



GOLDEN STATE

FIRE APPARATUS

PREPARED ESPECIALLY FOR:

CITY OF SALINAS

**One (1) Pierce Manufacturing, Inc.
100' Enforcer Tractor Drawn Aerial**





TABLE OF CONTENTS

- 1** Product Proposal
- 2** Standard Terms and Conditions (Exhibit A)
- 3** Product Specifications (Exhibit B)
 - Supporting Documents (If Applicable)
 - Electrical Analysis
 - Turning Radius Report
- 4** Product Warranties (Exhibit C)
- 5** Dealer Supplied Products and/or Services (Exhibit D)

1 PRODUCT PROPOSAL

OPTION A

100% PRE-PAYMENT

This will be the price of the Product(s) contingent upon the Customer paying the Grand Total Purchase Price to GSFA within thirty (30) calendar days of the Executed Date pursuant to the Payment Terms

IF YOU ELECT THIS OPTION,
IT RESULTS IN A SAVINGS OF
(\$362,051.92) OFF
OF THE GRAND TOTAL OF OPTION B

Please note this discount is also available contingent upon a Third Party (Leasing Company) paying 100% of the Grand Total Purchase Price on behalf of the Customer to GSFA within thirty (30) calendar days of the Executed Date pursuant to the Payment Terms

PRODUCT PROPOSAL FOR:

City of Salinas

65 W. Alisal Street, Suite 210
Salinas, CA 93901

Sales Consultant

Dewayne Young
dewayne@goldenstatefire.com
Mobile: (209) 777-0650

SUBMITTED DATE	EXPIRATION DATE	GSFA PROPOSAL #	MANUFACTURER BID #	MANUFACTURER	CONSORTIUM
11/12/2025	01/09/2026	31112-25AT	968	Pierce Manufacturing Inc.	Sourcewell #113021-PMI, ID #251, Member #2424

Golden State Fire Apparatus, Inc. ("GSFA") is pleased to provide this proposal for the fire apparatus(es) and equipment identified below (the "Product") to CITY OF SALINAS ("Customer") for consideration. This proposal (this "Product Proposal") includes the following exhibits attached hereto: the Standard Terms and Conditions attached as Exhibit A (the "Terms and Conditions"); the Product Specifications attached as Exhibit B (the "Specifications"); the Product Warranties attached as Exhibit C; and the Dealer Supplied Products and/or Services attached as Exhibit D (the "Dealer Supplied Products/Services List") (all of the foregoing, collectively, the "Agreement"). Through its signature below or other Acceptance (as defined on page 2), Customer acknowledges having received and read, and agrees to be bound by, the Agreement. The Agreement shall be effective as of the latest date appearing in the signature blocks below (the "Executed Date").

ITEM	PRODUCT DESCRIPTION	UNIT PRICE
A	One (1) Pierce Manufacturing, Inc. 100' Enforcer Tractor Drawn Aerial	2,329,487.00
B	<i>Discount for 100% Payment at Time of Order (the "Prepayment Discount")</i>	<i>(330,637.00)</i>
C	SUBTOTAL	1,998,850.00
D	9.25% State Sales Tax	184,893.63
E	California Tire Fee	14.00
F	100% Performance Bond	5,223.00
G	GRAND TOTAL PURCHASE PRICE	2,188,980.63

PAYMENT TERMS – Customer shall pay the total purchase price set forth directly above (the "Grand Total Purchase Price") to GSFA within thirty (30) calendar days of the Executed Date. If payment of the Grand Total Purchase Price is late, a late fee as specified in section 6 of the Terms and Conditions may be applied, and the Prepayment Discount may be adjusted, and the Grand Total Purchase Price increased in accordance with section 2.c of the Terms and Conditions. Customer shall pay any balance due as a result of Change Orders as described in the Terms and Conditions.

MANUFACTURER – Customer acknowledges that GSFA is not an agent of the Product manufacturer identified above ("Manufacturer") and is not capable of binding Manufacturer. Within five (5) business days of the Executed Date, GSFA shall submit an order form to the Manufacturer for the Product. GSFA's further performance under the Agreement is contingent upon Manufacturer's acceptance of such order form at the price and on the terms GSFA believed to be available when submitting this Product Proposal to Customer. If Manufacturer rejects such order as submitted or fails to respond to GSFA within a reasonable

amount of time, GSFA shall notify Customer in writing, and unless GSFA and Customer otherwise agree in writing, the Agreement shall then terminate and have no further force or effect.

PRODUCT COMPLETION – The Product shall be ready for final inspection by Customer at the manufacturing facility within approximately **46 to 49 MONTHS** after the Executed Date. The foregoing estimate is provided as a good faith approximation as of the date of submission of this Product Proposal and is subject to the Terms and Conditions.

PREDELIVERY SERVICE – If applicable, after transportation from the manufacturing facility and prior to final delivery or pick up, the Product shall receive those additional Products and/or services identified on the Dealer Supplied Products/Services List. It is estimated that such a service will add approximately **0.5 to 1.5 MONTH(S)** to the above Product completion estimate. The foregoing estimate is provided as a good faith approximation as of the date of submission of this Product Proposal and is subject to the Terms and Conditions.

PROPOSAL EXPIRATION – This Product Proposal supersedes any previous proposal(s) presented to Customer by GSFA and its employees and may be accepted by Customer on or before the Expiration Date identified above. Unless accepted by the Expiration Date, GSFA reserves the right to withdraw this Product Proposal or to alter its terms (including by providing updated Product pricing) prior to an order being accepted.

PURCHASE ORDER – Any PO shall be made out to: *Golden State Fire Apparatus, Inc. – 7400 Reese Road – Sacramento, CA 95828.*

ACCEPTANCE – ACCEPTANCE OF THIS PROPOSAL CREATES AN ENFORCEABLE BINDING AGREEMENT BETWEEN GSFA AND CUSTOMER. “**ACCEPTANCE**” MEANS THAT THE CUSTOMER DELIVERS TO GSFA: (A) A SIGNED COPY OF THIS PRODUCT PROPOSAL, OR (B) A SIGNED COPY OF A PURCHASE ORDER INCORPORATING THE AGREEMENT IN ITS ENTIRETY. ANY ADDITIONAL OR DIFFERENT TERMS, WHETHER CONTAINED IN CUSTOMER’S FORMS OR OTHERWISE PRESENTED BY CUSTOMER AT ANY TIME, ARE HEREBY REJECTED AND OF NO EFFECT UNLESS APPROVED IN WRITING SIGNED BY GSFA.

COUNTERPARTS - This Product Proposal may be executed in multiple counterparts, each of which shall be deemed an original (including copies sent to a party by electronic transmission) as against the party signing such counterpart, but which together shall constitute one and the same instrument. A signed copy of this Product Proposal delivered by facsimile, email or other means of electronic transmission will be deemed to have the same legal effect as delivery of an original signed copy of this Product Proposal. If this Product Proposal is returned to GSFA with the signature of Customer’s authorized representative but without an attestation or co-signers signature, then absent Customer’s written notice to the contrary, GSFA shall be entitled to rely on such single signature as sufficient evidence of the signatory’s authority to execute the Agreement and bind Customer thereby.

INTENDING TO CREATE A BINDING AGREEMENT, Customer and GSFA have each caused this Product Proposal dated 11/12/2025, GSFA Proposal Number 31112-25AT to be executed by their duly authorized representatives effective as of the Executed Date.

ACCEPTED AND AGREED TO BY CUSTOMER

Signature of Authorized Customer Representative

Print Name

Title

Date**ACCEPTED AND AGREED TO BY GSFA**

Signature of Authorized GSFA Representative

Print Name

Title

Date

OPTION B

PAYMENT AT TIME OF DELIVERY OR PICKUP

This will be the price of the Product(s) contingent
upon the Customer paying the Grand Total
Purchase Price to GSFA at time of delivery or pickup
pursuant to the Payment Terms

PRODUCT PROPOSAL FOR:**City of Salinas**65 W. Alisal Street, Suite 210
Salinas, CA 93901**Sales Consultant**Dewayne Young
dewayne@goldenstatefire.com
Mobile: (209) 777-0650

SUBMITTED DATE	EXPIRATION DATE	GSFA PROPOSAL #	MANUFACTURER BID #	MANUFACTURER	CONSORTIUM
11/12/2025	01/09/2026	31112-25BT	968	Pierce Manufacturing Inc.	Sourcewell #113021-OKC, ID #251, Member #2424

Golden State Fire Apparatus, Inc. ("GSFA") is pleased to provide this proposal for the fire apparatus(es) and equipment identified below (the "**Product**") to CITY OF SALINAS ("Customer") for consideration. This proposal (this "**Product Proposal**") includes the following exhibits attached hereto: the Standard Terms and Conditions attached as Exhibit A (the "**Terms and Conditions**"); the Product Specifications attached as Exhibit B (the "**Specifications**"); the Product Warranties attached as Exhibit C; and the Dealer Supplied Products and/or Services attached as Exhibit D (the "**Dealer Supplied Products/Services List**") (all of the foregoing, collectively, the "**Agreement**"). Through its signature below or other Acceptance (as defined on page 2), Customer acknowledges having received and read, and agrees to be bound by, the Agreement. The Agreement shall be effective as of the latest date appearing in the signature blocks below (the "**Executed Date**").

ITEM	PRODUCT DESCRIPTION	UNIT PRICE
A	One (1) Pierce Manufacturing, Inc. 100' Enforcer Tractor Drawn Aerial	2,329,487.00
B	9.25% State Sales Tax	215,477.55
C	California Tire Fee	14.00
D	100% Performance Bond	6,054.00
E	GRAND TOTAL PURCHASE PRICE	2,551,032.55

PAYMENT TERMS – Customer shall pay the total purchase price set forth directly above (the "**Grand Total Purchase Price**") to GSFA no later than the time of GSFA's delivery of the applicable Product to Customer's address listed above (or Customer's pick up of such Product at GSFA's facilities, if approved by GSFA). GSFA shall have no obligation to deliver, or permit pick up of the Product if the Customer does not have full payment ready when the Product is complete and ready to deliver or pick up, as applicable. Customer shall pay any balance due as a result of Change Orders as described in the Terms and Conditions.

MANUFACTURER – Customer acknowledges that GSFA is not an agent of the Product manufacturer identified above ("**Manufacturer**") and is not capable of binding Manufacturer. Within five (5) business days of the Executed Date, GSFA shall submit an order form to the Manufacturer for the Product. GSFA's further performance under the Agreement is contingent upon Manufacturer's acceptance of such order form at the price and on the terms GSFA believed to be available when submitting this Product Proposal to Customer. If Manufacturer rejects such order as submitted or fails to respond to GSFA within a reasonable amount of time, GSFA shall notify Customer in writing, and unless GSFA and Customer otherwise agree in writing, the Agreement shall then terminate and have no further force or effect.

PRODUCT COMPLETION – The Product shall be ready for final inspection by Customer at the manufacturing facility within approximately **46 to 49 MONTHS** after the Executed Date. The foregoing estimate is provided as a good faith approximation as of the date of submission of this Product Proposal and is subject to the Terms and Conditions.

PREDELIVERY SERVICE – If applicable, after transportation from the manufacturing facility and prior to final delivery or pick up, the Product shall receive those additional Products and/or services identified on the Dealer Supplied Products/Services List. It is estimated that such a service will add approximately **0.5 to 1.5 MONTH(S)** to the above Product completion estimate. The foregoing estimate is provided as a good faith approximation as of the date of submission of this Product Proposal and is subject to the Terms and Conditions.

PROPOSAL EXPIRATION – This Product Proposal supersedes any previous proposal(s) presented to Customer by GSFA and its employees and may be accepted by Customer on or before the Expiration Date identified above. Unless accepted by the Expiration Date, GSFA reserves the right to withdraw this Product Proposal or to alter its terms (including by providing updated Product pricing) prior to an order being accepted.

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COUNTERPARTS - This Product Proposal may be executed in multiple counterparts, each of which shall be deemed an original (including copies sent to a party by electronic transmission) as against the party signing such counterpart, but which together shall constitute one and the same instrument. A signed copy of this Product Proposal delivered by facsimile, email or other means of electronic transmission will be deemed to have the same legal effect as delivery of an original signed copy of this Product Proposal. If this Product Proposal is returned to GSFA with the signature of Customer’s authorized representative but without an attestation or co-signers signature, then absent Customer’s written notice to the contrary, GSFA shall be entitled to rely on such single signature as sufficient evidence of the signatory’s authority to execute the Agreement and bind Customer thereby.

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ACCEPTED AND AGREED TO BY CUSTOMER

Signature of Authorized Customer Representative

Print Name

Title

Date**ACCEPTED AND AGREED TO BY GSFA**

Signature of Authorized GSFA Representative

Print Name

Title

Date



GOLDEN STATE
FIRE APPARATUS

goldenstatefire.com

2 STANDARD TERMS AND CONDITIONS

Exhibit "A"

STANDARD TERMS AND CONDITIONS

1. Definitions.

- a. **"Agreement"** has the meaning given in the Product Proposal.
- b. **"Customer"** means the customer identified in the Product Proposal.
- c. **"Dealer Preparation,"** if applicable, means additional product(s) and/or services added or provided by GSFA after Manufacturer's completion of the Product and transportation to GSFA's premises prior to delivery to Customer, in accordance with the Dealer Supplied Products/Services List and/or a valid Change Order(s).
- d. **"Dealer Supplied Products/Services List"** means the Dealer Supplied Products and/or Services List attached to the Product Proposal as Exhibit D, which reflects all Dealer Preparation under the Agreement absent a valid Change Order(s).
- e. **"Grand Total Purchase Price"** means the total purchase price for the Product identified in the Product Proposal (subject to any adjustments required or permitted by these Terms and Conditions, including by the execution of a valid Change Order(s)).
- f. **"GSFA"** means Golden State Fire Apparatus, Inc., a California corporation.
- g. **"Manufacturer"** means the person or persons, company, firm, corporation, partnership, or other organization identified in the Product Proposal as responsible for manufacturing the Product.
- h. **"Party"** or **"Parties"** means GSFA and/or Customer, as applicable.
- i. **"Prepayment Discount"** means a discount to the purchase price for the Product granted to Customer in connection with Customer's advance payment of the Grand Total Purchase Price (or portion thereof, as specified in the Product Proposal), if applicable.
- j. **"Product"** means the fire apparatus(es) and any associated equipment listed in the Product Proposal and further described in the Specifications.
- k. **"Product Proposal"** means the GSFA proposal executed by Customer to which these Terms and Conditions are attached.
- l. **"Product Warranties"** means the Manufacturer warranties for the Product attached to the Product Proposal as Exhibit C.
- m. **"Specifications"** means the specifications for the Product attached to the Product Proposal as Exhibit B.
- n. **"Terms and Conditions"** means these Standard Terms and Conditions, which are attached to the Product Proposal as Exhibit A.

2. Purchase and Payment.

a. Purchase. Customer agrees to purchase the Product at the Grand Total Purchase Price (as such amount may be adjusted in accordance with these Terms and Conditions), pursuant to the payment terms set forth in the Product Proposal. The Grand Total Purchase Price is payable in U.S. dollars.

b. Contingency Reserve Fund. The Grand Total Purchase Price may include an amount to be set aside for the purpose of funding any future costs or financial obligations incurred by Customer under the Product Proposal or any valid Change Order(s) (the **"Contingency Reserve Fund"**). If applicable, the amount of any required Contingency Reserve Fund will be set forth in either the Product Proposal or Exhibit D. The Contingency Reserve Fund may be withdrawn against by Customer or GSFA for the purpose of satisfying Customer's payment obligations under the initial Product Proposal or any valid Change Order(s) (including, without limitation, a Change Order submitted by GSFA pursuant to Section 8.b). If a Contingency Reserve Fund is required under the Agreement, the amount of such fund is not intended as an estimate of the actual additional costs of contingencies, Change Orders, unforeseen items or other required work that may be incurred under the Agreement after submission of the Product Proposal to Customer, which amounts Customer acknowledges may exceed the Contingency Reserve Fund amount. The balance of any Contingency Reserve Fund will be credited against Customer's payment obligations, or otherwise returned to Customer within thirty (30) calendar days of delivery of all Products under the Agreement (provided that Customer has paid all amounts owed under the Agreement as of such date).

c. Prepayment Discount. If GSFA has granted Customer a Prepayment Discount, Customer must provide each associated prepayment (each, a “**Prepayment**”) within the time frame specified in the Product Proposal in order to receive such discount. Customer’s failure to timely make any Prepayment may result in: (i) GSFA’s termination of the Agreement; and/or (ii) Customer’s loss of the Prepayment Discount for the portion of the Grand Total Purchase Price represented by such outstanding Prepayment and the application of a late fee as set forth in Section 6, in each case in GSFA’s sole discretion.

d. State Sales Tax. Customer shall be responsible for the cost of state sales tax associated with, or attributable to, the Product. The taxes stated in the Product Proposal are subject to adjustment for the applicable state sales tax rate in effect at the time of delivery. Therefore, the sales tax set forth on the Product Proposal is only an estimate of such taxes and will be increased or decreased at the time of delivery if a change in the applicable sales tax rate has occurred, in which case Customer shall pay GSFA (or be refunded by GSFA) the difference in the applicable sales tax.

3. Product Completion Date. Within thirty (30) calendar days of the date on which the last required signatory executes the Product Proposal (such date, the “**Executed Date**”), GSFA shall submit to Customer a tentative Product completion date based on the then-estimated time to complete the manufacturing of the Product(s) and for the Product(s) to be ready for inspection and final approval by Customer at the manufacturing facility (which may differ from the Product completion estimate contained in the Product Proposal). Due to global supply chain constraints, any Product completion date contained herein, or in the Product Proposal, or otherwise provided to Customer, is a good faith estimate only as of the date provided to Customer, and merely an approximation based on current information available to GSFA and Manufacturer. Customer shall not be entitled to rely on any such estimate, and GSFA shall have no liability to Customer for a failure by GSFA or Manufacturer to meet any such estimate. All Product completion estimates are subject to modification and, if applicable, GSFA will provide updates to such estimates to Customer when available.

4. Stock / Demo Units. Notwithstanding any other provision contained in the Agreement (including Section 12 hereof concerning warranties), any Products constituting stock/demo unit(s) are sold to Customer on an as-is, first-come and first-served basis and GSFA makes no further representation or warranty to any customer with respect to such unit(s). Regardless of the terms of the Product Proposal, GSFA shall only be obligated to sell such stock/demo unit(s) to the first customer to enter into a purchase agreement with GSFA identifying such unit(s), and after the execution by GSFA of such agreement any subsequent purchase agreement (including the Agreement, as applicable) shall have no further force or effect with respect to such unit(s).

5. Multiple Unit Purchase. If the Grand Total Purchase Price includes pricing for multiple Products, the Product price stated in the Product Proposal shall only be valid if the quantity of Products being proposed are purchased at the same time, pursuant to the same Agreement. GSFA shall have no obligation to offer the same price for any Product if purchased by Customer pursuant to a later purchase agreement.

6. Late Fee; Storage Fee. A late fee equal to 0.033% of the outstanding portion of the Grand Total Purchase Price will be charged per calendar day for overdue payments beginning ten (10) calendar days after the payment is due and continuing for the first thirty (30) calendar days thereafter. After such thirty (30) calendar day period, the late fee shall increase to 0.044% per calendar day until payment of the outstanding portion of the Grand Total Purchase Price is received; provided that if Customer is a public agency, the foregoing late fees shall not exceed the statutory limit set forth in Section 926.10 of the California Government Code. If Customer is unable to satisfy the delivery requirements hereunder or is unwilling to take delivery of the Product, then GSFA shall be entitled to a storage charge running from the earlier of: (i) the date of delivery agreed to between GSFA and Customer (provided GSFA is willing and able to deliver the Product on such date), or (ii) twenty-one (21) calendar days after GSFA notifies Customer that the Product is available for delivery. The storage charge is equal to: (i) \$175.00 per calendar day per apparatus stored, or (ii) the actual charges incurred by GSFA with a third party for storage of the Product, whichever is greater. Such storage charge shall continue until the actual time of delivery and Customer’s possession of the Product, and any such storage by GSFA or such third party shall be at the sole risk of Customer.

7. Delivery; Inspection and Acceptance.

a. Delivery. Subject to Section 5 hereof, the Product is scheduled to be delivered to the location and within the time period specified in the Product Proposal. Such delivery date is an estimate, and GSFA is, notwithstanding this Section 7.a, not bound to such date unless it otherwise agrees in a separate writing to complete delivery by a date certain. For the avoidance of doubt, GSFA is not responsible for delivery delays caused by or because of actions, omissions or conduct of Customer, the Manufacturer, or their respective employees, affiliates, suppliers, contractors, and carriers. Risk of loss for the Product shall pass to Customer at the point and time of delivery (which shall include an attempted delivery by GSFA which cannot be completed due to any act or omission of Customer). However, title to the Product shall only pass to Customer upon delivery if Customer has then fully paid GSFA all amounts due hereunder (including additional amounts due under any valid Change Order). Absent GSFA's separate written agreement, which it may or may not provide in its sole and absolute discretion, delivery of the Product will not occur before Customer has fully paid all amounts due under the Agreement and provided proof of insurance reasonably satisfactory to GSFA. If GSFA permits Customer to take possession of the Product prior to such payment, Customer may not mount equipment, conduct training, or place the Product into service until all amounts due under the Agreement have been paid. If Customer has ordered multiple Products, GSFA reserves the right to deliver such Products in installments and to separately invoice Customer for such Products.

b. Inspection and Acceptance. Upon delivery, Customer shall have ten (10) calendar days within which to inspect the Product for substantial conformance to the Specifications, and in the event of substantial non-conformance to the Specifications to furnish GSFA with written notice sufficient to permit GSFA to evaluate such non-conformance ("**Notice of Nonconformance to Specifications**"). Contingent upon part availability and Customer's cooperation, any Product not in substantial conformance to material Specifications shall be remedied by GSFA (by repair or replacement, at GSFA's election) within thirty (30) calendar days from GSFA's receipt of the Notice of Nonconformance to Specifications. In the event GSFA does not receive a Notice of Nonconformance to Specifications within ten (10) calendar days of delivery, the Product will be deemed to be in conformance with Specifications and accepted by Customer.

8. Changes to Agreement Terms.

a. Change Orders. The Customer may request that GSFA incorporate a change to the Product or the Specifications for the Product, or GSFA may submit changes to the Agreement required or permitted to be made by GSFA (pursuant to Section 8.b or otherwise), by delivering a written Change Order to the other party hereto, which shall include a description of the proposed change sufficient to permit the receiving party to evaluate such change (either, a "**Change Order**"). For any Change Order submitted by Customer, GSFA will provide Customer a written response (a "**Response**") stating (i) whether GSFA will accommodate such Change Order (which GSFA may decide in its sole and absolute discretion); and (ii) the terms of the modification to the order, including any increase or decrease in the Grand Total Purchase Price resulting from such Change Order, a date on which any increase in the Grand Total Purchase Price must be paid, and an estimate of any effect on production scheduling or delivery resulting from such Change Order. Customer shall have seven (7) calendar days after receipt of the Response to notify GSFA as to whether Customer desires to make the changes GSFA has approved in the Response. In the event Customer countersigns GSFA's Response, Customer shall pay the increase (or be refunded the decrease) in the Grand Total Purchase Price by the date specified in the Response. GSFA may also send Customer a Change Order to account for any changes to the Agreement required or permitted to be made by GSFA (including those changes required pursuant to Section 8.b hereof), and such Change Order shall be effective upon delivery to Customer unless Customer elects to terminate the applicable Product order under the Agreement in accordance with Section 9.

b. Additional Changes.

i. Component Price Volatility; Increases Imposed by Manufacturer. GSFA shall not be responsible for (i) any unforeseen price increase or surcharge enacted by suppliers of major components of the Product (including but not limited to commercial chassis, engine, transmission, and fire pump); or (ii) price increases imposed on GSFA by Manufacturer pursuant to Manufacturer's terms and conditions for sale of the Product (a "**Manufacturer**

Price Increase”), after Customer becomes bound by the Agreement. Customer shall be responsible for all amounts arising from any price increases for major components of the Product (including all associated taxes and fees thereon) or any Manufacturer Price Increases occurring after the execution of the Agreement which increase the cost of the Product to GSFA, and such amounts will be documented on a Change Order adjusting the Grand Total Purchase Price accordingly. Customer shall pay any such price increase prior to Product delivery. A Manufacturer Price Increase may include, but shall not be limited to, an increase in Product price resulting from an increase in the Producer Price Index of Components for Manufacturing (see www.bls.gov Series ID: WPUID6112) in excess of a compounded annual growth rate of five percent (5%), as measured between the month Manufacturer accepts the applicable Product order and the month that is fourteen (14) months prior to the then-current estimated Product completion date (the foregoing, a **“PPI-Based Price Increase”**). If, upon Customer’s receipt of a Change Order reflecting a PPI-Based Price Increase, Customer elects to terminate the applicable Product order in accordance with Section 8.b.iii rather than pay such increase, then in lieu of the cancellation fees described in Section 9.a hereof GSFA shall be entitled to recover and Customer shall pay GSFA’s actual non-reimbursable costs incurred in connection with the Product order through the date of Customer’s termination of such Product order.

ii. New Legal Standards. In the event the Product design, materials or specifications require an alteration arising from new regulations issued by any governmental entity or trade association, including, but not limited to, the NFPA, DOT, and EPA, and such alteration increases the cost of the Product to GSFA, Customer shall be responsible for changes to the Grand Total Purchase Price arising from such alteration. GSFA shall promptly notify Customer when it becomes aware of any potential or required change in regulations occurring prior to delivery that would impact the Product purchased.

iii. Change Orders. Customer shall execute any Change Order submitted by GSFA documenting any of the changes required or permitted by Sections 8.b.i and 8.b.ii above (which shall, to the extent practicable, itemize any increases in the Grant Total Purchase Price and specify a commercially reasonable date by which Customer must pay such increase), unless Customer instead elects to terminate the applicable Product order under the Agreement within fifteen (15) calendar days of Customer’s receipt of such Change Order and in accordance with Section 9. Absent such a termination, failure or refusal to execute a Change Order does not alter Customer’s obligations under this Section 8.b.

c. Changes in Commercial Specifications. Specifications for all components of the Product manufactured by companies other than the Manufacturer are subject to change without notice. Specifications for such components will be as available at the time of manufacture of the Product. GSFA shall not be liable for any deviations in such specifications arising from a substitution of components or changes in the design of any component by their original manufacturer.

9. Termination.

a. By Customer. Customer may terminate a Product order identified in the Product Proposal or a Change Order by providing written notice to GSFA in accordance with Section 16 hereof. If Customer elects to terminate a Product order, Customer shall pay GSFA a cancellation fee as follows: (a) after the Product order is accepted and entered by GSFA, 10% of the portion of the Grand Total Purchase Price applicable to such Product (including all associated taxes, fees and costs) (such amount, the **“Product Purchase Price”**); (b) after completion of the pre-construction phase of the order process, 20% of the Product Purchase Price; and (c) after the requisition of any materials or commencement of any manufacturing or assembly of the Product by either GSFA or Manufacturer but before substantial completion of such Product, 50% of the Product Purchase Price. Customer shall not be permitted to terminate a Product order after substantial completion of manufacturing and assembly of such Product (excluding any Dealer Preparation or other pre-delivery services or untypical Product customization, if applicable). Notwithstanding the foregoing, if the applicable tier of cancellation fee is not sufficient to cover all actual costs and fees incurred by GSFA with Manufacturer in connection with Customer’s termination of the Product order (**“Manufacturer Termination Fees”**), then in addition to such cancellation fee Customer shall pay the balance of all Manufacturer Termination Fees. If Customer received a Prepayment Discount, such discount shall not be considered for the purpose of calculating the above cancellation fee. The tier of cancellation fee applicable to any cancellation,

as well as the determination of whether a Product has reached substantial completion, shall be in the sole and absolute discretion of GSFA. Customer may request a fee waiver, and GSFA, in its sole discretion, may agree to waive and/or adjust such fee. GSFA will return the balance of the Grand Total Purchase Price or Product Purchase Price, as applicable, within thirty (30) calendar days of the effective date of the cancellation of the Product order or termination of the Agreement.

Customer may terminate the Agreement for an Event of Default by GSFA after providing GSFA with written notice in accordance with Section 16 (which notice shall describe with reasonably particularity the Event of Default justifying such termination) if such Event of Default remains uncured (if capable of cure) thirty (30) days following GSFA's receipt of such notice; provided, however, that the foregoing cure period shall continue if and for so long as GSFA has commenced and is continuing to undertake commercially reasonable efforts to cure such Event of Default as promptly as reasonably practicable.

b. By GSFA. GSFA may terminate the Agreement for an Event of Default by Customer after providing Customer with written notice in accordance with Section 16 (which notice shall describe with reasonably particularity the Event of Default justifying such termination) if such Event of Default remains uncured (if capable of cure) thirty (30) days following Customer's receipt of such notice; provided, however, that the foregoing cure period shall continue if and for so long as Customer has commenced and is continuing to undertake commercially reasonable efforts to cure such Event of Default as promptly as reasonably practicable. Notwithstanding the foregoing, GSFA may terminate the Agreement effective immediately upon written notice to Customer for Customer's failure to pay any amount owed under the Agreement when due.

Notwithstanding any other provision of this Agreement, if Customer terminates a Product order in accordance with Section 9.a above, GSFA may elect to instead terminate the Agreement upon notice to Customer in accordance with Section 16 hereof. If GSFA terminates the Agreement in accordance with this Section 9.b, Customer shall pay the applicable tier of cancellation fee for all Products pursuant to Section 9.a above as if Customer had elected to terminate each applicable Product order.

c. Based on Discontinuation or Cancellation by Manufacturer. In the event that Manufacturer cancels a Product order (provided that such cancellation is not the result of an act by Customer in violation of the Agreement) or discontinues the manufacture of a Product prior to its completion and delivery: (i) if such Product is the only Product contemplated under the Agreement, then the Agreement shall terminate; or (ii) if additional Products are contemplated under the Agreement, then only the Product order for the applicable cancelled or discontinued Product shall be terminated. Such Agreement termination or Product termination, as applicable, shall be effective upon GSFA's written notice to Customer of such cancellation or discontinuance in accordance with Section 16 hereof. GSFA's only obligation to Customer in such event shall be the return of any Prepayment paid by Customer for the cancelled or discontinued Product. For the avoidance of doubt, the cancellation fees contemplated in Section 9.a hereof shall not apply in the event of a termination pursuant to this Section 9.c.

10. Customer's Obligations. Customer shall provide its timely and best efforts to cooperate with GSFA and Manufacturer during the Product manufacturing and Dealer Preparation process. Reasonable and timely cooperation includes, without limitation, Customer's providing timely information in response to any requests from Manufacturer or GSFA and the participation of Customer's authorized representatives in traveling to Manufacturer's facility for inspections and approval of the Product, including a final approval before the Product leaves Manufacturer's facility.

11. Representations and Warranties. Customer hereby represents and warrants to GSFA as of the Executed Date that the execution of the Agreement and the purchase of the Product(s) and performance of the other obligations of Customer under the Agreement have been approved by Customer in accordance with applicable general laws and, as applicable, Customer's charter, ordinances, purchasing policies, and other governing documents, and executed by the appropriate Customer employees, officials, and/or representatives, and funding for Customer's performance of its obligations under the Agreement has been duly budgeted and appropriated by Customer.

12. Standard Warranty. All applicable Manufacturer warranties are contained in the Product Warranties. Any additional warranties must be expressly approved in a writing signed by GSFA, and Customer acknowledges and agrees that Manufacturer will not be liable for any such additional warranties.

a. Disclaimer. OTHER THAN AS EXPRESSLY SET FORTH IN THE AGREEMENT, GSFA, ITS AFFILIATES, AND THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, SHAREHOLDERS, AGENTS, OR REPRESENTATIVES, DO NOT MAKE ANY EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE PRODUCT (WHETHER RELATING TO THE CONDITION OR QUALITY OF THE PRODUCT, OR OTHERWISE) PROVIDED HEREUNDER OR OTHERWISE REGARDING THE AGREEMENT (INCLUDING, WITHOUT LIMITATION, WITH RESPECT TO ANY APPLICABLE DEALER PREPARATION), WHETHER ORAL OR WRITTEN, EXPRESS, IMPLIED OR STATUTORY. WITHOUT LIMITING THE FOREGOING, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, THE IMPLIED WARRANTY AGAINST INFRINGEMENT, THE IMPLIED WARRANTY OR CONDITION OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE ARE EXPRESSLY EXCLUDED AND DISCLAIMED BY GSFA. STATEMENTS MADE BY SALES CONSULTANTS OR IN PROMOTIONAL MATERIALS DO NOT CONSTITUTE WARRANTIES.

b. Exclusions of Incidental and Consequential Damages. In no event shall GSFA be liable for special, consequential, incidental, indirect or punitive damages incurred by Customer in connection with any matter arising out of or relating to the Agreement, or the breach thereof, even if GSFA has been advised of the possibility of such damages, and regardless of whether such damages arise out of breach of warranty, the Agreement, indemnity, whether resulting from non-delivery or from GSFA's own negligence, or otherwise, except and solely to the extent such damages arise from the gross negligence or willful misconduct of GSFA.

13. Default. The occurrence of one or more of the following events (each, an "**Event of Default**") shall constitute a default under the Agreement: (a) Customer's failure to pay any amounts due or to perform any of its obligations under the Agreement; (b) GSFA's failure to perform any of its obligations under the Agreement; (c) either Party becoming insolvent or becoming subject to bankruptcy or insolvency proceedings; (d) any representation made by either Party under the Agreement which is false in any material respect; (e) any action by Customer to dissolve, merge, consolidate or transfer a substantial portion of its property to another entity during the term of the Agreement; (f) any other material breach of the terms of the Agreement by a Party; or (g) a default or breach by Customer under any other agreement with GSFA or its affiliates.

14. Indemnification of GSFA. Customer shall indemnify, defend, and hold harmless GSFA, its agents, servants, successors and assigns from and against all losses, damages, injuries, claims, demands and expenses, including attorneys' fees and other legal expenses, of whatever nature ("**Damages**"), to the extent such Damages arise out of or in connection with: (i) Customer's breach of the Agreement, or (ii) Customer's use, storage, or operation of the Product following delivery, regardless of where, how, and by whom operated (excluding any negligent operation by GSFA). The indemnification and assumptions of liability and obligation herein provided shall continue in full force and effect notwithstanding the termination of the Agreement, whether by expiration of time, by operation of law or otherwise. This provision is not intended to and shall not constitute the exclusive remedy of the Parties under the Agreement; the Parties may seek indemnity from one another under other legal principles, whether based in equity or law, so long as they do not nullify or cancel the effects of this paragraph.

15. Force Majeure. GSFA shall not be responsible nor deemed to be in default of any provision of the Agreement on account of delays in performance due to causes which are beyond GSFA's or Manufacturer's control and which make GSFA's performance impracticable, including but not limited to wars, insurrections, strikes or labor unrest, riots, fires, storms, floods, other acts of nature, explosions, earthquakes, accidents, any act of federal, state or local government, failure or delays in transportation, inability to obtain necessary labor, supplies or manufacturing facilities, supply chain issues, allocation regulations or orders affecting materials, equipment, facilities or completed products, failure to obtain any required license or certificates, acts of God or the public enemy or terrorism, failure of transportation, disease, pandemics or epidemics, quarantine restrictions, failure of vendors (due to causes similar to those within the scope of this clause) to perform their agreements or labor troubles causing cessation, slowdown, or interruption of work.

16. Notice. Any notices, requests, consents, claims, demands, waivers and other communications required or permitted to be given hereunder must be given in writing at the address of each Party set forth below, or to such other address as either Party may substitute by written notice to the other in accordance with this Section 16, by one of the following methods: hand delivery; registered, express, or certified mail, return receipt requested, postage prepaid; or nationally recognized private express courier. All such communications will be deemed to have been given: (i) when delivered by hand (with written confirmation of receipt); (ii) on the third (3rd) calendar day after the date mailed, by registered, express or certified mail; or (iii) when delivered by the addressee if sent by a nationally recognized private express courier.

GSFA:

Golden State Fire Apparatus Inc.
7400 Reese Road
Sacramento, CA 95828

CUSTOMER:

To the address listed in the Product Proposal

17. Contradictions. In the event of a conflict between the Agreement and any Change Order, or between Change Orders, the terms of the latest executed Change Order shall control.

18. Manufacturer's Statement of Origin. It is agreed that the manufacturer's statement of origin ("**MSO**") for the Product covered by the Agreement, if applicable, shall be retained and remain in the possession of GSFA per California Department of Vehicles (DMV) directives. Notwithstanding the foregoing, GSFA shall provide Customer with the original MSO if the Customer is self-registering, and Customer shall comply with all good-faith Process of Duty and other DMV requirements applicable to the Product and retain its own MSO.

19. Assignment. The relationship of the Parties established under the Agreement is that of independent contractors and neither Party is a partner, employee, agent, or joint venturer of or with the other. Neither Party may assign its rights and obligations under the Agreement unless it has obtained the prior written approval of the other Party.

20. Governing Law; Jurisdiction; Disputes. Without regard to any conflict of laws provisions, the Agreement is to be governed by and under the laws of the state of California. Prior to taking any legal action that may and/or can arise out of the Agreement, the Parties shall first attempt mediation with an agreed upon mediator. If the Parties cannot agree upon a mediator within thirty (30) calendar days of the submission of written notice of a dispute in accordance with Section 16 hereof, if any disputed matter remain unresolved within thirty (30) calendar days of the commencement of discussions, or if any party refuses to meet, then either party may submit any remaining disputes concerning and/or claim regarding the Agreement and/or the terms and conditions herein to the Superior Court, County of Sacramento (and the parties expressly consent to exclusive personal jurisdiction and venue before such court).

21. Entire Agreement; Amendments. The Agreement, including the Product Proposal, its exhibits and all valid Change Orders, is the exclusive agreement between the Parties regarding the subject matter contained herein and therein. No change in, modification of, or revision of the Agreement shall be valid unless in writing and signed by duly authorized representatives of both Parties with authority to sign such amendments to the Agreement.

END OF STANDARD TERMS AND CONDITIONS



GOLDEN STATE
FIRE APPARATUS

goldenstatefire.com

3 PRODUCT SPECIFICATIONS

Exhibit "B"



Proposal Details Report

11/12/2025

Customer: Salinas Fire Department

Representative Young, Dwayne

Requirements Manager:

Description: 100' Tiller - Duplicate to 42944 -

Chassis: Enforcer Chassis, Tractor (Tiller)

Body: Aerial, Tiller, No Pump, Alum Body

Bid Number: 968

Job Number:

Organization: Golden State Fire Apparatus, Inc

OptionCode	Type	Option	ProposalText
0766599		Boiler Plates, Tiller	<p>Golden State Fire Apparatus, Inc. is pleased to submit a proposal to Salinas Fire Department for a Pierce® Tractor-Drawn Aerial Ladder per your request for quotation. The following paragraphs will describe in detail the apparatus, construction methods, and equipment proposed. This proposal will indicate size, type, model and make of components parts and equipment, providing proof of compliance with each and every item (except where noted) in the departments advertised specifications.</p> <p>PIERCE MANUFACTURING was founded in 1913. Since then, we have been building bodies with one philosophy, "BUILD THE FINEST". Our skilled craftsmen take pride in their work, which is reflected, in the final product. We have been building fire apparatus since the early "forties" giving Pierce Manufacturing over 75 years of experience in the fire apparatus market. Pierce Manufacturing has built and put into service more than 62,500 apparatus, including more than 33,900 on Pierce custom chassis designed and built specifically for fire and emergency applications. Our Appleton, Wisconsin facility has over 870,000 total square feet of floor space situated on approximately 105 acres of land. Our Bradenton, Florida facility has 300,000 square feet of floor space situated on approximately 38 acres of land.</p> <p>Our beliefs in high ethical standards are carried through in all of our commitments and to everyone with whom we do business. Honesty, Integrity, Accountability and Citizenship are global tenets by which we all live and work. Consequently, we neither engage in, nor have we ever been convicted of price fixing, bid rigging, or collusion in any domestic or international fire apparatus market.</p> <p>Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification.</p> <p>In accordance with the current edition of applicable NFPA standards, this proposal will specify whether the fire department, manufacturer, or apparatus dealership will provide required loose equipment.</p> <p>Images and illustrative material in this proposal are as accurate as known at the time of publication but are subject to change without notice. Images and illustrative material are for reference only and may include optional equipment and accessories and may not include all standard equipment.</p> <p>GENERAL DESIGN AND CONSTRUCTION</p> <p>To control quality, ensure compatibility, and provide a single source for service and warranty, the custom cab, chassis, pump module and body will be entirely designed, assembled/welded and painted in Pierce owned manufacturing facilities. This includes, but not limited to the cab weldment, the pumphouse module assembly, the chassis assembly, the body and the electrical system.</p> <p>QUALITY AND WORKMANSHIP</p> <p>Pierce has set the pace for quality and workmanship in the fire apparatus field. Our tradition of building the highest quality units with craftsmen second to none has been the rule right from the beginning and we demonstrate that ongoing commitment by: Ensuring all steel welding follows American Welding Society D1.1-2004 recommendations for structural steel welding. All aluminum welding follows American Welding society and ANSI D1.2-2003 requirements for structural welding of aluminum. All sheet metal welding follows American welding Society B2.1-2000 requirements for structural welding of sheet metal. Our flux core arc welding uses alloy rods, type 7000 and is performed to American Welding Society standards A5.20-E70T1. Furthermore, all employees classified as welders are tested and certified to meet the American welding Society codes upon hire and every three (3) years thereafter. Pierce also employs an American Welding Society certified welding inspector in plant during working hours to monitor weld quality.</p> <p>Pierce Manufacturing operates a Quality Management System under the requirements of ISO 9001. These standards sponsored by the International Organization for Standardization (ISO) specify the quality systems that are established by the manufacturer for design, manufacture, installation and service. A copy of the certificate of compliance is included with this proposal.</p> <p>In addition to the Quality Management system, we also employ a Quality Achievement Supplier program to ensure the vendors and suppliers that we utilize meet the high standards we demand. That is just part of our overall "Quality at the Source" program at Pierce.</p> <p>To demonstrate the quality of our products and services, a list of at least five (5) fire departments/municipalities that have purchased vehicles for a second time is provided.</p> <p>DELIVERY</p> <p>The apparatus will be delivered under its own power to ensure proper break-in of all components while the apparatus is still under warranty. A qualified delivery representative shall deliver the apparatus and remain for a sufficient length of time to instruct personnel in proper operation, care and maintenance of the equipment delivered.</p> <p>MANUAL AND SERVICE INFORMATION</p> <p>At time of delivery, complete operation and maintenance manuals covering the apparatus will be provided. A permanent plate will be mounted in the driver's compartment specifying the quantity and type of fluids required including engine oil, engine coolant, transmission, pump transmission lubrication, pump primer and drive axle.</p> <p>SAFETY VIDEO</p> <p>At the time of delivery Pierce will also provide one (1) 39-minute, professionally produced apparatus safety video, in DVD format. A link to the video is also available on the Pierce Training website. This video will address key safety considerations for personnel to follow when they are driving, operating, and maintaining the apparatus, including the following: vehicle pre-trip inspection, chassis operation, pump operation, aerial operation, and safety during maintenance.</p> <p>PERFORMANCE TESTS</p> <p>A road test will be conducted with the apparatus fully loaded and a continuous run of no less than</p>

ten (10) miles. During that time the apparatus will show no loss of power nor will it overheat. The transmission drive shaft or shafts and the axles will run quietly and be free of abnormal vibration or noise. The apparatus when fully loaded will not have less than 25 percent nor more than 50 percent on the front axle, and not less than 50 percent nor more than 75 percent on the rear axle. The apparatus will meet the current edition of applicable NFPA standards acceleration and braking requirements.

SERVICE AND WARRANTY SUPPORT

Pierce dealership support will be provided by Golden State Emergency Vehicle Services by operating in conjunction with a Pierce authorized service center. The service center will have factory-trained mechanics on staff versed in Pierce fire apparatus. The service facility will be located within one hundred fifty (150) miles of the fire department.

In addition to the dealership, Pierce has service facilities located in both, Weyauwega, Wisconsin and Bradenton, Florida. Pierce also maintains a dedicated parts facility of over 100,000 square feet in Appleton, Wisconsin. The parts facility stocks in excess of \$5,000,000 in parts dedicated to service and replacement parts. The parts facility employs a staff dedicated solely for the distribution and shipment of service and replacement parts.

Service parts for the apparatus being proposed can be found via Pierceparts.com which, is an interactive online tool that delivers information regarding your specific apparatus as well as the opportunity to register for training classes.

As a Pierce customer you have the ability to view the complete bill of materials for your specific apparatus, including assembly drawings, piece part drawings, and beneficial parts notations. You will also have the ability to search the complete Pierce item master through a parts search function which offers all Pierce SKU's and descriptions offered on all Pierce apparatus. Published component catalogs, which include proprietary systems along with an extensive operator's manual library is available for easy reference.

Pierce Manufacturing maintains a dedicated service and warranty staff of over 35 personnel, dedicated to customer support, which also maintains a 24-hour 7 day a week toll free hot line, four (4) on staff EVTs, and offers hands-on repair and maintenance training classes multiple times a year.

LIABILITY

The successful bidder will defend any and all suits and assume all liability for the use of any patented process including any device or article forming a part of the apparatus or any appliance furnished under the contract.

INSURANCE PROVIDED BY BIDDER

Commercial General Liability Insurance

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of commercial general liability insurance:

Each Occurrence:

\$1,000,000

Products/Completed Operations Aggregate:

\$1,000,000

Personal and Advertising Injury:

\$1,000,000

General Aggregate:

\$2,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form and will include Contractual Liability coverage for bodily injury and property damage subject to the terms and conditions of the policy. The policy will include Owner as an additional insured when required by written contract.

Commercial Automobile Liability Insurance

The successful bidder will, during the performance of the contract, keep in force at least the following minimum limits of commercial automobile liability insurance and coverage will be written on a Commercial Automobile liability form:

Each Accident Combined Single Limit:

\$1,000,000

Umbrella/Excess Liability Insurance

The successful bidder will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance:

Aggregate:

\$3,000,000

Each Occurrence:

\$3,000,000

The umbrella policy will be written on an occurrence basis and at a minimum provide excess to the bidder's General Liability and Automobile Liability policies.

The required limits can be provided by one (1) or more policies provided all other insurance requirements are met.

Coverage will be provided by a carrier(s) rated A- or better by A.M. Best.

All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

Bidder agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as certificate holder.

INSURANCE PROVIDED BY MANUFACTURER

Product Liability Insurance

The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of Product Liability insurance:

Each Occurrence:

\$1,000,000

Products/Completed Operations Aggregate:

\$1,000,000

Coverage will be written on a Commercial General Liability form. The policy will be written on an occurrence form. The manufacturer's policy will include the owner as additional insured when required by written contract between the Owner and a Pierce authorized dealer.

		<p>Umbrella/Excess Liability Insurance The manufacturer will, during the performance of the contract and for three (3) years following acceptance of the product, keep in force at least the following minimum limits of umbrella liability insurance: Each Occurrence: \$25,000,000 Aggregate: \$25,000,000 The umbrella policy will be written on an occurrence basis and provide excess to the manufacturer's General Liability/Products policies. The required limits can be provided by one (1) or more policies provided all other insurance requirements are met. Coverage will be provided by a carrier(s) rated A- or better by A.M. Best. All policies will provide a 30-day notice of cancellation to the named insured. The Certificate of Insurance will provide the following cancellation clause: Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions. Manufacturer agrees to furnish owner with a current Certificate of Insurance with the coverages listed above along with the bid. The certificate will show the purchaser as the certificate holder.</p>
0018180	Single Source Compliance, Aerials	<p>SINGLE SOURCE MANUFACTURER Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pump house (including the sheet metal enclosure, valve controls, piping and operators panel) body and aerial device will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.</p>
0584456	Manufacture Location, Appleton, Wisconsin	Your apparatus will be manufactured in Appleton, Wisconsin.
0584452	RFP Location: Appleton, Wisconsin	
0588609	Vehicle Destination, US	
0670275	Unit to be Similar in some Aspects, Excluding Pump Panel	<p>SPECIAL INSTRUCTIONS The apparatus being proposed will be designed and built to match the 28976. However, some variation may be necessary due to changes in our manufacturing processes or our product offering. Revisions in NFPA guidelines and/or other regulations may also affect our ability to match the previous unit.</p>
0816491	Comply NFPA 1900 Changes Effective Jan 1, 2024, With Exceptions	<p>NFPA 2024 STANDARDS This unit will comply with the NFPA standards effective January 1, 2024, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions. Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus. All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack. A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating. The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications. An official of the company will designate, in writing, who is qualified to witness and certify test results.</p>
0533349	Aerial Fire Apparatus	
0588613	Vehicle Certification, Aerial w/o Pump	

0681279	Agency, Apparatus Certification, Aerial w/o Pump, U.L.	<p>NFPA COMPLIANCY</p> <p>Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA".</p> <p>INSPECTION CERTIFICATE</p> <p>A third party inspection certificate for the aerial device will be furnished upon delivery of the aerial device. The certificate will be Underwriters Laboratories Inc. Type 1 and will indicate that the aerial device has been inspected on the production line and after final assembly. Visual structural inspections will be performed on all welds on both aluminum and steel ladders. On critical weld areas, or on any suspected defective area, the following tests will be conducted: Magnetic particle inspection will be conducted on steel aerials to assure the integrity of the weldments and to detect any flaws or weaknesses. Magnets will be placed on each side of the weld while iron powder is placed on the weld itself. The powder will detect any crack that may exist. This test will conform to ASTM E709 and be performed prior to assembly of the aerial device.</p> <p>A liquid penetrant test will be conducted on aluminum aerials to assure the integrity of the weldments and to detect any flaws or weaknesses. This test will conform to ASTM E165 and be performed prior to assembly of the aerial device.</p> <p>Ultrasonic inspection will be conducted on all aerials to detect any flaws in pins, bolts and other critical mounting components.</p> <p>In addition to the tests above, functional tests, load tests, and stability tests will be performed on all aerials. These tests will determine any unusual deflection, noise, vibration, or instability characteristics of the unit.</p> <p>GENERATOR TEST</p> <p>If the unit has a generator, the generator will be tested, approved, and certified by Underwriters Laboratories at the manufacturer's expense. The test results will be provided to the Fire Department at the time of delivery.</p> <p>BREATHING AIR TEST</p> <p>If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and certify that the air quality meets the requirements of NFPA 1989, <i>Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection</i>.</p>
0816495	Certification, Vehicle Inspection Program, NFPA 1900	<p>VEHICLE INSPECTION PROGRAM CERTIFICATION</p> <p>To assure the vehicle is built to current NFPA 1900 standards, the apparatus, in its entirety, will be third-party, independent, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus.</p> <p>A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.</p>
0092138	Highly Customized Product (HCP)	<p>PRODUCT CHANGES AND IMPROVEMENTS</p> <p>Our components and processes, as described in this proposal document, are as accurate as known at the time of bid submission, but are subject to change for the purpose of product or process improvements, or changes in industry standards providing the change does not affect the meaning or definition of the bid specifications.</p>

0536644	Customer Service Website	<p>AFTERMARKET SUPPORT WEBSITE</p> <p>Pierceparts.com will provide <u>Pierce authorized dealer</u> access to comprehensive information pertaining to the maintenance and service of their customer's apparatus. This tool will provide the Pierce authorized dealer the ability to service and support their customers to the best of their ability with factory support at their fingertips.</p> <p>Pierceparts.com is also accessible to the end user through the guest login. Limited access is available and vehicle specific parts information accessible by entering a specific VIN number. All end users should see their local authorized Pierce dealer for additional support and service.</p> <p>The website will consist of the following screens at the dealer level:</p> <p>My Fleet Screen</p> <p>The My Fleet screen will provide access to truck detail information on the major components of the vehicle, warranty information, available vehicle photographs, vehicle drawings, sales options, applicable vehicle software downloads, etc.</p> <p>Parts Screens</p> <p>The Parts screens will provide parts look-up capability of Pierce Manufacturing sourced items, with the aid of digital photographs, part drawings and assembly drawings. The parts search application will permit the searching of parts by item description or function group (major system category). The parts application will provide the ability to submit electronically a parts order, parts quote, or parts return request directly to Pierce Manufacturing for processing.</p> <p>Warranty Screen</p> <p>The Warranty screens will provide dealers the ability to submit electronically warranty claims directly to Pierce Manufacturing for reimbursement.</p> <p>My Reports Screens</p> <p>The My Reports screens will provide access to multiple dealer reports to allow the dealership to maintain communication with the customer on the status of orders, claims, and phone contacts.</p> <p>Technical Support Screens</p> <p>The Technical Support screens will provide access to all currently published Operation and Maintenance and Service Publications. Access to Pierce Manufacturing Service Bulletins and Work Instructions, containing information on current service topics and recommendations will be provided.</p> <p>Training</p> <p>The Training screens will provide access to upcoming training classes offered by Pierce Manufacturing along with interactive electronic learning modules (Operators Guides) covering the operation of major vehicle components will be provided. Access to training manuals used in Pierce Manufacturing training classes will be provided.</p> <p>About Pierce</p> <p>Access to customer service articles, corporate news, quarterly newsletters, and key contacts within the Customer Service Department will be provided. The current Customer Service Policy and Procedure Manual, detailing the operation of the Customer Service group will also be accessible.</p>
0766110	Consortium, Sourcewell	
0535579	Not Required, Unit of Measure, (no pump, no tank)	
0030006	Bid Bond Not Requested	<p>BID BOND NOT REQUESTED</p> <p>A bid bond will not be included. If requested, the following will apply:</p> <p>All bidders will provide a bid bond as security for the bid in the form of a 5 percent bid bond to accompany their bid. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language, which assures that the bidder/principal will give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.</p> <p>Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.</p>

0816574	Performance Bond, 100% with Warranty Bond, 1 Yr, and Payment Bond, PPI Terms	<p>PERFORMANCE BOND, 1 YEAR</p> <p>The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.</p> <p>Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 100 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter.</p> <p>Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible.</p> <p>If the Producer Price Index of Components for Manufacturing [www.bls.gov Series ID: WPUID6112] ("PPI") has increased at a compounded annual growth rate of 5.0% or more between the month Pierce accepts the order ("Order Month") and a month 14 months prior to the then predicted Ready For Pickup date ("Evaluation Month"), then pricing may be updated in an amount equal to the increase in PPI over 5.0% for each year or fractional year between the Order Month and the Evaluation Month.</p> <p>The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.</p>
0000007	Approval Drawing	<p>APPROVAL DRAWING</p> <p>A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.</p> <p>A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.</p>
0517327	Drawing, As Built, At Delivery a Revised Print w/ Changes	<p>FINAL DRAWING</p> <p>There will be a revised drawing of the truck with all the changes made during production provided at pickup.</p>
0002928	Electrical Diagrams	<p>ELECTRICAL WIRING DIAGRAMS</p> <p>Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.</p>
0626490	Enforcer Chassis, Tractor (Tiller)	<p>ENFORCER CHASSIS</p> <p>The Pierce Enforcer™ is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.</p>
0523786	Angle of Approach	<p>ANGLE OF APPROACH</p> <p>The angle of approach will be 15.5 degrees degrees. This will be effective with the truck in a loaded state.</p>
0523787	Angle of Departure	<p>ANGLE OF DEPARTURE</p> <p>The angle of departure will be 11 degrees degrees. This will be effective with the truck in a loaded state.</p>
0000110	Wheelbase	<p>WHEELBASE</p> <p>The wheelbase of the vehicle will be 166.00".</p>
0000070	GVW Rating	<p>GVW RATING</p> <p>The gross vehicle weight rating will be 76,600#.</p>

0729280	Frame Rails, 13.38 x 3.50 x .375, Enforcer	<p>FRAME</p> <p>The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle. Each rail will have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle. The frame rails will be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges.</p>
0889469	Frame Liner, "C/Inv L" 12.50" x 3.00" x .25", AXT/Vel/Imp/Enf, 56" QVal	<p>FRAME REINFORCEMENT</p> <p>In addition, a mainframe internal liner will be provided. The liner will be an internal "C" design that steps to an internal "L" design over the rear axle. It will be heat-treated steel measuring 12.50" x 3.00" x 0.25" through the front portion of the liner, stepping to 9.38" x 3.00" x 0.25" through the rear portion of the liner. Each liner will have a section modulus of 13.58 cubic inches, yield strength of 110,000 psi, and rbm of 1,494,042 in-lb. Total rbm at wheelbase center will be 4,391,869 in-lb.</p> <p>The frame liner will be mounted inside of the chassis frame rail and extend the full length of the frame.</p>
0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer	<p>FRONT NON DRIVE AXLE</p> <p>The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 19,500 lb.</p> <p>Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron.</p> <p>The center cross members and side plates will be constructed out of 80,000-psi yield strength steel.</p> <p>Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations.</p> <p>There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension.</p> <p>The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load.</p> <p>Camber at load will be zero degrees for optimum tire life.</p> <p>The ball joint bearing will be of low friction design and be maintenance free.</p> <p>Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided.</p> <p>The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle.</p> <p>The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase.</p> <p>The axle will have a turning angle of up to 45 degrees.</p>
0030264	Suspension, Front TAK-4, 19,500 lb, Qtm/AXT/Imp/Vel/Enf/SFR	<p>FRONT SUSPENSION</p> <p>Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 19,500 lb.</p> <p>The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment.</p> <p>Each wheel will have torsion bar type spring. In addition, each front wheel end will also have energy absorbing jounce bumpers to prevent bottoming of the suspension.</p> <p>The suspension design will be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms.</p> <p>The torsion bar anchor lock system allows for simple lean adjustments, without the use of shims. One can adjust for a lean within 15 minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side.</p> <p>The independent suspension was put through a durability test that simulated 140,000 miles of inner city driving.</p>
0087572	Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/Enf	<p>FRONT SHOCK ABSORBERS</p> <p>KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.</p>
0000322	Oil Seals, Front Axle	<p>FRONT OIL SEALS</p> <p>Oil seals with viewing window will be provided on the front axle.</p>
0582936	Tires, Front, Goodyear, G289 WHA, 315/80R22.50, 20 ply	<p>FRONT TIRES</p> <p>Front tires will be Goodyear® 315/80R22.50 radials, 20 ply G289 WHA tread, rated for 20,400 lb maximum axle load and 68 mph maximum speed.</p>
0019575	Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot	<p>The tires will be mounted on Alcoa 22.50" x 9.00" polished aluminum disc wheels with a ten (10) stud, 11.25" bolt circle.</p>

0530461	Axle, Rear, Meritor RS30-185, 31,000 lb, Saber/Enforcer	REAR AXLE The rear axle will be a Meritor™, Model RS-30-185, with a capacity of 31,000 lb.
0544244	Top Speed of Vehicle, 60 MPH/96 KPH	TOP SPEED OF VEHICLE A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 60 mph/96KPH.
0555352	Suspen, Rear, Hendrickson FMX 312 EX, Air Ride, 31,000 lb	REAR SUSPENSION Rear suspension will be a Hendrickson FMX 312 EX, air ride with a ground rating of 31,000 lb. The suspension will have the following features: Heavy-duty shock absorbers to protect air springs from overextension Heavy-duty torque rods and bushings Premium, heavy-duty rubber bushings require no lubrication Integrated stabilizer design results in greater stability Low spring rate air springs for excellent ride quality Dual height control valves to maintain level vehicle from side to side
0000485	Oil Seals, Rear Axle	REAR OIL SEALS Oil seals will be provided on the rear axle(s).
0585004	Tires, Rear, Goodyear, G289 WHA, 315/80R22.50, 20 ply, Single	REAR TIRES Rear tires will be four (4) Goodyear 315/80R22.50 radials with 20 ply G289 WHA tread, rated for 36,360 lb maximum axle load and 68 mph maximum speed.
0641529	Wheels, Rear, Accuride, 22.50" x 9.00", Aluminum, Hub Pilot, Single	The tires will be mounted on Accuride® 22.50" x 9.00" polished aluminum disc wheels with a ten (10) stud, 11.25" bolt circle.
0568081	Tire Balancing, Counteract Beads	TIRE BALANCE All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.
0620570	Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	TIRE PRESSURE MANAGEMENT There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of eight (8) tires. The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi. Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.
0003245	Axle Hub Covers w/center hole, S/S, Front Axle	FRONT HUB COVERS Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.
0003246	Axle Hub Covers w/center hole, S/S, Tiller Axle	HUB COVERS (Tiller Axle) Stainless steel hub covers will be provided on the tiller trailer axle. An oil level viewing window will be provided.
0012045	Mud Flap, Rear, Pierce Logo	MUD FLAPS Mud flaps with a Pierce logo will be installed behind the rear wheels.
0020257	Mud Flap, Tiller Trailer, Pierce Logo	MUD FLAPS Mud flaps will be installed behind the tiller trailer wheels of the apparatus.
0601010	Chocks, Wheel, SAC-44-E, Folding, Aerials	WHEEL CHOCKS There will be two (2) pairs of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.
0690999	Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal, Angle Mount	Wheel Chock Brackets There will be two (2) pairs of Ziamatic SQCH-44-H horizontal mounting wheel chock brackets provided for the Ziamatic SAC-44-E folding wheel chocks. The brackets will be mounted one pair under D7 and the other pair shipped loose. The brackets will be mounted on an angle, with the "stop" down and opening up.

0822289	ABS/ATC Wabco Brake System, Single Axle, Tiller, NFPA 1900/ULC	ANTI-LOCK BRAKE SYSTEM The vehicle will be equipped with a Wabco tractor 4S4M and tiller tractor 2S2M anti-lock braking system. The ABS will provide a four (4) channel anti-lock braking control on both the front, rear tractor axle, and a two (2) channel system on the tiller axle. It will be a digitally controlled system that utilizes microprocessor technology to control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control. Automatic Traction Control An anti-slip feature will be included with the ABS. The Automatic Traction Control will be used for traction in poor road and weather conditions. The Automatic Traction Control will act as an electronic differential lock which will not allow a driving wheel to spin, thereby supplying traction at all times. The ABS electronic control unit (ECU) will work with the engine ECU, sharing information concerning wheel slip. Engine ECU will use information to control engine speed, allowing only as much throttle application as required for the available traction, regardless of how much the driver is asking for. An "Off-road traction" switch will be provided on the instrument panel. Activation of the switch will allow additional tire slip to let the truck climb out and get on top of deep snow or mud.
0030185	Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	BRAKES The service brake system will be full air type. The front brakes will be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance. The brake system will be certified, third party inspected, for improved stopping distance.
0803729	Brakes, Meritor, Cam, Rear, 16.50 x 8.63" No Dust Shield	The rear brakes will be Meritor™ 16.50" x 8.63" cam operated with automatic slack adjusters. Dust shields cannot be provided.
0020784	Air Compressor, Brake, Cummins/Wabco 18.7 CFM	BRAKE SYSTEM AIR COMPRESSOR The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.
0637584	Brake Reservoirs, 5,376 Cubic Inch Minimum Capacity, Saber FR/Enforcer	BRAKE SYSTEM The brake system will include: Brake treadle valve Heated automatic moisture ejector on air dryer Total air system minimum capacity of 5,376 cubic inches Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi Spring set parking brake system Parking brake operated by a push-pull style control valve A parking "brake on" indicator light on instrument panel Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) 1/4 turn drain valves on each air tank The air tank will be primed and painted to meet a minimum 750 hour salt spray test. The air tanks will be painted gloss black #101. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	BRAKE SYSTEM AIR DRYER The air dryer will be WABCO System Saver 1200 with spin-on coalescing filter cartridge and 100 watt heater.
0000790	Brake Lines, Nylon	BRAKE LINES Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.
0813346	Inlet/Outlet, Air, w/Disconnect Fitting, 1/4 Turn Valve, Location	AIR INLET/OUTLET One (1) air inlet/outlet will be installed with the female coupling located in the driver side lower step well of cab. This system will tie into the "wet" tank of the brake system and include a check valve in the inlet line and an 85 psi pressure protection valve in the outlet line. The air outlet will be controlled by a 1/4 turn valve. A mating male fitting will be provided with the loose equipment. The air inlet will allow a shoreline air hose to be connected to the vehicle. This will allow station air to be supplied to the brake system of the vehicle to insure constant air pressure.

0643363	Outlet, Air, with Shut Off Valve, Location	AIR OUTLET Two (2) air outlets will be installed with a female coupling located below D6 and P7 just rear of the stabilizer pads with dust covers. This system will tie into the "wet" tank of the brake system, include an 85 psi pressure protection valve in the outlet line to prevent the brake system from losing all air, and include a quarter turn shut off valve mounted at the tank. The valve and hoses will be mounted to the tank as high as possible to ensure maximum clearance and protect the lines from being damaged by brush and rocks during off-road operations.
0070810	All Wheel Lockup (Aerial/Tanker Chassis)	ALL WHEEL LOCK-UP An additional all wheel lock-up system will be installed which applies air to the front brakes only. The standard spring brake control valve system will be used for the rear.
0797636	Air Tanks, Special Location, Tiller	AIR TANK, SPECIAL LOCATION Due to space constraints, one (1) air tanks will be located relocate standard chassis air tanks due to full depth reservoir compartment.
0607839	Fittings, Compression Type, Entire Apparatus, Single Axle Tiller	COMPRESSION FITTINGS ONLY Any nylon hose on the apparatus that is pneumatic will be plumbed with compression type fittings where applicable.
0808497	Engine, Cummins X15, 565 hp, 1850 lb-ft, W/OBD, EPA 2027, Enforcer	ENGINE The chassis will be powered by an electronically controlled engine as described below: Make: Cummins® Model: X15 Power: 565 hp at 1700 rpm Torque: 1850 lb-ft at 1150 rpm Governed Speed: 2100 rpm Emissions Level: EPA 2027 Fuel: Diesel Cylinders: Six (6) Displacement: 912 cubic inches (14.9L) Starter: Delco 39MT+™ Fuel Filters: Frame mounted spin-on style filter from Cummins®. The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected. The engine will be filled with FA-4 10W30 oil as required by Cummins.
0000000	STF Engine Contingency Adjustment	
0730808	Filters, Remote Mounted, Oil, Fuel, X15, VEL/AXT/Enf	REMOTE MOUNTED ENGINE FILTERS The engine fuel and oil filters will be remote mounted for ease of maintenance.
0001244	High Idle w/Electronic Engine, Custom	HIGH IDLE A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation. The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."

0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine	<p>ENGINE BRAKE</p> <p>A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.</p> <p>The driver will be able to turn the engine brake system on/off and have a high, medium and low setting.</p> <p>The engine brake will activate when the system is on and the throttle is released.</p> <p>The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.</p> <p>The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.</p> <p>The ABS system will automatically disengage the auxiliary braking device, when required.</p>
0552334	Clutch, Fan, Air Actuated, Horton Drive Master	<p>CLUTCH FAN</p> <p>A Horton® fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and fully engaged in "Pump" position.</p>
0657451	Heater, 1500 Watt Immersion, Thermostatically Controlled, Shoreline	<p>ENGINE HEATER</p> <p>A 1,500 watt, 120 volt, immersion type engine heater will be installed. The AC power inlet will be connected to the shoreline. The heater is thermostatically controlled.</p>
0644573	Air Intake, Water & Ember Screen, Saber FR/Enforcer	<p>ENGINE AIR INTAKE</p> <p>The engine air intake will be located above the engine cooling package. It will draw fresh air from the front of the apparatus through the radiator grille.</p> <p>The ember separator is designed to prevent road dirt and recirculating hot air from entering the engine.</p> <p>The ember separator will be easily accessible by tilting the cab.</p>
0814375	Exhaust System, Horizontal, Right Side	<p>EXHAUST SYSTEM</p> <p>The exhaust system will be stainless steel from the turbo to the engine's aftertreatment device. The exhaust system will include an aftertreatment device to meet current EPA standards. An insulation wrap will be provided on all exhaust pipe between the turbo and the aftertreatment device to minimize the transfer of heat to the cab.</p> <p>The exhaust will terminate horizontally ahead of the right side rear wheels and will be flush with the body rub rail. The exhaust pipes will be aluminized steel.</p> <p>There will be an aluminized steel exhaust diffuser with a standard straight tip on the end provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.</p>
0816172	Adapter, Exhaust, Plymovent Bladder, for 6" or 7" Diffuser Outlet	<p>EXHAUST MODIFICATION</p> <p>An adapter for the Plymovent bladder exhaust extraction system will be provided on the end of the tail pipe.</p>
0829493	Radiator, Enforcer X15	<p>RADIATOR</p> <p>The radiator and the complete cooling system will meet or exceed the current edition of applicable NFPA and engine manufacturer cooling system standards.</p> <p>For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes.</p> <p>The radiator core will have a minimum front area of 1060 square inches.</p> <p>The radiator will be compatible with commercial antifreeze solutions.</p> <p>The radiator assembly will be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.</p> <p>The radiator will include a de-aeration/expansion tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap.</p> <p>A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.</p> <p>Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.</p>
0001090	Cooling Hoses, Rubber	<p>COOLANT LINES</p> <p>Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.</p> <p>Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.</p>

0565944	Fuel Tank, 50 Gallon, Left Side Rear Fill, Tractor Chassis, Sgl Axle	FUEL TANK A 50 gallon fuel tank will be provided and mounted at rear of chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps. A .75" drain plug will be provided in a low point of the tank for drainage. A fill inlet will be located on the left hand side rear of the chassis on the vertical portion of the fender skirting area. The inlet will be covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only". A .50" diameter vent will be provided running from top of tank to just below fuel fill inlet. The tank will meet all FHWA 393.67 requirements, including a fill capacity of 95 percent of tank volume.
0001129	Lines, Fuel	All fuel lines will be provided as recommended by the engine manufacturer.
0763582	DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle, Tiller	DIESEL EXHAUST FLUID TANK A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body forward of the rear axle. A 0.50" drain plug will be provided in a low point of the tank for drainage. A fill inlet will be located on the driver's side of the body and be covered with a hinged polished stainless steel door that is marked "Diesel Exhaust Fluid Only". The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing. The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.
0723716	Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	FUEL PRIMING PUMP A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.
0582243	Shutoff Valves, Fuel Line @ Primary Filter, Cummins	FUEL SHUTOFF A fuel line shutoff valve will be installed on both the inlet and outlet of the primary fuel filter.
0553019	Cooler, Engine Fuel, Imp/Vel, SFR/Enf	FUEL COOLER An air to fuel cooler will be installed in the engine fuel return line.
0578959	Fuel/Water Separator, Racor Inline	FUEL SEPARATOR The engine will be equipped with a Racor in-line spin-on fuel and water separator in addition to the engine fuel filters.
0887546	Trans, Allison 6th Gen, 4000 EVS P, w/Prognostics, Imp/Vel/SFR/Enf	TRANSMISSION An Allison 6th generation, Model EVS 4000P, electronic, torque converting, automatic transmission will be provided. The transmission will be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display will indicate when service is due. Two (2) PTO openings will be located on left side and top of converter housing (positions 8 o'clock and 1 o'clock). A transmission temperature gauge with an amber light and buzzer will be installed on the cab instrument panel.
0625331	Transmission, Shifter, 6-Spd, Push Button, 4000 EVS	TRANSMISSION SHIFTER A six (6)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation. The transmission ratio will be: 1st 3.51 to 1.00 2nd 1.91 to 1.00 3rd 1.43 to 1.00 4th 1.00 to 1.00 5th 0.75 to 1.00 6th 0.64 to 1.00 R 4.80 to 1.00
0684459	Transmission Oil Cooler, Modine, External	TRANSMISSION COOLER A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.

0522824	Mode, Downshift, Aggressive downshift to 3rd, w/engine brake, 6 speed	DOWNSHIFT MODE (w/engine brake) The transmission will be provided with an aggressive downshift mode. This will provide earlier transmission downshifts to 3rd gear from 6th gear, resulting in improved engine braking performance.
0801876	Fluid, 4000 Series Trans, Allison Approved TES-668 Synthetic, IPOS, Custom	TRANSMISSION FLUID The transmission will be provided with TranSynd, or other Allison approved TES-668 heavy duty synthetic transmission fluid.
0001375	Driveline, Spicer 1810	DRIVELINE Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1810 universal joints. The shafts will be dynamically balanced before installation. A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.
0669988	Steering, Sheppard M110 w/Tilt, TAK-4, Eaton Pump, w/Cooler	STEERING Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and an Eaton, Model VN20, hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings. A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.
0605356	Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer	STEERING WHEEL The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.
0550144	Logo/Emblem, on Horn Button	LOGO AND CUSTOMER DESIGNATION ON HORN BUTTON The steering wheel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row. The first row of text will be: EVERYBODY The second row of text will be: GOES The third row of text will be: HOME
0606186	Bumper, Non-Extended, Saber FR/Enforcer	BUMPER A one (1) piece, ten (10) gauge 304-2B polished stainless steel bumper, minimum of 10.00" high, will be attached to the front of the chassis frame. A 9.00" formed steel channel will be mounted directly behind bumper for additional strength. Gravel Pan A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face.
0822502	Lift & Tow Package, Non-Extended Bumper, SFR/Enforcer	LIFT AND TOW MOUNTS Mounted to the frame extension will be lift and tow mounts. The lift and tow mounts will be designed and positioned to adapt to certain tow truck lift systems. The lift and tow mounts with eyes will be painted the same color as the frame.
0522573	Tow Hooks Not Required, Due to Lift and Tow Package	TOW HOOKS No tow hooks are to be provided. This truck will be equipped with a lift and tow package with integral tow eyes.

0625650	Cab, Enforcer, 7000	<p>CAB</p> <p>The Enforcer cab will be designed specifically for the fire service and manufactured by the chassis builder.</p> <p>The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.</p> <p>For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards.</p> <p>The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.</p> <p>The front of the cab will be constructed of a 0.13" firewall plate, covered with a minimum 0.090" front skin thickness, and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.</p> <p>The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.375" thick cross-floor support providing a total thickness of 0.50" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.</p> <p>The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability.</p> <p>The centerline of front axle to the rear of the cab will be 70.00" long.</p> <p>The overall height (from the cab roof to the ground) of approximately 99.00". The overall height listed will be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed.</p> <p>The floor to ceiling height inside the crew cab will be 54.50" in the center and outboard positions.</p> <p>The crew cab floor will measure 46.00" from the rear wall to the back side of the rear facing seat risers.</p> <p>The medium block engine tunnel, at the rearward highest point (knee level), will measure 61.50" to the rear wall. The big block engine tunnel will measure between 45.00" and 51.50" to the rear wall, depending on the engine.</p> <p>The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.</p> <p>The cab will be a full tilt cab style.</p> <p>A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.</p> <p>CAB ROOF DRIP RAIL</p> <p>For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof.</p> <p>FENDER LINERS</p> <p>Full circular inner fender liners in the wheel wells will be provided.</p> <p>PANORAMIC WINDSHIELD</p> <p>A one (1)-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.</p> <p>WINDSHIELD WIPERS</p> <p>Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements.</p> <p>The washer reservoir will be able to be filled without raising the cab.</p>
0727969	Engine Tunnel, X15, Foil Insulation w/Mech Fasteners, Enforcer	<p>ENGINE TUNNEL</p> <p>Engine tunnel side walls will be constructed of 0.375" aluminum. The top will be constructed of 0.125" aluminum and will be tapered at the top to allow for more driver and passenger elbow room.</p> <p>The engine tunnel will be insulated for protection from heat and sound. Perforated foil faced insulation will be over a 1.00" thick closed cell foam affixed with pressure sensitive adhesive and further secured with mechanical fasteners. Thermal rating for this insulation will be -40 degrees Fahrenheit to 300 degrees Fahrenheit. The noise insulation keeps the dBA level within the limits stated in the current edition of applicable NFPA standards.</p> <p>The engine tunnel will be no higher than 18.00" off the crew cab floor.</p>
0887601	Cab Insulation, Enforcer/Saber FR	<p>INTERIOR CAB INSULATION</p> <p>The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, a minimum of 1.00" insulation in the crew cab floor, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.</p>

0633594	Rear Wall, Interior, Adjustable Seating	INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING) The interior rear wall of the crew cab will have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats will be adjustable with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change.
0632103	Rear Wall, Exterior, Cab, Saber FR/Enforcer	CAB REAR WALL EXTERIOR COVERING The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.
0639726	Cab Lift, Elec/Hyd, Manual Override, Unlocked Ind Light, Saber FR/Enforcer	CAB LIFT A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves. Hydraulic pump will have a manual override for backup in the event of electrical failure. Lift controls will be located on the right side pump panel or front area of the body in a convenient location. A "cab unlocked" indicator light will be located at the controls that will indicate when the cab is not in the locked position for safe road travel. The cab will be capable of tilting 43 degrees to accommodate engine maintenance and removal. The cab will be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system will be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms will return to the normally closed and locked position. The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position. For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered. Cab Lift Interlock The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.
0751131	Grille, Bright Finished, Painted Mesh Screen, Front of Cab, Enforcer	GRILLE An aluminum mesh grille screen, inserted behind a bright finished grille surround, will be provided on the front center of the cab. The mesh screen will be painted black #101.
0002224	Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	DOOR JAMB SCUFFPLATES All cab door jambs will be furnished with a 1.00" polished stainless steel scuffplate, mounted on the striker side of the jamb.
0620047	Scuffplates, S/S Corner Guard, Polished, Rear Cab Corners, 2"	SCUFFPLATES, REAR CAB CORNER GUARDS Both rear cab corners will be furnished with a full height, polished stainless steel corner guard scuffplate. The guard will extend 2.00" from the corner to protect paint from damage when pulling items (such as booster hose) around the cab.
0647932	Not Required, Trim, S/S Band, Across Cab Face, AXT/Saber/Enforcer	
0015440	No Chrome Molding, On side of cab	
0521669	Mirrors, Retractable, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	MIRRORS A Retractable, Model 613423, dual vision, motorized, west coast style mirror, with chrome finish, will be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass will be heated and adjustable with remote control within reach of the driver.
0072189	Mirror, 8.00" Convex, Cab Front, Front Cross View	FRONT CROSS VIEW MIRROR An 8.00" diameter convex mirror will be provided over the officer's side front corner of the cab. The mirror will provide the driver with a view of the front bumper and the area several feet in front of the truck. The mirror housing, tubing, clamps, and hardware will be constructed of corrosion resistant stainless steel.

0648171	Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Level Roof	<p>DOORS</p> <p>To enhance entry and egress to the cab, the forward cab door openings will be a minimum of 37.50" wide x 63.37" high. The crew cab doors will be located on the sides of the cab and will be constructed in the same manner as the forward cab doors. The crew cab door openings will be a minimum of 34.30" wide x 63.37" high.</p> <p>The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins will be constructed from 0.090" aluminum. A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The finish of the door handle will be chrome/black. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands.</p> <p>Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.</p> <p>The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed.</p> <p>A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.</p> <p>A chrome handle will be provided on the inside of each cab door for ease of entry.</p> <p>A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted.</p> <p>The bottom cab step at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.</p>
0655543	Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	<p>Door Panels</p> <p>The inner cab door panels will be constructed out of brushed stainless steel.</p>
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	<p>ELECTRIC OPERATED CAB DOOR WINDOWS</p> <p>All four (4) cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door. The driver's door will have four (4) switches, one (1) to control each door window.</p> <p>Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second.</p>
0528251	Electric Door Locks, Cab Doors, QXS, AXT, Sab, Enf	<p>ELECTRIC CAB DOOR LOCKS</p> <p>The front driver and officer doors will have a door lock master switch that will control all front and rear crew cab door locks. Each rear crew cab door will have its own lock control.</p> <p>There will be one (1) concealed switch located in an easily accessible chassis specific location that will unlock all the doors.</p>
0528263	Key Pad, Electric Door locks, DS & PS, QXS, AXT, Sab, Enf	<p>KEY PAD FOR ELECTRIC DOOR LOCKS</p> <p>For improved convenience, the cab door locks will include a Trimark keypad entry system to provide complete keyless entry to the cab. There will be two (2) keypads provided, located one (1) each side of the cab behind the front cab doors. The keypads will include visual and audio feedback to confirm activation and acknowledge correct entry code. For enhanced night time use, the keypads will be lighted. For increased security, the system will allow over 3,000 possible code combinations.</p>
0633615	Steps, 4-Door Cab, Reduced Bottom Step, Saber FR/Enforcer	<p>CAB STEPS</p> <p>The forward cab and crew cab access steps will be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps will be designed with a grip pattern punched into bright aluminum treadplate material to provide support, slip resistance, and drainage. The bottom steps will be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps will be a minimum 25.00" wide, and the crew cab steps will be 21.65" wide with an 8.00" minimum depth. The inside cab steps will not exceed 16.50" in height.</p> <p>The vertical surfaces of the step well will be aluminum treadplate.</p>
0770194	Handrail, Exterior, Knurled, Alum, 4-Door Cab	<p>CAB EXTERIOR HANDRAILS</p> <p>A 1.25" diameter slip-resistant, knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress.</p>

0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	<p>STEP LIGHTS</p> <p>There will be six (6) white LED step lights with chrome housing installed for cab and crew cab access steps.</p> <p>One (1) light for the left side cab access steps.</p> <p>Two (2) lights for the left side crew cab access steps.</p> <p>Two (2) lights for the right side crew cab access steps.</p> <p>One (1) light for the right side cab access step.</p> <p>In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.</p> <p>The lights will be activated when the battery switch is on and the adjacent door is opened.</p>
0583698	Fenders, S/S on cab, Extra Wide, Saber/Enf	<p>FENDER CROWNS</p> <p>Stainless steel fender crowns will be installed at the cab wheel openings.</p>
0825060	Tractor 5th Wheel and Fenders, Single	<p>FIFTH WHEEL</p> <p>The fifth wheel will be designed to allow the tiller trailer to pivot fore and aft and be rotated. The fifth wheel will also be capable of full operation up to a 14 degree break over angle.</p> <p>A fill and a gauge port will be provided on the top of the trailer goose neck for maintenance.</p> <p>LOCKOUT</p> <p>A fifth wheel lockout system will be provided to limit motion during aerial operations.</p> <p>The fifth wheel lockout system, when activated, will prevent movement between the upper and lower plates of the fifth wheel assembly.</p> <p>In the normal road travel condition, the cylinder mounted solenoid valves will be open and will allow transfer of oil between the front and rear pair of cylinders.</p> <p>When the stabilizers are in their proper supporting position and as the aerial leaves the boom support, the solenoid valves will close.</p> <p>The closed valves will allow no oil to be transferred and the fifth wheel assembly will become rigid.</p> <p>There will be a cylinder lockout indicator located in the cab.</p> <p>FENDER PANELS</p> <p>The chassis behind the cab will be assembled with fender panels over the wheels.</p> <p>The fender panels will be fabricated of 0.125"-5052 aluminum with a 38,000 psi tensile strength.</p> <p>Fender design will be provided for prevention of rust pockets and ease of maintenance.</p> <p>FENDER CROWNS</p> <p>Stainless steel fender crowns will be provided around the rear wheel openings.</p> <p>A rubber welting will be provided between the body and the crown to seal the seam and restrict moisture from entering.</p> <p>A dielectric barrier will be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.</p> <p>WALKWAY</p> <p>The area over the frame rails between the cab and fifth wheel will be covered with aluminum treadplate to serve as a walkway area.</p> <p>The walkway area will be properly reinforced with a steel substructure attached to the frame rails.</p> <p>RUNNING BOARDS</p> <p>Running boards will be installed on each side directly behind the cab for access to the walkway area behind the cab and the turntable.</p> <p>The running boards will be covered with aluminum treadplate.</p>
0042105	No Windows, Side of Crew Cab	
0813747	Compt, 16.50 W x 28 H x 15 D, Ea Side C/C, Dbl Pan, 2.5" Blw, 70" SFR/Enf	<p>STORAGE COMPARTMENTS</p> <p>Provided on each side of the cab, to the rear of the crew cab access doors, will be a storage compartment.</p> <p>The compartments will be 16.50" wide x 28.00" high x 15.00" deep. The floor of each compartment will extend 2.50" below the cab. The exterior of the compartments that extend below the cab will be covered with aluminum treadplate.</p> <p>There will be two (2) reverse hinged double pan doors painted to match the cab exterior with a non-locking D-Ring latch, one (1) on each side of the cab. A pneumatic stay arm for each exterior door will be provided as a door stop. The clear door openings will be 10.25" wide x 22.50" high. The compartment interior will be painted to match the cab interior.</p> <p>Compartment Light</p> <p>There will be two (2) white LED strip lights provided, one (1) each hinged side of compartment door openings.</p>
0594943	Inclinometer, In Cab, Location	<p>INCLINOMETER</p> <p>There will be one (1) inclinometer(s) provided to indicate the degree of elevation of the apparatus.</p> <p>The inclinometer(s) will be located inside the cab Side of HVAC enclosure, facing the driver.</p>
0619947	Lip, Dash Board, 1.00" Aluminum Angle Lip, Officer Side	<p>EQUIPMENT MOUNTING AREA</p> <p>There will be an aluminum angle with a 1.00" lip installed on the dash to prevent items from sliding off the dash panel.</p> <p>The angle will run full length across the front, flat portion of the dashboard closest to the officer.</p> <p>The lip will be painted to match the cab interior.</p>

0809595	Arm Rest, Side of Engine Tunnel, Each	ARM REST ON SIDE OF ENGINE TUNNEL There will be two (2) padded arm rest(s) provided on the side of the engine tunnel, One (1) LS and One (1) RS of Engine Tunnel. The arm rest padding will match the seat upholstery.
0894089	Dash, Heavy Duty Metal, Enforcer	CAB DASH The driver side dash, switch panel located to the right of the driver, and center console will be constructed of metal and painted to match the cab interior. The officer side dash will be a flat top design with an upper beveled edge to provide easy maintenance and will be constructed out of aluminum and painted to match the cab interior. The instrument gauge cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument gauge cluster.
0634206	Mounting Provisions, 1/4" Alum, Full Engine Tunnel, Saber FR/Enforcer	MOUNTING PLATE ON ENGINE TUNNEL Equipment installation provisions will be installed on the engine tunnel. A 0.25" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel 1.00" to allow for wire routing below the plate. The mounting surface will be painted to match the cab interior.
0606278	Tray, Equipment Mounting, Aluminum, Lip, Size	EQUIPMENT MOUNTING TRAY(S) There will be one (1) tray(s) for mounting of equipment located on the mounting plate next to the officer, allow room on passenger side for arm rest, match 28976. Each tray will have a 1.00" lip on four (4) sides. The size of the tray(s) will be 13"Wx22"Lx1"D. Each tray will be fabricated from aluminum and will be painted to match the cab interior. Tray not intended for storage of loose equipment. Items stored on tray will be permanently attached to meet current edition of applicable NFPA standards.
0750824	Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	CAB INTERIOR The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service. The engine tunnel will be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew. For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum. The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on an aluminum sheet and securely fastened to interior cab ceiling. The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs. All wiring will be placed in metal raceways. CAB INTERIOR UPHOLSTERY The cab interior upholstery will be 36 oz black vinyl.
0753903	Cab Interior, Paint Color, Saber FR/Enforcer	CAB INTERIOR PAINT The cab interior metal surfaces, excluding the rear heater panels, will be painted black, vinyl texture paint. The rear heater panels will be painted black, vinyl textured paint.
0052100	Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	CAB FLOOR The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler. The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.

0722038	HVAC, Heavy-Duty, Enforcer, w/X15, CARE	<p>DEFROST/AIR CONDITIONING SYSTEM A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.</p> <p>Cab Defroster A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following: One (1) adjustable outlet directed towards the left side cab window. One (1) adjustable outlet directed towards the right side cab window. Six (6) fixed outlets directed at the windshield. The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.</p> <p>Cab/Crew Auxiliary Heater There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat riser with a dual scroll blower. An aluminum plenum incorporated into the cab structure to be used to transfer heat to the forward positions.</p> <p>Air Conditioning A 19.10 cubic inch compressor will be installed on the engine. A roof-mounted condenser with a 78,000 BTU output at 2,400 SCFM that meets and exceeds the performance specification will be installed on the cab roof. The condenser cover to be painted to match the cab roof. The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes. The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours. The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel. The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab. The rear plenum will be covered with a metal cover painted to match the cab interior. The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications. Adjustable air outlets will be strategically located on the forward plenum cover per the following: Four (4) outlets directed towards the seating position on the left side of the cab. Four (4) outlets directed towards the seating position on the right side of the cab. Adjustable air outlets will be strategically located on the evaporator cover per the following: Minimum of five (5) outlets directed towards crew cab area. A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be secured with four (4) screws. The air conditioner refrigerant will be R-134A and will be installed by a certified technician.</p> <p>Climate Control An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control. The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature. The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position. The system controller will be located within panel position #12.</p> <p>Gravity Drain Tubes Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.</p>
0639675	Sun Visor, Smoked Lexan, AXT, Imp/Vel, SFR/Enf	<p>SUN VISORS Two (2) smoked Lexan™ sun visors will be provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab. There will be a black plastic thumb latch provided to help secure each sun visor in the stowed position.</p>
0634328	Grab Handles, Driver and Officer Door Posts, SFR/Enf	<p>GRAB HANDLES A black rubber covered grab handle will be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles will be securely mounted to the post area between the door and windshield.</p>
0583938	Lights, Engine Compt, Custom, Auto Sw, W/in 3SC0CDCR, 3" LED, Trim	<p>ENGINE COMPARTMENT LIGHTS There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination. These light(s) will be activated automatically when the cab is raised.</p>

0631830	Fluid Check Access, Saber FR/Enforcer, Arrow XT	ACCESS TO ENGINE DIPSTICKS For access to the engine oil and transmission fluid dipsticks, there will be a door on the engine tunnel, inside the crew cab. The door will be on the rear wall of the engine tunnel, on the vertical surface. The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling. The door will have a rubber seal for thermal and acoustic insulation. One (1) flush lift and turn latch will be provided on the access door.
0599959	Straps, Velcro, Map Box, Custom Chassis	VELCRO STRAP(S) FOR MAP BOX There will be one (1) Velcro® strap(s) installed at final inspection.
0770893	Mounting Bracket, Map Box, Leveling	MAP BOX MOUNTING BRACKET A bracket will be provided under the map box to keep it level on the engine tunnel.
0013560	Map box, 5 bin/30 Deg Slant, AXT, Imp/Vel, SFR/Enf	MAP BOX A map box with five (5) bins, open at the top, will be installed RS EMS cabinet On exterior inboard side wall of cabinet (Match Job # 35932) with each bin being 12.50" wide x 2.25" high x 12.00" deep. Each bin will slant 30 degrees from horizontal. The map box will be constructed of .125" aluminum and will be painted to match the cab interior.
0558014	Storage Pockets, Nylon Netting for Safety Vests	STORAGE POCKET There will be two (2) storage pockets provided for safety vests. Each pocket will be designed to accommodate one (1) safety vest. The storage pockets will be located under the forward facing rear seats, one per side. Mount the netting on the actual seat riser not the bottom of the seat cushion.. The pockets will be constructed of black nylon netting. The storage pocket will be approximately 9.00" wide x 13.00" high closed and 13.00" wide when opened.
0583039	Not Required, Side Roll and Frontal Impact Protection	
0622617	Seating Capacity, 6 Belted Seats	SEATING CAPACITY The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) will be six (6).
0636957	Seat, Driver, Pierce PSV, Air Ride, High Back, PRIMARY, SFR/Enf	DRIVER SEAT A seat will be provided in the cab for the driver. The seat design will be a cam action type, with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have an adjustable reclining back. The seat back will be a high back style with side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat will be furnished with a 3-point, shoulder type seat belt.
0632923	Seat, Officer, Pierce PSV, Air Ride, High Back, PRIMARY, SFR/Enf	OFFICER SEAT A seat will be provided in the cab for the passenger. The seat design will be a cam action type, with air suspension. The seat back will be a high back style with 9 degree fixed recline angle and side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat will be furnished with a 3-point, shoulder type seat belt.
0002517	Not Required, Radio Compartment	
0748169	SP Cabinet, Rear Facing, LS, 26.75 W x 30 H x 23 D, Ext Acc Only, SFR/Enf	REAR FACING LEFT SIDE CABINET A rear facing cabinet will be provided in the crew cab at the left side outboard position. The cabinet will be 26.75" wide x 30.00" high x 23.00" deep. The cabinet will include no adjustable shelves or trays in the cabinet interior. The cabinet will include no louvers. The cabinet will provide access only from outside the cab with one (1) reverse hinged double pan door painted to match the cab exterior with a locking D-ring latch with #751 key. The door will be located on the side of the cab over the wheelwell. A pneumatic stay arm will be provided as a door stop. The clear door opening will be 17.00" wide x 27.50" high. The exterior access will be provided with a brushed stainless steel scuffplate on the lower door frame. The cabinet will be constructed of smooth aluminum and painted to match the cab interior. Cabinet Light There will be one (1) white LED strip light installed on the right side of the exterior cabinet door opening. The lighting will be controlled by an automatic door switch.

0102783		Not Required, Seat, Rr Facing C/C, Center	
0748168	SP	Cabinet, Rear Facing, RS, 26.75 W x 30 H x 22 D, Ext Acc Only, SFR/Enf	<p>REAR FACING RIGHT SIDE CABINET</p> <p>A rear facing cabinet will be provided in the crew cab at the right side outboard position. The cabinet will be 26.75" wide x 30.00" high x 22.00" deep. The cabinet will include no adjustable shelves or trays in the cabinet interior. The cabinet will include no louvers. The cabinet will also provide access from outside the cab with one (1) reverse hinged double pan door painted to match the cab exterior with a locking D-ring latch with #751 key. A pneumatic stay arm will be provided as a door stop. The exterior clear door opening will be 17.00" wide x 27.50" high. The exterior access will be provided with a brushed stainless steel scuffplate on the lower door frame. The cabinet will be constructed of smooth aluminum, and painted to match the cab interior.</p> <p>Cabinet Light</p> <p>There will be one (1) white LED strip light installed on the left side of the exterior cabinet door opening. The lights will be controlled by an automatic door switch.</p>
0632947		Seat, Fwd Fcng C/C, LS Otbrd, Pierce PSV, SCBA, Foldup, SECONDARY, SFR/Enf	<p>FORWARD FACING DRIVER SIDE OUTBOARD SEAT</p> <p>There will be one (1) forward facing, foldup seat provided at the driver side outboard position in the crew cab. For optimal comfort, the seat will be a minimum of 15.00" from the front of the cushion to the face of the seat back and designed with EVC (elastomeric vibration control). The seat back will be an SCBA style with 90 degree back. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location. The seat will be furnished with a 3-point, shoulder type seat belt.</p>
0632657		Seat, Fwd Fcng C/C, Ctr, (1) Pierce PSV, SCBA, SECONDARY, SFR/Enf	<p>FORWARD FACING CENTER SEAT</p> <p>There will be one (1) forward facing seat provided at the center position in the crew cab. For optimal comfort, the seat will be provided with 15.00" deep foam cushion designed with EVC (elastomeric vibration control). The seat back will be an SCBA style with 90 degree back. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location. The seat will be furnished with a 3-point, shoulder type seat belt.</p>
0632875		Seat, Fwd Fcng C/C, RS Otbrd, Pierce PSV, Hi-Back, Foldup, SECONDARY, SFR/Enf	<p>FORWARD FACING PASSENGER SIDE OUTBOARD SEAT</p> <p>There will be one (1) forward facing foldup seat provided at the passenger side outboard position in the crew cab. The seat back will be a high back style with 9 degree fixed recline angle. For optimal comfort, the seat will be a minimum of 15.00" from the front of the cushion to the face of the seat back and designed with EVC (elastomeric vibration control). The seat will be furnished with a 3-point, shoulder type seat belt.</p>
0752005		Lip, Top of Interior Cabinet, All Sides	<p>LIP ON CABINET</p> <p>There will be a 1.00" lip provided around the top perimeter of the cabinet. There will NOT be anything stored on the top portion without restraints. There will be two (2) cabinets(s) provided with the lip On top of driver side and passenger side rear facing EMS compartment.</p>
0748170	SP	Cabinet, Rr Fcng, Top Eng Tnl, 38 W x 15 H x 18 D, Web, Notch, SFR/Enf	<p>REAR FACING CENTER CABINET</p> <p>A rear facing cabinet will be provided on the top rear of the engine tunnel. The cabinet will be 38.00" wide x 15.00" high x 18.00" deep. The bottom of the cabinet will taper to match the angle of the engine tunnel. The back corners of the cabinet will be notched around the gravity drains. The interior door will be web netting. The netting will be made with 1.00" wide nylon material with 2.00" openings. The nylon webbing will be permanently fastened at the bottom side of the cabinet and have 1.00" cam buckle fasteners on the opposite side to secure it. The clear door opening of the cabinet will be 35.50" wide x 12.00" high. The cabinet will include one (1) infinitely adjustable shelf with a 1.25" up-turned lip painted to match the cab interior. The cabinet will include no louvers. The cabinet will be constructed of smooth aluminum, and painted to match the cab interior.</p> <p>Cabinet Light</p> <p>There will be one (1) white LED strip light installed horizontally above the interior cabinet door opening. The lighting will be controlled by a rocker switch on the front of the cabinet.</p>
0566653		Upholstery, Seats In Cab, Turnout Tuff	<p>SEAT UPHOLSTERY</p> <p>All seat upholstery will be black Turnout Tuff material.</p>

0543991		Bracket, Air Bottle, Hands-Free II, Cab Seats	AIR BOTTLE HOLDERS All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G. There will be a quantity of two (2) SCBA brackets.
0697223	SP	Seat Mounting, Forward Facing, Moved Rearward	SPECIAL SEAT MOUNTING All forward facing seats will be mounted as far rearward as possible without having the front of the seat further back than the front of the seat riser.
0603866		Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer	SEAT BELTS All cab and tiller cab (if applicable) seating positions will have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of applicable NFPA and CAN/ULC - S515 standards. The 3-point shoulder type seat belts will include height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position. The 3-point shoulder type belts will also include the ReadyReach® D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location. Any flip up seats will include a 3-point shoulder type belts only. To ensure safe operation, the seats will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.
0817557		Helmet Storage, Provided by Fire Department, NFPA/ULC 2024	HELMET STORAGE PROVIDED BY FIRE DEPARTMENT NFPA 1900, 2024 edition, section 11.1.8.4.1 and CAN/ULC 515:2024 edition, section 5.2, requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.
0647647		Lights, Dome, FRP Dual LED 4 Lts	CAB DOME LIGHTS There will be four (4) dual LED dome lights with black bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab. The color of the LED's will be red and white. The white LED's will be controlled by the door switches and the lens switch. The color LED's will be controlled by the lens switch. All dome lights on the apparatus will be illuminated per the current edition of applicable NFPA standards per seating position.
0896451		Enhanced Software for Cab and Crew Cab Dome Lts	ENHANCED SOFTWARE FOR CAB AND CREW CAB DOME LIGHTS The cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors are closed. The dome lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.
0626097		Light, Map, Sunnex HS76*-00 Series, Swivel Joint, Clear Lens, Ceiling Mount	MAP LIGHT There will be one (1) Sunnex®, HS76*-00, halogen map light(s) with swivel joint base provided in the cab and located match 35932. Each map light will have a square base with an on/off switch. The light(s) will also be provided with a red lens. The light switch(es) will be connected directly to the battery switched power.
0804719		Handlts, (4) Streamlight, Fire Vulcan, 44451, C4 LED, Tail Lts, 12v, Orange	HAND HELD LIGHT There will be four (4) Streamlight, Fire Vulcan, Model #44451, hand lights provided with a vehicle mount with 12VDC direct wire charging rack and quick release buckle strap mounted Crew Cab, One (1) Under PS Forward Facing Seat, One (1) Under DS Forward Facing Seat, One (1) in LS3 and One (1) in RS3 final location at precon.. Each light housing will be orange in color and be provided with a C4, LED and two (2) "ultra bright blue tail light LEDs". The tail light LEDs will have a dual mode of blinking or steady.
0622803		Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	CAB INSTRUMENTATION The cab instrument panel include gauges, an LCD display, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership. Gauges The gauge panel will include the following ten (10) black faced gauges with black bezels to monitor vehicle performance: Voltmeter gauge (volts):

Low volts (11.8 VDC)
 Amber caution indicator on the information center with intermittent alarm
 Amber caution light on gauge assembly
 High volts (15.5 VDC)
 Amber caution indicator on the information center with intermittent alarm
 Amber caution light on gauge assembly
 Very low volts (11.3 VDC)
 Red warning indicator on the information center with a steady alarm
 Amber caution light on gauge assembly
 Very high volts (16.0 VDC)
 Red warning indicator on the information center with a steady alarm
 Amber caution light on gauge assembly
 Engine Tachometer (RPM)
 Speedometer MPH (Major Scale), KM/H (Minor Scale)
 Fuel level gauge (Empty - Full in fractions):
 Low fuel (1/8 full)
 Amber caution indicator on the information center with intermittent alarm
 Amber caution light on gauge assembly
 Very low fuel (1/32 full)
 Red caution indicator on the information center with steady alarm
 Amber caution light on gauge assembly
 Engine Oil pressure Gauge (PSI):
 Low oil pressure to activate engine warning lights and alarms
 Red caution indicator on the information center with steady alarm
 Amber caution light on gauge assembly
 Front Air Pressure Gauges (PSI):
 Low air pressure to activate warning lights and alarm
 Red warning indicator on the information center with a steady alarm
 Amber caution light on gauge assembly
 Rear Air Pressure Gauges (PSI):
 Low air pressure to activate warning lights and alarm
 Red warning indicator on the information center with a steady alarm
 Amber caution light on gauge assembly
 Transmission Oil Temperature Gauge (Fahrenheit):
 High transmission oil temperature activates warning lights and alarm
 Amber caution indicator on the information center with intermittent alarm
 Amber caution light on gauge assembly
 Engine Coolant Temperature Gauge (Fahrenheit):
 High engine temperature activates an engine warning light and alarms
 Amber caution indicator on the information center with intermittent alarm
 Amber caution light on gauge assembly
 Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):
 Low fluid (1/8 full)
 Amber indicator light in gauge dial
 All gauges will perform prove out at initial power-up to ensure proper performance.

Indicator Lamps

To promote safety, the following telltale indicator lamps will be located on the instrument panel in clear view of the driver. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.

The following amber telltale lamps will be present:

Low coolant
 Trac cntl (traction control) (where applicable)
 Check engine
 Check trans (check transmission)
 Aux brake overheat (Auxiliary brake overheat)
 Air rest (air restriction)
 Caution (triangle symbol)
 Water in fuel
 DPF (engine diesel particulate filter regeneration)
 Trailer ABS (where applicable)
 Wait to start (where applicable)
 HET (engine high exhaust temperature) (where applicable)
 ABS (antilock brake system)
 MIL (engine emissions system malfunction indicator lamp) (where applicable)
 Side roll fault (where applicable)
 Front air bag fault (where applicable)

The following red telltale lamps will be present:

Warning (stop sign symbol)
 Seat belt
 Parking brake
 Stop engine
 Rack down

The following green telltale lamps will be provided:

Left turn
 Right turn
 Battery on

The following blue telltale lamp will be provided:

High beam

Alarms

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.

Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.

Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

Indicator Lamp and Alarm Prove-Out

A system will be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms will perform prove-out at initial power-up to ensure proper performance.

Control Switches

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches will have backlit labels for low light applications.

Headlight/Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking and headlights. The second switch position will activate the parking lights. The third switch will activate the headlights.

Panel back lighting intensity control switch: A three (3)-position momentary rocker switch will be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times will allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.

Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will turn off and deactivate vehicle ignition. The second switch position will activate vehicle ignition and will perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position will temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position will terminate the alarm silence feature and reset function of cab alarm system.

Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

Hazard switch will be provided on the instrument panel or on the steering column.

Heater, defroster, and air conditioning control panel.

Turn signal arm: A self-canceling turn signal with high beam headlight controls will be provided.

Windshield wiper control will have high, low and intermittent modes.

Parking brake control: An air actuated push/pull park brake control valve will be provided.

Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.

High idle engagement switch: A momentary rocker switch with integral indicator lamp will be provided. The switch will activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.

"OK To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

Emergency switching will be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.

An additional "Emergency Master" button will be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.

Custom Switch Panels

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.

Diagnostic Panel

A diagnostic panel will be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist.

The diagnostic panel will include the following:

Engine diagnostic port

Transmission diagnostic port

ABS diagnostic port

Roll sensor diagnostic port

Command Zone USB diagnostic port

ABS diagnostic switch (blink codes flashed on ABS telltale indicator)

Diesel particulate filter regeneration switch (where applicable)

Diesel particulate filter regeneration inhibit switch (where applicable)

Cab LCD Display

A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel.

The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function.

The upper left section will display the outside ambient temperature.

The upper right section will display the following, along with other configuration specific information:

Odometer

Trip mileage

PTO hours

Fuel consumption

Engine hours

The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm.

The LCD will be capable of displaying multiple text messages should more than one

caution or warning condition exist.

0509511	Air Restriction Indicator, Imp/Vel, AXT, Enf MUX	AIR RESTRICTION INDICATOR A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.
0777954	SP Light, Indicator, Jackknife Warning, Wln 3S*00F*R	- There will be a Whelen Model 3S*00F*R, 3.00" diameter flashing indicator light with chrome trim in the cab in an overhead position TBD at pre-construction, that indicates jackknife position approaching the maximum allowable angle which is 60 degrees. The light(s) to include blue flashing LEDs and the warning light lens colors to be the same as the LEDs.
0683556	Light, Do Not Move Apparatus, Wln M2R Red LED	"DO NOT MOVE APPARATUS" INDICATOR A Whelen, Model M2R flashing red indicator light with a chrome bezel, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On." The same circuit that activates the Do Not Move Apparatus indicator will activate a pulsing alarm when the parking brake is released.
0509042	Messages, Open Dr/DNMT, Color Dsply,	DO NOT MOVE TRUCK MESSAGES Messages will be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged). The following messages will be displayed (where applicable): Do Not Move Truck DS Cab Door Open (Driver Side Cab Door Open) PS Cab Door Open (Passenger's Side Cab Door Open) DS Crew Cab Door Open (Driver Side Crew Cab Door Open) PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open) DS Body Door Open (Driver Side Body Door Open) PS Body Door Open (Passenger's Side Body Door Open) Rear Body Door Open DS Ladder Rack Down (Driver Side Ladder Rack Down) PS Ladder Rack Down (Passenger Side Ladder Rack Down) Deck Gun Not Stowed Lt Tower Not Stowed (Light Tower Not Stowed) Fold Tank Not Stowed (Fold-A-Tank Not Stowed) Aerial Not Stowed (Aerial Device Not Stowed) Stabilizer Not Stowed Steps Not Stowed Handrail Not Stowed Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.
0611683	Switching, Cab Instrument Lower Console & Overhead, Membrane, Enforcer WiFi MUX	SWITCH PANELS The emergency light switch panel will have a master switch for ease of use plus individual switches for selective control. Each switch panel will contain eight (8) membrane-type switches each rated for one million (1,000,000) cycles. Panels containing less than eight (8) switch assignments will include non-functioning black appliques. The built-in switch panels will be located in the lower console or overhead console of the cab. Additional switch panel(s) will be located in the overhead position(s) above the windshield or in designated locations on the lower instrument panel layout. The switches will be membrane-type and also act as an integral indicator light. For quick, visual indication the entire surface of the switch will be illuminated white whenever back lighting is activated and illuminated green whenever the switch is active. An active illuminated switch will flash when interlock requirements are not met or device is actively being load managed. For ease of use, a two (2)-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed in the center of the switch. The label will allow light to pass through the letters for ease of use in low light conditions.
0802940	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	WIPER CONTROL Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls. The control will be located on the left side of the center instrument panel.
0002565	Hourmeter, Aerial Inside Cab	HOURLMETER - AERIAL DEVICE An hourmeter for the aerial device will be provided and located within the cab display or instrument panel.
0002615	Switch, Aerial 12V Master	AERIAL MASTER There will be a master switch for the aerial operating electrical system provided.
0032828	No PTO switch req'd - w/aerial piggyback	

0834413		USB, Cab, 4, 12V DC, Dual USB Termination, Batt Dir. NFPA1900/ULC	CAB USB There will be four (4) USB terminations with a combination USB type A & C, wired to battery direct power, and provided per the following: One (1) within reach of the driver One (1) within reach of the passenger Two (2) on the rear of the engine tunnel, one (1) each side. Battery direct loads cannot be load managed.
0820911		Wiring, Spare, 15 A 12V DC 6th NFPA1900/ULC	SPARE CIRCUIT There will be six (6) pair of wires, including a positive and a negative, installed on the apparatus. The wires will have the following features: The positive wire will be connected directly to the battery switched power The negative wire will be connected to ground Wires will be capable of carrying 15 amps Power and ground will terminate match 28976 Termination will be with 15 amp, power point plug with rubber cover Wires will be protected to meet the NFPA Automotive Fire Apparatus standard The circuit(s) may be load managed when the parking brake is set.
0821191		Wiring, Spare, 20 A 12V DC, Batt Dir, 1st NFPA1900/ULC	SPARE CIRCUIT There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be capable of carrying 20 amps. Power and ground will terminate behind officer seat. Termination will be with a 10-place bus bar with screws and removable cover. Wires will be protected to meet the NFPA Automotive Fire Apparatus standard. Battery direct loads cannot be Load Managed.
0547328		Wiring, Spare, 20 A 12V DC, Switch Feature 1st	SPARE CIRCUIT There will be six (6) pair of wires, including a positive and a negative, installed on the apparatus. The wires will have the following features: The positive wire will be connected directly to the battery power. The negative wire will be connected to ground. Wires will be capable of carrying 20 amps. Power and ground will terminate One (1) LS3, One (1) RS4, Two (2) RS8 upper rear wall with a 5' coil leftover and Two (2) in LS7. Termination will be with heat shrinkable butt splicing. The circuits selected above will be controlled by a switch in the following locations: no switch location no additional switch location Wires will be protected to meet the NFPA Automotive Fire Apparatus standard. This circuit(s) may be load managed when the parking brake is set.
0772592	SP	Speakers, Panasonic, (2) Additional, Tiller Cab	ADDITIONAL RADIO SPEAKERS There will be one (1) 2 channel amplifier install in the chassis cab. There will be a volume control with on off switch installed in the tiller cab in reach of the tiller driver. There will be two (2) Panasonic radio speakers installed in the tiller cab.
0819994		Radio, Jensen, AM/FM/WB, Bluetooth	STEREO RADIO There will be one heavy duty AM/FM / Weatherband / Bluetooth stereo radio. The radio will be installed within reach of the officer. There will be 5.25" speakers installed one (1) pair of 5.25" speakers in the cab and one (1) pair of 5.25" speakers in the crew cab. The antenna will be a roof-mounted rubber antenna located in an open space, on the cab roof. The following Jensen features will be included: 180 watts max power (45W x 4); 100 watts RMS (25W x 4) Bluetooth® streaming audio (A2DP/AVRCP) Weatherband AM/FM tuner with 30 presets Audio settings (volume/bass/treble/balance/fade) Toggle switch between day and night display Daylight-readable, segmented LCD Two-wire power with non-volatile memory and clock support Low battery alert
0814201		Vehicle Information Center, 7" Color Display, Touchscreen, MUX, CL714	INFORMATION CENTER An information center employing a 7.00" diagonal touch screen color LCD display will be encased in an ABS plastic housing. The information center will have the following specifications: Operate in temperatures from -40 to 158 degrees Fahrenheit LCD optically bonded to hardened AR glass lens Five weather resistant user interface switches Grey with black accents Sunlight Readable Linux operating system Minimum of 1000nits rated display

Display can be changed to an available foreign language
A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area.

Programmed to read US Customary

General Screen Design

Where possible, background colors will be used to provide "At a Glance" vehicle information. If information provided on a screen is within acceptable limits, a green background will be used.

If a caution or warning situation arises the following will occur:

An amber background/text color will indicate a caution condition

A red background/text color will indicate a warning condition

The information center will utilize an "Alert Center" to display text messages for audible alarm tones. The text messages will be written to identify the item(s) causing the audible alarm to sound. If more than one (1) text message occurs, the messages will cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" will change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color will be shown for all alert center messages.

A label for each button will exist. The label will indicate the function for each active button for each screen. Buttons that are not utilized on specific screens will have a button label with no text or symbol.

Home/Transit Screen

This screen will display the following:

Vehicle Mitigation (if equipped)

Water Level (if the water level system includes compatible communications to the information center)

Foam Level (if the foam level system includes compatible communications to the information center)

Seat Belt Monitoring Screen

Tire Pressure Monitoring (if equipped)

Digital Speedometer

Active Alarms

On Scene Screen

This screen will display the following and will be auto activated with pump engaged (if equipped):

Battery Voltage

Fuel

Oil Pressure

Coolant Temperature

RPM

Water Level (if equipped)

Foam Level (if equipped)

Foam Concentration (if equipped)

Water Flow Rate (if equipped)

Water Used (if equipped)

Active Alarms

Virtual Buttons

There will be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels.

Page Screen

The page screen will display the following and allow the user to progress into other screens for further functionality:

Diagnostics

Faults

Listed by order of occurrence

Allows to sort by system

Interlock

Throttle Interlocks

Pump Interlocks (if equipped)

Aerial Interlocks (if equipped)

PTO Interlocks (if equipped)

Load Manager

A list of items to be load managed will be provided. The list will provide a description of the load. The lower the priority numbers the earlier the device will be shed should a low voltage condition occur.

The screen will indicate if a load has been shed (disabled) or not shed.

"At a glance" color features are utilized on this screen.

Systems

Command Zone

Module type and ID number

Module Version

Input or output number

Circuit number connected to that input or output

Status of the input or output

Power and Constant Current module diagnostic information

Foam (if equipped)

Pressure Controller (if equipped)

Generator Frequency (if equipped)

Live Data

General Truck Data

Maintenance

Engine oil and filter

Transmission oil and filter

Pump oil (if equipped)

Foam (if equipped)

Aerial (if equipped)

Setup

Clock Setup

Date & Time

12 or 24 hour format

Set time and date

Backlight
Daytime
Night time
Sensitivity
Unit Selection
Home Screen
Virtual Button Setup
On Scene Screen Setup
Configure Video Mode
Set Video Contrast
Set Video Color
Set Video Tint
Do Not Move

The screen will indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices will be indicated

Driver Side Cab Door
Passenger's Side Cab Door
Driver Side Crew Cab Door
Passenger's Side Crew Cab Door
Driver Side Body Doors
Passenger's Side Body Doors
Rear Body Door(s)
Ladder Rack (if applicable)
Deck Gun (if applicable)
Light Tower (if applicable)
Hatch Door (if applicable)
Stabilizers (if applicable)
Steps (if applicable)

Notifications

View Active Alarms

Shows a list of all active alarms including date and time of the occurrence is shown with each alarm

Silence Alarms - All alarms are silenced

Timer Screen

HVAC (if equipped)

Tire Information (if equipped)

Ascendant Set Up Confirmation (if equipped)

Button functions and button labels may change with each screen.

0816633

Collision Mitigation, HAAS Alert
(R2V), HA7

COLLISION MITIGATION

There will be a HAAS Alert®, Model HA7 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA7 cellular transponder module will be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degrees Celsius to 85 degrees Celsius.

The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground.

While responding with emergency lights on, the HA7 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app.

While on scene with emergency lights on, the HA7 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app.

The HA7 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription.

Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal.

0606247	Vehicle Data Recorder w/CZ Display Seat Belt Monitor	<p>VEHICLE DATA RECORDER</p> <p>There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.</p> <p>The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.</p> <p>The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs:</p> <ul style="list-style-type: none"> Vehicle Speed - MPH Acceleration - MPH/sec Deceleration - MPH/sec Engine Speed - RPM Engine Throttle Position - % of Full Throttle ABS Event - On/Off Seat Occupied Status - Yes/No by Position Seat Belt Buckled Status - Yes/No by Position Master Optical Warning Device Switch - On/Off <p>Internal clock syncs the time and date when a laptop is connected.</p> <p>Seat Belt Monitoring System</p> <p>A seat belt monitoring system (SBMS) will be provided on the Command Zone™ color display. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:</p> <ul style="list-style-type: none"> Seat Occupied & Buckled = Green LED indicator illuminated Seat Occupied & Unbuckled = Red LED indicator with audible alarm No Occupant & Buckled = Red LED indicator with audible alarm No Occupant & Unbuckled = No indicator and no alarm FAULT = Blue LED indicator illuminated <p>The seat belt monitoring screen will become active on the Command Zone color display when:</p> <ul style="list-style-type: none"> The home screen is active: and there is any occupant seated but not buckled or any belt buckled with an occupant. and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS will be activated. <p>The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.</p>
0816632	SP Intercom, David Clark, 8-Pos, 3-Dual Radio, (D, O, TC, RPTT), 4C, T	<p>INTERCOM SYSTEM</p> <p>An eight (8) position intercom system with dual radio interface at the driver position with two (2) Remote Push To Talk (RPTT) located SEE Switch Layout, the officer positions will be provided with two (2) RPTT located SEE Switch Layout and the Tiller cab positions will be provided with two (2) RPTT located See Switch Layout. Four (4) crew cab positions, at three (3) forward facing seats and two (2) rearward facing seats and the turntable will have intercom only.</p> <p>The following David Clark, Model U3800 components will be supplied with this system:</p> <ul style="list-style-type: none"> Two (2) U3805 Radio Cord Junction Module Three (3) U3816 Dual Radio Interface Module (Driver, officer and Tiller cab) Six (6) David Clark RPTT Switches One (1) U3800 Intercom Unit (2 forward facing Crew) One (1) C3820 Power Cable Two (2) U3802 Intercom Only Module (2 Crew) One (1) U3801 Intercom Only Module (Turntable) <p>All necessary cables and connectors</p>
0637058	David Clark Universal Radio Interfaces Included with Single/Dual System	<p>RADIO / INTERCOM INTERFACE INCLUDED</p> <p>All radio interfaced stations will have universal radio interfaces installed. The interface wiring will be routed within the cab to With Radio Equipment .</p>
0589947	Headset, David Clark, H3432 Over The Head, Flex Mic, Push On Push Off	<p>OVER THE HEAD HEADSET</p> <p>There will be five (5) over the head headset(s) provided See signed intercom drawing.</p> <p>Each David Clark, Model H3432, headset will feature:</p> <ul style="list-style-type: none"> 5' Coiled cord Noise cancelling electric microphone Flexible microphone boom rotates 200 degrees for left or right dress Microphone on/off button Comfort Gel Earseals 23 dB noise reduction
0819255	Hangers For Headsets, NFPA/ULC 2024, Each	<p>HEADSET HANGERS</p> <p>There will be five (5) headset hanger(s) installed driver's seat, officer's seat, driver's side outboard forward facing seat, passenger's side outboard forward facing seat and tiller operator seat. The hanger(s) will meet the current edition of applicable NFPA and ULC standards for equipment mounting.</p>
0835670	Install Customer Provided Key Storage/ Knox Box, Loc	<p>Key Storage Box</p> <p>There will be Two (2) Key / Knox Boxes sent to the apparatus manufacturers preferred installer and installed at TBD at Preconstruction. If wiring is required it will be included in with this option. Specific shipping requirements will be followed.</p> <p>A "technician's key" will be provided by the customer for each key storage box. The box cannot be installed without a compatible technician's key. May require a signed letter of approval.</p>

0687904	Antenna Mount, Custom Chassis, Cable Routed to Behind Officer Seat	RADIO ANTENNA MOUNT There will be six (6) standard 1.125", 18 thread antenna-mounting base(s) installed Match 35932 on the cab roof with high efficiency, low loss, coaxial cable(s) routed to behind the officer seat. A weatherproof cap will be installed on the mount.
0817058	Camera, Pierce, LS Mux, R Camera, SD, CL714	VEHICLE CAMERA SYSTEM There will be a color vehicle camera system provided with the following: One (1) Standard Definition (SD) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse. The camera images will be displayed on the left side vehicle information center display. Audio from the microphone on the rear camera will be emitted by an amplified speaker with volume control located behind the driver seat. The following components will be included: One (1) SV-CW134639CAI Camera All necessary cables
0814831	Not Required, Camera Switcher	Camera Switcher A camera switcher is not required.
0890416	Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT	ELECTRICAL POWER CONTROL SYSTEM The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible. Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership. Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA. Solid-State Control System A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic modules, electronic control modules to include a see through housing, a power indicator, a status indicator and circuit indicators located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices. The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership. For increased reliability and simplified use the control system modules will include the following attributes: Green LED indicator light for module power Red LED indicator light for network communication stability status Control system self test at activation and continually throughout vehicle operation No moving parts due to transistor logic Software logic control for NFPA mandated safety interlocks and indicators Integrated electrical system load management without additional components Integrated electrical load sequencing system without additional components Customized control software to the vehicle's configuration Factory and field programmable to accommodate changes to the vehicle's operating parameters To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications: Module circuit board will meet SAE J771 specifications Operating temperature from -40 degrees Celsius to +70 degrees Celsius Storage temperature from -40 degrees Celsius to +70 degrees Celsius Vibration to 50g IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter) Operating voltage from eight (8) volts to 32 volts DC The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical. Circuit Protection and Control Diagram Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information. On-Board Electrical System Diagnostics The on-board information center will include the following diagnostic information: Text description of active warning or caution alarms Simplified warning indicators Amber caution indication with intermittent alarm Red warning indication with steady tone alarm Advanced diagnostic feature will be provided in this control system. From the Command Zone display or connected wireless device, these features allow the user to monitor the real-time status of every input or output on the vehicle. It also allows users logged in as an administrator to force on inputs or outputs to assist the troubleshooting process.

TCU Module with WiFi

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will communicate through a black WiFi antenna allowing a line of site communication range of up to 300 feet with a roof mounted antenna.

The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone™, control and information system.

The TCU capability will record faults from the engine, transmission, ABS and Command Zone™, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data TCU will provide up to 2 Gigabytes of data storage.

The TCU will provide a means to download the TCU information and update software in the device.

Indicator Light and Alarm Prove-Out System

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.

Voltage Monitor System

A voltage monitoring system will be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system will provide visual and audible warning when the system voltage is below or above optimum levels.

The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

Dedicated Radio Equipment Connection Points

There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs will consist of the following:

12-volt 40-amp battery switched power

12-volt 60-amp ignition switched power

12-volt 60-amp direct battery power

There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

EMI/RFI Protection

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.

The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet, without exceptions, electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10KHz-1GHz to 100 Volts/Meter requirements. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself.

EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. The electrical system will be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility.

0896456

Prognostics, Electrical System

ELECTRICAL SYSTEM PROGNOSTICS

There will be a software based vehicle tool provided to predict remaining life of the vehicles critical fluid and events.

The system will send automatic indications to the Command Zone™ information center and/or wireless enabled devices to proactively alert of upcoming service intervals.

Prognostics will include the following:

Engine oil and filter

Transmission oil and filter

0816093	ClearSky Telematics, Remote Fleet & On-scene Management, AT&T Commercial	<p>TELEMATICS SYSTEM</p> <p>Your vehicle will include a cellular-based vehicle telematics system including a telematic control unit with external cellular Wi-Fi and GPS antenna. Pierce will provide access to a web-based user interface portal that will allow users to access vehicle data collected as part of the system, allow users to configure monitoring tools, provide a global view of the location of each vehicle that has the system, provide a summary of fleet data, etc. The web-based user interface portal or certain features thereof may be provided on a subscription basis.</p> <p>The telematic control unit will be fully integrated into the electrical system of the vehicle, will monitor the vehicle through the CAN data bus, and will transmit data through a secure AT&T 4G LTE cellular connection, and be provided with a 5 year subscription.</p> <p>The web-based user interface portal will provide, among other features:</p> <ul style="list-style-type: none"> User defined interval notifications User defined fault alerts Remote access to Command Zone™ diagnostics Vehicle analytics and activity monitoring Vehicle system status <p>The system is activated while building your vehicle and thereafter remains active for a 60-day grace period starting when your vehicle ships from the factory. This means that the system is active at the time of factory acceptance and during the 60-day grace period. By selecting this option, it is agreed that use of the system and the web-based user interface portal will be subject to the terms set forth in the Data Systems Agreement referenced at https://www.piercemfg.com/privacy-statement. Customers will be provided with an initial login at the time of factory acceptance to verify performance of the system and the web-based user interface portal. The term of the subscription, if any, will begin when the vehicle ships from the factory. If customers do not log into the web-based user interface portal and confirm acceptance of the terms before the 60-day grace period ends, the system will be deactivated, and no new data will be collected or retained Pierce. Reactivation can be coordinated through the customer's authorized Pierce Dealer.</p>
0624253	Electrical System, Enforcer MUX	<p>ELECTRICAL</p> <p>All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.</p> <p>Electrical wiring and equipment will be installed utilizing the following guidelines:</p> <p>All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.</p> <p>Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.</p> <p>Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.</p> <p>Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug).</p> <p>All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.</p> <p>All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal.</p> <p>All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.</p> <p>An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.</p> <p>The results of the tests will be recorded and provided to the purchaser at time of delivery.</p>
0079211	Batteries, (6) Stryten/Exide Grp 31, 950 CCA each, Threaded Stud	<p>BATTERY SYSTEM</p> <p>There will be six (6) 12 volt Stryten/Exide®, Model 31S950X3W, batteries that include the following features will be provided:</p> <ul style="list-style-type: none"> 950 CCA, cold cranking amps 190 amp reserve capacity High cycle Group 31 Rating of 5700 CCA at 0 degrees Fahrenheit 1140 minutes of reserve capacity Threaded stainless steel studs <p>Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity.</p> <p>The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.</p>

0008621	Battery System, Single Start, All Custom Chassis	BATTERY SYSTEM There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel. MASTER BATTERY SWITCH There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system. An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.
0002698	Battery Compartment, Saber/Enforcer	BATTERY COMPARTMENTS Batteries will be placed on non-corrosive mats and be stored in well ventilated compartments located under the cab and bolted directly to the chassis frame. The battery boxes will have reinforced sides. The battery compartments will be constructed of 0.188" steel plate and be designed to accommodate a maximum of three (3) group 31 batteries in each compartment. The battery hold-downs will be of a non-corrosive material. All bolts and nuts will be stainless steel. Heavy-duty, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound. Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound. JUMPER STUDS One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.
0816197	Charger, Sngl Sys, Kussmaul, LPC 80, 091-206-12-194C-WT-XX, 80 Amp	BATTERY CHARGER There will be a Kussmaul, Model LPC 80, part number 091-206-12-194C-WT-XX, 80 amp 12 volt DC battery charger with part number 091-194-provided. There will be a, Model 091-194X-IND-WT-XX, display indicating the state of charge provided. The color of the outside trim of this display will be red. The battery charger will be wired to the AC shoreline inlet through a splice box.
0814869	Location, Cab, Charger, Behind Driver Seat	The battery charger will be located in the cab behind the driver seat.
0813919	Panel, Charger Display, Kussmaul, Included w/ Charger	REMOTE CONTROL PANEL - BATTERY CHARGER There will be a Kussmaul™, charger display included.
0814939	Location, Cab, Ind/Remote, Driver's Seat Riser	The battery charger indicator will be located on the driver's seat riser.
0811952	Not Required, Indicator/Remote Status	
0824337	Not Required, Location Ind/Remote	
0016857	Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	AUTO EJECT FOR SHORELINE There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus. The shoreline inlet(s) will include red weatherproof flip up cover(s). There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting. The shoreline(s) will be connected to the battery charger. There will be a mating connector body supplied with the loose equipment. There will be a label installed near the inlet(s) that state the following: Line Voltage Current Rating (amps) Phase Frequency
0026800	Shoreline Location	The shoreline receptacle will be located on the driver side of cab, to the front of cab door.
0813265	Display, Kussmaul Single Bat Status Ind 091-94-12, Wired to Batteries, Comm/PMFD	BATTERY CHARGE INDICATOR There will be a Kussmaul, Model 091-94-12, battery charge indicator installed on the driver's seat riser.
0642936	Timer, Havis Chargeguard Select CG-X	12 VOLT AUTO SHUT OFF TIMER There will be a Havis, Model CG-X Chargeguard, automatic 12Vdc shut off timer located Inside the officer side MUX access door in best possible location (Match 35932) to protect 20A fuse block near the officer side dash (Match 35932) . The timer will provide 18Vdc high and 11Vdc low voltage disconnect and an adjustable shut down delay timer with a load current rating of 30 amps.

0647728		Alternator, 430 amp, Delco Remy 55SI	<p>ALTERNATOR</p> <p>A Delco Remy®, Model 55SI, alternator will be provided. It will have a rated output current of 430 amps, as measured by SAE method J56. The alternator will feature an integral regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.</p>
0658249	SP	Alarm, Buzzer Signaling System, Tiller, Special StaccatoTone, IPOS	<p>TILLER BUZZER SIGNALING SYSTEM ALARM WITH SPECIAL TONE</p> <p>The buzzer signaling system alarm provided in the tractor and tiller cab will have a staccato tone provided so as to distinguish itself from other truck alarms.</p>
0026408		Wiring, Customer Installed Radio, Battery-Direct, Ignition-Power & Ground	<p>CUSTOMER RADIO WIRING</p> <p>There will be one (1) 12 volt combination wiring leads of which each will include, one (1) battery direct, one (1) ignition and one (1) negative, for use with radio equipment. Each lead will be 18" long and be provided officer side overhead far right. The leads will be clearly marked and in a coil. A breaker rated for 20 amps will be provided for circuit protection of the battery direct powered lead with a minimum of 12 gauge wire. The ignition lead is for sensing purposes only. The wires will be colored coded as follows: Red for battery direct Yellow for ignition Black for ground</p>
0092582		Load Manager/Sequencer, MUX	<p>ELECTRONIC LOAD MANAGER</p> <p>An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system.</p> <p>For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed.</p> <p>The system will include the following features: System voltage monitoring. A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off. Sixteen available electronic load shedding levels. Priority levels can be set for individual outputs. High Idle to activate before any electric loads are shed and deactivate with the service brake. If enabled: "Load Man Hi-Idle On" will display on the information center. Hi-Idle will not activate until 30 seconds after engine start up. Individual switch "on" indicator to flash when the particular load has been shed. The information center indicates system voltage. The information center, where applicable, includes a "Load Manager" screen indicating the following: Load managed items list, with priority levels and item condition. Individual load managed item condition: ON = not shed SHED = shed</p> <p>SEQUENCER</p> <p>A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator.</p> <p>For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed.</p> <p>Emergency light sequencing will operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation.</p> <p>When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order.</p> <p>Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals: Cab Heater and Air Conditioning Crew Cab Heater (if applicable) Crew Cab Air Conditioning (if applicable) Exhaust Fans (if applicable) Third Evaporator (if applicable)</p>

0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/Enf/Imp/Sab/Vel	HEADLIGHTS There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille: the outside light on each side will contain a part number 055***1 low beam module the inside light on each side will contain a part number 055***1 high beam module the headlights to include chrome bezels The low beam lights will be activated when the headlight switch is on. The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.
0625953	Light, Directional, WIn 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts, Enf/Sab	DIRECTIONAL LIGHTS There will be two (2) Whelen 600 series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights. The color of the lenses will be clear.
0805325	Light, Directional, WIn M62T* LED, 15 Degree Angle Bracket, Additional	ADDITIONAL DIRECTIONAL LIGHT There will be two (2) Whelen®, Model M62T*, amber LED directional lights provided Rear of reservoir compartment. The lens color(s) to be the same as the LEDs. Each light will be surface mounted in a 15 degree angled bracket with chrome housing. The flash pattern of the directional lights will be Steady On (Arrow).
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	INTERMEDIATE LIGHT There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer	CAB CLEARANCE/MARKER/ID LIGHTS There will be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations: Three (3) amber LED identification lights will be installed in the center of the cab above the windshield. Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield.
0625210	Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED, AXT/Enf	FRONT CAB SIDE DIRECTIONAL LIGHTS There will be two (2) Truck-Lite®, Model 19036Y, amber LED lights installed to the outside of the chrome wrap around bezel, one (1) on each side of the cab. The lights will activate as additional directional lights with the corresponding directional circuit.
0534987	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts, Aerial	REAR CLEARANCE/MARKER/ID LIGHTING There will be three (3) Truck-Lite®, Model 33050R, LED lights used as identification lights recessed and located at the rear of the apparatus per the following: As close as practical to the vertical centerline Centers spaced not less than 6.00" or more than 12.00" apart Red in color All at the same height There will be two (2) Truck-Lite, Model 33050R, LED lights recessed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following: To indicate the overall width of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the rear All at the same height There will be two (2) Truck-Lite, Model 33050R, LED lights recessed on the side of the apparatus as marker lights as close to the rear as practical per the following: To indicate the overall length of the vehicle One (1) each side of the vertical centerline As near the top as practical Red in color To be visible from the side All at the same height There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground. There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground. Per FMVSS 108 and CMVSS 108 requirements.
0514453	Light, Marker End Outline, Rubber Arm, LED Marker Lamp	MARKER LIGHTS There will be one (1) pair of amber and red LED marker lights with rubber arm, located on the trailer in the standard location at the rear. The amber lens will face the front and the red lens will face the rear of the truck. These lights will be activated with the running lights of the vehicle.

0804519	Lights, Tail, WIn M62BTT* Red Stop/Tail & M62T* Amber Dir Arw w/Flange	REAR FMVSS LIGHTING The rear stop/tail and directional lighting will include the following: Two (2) Whelen®, Model M62BTT, 4.30" high x 6.70" wide x 1.40" deep brake/tail lights with red LEDs Two (2) Whelen, Model M62T, 4.30" high x 6.70" wide x 1.40" deep directional lights with amber LEDs. The directional lights will be set to Steady On (Arrow) flash pattern. The lens color(s) to be the same as the LEDs. The lights to include chrome trim.
0805618	Lights, Backup, WIn M62BU	There will be two (2) Whelen® Model M62BU, 4.31" high x 6.75" wide x 1.37" deep backup lights with white LEDs, clear lenses and chrome trim provided.
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	LICENSE PLATE BRACKET One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus. One (1) white LED light with chrome housing will be provided to illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.
0589905	Alarm, Back-up Warning, PRECO 1040	BACK-UP ALARM A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.
0059809	Light, Marker, Weldon, 9186-1500 LED, Location	MARKER LIGHTS There will be one (1) pair of Weldon, Model: 9186-1500-10 or 9186-1500-20, LED marker lights installed on this apparatus, one (1) light each side per the quantity selected. These lights will be activated with the headlight switch. These lights will be located on top of the trailer catwalk directly above the tiller trailer axle. These lights will be installed into the rub rail or with metal flanges to protect them from most damage. Amber lights will be used except for the rear most light at the rear of the apparatus which will be red.
0804537	Lights, Cornering, Tiller, WIn, 704BU, 2 lts	TILLER CORNERING LIGHTS There will be two (2) Whelen®, Model 704BU, 3.06" high x 7.25" wide x 1.25" deep lights with white LEDs and chrome trim installed per the following: one (1) light will be installed on the left side body in front of the trailer axle one (1) light will be installed on the right side body in front of the trailer axle The lights will be activated by the high beam function of the directional switch on the tiller cab steering column or the chassis directional light circuit.
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	CAB PERIMETER SCENE LIGHTS There will be four (4) TecNiq, Model T10-LC00-1, 15.00" lights with white LEDs and 45 degree stainless steel brackets provided per the following: one (1) under the driver's side cab access step one (1) under the passenger's side cab access step one (1) under the passenger's side crew cab access step one (1) under the driver's side crew cab access step The lights will be activated when the battery switch is on, when the respective door is open and by the same control selected for the body perimeter lights.
0760732	SP Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 4lts, Turntbl/Rr Stp, Tiller	BODY PERIMETER SCENE LIGHTS There will be four (4) TecNiq part number T10-LC00-1, 1.28" high x 15.52" long x 0.48" deep lights with white LEDs provided per the following: One (1) light under the left side turntable access steps One (1) light under the left side tiller cab access steps One (1) light under the right side tiller cab access steps One (1) light under the right side turntable access steps The lights will be activated when a switch within reach of the driver is activated and the parking brake is applied.
0552317	Lights, Perimeter, WIn 20C0CDCR	ADDITIONAL PERIMETER LIGHTS There will be eight (8) lights in addition to the standard body perimeter light(s) installed under front bumper center, D2, P3, split under P4 and P5, split under D3 and D4, split under P6 and P7, under D5 rear of the air outlet, below rear ladder access center. These additional light(s) will be Whelen, Model 20C0CDCR, 4.00" round LED light(s) with grommet(s). These additional light(s) will be controlled the same as the other perimeter lights.

0896454	Enhanced Software for Perimeter Lts	ENHANCED SOFTWARE FOR PERIMETER LIGHTS All perimeter lights will be deactivated when the parking brake is released unless alternate control is selected. The cab and crew cab perimeter lights will remain on for ten (10) seconds for improved visibility after the doors closed.
0813525	Lights, Step, P25 LED, Tiller, Control, Trim Feature	STEP LIGHTS There will be a total of sixteen (16) white LED step lights provided for access to the tiller cab and turntable. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x trim shall be chrome 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light. The step lights will be activated when parking brake is applied. The [Color, Trim]. All other steps on the apparatus will be illuminated per the current edition of applicable NFPA standards.
0690488	Lights, Side Scene, Zico ZQL-SS-LED, Stainless 2nd	SCENE LIGHTS There will be two (2) Ziamatic, Model Model ZQL-SS-LED, LED scene light(s) with stainless steel housing, installed on the side of the apparatus, P/S in the trailer axle fender well, one facing forward and one facing rear. A control for the light(s) selected above will be the following: no additional switch location no additional switch location Right Tiller Directional Switch Turn Signal - DS/PS turn Signal (cab) Matching feature value of option 550452 within bid) These lights may be load managed when the parking brake is set.
0550452	Lights, Side Scene, Zico ZQL-SS-LED, Stainless 1st	SCENE LIGHTS There will be two (2) Ziamatic, Model Model ZQL-SS-LED, LED scene light(s) with stainless steel housing, installed on the side of the apparatus, D/S in the trailer axle fender well, one facing rearward and one light facing forward. A control for the light(s) selected above will be the following: no additional switch location left cornering lights activated with tiller cab left turn signal switch no additional switch location ds/ps turn signal switch These lights may be load managed when the parking brake is set.
0666072	Lights, Tractor Scene, Wln M6ZC LED Rear of Cab 2lts	SCENE LIGHTS There will be one (1) pair of Whelen, Model M6ZC LED scene lights installed on the rear exterior wall of the tractor cab with chrome flanges. The lights will be controlled by the aerial master switch.
0776357	Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	12 VOLT LIGHTING There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC light(s) with a combination of flood and spot optics provided on the front visor, centered. The housing(s) painted parts of this light assembly to be black. The light(s) will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel. These light(s) may be load managed when the parking brake is applied.
0774948	Lights, Wln, P*H1* Pioneer, 12 VDC, 2nd	12 VOLT DC SCENE LIGHTS There will be one (1) Whelen® Model P*H1*, 8,875 lumens 12 volt DC powered lights with white LEDs and flood optics installed on the apparatus located, PS Upper Crew Cab (Match Job 35932). The light(s) to be installed in a all black 15 degree vertical recessed bracket PBH103BB. The painted parts of this light assembly to be black. The lights will be activated by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel. The light(s) may be load managed when the parking brake is applied.
0775524	Lights, Wln, P*H1* Pioneer, 12 VDC, 1st	12 VOLT DC SCENE LIGHTS There will be one (1) Whelen® Model P*H1*, 8,875 lumens 12 volt DC powered lights with white LEDs and flood optics installed on the apparatus located, DS Upper Crew Cab (Match Job 35932). The light(s) to be installed in a all black 15 degree vertical recessed bracket PBH103BB. The painted parts of this light assembly to be black. The lights will be activated by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel. The light(s) may be load managed when the parking brake is applied.

0768928	Lights, WIn, PSL2** Pioneer, 12 VDC, 2nd	12 VOLT LIGHTING There will be two (2) Whelen® Model PSL2**, 7,300 lumens 12 volt DC LED light(s) installed on the body located, One (1) As far back as possible above LS3 One (1) As Far Forward as possible above LS6. The painted parts of this light assembly to be black. The light(s) to be installed on adjustable bail bracket(s). The lights will be controlled when the battery switch is on and by the same control that has been selected for the driver's side scene light(s). The light(s) may be load managed when the parking brake is applied.
0768929	Lights, WIn, PSL2** Pioneer, 12 VDC, 1st	12 VOLT LIGHTING There will be two (2) Whelen® Model PSL2**, 7,300 lumens 12 volt DC LED light(s) installed on the body located, One (1) As far back as possible above RS4 One (1) As Far Forward as possible above RS7. The painted parts of this light assembly to be black. The light(s) to be installed on adjustable bail bracket(s). The lights will be controlled when the battery switch is on and by a switch in the tiller cab and by the same control that has been selected for the right side scene light(s). The light(s) may be load managed when the parking brake is applied.
0736743	Light, WIn, 12V PSL2** SIm Ln, 12 VDC 2nd	12 VOLT LIGHTING ON TILLER CAB There will be two (2) Whelen® Model PSL2**, 10,206 lumens 12 volt light(s) with white LEDs and flood optics. The painted parts of this light assembly to be black. The light(s) to be installed on adjustable bail bracket(s) and located on the tiller cab, PS of the tiller cab and on the catwalk above the forward portion of RS5. The light(s) will be controlled by a switch in the tiller cab. The light(s) may be load managed when the parking brake is applied.
0736755	Light, WIn, 12V PSL2** SIm Ln, 12 VDC 1st	12 VOLT LIGHTING ON TILLER CAB There will be two (2) Whelen® Model PSL2**, 10,206 lumens 12 volt light(s) with white LEDs and flood optics. The painted parts of this light assembly to be black. The light(s) to be installed on adjustable bail bracket(s) and located on the tiller cab, DS of the tiller cab and on the catwalk above the forward portion of LS4 (Match Job # 28976). The light(s) will be controlled by a switch in the tiller cab. The light(s) may be load managed when the parking brake is applied.
0889974	Light, WIn, 12V PSL2** SIm Ln, 12 VDC 3rd	12 VOLT LIGHTING ON TILLER CAB There will be one (1) Whelen® Model PSL2**, 10,206 lumens 12 volt light(s) with white LEDs and 40 degree x 20 degree flood optics. The painted parts of this light assembly to be black. The light (s) to be installed in a 15 degree vertical recessed bracket and located on the tiller cab, Back of Tiller Cab (Match Job 28976). The light(s) will be controlled by a switch at the driver's side switch panel and by a switch in the tiller cab. The light(s) may be load managed when the parking brake is applied.
0645678	Lights, Not Required, Rear Work, Alt. 120/240 Volt Lights At Rear Body	
0797313	Not Required, No Walking Surface, NFPA	
0090655	Aerial, Tiller, No Pump, Alum Body	
0554269	Body Skirt Height, 18"	
0013481	Not Required, Hose Bed Capacity	
0013534	Not Required, Running Boards	
0825621	Turntable Steps-Morton Cass, LS/RS, Tiller Single Axle	TURNTABLE STEPS Steps to access the turntable from the left and right side will be provided just behind the reservoir compartment. The bottom step will have a step height not exceeding 24.00" from the ground to the top surface of the step at any time. All steps will have a height no greater than 14.00" from top surface to top surface. The steps will be welded in place with the stepping area made of Morton Tread-Grip® channel. The stepwell will be lined with bright aluminum treadplate to act as scuffplates. A knurled aluminum handrail handrail will be provided on the forward side of the access steps.

0690023		Wall, Rear, Smooth Aluminum	SMOOTH ALUMINUM REAR WALL The rear wall will be smooth aluminum.
0029503		Tow Eyes (2), Painted Lower Job Color, Aerial	TOW EYES Two (2) rear painted tow eyes will be located at the rear of the apparatus and will be mounted directly to the torque box. The inner and outer edges of the tow eyes will be radiused. Each tow eye will be rated for 9000lb and painted to match the lower job color.
0090670		Construction, Compt, Alum, Tiller	COMPARTMENTATION Body and compartments will be fabricated of .125", 5052-H32 aluminum. Side compartments will be an integral assembly with the rear fenders. Circular fender liners will be provided for prevention of rust pockets and ease of maintenance. Compartment flooring will be of the sweep out design with the floor higher than the compartment door lip. The compartment door opening will be framed by flanging the edges in 1.75" and bending out again .75" to form an angle. Drip protection will be provided above the doors by means of bright aluminum extrusion or formed bright aluminum treadplate. The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear and outward side. These covers will have the corners welded. Side compartment covers will be separate from the compartment tops. All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury. A support system will be used which will incorporate a floating substructure by using Neoprene Elastomer isolators to allow the body to remain rigid while the chassis goes through its natural flex. The isolators will have a broad range of proven viability in vehicular applications, be of a fail safe design, and allow for all necessary movement in three (3) transitional and rotational modes. This will result in a 500 lb equipment rating for each lower compartment of the body. The compartmentation will include a 3.00" steel support assemblies which are bolted to the chassis frame rails. A steel framework will be mounted to the body above these support assemblies connected to the support assemblies with isolators. There will be one (1) support assembly mounted to each chassis frame rail. AGGRESSIVE WALKING SURFACE All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards. LOUVERS All body compartments will have a minimum of one (1) set of louvers stamped into a wall to provide the proper airflow inside the compartment and to prevent water from dripping into the compartment. These louvers will be formed into the metal and not added to the compartment as a separate plate.
0824055	SP	Compt,Single Reserv,22.5"HTop Stg Area w/Ctr Lift,Grating,F/D Ea Side,Dbl Dr.47"	TRACTOR RESERVOIR COMPARTMENT A compartment will be provided ahead of the tractor fifth wheel. The compartment on the left side will be approximately 44.00" wide x 37.75" high x 8.00" deep in the forward 10.63" of width, with the remainder of the compartment being 24.00" deep. The clear door opening will be 39.50" wide x 29.75" high. The compartment on the right side will be approximately 44.00" wide x 36.75" high x 8.00" deep in the forward 10.63" of width, with the remainder of the compartment being 24.00" deep. The clear door opening will be 39.50" wide x 28.75" high. The floor of this compartment will be raised 1.00" to allow for proper clearance from exhaust components. The transverse section will be approximately 34.38" wide x 15.50" high. There will be two (2) LED strip lights mounted on the forward wall, one each side of the apparatus to illuminate this compartment. The compartment will be fabricated out of smooth aluminum painted job color. Bright aluminum treadplate will be provided on the top of the compartment. The compartment will be furnished with a double lap door on each side that has a D handle latch and positive door hold open device. There will be an additional upper storage area provided rearward of the reservoir components. The size of this storage area will be approximately 14.00" wide x 22.50" high x 76.00" long. A lift up cover will be provided on the top. The hinge will be located towards the cab side and be located such that only the rear half of the cover opens up. A D-ring latch will be provided on each end, as well as gas shocks to hold the cover open. To illuminate this area, an Amdor Model AY-9750-040 white light will be provided running length-wise across the compartment. Hose grating will be provided on the floor of this rearward storage area.
0652578	SP	Compt, F/H, Trans Roll, Special Generator Mounting, 92.00" Wide, LS Front,Tiller	LEFT SIDE COMPARTMENTATION Left side compartmentation will consist of the following: Two (2) compartments will be provided in the front body section on the left side. Each compartment will be full-height. The forward compartment will be approximately 47.13" wide x 55.63" high x 24.50" deep with a door opening of approximately 39.00" wide x 47.75" high. The transverse area to the right side will be approximately 20.00" high due to the generator mounting. The rear compartment will be approximately 44.50" wide x 55.63" high x 24.50" deep with a door opening of approximately 39.00" wide x 47.75" high. The upper 38.75" of this compartment will be transverse to the right side front compartmentation. Both compartments will have roll-up doors.

0036503		Compt, F/H, Trans Front, Roll, LS Center, Tiller	<p>Two (2) compartments will be provided in the center body section on the left side. Each compartment will be full-height.</p> <p>The forward compartment will be approximately 47.13" wide x 55.63" high x 24.50" deep with a minimum clear door opening of approximately 38.75" wide x 45.87" high.</p> <p>The upper 38.75" of the forward compartment will be transverse to the right side front compartmentation.</p> <p>The rear compartment will be approximately 44.50" wide x 55.63" high x 24.50" deep with a minimum clear door opening of approximately 38.75" wide x 45.87" high.</p> <p>Both compartments will have roll-up doors.</p>
0822192	SP	Compt, F/H F/D Front Roll, Low Rear Roll, Spec Cab Steps, Narrow Rear	<p>Two (2) compartments will be provided in the rear body section on the left side.</p> <p>The forward compartment will be approximately 69.00" wide x 49.63" high x 24.50" deep in the lower 24.13" of the compartment with the remaining upper portion being approximately 22.50" deep. The minimum clear door opening will be approximately 63.25" wide x 39.87" high. This compartment will be located ahead of the rear wheels and will have a roll-up door.</p> <p>The rearward compartment will be approximately 42.00" wide x 24.13" high x 21.25" deep with a minimum clear door opening of approximately 36.25" wide x 16.87" high. The forward 21.25" of compartment width will be approximately 9.00" deep. This compartment will be located behind the rear wheels and in front of the tiller cab access steps and have a roll-up door.</p>
0652577	SP	Compt, F/H, Trans Roll, Special Generator Mounting, 92.00" Wide, RS Front,Tiller	<p>RIGHT SIDE COMPARTMENTATION</p> <p>Right side compartmentation will consist of the following:</p> <p>Two (2) compartments will be provided in the front body section on the right side. Each compartment will be full-height.</p> <p>The forward compartment will be approximately 47.13" wide x 55.63" high x 24.50" deep with a door opening of approximately 39.00" wide x 47.75" high.</p> <p>The transverse area to the left side will be approximately 20.00" high due to the generator mounting.</p> <p>The rear compartment will be approximately 44.50" wide x 55.63" high x 24.50" deep with a door opening of approximately 39.00" wide x 47.75" high.</p> <p>The upper 38.75" of this compartment will be transverse to the left side front compartmentation.</p> <p>Both compartments will have roll-up doors.</p>
0036512		Compt, F/H, Trans Front, Roll, RS Center, Tiller	<p>Two (2) compartments will be provided in the center body section on the right side. Each compartment will be full-height.</p> <p>The forward compartment will be approximately 47.13" wide x 55.63" high x 24.50" deep with a minimum clear door opening of approximately 38.75" wide x 45.87" high.</p> <p>The upper 38.75" of the forward compartment will be transverse to the left side front compartmentation.</p> <p>The rear compartment will be approximately 44.50" wide x 55.63" high x 24.50" deep with a minimum clear door opening of approximately 38.75" wide x 45.87" high.</p> <p>Both compartments will have roll-up doors.</p>
0793424		Compt, F/H F/D Front/Rear Roll, Center Lift Past 90, Special Cab Steps,78"Wide	<p>Three (3) compartments will be provided in the rear body section on the right side.</p> <p>The forward compartment will be approximately 69.00" wide x 49.63" high x 24.50" deep in the lower 24.13" of the compartment with the remaining upper portion being approximately 22.50" deep. The minimum clear door opening will be approximately 63.25" wide x 39.87" high. This compartment will be located ahead of the rear wheels and will have a roll-up door.</p> <p>The compartment directly above the rear wheels will be approximately 57.00" wide x 19.63" high x 13.50" deep with a clear door opening of approximately 52.25" wide x 13.75" high. This compartment will be provided with a lift-up door. This lift-up door will be provided with a cylinder that allows it to open approximately 120 degrees.</p> <p>The rearward compartment will be approximately 42.00" wide x 49.63" high x 21.00" deep with a minimum clear door opening of approximately 36.25" wide x 39.87" high. This compartment will be located behind the rear wheels and in front of the tiller cab access steps and will have a roll-up door. The forward 21.25" of compartment width and 24.25" of compartment height will be 9.00" deep.</p>

0594014	Doors, Amdor, Rollup, Side Compartments	<p>ROLL-UP DOOR, SIDE COMPARTMENTS</p> <p>There will be 12 compartment doors installed on the side compartments, double faced, aluminum construction, painted one (1) color to match the lower portion of the body and manufactured by AMDOR™ brand roll-up doors.</p> <p>Door(s) will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools. The slats will be mounted in reusable slat shoes with positive snap-lock securement.</p> <p>Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingress.</p> <p>The doors will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.</p> <p>Bottom panel flange of roll-up door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.</p> <p>A polished stainless steel lift bar with locking key latches to be provided for each roll-up door. The keys to be Model J236 for all compartment doors. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.</p> <p>All injection molded roll-up door wear components will be constructed of Type 6 nylon.</p> <p>Each roll-up door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.</p> <p>The header for the roll-up door assembly will not exceed 4.00".</p> <p>A heavy-duty magnetic switch will be used for control of open compartment door warning lights.</p>
0544873	Bumper, Rear, Rub Rail, Aerial	<p>REAR BUMPER</p> <p>An aluminum rub rail will be provided at the rear of the unit. It will extend the full width of the compartments.</p>
0688458	SP Scuffplate, Location	<p>SCUFFPLATE</p> <p>There will be Two (2) scuffplatespolished stainless steel scuffplates furnished On the top rail of the aerial egress, from the bolted location out to where the front starts to curve. Please make these 3 sided plates to wrap the top and sides of the upper egress section</p>
0062742	Compartment Door(s), Open Past 90 Degrees	<p>COMPARTMENT DOOR MODIFICATION</p> <p>There will be one (1) compartment door that will be provided with the capability to open past 90 degrees.</p> <p>The door(s) to receive this modification are located P2.</p>
0019845	Guard, Drip Pan, S/S, Rollup Door	<p>DOOR GUARD</p> <p>There will be 12 compartment doors that will include a guard/drip pan designed to protect the roll-up door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed all body roll up door compartments.</p>
0028546	D-Ring Latch for Free Door, Lap Doors	<p>FREE DOOR D-RING LATCH</p> <p>A D-ring style latch will be provided on the free door for three (3) compartment doors. The compartmentation, to have a free door latch(es), will be LS7, RS8 and R1.</p>
0641823	Electric Door Locks, Body Doors, Lap	<p>ELECTRIC DOOR LOCKS</p> <p>There will be three (3) door(s) located LS7, RS8, RS2 equipped with electric locks. The locks will be wired battery direct. The switch for control will be located With roll-up door control switch (LS Aerial Stabilizer control). In the event of loss of power, a manual override is available.</p>
0641826	Electric Door Locks, Body Doors, Amdor	<p>ELECTRIC DOOR LOCKS</p> <p>There will be twelve (12) door(s) located Within Stabilizer Control Box LS equipped with electric locks. The locks will be wired battery direct. The switch for control will be located RS1, RS3, RS4, RS5, RS6, RS7, LS1, LS2, LS3, LS4, LS5 and LS6. In the event of loss of power, a manual override is available.</p>
0642303	Master Control, Electric Door Locks, Body Drs and Cab Drs, Vel/Imp,Enf	<p>CONTROL OF ELECTRIC DOOR LOCKS</p> <p>The electric body door locks will be locked or unlocked with the cab controls.</p> <p>In the event of loss of power, a manual override is available.</p>
0074012	Scuffplate, Brushed S/S, Inside Compartment Door	<p>SCUFFPLATE ON INTERIOR OF COMPARTMENT DOOR(S)</p> <p>The four (4) compartment doors will include a brushed stainless steel scuffplate to cover the entire width and height on the inside panel of each door pan.</p> <p>Scuffplate will be located D7, P8.</p>

0689549	Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door	COMPARTMENT LIGHTING There will be thirteen (13) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips will be centered vertically along each side of the door framing. There will be two (2) light strips per compartment. The dual light strips will be in compartment(s): all side bod compartments, D7/P8 are included with reservoir compartment option. Any remaining compartments without light strips will have a 6.00" diameter Truck-Lite, Model 79384, light. Each light will have a number 1076 one filament, two wire bulb. Opening the compartment door will automatically turn the compartment lighting on.
0689539	Lights, Compt, Pierce, LED Light Strip, 36", Additional	COMPARTMENT LIGHTING, ADDITIONAL There will be one (1) Pierce LED strip light(s) provided in the compartment(s) located overhead in R1. Each light will be 36.00" in length. Opening the compartment door(s) will automatically turn the compartment lighting on.
0689540	Lights, Compt, Pierce, LED Light Strip, 27", Additional	COMPARTMENT LIGHTING, ADDITIONAL There will be two (2) Pierce LED strip light(s) provided in the compartment(s) located reservoir compartment rear door frame each side. Each light will be 27.00" in length. Opening the compartment door(s) will automatically turn the compartment lighting on.
0689541	Lights, Compt, Pierce, LED Light Strip, 9", Additional	COMPARTMENT LIGHTING, ADDITIONAL There will be one (1) Pierce LED light(s) provided in the compartment(s) located overhead in R2. Each light will be 9.00" in length. Opening the compartment door(s) will automatically turn the compartment lighting on.
0603420	Shelf Tracks, Painted, Aerial	MOUNTING TRACKS There will be eight (8) sets of tracks for mounting shelf(s) in LS2, LS3, LS5, LS6, RS3, RS4, RS6 and RS7. These tracks will be installed vertically to support the adjustable shelf(s) and will be full height of the compartment. The tracks will be painted to match the compartment interior.
0638569	Shelves, Fixed, 500 lb Capacity, Full Width/Depth, Painted Spatter Gray	FIXED SHELVES There will be one (1) shelf with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum with 2.00" sides. Each shelf will be painted spatter gray to match the compartment interior. Each shelf will be fixed in its location in the compartment The shelves will be held in place by .12" thick stamped plated brackets and bolts or angles bolted to the compartment as the engineer or shop floor see fit. The location will be D4/P5 full width, mounted 7.00" above the floor extensions. This dmension is needed for the rescue jacks being installed on P5 above the floor extension.
0687112	Shelves, Adjustable, 500 lb Capacity, Full Width/Depth, Painted	ADJUSTABLE SHELVES There will be seven (7) shelves with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum with 2.00" sides. Each shelf will be painted spatter gray. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by 0.12" thick stamped plated brackets and bolts. The location will be Two (2) in D3 - see photo, two (2) in P4 at 18" and 32.5", D2 upper - see photo, D2 lower - see photo, P3 upper at 32.5".
0015364	Tray, 500 lb, Slide-out, 2-Way, Utility, Adj Height, 3" Sides, Full Trans	TWO (2) WAY SLIDE-OUT UTILITY TRAY There will be two (2) slide-out trays provided. Each tray will be rated for up to 500 lb in the extended position. The tray(s) will be constructed of .19" thick aluminum for the tray bottom and special aluminum extrusions for the tray sides, ends and tracks. The corners will be welded. The tray will have 3.00" high sides, will span the full depth of the transverse compartment and will be as wide as possible for the compartment. The tray will be supported with a minimum of six (6) ball bearing rollers. The tray will slide out two thirds (2/3) of its length to either side of the apparatus. Automatic locks will be provided for both the in and out positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand. The vertical location of the tray within the compartment will be adjustable. The tray(s) will be located D5/P6 at 19", D6/P7 at 20.5".
0083986	Tray, 215 lb, Tilt/Slide-Out, 30 Deg, Adj	SLIDE-OUT/TILT-DOWN TRAY There will be two (2) slide-out trays provided. The bottom of each tray will constructed of 0.188" thick aluminum while special aluminum extrusions will be utilized for the tray sides, ends, and tracks. The corners will be welded to form a rigid unit. A spring loaded lock will be provided on each side at the front of the tray. Releasing the locks will allow the tray to slide out approximately two-thirds (2/3) of its length from the stowed position and tip 30 degrees down from horizontal. The tray will be equipped with ball bearing rollers for smooth operation. Rubber padded stops will be provided for the tray in the extended positions. The capacity rating of the tray will be a minimum of 215 lb in the extended position. The vertical position of the tray within the compartment will be adjustable. The tray(s) will be located in LS5 and LS6.

0510777	Tray, 215 lb, Tilt/Slide-Out, 30 Deg, Adj, 1/2 Trans	<p>SLIDE-OUT/TILT-DOWN TRAY</p> <p>There will be two (2) slide-out trays provided. The bottom of each tray will be constructed of 0.188" thick aluminum while special aluminum extrusions will be utilized for the tray sides, ends, and tracks. The corners will be welded to form a rigid unit. The tray will be half depth of the transverse compartment. A spring-loaded lock will be provided on each side at the front of the tray. Releasing the locks will allow the tray to slide out approximately two-thirds (2/3) of its length from the stowed position and tip 30 degrees down from horizontal. The tray will be equipped with ball bearing rollers for smooth operation. Rubber padded stops will be provided for the tray in the extended positions. The capacity rating of the tray will be a minimum of 215 lb in the extended position. The vertical position of the tray within the compartment will be adjustable. The tray(s) will be located D6, P7 at 32.5" - painted compartment interior.</p>
0647091	Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides	<p>SLIDE-OUT FLOOR MOUNTED TRAY</p> <p>There will be five (5) floor mounted slide-out tray(s) provided. Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position. Each tray will be constructed of aluminum painted nightspots. There will be two undermount-roller bearing type slides rated at 250 lb each provided. The pair of slides will have a safety factor rating of 2. To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117. To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request. Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand. The location(s) will be RS4, RS5, LS4, LS5 and RS7.</p>
0646005	Tray, Floor Mounted, Utility, Two Way Slide-Out, 500lb, 3" Sides, Full Trans	<p>TWO (2) WAY UTILITY SLIDE-OUT FLOOR MOUNTED TRAY</p> <p>There will be two (2) floor mounted utility slide-out tray(s) provided in D4/P5 side by side with shelf track for Customer installed toolboard mounted in each tray - see photo. Each tray will be rated for up to 500lb in the extended position. The tray(s) will be constructed of .19" thick aluminum for the tray bottom and special aluminum extrusions for the tray sides, ends and tracks. The corners will be welded. The finish will be painted spatter gray. The tray will be 3.00" high x full depth of the transverse compartment x as wide as possible for the compartment. The tray will be supported with a minimum of six (6) ball bearing rollers. The tray will slide out two thirds (2/3) of its length to either side of the apparatus. Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.</p>
0646301	Tray, Floor Mounted, Slide-Out, Aluminum Plate, Flat Top	<p>SLIDE-OUT FLOOR MOUNTED TRAY</p> <p>There will be one (1) floor mounted slide-out tray(s) provided TBD at precon. A rating on this tray will not be provided due to the elimination of sides. The tray(s) will be constructed of 0.25" thick aluminum plate. The tray will be flat with no sides or flanges. The finish of the tray will be with a brushed finish. There will be two undermount-roller bearing type slides rated at 250 lb each provided. The pair of slides will have a safety factor rating of 2. To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117. To ensure years of easy operation, the slides will require no more than a 50 lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request. Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.</p>
0799600	SP Tray, Floor Mounted, Slide-Out, 1.00" Sides Front/Rear, Three (3) Slides	<p>SLIDE-OUT FLOOR MOUNTED TRAY</p> <p>There will be one (1) floor mounted slide-out tray(s) provided P3. A capacity rating will not be available on this tray due to a reduced side height being less than 2.00". The tray(s) will be constructed of .19" aluminum. The tray will have 1.00" flanges on the front and rear. There will be three (3) undermount-roller bearing type slides rated at 250lb each provided. To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117. To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request. Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand. The lock mechanism will be provided on the center slide.</p>

0811095	SP	Respond Ready Storage w/4 Drawers, Painted & Powder Coated, 38"W, 4"/4"/4"/6"	<p>TOOL BOX</p> <p>There will be one (1) Respond Ready heavy duty drawer system(s) with four (4) drawers installed floor of LS3 (Match Job 28976).</p> <p>The drawer system will consist of one (1) flat top shelf, side panels with 1/2 inch risers, heavy duty 500lb slides, lock-out drawers, single handle latching hardware, powder coated front panels and galvanized components.</p> <p>The unit will be painted red.</p> <p>The drawers will be configured in a drawer system measuring 19.70" H x 38.00" W x 23.70" D exterior dimensions.</p> <p>Drawers will consist of one (1) 6.00" drawer (bottom) and three (3) 4.00" drawers.</p> <p>Each drawer will contain four (4) dividers.</p>
0646185		Toolboard, Slide-out, Alum, .188", Peg Board, "L"-Shaped	<p>SLIDE-OUT TOOLBOARD</p> <p>A slide-out aluminum toolboard will be provided. The tool board will be designed to include the upper and lower sections of the compartment.</p> <p>It will be a minimum of 0.188" thick with .281" diameter holes in a pegboard pattern with 1.00" centers between holes.</p> <p>A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard. A handhold cutout will be provided on the outboard edge of the toolboard.</p> <p>The board will be mounted on an undermount-roller bearing type slide rated at 250 lb with a factor of safety of 2.</p> <p>To ensure years of dependable service the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.</p> <p>To ensure years of easy operation, the slides will require no more than a 50 pound force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.</p> <p>The slide will be mounted stationary within the compartment.</p> <p>The board will have positive lock in the stowed and extended position.</p> <p>There will be One (1) toolboard(s) provided. The toolboard(s) will be spatter gray painted and installed P7.</p>
0726429		Partition, Vertical Compt, Transverse Compt, Aerials/HDRs	<p>PARTITION IN TRANSVERSE COMPARTMENT</p> <p>One (1) partition will be bolted in full width in RS7 and LS6 rearward, mounted 10.00" clear from door frame (Match Job 28976). Each partition will be the full vertical height of the compartment.</p>
0726451		Partition, Vertical Compt	<p>VERTICAL COMPARTMENT PARTITION</p> <p>One (1) partition will be bolted in LS7 and RS8 to enclose the cylinder (install with nutserts to make removable (Match Job 28976). Each partition will be the full vertical height of the compartment.</p>
0004005		Aluminum Treadplate on Compartment Floor	<p>COMPARTMENT FLOOR SCUFFPLATE</p> <p>Aluminum treadplate will be provided on the floor of one (1) compartments. The locations will be, P6.</p> <p>The edges of the treadplate will be completely caulked before installation to prevent corrosion.</p>
0650491		DuraSurf, Compartment Floor	<p>COMPARTMENT FLOOR SCUFFPLATE</p> <p>DuraSurf will be provided on the floor of one (1) compartment(s). The compartment below R1 compartment(s) will be lined.</p>
0614922		Dura Surf, Additional, Location	<p>SCUFF RESISTANT MATERIAL</p> <p>two (2) additional areas will be protected with Dura Surf material. The locations will be Floor of Stokes/Little Giant storage box.</p>
0539811		Box, Poly Tool	<p>TOOL BOX</p> <p>A tool box will be furnished.</p> <p>The outside size will be 20.00" long x 12.00" wide x 12.00" deep.</p> <p>The tool box will be black in color.</p> <p>Construction will be of .50" polypropylene plastic with joints and seams nitrogen welded. A cut out carrying handle will be provided on each end.</p> <p>There will be four (4) provided. It will be located three (3) in D5 on the floor mounted tray, one (1) ship loose.</p>
0817125	SP	Tray, 1" Sides, Fixed Floor Mount, S/S, Unpainted	<p>FLOOR MOUNTED FIXED TRAY</p> <p>There will be one (1) fixed floor mount tray with 1.00" sides, front, and rear.</p> <p>A capacity rating will not be available on this tray due to reduced side height being less than 2.00".</p> <p>Tray location will be RS6 floor match 28976. Power unit to match mounting of 28976, streamline connections to be facing forward. Tray mounted towards to rear section of the floor in RS6.</p> <p>The tray will be bolted to the floor of the compartment for a permanent mount. The tray will be constructed of stainless steel and unpainted.</p>

0062168	Cable Release, Tilt Tray, IAT Std Latches	CABLE RELEASE A cable release will be provided to allow one handed operation of the latches for slide out tilt trays. A cable will connect the two pull knobs so when you pull the cable from the center, it will release the dual knobs and release the tray. Cable will be plastic coated. A total of four (4) will be provided all slide out tilt trays.
0832901	Mirror, Velvac, 8" Round Convex, Each Side, Tiller Body	TILLER CONVEX MIRRORS An 8.00" convex mirror will be provided on each side of the tiller body Match Previous Job 28796. The brackets will angle outward so the tillerman can see the rear bumper in the mirrors.
0661232	Compt, At Rear Between Tow Eyes, Divider, Smooth Alum Sngl Pan Dr, D Ring,Tiller	COMPARTMENT BETWEEN TOW EYES A compartment will be supplied at the rear of the unit, above the rear bumper. It will be 8.50" high x 25.75" wide x 27.00" deep. The compartment will have two fixed dividers equally spaced to create three equal storage areas. The compartment will have a single-pan smooth aluminum drop-down door with a D-ring latch.
0660727	Louvers, Non-Standard Location, Per Compartment	COMPARTMENT LOUVER, NON-STANDARD LOCATION The louver(s) located in the P8 and D7 compartments will be provided rear inboard wall of D7 and P8, these shall be installed on the removable air tank cover within each compartment.. The quantity of louvers with non-standard locations is two (2).
0027093	Rack, Air Bags Inside Compartment, 6-Slot	AIR BAG STORAGE There will be a rack installed for storing six (6) air bags in the D4 mounted on the floor extension centered compartment. The rack will be fabricated from painted Nightspots 909017 .125" aluminum. The fire department will provide exact sizes of air bags prior to construction. The size of the air bags will be (2) @ 24" x 25" x 1.00", (2) @ 21" x 20" x 1.00", (1) @ 15" x 22" x1.00", (1) @ 7" x 7" x.1.00 (air bag size).
0050308	Rear of Body, Smooth Aluminum Sheet	REAR WALL The entire rear surface of the apparatus and all the doors will be covered with smooth aluminum.
0796214	Floor Extension, Compartment, 2.00" Downturned Lip	FLOOR EXTENSION There will be a compartment floor extension provided. The floor extension will extend from the area over the frame rails to within an inch of the compartment door. The floor extension will have a 2.00" vertical downturned lip and a 1.00" return flange. A total of four (4) will be provided and located LS4 and RS5.
0796215	Floor Extension, Compartment, 1.00" Upturned Lip	FLOOR EXTENSION There will be a compartment floor extension provided. The floor extension will extend from the area over the frame rails to within an inch of the compartment door. The floor extension will have a 1.00" vertical upturned lip and no return flange. A total of one (1) will be provided and located D6 rear of vertical partition to support the pike pole storage.
0796216	Floor Extension, Compartment, 1.00" Downturned Lip	FLOOR EXTENSION There will be a compartment floor extension provided. The floor extension will extend from the area over the frame rails to within an inch of the compartment door. The floor extension will have a 1.00" vertical downturned lip and no return flange. A total of one (1) will be provided and located D6 rear of vertical partition to support the pike pole storage.
0013202	Strap, Nylon w/Velcro	STRAP There will be twelve (12) black 2.00" wide nylon strap(s) provided sized to hold two (2) blowers on the floor tray in P3 - size to be determined at post paint, match 28976, two to restrain the air bags in D4, and 8 mounted to restrain the SCBA bottles in D2. The strap(s) will be fastened with Velcro in the center.
0027090	Tracks, Equipment Mounting, Horizontal	MOUNTING TRACKS There will be eight (8) sets of tracks for mounting equipment. These tracks will be installed horizontally on the back wall of the compartment(s). The compartment(s) with mounting tracks will be on the two trays in D4/P5. Mount four of them per tray as if the tool board was being installed. Customer is providing tool board from 28976.
0004016	Rub Rail, Aluminum Extruded, Side of Body	RUB RAIL Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail. Trim will be 2.12" high with 1.38" flanges turned outward for rigidity. The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.

0510626	Fender Crowns, Rear, S/S, Wider Than Standard	BODY FENDER CROWNS Stainless steel fender crowns will be provided around the rear wheel openings. These fender crowns must be wide enough to prevent splashing onto the body from the specified tires. A rubber welting will be provided between the body and the crown to seal the seam and restrict moisture from entering. A dielectric barrier will be provided between the fender crown fasteners (screws) and the fender sheet metal to prevent corrosion.
0558496	Handrails, Access to Tiller Cab, U-Shaped, Knurled Aluminum, Front Each Side	TILLER CAB HANDRAILS A U-shaped handrail will be installed on each side of the truck on the forward side of the tiller cab access steps. The handrail will extend upward from the existing tiller cab handrail and form a U-shape approximately 10.00" high above the top of the body. The standard handrail will be provided on the rearward side of the steps. Handrails will be 1.25" diameter anodized aluminum extrusion, with a knurled design, to provide a positive gripping surface. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails.
0505105	Handle, Grab, Chrome, Each	CHROME GRAB HANDLE One (1) handrail, chrome plated grab handle, will be mounted on top of the hinged reservoir compartment door centered.
0004154	Handrail, Extra - 10" Long	ADDITIONAL HANDRAIL Two (2) handrails, 10.00" long, will be mounted forward of D2 and P3 vertical for platform step. The handrail will be constructed out of knurled aluminum.
0024205	Holder, Air Bottle w/CRS Strap, Body Compt Mount w/Tracks	AIR BOTTLE HOLDERS Three (3) brackets will be provided for mounting air bottles. Each bracket will be a Ziamatic, model UN-6-30-3-SF, and contain a collision restraint strap. It will be mounted on tracks and used for adjusting the location of the bracket within the compartment. The brackets will be installed in compartment one in P1, two shipped loose.
0024210	Storage Bin, Air Bottle, 7.50" Square	AIR BOTTLE STORAGE BIN A storage bin will be provided for storage of 16 air bottles. This storage bin will be installed floor of D2. Each separate air bottle storage compartment will be 7.50" square x 23.00" deep. The storage bin will be formed out of aluminum and the flooring lined with Dura-surf.
0724007	SP Storage Bin, Extinguisher, One, 45 Degree Tilt Out	EXTINGUISHER STORAGE BIN A storage bin will be provided for storage of one (1) hand held fire extinguisher. This storage bin will be installed PS compartment behind crew cab door (watercan) DS compartment behind crew cab door (drychem). Each bin will be size to hold an extinguisher that is the following diameter and height: Watercan (PS) 24.5" Tall x 8" Diameter Dry Chem (DS) 24" Tall x 8.5" Diameter. The bin will tilt out 45 degrees and be formed out of aluminum with Dura-surf on the floor.
0004218	Ladder, 35' Duo-Safety 1200A 2-Sect	EXTENSION LADDER There will be two (2) 35' two (2) section aluminum Duo-Safety Series 1200-A extension ladder(s) provided.
0010406	Ladder, 28' Duo-Safety 1200A 2-Section	AERIAL EXTENSION LADDERS There will be two (2) 28' two (2) section aluminum Duo-Safety Series 1200-A extension ladder(s) provided and located in the ladder storage compartment.
0074230	Ladder, 20' Duo-Safety 875A Roof	ROOF LADDER There will be one (1) 20' aluminum Duo-Safety Series 875-A roof ladder(s) provided.
0654575	Ladder, 10' Duo-Safety 775-DR Roof	ADDED ROOF LADDER There will be one (1) 10' aluminum roof ladder(s), Series 775, with roof hooks on both ends provided aerial base section.
0044235	Ladder, 16' Duo-Safety 875A Roof	ADDED ROOF LADDER There will be one (1) 16' roof, aluminum, Series 875-A provided.
0024233	Not Required, Attic Extension Ladder	

0004246		Ladder, 10' Duo-Safety Folding, 585A	AERIAL FOLDING LADDER There will be one (1) 10' aluminum Duo-Safety Series 585-A folding ladder(s) provided and located in the ladder storage compartment.
0680193		Ladder Storage, Vertically Hinged Doors, Smooth Alum, Grabber Door Brkt, Tiller	GROUND LADDER STORAGE The ground ladders will be removable from the center rear of the apparatus. The ladders will be individually stored in stainless steel slides and will be arranged in such a manner that any one (1) ladder can be removed without having to move or remove any other ladder. Black Dura-Surf friction reducing material will be added to the stainless steel slides, on the bottom horizontal surfaces, of the ladder storage rack. Vertically hinged double lap doors will be provided at the rear to close the ladder compartment. Doors will be of double pan aluminum construction. Single sheet aluminum doors will not be considered. The lock door will be latched with Eberhard latches with "D" ring handles. There will be a Cast Products grabber door stay bracket provided on the outside of each door to hold it in the open position.
0568188	SP	Trough(s), Additional Equipment Storage, Compartment DS Rear Wall, Tiller	STORAGE TROUGHS There will be two (2) stainless steel trough(s) provided in driver side. The trough(s) will be sized to fit 6' Nupla Vent Hook RH-6DA and 10' Nupla Vent Hook RH-10DA.
0602100		Lights, Torque Box Ladder Storage, Pierce LED Strip Lights, 2 Lts	LADDER STORAGE LIGHTING There will be 21.00" white 12 volt DC LED strip lights in the torque box ladder storage compartment. One (1) light will be provided on each side of the ladder storage area. The lights will be activated when the ladder storage compartment door is opened.
0024245		Trough, Mounting Folding Ladder	FOLDING LADDER TROUGH A stainless steel trough will be provided for mounting the folding ladder.
0661513	SP	Door, Lift Up, Extend Past 90 Degrees, Tiller	LADDER STORAGE DOOR The lift up ladder storage door will open past 90 degrees.
0889410	SP	Compt, Above Rr Comp, T/P, Lift Past 90 Drs, Stokes & Ladder, Ea Side Acc, Till	COMPARTMENT FOR STOKES & LADDER STORAGE A treadplate compartment assembly will be provided for the storage of a stokes basket and a ladder. The box will be divided in the center to provide two (2) separate storage areas. The compartment will be located on top of the rear body, forward of the boom support. The overall length of the box will be the width of the top of the rear body. The rear area will store a stokes basket that is 84.50" long x 24.00" wide x 7.50" high. The stokes will be centered in the box (as applicable). The front area will store a Little Giant Classic Model 17 - 10102. The ladder will be stored toward the left side of the apparatus. There will be a vertical partition in this area to allow miscellaneous storage opposite of the ladder, if applicable (depending on ladder length). There will be two (2) lift up aluminum treadplate doors on each side with a D-handle latch on each door and pneumatic cylinders that allow the doors to lift up past 90 degrees. The compartment will be reinforced so it can withstand the weight of a person.
0064320		Pike Pole, 12' Fire Hooks Unlimited, New Yorker, Fiberglass, NYFG-12, Ram Knob	PIKE POLES There will be three (3) Fire Hooks Unlimited NYFG-12, 12' pike pole(s) with fiberglass handles and a ram knob end provided. The pike pole(s) will be stored on the apparatus.
0054352		Pike Pole, 8' Fire Hooks Unlimited, Fiberglass, NHF-8	PIKE POLE 8 FT There will be two (2) Fire Hooks Unlimited NHF-8, 8 foot pike pole(s) with fiberglass handles provided.
0054351		Pike Pole, 6' Fire Hooks Unlimited, Fiberglass, NHF-6	6' PIKE POLE There will be two (2) Fire Hooks Unlimited NHF-6, 6' pike pole(s) with fiberglass handles provided.
0548410		Not Required, Pole, Pike, 3'	
0089555		Trash Hook, 6' Fire Hooks Unlimited, TRH-6, w/D Handle	ADDITIONAL PIKE POLE(S) There will be four (4) 6' long trash hook(s), Fire Hooks Unlimited TRH-6, with fiberglass shaft and "D" handle provided.
0068135		Trash Hook, 10' Fire Hooks Unlimited, TRH-10, w/D Handle	ADDITIONAL PIKE POLE(S) There will be one (1) 10' long trash hook(s), Fire Hooks Unlimited Model TRH-10, with fiberglass shaft and "D" handle end provided.

0024892		Pike Pole, 6' Fire Hooks Unlimited, New York Roof Hook, Steel, Pry End, RH-6	PIKE POLE There will be two (2) Fire Hooks Unlimited, Model RH-6, 6' long New York Roof Hook with steel handle and pry end provided and located rear outboard pike pole compartment on driver side.
0770577		Pike Pole Tubes, in Torque Box/Ladder Storage, Aluminum	PIKE POLE STORAGE IN TORQUE BOX/LADDER STORAGE There will be aluminum tubing provided in the torque box/ladder storage area for a total of two (2) pike poles. If the head of a pike pole can come into contact with a painted surface, a stainless steel scuffplate will be provided.
0811101	SP	Pike Pole Storage Rack, Transverse Compt (No Poles), (4) Troughs/(2) Tubes	PIKE POLE STORAGE RACK A storage rack will be provided in the transverse compartment located Match Job 28796 deleted option 607374. The rack will consist of four (4) troughs and two (2) tubes. The troughs will be mounted one above the other with the tubes side by side above the top trough.
0779224	SP	Trough for D-Handled Pike Pole	PIKE POLE STORAGE Stainless steel trough(s) will be provided for the storage of two (2) pike poles. The pike poles to be stored will be One (1) Nupla 10' D handle rubbish hook and One (1) Nupla 6' D Handle Rubbish Hook. The trough(s) will be installed Drive side rear storage compartment (Match Job # 28976).
0004361		Tubes, Alum, Pike Pole Storage	PIKE POLE STORAGE Aluminum tubing will be used for the storage of two (2) pike poles and will be located in ladder storage compartment. If the head of a pike pole can come in contact with a painted surface, a stainless steel scuffplate will be provided.
0565794	SP	Compt, Pike Pole, BackBoard, Miscellaneous, Storage, LS Rear Wall, Tiller	STORAGE COMPARTMENT There will be storage for pike poles, backboard, and miscellaneous items provided at the rear, in the upper portion of the left side rear wall. The compartment will be equipped with aluminum tubing for storage of six (6) pike poles. The pike poles being stored in this compartment will be make/model and sized; two (2) 6' Nupla Featherlight, two (2) 8' Nupla Featherlight, two (2) 6' Fire Hooks New York Roof Hook. The backboard will be 74.00" long x 21.00" wide x 3.00" high. Each compartment will have a single pan smooth aluminum vertically hinged, to outside of the body, door with lift and turn latch.
0010458		Platform, Slide Out, 500 lb Capacity, w/Morton Cass	SLIDE-OUT PLATFORM Two (2) slideout platforms will be provided. The capacity rating will be 500# in the extended position. Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand. Each platform will be made of .12 polished aluminum treadplate with a Morton Cass insert to provide a non-skid surface. There will be an Amdor Model AY-LB-12HW0** white 12 volt DC LED light provided to illuminate the ground area. The location will be under LS2 & RS3 (to assist in removing the stokes basket and Little Giant ladder).
0067658		Not Required, Step, Slide-Out Pump Op. Platform	
0665700		Light, Slide-Out Pump Operator Step, Not Required	
0046495		Not Required, Pump Access, No Pump	
0001836		No Light, No Pump Compartment	
0606694		Air Horns, (2) Hadley, 6" Round, eTone, In Bumper	AIR HORN SYSTEM Two (2) Hadley®, eTone, chrome air horns will be recessed in the front bumper. The air horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed to prevent the loss of air in the brake system.
0606835		Location, Air Horns, Bumper, Each Side, Outside Frame, Outboard (Pos #1 & #7)	Air Horn Location The air horns will be located on each side of the bumper, towards the outside.
0757092		Control, Air Horn, Multi Select	Air Horn Control The air horn(s) will be activated by the following:

0815744	Control, Air Horn, Push Button Sw, Turntable	Push button switch located at the aerial turntable. The control to be available when the parking brake is applied.
0757076	Control, Air Horn, Lanyard, RS	Right side lanyard. The lanyard to be a nylon rope.
0757084	Control, Air Horn, Horn Ring	Steering wheel horn ring with electric/air horn selector switch
0039704	Air Horn Switch As Primary/Electric Horn As Secondary	AIR HORN SWITCHING The air horns will be the default from the horn ring when the battery switch is turned on. The electric chassis horns will be secondary.
0819013	Siren, Code 3 3692 100/200W, Other Speaker, Non-NFPA 2024	ELECTRONIC SIREN A "Code 3", model 3692, electronic siren with noise canceling microphone will be provided. This siren to be active when the battery switch is on and that emergency master switch is on. NFPA 1900, 2024 edition, Section 10.8.1.1 requires the siren manufacturer to certify the siren as meeting the requirements of SAE J1849, <i>Emergency Vehicle Sirens</i> . Per the fire department specification, the siren and siren speaker come from separate manufacturers and a certification is therefore invalid. The apparatus will be non compliant to NFPA 1900 standards at time of contract execution.
0510206	Location, Elect Siren, Recessed Overhead In Console	Electronic siren head will be recessed in the overhead console above the engine tunnel on the driver side.
0076156	Control, Elec Siren, Head Only	The electronic siren will be controlled on the siren head only. No horn button or foot switches will be provided.
0601330	Speaker, (1) Federal, ES100C w/ESFMT-EF Recess Mnt & S/S Grille	SPEAKER There will be one (1) Federal Signal DynaMax®, Model ES100, 100 watt speaker provided. The speaker will use a Federal Signal, Model ESFMT-EF, recess mount with stainless steel grille. The speaker will be connected to the siren amplifier.
0601552	Location, Speaker, Frt Bumper, Recessed, Right Side, Outside Frame, Inbrd (Pos 2)	The speaker will be recessed in the right side of the front bumper, just outside of the frame rail.
0895281	Siren, Federal Q2B, Littelfuse 24213 Sol	AUXILIARY MECHANICAL SIREN There will be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus. The Q2B siren will be chrome finish. The siren will have a 2-gauge cable connected to a Littelfuse part number 24213 power solenoid that is connected by a 2-gauge cable ran battery direct to the primary chassis batteries and will be labeled Q2B+ at the battery. The power solenoid will only be enabled when the emergency master switch is on. The siren will have a 2-gauge ground wire connected to the chassis battery stud. The cable will be labeled Q2B- at the battery.
0006097	Location of Siren, Recessed in Bumper	The mechanical siren will be recessed in the front bumper on the left side. The siren will be properly supported using the bumper framework.
0748305	Control, Mech Siren, Multi Select	MECHANICAL SIREN CONTROL The mechanical siren will be activated by the following:
0748281	Control Mech Siren, Ft Sw RS	Right side foot switch
0748282	Control Mech Siren, Ft Sw LS	Left side foot switch.
0740391	Sw, Siren Brake, Momentary Chrome Push Button, RS	A momentary chrome push button switch will be included in the right side dash panel to activate the siren brake.
0746353	Not Required, Warning Lights Intensity	

0605488	Lightbar, Wln, Freedom IV-Q, 81", RRRRWsrR_Opt_RsrWRRRR	<p>FRONT ZONE UPPER WARNING LIGHTS</p> <p>There will be one (1) 81.00" Whelen Freedom IV LED lightbar mounted on the cab roof. The lightbar will include the following:</p> <p>One (1) red flashing LED module in the driver's side end position. One (1) red flashing LED module in the driver's side front corner position. One (1) red flashing LED module in the driver's side first front position. One (1) red flashing LED module in the driver's side second front position. One (1) white flashing LED module in the driver's side third front position. One (1) red steady burning LED module in the driver's side fourth front position. One (1) red flashing LED module in the driver's side fifth front position. Open in the driver's side sixth front position. One (1) 795 LED traffic light controller set to national standard high priority in the center positions.</p> <p>Open in the passenger's side sixth front position. One (1) red flashing LED module in the passenger's side fifth front position. One (1) red steady burning LED module in the passenger's side fourth front position. One (1) white flashing LED module in the passenger's side third front position. One (1) red flashing LED module in the passenger's side second front position. One (1) red flashing LED module in the passenger's side first front position. One (1) red flashing LED module in the passenger's side front corner position. One (1) red flashing LED module in the passenger's side end position.</p> <p>There will be clear lenses and colored filters included on the lightbar. The following switches may be installed in the cab on the switch panel to control the lightbar: a switch to control the flashing LED modules. the traffic light controller by a cab switch with emergency master control. no momentary switch to activate the traffic light controller. The white flashing LED modules and the traffic light controller will be disabled when the parking brake is applied. The six (6) red flashing LED modules in the front positions may be load managed when the parking brake is applied.</p>
0605598	Lightbars, Wln, Freedom IV-Q, 2-21.5", RRRRR RRRRR	<p>SIDE WARNING LIGHTS</p> <p>There will be two (2) 21.50" Whelen Freedom IV LED lightbars mounted on the roof, one (1) on each side, over the crew cab doors.</p> <p>Each lightbar will include the following:</p> <p>One (1) red flashing LED module in the outside end position. One (1) red flashing LED module in the outside front corner position. One (1) red flashing LED module in the outside front position. One (1) red flashing LED module in the inside front position. One (1) red flashing LED module in the inside front corner position.</p> <p>There will be lenses that are the same color as the LEDs included on the lightbar. There will be a switch in the cab on the switch panel to control the lightbars. These lights may be load managed when the parking brake is applied.</p>
0067509	SP Switch, Additional for Lightbar	<p>An additional switch will be provided in the cab that will allow the operator to control the passenger side overhead for the floodlights in the lightbar portion of the lightbar.</p>
0761731	Lights, Front Zone, Wln M6** M6** M6** M6**, 4lts Q Bezel, Clr Fet	<p>FRONT ZONE LOWER LIGHTS</p> <p>There will be two (2) pair of Whelen, Model M6**, LED lights installed on the cab face above the headlights, in a common bezel matching the one for the headlamps. The housing to be polished and the trim shall be chrome.</p> <p>The driver's side front outside warning light to be red The driver's side front inside warning light to be red The passenger's side front inside warning light to be red The passenger's side front outside warning light to be red The color of the lenses will be clear There will be a switch located in the cab on the switch panel to control the lights.</p>
0653937	Flasher, Headlight Alternating	<p>HEADLIGHT FLASHER</p> <p>The high beam headlights will flash alternately between the left and right side. There will be a switch installed in the cab on the switch panel to control the high beam flash. This switch will be live when the battery switch and the emergency master switches are on. The flashing will automatically cancel when the hi-beam headlight switch is activated or when the parking brake is set.</p>
0746667	Lights, Side Zone Lower, Wln M6**, M6**, 4Lts	<p>SIDE ZONE LOWER LIGHTING</p> <p>There will be four (4) Whelen®, Model M6**, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with black trim installed per the following:</p> <p>Two (2) lights located, one (1) each side on the front custom cab corner. The driver's side, side front light to include red warning LEDs and the passenger's side, side front light to include red warning LEDs.</p> <p>Two (2) lights located, one (1) each side above rear wheels. The driver's side, side rear light to include red warning LEDs and the passenger's side, side rear light to include red warning LEDs. The warning light lens colors to be the same as the LEDs. There will be a switch in the cab on the switch panel to control the lights.</p>

0750408	Lights, Side, WIn PS*01FCR, 1st	SIDE WARNING LIGHTS There will be six (6) Whelen® Model PS*01FCR, 1.68" high x 11.11" wide x 0.52" deep flashing LED warning light(s) with black trim and clear lenses provided on the side of the apparatus, in rubrail centered below D1, D3/D4, D5/D6, P1, P4/P5, P6/P7. The light(s) to include red flashing LEDs. These lights will be controlled by the side zone lower switch in the cab. White LEDs will be deactivated when the parking brake is applied. Amber, blue, green and red LEDs may be load manages when the parking brake is applied.
0630020	SP Lights, Side, WIn M6* LED, Prk Brk Deactivation	SIDE WARNING LIGHTS There will be two (2) Whelen®, Model M6* LED flashing warning light(s) with bezel(s) provided behind the crew cab doors. The color of the lights will be red. The lens colors will be the same color as the LED's. These lights will be activated with the Side Zone Lower warning lights. These lights will be deactivated when the parking brake is applied.
0836565	Lights, Rear Zn Lwr, WIn M6*, 2Lts	REAR ZONE LOWER LIGHTING There will be two (2) Whelen®, Model M6* LED warning lights with chrome trim located at the rear lower of the apparatus per the following: The left side rear warning light to include red LEDs The right side rear warning light to include red LEDs The lens color(s) to be the same as the LEDs There will be a switch located in the cab on the switch panel to control the lights.
0088745	Light, Rear Zone Up, WIn L31H*F LED Beacon, Red LED	REAR/SIDE ZONE UPPER WARNING LIGHTS There will be two (2) Whelen®, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There will be a switch located in the cab on the switch panel to control the beacons. The color of the lights will be red LEDs with both domes red.
0006551	Not Required, Lights, Rear Upper Zone Blocking	
0791528	Light, Traffic Directing, WIn TAL65, 36.00" Long, TACTL5	TRAFFIC DIRECTING LIGHT There will be one (1) Whelen®, Model TAL65, 36.00" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus. The Whelen, Model TACTL5, control head will be included with this installation. The controller will be energized when the battery switch is on. The auxiliary flash not activated.
0529278	Location, TDL, Surface Mounted	This traffic directing light will be surface mounted at the rear of the apparatus.
0530282	Location, Traf Dir Lt Controller, Overhead Switch Panel DS Right End	The traffic directing light control head will be located in the driver side overhead switch panel in the right panel position.
0006646	Electrical System, 120/240VAC, General Design	ELECTRICAL SYSTEM GENERAL DESIGN for ALTERNATING CURRENT The following guidelines will apply to the 120/240 VAC system installation: General Any fixed line voltage power source producing alternating current (ac) line voltage will produce electric power at 60 cycles plus or minus 3 cycles. Except where superseded by the requirements of the current edition of applicable NFPA standards, all components, equipment and installation procedures will conform to NFPA 70, National Electrical Code (herein referred to as the NEC). Line voltage electrical system equipment and materials included on the apparatus will be listed and installed in accordance with the manufacturer's instructions. All products will be used only in the manner for which they have been listed. Grounding Grounding will be in accordance with Section 250-6 "Portable and Vehicle Mounted Generators" of the NEC. Ungrounded systems will not be used. Only stranded or braided copper conductors will be used for grounding and bonding. An equipment grounding means will be provided in accordance with Section 250-91 (Grounding Conductor Material) of the NEC. The grounded current carrying conductor (neutral) will be insulated from the equipment grounding conductors and from the equipment enclosures and other grounded parts. The neutral conductor will be colored white or gray in accordance with Section 200-6 (Means of Identifying Grounding Conductors) of the NEC. In addition to the bonding required for the low voltage return current, each body and driving or crew compartment enclosure will be bonded to the vehicle frame by a copper conductor. This conductor will have a minimum ampere rating of 115 percent of the nameplate current rating of the power source specification label as defined in Section 310-15 (amp capacities) of the NEC. A single conductor properly sized to meet the low voltage and line voltage requirements will be permitted to be used. All power source system mechanical and electrical components will be sized to support the continuous duty nameplate rating of the power source. Operation

Instructions that provide the operator with the essential power source operating instructions, including the power-up and power-down sequence, will be permanently attached to the apparatus at any point where such operations can take place.

Provisions will be made for quickly and easily placing the power source into operation. The control will be marked to indicate when it is correctly positioned for power source operation. Any control device used in the drive train will be equipped with a means to prevent the unintentional movement of the control device from its set position.

A power source specification label will be permanently attached to the apparatus near the operator's control station. The label will provide the operator with the following information:
Rated voltage(s) and type (ac or dc)

Phase

Rated frequency

Rated amperage

Continuous rated watts

Power source engine speed

Direct drive (PTO) and portable generator installations will comply with Article 445 (Generators) of the NEC.

Overcurrent protection

The conductors used in the power supply assembly between the output terminals of the power source and the main over current protection device will not exceed 144.00" (3658 mm) in length. For fixed power supplies, all conductors in the power supply assembly will be type THHW, THW, or use stranded conductors enclosed in nonmetallic liquid tight flexible conduit rated for a minimum of 194 degree Fahrenheit (90 degrees Celsius).

For portable power supplies, conductors located between the power source and the line side of the main overcurrent protection device will be type SO or type SEO with suffix WA flexible cord rated for 600-volts at 194 degrees Fahrenheit (90 degrees Celsius).

Wiring Methods

Fixed wiring systems will be limited to the following:

Metallic or nonmetallic liquid tight flexible conduit rated at not less than 194 degrees Fahrenheit (90 degrees Celsius)

or

Type SO or Type SEO cord with a WA suffix, rated at 600 volts at not less than 194 degrees Fahrenheit (90 degrees Celsius)

Electrical cord or conduit will not be attached to chassis suspension components, water or fuel lines, air or air brake lines, fire pump piping, hydraulic lines, exhaust system components, or low voltage wiring. In addition the wiring will be run as follows.

Separated by a minimum of 12.00" (305 mm), or properly shielded, from exhaust piping

Separated from fuel lines by a minimum of 6.00" (152 mm) distance

Electrical cord or conduit will be supported within 6.00" (152 mm) of any junction box and at a minimum of every 24.00" (610 mm) of continuous run. Supports will be made of nonmetallic materials or corrosion protected metal. All supports will be of a design that does not cut or abrade the conduit or cable and will be mechanically fastened to the vehicle.

Wiring Identification

All line voltage conductors located in the main panel board will be individually and permanently identified. The identification will reference the wiring schematic or indicate the final termination point. When prewiring for future power sources or devices, the unterminated ends will be labeled showing function and wire size.

Wet Locations

All wet location receptacle outlets and inlet devices, including those on hardwired remote power distribution boxes, will be of the grounding type provided with a wet location cover and installed in accordance with Section 210-7 "Receptacles and Cord Connections" of the NEC.

All receptacles located in a wet location will be not less than 24.00" (610 mm) from the ground.

Receptacles on off-road vehicles will be a minimum of 30.00" (762 mm) from the ground.

The face of any wet location receptacle will be installed in a plane from vertical to not more than 45 degrees off vertical. No receptacle will be installed in a face up position.

Dry Locations

All receptacles located in a dry location will be of the grounding type. Receptacles will be not less than 30.00" (762 mm) above the interior floor height.

All receptacles will be marked with the type of line voltage (120-volts or 240-volts) and the current rating in amps. If the receptacles are direct current, or other than single phase, they will be so marked.

Listing

All receptacles and electrical inlet devices will be listed to UL 498, Standard for Safety

Attachment Plugs and Receptacles, or other appropriate performance standards. Receptacles used for direct current voltages will be rated for the appropriate service.

Electrical System Testing

The wiring and associated equipment will be tested by the apparatus manufacturer or the installer of the line voltage system.

The wiring and permanently connected devices and equipment will be subjected to a dielectric voltage withstand test of 900-volts for one (1) minute. The test will be conducted between live parts and the neutral conductor, and between live parts and the vehicle frame with any switches in the circuit(s) closed. This test will be conducted after all body work has been completed.

Electrical polarity verification will be made of all permanently wired equipment and receptacles to determine that connections have been properly made.

Operational Test per Current Edition NFPA Standard

The apparatus manufacturer will perform the following operation test and ensure that the power source and any devices that are attached to the line voltage electrical system are properly connected and in working order. The test will be witnessed and the results certified by an independent third-party certification organization.

The prime mover will be started from a cold start condition and the line voltage electrical system loaded to 100 percent of the nameplate rating.

The power source will be operated at 100 percent of its nameplate voltage for a minimum of two (2) hours unless the system meets category certification as defined in the current edition of applicable NFPA standards.

Where the line voltage power is derived from the vehicle's low voltage system, the minimum continuous electrical load as defined in the current edition of applicable NFPA standards will be applied to the low voltage electrical system during the operational test.

0529588		Generator, Harrison 8kW, 8.0MAS-16R/D-11011/15/1, Hydraulic, Hotshift PTO	<p>GENERATOR</p> <p>The apparatus will be equipped with a complete AC (alternating current) electrical power system. The generator will be a Harrison Model 8.0MAS-16R/D-11011/15/1, 8,000 watt hydraulic driven unit.</p> <p>The generator will be driven by a transmission power take off unit, through a hydraulic pump and motor.</p> <p>The hydraulic engagement supply will be operational at any time (no interlocks).</p> <p>An electric/hydraulic valve will supply hydraulic fluid to the clutch engagement unit provided on the chassis PTO drive.</p> <p>Generator Instruments and Controls</p> <p>To properly monitor the generator performance a digital meter panel will be furnished and mounted near the circuit breaker panel.</p>
0096833	SP	Location, Hydraulic Generator, Forward Compt, Tiller	<p>GENERATOR LOCATION</p> <p>The generator will be mounted as high as possible in the center transverse area of the forward tiller trailer compartment. An opening will be made from the overhead. Structure to the torque box area will be either reinforced or constructed in such a manner, that it will handle the additional weight of the generator. The front wall of the compartment will have knockouts for air flow. The transverse areas in the compartment will be sealed to keep water out of the compartment.</p> <p>GENERATOR COVER</p> <p>An aluminum treadplate surround will be provided to conceal the generator. Adequate louvers or knockouts will be provided for cooling the generator.</p>
0016752		Starting Sw, Truck Engine Powered Gen, Cab Sw Pnl	<p>GENERATOR START</p> <p>There will be a switch provided on the cab instrument panel to engage the generator.</p>
0511739	SP	Remote Start, Hydraulic Generator, PTO and Field - SAME SWITCH	<p>GENERATOR REMOTE START</p> <p>A remote start switch will be provided in the cab switch panel, at the aerial turntable and in the tiller cab to engage the hydraulic generator PTO and field. A light at each switch location will be provided to indicate that the generator is running. There will be one switch only.</p>
0016740		Not Required, Fuel System	
0016767		Not Required, Oil Drain Extension, Generator	
0036738		Circuit Breaker Panel, Included With PTO Generator	<p>CIRCUIT BREAKER PANEL</p> <p>The circuit breaker panel will be located high on the right wall of compartment LS3.</p>
0016771		Not Required, Routing Exhaust, Generator	
0779722		Receptacle, 15/20A 120V 3-Pr 3-Wr, NEMA 5-20R SB Dup, 1st, Interior Body	<p>120 VOLT RECEPTACLE</p> <p>There will be two (2), 15/20 amp 120 volt AC three (3) wire straight blade duplex receptacle(s) with an interior stainless steel wall plate, installed One (1) LS3 and One (1) RS4 Match Job 28976. The NEMA configuration for the receptacle(s) will be 5-20R.</p> <p>The receptacle(s) will be powered from the shoreline inlet.</p> <p>There will be a label installed near the receptacle(s) that state the following:</p> <p>Line Voltage Current Rating (amps) Phase Frequency</p>
0779561	SP	Receptacle Strip, 15A 120V 6-Place, Shoreline	<p>POWER OUTLET STRIP</p> <p>There will be two (2) receptacle strip(s) with six (6) 15 amp 120 volt AC straight blade receptacles provided One (1) - LS3 TBD at pre-con (see signed AD) One (1) - RS4 TBD at pre-con (see signed AD).</p> <p>The strip(s) selected will be powered directly from the shoreline inlet.</p> <p>There will be a label installed near the strip(s) that state the following:</p> <p>Line Voltage Current Rating (amps) Phase Frequency</p>

0006790	Receptacle, 20A 120V 3-Pr 3-Wr TL, L5-20R Wtrprf	120 VOLT RECEPTACLE There will be two (2), 20 amp 120 volt AC three (3) wire twist lock receptacle(s) with waterproof flip up cover(s) installed on the left side of the rear body bulkhead and on the right side of the rear body bulkhead. The NEMA configuration for the receptacles will be L5-20R. The receptacle(s) will be powered from the on board generator. There will be a label installed near the receptacle(s) that state the following: Line Voltage Current Rating (amps) Phase Frequency
0581812	Receptacle, 30A 240V 3-Pr 3-Wr TL, L6-30R, Sw Loc, 2 Sw, Wtrprf	240 VOLT SWITCHED RECEPTACLE There will be one (1) 30 amp, 240 volt AC three (3) wire twist lock receptacle(s) with waterproof flip up cover(s) installed near the hydraulic power supply(ies), P6 near the power supply location on lower back wall. The NEMA configuration for the receptacles will be L6-30R. There will be two (2) switches provided to allow the power supply(ies) to be plugged in at all times, with the power supply switch turned on and controlled by the remote switches located D5 and P6 exact location TBD at precon. The receptacle(s) will be powered from the generator. There will be a label installed near the receptacle(s) that state the following: Line Voltage Current Rating (amps) Phase Frequency
0519544	Brand, Hydraulic Tool System, Hurst Low Pressure	
0648232	SP Power Supply, Hurst JL-SE, 240 VAC, 5,000 PSI	HYDRAULIC POWER SUPPLY A Hurst, Model JL-SE, 240 volt, 5000 psi hydraulic power supply will be provided. The unit will be capable of operating four (4) tools simultaneously or two (2) tools with turbo function which doubles the flow of hydraulic fluid to two (2) tools in order to increase speed. The power supply will be provided with a quick disconnect for the electrical plug and Streamline® mono-coupling connections for the hydraulic lines. Each mono-coupling will be made of machined aluminum and hardened steel. The mono-coupling system will have an interlocking push-twist positive locking capability allowing the twin hose to be connected into a single coupling for safe and quick connection of hydraulic hoses. Only the female mono couplings are mounted on the connecting block of the unit. A total of quantity of one (1) will be provided P6 floor mount towards the rear floor area, mount the unit where the streamline connections are facing forward - match 28976 .
0652376	Hose, Hydraulic, Parflex, Low Pressure, All Sizes, Twin Line, Connection	HYDRAULIC HOSE A high pressure aramid non-conductive hose will be plumbed from the hydraulic power unit to the reel/outlet. The hose will meet SAE J343 for less than 50 microamps of leakage under 75,000 volts per foot, and will also meet or exceed SAE 100R8 specifications. The hose construction will consist of a polymeric core tube, aramid braid reinforcement, and abrasion-resistant urethane cover. All layers will be permanently bonded. Minimum burst pressure will be 20,000 psi (1,380 bar) with a 4:1 operational safety factor. Appropriate couplings will be installed for quick connection of the power unit. A total of two (2) section(s) of hose will be provided for the reel(s)/outlet(s) located D5 and P6. The color of the hose(s) will be: hose 1 green/green hose 2 orange/orange hose 3 no hose required hose 4 no hose required hose 5 no hose required hose 6 no hose required The brand, model and age of tool being used with this hose will be Hurst.
0652357	Hose, Hydraulic, 150', Dual Parker-Hannifin, 5K	DUAL HYDRAULIC HOSE A 150' section of low pressure aramid braided hose will be provided. The hose will be Parflex 528N lightweight, kink resistant, permanently bonded, non-conductive hose constructed of a polymeric tube core with abrasion resistant urethane cover. The hose will be rated for 5,000 psi working pressure and will exceed SAE 100R8 specifications. The hose will meet the SAE J343 standard for less than 50 microamps leakage under 75,000 volts per foot. All layers are permanently bonded with a 20,000 psi minimum burst pressure. The hose provide will provide a 4:1 operational safety factor. The hose will be one (1) continuous length without unions and will be equipped with quick connection type fittings at the tool end. A total of two (2) section(s) of hose will be provided. The color of the hose(s) will be: Hose One (1): green/green Hose Two (2): orange/orange Hose Three (3): no hose required Hose Four (4): no hose required Hose Five (5): no hose required Hose Six (6): no hose required The brand, model and age of tool(s) being used with the hose(s) will be Hurst JLE.

0653543		Reel, Hydraulic, Hannay, 150' Cap, .25" Dual Hose (Any Make Tool)	<p>HYDRAULIC REEL WITH CAPACITY FOR 150' OF HOSE</p> <p>A hydraulic hose reel will be provided. The reel will be operated by a 12 volt electric motor controlled by a rewind switch. The motor will be protected by a circuit breaker and the rewind circuit will be protected by a fuse. The switch will be installed at a height not to exceed 72.00" above the operator's standing position. The switch will be guarded to prevent accidental operation.</p> <p>The reel capacity will be a minimum of 150' of 0.25" inside diameter dual hydraulic hose. Surfaces where the hose comes in contact with the reel roller will be constructed of either stainless steel, chrome plated steel or plastic.</p> <p>No guide is required on the reel assembly. A ball stop will be provided to prevent the hose from being wound around the reel.</p> <p>A label will be provided in a readily visible location adjacent to the reel. The label will indicate maximum flow pressure and total length of hose installed on the reel.</p> <p>A total of two (2) reels will be installed on ceiling in center of D5/P6, one to payout D5 and other to payout P6 - Match 28976.</p> <p>The reel will be designed for a Hurst, new.</p>
0599505		Fluid, Hurst Hydraulic, One Gallon of Hurst Blue, (180R017) (fills 1 reel)	<p>HYDRAULIC FLUID</p> <p>One (1) gallon of Hurst Blue hydraulic fluid will be provided. The fluid will be fire resistant, non-corrosive, electrically non-conductive and maintains viscosity over a wide range of temperatures. A total of four (4) will be provided.</p>
0596037		Switch, Hydraulic Power Supply, 240V Receptacle	<p>RECEPTACLE CONTROL SWITCH</p> <p>An on/off 12 volt toggle switch with an independent indicator light will be provided. The switch will control a 240V receptacle (through a relay) that will provide power for the hydraulic power unit. The switch(es) will be provided on a bracket.</p> <p>There will be a total of two (2) switch(es) provided in a box next to the reel rewind switches, one per side of D5 and P6.</p>
0503617	SP	Switch, Second IATS, To Control Reel Rewind	<p>SECOND REEL REWIND SWITCH</p> <p>There will be a redundant button switch to control the reel rewind.</p> <p>one each side (total of two switches each side, one for each reel).</p> <p>A total of two (2) will be provided.</p>
0640704	SP	Captive Roller Guide, Two Reels, Mounted on Bracket, Connected to Side Cmpt Wall	<p>ROLLER GUIDE BRACKET</p> <p>To aid in the payout hose from the reels, a captive roller assembly will be installed on a bracket. The bracket will be connected from the side wall to the side wall in D5/P6 - see photo. There will be two (2) captive roller assemblies provided on this bracket for the reels that are located above the bracket.</p>
0057807		Roller Guide for Reel, Mounted on Slide Out Tray	<p>ROLLER GUIDE</p> <p>To aid in the payout of the hose from the reel, a roller assembly will be installed on the end of a slide out tray in the compartment housing the reel.</p> <p>There will be four (4) individual roller assembly(ies) provided D5/P6 on the two-way slide out tray in each corner.</p>
0893414		Aerial, 100' Heavy Duty Ladder, 500/500 Tip, 50 MPH Wind, Tiller	<p>FOUR (4)-SECTION 100 FOOT TRACTOR-DRAWN AERIAL LADDER CONSTRUCTION STANDARDS</p> <p>The ladder will be constructed to meet all of the requirements as described in the current edition of applicable NFPA standards.</p> <p>The aerial device will be a true ladder type device; therefore ladders attached to booms will not be considered.</p> <p>These capabilities will be established in an unsupported configuration.</p> <p>All structural load supporting elements of the aerial device that are made of a ductile material will have a design stress of not more than 50% of the minimum yield strength of the material based on the combination of the live load and the dead load. This 2:1 structural safety factor meets the current NFPA standard.</p> <p>All structural load supporting elements of the aerial device that are made of non-ductile material will have a design stress of not more than 20% of the minimum ultimate strength of the material, based on the combination of the rated capacity and the dead load. This 5:1 safety factor meets the current NFPA standard.</p> <p>Wire ropes and attaching systems used to extend and retract the fly sections will have a 5:1 safety factor based on the ultimate strength under all operating conditions. The factor of safety for the wire rope will remain above 2:1 during any extension or retraction stall. The minimum ratio of the diameter of wire rope used to the diameter of the sheave used will be 1:12. Wire ropes will be constructed of seven (7) strands over an inner wire core for increased flexibility. The wire rope will be galvanized to reduce corrosion.</p> <p>The aerial base pivot bearings will be maintenance free type bearings and require no external lubrication.</p> <p>The aerial device will be capable of sustaining a static load one and one-half times its rated tip load capacity (live load) in every position in which the aerial device can be placed when the vehicle is on a firm level surface.</p> <p>The aerial device will be capable of sustaining a static load one and one-third times its rated tip load capacity (live load) in every position the aerial device can be placed when the vehicle is on a slope of five degrees downward in the direction most likely to cause overturning.</p> <p>With the aerial device out of the cradle and in the fully extended position at zero degrees elevation, a test load will be applied in a horizontal direction normal to the centerline of the ladder. The turntable will not rotate and the ladder will not deflect beyond what the product specification</p>

allows.

All welding of aerial components, including the aerial ladder sections, turntable, pedestal, and outriggers, will be in compliance with the American Welding Society standards. All welding personnel will be certified, as qualified under AWS welding codes.

The aerial device will be capable of operating in conditions of wind up to 50 mph and icing conditions of up to a .25" coating over the aerial structure.

All of the design criteria must be supported by the following test data:

- Strain gage testing of the complete aerial device

- Analysis of deflection data taken while the aerial device was under test load

The following standards for materials are to be used in the design of the aerial device:

- Materials are to be certified by the mill that manufactured the material

- Material testing that is performed after the mill test will be for verification only and not with the intent of changing the classification

- All welded structural components for the ladder will be traceable to their mill lots.

LADDER CONSTRUCTION

The ladder is comprised of four (4) sections.

The ladder will have the capability to support a minimum of 500 pounds at the tip in the unsupported configuration, based upon 360 degree rotation, up to full extension and from -8 degrees to +75 degrees.

The ladder will be constructed of high strength low alloy steel, minimum 70,000 pounds per square inch yield, with full traceability on all structural members.

Each section will be trussed diagonally, vertically and horizontally using welded steel tubing.

All ladder rungs are round and welded to each section utilizing "K" bracing for lateral and torsional rigidity.

The inside width dimensions of the ladder will be:

- Base Section 39.00"

- Lower Mid Section 32.25"

- Upper Mid Section 26.62"

- Fly Section 21.62"

The height of the handrails above the centerline of the rungs will be:

- Base Section 26.75"

- Lower Mid Section 22.87"

- Upper Mid Section 20.25"

- Fly Section 17.50"

The ladder will be designed to provide continuous egress for firefighters and civilians from an elevated position to the ground. The end of the fly section will be constructed in a manner that aids personnel in climbing off the ladder.

The egress section will be designed to maintain the rated load of the aerial device. It will be bolted on for easy replacement.

VERTICAL HEIGHT

The ladder will extend to a minimum height of 100' above the ground at 75 degrees. The measurement of height will be consistent with NFPA standards.

HORIZONTAL REACH

The rated horizontal reach will be 95'1". The measurement of horizontal reach will be consistent with NFPA standards.

TURNTABLE

The upper turntable assembly will connect the aerial ladder to the turntable bearing. The steel structure will have a mounting position for the aerial elevation cylinders, ladder connecting pins, and upper turntable operator's position. The turntable platform will be approximately 96.00" wide by 72.00" long.

The turntable will be coated with a non-skid, chemical resistant material in the walking areas.

The stepping surfaces will meet the skid-resistance requirements of the current NFPA standard.

The turntable handrails will be a minimum 42.00" high and will not increase the overall travel height of the vehicle. The handrails will be constructed from aluminum and have a slip resistant knurled surface.

A foot switch will be located at the turntable control console to allow hydraulic flow to the aerial device. The foot switch will be protected by a cover to prevent accidental activation. Activation of the foot switch is necessary for aerial operation.

ELEVATION SYSTEM

Two (2) double acting lift cylinders will be utilized to provide smooth precise elevation from 8 degrees below horizontal to 75 degrees above horizontal.

The lift cylinders will have a 6.00" internal diameter (bore), a .50" wall thickness, a 4.50" diameter cylinder rod and a 34.84" stroke.

The lift cylinders will be equipped with integral holding valves located on the cylinder to prevent the unit from falling should the charged lines be severed at any point within the hydraulic system.

The lift cylinders will be mounted utilizing maintenance free spherical bearings on both ends of the cylinders. The bearings will help reduce pin wear.

Ladder tip speed is automatically decelerated at angles above 60 degrees reducing "tip-lash".

The pivot pins will be stainless steel and 2.25" in diameter. Each elevation pin will be stainless steel with a greaseless ladder pivot pin.

EXTENSION/RETRACTION SYSTEM

A full hydraulic powered extension and retraction system will be provided using two (2) hydraulic cylinders and wire ropes.

Each set is capable of operating the ladder in the event of a failure to the other.

The extension cylinder will have a 3.00" internal diameter (bore), 1.75" diameter rod and a 134.00" stroke.

Extension and retraction will be internally limited within the cylinders, eliminating excess strain on wire ropes, sheaves and the ladder structure.

Each of the cylinders, wire ropes and sheave assemblies will be completely independent of the other, so as to provide a safety factor wherein a failure of one assembly will not affect the function and operation of the other.

The extension cylinders are equipped with counter balance valves to synchronize the cylinders for smoother operation and prevent the unit from retracting should the charged lines be severed at any point within the hydraulic system. The cylinders will also have internal deceleration valves, to cushion the movement of the cylinder when approaching full extension or retraction. All extension/retraction pins will have a corrosion-preventative, QPQ black finish.

The extension cylinders will be mounted utilizing maintenance free spherical bearings.

The reeling of the wire rope will be such as to provide synchronized, simultaneous movement of all sections to full extension.
The extension/retraction wire ropes will be 7-flex galvanized with stainless steel threaded ends, and will possess the following characteristics:
- Lower Mid Section .50 diameter, 26,200lb breaking strength
- Upper Mid Section .38" diameter, 14,880lb breaking strength
- Fly Section .31" diameter, 10,380lb breaking strength
Wear pads made of polymer material will be used between the telescoping sections for maximum weight distribution, strength and smoothness of operation.
Adjustment screws are provided on the wear pads to permit proper side alignment.
All sheaves will be plastic and greaseless and all sheave pins and pivot pins will be stainless steel.

ROTATION SYSTEM

A 46.00" diameter, external tooth, monorace, slewing ring bearing will be used for the rotation system. The gear teeth will be a stub tooth form.
The bearing will provide 360 degree continuous rotation.
The turntable will be bolted to the bearing using 36 SAE Grade 8, .875" diameter bolts.
To secure the bearing to the base support 36 Grade 8, .875" diameter bolts will be used.
The turntable base and the torque box bearing plate will be machined to fit the bearing thereby providing even distribution of forces.
A hydraulically driven, planetary gear box with a drive speed reducer will be used to provide infinite and minute rotation control throughout the entire rotational travel.
The gearbox will have a torque rating of 130,000 pounds per square inch.
A spring applied, hydraulically released disc type swing brake will be furnished to provide positive braking of the turntable assembly.
Provisions will be made for auxiliary operation of the system in case of prime mover failure.
The hydraulic system is equipped with pressure relief valves which will limit the rotational torque to a non-destructive power.

ROTATION INTERLOCK

A permanently installed prevention mechanism will be provided as part of the rotation system to prevent the rotation of the aerial device to the side in which the stabilizers have not been fully deployed or are short-jacked.
The mechanism will allow full and unrestricted use of the aerial in the 180 degree area on the side(s) where the stabilizers have been fully deployed.
The system will also have a manual override to comply with NFPA.

LOAD CAPACITIES

The following load capacities will be established with the stabilizers at full horizontal extension and placed in the down position to level the truck and to relieve the weight from the tires and axles. Capacities will be based upon full extension and 360 degree rotation.
A load chart, visible at the operator's station, will be provided. The load chart will show the recommended safe load at any condition of the aerial device's elevation and extension.

50 MPH WIND CONDITIONS/WATERWAY DRY

Degrees of

Elevation

-8 to 9

10 to 19

20 to 29

30 to 39

40 to 49

50 to 59

60 to 69

70 to 75

Egress

500

500

500

500

500

500

500

500

Fly

-

-

-

-

250

250

750

1000

Upper Mid

-

-

-

250

250

500

1000

1000

Lower Mid

-

-

250

250

500

750

1000

1000

Base
 -
 250
 250
 500
 750
 1000
 1000
 1000
50 MPH WIND CONDITIONS/WATERWAY CHARGED
 Degrees of
 Elevation
 -8 to 9
 10 to 19
 20 to 29
 30 to 39
 40 to 49
 50 to 59
 60 to 69
 70 to 75
 Egress
 500
 500
 500
 500
 500
 500
 500
 500
 Fly
 -
 -
 -
 -
 -
 250
 500
 750
 Upper Mid
 -
 -
 -
 -
 250
 500
 750
 1000
 Lower Mid
 -
 -
 -
 -
 250
 500
 750
 1000
 1000
 Base
 -
 -
 -
 250
 500
 750
 1000
 1000
 1000

The tip capacity will be reduced to zero when flowing water with the nozzle above the waterway centerline.

BOOM SUPPORT

A heavy-duty boom support will be provided for support of the ladder in the travel position. On the base section of the ladder, a stainless steel scuffplate will be provided where the ladder comes into contact with the boom support. In the stowed position, the ladder tip will be not less than 11.00" below horizontal for unsurpassed visibility and safety while maneuvering the apparatus.

0762413	Light, Boom Support, Amdor AY-LB-12HW012, 12" LED	AERIAL BOOM SUPPORT LIGHT There will be one (1) Amdor®, Model AY-LB-12HW012, 190 lumen, 12" long, white LED strip light mounted on the boom support cradle. This light will be activated when the aerial master switch is activated.
0755127	Tie Down, Rope, Per Pair, 9000lb Rating, Trailer Gooseneck, Tiller	ROPE TIE DOWN AT GOOSENECK There will be two (2) pairs of rope tie downs provided each side of the tiller gooseneck in the forward and rearward locations. Equal quantities will be provided on each side. The tie downs will be rated for a straight line pull of 9000 lb and will be chrome plated.

0663833	Boom Support, Raised, Tiller	SPECIAL HEIGHT BOOM SUPPORT A special height boom support will be provided to raise the aerial device to clear the generator above the gooseneck.
0663892	Scuffplate, Aerial Boom Support, Top and Sides	BOOM SUPPORT SCUFFPLATES There will be scuffplates provided on the top and sides of the aerial boom support that come into contact with the aerial device. The scuffplates will be DA finished.
0619238	SP Cover, Boom Support Wiring, 4Way, Tiller	COVER FOR BOOM SUPPORT WIRING The exposed wiring at the rear of the tiller boom support will be covered by an aluminum treadplate cover.
0680821	Boom Panel, Pair	AERIAL BOOM PANEL There will be one boom panel provided on each side of the aerial ladder base section. The boom panel will be painted #90 red. The boom panels will be designed so no mounting bolts are in the face of the panel. This will keep the lettering surface free of holes.
0526886	Indicator, Extension, Inside Handrails Only, Every 10'	EXTENSION INDICATOR Extension markings and corresponding numerical indicators will be provided along each inside top rail of the base section of the aerial every ten (10) feet. They will indicate various positions of extension up to full. Markings and indicators will be clearly visible to the console operator. To aid in visibility during hours of darkness, the markings and numerical indicators will be of a black reflective material.
0723719	Steps, Folding, Four, Aerial Device, Trident	FOLDING STEPS One (1) set of folding steps will be provided at the tip of the ladder. An additional set of folding steps will be provided at the base of the fly section. The steps will be bright finished with a luminescent tread coating, that is rechargeable from any light source and can hold a charge for up to 24 hours, on the stepping surface. Each step will have no integrated light.
0688232	Rung Covers, Aerial Device	AERIAL DEVICE RUNG COVERS Each rung will be covered with a secure, heavy-duty, fiberglass pultrusion that incorporates an aggressive, no-slip coating. The rung covers will be glued to each rung and will be easily replaceable should the rung cover become damaged. The center portion of each rung cover will be black and the outside 2.00" edge at each side will be photoluminescent to assist in providing a light source for each rung during low light conditions. Under no circumstances will the rung covers be fastened to the rungs using screws or rivets. The rung covers will have a 10-year, limited warranty.
0786841	Brackets Only, Roof/Fresno Ladder, Base Section, Inboard of Boom Panel	LADDER STORAGE MOUNTING BRACKETS Mounting will be provided on the right side of the aerial device while viewed from the turntable for storage of one (1) roof ladder(s). The bracket(s) will be located inboard of the boom panel at the base section. The bracket(s) will hold the boom panel as close to the base section as possible and include straps to secure the ladder. The mounting brackets will accommodate a 10' Duo-Safety 775-DR roof ladder as determined by the type of aerial device and the available space.
0663209	Inclinometer, Additional, Aerial Device	ADDITIONAL INCLINOMETER There will be one (1) additional inclinometer(s) provided to indicate the degree of elevation of the aerial device. The inclinometer(s) will be located on the outside of the base section on the opposite side of the standard location. A light will be provided to illuminate the inclinometer.
0674963	Scabbard, Temporary Vent Saw Storage, No Depth Gauge, Aerial Ladder	TEMPORARY SCABBARD AT END OF AERIAL There will be a total of two (2) vent saw scabbard(s) provided. The scabbard(s) will be mounted on each side of the aerial egress. The scabbard(s) will be DA finished.
0676785	Bracket Only, Rubbish Hook, Aerial Fly Section	RUBBISH HOOK MOUNTING BRACKET Mounting will be provided near the end of the fly section of the aerial ladder for a rubbish hook. The bracket will be sized to hold a Nupla 12' roof vent rubbish hook with D handle.
0678815	Brackets Only, Axe, 6lb or 8lb, Aerial Fly Section	AXE MOUNTING BRACKETS Brackets will be provided near the end of the fly section of the aerial ladder for mounting a fire axe. The mounting plates will be D/A finished aluminum.

0893726	Lights, Turntable Walkway, P25, LED, Job Color Brackets	LIGHTS FOR TURNTABLE WALKWAY There will be lights with white LEDs and black housing provided at the aerial turntable. The lights will be located to illuminate the entire walking surface of the turntable including the area around the turntable console. These lights will be activated by the aerial master switch. The light(s) that are installed with fabricated brackets, the brackets will be painted to match the mounting surface.
0762396	Light, Turntable Console, Amdor AY-LB-12HW012, LED Strip Light	TURNTABLE CONSOLE LIGHTING There will be one (1), Amdor®, Model AY-LB-12HW012, 190 lumen, 12" long, white LED light strip mounted in the turntable console cover to illuminate the controls located on both the upper and lower portion of the turntable control station. These lights will be activated by the aerial master switch.
0660526	Hoist Rings, S/S, Forward Edge of Turntable, 105', 100'HD	HOIST RINGS There will be two (2) stainless steel hoist rings located on the forward edge (aerial side) of the turntable. One (1) to be mounted on each side of the aerial device. The hoist rings will be mounted on a stainless steel protective plate which is attached to the turntable deck. The rating of each hoist ring will be a maximum of 1000 lb. There will be a label indicating this rating provided next to the hoist rings.
0682164	Cover, Around Aerial Rotation Bearing	ROTATION BEARING COVER A cover will be fitted over the aerial rotation bearing and drive pinion gear(s). The cover will be aluminum treadplate and attached to the underside of the turntable deck.
0642824	Guard, Aerial Ladder Extension Control While Stowed, Tiller	LADDER EXTENSION CONTROL GUARD A guard, fabricated from a stainless steel hinge will be installed at the forward end of the ladder extension control as a protective measure. This will allow the aerial operator at the turntable control console, to position the guard when the ladder is stowed preventing the aerial from extending into the tiller cab window.
0120788	Control Stations, 100'/105' Tiller	CONTROL STATION There will be a turntable control station located on the right hand side of the turntable so the operator will be able to easily observe the ladder tip while operating the controls. The controls will permit the operator to regulate the speed of the aerial functions within safe limits (as determined by the manufacturer and NFPA standards). The controls will be clearly marked and lighted for nighttime operation. A hinged aluminum cover will be provided. The momentary foot switch located at the turntable control station will activate the aerial function controls. They are capable of being operated independently or simultaneously. The following controls and indicator lights will be clearly identified, illuminated, and conveniently located for ease of operation and viewing: <ul style="list-style-type: none"> - Elevation, extension/retraction, and rotation controls - High idle switch - Rung alignment indicator light - Tip/Tracking lights - Hydraulic system pressure gauge - Indicator/Alarm test switch - EPU switch - Operator's load chart - Stabilizer Not Fully Extended indicator light - Monitor controls - Aerial waterway flow meter There will also be a minimum of two (2) 12-volt work lights installed on the turntable to illuminate the surrounding area for nighttime operation. The work lights will be activated by the aerial master switch. STABILIZER CONTROL STATION There will be an easily accessible control station located at both the driver and passenger side of the apparatus. The following controls and indicator lights will be clearly identified and conveniently located for ease of operation and viewing at each control station. <ul style="list-style-type: none"> - Stabilizer controls for driver and passenger side - Stabilizer Firm On Ground indicator lights - Stabilizer Fully Extended indicator lights - Inclinator for grade and slope - Stabilizer EPU switch - High Idle switch

0662753	Stabilizers, 100'/105' HD Tractor Drawn Steel Aerial, Split Pan, 17' Spread	<p>STABILIZERS</p> <p>The vehicle will come equipped with a stabilization system consisting of two (2) hydraulically operated out and down style stabilizers. This system will meet or exceed all requirements of the NFPA specifications related to stabilization and setup on sloped surfaces.</p> <p>The stabilizer/leveling jacks will have a maximum spread of 17' measured from the centerline of the jack footpads when the beams are fully extended. The beams will be 6.81" wide x 8.88" high with 0.75" thick top and bottom plates and 0.50" thick sides of 100,000-PSI minimum yield strength steel. The cylinders will have pilot-operated check valves with thermal relief designed to insure that the beams will not drift out of the stowed position during travel. Wear pads will guide the stabilizers.</p> <p>The horizontal extension cylinders will be totally enclosed within the beams and will incorporate telescoping hydraulic tubing to supply the jack cylinder hydraulic power. Stabilizer hydraulic hoses will remain stationary during operation of the stabilizers to prevent hose wear and potential failure. The cylinders will be equipped with decelerators to reduce the speed of extension and retraction when the beams are near the fully retracted and extended positions. The stabilizer extension hydraulic cylinders will have the following dimensions: 2.25" bore, 1.38" rod, and 57.25" stroke.</p> <p>The vertical jack cylinders will be capable of 12.00" ground penetration. The cylinders will be supplied with pilot operated check valves on each jack cylinder to hold the cylinder in the stowed or working position, should a charged line be severed at any point in the hydraulic system. For safety, the integral holding valves will be located in the cylinder base end, NOT in the transfer tube. Vertical jack cylinder rods will be fully enclosed by a telescoping inner box to protect the cylinder rods from damage. The stabilizer jack hydraulic cylinders will have the following dimensions: 4.25" bore, 3.00" rod, and 28.88" stroke.</p> <p>Each stabilizer jack will have a pan that will be of the split-pan design and will be a maximum 12.50" wide so as to allow the extension of the stabilizer between parked cars or other obstacles. This pan will serve as a protective guard and a mounting surface for warning lights. The top, forward, and rear edges will be flanged back 90 degrees for added strength.</p> <p>Stabilizer Pads</p> <p>The stabilizer footpad will be 12.00" in diameter. The footpad will be attached to the jack cylinder rod by means of a machined ball at the end of the jack cylinder rod which mates to a socket machined into the footpad. The footpad will have the ability to pivot 20 degrees from horizontal in any direction to allow setup on uneven terrain.</p> <p>Auxiliary Stabilizer Pads</p> <p>An auxiliary ground pad will be supplied for each stabilizer to provide additional load distribution on soft surfaces. The pads will be 24.00" square and made from lightweight composite material. The ground pressure will not exceed 75 lb per square inch when the ground pads are used and the apparatus is fully loaded and the aerial device is carrying its rated capacity in any position. There will be one (1) pad located on each side of the apparatus, behind the stabilizers.</p> <p>Stabilizer Controls</p> <p>An electrically controlled hydraulic valve will power stabilizer movement. The valve can also be manually controlled in the event of electrical malfunction. Hydraulic power override controls will be incorporated into the valve. The manual override mechanism will be completely sealed within the valve assembly to prevent any possibility of corrosion.</p> <p>The stabilizer controls will be located to provide the operator with a full view of each stabilizer being positioned. Each stabilizer control panel will include the following:</p> <ul style="list-style-type: none"> In/out stabilizer beam control toggle switch Up/down stabilizer jack control toggle switch Emergency hydraulic power unit (EPU) control toggle switch High idle control toggle switch Stabilizer fully extended LED indicator lights Stabilizer planted LED indicator lights <p>As a safety device, an electrically actuated diverter valve will be provided. The hydraulic power will be diverted to the aerial ladder controls automatically the instant all stabilizer jacks are firmly planted on the ground. Once the aerial ladder is raised from the bedded position, the stabilizer hydraulic power is cut off so the stabilizers will not accidentally be moved while the aerial is being operated.</p> <p>To aid in leveling the unit, two (2) bubble type angle indicators will be located near the stabilizer controls. One (1) indicator will show the angle of the truck from the front to rear and the other will show the side to side angle of the truck. The indicators will be color coded green to show when the truck has been properly leveled allowing the aerial device to be operated at full capacity.</p> <p>A stabilizer deployment audible warning alarm will be provided at each side of the body, activated by the stabilizer movement.</p> <p>A "Stabilizers Not Stowed" indicator light will be provided in the cab within view of the driver. It will illuminate automatically whenever the stabilizers are not fully stowed to prevent damage to the vehicle if it is moved. The stabilizer system will also be wired to the "Do Not Move Truck" indicator light. This light will flash whenever the apparatus parking brake is not engaged and the stabilizers are not fully stowed.</p>
0728961	Stabilizer Pan Material	<p>STABILIZER PAN MATERIAL</p> <p>The aerial stabilizer pans will be polished stainless steel.</p>
0530817	Aerial Stabilizer Pins	<p>STABILIZER PINS</p> <p>The stabilizer jacks will have holes for the stabilizer pins.</p>
0779621	Doors, Stabilizer Control Box, Valve/Electrical Distribution Box, Tiller	<p>STABILIZER CONTROL BOX DOORS</p> <p>There will be polished stainless steel doors hinged along the forward edge with a flush lift and turn latch provided over each stabilizer control box.</p> <p>VALVE/POWER DISTRIBUTION BOX ACCESS DOOR</p> <p>There will be polished stainless steel doors with a flush lift and turn latch provided over the valve and power distribution box doors. These doors will be bottom hinged.</p>

0769589

SP

Lights, Stabilizer Pad Locator, Wln
Micro MPB*, Rec Stb S Pn, Cnt Ft

STABILIZER GROUND ILLUMINATION LIGHT
There will be two (2) Whelen® Model MPB*, 4,100 lumens 12 volt DC light(s) provided. The light (s) will be recessed in the stationary stabilizer pan(s) located, One (1) DS and One (1) PS.
The light(s) will indicate where the stabilizer pad can be set down.
The painted parts of this light assembly to be black.
The light(s) will be activated when the aerial master switch is activated.
The light(s) may be load managed when the parking brake is applied.

0540495

Pads, Stabilizer, Modified to Slide On

STABILIZER PADS, MODIFIED
The two (2) auxiliary stabilizer pads will be modified so they can be installed on the bottom of the stabilizer. The auxiliary stabilizer pad holders on the truck will also be modified.

HYDRAULIC SYSTEM

All hose assemblies will be assembled and crimped by the hose manufactures certified technician. An assembly cell will be located on the premises where the technician can perform audits of the final aerial assembly for proper fitting torque and hose routing.

All manufacturing employees responsible for the installation of hydraulic components will be properly trained. Training will include: proper handling, installation, torque requirements, cleanliness and quality control procedures for hydraulic components.

Hoses used in the aerial hydraulic system will be of a premium quality hose with a high abrasion resistant cover. All pressure hoses will have a working pressure of 4000 psi and a burst pressure rating of 16,000 psi.

The hydraulic oil will be a premium Multi-Vis product having a leading edge additive package, provide oxidation stability, be extremely shear stable and maximum anti-wear properties. All oil delivered to the manufacturing site will have a minimum ISO cleanliness level of 18/15/13.

Each aerial will be evaluated as to the region and climate where it will be used to determine the optimum viscosity and proper oil grade. Oil viscosity will be based on an optimum range of 80 to 1000 SUS during normal aerial use. Before shipment of the unit, an oil sample will be taken and analyzed to confirm the oil is within the allowable ISO grade tolerance.

The aerial hydraulic system will have a minimum oil cleanliness level of ISO 18/15/13 based on the ISO 4406:1999 cleanliness standard. Each customer will receive a certificate of actual cleanliness test results and an explanation of the rating system.

Each aerial will include an oil sample port, identified with a yellow dust cap and a label, for subsequent customer testing.

Ball valves will be provided in the hydraulic suction lines to permit component servicing without draining the oil reservoir.

The system hydraulic pressure will be displayed on a 2.5" liquid filled gauge, located on the control console.

The hydraulic system will be additionally protected from excessive pressure by a secondary pressure relief valve set at 3,150 psi. In the event the main hydraulic pump compensator malfunctions, the secondary relief will prevent system damage.

HYDRAULIC CYLINDERS

All cylinders used on the aerial device will be produced by a manufacturer that specializes in the manufacture of hydraulic cylinders.

Each cylinder will include integral safety holding cartridges.

Each cylinder will be designed to a minimum safety factor of 4:1 to failure.

All safety holding cartridges will be installed at the cylinder manufacturer, in a controlled clean environment to avoid possible contamination and or failure.

HYDRAULIC PUMP

The hydraulic system will be supplied by a 4.6 cubic inch variable volume, load and pressure compensating piston pump. The pump will be rated at a minimum of 5,365 psi peak pressure and 2,600 rpm. The pump will meet the demands of all three simultaneous aerial functions. The pump will provide proper flow for single aerial function with the engine at idle speed. A switch will be provided on the control console to increase the engine speed for multiple function operation.

EMERGENCY PUMP

The aerial will be equipped with an emergency hydraulic pump, electrically driven from the truck batteries. The pump will be capable of running for 30 minutes for limited aerial functions to stow the unit in case of a main pump or truck system failure. A momentary switch will be located at the stabilizer and aerial control locations to activate the emergency pump.

AERIAL CONTROL VALVE

The aerial hydraulic control valve will be designed with special spool flows, limiting the oil flow for the designed function speed. The valve will be manually controlled and be located in the control console with the handles protruding through the operating surface for operation. The activation handles will be spaced a minimum of 3.5" for ease of operation. The valve spools will be designed to bleed off downstream pressure, in the neutral position and allow proper seating of any cylinder holding cartridge.

OIL RESERVOIR

The oil reservoir will have a minimum capacity of 40 gallons. The oil fill location will be easily accessible and be labeled "Hydraulic Oil Only" and also indicate the grade of oil that is installed in the reservoir. The fill cap will have a 40 micron filter to provide protection from contamination. A drain hose will be included and will terminate with a quarter turn ball valve.

Two suction ports will be provided, one for the main hydraulic pump and one for the emergency pump. The main suction will be slightly elevated off the bottom of the reservoir and include a 100 mesh suction strainer. The emergency suction port will be closer to the bottom of the reservoir to provide some reserve oil for emergency operation.

A six (6) disc type magnetic drain will also be provided to collect any ferrous contaminants.

A combination sight glass and thermometer will be mounted to the reservoir in an easily viewable location.

HIGH PRESSURE FILTER

The pressure filter will be rated for 6,000 psi working pressure and generously sized for efficiency and capacity. A 90 psi bypass spring will be included to protect the element and hydraulic system during lower than normal system operating temperatures.

The 5Q filter element will be constructed of a micro glass medium, which has the highest capture efficiency, dirt holding capacity and life expectancy over other media such as cellulose and synthetic. The nominal rating will be 5 micron and have an efficiency rating of 99.3 % for 5 micron sized particles. The element will have a dirt holding capacity of not less than 35 grams.

RETURN FILTER

The return filter will be rated for 150 psi working pressure and generously sized for efficiency and capacity. A 25 psi bypass spring will be included to protect the element and hydraulic system during lower than normal system operating temperatures. The 10Q filter element will be constructed of a micro glass medium, which has the highest capture efficiency, dirt holding capacity and life expectancy over other media such as cellulose and synthetic. The nominal rating will be 10 microns and have an efficiency rating of 99.5% for 10 micron sized particles. The element will have a dirt holding capacity of not less than 84.7 grams.

0120793	Swivels, PAL, Tiller, 32 Collector Rings	<p>HYDRAULIC SWIVEL The aerial ladder will be equipped with a high pressure hydraulic swivel which will connect the hydraulic lines from the hydraulic pump and reservoir, through the rotation point, to the aerial control bank. The hydraulic swivel will allow for 360-degree continuous rotation of the aerial.</p> <p>ELECTRIC SWIVEL The ladder will be equipped with an electric swivel to allow 360-degree rotation of the aerial while maintaining connections in all electrical circuits through the rotation point. A minimum of 32 collector rings that are capable of supplying 30-amp continuous service will be provided. All collector rings will be enclosed and protected against condensation and corrosion.</p>
0120780	Electrical System, Tiller	<p>ELECTRICAL SYSTEM The aerial electrical system will be designed and manufactured in such a way that the power and signal protection and control compartments will contain circuit protection devices and power control devices. The power and signal protection and control components will be protected against corrosion, excessive heat, excessive vibration, physical damage, and water spray. The aerial electrical system will be designed and manufactured to allow the following:</p> <ul style="list-style-type: none"> - All of the serviceable components will be readily accessible. - Circuit protection devices will be utilized to protect each circuit. - General protection circuit breakers will be Type-I automatic reset (continuously resetting) or Type-II (manual resetting) and conform to SAE requirements. When required, automotive type fuses conforming to SAE requirements will be utilized to protect electronic equipment. - Power control relays and solenoids, when utilized, will have a direct current (dc) rating of 125% of the maximum current for which the circuit is protected. <p>The aerial electrical system will be designed and manufactured to allow the following:</p> <ul style="list-style-type: none"> - Toggle switches will be utilized that are certified for the outside conditions that fire apparatus experience. - All wiring will be protected through conduit or loom. - All wiring harnesses will be properly supported to eliminate harness damage through rubbing. - All connectors utilized in the system will be of a waterproof design. - Two (2) inductive proximity switches and an illumination light will be incorporated into the boom support. - The aerial master and aerial PTO can be engaged after the water pump has been engaged without having to bring the RPM back to idle. - Standard cabling to the tip of the aerial will consist of one (1) 16/20 cable and one (1) 12/8 cable. <p>TORQUE BOX POWER DISTRIBUTION PANEL A fuse and relay panel, located in the passenger side gooseneck area, will include the following:</p> <ul style="list-style-type: none"> - NEMA 4x rated weatherproof enclosure - Relays, fuses, and circuit breakers for aerial and stabilizer interlocks and control switches <p>TURNTABLE LIGHTING The turntable will be lighted for nighttime operation with a minimum of two (2) work lights activated by the aerial master switch.</p> <p>TURNTABLE CONSOLE The following switches and indicator lights will be standard on the turntable console:</p> <ul style="list-style-type: none"> - High idle on/off switch - Tip/Tracking light switch - Indicator and alarm test switch - Emergency hydraulic power switch - STABILIZERS NOT FULLY EXTENDED amber indicator light - Rung alignment green indicator light <p>The turntable console will be lighted for nighttime operation with one (1) work light activated by the aerial master switch. A fuse panel will be located in the turntable console.</p> <p>TURNTABLE OVERRIDE CONTROLS The aerial manual override controls will be located in the turntable control console.</p> <p>MASTER OVERRIDE CONTROLS An emergency power switch will be located behind an access panel on the driver's side of the tiller gooseneck. The switch will activate the emergency power unit and allow control of the aerial or stabilizers based on the direction the switch is toggled. A work light will be provided to illuminate the master override controls when the battery switch is active and the master override door is open.</p> <p>BOOM SUPPORT Two (2) Turck inductive proximity switches will be provided on the boom support to detect if the aerial device is fully stowed within the boom support.</p> <p>STABILIZER INDICATOR A "Stabilizers Not Stowed" indicator will be provided in the driver's compartment. It will illuminate automatically whenever the stabilizers are not fully stowed, to prevent damage to the apparatus if moved. The stabilizer system will also be wired to the "Do Not Move" indicator light, which will flash whenever the apparatus parking brake is not fully engaged and the stabilizers are not fully stowed.</p> <p>CRADLE INTERLOCK SYSTEM A cradle interlock system will be provided to prevent the lifting of the aerial from the nested position until the operator has positioned all the stabilizers in a load supporting configuration. A switch will be installed at the cradle to prevent operation of the stabilizers once the aerial has been elevated from the nested position.</p> <p>STABILIZER ALARM An electronic warning device will be provided at each stabilizer to warn personnel that the stabilizers are being deployed. Each alarm will produce a fast pulsing 90 DBA signal and will cancel only when the stabilizer is put into a load bearing configuration.</p> <p>STABILIZER SCENE LIGHTS A 4.00" clear floodlight will be provided on each stabilizer to illuminate the surrounding area. The light will be actuated by the aerial master switch.</p>

0804781	Aerial Scene Lts Separated into Aerial Tip Category and Aerial Tracking Category	
0820601	Lights, Tip, Wln MP** LED, 4lts	<p>TIP LIGHT</p> <p>There will be four (4) Whelen® Model MP**, 5,695 lumens 12 volt DC LED lights installed at the tip of the aerial device.</p> <p>One (1) light on the left side high. The left side tip light to include spot optics.</p> <p>One (1) light on the left side low. The left side lower tip light to include flood optics.</p> <p>One (1) light on the right side low. The right side lower tip light to include flood optics.</p> <p>One (1) light on the right side high. The right side tip light to include spot optics.</p> <p>The light(s) to be installed with low profile adjustable pedestal mount(s).</p> <p>The painted parts of this light assembly to be white</p> <p>The lights will be controlled with the tracking lights.</p>
0802753	Lights, Tracking, Wln MP** LED, 2lts	<p>TRACKING LIGHTS</p> <p>There will be two (2) Whelen® MP**, 5,695 lumens 12 volt DC LED lights installed on the base section of the aerial device below the hand rails per the following:</p> <p>One (1) will be located on the left side with left side tracking light to include spot optics.</p> <p>One (1) will be located on the right side with spot optics.</p> <p>The light(s) to be installed with low profile adjustable pedestal mount(s).</p> <p>The painted parts of this light assembly to be white.</p> <p>The tracking lights will be controlled by a switch located at the platform/tip and turntable.</p>
0733396	SP Light, Locator, Wln L31H*F, LED, at Tip, PAL/PAP, 1lt	<p>AERIAL LOCATOR LIGHT</p> <p>There will be a Whelen®, Model L31H*F, LED beacon installed at the aerial tip for the purpose of locating the aerial device while in operation.</p> <p>The color of the locator light will be blue.</p> <p>The lights will be activated whenever the aerial is raised from the cradle.</p>
0618906	Lighting, Rung, LED, TecNiq, 4 Section, Base, Lower/Upper Mid, Fly, 3 Colors RWB	<p>LIGHTING ON AERIAL LADDER</p> <p>There will be TecNiq, Model D02, LED rung lighting provided on both sides of the aerial ladder base, lower and upper mid, and fly sections. The lighting will be located adjacent to the ladder rungs along the lower rail of the ladder sections and will run the length of the ladder section.</p> <p>The color of the aerial device when the device is at full extension will be:</p> <p>Top one-third to be red</p> <p>Middle one-third to be white</p> <p>Bottom one-third to be blue</p> <p>The LED rung lighting will be activated when a switch at the turntable operator's panel is activated through the aerial master and a switch at the turntable operator's panel is activated through the master battery switch.</p> <p>The lights may be load managed when the parking brake is applied.</p>
0540701	Lights, Stabilizer Warn (1) Set, Wln M6* LED, Front Colored Lens	<p>STABILIZER WARNING LIGHTS</p> <p>There will be two (2) Whelen, Model M6*, LED flashing warning lights with Whelen, Model M6FC, chrome flanges installed on the stabilizer cover panels, one (1) each side.</p> <p>The front stabilizer pan lights will be red LED with a lens the same color as the LEDs.</p> <p>These warning lights will be activated by the same switch as the side warning lights.</p>
0068703	Lights, Grote Supernova LED, Stabilizer Beam, (1) Set	<p>STABILIZER BEAM WARNING LIGHTS</p> <p>Two (2) 4.00" diameter red LED flashing lights will be mounted on each stabilizer, one (1) facing forward and one (1) facing rearward. The lights will be Grote Supernova 40 series LED lights. The lights will be recessed in the horizontal beam of the stabilizer. These warning lights will be activated with the aerial master switch.</p>
0601973	Lights, Stabilizer Scene, (1) set, Truck-Lite 44042C, LED	<p>STABILIZER SCENE LIGHTS</p> <p>There will be one (1) Truck-Lite, Model 44042C 4.00" LED, scene light installed under each stabilizer beam to illuminate the surrounding area. A total of two (2) lights will be installed. These lights will be activated by the aerial master switch.</p>
0633833	DC Power To Aerial Tip, 11.2 Amp @ 12 Volt DC	<p>DC POWER CABLE to TIP</p> <p>There will be a cable installed in the aerial device to provide 11.2 amps @ 12 volts DC to the tip of the aerial device.</p>
0737181	Intercom, 2-Way Fire Research ICA910 Hands Free	<p>2-WAY AERIAL COMMUNICATION SYSTEM</p> <p>There will be a Fire Research, Model ICA910, two-way intercom system provided. The control module with an LED volume display and push-button volume control will be located on the turntable operator console.</p> <p>A hands free module will be located at the aerial tip or platform and constantly transmit to the other module unless the control module push-to-talk button is pressed.</p> <p>Each intercom unit will be weatherproof.</p>

0540895	Not Required, Breathing Air to Tip, Aerial Ladder	
0024742	Not Required, Mask, Breathing Air To Tip	
0066919	Not Required, Raised Pedestal, Tiller	
0808215	LyfePulley, Rescue System	RESCUE LIFTING SYSTEM A rescue lifting attachment will be provided. The lifting attachment will mount to the aerial egress and will consist of a pair of nylatron pulleys mounted to a stainless steel shaft. The pulleys will be adjustable from side to side and will have a total lifting capacity of 750lb, regardless of whether one (1) or both pulleys are being utilized.
0597280	Lifting Eye Assembly, Rope Rescue Attachment, HDL	LIFTING EYE ASSEMBLY - ROPE RESCUE ATTACHMENT A lifting eye assembly will be provided that is designed to evenly distribute load at the tip of the aerial. The egress will include attachment points for the lifting eye assembly. The lift eye assembly is retained by two (2) locking pins, one (1) at each end outboard side of the egress. Leveling is maintained by the lifting eye assembly rotating within the egress mounting.
0645472	Rope Tie Bar At Base Section, for Lyfe Pulley, Painted Box, Ascendant, 105', Tiller	ROPE TIE BAR AT BASE SECTION, RESCUE LIFTING SYSTEM A removable bracket will be supplied at the rear of the base section, attached between the left hand and right hand rear hand rails. The bracket will provide Lyfe Pulley rope tie off and/or guide points spaced 5.25" apart, centered between the rear hand rails. The bracket will be designed to be easily removable and not interfere with a fully retracted ladder assembly when attached to the base section. A storage box for the bracket will be provided on the outside rear of the base section. The storage box and bracket will be painted to match the aerial device.
0667968	Switch, Console Cover, Do Not Move Truck Indicator Circuit	SWITCH There will be a switch installed that will activate the Do Not Move Truck Indicator circuit when the battery switch is on, the turntable console cover is opened and the parking brake is released.
0530828	Turntable Access, Chains	AERIAL TURNTABLE CHAIN A chain will be installed at the aerial turntable.
0090677	Waterway, 100' HDL, Tiller	WATER SYSTEM A waterway system will be provided consisting of the following components and features: The integral telescopic water system will consist of a 4.50" diameter tube in the base section, a 4.00" diameter tube in the lower mid-section, a 3.50" diameter tube in the upper mid-section and a 3.00" diameter tube in the fly section. The telescopic waterway will be constructed of anodized aluminum pipe. The aerial will be capable of discharging up to 1000 gpm at 100 psi parallel to the ladder and 90 degrees to each side of center. An adjustable pressure relief valve will be furnished to protect the aerial waterway from a pressure surge. Two (2) 1.50" drain valves will be located at the lowest points of the waterway system and will be routed to drain through the center of the 5th wheel. WATERWAY SEALS The waterway seals will be of type-B PolyPak design, composed of nitroxile seal and a nitrile wiper, which together offer maximum stability and extrusion resistance on the waterway. The seal will be capable of withstanding pressures up to 2000 psi, temperatures in excess of 250 degrees Fahrenheit and have resistance to all foam generating solutions. The seals will be internally lubricated. The waterway seals will have automatic centering guides constructed of synthetic thermal polymer. The guides will provide positive centering of the extendible sections within each other and the base section to insure longer service life and smoother operation.
0632856	Monitor, Akron 3480 StreamMaster II Electric	AERIAL MONITOR An Akron Model 3480 monitor with stow and deploy will be provided at the tip with a Akron 1250 gpm Model 5177. The monitor's functions will be controlled electrically from two (2) separate locations. One (1) control will be located at the control console and the other at the ladder tip. There will be a courtesy light at the tip of the aerial to illuminate the controls. Vertical travel of this monitor will be -45 degrees to 90 degrees. Horizontal rotation will be 90 degrees to each side of the center line of the aerial device.
0534379	Flowmeter, FRC, Waterway, PAL	AERIAL WATERWAY FLOW METER A Fire Research Corporation Model DF430, digital flow indicator with a four (4) digit LED display will be provided for the aerial waterway at the turntable control station. The display will have a flow totalizer, programmable high and low flow warnings, and automatically adjust LED brightness for day/night viewing.

0512000		Inlet, Aerial Waterway, 4.00" Plumbing with 5.00" Inlet, Tiller	AERIAL WATERWAY INLET The aerial waterway will be plumbed from the fifth wheel area to the waterway swivel with 4.00" pipe. A 5.00" inlet will be located on each side of the apparatus complete with a chrome plated cap. The individual "line" pressure gauges for the inlets will be manufactured by Class 1. They will be a minimum of 3.50" in diameter and will have white faces with black lettering. Gauges will be compound type with a vacuum/pressure range of 30.00"-0-600#. The individual pressure gauge will be installed as close to the inlet as practical.
0673128		Quick-Lock Waterway Locking System, 100' HDL, 105' HDL, ASL	WATERWAY LOCKING SYSTEM The aerial ladder waterway monitor will be capable of being positioned at either the fly section or at the next lower section of the ladder. The monitor location will be changeable by the use of a single handle, located at the side of the ladder. The handle, attached to a cam bracket, will simply be moved forward to lock the monitor at the fly section and back to lock it to the previous section. There will be no pins to remove and reinstall. The monitor will be operational at all times, regardless of its position, without connecting or disconnecting electrical lines.
0663185	SP	Monitor Auto Stow, To Left Side Body, Tiller	MONITOR AUTO STOW The monitor will be set to auto stow facing the left side of the body to the allow the operator to verify the monitor is stowed prior to nesting the device.
0660379	SP	Label Pinnable Waterway Lock, Rescue/Waterpipe	QUICK-LOCK WATER WAY LOCK LABELING The Quick-Lock waterway locking mechanism will be labeled "LOWER FLY" "RELEASE" "UPPER FLY". Three (3) labels will be installed on the side and three (3) on the top of the pinnable waterway release lever mounting bracket.
0013164		Elbow, Aerial Inlet, 5" FNST x 5" Storz w/Cap	ADAPTER, STORZ INLET There will be two (2) 5.00" FNST x 5.00" Storz 30 degree elbow(s) with blind cap provided aerial waterway inlet.
0746470		Waterway Shutoff Valve, Above Swivel, Elkhart Apex, Elec Control	AERIAL WATERWAY SHUTOFF VALVE A 5.00" electric operated butterfly valve will be installed above the swivel in the aerial inlet waterway to shut off water flow to the aerial waterway. The controller(s) will be located aerial turntable. The valve will be controlled with an Elkhart Apex electric valve controller(s). The electric control must be of a true position feedback design, requiring no clutches in the motor or current limiting. The controller(s) will have momentary open, close as well as programmable preset valve positions. The controller(s) will provide position indication on a full color, backlit LCD display. It will have manual adjustment of the brightness as well as an auto dimming option. If applicable, there will be a preset relief valve in the waterway between the butterfly valve and the monitor to protect the waterway when retracting.
0047897		Tools, Aerial	TOOLS The following tools will be provided for retorquing of all specified bolts as recommended by the manufacturer: Torque Wrench All Required Extensions, Sockets and Adapters 4-to-1 Multiplier
0559494		Manuals and Training, 3 Consecutive Days, Ascendant Ladder, PAL, English	MANUALS Two (2) operator maintenance manuals and two (2) wiring diagrams pertaining to the aerial device will be provided with the apparatus at time of pick-up. Manuals will be in the English language. INITIAL INSTRUCTION On initial delivery of the fire apparatus, the contractor will supply a qualified representative to demonstrate the apparatus and provide initial instruction to the fire department regarding the operation, care, and maintenance of the apparatus for a period of three (3) consecutive days.

0832200	Cab, Tiller, Sliding Doors, 2025	<p>TILLER CAB</p> <p>A permanently mounted tiller cab will be located on top of the tiller trailer, to the rear of the aerial ladder. The maximum overall height of the tiller cab will not exceed 134.00". The tiller cab will be totally enclosed.</p> <p>The cab windshield will be automotive approved tinted safety glass and will provide a minimum of 1,513 square inches of clear viewing area.</p> <p>Each side window, directly rearward of the windshield, will be more than 536 square inches. The side windows, combined with the windshield, will provide a minimum of 2,585 square inches of unobstructed viewing area. In order to provide maximum visibility for the tillerman, there will be no corner posts at the forward corners of the windshield.</p> <p>Two (2) slide back doors, one each side of cab will be provided. Doors will be mounted on top and bottom slides which will be lockable in either open or closed position. A minimum door opening of 21.50" will be provided when entering and exiting the tiller cab. The tiller cab doors will be equipped with drop-down windows. The windows will be 18.00" wide x 31.00" high.</p> <p>The rear wall of the tiller cab will have a vertically-split sliding window. The window will be 33.50" wide x 27.75" high.</p> <p>The tiller cab floor will be constructed of aluminum treadplate.</p> <p>A two (2) speed electric windshield wiper with washer will be provided for the front windshield. The windshield washer reservoir will have a capacity of two (2) quarts and will be located forward of the tiller cab.</p> <p>An adjustable, telescopic steering column will be provided.</p> <p>The diagnostic plug for the trailer ABS system will be provided in the driver side tiller access stepwell, behind the fuel fill door.</p> <p>The following controls/alarms will be provided inside the tiller cab:</p> <p>Buzzer signaling system with push button in tiller cab steering wheel as well as a labeled push button in the tractor cab, within reach of the driver.</p> <p>Jackknife alarm</p> <p>The following will be provided on the steering column support pedestal:</p> <p>Two (2) heater/defroster outlets</p> <p>Heater/defroster control switch</p> <p>The following controls/gauges will be located in the upper control panel:</p> <p>Tiller wheel position indicator LCD color display gauge (L-C-R)</p> <p>Two (2) LED amber turn signals</p> <p>Windshield wiper/washer control switch</p>
0726222	Sun Visor, Smoked Lexan, Tiller Cab	<p>A smoked Lexan™ sun visor will be provided in the tiller cab above the windshield. There will be no retention bracket provided to help secure the sun visor in the stowed position.</p>
0636263	Light, Dome, FRP Dual LED 1lt	<p>TILLER CAB DOME LIGHT</p> <p>There will be one (1) dual LED dome light with black bezel installed in the tiller cab.</p> <p>The color of the LED will be red and white.</p> <p>The white LED will be controlled by the door switches and the lens switch.</p> <p>The color LED will be controlled by the lens switch.</p> <p>All dome lights on the apparatus will be illuminated per the current edition of applicable NFPA standards per seating position.</p>
0834060	Heater/Defroster, Tiller Cab, Electric, Dual 12V, Med Climate	<p>TILLER CAB HEATER/DEFROSTER</p> <p>There will be two (2) DC Thermal, Model SA12-4000, combination heater/defroster provided in the tiller cab. Each heater will have a max of 5,000BTU. The heater/defrost system will have an airflow of 220 cfm.</p> <p>Each heater/defroster will have a high/off/low heat switch, and thermostatic control located in the tiller cab within reach of the tillerman.</p> <p>There will be a minimum of two (2) defrost outlets in the cab for maximum defrost performance. The system will be 12 volt and will be powered through the tractor ignition circuit.</p>
0827713	SP Air Conditioner, Tiller Cab, Painted Sides, 4-Way Top, Soft Start, Safe-Stride	<p>TILLER CAB AIR CONDITIONING</p> <p>Air conditioning will be provided for the tiller cab.</p> <p>The unit will be manufactured by Danhard Inc.</p> <p>The air conditioner will have cooling capacity of 13,500 BTU.</p> <p>The in tiller cab venting will route via louvers included on the B-pillar of the tiller cab.</p> <p>The unit will be 120 volt AC and will be run off of the onboard generator. The full load amperage draw will be 12.00 amps in the cooling mode.</p> <p>A start assist kit provided by Danhard Inc, will be included to reduce the compressor starting current experienced by the generator.</p> <p>The evaporator will be located ahead of the tiller cab on the top deck of the tiller trailer. The air conditioning unit will not increase the overall height of the tiller cab.</p> <p>The evaporator sides will be painted to match the job color. The cover will be made of aluminum treadplate coated with black Safe-Stride® non-slip surface treatment.</p>

0695671	Seat, Tiller, Pierce PS6, Premium, Air Ride Hi-Back	TILLER CAB SEAT A seat will be provided in the tiller cab. The seat will be a cam action type, with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. The seat will have a reclining back adjustable from 20 degrees back to 0 degrees forward. The seat back will be a high back style with manual lumbar adjustment lever, and will include minimum 7.50" deep side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep dual density foam cushions designed with EVC (elastomeric vibration control). To ensure safe operation, the seat will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled. The seat will be furnished with a 3-point, shoulder type seat belt. The seat belt will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position.
0554699	Steps, Tiller Cab Access, Moved Rearward, Each Side	TILLER CAB STEPS For access to the tiller cab, two (2) sets of steps will be furnished at the rear of the apparatus, one set each side. The steps will be moved rearward and be in alignment with the tiller cab door. The bottom three (3) access steps will be full width, approximately 21.00" wide and the top step will be full width, approximately 18.50" wide. The steps will be securely reinforced and constructed of aluminum treadplate. Handrails will be provided on each side of the step assemblies for maximum safety; a vertical handrail will be on the forward side and a candy cane style will be provided on the rearward side. A vertical handrail will also be provided on the tiller cab. The steps will be illuminated for nighttime operation.
0036977	Tiller Warning Indicators w/Seatbelt Warn in Cab	JACKKNIFE ALARM An audible and visual warning system will be provided to warn both drivers when the jackknife position approaches the maximum allowable angle. TILLER WARNING INDICATOR A warning indicator in the tractor cab will be activated if the parking brake is released and the tiller driver is not present in the tiller cab.
0012207	Mirror, 6" Round Convex, Tiller Cab (PR)	CONVEX MIRRORS (tiller cab) A 6.00" diameter round convex mirror with adjustable arm will be installed on each side of tiller cab.
0051052	Window Defrost Fans (2)	WINDOW DEFROST FANS Two (2) window defrost fans will be mounted one each side.
0626771	Trailer, 3.00" Extended Gooseneck, Single Axle Only, Tiller	TILLER TRAILER The gooseneck area of the tiller trailer will be constructed of 100,000 psi minimum yield strength steel. The gooseneck area will have a section modulus of 289.00 cu. in. and a resistance to bending moment of 28,900,000 inch pounds. The gooseneck area will be 46.00" wide x 13.50" deep. The tiller trailer frame will be box type construction to effectively resist trailer twist. The side rails will have a 13.38" tall web over the front and mid sections of the trailer, with a continuous smooth taper to a 10.75" over the tiller axle. The frame rails will be constructed of 80,000 psi minimum yield strength heat treated .38" thick steel, with 3.50" wide flanges and covered by top and bottom plates to form a ridged box structure. Cover plates will be 50,000 psi minimum yield strength steel. The tiller trailer frame will have a section modulus of 257.70 cu. in., and a resisting bending moment (rbm) of 12,880,000 inch pounds over the critical regions of the frame assembly, with a section modulus of 18.96 cu. in. with an rbm of 2,085,803 inch pounds over the rear axle. The overall length of the tiller trailer will be 471.00". The gooseneck area of the trailer will be extended 3.00".
0090681	Walkway, Turntable to Body, Tiller	WALKWAY, TURNTABLE TO BODY A walkway will be provided from the aerial turntable to the tiller body.

0052481	Axle, Tiller Trailer, Oshkosh TAK-4, Non Drive, 22,800#	<p>TILLER TRAILER NON DRIVE AXLE</p> <p>The tiller trailer axle will be of the independent suspension design with a ground rating of 22,800 lb.</p> <p>Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron.</p> <p>The center cross members and side plates will be constructed out of 80,000-psi yield strength steel.</p> <p>Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations.</p> <p>The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative chamber above rated load.</p> <p>Camber at load will be zero degrees for optimum tire life.</p> <p>The kingpin bearing will be of low friction design and be sealed for life.</p> <p>Toe links that are adjustable for alignment of the wheel to the center of the trailer will be provided.</p> <p>The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle.</p> <p>The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase.</p> <p>The turning angle will be up to 24 degrees.</p> <p>TILLER TRAILER NON DRIVE AXLE WARRANTY</p> <p>The non drive axle system will have a three (3) year parts and labor warranty.</p>
0032125	Steering, Sheppard M110 w/tilt, TAK-4, Tiller Trailer	<p>TILLER TRAILER STEERING</p> <p>Dual Sheppard M110 steering gears, with integral heavy-duty power steering, will be provided. The steering wheel will be 18.00" in diameter, and capable of tilting and telescoping. A lock-out pin will be provided on the tiller cab steering column.</p>
0652502	Brakes, Meritor, EX225, 17", Disc Plus, TAK-4, Tiller	<p>BRAKES</p> <p>The tiller trailer brake calipers will be Meritor® DiscPlus™ EX225 air disc type. The brake rotors will be 17.00" ventilated.</p>
0052483	Suspension, Tiller, 22,800#	<p>SUSPENSION</p> <p>Independent suspension will be provided with a minimum ground rating of 22,800 lb.</p> <p>The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces, and at moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment.</p> <p>Each wheel will have torsion bar type spring. In addition, each wheel end will also have energy absorbing jounce bumpers to prevent bottoming of the suspension.</p> <p>The suspension design will be such that there is at least 10.00" of total wheel travel and a minimum of 3.75" before suspension bottoms.</p> <p>The torsion bar type spring and anchor lock system will allow for simple lean adjustments without the use of shims. Adjustment for a lean will be accomplished within 15 minutes. Anchor adjustment design is such that it allows 4.00" of ride height adjustment per side.</p> <p>The independent suspension will have been put through a durability test that simulated a minimum of 140,000 miles of inner city driving.</p>
0898937	Tires, Goodyear, Armor MAX MSA, 425/65R22.5 20 Ply (tiller)	<p>TIRES</p> <p>Tiller trailer tires will be Goodyear 425/65R22.50 radials, 20 ply Armor MAX MSA, rated for 22,800 lb maximum axle load and 68 mph maximum speed.</p>
0037030	Wheels, Alum. Alcoa, 22.50" x 12.25" (385/425), Tiller	<p>WHEELS, TILLER</p> <p>The tires will be mounted on Alcoa® 22.50" x 12.25" polished aluminum disc type wheels with a ten (10)-stud 11.25" bolt circle.</p>
0037050	Oil Seals, Tiller Axle	<p>OIL SEALS</p> <p>Oil seals with viewing window will be provided on the tiller axle.</p>
0007150	Bag of Nuts and Bolts	<p>LOOSE EQUIPMENT</p> <p>The following equipment will be furnished with the completed unit:</p> <p>One (1) bag of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.</p>

0816498	NFPA Required Loose Equipment, Aerial, NFPA/ULC 2024, Provided by Fire Dept	<p>NFPA LOOSE EQUIPMENT</p> <p>NFPA Required Loose Equipment Provided by Fire Department</p> <p>The following loose equipment as outlined in NFPA 1900, 2024 edition, table 8.1 and CAN/ULC S515:2024 edition, section 5.2 will be provided by the fire department:</p> <p>One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 107, <i>American National Standard for High-Visibility Safety Apparel and Accessories</i>, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front.</p> <p>Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (152 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band.</p> <p>Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.</p> <p>Four (4) ladder belts meeting the requirements of NFPA 2500.</p> <p>NFPA Loose Equipment That Should be Considered</p> <p>The following loose equipment as outlined in NFPA 1900, 2024 edition, appendix table A.8.4 (a) and CAN/ULC S515:2024 edition, section 5.2 should be considered:</p> <p>Two (2) 3 ft - 4 ft plaster hooks with D handles mounted in brackets fastened to the apparatus</p> <p>Two (2) crowbars</p> <p>Two (2) claw tools</p> <p>Two (2) 12 lb (5 kg) sledgehammers</p> <p>Four (4) SCBA apparatus</p> <p>Four (4) SCBA spare cylinders</p> <p>One (1) first aid kit</p> <p>Six (6) salvage covers, each a minimum size of 12 ft × 18 ft (3.6 m × 5.5 m)</p> <p>Four (4) combination spanner wrenches</p> <p>Two (2) scoop shovels</p> <p>One (1) pair of bolt cutters, 24.00" (0.6 m) minimum</p> <p>One (1) 150 ft (45 m) light-use life safety rope meeting the requirements of NFPA 2500</p> <p>One (1) 150 ft (45 m) general-use life safety rope meeting the requirements of NFPA 2500</p> <p>One (1) 150 ft (45 m) utility ropes having a breaking strength of at least 5000 lb (2300 kg)</p> <p>One (1) box of tools to include the following:</p> <p>one (1) hacksaw with three (3) blades</p> <p>one (1) keyhole saw</p> <p>one (1) 12" (.3 m) pipe wrench</p> <p>one (1) 24" (.6 m) pipe wrench</p> <p>one (1) ballpeen hammer</p> <p>one (1) pair of tin snips</p> <p>one (1) pair of pliers</p> <p>one (1) pair of lineman's pliers</p> <p>assorted types and sizes of screwdrivers</p> <p>assorted adjustable wrenches</p> <p>assorted combination wrenches</p> <p>One (1) automatic external defibrillator (AED)</p>
0816939	Extinguisher, Dry Chemical, NFPA 2024, Provided by Fire Department	<p>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</p> <p>The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>
0816937	Extinguisher, 2.5 Gal. Pressurized Water, NFPA/ULC 2024, Provided by Fire Dept	<p>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</p> <p>The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>
0007482	Not Required, Crowbars	
0007484	Not Required, Claw Tools	
0816998	Axe, Flathead, Provided by Fire Department	<p>FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT</p> <p>The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.</p>
0817000	Axe, Pickhead, Provided by Fire Department	<p>PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT</p> <p>The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.</p>
0007494	Not Required, Sledgehammers	

0741569	Paint Process / Environmental Requirements, Appleton	<p>PAINT PROCESS</p> <p>The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows:</p> <p><u>Manual Surface Preparation</u> - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include; chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.</p> <p><u>Chemical Cleaning and Pretreatment</u> - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion.</p> <p><u>Surfacer Primer</u> - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.</p> <p><u>Finish Sanding</u> - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.</p> <p><u>Sealer Primer</u> - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated.</p> <p><u>Basecoat Paint</u> - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment.</p> <p><u>Clear Coat</u> - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacturer.</p> <p>After the cab and body are painted, the color will be verified to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications will be used to determine the color match. A Delta E reading will be used to determine a good color match within each family color.</p> <p>All removable items such as brackets, compartment doors, door hinges, and trim will be removed and painted separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly.</p> <p>The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T. standard in critical areas. The manufacture's written paint standards will be available upon request.</p> <p>Environmental Impact</p> <p>Contractor will meet or exceed all current state regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions:</p> <p>Topcoats and primers will be chrome and lead free.</p> <p>Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals.</p> <p>Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor.</p> <p>Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98 percent. Water wash systems will be 99.97 percent efficient.</p> <p>Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean.</p> <p>Paint wastes are disposed of in an environmentally safe manner.</p> <p>Empty metal paint containers will be recycled to recover the metal.</p> <p>Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.</p> <p>Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his state EPA rules and regulations.</p>
0709567	Paint, Single Color, Enforcer	<p>CAB PAINT</p> <p>The cab will be painted #90 red.</p>
0709845	Paint, Single Color, Body	<p>BODY PAINT</p> <p>The body will be painted to match the single cab paint color.</p>
0509328	Paint, Single Color, Tiller Cab	<p>PAINT</p> <p>The tiller cab will be painted #90 Red.</p>

0646901	Paint Chassis Frame Assy, With Liner, E-Coat, Standard	<p>PAINT CHASSIS FRAME ASSEMBLY</p> <p>The chassis frame assembly will be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.</p> <p>Components that are included with the chassis frame assembly that will be painted (unless otherwise stated in a secondary option) are:</p> <ul style="list-style-type: none"> Frame rails Frame liners Cross members Axles Suspensions Steering gear Battery boxes Bumper extension weldment Frame extensions Body mounting angles Rear Body support substructure (front and rear) Pump house substructure Steel fuel tank Castings <p>Individual piece parts used in chassis and body assembly</p> <p>Components treated with epoxy E-coat protection prior to paint:</p> <ul style="list-style-type: none"> Two (2) C-channel frame rails Two (2) frame liners <p>The E-coat process will meet the technical properties shown.</p>
0693797	No Paint Required, Aluminum Front Wheels	
0693792	No Paint Required, Aluminum Rear Wheels	
0809564	No Paint Required, Aluminum Tiller Wheels	
0733739	Paint, Axle Hubs	<p>AXLE HUB PAINT</p> <p>All axle hubs will be painted to match primary job color.</p>
0581434	Transit Coating, Carwell, Corrosion Protection, Including Underside	<p>TRANSIT COATING</p> <p>All non-painted metal surfaces on the exterior of the vehicle will be sprayed with a corrosion protective coating provided by Carwell. The coating can be removed with soap and water. The coating is made of a linseed oil base and is biodegradable.</p> <p>The underside non-painted metal surfaces will also be coated with a corrosion protective coating.</p>
0756955	Compartment Paint, 909017, Nightspots, Tiller	<p>COMPARTMENT INTERIOR PAINT</p> <p>Interior of compartments will be painted 909017, Nightspots.</p>

0790913	Aerial Ladder Paint, Incl Gooseneck, Stabilizers, Tiller	<p>AERIAL DEVICE PAINT COLOR</p> <p>The aerial device paint procedure will consist of a seven (7) step finishing process as follows:</p> <ol style="list-style-type: none"> 1. <u>Manual Surface Preparation</u> - All exposed metal surfaces on the aerial device structural components above the rotation point will be thoroughly cleaned and mechanically shot-blasted to remove metal impurities and prepare the aerial for painting. 2. <u>Zinc Rich Primer</u> - Zinc rich primer will be applied to the trailer including the gooseneck and stabilizer housings, stabilizer beams and jacks, and upper 5th wheel components. 3. <u>Primer/Surfacer Coats</u> - A two (2) component epoxy primer/surfacer will be applied to the mechanically shot-blasted metal surfaces to provide a strong corrosion protective base coat and to smooth out the surface. All seams will be caulked with a two (2) component epoxy caulk before painting. 4. <u>Hand Sanding</u> - The primer/surfacer coat of the outer surfaces of the hand rails and base rails will be lightly sanded to a smooth finish. 5. <u>Primer Coat</u> - A two (2) component epoxy primer coat will be applied over the sanded primer. 6. <u>Topcoat Paint</u> - Urethane base coat will be applied to opacity for correct color matching. 7. <u>Clear Coat</u> - Two (2) coats of an automotive grade two (2) component urethane will be applied. Surfaces that will not be painted include all chrome plated, polished stainless steel, anodized aluminum and bright aluminum treadplate. <p>All buy out components, such as monitor, nozzle, gauges, etc. will be supplied as received from the vendor.</p> <p>Removable items such as brackets will be removed and painted separately to ensure paint coverage behind all mounted items.</p> <p>The aerial device components will be painted as follows using the aforementioned seven (7) step finishing process:</p> <p>Aerial device ladder sections and extension cylinders: white 10</p> <p>Aerial turntable: white 10</p> <p>Aerial control console: white 10</p> <p>Aerial lift cylinders: white 10</p> <p>Aerial rotation motor (if applicable): black</p> <p>Aerial trailer including the gooseneck and stabilizer housings, 5th wheel components below the rotation point, body support structure, tiller axle and suspension: red 90</p> <p>Aerial stabilizers: black 101</p> <p>Aerial egress: #50 red (will be contrasting color to the aerial device ladder sections)</p> <p>Aerial boom support: gloss black primer</p>
0544111	Reflective Band, 10"	<p>REFLECTIVE BAND</p> <p>A 10.00" white reflective band will be provided across the front of the vehicle and along the sides of the body.</p>
0007356	Reflective across Cab Face	The reflective band provided on the cab face will be at the headlight level.
0583446	Stripe, Chevron, Rear, Diamond Grade, Tiller	<p>REAR CHEVRON STRIPING</p> <p>There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus including the rear door. The tillerman cab and rear bumper will not be covered. The colors will be red and fluorescent yellow green diamond grade.</p> <p>Each stripe will be 6.00" in width.</p> <p>This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.</p>
0598754	Stripe, Reflective/Diamond Grade, 4.00" on Stabilizers	<p>REFLECTIVE STRIPE ON STABILIZERS</p> <p>There will be a 4.00" wide fluorescent yellow diamond grade reflective stripe provided on the forward and rear facing side of all aerial stabilizers.</p>
0065687	Stripe, Reflective, Cab Doors Interior	<p>CAB DOOR REFLECTIVE STRIPE</p> <p>A 6.00" x 16.00" black reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel.</p> <p>This stripe will meet the current edition of applicable NFPA standards.</p>
0543998	Stripe, Reflective, Tillerman Doors Interior	<p>REFLECTIVE STRIPE, TILLERMAN DOORS</p> <p>A 6.00" x 16.00" black reflective stripe will be provided across the interior of each tillerman's entry door. The stripe will be located approximately 1.00" up from the bottom, on the door panel.</p> <p>This stripe will meet the NFPA 1901 requirement.</p>
0679788	Stripe, Vinyl, Cab Sides, IPO Chrome Molding	<p>CAB STRIPE</p> <p>There will be a vinyl stripe provided on both sides of the cab in place of the chrome molding.</p>
0030076	Lettering Specifications, Vinyl/Painted	
0027252	Lettering, Vinyl 3" w/outline & shade (21-40)	<p>LETTERING</p> <p>Twenty-one (21) to forty (40) non-reflective vinyl lettering, 3.00" high, outlining and shading will be provided.</p>

0685993	Lettering, Reflective, 10.00", Each	LETTERING There will be reflective lettering, 10.00" high, with no outline or shade provided. There will be two (2) letters provided.
0686002	Lettering, Reflective, 8.00", Each	LETTERING There will be reflective lettering, 8.00" high, with outline and shade provided. There will be seven (7) letters provided.
0686007	Lettering, Reflective, 7.00", Each	LETTERING There will be reflective lettering, 7.00" high, with outline and shade provided. There will be one (1) letter provided.
0686013	Lettering, Reflective, 6.00", Each	LETTERING There will be reflective lettering, 6.00" high, with outline and shade provided. There will be one (1) letter provided.
0686033	Lettering, Reflective, 4.00", Each	LETTERING There will be reflective lettering, 4.00" high, with outline and shade provided. There will be 12 letters provided.
0686080	Lettering, Reflective, 3.00", (41-60)	LETTERING Forty-one (41) to sixty (60) reflective lettering, 3.00" high, with no outline or shade will be provided.
0683997	Lettering, Vinyl, 18.00", Each	LETTERING There will be non-reflective vinyl lettering, 18.00" high, with no outline or shade provided. There will be three (3) letters provided.
0684006	Lettering, Vinyl, 11.00", (21-40)	LETTERING Twenty-one (21) to forty (40) non-reflective vinyl lettering, 11.00" high, with outline and shade will be provided.
0684036	Lettering, Vinyl, 5.00", Each	LETTERING There will be non-reflective vinyl lettering, 5.00" high, with outline and shade provided. There will be four (4) letters provided.
0623673	SP Lettering, RTape Vinyl EFX Smooth Gold, Salinas, CA(Not covered under warranty)	VINYL LETTERING There will be RTape vinyl EFX smooth gold #3102 lettering with gradient effect. That will be located Cab. This is not covered under Pierce warranty.
0655896	Sign Kit, Painted, Holder and Insert, Each	SIGN KIT FOR LETTERING/NUMERALS four (4) painted stainless steel plate(s) and holder(s) will be provided for department lettering. They will be mounted One (1) Front Bumper, One (1) RS Crew Cab, One (1) LS Crew Cab, One RS Rear and 12"W x 10" H in size.
0000387	Emblem, Eagle Hose 2, Color Imaged, Pair	EAGLE HOSE #2 EMBLEMS A pair of emblems, 13.00" or less in Diameter, featuring a "Flying American Flag" and an "Eagle Holding a Fire Hose", all within a gold circle, will be installed Located on tiller cab door.. The design will be color imaged.
0684221	Emblem, Maltese Cross, Printed Effect Gold Leaf, 12"-14", Pair	MALTESE CROSS INSTALLATION There will be one (1) pair of maltese crosses, comprised of printed effect gold leaf material, provided and installed between the front doors and the side window up high.

0772003	Manual, Fire Apparatus Parts, USB Flash Drive, Custom	FIRE APPARATUS PARTS MANUAL There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided. The manual(s) will contain the following: Job number Part numbers with full descriptions Table of contents Parts section sorted in functional groups reflecting a major system, component, or assembly Parts section sorted in alphabetical order Instructions on how to locate parts Each manual will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies. Service Parts Internet Site The service parts information included in these manuals are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.
0772037	Manual, Chassis Service, USB Flash Drive, Custom	CHASSIS SERVICE MANUALS There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit. The manual will contain the following sections: Job number Table of contents Troubleshooting Front Axle/Suspension Brakes Engine Tires Wheels Cab Electrical, DC Air Systems Plumbing Appendix The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.
0773381	Manual, Chassis Operation, (1) USB Flash Drive, Custom, English	CHASSIS OPERATION MANUAL The chassis operation manual will be provided on one (1) USB flash drive. The manual will be in the English language.
0030008	Warranty, Basic, 1 Year, Apparatus, WA0008	ONE (1) YEAR MATERIAL AND WORKMANSHIP A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.
0696698	Warranty, Engine, Cummins, 5 Year, WA0181	ENGINE WARRANTY A Cummins five (5) year limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.
0684953	Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	STEERING GEAR WARRANTY A Sheppard three (3) year limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with this proposal.
0596017	Warranty, Frame, 50 Year, Custom Chassis, WA0013	FIFTY (50) YEAR STRUCTURAL INTEGRITY The Pierce custom chassis frame only (does not include crossmembers) limited warranty certificate, WA0013, is included with this proposal.
0595698	Warranty, Axle, 3 Year, TAK-4, WA0050	FRONT AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY The Pierce TAK-4 suspension limited warranty certificate, WA0050, is included with this proposal.
0733306	Warranty, Single Axle, 5 Year, Meritor, General Service, WA0384	SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor™ Axle 5 year limited warranty will be provided.
0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.
0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	TEN (10) YEAR STRUCTURAL INTEGRITY The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.

0744240	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	TEN (10) YEAR PRO-RATED PAINT AND CORROSION A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.
0524627	Warranty, Electronics, 5 Year, MUX, WA0014	FIVE (5) YEAR MATERIAL AND WORKMANSHIP The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.
0695416	Warranty, Pierce Camera System, WA0188	CAMERA SYSTEM WARRANTY A Pierce fifty four (54) monthwarranty will be provided for the camera system.
0647720	Warranty, Pierce LED Strip Lights, WA0203	COMPARTMENT LIGHT WARRANTY The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.
0046369	Warranty, 5-year EVS Transmission, Standard Custom, WA0187	TRANSMISSION WARRANTY The transmission will have a five (5) year/unlimited mileage warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission. Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.
0685945	Warranty, Transmission Cooler, WA0216	TRANSMISSION COOLER WARRANTY The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed \$10,000 per occurrence. A copy of the warranty certificate will be included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	TEN (10) YEAR STRUCTURAL INTEGRITY The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.
0693126	Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185	ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of ten (10) years . A five (5) year limited warranty will be provided on painted roll up doors. The limited warranty certificate, WA0185, is included with this proposal.
0006999	Warranty, Structure, 20 Year, Aerial Device, WA0052	TWENTY (20) YEAR AERIAL DEVICE STRUCTURAL INTEGRITY WARRANTY The Pierce device limited warranty certificate, WA0052, is included with this proposal.
0687388	Warranty, Swivels, 5 Year, Aerial Device, WA0197	AERIAL SWIVEL WARRANTY An Amity five (5) year limited swivel warranty will be provided. A copy of the warranty certificate will be included with this proposal.
0685727	Warranty, Hydraulic System and Components, 3 Year/5 Year, WA0200	HYDRAULIC SYSTEM COMPONENTS WARRANTY Aerial hydraulic system components will be provided with a five (5) year material and workmanship limited warranty. HYDRAULIC SEAL WARRANTY Aerial hydraulic seals will be provided with a three (3) year material and workmanship limited warranty. A copy of the warranty certificates is included with this proposal.
0687327	Warranty, Waterway, 10 Year, Aerial Device, WA0198	AERIAL WATERWAY WARRANTY An Amity ten (10) year limited waterway warranty will be provided. A copy of the warranty certificate is included with this proposal.
0595860	Warranty, Paint, 4 Year, Aerial Device, Pro-Rated, WA0047	FOUR (4) YEAR PRO-RATED PAINT AND CORROSION A Pierce aerial device limited pro-rated paint warranty certificate, WA0047, is included with this proposal.
0725636	Warranty, Harrison Generator, 2 Year	TWO (2) YEAR GENERATOR MATERIAL AND WORKMANSHIP WARRANTY A Harrison Hydra-Gen generator two (2) yearlimited warranty will be provided.
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	TEN (10) YEAR PRO-RATED PAINT AND CORROSION A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.

0595412	Warranty, Graphics Lamination, 1 Year, Apparatus, WA0168	ONE (1) YEAR MATERIAL AND WORKMANSHIP The Pierce graphics fading and deterioration limited warranty limited warranty certificate, WA0168, is included with this proposal.
0819254	Certification, Vehicle Stability, CD0196	VEHICLE STABILITY CERTIFICATION The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1900, current edition, section 7.14, Vehicle Stability. The certification is included with this proposal.
0808564	Certification, Engine Installation, Enf, Cummins X15, 2027	ENGINE INSTALLATION CERTIFICATION The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.
0686786	Certification, Power Steering, CD0098	POWER STEERING CERTIFICATION The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification is included with this proposal.
0892691	Certification, Cab Integrity, Saber FR/Enforcer, CD0189	CAB INTEGRITY CERTIFICATION The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below: SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. European Occupant Protection Standard ECE Regulation No.29. SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks. Side Impact The cab will be subjected to dynamic preload where a 14,320-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident. Frontal Impact The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420. Additional Frontal Impact The same cab will withstand a frontal impact of 65,098 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420) Roof Crush The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons. Additional Roof Crush The same cab will be subjected to a roof crush force of 110,000 lbs. (Four and a half times the load criteria of ECE 29) The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.
0631973	Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	CAB DOOR DURABILITY CERTIFICATION Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.
0631978	Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	WINDSHIELD WIPER DURABILITY CERTIFICATION Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i> . The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.
0631974	Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	ELECTRIC WINDOW DURABILITY CERTIFICATION Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.

0631977	Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	<p>SEAT BELT ANCHOR STRENGTH Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.</p> <p>SEAT MOUNTING STRENGTH Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.</p>
0735949	Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	<p>PERFORMANCE CERTIFICATIONS</p> <p>Cab Air Conditioning Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria.</p> <p>Cab Defroster Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. <i>The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.</i></p> <p>Cab Auxiliary Heater <i>Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.</i></p>
0545073	Amp Draw Report, NFPA Current Edition	<p>AMP DRAW REPORT The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system. The manufacturer of the apparatus will provide the following: Documentation of the electrical system performance tests. A written load analysis, which will include the following: The nameplate rating of the alternator. The alternator rating under the conditions specified per: Current edition of applicable NFPA standards. The minimum continuous load of each component that is specified per: Current edition of applicable NFPA standards. Additional loads that, when added to the minimum continuous load, determine the total connected load. Each individual intermittent load. All of the above listed items will be provided by the bidder per the current edition of applicable NFPA standards.</p>
0002758	Amp Draw, NFPA/ULC Radio Allowance	
0799248	Appleton/Florida BTO	
0000029	TILLER BODY	
0000012	PIERCE CHASSIS	
0004713	ENGINE, OTHER	
0046396	EVS 4000 Series TRANSMISSION	
0020037	NO PUMP	
0020015	ABS SYSTEM	
0658751	PUMPER BASE	



Electrical Analysis

11/12/2025

Bid #: 968
Desc: 100' Tiller - Duplicate to 42944 - 2025
Customer: Salinas Fire Department
Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Job #:
Sales Rep: Young, Dewayne
Organization: Golden State Fire Apparatus, Inc
Type: Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0001244	High Idle w/Electronic Engine, Custom		0.00	1.20	0.00
0026408	Wiring, Customer Installed Radio, Battery-Direct, Ignition-Power &		0.00	36.00	0.00
0067509	Switch, Additional for Lightbar		0.00	0.00	0.08
0079211	Batteries, (6) Stryten/Exide Grp 31, 950 CCA each, Threaded Stud		0.00	3.00	0.00
0511739	Remote Start, Hydraulic Generator, PTO and Field - SAME		0.00	1.00	0.00
0550452	Lights, Side Scene, Zico ZQL-SS-LED, Stainless 1st		0.00	0.00	1.00
0552317	Lights, Perimeter, WIn 20C0CDCR		0.00	0.00	2.40
0583938	Lights, Engine Compt, Custom, Auto Sw, WIn 3SC0CDCR, 3"		0.00	0.30	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0626097	Light, Map, Sunnex HS76*-00 Series, Swivel Joint, Clear Lens,		0.00	0.00	1.56
0630020	Lights, Side, WIn M6* LED, Prk Brk Deactivation		0.00	2.70	1.80
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber		0.00	26.00	0.00
0639726	Cab Lift, Elec/Hyd, Manual Override, Unlocked Ind Light, Saber		0.00	180.00	0.00
0661232	Compt, At Rear Between Tow Eyes, Divider, Smooth Alum Sngl		0.00	0.00	0.00
0662753	Stabilizers, 100'/105' HD Tractor Drawn Steel Aerial, Split Pan, 17'		0.00	2.00	0.00
0666072	Lights, Tractor Scene, WIn M6ZC LED Rear of Cab 2lts		0.00	0.00	4.00
0683556	Light, Do Not Move Apparatus, WIn M2R Red LED		0.00	0.50	0.00
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0690488	Lights, Side Scene, Zico ZQL-SS-LED, Stainless 2nd		0.00	0.00	1.00
0750408	Lights, Side, WIn PS*01FCR, 1st		0.00	2.88	1.92
0772592	Speakers, Panasonic, (2) Additional, Tiller Cab		0.00	0.00	3.00
0777954	Light, Indicator, Jackknife Warning, WIn 3S*00F*R		0.00	0.50	0.00
0804537	Lights, Cornering, Tiller, WIn, 704BU, 2 lts		0.00	1.00	0.00
0804719	Handlts, (4) Streamlight, Fire Vulcan, 44451, C4 LED, Tail Lts,		0.00	0.00	4.40
0804781	Aerial Scene Lts Separated into Aerial Tip Category and Aerial		0.00	0.00	0.00
0805325	Light, Directional, WIn M62T* LED, 15 Degree Angle Bracket,		0.00	1.50	0.00
0805618	Lights, Backup, WIn M62BU		0.00	3.20	0.00
0813747	Compt, 16.50 W x 28 H x 15 D, Ea Side C/C, Dbl Pan, 2.5" Blw,		0.00	0.00	0.00
0816632	Intercom, David Clark, 8-Pos, 3-Dual Radio, (D, O, TC, RPTT),		0.00	0.00	0.50
0817058	Camera, Pierce, LS Mux, R Camera, SD, CL714		0.00	1.20	0.00
0819994	Radio, Jensen, AM/FM/WB, Bluetooth		0.00	0.00	2.00
0820911	Wiring, Spare, 15 A 12V DC 6th NFPA1900/ULC		0.00	0.00	90.00
0822289	ABS/ATC Wabco Brake System, Single Axle, Tiller, NFPA		0.00	6.00	0.00
0834413	USB, Cab, 4, 12V DC, Dual USB Termination, Batt Dir.		0.00	0.00	10.00
0893726	Lights, Turntable Walkway, P25, LED, Job Color Brackets		0.00	0.00	0.00
0895281	Siren, Federal Q2B, Littelfuse 24213 Sol		0.00	100.00	0.00
0547328	Wiring, Spare, 20 A 12V DC, Switch Feature 1st	Load Managed	0.00	0.00	120.00
0618906	Lighting, Rung, LED, TecNiq, 4 Section, Base, Lower/Upper Mid,	Load Managed	0.00	0.00	20.00
0722038	HVAC, Heavy-Duty, Enforcer, w/X15, CARE	Load Managed	0.00	0.00	100.00
0736743	Light, WIn, 12V PSL2** Slim Ln, 12 VDC 2nd	Load Managed	0.00	0.00	12.00
0736755	Light, WIn, 12V PSL2** Slim Ln, 12 VDC 1st	Load Managed	0.00	0.00	12.00
0768928	Lights, WIn, PSL2** Pioneer, 12 VDC, 2nd	Load Managed	0.00	0.00	12.20
0768929	Lights, WIn, PSL2** Pioneer, 12 VDC, 1st	Load Managed	0.00	0.00	12.20
0769589	Lights, Stabilizer Pad Locator, WIn Micro MPB*, Rec Stb S Pn,	Load Managed	0.00	0.00	7.00
0774948	Lights, WIn, P*H1* Pioneer, 12 VDC, 2nd	Load Managed	0.00	0.00	6.50
0775524	Lights, WIn, P*H1* Pioneer, 12 VDC, 1st	Load Managed	0.00	0.00	6.50
0776357	Light, Visor, WIn, 12V P*H2* Pioneer, Cnt Feature, 1st	Load Managed	0.00	0.00	13.00

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply



Electrical Analysis

11/12/2025

Bid #: 968
Desc: 100' Tiller - Duplicate to 42944 - 2025
Customer: Salinas Fire Department
Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Job #:
Sales Rep: Young, Dewayne
Organization: Golden State Fire Apparatus, Inc
Type: Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0821191	Wiring, Spare, 20 A 12V DC, Batt Dir, 1st NFPA1900/ULC	Load Managed	0.00	0.00	20.00
0834060	Heater/Defroster, Tiller Cab, Electric, Dual 12V, Med Climate	LM - Last	0.00	0.00	75.00
0889974	Light, WIn, 12V PSL2** SIm Ln, 12 VDC 3rd	Load Managed	0.00	0.00	5.46
0002565	Hourmeter, Aerial Inside Cab	NFPA	0.10	0.00	0.00
0002615	Switch, Aerial 12V Master	NFPA	0.08	0.00	0.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0010458	Platform, Slide Out, 500 lb Capacity, w/Morton Cass	NFPA	3.00	0.00	0.00
0036503	Compt, F/H, Trans Front, Roll, LS Center, Tiller	NFPA	1.80	0.00	1.80
0036512	Compt, F/H, Trans Front, Roll, RS Center, Tiller	NFPA	1.80	0.00	1.80
0059809	Light, Marker, Weldon, 9186-1500 LED, Location	NFPA	0.10	0.00	0.00
0068703	Lights, Grote Supernova LED, Stabilizer Beam, (1) Set	NFPA	1.60	0.00	0.00
0088745	Light, Rear Zone Up, WIn L31H*F LED Beacon, Red LED	NFPA	3.20	4.80	0.00
0092582	Load Manager/Sequencer, MUX	NFPA	0.56	0.56	0.00
0120788	Control Stations, 100'/105' Tiller	NFPA	4.26	0.00	0.00
0529588	Generator, Harrison 8kW, 8.0MAS-16R/D-11011/15/1, Hydraulic,	NFPA	35.31	0.00	0.00
0534379	Flowmeter, FRC, Waterway, PAL	NFPA	0.50	0.00	0.00
0534987	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts,	NFPA	0.35	0.00	0.00
0540701	Lights, Stabilizer Warn (1) Set, WIn M6* LED, Front Colored Lens	NFPA	1.80	2.70	0.00
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	NFPA	7.81	0.00	0.00
0601973	Lights, Stabilizer Scene, (1) set, Truck-Lite 44042C, LED	NFPA	1.00	0.00	0.00
0602100	Lights, Torque Box Ladder Storage, Pierce LED Strip Lights, 2 Lts	NFPA	1.00	0.00	0.00
0605488	Lightbar, WIn, Freedom IV-Q, 81", RRRRWsrR_Opt_RsrWRRRR	NFPA	6.48	2.68	9.92
0605598	Lightbars, WIn, Freedom IV-Q, 2-21.5", RRRRR RRRRR	NFPA	6.48	0.00	9.76
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29	NFPA	0.10	0.90	0.00
0622803	Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	NFPA	1.26	0.00	0.00
0625210	Lights, Directional, Cab Front Side, Truck-Lite 19036Y LED,	NFPA	0.12	0.00	0.00
0625650	Cab, Enforcer, 7000	NFPA	6.80	10.20	0.00
0625953	Light, Directional, WIn 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts,	NFPA	0.70	0.70	0.00
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	NFPA	1.60	0.00	0.00
0642936	Timer, Havis Chargeguard Select CG-X	NFPA	0.04	0.00	0.00
0647647	Lights, Dome, FRP Dual LED 4 Lts	NFPA	0.80	0.80	0.00
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber	NFPA	0.35	0.00	0.00
0652577	Compt, F/H, Trans Roll, Special Generator Mounting, 92.00"	NFPA	1.80	0.00	1.80
0652578	Compt, F/H, Trans Roll, Special Generator Mounting, 92.00"	NFPA	1.80	0.00	1.80
0653937	Flasher, Headlight Alternating	NFPA	0.08	0.00	0.00
0665700	Light, Slide-Out Pump Operator Step, Not Required	NFPA	0.65	0.00	0.00
0680193	Ladder Storage, Vertically Hinged Doors, Smooth Alum, Grabber	NFPA	0.90	0.00	0.90
0689539	Lights, Compt, Pierce, LED Light Strip, 36", Additional	NFPA	0.35	0.35	0.00
0689540	Lights, Compt, Pierce, LED Light Strip, 27", Additional	NFPA	0.52	0.52	0.00
0689541	Lights, Compt, Pierce, LED Light Strip, 9", Additional	NFPA	0.09	0.09	0.00
0733396	Light, Locator, WIn L31H*F, LED, at Tip, PAL/PAP, 1lt	NFPA	1.60	2.40	4.00
0737181	Intercom, 2-Way Fire Research ICA910 Hands Free	NFPA	0.50	0.00	0.00
0746667	Lights, Side Zone Lower, WIn M6**, M6**, 4Lts	NFPA	3.60	5.40	0.00
0748168	Cabinet, Rear Facing, RS, 26.75 W x 30 H x 22 D, Ext Acc Only,	NFPA	0.30	0.30	0.00
0748169	Cabinet, Rear Facing, LS, 26.75 W x 30 H x 23 D, Ext Acc Only,	NFPA	0.30	0.30	0.00
0748170	Cabinet, Rr Fcng, Top Eng Tnl, 38 W x 15 H x 18 D, Web, Notch,	NFPA	0.15	0.15	0.00
0760732	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 4lts,	NFPA	1.52	0.00	0.00
0761731	Lights, Front Zone, WIn M6** M6** M6** M6**, 4lts Q Bezel, Clr	NFPA	3.60	5.40	0.00

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Electrical Analysis

11/12/2025

Bid #: 968
Desc: 100' Tiller - Duplicate to 42944 - 2025
Customer: Salinas Fire Department
Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Job #:
Sales Rep: Young, Dewayne
Organization: Golden State Fire Apparatus, Inc
Type: Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0762396	Light, Turntable Console, Amdor AY-LB-12HW012, LED Strip	NFPA	0.20	0.00	0.00
0762413	Light, Boom Support, Amdor AY-LB-12HW012, 12" LED	NFPA	0.18	0.00	0.00
0763582	DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle, Tiller	NFPA	0.60	11.40	0.00
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/Enf/Imp/Sab/Vel	NFPA	4.20	4.20	0.00
0791528	Light, Traffic Directing, Wln TAL65, 36.00" Long, TACTL5	NFPA	0.60	1.20	0.00
0793424	Compt, F/H F/D Front/Rear Roll, Center Lift Past 90, Special Cab	NFPA	3.60	0.00	3.60
0802753	Lights, Tracking, Wln MP** LED, 2Lts	NFPA	8.00	0.00	0.00
0804519	Lights, Tail, Wln M62BTT* Red Stop/Tail & M62T* Amber Dir Arw	NFPA	0.83	2.49	0.00
0808497	Engine, Cummins X15, 565 hp, 1850 lb-ft, W/OBD, EPA 2027,	NFPA	6.00	0.00	0.00
0813525	Lights, Step, P25 LED, Tiller, Control, Trim Feature	NFPA	0.50	0.00	0.00
0814201	Vehicle Information Center, 7" Color Display, Touchscreen, MUX,	NFPA	1.20	0.00	0.00
0816093	ClearSky Telematics, Remote Fleet & On-scene Management,	NFPA	1.61	0.00	0.00
0819013	Siren, Code 3 3692 100/200W, Other Speaker, Non-NFPA 2024	NFPA	1.40	12.60	0.00
0820601	Lights, Tip, Wln MP** LED, 4Lts	NFPA	13.12	0.00	0.00
0822192	Compt, F/H F/D Front Roll, Low Rear Roll, Spec Cab Steps,	NFPA	1.80	0.00	1.80
0824055	Compt, Single Reserv, 22.5" H Top Stg Area w/Ctr Lift, Grating, F/D	NFPA	1.80	0.00	1.80
0836565	Lights, Rear Zn Lwr, Wln M6*, 2Lts	NFPA	1.80	2.70	0.00
0887546	Trans, Allison 6th Gen, 4000 EVS P, w/Prognostics,	NFPA	2.00	2.00	0.00
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	NFPA	0.07	0.00	0.00
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6Lts	NFPA	1.00	0.00	0.00
0893414	Aerial, 100' Heavy Duty Ladder, 500/500 Tip, 50 MPH Wind, Tiller	NFPA	5.00	0.00	0.00
0647728	Alternator, 430 amp, Delco Remy 55SI	S	0.00	0.00	0.00
Load Totals:			167.27	444.74	584.50

Note: Minimum Continuous Load is in "Blocking Right of Way" mode. (Reference current edition of NFPA 1901)

Note: Intermittent Load items are not factored in on any alternator load comparisons. These items are included on the report for reference only and should be looked at as amp draw exclusion items. (Reference current edition of NFPA 1901)

Note: Total Connected Load "Demand" represents Total Connected Load minus any Load Managed items

Alternator Output at Idle: 253.00

Minimum Continuous Load	
Supply:	253.00
Demand:	167.27
Variance:	85.73

Alternator Output at Governed Speed: 369.00

Total Connected Load	
Supply:	369.00
Demand:	329.91
Variance:	39.09

* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply

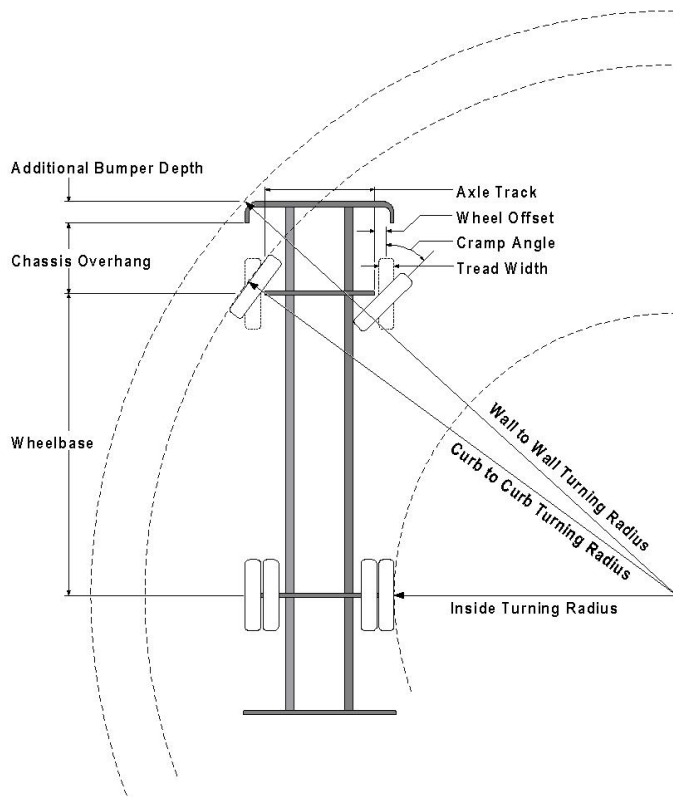


Turning Performance Analysis

11/12/2025

Bid Number: 968
Department: Salinas Fire Department

Chassis: Enforcer Chassis, Tractor (Tiller)
Body: Aerial, Tiller, No Pump, Alum Body



Parameters:

*Inside Cramp Angle:	45°
Axle Track:	82.92 in.
Wheel Offset:	3.12 in.
Tread Width:	12.4 in.
Chassis Overhang:	65.95 in.
Additional Bumper Depth:	7 in.
Front Overhang:	72.95 in.
Wheelbase:	166 in.

Calculated Turning Radii:

Inside Turn:	13 ft. 1 in.
Curb to curb:	25 ft. 9 in.
Wall to wall:	29 ft. 4 in.

Category	Option	Description
Bumpers	0606186	Bumper, Non-Extended, Saber FR/Enforcer
Axle, Front, Custom	0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer
Wheels, Front	0019575	Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot
Aerial Devices	0893414	Aerial, 100' Heavy Duty Ladder, 500/500 Tip, 50 MPH Wind, Tiller
Tires, Front	0582936	Tires, Front, Goodyear, G289 WHA, 315/80R22.50, 20 ply

Notes:

*Actual Inside cramp angle may be less than shown.

Curb to Curb turning radius calculated for 9.00 inch curb.

Definitions:

Inside CrampAngle	Maximum turning angle of the front inside fire.
Axle Track	King-pin to King-pin distance of front axle.
Wheel Offset	Offset from the center line of the wheel to the King-pin.
Tread Width	Width of the tire tread.
Chassis Overhang	Distance of the center line of the front axle to the front edge of the cab. This does not include the bumper depth.
Additional Bumper Wheel	Depth that the bumper assembly adds to the front overhang.
Wheelbase	Distance between the center lines of the vehicles front and rear axles.
Inside Turning Radius	Radius of the smallest circle around which the vehicle can turn.
Curb to Curb Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures assumes a curb height of 9 inches.
Wall to Wall Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures takes into account any front overhang due to chassis , bumper extensions and or aerial devices.



GOLDEN STATE
FIRE APPARATUS

goldenstatefire.com

4 PRODUCT WARRANTIES

Exhibit "C"



Fire and Rescue Apparatus

One (1) Year Material and Workmanship

Basic Apparatus

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Portions of the apparatus manufactured by Pierce shall be free from defects in material and workmanship
Warranty Begins:	The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.
Warranty Period Ends After:	Twelve (12) months.
Conditions and Exclusions: See Also Paragraphs 2 thru 4	No specific exclusions apply

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

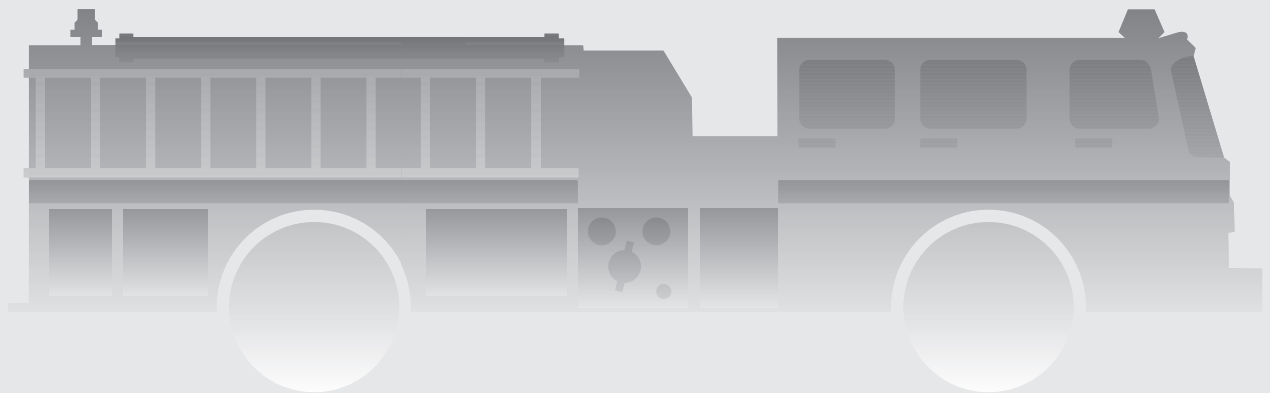
Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Cummins Warranty

Worldwide

Fire Apparatus/Crash Trucks



Coverage

Products Warranted

This Warranty applies to new diesel Engines sold by Cummins and delivered to the first user on or after April 1, 2007, that are used in fire apparatus truck and crash truck* applications Worldwide.

Base Engine Warranty

The Base Engine Warranty covers any failures of the Engine which result, under normal use and service, from a defect in material or factory workmanship (Warrantable Failure). This Coverage begins with the sale of the Engine by Cummins and ends five years or 100,000 miles (160,935 kilometers), whichever occurs first, after the date of delivery of the Engine to the first user.

Engine aftertreatment components included in the Cummins Critical Parts List (CPL) and marked with a Cummins part number are covered under Base Engine Warranty.

Additional Coverage is outlined in the Emission Warranty section.

These Warranties are made to all Owners in the chain of distribution and Coverage continues to all subsequent Owners until the end of the periods of Coverage.

Cummins Responsibilities

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure.

Cummins will pay for the lubricating oil, antifreeze, filter elements, belts, hoses and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay for reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

Cummins will pay reasonable costs for towing a vehicle disabled by a Warrantable Failure to the nearest authorized repair location. In lieu of the towing expense, Cummins will pay reasonable costs for mechanics to travel to and from the location of the vehicle, including meals, mileage and lodging when the repair is performed at the site of the failure.

Owner Responsibilities

Owner is responsible for the operation and maintenance of the Engine as specified in Cummins Operation and Maintenance Manuals. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable Warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the Engine available for repair by such facility. Except for Engines disabled by a Warrantable Failure, Owner must also deliver the Engine to the repair facility.

Service locations are listed on the Cummins Worldwide Service Locator at cummins.com.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items provided during Warranty repairs unless such items are not reusable due to the Warrantable Failure.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-Engine repairs and for "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs and other losses resulting from a Warrantable Failure.

Owner is responsible for a \$100 (U.S. Dollars) deductible per each service visit under this plan in the 3rd, 4th and 5th years of Base Engine Warranty. The deductible will not be charged during the first 2 years of the Base Engine Warranty.

Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel



exhaust fluid.

This Warranty does not apply to accessories supplied by Cummins which bear the name of another company. Such non-warranted accessories include, but are not limited to: alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, torque converters, vacuum pumps, power steering pumps, fan drives and air compressors. Cummins branded alternators and starters are covered for the first two years from the date of delivery of the Engine to the first user, or the expiration of the Base Engine Warranty, whichever occurs first.

Failures resulting in excessive oil consumption are not covered beyond the duration of the Coverage or 100,000 miles (160,935 kilometers) or 7,000 hours from the date of delivery of the Engine to the first user, whichever of the three occurs first. Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

Failures of belts and hoses supplied by Cummins are not covered beyond the first year from the date of delivery of the Engine to the first user or the duration of the Warranty, whichever occurs first.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins approved rebuilt part used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining Coverage hereunder.

Cummins Inc. reserves the right to interrogate Electronic Control Module (ECM) data for purposes of failure analysis.

CUMMINS DOES NOT COVER WEAR OR WEAROUT OF COVERED PARTS.

CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THIS WARRANTY AND THE EMISSION WARRANTY SET FORTH HEREINAFTER ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THESE ENGINES. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Emission Warranty

Products Warranted

This Emission Warranty applies to new Engines marketed by Cummins that are used in the United States** in vehicles designed for transporting persons or property on a street or highway. This Warranty applies to Engines delivered to the first user on or after September 1, 1992.

Coverage

Cummins warrants to the first user and each subsequent purchaser that the Engine is designed, built and equipped so as to conform at the time of sale by Cummins with all U.S. federal emission regulations applicable at the time of manufacture and that it is free from defects in material or factory workmanship which would cause it not to meet these regulations within the longer of the following periods: (A) Five years or 100,000 miles (160,935 kilometers) of operation, whichever occurs first, as measured from the date of delivery of the Engine to the first user or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

Limitations

Failures, other than those resulting from defects in material or factory workmanship, are not covered by this Warranty.

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel exhaust fluid.

Cummins is not responsible for non-Engine repairs, "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs or other losses resulting from a Warrantable Failure.

**CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL
OR CONSEQUENTIAL DAMAGES.**

* Airport operated crash trucks and fire department
operated trucks employed to respond to fires,
hazardous material releases, rescue and other
emergency-type situations.

** United States includes American Samoa, the
Commonwealth of Northern Mariana Islands, Guam,
Puerto Rico and the U.S. Virgin Islands.



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R. H. SHEPPARD CO., INC.
101 Philadelphia St.
Hanover, PA 17331
Pierce Manufacturing Inc.
2600 American Drive
Appleton, WI 54912

LIMITED WARRANTY: The R. H. Sheppard Co. Inc., ("Sheppard") warrants all M110PKG1 and M110SAU1 steering gears manufactured and sold to Pierce Manufacturing Inc. ("Pierce") for application on Pierce TAK-4 equipped vehicles to be free from defects of workmanship and material under normal use and service for a period of thirty six months from the in service date of the vehicle to its original owner.

Vehicle applications where Sheppard product is used require an application approval before production build. If Pierce uses Sheppard product for any purpose or application which has not been approved by Sheppard in advance, including aftermarket devices (defined as a device added to the steering system directly or indirectly affecting the performance or operation of the Sheppard product in its approved application) not tested and approved by Sheppard this limited warranty SHALL NOT APPLY AND SHALL BE VOID. SHEPPARD MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED. SHEPPARD EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

SHEPPARD SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES OR FOR LOSS OR DAMAGE DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF A PRODUCT. Pierce expressly acknowledges its obligation to inform all users (customers) of the above disclaimer.

CONDITIONS: Claims under this Limited Warranty may only be made by Pierce. In no event shall Sheppard be held liable for warranty charges by unauthorized persons. No allowance will be made for repairs or alterations, unless made with the written consent of Sheppard. Authorized Pierce dealers shall be the only authorized repair facility for Sheppard products applied to Pierce vehicles. Any warrantable repair made under this Limited Warranty must be made on or before 36 months of the in-service date for the Product to which the claim relates. Sheppard shall not be liable for claims made after such date. Sheppard product fitted to Pierce vehicles that are repaired at a repair facility other than an authorized Pierce dealer within the warranty period will be considered for payment under the guidelines of this agreement only by joint written consideration of Sheppard and Pierce warranty departments. It shall be the responsibility of the Pierce warranty department to notify Sheppard if and when this situation occurs. Sheppard will not be held responsible for damage to other steering components such as but not limited to pumps and reservoirs due to improper adjustment of steering gear relief plungers. Vehicle downtime and towing will not be considered under warranty.

REMEDIES: The sole and exclusive remedy of Pierce for Sheppard's breach of the foregoing warranty is limited to the return and repair or reimbursement as follows:

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
Page 2

Warranty Support: In support of the Pierce dealer network, Sheppard will provide a toll-free "Hotline" service to assist in the diagnosis and troubleshooting of steering problems. The R. H. Sheppard Co., Inc. Field Service Department can be reached at 1-800-274-7437 for assistance. Sheppard will require that Pierce dealers contact this toll-free "Hotline" for approval before product is removed from a vehicle in a warranty situation. When contacted regarding a warranty situation, the Sheppard representative will provide an authorization number for removal of the product. This Returned Goods Authorization (RGA) number must be included in all warranty correspondence and attached to all returned goods.

Procedure: In the event of a warranty situation, the servicing dealer shall contact the Sheppard Hotline and receive an RGA number before replacing any steering gear. For M110PKG1 and M110SAU1 steering gear models, the dealer will first obtain an RGA number from Sheppard, and then order the replacement gear from Pierce. Replacement M110PKG1 and M110SAU1 steering gears shall be shipped from Pierce once those models are in full production. A warranty claim for both parts and labor will then be generated by the dealer and sent to Pierce. After reviewing the claim, Pierce will submit it to Sheppard for reimbursement.

Parts Reimbursement: Sheppard agrees to reimburse Pierce at Pierce's purchase price plus 30% mark-up for parts found to be defective within the warranty period. Parts being returned for warranty consideration shall be sent to the R. H. Sheppard Company, 447 E. Middle St., Hanover, PA 17331 ATTN: Warranty Dept. Sheppard's determination as to whether the part is covered by the foregoing warranty is final and conclusive. Sheppard requires the return of complete steering gears only. Individual seals replaced under warranty **should not** be returned unless specifically requested by Sheppard. All parts being returned for warranty consideration must be clearly tagged with all pertinent warranty information including, but not limited to (1) Returned Goods Authorization number (RGA); (2) claim number; (3) date in service; (4) date of failure; (5) mileage; (6) part number; (7) labor hours; (8) dealer labor rate and; (9) dollar amount claimed. Claims submitted without prior authorization are subject to rejection under this agreement.

Labor: Labor to repair Sheppard product found to be defective within the warranty period will be reimbursed at not more than 10 hours per vehicle. Labor shall be reimbursed at the rate of \$85.00 USD per hour for M110PGK1 and M110SAU1 steering gears.

Freight: Pierce will collect M110PGK1 and M110SAU1 warranty material at a designated collection point. Inbound freight to the Pierce collection point will be the responsibility of Pierce. All warranty material should be returned from the Pierce collection point to R. H. Sheppard Co. Freight Collect by a Sheppard-specified common carrier based on location of the Pierce collection point. Sheppard does not require the return of failed seals. Any freight charges incurred for the return of seals will be the responsibility of Pierce. Parts returned for warranty consideration without prior authorization are subject to rejection under this agreement and may be subject to a charge back of inbound freight charges. Parts rejected under this warranty will be returned to Pierce Freight Collect or scrapped by Sheppard at Pierce's discretion.

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
Page 3

Outside Purchases: Pierce authorized dealers shall be the only outlet for repair, warranty service and parts for Sheppard products applied to Pierce vehicles. Sheppard will not be responsible for consumables such as hoses, belts, fluids, fittings or miscellaneous shop material that may be required for the repair of the product.

Warranty Documentation: Warranty credit memos will be issued monthly to the Pierce Warranty Department. Monthly credit memos will include (1) claim number; (2) part number; (3) parts reimbursement; (4) labor reimbursement; (5) any applicable Pierce reference number and; (6) reason for rejection or acceptance of the claim. Credit memos will be issued in U.S. funds. Debits for warranty claims will not be accepted under this agreement. Claim disposition will constitute the final and conclusive resolution of warranty claims.

Parts Retention: Sheppard will retain parts submitted for warranty consideration for a period of sixty (60) days for any material found to be rejected for warranty. Sheppard will notify Pierce within sixty (60) days of receipt of Sheppard's determination as to whether any such part is covered by this warranty. Warranty reimbursement will be issued within thirty days of receipt of material at Sheppard.

Good-Will Requests: Good-Will requests will be considered jointly between Sheppard and Pierce for equitable compensation.

RECALLS: Sheppard retains the right to review information regarding federal motor vehicle recall and /or product repair programs if Sheppard products fitted to Pierce vehicles are alleged to be non-compliant with federal motor vehicle safety standards. Sheppard retains the right to review any claims of product defect or non-compliance before participating in reimbursement of expenses incurred as a result of alleged non-compliance or defect of its products. Sheppard agrees to negotiate in good faith for the reimbursement of expenses incurred by Pierce for all administrative, material and labor cost and expense associated with any recall where Sheppard product is found to be defective or non-compliant with federal motor vehicle standards.

MISCELLANEOUS: This writing constitutes the full complete and final statement of Sheppard's limited warranty for M110PKG1 and M110SAU1 products sold to Pierce. All prior oral or written correspondence, test data, negotiations, representations, understandings and the like regarding products are merged in this writing and extinguished by it. This limited warranty may not be altered, amended extended or modified except by a writing signed by the President or Vice President of Sheppard. No employee, vendor, dealer, distributor or other representative of Sheppard has authority to make statements to extend, expand, alter or amend the terms of this Limited Warranty. Sheppard expressly disclaims any statements contrary to the Limited Warranty. Sheppard's failure at any time to enforce any of the terms and conditions stated herein shall not constitute a waiver of any provisions herein. This Limited Warranty shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania.

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
Page 4

Any legal actions which may arise as a result of disputes, controversies or claims arising out of or related to this limited warranty shall be in such forum as Sheppard and Pierce shall agree, or, in the absence of agreement, in a court of appropriate jurisdiction other than in the county in which either party is located. This Limited Warranty shall not be assigned by Pierce.

COOPERATIVE EFFORT: Sheppard and Pierce agree to work cooperatively toward expanding this warranty coverage to a period of sixty months from the in service date. These cooperative efforts shall focus on examining the effects of increased heat generated by 2007 model engines and its impact on the entire power steering system.

AGREEMENT: This agreement is effective April 3, 2006 and may be modified by mutual agreement between Sheppard and Pierce of a signed amendment to be attached to the original Limited Warranty. There are no third party beneficiaries to this Limited Warranty. This warranty agreement applies to Pierce authorized dealers only. It does not encompass any special arrangements that Pierce may now have or that Pierce may enter into, with any other segments of the trucking industry. This warranty agreement does not apply to non-conforming product removed at Pierce assembly plants.

This Limited Warranty agreement between the R. H. Sheppard Co., Inc and Pierce Manufacturing Inc. may be terminated by either party with thirty days written notice prior to termination.

Signed at Pierce Manufacturing Inc., Appleton, WI this _____ day of _____, 2006.

R. H. SHEPPARD CO., INC.

PIERCE MANUFACTURING INC.

Authorized Signature

Authorized Signature

Title

Title



Fire and Rescue Apparatus

Lifetime Fifty (50) Year Structural Integrity

Custom Chassis Frame

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

Coverage:	Custom chassis frame rail manufactured by Pierce shall be free from defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Fifty (50) Years (Expected Life of Apparatus)
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty applies to the frame rails only, crossmembers are excluded. This warranty does not apply to damage caused by corrosion.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Three (3) Year Material and Workmanship TAK-4 Independent Front Suspension

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The TAK-4 Front Independent Suspension and Steering Gears shall be free from defects in material and workmanship.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Years -or- 30,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty excludes brake pads, brake rotors, seal boots and shock absorbers.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

SUPPLIER

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

Coverage:	The Meritor axle shall be covered by Meritor as indicated in the attached Meritor warranty coverage description
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor warranty description shall apply.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

CUMMINS-MERITOR COMMERCIAL VEHICLE SYSTEMS WARRANTY

COVERAGE FOR THE
UNITED STATES AND CANADA
MODEL YEAR 2024 VEHICLES



Meritor

WARRANTY INFORMATION

TABLE OF CONTENTS

EFFECTIVE MODEL YEAR 2024 VEHICLES

Linehaul.....	3
General Service	6
Heavy Service/Specialty Vehicle	9
Fire and Emergency.....	12
Transit Bus	14
Off-highway Service.....	15
Terms and Conditions.....	17

How to Read Warranty Coverage

Number of Years	Mileage (in thousands) Unl = Unlimited	P = Parts Only P&L = Parts and Labor
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Notice:

Models or components that are approved for use by Cummins-Meritor's vocational guidelines contained in Cummins-Meritor publication TP-9441 for axles, SP-8320 for trailer axles and TP-12126 for drivelines, or any other products that have an application approval completed with Cummins-Meritor which are not specifically listed, are warranted for one year, unlimited miles, parts only (1/Unl/P).

Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles, parts only (1/Unl/P).

Advantage Program

Purchasing additional coverage on select components will continue to safeguard your investment against major repair costs after the initial base coverage expires. You can find out more about the Advantage Program by visiting **meritor.com** or by contacting Cummins-Meritor at **866-OnTrac1 (866-668-7221)**.

LINEHAUL WARRANTY INFORMATION

Vocational Definition of Linehaul

- Long distance hauling of food, goods and finished materials
- Not included are raw ferrous materials, minerals (except oil), sand, gravel, stone, rocks, topsoil, waste or logs
- Linehaul includes turnpike and hub & spoke

Linehaul Vehicles

- Auto Hauler¹
- Bulk Hauler¹
- Chip Hauler^{1,2}
- Doubles
- Flatbed
- General Freight
- Grain Hauler¹
- Livestock Hauler
- Moving Van
- Pipe Hauler
- Refrigerated Freight
- Tanker¹
- Triples

¹ Cummins-Meritor classifies these vehicle types as high center of gravity, which require special axle housing considerations.

² Chip Hauler vehicles require specific axle models listed below and Linehaul condition to be eligible for Linehaul warranty consideration.

Linehaul Typically Is:

- High mileage operation (over 60,000 miles/year)
- Greater than 30 miles between starts and stops
- Maximum grades of 12%
- Well maintained highways of concrete or asphalt construction (100% on-road)

- Category A job sites, terminals, docks and transfer sites (defined as pavement, concrete or maintained and hard packed gravel).

Note: Category B job sites, terminals, docks, transfer sites (defined as loose or unmaintained sand, dirt or gravel; landfill; farm field; mud; or other similar surfaces) are **NOT** approved for certain linehaul axle models.

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/750/P&L

FD-965	MFS-10-144A-N	MFS-12-143A-N	MFS-13B-132B-N	MFS-14G-132B-N
FF-941	MFS-12-122A-N	MFS-12E-143A-N	MFS-13B-132C-N	MFS-14-132C-N
FF-942	MFS-12-122B-N	MFS-12-144A-N	MFS-14-122A-N	MFS-14F-132C-N
FF-943	MFS-12-122C-N	MFS-13-122A-N	MFS-14-122B-N	MFS-14G-132C-N
FF-944	MFS-12E-122A-N	MFS-13-122B-N	MFS-14F-122B-N	MFS-14-142B-N
FF-961	MFS-12E-122B-N	MFS-13-122C-N	MFS-14G-122B-N	MFS-14F-142B-N
FF-966	MFS-12E-122C-N	MFS-13-132B-N	MFS-14-122C-N	MFS-14G-142B-N
FF-967	MFS-12-124A-N	MFS-13-132C-N	MFS-14F-122C-N	MFS-14-142C-N
FG-941	MFS-12-132B-N	MFS-13-143A-N	MFS-14G-122C-N	MFS-14F-142C-N
FG-943	MFS-12-132C-N	MFS-13-144A-N	MFS-14-124A-N	MFS-14G-142C-N
MFS-10-122A	MFS-12E-132B-N	MFS-13B-122B-N	MFS-14-132B-N	MFS-14-143A-N
MFS-10-143A-N	MFS-12E-132C-N	MFS-13B-122C-N	MFS-14F-132B-N	MFS-14-144A-N

Rear Drive Single Axles – 5/750/P&L

MS-19-14X	MS-23-17H ^{1,2}	RS-23-160	RS-23-185
RS-21-160	MS-23-17X ²	RS-23-161	RS-23-186

¹ Not approved for use in any Category B job sites, terminals, docks or transfer sites.

² Recommend 11 mm minimum wall thickness for these models used in combination with high center of gravity vehicles and trailing arm suspensions or vehicles operating mainly in Canada.

LINEHAUL WARRANTY INFORMATION

Rear Drive Tandem/Tridem Axles – 5/750/P&L

RT-40-160/P ^{1,2}	RZ-166 ²	MA-40-17H ³	MT-34-14X/P ⁴	MT-40-14X/P ⁴
RT-46-160/P ^{1,2}	RT-50-160/P ^{1,2}	RZ-188	MT-40-14T/P	MT-40-14H/E ^{3,4}
RT-46-164/P ^{1,2}	MA-40-165	MA-40-175	MT-40-14X/P ⁴	

¹ These models required for Chip Hauler and Linehaul warranty consideration.

² Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

³ Not approved for use in any Category B job sites, terminals, docks or transfer sites.

⁴ Recommend 11 mm minimum wall thickness for these models used in combination with high center of gravity vehicles and trailing arm suspensions or vehicles operating mainly in Canada.

Trailer Axles¹

Beam and Brackets	5/500/P, 1/100/L
TPX3000 Axle Series ²	10/Unl/P, 1/Unl/L
Wheel End Systems ³	
Standard System ⁴	1/100/P&L
AxlePak5	5/Unl/P&L
AxlePak7 ⁵	7/Unl/P&L

¹ For brake components and ABS coverage, refer to appropriate product warranties.

² Structural components only excluding spindle wear. Spindle wear is 5/Unl/P, 1/Unl/L.

³ Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

⁴ When installed by Cummins-Meritor.

⁵ When specified with AxlePak7 wheel end system, coverage on Meritor Tire Inflation System (MTIS) thru-tee and stator is 7/Unl/P, 1/Unl/L.

TAG/Pusher Axles¹

TQ, TR Beam and Brackets	5/750/P&L
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¹ For brake components and ABS coverage, refer to appropriate product warranties.

Trailer Mechanical Suspension Systems¹

IMS40 (Integrated Mechanical Suspension – Tandem) ²	1/Unl/P&L
IMS20 (Integrated Mechanical Suspension – Single) ²	1/Unl/P&L

¹ For axle coverage, refer to appropriate product warranties.

² All other suspension components refer to appropriate manufacturer's warranty.

Trailer Air Suspension Systems

MPA40 (Tandem Axle Parallelogram) ¹	
Major Structural Components	5/500/P, 1/100/L
Curbing Damage Warranty ²	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/Unl/P, 3/Unl/L
PinLoc Air Controls	1/100/P&L
PinLoc Actuator	3/300/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/Unl/P, 3/Unl/L
MTA and MTA-Tec6 Trailing Arm Suspension System	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/500/P, 3/300/L
Shock Absorbers	2/200/P&L
Lift Kit System	1/100/P&L

¹ Fastener torque coverage is limited to 2/Unl/P&L when torqued by Cummins-Meritor (For axle and ABS coverage, refer to appropriate product warranties.)

² "Curbing damage" is defined as deformation (bending, buckling or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding sub-frame consisting of the frame rails, cross-members and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferable to another trailer VIN and coverage does not apply if the trailer is deemed to be a total loss, scrapped or otherwise not salvageable.

LINEHAUL WARRANTY INFORMATION

Brake Components

Cam Q Series Trailer Brakes	5/500/P, 1/100/L
Q+ Drum Brake™ ¹	5/500/P, 1/Unl/P&L
ASA	5/500/P, 1/Unl/P&L
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ ²	12-Years or Wearable Life/P
EX+ L and EX+LS Air Disc Brake™ ³	5/500/P, 1/Unl/L
EX+L Air Disc Brake Extended Standard Warranty ^{3,4}	5/500/P&L

¹ For Trailer only, 3/300/P against rust jacking when equipped with Platinum Shield III.

² Based on stamped wear diameter max.

³ Warranty coverage for boots, seals, caps, bushings and pins is 2/200/P.
Warranty coverage for pads is 1/100/P.

⁴ Applies only to calipers using friction: MA9300 (EX225LXXXCGXXX).

Drivelines

RPL	5/500/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
92N	1/Unl/P

Meritor Tire Inflation System (MTIS)

MTIS Components	5/Unl/P, 1/Unl/L
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GENERAL SERVICE WARRANTY INFORMATION

General Service Vehicles

- Auto Hauler
- Beverage Truck
- Bulk Hauler
- Chip Hauler
- Cross Country Coach
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Grain Hauler
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Newspaper Delivery
- Pick-Up and Delivery
- Pipe Hauler
- Platform Auto Hauler
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Trailer
- Tour Bus
- Wrecker

General Service Typically Is:

- Typically, moderate mileage operation (less than 60,000 miles/year)
- An average of 3 to 30 miles between starts and stops
- Maximum grades of 12%
- Generally, on-road service (less than 10% off-road allowed)
- Category A job sites, terminals, docks and transfer sites (defined as pavement, concrete or maintained and hard packed gravel) or Category B job sites, terminals, docks and transfer sites (defined as loose or unmaintained sand, dirt or gravel; landfill; farm field; mud, or other similar surfaces)

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 2/Unl/P&L

FD-965	MFS-7-113C-N	MFS-12-132C-N	MFS-14G-122B-N	MFS-16-122A-N
FF-941	MFS-7-153C-N	MFS-12E-132C-N	MFS-14-122C-N	MFS-16-133A-N
FF-942	MFS-7-163C-N	MFS-12-143A-N	MFS-14F-122C-N	MFS-16-135A-N
FF-943	MFS-8-113B-N	MFS-12-144A-N	MFS-14G-122C-N	MFS-16-143A-N
FF-944	MFS-8-143A-N	MFS-12E-143A-N	MFS-14-124A-N	MFS-18-133A-N
FF-946	MFS-8-153B-N	MFS-13-122A-N	MFS-14-132B-N	MFS-18-135A-N
FF-961	MFS-8-163B-N	MFS-13-122B-N	MFS-14F-132B-N	MFS-18-193A-N
FF-966	MFS-10-122A	MFS-13B-122B-N	MFS-14G-132B-N	MFS-20-133A-N
FF-967	MFS-10-143A-N	MFS-13-122C-N	MFS-14-132C-N	MFS-20-135A-N
FG-941	MFS-10-144A-N	MFS-13B-122C-N	MFS-14F-132C-N	MFS-20-192A-N
FH-941	MFS-12-122A-N	MFS-13-132B-N	MFS-14G-132C-N	MFS-20-193A-N
FH-946 ¹	MFS-12E-122A-N	MFS-13-132C-N	MFS-14-142B-N	MFS-22-135A-N
FL-941	MFS-12-122B-N	MFS-13B-132B-N	MFS-14F-142B-N	MFS-22H-135A-N
FL-943	MFS-12E-122B-N	MFS-13B-132C-N	MFS-14G-142B-N	MFS-22-193A-N
MFS-6-151A-N	MFS-12-122C-N	MFS-13-143A-N	MFS-14-142C-N	MFS-22H-193A-N
MFS-6-153B-N	MFS-12E-122C-N	MFS-13-144A-N	MFS-14F-142C-N	
MFS-6-162B-N	MFS-12-124A-N	MFS-14-122A-N	MFS-14G-142C-N	
MFS-6-153C-N	MFS-12-132B-N	MFS-14-122B-N	MFS-14-143A-N	
MFS-6-162C-N	MFS-12E-132B-N	MFS-14F-122B-N	MFS-14-144A-N	

¹ Can also be used with reduced steer angles in tag position in Coach applications.

GENERAL SERVICE WARRANTY INFORMATION

Rear Drive Single Axles – 2/Unl/P&L

MS-17-13X	MS-21-14X	RC-23-162 ¹	RS-23-186	MS-26-616-SP
MS-17-14X	MS-23-17X	RC-23-165 ¹	RS-24-160	RS-30-185
MS-19-13X	RS-21-160	RS-23-160	RC-25-160	MS-30-616
MS-19-14X	RC-23-160	RS-23-161	RS-26-185	MS-30-616-SP
MS-21-13X	RC-23-161	RS-23-185	MS-26-616	RS-35-380

¹ 3/Unl/P&L if PreSet by Cummins-Meritor.

Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	MT-44-14X/P	RT-52-185 ¹	MT-70-380
MT-40-14T/P	RT-46-169	MT-58-616	RZ-188
MT-40-14X/P	MT-52-616	RT-58-185 ¹	

¹ Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Rear Drive Tandem/Tridem – 3/Unl/P&L

RT-40-160/P	RT-46-160/P	RT-46-164/P	RT-50-160/P	RZ-166
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Rear Drive Axles – 1/Unl/P&L

RND-14H	RND-16A
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Brake Components

Cam Q Series Trailer Brakes ¹	3/Unl/P, 1/Unl/L
Cam P ²	2/200/P
Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™ ^{1,2}	2/200/P&L
ASA	3/Unl/P
ASA ²	2/200/P
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ ³	12-Years or Wearable Life/P
EX+ Air Disc Brake™ ⁴	2/Unl/P&L

¹ For Trailer only, 3/300/P against rust jacking when equipped with Platinum Shield III or Chassis Protect.

² Applies to Tour Bus and Cross Country Coach only.

³ Based on stamped wear diameter max.

⁴ Warranty coverage for boots, seals, caps, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

Drivelines

RPL	4/400/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
92N	1/Unl/P

PTO – 1/Unl/P&L

MPT-170	MPT-185	MPT-500	MPT-1702
MPT-180	MPT-309	MPT-518	

GENERAL SERVICE WARRANTY INFORMATION

Trailer Axles¹

Beam and Brackets ²	5/Unl/P, 1/Unl/L
TPX4000 Axle Series ³	10/Unl/P, 1/Unl/L
Wheel End Systems ⁴	
Standard System ⁵	1/Unl/P&L
AxlePak5	5/Unl/P&L
AxlePak7 ⁶	7/Unl/P&L
AxlePak10 ⁷	10/Unl/P&L

¹ For brake components and ABS coverage, refer to appropriate product warranties.

² 9000 Series is 3/Unl/P, 1/Unl/L

³ Structural components only excluding spindle wear. Spindle wear 5/Unl/P, 1/Unl/L.

⁴ Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

⁵ When installed by Cummins-Meritor.

⁶ When specified with AxlePak7 wheel end system, coverage on Meritor Tire Inflation System (MTIS) thru-tee and stator is 7/Unl/P, 1/Unl/L.

⁷ AxlePak10 is limited to Intermodal Chassis applications equipped with TPX4000 series axles.

TAG/Pusher Axles¹

TQ, TR Beam and Brackets	3/Unl/P, 1/Unl/L
MC14002, MC16003, FH946 ²	2/Unl/P&L

¹ For brake components coverage, refer to appropriate product warranties.

² 3/Unl/P&L if sold with PreSet by Cummins-Meritor.

Meritor Tire Inflation System (MTIS)

MTIS Components	5/Unl/P, 1/Unl/L
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Trailer Mechanical Suspension Systems¹

IMS40 (Integrated Mechanical Suspension – Tandem) ²	1/Unl/P&L
IMS20 (Integrated Mechanical Suspension – Single) ²	1/Unl/P&L

¹ For axle coverage, refer to appropriate product warranties.

² All other suspension components refer to appropriate manufacturer's warranty.

Trailer Air Suspension Systems¹

MPA40 (Tandem Axle Parallelogram) ²	
Major Structural Components	5/Unl/P, 1/Unl/L
Curbing Damage Warranty ³	5/500/P, 1/100/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/Unl/P&L
PinLoc Actuator	3/Unl/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs and Rebound Straps	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
MTA and MTA-Tec6 Trailing Arm Suspension System	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings ⁴	5/Unl/P, 3/Unl/L
Shock Absorbers	2/Unl/P&L
Lift Kit System	1/Unl/P&L

¹ For axle coverage, refer to appropriate product warranties.

² Fastener torque coverage is limited to 2/Unl/P&L when torqued by Cummins-Meritor.

³ "Curbing damage" is defined as deformation (bending, buckling or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding sub-frame, consisting of the frame rails, cross-members and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferable to another trailer VIN and coverage does not apply if the trailer is deemed to be a total loss, scrapped or otherwise not salvageable.

⁴ Raw wood applications 3/Unl/P, 1/Unl/L

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Heavy Service/Specialty Vehicles

- Airport Rescue Fire Fighting (ARFF)
- Airport Shuttle¹
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Mixer
- Demolition
- Drill Rig
- Dump
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Train
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Rear Loader (Refuse)
- Recycling Truck
- Residential Pick-Up (Refuse)
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus¹
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Utility Truck
- Winch Truck

¹ Commercial chassis only

Heavy Service/Specialty Vehicle Typically Is:

- Moderate mileage operation (less than 60,000 miles per year)
- On/off-road vocations (10% or more off-road)
- Moderate to frequent stops/starts (up to 10 stops per mile)
- An average of three (3) miles between starting and stopping

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 2/Unl/P&L

FD-965	MFS-7-113C-N	MFS-12E-132C-N	MFS-14G-122B-N	MFS-16-122A-N
FF-941	MFS-7-153C-N	MFS-12-143A-N	MFS-14-122C-N	MFS-16-133A-N
FF-942	MFS-7-163C-N	MFS-12-144A-N	MFS-14F-122C-N	MFS-16-135A-N
FF-943	MFS-8-113B-N	MFS-12-155	MFS-14G-122C-N	MFS-16-143A-N
FF-944	MFS-8-153B-N	MFS-13-122	MFS-14-124A-N	MFS-18-133A-N
FF-946	MFS-8-163B-N	MFS-13-122B-N	MFS-14-132B-N	MFS-18-135A-N
FF-961	MFS-10-122A	MFS-13B-122B-N	MFS-14F-132B-N	MFS-18-192A-N
FF-966	MFS-10-143A-N	MFS-13-122C-N	MFS-14G-132B-N	MFS-18-193A-N
FF-967	MFS-10-144A-N	MFS-13B-122C-N	MFS-14-132C-N	MFS-20-133A-N
FG-941	MFS-12-122	MFS-13-132B-N	MFS-14F-132C-N	MFS-20-135A-N
FG-943	MFS-12E-122	MFS-13B-132B-N	MFS-14G-132C-N	MFS-20-192A-N
FH-941	MFS-12-122B-N	MFS-13-132C-N	MFS-14-142B-N	MFS-20-193A-N
FH-946	MFS-12E-122B-N	MFS-13B-132C-N	MFS-14F-142B-N	MFS-22-135A-N
FL-941	MFS-12-122C-N	MFS-13-143A-N	MFS-14G-142B-N	MFS-22H-135A-N
FL-943	MFS-12E-122C-N	MFS-13-144A-N	MFS-14-142C-N	MFS-22-193A-N
MFS-6-151A-N	MFS-12-124A-N	MFS-13-155	MFS-14F-142C-N	MFS-22H-193A-N
MFS-6-153B	MFS-12-132B-N	MFS-14-122	MFS-14G-142C-N	RF-16-145
MFS-6-162B	MFS-12E-132B-N	MFS-14-122B-N	MFS-14-143A-N	RF-21-160
MFS-6-162C	MFS-12-132C-N	MFS-14F-122B-N	MFS-14-144A-N	

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Front Drive Steer Axles – 2/Unl/P&L

MX-10-120	MX-12-120 EVO	MX-16-120	MX-19-140	MX-23-160
MX-10-120 EVO	MX-14-120	MX-18-120	MX-21-140	MX-23-810
MX-12-120	MX-14-120 EVO	MX-17-140	MX-21-160	

Front Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-14-130-FV (FSD-14A)	MX-20-130-FV (FSD-20A)	MX-23-130-SD (SDA-2300)
MX-10-130-FV (FSD-10A)	MX-16-130-FV (FSD-16A)	MX-21-130-FV (FSD-21A)	
MX-12-130-FV (FSD-12A)	MX-18-130-FV (FSD-18A)	MX-21-130-SD (SDA-2100)	
MX-13-130-FV (FSD-13A)	MX-18-130-SD (SDA-1800)	MX-23-130-FV (FSD-23A)	

Rear Drive Axles – 2/Unl/P&L

MS-17-14X	RH-23-160	RS-23-186/380	MS-26-616-SP	RS-30-185/380
MS-19-14X	RS-23-160	RS-24-160	RS-26-185/380	MS-35-380
MS-21-14X	RC-23-161	RC-25-160	RC-26-633	RS-38-380
RS-21-160	RS-23-161	RS-25-160	MS-30-616	MT-58-616
RC-23-160	RS-23-185	MS-26-616	MS-30-616-SP	MT-58-616-SP

Rear Drive Axles – 1/Unl/P&L

RND-14H	RND-16A
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Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	MT-44-14X/P	MT-52-616	MT-58-616	RT-70-380
MT-40-14T/P	RT-46-169	MT-52-616-SP	MT-58-616-SP	MT-70-380
MT-40-14X/P	RT-58-160	RT-52-185/380 ^{1,2}	RT-58-185/380 ^{1,2}	RZ-188

¹ Axle model designated will vary according to options and variations specified on these axles. Contact Cummins-Meritor Axle Applications Engineering for details.

² Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

Rear Drive Tandem/Tridem – 3/Unl/P&L

RT-40-160/P/A ³	RT-46-160/P/A ^{1,3}	RT-46-164/P ^{2,3}	RT-50-160/P/A ³	RZ-166
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¹ U.S. only. Canadian warranty = 1/Unl/P for combination vehicles only.

² Axle model designated will vary according to options and variations specified on these axles. Contact Cummins-Meritor Axle Applications Engineering for details.

³ Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

PTO – 1/Unl/P&L

MPT-170	MPT-185	MPT-500	MPT-1702
MPT-180	MPT-309	MPT-518	

HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

Drivelines

RPL	3/Unl/P, 1/Unl/P&L
92N	1/Unl/P&L
MXL	1/Unl/P&L

Transmission – 1/Unl/P&L

FAT 30

Brake Components

Cam P	3/Unl/P
Cam P	2/100/P
Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™ ¹	3/Unl/P&L
Q+ Drum Brake™ ²	2/100/P&L
ASA	3/Unl/P
ASA ²	2/100/P
Hubs/Cast Drums and Other Wheel-End Components ³	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake ⁴	2/100/P&L

¹ For Trailer only, 3/300/P against rust jacking when equipped with Platinum Shield III.

² Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

³ Based on stamped wear diameter max.

⁴ Warranty coverage for boots, seals, caps, bushings and pins is 2/100/P. Warranty coverage for pads is 1/100/P.

Gearboxes – 1/Unl/P&L

MGX-402	MGX-450	MGX-466	MGX-538
MGX-423	MGX-451	MGX-479	

Transfer Cases – 1/Unl/P

MTC-2212-CV (306)	MTC-3124 (T-2119)	MTC-3312-FV (TC-270)
MTC-3106-FV (TC-137)	MTC-3203	MTC-3220-FC (TC-142)
MTC-3111 (T-2111)	MTC-3205-GV (MTC-25/RTC-25)	MTC-4206-FV (TC-38)
MTC-3112-CV (548C)	MTC-3206-FV (TC-237)	MTC-4208
MTC-3116 (T-2111 through-shaft)	MTC-3206-CS (544)	MTC-4210
MTC-3118-FV (TC-180 and TC-180-23)	MTC-3208-GV (RTC-50)	MTC-4213
MTC-3118-CV (358)	MTC-3209-GV (MTC-60/RTC-60)	
MTC-3120-FV (TC-143)	MTC-3212-CV (315 and 548B)	

Trailer Axles¹

Beam and Brackets ²	5/Unl/P, 1/Unl/L
Wheel End Systems ³	
Standard System ⁴	1/Unl/P&L

¹ For brake components coverage, refer to appropriate product warranties.

² 9000 Series is 3/Unl/P, 1/Unl/L

³ Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

⁴ When installed by Cummins-Meritor.

Trailer Air Suspension Systems¹

MTA and MTA-Tec6 Trailing Arm Suspension System	
Major Structural Components ²	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Air Springs	2/200/P, 1/100/L
Bushings ²	5/500/P, 3/300/L
Shock Absorbers	2/200/P&L
Lift Kit System	1/100/P&L

¹ For axle coverage, refer to appropriate product warranties.

² Raw wood applications 3/Unl/P, 1/Unl/L

Meritor Tire Inflation System (MTIS)

MTIS Components	5/Unl/P, 1/Unl/L
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FIRE AND EMERGENCY WARRANTY INFORMATION

Fire and Emergency Vehicles

- Aerial Ladder Truck ▪ Ambulance ▪ Crash Fire Rescue ▪ Rapid Intervention ▪ Tanker
- Aerial Platform ▪ Command Vehicle ▪ Pumper Vehicle (RIV)

Fire and Emergency Typically Is:

- Lower mileage operations (less than 20,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/Unl/P&L

FL-941	MFS-18-135A-N	MFS-20-135A-N	MFS-22H-135A-N
FL-943	MFS-18-193A-N	MFS-20-193A-N	MFS-22-193A-N
MFS-18-133A-N	MFS-20-133A-N	MFS-22-135A-N	MFS-22H-193A-N

Front Drive Steer Axles – 2/Unl/P&L

MX-19-140	MX-21-140	MX-21-160	MX-23-160	MX-23-810
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Rear Drive Single Axles – 5/Unl/P&L

RC-23-160	RS-23-185	RC-25-160	RS-35-185 ¹
RS-23-160	RS-23-186	RS-26-185	RS-25-160
RS-23-161	RS-24-160	RS-30-185	

¹ 2/Unl/P&L if PreSet by Cummins-Meritor.

Rear Drive Tandem/Tridem Axles – 5/Unl/P&L

MT-40-14X/P	RT-46-160/P	RT-50-160/P	MT-58-616
RT-40-160/P	RT-46-164/P	MT-52-616	RT-58-185 ¹
MT-44-14X/P	RT-46-169	RT-52-185 ¹	MT-70-380 ²

¹ Each vehicle must have a Request for Application Recommendation (RAR) approved by Cummins-Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

² 2/Unl/P&L

Transfer Cases – 1/Unl/P

MTC-2212-CV (306)	MTC-3124 (T-2119)	MTC-3220-FC (TC-142)
MTC-3106-FV (TC-137)	MTC-3206-FV (TC-237)	MTC-4206-FV (TC-38)
MTC-3111 (T-2111 through-shaft)	MTC-3206-CS (544)	MTC-4208
MTC-3112-CV (548C)	MTC-3208-GV (RTC-50)	MTC-4210
MTC-3118-FV (TC-180 and TC-180-23)	MTC-3209-GV (MTC-60/RTC-60)	MTC-4213
MTC-3118-CV (358)	MTC-3212-CV (315 and 548B)	
MTC-3120-FV (TC-143)	MTC-3312-FV (TC-270)	

FIRE AND EMERGENCY WARRANTY INFORMATION

Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake™ ¹	2/Unl/P&L

¹ Warranty coverage for boots, seals, caps, bushings and pins is 2/200/P.
Warranty coverage for pads is 1/100/P.

Drivelines

RPL	4/400/P, 1/Unl/L
MXL	3/350/P, 1/Unl/L
92N	1/Unl/P

PTO – 1/Unl/P&L

MPT-170	MPT-185	MPT-500	MPT-1702
MPT-180	MPT-309	MPT-518	

TRANSIT BUS WARRANTY INFORMATION

Transit Bus Vehicles

- Airport Shuttle ▪ Commuter Coach ▪ Transit Bus ▪ Trolley
- City Bus ▪ Shuttle Bus

Transit Bus Typically Is:

- Moderate mileage operation (less than 50,000 miles per year)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 5/300/P&L

FH-946	FH-941 ¹	MFS-12-155	MFS-13-155
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¹ Commuter coach only – 2/Unl/P&L

Rear Drive Single Axles – 5/300/P&L

RS-23-160	71163	RC-23-162 ¹	RS-21-160
RC-23-161	79163	RC-23-165 ¹	

¹ Commuter coach only – 2/Unl/P&L

Tag Axles – 2/Unl/P&L

MC-14002	MC-16003	FH-946
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Center Non-drive Axles – 5/300/P&L

MC-26000	71063	79063
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Gearboxes – 1/Unl/P&L

MGX-450	MGX-451	MGX-538
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Brake Components

Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™ ¹	2/100/P&L
ASA ¹	2/100/P
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake ²	2/100/P&L

Drivelines

RPL	3/Unl/P, 1/Unl/L
92N	1/Unl/P&L
MXL	1/Unl/P&L

¹ Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

² Warranty coverage for boots, seals, caps, bushings and pins is 2/100/P.
Warranty coverage for pads is 1/100/P.

OFF-HIGHWAY SERVICE WARRANTY INFORMATION

Industrial and Off-Highway Service Vehicles

- Load-On/Load-Off
- Port Tractor
- Rail Yard Spotter
- Roll-On/Roll-Off
- Stevedoring Tractor
- Trailer Spotter
- Yard Jockey
- All and Rough Terrain Cranes
- Forestry
- Material Handling
- Specialized Heavy Haul
- Excavator
- Compactor
- Fertilizer Spreader
- Snow Blower
- Mining and Specialized Mining
- Rail Car Mover
- Loader
- Tow Tractor
- Pushback Tractor

Industrial and Off-Highway Service Typically Is:

- Low mileage operation
- Low speed vehicle speed restriction
- Vehicles are not typically licensed for highway use
- Six (6) starts/stops per mile (typical)

Coverage under Cummins-Meritor's warranty require that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Contact Cummins-Meritor regarding specific application approval questions on any product line.

Front Non-Drive Steer Axles – 1/Unl/P

FF - 941	FG - 941	FN - 951	MFS-20-192A-N	MFS-22-193A-N
FF - 943	FG - 943	FS-25	MFS-20-193A-N	MFS-22H-193A-N
FF - 961	FL - 941	MFS-20-133A-N	MFS-22-135A-N	MON-ZO FAMILY
FF - 966	FL - 943	MFS-20-135A-N	MFS-22H-135A-N	

Rear Drive Axles – 1/Unl/P

MT-14X ¹	RS-23-380	RS-30-185	RT-145 ¹
RS-23-186	RS-24-160	RS-30-380	RT-160 ¹

¹ 2/Unl/P for LO/LO Terminal Tractor applications

Planetary Axles – 1/Unl/P

MOB	MOE	MOH	MOT	MOZ
MOC	MOF	MOR	MOX	
MOD	MOG	MOS	MOY	

Gearboxes – 1/Unl/P&L

MGX-402	MGX-450	MGX-466	MGX-538
MGX-423	MGX-451	MGX-479	

PTO – 1/Unl/P&L

MPT-170	MPT-185	MPT-500	MPT-1702
MPT-180	MPT-309	MPT-518	

OFF-HIGHWAY SERVICE WARRANTY INFORMATION

Transfer Cases – 1/Unl/P

MTC-2212-CV (306)	MTC-3118-FV (TC-180 and TC-180-23)	MTC-3208-GV (RTC-50)
MTC-3106-FV (TC-137)	MTC-3118-CV (358)	MTC-3209-GV (MTC-60/RTC-60)
MTC-3111 (T-2111 through-shaft)	MTC-3120-FV (TC-143)	MTC-3220-FC (TC-142)
MTC-3112-CV (548C)	MTC-3124 (T-2119)	
MTC-3116 (T-2111)	MTC-3206-FV (TC-237)	

Drivelines – 1/Unl/P

RPL	MXL
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Transmission – 1/Unl/P&L

FAT 30

Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-End Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P

TERMS AND CONDITIONS

Coverage Exclusions

Product Description

All

The cost of any repairs, replacements or adjustments to a covered component (1) associated with noise; (2) resulting from the use or installation of non-genuine Cummins-Meritor components or materials; (3) due to vibration associated with improper operation or misapplication of drivetrain components; and (4) damage resulting from corrosion.

For axle assemblies supplied by Cummins-Meritor with suspension and interface brackets designed and/or attached by non-Cummins-Meritor parties, Cummins-Meritor warranty coverage does not apply to the brackets, bracket attachment methods and field issues caused by brackets or bracket attachments to any covered component unless specified in a separate OEM agreement.

Front Axles¹

Linehaul – King Pin Bushings 1yr/Unl P&L
All Other Vocations – King Pin Bushings Excluded

¹ King Pin Bushing wear excluded for all vocations.

Rear Axles

Self-contained traction equalizers and oil filters. The use of NoSPIN differentials will result in the exclusion of axle shafts from warranty considerations. NoSPIN is a product of Eaton.

ASA

Boot and bushing. Bent, broken, over-torqued, missing or otherwise damaged pawl assemblies.

Cam Brake

Brake lining wear and brake shoe “rust-jacking.”

Disc Brake

Pad wear, rotor wear.

Coverage Limitations

Product Description

All

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program. Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

Warranty coverage on vehicles with 1,850 lb-ft engine torque and over may be reduced on individual drivetrain components. Contact your Cummins-Meritor representative for specific details.

Front Axles

Tie rod and tie rod ends limited to 3-year/300,000-mile or published vocational coverage, whichever is less. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Cummins-Meritor.

Rear Axles

Pinion and through shaft seals limited to 3-year/300,000-mile or published vocational coverage, whichever is less, if yoke is installed by Cummins-Meritor. If yoke is not installed by Cummins-Meritor, then Cummins-Meritor does not warrant pinion seals. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Cummins-Meritor.

Rear Axles

The Cummins-Meritor breather part number A-2297-C-8765 with A-3196-J-1336 hose must be used for eligibility of any potential warranty consideration relating to contamination and/or loss of lube in axles.

Cam Brake

Limited to bracket, brake spider and camshaft structural integrity.

STEELite X30

Wearable life is up to the discard diameter of the drum.

Terms and Conditions

(1) What is Covered by this Commercial Warranty?

Meritor Heavy Vehicle Systems, LLC warrants to the owner (“Owner”) that the components listed in this publication, which have been installed by an Original Equipment Manufacturer (“OEM”) as original equipment in vehicles licensed for on-highway use, will be free from defects in material and workmanship. This warranty coverage begins only after the expiration of the OEM’s vehicle warranty for the applicable covered components. Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner or the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed elsewhere in this warranty statement.

Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Components (whether new, used or remanufactured) installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

For certain components, coverage requires the use of specific extended drain interval or synthetic lubricants. For further information about lubrication and maintenance, see Cummins-Meritor publication Maintenance Manual Number 1 and the applicable Cummins-Meritor maintenance manual for the product in question. Other conditions and limitations applicable to this warranty are detailed below.

TERMS AND CONDITIONS

(2) Designation of Vocational Use Required

To obtain warranty coverage, each Owner must notify Cummins-Meritor through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Cummins-Meritor components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Cummins-Meritor directly. Failure to notify Cummins-Meritor of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Cummins-Meritor as to the intended vocational use of the vehicle. This notification can be sent directly to Cummins-Meritor or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Cummins-Meritor's warranty requires that the application of products be properly approved pursuant to OEM and Cummins-Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines and/or contact Cummins-Meritor regarding specific application approval questions on any product line.

(3) What is the Cost of this Warranty?

There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty?

This warranty does not cover normal wear and tear; nor does it cover a component that fails, malfunctions or is damaged as a result of (I) improper installation, adjustment, repair or modification (including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage or vocation from that which was originally approved by Cummins-Meritor), (II) accident, natural disaster, abuse or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the axle and/or driveline capacity) or (III) improper or insufficient maintenance (including deviation from approved lubricants, change intervals or lube levels). This warranty does not cover any component or part that is not branded by Cummins-Meritor. **For vehicles that operate full or part time outside of the United States and Canada, a one year, unlimited mileage, parts only warranty (1/Unl/P) will apply.**

(5) Remedy

The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Cummins-Meritor's option. Cummins-Meritor reserves the right to require that all applicable failed materials are available and/or returned to Cummins-Meritor for review and evaluation.

(6) Disclaimer of Warranty

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESSED, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

(7) Limitation of Remedies

In no event shall Cummins-Meritor be liable for special, incidental, indirect or consequential damages of any kind or under any legal theory, including, but not limited to, towing, downtime, lost productivity, cargo damage, taxes or any other losses or costs resulting from a defective covered component.

(8) To Obtain Service

If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Cummins-Meritor or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Cummins-Meritor service location. The dealer will inspect the vehicle and contact Cummins-Meritor for an evaluation of the claim. When authorized by Cummins-Meritor, the dealer will repair or replace during the term of this warranty any defective Cummins-Meritor component covered by this warranty.

(9) Entire Agreement

This is the entire agreement between Cummins-Meritor and the Owner about warranty and no Cummins-Meritor employee or dealer is authorized to make any additional warranty on behalf of Cummins-Meritor. This agreement allocates the responsibilities for component failure between Cummins-Meritor and the Owner.



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Fire and Rescue Apparatus

Three (3) Year Material and Workmanship Meritor Wabco ABS Brake System Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The Meritor Wabco ABS brake system shall be covered by Meritor Wabco as indicated in the attached Meritor Wabco warranty coverage description
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor Wabco warranty description shall apply.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

WARRANTY

MODEL YEAR 2021 VEHICLES



Warranty coverage is essential to protecting your investment. But understanding the full details of your coverage can be challenging. This straightforward approach allows you, our valued customer, to better understand how your specific vehicle applications will be covered in your region. Our component warranty coverage is provided according to vocation/usage categories listed below.

- Linehaul covers high mileage operation (over 60,000 miles/year) on well-maintained major highways of concrete or asphalt construction.
- General Service covers moderate mileage operations (less than 60,000 miles/year) on well-maintained public roads (less than 10 percent off-road) typically with less than three (3) stops per mile.
- Heavy Service (Vocational) covers vehicles with more than 10 percent off-road OR moderate to frequent starts/stops typically with more than three (3) stops per mile.
- Off-Highway Service covers lower mileage operations. Vehicles are not typically licensed for highway use.

How to Read Warranty Coverage (Example)

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor
3	300	P

- The standard aftermarket warranty for WABCO products - including WABCO Original parts, WABCO Reman Solutions, ProVia quality aftermarket parts and WABCO retrofit solutions - is one year, parts only from in-service date when purchased from ZF distributor networks or its affiliates and/or subsidiaries.

WABCO

WARRANTY - MODEL YEAR 2021 VEHICLES

LINEHAUL/GENERAL SERVICE WARRANTY INFORMATION

LINEHAUL/GENERAL SERVICE VEHICLES

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Auto Hauler
- Beverage Truck
- Bulk Hauler
- Chip Hauler (Truck)
- Cross Country Coach
- Doubles
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Grain Hauler
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Pipe Hauler
- Platform Auto Hauler
- Pumper
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Truck
- Triples
- Tour Bus
- Wrecker

LINEHAUL TYPICALLY IS

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction

GENERAL SERVICE TYPICALLY IS

- Moderate mileage operations (less than 60,000 miles/year)
- Well maintained public roads (less than 10% off-road)
- Less than three (3) stops per mile

WABCO Components ¹	
Air Management	
Air Brake Valves	1/100/P&L
Trailer Lift Axle Control Valve	
Trailer Control Line Filter ³	
Air Compressors (ALL) ²	2/200/P&L
Air Dryers (ALL)	3/300/P&L
Aerodynamics	
OptiFlow® TrailerSkirt	2/UnU/P
OptiFlow® Trailer Tail and AutoTail	2/UnI/P
Braking Systems	
ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	
Electronic Braking System (EBS)	
Electronic Stability Control (ESC)	
Roll Stability Control (RSS)	
Trailer Roll Stability Support (RSS)	
Trailer ABS (Anti-Lock Braking System) ³	
Driveline Suspension Control	
Clutch Controls	2/200/P&L
Leveling Valves	1/100/P&L
OptiRide® Automated Manual Transmission (AMT)	
OptiRide® Electronically Controlled Air Suspension (ECAS)	3/300/P&L

WABCO Components ¹ (cont.)	
Safety	
OnGuardACTIVE®	3/300/P&L
OnLane®	
OnLaneALERT®	
OnSide®	
Trailer SafeStart™	
Trailer TailGUARD™	
Telematics	
TrailerCAST™ Telematics Device	3/300/P&L
Wheel End Solutions	
EasyFit™ Slack Adjuster	6/600/P
MAXXUS™ Truck Air Disc Brake	5/500/P&L
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 17 and 19 Air Disc Brake	2/UnI/P and 1/UnI/L
Pan 22 Air Disc Brake	5/500/P and 1/L
TRISTOP™ D Actuator w/ IBV or IRB	6/600/P
TRISTOP™ D Actuator	3/300/P
UNISTOP™ Actuator	2/200/P
Trailer MAXX22T™ Air Disc Brake	5/500/P and 1/L

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ An extended warranty of 4/400/P will apply when a WABCO Trailer Control Line Filter is used in combination with a WABCO Trailer ABS valve.

HEAVY SERVICE (VOCATIONAL) WARRANTY INFORMATION

HEAVY SERVICE VEHICLES

- Airport Rescue Fire (ARF)
- Airport Shuttle
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer
- Combination
- Cementing Vehicle
- City Bus
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Crash Fire Rescue (CFR)
- Mixer
- Demolition
- Drill Rig
- Dump
- Emergency Service
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Newspaper Delivery
- Package Delivery
- Pick-up and Delivery
- Rapid Intervention Vehicle (RIV)
- Rear Loader
- Recycling Truck
- Residential Pick-Up/Waste
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Transit Bus
- Trolley
- Utility Truck
- Winch Truck

HEAVY SERVICE TYPICALLY IS

- On/Off road vocations (10% or more off-road) OR
- Moderate to frequent starts/stops typically more than three (3) stops per mile



WABCO Components ¹	
Air Management	
Air Brake Valves	1/100/P&L
Air Compressors (ALL)2	
Air Dryers (ALL)	
Trailer Control Line Filter ³	
Braking Systems	
ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	2/200/P&L
Electronic Braking System (EBS)	3/300/P&L
Electronic Stability Control (ESC)	
Trailer ABS Valve ³	
Roll Stability Control (RSS)	
Trailer Roll Stability Support (RSS)	
Driveline Suspension Control	
OptiRide® Electronically Controlled Air Suspension (ECAS)	2/200/P&L
Leveling Valves	1/100/P&L
Clutch Controls	2/200/P&L
Safety	
OnGuardACTIVE®	3/300/P&L
OnLane®	
OnLaneALERT®	
OnSide®	
Trailer SafeStart™	
Trailer TailGUARD™	
Telematics	
TrailerCAST™ Telematics Device	3/300/P&L
Wheel End Solutions	
EasyFit™ Slack Adjuster	2/200/P
MAXXUS™ Air Disc Brake	1/Unl/P&L
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 22, 19 and 17 Air Disc Brake	1/Unl/P&L
Trailer MAXX22T™	1/Unl/P&L
TRISTOP™ D Actuator w/ IBV	3/Unl/P
TRISTOP™ D Actuator	2/200/P
UNISTOP™ Actuator	1/100/P

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ An extended warranty of 4/400/P will apply when a WABCO Trailer Control Line Filter is used in combination with a WABCO Trailer ABS valve.

WARRANTY - MODEL YEAR 2021 VEHICLES

INDUSTRIAL/OFF-HIGHWAY SERVICE WARRANTY INFORMATION

INDUSTRIAL AND OFF-HIGHWAY SERVICE TYPICALLY IS

- Low mileage operation³
- Vehicles are not typically licensed for highway use

Market	Common Application Types
Agriculture	Fertilizer Spreader, Tractor, Heavy Duty Ag Trailers, Harvester, Sprayer, Skid Loader, Silage Bagger, Slurry Wagons, Grain Cart
Airport Support	Pushback Tractor, Towing Tugs, Aircraft Tow Tractor, Refueling Trucks, Food Service Trucks, Baggage Tractors, De-Icing Equipment, Runway Clearing Equipment
Construction	All-Terrain Crane, Rough Terrain Crane, Excavator, Compactor, Wheel Loader, Road Roller, Motor Grader, Articulated Dump Truck, Rubber Tire Road Roller, Backhoe Loaders, Haul Trucks, Scraper Rough Terrain Forklifts, Trenchers, Drills
Forestry	Logging Forwarder, Kidder, Loaders, Yard Forklifts, Harvesters Fellers
Material Handling	Port Tractor, Rail Yard Spotter, Stevedoring Tractor, Trailer Spotter, Yard Jockey, Scissor Lift, Straddle Carrier, Manlift, Forklift, Boom Lift Telehandlers, Aerial Work Platforms
Mining	Specialized Mining, Excavator, Haul Truck, Underground Loader, Service Trucks, Wheel Loaders, Scrapers, Load Haul Dumps, Personnel Transports, Bolters, Scalpers
Municipal	Street Sweeper, Utility Tractor, Utility Trucks, Tree Trimmers, Dump Trucks, Tow Trucks, Flat Bed Trucks, Winch Applications
Oil & Gas	Fracturing Trailer, Injector Heads, Top Drives, Jack/Lift Boats, Wireline Trucks, Load-On / Load-Off
Rail	Railcar Mover, Track Layers, Grinders, Platform Crane, Locomotive Railcars, Ballast Equipment, Winch Applications



WABCO Components ¹	
Air Management	
Air Brake Valves	2/Unl/P
Air Compressors (ALL)2	
Air Dryers (ALL)	
Brake Actuation	
Air/Hydraulic Actuators	2/Unl/P
Master Cylinders	
Remote Actuators	
Slave and Wheel Cylinders	
Two Fluid Actuators	
Brake Locks	
Brake Locks (ALL)	2/Unl/P
Electric Brake Locks	
Lever Locks	
Braking Systems	
ABS (Anti-Lock Braking System) Air	1/100/P&L
ABS (Anti-Lock Braking System) Hydraulic	
Driveline Suspension Control	
Clutch Controls	1/100/P&L
Leveling Valves	
Electrohydraulics & Controls	
Electronic Pedals	2/Unl/P
Electrohydraulic Brake Valves (EBV)	
Pressure Switches	
Hydraulic Braking Solutions	
Accumulator Charging Valves	2/Unl/P
Hydraulic Throttle Controls and Switches	
Modulating Brake Valves	
Wheel End Solutions	
EasyFit™ Slack Adjuster	2/200/P
Caliper Disc Brakes	2/Unl/P
MAXXUS™ Air Disc Brake	1/Unl/P&L
Multiple Disc Brakes	2/Unl/P
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 22, 19 and 17 Air Disc Brake	1/Unl/P&L
TRISTOP™ D Actuator w/ IBV	3/Unl/P
TRISTOP™ D Actuator	2/200/P
UNISTOP™ Actuator	1/100/P

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ Equivalent hours of service limit: 2,000 hours for all components.

TERMS AND CONDITIONS

COVERAGE EXCLUSIONS

PRODUCT DESCRIPTION

ALL PRODUCTS

This Warranty shall not apply to the following, but not limited to: (1) damage to the product or its component parts caused by incorrect use, installation, maintenance or repair, including without limitation (a) improper fit of mating components or brackets, damaged threads, cut, broken, chafed, pinched or otherwise damaged wiring (sensors, harnesses and connectors), (b) sensors damaged during removal when seized in block, or associated with sensor adjustments/ alignments, and (c) damage resulting from the use or installation of non-genuine WABCO components or materials; (2) damage to the product, its component parts, or diminished product or component part performance due to incorrect operation, deviation from approved conditions or misapplication; (3) any unauthorized disassembly of the product or its component parts including without limitation (a) obliterated, defaced or missing WABCO or WABCO name plate, serial numbers or label identifying the device as a ZF product or WABCO component, (b) changes to sealed adjusting screws, and (c) opening or attempted repair of non-serviceable components; (4) malfunction of the component due to internal contamination of the vehicle system including without limitation (a) water and other contamination damage that is due to the use of a non-genuine air dryer cartridge or (b) valve failures due to contamination in air system, (5) complaints associated with noise, (6) damage resulting from corrosion (including oxidation of electrical devices and connections).

AIR DRYERS

Mounting brackets (see vehicle OEM). Desiccant cartridge housing only.

AIR SYSTEM COMPONENTS

Normal wear items; Gladhand seals, dash valve knobs, valve actuation handles, treadles, pedals.

ABS, ELECTRONIC STABILITY CONTROL (ESC), ROLL STABILITY CONTROL (RSC), OPTIRIDE®, ONGUARD® AND ONLANE®, COLLECTIVELY “ELECTRONICS”

Failure of electronic components due to overvoltage condition, improper grounding, electrostatic discharge (ESD), improper shielding, electromagnetic interference (EMI), or other wiring or installation issues. Malfunctions and failure codes caused by other electronic subsystem failures (data bus, engine, transmission, dashboard, etc.)

HYDRAULIC COMPONENTS

For certain components, brake fluid DOT3 or DOT4 is used as the operating medium. Use of any other fluid will void all warranties associated with that component. For hydraulic braking applications the brake fluid is considered a maintenance item. Maintenance intervals are listed in TB-1367.

COVERAGE LIMITATIONS

PRODUCT DESCRIPTION

ALL PRODUCTS

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program.

Products purchased on an incomplete vehicle (glider) are limited to one year, 1/Unl/P.

For vehicles that operate full- or part-time outside of the United States and Canada, a 1-Year/Unlimited Miles parts only (1/Unl/P) will apply.

TOOLBOX PLUS™ DIAGNOSTIC SOFTWARE

Proper diagnostics of WABCO Electronics may require the latest version of TOOLBOX PLUS™. Additional labor due to use of an outdated version of TOOLBOX™ software and/or the time to purchase or install the latest version of TOOLBOX PLUS™ are not covered under product warranty.

WARRANTY - MODEL YEAR 2021 VEHICLES

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?

ZF CV Systems North America LLC and its North American subsidiaries and affiliates (ZF) warrant to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment will be free from defects in material and workmanship. This warranty coverage begins from the original in-service date to the limits provided and runs concurrently with any warranties provided by OEMs and/or any distribution agreements and/or any service contracts that cover the components listed in this publication, if any. If the components listed in this publication are covered by an OEM warranty and/or service contract, then the OEM's warranty and/or service contract shall supersede ZF's warranty and Owner shall comply with all OEM's warranty and/or service contract requirements for claims under such OEM's warranty and/or service contract until those agreements expire. Once those agreements expire and provided the ZF warranty has not expired under the terms stated above, the ZF warranty will be in effect until its expiration date.

Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed previously in this publication. Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Additional diagnostic time due to use of an outdated version of TOOLBOX™, time to purchase or install latest version of TOOLBOX™ are the responsibility of the authorized ZF distributor networks and are not covered under product warranty. Components installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

(2) Designation of Vocational Use Required. To obtain warranty coverage, each Owner must notify ZF through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the WABCO components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with ZF directly. Failure to notify ZF of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date. A second Owner and each subsequent Owner must also notify ZF as to the intended vocational use of the vehicle. This notification can be sent directly to ZF or through

the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use. Coverage under ZF's warranty requires that the application of products be properly approved pursuant to OEM and ZF, approvals.

(3) What is the Cost of this Warranty? There is no charge to the Owner for this warranty.

(4) What is not Covered by this Warranty? In addition to the items listed on "Coverage Exclusions," this warranty does not cover normal wear and tear, or service items; nor does it cover a component that fails, malfunctions or is damaged as a result of (a) improper handling, storage, installation, adjustment, repair or modification including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by ZF, (b) accident, fire or other casualty, natural disaster, road debris, negligence, misuse, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the brake system capacity), or (c) improper or insufficient maintenance (including deviation from maintenance intervals, approved lubricants, or lube levels). This warranty does not cover any component or part that is not sold by ZF.

(5) To obtain service. If the owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either ZF or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM dealer or ZF distributor networks' servicer. The dealer or ZF authorized servicer will inspect the vehicle and contact ZF for an evaluation of the claim. When authorized by ZF, the dealer or ZF authorized servicer will repair or replace during the term of this warranty any defective WABCO component covered by this warranty.

(6) Disclaimer of Warranty and Limitation of remedies. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE LIMITED WARRANTY SET FORTH HEREIN IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND/OR WARRANTY FOR HIDDEN OR LATENT DEFECTS, AND IN NO EVENT WILL ZF OR ANY OF ITS AFFILIATES BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL, PROGRESSIVE, SPECIAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND.

- (7) Legal action. Any legal action or claim arising from or related to this Warranty, in contract or otherwise, must be commenced within one year from the accrual of that cause of action, or be barred forever. Any dispute arising in connection with this agreement shall be governed by and construed according to the laws of the State of Michigan and be brought, heard and determined exclusively in either the Circuit Court for the County of Oakland, State of Michigan or the United States District Court for the Eastern District of Michigan. The parties stipulate that the referenced venues are convenient.
- (8) Remedy. The exclusive remedy under this warranty shall be the repair or replacement of the defective component at ZF's option. ZF reserves the right to require that all applicable covered components are available and/or returned to ZF for review and evaluation. THE MAXIMUM LIABILITY, IF ANY, OF ZF FOR ALL DAMAGES, INCLUDING WITHOUT LIMITATION CONTRACT DAMAGES, BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORT, IS LIMITED TO AN AMOUNT NOT TO EXCEED THE PURCHASE PRICE OF THE PRODUCT and where indicated in the product and application warranty information above, the inclusion of labor is limited to the standard repair time. THE PARTIES ACKNOWLEDGE AND AGREE THAT THE LIMITATION OF DAMAGES PROVISION SET FORTH IN THIS PARAGRAPH SURVIVES BETWEEN THE ORIGINAL END USER AND ZF EVEN IF THE EXCLUSIVE REMEDY SET FORTH ABOVE IS DEEMED TO FAIL OF ITS ESSENTIAL PURPOSE. ZF may change the design or make improvements to its Products without incurring any warranty obligation for previously manufactured Product .
- (9) Entire Agreement. This is the entire agreement between ZF and the Owner about warranty and no, ZF employee, or dealer is authorized to make any additional warranty on behalf of ZF unless in writing and signed by an authorized representative of ZF.





**For further product details contact your distributor or the
WABCO Customer Care Center at 855-228-3203.**

About ZF Friedrichshafen AG

ZF is a global technology company and supplies systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies different kinds of vehicles. With its products, the company contributes to reducing emissions and protecting the climate.

ZF, which acquired WABCO Holdings Inc. on May 29, 2020, now has 160,000 employees worldwide with approximately 260 locations in 41 countries. In 2019, the two then-independent companies achieved sales of €36.5 billion (ZF) and \$3.4 billion (WABCO). For more information, visit: www.wabco-na.com



Fire and Rescue Apparatus

Ten (10) Year Structural Integrity Custom Cab

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The Pierce Custom Cab shall be free from structural failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This warranty applies only to the cab tubular support and mounting structures and other structural components of the cab of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus.</p> <p>This warranty does not apply to damage caused by corrosion.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion

Cab

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Exterior surfaces of the cab painted by Pierce shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years
Conditions and Exclusions:	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10%</p> <p>Corrosion Perforation 0-120 months 100%</p> <p>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</p> <p>Items not covered by this warranty include: (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual). (b) UV paint fade. (c) Any cab not manufactured by Pierce.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Five (5) Year Material and Workmanship

Command Zone Electronics

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Command Zone control modules shall be free from failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty applies to all of the control modules for the Command Zone system, including the full color graphic displays. Related wire harnesses, cables and connectors are not covered under this limited warranty and are instead covered under the Pierce One Year Basic Apparatus Limited Warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

54 Months Material and Workmanship

Camera System

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	This limited warranty covers repairs to correct any defect related to materials or workmanship of the Sharpvision camera system installed on the apparatus occurring during the warranty period.
Warranty Begins:	The date of delivery.
Warranty Period Ends After:	Fifty - Four (54) months
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty does not apply to related wire harnesses, cables, and connectors, which are covered by the Pierce one (1) year basic apparatus limited warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Ten (10) Year Material and Workmanship

Pierce 12V LED Strip Light

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	This limited warranty covers repairs to correct any defect related to materials or workmanship of the Pierce 12V LED strip lights installed on the apparatus occurring during the warranty period.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty does not apply to related wire harnesses, cables, and connectors, which are covered by the Pierce one (1) year basic apparatus limited warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

NEW PRODUCT WARRANTY



PARTICIPATING OEM SALES DISTRIBUTOR SALES

LIMITED WARRANTY ON NEW ALLISON AUTOMATIC TRANSMISSIONS USED IN EMERGENCY VEHICLE APPLICATIONS

Allison Transmission will provide for repairs or replacement, at its option, during the warranty period of each new Allison transmission listed below that is installed in an Emergency Vehicle in accordance with the following terms, conditions, and limitations.

WHAT IS COVERED

- **WARRANTY APPLIES** — This warranty is for new Allison transmission models listed below installed in an Emergency Vehicle and is provided to the original and any subsequent owner(s) of the vehicle during the warranty period.
- **REPAIRS COVERED** — The warranty covers repairs or replacement, at Allison Transmission's option, to correct any transmission malfunction resulting from defects in material or workmanship occurring during the warranty period. Needed repairs or replacements will be performed using the method Allison Transmission determines most appropriate under the circumstances.
- **TOWING** — Towing is covered to the nearest Allison Transmission Distributor or authorized Dealer only when necessary to prevent further damage to your transmission.
- **PAYMENT TERMS** — Warranty repairs, including parts and labor, will be covered per the schedule shown in the chart contained in section "APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE."
- **OBTAINING REPAIRS** — To obtain warranty repairs, take the vehicle to any Allison Transmission Distributor or authorized Dealer within a reasonable amount of time and request the needed repairs. A reasonable amount of time must be allowed for the Distributor or Dealer to perform necessary repairs.
- **TRANSMISSION REMOVAL AND REINSTALLATION** — Labor costs for the removal and re-installation of the transmission, when necessary to make a warranty repair, are covered by this warranty.
- **WARRANTY PERIOD** — The warranty period for all coverages shall begin on the date the transmission is delivered to the first retail purchaser, with the following exception:

Demonstration Service - A transmission in a new truck or bus may be demonstrated to a total of 5000 miles (8000 kilometers). If the vehicle is within this limit when sold to a retail purchaser, the warranty start date is the date of purchase. Normal warranty services are applicable to the demonstrating Dealer. Should the truck or bus be sold to a retail purchaser after these limits are reached, the warranty period will begin on the date the vehicle was first placed in demonstration service and the purchaser will be entitled to the remaining warranty.

APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE

APPLICABLE MODELS	WARRANTY LIMITATIONS (Whichever occurs first)		ADJUSTMENT CHARGE TO BE PAID BY THE CUSTOMER	
	Months	Transmission Miles Or Kilometers	Parts	Labor
MT, MD 3000, 3200, 3500, 3700	0-24	No Limit	No Charge	No Charge
HT with Hydraulic Controls	0-24	No Limit	No Charge	No Charge
AT, 1000 Series™, 2000 Series™, 2400 Series™	0-36	No Limit	No Charge	No Charge
HT with Electronic Controls	0-60	No Limit	No Charge	No Charge
HD 1000 EVS, 2100 EVS, 2200 EVS 2350 EVS, 2500 EVS, 2550 EVS, 3000 EVS, 3500 EVS, 4000, 4000 EVS, 4500, 4500 EVS, 4700, 4700 EVS, 4800, 4800 EVS	0-60	No Limit	No Charge	No Charge

WHAT IS NOT COVERED

- **DAMAGE DUE TO ACCIDENT, MISUSE, or ALTERATION** — Defects and damage caused as the result of any of the following are not covered:
 - Flood, collision, fire, theft, freezing, vandalism, riot, explosion, or objects striking the vehicle;
 - Misuse of the vehicle;
 - Installation into unapproved applications and installations;
 - Alterations or modification of the transmission or the vehicle, and
 - Damage resulting from improper storage (refer to long-term storage procedure outlined in the applicable Allison Service Manual)
 - Anything other than defects in Allison Transmission material or workmanship

NOTE: This warranty is void on transmissions used in vehicles currently or previously titled as salvaged, scrapped, junked, or totaled.

- **CHASSIS, BODY, and COMPONENTS** — The chassis and body company (assemblers) and other component and equipment manufacturers are solely responsible for warranties on the chassis, body, component(s), and equipment they provide. Any transmission repair caused by an alteration(s) made to the Allison transmission or the vehicle which allows the transmission to be installed or operated outside of the limits defined in the appropriate Allison Installation Guideline is solely the responsibility of the entity making the alteration(s).
- **DAMAGE CAUSED by LACK of MAINTENANCE or by the USE of TRANSMISSION FLUIDS NOT RECOMMENDED in the OPERATOR'S MANUAL** — Defects and damage caused by any of the following are not covered:
 - Failure to follow the recommendations of the maintenance schedule intervals applicable to the transmission;
 - Failure to use transmission fluids or maintain transmission fluid levels recommended in the Operator's Manual.
- **MAINTENANCE** — Normal maintenance (such as replacement of filters, screens, and transmission fluid) is not covered and is the owner's responsibility.
- **REPAIRS by UNAUTHORIZED DEALERS** — Defects and damage caused by a service outlet that is not an authorized Allison Transmission Distributor or Dealer are not covered.
- **USE of OTHER THAN GENUINE ALLISON TRANSMISSION PARTS** — Defects and damage caused by the use of parts that are not genuine Allison Transmission parts are not covered.
- **EXTRA EXPENSES** — Economic loss and extra expenses are not covered. Examples include but are not limited to: loss of vehicle use; inconvenience; storage; payment for loss of time or pay; vehicle rental expense; lodging; meals; or other travel costs.
- **"DENIED PARTY" OWNERSHIP** — Warranty repair parts and labor costs are not reimbursed to any participating or non-participating OEMs, dealers or distributors who perform warranty work for, or on behalf of, end users identified by the United States as being a "denied party" or who are citizens of sanctioned or embargoed countries as defined by the U.S. Department of Treasury Office of Foreign Assets Control. Furthermore, warranty reimbursements are not guaranteed if the reimbursement would be contrary to any United States export control laws or regulations as defined by the U.S. Department of Commerce, the U.S. Department of State, or the U.S. Department of Treasury.

OTHER TERMS APPLICABLE TO CONSUMERS AS DEFINED by the MAGNUSON-MOSS WARRANTY ACT

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Allison Transmission does not authorize any person to create for it any other obligation or liability in connection with these transmissions.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THESE TRANSMISSIONS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. PERFORMANCE OF REPAIRS AND NEEDED ADJUSTMENTS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (SUCH AS, BUT NOT LIMITED TO, LOST WAGES OR VEHICLE RENTAL EXPENSES) RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.**

** Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

OTHER TERMS APPLICABLE TO OTHER END-USERS

THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE ALLISON TRANSMISSION MODELS LISTED ABOVE AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLISON TRANSMISSION DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH TRANSMISSIONS. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY.

QUESTIONS

If you have any questions regarding this warranty or the performance of warranty obligations, you may contact any Allison Transmission Distributor or Dealer or write to:

Allison Transmission, Inc.
P.O. Box 894
Indianapolis, IN 46206-0894
Attention: Warranty Administration PF-9



Fire and Rescue Apparatus

Five (5) Year Material and Workmanship - Transmission Oil Cooler Three (3) Year Collateral Damage Coverage

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The transmission cooler shall be free from component or structural failures caused by defects in material and/or workmanship. Collateral damage up to \$10,000 per occurrence is available for the first three (3) years.
Warranty Begins:	The date of delivery to the first retail purchaser.
Warranty Period Ends After:	Five (5) Years on Oil Cooler and three (3) years on collateral damage coverage
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.</p> <p>This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.</p> <p>Towing is covered to the nearest distributor or authorized dealer only when necessary to prevent further damage to your transmission.</p> <p>Labor costs for the removal and reinstallation of goods may be covered when necessary to make repairs. Please contact your OEM for authorization.</p> <p>Replacement of cooler during the warranty period is limited to 100% of reasonable labor costs up to a maximum of \$700 to remove, replace, or repair the oil cooler.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

Ten (10) Year Structural Integrity Apparatus Body

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The apparatus body shall be free from structural failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This warranty applies only to the body tubular support and mounting structures and other structural components of the body of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus.</p> <p>This warranty does not apply to damage caused by corrosion.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



AMDOR Inc. TERMS OF BUSINESS AND GENERAL INFORMATION

Warranty:

All AMDOR Inc. roll-up door products are warranted for a period of 10 years from the date of delivery (with the exception of wet paint adhesion - please see below). AMDOR Inc. liability covers the replacement or repair of any component that fails due to defects in material and / or workmanship during the coverage period. We accept no liability for claims made for damages to any part (or parts) of a vehicle and / or machine (of any type) or injury claims by a person or persons assumed or alleged to have been brought about by the use or misuse of any product supplied by AMDOR Inc. Warranty coverage does not extend to door attachments including (but not limited to) decals, emblems, stripes and adhesives.

In order to initiate the claims process please contact your authorized representative of AMDOR Inc. Warranty claims must be accompanied by a written description providing full and reasonable details as to the nature of the defect. Upon receipt of your claim arrangements will be made to inspect the defective product (if necessary). Justified warranty claims will be repaired, exchanged, or credited to the customer's account at AMDOR Inc.'s discretion. All warranty claims must be approved in writing by the Customer Service Manager for AMDOR Inc. There are no exceptions to this clause.

Limited warranty coverage includes the labor associated with the disassembly and assembly of products deemed to be defective by AMDOR Inc. Labor allowances are based on a set time schedule as determined by AMDOR Inc. The maximum allowable hourly labor rate is \$ 50. All warranty labor claims must be approved in writing by an authorized representative of AMDOR Inc. prior to commencement of work. Allowances for removal and installation:

Curtain replacement:	3/4 hour
Balancer replacement:	1 hour
Door ajar switch	3/4 hour
Bottom Panel Assembly:	1/2 hour
Slat replacement:	3/4 hour
Door removal and replacement	1 1/2 hours

Items authorized for return must be accompanied by a Return Goods Authorization (RGA) number. We will accept collect shipments of items deemed to be defective provided that they are returned via the most economical carrier. Should items be

returned by means other than the most economical carrier the difference will be charged back to the sender.

AMDOR Inc. reserves the right to reject any claim when a product has been opened, interfered with or modified. Claims may also be rejected when damage to the product (or any sub-assembly) has been brought about by accident, misuse, abuse, vandalism, incorrect installation, temperature extremes, chemical exposure or any factor other than regular operating conditions.

Limited Wet Paint Match Adhesion Warranty

AMDOR Inc. warrants wet paint finishes applied by AMDOR utilizing our approved factory paint specification. All wet paint match colors must be approved in writing by an authorized OEM representative. AMDOR Inc. will provide a color spray out for this purpose. The time required for shipping and consideration of initial color spray outs will be considered over and above stated lead times. Warranty coverage will extend for a period of not less than 5 years from the date of delivery as determined by AMDOR Inc.'s Packing Slip. AMDOR reserves the right to determine whether individual units will be replaced and / or repaired by an AMDOR approved vendor. An allowance will be made for labor associated with the disassembly and assembly of individual units at the prescribed hourly rate of \$ 50 per hour. Compensation for labor will not exceed the maximum time allowance permitted for door removal and replacement. Written approval including specified allowance for time must be obtained from AMDOR prior to initiating work. Warranty coverage will extend to the following visible paint system defects:

- 1./ Loss of mechanical adhesion as evidenced by peeling, cracking or blistering which exposes the substrate material.
- 2./ Corrosion of the substrate due to paint system failure.
- 3./ Fading which results in a substantial departure from the primary AMDOR approved body color.

Wet paint adhesion limited warranty coverage will be excluded when damages to the system are determined by AMDOR Inc. to be a result of the following:

- 1./ Damage caused through the use of attachments including (but not limited to) decals, labels, adhesives, non factory approved coatings.
- 2./ Loss of gloss, discoloration or damage due to improper maintenance (including but not limited to) mechanical wash systems, pressure washers, steam cleaners, non approved wash or polishing agents.
- 3./ Abuse, acts of nature, excessive heat / cold, chemical exposure, vandalism and / or accidents.
- 4./ Scratches, chips, abrasions, or dents from any source.

This document supercedes all previous written and / or verbal warranties provided by AMDOR Inc. and / or it's affiliates.



Fire and Rescue Apparatus

Twenty (20) Year Structural Integrity

Pierce Aerial Device

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Each new Pierce Aerial Device shall be free from defects in material and workmanship. Aerial Device Models Covered by this warranty include: Aerial Platforms Aerial Ladders SkyBoom
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Twenty (20) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This warranty applies only to the torque box, turntable, aerial sections and other structural components of the aerial device, as identified in the Pierce specifications for the aerial device. This warranty shall be void if, or to the extent that the aerial device is not maintained in strict compliance with NFPA Standard 1911 in effect at time of sale, including such periodic inspections and testing by qualified third parties as are required by that Standard as it may be in effect from time to time. Proof of such compliance shall accompany any claims under this warranty. Third party testing agencies known to Pierce to be qualified for such purposes may be obtained from the Pierce Customer Service Department</p> <p>This warranty does not apply to damage caused by corrosion.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



AMITY FIRE AND SAFETY, INC.

3750 CHESTNUT ROAD
ALBURTIS, PA 18011-0451
Phone: 610-966-3115
Fax: 610-965-6313

* STANDARD FIVE YEAR WARRANTY *

(standard warranty is in effect for parts shipped after 4/15/10)

Three Function Swivel

A. PRESHIPMENT TESTING The Three Function Swivel fabricated by Amity which is exposed to pressure during normal use is subject to final inspection using the following pressure minimums:

1. Hydrostatic applications will be tested to 400 PSI unless specified otherwise on approved drawings. Operating pressures on installed systems are not to exceed 250 PSI at any point in the system. Warranty will be voided and Amity will not be held liable for failure and/or damage occurring from Water Hammering or freezing of water in any system.
2. Hydraulic applications will be tested to 4000 PSI. System operating pressure in application to be 3000 PSI maximum.
3. Dielectric and Continuity Test all circuits. 30 Amp max current loading.

B. THREE FUNCTION SWIVEL MAINTENANCE – Our Three Function Swivel has been fully tested at assembly. Under no circumstances is there to be any maintenance performed internally or externally to the Three Function Swivel by Purchaser or any other third party other than an authorized representative of or Amity itself. The Three Function Swivel is sealed and must remain so. The Three Function Swivel is designed for a long maintenance free life. Should any problems occur or replacement be necessary, first contact Amity. There is to be no field maintenance performed on the Three Function Swivel .

C. MOUNTING REQUIREMENTS – The following are the mounting requirements for the Three Function Swivel:

1. Mounting points and methods are to be determined at the initial design stage. All drawings and applicable documentation must be signed off by both parties and filed for future reference. No deviation to the approved mounting is allowed without approval from Amity.
2. The Three Function Swivel is to be mounted concentric to the center of the turntable bearing.
3. All inlet and outlet plumbing to conform to swivel mounting, under no circumstances is the Three Function Swivel to be positioned to match connections. This will avoid putting excessive loads on the Three Function Swivel. All tubing or piping to be supported by means other than the Three Function Swivel.

D. LIMITED WARRANTY, LIMITATIONS, CONDITIONS AND PROCEDURES REQUIRED.

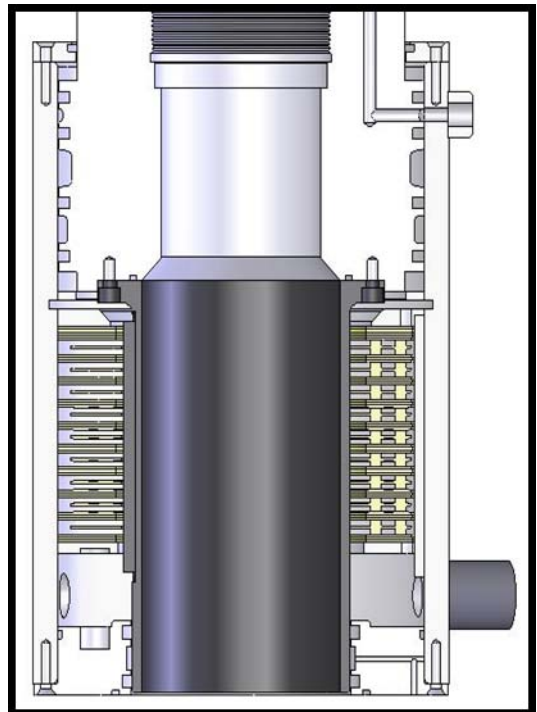
1. The Three Function Swivel is warranted to be free of defects in labor and/or materials for a period of five (5) years from the Date of Service. For purposes here, "Date of Service" shall mean the date when the Three Function Swivel, or the unit to which the Three Function Swivel is incorporated, passes final Underwriters Laboratory testing, or similarly compliant testing, and is certified for service. Evidence of such Date of Service shall be required in connection with any warranty claim by Purchaser.
2. The Three Function Swivel shall be repaired or replaced at the sole option and expense of the Amity provided the Three Function Swivel alleged to be defective was used for its intended normal use of operation and subject to the following qualifications and limitations.
3. Any alteration of the Three Function Swivel without consent from Amity is strictly forbidden and shall void warranty.
4. No welding shall be performed on finished Three Function Swivel.
5. No responsibility is assumed for any malfunctions or damages which are occasionally caused by foreign objects which may be ingested into water or hydraulic systems such as, but not limited to stones, sand or metal chips.
6. Amity assumes responsibility for our Three Function Swivel, which is defective only, and therefore, it will not assume responsibility for labor to either remove or install our Three Function Swivel unless it agrees in writing to assume such responsibility.
7. Unless otherwise approved in writing by the Amity all returns of defective Three Function Swivels (or allegedly defective Three Function Swivels) are at Purchaser's expense and must include a RGA number issued by the Amity.

8. All warranty claims must be presented at the time the problem occurs, or as soon as practical thereafter, either called or faxed to the Amity and include the numbers on the assembly's Amity's label with a detailed explanation of the difficulty in order for the matter to be appropriately evaluated and resolved.
9. Amity will not be held liable for damage incurred during shipment.
10. No responsibility shall be assumed for misuse or improper mounting, unreasonably use or abuse of the Three Function Swivel and or failure to provide or use improper maintenance, failure to follow written installation and use in instruction or any use other than the customary designed use.

THE REMEDIES PROVIDED IN THE ABOVE EXPRESS LIMITED WARRANTY AND ARE THE SOLE AND EXCLUSIVE REMEDIES AVAILABLE. NO OTHER EXPRESS WARRANTIES ARE MADE. ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE ARE LIMITED IN DURATION AS SET FORTH ABOVE. IN NO EVENT SHALL THE AMITY ASSUME OR BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THE WITHIN DESCRIBED WARRANTY SHALL ONLY BE AFFORDED TO THE ORIGINAL PURCHASER OR FOR INCORPORATION INTO ANOTHER UNIT AND TO FIRST PURCHASER AS PART OF COMPLETED UNIT, HOWEVER, THE WARRANTY PERIOD OF FIVE YEARS IS FROM THE DATE OF SERVICE WITH THE UNDERSTANDING IT IS INSTALLED WITHIN A REASONABLE TIME PERIOD.

Dated: _____, 20__





Fire and Rescue Apparatus

Five (5) Year Material and Workmanship Aerial Hydraulic System Components

Three (3) Year Material and Workmanship Aerial Hydraulic System Seals

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	The aerial hydraulic system components and seals shall be free from component or structural failures caused by defects in material and/or workmanship.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years and Three (3) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>Pierce's obligation under this warranty is limited to repairing or replacing without charge, as Pierce may elect, the hydraulic lines, fittings, valves, seals, cylinders, filters, pumps, hydraulic motors, rotary actuators, or components which Pierce determines to have failed due to defective material and workmanship.</p> <p>This warranty shall not apply unless the aerial device is inspected in accordance with NFPA 1911 Standard for Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus and the applicable Pierce Operator and Maintenance Manuals.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



AMITY FIRE AND SAFETY, INC.

3750 CHESTNUT ROAD
ALBURTIS, PA 18011-0451
Phone: 610-966-3115
Fax: 610-965-6313

* STANDARD TEN YEAR WARRANTY *

(standard warranty is in effect for parts shipped after 4/15/10)

Telescopic Waterways

A. PRESHIPMENT TESTING All waterways fabricated by Amity are final inspected using the following pressure minimums:

1. Hydrostatic applications will be tested to 400 PSI unless specified otherwise on approved drawings. Operating pressures on installed systems are not to exceed 250 PSI at any point in the system. Warranty will be voided and Amity will not be held liable for failure and/or damage occurring from Water Hammering or freezing of water in any system.

B. COMPONENTS DESCRIPTION AND MAINTENANCE

1. All components are thoroughly greased at assembly. Since internally lubricated seals are used, regular greasing is not required. We recommend components not be greased at installation.
2. Slip Tube Assemblies may be greased at the Amity's regularly scheduled Aerial Inspections. The seals in the Slip Tube Assemblies are self-lubricating, so greasing is not mandatory. We do recommend a visual inspection of the Slip Tube Assembly while it is fully extended after initial installation, from that point on we recommend inspection every ten hours of aerial operation. If any deposits of aluminum appear, they are to be rubbed off using a Teflon scouring pad. Slip Tube Assemblies are designed to give long maintenance free service; however, like any product, problems may occur and periodic visual inspections will aid in determining if a potential problem exists and warrants a call to us. Care must be taken to keep debris off of extended tubes. We recommend wiping tubes with light oil (10 weight) or hydraulic oil after use, if tubes appear to have contamination on them. Under no circumstance are tubes to be cleaned with lacquer thinner, or any other solvent.

C. LIMITED WARRANTY, LIMITATIONS, CONDITIONS AND PROCEDURES REQUIRED.

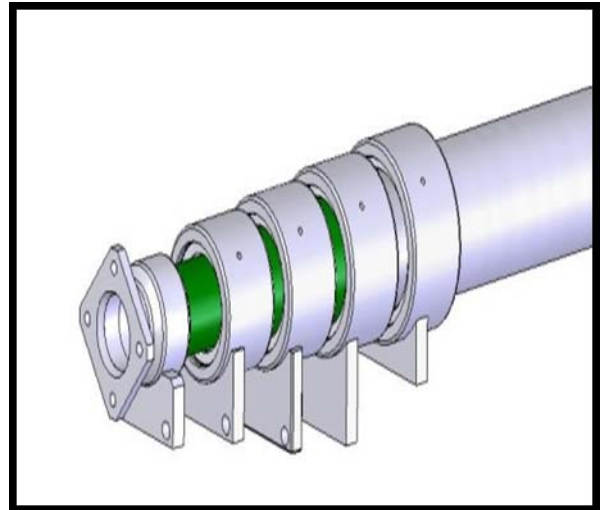
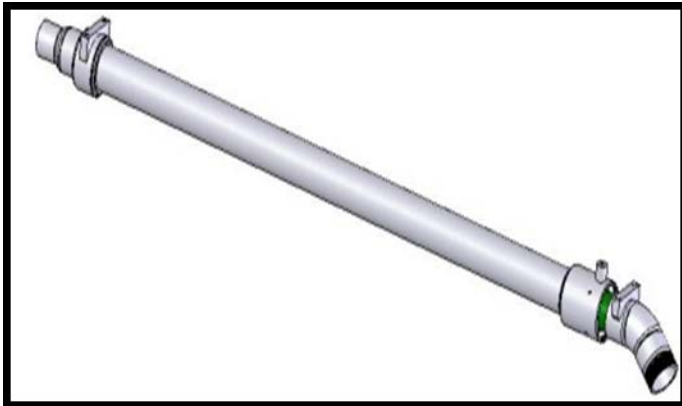
1. Products are warranted to be free of defects in labor and/or materials for a period of ten years from the date of purchase from the Amity and shall be repaired or replaced at the sole option and expense of the Amity provided the products alleged to be defective was used for its intended normal use operation and subject to the following qualifications and limitations.
2. Any alteration of product without consent from Amity is strictly forbidden and shall void warranty.
3. No welding shall be performed on finished product.
4. No responsibility is assumed for any malfunctions or damages which are occasionally caused by foreign objects which may be ingested into water system such as, but not limited to stones, sand or metal chips.
5. Amity assumes responsibility for our product, which is defective only, and therefore, it will not assume responsibility for labor to either remove or install our product unless it agrees in writing to assume such responsibility.
6. Unless otherwise approved in writing by the Amity all returns of defective (or allegedly defective products) are at Purchaser's expense and must include a RGA number issued by the Amity.
7. All warranty claims must be presented at the time the problem occurs, or as soon as practical thereafter, either called or faxed to the Amity and include the numbers on the assembly's Amity's label with a detailed explanation of the difficulty in order for the matter to be appropriately evaluated and resolved.
8. Amity will not be held liable for damage incurred during shipment.
9. No responsibility shall be assumed for misuse or improper mounting, unreasonable use or abuse of the Product and or failure to provide or use improper maintenance, failure to follow written installation and use in instruction or any use other than the customary designed use.

THE REMEDIES PROVIDED IN THE ABOVE EXPRESS LIMITED WARRANTY AND ARE THE SOLE AND EXCLUSIVE REMEDIES AVAILABLE. NO OTHER EXPRESS WARRANTIES ARE MADE. ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR

FITNESS FOR A PARTICULAR PURPOSE OR USE ARE LIMITED IN DURATION AS SET FORTH ABOVE. IN NO EVENT SHALL THE AMITY ASSUME OR BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

THE WITHIN DESCRIBED WARRANTY SHALL ONLY BE AFFORDED TO THE ORIGINAL PURCHASER OR FOR INCORPORATION INTO ANOTHER UNIT AND TO FIRST PURCHASER AS PART OF COMPLETED UNIT, HOWEVER, THE WARRANTY PERIOD OF TEN YEARS COMMENCES UPON INSTALLATION INTO FINAL ASSEMBLY WITH THE UNDERSTANDING IT IS INSTALLED WITHIN SIX MONTHS OF PURCHASE.

Dated: _____, 20____





Fire and Rescue Apparatus

Four (4) Year Pro-Rated Paint and Corrosion

Aerial Device

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Aerial device shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection for exterior surfaces.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Four (4) Years
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-24 months 100% 25-48 months 50%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-24 months 100% 25-48 months 50%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-24 months 100% 25-48 months 50%</p> <p>Corrosion Perforation 0-24 months 100% 25-48 months 50%</p> <p>This limited warranty applies only to exterior paint.</p> <p>Items not covered by this warranty include: (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual). (b) UV paint fade.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



MANUFACTURER'S LIMITED WARRANTY - HYDRAULIC GENERATORS

STANDARD

Harrison Hydra-Gen® (Seller) extends to the original purchaser (Buyer) of goods for use (whether it be an OEM, dealer, re-seller, or end-user) the following warranty covering the Harrison Hydra-Gen® Generator System, subject to the qualifications indicated. Harrison Hydra-Gen® Generator Systems shall consist of a Harrison generator tray assembly and its' components, a Harrison hydraulic pump assembly, and a Harrison supplied meter assembly; unless otherwise specified in below guidelines.

Harrison Hydra-Gen® warrants the original purchaser that the Generator System manufactured or supplied by Harrison Hydra-Gen® will be free from defects in materials and workmanship, provided such goods are:

1. Installed, operated and maintained in accordance with the Harrison Hydra-Gen® owner's manual, and/or written installation addendums.
2. Each new application has been reviewed and approved by the Harrison Hydra-Gen® Application Engineering Group.

PERIOD OF WARRANTY

*Two (2) years or 2000 hours of usage, whichever comes first, from the date the product is shipped from Harrison to the Installer.

***The END USER must complete and return to Harrison Hydra-Gen® the Harrison Hydra-Gen® Warranty Registration Card, Form WR-1, provided in the generator manual and provided online @ www.harrisonhydragen.com, within 45 days of delivery.**

Warranty includes all parts and labor. In addition, maintenance items that are contaminated or damaged by a proven warrantable failure are covered in years 1-2, and Labor time up to 4 hours, travel time up to 2.5 hours, and mileage up to 100 miles for warranty related repairs are covered.



Repair or replacement parts are warranted for ninety (90) days from date of purchase, excluding labor and travel expenses. Any part repaired or replaced during the warranty period assumes the remainder of the warranty or ninety (90) days, whichever is greater.

Only components supplied by Harrison Hydra-Gen® are covered under this warranty.

There is no other express warranty. Implied warranties, including merchantability and fitness for a particular purpose, are limited to periods set forth above and to the extent permitted by law. Any and all implied warranties are excluded. In no event is Harrison Hydra-Gen® liable for incidental or consequential damages.

The Buyer (OEM, dealer, re-seller, or end-user) must notify Harrison Hydra-Gen®, an Authorized Distributor, or a designated Harrison Hydra-Gen® Service Representative, **in writing**, within thirty (30) calendar days after goods or parts failed to meet this warranty.

The sole liability of Harrison Hydra-Gen® and the Buyer's sole remedy for a failure of goods under this warranty and for any and all other claims arising out of the purchase and use of the goods, including negligence on the part of the manufacturer, shall be limited to the repair or replacement of the product, at the option of Harrison Hydra-Gen®, of the parts that do not conform to this warranty, provided that the product or parts are returned to the Harrison Hydra-Gen® manufacturing facility.

A Returned Goods Authorization (RGA) is required for all products and parts being returned, and may be requested by phone, fax, email, or mail.

Failure to make timely delivery to Harrison Hydra-Gen® of the goods claimed to be defective shall void any warranty.

Unless previous written agreements have been made between the Buyer and Harrison Hydra-Gen®, the Buyer shall be responsible for all freight and shipping charges in connection with the delivery of the goods claimed to be defective, to Harrison Hydra-Gen® at its manufacturing facility, and the return of repaired or replacement goods to the Buyer.

If Harrison Hydra-Gen® determines that no warranty coverage is available for goods claimed to be defective, whether determination is based on the warranty being voided, the product failure

being due to a cause not covered by the warranty, the failure to make a timely and proper warranty claim, or otherwise, the Buyer shall have the option of either:

1. Having the goods not repaired and returned to the Buyer, freight collect.
2. Having the goods repaired, If Harrison Hydra-Gen® determines that the product is repairable, and returned to the Buyer, freight collect. The Buyer will be responsible for all costs associated with the repair and testing of the goods and shall authorize Harrison Hydra-Gen®, in writing, to have the goods repaired and tested by Harrison Hydra-Gen®.

The owner is obligated to operate and maintain the goods in accordance with the recommendations published by Harrison Hydra-Gen® in the owner's manual. The owner is responsible for the costs associated with such maintenance and any adjustments that may be required.

This warranty shall not apply to:

1. Damages or defects caused by normal wear, accident, misuse, abuse, abnormal operating conditions, negligence, corrosion, accident causes, or attributable to written specifications or instructions furnished by the installer.
2. Damages or defects caused by improper maintenance in accordance with the Harrison Hydra-Gen® product manuals and operating guidelines.
3. Damages caused by operator error.
4. Damages or defects caused by improper installation.
5. Damages or defects caused by inadequate water drainage provided by the installer in the area where the generator is installed or stored.
6. Damages or defects caused by inadequate air flow space or ventilation provided by the installer in the area where the generator is installed.
7. Any product or part altered or modified by the installer or service facility without written prior consent by Harrison Hydra-Gen®.
8. Cost of normal maintenance, adjustments, installation or start-up.
9. Normal wear items and components needing periodic maintenance such a rubber hoses and filters.
10. Excessive labor due to components being concealed in vehicle as a result of installation.
11. Water, road debris, excessive dirt, salt, abrasive particles, or large foreign objects found in the generator.
12. Telephone or other communications expense.
13. Paint, hydraulic fluid, and interconnecting hoses (internal or external to system assemblies).



This warranty gives you specific legal rights, and you may also have other rights that may vary from state to state or province to province.

No person is authorized to give any other warranties or to assume any other liabilities behalf of Harrison Hydra-Gen®, unless made or assumed in writing by an officer of Harrison Hydra-Gen®.

Contact Harrison Hydra-Gen® for questions regarding your warranty rights and responsibilities at (281) 807-4420; or visit our website at www.harrisonhydragen.com.



Fire and Rescue Apparatus

Ten (10) Year Pro-Rated Paint and Corrosion

Custom Body

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Exterior surfaces of the body shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years
Conditions and Exclusions:	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10%</p> <p>Corrosion Perforation 0-120 months 100%</p> <p>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</p> <p>Items not covered by this warranty include: (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual). (b) UV paint fade. (c) Any cab not manufactured by Pierce.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



Fire and Rescue Apparatus

One (1) Year Material and Workmanship

Graphics Fading and Deterioration

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Each graphic lamination shall be free from defects in material workmanship, fading, and deterioration.
Warranty Begins:	The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.
Warranty Period Ends After:	One (1) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty does not cover damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



GOLDEN STATE
FIRE APPARATUS

goldenstatefire.com

5 DEALER SUPPLIED PRODUCTS AND /OR SERVICES

Exhibit "D"

DEALER SUPPLIED EQUIPMENT and/or SERVICES

The following items and/or services will be provided by Golden State Fire Apparatus Inc. (GSFA) and are shown PER UNIT unless otherwise noted:

LICENSED MANUFACTURER

The State of California Vehicle Code, section 11701 requires “every manufacturer of a vehicle subject to registration shall make application to the Department of Motor Vehicles (DMV) for a license containing a general distinguishing number”. The manufacturer has a current license at time of proposal and shall provide a copy upon request. Temporary licenses are not acceptable.

LICENSED DEALERSHIP

The State of California Vehicle Code, section 11701 requires a “dealer in vehicles of a type subject to registration, shall make application to the Department of Motor Vehicles (DMV) for a license containing a general distinguishing number”. Golden State Fire Apparatus, Inc. has a current license at time of bid as outlined above and is available upon request. Temporary licenses are not acceptable.

LICENSED SALES REPRESENTATIVE

The State of California Vehicle Code, section 11800 requires that it shall be “unlawful for any person to function as a vehicle salesperson without having first procured a license issued by the Department of Motor Vehicles (DMV)”. The representative has a current vehicle salespersons license at time of proposal and shall provide a copy upon request. Temporary licenses are not acceptable.

WEEKLY PROGRESS REPORTS

GSFA will provide weekly progress reports including photographs of the apparatus or the major components as they are being constructed. The reports will commence at the start of the manufacturing process and will continue through production by the manufacturer. The reports will show the progress of the apparatus through the course of each week. Special attention will be given to show the unique features and aspects of the apparatus as construction progresses.

VEHICLE REGISTRATION

The State of California Vehicle Code section 11739 requires that the “dealer of a new motor vehicle sale is responsible for applying for the title, securing vehicle registration, and obtaining license plates for the Customer” through the Department of Motor Vehicles (DMV). Golden State Fire Apparatus, Inc. is a factory-authorized dealer of the vehicle being sold and is authorized to register with the State of California as a new vehicle manufacturer.

GSFA will make all necessary applications and complete all transfer papers, including applying for California Exempt “E” license plates.

PRE-CONSTRUCTION, FACTORY TRIP

A pre-construction trip to the manufacturing facility will be provided for four (4) Customer representative(s). The intent of this trip is to review and finalize, in detail, the specifications prior to the start of production. The pre-construction trip will have a duration of four (4) days and three (3) nights and be scheduled at times mutually agreed upon between GSFA. and the Customer. Costs for airfare, lodging, meals, and ground transportation while at the manufacturer’s location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco, or San Jose.

Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original

ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.

FINAL INSPECTION, FACTORY TRIP

A final inspection trip to the manufacturing facility will be provided for four (4) Customer representative(s). The intent of this trip is to ensure that the apparatus is built to specification and to detect any deficiencies that require correction. The final inspection trip will have a duration of four (4) days and three (3) nights and be scheduled at times mutually agreed upon between GSFA and the Customer. Costs for airfare, lodging, meals, and ground transportation while at the manufacturer's location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco, or San Jose.

Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.

CONTINGENCY RESERVE FUND

A Contingency Reserve Fund amounting to \$25,000 per unit is incorporated into the quotation to address potential change orders, unforeseen items, or necessary work that may arise during the contract. The utilization of this reserve fund is at the sole discretion of the Customer. It is essential to note that this reserve fund is not an estimate for the aforementioned contingencies, and the actual costs associated with change orders, unforeseen items, or required work may surpass the reserved amount depending on their nature.

Any unused portion of the Contingency Reserve Fund will be credited back on the final invoice. Alternatively, if not credited, the remaining funds will be promptly returned to the Customer in the form of a check following the completion of the final invoicing process. This approach guarantees financial transparency and effective management throughout the project.

DELIVERY TO AUTHORIZED SERVICE FACILITY

GSFA will, at their expense, deliver the apparatus (including any applicable equipment, spare parts, and supplies) to their Northern California facility in Sacramento for a dealer preparation inspection.

To ensure proper break in of all components while still under warranty, the apparatus shall be delivered under its own power - rail or truck freight shall not be acceptable.

PRE-DELIVERY SERVICE

After transportation from the factory and prior to delivery, the apparatus will receive a pre-delivery service to confirm proper operation and correction of any issues found as a result of said inspection. The Golden State Fire Apparatus, Inc. pre-delivery service consists of the following:

- Engine Compartment and Undercarriage – Check for any broken mounting brackets and inspect for correct capacities of the following (if applicable): engine oil, coolant, power steering fluid, washer reservoir fluid, transmission fluid, rear end fluid, pump transmission oil, and primer oil.
- Interior – Operate all doors, windows, and locks for proper adjustment. Check upholstery.

- Exterior – Repair reasonable paint scratches or chips. Tighten any loose hardware and inspect tires and wheels for proper pressure and lug torquing.
- Road Test – With the water tank (if applicable) full, the apparatus will be driven approximately twenty miles which allows the drive train components to get up to operating temperature. Road test will be on both city and highway roads. A DOT compliant brake test will be conducted to ensure the system is holding air. The brake condition and wheel seals will also be inspected.
- Electrical - Operate all lights, sirens, and other electrical accessories to verify operation.
- Pump - If applicable, vacuum test the pump to hold for 15 minutes. After vacuum test, operate the relief valve, transfer valve and check pump shift. Check water tank for leaks and inspect water level gauge for calibration. With discharge caps loose, rapid test all individual gauges and main gauges for calibration. Lubricate valve rods.
- Foam System – If applicable, tighten caps and connect foam lines. Test selector, valves, metering valve and operation of foam system (including flush).
- Fuel Tank - Fuel tank will be filled at the dealership location prior to final delivery.
- DEF Tank - DEF tank will be filled at the dealership location prior to final delivery.
- Wash - The apparatus will be thoroughly washed at the dealership location prior to final delivery.

FINAL DELIVERY (CUSTOMER LOCATION)

GSFA will, at their expense, deliver the Product (including any applicable equipment, spare parts, and supplies) to the Customer specified address once completed. Prior to delivery of the Product, Customer agrees to provide proof of liability and physical damage insurance to GSFA. GSFA will not release the Product to the Customer until such proof of insurance is provided.

It is the responsibility of the Customer to have any outstanding balance due, paid in full to GSFA, prior to or at the time that the Product is complete and ready to deliver. If payment is late or delivery is delayed pending payment, a daily finance charge of \$150.00 and a daily storage fee of \$50.00 may apply until such payment is received.

Due to insurance liability, the Product will not be delivered without full acceptance and full payment (or prior written agreement between the Customer and GSFA).

END OF EXHIBIT “D”