



GOLDEN STATE

FIRE APPARATUS

PREPARED ESPECIALLY FOR:

CITY OF SALINAS

**Two (2) Pierce Manufacturing, Inc.
Enforcer 1500 GPM Type 1 Fire Engines**



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GOLDEN STATE
FIRE APPARATUS

goldenstatefire.com

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
(\$355,830.28) 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	31112-25AP	969	Pierce Manufacturing Inc.	Sourcewell #113021- OKC, ID #259, 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	EXTENDED PRICE
A	Two (2) Pierce Manufacturing, Inc. Enforcer 1500 GPM Type 1 Fire Engines	2,232,864.00
B	<i>Discount for 100% Payment at Time of Order (the "Prepayment Discount")</i>	<i>(325,322.00)</i>
C	SUBTOTAL	1,907,542.00
D	9.25% State Sales Tax	176,447.64
E	California Tire Fee	21.00
F	100% Performance Bond	2,840.00
G	GRAND TOTAL PURCHASE PRICE	2,086,850.64

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 **48 to 51 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 31112-25AP 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	31112-25BP	969	Pierce Manufacturing Inc.	Sourcewell #113021-OKC, ID #259, Member #2424

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ITEM	PRODUCT DESCRIPTION	EXTENDED PRICE
A	Two (2) Pierce Manufacturing, Inc. Enforcer 1500 GPM Type 1 Fire Engines	2,232,864.00
B	9.25% State Sales Tax	206,539.92
C	California Tire Fee	21.00
D	100% Performance Bond	3,256.00
E	GRAND TOTAL PURCHASE PRICE	2,442,680.92

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 **48 to 51 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.

INTENDING TO CREATE A BINDING AGREEMENT, Customer and GSFA have each caused this Product Proposal dated 11/12/2025, GSFA Proposal Number 31112-25BP 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

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, Dewayne
Requirements Manager:
Description: Salinas Fire Department - Enforc
Chassis: Enforcer Chassis
Body: Pumper, Medium, Galvanneal, 2nd Gen

Bid Number: 969
Job Number:
Organization: Golden State Fire Apparatus, Inc

OptionCode	Type	Option	ProposalText
0766611		Boiler Plates, Pumper	Golden State Fire ADMIN (SEND SP'S TO TURN PINK), Inc. is pleased to submit a proposal to Salinas Fire Department for a Pierce® triple combination pumper 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. 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. 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. Pierce has only one brand of fire apparatus "Pierce", ensuring you are receiving top of the line product that meets your specification. 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. 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. GENERAL DESIGN AND CONSTRUCTION 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. QUALITY AND WORKMANSHIP 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. 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. 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. 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. DELIVERY 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. MANUAL AND SERVICE INFORMATION 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. SAFETY VIDEO 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. PERFORMANCE TESTS A road test will be conducted with the apparatus fully loaded and a continuous run of no less than

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.

		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.
0661794	Single Source Compliance	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, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body 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.
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	SPECIAL INSTRUCTIONS The apparatus being proposed will be designed and built to match the 35932. 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.
0816491	Comply NFPA 1900 Changes Effective Jan 1, 2024, With Exceptions	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.
0533347	Pumper/Pumper with Aerial Device Fire Apparatus	
0588611	Vehicle Certification, Pumper	

0661778	Agency, Apparatus Certification, Pumper/Tanker, U.L.	NFPA COMPLIANCY 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". PUMP TEST Underwriters Laboratory (UL) will test, approved, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department. GENERATOR TEST If the unit has a generator, Underwriters Laboratory (UL) will test, approved, and certify the generator. The test results will be provided to the Fire Department at the time of delivery. BREATHING AIR TEST If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and have the sample certified that the air quality meets the requirements of NFPA 1989, <i>Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection</i>.
0816495	Certification, Vehicle Inspection Program, NFPA 1900	VEHICLE INSPECTION PROGRAM CERTIFICATION 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. 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.
0092138	Highly Customized Product (HCP)	PRODUCT CHANGES AND IMPROVEMENTS 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.
0766110	Consortium, Sourcewell	
0537375	Unit of Measure, US Gallons	
0030006	Bid Bond Not Requested	BID BOND NOT REQUESTED A bid bond will not be included. If requested, the following will apply: 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. 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.

0816574	Performance Bond, 100% with Warranty Bond, 1 Yr, and Payment Bond, PPI Terms	PERFORMANCE BOND, 1 YEAR 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. 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. 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. 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. The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.
0000007	Approval Drawing	APPROVAL DRAWING 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. 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.
0002928	Electrical Diagrams	ELECTRICAL WIRING DIAGRAMS Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.
0649754	Enforcer Chassis	ENFORCER CHASSIS 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.
0000110	Wheelbase	WHEELBASE The wheelbase of the vehicle will be 191.50.
0000070	GVW Rating	GVW RATING The gross vehicle weight rating will be 43,500#.
0649713	Frame Rails, 10.25" x 3.50" x .375", Saber FR/Enf	FRAME 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 be heat-treated steel measuring 10.25" x 3.50" x 0.375". Each rail will have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.
0648354	Frame Liner, Internal "C", 9.38" x 3.13" x .25", Saber FR/Enf, 26" Qval	FRAME REINFORCEMENT A full-length mainframe "C" liner will be provided. The liner will be an internal "C" design, heat-treated steel measuring 9.38" x 3.13" x 0.25". Each reinforcement member will have a section modulus of 3.90 cubic inches, yield strength of 120,000 psi and resisting bending moment (rbm) of 938,762 in-lb.

0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer	FRONT NON DRIVE AXLE The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 19,500 lb. 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. The center cross members and side plates will be constructed out of 80,000-psi yield strength steel. 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. There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension. 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. Camber at load will be zero degrees for optimum tire life. The ball joint bearing will be of low friction design and be maintenance free. Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided. The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle. The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase. The axle will have a turning angle of up to 45 degrees.
0030264	Suspension, Front TAK-4, 19,500 lb, Qtm/AXT/Imp/Vel/Enf/SFR	FRONT SUSPENSION Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 19,500 lb. 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. 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. 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. 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. The independent suspension was put through a durability test that simulated 140,000 miles of inner city driving.
0087572	Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/Enf	FRONT SHOCK ABSORBERS KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.
0000322	Oil Seals, Front Axle	FRONT OIL SEALS Oil seals with viewing window will be provided on the front axle.
0582936	Tires, Front, Goodyear, G289 WHA, 315/80R22.50, 20 ply	FRONT TIRES 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.
0019575	Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot	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.
0530458	Axle, Rear, Meritor RS24-160, 24,000 lb, Saber/Enforcer	REAR AXLE The rear axle will be a Meritor™, Model RS-24-160, with a capacity of 24,000 lb.
0544250	Top Speed of Vehicle, 65 MPH /104 KPH	TOP SPEED OF VEHICLE A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 65 MPH / 104 KPH.
0565379	Suspen, Rear, Single Slipper Spring, 24,000 lb, Saber/Enforcer	REAR SUSPENSION The rear suspension will be Standens, semi-elliptical, 3.00" wide x 52.50" long, with a ground rating of 24,000 lb. The spring hangers will be castings. The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.
0000485	Oil Seals, Rear Axle	REAR OIL SEALS Oil seals will be provided on the rear axle(s).

0782552	Tires, Rear, Goodyear, Endurance RSA, 12R22.50, LRH, Single	REAR TIRES Rear tires will be four (4) Goodyear 12R22.50 radials, load range H, Endurance RSA highway tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.
0654792	Wheels, Rear, Alcoa-Accuride, 22.50" x 8.25", Aluminum-Steel, Hub Pilot, Single	The outside tires will be mounted on Alcoa® 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud, 11.25" bolt circle. The inside tires will be mounted on Accuride® 22.50" x 8.25" steel disc wheels with a ten (10) stud, 11.25" bolt circle. An isolator will be provided between the steel and aluminum rims.
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.
0819008	No Tire Pressure Indicator, Fire Department Omits, Non-NFPA 2024 Compliant	TIRE PRESSURE INDICATOR NFPA 1900, 2024 edition, section 7.14.6 requires each tire be equipped with a visual indicator or monitoring system that indicates tire pressure. Per Fire Department specification, a tire pressure indicator is not on the apparatus as manufactured. This apparatus will be non-compliant to NFPA 1900 standards effective at time of contract execution.
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.
0012045	Mud Flap, Rear, Pierce Logo	MUD FLAPS Mud flaps with a Pierce logo will be installed behind the rear wheels.
0544802	Chocks, Wheel, SAC-44-E, Folding, (Up to 44" Diameter Tires)	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.
0544806	Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	Wheel Chock Brackets There will be two (2) pairs of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted forward of the right side rear tire, rearward of the right side rear tire and one (1) forward and one (1) rearward of the left side rear tire.
0820509	ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA 1900/ULC	ELECTRONIC STABILITY CONTROL A vehicle control system will be provided as an integral part of the ABS brake system from Meritor Wabco. The system will monitor and update the lateral acceleration of the vehicle and compare it to a critical threshold where a side roll event may occur. If the critical threshold is met, the vehicle control system will automatically reduce engine RPM, engage the engine retarder (if equipped), and selectively apply brakes to the individual wheel ends of the front and rear axles to reduce the possibility of a side roll event. The system will monitor directional stability through a lateral accelerometer, steer angle sensor and yaw rate sensor. If spinout or drift out is detected, the vehicle control system will selectively apply brakes to the individual wheel ends of the front and rear axles to bring the vehicle back to its intended direction. ANTI-LOCK BRAKE SYSTEM The vehicle will be equipped with a Wabco 4S4M, anti-lock braking system. The ABS will provide a four (4) channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any wheel begins to lockup, a signal will be sent to the control unit. This control unit will then 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 that 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.
0509206	Brakes, Meritor, EX225, Disc Plus, Rear, Single Axle	The rear brakes will be Meritor™, Disc Plus, Model EX225, disc operated with automatic slack adjusters and a 17.00" ventilated rotor for improved stopping distance.
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.
0644232	Brake Reservoirs, 4,272 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 4,272 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 same as frame color. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.
0644228	Air Dryer, Wabco System Saver 1200 IWT, Heated, 10" Frame, Standen, SFR/Enf	BRAKE SYSTEM AIR DRYER The air dryer will be a WABCO System Saver 1200 IWT, with internal wet tank, 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 on the driver side pump panel. 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.
0675244	All Wheel Lock-up, Single Prk Brk Control	ALL WHEEL LOCK-UP An all wheel lock-up system will be installed which will apply air to the front brakes and use the spring brake at the rear. Front brakes will apply when standard rear parking brake control valve is activated.
0615609	Fittings, Compression Type, Entire Apparatus, Single Rear Axle	COMPRESSION FITTINGS ONLY Any nylon tube on the apparatus that is pneumatic will be plumbed with compression type fittings where applicable. Push lock fittings will not be acceptable for any pneumatic nylon tube plumbing.

0808535	Engine, Cummins X10, 450 hp, 1250 lb-ft, W/OBD, EPA 2027, Saber FR/Enforcer	ENGINE The chassis will be powered by an electronically controlled engine as described below: Make: Cummins Model: X10 Power: 450 hp at 2100 rpm Torque: 1250 lb-ft at 1200 rpm Governed Speed: 2200 rpm Emissions Level: EPA 2027 Fuel: Diesel Cylinders: Six (6) Displacement: 604 cubic inches (9.9L) Starter: Delco 39MT™ Fuel Filters: Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter. 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	
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	ENGINE BRAKE A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver. The driver will be able to turn the engine brake system on/off and have a high, medium and low setting. The engine brake will activate when the system is on and the throttle is released. The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine. The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated. The ABS system will automatically disengage the auxiliary braking device, when required.
0644227	Clutch, Fan, Air Actuated, Saber FR/Enforcer	CLUTCH FAN A fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.
0640477	Air Intake, Metal Screen, Saber FR/Enforcer	ENGINE AIR INTAKE 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. A stainless steel metal screen will be installed at the inlet of the air intake system that will meet current edition of applicable NFPA standards. The air cleaner and stainless steel screen will be easily accessible by tilting the cab.
0814375	Exhaust System, Horizontal, Right Side	EXHAUST SYSTEM 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. 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. 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.

0816172	Adapter, Exhaust, Plymovent Bladder, for 6" or 7" Diffuser Outlet	EXHAUST MODIFICATION An adapter for the Plymovent bladder exhaust extraction system will be provided on the end of the tail pipe.
0788765	Radiator, Saber FR/Enforcer	RADIATOR The radiator and the complete cooling system will meet or exceed the current edition of applicable NFPA and engine manufacturer cooling system standards. 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. The radiator core will have a minimum front area of 1060 square inches. Supply tank will be made of heavy duty glass-reinforced nylon and the return tank will be made of aluminum. Both tanks will be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There will be a full steel frame around the inserts to enhance cooling system durability and reliability. The radiator will be compatible with commercial antifreeze solutions. 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. 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. 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. Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.
0001090	Cooling Hoses, Rubber	COOLANT LINES Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing. 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.
0051125	Fuel Tank, 75 Gallon, Left Side Fill, Qtm/AXT/Vel/Imp/SFR/Enf	FUEL TANK A 75 gallon fuel tank will be provided and mounted at the rear of the 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 0.75" drain plug will be located in a low point of the tank for drainage. A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only." The fuel door will be polished stainless steel. A 0.50" diameter vent will be installed from tank top to just below fuel fill inlet. The fuel 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.
0595087	DEF Tank, 4.5 Gallon, LS Fill, Forward of Rear Axle	DIESEL EXHAUST FLUID TANK A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the left 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 left side of the body and be covered with a hinged, spring loaded, 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.
0552607	Shutoff Valves (2), Fuel Line @ Filter	FUEL SHUTOFF A shutoff valve will be installed in the fuel line, on both sides of the fuel filter.
0699437	Cooler, Chassis Fuel, Not Req'd.	
0592809	Fuel Fill, Lower	FUEL FILL LOWERED The fuel fill will be lowered.
0690880	No Selection Required From This Category	

0887559	Trans, Allison 6th Gen, 3000 EVS P, w/Prognostics, Imp/Vel/SFR/Enf	TRANSMISSION An Allison 6th generation, Model EVS 3000P, 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 both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear. A transmission temperature gauge with amber light and audible alarm will be installed on the cab dash.
0625329	Transmission, Shifter, 5-Spd, Push Button, 3000 EVS	TRANSMISSION SHIFTER A five (5)-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 3.49 to 1.00 2nd 1.86 to 1.00 3rd 1.41 to 1.00 4th 1.00 to 1.00 5th 0.75 to 1.00 R 5.03 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.
0024895	Mode, Downshift, Aggressive downshift to 2nd, w/engine brake, 5 speed	DOWNSHIFT MODE (w/engine brake) The transmission will be provided with an aggressive downshift mode. This will provide earlier transmission downshifts to 2nd gear, resulting in improved engine braking performance.
0801878	Fluid, 3000 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.
0001370	Driveline, Spicer 1710	DRIVELINE Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1710 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

0624298	Bumper, 16" Extended, Saber FR/Enforcer	BUMPER A one (1) piece, ten (10) gauge, 304-2B type polished stainless steel bumper, minimum of 10.00" high, will be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength. The bumper will be extended 16.00" from front face of cab. Gravel Pan A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face. The gravel pan will be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.
0640199	Tray, Hose, Center, 16" Bumper, Outside Air Horns	CENTER HOSE TRAY A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 100' of 1.75" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.
0630809	Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched	Center Hose Tray Cover A bright aluminum treadplate cover will be provided over the center hose tray. The cover will be "notched" allowing the hose to be pre connected to hose connection. The cover will be attached with a stainless steel hinge. A D-ring latch will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position. The arm will be located right side.
0614646	No Lift & Tow Package, Imp/Vel, AXT, SFR/Enf	
0628336	Tow Eyes, Painted, Below Deck, Color Feature	TOW EYES Two (2) painted steel tow eyes will be installed under the bumper and attached to the front frame members. The tow eyes will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow eyes will not be used for lifting of the apparatus. The inner and outer edges of the tow eyes will have a .25" radius. The tow eyes will be painted red #90.
0030434	Travel Stops, Front Inlet/Outlet Swivel, Qty & Location	SWIVEL STOPS Installed on the front bumper extension will be two (2) sets of stainless steel rods to limit the travel of a front outlet or inlet swivel. Two (2) stainless steel rods, for each application, will be threaded into the bumper deck and mounted both IPO flange bolts on swivel closest to the cab.

0648332	Cab, Enforcer, 7010	CAB The Enforcer cab will be designed specifically for the fire service and manufactured by the chassis builder. The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises. For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards. 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. 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. 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. The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability. The centerline of front axle to the rear of the cab will be 70.00" long. The forward cab section will have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 109.00". 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. The floor to ceiling height inside the crew cab will be 64.50" in the center and outboard positions. The crew cab floor will measure 46.00" from the rear wall to the back side of the rear facing seat risers. 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. The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants. The cab will be a full tilt cab style. A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab. CAB ROOF DRIP RAIL 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. FENDER LINERS Full circular inner fender liners in the wheel wells will be provided. PANORAMIC WINDSHIELD 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. WINDSHIELD WIPERS Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements. The washer reservoir will be able to be filled without raising the cab.
0647919	Engine Tunnel, ISL, Spray Insulation, Saber FR/Enforcer	ENGINE TUNNEL Engine hood 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. The engine hood will be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current edition of applicable NFPA standards. The engine tunnel will be no higher than 17.00" off the crew cab floor.
0887601	Cab Insulation, Enforcer/Saber FR	INTERIOR CAB INSULATION 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.

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	
0569263	Mirrors, Retractable, West Coast Style, Remote, w/Remote Convex	MIRRORS A Retractable Aerodynamic, Model 613295, 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 adjustable with a remote control within reach of the driver.

0648170	Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Raised Roof	DOORS 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 73.25" high. 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. 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. 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. 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. A chrome grab handle will be provided on the inside of each cab door for ease of entry. A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted. 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.
0655543	Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	Door Panels The inner cab door panels will be constructed out of brushed stainless steel.
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	ELECTRIC OPERATED CAB DOOR WINDOWS 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. 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.
0528251	Electric Door Locks, Cab Doors, QXS, AXT, Sab, Enf	ELECTRIC CAB DOOR LOCKS 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. There will be one (1) concealed switch located in an easily accessible chassis specific location that will unlock all the doors.
0528263	Key Pad, Electric Door locks, DS & PS, QXS, AXT, Sab, Enf	KEY PAD FOR ELECTRIC DOOR LOCKS 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.
0633615	Steps, 4-Door Cab, Reduced Bottom Step, Saber FR/Enforcer	CAB STEPS 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. The vertical surfaces of the step well will be aluminum treadplate.
0770194	Handrail, Exterior, Knurled, Alum, 4-Door Cab	CAB EXTERIOR HANDRAILS 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.

0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	STEP LIGHTS There will be six (6) white LED step lights with chrome housing installed for cab and crew cab access steps. One (1) light for the left side cab access steps. Two (2) lights for the left side crew cab access steps. Two (2) lights for the right side crew cab access steps. One (1) light for the right side cab access step. 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. The lights will be activated when the battery switch is on and the adjacent door is opened.
0583698	Fenders, S/S on cab, Extra Wide, Saber/Enf	FENDER CROWNS Stainless steel fender crowns will be installed at the cab wheel openings.
0042105	No Windows, Side of Crew Cab	
0012090	Not Required, Windows, Front/Side of raised roof	
0779033	Not Required, Windows Rear of Crew Cab, Saber FR/Enforcer	
0813747	Compt, 16.50 W x 28 H x 15 D, Ea Side C/C, Dbl Pan, 2.5" Blw, 70" SFR/Enf	STORAGE COMPARTMENTS Provided on each side of the cab, to the rear of the crew cab access doors, will be a storage compartment. 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. 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. Compartment Light There will be two (2) white LED strip lights provided, one (1) each hinged side of compartment door openings.
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.
0619947	Lip, Dash Board, 1.00" Aluminum Angle Lip, Officer Side	EQUIPMENT MOUNTING AREA There will be an aluminum angle with a 1.00" lip installed on the dash to prevent items from sliding off the dash panel. The angle will run full length across the front, flat portion of the dashboard closest to the officer. The lip will be painted to match the cab interior.
0722796	Dash, Poly, Saber FR/Enforcer	CAB DASH The driver side dash, switch panel located to the right of the driver, and center console will be an easily removable high impact resistant polymer cover. The instrument gauge cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument gauge cluster. 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.
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 two (2) tray(s) for mounting of equipment located top of the engine tunnel, please leave loose until final. Each tray will have a 1.00" lip on four (4) sides. The size of the tray(s) will be 13"W x 22"L x 1"D for the engine tunnel. 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 black 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.
0722696	HVAC, Standard-Duty, Enforcer, CARE	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. 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. 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. Air Conditioning A condenser will be a 59,644 BTU output that meets and exceeds the performance specification will be mounted on the radiator. 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 rear plenum 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 hinged with two (2) thumb latches. The air conditioner refrigerant will be R-134A and will be installed by a certified technician. 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. 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.

0639675	Sun Visor, Smoked Lexan, AXT, Imp/Vel, SFR/Enf	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.
0634328	Grab Handles, Driver and Officer Door Posts, SFR/Enf	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.
0583938	Lights, Engine Compmt, Custom, Auto Sw, WIn 3SC0CDCR, 3" LED, Trim	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.
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 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.
0583039	Not Required, Side Roll and Frontal Impact Protection	
0622618	Seating Capacity, 5 Belted Seats	SEATING CAPACITY The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) will be five (5).
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 non-locking D-ring latch. 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	REAR FACING RIGHT SIDE CABINET 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 non-locking D-ring latch. 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. Cabinet Light 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.
0632947		Seat, Fwd Fcng C/C, LS Otbrd, Pierce PSV, SCBA, Foldup, SECONDARY, SFR/Enf	FORWARD FACING DRIVER SIDE OUTBOARD SEAT 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.
0632657		Seat, Fwd Fcng C/C, Ctr, (1) Pierce PSV, SCBA, SECONDARY, SFR/Enf	FORWARD FACING CENTER SEAT 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.
0632875		Seat, Fwd Fcng C/C, RS Otbrd, Pierce PSV, Hi-Back, Foldup, SECONDARY, SFR/Enf	FORWARD FACING PASSENGER SIDE OUTBOARD SEAT 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.
0752005		Lip, Top of Interior Cabinet, All Sides	LIP ON CABINET 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 each EMS compartment.

0748170	SP	Cabinet, Rr Fcng, Top Eng Tnl, 38 W x 15 H x 18 D, Web, Notch, SFR/Enf	REAR FACING CENTER CABINET 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 lippainted 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. Cabinet Light 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.
0566653		Upholstery, Seats In Cab, Turnout Tuff	SEAT UPHOLSTERY All seat upholstery will be black Turnout Tuff material.
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.
0733995	SP	Spacer, Leveler, Driver/Officer PSV Air Ride Seat	SEAT SPACER There will be a spacer provided between the suspension and seat cushion on the driver and officer air ride seats. The spacer will level the seat cushion.
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 over officer side left shoulder. 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) DS under 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.
0683556	Light, Do Not Move Apparatus, WIn 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 not activate any 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.
0834416	USB, Cab, 4, 12V DC, Dual USB Termination, NFPA1900/ULC	CAB USB There will be four (4) USB terminations with a combination USB type A & C, wired to switched battery power, 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. This circuit may be load managed.
0821194	Wiring, Spare, 20 A 12V DC, Batt Dir, 2nd 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 upper left corner of LS3 with 6' coil Termination will be with heat shrinkable butt splicing Wires will be protected to meet the NFPA Automotive Fire Apparatus standard Battery direct loads cannot be Load Managed
0821260	Wiring, Spare, 20 A 12V DC, 12 Ckt Fuse Block, Blue Sea 5026 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 switched power. The negative wire will be connected to ground. Wires will be capable of carrying 20 amps. Power and ground will terminate officer side dash area, leave loose with a 4' coil, . Termination will be to a Blue Sea System, Model 5026, 12 circuit with negative bus bar, straight blade fuse block. The terminal block will include a cover with circuit labels. 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.
0821261	Wiring, Spare, 20 A 12V DC, 12 Circuit Fuse Block Blue Sea 5026 2nd 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 switched power. The negative wire will be connected to ground. Wires will be capable of carrying 20 amps. Power and ground will terminate rear crew cab wall center, leave loose with a 4' coil. Termination will be to a Blue Sea System, Model 5026, 12 circuit with negative bus bar, straight blade fuse block. The terminal block will include a cover with circuit labels. 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.
0821329	Wiring, Spare, 10 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 10 amps. Power and ground will terminate RS1 right wall on rearward shelf track in box with adjust ability. Termination will be with 15 amp, power point plug with rubber cover. Wires will be protected to meet the NFPA Automotive Fire Apparatus standard. Battery direct loads cannot be Load Managed

0821330	Wiring, Spare, 10 A 12V DC Batt Dir 2nd 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 10 amps. Power and ground will terminate rear crew cab wall center, leave loose with a 4' coil. Termination will be with heat shrinkable butt splicing. Wires will be protected to meet the NFPA Automotive Fire Apparatus standard. This circuit(s) may be load managed when the parking brake is applied.
0821331	Wiring, Spare, 10 A 12V DC Batt Dir 3rd 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 10 amps. Power and ground will terminate RS1 right wall on rearward shelf track in box with adjust ability. Termination will be with 15 amp, power point plug with rubber cover. Wires will be protected to meet the NFPA Automotive Fire Apparatus standard. Battery Direct loads cannot be Load Managed
0821333	Wiring, Spare, 10 A 12V DC Batt Dir 4th 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 10 amps. Power and ground will terminate upper left corner of RS3 with 6' coil. Termination will be with heat shrinkable butt splicing. Wires will be protected to meet the NFPA Automotive Fire Apparatus standard. Battery Direct loads cannot be Load Managed
0686687	Wiring, Spare, 37.5 A 12V DC, Customer Install Radio, 30A Sw Bat, 7.5A Ign Grnd	CUSTOMER SUPPLIED RADIO WIRING There will be one (1) 12 volt combination wiring leads of which each will include one (1) battery switched, one (1) ignition and one (1) negative for use with radio equipment. Each lead will be 18.00" long and be provided top center console, behind switch panels 13 and 14 for future radio install. The leads will be clearly marked in a coil and terminate with butt splices. A breaker rated for 30 amps will be provided for circuit protection of the battery switched lead with a minimum of 10 gauge wire. A breaker rated for 7.5 amps will be provided for circuit protection of the ignition lead. The wires will be colored coded as follows: red for battery switched yellow for ignition black for ground
0547322	Wiring, Spare, 15 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 15 amps. Power and ground will terminate See IP Layout. Termination will be with 15 amp, power point plug with rubber cover. The circuits selected above will be controlled by a switch in the following locations: a switch in the command switch panel 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.
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	VEHICLE DATA RECORDER There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided. 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. The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs: - 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 Internal clock syncs the time and date when a laptop is connected. Seat Belt Monitoring System 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: - 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 The seat belt monitoring screen will become active on the Command Zone color display when: - 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. 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.
0802726	Intercom, David Clark, 5-Pos, 2-Dual Radio, (D, O, RPTT), 3ibC, 3805	INTERCOM SYSTEM A five (5) position intercom system with dual radio interface capability at the driver and officer positions with dual remote push to talk buttons located Per intercom layout will be provided. Three (3) crew cab positions at three (3) forward facing seats will have radio listen / intercom only. The following David Clark, Model U3800 components will be supplied with this system: - Two (2) U3816 Radio Interface Modules (Driver, Officer) - Two (2) U3805 Radio Junction Modules - Four (4) Remote push to talk kits (2 Driver, 2 Officer) - One (1) U3800 Intercom Unit (2 Crew) - One (1) C3820 Power Cable - One (1) U3801 Remote Headset Station (1 Crew) All necessary station cables and connectors
0637058	David Clark Universal Radio Interfaces Included with Single/Dual System	RADIO / INTERCOM INTERFACE INCLUDED All radio interfaced stations will have universal radio interfaces installed. The interface wiring will be routed within the cab to With Radio Equipment .
0597914	Headset, David Clark, H3442 Under Helmet, Flex Mic	UNDER THE HELMET HEADSET There will be four (4) under the helmet, headset(s) provided Driver, Officer, RS outboard Fwd Fcng seat, LS outboard Fwd Fcng seat. Each David Clark, Model H3442, headset will feature: - M-7A noise canceling electret microphone - Hybrid wire/flex boom assembly, 280° rotating, for perfect microphone placement on left or right side - Dynamic earphone elements - Advanced Undercut Gel Ear Seals for superior comfort - Microphone on/off switch 6 ft. extended coil cord - Adjustable overhead support assembly - Carbon steel nape-band spring, black finish, rotates for left or right side mic positioning - Independently Certified NRR: 23dB
0819255	Hangers For Headsets, NFPA/ULC 2024, Each	HEADSET HANGERS There will be four (4) headset hanger(s) installed driver's seat, officer's seat, driver's side inboard forward facing seat and passenger's side inboard forward facing seat. The hanger(s) will meet the current edition of applicable NFPA and ULC standards for equipment mounting.
0687904	Antenna Mount, Custom Chassis, Cable Routed to Behind Officer Seat	RADIO ANTENNA MOUNT There will be three (3) standard 1.125", 18 thread antenna-mounting base(s) installed right side 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.

0815108	Camera, Safety Vision, LS Mux, R, Camera, SD	VEHICLE CAMERA SYSTEM There will be a color vehicle camera system provided with the following: One (1) 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 active camera will be via an amplified speaker with volume control located behind the driver seat. The following Safety Vision components will be included: One (1) Safety Vision, 620 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

TELEMATICS SYSTEM

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.

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.

The web-based user interface portal will provide, among other features:

User defined interval notifications

User defined fault alerts

Remote access to Command Zone™ diagnostics

Vehicle analytics and activity monitoring

Vehicle system status

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.

0624253	Electrical System, Enforcer MUX	ELECTRICAL 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. Electrical wiring and equipment will be installed utilizing the following guidelines: 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. 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. 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. 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). All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area. All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal. 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. 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. The results of the tests will be recorded and provided to the purchaser at time of delivery.
0079211	Batteries, (6) Stryten/Exide Grp 31, 950 CCA each, Threaded Stud	BATTERY SYSTEM There will be six (6) 12 volt Stryten/Exide®, Model 31S950X3W, batteries that include the following features will be provided: 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 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. 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.
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 to protect 20A fuse block near the officer side dash . 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.
0121711	Alternator, 320 amp, Leece-Neville 4962PA, Sgl Sys	ALTERNATOR A Leece-Neville, Model 4962PA, alternator will be provided. It will have a rated output current of 320 amps, as measured by SAE method J56. The alternator will feature an integral, self diagnostic regulator and rectifier. The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.

0092582	Load Manager/Sequencer, MUX	ELECTRONIC LOAD MANAGER 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. 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. 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 SEQUENCER 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. 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. 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. When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order. 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)
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, Wln 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, Wln 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 crew cab. 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.
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	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.
0804514	Lights, Tail, WIn M62BTT* Red Stop/Tail & M62T* Amber Dir Arw For Hsg	REAR FMVSS LIGHTING The rear stop/tail and directional lighting included in the rear tail light housing 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.
0806466	Lights, Backup, WIn M62BU, LED, For Tail Lt Housing	There will be two (2) Whelen Model M62BU, LED backup lights provided in the tail light housing.
0889571	Bracket, License Plate & Light, P25 LED, Stainless Brkt, Loc	LICENSE PLATE BRACKET One (1) license plate bracket constructed of stainless steel will be provided and located LS rear. Above electric hosebed door switches (see signed AD drawing). 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.
0556842	Bezels, WIn, (2) M6 Chrome Pierce, For mtg (4) WIn M6 lights	LIGHTING BEZEL There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.
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.

0564535	Light, Marker, Britax Rubber Arm, Model L427.203.L12 LED, Red/Amb, Qty/Loc	MARKER LIGHTS There will be one (1) pair of amber and red, Britax, Model L427.203.L12, LED marker lights with rubber arm, located at the very rear of the body (duplicate location from previous job 35932). The amber lens will face the front and the red lens will face the rear of the truck and be the most rearward marker light. These lights will be activated with the running lights of the vehicle.
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.
0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	PUMP HOUSE PERIMETER LIGHTS There will be two (2) TecNiq, Model T10-LC00-1, 15.00" white 12 volt DC LED weatherproof strip lights provided under the pump panel running boards, one (1) each side. The lights will be controlled by the same means as the body perimeter lights.
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear Step	BODY PERIMETER SCENE LIGHTS There will be two (2) TecNiq, Model T10-LC00-1, 15.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear. The perimeter scene lights will be activated when a switch within reach of the driver is activated and the parking brake is applied.
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.
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	STEP LIGHTS Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard. These step lights will be actuated with the pump panel light switch. All steps on the apparatus will be illuminated per the current edition of applicable NFPA standards.
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.
0774308	Lights, Wln, P*H2* Pioneer, 12 VDC, 2nd	12 VOLT DC SCENE LIGHTS There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC powered lights with white LEDs and a combination of flood and spot optics installed on the apparatus located, P/S rear outer crew cab wall (Match Job 35932). The light(s) to be installed on push up side mount outside pole length to be 20.00" long with a handle holder and sensor connecting the pole to the Do Not Move Truck Indicator circuit. The painted parts of this light assembly to be black. The lights will be activated by a switch at the left side pump panel and by a switch at the right side pump panel. The light(s) may be load managed when the parking brake is applied.
0774309	Lights, Wln, P*H2* Pioneer, 12 VDC, 1st	12 VOLT DC SCENE LIGHTS There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC powered lights with white LEDs and a combination of flood and spot optics installed on the apparatus located, D/S rear outer crew cab wall (Match Job 35932). The light(s) to be installed on push up side mount outside pole length to be 20.00" long with a handle holder and sensor connecting the pole to the Do Not Move Truck Indicator circuit. The painted parts of this light assembly to be black. The lights will be activated by a switch at the left side pump panel and by a switch at the right side pump panel. The 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, P/S crew cab upper (Match Job 35932). The light(s) to be installed in a 15 degree vertical recessed bracket. 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, by a switch at the left side pump 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, driver side, upper crew cab (Match Job 35932). The light(s) to be installed in a 15 degree vertical recessed bracket. 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, by a switch at the left side pump 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.
0774336	Lights, Wln, P*H1* Pioneer, 12 VDC, 1st	12 VOLT LIGHTING There will be two (2) Whelen® Model P*H1*, 8,875 lumens 12 volt DC LED light(s) with flood optics installed on the apparatus located, upper rear bulkheads, one each side (Match Job 35932). The painted parts of this light assembly to be black. The light(s) to be installed in a 15 degree vertical recessed bracket. The lights will be controlled by a switch at the driver's side switch panel, by a switch at the left side pump panel, by a switch at the passenger's side switch panel and by a switch in a stainless steel cup located on the passenger's side at the rear of the apparatus no more than 72.00" from the ground. The light(s) may be load managed when the parking brake is applied.
0645878	Lights, Hose Bed, Cover, Dual Amdor AY-9750-20 LED Light Strips 4lts, Low	HOSE BED LIGHTS There will be Amdor LumaBar H2O, Model AY-9750-20, 20.00" white 12 volt DC LED light strips provided to illuminate the hose bed area. Two (2) LED light strips will be installed on the driver's side hose bed cover 30.00" from the front and rear of the hose bed, as close to the hinge as practical. Two (2) LED light strips will be installed on the passenger's side hose bed cover 30.00" from the front and rear of the hose bed, as close to the hinge as practical. The lights will be activated when the hosebed cover is raised.
0645677	Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body	
0709438	Lights, Walk Surf, FRP Flood, LED	WALKING SURFACE LIGHT There will be Model FRP, 4.00" round black 12 volt DC LED floodlight(s) with bolt mount provided to illuminate the entire designated walking surface on top of the body. The light(s) will be activated when the body step lights are on.
0060111	Pumper, Medium, Galvanneal, 2nd Gen	
0554271	Body Skirt Height, 20"	

0028244	Tank, Water, 500 Gallon, Poly, Med	WATER TANK Booster tank will have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. Tank joints and seams will be nitrogen welded inside and out. Tank will be baffled in accordance with the current edition of applicable NFPA standards. Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments. Longitudinal partitions will be constructed of 0.38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding. Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover. All partitions will interlock and will be welded to the tank bottom and sides. Tank top will be constructed of 0.50" polypropylene. It will be recessed 0.38" and will be welded to the tank sides and the longitudinal partitions. Tank top will be sufficiently supported to keep it rigid during fast filling conditions. Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (0.50" diameter, 13.00" deep) to accommodate lifting eyes. A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank. Sump will include a drain plug and the tank outlet. Tank will be installed in a fabricated cradle assembly constructed of structural steel. Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing. Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, 0.50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on. Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle. Mounting system will be approved by the tank manufacturer.
0003405	Overflow, 4.00" Water Tank, Poly	Fill tower will be constructed of 0.50" polypropylene and will be a minimum of 8.00" wide x 14.00" long. Fill tower will be furnished with a 0.25" thick polypropylene screen and a hinged cover. An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.
0028104	Foam Cell Required	
0023412	Drain, Tank - 1.50"	TANK DRAIN A 1.50" tank drain will be installed with a 1.50" ball valve located underneath the left front compartment and properly labeled.
0084432	Modified Poly Tank, Ext'd Over Rear Compt	The water tank will be extended to the rear of the truck, over the rear compartment.
0633066	Sleeve, Through Tank	SLEEVE PLUMBING THROUGH TANK Two (2) sleeves will be provided in the water tank for a 3.00" pipe to the rear.
0553729	Not Required, Restraint, Water Tank, Heavy Duty	
0003429	Not Required, Direct Tank Fill	
0003424	Not Required, Dump Valve	
0048710	Not Required, Jet Assist	
0030007	Not Required, Dump Valve Chute	
0514778	Not Required, Switch, Tank Dump Master	

0126632	Hose Bed, Galv, Pumper	HOSE BED The hose bed will be fabricated of 12-gauge galvalume steel. The sides will not form any portion of the fender compartments. Upper and rear edges of side panels will have a double break for rigidity, a split tube finish will not be acceptable. The upper area at the rear of the hose bed will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed. Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.
0723549	Painted Hose Bed	The hose bed interior walls will be painted to match the lower body color.
0003481	Hose Bed Capacity, Special	Hose bed will accommodate From DS to PS: 800' Bulldog 5", 200' Key Tru-Id 2.5", 400' Key Cobra Combat 1.75", 200' Key Tru-Id 2.5" and 400' Key 3".
0083488	Divider, Hose Bed, .25" Unpainted	HOSE BED DIVIDER Three (3) hosebed dividers will be furnished for separating hose. Each divider will be constructed of a 0.25" brushed aluminum sheet. Flat surfaces will be sanded for uniform appearance or constructed of brushed aluminum. Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed. Divider will be held in place by tightening bolts, at each end. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.
0821844	Cover, Hose Bed, Alum Treadplate, Bolted T-Bar, Electric Actuated	HOSE BED COVER ELECTRIC ACTUATOR A two (2) section hose bed cover, constructed of .125" bright aluminum treadplate will be furnished. The cover will be hinged with full length stainless steel piano hinge. The sides will be slanted down with the center of the cover supported by a modular stationary bridgework support. The covers will not over lap. The cover will be reinforced so that it can support the weight of a man walking on the cover. A pneumatic gas spring assist will be installed at the front of the covers to help support and stabilize the cover throughout its range of motion. If access to water tank fill tower is blocked by the hose bed cover, then a hinged door will be provided in it so that tank may be filled without raising cover doors. Chrome grab handles and two (2) (one (1) each side) electric linear actuator with brake cylinders will be provided to assist in opening and closing the cover. A rubber-covered momentary toggle switch will be provided for each actuator that controls the opening and closing of the covers. Each switch will be located at the rear body of the body at the left side. Additional locks on top of the cover are not required to secure the cover in the nested position. A cross divider will be provided directly behind the actuators, at the front of the hose bed, to support the actuators and provide a clean appearance. A handrail will be provided at the rear, in the center of the support, to assist in climbing up the back of the truck. The hose bed cover will be connected to the Do Not Move Truck indicator. The light will be activated if the cover is not in the stowed position and the parking brake is released.
0807353	Hose Restraint, Hose Bed, Vinyl, Rear, Separate From Top, Split 2-Sec	HOSE RESTRAINT REAR At the rear of the hose bed, a black vinyl flap will be provided. The vinyl flap will be split into two sections at the center. The vinyl flap will be provided with hook and loop between each section. The top of the vinyl flap will be attached to the top of the hosebed with quarter turn. At the bottom of the flap, hinged style seat belt buckle will be provided. The bottom of the flap will be chain weighted.
0010133	Cross-Divider, Hose Bed	A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.
0581892	Divider, .25", Unpainted, Permanent	ADDITIONAL HOSE BED DIVIDER There will be one (1) additional hose bed dividers furnished. Each divider will be constructed of a 0.25" brushed aluminum sheet. Partition will be permanently installed and located on the inboard top edge of the ladder storage box. Acorn nuts will be installed on all bolts in the hose bed which have exposed threads. Flat surfaces will be sanded for uniform appearance or constructed of brushed aluminum.
0817279	Extension, Over Pre-Connect, Webbing or Vinyl, Rear Hose Bed Cover	A quantity of one (1) extension(s) in the webbing or vinyl hosebed cover at the rear of the hose bed will be provided to allow for coverage of pre-connects. The extension(s) provided will be Vinyl 4" Longer than StandardThis will be for the right side of the split hose cover.

0013512		Running Boards, 12.75" Deep	RUNNING BOARDS Running boards will be fabricated of 0.125" bright aluminum treadplate. Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure. Running boards will be 12.75" deep and spaced 0.50" away from the pump panel. A splash guard will be provided above the running board treadplate.
0689621		Tailboard, 16" Deep	TAILBOARD The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly. The tailboard area will be 16.00" deep. The exterior side will be flanged down and in for increased rigidity of tailboard structure.
0831801	SP	Wall, Rear, Body Material, Aluminum Treadplate Center, 16" Inset	REAR WALL, BODY MATERIAL/TREADPLATE CENTER The rear facing surfaces of the center rear wall will be aluminum treadplate. The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body. The center rear wall will be inset 16" from the body bulkhead rear walls. Any inboard facing surfaces below the height of the hosebed will be aluminum diamondplate.
0889214		Tow Eyes, w/Tow Bar, 2G Pumper	REAR TOW EYES Two (2) tow eyes, which are an integral part of the body mounting substructure, will be installed below the rear of the truck. The tow eyes will be of adequate strength to allow the truck to be pulled from the eyes. REAR TOW BAR One (1) tow bar will be installed under the tailboard. The tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow bar design will have been tested and evaluated using finite element analysis techniques.
0590934		Hose Restraint, Running Board, Straps, FV Fastener	RUNNING BOARD HOSE RESTRAINT A pair of 2.00" wide black nylon straps with 2.00" side release fasteners will be provided for each hose tray to secure the hose during travel. There will be Two (2) hose trays located one (1) in each side running board.
0014112		Tray, Hose, Running Board, Special Capacity, Predefined	HOSE TRAY Two (2) hose trays will be recessed one (1) in each side running board. Capacity of the tray will be 25' of 5.00" hose. Rubber matting will be installed on the floor of the tray to provide proper ventilation. Drain holes will be provided.

COMPARTMENTATION

Body and compartments will be fabricated of galvanized steel.

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.

Side compartment flooring will be 12-gauge and of the sweep out design, with the floor higher than the compartment door lip.

The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again 0.75" to form an angle.

Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate, or polished stainless steel.

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 TIG welded.

Side compartment covers will be separate from the compartment tops.

Front facing compartment walls will be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury.

UNDERBODY SUPPORT SYSTEM

Due to the severe loading requirements of this pumper, a method of body and compartment support suitable for the intended load will be provided.

The backbone of the support system will be the chassis frame rails, which is the strongest component of the chassis and designed for sustaining maximum loads.

The support system will include 0.375" thick steel vertical angle supports bolted to the chassis frame rails with 0.625" diameter bolts.

Attached to the bottom of the steel vertical angles will be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

A steel frame will be mounted on the top of these supports to create a floating substructure, which results in a 500 lb equipment support rating per lower compartment.

The steel frames as well as the steel vertical angles will be treated with an epoxy E-coat or equivalent to provide resistance to corrosion and chemicals as standard.

The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body.

The isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.

A design with body compartments hanging on the chassis, unsupported, will not be acceptable.

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

Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate.

TESTING OF BODY DESIGN

Body structural analysis will be fully tested. Proven engineering and test techniques such as finite element analysis, strain gauging, and model analysis will be performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.

The body will be tested while loaded to its greatest in-service weight.

The criteria used during the testing procedure will include:

Raising opposite corners of the vehicle tires 9.00", simulating the twisting a truck may experience when driving over a curb.

Making a 90 degree turn while at 20 mph, simulating aggressive driving conditions.

Driving the vehicle at 35 mph on a washboard road.

Driving the vehicle at 55 mph on a smooth road.

Accelerating the vehicle fully, until reaching the approximate speed of 45 mph, on rough pavement.

Evidence of actual testing techniques will be made available upon request.

LEFT SIDE COMPARTMENTATION

The left side compartmentation will consist of three rollup door compartments.

A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.75" wide x 56.88" high.

A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high.

A full height, rollup door compartment behind the rear wheels will be provided. **The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high.**

The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

0063658	RS 152" Rollup, Full Height Compts, FDLER	RIGHT SIDE COMPARTMENTATION The right side compartmentation will consist of three rollup door compartments. A full height, rollup door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 28.75" wide x 56.88" high. A rollup door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 58.25" wide x 23.13" high. A full height, rollup door compartment behind the rear wheels will be provided. The interior dimensions of this compartment will be 47.75" wide x 67.63" high x 25.88" deep in the lower 26.00" of height and 12.00" deep in the remaining upper section of the compartment. The clear door opening will be a minimum of 44.75" wide x 57.88" high. The interior height of the compartments will be measured from the compartment floor to the ceiling. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartments will be measured from the back wall to the inside of the door frame. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.
0594005	Doors, Rollup, Amdor, Side Compartments	SIDE COMPARTMENT ROLLUP DOOR(S) There will be six (6) 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 rollup doors. 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. 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. 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. Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands. A polished stainless steel lift bar with locking key latches to be provided for each roll-up door. The keys to be Model 751 to match all compartment and cab 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. All injection molded rollup door wear components will be constructed of Type 6 nylon. Each rollup door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door. The header for the rollup door assembly will not exceed 4.00". A heavy-duty magnetic switch will be used for control of open compartment door warning lights.
0013671	Rear, Rollup, 30.75" F-F, 25.88" D	REAR COMPARTMENTATION A roll-up door compartment above the rear tailboard will be provided. The interior dimensions of this compartment will be 40.00" wide x 33.63" high x 25.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment will be calculated with the compartment door closed. A louvered, removable access panel will be furnished on the back wall of the compartment. The rear compartment will be open into the rear side compartments. The clear door opening of this compartment will be a minimum of 33.25" wide x 23.88" high. Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.

0594003	Door, Amdor, Rollup, Rear Compartment	ROLLUP REAR COMPARTMENT DOOR The rear compartment will have a rollup door. The door will be double faced, aluminum construction, satin aluminum and manufactured by AMDOR™ brand rollup doors. The door 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. 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. The door 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. Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands. A polished stainless steel lift bar with locking key latches to be provided for each roll-up door. The keys to be Model 751 to match all compartment and cab 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. All injection molded rollup door wear components will be constructed of Type 6 Nylon. The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door. The header for the rollup door assembly will not exceed 4.00". A heavy-duty magnetic switch will be used for control of open compartment door warning lights.
0554995	No Body Modification Required	
0625184	Guard, Drip Pan, S/S, Rollup Door, Pumper	DOOR GUARD There will be seven (7) compartment doors that will include a guard/drip pan designed to protect the rollup door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed left side rearward compartment, left side over the wheel compartment, left side forward compartment, right side rearward compartment, right side over the wheel compartment, right side forward compartment and rear compartment.
0641826	Electric Door Locks, Body Doors, Amdor	ELECTRIC DOOR LOCKS There will be seven (7) door(s) located all body compartments equipped with electric locks. The locks will be wired battery direct. The switch for control will be located cab key pad both sides. In the event of loss of power, a manual override is available.
0642303	Master Control, Electric Door Locks, Body Drs and Cab Drs, Vel/Imp,Enf	CONTROL OF ELECTRIC DOOR LOCKS The electric body door locks will be locked or unlocked with the cab controls. In the event of loss of power, a manual override is available.
0732709	Pull Strap for Rollup Doors, Special Length	ROLLUP DOOR PULL STRAPS six (6) compartment doors will be provided with pull straps. The pull straps will be 12.00" long and black in color. The straps will be installed directly to the inside of the rollup door. The rollup door compartments to have these straps will be each side roll up door.
0616670	Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, Pumper/Tanker	COMPARTMENT LIGHTING There will be seven (7) 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 all body compartment (s). 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.
0687146	Shelf Tracks, Painted	MOUNTING TRACKS There will be four (4) sets of tracks for mounting shelf(s) in LS1, LS2, RS1 and B1. These tracks will be installed vertically to support the adjustable shelf(s). The tracks will be painted to match the compartment interior.

0773380	SP	Shelves, Adjustable, Full Width/Depth, Low/Special Side Height	ADJUSTABLE SHELVES There will be one (1) shelf provided B1 upper. The shelf construction will consist of .188" aluminum painted nightspots. A capacity rating will not be available on this item due to a reduced side height being less than 2.00". Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. Each shelf will have an inside wide of 36.00" and as deep as the compartment space will allow. The shelves will be held in place by .12" thick stamped plated brackets and bolts. The side height of the shelf/shelves will be as follows: Front: 1.00" high Rear: 2.00" high Left & Right Sides: 2.00" high
0791839	SP	Shelves, Fixed, 500 lb Capacity, Full Width/Depth, Nightspots	FIXED SHELVES There will be two (2) shelves with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum with 2.00" sides. The finish will be Nightspots 909017 paint. 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 LS3 mounted above the C-Tech cabinet, LS1 forward of the partition at 28.00" from the floor.
0788782	SP	Shelves, Adjustable, FW/FD, Painted, Front Flange Down, Special Reinforcement	ADJUSTABLE SHELVES There will be one (1) shelf provided. The shelf construction will consist of .188" aluminum with 2.00" sides at each side and the rear. The front of the shelf will have a 1.00" lip flanged down with a 1.00" square tube provided across the midpoint of the bottom of the shelf to provide adequate structural integrity to the shelf. Each shelf will be painted to match the compartment interior. 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 .12" thick stamped plated brackets and bolts. Each shelf will be designed to be .25" away from the back wall and the side mounting tracks. The shelf front will be .75" back from the door opening to allow for equipment shift. There will be a manufacturing tolerance of + or- .25" . The location will be LS2 below the upper shelf that is to be located at 18" off the floor.
0600350		Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations	ADJUSTABLE SHELVES There will be four (4) shelves with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum painted nightspots with 2.00" sides. 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 .12" thick stamped plated brackets and bolts. The location(s) will be in RS1 in the lower third, in RS1 in the upper third, in LS2 in the upper third and in LS1 in the upper third to the left of the partition.
0647091		Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides	SLIDE-OUT FLOOR MOUNTED TRAY There will be one (1) 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 B1.
0725642		Cabinet, Drawer Assembly, CTECH, Three Drawers, Up To 36" Wide, 24" Deep	DRAWER ASSEMBLY A slide-out drawer assembly will be installed LS3. The clear dimensions of the first drawer starting at the top will be 3.00" with a face plate that is 4.00" high x 21.00" deep. The clear dimensions of the second drawer will be 5.75" with a face plate that is 6.00" high x 21.00" deep. The clear dimensions of the third drawer will be 9.75" with a face plate that is 10.00" high x 21.00" deep. Each drawer will be the same width and not exceed 36.00". The drawers will have a capacity of 250 lb. The drawers will be mounted in a cabinet housing constructed of light gray powder coated aluminum with anodized aluminum frames. The housing will be 24.00" deep, and completely enclose the drawer. A full-length aluminum extruded rail will be provided at the top edge of each drawer. This rail will act as the latching mechanism as well as the handle for each drawer. There will be a total of one (1) provided.

0540317		Toolboard, Swing-out, Alum, .188", Peg Board	SWING OUT TOOLBOARD A swing out aluminum toolboard will be provided. It will be a minimum of 0.188" thick with .203" diameter holes in a pegboard pattern with 1.00" centers between holes. A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard. The board will be mounted on a pivoting device at the front of the compartment on the top and bottom to allow easy movement in and out of the compartment. The maximum tool load will be 400 lb. The board will have positive lock in the stowed and extended position. The board will have a D-ring handle to secure it in the stowed position. The board will be mounted stationary within the compartment. One (1) toolboard(s) will be provided. The toolboard(s) will be painted nightspots 909017 and installed RS2 full height and width.
0726441		Partition, Trans Rear Compt	PARTITION, TRANSVERSE REAR COMPARTMENT Two (2) partitions will be bolted in place to separate the left and right side rear compartments from the rear tailboard compartment. The partition will be body material painted nightspots 909017.
0726403		Partition, Vertical Compt, Special Height	VERTICAL COMPARTMENT PARTITION One (1) partition will be bolted in LS1, Mounted 20" from the rear bulkhead, also make partition 53.00" tall from the floor. (Match Previous Job # 35932). Each partition will be 53.00" tall from the floor vertical height of the compartment. (Match Previous Job # 35932) vertical height of the compartment. Each partition will be painted nightspots 909017.
0004047		Aluminum, .188" Smooth Aluminum, "DA", on Compartment Floor	COMPARTMENT FLOOR SCUFFPLATE Smooth aluminum will be provided on the floor of one (1) compartments. The scuffplate(s) will be .188" thick with a "DA" finish. The locations will be RS1. The edges of the aluminum scuffplate will be completely caulked before installation to prevent corrosion.
0004005		Aluminum Treadplate on Compartment Floor	COMPARTMENT FLOOR SCUFFPLATE Aluminum treadplate will be provided on the floor of two (2) compartments. The locations will be, LS1, RS3. The edges of the treadplate will be completely caulked before installation to prevent corrosion.
0674891		Lip, 1.00" Retaining, Each	1.00" RETAINING LIP A 1.00" lip will be provided full width of LS1 floor to contain the equipment. The lip will be finished to match the compartment interior.
0692510	SP	Bracket, SCBA, Zico, ULLH, Load & Lock, Mounted at 45 Degrees	SCBA HOLDER A total of one (1) Ziamatic model ULLH SCBA holder bracket. This bracket will include a backplate, two seats, a footplate and the model LLS ("Load & Lock") strap to hold the bottle in the bracket. The bracket seats will be a "one size fits all" style seat and will accommodate SCBA cylinders from the high pressure 30-minute to the high pressure 60-minute. The bracket will be mounted on a 45 degree wall bracket. The brackets will be mounted LS3 on shelf tracks, locate at pick up.
0076795		Bracket, SCBA, Zico, ULLH, Load & Lock, Mounted	SCBA HOLDER A total of one (1) Ziamatic model ULLH SCBA holder bracket. This bracket will include a backplate, two seats, a footplate and the model LLS ("Load & Lock") strap to hold the bottle in the bracket. The bracket seats will be a "one size fits all" style seat and will accommodate SCBA cylinders from the high pressure 30-minute to the high pressure 60-minute. The brackets will be mounted LS3 - locate at pick up.
0044903		Netting, Retention 1.00" Nylon Strap, Side Fastened, 2.00" Box Pattern	RETENTION NETTING Retention netting will be provided to retain compartment equipment from laying against the compartment door. The net(s) will be located LS1 upper left portion, match 32039 - see photo. Each compartment door opening will be provided with a heavy black nylon webbing made of 1.00" nylon strap with a 2.00" box pattern. The nylon webbing will be fastened to one (1) side of the compartment in a fixed manner. The remaining sides will be secured with Hook and loop straps fastener(s). A total of one (1) will be provided.
0755528		Toolboard, Alum, .188", No Holes, Back Wall Mounted, Special	TOOLBOARD There will be 3/16" thick aluminum toolboard (no holes) painted nightspots 909017 installed on the back wall of one (1) compartment(s). The toolboard will be mounted using two (2) horizontal tracks. Retainers will be used to mount the toolboard to the tracks. The toolboard will be located in the RS2 and mounted The board will be split into two pieces for easier removal. (Please match Job # 35932 which used deleted option 629334).

0027090	Tracks, Equipment Mounting, Horizontal	MOUNTING TRACKS There will be three (3) 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 full width in LS2, LS3, RS3 - locate at pick up.
0024016	Rub Rail, Aluminum Extruded, Side & Rear of Body	RUB RAIL Bottom edge of the side and rear of the body 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.
0784811	Fender Crowns, Rear, Stainless, w/Removable Liner	BODY FENDER CROWNS Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion. The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown. BODY FENDER LINER A aluminum painted to match the lower body color fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.
0816944	Hose, Hard Suction, Provided by Fire Department, NFPA/ULC 2024	HARD SUCTION HOSE Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose. There will be Two (2) lengths of 10' long x 6.00" diameter hose provided and equipped with rocker lug couplings provided on the ends.
0004095	Troughs, HSH, (1), Each Side, Steel	HOSE TROUGHS Hard suction hose will be carried in two (2) V-shaped troughs, one (1) each side, and held in place by chrome plated, quarter turn, spring loaded clamps. Troughs will be constructed of steel and painted job color.
0626229	Handrails, Side Pump Panels, Per Print	HANDRAILS The handrails will be 1.25" diameter knurled aluminum 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. Handrails will be provided to meet current edition of applicable NFPA standards. The handrails will be installed as noted on the sales drawing.
0004126	Handrails, Beavertail, Standard	HANDRAILS One (1) vertical handrail will be located on each rear beavertail.
0082756	Handrail, Rear, Below Hose Bed	HANDRAIL One (1) knurled aluminum handrail will be installed below the hose bed.
0004150	Handrail, Extra - 15-20" Long	ADDITIONAL HANDRAIL Two (2) handrails will be mounted forward portion of the D/S and P/S hosebed cover. match 35932. The handrail(s) will be constructed of knurled aluminum.
0519354	Handrail, Extra - 12"	ADDITIONAL HANDRAIL One (1) handrail, 12.00" long, will be mounted Directly below reel line roller assembly RS, attached to dunnage area side sheet.. The handrail(s) will be constructed out of knurled aluminum.
0657651	Compt, Air Bottle, Double, Fender Panel	AIR BOTTLE STORAGE (Double) A quantity of three (3) air bottle compartments, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the left side rearward of the rear wheels, on the right side forward of the rear wheels and on the right side rearward of the rear wheels. A polished stainless steel door with a chrome plated flush lift & turn latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, "W" shaped insert formed of composite materials will be provided.

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.
0816909		Ladder, Extension, Provided by Fire Department, NFPA/ULC 2024	EXTENSION LADDERS PROVIDED BY FIRE DEPARTMENT The extension ladder is not on the apparatus as manufactured. There will be one (1) extension ladder(s) provided and installed by the fire department. The ladder(s) will be a 24' Duo-Safety 900-A, two (2)-section.
0816887		Ladder, Roof, Provided by Fire Department, NFPA/ULC 2024	ROOF LADDER PROVIDED BY FIRE DEPARTMENT The roof ladder is not on the apparatus as manufactured. There will be one (1) roof ladder(s) provided and installed by the fire department. The ladder(s) will be a 14' Duo-Safety 775-A.
0818211	SP	Ladders/Backboard Btwn Tank & S.Sht, RS, Enclosed, RPH, Vinyl, Spcl Mt	LADDER STORAGE The ladders and a single backboard will be stored between the water tank and the right side compartments. The ladders will extend into the pump compartment just to the rear of the water pump discharges. Backboard dimensions will be 16"x 72" x 1.50". The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. A black rubber boot will be provided to enclosed the ladders in the gap between the pump house and the body. The ladders that extend into the pump house will also be enclosed. The pump house portion of the enclosure will be made of black vinyl. The vinyl portion will be fastened to the pumphouse structure with side release buckles. The vinyl portion will allow the user to move the enclosure aside to access the pump area. Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides. A bright aluminum treadplate enclosure will be provided at the rear of the body to properly contain the ladders This enclosure will extend to the rear of the side body compartments. The ladders will be mounted fly section inboard. The enclosure will also include a vertically hinged aluminum treadplate door with a locking D-handle latch with key Model 751 to access the ladders. The door will be hinged along the inboard edge.
0820257		Ladder, 10' Duo-Safety 585A, Provided by Fire Dept	FOLDING LADDER PROVIDED BY FIRE DEPARTMENT The folding ladder is not on the apparatus as manufactured. There will be one (1) 10' aluminum Series 585-A Duo-Safety folding ladder provided by the fire department.
0816920		Pike Pole, Provided by Fire Department, NFPA/ULC 2024	PIKE POLE PROVIDED BY FIRE DEPARTMENT The pike poles are not on the apparatus as manufactured. The fire department will provide and mount the pike poles. There will be one (1) pike pole(s) provided. The pike pole(s) will be a Akron 10' pike pole.
0816918		Pike Pole, 6', Provided by Fire Department, NFPA/ULC 2024	6' PIKE POLE PROVIDED BY FIRE DEPARTMENT The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike poles. There will be one (1) 6' pike pole(s) provided. The pike pole(s) will be a Duo-Safety 6' pike pole.
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.
0004379		Bell, 12" Chrome w/Eagle, Mounted on Cab Corner	BELL A chrome plated, 12.00" bronze cast bell, complete with an eagle, will be mounted on the passenger side radiused corner of cab face. The cab will be properly reinforced to support the weight of the bell. A rope pull, for the bell, will be installed inside the cab.
0504812		Label, "NOT A STEP"	WARNING LABEL(S) There will be two (2) label(s) indicating "NOT A STEP", provided one (1) each side on top of the side crew cab directional light housings.

0785102		Steps, Folding, Front of Body, Cargo Bed Access, w/LED, Trident	FOLDING STEPS FRONT OF BODY Folding steps will be provided full height on the left side and right side body compartments to provide access to the cargo bed. Steps will be spaced evenly on the sales drawing. Actual quantity may vary due to pump panel interferences but will meet the NFPA required maximum stepping height. The Trident steps will be bright finished, non-skid with a black tread coating on the stepping surface. The step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.
0592994		Steps, Folding, Rear of Body, w/LED, Trident	REAR FOLDING STEPS Bright finished, non-skid folding steps with a black tread coating on the stepping surface will be provided at the rear. Each step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.
0650261		I Zone Bracket, Pair, Folding Style	I-ZONE BRACKETS Two (2) flip-out I-Zone brackets will be provided and mounted at the rear of the apparatus, just below the rear flood lights, (Match job 35932). The brackets will be designed with adequate reinforcement to eliminate flexing of the body (oil canning).
0005498		Pump House, Side Control, 52"	PUMP COMPARTMENT The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. It will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist. Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly. PUMP MOUNTING Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump. PUMP CONTROL PANELS (Side Control) All pump controls and gauges will be located at the left side of the apparatus and properly marked. The control panels will be 52.00" wide. Polished stainless steel trim collars will be installed around all inlets and outlets. All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position. The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding. The identification tag for each valve control will be recessed in the face of the tee handle. All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge. All line pressure gauges will be mounted in individual chrome plated castings with the identification tag recessed in the casting below the gauge. All remaining identification tags will be mounted on the pump panel in chrome plated bezels. Mounting of the castings and identification bezels will be done with a threaded peg cast on the back side of the bezel or screws.
0053227		Raised Pump House Structure, Side Control Vert Up-Right Moved Inboard For Ladder	PUMPHOUSE STRUCTURE A special pumphouse structure is required to accommodate the ladders stored between the tank and the sidesheet. The vertical upright support will need to be moved inboard.
0583591	SP	Compt, D-Handle Pike Pole Storage (2), Rear of Cargo Area, RS Access	D-HANDLE PIKE POLE STORAGE A compartment will be located to the rear of the cargo compartment to allow for storage of (2) D-handle pike poles. The compartment will be wider than the pumphouse width and will overhang on the right side. This compartment will be fabricated out of painted aluminum with a top-hinged, aluminum treadplate door and D-handle latch on the right side. The pike poles will be stored in stainless steel U-shaped troughs. The length and type of D-handled pike poles to be stored will be one (1) 6' Nupla rubbish hook w/ aluminum D handle and one (1) 6' Nupla plaster hook w/ D handle, customer will provide. A false floor will be provided over the compartment to allow access and storage of other items in the cargo area.

0004425	Pump, Waterous, CSU, 1500 GPM, Single Stage	PUMP Pump will be a Waterous CSU, 1500 gpm single (1) stage midship mounted centrifugal type. Pump will be the class "A" type. Pump will deliver the percentage of rated discharge at pressures indicated below: 100 percent of rated capacity at 150 psi net pump pressure. 70 percent of rated capacity at 200 psi net pump pressure. 50 percent of rated capacity at 250 psi net pump pressure. Pump body will be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings). Pump will be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping. Pump case halves will be bolted together on a single horizontal face to minimize chance of leakage and facilitate ease of reassembly. No end flanges will be used. Discharge manifold of the pump will be cast as an integral part of the pump body assembly and will provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency. The three (3) 3.50" openings will be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold. Impeller shaft will be stainless steel, accurately ground to size. It will be supported at each end by sealed, anti-friction ball bearings for rigid precise support. Impeller will have flame plated hubs assuring maximum pump life and efficiency despite any presence of abrasive matter in the water supply. Bearings will be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings will be used.
0004481	Seal, Grafoil, Waterous	PUMP PACKING Stuffing boxes will be of the conventional two (2) piece, split-gland type, to permit adjustment or replacement of Grafoil packing without disturbing the pump. Water will be fed into stuffing box lantern rings for proper lubrication and cooling when the pump is operating. Lantern rings will be located at the inner ends of the stuffing boxes, to avoid having to remove them when replacing pump packing. Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.
0816447	Trans, Pump, Waterous C22 Series	PUMP TRANSMISSION The pump transmission will be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump will be through a high strength Morse HY-VO silent drive chain. By using a chain rather than gears, 50 percent of the sprocket will be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work. Drive shafts will be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case will be designed to eliminate the need for water cooling.
0635600	Pumping Mode, Stationary Only	PUMPING MODE An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	AIR PUMP SHIFT Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel. Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump". The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements. The pump shift control in the cab will be illuminated to meet NFPA requirements.
0003148	Transmission Lock-up, EVS	TRANSMISSION LOCK-UP The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.
0004547	Auxiliary Cooling System	AUXILIARY COOLING SYSTEM A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger will be plumbed to the master drain valve.
0014486	Not Required, Transfer Valve, Single Stage Pump	

0746501	Valve, Relief Intake, Elkhart	INTAKE RELIEF VALVE - PUMP One (1) Elkhart Style 40 relief valve(s) will be installed on the suction side of the pump preset at 125 psig. The relief valve(s) will have a working range of 75 psi to 250 psi. The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag. The relief valve pressure control will be located behind the right side pump panel with a stainless steel access door.
0721609	Controller, Pressure, Pierce LCD, Custom Chassis	PIERCE PRESSURE CONTROLLER A Pierce electronic pressure controller will be provided. A pressure transducer will be installed in the discharge side of the water pump. The transducer continuously monitors pump pressure sending a signal to the electronic pressure controller. The pressure controller can be used in two (2) modes of operation, RPM mode and pressure modes. The controller will be programmed to turn on/default to No Mode/Default Press Setting mode. In the RPM mode, the controller can be activated after vehicle parking brake has been set. When in this mode, the controller will maintain the set engine speed, regardless of engine load (within engine operation capabilities). In the pressure mode, the controller can be activated after vehicle parking brake has been set. When in this mode, the controller will automatically maintain the discharge pressure set by the operator (within the discharge capabilities of the pump and water supply) regardless of flow. A 2.00" diameter throttle control knob with no mechanical stops, a serrated grip, and a red idle push button in the center will be a integrated/part of the pressure controller. The throttle control knob will be programmed for Clockwise rotation to increase engine speed. Individual LED indicators for ok to pump, throttle ready, pressure mode and rpm mode will be located on the pressure controller for easy viewing. A pump cavitation protection feature will also be provided which will return the engine to idle should the pump cavitate. Cavitation is sensed by the combination of pump pressure below 30 psi and engine speed above 2000 rpm for more than five (5) seconds. Other safety features include recognition of low water and no water conditions with an automatic programmed response and a push button to return the engine to idle. The pressure controller LCD screen will be 4.20" in size with a minimum brightness of 750 nits. The LCD screen and LED intensity will be automatically adjust for day and nighttime operation. The LCD screen intensity can also be manually adjusted if needed. The following information will be provided/displayed on the LCD screen - Engine RPM Check engine and stop engine warning indicators Engine oil pressure Engine coolant temperature Water pump transmission temperature Fuel Level Water tank level Battery voltage Operating mode (RPM or pressure) Pressure or RPM setting On screen messaging show diagnostic and warning messages as they occur. It will show apparatus information, stored data, and program options when selected by the operator. It will monitor inputs outputs and support audible and visual warning alarms for the following conditions - High battery voltage Low battery voltage/engine off Low battery voltage/engine running High water pump temperature Low fuel Low engine oil pressure High engine coolant temperature Water tank out of water (visual alarm only) No engine response (visual alarm only) The pressure controller will store the accumulated operating hours for the pump and engine. These items are to be displayed within the pressure controller menu. The pressure controller will include a USB port on the back of the controller for easy software upgrades if needed.
0072153	Primer, Trident, Air Prime, Air Operated	PRIMING PUMP The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of applicable NFPA standards. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. One (1) priming control will open the priming valve and start the pump primer.
0044552	Line, 0.50" Recirculating w/Check Valve	RECIRCULATING LINE WITH CHECK VALVE A 0.50" diameter recirculating line, from the pump to the water tank, will be furnished with a control installed at the pump operator's control panel. A check valve will be provided in this line to prevent the back flow of water from the tank to the pump if the valve is left in the open position.
0620445	Foam Drain(s), Special Location	FOAM DRAIN(S), LOCATION The foam drain(s) will be located under running board as close to the hose tray as possible.

0780364	Manuals, Pump, (2) Total, Electronic Copies	PUMP MANUALS There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.
0603129	Plumbing, Stainless Steel and Hose, Single Stage Pump	PLUMBING, STAINLESS STEEL AND HOSE All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness. Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings. Plumbing manifold bodies will be ductile cast iron or stainless steel. All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame. All water carrying gauge lines will be of flexible polypropylene tubing. All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.
0795135	Plumbing, Stainless Steel, w/Foam System	FOAM SYSTEM PLUMBING All piping that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be allowed.
0004645	Inlets, 6.00" - 1250 GPM or Larger Pump	MAIN PUMP INLETS A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.
0014650	Pump Suction Tube(s), Short, All	SHORT SUCTION TUBE(S) The suction tube(s) on the water pump will have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.
0004646	Cap, Main Pump Inlet, Long Handle, NST, VLH	MAIN PUMP INLET CAP The main pump inlets will have National Standard Threads with a long handle chrome cap. The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0084610	Valves, Akron 8000 series- All	VALVES All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve. Valves will have a ten (10) year warranty.
0004686	Valve, Inlet(s) Recess Behind Panel, Side Cntrl	The location of the valve for the two (2) inlets will be behind the pump panel.
0004700	Control, Inlet, at Valve	INLET CONTROL The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.
0004660	Inlet (1), Left Side, 2.50"	LEFT SIDE INLET There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0004680	Inlet, Right Side, 2.50"	RIGHT SIDE INLET There will be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0034720	Anode, Zinc, Pair, Pump Inlets	ANODE, INLET A pair of sacrificial zinc anodes will be provided in the water pump inlets to protect the pump from corrosion.
0092569	No Rear Inlet (Large Dia) Requested	
0064116	No Rear Inlet Actuation Required	

0092696	Not Required, Cap, Rear Inlet	
0009648	No Rear Intake Relief Valve Required on Rear Inlet	
0092568	No Rear Auxiliary Inlet Requested	
0723049	Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	INLET BLEEDER VALVE A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a "T" swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.
0064752	Tank to Pump, (1) 3.50" Valve, 4.00" Plumbing, Waterous Valve	TANK TO PUMP The booster tank will be connected to the intake side of the pump with 4.00" heavy-duty piping and a quarter turn 3.50" Waterous valve. The control will be remotely located at the operator's panel. The tank to pump line will run straight, without elbows, from the pump into the front face of the water tank and angle down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing. A check valve will be provided in the tank to pump supply line to prevent the possibility of back filling the water tank.
0004905	Outlet, Tank Fill, 1.50"	TANK REFILL A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.
0062133	Control, Outlets, Manual, Pierce HW if applicable	DISCHARGE OUTLET CONTROLS The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve. If a handwheel control valve is used, the control will be a minimum of a 3.90" diameter stainless steel handwheel with a dial position indicator built into the center of the handwheel. Any 3.00 inch or larger discharge valve will be a slow-operating valve to meet current edition of applicable NFPA standards.
0004940	Outlet, Left Side, 2.50"	LEFT SIDE DISCHARGE OUTLETS Two (2) discharge outlets with a 2.50" valve will be provided on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0005091	Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	LEFT SIDE OUTLET ELBOWS The 2.50" discharge outlets located on the left side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0092570	Not Required, Outlets, Left Side Additional	
0035094	Not Required, Elbow, Left Side Outlets, Additional	
0004945	Outlet, Right Side, 2.50"	RIGHT SIDE DISCHARGE OUTLET One (1) discharge outlet with a 2.50" valve will be provided on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.
0025091	Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	RIGHT SIDE OUTLET ELBOWS The 2.50" discharge outlets located on the right side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0092571	Not Required, Outlets, Right Side Additional	

0089584	Not Required, Elbow, Right Side Outlets, Additional	
0816625	Outlet, Large Diameter, Right Side, Akron Valve	LARGE DIAMETER DISCHARGE OUTLET There will be an Akron 8800 4.00" flat ball valve with 4.00" plumbing terminating with a 4.00" MNST chrome adapter on the right side pump panel. The valve will be controlled with a(n) Pierce large handwheel with indicator located at the pump operator's panel.
0005097	Elbow, Large Dia Outlet, 30 Deg, 4.00" FNST x 5.00" Storz	LARGE DIAMETER OUTLET ELBOWS The 4.00" outlet(s) will be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.
0649939	Outlet, Front, 1.50" w/2" Plumbing	FRONT DISCHARGE OUTLET There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the left side of the front bumper. Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel. There will be automatic drains provided at all low points of the piping.
0004995	Outlet, Rear, 2.50"	REAR DISCHARGE OUTLET There will be Two (2) discharge outlets piped to the rear of the hose bed, two (2) on the right side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.
0045091	Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	REAR OUTLET ELBOWS The 2.50" discharge outlets located at the rear of the apparatus will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow. The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0092574	Not Required, Outlet, Rear, Additional	
0085695	Not Required, Elbow, Rear Outlets, Large, Additional	
0092573	Not Required, Outlet, Hose Bed/Running Board Tray	
0752097	Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	DISCHARGE CAPS/ INLET PLUGS Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets. Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size. The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.
0723042	Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	OUTLET BLEEDER VALVE A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application. The valves will be located behind the panel with a T swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The T swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails.
0005080	Reducer, 2.50" FNST x 1.50" MNST, w/Cap	REDUCER There will be five (5) adapters with 2.50" FNST x 1.50" MNST threads and a 1.50" chrome plated cap installed on all 2.50" discharges.

0091260	Outlet, 3.00" Deluge w/TFT Extend-a-Gun XG12 Riser, Akron Valve, Handwheel	DELUGE RISER A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be rigidly braced and installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel. The outlet will include an Akron valve with a handwheel control. TELESCOPIC PIPING The deluge riser piping will include a 12.00" Task Force Model XG12 Extend-A-Gun extension. This extension will be telescopic to allow the deluge gun to be raised 12.00" increasing the range of operation. A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.
0095958	Deluge Outlet, Special Height/Location	DELUGE OUTLET SPECIAL INSTRUCTIONS The deluge gun outlet will be located 18.00" from the top of the floor to the top of the Extenda A Gun. 6" off of center towards the drivers side (See AD Drawing).
0770359	No Monitor Requested, Customer/Dealer Furnished and Installed	MONITOR A customer/dealer supplied and installed make and model Stang 925 Snorkel Monitor monitor will be properly installed on the deluge riser.
0029304	No Nozzle Req'd	
0071580	Deluge Mount, 3" ANSI 4 Bolt Flange S/S	The deluge riser will have a 3.00" four (4)-bolt stainless steel flange for mounting the monitor.
0723726	Speedlay Module Not Required	
0722432	Hose Restraint Not Required, No Speedlay Module	
0723395	Speedlays, Not Required	
0723394	Speedlays, Not Required	
0029167	Crosslays Sngl Sheet Unpainted, (2+) 1.50", Std. Cap	CROSSLAY HOSE BEDS Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' of 1.75" double jacketed hose and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve. Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus. The crosslay controls will be at the pump operator's panel. The center crosslay dividers will be fabricated of 0.25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. Vertical scuffplates constructed of polished stainless steel will be provided at the front and rear ends of the bed on each side of vehicle. Crosslay bed flooring will consist of removable perforated brushed aluminum.
0029196	Not Required, 2.50" Crosslay	
0500535	Not Required, Hose Restraint, Crosslay	
0029260	Not Required, Speedlays	
0750536	Hose Restr, Spdly, Not Required, No Spdly	
0590877	Hose Restraint, Crosslay/Deadlay, Aluminum Treadplate, Top Only	CROSSLAY/DEADLAY HOSE RESTRAINT An aluminum treadplate cover, hinged at the front will be installed over the top of the crosslay/deadlay(s). It will include a latch at each end of the cover to hold it securely in place, a chrome grab handle at each end for opening and closing the cover and a foam rubber gasket where the cover comes into contact to a painted surface. The cover will be provided with rubber latch hold open device.
0697471	SP Crosslays, Lowered 15.00", w/Raised Pump House	CROSSLAY HEIGHT The crosslays will be 15.00" lower than the standard height with a raised height pump house.

0626226	SP	Divider, Crosslay, Special Height, 22.00"	SPECIAL HEIGHT CROSSLAY DIVIDER The crosslay divider will be 22.00" in height.
0817267	SP	Flap, Oversized, Crosslay Ends, Vinyl, Buckle Fastners	CROSSLAY FLAPS A black vinyl cover with a seat buckle style hold down at each bottom corner will be provided over the ends of the crosslay hose beds. A hinged male end of the seat belt buckled will be mounted to the crosslay opening The vinyl flaps will be permanently secured on the top to the aluminum treadplate. The flaps will be 4.00" longer than standard to allow for additional hose load.
0522721		90 Degree Swivel Elbow, Special Location	two (2) 90 degree swivel elbow will be located centered as much as possible within the cross lay bed, please reduce the 90 degree elbows as much as possible .
0015216		Reel, Booster, Aluminum - Over Pump, Right Side	BOOSTER HOSE REEL A Hannay electric rewind booster hose reel will be installed over the pump in a recessed open compartment on the right side of the apparatus. The reel will be fabricated of aluminum and have highly polished end discs. A polished stainless steel roller and guide assembly will be mounted on the reel side of the apparatus. Discharge control will be provided at the pump operator's panel. Plumbing to the reel will consist of 1.50" Aeroquip hose and a 1.50" valve.
0005280		Switches, Reel Rewind - (1) Each Pump Panel	Reel motor will be protected from overload with a circuit breaker rated to match the motor. Two (2) electric rewind control switches will be provided, one (1) installed on each pump panel.
0005300		Hose, Booster - 150' of 1.00"/800 PSI	Booster hose, 1.00" diameter and 150 feet, with chrome plated Barway, or equal couplings will be provided. Working pressure of the booster hose will be a minimum of 800 psi.
0017858		Capacity, Hose Reel 150' of 1"	Capacity of the hose reel will be 150 feet of 1.00" booster hose.
0007428		Nozzle for Booster Reel Not Req'd	
0025028		Cutout for Reel Access, Roller Assembly in Cutout	HOSEREEL ACCESS A quantity of one (1) cutout(s) will be provided in the RS side sheet of dunnage, outboard of reel (See AD Drawing) for the hose reel(s). These cutout(s) will allow access to the hose and provide a window to view the reel. Stainless steel rollers with nylon bushings will be mounted horizontally and vertically around the cutout.
0622237		Roller Assembly, Additional	There will be one (1) additional polished stainless steel roller and guide assembly mounted LS cargo top flange.

HUSKY 3 FOAM PROPORTIONER

A Pierce Husky® 3 foam proportioning system will be provided. The Husky 3 is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation will be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system will automatically proportion foam solution at rates from 0.1 percent to 3 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump.

The design of the system will allow operation from draft, hydrant, or relay operation.

System Capacity

The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi.

100 gpm @ 3 percent

300 gpm @ 1 percent

600 gpm @ 0.5 percent

Class A foam setting in 0.1 percent increments from 0.1 percent to 1 percent. Typical settings of 1 percent, 0.5 percent and 0.3 percent (maximum capacity will be limited to the plumbing and water pump capacity).

Control System

The system will be equipped with a digital electronic control display located on the pump operators panel. Push button controls will be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes.

The percent of injection will have a preset. This preset can be changed at the fire department as desired. The percent of injection will be able to be easily changed at the scene to adjust to changing demands.

Three (3) 0.50" tall LEDs will display the foam percentage in numeric characters. Three (3) indicator LEDs will also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs will indicate various system operation or error states.

The indications will be:

Solid Green - System On

Solid Red - Valve Position Error

Solid Yellow - Priming System

Flashing Green - Injecting Foam

Flashing Red - Low Tank Level

Flashing Yellow - Refilling Tank

The control display will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve will be installed in the plumbing to prevent foam from contaminating the water pump.

Hydraulic Drive System

The foam concentrate pump will be powered by an electric over hydraulic drive system. The hydraulic system and motor will be integrated into one (1) unit.

Foam Concentrate Pump

The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum will be present in its construction.

A relief system will be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump

The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump will be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails.

External Foam Concentrate Connection

An external foam pick-up will be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank.

Panel Mounted External Pick-Up Connection / Valve

A bronze three (3)-way valve will be provided. The unit will be mounted to the pump panel. The valve unit will function as the foam system tank to pump valve and external suction valve. The external foam pick-up will be one (1) 0.75" male connection GHT (garden hose thread) with a cap.

Pick-Up Hose

A 0.75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a 0.75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose.

Discharges

The foam system will be plumbed to five (5) discharges. The discharges capable of dispensing foam will be front bumper discharge, both crosslays, center rear 2.50" outlet, hose reel.

System Electrical Load

The maximum current draw of the electric motor and system will be no more than 55 amperes at 12 VDC.

0592527	Refill, Foam Tank, Integral, Husky 3	SINGLE FOAM TANK REFILL The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), the display will indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.
0031896	Demonstration, Foam System, Dealer Provided	
0005446	Foam Cell, 20 Gallon, Not Reduce Water	FOAM TANK The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 20 gallons of foam with the intended use of Class A foam. The foam cell will not reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.
0697589	Drain, 1.00", Foam Tank #1, Husky 3 Foam System, Quarter Turn	FOAM TANK DRAIN The foam tank drain will be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.
0091079	Not Required, Foam Tank #2	
0091112	Not Required, Foam Tank #2 Drain	
0746445	Approval Dwg, Pump Operator's Panel, Includes Color And Label Tags	The following drawing(s) will be provided for approval by the customer. The drawing(s) will be made for up Two (02) Truck apparatus and/or similar Pierce job number. PUMP OPERATOR'S PANEL DRAWING A detailed drawing to scale of the pump operator's panel will be provided for the customer to review. The drawing will include all of the gauges, controls, switching, etc., located on the pump operator's panel. The customer will be allowed to make changes and/or mark-ups to this approval drawing. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved pump operator's panel drawing will become part of the contract documents. Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion. COLOR CODED TAGS A detailed drawing/chart of the colors used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved drawing/chart of the colors will become part of the contract documents. SPECIAL TEXT/VERBIAGE TAGS A detailed drawing/chart of the text/verbiage used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line. The finalized and signed customer approved drawing/chart of the text/verbiage will become part of the contract documents.
0615641	Pump Panel Configuration, Similar to Control Zone	PUMP PANEL CONFIGURATION The pump panel configuration layout will be ergonomically efficient and systematically organized.
0629252	Material, Pump Panels, Side Control Black Vinyl	PUMP AND GAUGE PANEL The pump and gauge panels will be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding will be provided around each panel.

0831957	SP	Panel, Pump Access - Both Sides, Salinas	LEFT SIDE PANEL The left side pump panel will be split into (4) pieces. An upper (Gauge panel), mid upper section (Valve controls) and lower mid section (Main inlet and discharge outlets) lower section panels (Drain bank). The left side upper gauge pump panel will have vertically hinged access above the valve controls per the customer approved pump panel layout and secured using Southco chrome recessed type latches. The hinge will be located towards the front of the pump panel. The upper panel will be made as large as possible. The left side mid upper section (valve controls) pump panel will be secured using screws. The left side mid lower section (Main inlet and discharge outlets) will be secured using Southco recessed type latches. The panel will be made as large as possible. The lower portion/balance (drain bank) of the left panel will be secured using screws. LEFT SIDE PANEL The right side pump panel will be split into (3) pieces. Upper, Mid and Lower section panels. The upper and mid section panels will be secured using Southco chrome recessed type latches. The panels will be made as large as possible. The lower portion/balance (drain bank) of the right panel will be secured using screws.
0819035		No Light, No Pump Compt Light, Non-NFPA 2024	NO PUMP COMPARTMENT LIGHT The pump compartment light will not be installed. Per current edition of NFPA 1900, 2024 edition, Section 10.9.5.1, the pump compartment will have a light of at least 20 candlepower. Per the customer specifications this apparatus will not include this pump compartment light. The apparatus will be non compliant to NFPA 1900 standards at time of contract execution.
0586438		Gauges, (5), Engine - Pump Panel, IAT Pressure Controller	PUMP PANEL GAUGES AND CONTROLS The following will be provided on the pump and gauge panels in a neat and orderly fashion. These gauges will be in addition to what is provided with the pressure controller. - Engine Oil Pressure Gauge: With visual and audible warning - Engine Water Temperature Gauge: With visual and audible warning - Tachometer: Electric - Master Pump Drain Control - Voltmeter - Fuel
0005601		Throttle, Engine, Incl'd w/Press Controller	
0739224		Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	THROTTLE READY GREEN INDICATOR LIGHT There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.
0549333		Indicators, Engine, Included with Pressure Controller	
0745568		Indicator Light, Pump Panel, Ok To Pump, Green	OK TO PUMP INDICATOR LIGHT There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.
0005635		Hourmeter, Pump	- Pump Hourmeter
0553643		Control, Air Horn at Pmp Pnl, Red Switch, Momentary	AIR HORN SWITCH An air horn control switch will be provided at the pump operator's control panel. This switch will be momentary red and properly labeled. The switch will be located within easy reach of the operator in the electrical switch panel.
0009624		Switch, High Idle, Mounted At Pump Panel, Indicator Light	HIGH IDLE A high idle switch will be provided, on the pump operator panel, that will automatically maintain a preset engine rpm. This switch will be 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".
0816268	SP	Pump Master Gauge Panel Mounted @ Angle	ANGLED GAUGE PANEL The pump master gauge panel will be mounted at an angle downward, with a hinge on the bottom and secured with Southco C2 chrome raised trigger lever latch ,to improve visibility of the gauges.
0534725	SP	Plate, Tank to Pump Line, 4"x4" Rounded	- A 4.00" x 4.00" plate with rounded corners and coated with red scotchlite will be provided around the tank to pump line control at the pump panel.

0830289	Gauges, 6.00" Master, IC	VACUUM AND PRESSURE GAUGES The pump vacuum and pressure gauges will be liquid filled and manufactured by Innovative Controls. The gauges will be a minimum of 6.00" in diameter and will have white faces with black markings, with a pressure range of 30.00" 0-400 psi. The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel. Test port connections will be provided at the pump operator's panel. One (1) will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and polished stainless steel plugs. They will be marked with a label.
0005714	Gauge, 2.50" Pressure, Class 1, 0-400psi	PRESSURE GAUGES The individual "line" pressure gauges for the discharges will be Class 1 interlube filled. They will be 2.50" in diameter and have white faces with black lettering. Gauges will have a pressure range of 0-400#. The individual pressure gauge will be installed as close to the outlet control as practical.
0536428	Gauge, Water Level, Pierce, In pressure Controller	WATER LEVEL GAUGE An electric water level gauge will be incorporated in the pressure controller that registers water level by means of 9 LEDs. They will be at 1/8 level increments with a tank empty LED. The LEDs will be a bright type that is readable in sunlight and have a full 180-degree of clear viewing. To further alert the pump operator, the gauge will have a warning flash when the tank volume is less than 25 percent and will have "Down Chasing LEDs when the tank is almost empty. The level measurement will be ascertained by sensing the head pressure of the fluid in the tank or cell.
0084763	Gauge, Ernst Sight Water Level, w/Red Ball, IATS	WATER LEVEL GAUGE, ADDITIONAL An additional water level gauge will be provided. An Ernst sight tube water level indicator with a floating red ball will be mounted on the gauge panel with an unrestricted view for the operator.
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class "A"	CLASS "A" FOAM LEVEL GAUGE A Fire Research TankVision Pro, Model WLA360-A00, cell/tank level indicator kit will be installed on the pump operator's panel. The kit will include an electronic indicator module, a pressure sensor, a 10' sensor cable and a tank vent. The indicator will show the volume of Class "A" foam concentrate in the cell/tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs will provide for a viewing angle of 180 degrees. The indicator case will be waterproof, manufactured of Polycarbonate/Nylon material and have a distinctive green label. The program features will be accessed from the front of the indicator module. The program will support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display cell/tank volume, adjustable brightness control levels and a data link to connect remote indicators. Low foam level warnings will include flashing LEDs at 1/4 cell/tank and down chasing LEDs when the cell/tank is almost empty. The indicator will receive an input signal from an electronic pressure sensor. The sensor will be mounted from the outside of the foam cell/tank near the bottom. No probe will be placed on the interior of the cell/tank. Wiring will be weather resistant and have automotive type plug-in connectors.
0682503	Light Shield/Step 8", LED, P25 LED Stp Lt	STEP/LIGHT SHIELD There will be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operator's panel. There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house. One (1) pump panel light will come on when the pump is in ok to pump mode. The switch panel will be lit when the parking brake is set. This is to afford the operator illumination when first approaching the control panel. All step lights on the apparatus will be illuminated per the current edition of applicable NFPA standards.
0522730	Light, Over Passenger Side Pump Panel, P25 LED Stp Lt	There will be four (4) white LED scene lights with ABS chrome housing, installed above the passenger side pump panel. All step lights on the apparatus will be illuminated per the current edition of applicable NFPA standards. The lights will be operated from a switch on the pump panel.
0682261	Light Shield/Step 8", DS LED, P25 LED Step Lt	ADDITIONAL STEP/LIGHT SHIELD There will be an additional aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the driver's side pump panel. There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house. All step lights on the apparatus will be illuminated per the current edition of applicable NFPA standards.

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:
0757076	Control, Air Horn, Lanyard, RS	Right side lanyard. The lanyard to be a nylon rope.
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.
0895310	Siren, Federal Q2B	AUXILIARY MECHANICAL SIREN There will be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus. The Q2B will be chrome finish. The siren will have a 2-gauge cable connected to a 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.

0740392	Sw, Siren Brake, Momentary Red, RS Overhead Sw Pnl	A momentary red switch will be included in the right side overhead switch panel to activate the siren brake.
0740834	Sw, Siren Brake, Momentary Red, LS Overhead Sw Pnl	A momentary red switch will be included in the left side overhead switch panel to activate the siren brake.
0746353	Not Required, Warning Lights Intensity	
0605488	Lightbar, Wln, Freedom IV-Q, 81", RRRRWsrR_Opt_RsrWRRRR	FRONT ZONE UPPER WARNING LIGHTS There will be one (1) 81.00" Whelen Freedom IV LED lightbar mounted on the cab roof. The lightbar will include the following: - 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. 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. 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.
0016380	No Additional Lights Req'd, Side Zone Upper	
0761731	Lights, Front Zone, Wln M6** M6** M6** M6**, 4lts Q Bezel, Clr Fet	FRONT ZONE LOWER LIGHTS 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. - 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 the same color as the LED's There will be a switch located in the cab on the switch panel to control the lights.
0653937	Flasher, Headlight Alternating	HEADLIGHT FLASHER 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 headlight (high or low beam) switch is activated or when the parking brake is set.
0746667	Lights, Side Zone Lower, Wln M6**, M6**, 4Lts	SIDE ZONE LOWER LIGHTING There will be four (4) Whelen®, Model M6**, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with chrome trim installed per the following: Two (2) lights located, one (1) each side on the bumper extension. 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. 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.

0750408	Lights, Side, Wln PS*01FCR, 1st	SIDE WARNING LIGHTS There will be two (2) 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, cab side centered above EMS door as close to drip rail as possible, each side. 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, Wln 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 rearward of the crew cab doors, above the lower compartment 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.
0564654	Lights, Rear Zn Lwr, Wln M6*, Colored Lens, For Tail Light Housing	REAR ZONE LOWER LIGHTING There will be two (2) Whelen®, Model M6*, LED flashing warning lights will be located at the rear of the apparatus. The driver's side rear light to be red The passenger's side rear light to be red Both lights will include a lens that is the same color as the LED's. There will be a switch located in the cab on the switch panel to control the lights.
0080676	Lights, Rear/Side Up Zone, Wln 50*03Z*R, 6Lts	REAR AND SIDE ZONE UPPER WARNING LIGHTS There will be six (6) Whelen, Model 50*03Z*R, flashing LED lights provided: There will be four (4) LED lights at the rear of the truck in the upper zone facing the rear. The upper pair will be driver side amber Super LED/amber lens, passenger side red Super LED/red lens. The lower pair will be driver side red Super LED/red lens, passenger side amber Super LED/amber lens. There will be one (1) LED light at the rear of the truck in the upper zone facing the driver side. There will be one (1) LED light at the rear of the truck in the upper zone facing the officer side. The color of these lights will be red Super LED/red lens. These lights will be installed with Whelen, Model 5TSMAC, chrome plated flanges. There will be a switch located in the cab on the switch panel to control the lights.
0006551	Not Required, Lights, Rear Upper Zone Blocking	
0026813	No Hose Bed Warn Lts Brkts Required, Lts On Hatch Compts, Pumper	
0791493	Light, Traffic Directing, Wln TAM65 36" Long LED	TRAFFIC DIRECTING LIGHT There will be one (1) Whelen® Model TAM65, 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 control head will be energized when the battery switch is on. The auxiliary flash not activated.
0551728	Location, TDL, Recessed with S/S Trim	This traffic directing light will be recessed with a stainless steel trim plate at the rear of the apparatus as high as practical.
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.
0519934	Not Required, Brand, Hydraulic Tool System	
0007150	Bag of Nuts and Bolts	LOOSE EQUIPMENT The following equipment will be furnished with the completed unit: Two (2) bags of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.

0816508	NFPA Required Loose Equipment, Pumper, NFPA/ULC 2024, Provided by Fire Dept	NFPA LOOSE EQUIPMENT NFPA Required Loose Equipment Provided by Fire Department The following loose equipment as outlined in NFPA 1900, 2024 edition, table 8.1 and CAN/ULC 515:2024 edition, section 5.2 will be provided by the fire department: One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</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. 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. Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. NFPA Loose Equipment That Should be Considered The following loose equipment as outlined in NFPA 1900, 2024 edition, appendix table A.8.4 (a) and CAN/ULC 515:2024 edition, section 5.2 should be considered: 800 ft (60 m) of 2.50" (65 mm) or larger fire hose. 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose. One (1) handline nozzle, 200 gpm (750 L/min) minimum. Two (2) handline nozzles, 95 gpm (360 L/min) minimum. One (1) smooth bore or combination nozzle with shutoff and with 2.50" (65 mm) inlet that flows a minimum of 250 gpm (950 L/min). Four (4) SCBA apparatus Four (4) SCBA spare cylinders One (1) first aid kit. Four (4) combination spanner wrenches. Two (2) hydrant wrenches. One (1) double female 2.50" (65 mm) adapter with national hose (NH) threads. One (1) double male 2.50" (65 mm) adapter with national hose (NH) threads. One (1) rubber mallet, for use on suction hose connections. Two (2) salvage covers each a minimum size of 12 ft x 18 ft (3.7 m x 5.5 m). One (1) automatic external defibrillator (AED).
0519913	Not Required, Soft Suction Hose	SOFT SUCTION HOSE There will be no soft suction hose provided.
0027023	No Strainer Required	
0816939	Extinguisher, Dry Chemical, NFPA 2024, Provided by Fire Department	DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.
0816937	Extinguisher, 2.5 Gal. Pressurized Water, NFPA/ULC 2024, Provided by Fire Dept	WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.
0816998	Axe, Flathead, Provided by Fire Department	FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.
0817000	Axe, Pickhead, Provided by Fire Department	PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

0741569	Paint Process / Environmental Requirements, Appleton	PAINT PROCESS The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows: <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. <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. <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. <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. <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. <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. <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. 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. 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. 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. Environmental Impact 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: Topcoats and primers will be chrome and lead free. 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. Particulate emission collection from sanding operations will have a 99.99 percent efficiency factor. 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. Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean. Paint wastes are disposed of in an environmentally safe manner. Empty metal paint containers will be recycled to recover the metal. Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse. 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.
0709567	Paint, Single Color, Enforcer	CAB PAINT The cab will be painted #90 red.
0709845	Paint, Single Color, Body	BODY PAINT The body will be painted to match the single cab paint color.

0646901	Paint Chassis Frame Assy, With Liner, E-Coat, Standard	PAINT CHASSIS FRAME ASSEMBLY 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. Components that are included with the chassis frame assembly that will be painted (unless otherwise stated in a secondary option) are: 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 Individual piece parts used in chassis and body assembly Components treated with epoxy E-coat protection prior to paint: Two (2) C-channel frame rails Two (2) frame liners The E-coat process will meet the technical properties shown.
0693797	No Paint Required, Aluminum Front Wheels	
0687653	Paint, Rear Wheels, Single Axle, Alum-Stl	REAR WHEELS PAINT All wheel surfaces, inside and outside of inboard steel wheels only, will be provided with powder coat paint #101 black.
0733739	Paint, Axle Hubs	AXLE HUB PAINT All axle hubs will be painted to match primary job color.
0639088	Compartment Paint, 909017, Nightspots	COMPARTMENT INTERIOR PAINT Interior of compartments will be painted 909017, Nightspots.
0544111	Reflective Band, 10"	REFLECTIVE BAND A 10.00" black reflective band will be provided across the front of the vehicle and along the sides of the body.
0007356	Reflective across Cab Face	The reflective band provided on the cab face will be at the headlight level.
0536954	Stripe, Chevron, Rear, Diamond Grade, Pumper	REAR CHEVRON STRIPING There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered. The colors will be red and fluorescent yellow green diamond grade. Each stripe will be 6.00" in width. 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.
0027341	Jog, In Reflective Stripe, Single or Multiple	JOG(S) IN REFLECTIVE BAND The reflective band located on each side of the apparatus body will contain two (2) jog(s) and will be angled at approximately 45 degrees when installed.
0679885	Stripe, Sign Gold Outline Above & Below Reflective Band	SIGN GOLD STRIPE There will be a Sign Gold stripe applied above and below the reflective band. The sign gold stripes will be .50" wide with an outline.
0065687	Stripe, Reflective, Cab Doors Interior	CAB DOOR REFLECTIVE STRIPE 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. This stripe will meet the current edition of applicable NFPA standards.
0679831	Stripe, Sign Gold, Cab Sides, IPO Chrome Molding	CAB STRIPE There will be a Sign Gold stripe provided on both sides of the cab in place of the chrome molding.

0033179	Lettering Specifications, Reflective	
0686162	Lettering, Reflective, 3.00", Each	LETTERING There will be reflective lettering, 3.00" high, with outline and shade provided. There will be nine (9) letters provided.
0686018	Lettering, Reflective, 5.00", Each	LETTERING There will be reflective lettering, 5.00" high, with outline and shade provided. There will be ten (10) letters provided.
0686033	Lettering, Reflective, 4.00", Each	LETTERING There will be reflective lettering, 4.00" high, with outline and shade provided. There will be three (3) letters provided.
0685754	Lettering, Sign Gold, 8.00", Each	LETTERING There will be sign gold lettering, 8.00" high, with outline and shade provided. There will be two (2) letters provided.
0685814	Lettering, Sign Gold, 4.00", (21-40)	LETTERING Twenty-one (21) to forty (40) Sign Gold lettering, 4.00" high, with outline and shade will be provided.
0685849	Lettering, Sign Gold, 3.00", Each	LETTERING There will be sign gold lettering, 3.00" high, with outline and shade provided. There will be 21 letters 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.
0684013	Lettering, Vinyl, 10.00", Each	LETTERING There will be non-reflective vinyl lettering, 10.00" high, with no outline or shade provided. There will be two (2) letters provided.
0655896	Sign Kit, Painted, Holder and Insert, Each	SIGN KIT FOR LETTERING/NUMERALS three (3) painted stainless steel plate(s) and holder(s) will be provided for department lettering. They will be mounted (1) front, (1) each side all to be painted black and 12" W x 10" H in size.
0814868	SP Sign Kit, Painted, Holder and Insert, Hinged w/Knob	SIGN KIT FOR LETTERING/NUMERALS one (1) painted stainless steel plate(s) and holder(s) will be provided for department lettering. They will be mounted RS Rear and 12" W x 10" H in size. The holder(s) will be hinged on the bottom to allow the placard to be removed easily due to other items mounted around it. Threaded knob(s) will be provided to hold the hinged holder(s) in the stowed position.
0684135	Emblem, Monogram w/Scrolling, Sign Gold, 15"-17", Pair	EMBLEM/S There will be one (1) pair of sign gold emblems, 15.00" to 17.00" wide, supplied and installed Located on the cab doors.. The emblems will include the fire department's monogram or number inside of a circle with scrolling.
0684200	Emblem, Maltese Cross, Sign Gold, 12"-14", Pair	EMBLEMS There will be one (1) pair of maltese crosses, comprised of sign gold material, provided and installed Located on the cab between cab & crew cab windows..

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.
0772065	Manual, Chassis Operation, (2) USB Flash Drives, Custom, English	CHASSIS OPERATION MANUAL The chassis operation manual will be provided on two (2) USB flash drives. Manuals 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.
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.
0688798	Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	WATER TANK WARRANTY A UPF poly water tank limited warranty certificate, WA0195, is 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.
0734463	Warranty, Pump, Waterous, 7 Year Parts, WA0382	PUMP WARRANTY The Waterous pump will be provided with a seven (7) year material and workmanship limited warranty . A copy of the warranty certificate will be included with this proposal.
0648675	Warranty, 10 Year S/S Pumping, WA0035	TEN (10) YEAR PUMP PLUMBING WARRANTY The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	FOAM SYSTEM WARRANTY The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.
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.
0808582	Certification, Engine Installation, Saber FR/Enf, Cummins X10, 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	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. 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.

0735949	Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	PERFORMANCE CERTIFICATIONS 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. 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> 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>
0545073	Amp Draw Report, NFPA Current Edition	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.
0002758	Amp Draw, NFPA/ULC Radio Allowance	
0799248	Appleton/Florida BTO	
0000018	PUMPER, 2ND GEN	
0000012	PIERCE CHASSIS	
0004713	ENGINE, OTHER	
0046395	EVS 3000 Series TRANSMISSION	
0020011	WATEROUS PUMP	
0020009	POLY TANK	
0028048	FOAM SYSTEM	
0020006	SIDE CONTROL	
0020007	AKRON VALVES	
0020015	ABS SYSTEM	
0658751	PUMPER BASE	



Electrical Analysis

11/12/2025

Bid #: 969

Job #:

Desc: Salinas Fire Department - Enforcer Pumpers (2) Duplicate to 42943 - 2025

Sales Rep: Young, Dewayne

Customer: Salinas Fire Department

Organization: Golden State Fire Apparatus, Inc

Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Type: Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0001244	High Idle w/Electronic Engine, Custom		0.00	1.20	0.00
0015216	Reel, Booster, Aluminum - Over Pump, Right Side		0.00	36.00	0.00
0072153	Primer, Trident, Air Prime, Air Operated		0.00	0.00	0.00
0079211	Batteries, (6) Stryten/Exide Grp 31, 950 CCA each, Threaded Stud		0.00	3.00	0.00
0534725	Plate, Tank to Pump Line, 4"x4" Rounded		0.00	0.00	0.08
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0553643	Control, Air Horn at Pmp Pnl, Red Switch, Momentary		0.00	0.16	0.00
0583938	Lights, Engine Compt, Custom, Auto Sw, Wln 3SC0CDCR, 3"		0.00	0.30	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0592633	Foam Sys, Husky 3, Single Agent		0.00	55.00	0.00
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class		0.00	0.00	1.23
0626097	Light, Map, Sunnex HS76*-00 Series, Swivel Joint, Clear Lens,		0.00	0.00	1.56
0630020	Lights, Side, Wln 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
0683556	Light, Do Not Move Apparatus, Wln M2R Red LED		0.00	0.50	0.00
0686687	Wiring, Spare, 37.5 A 12V DC, Customer Install Radio, 30A Sw		0.00	0.00	37.50
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0750408	Lights, Side, Wln PS*01FCR, 1st		0.00	0.96	0.64
0802726	Intercom, David Clark, 5-Pos, 2-Dual Radio, (D, O, RPTT), 3ibC,		0.00	0.00	0.50
0805325	Light, Directional, Wln M62T* LED, 15 Degree Angle Bracket,		0.00	1.50	0.00
0806466	Lights, Backup, Wln M62BU, LED, For Tail Lt Housing		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
0815108	Camera, Safety Vision, LS Mux, R, Camera, SD		0.00	1.20	0.00
0819994	Radio, Jensen, AM/FM/WB, Bluetooth		0.00	0.00	2.00
0820509	ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA		0.00	6.00	0.00
0821260	Wiring, Spare, 20 A 12V DC, 12 Ckt Fuse Block, Blue Sea 5026		0.00	0.00	20.00
0821261	Wiring, Spare, 20 A 12V DC, 12 Circuit Fuse Block Blue Sea 5026		0.00	0.00	20.00
0834416	USB, Cab, 4, 12V DC, Dual USB Termination, NFPA1900/ULC		0.00	0.00	10.00
0895310	Siren, Federal Q2B		0.00	100.00	0.00
0547322	Wiring, Spare, 15 A 12V DC, Switch Feature 1st	Load Managed	0.00	0.00	90.00
0722696	HVAC, Standard-Duty, Enforcer, CARE	Load Managed	0.00	0.00	100.00
0774308	Lights, Wln, P*H2* Pioneer, 12 VDC, 2nd	Load Managed	0.00	0.00	13.00
0774309	Lights, Wln, P*H2* Pioneer, 12 VDC, 1st	Load Managed	0.00	0.00	13.00
0774336	Lights, Wln, P*H1* Pioneer, 12 VDC, 1st	Load Managed	0.00	0.00	13.00
0774948	Lights, Wln, P*H1* Pioneer, 12 VDC, 2nd	Load Managed	0.00	0.00	6.50
0775524	Lights, Wln, P*H1* Pioneer, 12 VDC, 1st	Load Managed	0.00	0.00	6.50
0776357	Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	Load Managed	0.00	0.00	13.00
0804719	Handlts, (4) Streamlight, Fire Vulcan, 44451, C4 LED, Tail Lts,	Load Managed	0.00	0.00	4.40
0821194	Wiring, Spare, 20 A 12V DC, Batt Dir, 2nd NFPA1900/ULC	Load Managed	0.00	0.00	20.00
0821329	Wiring, Spare, 10 A 12V DC Batt Dir 1st NFPA1900/ULC	Load Managed	0.00	0.00	10.00
0821330	Wiring, Spare, 10 A 12V DC Batt Dir 2nd NFPA1900/ULC	Load Managed	0.00	0.00	10.00
0821331	Wiring, Spare, 10 A 12V DC Batt Dir 3rd NFPA1900/ULC	Load Managed	0.00	0.00	10.00
0821333	Wiring, Spare, 10 A 12V DC Batt Dir 4th NFPA1900/ULC	Load Managed	0.00	0.00	10.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0005635	Hourmeter, Pump	NFPA	0.11	0.00	0.00
0013671	Rear, Rollup, 30.75" F-F, 25.88" D	NFPA	0.90	0.00	0.90

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



Electrical Analysis

11/12/2025

Bid #: 969

Job #:

Desc: Salinas Fire Department - Enforcer Pumpers (2) Duplicate to 42943 - 2025

Sales Rep: Young, Dewayne

Customer: Salinas Fire Department

Organization: Golden State Fire Apparatus, Inc

Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Type: Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0023650	LS 152" Rollup, Full Height Compts, FDLER	NFPA	4.50	0.00	4.50
0063658	RS 152" Rollup, Full Height Compts, FDLER	NFPA	4.50	0.00	4.50
0080676	Lights, Rear/Side Up Zone, Wln 50*03Z*R, 6Lts	NFPA	1.14	0.00	0.00
0092582	Load Manager/Sequencer, MUX	NFPA	0.56	0.56	0.00
0522730	Light, Over Passenger Side Pump Panel, P25 LED Stp Lt	NFPA	1.00	0.00	0.00
0536428	Gauge, Water Level, Pierce, In pressure Controller	NFPA	1.23	0.00	0.00
0556360	Lights, Step, P25 LED 4Lts, Pump Pnl Sw	NFPA	1.00	0.00	0.00
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	NFPA	0.35	0.00	0.00
0564535	Light, Marker, Britax Rubber Arm, Model L427.203.L12 LED,	Load Managed	2.00	0.00	0.00
0564654	Lights, Rear Zn Lwr, Wln M6*, Colored Lens, For Tail Light	NFPA	1.80	2.70	0.00
0586438	Gauges, (5), Engine - Pump Panel, IAT Pressure Controller	NFPA	0.30	0.00	0.00
0595087	DEF Tank, 4.5 Gallon, LS Fill, Forward of Rear Axle	NFPA	0.60	11.40	0.00
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	NFPA	1.00	0.00	0.00
0605488	Lightbar, Wln, Freedom IV-Q, 81", RRRRWsrR_Opt_RsrWRRRR	NFPA	6.48	2.68	9.92
0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2Lts	NFPA	0.80	0.00	0.00
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
0625953	Light, Directional, Wln 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts,	NFPA	0.70	0.70	0.00
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2Lts, Rear	NFPA	0.80	0.00	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
0644228	Air Dryer, Wabco System Saver 1200 IWT, Heated, 10" Frame,	NFPA	7.81	0.00	0.00
0645878	Lights, Hose Bed, Cover, Dual Amdor AY-9750-20 LED Light	NFPA	3.40	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
0648332	Cab, Enforcer, 7010	NFPA	6.80	10.20	0.00
0653937	Flasher, Headlight Alternating	NFPA	0.08	0.00	0.00
0682261	Light Shield/Step 8", DS LED, P25 LED Step Lt	NFPA	3.50	0.00	0.00
0682503	Light Shield/Step 8", LED, P25 LED Stp Lt	NFPA	4.00	0.00	0.00
0709438	Lights, Walk Surf, FRP Flood, LED	NFPA	2.00	0.00	0.00
0721609	Controller, Pressure, Pierce LCD, Custom Chassis	NFPA	1.70	0.00	0.00
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure	NFPA	0.10	0.00	0.00
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	NFPA	0.10	0.00	0.00
0746667	Lights, Side Zone Lower, Wln 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
0761731	Lights, Front Zone, Wln M6** M6** M6** M6**, 4Lts Q Bezel, Clr	NFPA	3.60	5.40	0.00
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/Enf/Imp/Sab/Vel	NFPA	4.20	4.20	0.00
0791493	Light, Traffic Directing, Wln TAM65 36" Long LED	NFPA	1.26	2.52	0.00
0804514	Lights, Tail, Wln M62BTT* Red Stop/Tail & M62T* Amber Dir Arw	NFPA	0.83	2.49	0.00
0808535	Engine, Cummins X10, 450 hp, 1250 lb-ft, W/OBD, EPA 2027,	NFPA	1.00	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
0887559	Trans, Allison 6th Gen, 3000 EVS P, w/Prognostics,	NFPA	2.00	2.00	0.00
0889571	Bracket, License Plate & Light, P25 LED, Stainless Brkt, Loc	NFPA	0.07	0.00	0.00

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



Electrical Analysis

11/12/2025

Bid #: 969

Job #:

Desc: Salinas Fire Department - Enforcer Pumpers (2) Duplicate to 42943 - 2025

Sales Rep: Young, Dewayne

Customer: Salinas Fire Department

Organization: Golden State Fire Apparatus, Inc

Option: Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT

Type: Multiplexed

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	NFPA	1.00	0.00	0.00
0121711	Alternator, 320 amp, Leece-Neville 4962PA, Sgl Sys	S	0.00	0.00	0.00
Load Totals:			91.05	484.29	434.53

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: 168.00

Minimum Continuous Load	
Supply:	168.00
Demand:	91.05
Variance:	76.95

Alternator Output at Governed Speed: 282.00

Total Connected Load	
Supply:	282.00
Demand:	206.18
Variance:	75.82

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

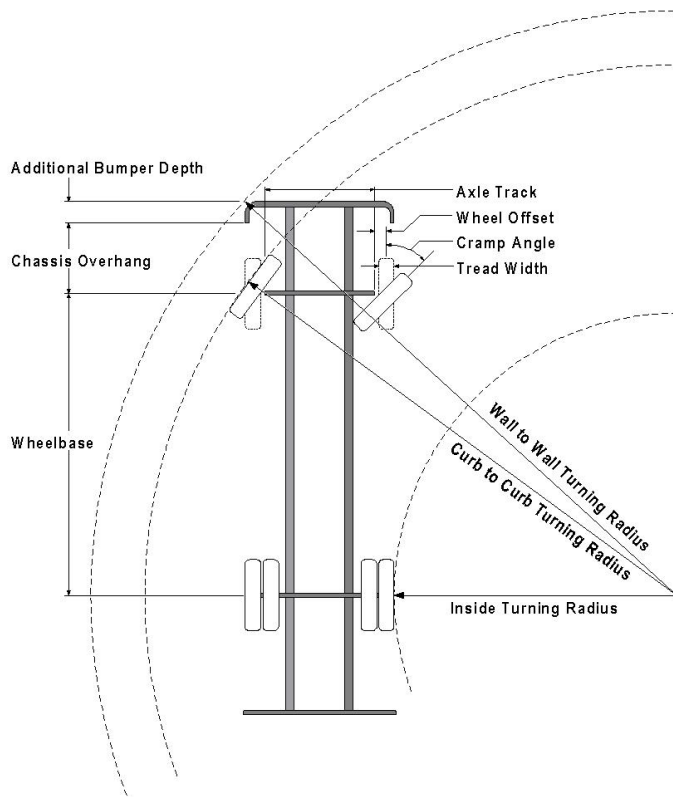


Turning Performance Analysis

11/12/2025

Bid Number: 969
Department: Salinas Fire Department

Chassis: Enforcer Chassis
Body: Pumper, Medium, Galvanneal, 2nd Gen



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:	16 in.
Front Overhang:	81.95 in.
Wheelbase:	191.5 in.

Calculated Turning Radii:

Inside Turn:	15 ft. 2 in.
Curb to curb:	28 ft. 8 in.
Wall to wall:	32 ft. 10 in.

Category	Option	Description
Axle, Front, Custom	0630705	Axle, Front, Oshkosh TAK-4, Non Drive, 19,500 lb, Enforcer
Bumpers	0624298	Bumper, 16" Extended, Saber FR/Enforcer
Wheels, Front	0019575	Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot
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.
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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

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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/Uni/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/Uni/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/Uni/P for LO/LO Terminal Tractor applications

Planetary Axles – 1/Uni/P

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

Gearboxes – 1/Uni/P&L

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

PTO – 1/Uni/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
MAXXUSTM 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
TRISTOPTM D Actuator w/ IBV	3/Unl/P
TRISTOPTM D Actuator	2/200/P
UNISTOPTM 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	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. 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

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:	This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any: Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25% Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25% Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10% Corrosion Perforation 0-120 months 100% 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. 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.

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

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	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. 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. Towing is covered to the nearest distributor or authorized dealer only when necessary to prevent further damage to your transmission. Labor costs for the removal and reinstallation of goods may be covered when necessary to make repairs. Please contact your OEM for authorization. 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.

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.

UNITED PLASTIC FABRICATING
Limited Lifetime Warranty
Effective as of January 1, 2024

1. General. United Plastic Fabricating, Inc. (the "Company") warrants to the owner (the "Owner") that the products set forth on Exhibit A, attached hereto (the "Product") will be reasonably free from defects in materials and workmanship for the service life of the Product. This Limited Lifetime Warranty (the "Warranty") only applies to Company Products that are: (a) owned by a federal, state, county or local government, a volunteer fire department or dedicated commercial fire service operation; (b) continuously and actively used in emergency response and/or fire suppression vehicles; and (c) used, stored, handled and installed in the manner recommended by Company.

2. Warranty Obligations. Subject to the exclusions and limitations set forth in this Warranty, Company will, at its option, repair or offer a one (1) time replacement of the Product without charge, if the Product fails or does not perform as warranted during the warranty period due to a manufacturing defect or a defect in materials. Repair or replacement shall include reasonable labor charges necessary to repair or replace the defective Product but shall not include: (a) the costs associated with removal of the Product from the vehicle or the cost to otherwise provide access to the Product in the vehicle; (b) the cost associated with any required upgrades the vehicle (including, without limitation, upgrades required to strengthen the vehicle's frame); or (c) travel costs, except as provided by Section 3. Company's obligation as to repair or replacement shall further be limited to repair or replacement with the models of the Product that are available at the time of the repair or replacement, and shall be limited to the repair or replacement of only the specific Product that fails due to a manufacturing defect. In the event a Product becomes unavailable or cannot be supplied by Company for any reason a substitute Product of equal quality and functionality of the subject Product may be substituted by Company. Any repaired Product shall remain subject to this Warranty and any repair shall not extend the warranty period in any manner or start a new warranty period. Any Product that is replaced by Company shall be excluded from this Warranty. In no

event shall Company be required to expend, in any one (1) or series of expenditures, more than the purchase price of the Product to repair or replace a defective Product. Amounts expended by Company shall include all amounts paid by Company in connection the repair or replacement, including without limitation, amounts paid to third-parties, material costs, incidental costs and travel costs (except as provided by Section 3).

3. Travel; Expenses; Product Access. Company shall be responsible for any travel costs incurred to repair or replace the Product provided that: (a) the Product is located in the continental United States or Canada; and (ii) the warranty claim is initiated prior to the date on which NFPA 1912 Standards (Annex D) recommends replacement of the Product. All other travel costs incurred by Company or its agents to repair or replace the Product shall be the responsibility of the party asserting the warranty claim. Company reserves the right to require, as a condition to undertaking any repair or replacement: (y) pre-payment of its anticipated travel costs; and (z) satisfactory arraignments concerning scheduling and access to the Product. If the subject Product is located in an area of the world considered, in Company's sole discretion, to be unsafe Company may refuse to process the claim or require relocation of the Product, at no expense to Company, to an area where such repairs can be performed safely by Company or its agents. In the event Company or Company's agents are dispatched to repair or replace a defective Product and the vehicle in which the Product has been installed is not available or the Product is not readily accessible, for any reason, Company or Company's agents, as the case may be, shall be immediately reimbursed for all expenses incurred therewith.

4. Exclusions: Products must be stored, handled, installed, used and maintained in accordance with instructions provided by Company, and this Warranty is conditioned upon compliance with all such instructions. This Warranty does not cover defects caused by: (a) improper installation; (b) modification, alteration or repair of the Product by any unauthorized third-party; (c) misuse, including, without limitation, improper

storage or handling of the Product (e.g. excessive exposure to UV rays); chemical abuse (e.g. harsh cleansers and solvents), thermal abuse or shock (e.g. excessive heat or cold); (d) damage not resulting from manufacturing defects that occur while the Product is not in Company's possession (e.g. accidents); or (e) unreasonable or unintended use of the Product. Copies of the Company's operation and maintenance instructions are available on the Company's website <https://www.unitedplastic.com/upf-documents/>

5. Disclaimer. THE WARRANTIES SET FORTH HEREIN ARE THE ONLY WARRANTIES MADE BY COMPANY IN CONNECTION WITH THE PRODUCT. COMPANY CAN NOT AND DOES NOT MAKE ANY IMPLIED OR EXPRESS WARRANTIES WITH RESPECT TO THE PRODUCT, AND DISCLAIMS ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. PRODUCTS SOLD BY COMPANY ARE SOLD ONLY TO THE SPECIFICATIONS SPECIFICALLY SET FORTH BY COMPANY IN WRITING. OTHER THAN THE LIMITED WARRANTY SET FORTH HEREIN, COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. COMPANY'S SOLE OBLIGATION UNDER THIS WARRANTY SHALL BE REPAIR OR REPLACEMENT OF NON-CONFORMING PRODUCT. BUYER ASSUMES ALL RISK WHATSOEVER AS TO THE RESULT OF THE USE OF THE PRODUCT PURCHASED, WHETHER USED SINGULARLY OR IN COMBINATION WITH ANY OTHER PRODUCTS OR SUBSTANCES.

6. Limitation of Liability. NO CLAIM BY OWNER OF ANY KIND, INCLUDING CLAIMS FOR INDEMNIFICATION, SHALL BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE PRODUCT IN RESPECT TO WHICH DAMAGES ARE CLAIMED. IN NO EVENT SHALL COMPANY BE LIABLE TO OWNER IN TORT, CONTRACT OR OTHERWISE, FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, ANY OBLIGATION OF COMPANY TO REPAIR OR REPLACE ANY CHASSIS, SUB-FRAMES, BODIES, VALVES, DUMPS, HOSES, PRESSURE VACUUM VENTS OR OTHER SIMILAR COMPONENTS), RELIANCE, STATUTORY, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOSS OF USE, LOSS OF TIME,

LOSS OF REVENUES, INCONVENIENCE, LOSS BUSINESS OPPORTUNITIES, OR DAMAGE TO GOOD WILL OR REPUTATION, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR SUCH DAMAGES COULD HAVE BEEN REASONABLY FORESEEN, IN CONNECTION WITH, ARISING OUT OF, OR AS A RESULT OF, THE SALE, DELIVERY, SERVICING, USE OR LOSS OF USE OF THE PRODUCTS SOLD HEREUNDER, OR FOR ANY LIABILITY OF BUYER TO ANY THIRD PARTY WITH RESPECT THERETO.

7. Reformation. If any term or provision of this Warranty shall be held or deemed to be, or shall in fact be, invalid, inoperative, illegal or unenforceable as applied in any case or in any jurisdiction or jurisdictions because of the conflicting nature of any provision with any constitution or statute or rule of public policy or for any other reason, then: (a) such circumstance shall not have the effect of rendering the provision or provisions in question invalid, inoperative, illegal or unenforceable in any other jurisdiction or in any other case or circumstance or of rendering any other provision or provisions herein contained invalid, inoperative, illegal or unenforceable to the extent that such other provisions are not themselves actually in conflict with such constitution, statute or rule of public policy; and (b) any such invalid, inoperative, illegal or unenforceable provision shall be reformed and construed in any such jurisdiction or case so that such provision would be valid, operative and enforceable to the maximum extent permitted in such jurisdiction or case.

8. Headings. The headings contained herein are for convenience and reference only, and shall be given no effect in the interpretation of any term or condition of this Warranty.

9. Submitting a Warranty Claim. To request coverage under this Warranty you must submit a claim through Company's website:
<https://www.unitedplastic.com/contact/product-support/>

10. Transferability. This Warranty is transferable and entitles the transferee to coverage for the remainder of the original warranty period.

11. Modification. This Warranty may be modified (a) as set forth on a binding sales order for the Product or (b) by a written agreement between Company and the Owner.

Exhibit A

Covered Product List

- Poly-Tanks®
- PolySide® Wetside Tanks
- Defender™ Skid Tanks
- Ellip-T™ Elliptical Tanks
- ARFF Tanks



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	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. 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.



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.

Waterous Seven-Year Limited Warranty

WATEROUS warrants, to the original Buyer only, that products manufactured by WATEROUS will be free from defects in material and workmanship under normal use and service for a period of seven (7) years from the date the product is first placed in service, or seven and one-half (7-1/2) years from the date of shipment by WATEROUS, whichever period shall be the first to expire; provided the Buyer notifies WATEROUS, in writing, of the defect in said product within the warranty period, and said product is found by WATEROUS to be nonconforming with the aforesaid warranty. When required in writing by WATEROUS, defective products must be promptly returned by Buyer to WATEROUS at WATEROUS' plant at South St. Paul, Minnesota, or at such other place as may be specified by WATEROUS, with transportation and other charges prepaid. A Returned Material Authorization (RMA) is required for all products and parts and may be requested by phone, fax, email, or mail. The aforesaid warranty excludes any responsibility or liability of WATEROUS for:

- (a) damages or defects due to accident, abuse, misuse, abnormal operating conditions, negligence, accidental causes, use in non-firefighting applications, or improper maintenance, or attributable to written specifications or instructions furnished by Buyer;
- (b) defects in products manufactured by others and furnished by WATEROUS hereunder, it being understood and agreed by the parties that the only warranty provided for such products shall be the warranty provided by the manufacturer thereof which, if assignable, WATEROUS will assign to Buyer, if requested by Buyer;
- (c) any product or part, altered, modified, serviced or repaired other than by WATEROUS, without its prior written consent;
- (d) the cost of dismantling, removing, transporting, storing, or insuring the defective product or part and the cost of reinstallation; and
- (e) normal wear items (packing, strainers, filters, light bulbs, anodes, intake screens, mechanical seals, etc.).

ALL OTHER WARRANTIES ARE EXCLUDED, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER CAUSE OF ACTION, SHALL WATEROUS BE LIABLE FOR ANY PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR PERSONAL INJURY OR PROPERTY DAMAGES.

The exclusive remedy of Buyer and the sole liability of WATEROUS, whether based on contract, warranty, tort or any other basis of recovery whatsoever, is expressly limited at the election of WATEROUS to:

- (a) the replacement at the agreed point of delivery of any product or part, which upon inspection by WATEROUS or its duly authorized representative, is found not to conform to the limited warranty set forth above, or
- (b) the repair of such product or part, or
- (c) the refund or crediting to Buyer of the net sales price of the defective product or part.

BUYER'S REMEDIES CONTAINED HEREIN ARE EXCLUSIVE OF ANY OTHER REMEDY OTHERWISE AVAILABLE TO BUYER.

Waterous Company
125 Hardman Avenue South
South St. Paul, MN 55075 USA
www.waterousco.com

WATEROUS



Fire and Rescue Apparatus

Ten (10) Year Material and Workmanship Stainless Steel Piping Limited Warranty

1. LIMITED WARRANTY

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

Coverage:	Stainless steel piping shall be free from structural failures caused by defects in material and workmanship, or perforation caused by corrosion.
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	Pierce's obligation under this warranty is limited to repairing or replacing without charge, as Pierce may elect, the stainless steel piping or components which Pierce determines to have failed due to defective material and workmanship, or perforation caused by corrosion. This warranty does not cover the use of fluoroprotein (FP) type foam. The sodium chloride within FP foam can cause long-term damage to system components if not thoroughly flushed immediately after use.

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 Foam System & Five (5) Year Material and Workmanship Control Head Limited Warranty

1. LIMITED WARRANTY

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

Coverage:	Limited warranty 1 year parts and labor for the foam system and 5 years parts and labor for the control head.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	One (1) Year & Five (5) Year
Conditions and Exclusions: See Also Paragraphs 2 thru 4	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. 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.

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

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:	This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any: Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25% Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25% Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10% Corrosion Perforation 0-120 months 100% 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. 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.

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

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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 \$20,000 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”