



# **GOLDEN STATE**

**FIRE APPARATUS**

PREPARED ESPECIALLY FOR:

## **CITY OF MANTECA FIRE DEPARTMENT**

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One (1) Pierce Manufacturing, Inc.  
STOCK Saber 1500 GPM Type 1 Engine (Job 42989)



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# 1 PRODUCT PROPOSAL

## PRODUCT PROPOSAL FOR:

## City of Manteca Fire Department

1154 Union Road  
Manteca, CA 95337

## Sales Consultant

Ryan Wright  
[ryan@goldenstatefire.com](mailto:ryan@goldenstatefire.com)  
Mobile: (209) 613-3809

SUBMITTED DATE	EXPIRATION DATE	GSFA PROPOSAL #	MANUFACTURER BID #	MANUFACTURER	CONSORTIUM
12/06/2024	12/31/2024 OR UNTIL VEHICLE IS SOLD	71206-24B	981 (Job 42989)	Pierce Manufacturing Inc.	Sourcewell #113021- OKC, ID #259, Member # 21323

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

ITEM	PRODUCT DESCRIPTION	UNIT PRICE
A	One (1) Pierce Manufacturing, Inc. <u>STOCK</u> Saber 1500 GPM Type 1 Engine (Job 42989)	860,000.00
B	8.25% State Sales Tax	70,950.00
C	California Tire Fee	10.50
D	<b>GRAND TOTAL PURCHASE PRICE</b>	<b>930,960.50</b>

**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.

## ATTACHMENT 2

**PRODUCT COMPLETION** – The Product shall be ready for final inspection by Customer at the manufacturing facility within approximately **1.5 to 2 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 **1 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 12/06/2024, GSFA Proposal Number 71206-24B 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



**GOLDEN STATE**  
FIRE APPARATUS

ATTACHMENT 2

goldenstatefire.com

# **2 STANDARD TERMS AND CONDITIONS**

**Exhibit "A"**

## STANDARD TERMS AND CONDITIONS

### 1. Definitions.

- a. **"Agreement"** has the meaning given in the Product Proposal.
- b. **"Customer"** means the customer identified in the Product Proposal.
- c. **"Dealer Preparation,"** if applicable, means additional product(s) and/or services added by GSFA after Manufacturer's completion of the Product and prior to delivery, in accordance with the Dealer Supplied Products/Services List.
- d. **"Delivery Date"** means the Product Completion timeframe plus the Predelivery Service timeframe equals the Delivery Date.
- e. **"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).
- f. **"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)).
- g. **"GSFA"** means Golden State Fire Apparatus, Inc., a California corporation.
- h. **"Manufacturer"** means the person or persons, company, firm, corporation, partnership, or other organization identified in the Product Proposal as responsible for manufacturing the Product.
- i. **"Party"** or **"Parties"** means GSFA and/or Customer, as applicable.
- j. **"Predelivery Service"** means the Products and/or Services that will be provided by GSFA after transportation of the Product(s) from the manufacturing facility and prior to Final Delivery or Pick-Up.
- k. **"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).
- l. **"Product"** means the fire apparatus(es) and any associated equipment listed in the Product Proposal and further described in the Specifications.
- m. **"Product Completion"** means the fire apparatus(es) in the Product Proposal and further described in the Specifications being ready for final inspection by Customer at the manufacturing facility.
- n. **"Product Proposal"** means the GSFA proposal executed by Customer to which these Terms and Conditions are attached.
- o. **"Product Warranties"** means the Manufacturer warranties for the Product attached to the Product Proposal as Exhibit C.
- p. **"Specifications"** means the specifications for the Product attached to the Product Proposal as Exhibit B.
- q. **"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 such 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 (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. 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 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, 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) for the Product or any Manufacturer Price Increases occurring after the execution of the Agreement which increases 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](http://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 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 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. 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 consequential, incidental, 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 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 (3<sup>rd</sup>) 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.

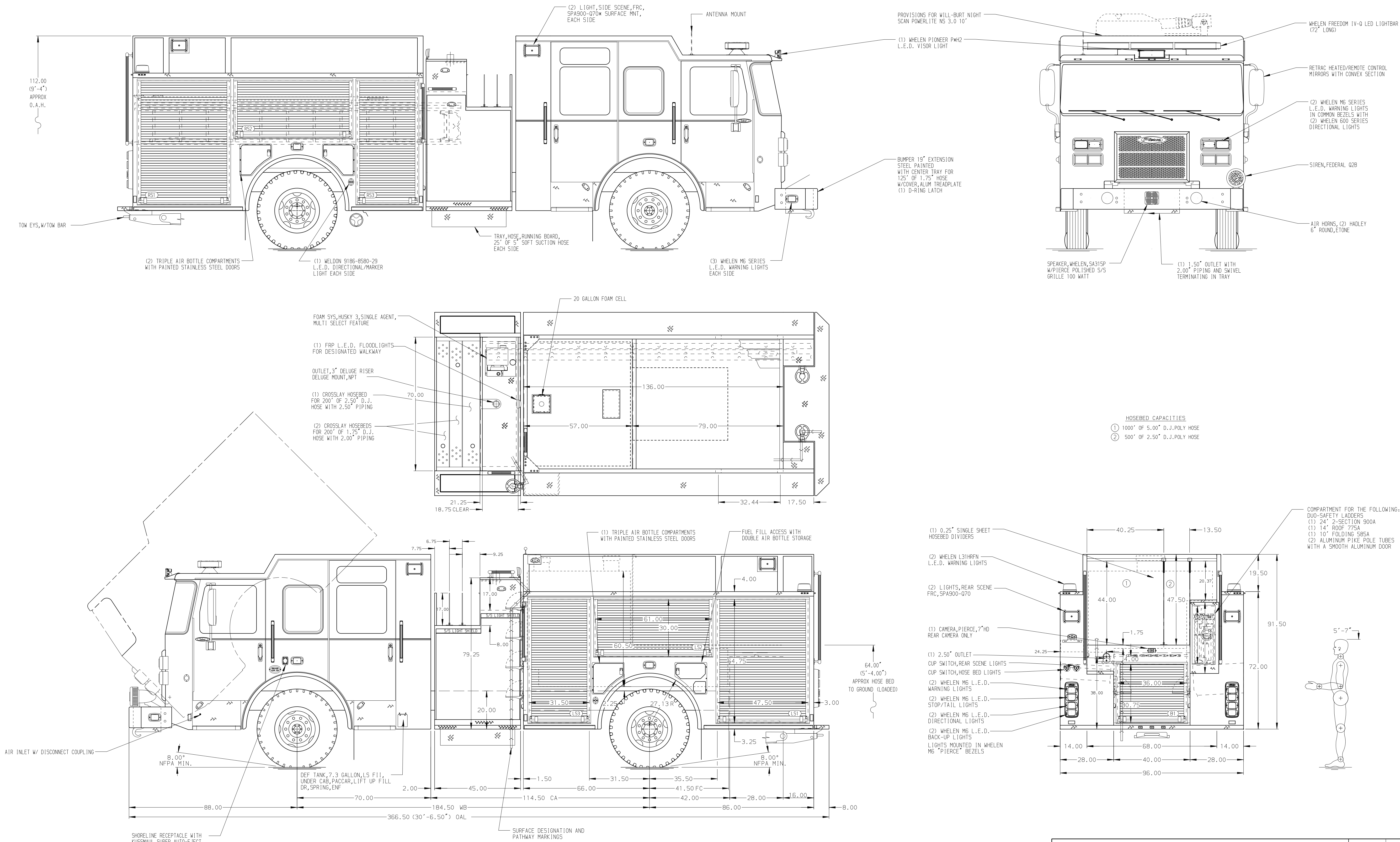
20. Governing Law; Jurisdiction; Disputes. Without regard to any conflict of laws provisions, the Agreement is to be governed by and under the laws of the state of California. Prior to taking any legal action that may and/or can arise out of the Agreement, the Parties shall first attempt mediation with 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**

# **3 PRODUCT SPECIFICATIONS**

**Exhibit "B"**



ALUMINUM BODY

NOTE  
DIMENSIONS SHOWN ARE APPROXIMATE  
AND ARE SUBJECT TO MINOR DEVIATIONS  
AS MAY OCCUR OR BE NECESSARY IN  
CONSTRUCTION.  
MINOR DETAILS NOT SHOWN.

				CHASSIS DATA	TITLE	1500-D-750P, 730G WATER 20G FOAM, 152" NEW YORK STYLE PUMPER, (2) CROSSLAYS, 45" PUMPHOUSE, DELUGE	JOB NO.	42989
				MAKE	FOR	PIERCE FIELD UNIT BRADENTON, FLORIDA	SCALE	1:24
				MODEL			DRAWN BY	VHO
				REV	DATE	BY	CHECKED BY	-
				CH			SHEET SIZE	D
				SABER FR	DWG NO.	42989AD	SHEET NO.	1 OF 1



## Proposal Details Report

ATTACHMENT 2 2/6/2024

**Customer:** Manteca Fire Department  
**Representative** Klockzien, Dave  
**Requirements Manager:**  
**Description:** Saber 7010 1500/750 SC, Low  
**Chassis:** Saber FR Chassis, BMP Only  
**Body:** Pumper, Medium, Aluminum, 2nd Gen, Saber

**Bid Number:** 981  
**Job Number:**  
**Organization:** Golden State Fire Apparatus, Inc

OptionCode	Type	Option	ProposalText
0074080		Build-to-Order, Pierce Florida Product - 2nd Gen Pumper	
0010012		No Boiler Plates requested	
0661794		Single Source Compliance	<b>SINGLE SOURCE MANUFACTURER</b> 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.
0584455		Manufacture Location, Bradenton, Florida	Your apparatus will be manufactured in Bradenton, Florida.
0584453		RFP Location: Bradenton, Florida	
0588609		Vehicle Destination, US	
0629866	SP	Comparison Report Required - PMFD	<b>COMPARISON REPORT</b> A report will be provided to allow the Sales Representative to compare the options to a previous job. The report will be provided for job 41141 (different engine).
0816491		Comply NFPA 1900 Changes Effective Jan 1, 2024, With Exceptions	<b>NFPA 2024 STANDARDS</b> 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	



0568412	Agency, Apparatus Certification, Pumper/Tanker, Third Party, PMFD	<p><b>NFPA COMPLIANCE</b></p> <p>Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in the current edition at time of contract execution. Fire Department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA."</p> <p><b>PUMP TEST</b></p> <p>The rated water pump will be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results, along with the pump manufacturer's certification of hydrostatic test, the engine manufacturer's certified brake horsepower curve, and the manufacturer's record of pump construction details will be forwarded to the Fire Department.</p> <p><b>GENERATOR TEST</b></p> <p>If the unit has a generator, the generator will be tested, approved, and certified by an ISO certified independent third party testing agency at the manufacturer's expense. The test results will be provided to the Fire Department at the time of delivery.</p>
0766110	Consortium, Sourcewell	
0537375	Unit of Measure, US Gallons	
0030006	Bid Bond Not Requested	<p><b>BID BOND NOT REQUESTED</b></p> <p>A bid bond will not be included. If requested, the following will apply:</p> <p>All bidders will provide a bid bond as security for the bid in the form of a 5 percent bid bond to accompany their bid. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language, which assures that the bidder/principal will give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.</p> <p>Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.</p>
0816569	Performance Bond, Not Requested, PPI Terms	<p><b>PERFORMANCE BOND NOT REQUESTED</b></p> <p>A performance bond will not be included. If requested at a later date, one will be provided to you for an additional cost and the following will apply:</p> <p>The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required.</p> <p>Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Bumper to Bumper warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 25 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 three (3) years from the date of such satisfactory acceptance and delivery, or the actual Bumper to Bumper warranty period, whichever is shorter.</p> <p>Due to global supply chain constraints, any delivery date contained herein is a good faith estimate as of the date of this order/contract, and merely an approximation based on current information. Delivery updates will be made available, and a final firm delivery date will be provided as soon as possible.</p> <p>If the Producer Price Index of Components for Manufacturing [www.bls.gov Series ID: WPUID6112] ("PPI") has increased at a compounded annual growth rate of 5.0% or more between the month Pierce accepts the order ("Order Month") and a month 14 months prior to the then predicted Ready For Pickup date ("Evaluation Month"), then pricing may be updated in an amount equal to the increase in PPI over 5.0% for each year or fractional year between the Order Month and the Evaluation Month.</p> <p>The seller will document any such updated price for the customer's approval before proceeding and provide an option to cancel the order.</p>
0000007	Approval Drawing	<p><b>APPROVAL DRAWING</b></p> <p>A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.</p> <p>A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.</p>

0002928	Electrical Diagrams	<b>ELECTRICAL WIRING DIAGRAMS</b> Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.
0816080	Saber FR Chassis, BMP Only	<b>SABER FR CHASSIS</b> The Pierce Saber FR® 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.
0629024	Chassis Discount, Saber FR	
0000110	Wheelbase	<b>WHEELBASE</b> The wheelbase of the vehicle will be 184.50".
0000070	GVW Rating	<b>GVW RATING</b> The gross vehicle weight rating will be 44,000#.
0729280	Frame Rails, 13.38 x 3.50 x .375, Enforcer	<b>FRAME</b> The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle. Each rail will have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle. The frame rails will be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges.
0020018	Frame Liner Not Req'd	
0637911	Axle, Front, Dana, D-2000F, 20,000 lb Saber FR/Enforcer	<b>FRONT AXLE</b> The front axle will be a reverse "I" beam type with inclined king pins. It will be a Dana axle, Model D-2000F, with a rated capacity of 20,000 lb.
0637913	Suspension, Front, Standens, Taper Leaf, 20,000 lb, Saber FR/Enforcer	<b>FRONT SUSPENSION</b> The front springs will be a Standens, three (3)-leaf, taper leaf design, 54.00" long x 4.00" wide, with a ground rating of 20,000 lb. The two (2) top leaves will wrap the forward spring hanger pin. The top leaf will also wrap the rear spring hanger pin. Both the front and rear eyes will be Berlin style wraps that will place the eyes in the horizontal plane within the main leaf. This will reduce bending stress from acceleration and braking. 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.
0778717	Shock Absorbers on Front Axle, Koni, Saber FR	<b>SHOCK ABSORBERS</b> Koni®, adjustable heavy-duty telescoping shock absorbers will be provided on the front axle.
0000322	Oil Seals, Front Axle	<b>FRONT OIL SEALS</b> Oil seals with viewing window will be provided on the front axle.
0582936	Tires, Front, Goodyear, G289 WHA, 315/80R22.50, 20 ply	<b>FRONT TIRES</b> 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.
0641555	Axle, Rear, Dana S23-190, 24,000 lb, Saber/Enforcer	<b>REAR AXLE</b> The rear axle will be a Dana Model S23-190, single axle assembly with a capacity of 24,000 lb.
0544253	Top Speed of Vehicle, 68 MPH /109 KPH	<b>TOP SPEED OF VEHICLE</b> A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph / 109 kph.

0565379	Suspen, Rear, Single Slipper Spring, 24,000 lb, Saber/Enforcer	<b>REAR SUSPENSION</b> The rear suspension will be Standens, semi-elliptical, 5.00" wide x 92.30" 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	<b>REAR OIL SEALS</b> Oil seals will be provided on the rear axle(s).
0782805	Tires, Rear, Goodyear, Armor Max MSD, 12R22.50, LRH, Single	<b>REAR TIRES</b> The rear tires will be four (4) Goodyear Armor Max MSD, 12R22.50 radials, load range H, rated for 27,120 lb maximum axle load and 68 mph maximum speed.
0039925	Wheels, Rear, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot, Single, 12R Tire	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.
0568081	Tire Balancing, Counteract Beads	<b>TIRE BALANCE</b> All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.
0620570	Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	<b>TIRE PRESSURE MANAGEMENT</b> There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires. The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi. Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.
0003245	Axle Hub Covers w/center hole, S/S, Front Axle	<b>FRONT HUB COVERS</b> Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.
0001960	Axle Hub Covers, Rear, S/S, High Hat (Pair)	<b>REAR HUB COVERS</b> A pair of stainless steel high hat hub covers will be provided on rear axle hubs.
0002045	Mud Flap, Front and Rear, Pierce Logo	<b>MUD FLAPS</b> Mud flaps with a Pierce logo will be installed behind the front and rear wheels.
0818775	Chocks, Wheel, Pumper, Provided by Fire Department, NFPA/ULC 2024	<b>WHEEL CHOCKS PROVIDED BY FIRE DEPARTMENT</b> NFPA 1900, 2024 edition, section 8.15.1 and CAN/ULC S515:2024 edition, section 5.2 requires wheel chocks mounted in a readily accessible location. Each wheel chock will hold the apparatus, when loaded to its GVWR or GCWR, on a hard surface with a 10 percent grade for the length of the apparatus with the transmission in neutral and the parking brake released. The wheel chocks are not on the apparatus as manufactured. The fire department will provide and install these wheel chocks.
0544690	Mounting Brackets, Chocks, Provided by Fire Department	<b>Wheel Chock Brackets Provided by Fire Department</b> The wheel chock brackets are not on the apparatus as manufactured. The fire department will provide and install the wheel chock brackets.

0820509	ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA 1900/ULC	<b>ELECTRONIC STABILITY CONTROL</b> 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. <b>ANTI-LOCK BRAKE SYSTEM</b> 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. <b>AUTOMATIC TRACTION CONTROL</b> 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.
0690932	Brakes, Bendix, ADB-22X, 17" Disc, Front	<b>BRAKES</b> The service brake system will be full air type by Bendix®. Front brakes will be Model ADB22X™, disc type with automatic pad wear adjustment and 17.00" rotors for improved stopping distance.
0581433	Brakes, Bendix, Cam, Rear, 16.50 x 7.00"	The rear brakes will be Bendix®, Model ES1657D, 16.50" x 7.00" cam operated with automatic slack adjusters.
0735527	Air Compressor, Brake, Wabco 26.8 CI, Paccar	<b>AIR COMPRESSOR, BRAKE SYSTEM</b> The air compressor will be a Wabco single piston compressor with a 26.8 CI displacement.
0644232	Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	<b>BRAKE SYSTEM</b> 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.
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	<b>BRAKE SYSTEM AIR DRYER</b> The air dryer will be WABCO System Saver 1200 with spin-on coalescing filter cartridge and 100 watt heater.
0000790	Brake Lines, Nylon	<b>BRAKE LINES</b> 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.
0000854	Air Inlet, w/Disconnect Coupling	<b>AIR INLET</b> One (1) air inlet with 3D series male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located forward in the driver side lower step well of cab. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female fitting will also be provided with the loose equipment.

0811018	SP Engine, Paccar MX13, 510HP, 1850 lb-ftW/OBD, EPA 2024, SFR/Enforcer, BMP/HDR/STK	<b>ENGINE</b> The chassis will be powered by an electronically controlled engine as described below. Make: Paccar Model: MX13 Power: 510 hp at 1600rpm Torque: 1850 lb-ft at 1000rpm Governed Speed: 1900 rpm Emissions Certification: EPA 2024 Fuel: Diesel Cylinders: Six (6) Displacement: 12.9L Starter: DP60 Fuel Filters: Dual cartridge style with check valve, water separator, and water in fuel sensor 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.
0811409	Not Required, Engine Contingency Adjustment	
0001244	High Idle w/Electronic Engine, Custom	<b>HIGH IDLE</b> 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."
0735687	Engine Brake, Fully Integrated, Paccar MX13 Engine	<b>ENGINE BRAKE</b> The compression release brake option is a fully integrated MX engine braking system. It utilizes the turbocharger and back pressure valve, but adds in a hydraulically operated compression brake to increase overall retarding power. To maximize the effectiveness of the compression brake the MX engine brake system works in conjunction with the turbocharger and back pressure valve. The driver will be able to turn the engine brake system on/off and have a high, medium and low setting.
0644227	Clutch, Fan, Air Actuated, Saber FR/Enforcer	<b>CLUTCH FAN</b> 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.
0644573	Air Intake, Water & Ember Screen, Saber FR/Enforcer	<b>ENGINE AIR INTAKE</b> 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. The ember separator is designed to prevent road dirt and recirculating hot air from entering the engine. The ember separator will be easily accessible by tilting the cab.
0814375	Exhaust System, Horizontal, Right Side	<b>EXHAUST SYSTEM</b> 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 extend 2.00" past 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.

0788765	Radiator, Saber FR/Enforcer	<p><b>RADIATOR</b></p> <p>The radiator and the complete cooling system will meet or exceed the current edition of applicable NFPA and engine manufacturer cooling system standards.</p> <p>For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes.</p> <p>The radiator core will have a minimum front area of 1060 square inches.</p> <p>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.</p> <p>The radiator will be compatible with commercial antifreeze solutions.</p> <p>The radiator assembly will be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.</p> <p>The radiator will include a de-aeration/expansion tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap.</p> <p>A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.</p> <p>Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.</p>
0001090	Cooling Hoses, Rubber	<p><b>COOLANT LINES</b></p> <p>Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.</p> <p>Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.</p>
0001125	Fuel Tank, 65 Gallon, Left Side Fill	<p><b>FUEL TANK</b></p> <p>A 65 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.</p> <p>A 0.75" drain plug will be located in a low point of the tank for drainage.</p> <p>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."</p> <p>A 0.50" diameter vent will be installed from tank top to just below fuel fill inlet.</p> <p>The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.</p>
0001129	Lines, Fuel	All fuel lines will be provided as recommended by the engine manufacturer.
0889521	DEF Tank, 7.3 Gallon, LS Fill, Under Cab, Paccar, Lift Up Fill Dr, Spring, ENF	<p><b>DIESEL EXHAUST FLUID TANK</b></p> <p>A 7.3 gallon diesel exhaust fluid (DEF) tank will be provided and mounted under the cab on the driver's side.</p> <p>A fill inlet will be provided on the driver's side of the cab. The lift up door will be spring loaded and be polished stainless steel.</p>
0552793	Not Required, Fuel Priming Pump	
0552712	Not Required, Shutoff Valve, Fuel Line	
0699437	Cooler, Chassis Fuel, Not Req'd.	
0690880	No Selection Required From This Category	
0887546	Trans, Allison 6th Gen, 4000 EVS P, w/Prognostics, Imp/Vel/SFR/Enf	<p><b>TRANSMISSION</b></p> <p>An Allison 6th generation, Model EVS 4000P, electronic, torque converting, automatic transmission will be provided.</p> <p>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.</p> <p>Two (2) PTO openings will be located on left side and top of converter housing (positions 8 o'clock and 1 o'clock).</p> <p>A transmission temperature gauge with an amber light and buzzer will be installed on the cab instrument panel.</p>

0625331	Transmission, Shifter, 6-Spd, Push Button, 4000 EVS	<b>TRANSMISSION SHIFTER</b> A six (6)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation. The transmission ratio will be: 1st 3.51 to 1.00 2nd 1.91 to 1.00 3rd 1.43 to 1.00 4th 1.00 to 1.00 5th 0.75 to 1.00 6th 0.64 to 1.00 R 4.80 to 1.00
0684459	Transmission Oil Cooler, Modine, External	<b>TRANSMISSION COOLER</b> A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.
0001375	Driveline, Spicer 1810	<b>DRIVELINE</b> Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1810 universal joints. The shafts will be dynamically balanced before installation. A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.
0734212	Steering, Dual Gear, TRW TAS-65, w/tilt, Paccar Pump w/ Cooler, Enf, Paccar	<b>STEERING</b> Dual steering gear, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and Paccar 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.
0509229	Steering Wheel, 2 Spoke	<b>STEERING WHEEL</b> The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 2-spoke design.
0681841	Logo/Emblem, Not Required	
0606441	Bumper, 19" Extended, Steel Painted, Saber FR/Enforcer	<b>BUMPER</b> A one (1)-piece bumper manufactured from 0.25" formed steel with a 0.38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange, and will extend 19.00" from the face of the cab. The bumper will be 95.28" wide with 45 degree corners and side plates. The bumper will be metal finished and painted job color. To provide adequate support strength, the bumper will be mounted directly to the front of the C channel frame. The frame will be a bolted modular extension frame constructed of 50,000 psi tensile steel. <b>Gravel Pan</b> A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and the cab face. The pan will be properly supported from the underside to prevent flexing and vibration.
0640197	Tray, Hose, Center, 19" Bumper, Outside Air Horns	<b>CENTER HOSE TRAY</b> A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 125' 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.
0630813	Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray	<b>Center Hose Tray Cover</b> A bright aluminum treadplate cover will be provided over the center hose tray. The cover will be attached with a stainless steel hinge. One (1) D-ring latch will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position.
0614646	No Lift & Tow Package, Imp/Vel, AXT, SFR/Enf	

0002270	Tow Hooks, Chrome	<p><b>TOW HOOKS</b></p> <p>Two (2) chromed steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks 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 hooks will not be used for lifting of the apparatus.</p>
0632360	Cab, Saber FR, 7010	<p><b>CAB</b></p> <p>The 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.</p> <p>For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards.</p> <p>The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.</p> <p>The front of the cab will be constructed of a 0.13" firewall plate, covered with a minimum 0.090" front skin thickness, and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.</p> <p>The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.</p> <p>The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability.</p> <p>The centerline of front axle to the rear of the cab will be 70.00" long.</p> <p>The 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.</p> <p>The floor to ceiling height inside the crew cab will be 64.50" in the center and outboard positions.</p> <p>The crew cab floor will measure 46.00" from the rear wall to the front of the rear facing seat risers.</p> <p>The engine tunnel, at the rearward highest point (knee level), will measure 61.50" to the rear wall.</p> <p>The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.</p> <p>The cab will be a full tilt cab style.</p> <p>A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.</p> <p><b>CAB ROOF DRIP RAIL</b></p> <p>For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof.</p> <p><b>FENDER LINERS</b></p> <p>Full circular inner fender liners in the wheel wells will be provided.</p> <p><b>PANORAMIC WINDSHIELD</b></p> <p>A 1-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.</p> <p><b>WINDSHIELD WIPERS</b></p> <p>Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements.</p> <p>The washer reservoir will be able to be filled without raising the cab.</p>
0747442	Engine Tunnel, X12, MX13, Spray Insulation, Enforcer	<p><b>ENGINE TUNNEL</b></p> <p>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.</p> <p>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.</p> <p>The engine tunnel will be no higher than 17.00" off the crew cab floor.</p>
0887601	Cab Insulation, Enforcer/Saber FR	<p><b>INTERIOR CAB INSULATION</b></p> <p>The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, a minimum of 1.00" insulation in the crew cab floor, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.</p>



0633594	Rear Wall, Interior, Adjustable Seating	<b>INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)</b> The interior rear wall of the crew cab will have mounting holes every 27.61 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	<b>CAB REAR WALL EXTERIOR COVERING</b> The exterior surface of the rear wall of the cab will be painted job color.
0644201	Cab Lift, Elec/Hyd, Saber FR/Enforcer	<b>CAB LIFT</b> A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves. Lift controls will be located on the right side pump panel or front area of the body in a convenient location. 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. <b>Cab Lift Interlock</b> 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.
0636939	Grille, Polished Stainless Steel, Front of Cab, Saber FR	<b>GRILLE</b> A single piece polished stainless steel grille and framework will be provided on the front center of the cab.
0647932	Not Required, Trim, S/S Band, Across Cab Face, AXT/Saber/Enforcer	
0087357	Molding, Chrome on Side of Cab	<b>SIDE OF CAB MOLDING</b> Chrome molding will be provided on both sides of cab.
0772130	Mirrors, Retractable, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex, Marker Light	<b>MIRRORS</b> A Retractable, dual vision, motorized, west coast style mirror, with chrome finish, will be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass will be heated and adjustable with remote control within reach of the driver. An amber marker light will be provided on each mirror head.
0648170	Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Raised Roof	<b>DOORS</b> 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	<b>Door Panels</b> 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	<b>ELECTRIC OPERATED CAB DOOR WINDOWS</b> 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.
0638310	Steps, 4-Door Cab, Saber FR/Enforcer	<b>CAB STEPS</b> 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 a 10.00" 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	<b>CAB EXTERIOR HANDRAILS</b> 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	<b>STEP LIGHTS</b> 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.
0002141	Fenders, s/s on cab - Saber/Enforcer	<b>FENDER CROWNS</b> Stainless steel fender crowns will be installed at the cab wheel openings.
0637984	Window, Side of C/C, Fixed, Saber FR/Enforcer	<b>CREW CAB WINDOWS</b> One (1) fixed window with tinted glass will be provided on each side of the cab, to the rear of the front cab door. The windows will be sized to enhance light penetration into the cab interior. The windows will measure 18.70" wide x 23.75" high.
0012090	Not Required, Windows, Front/Side of raised roof	
0779033	Not Required, Windows Rear of Crew Cab, Saber FR/Enforcer	
0798597	Holder, Cup, Cab/Crewcab, Each, Loc	<b>CUP HOLDER</b> There will be two (2) cup holder(s) provided. Each cup holder will have self-adjusting fingers that automatically grip beverage containers of various sizes. A recess in the cup holder will allow it to hold beverage containers with handles. The cup holder(s) will be located on top of engine tunnel for driver and officer.
0722796	Dash, Poly, Saber FR/Enforcer	<b>CAB DASH</b> 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	<b>MOUNTING PLATE ON ENGINE TUNNEL</b> 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 1.50" to allow for wire routing below the plate. The mounting surface will be painted to match the cab interior.

## ATTACHMENT 2

0750824	Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	<b>CAB INTERIOR</b> The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service. The engine tunnel will be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew. For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum. The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on an aluminum sheet and securely fastened to interior cab ceiling. The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs. All wiring will be placed in metal raceways. <b>CAB INTERIOR UPHOLSTERY</b> The cab interior upholstery will be 36 oz dark silver gray vinyl.
0753903	Cab Interior, Paint Color, Saber FR/Enforcer	<b>CAB INTERIOR PAINT</b> The cab interior metal surfaces, excluding the rear heater panels, will be painted fire smoke gray, vinyl texture paint. The rear heater panels will be painted black, vinyl textured paint.
0052100	Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	<b>CAB FLOOR</b> 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.

0741237	HVAC, Standard-Duty, Saber FR, CARE	<p><b>DEFROST/AIR CONDITIONING SYSTEM</b>  A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.</p> <p><b>Cab Defroster</b>  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 will be directed towards the left side cab window  One (1) adjustable will be directed towards the right side cab window  Six (6) fixed outlets will be directed at the windshield  The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.</p> <p><b>Cab/Crew Auxiliary Heater</b>  There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat riser with a dual scroll blower. An aluminum plenum incorporated into the cab structure to be used to transfer heat to the forward positions.</p> <p><b>Air Conditioning</b>  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 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) will be directed towards the seating position on the left side of the cab  Four (4) will be directed towards the seating position on the right side of the cab  Adjustable air outlets will be strategically located on the evaporator cover per the following:  Five (5) will be directed towards crew cab area  A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be secured with four (4) screws.  The air conditioner refrigerant will be R-134A and will be installed by a certified technician.</p> <p><b>Climate Control</b>  An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control.  The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature.  The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position.  The system controller will be located within panel position #12.</p> <p><b>Gravity Drain Tubes</b>  Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.</p>	<b>ATTACHMENT 2</b>
0639675	Sun Visor, Smoked Lexan, AXT, Imp/Vel, SFR/Enf	<p><b>SUN VISORS</b>  Two (2) smoked Lexan™ sun visors will be provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab.  There will be a black plastic thumb latch provided to help secure each sun visor in the stowed position.</p>	
0634328	Grab Handles, Driver and Officer Door Posts, Saber FR/Enforcer	<p><b>GRAB HANDLES</b>  A black rubber covered grab handle will be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles will be securely mounted to the post area between the door and windshield.</p>	
0583938	Lights, Engine Compt, Custom, Auto Sw, WIn 3SC0CDCR, 3" LED, Trim	<p><b>ENGINE COMPARTMENT LIGHTS</b>  There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination.  These light(s) will be activated automatically when the cab is raised.</p>	
0631830	Fluid Check Access, Saber FR/Enforcer, Arrow XT	<p><b>ACCESS TO ENGINE DIPSTICKS</b>  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) Southco C2 chrome flush latch will be provided on the access door.</p>	

0583039	Not Required, Side Roll and Frontal Impact Protection	
0622617	Seating Capacity, 6 Belted Seats	<b>SEATING CAPACITY</b> The seating capacity of the vehicle (including tiller cab and belted seat positions in the rescue body) will be six (6).
0636957	Seat, Driver, Pierce PSV, Air Ride, High Back, PRIMARY, SFR/Enf	<b>DRIVER SEAT</b> 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.
0636946	Seat, Officer, Pierce PSV, Fixed, SCBA, PRIMARY, SFR/Enf	<b>OFFICER SEAT</b> A seat will be provided in the cab for the passenger. The seat will be a fixed type with no suspension. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat back will be an SCBA back style with 5 degree fixed recline angle. 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.
0620420	Radio Compartment, Below Non-Air Ride Seat, Saber FR/Enforcer	<b>RADIO COMPARTMENT</b> A radio compartment will be provided under the officer's seat. The inside compartment dimensions will be 16.00" wide x 7.50" high x 15.00" deep, with the back of the compartment angled up to match the cab structure. A drop-down door with one (1) Southco C2 chrome flush latch will be provided for access. The compartment will be constructed of smooth aluminum and painted to match the cab interior.
0632852	Seat, Rr Fcng C/C, LS Otbrd, Pierce PSV, SCBA, PRIMARY, SFR/Enf	<b>REAR FACING DRIVER SIDE OUTBOARD SEAT</b> There will be one (1) rear facing seat provided at the driver side outboard position in the crew cab. For optimal comfort, the seat will be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat back will be an SCBA back style with 5 degree fixed recline angle. 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.
0102783	Not Required, Seat, Rr Facing C/C, Center	
0632848	Seat, Rr Fcng C/C, RS Otbrd, Pierce PSV, SCBA, PRIMARY, SFR/Enf	<b>REAR FACING PASSENGER SIDE OUTBOARD SEAT</b> There will be one (1) rear facing seat provided at the passenger side outboard position in the crew cab. For optimal comfort, the seat will be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat back will be an SCBA back style with 5 degree fixed recline angle. 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.
0632949	Seat, Fwd Fcng C/C, LS Otbrd, Pierce PSV, Hi-Back, Foldup, SECONDARY, SFR/Enf	<b>FORWARD FACING DRIVER SIDE OUTBOARD SEAT</b> There will be one (1) forward facing, foldup seat provided at the driver 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.

0783479	Cabinet, Forward Facing, Center, 38.50 W x 50 H x 28 D, Roll, SFR/Enf	<b>ATTACHMENT 2</b> <b>FORWARD FACING CENTER CABINET</b> A forward facing cabinet will be provided in the crew cab at the center position. The cabinet will be 38.50" wide x 50.00" high x 28.00" deep with one (1) Amdor rollup door with anodized finish, locking with #751 key. The frame to frame opening of the cabinet will be 36.00" wide x 44.75" high. The minimum clear door opening will be 33.25" wide x 38.87" high. The cabinet will include two (2) infinitely adjustable shelves with a 0.75" 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. <b>Cabinet Light</b> There will be one (1) white LED strip light installed on the left side of the interior cabinet door opening and one (1) white LED strip light installed on the right side of the interior cabinet door opening. The lighting will be controlled by an automatic door switch.
0632875	Seat, Fwd Fcng C/C, RS Otbrd, Pierce PSV, Hi-Back, Foldup, SECONDARY, SFR/Enf	<b>FORWARD FACING PASSENGER SIDE OUTBOARD SEAT</b> 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.
0766467	Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE	<b>SEAT UPHOLSTERY</b> All seat upholstery will be leather grain 36 oz dark silver gray vinyl resistant to oil, grease and mildew. The cab will have six (6) seating positions.
0543991	Bracket, Air Bottle, Hands-Free II, Cab Seats	<b>AIR BOTTLE HOLDERS</b> 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 three (3) SCBA brackets.
0603866	Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer	<b>SEAT BELTS</b> 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	<b>HELMET STORAGE PROVIDED BY FIRE DEPARTMENT</b> NFPA 1900, 2024 edition, section 11.1.8.4.1 and CAN/ULC S515:2024 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	<b>CAB DOME LIGHTS</b> 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. In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.
0816997	Portable Hand Light, Provided by Fire Dept, NFPA/ULC 2024	<b>PORTABLE HAND LIGHTS PROVIDED BY FIRE DEPARTMENT</b> The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.
0644187	Cab Instruments, Black Gauges, Black Bezels, Saber FR/Enforcer	<b>CAB INSTRUMENTATION</b> The cab instrument panel will include gauges, 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.

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### 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 telltale light on indicator light display with steady tone alarm

High volts (15.5 VDC)

Amber telltale light on indicator light display with steady tone alarm

Engine Tachometer (RPM)

Speedometer MPH (Major Scale), KM/H (Minor Scale)

Fuel level gauge (Empty - Full in fractions):

Low fuel (1/8 full)

Amber indicator light in gauge dial with steady tone alarm

Engine Oil pressure Gauge (PSI):

Low oil pressure to activate engine warning lights and alarms

Red indicator light in gauge dial with steady tone alarm

Front Air Pressure Gauges (PSI):

Low air pressure to activate warning lights and alarm

Red indicator light in gauge dial with steady tone alarm

Rear Air Pressure Gauges (PSI):

Low air pressure to activate warning lights and alarm

Red indicator light in gauge dial with steady tone alarm

Transmission Oil Temperature Gauge (Fahrenheit):

High transmission oil temperature activates warning lights and alarm

Amber indicator light in gauge dial with steady tone alarm

Engine Coolant Temperature Gauge (Fahrenheit):

High engine temperature activates an engine warning light and alarms

Red indicator light in gauge dial with steady tone alarm

Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):

Low fluid (1/8 full)

Amber indicator light in gauge dial

### 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)

Air rest (air restriction)

DPF (engine diesel particulate filter regeneration)

HET (engine high exhaust temperature) (where applicable)

ABS (antilock brake system)

MIL (engine emissions system malfunction indicator lamp) (where applicable)

Regen inhibit (engine emissions regeneration inhibit) (where applicable)

Side roll fault (where applicable)

Front air bag fault (where applicable)

Aux brake overheat (auxiliary brake overheat) (where applicable)

The following red telltale lamps will be present:

Ladder rack down

Parking brake

Stop engine

The following green telltale lamps will be present:

Left turn

Right turn

Battery on

Ignition

Aux brake (auxiliary brake engaged) (where applicable)

The following blue telltale lamps will be present:

High beam

### Alarms

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning condition is active.

### 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 for 3 to 5 seconds when the ignition switch is moved to the on position with the battery switch on.

### 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

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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, defrost, and air conditioning control panel.

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

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

Parking brake control: An air actuated push/pull park brake control.

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

High idle engagement switch: A maintained 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 provided and accessible while standing on the ground.**

**The panel will be 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/TRANSMISSION/ABS J1939 Diagnostic Port**

**ABS Diagnostic Switch and Indicator - The switch and amber indicator will allow access to diagnostic mode and display of standard ABS system fault blink codes that may be generated by the ABS system**

**DPF REGEN (Diesel Particulate Filter Regeneration Switch) (where applicable) will be provided to request regeneration of the engine emission system. An amber indicator will be provided on top of the switch that will illuminate in a "CHECK ENGINE" condition**

**REGEN INHIBIT (Diesel Particulate Filter Regeneration Inhibit Switch) (where applicable) will be provided that will request that regeneration be temporarily prevented. A green indicator will be provided on top of the Regen Inhibit switch that will illuminate when the Regen Inhibit feature is active. Regen Inhibit will be disabled upon cycling of the ignition switch to the off state.**

0002544	Air Restriction Indicator - Pierce Chassis	<b>AIR RESTRICTION INDICATOR</b> A high air restriction warning indicator light (electronic) will be provided.
0543751	Light, Do Not Move Apparatus	<b>"DO NOT MOVE APPARATUS" INDICATOR</b> A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On." The same circuit that activates the Do Not Move Apparatus indicator will activate a steady tone alarm when the parking brake is released.
0637359	Not Required, Door Open Indicator w/Do Not Move Truck Light, Enf/Saber FR	
0754774	Switching, Cab Instrument Lower Console & Overhead, Rocker, Saber	<b>SWITCH PANELS</b> The built-in switch panels will be located in the lower console or overhead console of the cab. Switches will be rocker type with an indicator light, of which is an integral part of the switch.
0802940	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	<b>WIPER CONTROL</b> 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.



0821191	Wiring, Spare, 20 A 12V DC, Batt Dir, 1st NFPA1900/ULC	<b>SPARE CIRCUIT</b> There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above 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 protected to 20 amps at 12 volts DC. Power and ground will terminate behind officer seat. Termination will be with a 10-place bus bar with screws and removable cover. Wires will be sized to 125 percent of the protection. Battery direct loads cannot be Load Managed.
0821473	Wiring, Spare, 4.8 A 12V DC, USB Term Batt Dir 1st NFPA1900/ULC	<b>SPARE CIRCUIT</b> There will be one (1) dual USB fast charge socket mounts installed on the apparatus. The above 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 protected to 4.8 amps at 12 volts DC. The USB socket mount will be officer dash. Termination will be a dual USB charger socket. Wires will be sized to 125 percent of the protection. This circuit(s) may be load managed when the parking brake is applied.
0763646	Vehicle Information Center, LCD On Gauge Cluster Only, Sab/Enf	<b>INFORMATION CENTER</b> There will be a LCD display integral to the cab gauge panel provided that will display the following information: Total distance Trip distance Total hours Trip hours PTO "A" hours PTO "B" hours
0816633	Collision Mitigation, HAAS Alert (R2V), HA7	<b>COLLISION MITIGATION</b> There will be a HAAS Alert®, Model HA 7 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.
0610240	Vehicle Data Recorder w/Seat Belt Monitor	<b>VEHICLE DATA RECORDER</b> 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 <b>Seat Belt Monitoring System</b> A seat belt monitoring system (SBMS) will be provided. 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 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.

0687904	Antenna Mount, Custom Chassis, Cable Routed to Behind Officer Seat	<b>RADIO ANTENNA MOUNT</b> There will be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed on officer side of cab roof 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.
0808099	Camera, Pierce, 7" HD, R, Camera, AHD	<b>VEHICLE CAMERA SYSTEM</b> There will be a color vehicle camera system provided with the following: One (1) Analog High Definition (AHD) white camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse. The camera image will be displayed on a 7.00" High Definition (HD) display located in view of the driver in the custom dash, per instrument panel layout. The display will include manual camera activation capability and audio from the active camera. The following components will be included: One (1) HD700136DC, display One (1) 1080p AHD rear camera All necessary cables
0814831	Not Required, Camera Switcher	<b>Camera Switcher</b> A camera switcher is not required.
0674566	Location, Rear Vision Camera	<b>REAR CAMERA LOCATION</b> The rear camera will be located Center at rear .
0624249	Electrical Power/Signal Protection & Control, Saber FR	<b>ELECTRICAL POWER CONTROL SYSTEM</b> A compartment will be provided in or under the cab to house the vehicle's electrical power and signal circuit protection and control components. The power and signal protection and control compartment will contain circuit protection devices and power control devices. Power and signal protection and control components will be protected against corrosion, excessive heat, excessive vibration, physical damage and water spray. Serviceable components will be readily accessible. Circuit protection devices, which conform to SAE standard, will be utilized to protect each circuit. All circuit protection devices will be sized to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting) and conform to SAE J553 or J258. When required, automotive type fuses conforming to SAE J554, J1284, J1888 or J2077 will be utilized to protect electronic equipment. Power control relays and solenoids will have a direct current (dc) rating of 125 percent of the maximum current for which the circuit is protected. Visual status indicators will be supplied to identify control safety interlocks and vehicle status. In addition to visual status indicators, audible alarms designed to provide early warning of problems before they become critical will be used. <b>Voltage Monitor System</b> A voltage monitor system will be provided to indicate the status of each battery system connected to the vehicle's electrical load. The monitor system will provide visual and audio warning when the system voltage is below optimum levels. <b>Power and Ground Studs</b> Spare circuits will be provided in the primary distribution center for two-way radio equipment. The spare circuits will consist of the following: One (1) 12-volt DC, 30 amp battery direct spare One (1) 12-volt DC ground and un-fused switched battery stud located in or adjacent to the power distribution center <b>EMI/RFI Protection</b> The electrical system proposed will include means to control undesired electromagnetic and radio frequency emissions. State of the art electrical system design and components will be used to ensure radiated and conducted EMI (electromagnetic interference) and RFI (radio frequency interference) emissions are suppressed at their source. The apparatus proposed will have the ability to operate in the electromagnetic environment typically found in fire ground operations. The contractor will be able to demonstrate the EMI and RFI testing has been done on similar apparatus and certifies that the vehicle proposed meets SAE J551 requirements. EMI/RFI susceptibility will be controlled by applying immune circuit designs, shielding, twisted pair wiring and filtering. 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.

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0624260	Electrical System, Saber FR	<p><b>ELECTRICAL</b></p> <p>All 12-volt electrical equipment installed by Pierce Manufacturing will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal. Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.</p> <p>Electrical wiring and equipment will be installed utilizing the following guidelines:</p> <p>All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.</p> <p>Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.</p> <p>Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also, a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.</p> <p>Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will have this compound in the plug to prevent corrosion and for easy separation (of the plug).</p> <p>All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.</p> <p>All electrical terminals in exposed areas will have silicon applied completely over the metal portion of the terminal.</p> <p>All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection.</p> <p>Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.</p> <p>An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.</p> <p>The results of the tests will be recorded and provided to the purchaser at time of delivery.</p>	<b>ATTACHMENT 2</b>
0079166	Batteries, (4) Stryten/Exide Grp 31, 950 CCA ea, Threaded Stud	<p><b>BATTERY SYSTEM</b></p> <p>There will be four (4) 12 volt Stryten/Exide®, Model 31S950X5W, batteries that include the following features will be provided:</p> <ul style="list-style-type: none"> <li>950 CCA, cold cranking amps</li> <li>190 amp reserve capacity</li> <li>High cycle</li> <li>Group 31</li> <li>Rating of 3800 CCA at 0 degrees Fahrenheit</li> <li>760 minutes of reserve capacity</li> <li>Threaded stainless steel studs</li> </ul> <p>Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity.</p> <p>The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.</p>	
0008621	Battery System, Single Start, All Custom Chassis	<p><b>BATTERY SYSTEM</b></p> <p>There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.</p> <p><b>MASTER BATTERY SWITCH</b></p> <p>There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.</p> <p>An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.</p>	
0002698	Battery Compartment, Saber/Enforcer	<p><b>BATTERY COMPARTMENTS</b></p> <p>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.</p> <p>Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound.</p> <p><b>JUMPER STUDS</b></p> <p>One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.</p>	
0812586	Charger, Sngl Sys, Kussmaul, Chief 091-266-12-60, 60 Amp	<p><b>BATTERY CHARGER</b></p> <p>There will be a Kussmaul™, Chief Series Smart Charger 6012, product code 091-266-12-60, 60 amp battery charger with build-in touch screen display provided.</p> <p>The battery charger will be wired to the AC shoreline inlet through a junction box located near the battery charger.</p>	

0814869	Location, Cab, Charger, Behind Driver Seat	The battery charger will be located in the cab behind the driver seat.	<b>ATTACHMENT 2</b>
0813791	Panel, Charger Display, Kussmaul, 091-94-12, Batt Dir	<b>REMOTE CONTROL PANEL - BATTERY CHARGER</b> There will be a Kussmaul™, Model 091-94-12 universal display panel included. It will be wired directly to the chassis batteries.	
0814939	Location, Cab, Ind/Remote, Driver's Seat Riser	The battery charger indicator will be located on the driver's seat riser.	
0016857	Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	<b>AUTO EJECT FOR SHORELINE</b> 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	
0020168	Shoreline Cab Loc, Cab, Saber FR	The shoreline receptacle will be located on the driver side of cab, above wheel.	
0647729	Alternator, 320 amp, Delco Remy 40SI	<b>ALTERNATOR</b> A Delco Remy®, Model 40SI, 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 regulator and rectifier system that has been tested and qualified to an ambient temperature of 257 degrees Fahrenheit (125 degrees Celsius). The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.	
0644176	Load Manager, Integrated In Electrical System, Saber FR/Enforcer	<b>ELECTRONIC LOAD MANAGEMENT</b> An electronic load management (ELM) system that monitors the vehicles 12-volt electrical system, and automatically reduces the electrical load in the event of a low voltage condition and by doing so, ensures the integrity of the electrical system. The ELM will monitor the vehicle's voltage while at the scene (parking brake applied). It will sequentially shut down individual electrical loads when the system voltage drops below a preset value. Two (2) separate electrical loads will be controlled by the load manager. The ELM will sequentially re-energize electrical loads as the system voltage recovers.	
0783157	Headlights, Rect LED, JW Spkr Evo 2, Heat, AXT/DCF/Enf/Imp/Sab/Vel	<b>HEADLIGHTS</b> There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights with heated lens 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.	
0804681	Light, Directional, W/in 604T* Cmn Bzl, Above Headlts,Sab/Enf	<b>DIRECTIONAL LIGHTS</b> There will be two (2) Whelen®, Model 604T*, amber LED populated directional lights provided on the front of the cab, above the headlights. Each light will be housed in the same quad common bezel as the front warning light. The lens color(s) to be clear. The flash pattern of the directional lights will be Steady On (Arrow).	
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	<b>INTERMEDIATE LIGHT</b> 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	<b>CAB CLEARANCE/MARKER/ID LIGHTS</b> 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.	

0647899	Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29 LED, Sab/Enf	<b>FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS</b> There will be two (2) Weldon, Model 9186-8580-29, amber LED lights installed front of the cab door, one (1) on each side of the cab. The lights will activate as marker lights with the headlight switch and directional lights with the corresponding directional circuit.
0627282	Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	<b>REAR CLEARANCE/MARKER/ID LIGHTING</b> There will be a three (3) LED light bar used as identification lights 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) LED lights installed 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) LED lights installed on the side of the apparatus used 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	<b>REAR FMVSS LIGHTING</b> 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.
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	<b>LICENSE PLATE BRACKET</b> One (1) license plate bracket constructed of stainless steel will be provided at the rear of the apparatus. One (1) white LED light with chrome housing will be provided to illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.
0556842	Bezels, WIn, (2) M6 Chrome Pierce, For mtg (4) WIn M6 lights	<b>LIGHTING BEZEL</b> 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	<b>BACK-UP ALARM</b> 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.
0769566	Lights, Perimeter Cab, Amdor AY-LB-12HW020 & AY-LB-12HW012 LED 4Dr	<b>CAB PERIMETER SCENE LIGHTS</b> There will be four (4) Amdor white LED strip lights provided, one (1) for each cab door and crew cab door. Two (2) Amdor, Model AY-LB12HW020, 350 lumens each, 20.00" LED strip lights, one (1) for each cab door. Two (2) Amdor, Model AY-LB12HW012, 190 lumens each, 12.00" LED strip lights, one (1) for each crew cab door. These lights will be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.

0769572	Lights, Perimeter Pump House, Amdor AY-LB-12HW020 LED 2lts	<b>PUMP HOUSE PERIMETER LIGHTS</b> There will be two (2) Amdor, Model AY-LB12HW020, 350 lumens each, 20.00" long, white LED weatherproof strip lights with brackets provided under the pump panel running boards, one (1) each side. If the combination of options in the vehicle does not permit clearance for a 20.00" light, a 12.00" version of the Amdor light will be installed. The lights will be controlled by the same means as the body perimeter lights.
0770056	Lights, Perimeter Body, Amdor AY-LB-12HW020 LED 2lts, Rear Step	<b>BODY PERIMETER SCENE LIGHTS</b> There will be two (2) Amdor, Model AY-LB12HW020, 350 lumens, 20.00" long, white LED's, 12 volt DC 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 the parking brake is applied.
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	<b>STEP LIGHTS</b> 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. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. These step lights will be actuated with the pump panel light switch. All other steps on the apparatus will be illuminated per the current edition of applicable NFPA standards.
0097930	Housing, Light, Painted Blister	<b>LIGHT HOUSING</b> There will be two (2) housing(s) installed Per AD to allow for a partial recess of a light in an area with an obstruction behind the bulkhead. The housing material will match the body material and each will be painted to match the apparatus.
0598966	Lights, Side Scene, FRC SPA900-Q70 Surface Mt, 2nd	<b>SCENE LIGHTS</b> There will be two (2) Fire Research, Model SPA900-Q70 scene light(s) with chrome flange(s) installed on the side of the apparatus, mount behind passenger side crew cab door, high as possible. Mount one above RS1, between the two body post's. A control for the light(s) selected above will be the following: a switch at the driver's side switch panel a switch at the pump operator's panel no additional switch location no additional switch location These lights may be load managed when the parking brake is set.
0598967	Lights, Side Scene, FRC SPA900-Q70 Surface Mt, 1st	<b>SCENE LIGHTS</b> There will be two (2) Fire Research, Model SPA900-Q70 scene light(s) with chrome flange(s) installed on the side of the apparatus, mount behind driver side crew cab door, high as possible. Mount one above LS1, between the two body post's. A control for the light(s) selected above will be the following: a switch at the driver's side switch panel a switch at the pump operator's panel no additional switch location no additional switch location These lights may be load managed when the parking brake is set.
0776357	Light, Visor, WIn, 12V P*H2* Pioneer, Cnt Feature, 1st	<b>12 VOLT LIGHTING</b> 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 white. The light(s) will be controlled by a switch at the driver's side switch panel. These light(s) may be load managed when the parking brake is applied.
0532358	Not Required, Deck Lights, Other Hose Bed & Rear Lighting	
0645877	Lights, Hose Bed, Sides, Dual LED Light Strips	<b>HOSE BED LIGHTS</b> There will be white 12 volt DC LED light strips with stainless steel protective cover, provided to light the hose bed area. Hose Bed lights will meet the photometric levels listed in the current edition of applicable NFPA standards for Hose Bed lighting requirements. Light strip(s) will be installed along the upper edge of the left side of the hose bed. Light strip(s) will be installed along the upper edge of the right side of the hose bed. The lights will be activated by a cup switch at the rear of the apparatus no more than 72.00" from the ground.
0645677	Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body	

0645611	Lights, Rear Scene, FRC, SPA900-Q70, Surface Mt, 1st	<b>REAR SCENE LIGHT(S)</b> There will be two (2) Fire Research, Model SPA900-Q70, LED scene light(s) with chrome trim bezels installed at the rear of the apparatus, upper rear body bulkheads, one each side. The light(s) will be controlled by a switch at the driver's side switch panel and by a cup switch at the driver's side rear bulkhead. The light(s) may be load managed when the parking brake is set.
0709438	Lights, Walk Surf, FRP Flood, LED	<b>WALKING SURFACE LIGHT</b> 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.
0802863	Pumper, Medium, Aluminum, 2nd Gen, Saber	
0632361	No Additional Florida Discount - w/Saber FR Chassis	
0554271	Body Skirt Height, 20"	
0013492	Tank, Water, 750 Gallon, Poly, Med, New York Style	<b>WATER TANK</b> Booster tank will have a capacity of 750 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. The tank will be stepped in design to allow for a low hosebed. 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	
0553725	Restraint, Water Tank, Heavy Duty, Special Type Tank, 4x4, or Export	<b>WATER TANK RESTRAINT</b> A heavy-duty water tank restraint will be provided.
0003429	Not Required, Direct Tank Fill	
0003424	Not Required, Dump Valve	
0048710	Not Required, Jet Assist	

0030007 Not Required, Dump Valve Chute

## ATTACHMENT 2

0514778 Not Required, Switch, Tank Dump Master

0709973 Hose Bed, Aluminum, Pumper, New York Style, Saber/Commercial

### HOSE BED

The hose bed will be fabricated of 0.125"-5052 aluminum with a nominal 38,000 psi tensile strength.

The hose bed will be as low as practical.

Upper and rear edges of side panels will have a double break for rigidity.

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.

A cross divider will be provided at the front of the hose bed before the tank transitions from the lower section to the upper section. The divider will run from the top of the side sheet down below the hose bed grating.

The inside of the hose bed will be painted. The inside of the cargo area above the pump will be painted.

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 1000' of 5" DJ Poly and 500' of 2.5" DJ Poly.

0083488 Divider, Hose Bed, .25" Unpainted

### HOSE BED DIVIDER

One (1) hosebed divider 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.

0806306 Straps, Top of Hose Bed

### HOSE BED HOSE RESTRAINT

The hose in the hose bed will be restrained by two (2) black nylon Velcro® straps at the top of the hose bed. Each strap will be permanently attached to a footman loop on one side and will loop through the footman loop on the opposite side then fasten to itself with hook and loop fabric. One (1) strap will be approximately one third of the distance from the front of the hose bed and one (1) strap will be approximately one third of the distance from the rear of the hose bed.

0807433 Hose Restraint, Hose Bed, Web, Rear, Separate From Top, Seat Belt

A heavy duty 2" black nylon webbing will be installed at the rear of the hose bed with seat belt buckles at the top. The seat belt buckles will be provided with one (1) web strap attached to each buckle for release. At the bottom of the webbing, hinged style seat belt buckle will be provided. If a strap is provided, the color of the strap will be orange.

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 In hosebed, on top of the ladder compartment.

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.

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.

0689497 Tailboard, 24" & 8" Deep, T-Shaped, Angled Corners

### 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 24.00" deep in the center area and 8.00" deep to the rear of the side compartments. The tailboard will be T-shaped. The outboard sides of the tailboard will be angled at 45 degrees beginning at the point where the body meets the tailboard at the outboard edge angling rearward to the rear edge of the tailboard.

The exterior side will be flanged down and in for increased rigidity of tailboard structure.



0690037	Wall, Rear, Smooth Aluminum/Body Material	<b>REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL</b> The rear facing surfaces of the center rear wall will be smooth aluminum. The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body. Any inboard facing surfaces below the height of the hosebed will be aluminum diamondplate.
0889214	Tow Eyes, w/Tow Bar, 2G Pumper	<b>REAR TOW EYES</b> 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. <b>REAR TOW BAR</b> 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.
0590926	Hose Restraint, Running Board, Velcro Straps	<b>RUNNING BOARD HOSE RESTRAINT</b> A pair of 2.00" wide black nylon straps with Velcro fasteners will be provided for each hose tray to secure the hose during travel. Two (2) hose trays will be located one (1) in each side running board.
0003634	Tray, Hose, Running Board, 25' of 5.00", Soft Suction Hose	<b>HOSE TRAY</b> Two (2) hose trays will be recessed one (1) in each side running board. Capacity of the tray will be 25.00' of 5.00" soft suction 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 0.125", 5052 H32 aluminum.  
Side compartments will be an integral assembly with the rear fenders.  
Circular fender liners will be provided for prevention of rust pockets and ease of maintenance.  
Side compartment flooring will be 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 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 is designed for sustaining maximum loads.

Forward to the rear axle, the support system will include "L"-shaped support members bolted to the chassis frame rails. These welded support members will include vertical formed channels, horizontal structural channels, and support gussets. These parts extend from the chassis frame outward underneath the body.

Rearward to the rear axle, the body support system will include two rearward facing "L"-shaped support members bolted to the chassis frame rails. These support members will be connected to the two body supporting crossmembers forming a boxed foundation for the rear body support system.

Steel upper platform decks will be mounted on the top of these support members to create a floating substructure which will result in a 500 lb equipment support rating per lower compartment.

All structural components of this system will be made from high strength 50K steel plate material or structural steel componentry. 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.

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 pattern which assimilates a 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 in an unsupported fashion 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 body and substructure.

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" to simulate the twisting a truck may experience when driving over a curb.

Making a 90 degree turn, while driving at 20 mph to simulate 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.

**ATTACHMENT 2**

0023650	LS 152" Rollup, Full Height Front & Rear, FDLER	<p><b>LEFT SIDE COMPARTMENTATION</b></p> <p>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. <b>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.</b></p>
0063658	RS 152" Rollup, Full Height Front & Rear, FDLER	<p><b>RIGHT SIDE COMPARTMENTATION</b></p> <p>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. <b>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.</b></p>
0594005	Doors, Rollup, Amdor, Side Compartments	<p><b>SIDE COMPARTMENT ROLLUP DOOR(S)</b></p> <p>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 to be provided for each roll-up door. 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.</p>
0013671	Compt, Rear, Rollup, 30.75" FF, 25.88" D	<p><b>REAR COMPARTMENTATION</b></p> <p>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.</p>

0594003	Door, Amdor, Rollup, Rear Compartment	<p><b>ROLLUP REAR COMPARTMENT DOOR</b></p> <p>The rear compartment will have a rollup door.</p> <p>The door will be double faced, aluminum construction, satin aluminum and manufactured by AMDOR™ brand rollup doors.</p> <p>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.</p> <p>Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingress.</p> <p>The 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.</p> <p>Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.</p> <p>A polished stainless steel lift bar to be provided for each roll-up door. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.</p> <p>All injection molded rollup door wear components will be constructed of Type 6 Nylon.</p> <p>The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.</p> <p>The header for the rollup door assembly will not exceed 4.00".</p> <p>A heavy-duty magnetic switch will be used for control of open compartment door warning lights.</p>	<b>ATTACHMENT 2</b>
0554995	No Body Modification Required		
0616670	Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, Pumper/Tanker	<p><b>COMPARTMENT LIGHTING</b></p> <p>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).</p> <p>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.</p> <p>Opening the compartment door will automatically turn the compartment lighting on.</p>	
0687146	Shelf Tracks, Painted	<p><b>MOUNTING TRACKS</b></p> <p>There will be seven (7) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1, RS2, RS3 and B1. These tracks will be installed vertically to support the adjustable shelf(s). The tracks will be painted to match the compartment interior.</p>	
0600350	Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations	<p><b>ADJUSTABLE SHELVES</b></p> <p>There will be five (5) shelves with a capacity of 500 lb provided.</p> <p>The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides.</p> <p>Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track.</p> <p>The shelves will be held in place by .12" thick stamped plated brackets and bolts.</p> <p>The location(s) will be in LS1 at the depth transition point, in RS1 at the transition point, in RS3 at the transition point, in LS3 at the depth transition point and in B1 in the upper third.</p>	
0647091	Tray, Floor Mounted, Slide-Out, 500lb, 2.00" Sides	<p><b>SLIDE-OUT FLOOR MOUNTED TRAY</b></p> <p>There will be four (4) floor mounted slide-out tray(s) provided.</p> <p>Each tray will have 2.00" high sides and a minimum capacity rating of 500 lb in the extended position.</p> <p>Each tray will be constructed of aluminum painted spatter gray.</p> <p>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.</p> <p>To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.</p> <p>To ensure years of easy operation, the slides will require no more than a 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.</p> <p>Proof of compliance will be provided upon request.</p> <p>Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.</p> <p>The location(s) will be RS1, RS3, LS1 and LS3.</p>	
0004016	Rub Rail, Aluminum Extruded, Side of Body	<p><b>RUB RAIL</b></p> <p>Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail.</p> <p>Trim will be 2.12" high with 1.38" flanges turned outward for rigidity.</p> <p>The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.</p>	

0784811	Fender Crowns, Rear, Stainless, w/Removable Liner	<p><b>BODY FENDER CROWNS</b> 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.</p> <p><b>BODY FENDER LINER</b> 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.</p>
0519849	Not Required, Hose, Hard Suction	<p><b>HARD SUCTION HOSE</b> Hard suction hose will not be required.</p>
0626229	Handrails, Side Pump Panels, Per Print	<p><b>HANDRAILS</b> 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.</p>
0004126	Handrails, Beavertail, Standard	<p><b>HANDRAILS</b> One (1) vertical handrail will be located on each rear beavertail.</p>
0610196	Handrail, Rear, Above Hose Bed, New York Style/Low Hose Bed	<p>One (1) horizontal black rubber-covered aluminum handrail will be provided above the hose bed at the rear of the apparatus. The hose bed dividers shall be tied to the upper handrail or cross bar in order to provide sufficient reinforcement.</p>
0648325	Compt, Air Bottle, Double, Tri Door, Fender Panel	<p><b>AIR BOTTLE STORAGE (Double)</b> A quantity of one (1) air bottle compartment, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the left side rearward of the rear wheels. The triangular door to cover the double air bottle opening and the fuel tank access. A painted stainless steel door with a chrome plated flush lift &amp; 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, black rubber matting will be provided.</p> <p><b>AIR BOTTLE COMPARTMENT STRAP</b> A strap will be provided in the air bottle compartment to help contain the air bottle when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.</p>
0657522	Compt, Air Bottle, Triple, Fender Panel	<p><b>AIR BOTTLE STORAGE (Triple)</b> A quantity of three (3) air bottle compartments designed to hold (3) air bottles up to 7.25" in diameter x 26.00" deep will be provided on the left side forward of the rear wheels, on the right side forward of the rear wheels and on the right side rearward of the rear wheels. A painted stainless steel door with a chrome plated flush lift &amp; 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, black rubber matting will be provided.</p> <p><b>AIR BOTTLE COMPARTMENT STRAP</b> A strap will be provided in the air bottle compartment(s) to help contain the air bottles when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.</p>
0004225	Ladder, 24' Duo-Safety 900A 2-Section	<p><b>EXTENSION LADDER</b> There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.</p>
0004230	Ladder, 14' Duo-Safety 775A Roof	<p><b>ROOF LADDER</b> There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.</p>

## ATTACHMENT 2

0049958	Ladders Btwn Tank & S.Sht, RS, Extended Rear, Enclosed, RPH	<b>LADDER STORAGE</b> The ladders 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. The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. The ladders that extend into the pump house will also be enclosed. A black rubber boot will be provided to enclose the ladders in the gap between the pump house and the body. 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. If the apparatus does not have a flush rear wall, an aluminum 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 enclosure will also include a vertically hinged smooth aluminum door with a D-handle latch to access the ladders. The door will be hinged on the left side.
0014245	Ladder, 10' Duo-Safety Folding 585A, w/Mounting	<b>FOLDING LADDER</b> One (1) 10' aluminum, Series 585-A, Duo-Safety folding ladder will be installed in a U-shaped trough inside the ladder storage compartment.
0816920	Pike Pole, Provided by Fire Department, NFPA/ULC 2024	<b>PIKE POLE PROVIDED BY FIRE DEPARTMENT</b> 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 Fire Hooks Unlimited 8 foot roof hook.
0816918	Pike Pole, 6', Provided by Fire Department, NFPA/ULC 2024	<b>6' PIKE POLE PROVIDED BY FIRE DEPARTMENT</b> 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 Fire Hooks Unlimited 6 foot roof hook.
0004361	Tubes, Alum, Pike Pole Storage	<b>PIKE POLE STORAGE</b> 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.
0785102	Steps, Folding, Front of Body, Cargo Bed Access, w/LED, Trident	<b>FOLDING STEPS FRONT OF BODY</b> 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	<b>REAR FOLDING STEPS</b> 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.

0007545	Pump House, Side Control, 45", Control Zone	<p><b>PUMP COMPARTMENT</b></p> <p>The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. The pump compartment will be constructed of the same material as the body compartmentation.</p> <p>The pump compartment substructure will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards.</p> <p>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.</p> <p>Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly.</p> <p><b>PUMP MOUNTING</b></p> <p>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.</p> <p><b>LEFT SIDE PUMP CONTROL PANELS</b></p> <p>All pump controls and gauges will be located at the left side of the apparatus and properly identified.</p> <p>Layout of the pump control panel will be ergonomically efficient and systematically organized. The pump operator's control panel will be removable in two (2) main sections for ease of maintenance:</p> <p>The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges.</p> <p>The lower section of the panel will contain all inlets, outlets, and drains.</p> <p>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.</p> <p><b>IDENTIFICATION TAGS</b></p> <p>The identification tag for each valve control will be recessed in the face of the tee handle.</p> <p>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.</p> <p>All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag.</p> <p>All remaining identification tags will be mounted on the pump panel in chrome plated bezels.</p> <p>The pump panel on the right side will be removable with lift and turn type fasteners.</p> <p>Trim rings will be installed around all inlets and outlets.</p> <p>The trim rings for the side discharge outlets will be color coded and labeled to correspond with the discharge identification tag.</p>	<b>ATTACHMENT 2</b>
0037731	Pump House Structure, Raised, Included with Ladder Storage		
0004425	Pump, Waterous, CSU, 1500 GPM, Single Stage	<p><b>PUMP</b></p> <p>Pump will be a Waterous CSU, 1500 gpm single (1) stage midship mounted centrifugal type.</p> <p>Pump will be the class "A" type.</p> <p>Pump will deliver the percentage of rated discharge at pressures indicated below:</p> <p>100 percent of rated capacity at 150 psi net pump pressure.</p> <p>70 percent of rated capacity at 200 psi net pump pressure.</p> <p>50 percent of rated capacity at 250 psi net pump pressure.</p> <p>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).</p> <p>Pump will be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	
0004481	Seal, Grafoil, Waterous	<p><b>PUMP PACKING</b></p> <p>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.</p> <p>Lantern rings will be located at the inner ends of the stuffing boxes, to avoid having to remove them when replacing pump packing.</p> <p>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.</p>	

## ATTACHMENT 2

0816447	Trans, Pump, Waterous C22 Series	<b>PUMP TRANSMISSION</b> 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	<b>PUMPING MODE</b> 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	<b>AIR PUMP SHIFT</b> 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	<b>TRANSMISSION LOCK-UP</b> 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	<b>AUXILIARY COOLING SYSTEM</b> 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	<b>INTAKE RELIEF VALVE - PUMP</b> 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.
0794959	Controller, Pressure, Pierce, Pump Boss, PBA300	<b>PRESSURE CONTROLLER</b> A Pierce Pump Boss Model PBA300 pressure governor will be provided. A pressure transducer will be installed in the water discharge manifold on the pump. The display panel will be located at the pump operator's panel.
0072153	Primer, Trident, Air Prime, Air Operated	<b>PRIMING PUMP</b> 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.
0780364	Manuals, Pump, (2) Total, Electronic Copies	<b>PUMP MANUALS</b> 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.



0602512	Plumbing, Stainless Steel and Hose, Single Stage Pump, Control Zone	<b>PLUMBING, STAINLESS STEEL AND HOSE</b> 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	<b>FOAM SYSTEM PLUMBING</b> 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	<b>MAIN PUMP INLETS</b> 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.
0004646	Cap, Main Pump Inlet, Long Handle, NST, VLH	<b>MAIN PUMP INLET CAP</b> 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	<b>VALVES</b> 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 <b>ten (10) year</b> warranty.
0016158	Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	The location of the valve for the one (1) inlet will be recessed behind the pump panel.
0004700	Control, Inlet, at Valve	<b>INLET CONTROL</b> 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"	<b>LEFT SIDE INLET</b> 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.
0029147	Not Required, Inlet, Right Side	
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	
0586174	Provision, Front Inlet	<b>FRONT INLET PROVISION</b> Provisions for a front inlet will be provided on the right side pump suction manifold. Flange will be capped off for possible addition of front inlet at a later date.
0092568	No Rear Auxiliary Inlet Requested	

0723049	Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	<b>INLET BLEEDER VALVE</b> 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.
0029043	Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing	<b>TANK TO PUMP</b> The booster tank will be connected to the intake side of the pump with stainless steel piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. Tank to pump line will run straight (no 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"	<b>TANK REFILL</b> 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	<b>DISCHARGE OUTLET CONTROLS</b> 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 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel. Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.
0004940	Outlet, Left Side, 2.50"	<b>LEFT SIDE DISCHARGE OUTLETS</b> There will be One (1) discharge outlet with a 2.50" valve 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	<b>LEFT SIDE OUTLET ELBOWS</b> 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"	<b>RIGHT SIDE DISCHARGE OUTLETS</b> There will be One (1) discharge outlet with a 2.50" valve 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	<b>RIGHT SIDE OUTLET ELBOWS</b> 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	<b>LARGE DIAMETER DISCHARGE OUTLET</b> 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	<b>LARGE DIAMETER OUTLET ELBOWS</b> 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	<b>FRONT DISCHARGE OUTLET</b> There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located in the center bumper tray. 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"	<b>REAR DISCHARGE OUTLET</b> There will be One (1) discharge outlet piped to the rear of the hose bed, left 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.
0040286	Elbow, Rear Outlets, 30 Degree, 2.50" FNST x 2.50" MNST, VLH	<b>REAR OUTLET ELBOWS</b> 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, 30 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	<b>DISCHARGE CAPS/ INLET PLUGS</b> 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	<b>OUTLET BLEEDER VALVE</b> 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.
0820280	Outlet, 3.00" Deluge Riser	<b>DELUGE RISER</b> 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. Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 13.7.5.3.
0770359	No Monitor Requested, Customer/Dealer Furnished and Installed	<b>MONITOR</b> A customer/dealer supplied and installed make and model no monitor required or requested monitor will be properly installed on the deluge riser.
0029304	No Nozzle Req'd	
0005070	Deluge Mount, NPT	The deluge riser will have male National Pipe Threads 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	<p><b>CROSSLAY HOSE BEDS</b></p> <p>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.</p> <p>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.</p> <p>The crosslay controls will be at the pump operator's panel.</p> <p>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.</p> <p>Vertical scuffplates constructed of stainless steel will be provided at the front and rear ends of the bed on each side of vehicle.</p> <p>Crosslay bed flooring will consist of removable perforated brushed aluminum.</p>
0090442	Crosslays Sngl Sheet Unpainted, (1) 2.50" Std Cap	<p><b>2.50" CROSSLAY HOSE BED</b></p> <p>One (1) crosslay with 2.50" outlets will be provided. This bed to be capable of carrying 200' of 2.50" double jacketed hose and will be plumbed with 2.50" i.d. pipe and gated with a 2.50" quarter turn ball valve.</p> <p>Outlet to be equipped with a 2.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.</p> <p>The crosslay control will be at the pump operator's panel.</p> <p>When used in conjunction with other crosslay/speedlay/deadlay configurations, a center crosslay divider, when needed, will be fabricated of .25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish. The remainder of the crosslay bed will be painted job color.</p> <p>Stainless steel vertical scuffplates will be provided at hose bed ends (each side of vehicle).</p> <p>Bottom of hose bed ends (each side) will also be equipped with a stainless steel scuffplate.</p> <p>Crosslay bed flooring will consist of removable perforated brushed aluminum.</p>
0623374	Hose Restraint, Crosslays, 2" Nylon Web, Seat Belt Buckle, Tether, Bar, Sides	<p><b>CROSSLAY HOSE RESTRAINT</b></p> <p>A 2.00" black nylon webbing design restraint will be provided at each of the ends of three (3) crosslay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the crosslays, with footman loops and a permanent attachment, and is to attach at the top outside corners with seat belt buckles. The female end of the seat buckle will be permanently attached at the top corner of the opening. A bar will be attached to the female ends of the seat belt buckles to allow a single pull release. A single orange nylon strap will be attached to the bar for releasing the buckles on the webbing.</p>
0029260	Not Required, Speedlays	
0750536	Hose Restr, Spdly, Not Required, No Spdly	
0590891	Hose Restraint, Crosslay/Deadlay, Velcro Straps, Top	<p><b>CROSSLAY/DEADLAY HOSE RESTRAINT</b></p> <p>The crosslay/deadlay hosebed(s) will have three (3) 2.00" wide black nylon straps with Velcro fasteners provided across the top to secure the hose during travel. The straps will extend from the front to back across the top of the hosebed(s).</p>
0019853	Crosslays, 8.00" Lower Than Standard - Control Zone w/9.00" Raised PH	<p><b>CROSSLAY 8.00" LOWER THAN STANDARD</b></p> <p>The crosslays will be lowered 8.00" from standard.</p>

**HUSKY 3 FOAM PROPORTIONER****ATTACHMENT 2**

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 .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 operator's 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) .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 the center of front bumper, left rear outlet, front crosslay, center crosslay and rear crosslay.

**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	<b>SINGLE FOAM TANK REFILL</b> 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 will display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop and the controller will shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED will illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.
0031896	Demonstration, Foam System, Dealer Provided	
0022539	Foam Cell, 20 Gallon, Reduce Water	<b>FOAM TANK</b> 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 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	<b>FOAM TANK DRAIN</b> 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	
0738072	Approval Dwg, Pump Panel(s), Not Required	
0032479	Pump Panel Configuration, Control Zone	<b>PUMP PANEL CONFIGURATION</b> The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.
0629252	Material, Pump Panels, Side Control Black Vinyl	<b>PUMP AND GAUGE PANEL</b> 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.
0721765	Panel, Pump Access - Right Side Only, Side Control	<b>PUMP ACCESS</b> <b>Right Side Panel</b> The right side upper pump panel will be removable. <b>Panel Fastener</b> The removable panels will be secured with black swell latch. The left side pump panels will be attached with screws. The right side lower pump panel (drain bank) will be attached with screws.
0583824	Light, Pump Compt, WIn 3SC0CDCR LED White	<b>PUMP COMPARTMENT LIGHT</b> There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment.
0586382	Gauges, Engine, Included With Pressure Controller	Engine monitoring graduated LED indicators will be incorporated with the pressure controller. Also provided at the pump panel will be the following: - Master Pump Drain Control
0005601	Throttle, Engine, Incl'd w/Press Controller	
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle, Green	<b>THROTTLE READY GREEN INDICATOR LIGHT</b> 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	<b>OK TO PUMP INDICATOR LIGHT</b> There will be a green indicator light installed on the pump operator's panel that is activated when the pump is in Ok To Pump mode.
0511078	Gauges, 4.00" Master, Class 1, 30"-0-600psi	<b>VACUUM AND PRESSURE GAUGES</b> The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated. The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#. Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. 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 non-corrosive polished stainless steel or brass plugs. They will be marked with a label. This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.
0511100	Gauge, 2.00" Pressure, Class 1, 30"-0-400psi	<b>PRESSURE GAUGES</b> The individual "line" pressure gauges for the discharges will be Class 1 interlube filled. They will be a minimum of 2.00" in diameter and have white faces with black lettering. Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. Gauges will have a pressure range of 30"-0-400#. The individual pressure gauge will be installed as close to the outlet control as practical. This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.
0062586	Gauge, Water Level, Class 1, Pierce Std	<b>WATER LEVEL GAUGE</b> There will be an electronic water level gauge provided on the operator's panel that registers water level by means of five (5) colored LED lights. The lights will be durable, ultra-bright five (5) LED design viewable through 180 degrees. The water level indicators will be as follows: 100 percent = Green 75 percent = Yellow 50 percent = Yellow 25 percent = Yellow Refill = Red The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the water tank is empty. The level measurement will be based on the sensing of head pressure of the fluid in the tank. The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from water and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The field calibratable display measures head pressure to accurately show the tank level.
0062992	Gauge, Foam Level, (1) Tank, Class 1, GAAAR 5lt	<b>FOAM LEVEL GAUGE</b> An electronic foam level gauge will be provided on the operator's panel that registers foam level by means of five (5) colored LED lights. The lights will be durable, ultra-bright five (5) LED design viewable through 180 degrees. The foam level indicators will be as follows: 100 percent = Green 75 percent = Yellow 50 percent = Yellow 25 percent = Yellow Refill = Red The light will flash when the level drops below the given level indicator to provide an eighth of a tank indication. To further alert the pump operator, the lights will flash sequentially when the foam tank is empty. The level measurement will be based on the sensing of head pressure of the fluid in the tank. The display will be constructed of a solid plastic material with a chrome plated die cast bezel to reduce vibrations that can cause broken wires and loose electronic components. The encapsulated design will provide complete protection from foam and environmental elements. An industrial pressure transducer will be mounted to the outside of the tank. The display will be able to be calibrated in the field and will measure head pressure to accurately show the tank level.
0660319	Light Shield, S/S LED, Full Panel Coverage, Two Piece	<b>LIGHT SHIELD</b> There will be a polished, 16 gauge stainless steel light shield installed over the pump operators panel. The light shield will be split into two separate pieces to provide illumination of the entire pump operators panel. There will be 12 volt DC white LED lights installed under the stainless steel light shield 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. There will be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.

## ATTACHMENT 2

0606694	Air Horns, (2) Hadley, 6" Round, eTone, In Bumper	<b>AIR HORN SYSTEM</b> 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.
0606834	Location, Air Horns, Bumper, Each Side, Outside Frame, Inboard (Pos #2 & #6)	<b>Air Horn Location</b> The air horns will be located on each side of the bumper, just outside of the frame rails.
0757092	Control, Air Horn, Multi Select	<b>Air Horn Control</b> The air horn(s) will be activated by the following:
0757078	Control, Air Horn, Push Button Sw, RS	Right side push button switch
0757084	Control, Air Horn, Horn Ring	Steering wheel horn ring with electric/air horn selector switch
0533071	Siren, WIn 295SLSC1, 100 or 200 Watt, w/Plug-in/Detachable Microphone Cord	<b>ELECTRONIC SIREN</b> A Whelen, Model: 295SLSC1, electronic siren with a plug-in, detachable noise canceling microphone will be provided. This siren to be active when the battery switch is on and that emergency master switch is on.
0790527	Location, Electronic Siren, Center Dash Switch Panel, Saber FR	The electronic siren head will be located in switch panel # 8 area of the center dash switch panel.
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.
0601306	Speaker, (1) WIn, SA315P, w/Pierce Polished Stainless Steel Grille, 100 watt	<b>SPEAKER</b> There will be one (1) Whelen®, Model SA315P, black nylon composite, 100-watt, speaker with through bumper mounting brackets and polished stainless steel grille provided. The speaker will be connected to the siren amplifier.
0601565	Location, Speaker, Frt Bumper, Recessed, Center (Pos 4)	The speaker(s) will be recessed in the center of the front bumper.
0895310	Siren, Federal Q2B	<b>AUXILIARY MECHANICAL SIREN</b> 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.
0006095	Siren, Mechanical, Mounted Above Deckplate	The mechanical siren will be mounted on the bumper deck plate. It will be mounted on the left side. A reinforcement plate will be furnished to support the siren.
0748305	Control, Mech Siren, Multi Select	<b>MECHANICAL SIREN CONTROL</b> The mechanical siren will be activated by the following:
0748282	Control, Mech Siren, Ft Sw LS	Left side foot switch.
0895055	Control Mech Siren, Ft Sw RS, Interlock	Right side foot switch. The control to be available when the parking brake is released.
0736164	Sw, Siren Brake, Momentary, LS Overhead Sw Pnl	A momentary switch will be included in the left side overhead switch panel to activate the siren brake.
0740391	Sw, Siren Brake, Momentary Chrome Push Button, RS	A momentary chrome push button switch will be included in the right side dash panel to activate the siren brake.



0746353	Not Required, Warning Lights Intensity	
0606710	Lightbar, WIn, Freedom IV-Q, 72", RR_R_W____W_R_RR	<b>FRONT ZONE UPPER WARNING LIGHTS</b> There will be one (1) 72.00" 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. Open in the driver's side first front position. One (1) red flashing LED module in the driver's side second front position. Open in the driver's side third front position. One (1) white LED module in the driver's side fourth front position. Open in the driver's side fifth front position. Open in the driver's side sixth front position. Open in the passenger's side sixth front position. Open in the passenger's side fifth front position. One (1) white flashing LED module in the passenger's side fourth front position. Open in the passenger's side third front position. One (1) red flashing LED module in the passenger's side second front position. Open 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 included on the lightbar. There will be a switch installed in the cab on the switch panel to control this lightbar. The two (2) white flashing LED modules will be disabled when the parking brake is applied. The two (2) 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	
0540384	Lights, Front Zone, WIn M6°C LED, Clear Lens, in Common Bzl	<b>LIGHTS, FRONT ZONE LOWER</b> Two (2) Whelen model M6°C LED flashing warning lights will be installed on the cab face above the headlights, in a common bezel with the directional lights. The driver's side front warning light to be red. The passenger's side front warning light to be red. Both lights will include a clear lens. There will be a switch located in the cab on the switch panel to control the lights.
0540692	Lights, Side Zone Lower, WIn M6°C LED, Clear Lens, 3pr, Ovr 25	<b>SIDE ZONE LOWER LIGHTING</b> There will be six (6) Whelen®, Model M6°C, flashing LED warning lights with chrome trim installed per the following: Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red. Two (2) lights, one (1) each side, as close to center above the front wheels as possible. The side middle lights to be red. Two (2) lights, one (1) each side, centered above rear wheels. The side rear lights to be red. The lights will include clear lenses. There will be a switch in the cab on the switch panel to control the lights.
0564655	Lights, Rear Zn Lwr, WIn M6°C LED, Clear Lens, For Tail Lt Housing	<b>REAR ZONE LOWER LIGHTING</b> There will be two (2) Whelen®, Model M6°C, LED flashing warning lights 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 clear. There will be a switch located in the cab on the switch panel to control the lights.
0088745	Light, Rear Zone Up, WIn L31HRFN LED Beacon, Red LED	<b>REAR/SIDE ZONE UPPER WARNING LIGHTS</b> There will be two (2) Whelen®, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There will be a switch located in the cab on the switch panel to control the beacons. The color of the lights will be red LEDs with both domes clear.
0006551	Not Required, Lights, Rear Upper Zone Blocking	
0006615	Mtg, Rear Warn Lts, Compt Top	The rear warning lights will be mounted on top of the compartmentation with all wiring totally enclosed. The rear deck lights will be mounted on the beavertails as high as possible.
0671685	Mounting Provisions, Will-Burt Night Scan, Powerlite NS 3.0 10', Cab	<b>LIGHT TOWER CAB ROOF REINFORCEMENTS</b> Aluminum reinforcements will be installed in the crew cab for the future addition of a Will-Burt Night Scan Powerlite Model NS 3.0 light tower. The base of the Night Scan light will be mounted to the passenger side of the crew cab roof. The reinforcements will be mounted so that the future unit can centered on the crew cab roof.

0519934	Not Required, Brand, Hydraulic Tool System	
0649753	Not Required, PTO Driven Hydraulic Tool System	
0007150	Bag of Nuts and Bolts	<b>LOOSE EQUIPMENT</b> The following equipment will be furnished with the completed unit: One (1) bag 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	<b>NFPA LOOSE EQUIPMENT</b> <b>NFPA Required Loose Equipment Provided by Fire Department</b> The following loose equipment as outlined in NFPA 1900, 2024 edition, table 8.1 and CAN/ULC S515:2024 edition, section 5.2 will be provided by the fire department: 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. <b>NFPA Loose Equipment That Should be Considered</b> The following loose equipment as outlined in NFPA 1900, 2024 edition, appendix table A.8.4 (a) and CAN/ULC S515:2024 edition, section 5.2 should be considered: 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).
0816941	Soft Suction Hose, Provided by Fire Department, NFPA/ULC 2024	<b>SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT</b> Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.
0027023	No Strainer Required	
0816939	Extinguisher, Dry Chemical, NFPA 2024, Provided by Fire Department	<b>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</b> 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	<b>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</b> 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	<b>FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT</b> 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	<b>PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT</b> The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.

**PAINT PROCESS****ATTACHMENT 2**

The exterior custom cab and/or body painting procedure will consist of a seven (7) step finishing process. A commercial chassis paint process will follow similar processes as determined by the chassis manufacturer. The following procedure will be used by Pierce:

Manual Surface Preparation - 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.

Chemical Cleaning and Pretreatment - 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. A final pure water rinse will be applied to all metal surfaces.

Surfacer Primer - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective base coat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a critical aesthetic finish. The surfacer primer will be a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.

Finish Sanding - 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.

Sealer Primer - The sealer primer is applied prior to the base coat 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 top coated.

Base coat Paint - Two coats of a high performance, two component high solids polyurethane base coat will be applied. The Base coat will be applied to a thickness that will achieve the proper color match. The Base coat will be used in conjunction with a urethane clear coat to provide protection from the environment.

Clear Coat - Two (2) coats of clear coat will be applied over the base coat color. The clear coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style 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.

Our specifications are written to define cyclic corrosion testing, physical strengths, durability and minimum appearance requirements must be met in order for an exterior paint finish to be considered acceptable as a quality finish.

Each batch of base coat color will be checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again 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 are 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 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.

**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 will be 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. Pierce will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with the state EPA rules and regulations.

**PAINT**

The cab and the body will be painted #90 red

0646897	Paint Chassis Frame Assy, E-Coat, Standard	<b>PAINT CHASSIS FRAME ASSEMBLY</b> The chassis frame assembly will be finished with primer and gloss black paint 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 treated with epoxy E-coat protection prior to paint: Two (2) C-channel frame rails Components that are included with the chassis frame assembly that will be painted not e-coated (unless otherwise stated in a secondary option) are: 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 The E-coat process will meet the technical properties shown.
0693797	No Paint Required, Aluminum Front Wheels	
0693792	No Paint Required, Aluminum Rear Wheels	
0733739	Paint, Axle Hubs	<b>AXLE HUB PAINT</b> All axle hubs will be painted to match lower job color.
0007230	Compartment, Painted, Spatter Gray	<b>COMPARTMENT INTERIOR PAINT</b> The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.
0544129	Reflective Band, 1"-6"-1"	<b>REFLECTIVE STRIPES</b> Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" white stripe at the top with a 1.00" gap then a 6.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.
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	<b>REAR CHEVRON STRIPING</b> 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.
0593225	Stripe, Reflective, Cab Doors Interior, Diamond Grade	<b>CAB DOOR REFLECTIVE STRIPE</b> A 6.00" x 16.00" fluorescent yellow green diamond grade 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.
0027286	Not Required, Lettering Specs	
0007472	[Lettering not Requested]	
0830256	SP Price Adjustment, PL50 Stock Unit 42989	

0772003	Manual, Fire Apparatus Parts, USB Flash Drive, Custom	<b>FIRE APPARATUS PARTS MANUAL</b> 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. <b>Service Parts Internet Site</b> 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	<b>CHASSIS SERVICE MANUALS</b> There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit. The manual will contain the following sections: Job number Table of contents Troubleshooting Front Axle/Suspension Brakes Engine Tires Wheels Cab Electrical, DC Air Systems Plumbing Appendix The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.
0773381	Manual, Chassis Operation, (1) USB Flash Drive, Custom	<b>CHASSIS OPERATION MANUAL</b> The chassis operation manual will be provided on one (1) USB flash drive.
0030008	Warranty, Basic, 1 Year, Apparatus, WA0008	<b>ONE (1) YEAR MATERIAL AND WORKMANSHIP</b> A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.
0735523	Warranty, Engine, Paccar MX13, 5 Year, WA0386	<b>ENGINE WARRANTY</b> A Paccar five (5) year <b>limited engine warranty will be provided. A limited warranty certificate is included with this proposal.</b>
0684952	Warranty, Steering Gear, TRW Ross TAS, 1 Year WA0202	<b>STEERING GEAR WARRANTY</b> A TRW <b>one (1) year</b> limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.
0596017	Warranty, Frame, 50 Year, Custom Chassis, WA0013	<b>FIFTY (50) YEAR STRUCTURAL INTEGRITY</b> The Pierce custom chassis frame only (does not include crossmembers) limited warranty certificate, WA0013, is included with this proposal.
0610471	Warranty, Axle, Eaton/Dana, 5 Year/100,000 Mile, Parts and Labor	<b>FRONT AXLE WARRANTY</b> A Eaton <b>five (5)-year/100,000 mile</b> parts and labor warranty will be provided.
0610485	Warranty, Axle, Eaton/Dana, 5 Year/100,000 Mile, Parts and Labor	<b>REAR AXLE WARRANTY</b> A Eaton <b>five (5)-year/100,000 mile</b> parts and labor warranty will be provided.
0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	<b>ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY</b> A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.
0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	<b>TEN (10) YEAR STRUCTURAL INTEGRITY</b> The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.

0595813	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	<b>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</b> A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.
0695416	Warranty, Pierce Camera System, WA0188	<b>CAMERA SYSTEM WARRANTY</b> A Pierce fifty four (54) month <b>warranty will be provided for the camera system.</b>
0647720	Warranty, Pierce LED Strip Lights, WA0203	<b>COMPARTMENT LIGHT WARRANTY</b> 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	<b>TRANSMISSION WARRANTY</b> The transmission will have a <b>five (5) year/unlimited mileage</b> 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	<b>TRANSMISSION COOLER WARRANTY</b> 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	<b>WATER TANK WARRANTY</b> A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	<b>TEN (10) YEAR STRUCTURAL INTEGRITY</b> 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	<b>ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY</b> An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of <b>ten (10) years</b> . A <b>five (5) year</b> 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	<b>PUMP WARRANTY</b> The Waterous pump will be provided with a seven (7) year <b>material and workmanship limited warranty</b> . <b>A copy of the warranty certificate will be included with this proposal.</b>
0648675	Warranty, 10 Year S/S Pumping, WA0035	<b>TEN (10) YEAR PUMP PLUMBING WARRANTY</b> The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	<b>FOAM SYSTEM WARRANTY</b> The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	<b>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</b> A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.
0593921	Not Required, Warranty, No Lettering	
0819254	Certification, Vehicle Stability, CD0196	<b>VEHICLE STABILITY CERTIFICATION</b> 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.
0807819	Certification, Engine Installation, Enf, Paccar MX13, 2024	<b>ENGINE INSTALLATION CERTIFICATION</b> 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	<p><b>POWER STEERING CERTIFICATION</b></p> <p>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.</p>
0892691	Certification, Cab Integrity, Saber FR/Enforcer, CD0189	<p><b>CAB INTEGRITY CERTIFICATION</b></p> <p>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:</p> <p>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.</p> <p><b>Side Impact</b></p> <p>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.</p> <p><b>Frontal Impact</b></p> <p>The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420.</p> <p><b>Additional Frontal Impact</b></p> <p>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)</p> <p><b>Roof Crush</b></p> <p>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.</p> <p><b>Additional Roof Crush</b></p> <p>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)</p> <p>The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.</p> <p>There will be no exception to any portion of the cab integrity certification. Nonconformance will lead to immediate rejection of bid.</p>
0631973	Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	<p><b>CAB DOOR DURABILITY CERTIFICATION</b></p> <p>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.</p>
0631978	Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	<p><b>WINDSHIELD WIPER DURABILITY CERTIFICATION</b></p> <p>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.</p>
0631974	Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	<p><b>ELECTRIC WINDOW DURABILITY CERTIFICATION</b></p> <p>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.</p>
0631977	Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	<p><b>SEAT BELT ANCHOR STRENGTH</b></p> <p>Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.</p> <p><b>SEAT MOUNTING STRENGTH</b></p> <p>Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.</p>

0735949	Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175	<b>PERFORMANCE CERTIFICATIONS</b> <b>Cab Air Conditioning</b> 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. <b>Cab Defroster</b> 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> <b>Cab Auxiliary Heater</b> <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>	<b>ATTACHMENT 2</b>
0545073	Amp Draw Report, NFPA Current Edition	<b>AMP DRAW REPORT</b> 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		
0799247	Appleton/Florida Stock Unit		
0000017	FLORIDA DIVISION BODY		
0000012	PIERCE CHASSIS		
0735525	PACCAR MX13 ENGINE		
0046396	EVS 4000 Series TRANSMISSION		
0020011	WATEROUS PUMP		
0020009	POLY TANK		
0028048	FOAM SYSTEM		
0020006	SIDE CONTROL		
0020007	AKRON VALVES		
0020015	ABS SYSTEM		
0755450	PIERCE MFG BODY		





# Electrical Analysis

ATTACHMENT 2<sub>12/6/2024</sub>

**Bid #:** 981  
**Desc:** Saber 7010 1500/750 SC, Low Hose Bed - 42989  
**Customer:** Manteca Fire Department  
**Option:** Electrical Power/Signal Protection & Control, Saber FR

**Job #:**  
**Sales Rep:** Klockzien, Dave  
**Organization:** Golden State Fire Apparatus, Inc  
**Type:** Hard Wired

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0001244	High Idle w/Electronic Engine, Custom		0.00	1.20	0.00
0062992	Gauge, Foam Level, (1) Tank, Class 1, GAAAR 5lt		0.00	0.00	1.00
0072153	Primer, Trident, Air Prime, Air Operated		0.00	0.00	0.00
0079166	Batteries, (4) Stryten/Exide Grp 31, 950 CCA ea, Threaded Stud		0.00	3.00	0.00
0543751	Light, Do Not Move Apparatus		0.00	0.80	0.00
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0583824	Light, Pump Compt, WIn 3SC0CDCR LED White		0.00	0.36	0.00
0583938	Lights, Engine Compt, Custom, Auto Sw, WIn 3SC0CDCR, 3"		0.00	0.30	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0598966	Lights, Side Scene, FRC SPA900-Q70 Surface Mt, 2nd		0.00	0.00	12.00
0598967	Lights, Side Scene, FRC SPA900-Q70 Surface Mt, 1st		0.00	0.00	12.00
0624939	Foam Sys, Husky 3, Single Agent, Multi Select Feature		0.00	55.00	0.00
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber		0.00	26.00	0.00
0644201	Cab Lift, Elec/Hyd, Saber FR/Enforcer		0.00	180.00	0.00
0645611	Lights, Rear Scene, FRC, SPA900-Q70, Surface Mt, 1st		0.00	0.00	12.00
0735687	Engine Brake, Fully Integrated, Paccar MX13 Engine		0.00	0.42	0.00
0776357	Light, Visor, WIn, 12V P*H2* Pioneer, Cnt Feature, 1st		0.00	0.00	13.00
0806466	Lights, Backup, WIn M62BU, LED, For Tail Lt Housing		0.00	3.20	0.00
0808099	Camera, Pierce, 7" HD, R, Camera, AHD		0.00	1.20	0.00
0820509	ESC/ABS/ATC Wabco Brake System, Single Rear Axle, NFPA		0.00	6.00	0.00
0821191	Wiring, Spare, 20 A 12V DC, Batt Dir, 1st NFPA1900/ULC		0.00	0.00	20.00
0821473	Wiring, Spare, 4.8 A 12V DC, USB Term Batt Dir 1st		0.00	0.00	4.80
0895310	Siren, Federal Q2B		0.00	100.00	0.00
0741237	HVAC, Standard-Duty, Saber FR, CARE	Load Managed	0.00	0.00	100.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0013671	Compt, Rear, Rollup, 30.75" FF, 25.88" D	NFPA	0.90	0.00	0.90
0023650	LS 152" Rollup, Full Height Front & Rear, FDLER	NFPA	4.50	0.00	4.50
0062586	Gauge, Water Level, Class 1, Pierce Std	NFPA	1.23	0.00	0.00
0063658	RS 152" Rollup, Full Height Front & Rear, FDLER	NFPA	4.50	0.00	4.50
0088745	Light, Rear Zone Up, WIn L31HRFN LED Beacon, Red LED	NFPA	3.20	4.80	0.00
0533071	Siren, WIn 295SLSC1, 100 or 200 Watt, w/Plug-in/Detachable	NFPA	0.80	7.20	0.00
0540384	Lights, Front Zone, WIn M6*C LED, Clear Lens, in Common Bzl	NFPA	1.80	2.70	0.00
0540692	Lights, Side Zone Lower, WIn M6*C LED, Clear Lens, 3pr, Ovr 25	NFPA	5.40	8.10	0.00
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	NFPA	1.00	0.00	0.00
0564655	Lights, Rear Zn Lwr, WIn M6*C LED, Clear Lens, For Tail Lt	NFPA	1.80	2.70	0.00
0568012	Air Dryer, Wabco System Saver 1200, Heater, 2010	NFPA	7.81	0.00	0.00
0586382	Gauges, Engine, Included With Pressure Controller	NFPA	0.30	0.00	0.00
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	NFPA	1.00	0.00	0.00
0606710	Lightbar, WIn, Freedom IV-Q, 72", RR_R_W____W_R_RR	NFPA	6.48	2.48	2.48
0610240	Vehicle Data Recorder w/Seat Belt Monitor	NFPA	0.50	0.00	0.00
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29	NFPA	0.10	0.90	0.00
0627282	Lights, Clearance/Marker/ID, Rear, FRP LED Bar & P25 LED 4Lts	NFPA	1.75	0.00	0.00
0632360	Cab, Saber FR, 7010	NFPA	6.80	10.20	0.00
0644176	Load Manager, Integrated In Electrical System, Saber FR/Enforcer	NFPA	0.56	0.56	0.00
0644187	Cab Instruments, Black Gauges, Black Bezels, Saber FR/Enforcer	NFPA	1.26	0.00	0.00
0645877	Lights, Hose Bed, Sides, Dual LED Light Strips	NFPA	2.52	0.00	0.00
0647647	Lights, Dome, FRP Dual LED 4 Lts	NFPA	0.80	0.80	0.00

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



# Electrical Analysis

ATTACHMENT 2<sub>12/6/2024</sub>

**Bid #:** 981  
**Desc:** Saber 7010 1500/750 SC, Low Hose Bed - 42989  
**Customer:** Manteca Fire Department  
**Option:** Electrical Power/Signal Protection & Control, Saber FR

**Job #:**  
**Sales Rep:** Klockzien, Dave  
**Organization:** Golden State Fire Apparatus, Inc  
**Type:** Hard Wired

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber	NFPA	0.35	0.00	0.00
0647899	Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29	NFPA	0.80	0.00	0.00
0660319	Light Shield, S/S LED, Full Panel Coverage, Two Piece	NFPA	3.00	0.00	0.00
0709438	Lights, Walk Surf, FRP Flood, LED	NFPA	2.00	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
0769566	Lights, Perimeter Cab, Amdor AY-LB-12HW020 & AY-LB-	NFPA	0.96	0.00	0.00
0769572	Lights, Perimeter Pump House, Amdor AY-LB-12HW020 LED 2lts	NFPA	0.58	0.00	0.00
0770056	Lights, Perimeter Body, Amdor AY-LB-12HW020 LED 2lts, Rear	NFPA	0.60	0.00	0.00
0783157	Headlights, Rect LED, JW Spkr Evo 2, Heat,	NFPA	6.60	6.60	0.00
0783479	Cabinet, Forward Facing, Center, 38.50 W x 50 H x 28 D, Roll,	NFPA	0.50	0.50	0.00
0794959	Controller, Pressure, Pierce, Pump Boss, PBA300	NFPA	1.80	0.00	0.00
0804514	Lights, Tail, WIn M62BTT* Red Stop/Tail & M62T* Amber Dir Arw	NFPA	0.83	2.49	0.00
0804681	Light, Directional, WIn 604T* Cmn Bzl, Above Headlts, Sab/Enf	NFPA	0.02	0.02	0.00
0811018	Engine, Paccar MX13, 510HP, 1850 lb-ftW/OBD, EPA 2024,	NFPA	6.00	0.00	0.00
0813791	Panel, Charger Display, Kussmaul, 091-94-12, Batt Dir	NFPA	0.03	0.00	0.00
0887546	Trans, Allison 6th Gen, 4000 EVS P, w/Prognostics,	NFPA	2.00	2.00	0.00
0889521	DEF Tank, 7.3 Gallon, LS Fill, Under Cab, Paccar, Lift Up Fill Dr,	NFPA	0.60	11.40	0.00
0889577	Bracket, License Plate & Light, P25 LED, Stainless Brkt	NFPA	0.07	0.00	0.00
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	NFPA	1.00	0.00	0.00
0647729	Alternator, 320 amp, Delco Remy 40SI	S	0.00	0.00	0.00
<b>Load Totals:</b>			<b>87.95</b>	<b>441.78</b>	<b>187.18</b>

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: 210.00

Minimum Continuous Load	
Supply:	210.00
Demand:	87.95
Variance:	122.05

## Alternator Output at Governed Speed: 288.00

Total Connected Load	
Supply:	288.00
Demand:	175.13
Variance:	112.87

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



# Turning Performance Analysis ATTACHMENT 2

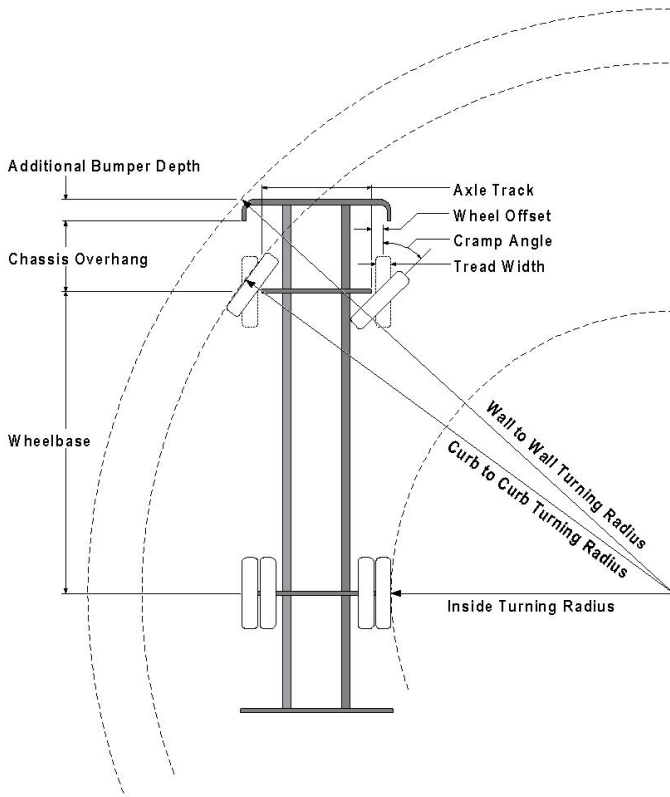
07/16/2024

**Bid Number:** 981

**Department:** Manteca Fire Department

**Chassis:** Saber FR Chassis, BMP Only

**Body:** Pumper, Medium, Aluminum, 2nd Gen, Saber



## Parameters:

*Inside Cramp Angle:	50°
Axle Track:	85.86 in.
Wheel Offset:	3.12 in.
Tread Width:	12.4 in.
Chassis Overhang:	65.95 in.
Additional Bumper Depth:	19 in.
Front Overhang:	84.95 in.
Wheelbase:	184.5 in.

## Calculated Turning Radii:

Inside Turn:	12 ft. 1 in.
Curb to curb:	26 ft. 1 in.
Wall to wall:	30 ft. 8 in.

Category	Option	Description
Bumpers	0606441	Bumper, 19" Extended, Steel Painted, Saber FR/Enforcer
Axle, Front, Custom	0637911	Axle, Front, Dana, D-2000F, 20,000 lb 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.

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.

# **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:	No specific exclusions apply
See Also Paragraphs 2 thru 4	

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:	Covers any failures of the engine which result, under normal use and service, from a defect in material or factory workmanship.
Warranty Begins:	The date of the original buyer invoice.
Warranty Period Ends After:	Five (5) years or 100,000 miles, whichever occurs first
Conditions and Exclusions:  See Also Paragraphs 2 thru 4	See warranty for exclusions.

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.*



## **PACCAR ENGINE LIMITED WARRANTY**

### **PACCAR MX Warranty**

### **United States**

**THIS LIMITED WARRANTY ("LIMITED WARRANTY") LISTS THE RESPECTIVE RIGHTS AND RESPONSIBILITIES OF PIERCE MANUFACTURING INC.'S END USER CUSTOMER THAT FIRST PUTS THE PACCAR ENGINE INTO SERVICE ("YOU" or "FIRST PURCHASER"), PACCAR INC ("PACCAR"), AND THE SERVICING PACCAR ENGINE DISTRIBUTORS ("AUTHORIZED DISTRIBUTORS"). PLEASE READ THIS LIMITED WARRANTY CAREFULLY.**

PACCAR warrants directly to You that the PACCAR MX engine and related kitted parts (collectively, the "Engine") will be free from defects in materials and factory workmanship ("Warrantable Failures") appearing under normal commercial use and service during the time, mileage or hour limitations set forth in the attached Warranty Schedule. **This Engine warranty extends only to You, and not any subsequent owner or user of the Engine.** The Emissions warranty is made to all owners of the Engine in the chain of distribution until the end of the Emissions warranty coverage period. Warranty coverage relating to the Emissions components is outlined in the Emissions Warranty section of the PACCAR MX Operator's Manual, the terms and conditions of which are incorporated herein by reference.

YOUR SOLE AND EXCLUSIVE REMEDY AGAINST PACCAR AND ITS SUBSIDIARIES AND AFFILIATES ARISING FROM YOUR PURCHASE AND USE OF THIS ENGINE IS LIMITED TO THE REPAIR OR REPLACEMENT OF WARRANTABLE FAILURES AT AUTHORIZED DISTRIBUTORS IN THE UNITED STATES AND CANADA AND IS SUBJECT TO PACCAR'S TIME, MILEAGE, AND HOUR LIMITATIONS LISTED IN THE ATTACHED WARRANTY SCHEDULES. The maximum time, mileage and hour limitations in the Warranty Schedules begin running on the Date of Delivery to the First Purchaser. **The accrued time, mileage, or hours is calculated when this Engine is brought into an Authorized Distributor for correction of Warrantable Failures.**

### **WARRANTY DISCLAIMER AND LIMITATIONS OF LIABILITY (ENGINE AND EMISSIONS)**

**This Limited Warranty is the sole warranty made by PACCAR and its Authorized Distributors to You relating to the Engine. Except for the above limited express warranty, PACCAR and its Authorized Distributors make no other warranties to You, express or implied. PACCAR AND ITS AUTHORIZED DISTRIBUTORS EXPRESSLY DISCLAIM ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

IT IS AGREED THAT PACCAR AND ITS AUTHORIZED DISTRIBUTORS SHALL NOT BE LIABLE TO YOU FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO: LOSS OF INCOME OR LOST PROFITS; ENGINE OR VEHICLE DOWNTIME; THIRD PARTY DAMAGE, INCLUDING DAMAGE OR LOSS TO OTHER ENGINES, VEHICLES OR PROPERTY, ATTACHMENTS, TRAILERS AND CARGO; LOSS OR DAMAGE TO PERSONAL CONTENTS; COMMUNICATION EXPENSES; LODGING AND/OR MEAL EXPENSES; FINES; APPLICABLE TAXES OR BUSINESS COSTS OR LOSSES; ATTORNEYS' FEES; AND ANY LIABILITY YOU MAY HAVE IN RESPECT TO ANY OTHER PERSON OR ENTITY.

This warranty does not apply to parts or accessories supplied by the vehicle manufacturer or third parties.

Failures of belts and hoses supplied by PACCAR are covered during the first year from the Date of Delivery of the Engine to the First Purchaser. PACCAR does not warrant antifreeze, lubricants, filters, filter elements, or any other part that is a maintenance or repair item. However, in its sole discretion, PACCAR may pay for lubricating oil, antifreeze, filter elements, belts, hoses, and other maintenance or repair items if the need for replacing such items is due to a Warrantable Failure of the Engine.

You are responsible for the safe operation and maintenance of the Engine and Emissions equipment as specified in the applicable Operator's Manuals. You are responsible for providing proof that all recommended inspections and maintenance have been performed. Before the expiration of the applicable warranty, You must notify an Authorized Distributor of any Warrantable Failures and make the Engine available for Engine repair by such Authorized Distributor. You are responsible for delivery of the Engine to the Authorized Distributor. Locations in the United States and Canada of Authorized Distributors may be found at [WWW.PACCARPOWERTRAIN.COM](http://WWW.PACCARPOWERTRAIN.COM).

PACCAR IS NOT RESPONSIBLE FOR WEAR AND TEAR OR WEAROUT OF COVERED PARTS, storage deterioration, and changes in adjustment resulting from your use of the Engine. Damage due to accident, misuse, abuse, neglect, negligence, improper or insufficient maintenance, or unauthorized modification is not warranted. This may include, but is not limited to: operation without adequate coolants, lubricants, or other fluids; over-fueling; over-speeding; lack of maintenance of the lubricating, cooling or air intake systems; improper storage, starting, warm-up, run-in or shutdown practices; and unauthorized modifications to the Engine. **PACCAR is not responsible for damage or loss resulting from Engine horsepower/torque upgrades.**

Parts used to repair a Warrantable Failure may be new parts, approved remanufactured parts, or repaired parts. PACCAR is not responsible for failures resulting from the use of parts not approved by PACCAR. A new or approved remanufactured part used to repair a Warrantable Failure assumes the identity of the part it has replaced and is entitled to the remaining warranty coverage, if any.

PACCAR IS NOT RESPONSIBLE FOR DAMAGE OR LOSSES CAUSED BY INCORRECT OIL, FUEL, DIESEL EXHAUST FLUID, COOLANT, OR ADDITIVES; WATER, DIRT OR OTHER CONTAMINANTS IN THE FUEL, OIL OR DIESEL EXHAUST FLUID; OPERATION WITHOUT ADEQUATE COOLANTS OR LUBRICANTS; OVER-FUELING; OVER-SPEEDING; IMPROPER STORAGE, STARTING, WARM-UP, RUN-IN OR SHUT-DOWN PRACTICES; OR UNAUTHORIZED MODIFICATIONS OF THE ENGINE. Failure of replacement parts used in repairs due to the above non-warrantable conditions is not warrantable.

If your vehicle is disabled by a Warrantable Failure to the Engine during the base warranty period, PACCAR is not responsible for towing expenses to transport the vehicle to the nearest Authorized Distributor. In lieu of the towing expense and at the sole discretion of PACCAR,



PACCAR will pay the reasonable costs of an authorized mechanic to travel to and from the location of the disabled Vehicle in order to perform the Engine repair.

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

Warrantable Failures resulting in excessive oil consumption will be handled within the basic Engine coverage as stated in the attached Engine Schedule. Before a claim for excessive oil consumption, low power, or excessive fuel consumption will be considered for payment, You must submit adequate documentation to show that consumption exceeds PACCAR published standards

PACCAR reserves the right to inspect and download data from the Engine Electronic Control Module for purpose of failure analysis unless prohibited by applicable law.

#### **TIME LIMIT ON COMMENCING LEGAL ACTION / OTHER TERMS**

IT IS AGREED THAT YOU HAVE 12 MONTHS FROM THE ACCRUAL OF THE CAUSE OF ACTION TO COMMENCE ANY LEGAL ACTION ARISING FROM THE PURCHASE OR USE OF THE ENGINE, OR BE BARRED FOREVER.

To the extent any provision of this limited warranty is found to contravene the law of any jurisdiction, the remainder of the warranty shall not be affected thereby.

**PACCAR ENGINE LIMITED WARRANTY SCHEDULE****PACCAR MX Warranty  
United States**

THIS ENGINE WARRANTY SCHEDULE APPLIES ONLY TO ORIGINAL FACTORY EQUIPMENT AND IS SUBJECT TO THE TERMS AND LIMITATIONS IN THE ATTACHED LIMITED WARRANTY. This Engine Warranty Schedule does not apply to the vehicle which is warranted separately. Pursuant to the terms of the attached Limited Warranty, PACCAR Inc ("PACCAR") will pay warranty claims for Warrantable Failures within the following maximum limits in time, mileage, or hours, **whichever shall occur first**. The Warrantable Failure must be brought to the attention of an Authorized Distributor within 30 days of discovery.

**PACCAR MX Engine**

**Basic Engine -Twenty-four (24) months or 250,000 miles (or 400,000 km) or 6,250 hours** - (all applications except fire apparatus)

**Fire Apparatus Truck Applications Basic Engine - Sixty (60) months or 100,000 miles (or 160,000 km) or 6,250 hours**

**Major Engine Components - Sixty (60) months or 500,000 miles or 12,500 hours**

Cylinder Block Casting  
Main Bearing Bolts  
Cylinder Head Casting  
Cylinder Head Capscrews

Crankshaft  
Camshaft  
Cam Follower Assemblies  
Connecting Rod Assemblies

Lube Pump Gear  
Crankshaft Gear  
Camshaft Gear  
Camshaft Idler Gear

Flywheel Housing  
Water Pump Housing  
Thermostat Housing

**TRW COMMERCIAL STEERING SYSTEMS**  
**800 HEATH STREET**  
**LAFAYETTE, INDIANA 47904**



## PRODUCT WARRANTY

- I. WARRANTY:** The Commercial Steering Systems group of TRW, Inc., hereinafter referred to as "CSS", warrants that each new product supplied by CSS to its customer, when properly installed, used and maintained, shall be free from defect in material and workmanship for the period specified below:
- (A) CSS Product installed in **New On-highway Motor Vehicle:**
- Within twelve (12) months after date of delivery of such vehicle to the original retail purchaser, or before such vehicle has been driven one hundred thousand (100,000) miles, whichever event shall first occur.
- (B) CSS Product installed in **New Agricultural, Turf, Industrial, or Construction Vehicles and Related Equipment**
- Within twelve (12) months after date of delivery of such vehicle/equipment to the original retail purchaser or before such vehicle/equipment has been operated for two thousand (2000) hours or fifty thousand (50,000) miles, whichever occurs first.
- (C) CSS Product installed in **New End Product, Not Specifically Mentioned in Classifications (A) or (B) Above and All Other Off-Highway/Severe Applications:**
- Within six (6) months after date of delivery of the original equipment manufacturer's end product to the original retail purchaser.
- II. REMEDY:** Customer's sole remedy under the foregoing warranty is limited to correction by means of repair, replacement or issuance of credit, at the option of CSS, of any product which is:
- (A) Returned to CSS within the specified warranty time period, with prior notice to, and the written consent of, CSS, with transportation and handling charges prepaid, together with a statement describing the alleged defect, the part number, model number and application, and mileage or hours of use of such product; and
- (B) Upon examination, determined by CSS not to conform to the warranty.
- III.** Any product which is repaired or replaced under this warranty will be returned to customer prepaid. Disposition of any product determined not to be covered by this warranty will be at the customer's expense.
- IV.** CSS will not be liable for any repairs, replacements, or adjustments to any product or any cost of labor performed by or at the request of customer without the express prior written consent of CSS.
- V. EXCEPTIONS:** The provision of this warranty shall not apply to any CSS product which is used for a purpose for which it is not designed, or which shall have been repaired or altered in any way, or which has been subject to misuse, negligence or accident, neglect of normal maintenance services, so as, in the judgement of CSS to adversely affect its performance and reliability. In no case will the CSS warranty exceed the standard published warranty of its customer in terms of time and/or distance. In all events, the CSS warranty will expire thirty (30) months after the date of manufacture as stamped on the Product. In the case of hydraulic equipment, operation with unapproved fluid or temperatures voids this warranty.
- VI. EXCLUSION OF ALL OTHER REMEDIES AND LIMITATION OF LIABILITY:** Customer's sole and exclusive remedy under the foregoing warranty shall be for the repair, replacement or issuance of credit with respect to a defective product, as set forth and described above. Other provisions hereof notwithstanding, CSS shall not be liable to Customer, or any successor in interest, beneficiary or assignee of Customer, based upon any claim against CSS, whether in contract, warranty, negligence, strict liability, indemnity or otherwise, for any special, consequential, incidental or other damages relating in any way to the design, manufacture, sale, installation or other use of any product purchased from CSS.
- VII. EXCLUSION OF ALL OTHER WARRANTIES: THE FOREGOING WARRANTY IS THE EXCLUSIVE WARRANTY BY CSS AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES AND REPRESENTATIONS, WHETHER ORAL, WRITTEN, EXPRESSED, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**



# 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 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:	This warranty does not apply to damage caused by corrosion.
See Also Paragraphs 2 thru 4	

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.*



Dana Holding Corporation  
Commercial Vehicle Products Group  
Graco Lake Corporate Center  
1 Village Center Drive  
Van Buren Township, Michigan 48111  
www.dana.com

FOR IMMEDIATE RELEASE

### **5 YEAR WARRANTY FOR YOUR FIRE/RESCUE VEHICLE**

Dana Holding Corporation's Commercial Vehicle Systems Group is pleased to announce a change in our standard warranty for fire/rescue vehicles. Starting in 2011, all steer and drive axle applications for fire or rescue vehicles will carry a minimum 5 year / 100,000 mile warranty. Additional 1 and 2 year extended warranty packages are available. (Applicable fees apply) That's a total of 7 years of warranty coverage. Our experience in extended warranty coverage's dates back to the mid 80's. Since then, we have pioneered many new programs designed to deliver warranties, which meet the demands of an ever-changing industry. From our first versions of the on/off-highway coverage's, to our more recent vocational warranties, customization and customer satisfaction, have always been our goals.

For further information and requirements, please go to [www.roadranger.com](http://www.roadranger.com).

### **24K STEER BEAM NOW AVAILABLE**

Dana Holding Corporation is continually working with chassis manufactures to determine needs and how best to offer a solution. The amount of equipment has increased over the years and not all firehouses can accommodate a tandem axle vehicle. We have listened to your requests for a slightly higher front GAWR for single axle vehicles. Dana can now offer a front steer beam with a 5 1/4" drop at 24K GAWR. This will allow chassis manufactures to meet the limited length requirements while still carrying the same amount of equipment.

Please contact your Dana representative for further information

For additional information please contact:

Alan Manzoni  
Account Manager – Specialty Markets  
Dana Holding Corporation  
One Village Center Dr.  
Van Buren Twp., MI 48111-5711  
Phone: (734) 629-1141  
[alan.manzoni@dana.com](mailto:alan.manzoni@dana.com)



**The Roadranger System**



**Roadranger**  
MORE TIME ON THE ROAD



**Dana Holding Corporation**  
Commercial Vehicle Products Group  
Grace Lake Corporate Center  
1 Village Center Drive  
Van Buren Township, Michigan 48111  
[www.dana.com](http://www.dana.com)

## ATTACHMENT 2

New for 2011!

Dana Holding Corporation is pleased to announce a change in our standard warranty for fire/rescue vehicles. All steer and drive axles will now come with a 5 year / 100,000 mile warranty. For further information, please go to [www.roadranger.com](http://www.roadranger.com).

Dana Holding Corporation is working with chassis manufactures to supply a 24K front steer beam with a 5 ¼' drop. We have listened to your requests for a slightly higher GAWR for single axle aerials. Not all fire stations can accommodate a long wheel base application. This allows manufactures to meet the limited length requirements for smaller fire houses. Please submit your requests through our website. Please indicate on the application your need for 24K GAWR.

Finally, our drive axles will accommodate simultaneous auxiliary braking. Dana axles are built tough and were design with Telma retarders in mind. Submit your application for single or tandem designation.

Dana Holding Corporation will work with you to provide the best drive train solution with the best warranty in the fire/rescue industry. For additional information please contact:

Alan Manzoni  
Account Manager - Specialty Markets  
Dana Holding Corporation  
One Village Center Dr.  
Van Buren Twp., MI 48111-5711

Phone: (734)629-1141

Cell: (269)312-3220

[Alan.manzoni@dana.com](mailto:Alan.manzoni@dana.com)



## 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 <sup>1</sup>	
Air Management	
Air Brake Valves	1/100/P&L
Trailer Lift Axle Control Valve	
Trailer Control Line Filter <sup>3</sup>	
Air Compressors (ALL) <sup>2</sup>	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) <sup>3</sup>	
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 <sup>1</sup> (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/Unl/P and 1/Unl/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

<sup>1</sup> ZF and WABCO branded components. <sup>2</sup> 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. <sup>3</sup> 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 <sup>1</sup>	
Air Management	
Air Brake Valves	1/100/P&L
Air Compressors (ALL)2	
Air Dryers (ALL)	
Trailer Control Line Filter <sup>3</sup>	
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 <sup>3</sup>	
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

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

<sup>1</sup> ZF and WABCO branded components. <sup>2</sup> 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. <sup>3</sup> 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](http://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:

<b>Coverage:</b>	<b>The Pierce Custom Cab shall be free from structural failures caused by defects in material and workmanship</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Ten (10) Years - or - 100,000 Miles</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<b>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.</b>  <b>This warranty does not apply to damage caused by corrosion.</b>

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

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

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

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

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

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

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

#### 2. DISCLAIMERS OF WARRANTIES

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

#### 3. BUYER'S EXCLUSIVE REMEDY

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

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

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

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





# Fire and Rescue Apparatus

## Ten (10) Year Pro-Rated Paint and Corrosion

### Cab

## Limited Warranty

### 1. LIMITED WARRANTY

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

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

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

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

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

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

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

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

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

### 2. DISCLAIMERS OF WARRANTIES

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

### 3. BUYER'S EXCLUSIVE REMEDY

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

### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

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

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



# Fire and Rescue Apparatus

## 54 Months Material and Workmanship

### Camera System

# Limited Warranty

#### 1. LIMITED WARRANTY

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

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

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

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

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

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

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

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

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

#### 2. DISCLAIMERS OF WARRANTIES

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

#### 3. BUYER'S EXCLUSIVE REMEDY

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

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

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

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



# Fire and Rescue Apparatus

## Ten (10) Year Material and Workmanship

### Pierce 12V LED Strip Light

### *Limited Warranty*

#### 1. LIMITED WARRANTY

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

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

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

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

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

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

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

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

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

#### 2. DISCLAIMERS OF WARRANTIES

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

#### 3. BUYER'S EXCLUSIVE REMEDY.

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

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

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

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

## NEW PRODUCT WARRANTY


**PARTICIPATING OEM SALES  
DISTRIBUTOR SALES**
**LIMITED WARRANTY ON NEW ALLISON AUTOMATIC TRANSMISSIONS  
USED IN EMERGENCY VEHICLE APPLICATIONS**

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

**WHAT IS COVERED**

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

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

**APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE**

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

## WHAT IS NOT COVERED

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

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

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

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

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

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

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

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

## OTHER TERMS APPLICABLE TO OTHER END-USERS

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

## QUESTIONS

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

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



# Fire and Rescue Apparatus

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

### Limited Warranty

#### 1. LIMITED WARRANTY

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

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

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

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

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

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

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

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

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

#### 2. DISCLAIMERS OF WARRANTIES

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

#### 3. BUYER'S EXCLUSIVE REMEDY

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

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

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

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



# UNITED PLASTIC FABRICATING, INC.

# WARRANTY

FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™

## LIFETIME SERVICE WARRANTY

United Plastic Fabricating, Inc. (hereinafter called "UPF") warrants each POLY-TANK®, Booster/Foam Tank POLYSIDE® Wetside Tank, Integrator Tank/Body, ELLIPSE™ Elliptical Tank, Ellip-T-Tank Tank and DEFENDER™ Skid Tank to be free from defects in material and workmanship for the service life of the original vehicle (vehicle must be actively used in an emergency response for fire suppression). All UPF Tanks must be installed and operated in accordance with the UPF Installation and Operating Guidelines. Failure to do so can void the warranty.

Every UPF Tank is inspected and tested before leaving our facility. Should your UPF Tank require service, please notify UPF via email, fax, in writing or by calling UPF at 1-978-975-4520. Please provide the serial number, a description of the service request, the location along with the phone number and name of the contact person. Our goal is to have scheduled work completed within a reasonable time period.

Under a valid warranty claim, UPF will cover the cost to repair the UPF Tank including the customary and reasonable costs to make the tank accessible such as the removal and reinstallation of the tank if authorized in advance (pre-approved) by UPF. The warranty will not cover tanks that have been improperly installed, operated, misused, abused, or modified from its intended or designed use. Serial number must not have been altered, defaced or removed. Tanks that are not stored or installed properly which results in the tank suffering UV damage will not be covered by this agreement.

Should UPF determine that the service claim is valid under this warranty for a tank located outside of the United States and Canada, UPF will assume the costs for labor and material for the warranty repair as described above plus all travel costs to the U.S. port of embarkation. Costs for airline travel outside of the U.S. and Canada will not be the responsibility of UPF.

In the event the tank shall become stationed in an area of the world that is considered to be a war zone or where unsafe conditions exist for the safe passage of United States Nationals, as reported by the United States Department of State, (<http://www.state.gov>), and a request to perform service or warranty repairs, UPF reserves the right to refuse to honor such requests. It is the purchaser's responsibility to relocate the tank to an area where such repairs can be performed without undue risk to UPF employees or their designee. UPF will make every reasonable effort to support our products through alternative means.

For Ellipse™ elliptical tanks, a separate five year warranty provided by the subcontractor is applied to the sub-frames, chute linings (rubber isolation strips) and metal components. The stainless steel wrap provided by UPF shall be warranted by the subcontractor performing the wrap installation in accordance with their warranty in place at the time of the installation. UPF will not be liable for any warranty costs associated with the wrap, sub-frames, chute linings (rubber isolation strips) and metal components but will assist with all claims on behalf of its customer.

For PolySide® wetsided tanks and Integrator™ Tank/Body units, all polypropylene components related to the tank shall carry the standard UPF lifetime



## ATTACHMENT 2

service warranty. Other polypropylene components, including but not limited to compartments, wheel wells, fenders and other body related components shall be warranted by UPF for a period of ten years. The warranty for the PolySide® and Integrator™ units excludes paint or hardware, which shall be covered by the manufacturer of the paint/hardware.

All UPF tanks 50 gallons or less utilized for non-fire applications and installed on specialty vehicles such as ATVs, trailers, boats, etc. are covered under a separate warranty policy available from UPF. Further, UPF Protector™ foam and water trailers are warranted under a separate warranty policy available from UPF.

This UPF warranty is transferable within the United States only with prior written approval by UPF (except an original apparatus manufacturer may assign this warranty to the first titled owner/lessee of the apparatus).

**UPF will NOT reimburse any unnecessary work and/or work that has not been pre-approved. Any and all third party charges must be pre-authorized and approved in writing by UPF prior to commencing the work. Any unauthorized third party repairs, alterations, actions or modifications will not be covered and can void the warranty. UPF will be the sole determining authority as to whether a service claim will be valid and covered under this warranty.**

In no event will UPF be liable for an amount in excess of the purchase price of the booster/foam tank at the time of manufacture or for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of failure of its product. Loss of contents (water, foam, etc.) shall not be the responsibility of UPF. Further, UPF is not responsible for costs associated with service repairs to chassis, sub-frames, bodies, valves, dumps, hoses, pressure vacuum vents, and other components (i.e. liquid level transducers, etc.). Further, UPF will not cover the cost for travel of the vehicle to and from a repair facility.

This warranty contains the entire warranty. It is the sole warranty and price agreements or representation, whether oral or written, are either merged herein or expressly cancelled. UPF neither assumes, nor authorizes any person supposing to act on its behalf to change, nor assume for it, any warranty or liability concerning its product.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow exclusion or limitation or incidental or consequential damage, so the above limitation or exclusion may not apply to you. Since some states do not allow limitations on the length of an implied warranty, the above limitation may not apply to you.

**THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATION OR LIABILITIES ON THE PART OF UPF.**





## BULLETIN



**TO: All Dealer Service Representatives**

**From: Kevin Hanegraaf**

**DATE: January 4, 2010**

**RE: UPF Tank Warranty Policy – Truck in Accident**

**Service Topic #292**

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To keep the UPF tank warranty valid on trucks that have been involved in a vehicular accident, it is UPF's policy that the customer must remove the tank from the truck and send it back to one of UPF's facilities for inspection. In the event that this does not take place, the warranty will be considered null and void.

The customer must remove and send the tank back to UPF for inspection in order to maintain the original warranty coverage, at which time it will be:

- *Filled with water*
- *Visually inspected*
- *Ultraviolet spark tested on articulating test stand in the dark*
- *Recommendation for repairs if necessary provided by UPF*
- *Fully evaluated and repaired by UPF*

If your customer chooses to leave the tank on the truck and wants a technician to inspect and/or repair the tank in the field, then **the warranty is no longer in effect.** This direction is upheld by UPF because the technician cannot inspect the entire tank when it is still installed on the truck.

**Note:** This memo is intended to relay the information Pierce has received on UPF's tank warranty for trucks that are in a vehicular accident. In the event of an actual claim, we direct you to consult with UPF's service Manager Maura Watts (800-638-8265 x253)



# 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:

<b>Coverage:</b>	<b>The apparatus body shall be free from structural failures caused by defects in material and workmanship</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Ten (10) Years - or - 100,000 Miles</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<b>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.</b>  <b>This warranty does not apply to damage caused by corrosion.</b>

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](http://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	<p>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.</p> <p>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.</p>

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

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

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

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

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

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

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

### 2. DISCLAIMERS OF WARRANTIES

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

### 3. BUYER'S EXCLUSIVE REMEDY

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

### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

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

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





# Fire and Rescue Apparatus

## One (1) Year Material and Workmanship 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	<p>This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.</p> <p>This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.</p>

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:	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p><b>Topcoat Durability &amp; Appearance: Gloss, Color Retention &amp; Cracking</b>  0-72 months 100%  73-96 months 50%  97-120 months 25%</p> <p><b>Integrity of Coating System: Adhesion, Blistering/Bubbling</b>  0-36 months 100%  37-84 months 50%  85-120 months 25%</p> <p><b>Corrosion: Dissimilar Metal and Crevice</b>  0-36 months 100%  37-48 months 50%  49-72 months 25%  73-120 months 10%</p> <p><b>Corrosion Perforation</b>  0-120 months 100%</p> <p>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</p> <p>Items not covered by this warranty include:  (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).  (b) UV paint fade.  (c) Any cab not manufactured by Pierce.</p>

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

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

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

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

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

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

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

#### 2. DISCLAIMERS OF WARRANTIES

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

#### 3. BUYER'S EXCLUSIVE REMEDY

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

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

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

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



# **5 DEALER SUPPLIED PRODUCTS AND /OR SERVICES**

**Exhibit "D"**

With a rich legacy spanning over three decades, Golden State Fire Apparatus, Inc. stands as the premier authorized dealership for top-tier fire apparatus in Central and Northern California. Our unwavering commitment to attention to detail and customer satisfaction have positioned us as leaders in the industry.

We express our sincere gratitude for the privilege you have afforded us — the opportunity to present this comprehensive proposal for a STOCK SABER 1500 GPM TYPE 1 ENGINE (JOB 42989). Your thoughtful review and consideration of the detailed proposal are deeply valued. At Golden State Fire Apparatus, Inc., we look forward to the prospect of serving your firefighting needs with the utmost excellence and professionalism.

### **DEALER-SUPPLIED PRODUCTS AND SERVICES**

Golden State Fire Apparatus Inc. (GSFA) will furnish the following items and/or services before final delivery so that all necessary components and support are in place, contributing to an efficient final delivery process. Please refer to the detailed list below for a comprehensive overview of the products and/or services included:

### **AUTHORIZED MANUFACTURER**

In accordance with the State of California Vehicle Code, specifically Section 11701, it is mandated that "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, as of the proposal submission, holds a valid license in compliance with this requirement and is prepared to furnish a copy upon request. This adherence to regulatory standards ensures that the manufacturer maintains a current and official status, promoting transparency and compliance with legal requirements throughout the duration of the proposal and subsequent processes.

### **AUTHORIZED DEALERSHIP**

In compliance with the State of California Vehicle Code, specifically Section 11701, it is mandated that "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. possesses a valid license at the time of the bid, as detailed above, and can promptly provide a copy upon request. This adherence to regulatory standards ensures that the dealership maintains a current and official status, promoting transparency and compliance with legal requirements throughout the duration of the proposal and subsequent processes.

### **AUTHORIZED SALES REPRESENTATIVE**

In accordance with the State of California Vehicle Code, specifically Section 11800, it is expressly prohibited for any individual to function as a vehicle salesperson without obtaining a license issued by the Department of Motor Vehicles (DMV). The representative, at the time of

proposal, holds a valid vehicle salesperson's license and is ready to furnish a copy upon request. This adherence to regulatory standards ensures that the sales representative maintains a current and official status, promoting transparency and compliance with legal requirements throughout the bidding process and subsequent phases.

### **VEHICLE REGISTRATION**

In adherence to the State of California Vehicle Code Section 11739, it is mandated 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). Being a factory-authorized dealer of the vehicle being sold, Golden State Fire Apparatus, Inc. is duly authorized to register the vehicle with the State of California as a new vehicle manufacturer.

GSFA is committed to facilitating an excellent vehicle ownership experience for the customer. As such, we will manage all necessary applications and complete all transfer papers, including the application for California Exempt "E" license plates. This approach ensures compliance with regulatory requirements and a hassle-free registration process for our valued customers.

### **WEEKLY PROGRESS PHOTOGRAPHS**

GSFA is committed to ensuring transparency and comprehensive reporting throughout the construction process of the apparatus. To achieve this, GSFA will provide weekly photographs capturing various stages of the apparatus or major components under construction.

Commencing from the initiation of the manufacturing process, the photographic documentation will extend throughout the entire production phase by the manufacturer. These weekly reports will offer a visual representation of the ongoing progress of the apparatus, highlighting key milestones and showcasing unique features and aspects as construction unfolds.

Our focus is to provide customers with a clear and detailed insight into the evolution of the apparatus, fostering a deeper understanding of the craftsmanship and distinct elements incorporated during the construction process. This commitment to regular, visual updates aims to enhance communication and transparency regarding the progress of the apparatus.

### **CONTINGENCY RESERVE FUND**

A Contingency Reserve Fund amounting to \$25,000 per unit is incorporated into the quotation to address potential change orders, unforeseen items, or necessary work that may arise during the contract. The utilization of this reserve fund is at the sole discretion of the Customer. It is essential to note that this reserve fund is not an estimate for the aforementioned contingencies, and the actual costs associated with change orders, unforeseen items, or required work may surpass the reserved amount depending on their nature.

Any unused portion of the Contingency Reserve Fund will be credited back on the final invoice. Alternatively, if not credited, the remaining funds will be promptly returned to the Customer in the form of a check following the completion of the final invoicing process. This approach guarantees financial transparency and effective management throughout the project.

### **COMMUNICATION EQUIPMENT MOUNTING FUND**

A Communication Equipment Mounting Fund amounting to \$2,500 per unit is incorporated into the quotation and is specifically designated to cover the expenses associated with mounting communication equipment, such as two-way radios, adhering to the directives of the Customer.

In the event that the mounting costs surpass the stipulated allowance, any additional work required can be undertaken at the prevailing shop rate. Any unused portion of the Communication Equipment Mounting 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.

### **FINAL INSPECTION, FACTORY VISIT**

A final inspection trip to the manufacturing facility is included for three (3) Customer representatives. The primary objective of this visit is to ensure the adherence of the apparatus to specifications and promptly identify any potential deficiencies. The final inspection trip is anticipated to span four (4) days and three (3) nights, with scheduling details collaboratively determined between GSFA and the Customer.

GSFA will cover the costs associated with airfare, lodging, meals, and ground transportation during the stay at the manufacturer's location. Air travel will be arranged from one of the following airports: Sacramento, San Francisco, or San Jose.

It is important to note that certain costs, including Customer ground transportation within California, airport parking, luggage fees, and incidental expenses during travel to the factory, fall within the responsibility of the Customer. Furthermore, flight reservations are non-refundable, and in the event of a cancellation post-booking, the Customer will bear all associated costs, encompassing not only the original ticket cost but also any change or cancellation fees levied by the airline and/or travel agency. Additionally, flight reservations are non-transferable. This delineation aims to establish clarity and transparency regarding the allocation of responsibilities and potential costs associated with the final inspection trip.

### **DELIVERY TO AUTHORIZED SERVICE FACILITY**

GSFA will deliver the apparatus to our Northern California facility located in Sacramento for a comprehensive dealer preparation inspection. This service, conducted at the expense of GSFA, aims to have the apparatus in optimal condition at the time of final delivery.

To ensure the proper break-in of all components while still under warranty, the apparatus will be delivered under its own power. The use of rail or truck freight for transportation is deemed unacceptable in order to uphold the highest standards of quality assurance during the delivery process. This approach not only aligns with warranty considerations but also emphasizes the commitment to delivering a fully operational apparatus to our valued customers.

### **PRE-DELIVERY SERVICE**

Before reaching its final destination, the apparatus undergoes a pre-delivery service conducted by Golden State Emergency Vehicle Service, Inc. This service is designed to tap into the expertise of an external source, providing an experienced perspective that enhances the thoroughness of your final inspection. Our pre-delivery service covers the following areas:

1. Engine Compartment and Undercarriage:
  - Inspect for broken mounting brackets.
  - Inspect and identify locations of any fluid leaks.
  - General inspection of hoses, wiring, and linkage, focusing on potential wear points.
  - Verify correct fluid capacities for engine oil, coolant, power steering fluid, washer reservoir fluid, transmission fluid, rear-end fluid, pump transmission oil, and primer oil if applicable.
  - Re-torque U-bolts to OEM specifications if equipped with leaf spring suspension (Pierce Custom chassis only).
2. Interior:
  - Confirm proper operation of doors, windows, and locks, ensuring accurate adjustment.
  - Confirm proper operation of seatbelt alarms.
  - Confirm proper operation of all compartment door alarms, as well as hose bed cover, ladder rack, light tower, and deck gun alarms.
  - Ensure functionality of auxiliary power points, interior lighting, mirror, and seat controls, and if applicable - headsets and radios.
  - Inspect upholstery for quality and condition.
3. Exterior:
  - Address reasonable paint scratches or chips.
  - Tighten any loose hardware.
  - Inspect tires and wheels, ensure proper pressure.
  - Check compartment doors for proper operation and latch fit.
  - Lubricate compartment door locks if applicable.

4. Road Test:
  - Conduct a road test with a full water tank (if applicable), covering approximately twenty miles on both city and highway roads.
  - Perform a DOT compliant brake test to verify the system is holding air.
  - Inspect brake condition, wheel seals, and ensure drive train components reach optimal operating temperatures.
  - Conduct an Allison Transmission self-diagnostic to verify fluid level, fluid and filter life, and check for fault codes.
5. Electrical:
  - Verify the operation of all lights, sirens, and other electrical accessories.
6. Pump:
  - Operate the Pressure Governor or Relief Valve, transfer valve, and check pump shift.
  - Inspect water tank, pump and plumbing for leaks and calibrate the water level gauge.
  - Ensure smooth operation of all discharge, suction, and drain valves.
7. Pierce Husky™ Foam System:
  - If applicable, draft and inject clean water to ensure proper operation of the foam pump.
8. Fuel and DEF Tanks:
  - Fill the fuel tank and DEF tank prior to final delivery.
9. Wash:
  - Thoroughly wash the apparatus prior to final delivery.

This pre-delivery service assists the apparatus to meet our high standards of quality and operational efficiency before reaching its final destination.

### **FINAL DELIVERY (CUSTOMER LOCATION)**

GSFA will deliver the completed Product, inclusive of any relevant equipment, spare parts, and supplies, to the Customer's specified address at GSFA's expense.

In preparation for the Product's delivery, the Customer is required to furnish GSFA with proof of liability and physical damage insurance. GSFA will withhold the release of the Product until such proof of insurance is provided.

To ensure a timely delivery process, it is incumbent upon the Customer to settle any outstanding balance owed to GSFA before or at the time the Product is completed and ready for delivery. In the event of delayed payment or delivery, GSFA reserves the right to impose a late fee and daily storage charge as outlined in the Standard Terms and Conditions until payment is received.

For compliance with insurance liability considerations, the Product will only be delivered upon full acceptance and full payment, or through a prior written agreement mutually reached between the Customer and GSFA. This ensures a secure and efficient finalization of the delivery process, aligning with both parties' obligations and safeguarding against potential liabilities.

### **SERVICE ADVANTAGE**

In a world that demands immediate response, we recognize that the service and support of your apparatus should be no different. Established in 1989, Golden State Fire Apparatus Inc. proudly stands as an authorized full line sales and service dealership for Pierce Manufacturing Inc. Our commitment is to deliver prompt, professional service, and unwavering support for our products.

Situated within a spacious 33,814-square-foot facility in Sacramento, featuring eighteen functional working bays, our location is strategically positioned near Highway 99, providing convenient access to the Interstate 80 and Highway 50 interchanges.

Count on Golden State for warranty and technical support, covering repairs and services spanning chassis, body, electrical, pump, routine maintenance, equipment mounting, pump testing, and more. Our mobile service program is designed to offer field repairs when and where you need them, which helps to minimize emergency apparatus downtime.

Our service staff includes professionals that are factory-trained by Pierce and hold ASE and EVT certifications. These professionals undergo recurrent training on chassis, electrical systems, and aerial devices to ensure they are equipped to handle diverse challenges.

At our dedicated two-story, 4,500 square-foot parts distribution department, we maintain an extensive inventory of both Pierce and non-Pierce parts. If a required part is not readily available, we promptly order it directly from the factory. Our primary goal is to keep your equipment on the road and ready for action.

In 2025, we will be opening our second service facility in Tracy, California. This will be a 52,934-square-foot facility and have twenty-two (22) indoor service bays.

With a single contact to a sole source, Golden State offers a blend of service, support, and sales, all conveniently housed under one roof. We invite you to visit us at any time to witness

## **ATTACHMENT 2**

firsthand our capability to serve your department. We take pride in proving our commitment to your firefighting needs!