

# Rosenbauer America

Bidder Complies

One (1) == General Timberwolf Bid Prep Forms - 531.080 05/31/09 ==

Y\_\_N\_\_

One (1)  
00-00-1300 Fire Department Name

Y\_\_N\_\_



**DATE:**

**Prepared For:**

**DEPARTMENT NAME: Timberwolf Demo #13**

**ADDRESS:**

**CITY/STATE/ZIP:**

**FIRE CHIEF:**

**DEPARTMENT CONTACT:**

**PHONE:**

**FAX:**

**CELL PHONE:**

**EMAIL ADDRESS:**

**CHASSIS MAKE:**

**MODEL:**

**ENGINE:**

**TRANSMISSION:**

**WHEELBASE:**

**MAXIMUM OVERALL HEIGHT:**

**MAXIMUM OVERALL LENGTH:**

One (1)  
00-00-1499 Overall Height Restriction, NONE

Y\_\_N\_\_

**OVERALL HEIGHT**

An overall height restriction has not been specified for this apparatus.

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One (1)  
00-00-1509

Overall Length Restriction, NONE

Y\_\_N\_\_

## OVERALL LENGTH

One (1)  
00-00-1519

An overall length restriction has not been specified for this apparatus.  
Overall Width Restriction, NONE

Y\_\_N\_\_

## OVERALL WIDTH

One (1)  
00-00-1529

An overall width restriction has not been specified for this apparatus.  
Wheelbase Restriction, NONE

Y\_\_N\_\_

## WHEELBASE

One (1)  
00-12-1100

A wheelbase restriction has not been specified for this apparatus.  
Financial Stability Response

Y\_\_N\_\_

## FINANCIAL STABILITY SPECIFICATIONS

With high-profile instances of fire apparatus manufacturers encountering financial difficulties, it is imperative that fire departments be diligent in evaluating the financial position of the companies they solicit to build on their emergency response vehicles. A contact entered into with a company on shaky ground is a dangerous prospect, since conducting business with a manufacturer in such condition could open the department to monumental problems.

Take, for instance, the growing theme of manufacturers *requiring* as opposed to *offering* pre-payment and progressive payment options with a corresponding discount off the price of a vehicle. Such offers are made with an ulterior motive in mind, as it can be generally inferred that manufacturers requiring pre-payments and progressive payments do so because they need your cash *today* to fund production of other vehicles already in the backlog.

Should problems arise, as has been the case in situations too numerous to mention, your department risks losing any down payments already made or even the entire cost of a piece of equipment should certain pre-pay discount situations go awry.

While pre-payment discounts may be enticing, it is important to know just how stable the manufacturer seeking your funds is before you make that commitment. If you enter into one of these agreements and the manufacturer hits a rough patch, it is you that will be hurting, because your funds may not be recoverable. However, if you enter into a contract with a financially sound manufacturer, you will reap all of the benefits of a well-built truck at a lower cost. You may equally, by taking advantage of the time-value of money, be able to afford more truck than initially thought, because funds saved by leveraging pre-payment options could allow you get some added features that you might not necessarily have been able to afford.

With this in mind, it must be noted that Rosenbauer is a company with rock-solid

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financial stability. This is a statement not made lightly, as we can prove it to you. We can provide language that you can insert into your bid specifications that stipulates that in order for bids to be accepted by a fire department, the company bidding must meet several fiscal criteria.

The first criteria call for the successful bidder to meet a debt-to-equity ratio not exceeding a 2.0 rating. Rosenbauer presently stands at a 1.51 rating, which is well below the accepted rating. This low number results from Rosenbauer owning more assets with a marginal debt service. This means we are not using lenders to fund our operations, nor our growth.

The second requirement is that the debt coverage ratio of the successful body builder exceeds a 100 rating. The higher the number, the better able a company is to meet its payment obligations with banks and creditors. Rosenbauers number is at 279.6, which is nearly three times the required amount. The higher the debt coverage ratio, the easily and more fluidly a company is positioned to pay its monthly obligations and operating costs.

The third criteria require that the equity ratio of the successful bidder must exceed .30 rating. A higher equity ratio indicates that the body builder has increased flexibility to meet its financial obligations which translates into greater financial stability. Rosenbauer currently has an equity ratio of .387 which is well above the accepted rating and an excellent indicator of financial strength.

When exploring and evaluating various manufacturers to consider for building your apparatus, there is little doubt you will find one that stands on as firmly a financial ground as Rosenbauer. While others are experiencing stressful issues that raise doubts as to the companys long-term viability, Rosenbauer continues to demonstrate a strengthening of its financial position in the apparatus manufacturing industry. Because Rosenbauer meets and exceeds all the above-stated financial bid requirements, we are best positioned to ensure customers of a strong relationship with the company, which cannot be claimed by most of our competitors in this volatile market.

The Rosenbauer America Dun and Bradstreet number is 02-447-3584. To acquire a Dun and Bradstreet report, telephone them at 1-800-234-3867 or visit their web site address at [www.dnb.com](http://www.dnb.com). Dun and Bradstreet is nationally-recognized, independent financial analysis company.

Performance Testing, Tilt Angle, BR

Y\_\_N\_\_

One (1)  
01-06-0650

## **TILT TESTING FACILITIES AND REQUIREMENTS**

The apparatus, prior to acceptance, will be required to meet the stability test of the applicable NFPA Automotive Fire Apparatus Standard. The final and completed vehicle shall be tilt-tested to the applicable standards and photographed to ensure that this procedure and certification can be verified. Each bidder shall have the facilities

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to perform these tests at the manufacturing site. The bidder shall own the facilities to perform the above test, and shall not contract with an outside agency to have these tests performed on this apparatus.

One (1)

== General Timberwolf Warranties-BR - 531.080 05/31/09 ==

Y\_\_N\_\_

One (1)  
01-16-0150

Warranty, Apparatus, Bumper to Bumper, 1 Year, BR

Y\_\_N\_\_

### **BUMPER TO BUMPER WARRANTY**

We warrant each new motorized fire apparatus manufactured by ROSENBAUER AMERICA, LLC for a period of ONE YEAR from the date of delivery, except for chassis and other components noted herein.

Under this warranty we agree to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of ROSENBAUER AMERICA, LLC, made available for our inspection at our request, returned to our factory or other location designated by us with transportation prepaid within thirty days after the date of failure or within one year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship.

The warranty on the chassis and chassis supplied components, storage batteries, generators, electrical lamps and other devices subject to deterioration is limited to the warranty of the manufacturer thereof and adjustments for the same are to be made directly with the manufacturer by the customer.

This warranty will not apply to any fire apparatus that has been repaired or altered outside our factory in any way, which in our opinion might affect its stability or reliability.

This warranty shall not apply to those items that are usually considered normal maintenance and upkeep services: including, but not limited to, normal lubrication or proper adjustment of minor auxiliary pumps or reels.

This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on our part. We neither assume nor authorize any person to assume for us any liability in connection with the sales of our apparatus unless made in writing by ROSENBAUER AMERICA, LLC.

One (1)  
01-17-0850

Pump Warranty, Rosenbauer, BR

Y\_\_N\_\_

### **PUMP WARRANTY**

Rosenbauer America, LLC (Rosenbauer) warrants, to the original buyer only, that products and parts manufactured by Rosenbauer America, LLC will be free from

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## Bidder Complies

defects in material and workmanship under normal use and service for a period of two (2) years from the date the product is first placed in service, or one and one half years from the date of shipment by Rosenbauer America, LLC, whichever period will be the first to expire; provided the buyer notifies Rosenbauer in writing, of the defect in said product within the warranty period, and said product is found by Rosenbauer America to be conforming with the aforesaid warranty.

When required in writing by Rosenbauer, defective products must be promptly returned by the buyer to the Rosenbauer plant or at such other place as may be specified by Rosenbauer with transportation and other charges prepaid. A Return Goods Authorization (RGA) is required for all products and parts and may be requested by phone, fax or mail. The aforesaid warranty excludes any responsibility or liability of Rosenbauer America, LLC for:

A. Damages or defects due to accident, abuse, misuse, abnormal operating conditions, negligence, accidental causes or improper maintenance, or attributable to written specifications or instructions furnished by buyer;

B. Defects in products manufactured by others and furnished by Rosenbauer America 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, Rosenbauer America will assign to the buyer, if requested by Buyer;

C. Any product or part, altered, modified, serviced or repaired other than by Rosenbauer America, 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.

E. Normal wear items (packing, strainers, filters, light bulbs, anodes, intake screens, etc.)

All other warranties are excluded, whether expressed or implied by operation of law or otherwise, including all implied warranties of merchantability or fitness for purpose. Rosenbauer America shall not be liable for consequential or incidental damages directly or indirectly arising or resulting from breach of any of the terms of this limited warranty or from the sale, handling, or use of any other product or part. Rosenbauer America liability hereunder, either for breach of warranty or for negligence, is expressly limited at Rosenbauer America option:

A. To the replacement at the agreed point of delivery of any product or part, which upon inspection by Rosenbauer America or its duly authorized representative, is found not to conform to the limited warranty set forth above, or

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B. To the repair of such product or part, or

C. To 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 the buyer.

One (1)  
01-19-0460

Warranty, Bdy, Alum, 20 Years, Transferable, BR

Y\_\_N\_\_

## **ALUMINUM BODY WARRANTY - TWENTY YEAR**

Rosenbauer America, LLC warrants to the original purchaser that the all aluminum body, fabricated by Rosenbauer America, LLC, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of TWENTY (20) years. Warranty coverage is transferable to second owner, if applicable, with proper notification made to Rosenbauer America, LLC.

This warranty does not apply to the following items that are covered by a separate warranty: paint finish, hardware, moldings, and other accessories attached to this body. In addition, this warranty does not apply to any part or accessory manufactured by others and attached to this body.

ROSENBAUER AMERICA, LLC MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE ALUMINUM BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND HEREBY DISCLAIMED.

Rosenbauer America, LLC will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Rosenbauer America, LLC elects to repair this body, the extent of such repair shall be determined solely by Rosenbauer America, LLC, and shall be performed solely at the Rosenbauer America, LLC factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

Rosenbauer America, LLC will not be liable for damages and under no circumstances will its liability exceed the price for a defective body. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

Rosenbauer America, LLC will be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach hereof, within twelve months from the date the cause of the action occurred.

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Bidder Complies

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufactureres.

One (1)  
01-19-2450

Warranty, Subframe, 20 Year Alum, Transferable, BR

Y \_\_\_ N \_\_\_

## ALUMINUM SUBFRAME WARRANTY

Subject to the provisions, limitations and conditions set forth in this warranty, Rosenbauer America, LLC (hereby referred to as "seller"), hereby warrants to each original purchaser only that each new aluminum body subframe (exclusive of paint finish and hardware) is structurally sound and free of all structural defects of both material and workmanship and further warrants that it will maintain such structural integrity for a period of twenty (20) years of ownership by the original purchaser. Warranty coverage is transferable to second owner, if applicable, with proper notification made to Rosenbauer America, LLC.

This warranty is conditioned upon normal use and reasonable maintenance of such subframe; prompt written notice of all defects to seller or one of the seller's then authorized dealers in the area; no repair or additions there to except by seller or authorized by it; said defect not resulting from misuse, negligence, accident, remount, overloading beyond applicable weight rating by customer or third parties. If any such conditions are not complied with, this warranty shall become void and unenforceable.

Should repairs become necessary under the terms or the warranty, the extent of that repair shall be determined solely by the seller and shall be performed solely at Rosenbauer America, LLC or a repair facility designated by the seller. The expense of any transportation to or from such repair facility shall be that of the purchaser and is not an item covered by this warranty.

Seller reserves the unrestricted right at any time from time to time to make changes in the design of and/or improvements on its products without thereby imposing any obligation on itself to make corresponding changes or improvements in or on its products theretofore manufactured.

EXCLUSIONS AND LIMITATIONS: THIS MANUFACTURER'S WARRANTY IS PROVIDED IN PLACE OF ANY AND ALL OTHER REPRESENTATIONS OR IMPLIED WARRANTIES. NO PERSON IS AUTHORIZED TO MAKE ANY REPRESENTATIONS OR WARRANTY ON BEHALF OF ROSENBAUER AMERICA, LLC OR ANY OF ITS DISTRIBUTORS OTHER THAN SET FORTH IN THIS MANUFACTURER'S WARRANTY. YOUR RIGHT TO SERVICE AND REPLACEMENT OF PARTS ON THE TERMS EXPRESSLY SET FORTH HERIN ARE YOUR EXCLUSIVE REMEDIES AND NEITHER THE MANUFACTURER NOR ANY OF ITS DISTRIBUTORS SHALL BE LIABLE FOR DAMAGES, WHETHER ORDINARY, INCIDENTAL OR CONSEQUENTIAL.

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Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

One (1)  
01-20-0360

Warranty, Paint, PPG, 7 Years, General, BR

Y\_\_N\_\_

## PAINT WARRANTY SEVEN YEAR

The PPG paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of SEVEN (7) years beginning the day the vehicle is delivered to the purchaser.

The areas as outlined on the guarantee certificate will be covered for the following paint failures:

### Guarantee Inclusions:

Full apparatus body manufactured and painted by Rosenbauer America. LLC:

1. Peeling or delaminating of the topcoat and/or other layers of paint.
2. Cracking or checking.
3. Loss of gloss caused by cracking, checking, or hazing.
4. Any paint failure caused by defective PPG Fleet Finishes, which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.

Note: Surety bond, if required, will cover standard one year warranty period only and will not cover any extended warranties allowed by seller or other component manufacturers.

One (1)  
01-33-3100

Mnls, Bdy Complete, 1 Set Printed With CD, BR

Y\_\_N\_\_

## COMPLETE PRINTED MANUAL

**ROSENBAUER** shall provide with the vehicle upon delivery, one (1) complete delivery manual. This manual shall be in a notebook type binder, with reference tabs for each section of the vehicle. A companion compact disk (CD) with all of the printed material in an electronic format (Adobe Acrobat PDF) shall be provided.

Within each section shall be:

1. Individual component manufacturer instruction and parts manuals
2. Warranty forms for the body

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3. Warranty forms for all major components
  4. Warranty instructions and format to be used in compliance with warranty obligations
  5. Wiring diagrams
  6. Installation instruction and drawings for major parts
  7. Visual graphics and electronic photos for the installation of major parts
  8. Necessary normal routine service forms, publications and components of the body portion of the apparatus
  9. Technical publications for training and instruction on major body components
  10. Warning and safety related notices for personnel protection
  11. Cab and chassis manuals on parts, service and maintenance shall be provided
- Plmbg Warranty, Stnls Stl, 10 Years, BR

One (1)  
02-14-6250

Y\_\_N\_\_

## **STAINLESS STEEL PLUMBING WARRANTY**

Subject to the provisions, limitations and conditions set forth in this warranty, Rosenbauer America, LLC (hereby referred to as "seller"), hereby warrants to each original purchaser only that stainless steel plumbing components and ancillary brass fittings used in the construction of the water/foam plumbing system shall be warranted for a period of ten (10) years. This covers structural failures caused by defective design or workmanship, or perforation caused by corrosion, provided the apparatus is used in a normal and reasonable manner. This warranty is extended only to the original purchaser for a period of ten years from the date of the delivery and shall terminate upon the transfer of possession or ownership by original purchaser.

This warranty is conditioned upon normal use and reasonable maintenance of such plumbing; prompt written notice of all defects to seller or one of the seller's then authorized dealers in the area; no repair or additions there to except by seller or authorized by it; said defect not resulting from misuse, negligence, accident, remount, overloading beyond applicable weight rating by customer or third parties. If any such conditions are not complied with, this warranty shall become void and unenforceable.

Should repairs become necessary under the terms or the warranty, the extent of that repair shall be determined solely by the seller and shall be performed solely at Rosenbauer America, LLC or a repair facility designated by the seller. The expense of any transportation to or from such repair facility shall be that of the purchaser and is not an item covered by this warranty.

Seller reserves the unrestricted right at any time from time to time to make changes in the design of and/or improvements on its products without thereby imposing any obligation on itself to make corresponding changes or improvements in or on its products theretofore manufactured.

**EXCLUSIONS AND LIMITATIONS: THIS MANUFACTURER'S WARRANTY IS PROVIDED IN PLACE OF ANY AND ALL OTHER REPRESENTATIONS OR**

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IMPLIED WARRANTIES. NO PERSON IS AUTHORIZED TO MAKE ANY REPRESENTATIONS OR WARRANTY ON BEHALF OF ROSENBAUER AMERICA, LLC OR ANY OF ITS DISTRIBUTORS OTHER THAN SET FORTH IN THIS MANUFACTURER'S WARRANTY. YOUR RIGHT TO SERVICE AND REPLACEMENT OF PARTS ON THE TERMS EXPRESSLY SET FORTH HERIN ARE YOUR EXCLUSIVE REMEDIES AND NEITHER THE MANUFACTURER NOR ANY OF ITS DISTRIBUTORS SHALL BE LIABLE FOR DAMAGES, WHETHER ORDINARY, INCIDENTAL OR CONSEQUENTIAL.

One (1)  
02-90-1500

International 7400 4-Dr 315HP 35000GVW Alum Whls AC 201"WB

Y\_\_\_N\_\_\_

## 2010 INTERNATIONAL 7400 SFA 4X4 (SR525)

### Model Profile

#### 2010 7400 SFA 4X4 (SR525)

**APPLICATION:** Tank (Emergency)

**MISSION:** Requested GVWR: 35000. Calc. GVWR: 35000

Calc. Start / Grade Ability: 28.90% / 3.27% @ 55 MPH

Calc. Geared Speed: 72.6 MPH

**FUEL ECONOMY:** 8.45 MPG @ 55 MPH

**DIMENSION:** Wheelbase: 203.00, CA: 84.10, Axle to Frame: 75.00

**ENGINE, DIESEL:** {International MaxxFORCE 9} 310 HP, 950 lb-ft Torque @ 1200 RPM, 2200 RPM

Governed Speed,

# 2 Bell Housing

**TRANSMISSION, AUTOMATIC:** {Allison 3000EVS\_P} 4th Generation Controls; Close Ratio, 5-Speed;

With Overdrive, Includes

Oil Level Sensor, With Provision for PTO, Less Retarder, Max. GVW N/A

**CLUTCH:** Omit Item (Clutch & Control)

**AXLE, FRONT DRIVING:** {Meritor MX-12-120} Single Reduction, 12,000-lb Capacity

**AXLE, REAR, SINGLE:** {Meritor RS-23-160} Single Reduction, 23,000-lb Capacity, With 200 Wheel

Ends Gear Ratio: 4.89

**CAB:** Conventional 6-Man Crew Cab

**TIRE, FRONT:** (2) 11R22.5 G182 RSD (GOODYEAR) 496 rev/mile, load range G, 14 ply

**TIRE, REAR:** (4) 11R22.5 G182 RSD (GOODYEAR) 496 rev/mile, load range G, 14 ply

**SUSPENSION, RR, SPRING, SINGLE:** Vari-Rate; 23,500-lb Capacity, With 4500 lb Auxiliary Rubber Spring

**PAINT:** Cab schematic 209GM

Location 1: 9219, Winter White (Std)

Location 2: 2303, Red (Custom)

Chassis schematic N/A

Base Chassis, Model 7400 SFA 4X4 with 203.00 Wheelbase, 84.10 CA, and 75.00 Axle to Frame.

TOW HOOK, FRONT (2) Inside Rail, Frame Mounted.

FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.250" x 3.610" x 0.375" (260.4mm x 91.7mm x 9.5mm); 456.0" (11582mm)

Maximum OAL

BUMPER, FRONT Full Width, Aerodynamic, Chrome Plated Steel; 0.189" Material Thickness

FRAME EXTENSION, FRONT Bolt On Type; 20" In Front of Grille, Without Crossmember

WHEELBASE RANGE 181" (460cm) Through and Including 205" (520cm)

AXLE, FRONT DRIVING {Meritor MX-12-120} Single Reduction, 12,000-lb Capacity

Includes

: DRAIN PLUG, DRIVING FRONT AXLE Magnetic

SUSPENSION, FRONT, SPRING Parabolic, Taper Leaf; 12,000-lb Capacity; With Shock Absorbers

Includes

: SPRING PINS Rubber Bushings, Maintenance-Free

BRAKE SYSTEM, AIR Dual System for Straight Truck Applications

Includes

: BRAKE CHAMBERS, SPRING (2) Rear Parking

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## Bidder Complies

: BRAKE LINES Color and Size Coded Nylon  
: DRAIN VALVE Twist-Type  
: DUST SHIELDS, FRONT BRAKE  
: DUST SHIELDS, REAR BRAKE  
: GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located in Instrument Cluster  
: PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel  
: PARKING BRAKE VALVE For Truck  
: QUICK RELEASE VALVE Bendix On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4  
: SLACK ADJUSTERS, FRONT Automatic  
: SLACK ADJUSTERS, REAR Automatic  
: SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4  
DRAIN VALVE, AUTOMATIC {Bendix DV-2} With Heater; for Air Tank  
AIR BRAKE ABS {Bendix AntiLock Brake System} Full Vehicle Wheel Control System (4-Channel)  
AIR DRYER {Bendix AD-IP} With Heater  
BRAKE CHAMBERS, FRONT AXLE {Haldex} 20 SqIn  
BRAKE CHAMBERS, REAR AXLE {Haldex GC3030LHDHO} 30/30 Spring Brake  
BRAKES, FRONT, AIR CAM S-Cam; 16.5" x 5.0"; Includes 20 Sq. In. Long Stroke Brake Chambers  
BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake  
AIR COMPRESSOR {Bendix Tu-Flo 550} 13.2 CFM Capacity  
STEERING COLUMN Tilting  
STEERING WHEEL 2-Spoke, 18" Diam., Black  
STEERING GEAR {Sheppard M-100} Power  
EXHAUST SYSTEM Single, Horizontal, Aftertreatment Device Frame Mounted Outside Right Rail Under Cab; Includes Vertical Tail Pipe and Guard  
Includes  
: MUFFLER/TAIL PIPE GUARD Bright Finish

EXHAUST BRAKE, DLOGIC {Diamond Logic} for MaxxFace 9 / DT570, MaxxFace 10 / HT570 Engines; Electronically Activated  
EXHAUST HEIGHT 11' 6"  
SWITCH, FOR EXHAUST 2 Position, Lighted & Latching, ON/OFF Type, Mounted in IP, Inhibits Diesel Particulate Filter Regeneration as Long as Switch is in ON Position  
ELECTRICAL SYSTEM 12-Volt, Standard Equipment  
Includes  
: BATTERY BOX Steel with Fiberglass Cover  
: DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab  
: FUSES, ELECTRICAL SAE Blade-Type  
: HAZARD SWITCH Push On/Push Off, Located on Top of Steering Column Cover  
: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever  
: HEADLIGHTS (2) Sealed Beam Halogen, 5" X 7" Rectangular, with Chrome Plated Bezels  
: HORN, ELECTRIC Single  
: JUMP START STUD Located on Positive Terminal of Outermost Battery  
: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light  
: RUNNING LIGHT (2) Daytime, Included With Headlights  
: STARTER SWITCH Electric, Key Operated  
: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector  
: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature  
: TURN SIGNALS, FRONT Includes Reflectors and Auxiliary Side Turn Signals, Solid State Flashers; Flush Mounted  
: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever  
: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted  
: WIRING, CHASSIS Color Coded and Continuously Numbered  
CIGAR LIGHTER Includes Ash Cup  
HORN, ELECTRIC (2)  
IGNITION SWITCH Keyless  
ALTERNATOR {Leece-Neville 4962PAH} Brush Type, 12 Volt 320 Amp. Capacity, Pad Mounted

# Rosenbauer America

## Bidder Complies

BODY BUILDER WIRING To Rear of Frame, With Stop, Tail, Turn, and Marker Lights Circuits, Ignition Controlled Auxiliary Feed and Ground, Less Trailer Socket

BATTERY SYSTEM {International} Maintenance-Free, (3) 12-Volt 1950CCA Total

RADIO {International} AM/FM Stereo With CD Player, Weatherband, Clock, Auxiliary Input, Includes Multiple Coaxial Speakers

Includes

: SPEAKERS IN CAB (2) Coaxial with Deluxe Interior

: SPEAKERS IN CAB (4) Coaxial with Premium Interior

JUMP START STUD Remote Mounted

HORN, AIR Black, Single Trumpet, Air Solenoid Operated, Mounted Behind Bumper on Right Rail

BATTERY DISCONNECT SWITCH {Joseph Pollak 51-315} Positive Type, Lever Operated, Cab Mounted

SWITCH, AIR HORN, PASSENGER Fire Truck Application; Switch Located in Instrument Panel Close to Passenger, Driver Also To

Activate Switch at Steering Wheel

HEADLIGHTS Long Life Halogen; for Two Light System

STARTING MOTOR {Delco Remy 38MT Type 300} 12 Volt; less Thermal Over-Crank Protection

COURTESY LIGHT (4) Mounted In Front & Rear Map Pocket Left and Right Side

INDICATOR, LOW COOLANT LEVEL With Audible Alarm

INDICATOR, BATTERY WARNING Green Indicator Mounted on Left Side of Instrument Panel

CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III With Trip Indicators, Replaces All Fuses Except For 5-Amp Fuses

FENDER EXTENSIONS Rubber

GRILLE Stationary, Chrome

GRILLE EMBER SCREEN Mounted to Grille to Keep Hot Embers out of Engine Air Intake System

FRONT END Tilting, Fiberglass, With Three Piece Construction; for 2007 Emissions

PAINT SCHEMATIC, PT-1 Two Tone, Design 209.

PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

PAINT CLASS Single Custom Color

KEYS,- ALL ALIKE, ID Z-001

CLUTCH Omit Item (Clutch & Control)

ENGINE, DIESEL {International MaxxFORCE 9} 310 HP, 950 lb-ft Torque @ 1200 RPM, 2200 RPM Governed Speed, # 2 Bell Housing

Includes

: AIR COMPRESSOR AIR SUPPLY LINE Naturally-Aspirated

: COLD STARTING EQUIPMENT Intake Manifold Electric Grid Heater with Engine ECM Control

: CRUISE CONTROL Electronic; Controls Integral to Steering Wheel

: ENGINE OIL DRAIN PLUG Magnetic

: ENGINE SHUTDOWN Electric, Key Operated

: FUEL FILTER Included with Fuel/Water Separator

: FUEL/WATER SEPARATOR Fuel/Water Separator and Fuel Filter in a Single Assembly; With Water-in-Fuel Sensor; Engine Mounted

: GOVERNOR Electronic

: OIL FILTER, ENGINE Spin-On Type

: WET TYPE CYLINDER SLEEVES

FAN DRIVE {Horton Drivemaster} Direct Drive Type, Two Speed With Residual Torque Device for Disengaged Fan Speed

Includes

: FAN Nylon

RADIATOR Cross Flow, Series System; 1228 SqIn Aluminum Radiator Core With Internal Water to Oil Transmission Cooler and 1167 In

Charge Air Cooler

Includes

: ANTI-FREEZE Red Shell Rotella Extended Life Coolant -40F (-40C)

: DEAERATION SYSTEM with Surge Tank

: HOSE CLAMPS, RADIATOR HOSES Gates Shrink Band Type; Thermoplastic Coolant Hose Clamps

: RADIATOR HOSES Premium, Rubber

FEDERAL EMISSIONS for 2004; for International VT365, DT466 and DT570 Engines

AIR CLEANER Single Element

# Rosenbauer America

## Bidder Complies

Includes

: GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted  
THROTTLE, HAND CONTROL Engine Speed Control for PTO; Electronic, Stationary Pre-Set, Two  
Speed Settings; Mounted on Steering  
Wheel  
FEDERAL EMISSIONS 2007 for International MaxxForce 9 & 10 Engines (DT570 & HT570)  
ENGINE CONTROL, REMOTE MOUNTED Provision for; Includes Wiring for Body Builder Installation of  
PTO Controls; With Ignition Switch  
Control for MaxxForce post 2007 Emissions Electronic Engines  
ENGINE WATER COOLER {Sen-Dure} Auxiliary, For Use With Fire Trucks

EXPANDED ENGINE TEMP EFFECTS to Allow Higher Engine Operating Temperature Range;

Includes Nylon Surge Tank and 15 psi

Pressure Cap

EMISSION COMPLIANCE Engine Shutdown System Exempt Vehicles, Complies With California Clean  
Air Regulations

TRANSMISSION, AUTOMATIC {Allison 3000EVS\_P} 4th Generation Controls; Close Ratio, 5-Speed;  
With Overdrive, Includes Oil Level

Sensor, With Provision for PTO, Less Retarder, Max. GVW N/A

Includes

: OIL FILTER, TRANSMISSION Mounted on Transmission

: TRANSMISSION OIL PAN Magnet in Oil Pan

TRANSFER CASE {Meritor T-4210 2} 2 Spd, 10000 lb-ft Total Capacity, Without Provision for PTO,  
With Electric Over Air Control, With

Lube Pump

Includes

: LIGHT, INDIC, ALL-WHEEL DRIVE Illuminates With All Wheel Drive Engaged, Located on Instrument  
Panel

TRANSMISSION SHIFT CONTROL {Allison} Push-Button Type; for Allison 3000 & 4000 Series

Transmission

TRANSFER CASE LUBE {EmGard 50W} Synthetic; 1 thru 14.99 Pints

OIL COOLER, TRANSFER CASE Remote Mounted Back of Cab

SHIFT CONTROL PARAMETERS WT-Allison S-1 Performance Programming in Primary and Allison S-  
4 Economy Programming in

Secondary

TRANSMISSION DIPSTICK Relocated to Right Side of Transmission

ALLISON SPARE INPUT/OUTPUT for Emergency Vehicle Series (EVS); Fire/Pumper, Tank,  
Aerial/Ladder

AXLE, REAR, SINGLE {Meritor RS-23-160} Single Reduction, 23,000-lb Capacity, With 200 Wheel  
Ends . Gear Ratio: 4.89

Includes

: REAR AXLE DRAIN PLUG (1) Magnetic, For Single Rear Axle

SUSPENSION, RR, SPRING, SINGLE Vari-Rate; 23,500-lb Capacity, With 4500 lb Auxiliary Rubber  
Spring

FUEL TANK Top Draw; D Style, Steel, 50 U.S. Gal., 189 L Capacity, With Quick Connect Outlet, 16"  
Tank Depth, Mounted Left Side Under

Cab

CAB Conventional 6-Man Crew Cab

Includes

: ARM REST (2) Molded Plastic; One Each Door

: CLEARANCE/MARKER LIGHTS (5) Flush Mounted

: COAT HOOK, CAB Located on Rear Wall, Centered Above Rear Window

: CUP HOLDERS Two Cup Holders, Located in Lower Center of Instrument Panel

: DOME LIGHT, CAB Rectangular, Door Activated and Push On-Off at Light Lens, Timed Theater  
Dimming, Integral to Console, Center

Mounted

: GLASS, ALL WINDOWS Tinted

: GRAB HANDLE, CAB INTERIOR (1) "A" Pillar Mounted, Passenger Side

: GRAB HANDLE, CAB INTERIOR (2) Front of "B" Pillar Mounted, One Each Side

: GRAB HANDLE, CAB INTERIOR (4) Two Each Side, Rear Door Mounted at Hinge Side and "C" Pillar  
Mounted

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## Bidder Complies

: INTERIOR SHEET METAL Upper Door (Above Window Ledge) Painted Exterior Color  
: STEP (8) Two Steps Per Door  
GAUGE CLUSTER English With English Electronic Speedometer  
Includes  
: GAUGE CLUSTER (6) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel (Electronic), Tachometer (Electronic), Voltmeter, Washer Fluid Level  
: ODOMETER DISPLAY, Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout  
: WARNING SYSTEM Low Fuel, Low Oil Pressure, High Engine Coolant Temp, and Low Battery Voltage (Visual and Audible)

SEATBELT WARNING PREWIRE Includes Seat Belt Switches and Seat Sensors for all Belted Positions in the Cab and a Harness Routed to the Center of the Dash for the Aftermarket Installation of the Data Recorder and Seatbelt Indicator Systems, for 4 to 6 Seat Belts  
GAUGE, OIL TEMP, ALLISON TRAN  
GAUGE, AIR CLEANER RESTRICTION {Filter-Minder} With Black Bezel Mounted in Instrument Panel  
IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster  
SEAT, DRIVER {Seats, Inc. Universal Series} 911, NFPA Compliant, Air Suspension, High Back Vinyl with Covered Back and International Logo on Head Rest  
Includes  
: SEAT BELT 3-Point, Lap and Shoulder Belt Type  
SEAT, REAR {Seats, Inc. Universal Series} 911, NFPA Compliant, Three Individual Seats on one Riser, Non-Suspension, High Back for SCBA, Vinyl With Covered Back, International Logo on Headrest  
Includes  
: SEAT BELT (3) Two 3-Point Shoulder Belts for Driver and Outer Passenger and One 2-Point Lap Belt for Center Passenger  
SEAT, PASSENGER {Seats, Inc. Universal Series} 911, NFPA Compliant, Non-Suspension, High Back for SCBA, Vinyl Covered Back, Adjusters, 5 Degree Back angle, International Logo on Headrest  
Includes  
: SEAT BELT 3-Point, Lap and Shoulder Belt Type  
MIRRORS (2) {Lang Mekra} Styled; Rectangular, 7.09" x 15.75" & Integral Convex Both Sides, 102" Inside Spacing, Breakaway Type, Heated Heads Thermostatically Controlled, Power Both Sides, Clearance Lights LED, Bright Finish Heads & Brackets  
GRAB HANDLE Chrome; Towel Bar Type With Anti-Slip Rubber Inserts; for Cab Entry Mounted Left Side Only at "B" Pillar  
SEAT BELT All Red; 4 to 6  
INSTRUMENT PANEL Center Section, Flat Panel  
AIR CONDITIONER {International Blend-Air} With Integral Heater & Defroster  
Includes  
: FRESH AIR FILTER  
: HEATER HOSES Premium  
: REFRIGERANT Hydrofluorocarbon HFC-134A  
FRESH AIR FILTER for HVAC  
STORAGE POCKET, DOOR Molded Plastic, Full Width; Mounted on Passenger Door  
CAB INTERIOR TRIM Deluxe; for Crew Cab  
Includes  
: "A" PILLAR COVER Molded Plastic  
: CAB INTERIOR TRIM PANELS Cloth Covered Molded Plastic, Full Height; All Exposed Interior Sheet Metal is Covered Except for the Following: with a Two-Man Passenger Seat or with a Full Bench Seat the Back Panel is Completely Void of Covering  
: CONSOLE, OVERHEAD Molded Plastic; With Dual Storage Pockets with Retainer Nets and CB Radio Pocket  
: DOOR TRIM PANELS Molded Plastic; Driver and Passenger Doors  
: FLOOR COVERING Rubber, Black  
: HEADLINER Soft Padded Cloth

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## Bidder Complies

: INSTRUMENT PANEL TRIM Molded Plastic with Black Center Section  
: STORAGE POCKET, DOOR (1) Molded Plastic, Full-Length; Driver Door  
: SUN VISOR (2) Padded Vinyl with Driver Side Toll Ticket Strap, Integral to Console  
CAB REAR SUSPENSION Air Bag Type  
WHEELS, FRONT DISC; 22.5" Polished Aluminum, 10-Stud (285.75MM BC) Hub Piloted, Flanged Nut, Metric Mount, 8.25 DC Rims; With Steel Hubs

Includes

: WHEEL SEALS, FRONT Oil Lubricated, Includes Wheel Bearings  
WHEELS, REAR DUAL DISC; 22.5" Polished Aluminum, 10-Stud (285.75MM BC) Hub Piloted, Flanged Nut, Metric Mount, 8.25 DC Rims;  
With Steel Hubs.

Includes

: WHEEL SEALS, REAR Oil Lubricated, Includes Wheel Bearings  
BDY INTG, I/O EXPANSION HARNES {for Diamond Logic Builder} In-Cab wire harness (DLB) program only, Includes a harness with five blunt cut wires routed on lower left of instrument panel. Two ground active inputs and two (.5Amp) relay drivers outputs are provided  
(2) TIRE, FRONT 11R22.5 G182 RSD (GOODYEAR) 496 rev/mile, load range G, 14 ply  
(4) TIRE, REAR 11R22.5 G182 RSD (GOODYEAR) 496 rev/mile, load range G, 14 ply

One (1) == General Timberwolf SA Chassis Modifictns - 531.080 05/31 Y\_\_N\_\_

One (1) Vehicle Dimensions, Sngl Axle Y\_\_N\_\_  
10-01-1100

### OVERALL DIMENSIONS

The vehicle shall have the following dimensions:

1. Chassis wheelbase:
2. Cab to axle dimension of chassis:
3. Overall length:
4. Overall width:

One (1) Overall height Y\_\_N\_\_  
Label, Data, Fluid Levels  
10-02-1100

### FLUID DATA PLAQUE

One (1) fluid data plaque containing required information shall be provided based on the applicable components for this apparatus, compliant with NFPA Standards:

1. Engine oil
2. Engine coolant
3. Chassis transmission fluid
4. Drive axle lubricant
5. Power steering fluid

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6. Pump transmission lubrication fluid
7. Paint manufacturer and color numbers
8. Other NFPA applicable fluid levels or data as required

One (1)  
10-02-1200  
Location shall be in the driver's compartment or on driver's door.  
Label, Data, Height x Length, Weight  
Y\_\_N\_\_

### **APPARATUS DIMENSION DATA**

One (1)  
10-02-1300  
One (1) highly visible label indicating the overall height, length, and weight of the vehicle shall be installed in the cab dash area.  
Label, Data, "No Ride" Rr Step  
Y\_\_N\_\_

### **NO RIDE LABEL**

One (1)  
10-02-2100  
One (1) "NO RIDERS" label shall be applied on the vehicle at the rear step area or other applicable areas. The label shall warn personnel that riding in or on these areas, while the vehicle is in motion is prohibited.  
Label, Indicating Number of Seats  
Y\_\_N\_\_

### **CAB SEATING POSITION LIMITS**

One (1)  
10-02-2500  
One (1) label shall be installed in the cab to indicate seating positions for firefighters. A weight allowance of 250 pounds for each shall be factored into the gross vehicle weight rating of the chassis.  
Label, "Caution: Do Not Wear Helmet While Seated"  
Y\_\_N\_\_

### **HELMET WARNING TAG**

One (1)  
10-03-1230  
One (1) label shall be installed in the cab, visible from each seating position. The label shall read "CAUTION: DO NOT WEAR HELMET WHILE SEATED."  
Helmets must be properly stowed while the vehicle is in motion according to the current edition of NFPA 1901.  
Chassis Preparation, Comm, 4 Door, Tmbrwlf/Airwlf  
Y\_\_N\_\_

### **CHASSIS PREPARATION**

One (1)  
10-03-6500  
Prior to installation of the fire pump, apparatus body, or cab steps, all components which extend out beyond the chassis frame rails shall be removed and relocated to the area within the frame rails allowing for maximum side depth compartmentation.  
Tow Plates (2), Rr Frame Rail, Under Rr Bdy, Tmbrwlf/Airwlf  
Y\_\_N\_\_

### **REAR TOWING PROVISIONS**

There shall be two tow eyes furnished under the rear of the body and attached directly to each chassis frame rail. There shall be a reinforcement spreader bar connecting the two tow eyes. Tow eyes are to be constructed of 1/2" plate steel with a 3" I.D. hole,

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One (1)  
10-04-2236 large enough for passing through a tow chain end hook.  
Bumper Ext, 20", IH, By Bdy Bldr Y\_\_N\_\_

### **BUMPER EXTENSION**

The chassis frame shall be extended forward approximately 20" with reinforced steel angle and structural channel by the body builder. The extension shall be designed to support the bumper and other equipment to be installed.

One (1)  
10-04-2344 Bumper Gravelshield, 20", By Bdy Bldr Y\_\_N\_\_

### **FRONT BUMPER GRAVELSHIELD**

A 20" front to rear filler panel constructed from NFPA compliant, slip resistant .190" aluminum tread plate material shall be provided on the front chassis frame extension. The extension shall be covered on the top and sides, up to the level of front bumper and shall be reinforced to support one (1) firefighter (approximately 250 pounds) and the equipment specified to be installed. Aluminum fabrications are to be completely bolted in place and removable using stainless steel threaded fasteners with Ny-Lok nut fasteners.

One (1)  
10-04-3570 Bumper, Flat Style, Plshd Stnlss Stl Cladding, Tmbrwlf Y\_\_N\_\_

### **HEAVY DUTY FRONT BUMPER**

The front bumper shall be fabricated from ASTM A36 or equivalent steel with a minimum height of 12", a material thickness of .250" and match the width of the chassis. The front bumper top and bottom flanges shall be approximately 2" and shall be attached directly to the frame rails and be primed and undercoated. Bumper cladding fabricated from 16 gauge polished stainless steel shall be installed completely concealing the bumper for a high quality, finished appearance.

One (1)  
10-06-1110 Whl Trim, S/S Hub/Lug Cvr, Front/Rr, Sngl Axle Y\_\_N\_\_

### **HUB AND LUG NUT COVERS**

The apparatus shall have chrome or stainless steel hub and lug nut covers on the front and single rear axles.

One (1)  
10-06-1600 Tire Pressure Indicator (Sngl Axle) Y\_\_N\_\_

### **TIRE PRESSURE INDICATOR**

There shall be a tire pressure indicator at each tire's valve stem on the vehicle that shall

indicate if there is insufficient pressure in the specific tire.

One (1)  
10-07-2110 Exhaust, Vert, With Chs, Navistar Y\_\_N\_\_

### **VERTICAL EXHAUST SYSTEM**

The vertical exhaust system shall be supplied with the commercial chassis on the

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passenger side of the apparatus. There shall be a ventilated protective guard installed around the exhaust pipe.  
One (1) Mud Flaps, Rr Whls, Blk, w/ Bdy Y\_\_N\_\_  
10-08-2100

### REAR MUD FLAPS

One (1) pair of black mud flaps shall be installed behind the rear wheels.  
Cab Step Overlay, 4 Dr LH Side w/Compt Y\_\_N\_\_  
10-10-0800

### CAB ENTRANCE STEPS

The four (4) door chassis shall be equipped with a modular step/fuel tank enclosure constructed from slip resistant aluminum tread plate to conform with applicable NFPA standards. The step/enclosure is to completely cover the fuel tank, and is to include a radius cut-out allowing access to the fuel tank fill. The entire step/enclosure is to be of a one piece design, bolted in place for ease of removal.

Heavy channel steel underbody supports shall be provided to support the right and left side cab entrance steps. Supports shall be attached directly to the chassis frame rails, and shall provide adequate support to the steps to minimize flex and distortion.

The overlay shall be provided with a storage compartment. A hinged door with latch shall be provided on the storage compartment.  
One (1) Cab Step Overlay, 4 Dr RH Side w/Compt Y\_\_N\_\_  
10-10-0900

### CAB ENTRANCE STEPS

The four (4) door chassis shall be equipped with a modular step enclosure constructed from slip resistant aluminum tread plate to conform with applicable NFPA standards. The entire step/enclosure is to be of a one piece design, bolted in place for ease of removal.

Heavy channel steel underbody supports shall be provided to support the right and left side cab entrance steps. Supports shall be attached directly to the chassis frame rails, and shall provide adequate support to the steps to minimize flex and distortion.

The overlay shall be provided with a storage compartment. A hinged door with latch shall be provided on the storage compartment.  
One (1) Painting, Tow Plates, Blk Y\_\_N\_\_  
80-43-2400

The tow plates shall be painted black.  
One (1) == General Timberwolf Pump&Plumbing - 531.080 05/31/09 == Y\_\_N\_\_

One (1) Bumper Crosslay Hosebed, Full Width, (1) 150' 1-3/4", Twlf Y\_\_N\_\_  
10-04-2560

### FRONT BUMPER CROSSLAY HOSEBED

10061-0004

05/12/10

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One (1) crosslay hosebed with minimum 3.5 cu. ft. capacity, designed to carry 150 feet of 1-3/4" double jacket fire hose shall be provided and installed in the chassis front bumper extension. Crosslays shall be plumbed from the specified discharge valves on the fire pump using high pressure flexible hose with stainless steel end couplings. Crosslays shall be provided with recess mounted 1-1/2" NST **long neck** swivel discharges, and aluminum flooring.

One (1)  
10-04-2600

Bumper Cmpt, Left, Battery Compt, Tmbrwlf/Airwlf

Y\_\_N\_\_

## FRONT BUMPER COMPARTMENT

One (1) recessed battery compartment constructed from smooth aluminum shall be installed in the left side of the front bumper extension. One battery shall be relocated from under the chassis cab and installed in this compartment. An aluminum tread plate door for the front bumper compartment shall be supplied. The flat door shall have a stainless steel hinge at the rear and a latch to secure the compartment. Water drain holes shall be drilled in the bottom.

One (1)  
10-04-2930

Bumper Cmpt, Right, Battery Compt, Tmbrwlf/Airwlf

Y\_\_N\_\_

## FRONT BUMPER COMPARTMENT

One (1) recessed battery compartment constructed from smooth aluminum shall be installed in the left side of the front bumper extension. Two batteries shall be relocated from under the chassis cab and installed in this compartment. An aluminum tread plate door for the front bumper compartment shall be supplied. The flat door shall have a stainless steel hinge at the rear and a latch to secure the compartment. Water drain holes shall be drilled in the bottom.

One (1)  
20-27-1210

Pump, Rosenbauer, NH40-1000 GPM, NPHP, PTO - Tmbrwlf

Y\_\_N\_\_

## 1000 GPM COMBINATION NORMAL & HIGH PRESSURE PUMP SYSTEM W/ PTO DRIVE SYSTEM

A Rosenbauer Model NH40 fire pump shall be rear mounted with a rated capacity of 1000 GPM. In addition to meeting NFPA 1901 requirements, it shall be constructed and mounted in accordance with the following specifications.

Pump shall deliver the percentage of rated discharge at pressures indicated below:

- 100% of rated capacity at 150 pounds net pressure
- 70% of rated capacity at 200 pounds net pressure
- 50% of rated capacity at 250 pounds net pressure
- 100% of rated capacity at 165 pounds net pressure

The pump shall incorporate a high pressure, three-stage pump. The high-pressure side shall be capable of developing 100 GPM at 600 PSI simultaneously while pumping the rated volume specified above.

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The high-grade light alloy impellers shall be accurately balanced and mounted on a stainless steel pump shaft. The shaft shall be supported by three roller bearings; two located in the gearbox and one in the suction inlet. Bearings shall be protected from water and sediment by maintenance free self-adjusting mechanical seals.

The main pump body shall be easily removable without disturbing setting of the pump on the chassis.

The pump body is to be of high quality seawater resistant light alloy. All parts that come into contact with water to be special treated light alloy or stainless steel.

The pump manufacturer shall test the pump for 10 minutes hydrostatically at a pressure of 500 psig. Hydrostatic Certification by the pump manufacturer shall be provided.

Fire pump shall incorporate high strength helical gear drive single stage transmission.

Pump drive system shall be with a heavy duty PTO system bolted directly to the chassis transmission. There shall be a heavy duty drive line assembly with hanger bearings furnished from the PTO to the rear mounted pump transmission.

The pump shall be provided with a plate giving the rated flow at "capacity" and "pressure" test pressures, together with the rpm of the engine at those pressures and deliveries and mounted in clear view of the pump operators panel. Data plate shall include model and serial numbers of the pump body and chain transmission, hydro and discharge test pressures, and the date of pump and transmission manufacture.

## HIGH PRESSURE RELIEF VALVE

A relief valve shall be plumbed to the high pressure side of the pump to prevent water spiking.

## OILLESS PRIMING SYSTEM

The pump shall be capable of taking suction and discharging water with a lift of 10 feet in not more than 30 seconds with the pump dry, through 20 feet of suction hose of appropriate size. It shall be capable of developing a vacuum of 22" at an altitude of up to 1000 feet.

A high capacity, electrically driven automatic double piston priming pump shall be provided with a manual back up.

A vacuum test with a capped suction of at least 20' long shall develop 22" of vacuum and hold a vacuum with a drop not in excess of 10" in five minutes.

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## PUMP REMOVAL

The pump and plumbing shall be of a modular design and shall be completely removable as one unit from the top of the apparatus as a complete unit for future removal if necessary.

One (1)  
20-27-6200

Primer, Rosenbauer, Automatic

Y\_\_N\_\_

## PRIMER SYSTEM

The fire pump primer system shall be a positive displacement double piston type that is driven by a belt from the input shaft of the fire pump. The pump shall be lubricated from an oil reservoir but shall not oil or discharge oil in the exhaust. Primers that use 12 volt electricity to drive the primer shall not be acceptable due to voltage loss on the electrical system.

The primer system shall be a "hands off" automatic style primer that, when engaged for drafting operations shall be able to be left unattended for the duration of the drafting operation. Once pump pressure of approximately 5 PSI is achieved, the primer shall disengage. When the pump pressure drops below 5 PSI the primer shall re-engage itself to re-prime the fire pump.

This feature adds to the safety of fire fighters by automatically keeping the pump primed and allows the pump operator to assist in other duties on the fire scene. Primers that do have this automatic feature will not be acceptable, no exceptions.

One (1)  
20-28-3410

Pump Shift, Rosenbauer, PTO, Pump and Roll, Tmbrwlf/Airwlf

Y\_\_N\_\_

## PTO PUMP SHIFT SPECIFICATIONS -- PUMP AND ROLL

An electric powered PTO pump shift shall be installed in the cab driver's area where not subject to accidental engagement. The pump shift system shall permit "pump and roll" operations, as well as stationary pumping operations.

The following indicator lights shall be included with pump shift.

1. A green indicator light, labeled "PUMP ENGAGED" shall indicate pump shift has successfully been completed.
2. A green indicator light, labeled "OK TO PUMP" shall indicate the chassis transmission is in proper gear and parking brake is engaged.
3. Pump shift and interlocks shall comply with applicable sections of the NFPA standards.
4. The pump shift shall have an instruction label and nameplate to indicate proper pump shift instructions.

One (1)

Supply Valve, High Pressure, Elec

Y\_\_N\_\_

10061-0004

# Rosenbauer America

Bidder Complies

20-28-4010

## **HIGH PRESSURE VALVE**

A 1 1/2" electrically operated valve shall be provided to feed the high pressure manifold. The specified valve shall be an Akron 8800 Series one and one half-inch (1-1/2") valve with a stainless ball. The valve shall be equipped with a KZCO KZ Valve Model EH-2 12 volt electric actuator. The valve control shall be push button or rocker type switch with indicator light provided. When the valve is open, the indicator light shall illuminate. When the valve is closed the indicator light shall be off. The valve shall be controlled from the cab and rear of truck and shall be properly labeled.

One (1)  
20-30-3400

Pump Instln, Rr Mt PTO, By Bdy Bldr

Y\_\_N\_\_

## **PTO FIRE PUMP DRIVESHAFTS AND INSTALLATION**

The rear mounted PTO fire pump shall be installed and shall include installation of the fire pump, modification and/or fabrication of new drivelines and all pump-mounting brackets. The PTO drive shaft(s) shall be spin balanced prior to final installation.

One (1)  
20-31-1100

Pump Test, Pumper, UL

Y\_\_N\_\_

## **UNDERWRITERS LABORATORIES FIRE PUMP TEST**

The pump shall undergo an Underwriters Laboratories Incorporated test per applicable sections of NFPA standards, prior to delivery of the completed apparatus.

One (1)  
20-31-1500

The UL acceptance certificate shall be furnished with the apparatus on delivery.  
Pump Test, Label

Y\_\_N\_\_

## **FIRE PUMP TEST LABEL**

A fire pump performance and rating label shall be install on the fire apparatus pump panel. The label shall denote levels of pump performance and testing completed at factory. These shall include GPM at net pump pressure, RPM at such level, and other pertinent data as required by applicable NFPA standards. In addition, the pressure control device, tank to pump flow tests, and other required testing shall be completed.

In addition, the entire pump, suction and discharge passages shall be hydrostatically tested to a pressure as required by applicable NFPA standards. The pump shall be fully tested at the pump manufacturer's factory to the performance specifications as outlined by applicable NFPA standards. Pump shall be free from objectionable pulsation and vibration.

If applicable, the fire pump shall be tested and rated as follows:

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100% of rated capacity at 150 pounds net pressure.  
70% of rated capacity at 200 pounds net pressure.  
50% of rated capacity at 250 pounds net pressure.  
100% or rated capacity at 165 pounds net pressure.

One (1)  
20-31-3200

Dump-Relief Vlv, Suction Side, ELK #240

Y\_\_\_N\_\_\_

## INTAKE RELIEF/DUMP VALVE

One (1) Elkhart Model 40, 2-1/2" intake relief/dump valve preset at 125 psi shall be permanently installed on the suction side of the fire pump. The valve shall have an adjustment range of 75 psi to 250 psi, and shall be designed to automatically self-restore to a non-relieving position when excessive pressure is no longer present.

Discharge side of the intake relief valve shall be plumbed to the side the apparatus, away from the pump operator, and shall terminate with a 2-1/2" NST male thread. The outlet shall be marked with an engraved tag "Intake pressure relief outlet - Do Not Cap".

One (1)  
20-31-4700

Pump Cooler, Rosenbauer, Thermal

Y\_\_\_N\_\_\_

## FIRE PUMP COOLING

The fire pump shall be equipped Rosenbauer thermal bypass cooling system. The system shall automatically dump water through a discharge line to the ground when pump water temperature exceeds 140 degrees.

One (1)  
20-31-5200

Heat Exchanger, Engine, Complete

Y\_\_\_N\_\_\_

## CHASSIS ENGINE HEAT EXCHANGER COOLING SYSTEM

The apparatus shall be equipped with a heat exchanger for supplementary chassis engine cooling during fire pump operations. A manually opened valve, mounted at the operator's panel, shall direct water from the fire pump to the heat exchanger that is mounted in the engine radiator cooling hose. The system shall provide cooling water from the fire pump to circulate around the engine radiator coolant without mixing or coming in direct contact with the engine coolant. The complete installation shall be done by the fire apparatus manufacturer.

A nameplate label shall be installed on the pump panel noting "engine cooling system" with "on-off" opening directions noted.

One (1)  
21-00-3250

Piping, Stnls Stl - Up to 1000 GPM \*

Y\_\_\_N\_\_\_

## PUMP PLUMBING SYSTEM

The fire pump plumbing system shall be of rigid stainless steel pipe or flexible piping with stainless steel fittings. Mechanical grooved couplings shall be installed to permit flexing of the plumbing system and allow for quick removal of piping or valves for service. Flexible hose couplings shall be threaded stainless steel or mechanical grooved coupling connections.

10061-0004

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The fire pump and plumbing shall be hydrostatically tested in compliance to applicable sections of NFPA standards. The test results shall be included in the delivery documentation.

Two (2)  
21-01-2202 Dschg Bleeder, Class 1, Automatic - Spec Only Y\_\_N\_\_

A Class 1 automatic type 3/4" bleeder valve shall be installed on discharges larger than 1-1/2" in size.

One (1)  
21-01-2302 Dschg Bleeder, Class 1, Mnl 1/4 Turn - Spec Only Y\_\_N\_\_

A Class 1 3/4" cast bronze quarter-turn drain and bleeder valve shall be installed on gated intakes and discharges larger than 1-1/2" in size.

The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a 1"x 1 1/2" recessed ID label provision.

One (1)  
21-01-2302 Dschg Bleeder, Class 1, Mnl 1/4 Turn - Spec Only Y\_\_N\_\_

A Class 1 3/4" cast bronze quarter-turn drain and bleeder valve shall be installed on gated intakes and discharges larger than 1-1/2" in size.

The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a 1"x 1 1/2" recessed ID label provision.

One (1)  
21-01-2302 Dschg Bleeder, Class 1, Mnl 1/4 Turn - Spec Only Y\_\_N\_\_

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One (1)  
21-01-2302 Dschg Bleeder, Class 1, Mnl 1/4 Turn - Spec Only Y\_\_N\_\_

A Class 1 3/4" cast bronze quarter-turn drain and bleeder valve shall be installed on gated intakes and discharges larger than 1-1/2" in size.

The valve shall be complete with a chrome plated bronze ball, reinforced teflon seals, and blow-out proof stem rated to 600 PSI. A chrome plated zinc handle shall be provided on each drain valve complete with a 1"x 1 1/2" recessed ID label provision.

One (1)  
21-01-5600 Intk Manifold, Stnls Stl Y\_\_N\_\_

### **STAINLESS STEEL INTAKE MANIFOLD**

The suction manifold assembly shall be fabricated with Schedule #10 type 304 stainless steel. All threaded fittings shall be a minimum of Schedule 10 stainless steel. The suction manifold assembly shall have radiused sweep elbows to minimize

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water turbulence into the suction volute. The suction manifold shall be welded and pressure tested prior to installation. The stainless steel manifold assembly shall be attached to the pump intake volute with a heavy-duty, flexible Victaulic coupling.

One (1)  
21-01-6600

The stainless steel manifold assembly shall have a ten (10) year warranty.  
Dschg Manifold, Stnls Stl

Y\_\_N\_\_

## **STAINLESS STEEL DISCHARGE MANIFOLD**

The discharge manifold assembly shall be fabricated with Schedule #10 type 304 stainless steel. All threaded fittings shall be a minimum of Schedule 10 stainless steel. The discharge manifold assembly shall have radiused sweep elbows to minimize water turbulence into the discharge header. The manifold shall be welded and pressure tested prior to installation. The stainless steel manifold assembly shall be attached to the pump intake volute with a heavy-duty, flexible Victaulic coupling.

One (1)  
21-01-7300

The stainless steel manifold assembly shall have a ten (10) year warranty.  
Painting, Pump & Piping, Unpainted

Y\_\_N\_\_

## **PLUMBING SYSTEM**

One (1)  
21-01-8100

The plumbing system shall be unpainted.  
Threads, National Hose (NST)

Y\_\_N\_\_

## **HOSE THREADS**

One (1)  
22-04-3310

The hose threads shall be National Standard Thread (NST) on all base threads on the apparatus intakes and discharges.

Intk, Ungated, 6", Rr Center - Tmbrwlf

Y\_\_N\_\_

## **REAR CENTER -- 6" UNGATED INTAKE**

One (1)  
22-30-1110

One (1) 6" ungated suction intake shall be installed on the rear center to supply the rear mounted fire pump from an external water supply. The intake shall be provided with a removable screen and 6" NH male threads.

Intk, Gtd, 2-1/2", Left Rear, Rr Mt - Tmbrwlf/Airwlf

Y\_\_N\_\_

## **LEFT REAR 2-1/2" GATED INTAKE**

One (1)  
22-41-1100

One (1) 2-1/2" gated suction intake shall be installed to left of the rear master intake to supply the fire pump from an external water supply. The control valve shall be a quarter turn ball valve and shall have 2-1/2" NST female thread of brass, chrome plated, or stainless steel material. The specified suction intake plugs shall be capable of withstanding a minimum of 500 PSI. The drain valve shall be located adjacent to the intake fitting.

Plug, 2-1/2", Chrome Rocker Lug, w/Chain

Y\_\_N\_\_

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One (1) 2-1/2" chrome plated plug shall be provided. The threads shall be NST and the plug shall be equipped rocker lugs and chain or cable securement.  
One (1) 22-41-5700 Cap, 6", Chrome Long Hndl Y\_\_N\_\_

One (1) 6" chrome plated cap shall be provided. The threads shall be NST and the cap shall be equipped long handles.  
One (1) 22-51-8810 Tank-To-Pump, Water Tank, 4", NH Series, General Y\_\_N\_\_

### WATER TANK TO PUMP LINE

One (1) 4" water tank to the rear mounted fire pump line shall be provided with a 4" electric over air operated butterfly style suction valve, 4" piping, and with flex hose and stainless steel hose clamps. The tank to pump line shall be equipped with a check valve to prevent pressurization and the possibility of backfilling of the water tank. The valve shall be capable of being controlled at the pump operator's panel and in the cab.

The line shall be flow tested during the fire pump testing and shall meet applicable requirements of NFPA standards.  
One (1) 22-55-4050 Intk Vlv Cntrl, AKR, Mnl Swing Type-Adjacent Y\_\_N\_\_

The specified intake valve shall be equipped with one (1) manually operated swing type manual control located adjacent the intake. The valve shall be equipped with a color coded engraved type name plate.  
One (1) 23-02-1210 Tank Fill/Cooling Line, Water Tank, 1-1/2", Tmbrwlf/Airwlf Y\_\_N\_\_

### FIRE PUMP TO WATER TANK FILL LINE

One (1) 1-1/2" fire pump to water tank refill and pump bypass cooler line shall be provided. The valve shall be an electrically operated full flow quarter turn ball valve with 1-1/2" piping and flex hose to tank. The valve control shall have a nameplate located near the valve control.  
One (1) 23-14-1610 Dschg, 1", Frnt & Rr Ground Sweeps, Sngl Vlv - Tmbrwlf/Airwl Y\_\_N\_\_

### FRONT & REAR 1" GROUND SWEEP DISCHARGES

Four 3/4" ground sweep nozzles shall be provided and located one (1) each side ahead of the front and rear wheels. Ground sweep nozzles shall be supplied with one inch (1") internal diameter, wire reinforced high pressure hose. Ground sweep nozzle discharge shall be controlled using a one inch (1") stainless steel ball valve. The valve shall be operated with electric actuators with open/close switches located in the chassis cab accessible from both the driver and officer seating positions.  
One (1) 23-14-1660 Dschg, 1", Ground Sweeps, Plumbed High Pressure Y\_\_N\_\_

The ground sweep or front bumper "spraybar" discharge(s) shall be piped to the high pressure side of the fire pump.  
One (1) 23-14-2510 Dschg, 1-1/2", Front RH Bumper Monitor, Tmbrwlf Y\_\_N\_\_

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## FRONT BUMPER MONITOR DISCHARGE

One (1) 1-1/2" discharge shall be piped to the right front bumper area. The quarter turn ball valve shall be controlled in the chassis cab. The monitor shall be supplied by a flexible high pressure hose mounted with adequate support brackets and abrasion resistant mountings.

Low point drains shall be installed where necessary. A color coded nameplate label shall be provided.

One (1) 23-14-2560 Dschg, 1-1/2", Front Bumper Monitor, Plumbed High Pressure Y\_\_N\_\_

The front bumper monitor discharge shall be piped to the high pressure side of the fire pump.

One (1) 23-14-3110 Dschg, 1-1/2" Frnt Bmpr Crosslay, Tmbrwlf/Airwlf Y\_\_N\_\_

## FRONT BUMPER -- 1-1/2" CROSSLAY DISCHARGE

One (1) 1-3/4" front bumper crosslay installed at the bumper deck area. The discharge shall be supplied by a 2" quarter turn full flow ball valve at the pump panel.

The discharge shall terminate with a swivel with 2" NPT female x 1-1/2" male NST hose threads. The swivel shall be mounted in the floor of hosebed.

The plumbing shall be flexible hose with abrasion resistant support mountings. Auxiliary low point drains shall be provided on the discharge line.

The crosslay hose bed shall be constructed of smooth aluminum with a minimum capacity of 150 feet of fire department supplied 1-3/4" diameter double jacket hose and nozzle.

The hosebed shall be constructed with slots integrated into the hosebed floor. The hose bed openings shall be equipped with hose and nozzle securement devices to comply to applicable NFPA standards.

One (1) 23-16-2900 Crosslay/Speedlay, Equipment Securement, NFPA Y\_\_N\_\_

## EQUIPMENT SECUREMENT

The hose bed openings shall be equipped with hose and nozzle securement devices to comply to applicable NFPA standards.

One (1) 23-16-3300 Crosslay Cvr, Vinyl, Top and Sides Y\_\_N\_\_

## VINYL CROSSLAY COVER WITH END FLAPS

The crosslay hosebed shall be equipped with a vinyl cover with end flaps and shall be secured with VELCRO fasteners.

The hose bed openings shall be equipped with hose and nozzle securement devices to comply to applicable NFPA standards.

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Y\_\_N\_\_

One (1)  
23-20-1600

Dschg, Speedlay, 2-1/2", Right Rear Face, Tmbrwlf

## **RIGHT REAR FACE -- 2-1/2" SPEEDLAY DISCHARGE**

One (1) 2-1/2" discharge shall be installed on the right side lower rear face of the body next to the rear center pump compartment and controlled by a quarter turn ball valve on the pump panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads. An engraved nameplate label shall be provided adjacent the control handle.

## **REMOVEABLE TRAY FOR SPEEDLAY HOSEBED**

The speedlay hosebed shall be equipped with a "U" shaped aluminum hose tray. The unit shall be equipped with pull out hand holes and retaining devices to secure the tray, nozzle, and hose in transit. The tray shall have a storage capacity of 150' of 1-3/4" double jacket fire hose.

## **SPEEDLAY ACCESS**

A vertically hinged, single panel aluminum door with stainless steel D-handle latch shall provide access to the speedlay discharge and speedlay hosebed. The door shall be attached to the apparatus body with a full length, heavy duty stainless steel piano style hinge.

One (1)  
23-20-2110

Dschg, 2-1/2", Rr Cntr Pmp Pnl, Left Side, Tmbrwlf/Airwlf

Y\_\_N\_\_

## **REAR CENTER PUMP PANEL LEFT SIDE -- 2-1/2" DISCHARGE**

One (1) 2-1/2" discharge shall be installed on the left side of the rear center pump panel and shall be controlled by a quarter turn ball valve on the rear mount pump control panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads. An engraved nameplate label shall be installed adjacent the valve control handle.

One (1)  
23-20-2310

Dschg, 2-1/2", Rr Cntr Pmp Pnl, Right Side, Tmbrwlf/Airwlf

Y\_\_N\_\_

## **REAR RIGHT SIDE -- 2-1/2" DISCHARGE**

One (1) 2-1/2" discharge shall be installed on the right side of the rear center pump panel and shall be controlled by a quarter turn ball valve on the rear mount pump control panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads. An engraved nameplate label shall be installed adjacent the valve control handle.

One (1)  
23-20-2610

Dschg, 2-1/2", Left Rear Upper Face, Tmbrwlf/Airwlf

Y\_\_N\_\_

## **LEFT REAR UPPER FACE -- 2-1/2" DISCHARGE**

One (1) 2-1/2" discharge shall be installed on the left side upper rear face of the body just below the hosebed area and controlled by a quarter turn ball valve on the pump panel. The discharge shall have 2-1/2" NPT x 2-1/2" NST male hose threads. An engraved nameplate label shall be provided adjacent the control handle.

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		<u>Bidder Complies</u>
		Y__N__
One (1) 24-01-2400	Adptr, Reducing, 2-1/2"F x 1-1/2"M, Chrome  One (1) chrome plated reducing adapter with rocker lugs shall be provided with 2-1/2" NST rigid female x 1-1/2" NST male hose threads.	Y__N__
One (1) 24-01-2400	Adptr, Reducing, 2-1/2"F x 1-1/2"M, Chrome  One (1) chrome plated reducing adapter with rocker lugs shall be provided with 2-1/2" NST rigid female x 1-1/2" NST male hose threads.	Y__N__
One (1) 24-02-1202	Elbow, Flange x 2-1/2"M, Chrome  One (1) chrome plated elbow bolted directly to the valve body shall be provided with 2-1/2" NST male hose threads.	Y__N__
One (1) 24-02-1202	Elbow, Flange x 2-1/2"M, Chrome  One (1) chrome plated elbow bolted directly to the valve body shall be provided with 2-1/2" NST male hose threads.	Y__N__
One (1) 24-03-1200	Cap, 1-1/2", Chrome, Rocker Lug, w/Chain  One (1) 1-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.	Y__N__
One (1) 24-03-1400	Cap, 2-1/2", Chrome, Rocker Lug, w/Chain  One (1) 2-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.	Y__N__
One (1) 24-03-1400	Cap, 2-1/2", Chrome, Rocker Lug, w/Chain  One (1) 2-1/2" NST rocker lug chrome plated vented cap and cable or chain securement shall be provided.	Y__N__
One (1) 24-17-2120	Mntr, TFT, Frnt Bmpr, Elec, B-TOS-ERP Nozzle, Tmbrwlf	Y__N__

## **ELECTRICALLY REMOTE CONTROLLED MONITOR**

One (1) TFT Tornado Model Y2C-52 bumper monitor package with a shall be provided and installed. The lightweight monitor shall have a one (1") vaned waterway and be capable of flowing up to 125 GPM. The monitor shall be equipped with a 12 volt electric motor. The monitor is designed to mount on a front bumper of an apparatus. Controls for the monitor shall be mounted inside the chassis cab.

The monitor shall be plumbed with 1-1/2" inch flexible hose with stainless steel couplings and have a 1-1/2" valve. The valve shall be electrically operated with valve control located in chassis cab.

Proper switching shall be provided in the cab for operation of high pressure water to the turret within reach of the Driver and Officer.

There shall be a 3/4" drain furnished in the supply line to the monitor.

## **REMOTE ELECTRIC NOZZLE TIP**

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Task Force Tips Ultimatic 125, model # B-TOS-ERP adjustable nozzle with electrically operated pattern control shall be provided. The nozzle design shall allow for straight stream through dense wide fog patterns and be able to be flushed without shutting down.

The electric drive unit shall develop over 400 pounds of torque, be enclosed in a waterproof cast aluminum housing and include a manual override device in the event the power source fails. The unit shall be compatible with 12 or 24 volt power systems and require no more than a 3 amp power draw and include a 6" connection cable with plug.

Nozzle stream shaper actuator shall have position encoder for smooth transition between straight stream and fog pattern with fine stream adjustment. Nozzle stream shaper shall stop and pause at full fog position. A second electrical actuation of the stream shaper shall move the shaper to the flush position for removing debris from the nozzle.

For corrosion resistance and durability the nozzle shall be constructed from hardcoat anodized aluminum alloy, a protective rubber bumper with fog teeth, laser engraved serial number, reflective labeling and five year warranty.

The nozzle shall have a 1-1/2" female NH swivel rocker lug coupling and a user adjustable flow range of 15-120 GPM at 100 PSI. A waterproof six-pin electrical connection for use with TFT remote control monitors shall be included. The nozzle shall be designed to accept the TFT FJ-U or FJ-UMX FoamJet low expansion air aspirating attachments.

One (1)  
24-30-3310

Hose Reel, HAN, LH Under Cab Cmpt, Elec, Stl Pntd - Tmbrwlf

Y\_\_N\_\_

## **ELECTRIC REWIND HOSE REEL**

One (1) Hannay painted steel hose reel with leak proof ball bearing swing joint, adjustable friction brake, electric and crank rewind shall be installed. The reel shall be plumbed with wire reinforced, high-pressure hose coupled. The reel shall be bolted to a mounting system for easy service or removal.

One (1)  
24-30-3410

The hose reel is to be mounted in left side cab step compartment area.  
Hose Reel, HAN, RH Under Cab Cmpt, Elec, Stl Pntd - Tmbrwlf

Y\_\_N\_\_

## **ELECTRIC REWIND HOSE REEL**

One (1) Hannay painted steel hose reel with leak proof ball bearing swing joint, adjustable friction brake, electric and crank rewind shall be installed. The reel shall be plumbed with wire reinforced, high-pressure hose coupled. The reel shall be bolted to a mounting system for easy service or removal.

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One (1) 24-31-2100	The hose reel is to be mounted in right side cab step compartment area. Hose Reel, Rwnd Cntrl, Weatherproof Push Button	Y__N__
	A push button hose reel rewind switch shall be installed to control the electric rewind hose reel. The exact location shall be determined at construction.	
One (1) 24-31-2100	Hose Reel, Rwnd Cntrl, Weatherproof Push Button	Y__N__
	A push button hose reel rewind switch shall be installed to control the electric rewind hose reel. The exact location shall be determined at construction.	
One (1) 24-32-1210	Dschg, Hose Reel, 1", Class 1 Valve	Y__N__
	A Class 1, 1" ball valve gated discharge line shall be furnished with the valve located adjacent to the booster reel and plumbed using 1" I.D. wire reinforced, high pressure hose. The valve shall be operated using a Class One quarter-turn chrome plated handle attached directly to the valve complete with 1" x 1 1/2" ID label.	
One (1) 24-32-1210	Dschg, Hose Reel, 1", Class 1 Valve	Y__N__
	A Class 1, 1" ball valve gated discharge line shall be furnished with the valve located adjacent to the booster reel and plumbed using 1" I.D. wire reinforced, high pressure hose. The valve shall be operated using a Class One quarter-turn chrome plated handle attached directly to the valve complete with 1" x 1 1/2" ID label.	
One (1) 24-32-1800	Dschg, Hose Reel, Plmbd to High Pressure	Y__N__
	The specified hose reel shall be piped to the high pressure side of the fire pump.	
One (1) 24-32-1800	Dschg, Hose Reel, Plmbd to High Pressure	Y__N__
	The specified hose reel shall be piped to the high pressure side of the fire pump.	
One (1) 24-33-1300	Hose, Water, 800#, 3/4" x 150', 50' Lengths	Y__N__
	Three (3) 50' foot lengths (150') of 3/4" water hose with pin lug couplings and 800 PSI working pressure shall be provided and mounted on the specified hose reel.	
One (1) 24-33-1300	Hose, Water, 800#, 3/4" x 150', 50' Lengths	Y__N__
	Three (3) 50' foot lengths (150') of 3/4" water hose with pin lug couplings and 800 PSI working pressure shall be provided and mounted on the specified hose reel.	
One (1) 24-33-9600	Roller, Hose Reel, Captive, Four Sided	Y__N__
	One (1) stainless steel four sided captive type roller assembly shall be provided. The location of the captive rollers shall be:	
One (1) 24-33-9600	Roller, Hose Reel, Captive, Four Sided	Y__N__
	One (1) stainless steel four sided captive type roller assembly shall be provided. The location of the captive rollers shall be:	
One (1) 24-53-0820	Dschg Vlv Cntrl, AKR, Mnl Swing Type-Adj, TS-7	Y__N__
	One (1) manually operated swing-type, self-locking control located adjacent to the valve shall be supplied for the specified discharge. The control handle shall be an Akron TS-7 handle (7" long) . The valve shall be equipped color coded name plate.	
One (1)	Dschg Vlv Cntrl, AKR, Mnl Swing Type-Adj, TS-7	Y__N__

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## Bidder Complies

24-53-0820

One (1) manually operated swing-type, self-locking control located adjacent to the valve shall be supplied for the specified discharge. The control handle shall be an Akron TS-7 handle (7" long) . The valve shall be equipped color coded name plate.

One (1)  
24-53-0820

Dschg Vlv Cntrl, AKR, Mnl Swing Type-Adj, TS-7

Y\_\_N\_\_

One (1)  
24-53-0820

One (1) manually operated swing-type, self-locking control located adjacent to the valve shall be supplied for the specified discharge. The control handle shall be an Akron TS-7 handle (7" long) . The valve shall be equipped color coded name plate.

Dschg Vlv Cntrl, AKR, Mnl Swing Type-Adj, TS-7

Y\_\_N\_\_

One (1)  
24-53-6200

One (1) manually operated swing-type, self-locking control located adjacent to the valve shall be supplied for the specified discharge. The control handle shall be an Akron TS-7 handle (7" long) . The valve shall be equipped color coded name plate.

Vlv Cntrl, AKR, 2.0" Elec, KZCO

Y\_\_N\_\_

One (1)  
24-61-1225

The Akron valve shall be equipped with a KZCO KZ Valve Model EH-2 12 volt electric actuator. The valve control shall be push button or rocker type switch with indicator light provided. When the valve is open, the indicator light shall illuminate. When the valve is closed the indicator light shall be off. The valve control switch shall be labeled appropriately.

Vlv Mfger, AKR, 8000, (2"), KZCO Electric

Y\_\_N\_\_

One (1)  
24-61-1252

The specified valve shall be an Akron 8000 Series two-inch (2") valve with a stainless ball.

Vlv Mfger, AKR 8000, 2-1/2", Mnl Swng Type-Adj, Twlf

Y\_\_N\_\_

One (1)  
24-61-1252

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

Vlv Mfger, AKR 8000, 2-1/2", Mnl Swng Type-Adj, Twlf

Y\_\_N\_\_

One (1)  
24-61-1252

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

Vlv Mfger, AKR 8000, 2-1/2", Mnl Swng Type-Adj, Twlf

Y\_\_N\_\_

One (1)  
24-61-1252

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

Vlv Mfger, AKR 8000, 2-1/2", Mnl Swng Type-Adj, Twlf

Y\_\_N\_\_

One (1)  
24-62-1258

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

Vlv Mfger, AKR, 8000, (2-1/2"), Mnl Swg Cntrl Only

Y\_\_N\_\_

One (1)  
25-08-1210

The specified valve shall be an Akron 8000 Series two and one half-inch (2-1/2") valve with a stainless ball.

Foam System, RBA, NP-FIXMIX - Tmbrwlf

Y\_\_N\_\_

### **ROSENBAUER FIX MIX NORMAL PRESSURE FOAM SYSTEM**

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A Rosenbauer Fix Mix automatic normal pressure around-the-pump foam proportioning system shall be provided and direct mounted to the water pump. The system shall be a fully mechanical system requiring no electricity, hydraulics or calibration to operate.

The system shall be capable of providing a constant foam proportioning independent of pump output and pump pressure. The system shall be capable of delivering foam at a proportioning rate of 1%.

Controls for the foam system shall be provided on the pump panel and in the cab.

When a bumper turret is required, proper switching shall be provided in the cab for operation of high pressure water to the turret within reach of the Driver and Officer.  
Foam System, RBA, HP-FIXMIX - Tmbrwlf

One (1)  
25-08-1220

Y\_\_N\_\_

## **ROSENBAUER FIX MIX HIGH PRESSURE FOAM SYSTEM**

A Rosenbauer Fix Mix automatic high pressure around-the-pump foam proportioning system shall be provided and direct mounted to the water pump. The system shall be a fully mechanical system requiring no electricity, hydraulics or calibration to operate.

The system shall be capable of providing a constant foam proportioning independent of pump output and pump pressure. The system shall be capable of delivering foam at a proportioning rate of up to 6%.

Controls for the foam system shall be provided on the pump panel and in the cab.

When a bumper turret is required, proper switching shall be provided in the cab for operation of high pressure water to the turret within reach of the Driver and Officer.  
NP-FIXMIX, Dual Rate, Pneumatic

One (1)  
25-08-1306

Y\_\_N\_\_

## **PROPORTIONING CONTROL & RATE**

The system shall be capable of providing a constant foam proportioning independent of pump output and pump pressure. The system shall have pneumatic actuators for selecting the foam proportioning rate provided at the pump. The system shall be capable of delivering foam at proportioning rates as follows:

One (1)  
25-08-1310

HP-FIXMIX, Foam Supply

Y\_\_N\_\_

The system shall be capable of providing a constant foam proportioning independent of pump output and pump pressure. The system shall have a control switch at the pump operator's panel for controlling the foam proportioner foam supply.

One (1)  
25-08-1322

Proportioning Rate, NP-FIXMIX, 1%

Y\_\_N\_\_

1%

One (1)

Proportioning Rate, NP-FIXMIX, 3%

Y\_\_N\_\_

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25-08-1324

3%

One (1)  
25-08-1332

Proportioning Rate, HP-FIXMIX, 1%

Y\_\_N\_\_

The system shall deliver foam at a proportioning rate of 1%.

One (1)  
25-08-2240

Foam Capability, NP-FIXMIX & HP-FIXMIX - Tmbrwlf

Y\_\_N\_\_

### **HIGH PRESSURE & NORMAL PRESSURE FOAM CAPABILITY**

There shall be two (2) separate foam systems installed and shall operate independently. A Rosenbauer Normal Pressure FIXMIX automatic around-the-pump foam proportioning system shall be installed to provide foam capability to the normal pressure discharges only and a Rosenbauer High Pressure FIXMIX automatic around-the-pump foam proportioning system shall be installed to provide foam capability to the high pressure discharges only.

One (1)  
25-09-1100

Remote Foam Activation Swtch and Lt

Y\_\_N\_\_

### **REMOTE FOAM ACTIVATION SWITCH AND LIGHT**

There shall be a switch and indicator light mounted in the cab to energize the foam pump remotely for pump and roll operations.

One (1)  
25-20-1090

Foam Plmbg, HP-FIXMIX, Class A

Y\_\_N\_\_

The high pressure foam system shall be plumbed to the Class A foam tank .

One (1)  
25-20-1100

Foam Plmbg, Strainer, Removable

Y\_\_N\_\_

### **FOAM LINE STRAINER**

One (1) strainer with stainless steel screen shall be installed in the foam line ahead of the foam concentrate pump. The strainer shall be easily accessible and removable for cleaning. The strainer screen shall be suitable for all types of Class A and B foam concentrates.

One (1)  
25-20-1500

Foam Plmbg, Sngl Class A Tank, 1" Mnl Vlv - Tmbrwlf

Y\_\_N\_\_

### **1" FOAM TANK CONTROL -- CLASS A**

One (1) Class A foam tank shall be plumbed with 1" valve and corrosion resistant hose from the foam tank to the foam inlet of the foam system. The manually opened valve shall be provided in the pump compartment with a label.

One (1)  
25-21-1510

Foam Tank, Intgrl Poly, 30 Gal, Class A - Tmbrwlf

Y\_\_N\_\_

### **INTEGRAL CLASS A FOAM TANK -- 30 GALLON**

One (1) thirty (30) gallon Class A foam tank shall be installed within the water tank. The non-corrosive foam tank shall meet applicable sections of NFPA standards. The foam concentrate tank shall be provided with sufficient wash partitions so that the maximum dimension perpendicular to the plane of any partition shall not exceed 36 inches. The swash partition(s) shall extend from wall to wall and cover at least 75

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percent of the area of the plane of the partition.

The foam concentrate tank shall be provided with a fill tower or expansion compartment having a minimum area of 12 square inches and having a volume of not less than 2 percent of the total tank volume. The fill tower opening shall be protected by a completely sealed air-tight cover. The cover shall be attached to the fill tower by mechanical means. The fill opening shall be designed to incorporate a 1/4 inch removable screen and shall be located so that foam concentrate from a five (5) gallon container can be dumped directly to the bottom of the tank to minimize aeration without the use of funnels or other special devices.

The foam tank fill tower shall be equipped with a pressure/vacuum vent that enables the tank to compensate for changes in pressure or vacuum when filling or withdrawing foam concentrate from the tank. The pressure/vacuum vent shall not allow atmospheric air to enter the foam tank except during operation or to compensate for thermal fluctuations. The vent shall be protected to prevent foam concentrate from escaping or directly contacting the vent at any time. The vent shall be of sufficient size to prevent tank damage during filling or foam withdrawal.

A color coded label or visible permanent marking that reads "FOAM TANK FILL" shall be placed at or near any foam concentrate tank fills opening. A label shall be placed at or near any foam concentrate tank fill opening that specifies the type of foam concentrate the system is designed to use. Any restrictions on the types of foam concentrate that can be used with the system shall also be stated, and a warning message that reads "WARNING: DO NOT MIX BRANDS AND TYPES OF FOAM."

The foam concentrate tank outlet connection shall be designed and located to prevent aeration of the foam concentrate and shall allow withdrawal of 80 percent of the foam concentrate tank storage capacity under all operating conditions with the vehicle level.

One (1)  
25-22-9300

Foam Tank, UPF

Y\_\_N\_\_

The foam tank(s) shall be fabricated by United Plastic Fabricating.

One (1)  
25-23-1000

Foam Tank Drain, 1" Gate Vlv, Under Tank

Y\_\_N\_\_

## **FOAM TANK DRAIN -- UNDER TANK**

The foam tank shall have one (1) 1" gate valve drain provision installed.  
Mstr Gauges, Noshok, 4" PSI, Pr

One (1)  
27-01-1500

Y\_\_N\_\_

## **MASTER DISCHARGE AND INTAKE GAUGES**

10061-0004

05/12/10

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Two (2) 4" diameter Noshok discharge pressure and intake gauges (30-0-600 PSI) with engraved, color coded labels, shall be provided on the pump instrument panel.

To prevent internal freezing and to keep contaminants from entering the gauge, the stem and tube shall be sealed from the water system using an isolation Sub-Z diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. The face of the gauge shall be a white dial with black letters.

One (1)  
27-01-4100

Gauge, Test Taps

Y\_\_N\_\_

## **TEST TAPS**

Test taps for pump intake and pump pressure shall be provided on the pump instrument panel and be properly labeled.

One (1)  
27-02-1500

Gauge, Dschg, Noshok, 2-1/2" 400#, WF

Y\_\_N\_\_

One (1) 2-1/2" Noshok pressure gauge rated at 0-400 PSI shall be provided. The gauge shall include a color coded label and be installed on the pump instrument panel. The face of the gauge shall have a white dial with black letters.

One (1)  
27-02-1500

Gauge, Dschg, Noshok, 2-1/2" 400#, WF

Y\_\_N\_\_

One (1) 2-1/2" Noshok pressure gauge rated at 0-400 PSI shall be provided. The gauge shall include a color coded label and be installed on the pump instrument panel. The face of the gauge shall have a white dial with black letters.

One (1)  
27-02-1500

Gauge, Dschg, Noshok, 2-1/2" 400#, WF

Y\_\_N\_\_

One (1) 2-1/2" Noshok pressure gauge rated at 0-400 PSI shall be provided. The gauge shall include a color coded label and be installed on the pump instrument panel. The face of the gauge shall have a white dial with black letters.

One (1)  
27-02-1500

Gauge, Dschg, Noshok, 2-1/2" 400#, WF

Y\_\_N\_\_

One (1) 2-1/2" Noshok pressure gauge rated at 0-400 PSI shall be provided. The gauge shall include a color coded label and be installed on the pump instrument panel. The face of the gauge shall have a white dial with black letters.

One (1)  
27-02-1500

Gauge, Dschg, Noshok, 2-1/2" 400#, WF

Y\_\_N\_\_

One (1) 2-1/2" Noshok pressure gauge rated at 0-400 PSI shall be provided. The gauge shall include a color coded label and be installed on the pump instrument panel. The face of the gauge shall have a white dial with black letters.

One (1)  
27-03-1600

Gauge, Dschg, 2-1/2" 600#, High Pressure Pumps

Y\_\_N\_\_

## **HIGH PRESSURE DISCHARGE GAUGE**

One (1) 2-1/2" pressure gauge rated at 0-600 PSI shall be provided for the high pressure pump. The gauge shall include a color coded label and be installed on the pump instrument panel. The face of the gauge shall have a white dial with black letters.

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One (1)  
27-03-1800

Gauge, Dschg, Digital, In Cab, Pump and Roll

Y\_\_N\_\_

## **IN-CAB DIGITAL PUMP DISCHARGE PRESSURE GAUGE**

One (1) digital pressure gauge shall be provided in the cab for pump and roll operation. The gauge display shall be a waterproof display with super-bright digits at least 1/2" high. A weatherproof transducer (transmitter) shall be installed in the appropriate location in the piping system.

One (1)  
27-10-5000

Pressure Gvrnr, Rosenbauer, LCS, Tmbrwlf

Y\_\_N\_\_

## **PUMP PANEL OPERATOR INTERFACE AND PRESSURE GOVERNOR**

A Rosenbauer LCS™ operator interface with pressure governor shall be installed at the pump operator's panel.

The LCS™ operator interface is a user-friendly push button switch panel allowing an operator to control many separate emergency apparatus functions at a central interface point. The operator interface shall be configurable for emergency lighting, fire fighting functions and pressure governor throttle control.

The governor shall operate in two control modes, pressure and RPM. No discharge pressure or engine RPM variation shall occur when switching between modes. A throttle ready LED shall light when the interlock signal is recognized. The governor shall start in pressure mode and set the engine RPM to idle. In pressure mode the governor shall automatically regulate the discharge pressure at the level set by the operator. In RPM mode the governor shall maintain the engine RPM at the level set by the operator except in the event of a discharge pressure increase. The governor shall limit a discharge pressure increase in RPM mode to a maximum of 30 psi. Other safety features shall include recognition of no water conditions with an automatic programmed response and a push button to return the engine to idle.

There shall be switches to control the following:

- Pump Start
- Pump Stop
- Tank Fill / Recirculating Line
- Tank To Pump
- Pump Air Blow-out
- Auto Direct Tank Fill
- Drain
- High Pressure Valve
- Primer
- Engine RPM

There shall be switches on the panel to control the following, if specified:

- Normal Pressure Foam System
- High Pressure Foam System

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- Scene Lights
- Pump Heater
- Foam Percent

\*\* Please note: These options are specified elsewhere in these specifications with a separate section and heading.

All switches shall be back-lit, push button style. The switches shall have a colored LED light indicating when the switch circuit is in the engaged position.

One (1)  
27-21-1100

Engine Mntr, FRC, TachPro, Pump Panel

Y\_\_N\_\_

## ENGINE MONITORING DISPLAY

One (1) Fire Research TachPro model TPA300-A00 engine monitoring display kit shall be installed on the pump panel. The kit shall include a display module, audible alarm buzzer, memory module, and cables. The display module shall consolidate five (5) instruments into one device. The case shall be waterproof and have dimensions not to exceed 5" high by 5" wide by 3 1/4" deep. Inputs for engine information shall be from a SAE J1587 datalink, other inputs shall be 12 volts DC.

The following continuous displays shall be provided:

- 1) Engine RPM; shown with four daylight bright LED digits more than 1/2" high, updated in 10 RPM increments
- 2) Oil pressure; shown on an LED bar graph display in 10 psi increments
- 3) Battery voltage; shown on an LED bar graph display
- 4) Engine coolant temperature; shown on an LED bar graph display in 10 degree increments.
- 5) The program shall support the accumulation of elapsed pump hours in a non-volatile, transferable memory module. Pump hours shall be displayed at the push of a button.

The program shall have self-diagnostic capabilities. It shall monitor inputs and support audible and visual warning alarms for the following conditions:

- 1) Low oil pressure alarms when engine oil pressure is less than 8 psi
- 2) Low battery voltage alarms at 11.5 volts if engine is off or 11.8 volts if engine is running
- 3) High battery voltage alarms at 15.6 volts
- 4) High engine coolant temperature visual alarm at 220 °F and audio alarm at 230 °F.

One (1)  
27-35-4010

Water Tank Gauge, IC, 14-LED, Pump Panel, Tmbrwlf/Airwlf

Y\_\_N\_\_

## WATER TANK LEVEL GAUGE - PUMP PANEL

The apparatus shall be equipped with one (1) Innovative Controls SL Series Tank

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Level Monitor System shall be installed. The system shall include an electronic display module, a pressure transducer-based sender unit, and a 15' connection cable. The display module shall show the volume of water in the tank using 14 superbright easy-to-see LEDs to easily distinguish the tank level at a glance. Tank level indication is enhanced by the use of green LEDs at the full and near-full levels, amber LEDs between  $\frac{3}{4}$  and  $\frac{1}{4}$  tank levels, and red LEDs at the near-empty and empty levels. The electronic display module shall be waterproof and shock resistant being encapsulated in a urethane-based potting compound. The potted display module shall be mounted to a chrome plated panel-mount bezel with a durable easy-to-read polycarbonate insert featuring blue graphics and a water icon.

All programming functions shall be accessed and performed from the front of the display module. The programming includes self-diagnostics, manual or self-calibration, and networking capabilities to connect remote slave displays. Low tank level warnings shall include flashing red LEDs starting below the  $\frac{1}{4}$  level and an output for an audible alarm.

The display module shall receive an input signal from a pressure transducer. This stainless steel sender unit shall be installed on the outside of the water tank near the bottom. All wiring, cables and connectors shall be waterproof without the need for sealing grease.

Location of water tank level monitor shall be at the pump panel.  
Water Level Display, IC, 5-LED, Mini, In-Cab

One (1)  
27-35-4200

Y\_\_N\_\_

## WATER LEVEL DISPLAY

The apparatus shall be equipped with one (1) Innovative Controls 5-LED Mini Slave Water Level display. The display and shall be installed in the chassis cab. Five colored LEDs shall be provided on the indicator module in a vertical line to easily distinguish the water tank level at a glance.

One (1)  
27-36-5002

Foam Tank Gauge, IC, 14-LED, Class A, Pump Panel, Tmbrwlf

Y\_\_N\_\_

## CLASS A FOAM TANK LEVEL GAUGE

The apparatus shall be equipped with one (1) Innovative Controls SL Series Tank Level Monitor System shall be installed. The system shall include an electronic display module, a pressure transducer-based sender unit, and a 15' connection cable. The display module shall show the volume of Class A foam in the tank using 14 superbright easy-to-see LEDs arranged to easily distinguish the tank level at a glance. Tank level indication is enhanced by the use of green LEDs at the full and near-full levels, amber LEDs between  $\frac{3}{4}$  and  $\frac{1}{4}$  tank levels, and red LEDs at the near-empty and empty levels. The electronic display module shall be waterproof and shock resistant being encapsulated in a urethane-based potting compound. The potted display module shall be mounted to a chrome plated panel-mount bezel with a durable easy-to-read polycarbonate insert featuring red graphics and a foam icon.

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All programming functions shall be accessed and performed from the front of the display module. The programming includes self-diagnostics, manual or self-calibration, and networking capabilities to connect remote slave displays. Low tank level warnings shall include flashing red LEDs starting below the ¼ level, down-chasing LEDs when the tank is almost empty, and an output for an audible alarm.

The display module shall receive an input signal from a pressure transducer. This stainless steel sender unit shall be installed on the outside of the foam tank near the bottom. All wiring, cables and connectors shall be waterproof without the need for sealing grease.

Location of Class A foam tank level monitor shall be at the pump panel.  
Foam Tank Gauge, IC, 5-LED, Class A, Mini, In-Cab

One (1)  
27-36-5200

Y\_\_N\_\_

## **CLASS A FOAM LEVEL DISPLAY**

The apparatus shall be equipped with one (1) Innovative Controls 5-LED Mini Slave Foam Level display. The display shall be installed in the cab. Five colored LEDs shall be provided on the indicator module in a vertical line to easily distinguish the Class A foam tank level at a glance.

Two (2)  
80-43-1600

Painting, Hose Reel, Silver Grey

Y\_\_N\_\_

## **HOSE REEL PAINTING**

The hose reel(s) shall be painted silver grey.  
== General Timberwolf Pump Cmnt - 531.080 05/31/09 ==

One (1)

Y\_\_N\_\_

One (1)  
26-40-1600

Pump Enclsr, Specs, Tmbrwlf/Airwlf

Y\_\_N\_\_

## **REARMOUNT PUMP ENCLOSURE**

The rearmount pump and plumbing installation shall be located in the rear compartment of the apparatus body. All NFPA required gauges and controls shall be furnished on a panel furnished with the pump or installed on a panel fabricated by the apparatus body builder.

Labels shall be furnished for the discharges and intakes and for other controls and indicators.

Located within the module shall be:

1. Electric primer.
2. Pump area service lights.

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3. All gauge piping and hoses.
4. Intake dump valve.
5. Pressure control device and throttle control.
6. Pump engagement lights.
7. Engine instruments.
8. Master intake and discharge gauges.
9. Tank fill control.

One (1)  
26-40-2500  
10. Tank-to-pump control.  
Pump Panel Lctn, TimberWolf, Rr Center  
Y\_\_N\_\_

## **PUMP PANEL LOCATION -- REAR CENTER**

One (1)  
26-40-3110  
The pump operator's instrument panel for the rearmount pump shall be located in the rear center compartment of the apparatus body.  
Pump Cntrl Panel, Rr Mt Stnls Stl, Tmbrwlf  
Y\_\_N\_\_

## **PUMP CONTROL PANEL -- REARMOUNT**

One (1)  
26-40-4100  
The pump operator's instrument panel for the rearmount pump shall be constructed of 14 gauge #304 brushed stainless steel and be fastened to the pump enclosure with 1/4" stainless steel bolts.  
Pump Cntrl Panel Enc Door, Rr Mt, Rr Center, Roll Up  
Y\_\_N\_\_

## **PUMP CONTROL PANEL ROLL-UP DOOR -- REAR CENTER**

One (1)  
26-40-5500  
The rearmount pump operator's panel shall be located at the rear center of the apparatus body. A roll-up style compartment door shall be provided for the door opening.  
Pump Access Panels, Rr Mt, Side Cmpts Bhnd Rr Whls  
Y\_\_N\_\_

## **REARMOUNT PUMP AND PLUMBING ACCESS**

One (1)  
26-55-1100  
The rearmount pump enclosure and plumbing area shall be accessible through removable panels, with stainless steel bolts in rear side compartment walls.  
Labels, Test Data and Safety Placards  
Y\_\_N\_\_

## **LABELS**

Safety, information, data, and instruction labels for apparatus shall be provided and installed at the operator's instrument panel.

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The labels shall include rated capacities, pressure ratings, and engine speeds as determined by the certification tests. The no-load governed speed of the engine, as stated by the engine manufacturer, shall also be included.

The labels shall be provided with all information and be attached to the apparatus prior to delivery.

One (1)  
26-55-2410

Labels, IC Color Coded, General

Y\_\_N\_\_

## **COLOR CODED PUMP PANEL LABELING AND NAMEPLATES**

Discharge and intake valve controls shall be color coded in compliance to guidelines of applicable sections of NFPA standards.

All labels, instruction panels and warnings shall be installed on the pump panel for safe operation of the pumping equipment and controls using Innovative Controls labels and bezel assemblies. These bezel assemblies will be used to identify intake and discharge controls with color and verbiage. The label and bezel assemblies are designed and manufactured to withstand the specified apparatus service environment and shall be backed by a warranty equal to that of the exterior paint and finish. The specified assemblies feature a chrome-plated panel-mount bezel with durable UV resistant polycarbonate inserts. These UV resistant polycarbonate graphic inserts shall be sub-surface screen printed to eliminate the possibility of wear and protect the inks from fading. All insert labels shall be backed with 3M permanent adhesive (200MP), which meets UL969 and NFPA standards

One (1)  
26-56-1460

Pump Panel Lt, Rr Mt, Three (3) Grote Strip LEDs, Tmbrwlf

Y\_\_N\_\_

## **REARMOUNT PUMP PANEL LIGHTS**

Three (3) Grote LED strip lights shall be installed in the pump compartment. The lights shall be controlled automatically by the door switch. The lights shall be mounted below the roll-up door roll illuminating the pump, plumbing and controls.

One (1)  
27-37-3010

Air Blow Out, Tmbrwlf/Airwlf

Y\_\_N\_\_

## **AIR BLOWOUT**

One (1) air blow out shall be provided for the high pressure side of the fire pump and all related high pressure discharges. The air supply must be supplied from an external source and be connected to an air inlet fitting located at or near the pump operators panel.

One (1)

The air inlet shall be a Parker Model #B53 male with female fitting.  
== General Timberwolf 750 Gal Long Body - 531.080 05/31/09

Y\_\_N\_\_

One (1)

Warranty, Water Tank, UPF, BR

Y\_\_N\_\_

10061-0004

05/12/10

# Rosenbauer America

Bidder Complies

01-18-0450

## WATER TANK WARRANTY

**UNITED PLASTIC FABRICATION INC.** Warrants each UPF POLY-TANK IIE Booster/Foam tank to be free from manufacturing defects in material and workmanship for the service life of the vehicle (vehicle must be actively used in fire suppression). The UPF POLY-TANK IIE must be installed in accordance with the United Plastic Fabricating installation manual. Every UPF POLY-TANK IIE is thoroughly inspected and tested for leaks before leaving our facility. Should any problems develop with your UPF POLY-TANK IIE booster/foam tank and will not meet performance criteria during the service life of the vehicle, notify UPF in writing or call our TOLL FREE SERVICE HOT LINE 1-800-USA-POLY. Provide UPF with the serial number and a description of the problem. If the tank problem would render the truck out of service, UPF will dispatch a service technician WITHIN 48 HOURS (2 DAYS) to repair the tank. (This time period is for North America only). If the vehicle can remain in service, UPF will dispatch a service technician within a mutually agreed upon time period.

We will repair, or at our option, replace the tank with a new UPF POLY-Tank IIE. UPF will cover customary and reasonable costs to remove and install the UPF POLY-TANK IIE. This warranty will not cover tanks that have been improperly installed, misused or abused, and the serial number must not have, been altered, defaced or removed. UPF will not cover any unauthorized third party repairs or alterations. Any of these actions may void the warranty.

**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 OBLIGATIONS OR LIABILITIES ON THE PART OF UNITED PLASTIC FABRICATION, INC.**

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. UNITED PLASTIC FABRICATION, INC. 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.

**IN NO EVENT WILL UNITED PLASTIC FABRICATION, INC BE LIABLE FOR AN AMOUNT IN EXCESS OF THE PRESENT RETAIL, PURCHASE PRICE PLUS INSTALLATION AND REMOVAL COST OF THE BOOSTER TANK, FOR ANY LOSS OR DAMAGE, WHETHER DIRECT OR INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHERWISE ARISING OUT OF FAILURE OF ITS PRODUCT.**

This warranty gives you specific legal rights, and you may have other rights, which

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vary from state to state. Some states do not allow exclusion or limitation of incidental of incidental or consequential damage, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

One (1)  
24-53-6300

Vlv Cntrl, AKR, 2.5" Elec, KZCO

Y\_\_N\_\_

The Akron valve shall be equipped with a KZCO KZ Valve Model EH-2 12 volt electric actuator. The valve control shall be push button or rocker type switch with indicator light provided. When the valve is open, the indicator light shall illuminate. When the valve is closed the indicator light shall be off. The valve control switch shall be labeled appropriately.

One (1)  
25-28-1362

Water Tank, 750 Gal, Poly, T-Tank, Tmbrwlf/Airwlf

Y\_\_N\_\_

### **WATER TANK - 750 GALLON**

The apparatus shall be equipped with a seven-hundred-fifty (750) gallon polypropylene water tank. The tank shall be equipped with a four-inch (4") overflow pipe.

One (1)  
25-42-1100

Water Tank, Base Specs, Poly

Y\_\_N\_\_

The apparatus shall be equipped with a polypropylene water tank. The tank body and end bulkheads shall be constructed of .5" thick, polypropylene, nitrogen-welded and tested inside and out. Tank construction shall conform to applicable NFPA standards. The tank shall carry a lifetime warranty.

The transverse and longitudinal .375" thick swash partitions shall be interlocked and welded to each other as well as to the walls of the tank. The partitions shall be designed and equipped with vent holes to permit air and liquid movement between compartments.

The .5" thick cover shall be recessed .375" from the top of the side walls. Hold down dowels shall extend through and be welded to both the covers and the transverse partitions, providing rigidity during fast fill operations. Drilled and tapped holes for lifting eyes shall be provided in the top area of the booster tank.

The water fill tower shall be provided at front of the tank. The 0.5" thick polypropylene fill and overflow tower shall be equipped with a hinged lid and a removable polypropylene screen. The overflow tube shall be installed in fill tower and piped with schedule 40 PVC pipe through the tank.

The water tank sump shall be located in the forward area of the tank. There will be a schedule 40 polypropylene tank suction pipe from the front of the tank to the tank sump. The tank drain and clean out shall be located in the bottom of the tank sump.

The pump to tank refill connection shall be a sized to mate with tank fill discharge line. A deflector shield inside the tank will also be provided.

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The water tank manufacturer shall certify the capacity of the water tank prior to delivery of the apparatus. This capacity shall be recorded on the manufacturer's record of construction and the certification shall be provided to the purchaser when the apparatus is delivered.

One (1)  
25-42-1200

Water Tank, UPF, Base Specs, Poly

Y\_\_N\_\_

The apparatus shall be equipped with a water tank manufactured by United Plastic Fabricating.

One (1)  
25-44-1700

Water Tank, Fill Tower, 10" x 10", General

Y\_\_N\_\_

### **WATER TANK FILL TOWER**

A fill tower measuring approximately 10" x 10" square shall be provided on the water tank.

One (1)  
25-50-1400

Water Tank Clean-out & Plug, 3"

Y\_\_N\_\_

Tank suction shall be located in a sump assembly located below the bottom of the tank, properly baffled to prevent surging of water. A 3" cleanout plug shall be provided in the bottom of the tank sump.

One (1)  
25-50-2510

Direct Tank Fill, 2-1/2" AKR, Right Rr, KZCO Elec, Tmbrwlf

Y\_\_N\_\_

### **DIRECT TANK FILL**

One (1) 2-1/2" diameter direct tank fill inlet shall be provided, including a 2-1/2" female NH swivel, plug and screen. The tank fill shall include a quarter turn 2-1/2" Akron 8800 series valve with stainless steel ball. The valve shall be located on the right side rear of body as low as possible and controlled from the pump operator's panel.

One (1)  
29-00-2400

The Akron valve shall be equipped with a KZCO KZ Valve Model EH-2 12 volt electric actuator. The valve control shall be push button or rocker type switch with indicator light provided. When the valve is open, the indicator light shall illuminate. When the valve is closed the indicator light shall be off. The valve control switch shall be labeled appropriately.

Hosebed, Pmpr, <168" L, HD, 71" Wide - MN

Y\_\_N\_\_

### **HOSEBED WIDTH**

The width of the pumper body hosebed shall be 71".

One (1)  
29-10-1050

Hosebed, Grating, Extrd Alum, <168" Long - MN

Y\_\_N\_\_

### **ALUMINUM HOSEBED GRATING**

The hose bed compartment deck shall be constructed entirely from maintenance-free, extruded aluminum slats. The slats shall have an anodized, radiused ribbed top surface. The slats shall be of widths approximately 3/4" high x 6" wide, space 1/2"

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One (1)  
29-10-5090

apart and shall be welded into a one-piece grid system to prevent the accumulation of water and allow ventilation to assist in drying hose.  
Hosebed, Strge Cpcty, 30 Cubic Feet, Minimum

Y\_\_N\_\_

### HOSE BED STORAGE CAPACITY

One (1)  
29-10-8150

The hose bed shall be designed to have a storage capacity for a minimum of 30 cubic feet of fire department supplied fire hose.  
Hosebed, Divider, 1/4" Alum, General

Y\_\_N\_\_

### ALUMINUM HOSEBED DIVIDER

One (1) adjustable hosebed divider constructed of .250" aluminum shall be installed on the apparatus.

The divider shall be fully adjustable, mounted using extruded aluminum track at the rear and aluminum "C" channel tracks at the front of the divider for full side to side adjustment.

One (1)  
29-10-8550

Hosebed, Partition, Front of Hosebed, > 48" - MN

Y\_\_N\_\_

One (1) stationary hosebed partition shall be provided in the main hosebed, mounted left to right. The partition shall be fabricated of .190" smooth aluminum. Partition shall be bolted in place using stainless steel fasteners to allow for ease of removal or relocation.

One (1)  
29-20-2000

Hosebed Cvr, Vinyl, <180" L, <74" W, Velcro

Y\_\_N\_\_

### VINYL HOSEBED COVER

The apparatus shall be equipped with a vinyl hosebed cover.

The cover, approximately 74" wide, shall be secured utilizing a velcro fastening system at the front and sides of the hosebed body.

The color shall be:

One (1)  
30-00-0000

BODY CONSTRUCTION

Y\_\_N\_\_

One (1)  
30-01-2040

Bdy Const - General Extrd Alum - SA Timberwolf

Y\_\_N\_\_

### HEAVY DUTY EXTRUDED ALUMINUM BODY

To prevent possible interaction of dissimilar metals and to reduce the weight of the completed apparatus, the body and ALL STRUCTURAL SUPPORTS shall be constructed entirely of aluminum sheet and aluminum extrusions.

Aluminum extrusions or sheet aluminum of smaller thicknesses or lesser grades to those specified herein are not acceptable.

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All extrusions utilized in the body superstructure, substructure and framing shall be 6061-T6 alloy aluminum. For strength and rigidity, all aluminum sheets utilized in the apparatus body, hose body and compartment sides shall be a minimum of **3/16"** 5052-H32 alloy aluminum sheet. All extrusions shall be beveled at each joint and all seams shall be electrically seam welded using #5356 alloy aluminum wire.

## **FASTENERS**

All fasteners use in the apparatus body shall be attached with Ny-Lok type fasteners.

All aluminum and stainless steel components shall be attached using stainless steel fasteners. Zinc or cadmium plated fasteners are not acceptable for use with any aluminum or stainless steel components on the vehicle.

Compartment door hinges, handrails and running boards shall be attached using a minimum of 1/4" diameter machine bolt fasteners. Fasteners used in nonstructural areas such as; door handles, trim moldings, gauge mounting, etc shall be 3/16" in diameter.

## **BODY SUPERSTRUCTURE CONSTRUCTION**

All vertical and horizontal structural members of the outer apparatus body shall be constructed of no less than 4.00" by 12.00", 6061-T6 aluminum extrusions with a minimum .200" wall thickness fully welded together forming a unitized support system for the body and compartments. In order to provide a complete internal and integrated body super-structure, full height extruded structural members shall be provided at each corner of the apparatus and between each exterior equipment compartment.

## **EXTERIOR COMPARTMENT CONSTRUCTION**

Compartment sides and walls shall be welded to the super-structure. Seams shall be sealed using an engineered grade polyurethane adhesive-sealant.

The compartments shall be designed to provide protected raceways for vertically hinged door fastener retention elements. This requirement shall eliminate the possibility of door hinge hardware from being damaged by or damaging equipment stored in the compartments.

The compartment door openings are to be full width of the compartment with no loss of space. The raceways shall be designed to allow door hardware removal by a single person with simple hand tools.

Full height access panels fastened with stainless steel fasteners shall be provided to

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access all wiring routed through vertical super-structure extrusions. There shall be no exposed wiring allowed within the compartment interiors.

Compartment flooring shall be constructed of a combination aluminum extrusion and aluminum treadplate welded in place to the extruded aluminum framework creating a double compartment floor for added strength. Due to the high usage and wear and tear caused by removal of equipment, only treadplate aluminum with a raised pattern will be acceptable for compartment flooring. Bolted or welded in smooth raw aluminum or painted aluminum does not meet the intent nor technical requirement of raised pattern treadplate.

There shall be no floor welds visible from the interior of the equipment compartments.

The tops of the side exterior compartments shall be constructed of NFPA #1901 Standards compliant non-slip polished aluminum treadplate fastened to the body with stainless steel fasteners. Compartment tops that are welded in place do not meet the serviceability intent of this requirement.

## **SHELVING TRACKS**

The vertical extrusions forming the framework of the side exterior compartmentation shall be designed to incorporate FULLY RECESSED adjustable shelving standards. Shelving tracks shall run full height of **ALL** side exterior equipment compartment.

The intent of this requirement is to allow full use of the available storage areas without the interference of shelving tracks extending into and reducing the interior widths of the compartments which will allow equipment to be stored within the full width of the compartment interiors.

Shelving, when specified, shall have a width of no less than .50" of the overall compartment width.

Adjustable shelving tracks welded or bolted onto interior walls of the compartments do not meet the intent of these specifications.

## **HOSE BODY CONSTRUCTION**

To maintain strength and rigidity, the main hose body shall be completely framed with a minimum of 2.00" X 3.00" 6061-T6 alloy aluminum extrusions with a .281 nominal wall thickness. The hose body extrusions shall be welded to the super-structure framework, becoming an integral portion of a complete unitized support system. Sheet metal or sheet aluminum with double or triple formed breaks, does not meet the technical requirement of the specification in providing a complete hosebody framework and are not acceptable.

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One (1)  
30-01-2250

Sides shall be constructed of aluminum sheet welded to the framework. There shall be no visible welds on the exterior of the hose bed side sheets.

Electrolysis Corrosion Cntrl

Y\_\_\_N\_\_\_

## **ELECTROLYSIS CORROSION CONTROL**

The apparatus shall be assembled using ECK or electrolysis corrosion control, on all high corrosion potential areas, such as door latches, door hinges, trim plates, fenderettes, etc. This coating is a high zinc compound that shall act as a sacrificial barrier to prevent electrolysis and corrosion between dissimilar metals. This shall be in addition to any other barrier material that may be used.

All 1/4" diameter and smaller screws and bolts shall be stainless steel with a powdered aluminum coating. This coating shall be bonded metallurgically to the stainless screws to prevent peeling and flaking. This coating is designed to reduce the potential for electrolysis and corrosion to occur where items are assembled and attached.

Due to the expected life of the vehicle, proposals will only be acceptable from manufacturers that include these corrosion features.

Dr Strap, Pull Down

Seven (7)  
30-02-1250

Y\_\_\_N\_\_\_

## **PULL DOWN STRAPS**

Nylon straps shall be provided and installed on each roll up door . The straps shall be secured to the side wall of the interior compartment in a way that will allow the strap to automatically tuck inside the compartment when closed to prevent the strap from dangling and hindering closing of the door. The straps shall be black in color.

Drs, Roll-Up/Safe Step, Outside Cmpt, Specs, General

One (1)  
30-02-1700

Y\_\_\_N\_\_\_

## **ROLL-UP DOORS**

Exterior side equipment compartments so specified shall be equipped with roll-up shutter doors to be installed as specified herein. The door shall be located above and outside of the interior of the compartments thereby protecting the door in the raised position from possible damage by the shifting of equipment.

The door roll mechanism shall also be protected from possible damage should equipment shift while the vehicle is in transit with the door in the closed position.

When the door is raised, the location of the drum assembly shall not allow water drainage from the doors into any portion of the interior of the compartment, thereby preventing the accumulation of water, snow, or ice from damaging the equipment located therein.

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The roll-up door drum assembly shall be fully enclosed and protected from the elements. Provisions shall be made on each end and each side of the apparatus for moisture to self-drain from the raised doors to below the apparatus body using integral drainage ports.

To provide access for repairs and adjustments without removing equipment from the compartments, the door roll assemblies shall be serviced from above the compartment. There shall be no need to remove any equipment nor to open the door to provide service to the same. Should a door be prohibited from being raised because of damage to or a defect in the roller assembly, service must be capable of being performed without the cutting, damaging or destroying of the door shutters to gain access. Access to the door mechanism shall be provided through the removable door roller assembly access panel that requires only the use of common hand tools to remove.

Pendent plates supporting the door roll assembly shall be bolted in place, adjustable and capable of being removed with common hand tools. Pendent plates and supports that are welded in place do not meet the maintenance and service criteria of these specifications.

In order to provide unlimited access to stored equipment and to help prevent damage to the tracks by removing equipment, the tracks shall not protrude into any portion of the door frame opening. The width of the door frame opening shall be the actual useable width available to store and remove equipment. No Exception.

Door openings shall match the compartment sizes as specified.

The roll up door(s) shall be fabricated from aluminum extrusions and be manufactured and assembled in the United States.

The door slats shall be double-wall extrusions with dimensions of 1.366" high x .315" thick. The exterior surface shall be flat and the interior surface concave to deflect loose equipment to prevent the door from jamming. Each slat shall have interlocking end shoes to prevent the slat from moving side to side resulting in binding of the door. Each slat shall be separated by a co-extruded PVC and rubber inner seal to prevent metal to metal contact and minimize dirt and moisture from entering the compartment. The inner seal shall not be visible from the exterior to maintain a clean appearance of door. The slats shall have interlocking joints with a folding locking flange to provide security and prevent penetration by sharp objects.

The track shall be a one (1) piece aluminum assembly that has an attaching flange and finishing flange incorporated into the design that facilitates installation and provides a finished look to the door without additional trim or caulking. A low profile side seal shall be utilized to maximize usable compartment space.

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A drip rail designed to prevent water from dripping into the compartment shall be provided. The drip rail shall have a built in replaceable non-contacting seal to eliminate scratching of the surface of the door.

Bottom rail extrusion must have smooth back to prevent loose equipment from jamming the door and have "V" shaped double seal to prevent water and debris from entering the compartment. A two (2) inch wide finger pull shall be integrated into the bottom rail extrusion for easy one hand opening and closing. The door latch system shall be a full width one (1) piece lift bar that enables the user to operate with one hand.

A magnetic door ajar system shall be integrated in the lift bar handle and the lift bar handle retainer block to signal an open door.

The roll mechanism shall have a clip system that connects the curtain slats to the operator drum to allow for easy tension adjustment without tools. A four (4) inch diameter counterbalanced operator drum shall be incorporated to assist in lifting the door.

### **SAFE-STEPS**

To safely access equipment stored in the upper section of the compartments, heavy duty drop down door steps shall be provided at the bases of the high side equipment compartments ahead of and behind the rear wheels. The drop down door steps and the roll up doors of each compartment will operate independently of each other and shall have no exposed mechanical devices or hinges. **No Exception.**

An aluminum NFPA compliant treadplate stepping surface shall be provided full width of the compartment and no less than 16" in depth. Each shall withstand a static load of 800 pounds. Four (4) gas filled spring loaded door openers shall assist in opening and closing.

One (1)  
30-02-1780

Finish, Safe Step, Mirror Stainless, Specs, General

Y\_\_N\_\_

### **SAFE STEP DOOR FINISH**

When in the closed position, the safe step door exterior shall have a stainless steel mirrored finish surface.

One (1)  
30-02-1900

Side Body Header, Tread Plate, General

Y\_\_N\_\_

### **SIDE BODY HEADER**

All high side compartment tops shall be NFPA approved non-slip treadplate with the side body header area above the compartment doors finished with polished aluminum tread plate.

The aluminum overlays on the compartmentation tops on each side of the body shall

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be extended out and downward a minimum of .50" over the compartment doors forming a drip rail. Corners shall be TIG welded.

Lower or rear face compartments, if specified shall be provided with polished aluminum drip rails.

One (1)  
30-10-1510

Sub-Frame, Alum, SA Tmbrwf , General

Y\_\_N\_\_

## ALUMINUM SUB-FRAME

The surface of the chassis frame rails shall be isolated from the apparatus substructure by an elastomeric isolator.

The main body sub-frame shall be fully welded to the longitudinal chassis extrusions.

Two (2) 6061-T6 aluminum longitudinal extrusions shall be provided, one (1) on each chassis frame rail running full length beneath the apparatus body. A minimum .50" extruded wall thickness shall be provided on the top flange of the chassis frame rail. Each extrusion shall be designed to cover the complete top flange and outside radius of the chassis frame rail extending down the outside web of the frame rail a minimum of 1.25" to prevent side to side shifting of the apparatus body.

The main body sub-frame shall be constructed of not less than four (4) 4.00" by 2.50" tubular, 6061-T6 aluminum, "I" beams with a .375" vertical main body crossmembers. A minimum of four (4) crossmembers shall be provided two ahead of and two behind the rear axle forming the main body support crossmembers.

The main crosstubes shall be routed through and fully welded to the vertical and horizontal extrusions forming the body super-structure.

For added strength and rigidity, no less than six (6) intermediate body crossmembers shall be provided constructed of solid aluminum structural "I" beams 4.00" high by 3.00" wide with a minimum .29" flange thickness. If necessary, additional crossmembers shall be provided, to meet the minimum booster tank mounting requirements, as published by the manufacturer of the booster tank provided.

The intermediate structural "I" beam crossmembers shall be interconnected and welded to the main body tubular crossmembers forming a fully welded support grid for the body super-structure compartments and booster tank.

A minimum of six (6) U-bolts shall be provided to secure the body sub-structure to the chassis frame. The forward two (2) U-bolts shall be shock absorbing spring tension type to allow for flexing without placing stress on the apparatus body or chassis frame rails.

One (1)  
31-01-7020

100" OAW, Full Dpth Ahd Rr Whls & Half Dpth Ovrwhls, Tmbrwf

Y\_\_N\_\_

## BODY WIDTH

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The overall width of the pumper body shall not exceed 100". The overall width across the rub rails shall be 101".

## COMPARTMENT DEPTH

The left side compartments ahead of the rear wheels shall have an interior usable depth of not less than 26" the full height of the compartment with the specified doors in the closed position in order to provide the maximum amount of storage area.

The left side upper compartment over the rear wheels shall have an interior usable depth of not less than 12" with the specified doors in the closed position.

The left side compartment behind the rear wheels shall have an interior usable depth of not less than 12" in the upper 15" portion and shall have an interior usable depth of not less than 24" in the remaining lower portion with the specified doors in the closed position.

The right side compartments ahead of the rear wheels and over the rear wheels shall have an interior usable depth of not less than 26" the full height of each compartment with the specified doors in the closed position in order to provide the maximum amount of storage area.

The right side upper compartment over the rear wheels shall have an interior usable depth of not less than 12" with the specified doors in the closed position.

The right side compartment behind the rear wheels shall have an interior usable depth of not less than 12" in the upper 15" portion and shall have an interior usable depth of not less than 24" in the remaining lower portion with the specified doors in the closed position.

One (1)  
31-01-7300

Bdy, General HD Extrd Alum, Timberwolf, 160"

Y\_\_N\_\_

## BODY LENGTH

The apparatus body shall be 160" long, reference the drawing for actual body length. Cmpt Height, 79" High Left, High Side, RU Drs

One (1)  
32-05-4079

Y\_\_N\_\_

## COMPARTMENT HEIGHT

The left side full height body compartments shall be 63" high and equipped with a 63" high clear door opening.

The left side upper level compartment(s) shall be 32" high and equipped with a 32" high clear door opening.

One (1)  
32-05-6260

Ahd Rr Whls-44" Full Ht Compt-Roll Up Outside Compt

Y\_\_N\_\_

## LEFT FRONT COMPARTMENT

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## Bidder Complies

There shall be one (1) 44" wide full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

One (1)  
32-05-7036

The compartment shall be equipped with the following:  
Abv Rr Whls-52" Sngl Cmpt, No Hyd Rack-RU Outside Cmpt

Y\_\_N\_\_

### **LEFT OVERWHEEL COMPARTMENT**

There shall be one (1) 52" wide compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

One (1)  
32-05-8060

The compartment shall be equipped with the following:  
Bhd Rr Whls-48" Full Ht Cmpt-Roll Up Outside Cmpt

Y\_\_N\_\_

### **LEFT REAR COMPARTMENT**

There shall be one (1) 48" wide full height compartment located behind the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

One (1)  
32-06-4079

The compartment shall be equipped with the following:  
Cmpt Height, 79" High Right, High Side, RU Drs

Y\_\_N\_\_

### **COMPARTMENT HEIGHT**

The right side full height body compartments shall be 63" high and equipped with a 63" high clear door opening.

One (1)  
32-06-6260

The right side upper level compartment(s) shall be 32" high and equipped with a 32" high clear door opening.  
Ahd Rr Whls-44" Full Ht Cmpt-Roll Up Outside Cmpt

Y\_\_N\_\_

### **RIGHT FRONT COMPARTMENT**

There shall be one (1) 44" wide full height compartment located ahead of the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

One (1)  
32-06-7050

The compartment shall be equipped with the following:  
Abv Rr Whls-52" Sngl Cmpt w/o Hyd Rack-RU Outside Cmpt

Y\_\_N\_\_

### **RIGHT OVERWHEEL COMPARTMENT**

There shall be one (1) 52" wide compartment above the rear wheels. The compartment shall be equipped with a single natural finish roll up door.

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## Bidder Complies

One (1)  
32-06-8060

The compartment shall be equipped with the following:  
Bhd Rr Whls-48" Full Ht Compt-Roll Up Outside Compt

Y\_\_N\_\_

### RIGHT REAR COMPARTMENT

There shall be one (1) 48" wide full height compartment located behind the rear wheels. The compartment shall be equipped with a full height single natural finish roll up door.

One (1)  
32-08-5202

The compartment shall be equipped with the following:  
Rr Center Compt - Full Height/Non Trans

Y\_\_N\_\_

### REAR CENTER COMPARTMENT

There shall be one (1) full height compartment located at the rear of the apparatus. The compartment shall be partitioned off from the side compartments.

One (1)  
33-60-2610

The fire pump shall be installed in this compartment. A weather resistant cover shall be installed as specified elsewhere in these specifications.  
Rr Bdy, 30 Degree Departure Angle, Tmbrwlf/Airwlf

Y\_\_N\_\_

### REAR BODY

The lower portion of the rear body shall be raised to provide a 30 degree angle of departure for off road use. The height of the left and right side compartments located behind the rear wheels will be reduced approximately 12".

One (1)  
44-05-1100

Whl Well Panel, Alum T/P, Sngl Axle

Y\_\_N\_\_

### WHEEL WELL LINER

For ease of accessibility and maintenance, wheel well panels shall be double break formed polished aluminum treadplate that is fully gasketed and bolted in place with stainless fasteners. Wheel wells shall be of the removable design so as to provide replacement in the event of damage. There shall be no visible bolt heads, retention nuts or fasteners on the exterior surface of the panel. Wheelwell panel shall be isolated from the apparatus body utilizing .25" nylon spacer blocks.

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 24.00") radius wheel well liner constructed of exterior grade .25" black polyethylene sheet shall be provided. For ease of removal, the liner shall be held in place via means of a self-tension retention system. Due to possible corrosion and contamination by road debris in the wheel well area, mechanical fasteners shall not be used to secure the wheel well liner.

One (1)  
44-06-4320

Fenderette, Polished Stainless Steel, General

Y\_\_N\_\_

### FENDERETTES

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## Bidder Complies

One (1) 44-10-1100	<p>The rear wheel wells shall be radius cut for a streamlined appearance. A polished type 304 stainless steel radius fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless steel fasteners with nylon isolators to prevent contact of the fastener with the wheelwell housing panel. A black rubber gasket shall be installed between the stainless fenderette and the apparatus body sides. Silicone caulking does not meet the intent nor the technical requirement of a solid gasket material in this area and is not acceptable.</p> <p>Whl Well Cmpt, Sngl SCBA Tube, Alum Dr</p>	Y__N__
	<p>One (1) breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.</p>	
	<p>The cylinder storage compartment shall be constructed entirely of aluminum. The door assemblies shall be bolted in-place and removable for repair or replacement.</p>	
One (1) 44-10-1100	<p>Compartment shall be provided with SCBA cylinder scuff protection. A brushed aluminum door with push button trigger latch shall be provided.</p> <p>Whl Well Cmpt, Sngl SCBA Tube, Alum Dr</p>	Y__N__
	<p>One (1) breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.</p>	
	<p>The cylinder storage compartment shall be constructed entirely of aluminum. The door assemblies shall be bolted in-place and removable for repair or replacement.</p>	
One (1) 44-10-1100	<p>Compartment shall be provided with SCBA cylinder scuff protection. A brushed aluminum door with push button trigger latch shall be provided.</p> <p>Whl Well Cmpt, Sngl SCBA Tube, Alum Dr</p>	Y__N__
	<p>One (1) breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.</p>	
	<p>The cylinder storage compartment shall be constructed entirely of aluminum. The door assemblies shall be bolted in-place and removable for repair or replacement.</p>	
One (1) 44-10-1100	<p>Compartment shall be provided with SCBA cylinder scuff protection. A brushed aluminum door with push button trigger latch shall be provided.</p> <p>Whl Well Cmpt, Sngl SCBA Tube, Alum Dr</p>	Y__N__
	<p>One (1) breathing air cylinder storage compartment shall be provided and located in the rear wheel well of the apparatus body.</p>	
	<p>The cylinder storage compartment shall be constructed entirely of aluminum. The door assemblies shall be bolted in-place and removable for repair or replacement.</p>	
	<p>Compartment shall be provided with SCBA cylinder scuff protection. A brushed aluminum door with push button trigger latch shall be provided.</p>	

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One (1)  
44-11-5160

Whl Well Cmpt, Ahd of Whls Left Side, Tmbrwlf/Airwlf

Y\_\_N\_\_

## WHEEL WELL COMPARTMENT LEFT SIDE AHEAD OF WHEELS

One (1) wheel well compartment shall be located on the left side in the rear wheel well panel ahead of the rear wheels of the type specified herein.

One (1)  
44-11-5360

Whl Well Cmpt, Bhnd Whls Left Side, Tmbrwlf/Airwlf

Y\_\_N\_\_

## WHEEL WELL COMPARTMENT LEFT SIDE BEHIND WHEELS

One (1) wheel well compartment shall be located on the left side in the rear wheel well panel behind the rear wheels of the type specified herein.

One (1)  
44-11-5560

Whl Well Cmpt, Ahd of Whls Right Side, Tmbrwlf/Airwlf

Y\_\_N\_\_

## WHEEL WELL COMPARTMENT RIGHT SIDE AHEAD OF WHEELS

One (1) wheel well compartment shall be located on the right side in the rear wheel well panel ahead of the rear wheels of the type specified herein.

One (1)  
44-11-5760

Whl Well Cmpt, Bhnd Whls Right Side, Tmbrwlf/Airwlf

Y\_\_N\_\_

## WHEEL WELL COMPARTMENT RIGHT SIDE BEHIND WHEELS

One (1) wheel well compartment shall be located on the right side in the rear wheel well panel behind the rear wheels of the type specified herein.

One (1)  
44-30-1850

Roof Access Ladder, Alum Tubing, Fold-Up, Left Rr

Y\_\_N\_\_

## ACCESS LADDER

One (1) access ladder constructed of rectangular aluminum tubing and round extruded aluminum non-slip rungs shall be installed on the left rear of the apparatus. The bottom portion of the ladder shall fold up in a secured position when not in use to maintain a high angle of departure. The ladder shall provide access to the top of the body.

One (1)  
44-35-2200

High Angle of Departure Cmpts, Left Side Only, Tmbrwlf/Airwl

Y\_\_N\_\_

## HIGH ANGLE OF DEPARTURE COMPARTMENT

One (1) high angle of departure storage compartment shall be provided. There shall be one (1) installed under the behind the rear wheels body compartment on the left side. The compartment shall be constructed from 1/8" smooth aluminum with an aluminum tread plate door and stainless steel hinge. A stainless steel, D-ring handle shall be provided for opening and closing the door. The door shall have weather stripping installed around the perimeter to provide for a weatherproof seal.

One (1)  
44-40-1020

Vents, Cmpts, Louvers (Ea)

Y\_\_N\_\_

A removable louvered vent shall be provided in the compartment.

One (1)  
44-40-1020

Vents, Cmpts, Louvers (Ea)

Y\_\_N\_\_

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## Bidder Complies

One (1)  
44-40-1020 A removable louvered vent shall be provided in the compartment.  
Vents, Compts, Louvers (Ea) Y\_\_N\_\_

One (1)  
44-40-1020 A removable louvered vent shall be provided in the compartment.  
Vents, Compts, Louvers (Ea) Y\_\_N\_\_

One (1)  
44-40-1020 A removable louvered vent shall be provided in the compartment.  
Vents, Compts, Louvers (Ea) Y\_\_N\_\_

One (1)  
44-40-1020 A removable louvered vent shall be provided in the compartment.  
Vents, Compts, Louvers (Ea) Y\_\_N\_\_

One (1)  
44-40-1020 A removable louvered vent shall be provided in the compartment.  
Vents, Compts, Louvers (Ea) Y\_\_N\_\_

One (1)  
45-02-4100 A removable louvered vent shall be provided in the compartment.  
Shelf, Adjust, Alum 3/16", General Y\_\_N\_\_

### ADJUSTABLE SHELF

One (1) compartment shelf(ves) shall be provided and constructed of .190" smooth aluminum, and are to have formed upward breaks on front and rear for added strength. Shelve(s) shall be fully adjustable within the compartments. Lighter gauge shelf materials are not acceptable.

One (1)  
45-02-4100 Shelf(ves) shall extend full width of the compartments, within .50" of the overall width, and adjust up and down in the integral shelf tracks.  
Shelf, Adjust, Alum 3/16", General Y\_\_N\_\_

### ADJUSTABLE SHELF

One (1) compartment shelf(ves) shall be provided and constructed of .190" smooth aluminum, and are to have formed upward breaks on front and rear for added strength. Shelve(s) shall be fully adjustable within the compartments. Lighter gauge shelf materials are not acceptable.

One (1)  
55-01-3270 Shelf(ves) shall extend full width of the compartments, within .50" of the overall width, and adjust up and down in the integral shelf tracks.  
Cmpt Lt, Wall, OSS Night Stik, 27" LED Tube Lt, (2) Ea Cmpt Y\_\_N\_\_

Two (2) 27" long OnScene Solutions Night Stik LED lights shall be installed, one on each side of the door opening. The lights shall contain 18 LEDs per light producing approximately 111 lumens (six LEDs and 37 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add

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One (1) 55-01-3270	additional lights in series if required. Cmpt Lt, Wall, OSS Night Stik, 27" LED Tube Lt, (2) Ea Cmpt	Y__N__
	Two (2) 27" long OnScene Solutions Night Stik LED lights shall be installed, one on each side of the door opening. The lights shall contain 18 LEDs per light producing approximately 111 lumens (six LEDs and 37 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.	
	The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.	
One (1) 55-01-3285	Cmpt Lt, Wall, OSS Night Stik, 45" LED Tube Lt, (2) Ea Cmpt	Y__N__
	Two (2) 45" long OnScene Solutions Night Stik LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 185 lumens (six LEDs and 37 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.	
	The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.	
One (1) 55-01-3285	Cmpt Lt, Wall, OSS Night Stik, 45" LED Tube Lt, (2) Ea Cmpt	Y__N__
	Two (2) 45" long OnScene Solutions Night Stik LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 185 lumens (six LEDs and 37 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.	
	The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.	
One (1) 55-01-3285	Cmpt Lt, Wall, OSS Night Stik, 45" LED Tube Lt, (2) Ea Cmpt	Y__N__
	Two (2) 45" long OnScene Solutions Night Stik LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 185 lumens (six LEDs and 37 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.	
	The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.	
One (1) 55-01-3285	Cmpt Lt, Wall, OSS Night Stik, 45" LED Tube Lt, (2) Ea Cmpt	Y__N__
	The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.	
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## Bidder Complies

Two (2) 45" long OnScene Solutions Night Stik LED lights shall be installed, one on each side of the door opening. The lights shall contain 30 LEDs per light producing approximately 185 lumens (six LEDs and 37 lumens every 9"). The light stick shall be rated at 100,000 hours of service and shall be provided with a 5 year free replacement warranty. The light shall have a 5/8" LEXAN™ polycarbonate tube enclosure for severe duty applications.

The light stick shall be waterproof and be connectible via a jumper wire to add additional lights in series if required.

One (1)  
55-06-1400 Cmpt Lt, Dr Swtch, Magnetic, Ea Y\_\_N\_\_

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)  
55-06-1400 Cmpt Lt, Dr Swtch, Magnetic, Ea Y\_\_N\_\_

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)  
55-06-1400 Cmpt Lt, Dr Swtch, Magnetic, Ea Y\_\_N\_\_

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)  
55-06-1400 Cmpt Lt, Dr Swtch, Magnetic, Ea Y\_\_N\_\_

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)  
55-06-1400 Cmpt Lt, Dr Swtch, Magnetic, Ea Y\_\_N\_\_

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)  
55-06-1400 Cmpt Lt, Dr Swtch, Magnetic, Ea Y\_\_N\_\_

The compartment light will be controlled by a magnetic "On-Off" switch located on each compartment door.

One (1)  
== General Timberwolf Common Body Parts - 531.080 05/31/09 Y\_\_N\_\_

One (1)  
33-70-2100 Handrails, Pmpr, Below Hosebed, Horz, 48" Y\_\_N\_\_

### HANDRAIL BELOW HOSEBED

One (1) extruded aluminum non-slip handrail, approximately 48" in length, shall be provided and horizontally mounted below the hosebed on the rear of the apparatus.

One (1)  
33-70-3110 Handrails, Pmpr, Left Top of Bdy Side, Rr, 12", Single Y\_\_N\_\_

### HANDRAIL TOP OF BODY SIDE

One (1) extruded aluminum non-slip handrails, approximately 12" in length, shall be provided and installed on the left side top-side of the rear hosebed for access to the hosebed area.

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One (1)  
44-01-1400

Bdy Trim, Frnt Bdy, Ht of Side Cmpts, Alum T/P

Y\_\_N\_\_

## FRONT BODY PROTECTION PANELS

Aluminum tread plate overlays and panels shall be installed on the front of the body from the lower edge to the top of the compartment doors. The material shall be bolted in place and sealed to prevent any moisture entry between the overlay and the body structure.

One (1)  
44-01-4020

Bdy Trim, Rr Bdy, Smooth Alum for Chevron Stripe, General

Y\_\_N\_\_

## REAR BODY PROTECTION PANELS

Smooth aluminum shall be installed on the rear of the body, to allow for the installation of a "Chevron" stripe on the rear. The "Chevron" style striping shall consist of 3M reflective red and amber striping installed and placed at a 45 degree angle in an "A" pattern pointing up towards the center upper portion of the rear face.

One (1)  
44-02-1120

Rub Rails, Lwr Bdy, General Extrd Alum

Y\_\_N\_\_

## EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the lower right and left body sides. The side rub rails shall be a heavy extruded aluminum "C" channel. There shall also be a bolt on aluminum corner casting on each rear corner to blend the rear tail board assembly with the side rub rails.

One (1)

== General Timberwlf - DC Electrical System - 531.080 05/31

Y\_\_N\_\_

One (1)  
50-09-3100

Elecal, Base, Rosenbauer LCS - Tmbrwlf/Airwlf

Y\_\_N\_\_

## LOW VOLTAGE ELECTRICAL SYSTEM SPECIFICATIONS

The electrical system shall include all panels, electrical components, switches and relays, wiring harnesses and other electrical components. The electrical equipment installed by the apparatus manufacturer shall conform to current automotive electrical system standards, the latest Federal DOT standards, and the requirements of the applicable NFPA standards.

The apparatus shall have a Rosenbauer Logic Control System (LCS™) using integrated CAN-bus technology. The system shall support both CAN-Bus technology as well as conventional wiring with relay driven circuits. The system shall be modular and configurable to accommodate the necessary control functions for the emergency apparatus being specified. The system shall provide operator relief with optimized sequences and a central control point(s) for all functions. Operator interface(s) shall have key buttons with tactile feedback (even when wearing gloves) to control apparatus functions. The key buttons shall allow the operator to engage or disengage functions by touch (pressed button feedback). Key buttons shall be identified with color-coded pictographs and/or labels combined with LED control

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lamps indicating function status. Operator interface(s) shall be ergonomic in placement and design, intuitive to use, with functions arranged in a top-down order configuration. The operator interface(s) shall be internally backlit for operation at night and low light conditions. The Rosenbauer LCS™ system shall provide maximum control integration of the various component systems installed on the specified apparatus. The system shall be pre-wired for computer accessibility to allow service personnel to easily connect to perform diagnostics, troubleshooting, or program additions.

The system shall have the following functions or features available:

1. Power management
2. Load shedding
3. Solid-state circuitry
4. Switch input
5. Lighting device activation
6. Self-contained diagnostic indicators
7. Power distribution
8. Diagnostic display capability
9. High Idle
10. Throttle Control
11. Multiple Operator Interfaces

All wiring shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the maximum current for the protected circuit. Voltage drops in all wiring from the power source to the using device shall not exceed 10 percent. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards. The wiring harness shall conform to SAE J-1128 with GXL temperature properties. All exposed wiring shall be protected in a loom with a minimum 289 degree Fahrenheit rating. All wiring looms shall be properly supported and attached to body members. The electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

The wiring connections and terminations shall use a method that provides a positive mechanical and electrical connection and shall be installed in accordance with the device manufacturer's instructions. Electrical connections shall be with mechanical type fasteners and large rubber grommets where wiring passes through metal panels.

The wiring between the cab and body shall be joined using Deutsche type connectors

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or an enclosed in a terminal junction panel area. This system will permit body removal with minimal impact on the apparatus electrical system. All connections shall be crimp-type with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather-resistant connectors shall be provided throughout to ensure the integrity of the electrical system.

Any electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. In addition, the main body junction panel shall house the automatic reset breakers and relays where required.

There shall be no exposed electrical cabling, harnesses, or terminal connections located in compartments, unless they are enclosed in a junction box or covered with a removable electrical panel. The wiring shall be secured in place and protected against heat, liquid contaminants and damage. Wiring shall be uniquely identified every three-inches (3") by color coding or permanent marking with a circuit function code and identified on a reference chart or electrical wiring schematic per requirements of applicable NFPA #1901 standards.

The electrical circuits shall be provided with low voltage overcurrent protective devices. Such devices shall be accessible and located in required terminal connection locations or weather resistant enclosures. The overcurrent protection shall be suitable for electrical equipment and shall be automatic reset type and meet SAE standards. All electrical equipment, switches, relays, terminals, and connectors shall have a direct current rating of 125 percent of maximum current for which the circuit is protected. The system shall have electro-magnetic interference suppression provided as required in applicable SAE standards.

The electrical system shall include the following:

- a) Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied. A corrosion preventative compound shall be applicable to all terminal plugs located outside of the cab or body.
- b) The electrical wiring shall be harnessed or be placed in a protective loom.
- c) Holes made in the roof shall be caulked with silicone. Large fender washers shall be used when fastening equipment to the underside of the cab roof.
- d) Any electrical component that is installed in an exposed area shall be mounted in a manner that will not allow moisture to accumulate in it.
- e) A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work.
- f) All lights that have their sockets in a weather exposed area shall have corrosion preventative compound added to the socket terminal area.

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The warning lights shall be switched in the chassis cab with labeled switches in an accessible location. All electrical equipment switches shall be mounted on a switch panel mounted in the cab convenient to the operator. For easy nighttime operation, an integral indicator shall be provided to signal when the circuit is energized. All switches shall be appropriately identified as to their function.

A single warning light switch shall activate all required warning lights. This switch will allow the vehicle to respond to an emergency and "call for the right of way". When the parking brake is applied, a "blocking right of way" system shall automatically activate per requirements of the applicable NFPA standards. All "clear" warning lights shall be automatically turned off upon application of the parking brake.

## **NFPA REQUIRED TESTING OF ELECTRICAL SYSTEM**

The apparatus shall be electrically tested upon completion of the vehicle and prior to delivery. The electrical testing, certifications, and test results shall be submitted with delivery documentation per requirements of the applicable NFPA standards. The following minimum testing shall be completed by the apparatus manufacturer:

### 1. Reserve capacity test:

The engine shall be started and kept running until the engine and engine compartment temperatures are stabilized at normal operating temperatures and the battery system is fully charged. The engine shall be shut off and the minimum continuous electrical load shall be activated for ten (10) minutes. All electrical loads shall be turned off prior to attempting to restart the engine. The battery system shall then be capable of restarting the engine. Failure to restart the engine shall be considered a failed test.

### 2. Alternator performance test at idle:

The minimum continuous electrical load shall be activated with the engine running at idle speed. The engine temperature shall be stabilized at normal operating temperature. The battery system shall be tested to detect the presence of battery discharge current. The detection of battery discharge current shall be considered a test failure.

### 3. Alternator performance test at full load:

The total continuous electrical load shall be activated with the engine running up to the engine manufacturer's governed speed. The test duration shall be a minimum of two (2) hours. Activation of the load management system is permitted during this test. However, if an alarm sounds due to excessive battery discharge, as detected by the system requirements in the NFPA standards, or a system voltage of less than 11.7 volts dc for more than 120 seconds is present, the test has failed.

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## 4. Low voltage alarm test:

Following the completion of the above tests, the engine shall be shut off. The total continuous electrical load shall be activated and shall continue to be applied until the excessive battery discharge alarm activates. The battery voltage shall be measured at the battery terminals. With the load still applied, a reading of less than 11.7 volts dc for a 12 volt system shall be considered a test failure. The battery system shall then be able to restart the engine. Failure to restart the engine shall be considered a test failure.

## NFPA REQUIRED DOCUMENTATION

The following documentation shall be provided on delivery of the apparatus:

- a. Documentation of the electrical system performance tests required above.
- b. A written load analysis, including:
  1. The nameplate rating of the alternator.
  2. The alternator rating under the conditions.
  3. Each specified component load.
  4. Individual intermittent loads.

One (1)  
50-12-1550

Electrical Console, In Cab, Rosenbauer LCS, Tmbrwlf/Arwlf

Y\_\_\_N\_\_\_

## IN-CAB OPERATOR INTERFACE

An electrical console shall be constructed of molded fiberglass material with a black automotive textured finish and mounted in the cab of the truck chassis. Console shall be designed and installed accessible from the driver and passenger seats. The top face of the console shall be fabricated from smooth aluminum plate with a sanded finish. A Rosenbauer LCS™ operator interface shall be installed in the forward inclined panel.

The LCS™ operator interface is a user-friendly push button switch panel allowing an operator to control many separate emergency apparatus functions at a central interface point. The operator interface shall be configurable for emergency lighting and cab controlled fire fighting functions.

There shall be switches to control the following:

- Pump Start
- Pump Stop

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- Tank To Pump
- Tank Fill / Recirculating Line
- High Pressure Valve
- Master Warning
- Primer

There shall be switches on the panel to control the following:

- Normal Pressure Foam System
- High Pressure Foam System
- Brow Light
- Left Scene Lights
- Rear Scene Lights
- Right Scene Lights
- Under-Truck Nozzles
- Truck Protection Sprinklers
- Air Blow Out
- Left Reel Rewind
- Right Reel Rewind

\*\* Please note: These options are specified elsewhere in these specifications with a separate section and heading.

All switches shall be back-lit, push button style. The switches shall have a colored LED light indicating when the switch circuit is in the engaged position.

One (1)  
50-15-7800

Battery Chrgr/Comp, KUSS, Pump Plus 1200

Y\_\_N\_\_

## **BATTERY CHARGER AND AIR COMPRESSOR**

One (1) Kussmaul Pump Plus 1200 model #091-53-12-B1 battery charger and air compressor system shall be installed. The 120 volt compressor system shall be designed to maintain the air pressure in the chassis brake system whenever the pressure drops below a predetermined level.

The battery charger shall be supplied from the 120 volt shore power receptacle and be a fully automatic high output charging system. The unit shall be mounted in a clean dry area and will be accessible for service and/or maintenance.

One (1)  
50-20-1124

Shore Power Inlet Below Left Front Cab Door, Commercial

Y\_\_N\_\_

## **SHORE POWER PLUG**

The shore power plug shall be located in the step area below the left front cab door of the commercial chassis.

One (1)  
50-20-1500

Shore Power Inlet, KUSS Super Auto-Eject 20A

Y\_\_N\_\_

## **AUTO-EJECT**

A Kussmaul "Super Auto-Eject" 20-amp automatic disconnect device shall be

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provided and installed on the 110 volt shoreline connection complete with weatherproof cover and matching plug. The Auto-Eject shall be activated by the chassis starter switch to disconnect the plug. The Super Auto-Eject shall be completely sealed to prevent contamination of the mechanism by inclement weather and road conditions. The Super Auto-Eject shall have an internal switch to open and close the AC circuit after the mating connector is inserted and before the connector is removed.

One (1)  
50-42-2000

Air Horns, (2) Hood Mntd

Y\_\_N\_\_

## AIR HORNS

Two (2) Stuttertone chrome plated air horns shall be mounted on the side of the hood of the commercial chassis. An air protection valve shall be provided in the air horn piping that will not allow the chassis air brake system to drop below 90 PSI.

One (1)  
50-43-2000

Air Horn Cntrl, Driver, Horn Ring, Air/Elec

Y\_\_N\_\_

## ELECTRIC TRAFFIC HORN AND AIR HORN SELECTOR SWITCH

One (1) selector switch shall be provided on the cab's dash that will allow the chassis steering wheel horn button to activate either the electric traffic horn or air horn system.

One (1)  
51-05-6200

Lt, Engine Cmpt, 12 Volt LED With Switch

Y\_\_N\_\_

## ENGINE COMPARTMENT LIGHT

One (1) 12 volt LED light with switch shall be mounted in the engine enclosure. Back Up Alarm, General

One (1)  
52-01-1210

Y\_\_N\_\_

## BACK-UP ALARM

One (1) automatic electric back-up alarm shall be wired to the back-up light circuit, and mounted under the rear of the apparatus body.

One (1)  
52-41-1320

Seat Monitor Mini Display & VDR, Fire Research

Y\_\_N\_\_

## SEAT MONITOR DISPLAY and VEHICLE DATA RECORDER

Fire Research series SBA300 seat monitor display and vehicle data recorder kit shall be installed. The kit shall include a seat monitor display module, a vehicle data recorder, and cables. The data recorder case shall be waterproof. It shall have inputs for monitored information from the vehicle J1939 CAN bus, independent sensors, seatbelt and seat occupied switches, outputs for audible alarms, and two-way FRC datalink connectors.

The seat monitor display shall be programmable for up to thirteen (13) seats and have a seatbelt icon for each. An alarm silence button and LED indicators for power and datalink status shall be located on the front of the seat monitor display.

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The vehicle data recorder shall record the following data once per second and store it in a 48 hour loop:

- Vehicle Speed
- Acceleration
- Deceleration
- Engine Speed
- Engine Throttle Position
- ABS Event
- Seat Occupied Status
- Seat Belt Status
- Master Optical Warning Device Switch
- Time
- Date

The vehicle data recorder shall record the following data once per minute and have memory to store it for 100 engine hours:

- Maximum Vehicle Speed
- Maximum Acceleration
- Maximum Deceleration
- Maximum Engine Speed
- Maximum Engine Throttle Position
- ABS Event
- Seat Occupied with Seat Belt Unbuckled
- Master Optical Warning Device Switch
- Time
- Date

The oldest data shall be erased first when memory capacity is reached. All data shall be password protected and uploadable from the vehicle data recorder to a computer running FRC Hawk data management software. The Hawk software shall store, manage, provide graphic displays and produce formatted reports of the vehicle data recorder data.

*NOTE: The SBW system shall only be installed, as long as the chassis manufacturer provides the correct provisions for the installation of the SBW system by the body manufacturer.*

*NOTE: The VDR shall only be provided as long as the chassis options include provisions to access the vehicle data information.*

One (1)  
53-01-1200

Marker Lts, LED, DOT Requirements

Y\_\_N\_\_

## **MARKER LIGHTS**

LED marker lights shall be installed on the vehicle in conformance to the Department of Transportation requirements.

One (1)  
53-02-1250

License Plate Brkt, Cast Prdts, LP0005-1 w/ LED Lt

Y\_\_N\_\_

## **LICENSE PLATE BRACKET**

10061-0004

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## Bidder Complies

One (1)  
53-03-2600 One (1) Cast Products license plate bracket shall be provided at the rear bumper. The bracket shall have a polished finish and LED light.  
Tail/Brake Lts, Whelen, LED, 4"x6" Y\_\_N\_\_

### **TAIL LIGHTS**

One (1)  
53-04-2600 Two (2) Whelen LED tail/brake lights shall be provided. The rectangular 4"x6" light shall be red.  
Turn Signals, Whelen, LED, 4"x6" Y\_\_N\_\_

### **TURN SIGNALS**

One (1)  
53-05-1800 Two (2) Whelen turn signals shall be provided. The rectangular LED light shall be 4" x 6" in dimension.  
Turn Signals, Mid Bdy, 1-1/4" x 4" LED Marker Lt Y\_\_N\_\_

### **MID BODY LED TURN SIGNALS**

One (1)  
53-06-1500 Two (2) mid body LED turn signals shall be provided. The LED lights shall be approximately 1-1/4" x 4" in dimension. The location of the turn lights shall be at mid-body near the rear wheel axle.  
Backup Lts, Whelen, Incan, 4"x6" Y\_\_N\_\_

### **BACKUP LIGHTS**

One (1)  
53-07-1200 Two (2) Whelen Series 600, halogen backup lights shall be installed on the rear of the apparatus body. The dimensions shall be 4" x 6" and the lens color shall be clear.  
Tail Lt Bezel, 4 Lts Y\_\_N\_\_

### **FOUR LIGHT BEZEL**

One (1)  
54-02-1500 Two (2) tail light cluster bezels shall be supplied. Each bezel shall be designed to hold the specified rear lights located at the lower rear corners of the body.  
Ground Lts, Cab, 4 Door, LED Y\_\_N\_\_

### **CAB GROUND LIGHTS**

One (1)  
54-03-1400 Four (4) LED ground lights shall be installed under the cab doors, one (1) under each door.  
Ground Lts, Mid Bdy, LED, Pair Y\_\_N\_\_

### **MID BODY GROUND LIGHTS**

One (1)  
10061-0004 Two (2) LED ground lights shall be installed under the mid-body of the apparatus. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.  
Ground Lts, Behind Rr Whls, LED, Pair Y\_\_N\_\_

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54-03-1800

## REAR BODY GROUND LIGHTS

Two (2) LED ground lights shall be installed under the compartments located behind the rear wheels. One (1) light shall be located on the driver's side and one (1) light located on the officer's side of the apparatus.

One (1) Lt Swtch , Ground Lts w/ Park Brake Y\_\_N\_\_

54-04-1999

The ground lights shall automatically activate when the parking brake is applied.  
Step Lt, Fxd /Fldg Step, Hooded, Ea

Two (2) Step Lt, Fxd /Fldg Step, Hooded, Ea Y\_\_N\_\_

54-10-1100

## STEP LIGHT

Two (2) hooded step light(s) shall be installed.  
Lt Swtch , Step/Wlkwy Lts Wired Park Brake Swtch

One (1) Lt Swtch , Step/Wlkwy Lts Wired Park Brake Swtch Y\_\_N\_\_

54-11-2100

The step/walkway light switch shall be installed and wired to the parking brake.  
Scene Lt, Whelen, Halogen, 7"x9", Opti-Scenelight

Six (6) Scene Lt, Whelen, Halogen, 7"x9", Opti-Scenelight Y\_\_N\_\_

54-15-1360 10

## SCENE LIGHT

Six (6) Whelen Series 900 halogen 7" x 9" Gradient OptiScenelight shall be installed.  
The light optics shall provide a 8 to 32 degree light spread.

Six (6) Scene Lt, Bezel Stand Off, Straight Y\_\_N\_\_

54-15-1400

The scene light shall be provided with a straight stand off bezel.  
Scene Lt Lctn, Left Side Of Bdy

Two (2) Scene Lt Lctn, Left Side Of Bdy Y\_\_N\_\_

54-15-5500

Two (2) scene light shall be located on the left side of the apparatus body.  
Scene Lt Lctn, Right Side Of Bdy

Two (2) Scene Lt Lctn, Right Side Of Bdy Y\_\_N\_\_

54-15-5600

Two (2) scene light shall be located on the right side of the apparatus body.  
Scene Lt Lctn, Rr Of Bdy

Two (2) Scene Lt Lctn, Rr Of Bdy Y\_\_N\_\_

54-15-5700

Two (2) scene light shall be located on the rear of the apparatus body.  
Scene Lt Swtch , All Lts, Cab

One (1) Scene Lt Swtch , All Lts, Cab Y\_\_N\_\_

54-15-6100

One (1) scene light switch shall be installed on the cab dash to activate all scene lights.

One (1) Scene Lt Swtch , Left Scene Lts, Cab Y\_\_N\_\_

54-15-6400

One (1) scene light switch shall be installed on the cab dash to activate left side scene lights upon engagement.

One (1) Scene Lt Swtch , Right Scene Lts, Cab Y\_\_N\_\_

54-15-6500

One (1) scene light switch shall be installed on the cab dash to activate right side scene lights upon engagement.

One (1) Scene Lt Swtch , Rr Scene Lts, Cab Y\_\_N\_\_

54-15-6600

One (1) scene light switch shall be installed on the cab dash to activate rear scene

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lights upon engagement.  
One (1) Scene Lt Swtch , Rr Scene Lts, Auto w/ Reverse Y\_\_N\_\_  
54-15-6700

The rear scene lights shall activate automatically upon placing the transmission into reverse.

One (1) Dr Open/Hazard Wrn Lt, Flashing LED Red Lens Y\_\_N\_\_  
55-11-1300

### DOOR OPEN LIGHT

One (1) red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The warning light shall also be attached to folding equipment racks and light towers as specified. The light shall be a flashing LED marker light with a red lens and shall be properly marked and identified.

One (1) Siren, Elect, Code 3 3692 V-Con Y\_\_N\_\_  
56-01-1300

### ELECTRIC SIREN

One (1) Code 3 Model #3692 V-Con electronic siren shall be mounted in the cab. The unit shall feature an electronic air horn, wail, yelp, hi-lo siren and shall have a hard wired microphone.

One (1) Spkr, Cast Products, 100 Watt GS1004 Y\_\_N\_\_  
56-02-1200

### SPEAKER

One (1) Cast Products Model #GS1004 100 watt speaker shall be installed on the apparatus.

One (1) Spkr Lctn, Bumper, Rcsd, Left Side Y\_\_N\_\_  
56-03-1200

### SPEAKER LOCATION

The siren speaker shall be installed in the left side of the apparatus bumper.  
Lt Bar, Whelen, Ultra Freedom, #FN55VLED, LED, 55"

One (1) Y\_\_N\_\_  
57-02-1100

### LIGHTBAR

One (1) Whelen Ultra Freedom Model #FN55VLED LED light bar shall be installed. The lightbar shall be 55" in length. The configuration and lens color shall be red / clear / red. The light bar shall be installed on the apparatus cab roof.

One (1) Bezels, Chrome, Wrn Lts (1 pair) Y\_\_N\_\_  
58-01-1100

There shall be chrome bezels supplied and installed on the warning lights.  
Bezels, Chrome, Wrn Lts (1 pair)

One (1) Y\_\_N\_\_  
58-01-1100

There shall be chrome bezels supplied and installed on the warning lights.  
Bezels, Chrome, Wrn Lts (1 pair)

One (1) Y\_\_N\_\_  
58-01-1100

There shall be chrome bezels supplied and installed on the warning lights.

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		<u>Bidder Complies</u>
One (1) 58-01-1100	Bezels, Chrome, Wrn Lts (1 pair)	Y__N__
	There shall be chrome bezels supplied and installed on the warning lights.	
One (1) 58-01-1100	Bezels, Chrome, Wrn Lts (1 pair)	Y__N__
	There shall be chrome bezels supplied and installed on the warning lights.	
One (1) 58-03-1520	Wrn Lts, Whelen, Low Frnt, (2) #600 S-LED	Y__N__
	<b><u>LOWER FRONT WARNING LIGHTS</u></b>	
	One (1) pair of Whelen model #600 red Super LED warning lights shall be installed, one each side one the front of the chassis cab. The dimensions of the lights shall be 4" x 6".	
One (1) 58-09-1520	Wrn Lts, Whelen, Intrsct (2) #600 S-LED	Y__N__
	<b><u>INTERSECTION WARNING LIGHTS</u></b>	
	One (1) pair of Whelen model #600 red Super LED warning lights shall be installed one each side of the chassis cab. The dimensions of the lights shall be 4" x 6".	
One (1) 58-36-1520	Wrn Lts, Whelen, Low Rr Side (2) #600 SLED	Y__N__
	<b><u>LOWER REAR SIDE WARNING LIGHTS</u></b>	
	One (1) pair of Whelen model #600 red Super LED warning lights shall be installed, one each side of the apparatus body, towards the rear of the body. The dimensions of the lights shall be 4" x 6".	
One (1) 58-61-1720	Wrn Lts, Whelen, Upper Side Rr (2) #900 S LED	Y__N__
	<b><u>UPPER SIDE REAR WARNING LIGHTS</u></b>	
	One (1) pair of Whelen model #900 red Super LED warning lights shall be installed, one each side on the upper portion of the body side, towards the rear of the body. The dimensions of the lights shall be 7" x 9".	
One (1) 58-71-1720	Wrn Lts, Whelen, Upper Rr (2) #900 S LED	Y__N__
	<b><u>UPPER REAR WARNING LIGHTS</u></b>	
	One (1) pair of Whelen model #900 red Super LED warning lights shall be installed, one each side on the upper rear of the apparatus body. The dimensions of the lights shall be 7" x 9".	
One (1) 58-81-1520	Wrn Lts, Whelen, Low Rr (2) #600 S-LED	Y__N__
	<b><u>LOWER REAR WARNING LIGHTS</u></b>	
	One (1) pair of Whelen model #600 red Super LED warning lights shall be installed, one each side on the lower rear of the apparatus body. The dimensions of the lights shall be 4" x 6".	
One (1)	== General Timberwolf - AC Electrical System - 531.080 05/31	Y__N__
10061-0004		05/12/10

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One (1) == General Timberwolf - Equipment Systems - 531.080 05/31/0 Y\_\_N\_\_

One (1) == General SA Timberwolf - Pnt/Ltr/Str - 531.080 05/31/09 = Y\_\_N\_\_

One (1) Bdy Paint, Tmbrwlf, Sngl Color - MN Y\_\_N\_\_  
80-05-5210

### **BODY PAINT PROCESS**

While constructing the truck body, all aluminum parts that are to be finish painted shall be properly fitted on the body and then removed to be painted individually. The back side of all aluminum parts shall be sanded smooth of any burrs and sharp edges.

During reassembly of the apparatus, care shall be exercised in fitting and fastening the parts back in their respective position on the vehicle.

All aluminum parts shall be bolted to the body using stainless steel fasteners. Zinc or Cadmium plated fasteners are not acceptable. All bright metal fittings, if unavailable in stainless steel shall be heavily chrome plated. Iron fittings shall be copper plated prior to chrome plating.

All seam shall be caulked both inside and along the exterior edges with a urethane automotive sealant to prevent moisture from entering between any body panels.

The body and all parts shall be thoroughly washed with a grease cutting solvent (PPG DX330) prior to any sanding. After the body has been sanded and the weld marks and minor imperfections are filled and sanded, the body shall be washed again with (PPG DX330) to remove any contaminants on the surface.

The first coating to be applied is a pre-treat self etching primer (PPG DX1787) (.5 to 1.0 dry film build) for maximum adhesion to the body material. The next two to four coats (depending on need) shall be an acrylic urethane primer surfacer (PPG K38). The film build shall be 4-6 mils when dry. The primer surfacer coat, after appropriate dry time, shall be sanded with 320-600 grit sandpaper to ensure maximum gloss of the paint. The last step is the application of at least three coats of PPG Concept acrylic urethane two-component color (single stage). The film build being 2-3 mils dry. The single stage acrylic urethane, when mixed with component (PPG DCX61) catalyst shall provide a UV barrier to prevent fading and chalking.

One (1) All products and technicians are certified by PPG every two (2) years. Y\_\_N\_\_  
80-31-1200 Compt Finish, Natural, Up to 8 Cmpts

### **INTERIOR COMPARTMENT FINISH**

# Rosenbauer America

## Bidder Complies

One (1)  
80-42-1500 The interiors of up to eight (8) body compartments shall be left a natural finish.  
Bdy Paint, Touch Up, 2 oz. Bttl, One Color Y\_\_N\_\_

### TOUCH-UP PAINT

One (1) two (2) ounce bottle of touch-up paint shall be furnished with the completed truck at final delivery.

One (1)  
80-50-1800 Lettering, 4" Mylar Gold Leaf, 75 Letters Y\_\_N\_\_

### SIMULATED GOLD LEAF LETTERING

The lettering shall be applied in simulated gold leaf material, shaded in black and encapsulated in clear Mylar.

A quantity of seventy-five (75), four (4) inch letters are to be placed on the cab and on the body as directed by fire department.

One (1)  
80-70-1300 Stripe, Sngl Reflective, 4", Straight Design Y\_\_N\_\_

### CAB AND BODY STRIPE

A straight Scotchlite reflective stripe, 4" minimum in width, shall be applied horizontally around the cab and body in compliance with applicable NFPA 1901 standards. The purchaser shall specify the color and location of the stripe.

One (1)  
80-72-1100 Stripe, Reflective, Chevron Pattern Entire Rr Y\_\_N\_\_

### CHEVRON STRIPING

The entire rear portion of the body shall have 3M reflective red and amber striping installed. The chevron style striping shall be applied at a 45-degree upward angle pointing towards the center upper portion of the rear panel.

One (1)  
80-75-1600 Reflective Stripe Material, White Y\_\_N\_\_

### COLOR OF STRIPING MATERIAL

The color of the 3M brand striping material shall be white.

One (1) == General Pmpr/Tnkr - Loose Equipment - 531.080 05/31/09 = Y\_\_N\_\_

Equipment Loading Allowance of 2000#

One (1)  
90-01-0300 Y\_\_N\_\_

### EQUIPMENT PAYLOAD WEIGHT ALLOWANCE

In compliance with NFPA #1901 standards, the apparatus shall be engineered to provide an allowance of 2000 pounds of fire department provided loose equipment.

One (1)  
90-01-5900 Whl Chocks Pair Zico #SAC-44 Fldg w/ Mts Y\_\_N\_\_

### WHEEL CHOCKS WITH MOUNTS

10061-0004

05/12/10

# Rosenbauer America

Bidder Complies

A pair of Zico Model SAC-44 Quic-Chok folding wheel chocks shall be provided and mounted under the apparatus body with model SQCH-44H horizontal mounting brackets.