

# Rosenbauer America

Bidder Complies

One (1) == GSE (SIDE MOUNT, TOP MOUNT OR SAFE SCENE - 6.000 ==

Y\_\_N\_\_

One (1) 1 YEAR GENERAL DIVISION TRUCK WARRANTY

Y\_\_N\_\_

AB-00-0500

## **FIRE APPARATUS WARRANTY**

The Rosenbauer (General Division) warrants each new motorized fire apparatus manufactured by General Safety Equipment for a period of ONE YEAR from the date of delivery, except for the chassis and other components noted herein which are covered by a separate manufacturers warranty.

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 General Safety Equipment, 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.

All warranty work performed must be completed at the General Safety Equipment factory or a General Safety Equipment approved service center. The expense of any transportation to or from the factory or approved service center shall be borne by the purchaser and is not an item covered under this warranty.

The warranty on the chassis and chassis supplied components, fire pump, water tank, generator, electrical components and other devices not manufactured by General Safety Equipment is limited to the warranty and warranty terms of the manufacturer thereof.

This warranty shall not apply to any fire apparatus which 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 which are usually considered normal maintenance and upkeep services, including, but not limited to, electrical lamps, valve seals, normal lubrication and/or proper adjustment of minor items.

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 General Safety Equipment.

One (1)  
AB-00-1550

HALE PUMP WARRANTY

Y\_\_N\_\_

## **HALE PUMP WARRANTY**

The Hale Fire Pump Co. Herein referred to as "HALE", warrants products of its manufacturer to be free from defects in material and workmanship, under normal service and use, for a period of two years or two thousand hours of usage, whichever comes first. This limited warranty is effective only if the equipment or apparatus is used as directed, is not subjected to misuse, negligence or accident, and is not altered, treated or repaired by someone other than Hale or its designee. Items not manufactured by Hale shall bear only the limited warranties offered by their respective manufacturer.

The exclusive remedy for breach of this warranty shall be to give Hale written notice thereof and to request a Returned Goods Authorization. Upon receipt of the RGA the buyer will return

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the nonconforming material to Hale FOB It's plant within thirty days after the buyer has received the RGA. Thereupon Hale at its own election shall repair or replace the same or repay the price thereof. No approximate, incidental, consequential or other damages shall be recoverable.

Hale shall not be liable for consequential damages or contingent liabilities including: but not limited to, loss of life, personal injury, loss of crops, loss due to fire or water property damage, and consequential trade or other commercial loss arising due to the failure of the manufacturer's product.

HALE MAKES NO WARRANTIES OF FREEDOM FROM PATENT INFRINGEMENT, OF MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE OR ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE OR OTHER LIKE OR DIFFERENT EXPRESSED OR IMPLIED WARRANTIES EXCEPT AS MADE ABOVE.  
20 YEAR TRANSFERABLE BODY WARRANTY

Y\_\_N\_\_

One (1)  
AB-00-2500

### **20 YEAR TRANSFERABLE BODY WARRANTY**

The Rosenbauer (General Division) warrants the 3/16" aluminum and 12 gauge stainless steel bodies, fabricated by General Safety Equipment, under normal use and with reasonable maintenance, shall remain structurally sound for a period of TWENTY (20) years.

Warranty coverage is transferable to second owner, if applicable, with proper notification made to General Safety Equipment.

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

GENERAL SAFETY EQUIPMENT MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE APPARATUS BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

General Safety Equipment 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 General Safety Equipment elects to repair this body, the extent of such repair shall be determined solely by General Safety Equipment, and shall be performed solely at the General Safety Equipment factory. The expense of any transportation to or from the factory shall be borne by the purchaser and is not an item covered under this warranty.

General Safety Equipment will not be liable for consequential 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.

7 YEAR PPG PAINT WARRANTY

Y\_\_N\_\_

One (1)  
AB-00-3500

### **PAINT WARRANTY**

The PPG seven year 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.

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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 GENERAL SAFETY EQUIPMENT:

- Peeling or delamination of the topcoat and/or other layers of paint.
- Cracking or checking
- Loss of gloss caused by cracking, checking, or hazing.
- Any paint failure caused by defective PPG Fleet finishes, which are covered by this guarantee.

### GUARANTEE EXCLUSIONS:

- Paint deterioration caused by blisters or other film degradation due to rust or corrosion originating from the substrate.
- Hazing, chalking or loss of gloss caused by improper care, abrasive polishes, cleaning agents, heavy duty pressure washing, or aggressive mechanical wash systems.
- Paint deterioration caused by abuse, accidents, acid rain, chemical fallout or acts of nature.
- Custom finishes, exotic finishes or any finish other than standard finish procedures.
- Failures resulting from product misuse or abuse.
- Repairs done over previously refinished areas unless stripped to bare metal or appropriate substrate.
- Claims presented without proper warranty documentation.
- Failure on finishes containing Non PPG or Non PPG finishes approved products.
- Failure on finishes performed by Non PPG Certified Refinish Technicians.
- Failure on finishes performed by Non PPG Certified Repair Centers.
- Failure on finishes performed by PPG Certified refinishes who have allowed their certification to expire.

One (1)  
AB-00-4000

UPF TANK WARRANTY

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

### **UPF POLY-TANK IIE THE ALL-OUT NO FAULT LIFETIME 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 American Only). If the vehicle can remain in service, UPF will dispatch a service technician with 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.

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**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 canceled. 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 give you specific legal rights, and you also may have other rights, which vary from state to state. Some states do not allow exclusion or limitation 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) HARDWIRE CAB TILT Y\_\_N\_\_  
CC-00-0000

One (1) HORIZONTAL EXHAUST AHEAD OF RIGHT REAR WHEELS Y\_\_N\_\_  
CC-02-0300

### **HORIZONTAL CHASSIS EXHAUST**

The chassis exhaust system shall be extended to the front of the right rear wheels.  
One (1) AIR TANK CABLE DRAINS (EXTENDED TO RUNNING BOARDS) Y\_\_N\_\_  
CC-02-1430

### **CHASSI AIR TANK DRAINS**

Extension cables shall be installed on the chassis provided air tank drains and shall be controlled from the outside of the runningboards.  
One (1) HOSEWELL CENTER OF FRONT BUMPER EXTENSION Y\_\_N\_\_  
CC-39-3100

### **CENTER HOSEWELL**

A recessed style hosewell for storage is to be provided in the center of the front bumper extension. Hosewell is to be constructed of .125 #5052, smooth aluminum material.

Hosewell shall be provided with proper drainage and is to be sized as large as space permits.

The hose tray to be approximately 24" long x 14" deep x 13" wide with a center side to side adjustable divider (adjustable front to rear). The tray shall have capacity for 30ft. of 5" LDH hose and 100ft. of 1-3/4" double jacket hose.

One (1) HOSE TRAY TO HAVE NFPA STRAPS Y\_\_N\_\_  
CC-39-3400

### **ALUMINUM HOSEWELL COVER**

GSE3029-0005

03/11/09

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There shall be NFPA straps located on the front hosewell tray for restraint of the hose in the tray.

One (1)  
CC-50-5500 MUD FLAPS - FRONT WHEELS (1 PAIR) Y\_\_N\_\_

## **FRONT MUD FLAPS**

One (1) pair of mud flaps shall be installed behind the front wheels of the apparatus using stainless steel brackets with stainless steel threaded fasteners and Ny-Lok nuts.

One (1)  
CC-50-6000 MUD FLAPS - REAR WHEELS (1 PAIR) Y\_\_N\_\_

## **REAR MUD FLAPS**

Heavy duty black rubber mud flaps shall be furnished and installed behind the rear wheels of the vehicle. Mud flaps shall extend the full width of the rear duals, and are to be attached to heavy stainless steel angle support brackets with stainless steel threaded fasteners and Ny-Lok nuts.

One (1)  
CC-70-2200 AIR HORNS SUPPLIED WITH CHASSIS Y\_\_N\_\_

## **AIR HORNS**

The air horns shall be supplied by the chassis manufacturer.

One (1)  
DH-01-2000 HALE QMAX-1500 GPM SINGLE STAGE PUMP Y\_\_N\_\_

## **HALE QMAX-1500 GPM SINGLE STAGE FIRE PUMP**

The centrifugal type fire pump shall be a Hale model QMAX midship mounted with a rated capacity of 1500 GPM. The pump shall meet NFPA 1901 requirements.

The pump shall be designed to be mounted on the chassis rails of commercial and custom truck chassis.

At time of delivery pump shall be tested and rated as follows:

- 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.

The entire pump shall be assembled and tested at the pump manufacturer's factory.

The pump shall be driven by a driveline from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable the pump to meet and exceed its rated performance.

The entire pump, both suction and discharge passages shall be hydrostatically tested to a pressure of 600 PSI. The pump shall be fully tested at the pump manufacturer's factory to the performance specs as outlined by the latest NFPA Pamphlet No. 1901. Pump shall be free from objectionable pulsation and vibration.

The pump body and related parts shall be of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI. All moving metal parts in contact with water shall be of high quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron not acceptable.

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Pump body shall be vertically split on a single plane for easy removal of entire impeller assembly including wear rings and bearings without disturbing piping or the mounting of the pump in chassis.

Pump shaft to be rigidly supported by three bearings for minimum deflection. The bearings shall be heavy-duty, deep groove ball bearings in the gearbox and they shall be splash lubricated.

Pump impeller shall be hard, fine grain bronze of the mixed flow design; accurately machined, hand ground, and individually balanced. The vanes of the impeller intake eyes shall be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.

Removable, non corrosive material clearance rings shall be provided.

The pump shaft shall be heat-treated, electric furnace, corrosion resistant stainless steel.

Pump shaft must be sealed with double-lip oil seal to keep road dirt and water out of gearbox.

### **PUMP TRANSMISSION**

The pump transmission shall be assembled and tested at the pump manufacturer's factory. Pump transmission shall be of sufficient size to withstand up to 16,000 lbs. Ft. of torque in road operating conditions. The pump transmission shall be designed with ample capacity for lubrication reserve and to maintain the proper operating temperature.

The transmission drive shafts shall be of heat-treated chrome nickel steel and at least 2-3/4 inches in diameter, on both the input and output drive shafts. They shall withstand the full torque of the engine.

All gears drive and pump, shall be of highest quality electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated, shaved, hardened and ground to give an extremely accurate gear for long life, smooth quiet running, and higher load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust. (No exceptions.)

The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.

If gearbox is equipped with a power shift, the shifting mechanism shall be a heat-treated, hard-anodized aluminum power cylinder, with stainless steel shaft. An in-cab control for rapid shift shall be provided that locks in road or pump.

For automatic transmissions, three green warning lights shall be provided to indicate to the operator(s) when the pump has completed the shift from Road to Pump position. Two green lights to be located in the truck driving compartment and one green light on pump operators panel adjacent to the throttle control. For manual transmissions, one green warning light will be provided for the driving compartment. All lights to have appropriate identification/instruction plates.

### **PNEUMATIC PUMP SHIFT**

The pump shift shall be air operated and shall incorporate an air built with double action piston to shift from road to pump and back. A manual or electric operated pump shift mechanism is not acceptable.

The pump shift switch shall be mounted in the cab and identified as AIR PUMP SHIFT and include instructions permanently inscribed on the pump shift switch plate. The In-Cab

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operating valve uses a spring loaded locking collar to prevent it from accidentally being moved.

The pump shift control assembly shall incorporate an indicating light system which will notify the operator when the shift has been completed to PUMP and when the chassis transmission is in correct pumping gear. The switch that activates the lights must be mounted on the pump transmission and positioned so that the pump shift arm activates the switch only when the shift arm has completed its full travel into PUMP position.

An additional green indicator light shall be provided adjacent to the throttle control at the pump operators panel to indicate a completion of the pump shift.

One (1)  
DH-04-3000

HALE OILESS PRIMER

Y\_\_N\_\_

### **PRIMING PUMP**

The priming pump shall be a positive displacement, oil-less rotary vane electric motor driven pump conforming to the requirements of NFPA 1901. The pump body shall be manufactured of heat treated anodized aluminum for wear and corrosion resistance.

The pump shall be capable of producing a minimum 24 Hg vacuum at 2000 feet above sea level.

The electric motor shall be a 12 VDC (or 24 VDC) totally enclosed unit.

The priming pump shall not require lubrication.

The priming pump shall be operated by a single push-pull control valve mounted on the pump operator panel. The control valve shall be of all bronze construction.

One (1)  
DH-04-3002

HALE MANIFOLD DRAIN

Y\_\_N\_\_

### **MANIFOLD DRAIN**

A Hale manifold drain valve shall be furnished with all pump drains connected to it so that the entire pump system may be drained by one control. Drain valve assembly shall consist of a stainless steel plunger and a bronze body. A push-pull control with handle is to be provided and located at the drivers side pump panel properly identified PUMP DRAIN.

One (1)  
DH-04-500A

HALE PUMP PACKING GLAND

Y\_\_N\_\_

### **PUMP PACKING**

The pump shaft shall have a single packing gland located on the inlet side of the pump. It shall be of the split design for ease of repacking. The packing gland must be a full circle threaded design to exert uniform pressure on the packing.

One (1)  
DH-14-5000

THERMAL RELIEF VALVE (WITH INDICATOR LIGHT)

Y\_\_N\_\_

### **THERMAL PROTECTION W/LIGHT**

The pump shall be equipped with a Hale TRV120 thermal protection device which monitors the water temperature of the pump and relieves water when the temperature inside the pump exceeds 120 degrees Fahrenheit. The valve shall be re-set automatically. A light shall be provided at the pump panel, which will illuminate when the pump reaches 120 degrees Fahrenheit to warn the operator that the pump is automatically dumping.

Two (2)  
DH-14-5200

PUMP ANODE SYSTEM

Y\_\_N\_\_

### **ANODE SYSTEM**

The pump shall be equipped with an anode system. This system shall consist of an anode, the flange and the gasket needed to install the system on the pump.

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One (1) DH-20-1000	Install one (1) anode in the suction side of the pump and one (1) in the discharge side of the pump. MANUFACTURERS "UL" TEST  <b>UL TEST</b>	Y__N__
One (1) DH-20-4000	The pump shall undergo an Underwriters Laboratories Incorporated test per Class A requirements of NFPA #1901 prior to delivery of the completed pumper. HEAT EXCHANGER GATED LINE (SPARTAN, HME & RBA)  <b>HEAT EXCHANGER DISCHARGE</b>	Y__N__
One (1) EE-02-1000	A gated discharge line shall be installed to provide water from the fire pump to the chassis supplied heat exchanger to assist in engine cooling during pumping operations. The heat exchanger line shall be controlled at the pump operator's panel. SUCTION RELIEF VALVE (ELKHART)  <b>INTAKE RELIEF VALVE</b>	Y__N__
One (1) EE-02-6500	A 2-1/2" intake relief 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 300 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 away from but, visible to the pump operator, and shall terminate with a 2-1/2" NST male chrome threaded adapter, marked with an engraved tag "Intake pressure relief outlet - Do Not Cap". TWO (2) - 6" STEAMER INLETS  <b>STEAMERS</b>	Y__N__
One (1) EE-03-0000	There shall be two (2) steamer inlets furnished. Steamer inlets shall be located, one on the right side and one on the left side of the pump panel. The suction inlets shall have 6" NST threads. The suction inlets shall have a removable strainer provided inside each external inlet. GATED PUMP SUCTIONS  <b>PUMP SUCTIONS</b>	Y__N__
One (1) EE-04-1000	Each gated suction inlet shall include a Class One 3/4" cast bronze 1/4 turn drain valve 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 and located adjacent to the intake fitting.  Each 3" and larger gated pump suction intake shall have an operating mechanism which will not permit changing the position of the flow regulating element of the valve from full close to full open, or vice versa, in less than 3 seconds.  All specified suction intake caps shall be capable of withstanding a minimum of 500 psi. 2-1/2" GATED SUCTION INTAKE(S)  <b>2 1/2" GATED SUCTION INTAKE</b>	Y__N__
GSE3029-0005	The following 2-1/2" independent gated suction intakes shall be provided. Intakes shall be provided with Akron #8825 quarter turn valves which shall be <b>LOCATED WITHIN THE PUMP COMPARTMENT</b> . No Exception. Gated suction inlets shall be provided with 1/4 turn bronze	

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flange mounted Class One drain valves with a chrome plated handle, chrome plated female swivel adapters having an internal screen, and a chrome plated plug type cap with end chain.

One (1)  
EE-04-2000 Intakes shall be located:  
2 1/2" GATED SUCTION LEFT SIDE Y\_\_N\_\_

### **2 1/2" GATED SUCTION LEFT SIDE**

One (1)  
EE-04-3000 One (1) 2-1/2" gated suction on the left side of the pump.  
2 1/2" GATED SUCTION RIGHT SIDE Y\_\_N\_\_

### **2 1/2" GATED SUCTION RIGHT SIDE**

One (1)  
FA-01-0000 One (1) 2-1/2" gated suction on the right side of the pump.  
GATED DISCHARGES Y\_\_N\_\_

### **PUMP DISCHARGES**

All gated discharge outlets other than the deck gun and front bumper discharges shall include a Class One 3/4" cast bronze 1/4 turn drain valve 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. Drains shall be **ALIGNED IN A STRAIGHT HORIZONTAL ROW** at the lower edge of the corresponding pump panel so as to allow for ease of identification and operation. Each drain shall be labeled and numbered to correspond to the respective discharge outlet and coloring.

When provided, the front bumper discharge and deck gun discharge shall be provided with a Class 1 automatic drain valve.

All 3" or larger discharge valves shall have an operating mechanism which will not permit changing the position of the flow regulating element of the valve from full close to full open, or vice versa, in less than 3 seconds.

Individual discharge control handles are to be aligned in a straight horizontal row across the pump operators control panel, directly inline with, and below the corresponding discharge outlet line pressure gauges. No exceptions will be allowed to this requirement.

One (1)  
FA-01-0400 STAINLESS STEEL DISCHARGE MANIFOLD & PLUMBING Y\_\_N\_\_

### **STAINLESS STEEL DISCHARGE MANIFOLD & PLUMBING**

A discharge manifold and rigid plumbing shall be provided and fabricated with type 304, 1/4" thick stainless steel. The discharge manifold shall be pressure tested prior to installation. The stainless steel discharge manifold assembly shall be bolted to the pump and have stabilizer arms attached to reinforce the discharge manifold.

One (1)  
FA-10-0000 The stainless steel discharge manifold assembly shall have a ten (10) year warranty.  
SIDE MOUNT DISCHARGES Y\_\_N\_\_

### **SIDE MOUNT PLUMBING ASSEMBLIES**

One (1)  
FB-20-0000 2" AKRON DISCHARGES Y\_\_N\_\_

### **2" GATED DISCHARGES, AKRON**

Akron model #8820, 2" ball valve gated discharge line(s) shall be furnished, operators panel controlled with the valves located within the enclosed pump compartment and plumbed using

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2" I.D. wire reinforced, high pressure hose coupled with stainless steel fittings. Valves shall be operated using a Class One chrome plated locking "T" handle control assemblies which are aligned in a straight horizontal row directly below the corresponding line pressure gauge.

One (1)  
FB-20-3000  
Outlet(s) located;  
(1) 2" AKRON FRONT DISCH 1 1/2" NST Y\_\_N\_\_

One (1) discharge located at front bumper, plumbed using 2" I.D. wire reinforced, high pressure hose coupled with stainless steel fittings, provided with a 2" NPT X 1 1/2" NST male brass 90 degree swivel.

One (1)  
FB-20-4100  
(2) 2" AKRON CROSSLAY DISCH 1 1/2" NST Y\_\_N\_\_

Two (2) discharges located in crosslay hosebeds, plumbed using 2" I.D. wire reinforced, high pressure hose coupled with stainless steel fittings, provided with 2" NPT X 1 1/2" NST male brass 90 degree swivels.

The crosslays shall have capacity of 300ft. of 1-3/4" Snaptite Duralite hose double stacked in each crosslay. The crosslay decking shall not exceed 65" above the ground.

One (1)  
FB-25-0000  
2 1/2" AKRON DISCHARGES Y\_\_N\_\_

### **2 1/2" GATED DISCHARGES, AKRON**

Akron model #8825, 2 1/2" ball valve gated discharge lines shall be furnished, operators panel controlled with the valves located within the enclosed pump compartment. Valves shall be operated using Class One chrome plated locking "T" handle control assemblies which are aligned in a straight horizontal row directly below the corresponding line pressure gauge.

One (1)  
FB-25-0700  
Outlets located;  
(2) 2 1/2" AKRON LEFT SIDE DISCH Y\_\_N\_\_

Two (2) discharges on the left side pump panel with chrome plated 2 1/2" NST adapters, extending thru the pump panel with rubber extrusion trim around the openings. Each discharge shall be provided with chrome plated 30 degree discharge elbows, chrome caps and chains.

One (1)  
FB-25-0900  
(1) 2 1/2" AKRON RIGHT SIDE DISCH Y\_\_N\_\_

One (1) discharge on the right side pump panel with chrome plated 2 1/2" NST adapter, extending thru the pump panel with rubber extrusion trim around the opening. Discharge shall be provided with chrome plated 30 degree discharge elbow, chrome cap and chain.

One (1)  
FB-25-1300  
(2) 2 1/2" AKRON REAR DISCH Y\_\_N\_\_

Two (2) discharges located at rear of the body plumbed with 2 1/2" I.D. schedule 40 pipe, with chrome plated discharge extension adapters with 2 1/2" NST male, 30 degree chrome plated elbows, with 2 1/2" NST chrome plated caps with chains.

One (1)  
FB-30-0000  
3" AKRON DISCHARGES Y\_\_N\_\_

### **3" GATED DISCHARGES, AKRON**

Akron model #8830, 3" ball valve gated discharge line(s) shall be furnished, operators panel controlled and complete with Slo-Cloz actuator(s). Valve(s) shall be operated using Class One chrome plated locking "T" handle control assemblies which are aligned in a straight horizontal row directly below the corresponding line pressure gauge.

Outlet(s) located;

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One (1) (1) 3" AKRON RIGHT SIDE DISCH 5" STRZ Y\_\_N\_\_  
 FB-30-2000

One (1) discharge on the right side pump panel with rubber extrusion trim around the opening. Discharge shall be provided with a 30 degree discharge elbow, and adapter to 5" Storz with cap and chain.

One (1) (1) 3" AKRON DECK GUN DISCH ABEV PUMP Y\_\_N\_\_  
 FB-30-4000

One (1) discharge at area above fire pump compartment plumbed with 3" I.D. pipe, for deck gun application.

Ten (10) NOSHOK 2-1/2" LINE GAUGES (WHITE FACE) Y\_\_N\_\_  
 GG-03-4000

### **INDIVIDUAL PRESSURE GAUGES**

NOSHOK 2 1/2" pressure gauges shall monitor all water discharge pressures. They shall be located on the pump operators panel adjacent to the related valve control. Each individual pressure gauge shall read from 30 psi to 600 psi. The construction shall be one piece die cast sealed to a high impact resistant crystal. The one piece casting shall integrate the case, connection, and internal movements into a solid unit that will eliminate any potential for fluid leakage. NOSHOK gauge shall a three year warranty covering accuracy and performance as well as defects in material and workmanship. The pointer in each gauge shall have an orange tip for increased visibility. The gauges face plate cover shall be white with black numbers.

One (1) FRC INCONTROL PSG & ENGINE/PUMP MONITOR WITH AUD. ALARM Y\_\_N\_\_  
 GG-05-4000

### **PSG GOVERNOR/ENGINE MONITORING SYSTEM**

A Fire Research model INCONTROL pressure governor and all-in-one instrument monitoring module shall be provided and mounted on the pump gauge panel. The unit shall maintain a steady pump discharge pressure by controlling engine speed or hold a selected engine RPM. It shall offer complete engine control and remote display in a single compact unit. The INControl shall operate in one of two modes, pressure or RPM. In pressure mode the INControl shall maintain a constant pump discharge pressure. The discharge pressure shall be monitored and compared to the selected pressure setting, the engine RPM shall vary to keep the discharge pressure at the selected setting. In RPM mode the INControl shall maintain a constant engine RPM. The pump discharge pressure shall be monitored and can vary but, as a safety feature it will be limited to an increase of 30 PSI. If the discharge pressure increases 30 PSI the governor will automatically lower the engine RPM to prevent a high pressure surge. The module shall have three (3) 4-digit LED displays for pump discharge, pump intake, and engine RPM. An LED bar graph shall be provided to show PSI or RPM setting depending on the mode, and three (3) LED bar graphs that provide a constant display of the battery voltage, engine coolant temperature, and engine oil pressure.

All controls and indicators are located on the front of the control module.

#### **Features:**

- Power Up in Pressure Mode
- Automatic Regulation of Pump Discharge Pressure
- Manual Control of Pressure or Engine RPM Settings
- Field Programmable Presets
- Diagnostic Capabilities
- No Pressure or RPM Variation When Changing Modes
- Limits Increase of Pressure When in RPM Mode
- Recognition of No Water Condition With Automatic Response
- Interlock Signal Recognition and OK To Pump LED
- Return to Engine Idle With the Push of a Button

One (1) UL TEST CONNECTIONS Y\_\_N\_\_

GSE3029-0005

03/11/09

# Rosenbauer America

Bidder Complies

GG-06-1000

## **UL TEST CONNECTION**

An Elkhart Brass model #471 pump pressure and vacuum checking assembly shall be provided and mounted at the pump operators control panel. Assembly shall include plug type caps.

One (1)

DATA PLATE AND SAFETY PLACARDS

Y\_\_N\_\_

GG-07-0500

## **DATA PLATE AND PLACARDS**

The manufacturer will provide at time of delivery the following placards and signage as specified by the purchaser and required by the specified governing bodies.

A test data plate will be provided at the pump operators position which gives the rated discharges and pressures together with the speed of the engine as tested for the proposed unit. Plate will comply with requirements of NFPA #1901.

A permanent data plate will be affixed in the drivers compartment specifying the quantity and type of the following fluids used in the completed vehicle when equipped with the specified component.

1. Engine Oil
2. Engine Coolant
3. Chassis Transmission Fluid
4. Pump Transmission Lubrication Fluid when applicable
5. Pump Primer Fluid when applicable
6. Drive Axle Lubrication Fluid
7. Air Conditioning refrigerant
8. Air Conditioning lubrication oil
9. Power steering fluid
10. Cab tilt mechanism fluid when applicable
11. Transfer case fluid
12. Hydraulic ladder rack fluid when applicable
13. Air compressor system lubricant
14. Generator system lubricant when applicable

Permanent placards will be affixed and visible to all seated occupants instructing the occupants to wear their seat belts.

A permanent placard will be affixed to the rear step area to instruct that riding on the rear step is prohibited.

All warning placards required by NFPA 1901 standards and required by the purchasers specifications for the apparatus will be provided and installed.

One (1)

COLOR CODED TAGS

Y\_\_N\_\_

GG-07-1000

## **PUMP PANEL IDENTIFICATION TAGS**

All discharges shall be provided with color coded labels. Identification labels shall be provided at the discharge control, the discharge outlet, and at the discharge drain valve control. The tags shall be colored according to the customers selections of "General's" standard colors.

One (1)

ALUMINUM EXTRUDED PUMP HOUSE

Y\_\_N\_\_

GG-07-1600

## **EXTRUDED ALUMINUM PUMP HOUSE STRUCTURE**

GSE3029-0005

03/11/09

# Rosenbauer America

## Bidder Complies

The pump house structure shall be fabricated of extruded aluminum. The structure shall be welded together and have gusset plates on each corner. The pump house shall be mounted separate from the body and chassis and be bolted to the chassis frame rails.

The exposed areas of the pump house structure shall be overlaid with polished aluminum treadplate.

One (1)  
GG-16-1000

SIDE MOUNT PUMP PANEL (44" WIDE)

Y\_\_N\_\_

### **LEFT SIDE MOUNTED OPERATOR'S CONTROL PANEL**

All pump suction and discharge controls are to be mounted on the left side pump operator's panel so as to permit operation of the pump from a central location.

All linkage rods from the pump operators control panel to the pump components shall be heavily cadmium plated to resist rust and sticking. Plain or painted steel control rods that are susceptible to rust and corrosion are not acceptable.

All linkage rods shall be attached using threaded fittings or clevis connectors. Rods that are provided with welded fittings or connections are not acceptable.

All of the pump controls shall be clearly identified with permanently engraved plate type labels.

A full panel width extruded aluminum bolted in place and removable light hood with a minimum of three (3) LED light assemblies shall be provided to illuminate the entire pump operators control panel. Lighting shall be provided with a pump operator's panel mounted switch.

An additional extruded aluminum bolted in place and removable light hood with a minimum of two (2) LED light assemblies shall be provided to illuminate the right side pump panel. Lights shall be controlled by the operators panel light switch.

### **GAUGE PANEL**

All gauges shall be suitably enclosed and mounted on a full pump compartment width "hinged" gauge panel constructed of the same material as the pump operators control panel, allowing access to the backside of all gauges and gauge lines. Panel is to include a stainless steel piano hinge, flush mounted chrome plated trigger latch, and stainless steel cable end stops. Electrical wiring and all gauge lines shall be properly tie wrapped to prevent kinking or cutting of the lines when the panel is opened.

One (1)  
GG-16-2000

SS PUMP PANELS

Y\_\_N\_\_

### **PUMP PANELS**

The pump panels shall be constructed entirely of 12 gauge type 304 brushed stainless steel material.

One (1)  
GG-16-3200

HINGED PUMP PANEL

Y\_\_N\_\_

### **HINGED PUMP PANEL**

The right side pump panel shall be provided with thumb latches and shall be hinged to provide easy access to the pump/plumbing and valves for service.

One (1)  
GG-16-4000

PUMP COMPT INSPECT./ACCESS DOOR, (RGT SIDE)

Y\_\_N\_\_

### **PUMP COMPARTMENT ACCESS DOOR**

GSE3029-0005

03/11/09

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## Bidder Complies

The right side pump panel shall be provided with a full panel width horizontally hinged access door located in the upper portion of the panel. This door shall be approximately 18" high and as wide as possible, and shall be constructed of the same material as the pump panel. A large D-handle stainless steel latch and dual pneumatic door props shall be provided on the access door.

One (1)  
GG-27-1000

DUNNAGE AREA OVER PUMP

Y\_\_N\_\_

### **STORAGE OVER PUMP**

There shall be a dunnage compartment furnished above the pump. The dunnage compartment shall be as wide as possible from side to side, and be a minimum of 12" deep. The floor of the dunnage compartment shall have "Black" Turtle Tile installed on the floor.

One (1)  
HH-00-0200

UPF BOOSTER TANK

Y\_\_N\_\_

### **UPF BOOSTER TANK**

One (1)  
HH-01-2000

BOOSTER TANK POLY 750 GALLON

Y\_\_N\_\_

### **BOOSTER TANK**

A 750 gallon capacity polypropylene booster tank shall be provided.

The booster tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. All joints and seams shall be nitrogen welded and tested for maximum strength and integrity.

The transverse swash partitions shall be manufactured of polypropylene and extend from approximately 4" off the floor to just under the cover. The longitudinal swash partitions shall be constructed of polypropylene and extend from the floor of the tank through the cover to allow for positive welding and maximum integrity. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are welded to each other as well as to the walls of the tank.

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of polypropylene and with a minimum dimension of 8" x 8" outer perimeter. The tower shall be located in the left front corner of the tank. The tower shall have a polypropylene screen and a polypropylene hinged cover. Inside the fill tower, shall be fastened a combination vent overflow pipe. The vent overflow shall be polypropylene pipe that is designed to run through the tank and shall be piped behind the rear wheels.

A forward mounted sump shall be provided in the tank. The sump shall be constructed of polypropylene and be located in the left front quarter of the tank. A polypropylene pipe shall be installed that will sweep from the front of the tank to the sump location. The sump shall have a 3" N.P.T. threaded coupling on the bottom for a plug. This shall be used as a combination clean out and tank drain. An anti-swirl plate shall be located above the sump.

There shall be two standard tank outlets; one for tank-to-pump suction lines, and one for a tank fill line which shall be a 1 1/2" N.P.T. coupling. All tank couplings shall be backed with flow deflectors to break up the stream of water entering the tank.

The tank shall carry a lifetime warranty from its manufacturer.

One (1)  
HH-03-0200

TANK TO PUMP 3" AKRON

Y\_\_N\_\_

### **BALL VALVE TANK TO PUMP**

GSE3029-0005

03/11/09

# Rosenbauer America

## Bidder Complies

A 3" Akron Brass ball type gated suction valve, operators panel controlled, shall be furnished from the tank to the pump, complete with a flexible connection and enclosed in the pump compartment.

A check valve shall be provided and installed in the line between the tank and the pump to prevent the possibility of backfilling the booster tank thru the tank to pump suction line.

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)  
HH-03-6500 TANK FILL/RECIRCULATING LINE 2" AKRON Y\_\_N\_\_

### **TANK FILL/COOLING LINE**

One (1) 2" Akron tank fill and pump cooling line.  
INNOVATIVE CONTROL 14 LIGHT TANK LEVEL GAUGE

One (1)  
HH-05-2800 Y\_\_N\_\_

### **TANK LEVEL GAUGE**

An INNOVATIVE CONTROLS, INC., type "IC-LEVEL" tank level indicator shall be provided and installed on the pump panel. A IC wiring harness shall be installed between the panel mounted indicator and the tank probe.

One (1)  
JJ-04-0300 LADDER MOUNTING RIGHT SIDE OF BODY Y\_\_N\_\_

### **LADDER MOUNTINGS, LADDERS AND PIKE POLES**

The specified ladders and pike poles shall be mounted on the right side of the body, directly above the right side compartments, using heavy duty Cast Products cast aluminum ladder brackets and with spring loaded chrome plated quick release type clamps.

One (1)  
JJ-05-0000 ----GROUND LADDERS---- Y\_\_N\_\_

### **GROUND LADDERS**

EXTENSION LADDER 24' TWO SECTION #900A

One (1)  
JJ-05-0500 Y\_\_N\_\_

A 24 foot, 2 section fire department extension ladder, DUO-SAFETY Model 900A, in which the side rails also act as guides for the fly ladder, shall be furnished.

One (1)  
JJ-05-4500 ROOF LADDER 14' W/FOLDING HOOKS #775A Y\_\_N\_\_

A 14 foot DUO-SAFETY Model #775A, aluminum roof ladder with folding roof hooks shall be furnished.

One (1)  
JJ-05-5500 FOLDING ATTIC LADDER 10' ALUMINUM #585A Y\_\_N\_\_

A 10 foot DUO-SAFETY Model #585A aluminum folding ladder with mounting brackets shall be furnished.

One (1)  
JJ-06-0000 ----PIKE POLES---- Y\_\_N\_\_

### **PIKE POLES**

(1) PIKE POLE 6' I BEAM FIBERGLASS HANDLE

One (1)  
JJ-06-0500 Y\_\_N\_\_

One (1) 6 foot pike pole with fiberglass I beam handle, steel hook and aluminum mounting tube.

Install the pike pole tube w/pike pole on top of right side compartments. The rear ends of the tubes shall be notched to hold the pike heads in place with any pins, straps or other device

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## Bidder Complies

that needs to be unlatched. See attached drawing of notch design desired for the pike heads.  
Note: The pike pole tubes shall be of the same length to completely cover a 10ft. pike pole.

One (1)  
JJ-06-1500

(1) PIKE POLE 10' I BEAM FIBERGLASS HANDLE

Y\_\_N\_\_

One (1) 10 foot pike pole with fiberglass I beam handle steel hook and aluminum mounting tube.

Install the pike pole tube w/pike pole on top of right side compartments. The rear ends of the tubes shall be notched to hold the pike heads in place with any pins, straps or other device that needs to be unlatched. See attached drawing of notch design desired for the pike heads.  
Note: The pike pole tubes shall be of the same length to completely cover a 10ft. pike pole.

One (1)  
KB-02-2000

ALUMINUM EXTRUDED APPARATUS BODY (PUMPER/TANKER)

Y\_\_N\_\_

### **APPARATUS BODY MATERIALS**

#### **STRUCTURAL DESIGN**

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.

All extrusions utilized in the body super-structure, sub-structure and framing shall be 6061-T6 alloy aluminum of the specified thickness and size.

For strength and rigidity all aluminum sheet material utilized in the apparatus body, hose body and compartment sides shall be a minimum of 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 threaded fasteners used in the apparatus body shall be attached with Ny-Lok type nuts.

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 runningboards shall be attached using minimum 1/4" diameter machine screw fasteners.

3/16" diameter fasteners shall only be used in non-structural areas such as; door locks, trim moldings, gauge mountings, etc.

One (1)  
KK-01-1500

ALUMINUM SUB-FRAME

Y\_\_N\_\_

### **APPARATUS BODY SUB-FRAME**

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

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## Bidder Complies

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

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. No Exception.

One (1)  
KK-01-4000

TOW EYES (PR) UNDER REAR OF BODY

Y\_\_N\_\_

### **TOW EYES**

Two (2) tow eyes shall be furnished under the rear of the body and attached directly to the chassis frame. Tow eyes are to be constructed of 1/2" plate steel with a 3" I.D. hole, large enough for passing through a tow chain end hook.

One (1)  
KK-22-2000

ALUMINUM GRATINGS MAIN HOSEBED

Y\_\_N\_\_

### **HOSEBED FLOORING**

Floors of the specified hosebeds are to be provided with removable slat style extruded aluminum hosebed gratings, spaced 1/2" apart for proper hose ventilation. Hosebed gratings are easily lifted out of the main hosebed for access to the top of the specified booster water tank.

One (1)  
KK-22-200A

HOSE BED LAYOUT/CAPACITY

Y\_\_N\_\_

### **HOSE BED LAYOUT/CAPACITY**

The hose bed shall have the following layout and capacity starting from the drivers side to the officers side of the hose bed.

350 ft. of 1-3/4" Snaptite hose double stacked, 1,200 ft. of 5" Snaptite large diameter hose, 600 ft. of double jacket hose double stacked, 250 ft. of 2-1/2" double jacket hose single stacked.

One (1)  
KK-25-2200

(3) MAIN HOSEBED DIVIDERS (ADJUSTABLE)

Y\_\_N\_\_

### **MAIN HOSEBED DIVIDERS**

Three (3) adjustable hosebed dividers shall be provided in the main hosebed.

The hosebed divider shall be fabricated of 1/4" smooth aluminum sheet stock.

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

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Bidder Complies

adjustment. No exceptions.

The base of the hose bed dividers shall have a slotted extrusion that runs the full length of the dividers for additional support for the dividers.

One (1)  
KK-26-2000

HOSEBED COVER ROM ROLL UP

Y\_\_N\_\_

## **ROM ROLL-UP HOSEBED COVER**

A ROM Roll-Up hosebed cover shall be provided to cover the entire horizontal and vertical surfaces of the hosebed. The hosebed cover shall be electrically actuated with a switch located at the rear of the apparatus body.

One (1)  
KK-30-1100

(2) CROSSLAY HOSEBEDS 1 3/4" ABOVE FRONT TRANS. COMPT.

Y\_\_N\_\_

## **1 3/4" CROSSLAY HOSEBEDS**

Two (2) crosslay hosebeds at least 3.5 cu. ft., designed to carry 300 feet of SnapTite Duralite 1 3/4" fire hose shall be provided and recess mounted above the front transverse compartment. 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 discharge connections and perforated flooring.

Polished stainless steel hose roller assemblies at the sides and lower edges of the crosslay openings on each side of the apparatus body shall be provided.

Both of the crosslay beds shall be of the same dimensions. **The height to the top of the crosslay decking shall be a maximum of 65" maximum from the ground with the apparatus in the unloaded condition.**

Note: The front bulkhead shall be the same height as the pump module.

One (1)  
KK-31-3000

CROSSLAY COVER VINYL (RED)

Y\_\_N\_\_

## **CROSSLAY HOSEBED COVER**

A vinyl coated nylon hosebed cover red in color shall be provided over the crosslay hosebed(s) complete with Lift-A-Dot fasteners.

The cover shall extend down over the crosslay ends to comply with NFPA 1901 standards.

One (1)  
LA-02-0500

FLEX JOINT/BODY AND PUMP

Y\_\_N\_\_

## **BODY AND PUMP HOUSE FLEX JOINT**

The body and pump house shall be separate free standing components forming a true flex joint between the body and pump house. No Exception. The intent is to allow either to be easily removed as a single unit without disturbing the other and to provide a flex joint between the two modules. Designs where the pump house and body are interjoined as a common unit do not meet the technical requirement of providing a flex joint nor the reparability requirement of these specifications.

One (1)  
LA-02-1000

INTERFACE CHASSIS/BODY-ALUM (\*EXCL. AERIAL\*)

Y\_\_N\_\_

## **CHASSIS FRAME AND BODY INTERFACE**

The surface of the chassis frame rails shall be isolated from the apparatus body sub-structure by an elastomeric isolator.

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## Bidder Complies

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.

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)  
LA-03-0500

SUPER STRUCTURE/ALUMINUM BODY

Y\_\_N\_\_

### **BODY SUPERSTRUCTURE**

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.

Bidder is to provide with their bid proposal illustrations and drawings of the body structure to show compliance with this requirement. No Exception.

One (1)  
LA-04-0500

COMPT. CONSTR./ALUM BODY (\*EXCL. AERIAL\*)

Y\_\_N\_\_

### **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.

Rear compartments on apparatus equipped with rear fuel tanks shall be provided with a minimum 13" wide x 38" removable access panel on the rear wall to enable the fuel tank sending unit to be removed for repair or replacement.

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

A minimum of forty-five square inches of removable louvered ventilation shall be provided in each compartment.

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.

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## Bidder Complies

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

The tops of the side exterior compartments shall be constructed of 3003-H14 alloy 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.

One (1)  
LA-05-0500

BODY WIRING RACEWAYS

Y\_\_N\_\_

### **BODY WIRING RACEWAYS**

Due to the possibility of damage by shifting equipment, exposed wiring shall not be permitted in the equipment compartments. The main body wiring harness shall not be routed beneath the apparatus body where it may be exposed to road debris and the elements of weather.

The body shall be designed to provide easily accessible recessed raceways to fully protect all body wiring. Bolted on access panels shall be provided for all wiring routed through the body. Access panels shall be removable with common hand tools. Hollow tubes with wiring routed through the same that is only accessible by disconnecting wiring and manually pulling the same through the tube does not meet the intent nor the technical requirements of this specification in providing accessible wiring. Open faced channels with wiring held in place by clips or tie downs does not meet the intent nor technical requirement of providing protected wiring.

One (1)  
LA-06-0500

SHELVING TRACKS / ALUMINUM BODY

Y\_\_N\_\_

### **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 .25" 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.

One (1)  
LA-07-0553

RECESSED (LED) COMPARTMENT LIGHTING

Y\_\_N\_\_

### **RECESSED LED COMPARTMENT LIGHTING**

All side exterior equipment compartments shall be provided with one (1) fully recessed rubber shock mounted sealed and weathertight LED clear compartment light. The light shall be totally enclosed (not exposed to the environment) and side wall recessed mounted within 12.00" of the compartment ceiling. When two (2) compartment lights are specified, the second light shall be mounted approximately one half the distance between the upper light and the compartment floor.

The lights shall be a minimum of 4.00" diameter and use recessed wiring and are to be equipped with wire plugs for ease of removable or replacement.

One (1)

HOSE BODY CONST./ ALUM BODY (\*EXCL. AERIAL\*)

Y\_\_N\_\_

GSE3029-0005

03/11/09

# Rosenbauer America

Bidder Complies

LA-08-0500

## 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.

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.

One (1)  
LA-09-4000

ALUMINUM PAINTED WHEEL WELL AREA & SS FENDERETTES

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

## WHEEL WELL LINER AND FENDERETTES

For ease of accessibility and maintenance, wheel well panels shall be double break formed painted smooth aluminum plate 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.

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.

One (1)  
LA-12-0510

FOURWAY COMPT. TOPS WITH PAINTED HEADER ABOVE DOORS

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

## APPARATUS COMPARTMENTATION

There shall be large enclosed compartments on both sides of the body, starting at the front of the hosebody and continuing to the rear of the apparatus. These compartments shall be as large as possible, using all available space.

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

All high side compartment tops shall be NFPA approved non-slip treadplate with the side body header area above the compartment doors a painted surface.

One (1)

ROLL-UP COMPARTMENT DOORS OUTSIDE COMPARTMENTS

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

GSE3029-0005

03/11/09

# Rosenbauer America

Bidder Complies

LA-13-4500

## **SIDE BODY COMPARTMENT ROLL-UP DOOR CONSTRUCTION**

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 exterior of the compartment, thereby preventing the accumulation of water, snow, or ice from damaging the equipment located therein.

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.  
HINGED & ROLL UP COMPARTMENT DOORS (COMBO)

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

One (1)  
LA-13-6500

## **BODY HINGED AND ROLL-UP COMPARTMENT DOOR CONSTRUCTION**

All hinged compartment doors so specified shall be of the overlapping style so that the entire door fits flush against the apparatus body sides. Doors shall be designed, in the closed position, to have the painted edges protected from damage on the tops by forming the treadplate compartment tops into an extended drip edge, on the bottoms by the rub rail and on the front and rear by extending the front and rear vertical scuff plates into protective edges. There shall be no visible painted door edge surfaces when the doors are in the closed position. Doors shall not extend into the compartments thereby reducing the usable compartment depths.

Doors shall be a minimum 1.50" thick, fabricated of a minimum of .125 smooth aluminum. Full panel inner compartment door liners shall be provided and constructed of .125" smooth aluminum material. Exterior door panels shall be smooth with no welds or fasteners visible on the exterior skin. Double door compartments shall not require nor be equipped with a

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secondary latch to hold the same in position.

All compartment door hinges shall be full length piano type constructed of a minimum 14 gauge type 304 polished stainless steel with 1/4" stainless steel hinge pin with dual directional bolt holes for ease of adjustment. Door hinges shall be fully recessed and protected from the environment by the door gasket. The door hinges shall not be visible from the outside of the body when the doors are in the closed position.

Striker plates shall be a minimum of 12 gauge stainless steel and posts shall be positioned so they do not interfere with the clear door openings. Door retention studs or posts on striker plates that extend into the clear door frame opening do not meet the technical intent of these specifications. Door hinges and striker plates shall be attached with minimum 5/16" stainless steel nuts and bolts.

When horizontally hinged lift-up doors are specified, they shall be equipped with heavy duty gas filled props to hold them in the open position. All other hinged doors shall be equipped with gas shocks specifically designed for use on vertically hinged doors. Door holders shall be bolted in position. Door closures utilizing chains, mechanical stops or spring loaded hardware do not meet the technical requirement of pneumatic gas shocks.

All compartment doors shall be provided with double hollow core weather stripping to provide a double seal at the door opening to prevent road spray and debris from entering the compartment. Door openings shall match the compartment sizes.

On vertically hinged double door compartments, the secondary door shall have a nylon door holder, top and bottom of the interior of the door to hold in place when closed.

### **SIDE BODY COMPARTMENT ROLL UP DOOR CONSTRUCTION**

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 exterior of the compartment, thereby preventing the accumulation of water, snow, or ice from damaging the equipment located therein.

The 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. No Exception. Access to the door mechanism shall be provided through the removable 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

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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 roll-up door 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.

Roll-up shutter doors and hinged doors on the same side of the apparatus shall be flush with each other. One shall not protrude any further from the side of the apparatus body than the other.

One (1)  
LA-14-0500

All door openings shall match the compartment sizes as specified.  
EXTERIOR DOOR LATCHES (HINGED DOORS) Y\_\_N\_\_

### **EXTERIOR DOOR LATCHES**

One (1)  
LA-14-5500

Side exterior hinged compartment doors shall be furnished with lockable trigger style latches.  
FRONT TREADPLATE OVERLAY/REAR SMOOTH ALUM FOR CHEVRON Y\_\_N\_\_

### **SIDE AND REAR OVERLAYS**

.125" polished aluminum treadplate and smooth plate overlays and panels shall be provided and installed in the following areas:

The front face of each side compartment shall have aluminum treadplate.

The rear face of the side compartments shall be smooth aluminum for installation of Chevron.

Overlays shall be bolted in place and sealed to prevent any moisture entry between the overlay and the body structure.

One (1)  
LA-15-0500

RUNNINGBOARDS Y\_\_N\_\_

### **RUNNINGBOARDS**

Runningboards shall be provided on both sides of the body at the pump panel areas and shall be fabricated from NFPA approved non-slip .190" bright aluminum treadplate. The runningboards shall be flange down a minimum of 3.00" for added strength and to match the specified apparatus body rubrails.

Runningboards shall be bolted in place and removable for ease of repair or replacement. No Exception.

One (1)  
LA-16-0600

RUB RAILS (ALUMINUM EXTRUDED) Y\_\_N\_\_

### **EXTRUDED ALUMINUM RUB RAILS**

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

The side rub rails shall be a heavy extruded aluminum "C" channel.

One (1)  
LB-24-0400

COMPTS LEFT 40/34W (FH) (EXTERIOR ROLL UPS) Y\_\_N\_\_

### **COMPARTMENTS LEFT SIDE**

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The left side compartment ahead of the rear wheels shall be 40" wide x 63" high and equipped with a large 40" wide by 60" high clear door opening.

The left side compartment above the rear wheels shall be 58" wide x 32" high, with a 58" wide by 32" high clear door opening.

The left side compartment behind the wheels shall be 34" wide x 63" high and have a 34" wide by 60" high clear door opening.

The compartments on the left side shall have ROLL-UP exterior mounted doors.

One (1) 12" DEEP COMPTS LEFT SIDE/WELDED BODY Y\_\_N\_\_  
LB-50-1400

All left side compartments shall have an interior usable depth of not less than 12" in the upper portion with the specified doors in the closed position.

The lower portion of the forward and rear side compartments of the body are to be notched in and under the water tank to a useable depth of 26" with the specified doors in the closed positions in order to provide the maximum amount of storage area.

One (1) COMPTS RIGHT (3/4 HGT W/HINGED DROP/D) (EXTERIOR ROLL Y\_\_N\_\_  
LC-24-1000

### **COMPARTMENTS RIGHT SIDE**

The right side compartment ahead of the rear wheels shall be 40" wide x 27" high and equipped with a large 24" wide by 27" high clear door opening.

The right side compartment behind the wheels shall be 34" wide x 27" high and have a 34" wide by 27" high clear door opening.

The right side compartments, ahead of and behind the rear wheels, shall be provided with roll up doors that open the full height of the compartments.

One (1) 12" DEEP COMPTS RIGHT SIDE Y\_\_N\_\_  
LC-50-1400

All right side compartments shall have an interior usable depth of not less than 12" in the upper portion with the specified doors in the closed position.

The lower portion of the forward and rear side compartments of the body are to be notched in and under the water tank to a useable depth of 26" with the specified doors in the closed position in order to provide the maximum amount of storage area.

One (1) TRANSVERSE COMPT AHEAD OF PUMP Y\_\_N\_\_  
LE-02-1000

### **TRANSVERSE COMPARTMENT**

An enclosed, full pump module width transverse compartment shall be furnished at the front of the body, ahead of the fire pump module. This compartment is to be furnished with full height compartment doors constructed of 3/16" painted aluminum exterior single pan doors with large "D" ring single point latch. The drivers side door shall be reversed hinged to allow door to clear the tele-light pole on the drivers side rear of the cab. Compartment interior shall be designed as fully transverse and shall be accessible from either side of the body.

The compartment shall be constructed of the same materials as the specified fire pump module with .190" aluminum treadplate floors. Floor of the transverse compartment shall extend from the runningboard level into the chassis frame rails, then up and over the frame rails, down to runningboard level providing a full width transverse compartment.

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There shall be removable floor panels at each from the top of the frame height out to the door openings at each side for storage of long item in the transverse area.

The compartment shall be approximately 19" wide x 33" high with the transverse area located above the chassis frame rails. The crosslays shall be located above the transverse compartment and the floor of the crosslays shall be a maximum of 65" above the ground.

There shall be a upper horizontal compartment shelf located just below the compartment top to provide storage for a backboard. There shall be a center located strap with quick release each side to allow the backboard to be removed from either side of the body. The shelf shall be covered with a plastic material to allow easy sliding of the backboard. The backboard storage area to accommodate a 18" wide x 3" high x 72" long backboard with straps and buckles to fit

One (1)  
LL-09-1000 REAR CENTER COMPARTMENT Y\_\_N\_\_

### **REAR COMPARTMENT**

A large full width enclosed storage compartment shall be provided across the rear face of the apparatus body a minimum of 26" deep.

The entire rear face of the apparatus body is to be constructed of .125 polished aluminum treadplate material, bolted in place and removable.

One (1)  
LL-09-3000 DOOR/REAR CENTER COMPT. (LOW ROLLUP) Y\_\_N\_\_

The rear compartment shall be provided with the specified large 26" high x 42" wide roll-up style compartment door.

One (1)  
LL-09-9100 FLAT BACK BEAVERTAIL Y\_\_N\_\_

### **FLAT BACK BODY**

The rear vertical surface of the body shall be flat from side to side.

One (1)  
LL-10-1600 REAR STEP/TAILBOARD (18") Y\_\_N\_\_

### **REAR STEP/TAILBOARD**

A single piece, NFPA approved non-slip, .190" rear step/tailboard shall be furnished that is a minimum of 18.00" deep and full width of the apparatus body, from rub rail to rub rail. Tailboard shall be bolted in place and removable for ease of repair or replacement. No Exception. The rear step tailboard shall be spaced away from the rear edge of the body approximately 1/2" to allow proper drainage. The tailboard shall be provided with cast aluminum replaceable radius corners for a pleasing appearance.

Six (6)  
LL-18-5000 COMPT DOORS ROBINSON ROLL UP (EA) Y\_\_N\_\_

### **ROLL UP DOORS**

R.O.M. Robinson brand extruded aluminum shutter style doors with lift bar latch mechanisms and associated hardware shall be provided and installed as specified.

Six (6)  
LL-18-5050 NATURAL SATIN FINISH ROLL UP DOORS Y\_\_N\_\_

### **ROLL UP DOOR FINISH**

The roll up doors provided shall be left a satin anodized natural finish.

Six (6)  
LL-18-5200 DOOR LOCKS FOR ROLL UP DOORS Y\_\_N\_\_

### **EXTERIOR DOOR LOCKS**

GSE3029-0005

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One (1) LL-18-5200	A keyed cylinder lock shall be provided in the bottom portion of each roll-up door. All locking roll-up doors shall be keyed alike. DOOR LOCKS FOR ROLL UP DOORS	Y__N__
	<b>EXTERIOR DOOR LOCKS</b>	
Five (5) LL-18-5310	A keyed cylinder lock shall be provided in the bottom portion of each roll-up door. All locking roll-up doors shall be keyed alike. PULL DOWN STRAPS FOR ROLL UP DOORS	Y__N__
	<b>PULL DOWN STRAPS</b>	
One (1) LL-22-3000	Black in color nylon straps shall be provided and installed on the side portion of each roll up door and attached midway alongside the interior compartment which will allow the strap to automatically tuck inside the compartment when closed. HANDRAILS, FULL HGHT. AT REAR 56" W/(3) BRKTS	Y__N__
One (1) LL-22-4000	Vertical access rails shall extend the full height of the apparatus body, a minimum of 56" in length. Each rail shall have one center and two end style chrome plated mounting brackets. HANDRAIL, HORIZONTAL REAR BELOW HOSEBED	Y__N__
One (1) LL-22-6000	A full width access rail is to be provided and installed across the rear face of the apparatus body, below the hosebed level above the rear compartment doors. HANDRAIL, FRONT PUMPHOUSE CORNER RIGHT SIDE	Y__N__
One (1) LL-22-7000	An access rail shall be provided and installed on the upper section of the right side pumphouse. HANDRAIL, FRONT PUMPHOUSE CORNER LEFT SIDE	Y__N__
One (1) LL-22-7200	An access rail shall be provided and installed on the upper section of the left side pump house. HANDRAILS (2) REAR TOPSIDE OF HOSEBED	Y__N__
One (1) LL-26-1400	A 12" long access rail shall be provided and installed one (1) each side topside of the rear hosebed for access to the hosebed area. FOUR (4) REAR FOLDING STEPS, 2 EA. SIDE	Y__N__
	<b>REAR FOLDING STEPS</b>	
One (1) LL-26-2310	Four (4) Cast Products Model # FT44503 cast aluminum folding steps with built-in hand holds shall be provided and mounted on the rear of the apparatus, two each side. Folding steps shall meet all applicable NFPA standards at time of installation and shall withstand a minimum 500 lb. load. FIVE (5) FRONT FOLDING STEPS, 3 EA. LEFT & 2 RIGHT SIDE	Y__N__
	<b>FRONT FOLDING STEPS</b>	
One (1) LL-26-2430	Five (5) Cast Products Model #FT44503 cast aluminum folding steps with built-in hand holds shall be provided and mounted three (3) at left side and two (2) at right side on front face of the side compartments of the apparatus body. Folding steps shall meet all applicable NFPA standards at time of installation and shall withstand a minimum 500 lb. load. OUT AND DOWN STIRRUP STEP	Y__N__
	<b>OUT AND DOWN STEPS</b>	

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One (1)  
LL-30-6000

Two (2) out and down stirrup steps constructed of smooth aluminum and non-slip step rungs shall be provided and mounted below the right side compartments in front and rear of the right side rear wheels for access to the ladder brackets at right side of the body.

FUEL FILL DOOR W/REAR FUEL TANK

Y\_\_N\_\_

### **FUEL FILL**

One (1)  
LL-30-6900

One (1) cast aluminum fuel fill housing complete with a spring loaded hinged door and a gasketed polished trim ring shall be provided in the rear wheelwell area of the apparatus body with large engraved identification label.

(4) SCBA COMPTS. POCKETS IN REAR WHEELWELLS

Y\_\_N\_\_

### **AIR BOTTLE COMPARTMENTS IN WHEELWELLS**

Four (4) SCBA storage compartments shall be provided and located in the rear wheelwells of the apparatus body, two on each side of the rear wheels.

SCBA bottle compartments shall be constructed entirely of aluminum, gasketed between compartment and body side, bolted in-place and removable for repair or replacement. No Exception.

Compartments shall be provided with SCBA bottle scuff protection. Each compartment shall be provided with brushed aluminum spring loaded doors with push button trigger latches and polished aluminum surrounds. Compartment doors are to be provided with an O-ring gasket seal to prevent moisture and debris from entering compartments.

One (1)  
MM-01-0000

PAINTING (BODY)

Y\_\_N\_\_

### **PAINT PROCESS**

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

Tacked free of any dust particles, the body and all parts shall be individually sprayed using the following minimum procedure and materials:

One (1) coat of self etching primer  
Two (2) coats of urethane primer  
Two (2) color coats of the specified color  
Three (3) coats of clear urethane

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

All aluminum parts shall be bolted to the body using stainless steel fasteners. Zinc or Cadmium plated fasteners are not acceptable.

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

One (1)  
MM-01-1500

D/A INTERIORS W/ROLL UP DOORS (ALUM BODY)

Y\_\_N\_\_

### **INTERIOR COMPARTMENT FINISH**

The interior compartments shall be left unpainted and have D/A finish.

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		<u>Bidder Complies</u>
		Y__N__
One (1) MM-01-3120	<p>WATER PUMP VALVES AND PLUMBING (UN-PAINTED)</p> <p><b>FIRE PUMP</b></p> <p>The pump shall be painted gray in color with the plumbing and valves left unpainted.</p>	Y__N__
One (1) MM-01-8001	<p>BODY TRIM PACKAGE</p> <p><b>BODY TRIM PACKAGE</b></p> <p>The front and rear corners of the body where the aluminum treadplate meets the vertical extrusions shall be trimmed with mirrored polished stainless steel caps for a more pleasing appearance.</p>	Y__N__
One (1) MM-02-8000	<p>STRIPE REFLECTIVE 1" x 6" x 1" WHITE</p> <p><b>STRIPING</b></p> <p>A 1" x 6" x 1" wide white 3M brand Scotchlite #680-10 reflective multi-stripe shall be affixed to the perimeter of the vehicle. There shall be a 1" gap between each of the stripes. Striping shall be placed up to 60" above ground level and shall conform to NFPA reflectivity requirements. At least 50% of the perimeter length of each side and width of the rear, and at least 25% of the perimeter width of the front of the vehicle shall have reflective stripe.</p>	Y__N__
One (1) MM-02-8016	<p>REFLECTIVE STRIPE (RUB RAIL)</p> <p><b>REFLECTIVE STRIPE RECESSED INTO RUB RAIL</b></p> <p>There shall be a reflective stripe recessed into the rub rail on each side of the body.</p>	Y__N__
One (1) MM-02-8017	<p>CHEVRON STRIPE RED/AMBER (REAR FACE)</p> <p><b>CHEVRON STRIPING</b></p> <p>The rear treadplate face of the body between the beavertails shall be replaced with smooth aluminum plate and shall have a 3M diamond grade reflective red and amber chevron style striping installed and placed at a 45 degree angle in an "A" pattern towards the center upper portion of the rear face.</p>	Y__N__
One (1) MM-02-8019	<p>The Chevron shall be located on the entire rear of the apparatus including the rear face of the side compartments, body and rear roll-up door.</p> <p>CHEVRON STRIPE RED/AMBER (FRONT BUMPER)</p> <p><b>CHEVRON STRIPING</b></p> <p>The front bumper shall have 3M diamond grade 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.</p>	Y__N__
One (1) NN-00-0000	<p>ELECTRICAL (CUSTOM)</p> <p><b>ELECTRICAL</b></p> <p>The apparatus shall have the ability to function in an electromagnetic environment most common to fire ground operations. The electrical system shall be designed for full compatibility with low level control frequencies and any high powered two-way radio systems.</p> <p>All wiring shall be protected by circuit breakers or fuses. Circuit breakers shall be the automatic reset type unless operational requirements and/or safety concerns dictate manual reset type. Automotive type fuses shall be used when required to protect delicate electronic</p>	Y__N__

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equipment. All circuit protection devices shall conform to the Society of Automotive Engineers (SAE) standards. All circuit protection devices shall be sized according to 125% of the anticipated load to prevent any wire and/or component damage when subjected to extreme current overload.

All apparatus builder supplied wiring (excluding battery cables) shall be GXL high temperature (250 degrees minimum) type, color and number coded and imprinted with circuit function every 2 inches. Wiring connectors shall be the crimp type with plastic sleeve or shrink tube insulation covering the crimped area to prevent accidental grounding. In-line connectors shall also utilize shrink tubing for a weatherproof connection.

All externally exposed, non-plug type, electrical connections shall be given a hand applied or sprayed application of an industrial standard insulation coating with a minimum rating of 2100 volts per mil thickness. Insulation shall protect the connection from water induced electrical corrosion and accidental short-circuiting. Should the connection be loosened or removed during the manufacturing process another coating shall be applied after it has been refastened or replaced.

All solenoids, relays, terminal blocks and circuit breakers shall be protected against corrosion, excessive heat, vibration, physical damage and water spray.

Any electrical component or device installed in an exposed area on the outside of the cab or body shall be mounted in such a manner, or protected by a gasket, caulking or other means, so that moisture will not accumulate in it.

All exposed electrical wiring shall be run in an automotive type split plastic conduit or woven fabric type loom and shall have rubber grommets installed wherever the harness passes through any sheet metal panels.

An operational test shall be conducted to ensure that all installed electrical equipment is properly connected and is in working order. Additionally all warning lights shall be run continuously for not less than three (3) hours.

Wiring data shall be provided with the completed apparatus.

Exposed wiring will be not be allowed in compartment interiors. No Exception.

The following electrical equipment and lights shall be provided and installed:

## **REAR STEP LIGHTS**

Two (2) LED chrome plated lights shall be provided and installed on the rear face of the body to illuminate the rear step area. Lights shall be wired to the panel light switch at the pump operators panel.

D.O.T. LED LIGHTS

Y\_\_N\_\_

One (1)  
NN-00-0052

## **CLEARANCE LIGHTS**

Truck-Lite LED vehicle clearance marker lights with reflectors mounted in accordance with Highway Safety Standards shall be furnished and installed. Clearance and marker lights shall be recess mounted within the center tailboard/step.

## **MID BODY TURN SIGNALS**

Mid mounted body LED turn signals shall be installed recess mounted in the vehicle rub rails.

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Y\_\_N\_\_

One (1)  
NN-00-0100

12 VOLT ELECTRICAL SYSTEM TEST

## 12 VOLT ELECTRICAL CERTIFICATION

The low voltage electrical system shall be tested and certified per NFPA 1901 requirements.

A certificate of compliance shall be provided with the completed vehicle upon delivery.

Minimum electrical load consists of the total amperage required to simultaneously operate the following in a stationary mode at the incident scene.

- The propulsion engine and transmission.
- All Clearance and marker lights.
- The communication radio. (Default of 5.0 amps used for testing).
- Illumination of all walking surfaces, the ground at all egress points, controls and instrument panels and 50% of the total compartment lighting load.
- Minimum warning lights required for "Blocking Right of Way" mode.
- The current to simultaneously operate any fire pump, aerial device & hydraulic pumps.
- Anything defined by the purchaser to be critical to the mission of the apparatus.

The first test for the electrical system is the **Reserve Capacity Test**. All the above listed components operate with the engine shut off. After 10 minutes all electrical loads are shut off and the battery system must have adequate reserve power to start the engine.

The second test is the **Alternator Performance Test at Idle**. All the above listed components operate with the engine at an idle. There can be no current draw from the batteries of the apparatus.

The third test is the **Alternator Performance Test at Full Load**. All electrical components shall be activated with the engine operating at governed RPM for two hours. During the test the system voltage can not drop below 11.7 volts or have excessive battery discharge for more than 120 seconds. Any loads not listed in the minimum electrical load may be load managed in order to pass the test.

All of the above tests must be conducted with the engine compartment at approximately 200 degrees.

One (1)  
NN-00-2400

STOP/TAIL LIGHTS WHELEN 600 SERIES (LED)

Y\_\_N\_\_

## TAIL AND BACKUP LIGHTS

Two (2) Whelen 600 series LED rectangular RED stop/tail lights shall be provided and mounted at the rear of the body, one on each side.

One (1)  
NN-00-3700

DIRECTIONAL LIGHTS WHELEN 600 SERIES (LED)

Y\_\_N\_\_

Two (2) Whelen 600 series LED amber arrow directional signal lights shall be provided and mounted at the rear of the body, one on each side.

One (1)  
NN-00-5100

BACKUP LIGHTS WHELEN 600 SERIES (LED)

Y\_\_N\_\_

Two (2) Whelen Model 600 series LED rectangular clear backup lights shall be provided and mounted, one on each side at the rear of the body.

One (1)  
NN-00-5300

FOUR (4) LIGHT POLISHED BEZEL (PR)

Y\_\_N\_\_

## TAIL/WARNING LIGHT TRIM

A polished cast aluminum four hole tail/warning light bezel/housing shall be provided. The

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One (1) NN-00-6200	specified rear lighting units shall be installed in the bezel/housing and secured. The completed assembly is to be bolted to the apparatus body, one assembly each side. <b>LOAD MANAGER SUPPLIED WITH CHASSIS</b>	Y__N__
	<b>LOAD MANAGER</b>	
One (1) NN-04-0000	The apparatus shall be equipped with a Class 1 Total System Manager (TSM) for performing electrical load management. The TSM shall be supplied with the custom chassis. <b>EMERGENCY LIGHTS (HEADER)</b>	Y__N__
One (1) NN-06-1000	<b>NFPA REQUIRED LIGHTING</b> WHELEN PACKAGES	Y__N__
One (1) NN-06-1010	The following Whelen warning lights shall be provided and installed on the apparatus to meet NFPA requirements: <b>LIGHTBAR SUPPLIED WITH CUSTOM CHASSIS</b>	Y__N__
	<b>LIGHTBAR</b>	
One (1) NN-06-1050	The lightbar shall be furnished with the chassis. <b>LOWER FRONT WARNING LIGHTS W/CHASSIS</b>	Y__N__
	<b>LOWER FRONT WARNING</b>	
One (1) NN-06-1060	The lower front warning lights shall be furnished with the chassis. <b>INTERSECTION LIGHTS SUPPLIED WITH CHASSIS</b>	Y__N__
	<b>FRONT INTERSECTION LIGHTS</b>	
One (1) NN-06-1070	The intersection lights shall be furnished with the chassis. <b>NO UPPER LEVEL SIDE WARNING REQUIRED</b>	Y__N__
One (1) NN-06-1082	<b>WHELEN 600 RED SUPER LED (LOWER LEVEL BODY SIDES)</b>	Y__N__
	<b>LOWER ZONE B &amp; D SIDE LIGHTS</b>	
One (1) NN-06-1085	There shall be one (1) Whelen 60R00F*R 600 series red Super LED flashing light furnished on each side of the apparatus to meet the NFPA Zone B & D lower level lighting requirement. The lights shall be connected to a flasher and be activated through the master emergency light switch located on the electrical console. <b>WHELEN B6TLR ROTATORS/SUPER LED (UPPER REAR)</b>	Y__N__
	<b>UPPER REAR LIGHTS</b>	
One (1) NN-06-1094	Two (2) Whelen B6TLRR1P combination rotating upper lights with LED lower flashing lights mounted on the rear of the apparatus body to meet the NFPA Zone B, C, D upper level lighting requirement. The lights shall be activated through the master emergency light switch located on the electrical console. Each light to have the following equipment.  - (1) Upper 50 watt fast rotator with red lens - (1) Lower red LED lens <b>WHELEN 600 SUPER RED LED (LOWER REAR)</b>	Y__N__
	<b>LOWER ZONE C REAR LIGHTS</b>	

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## Bidder Complies

One (1) NN-22-3205	<p>There shall be two (2) Whelen 60R00F*R 600 series red LED flashing lights furnished on the rear of the apparatus body to meet the NFPA Zone C lower level lighting requirement. The lights shall be activated through the master emergency light switch located on the electrical console.</p> <p>TRAFFIC ARROW WHELEN TAL65 LED REAR FACING</p> <p><b>TRAFFIC DIRECTION BAR</b></p>	Y__N__
One (1) NN-22-5300	<p>A Whelen Model TAL65, 36" long all LED Traffic Advisor light bar shall be provided with the control head surface mounted on the dash of the truck cab.</p> <p>SURFACE MOUNT TRAFFIC ADVISOR</p> <p><b>MOUNTING OF TRAFFIC ADVISOR</b></p>	Y__N__
One (1) NN-27-200A	<p>The traffic advisor shall be surface mounted on the rear face of the apparatus.</p> <p>HIGH INTENSITY TELE-LITE 150WATT HID</p> <p><b>HIGH INTENSITY DISCHARGE LIGHT 150 WATT OPTIMUM</b></p>	Y__N__
One (1) NN-27-4000	<p>One (1) Fire Research Optimum Model #HD15 HID (High Intensity Discharge) Light shall be provided. The light head shall be housed in a heavy duty aluminum housing with a telescopic pole located on the drivers side rear of the cab. The light shall be switched at the pump operators panel.</p> <p>HOSEBED LIGHTS UNITY 12V 1-SPOT 1-FLOOD</p> <p><b>HOSEBED DECK LIGHTS</b></p>	Y__N__
One (1) NN-29-0500	<p>Two (2) Unity #AG series (1-Spot and 1-Flood) six inch rear mounted hose loading lights, swivel type with individual switches, chrome plated shall be provided.</p> <p>RUNNINGBOARD WALKWAY LIGHTS (PR)</p> <p><b>RUNNINGBOARD LIGHTS</b></p>	Y__N__
One (1) NN-29-1500	<p>Two (2) fully recessed rubber shock mounted minimum 4" diameter <u>LED light assemblies</u> and weathertight clear lens lights shall be provided and recess mounted, one (1) each side, on the lower front face of the side compartments to illuminate the side runningboards. Lights shall be wired to the pump panel light switch unless otherwise specified.</p> <p>PUMP COMPARTMENT LIGHT (EA)</p> <p><b>PUMP COMPARTMENT WORK LIGHT</b></p>	Y__N__
One (1) NN-29-2000	<p>One (1) Truck-Lite model #80351 pump compartment work light(s) shall be provided and installed within the pump compartment area complete with a push button activation switch mounted on each light head.</p> <p>UNDERBODY LIGHTS EACH SIDE</p> <p><b>UNDERBODY LIGHTS</b></p>	Y__N__
One (1) GSE3029-0005	<p>Truck-Lite model 40003, underbody lights meeting NFPA requirements shall be provided and mounted below runningboard level, each side of the body controlled by the park brake switch. Lights are to be a minimum 4" diameter sealed and weathertight. Fixtures are to be mounted in bolt on brackets using shock absorbing rubber grommet mounts for ease of repair or replacement.</p> <p>UNDER TAILBOARD LIGHTS</p>	Y__N__

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Bidder Complies

NN-29-2009

## **UNDER TAILBOARD LIGHTS**

Truck-Lite model 40003, underbody lights meeting NFPA requirements shall be provided and mounted below the tailboard level, each side of the body controlled by the park brake switch. Lights are to be a minimum 4" diameter sealed and weathertight. Fixtures are to be mounted in bolt on brackets using shock absorbing rubber grommet mounts for ease of repair or replacement.

One (1)  
NN-29-4000

LICENSE PLATE LIGHT WITH MNTG. BRACKET

Y\_\_N\_\_

## **LICENSE PLATE BRACKET**

A license plate mounting bracket shall be provided complete with a chrome plated shielded indirect type light. Bracket shall be mounted at the rear of the apparatus body.

One (1)  
OO-00-0000

ADDITIONAL EQUIPMENT

Y\_\_N\_\_

## **ADDITIONAL EQUIPMENT**

The following equipment shall be provided on the completed apparatus by the apparatus manufacturer.

One (1)  
OO-00-0100

OPERATION AND SERVICE DOCUMENTATION

Y\_\_N\_\_

## **OPERATION/SERVICE MANUAL**

The following applicable documentation shall be supplied upon delivery:

Two (2) electronic copies of Operation/Service manual of the apparatus operations and service

manuals supplied by components manufacturers.

Pump certification when applicable including manufactures record of apparatus construction details.

Certificate of compliance to Electrical Warning System Low Voltage test.

Water tank capacity certificate when applicable.

Line Voltage Electrical System test certificate.

(NFPA 19-14.4.1 - 19.14.4.2)

Certificate of approval for stationary pumping when applicable.

One (1)  
OO-00-0300

All manuals shall be formatted on CD.

AS BUILT WIRING DIAGRAMS

Y\_\_N\_\_

## **WIRING DIAGRAM**

An electronic as built wiring diagram shall be provided with the apparatus at time of delivery.

One (1)  
OO-07-1502

WHEEL CHOCKS PR ZICO #SAC-44 W/MTS (NFPA)

Y\_\_N\_\_

## **WHEEL CHOCKS**

One (1) pair of Zico Model SAC-44 Quic-Chok NFPA compliant wheel chocks shall be provided and mounted under the apparatus runningboards in model SQCH-44-H horizontal mounting brackets.

One (1)  
UU-00-0000

DEALER SUPPLIED EQUIPMENT

Y\_\_N\_\_

## **DEALER SUPPLIED EQUIPMENT**

The following list of equipment shall be furnished and installed by the apparatus dealer:

GSE3029-0005

03/11/09

# Rosenbauer America

Bidder Complies