# Pittsburg County, Oklahoma COUNTY PURCHASING OFFICE

Pittsburg County Court House McAlester, Oklahoma Phone: (918) 423-4934

# **INVITATION TO BID**

SIDE REL	REVIEW TERMS ATING TO SUE	DATE ISSU	14-Mar-22		
			BID CLOSING DATE AND HOUR	REQUIRED	DELIVERY DATE
BID # 19			March 25th, 2022 @ 4:00pm	Days after award of Purchase Order	
TERMS:	3 365 X			DATE OF E	DELIVERY:
Item	Quantity	Unit of issue	DESCRIPTION	Unit Price	Total
			Pittsburg County wishes to advertise for the following for Indianola Volunteer Fire Department:		
			One (1), Used 3,000 Gallon Tender  See Specifications Attached		
			IF BID IS NOT RETURNED IN THE ENCLOSED ENVELOPE OR IS PLACED IN A FEDEX, UPS OR USPS SHIPPING ENVELOPE, PLEASE MARK ON THE OUTSIDE OF THE ENVELOPE "SEALED BID" & BID NUMBER.		
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#### TERMS AND CONDITIONS

- Sealed bids will be opened in the Commissioner's Conference Room, Pittsburg County Courthouse, McAlester, Oklahoma, at the time and date shown on the invitation to bid form.
- 2. Late bids will not be considered. Bids must be received in sealed envelopes (one to an envelope) with bid number and closing date written on the outside of the envelope.
- 3. Unit prices will be guaranteed correct by the bidder.
- 4. Firm prices will be F.O.B. destination.
- 5. Purchases by Pittsburg County, Oklahoma, are not subject to state or federal taxes.
- 6. This bid is submitted as a legal offer and any bid when accepted by the County constitutes a firm contract.
- 7. Oklahoma laws require each bidder submitting a bid to a county for goods or services to furnish a notarized sworn statement of non-collusion. A form is supplied below.
- 8. Bids will be firm until delivered.

(DATE)

9412935-19

AFFIDAVIT: I, the undersigned, of lawful age, being first duly sworn on oath say that he (she) is the agent authorized by the bidder to submit the above bid. Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any state official or employee as to quantity; quality or price in the prospective contract or any other terms of said prospective contract; or in any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract; that the bidder/contractor has not paid, given or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma (or other entity) any money or other thing of value, either directly or indirectly in the procuring of the award of a contract pursuant to this bid.

ubscribed and sworn before this f20	•			
	Firm:			
My commission expires	Signed by:	Title:		
	Address:	Phone:		
NOTARY PUBLIC (CLERK OR JUDGE)	City:	State		
		Zip		

## RESOLUTION 22-205 To Advertise

The Board of County Commissioners, Pittsburg County, met in regular session on Monday, March 14, 2022.

WHEREAS, the Pittsburg County wishes to advertise for the following for Indianola Volunteer Fire Department:

One (1), Used 3,000 Gallon Tender

A bid package containing complete specifications and an "Invitation to Bid" are available at the Pittsburg County Clerk's Office, 115 E. Carl Albert Pkwy, Room 103, McAlester, Oklahoma 74501 or online at pittsburg.okcounties.org.

THEREFORE, each competitive bid submitted to the County must be accompanied with an affidavit for filing with the competitive bid form, as required by Title 19 O.S. \$ 1501.

Sealed bids will be received and filed with the Pittsburg County Clerk until Friday, March 25, 2022 at 4:00 p.m. All bids received after 4:00 p.m. on Friday, March 25, 2022 WILL NOT BE OPENED. Bids will be opened on Monday, March 28, 2022 at 10:00 a.m. in the Board of County Commissioners Conference Room, 115 E. Carl Albert Pkwy, McAlester, Oklahoma. The Board of County Commissioners, Pittsburg County, reserves the right to reject any and all bids and readvertise.

BOARD OF COUNTY COMMISSIONERS PITTSBURG COUNTY, OKLAHOMA

ATTEST

VICE CHAIRMAN

MEMBER

COUNTY CLERK

# INDIANOLA FIRE DEPT. 3000 GALLON TENDER

# GENERAL INFORMATION

The proposed apparatus will be constructed to withstand the severe and continuous use encountered during emergency firefighting services. The apparatus shall be of the latest type, carefully designed and constructed with due consideration to the nature and

distribution of the load to be sustained. These specifications detail the proposal for general design criteria of cab and chassis components, fire pump and related components, water tank, fire body, electrical components, painting, and equipment. All items of these proposal specifications will conform to the National Fire Protection Association Pamphlet No. 1901, latest edition. The manufacturer will furnish satisfactory evidence of our ability to construct, supply service parts and technical assistance for the apparatus specified. The proposed chassis will be certified as conforming to all applicable federal motor vehicle safety standards (FMVSS) in effect at the date of contract. This will be attested to by the attachment of a FMVSS certify caution label on the vehicle by the manufacturer, who will be recognized as the responsible final manufacturer.

## GENERAL CONSTRUCTION

The proposed apparatus, assemblies, subassemblies, component parts, etc., will be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to subject when placed in service. All parts of the apparatus will be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in firefighting service. All parts of the proposed apparatus will be strong enough to withstand general service under full load. The apparatus will be so designed that the various parts and readily accessible for lubrication, inspection, adjustment and repair.

The apparatus will be designed and constructed, and the equipment so mounted, with due consideration to distribution of the load between front and rear axles that all specified equipment, including a full water tank, loose equipment, and firefighters will be carried without overloading or injuring the apparatus.

## VEHICLE FLUIDS PLATE

As required by NFPA-1901, the manufacturer will affix a permanent plate in the driver's compartment specifying the quantity and type of the following fluids used in the vehicle: A permanent plate in the driving compartment will specify the quantity and type of the following fluids used in the vehicle:

Engine oil
Engine coolant
Chassis transmission fluid
Pump transmission lubrication fluid
Pump primer fluid
Drive axle(s) lubrication fluid
Air-conditioning refrigerant
Air-conditioning lubrication oil
Power steering fluid
Cab tilt mechanism
Transfer case fluid
Equipment rack fluid
Air compressor system lubricant

PRINCIPLE APPARATUS G.V.W.R.

The axie and total weight ratings of the completed apparatus will not be less than the following minimum acceptable weight ratings:

MINIMUM FRONT G.A.W.R.: 16,000 lbs.
MINIMUM REAR G.A.W.R.: 46,000 lbs.
MINIMUM TOTAL G.V.W.R.: 62,000 lbs.

The manufacturer will include the principal dimensions, front G.A.W.R., rear G.A.W.R., and total G.V.W.R. of the proposed apparatus. Additionally, will provide a weight distribution of the fully loaded, completed vehicle; this will include a filled water tank, specified hose load, miscellaneous equipment allowance in accordance with NFPA-1901 requirements, and an equivalent personnel load of 250 lbs. per seating position.

## STEPPING, STANDING, & WALKING SURFACES

All stepping, standing, and walking surfaces on the body will meet NFPA #1901 anti-slip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces will be Alcoa No-Slip type. This material will be certified to meet the NFPA #1901 standard. Upon request by the purchaser, the manufacturer will supply proof of compliance with this requirement. All vertical surfaces on the body, which incorporate aluminum tread plate material, will utilize the same material pattern to provide a consistent overall appearance.

## MANUFACTURER'S PRE-DELIVERY TEST

NFPA-1901 (2016 Edition) 16.13.9\* Manufacturer's Pre-delivery Test: The manufacturer will conduct a piping hydrostatic test prior to delivery of the apparatus. The test will be conducted as follows:

- (1) The pump and its connected piping system will be hydrostatically tested to a gauge pressure of 250 PSI
- (2) The hydrostatic test will be conducted with the tank fill line valve, the bypass line valve if so equipped, and the tank-to-pump valve closed.
- (3) All discharge valves will be open and the outlets capped.
- (4) All intake valves will be closed, and non-valved intakes will be capped.

## NFPA-1901 REQUIRED LABELS:

SEAT BELT SIGN: An accident prevention sign stating "Danger Personnel Must Be Seated and Seat Belts Must Be Fastened While Vehicle Is In Motion" will be visible from each seating position.

SEATING CAPACITY SIGN: A permanent sign will be installed in the driver's compartment specifying the maximum number of personnel, the vehicle is designed to carry (seating capacity) per NFPA standards. It will be located in an area visible to the driver and will read "SEATING CAPACITY (2)".

ACCIDENT PREVENTION SIGN: An accident prevention sign stating "Danger Do Not Ride On Rear Step While Vehicle Is In Motion, Death Or Serious Injury May Result" will be placed so it is visible from the rear step of the vehicle. A similar sign will be placed on the top mount walkway.

(II provided)

SUCTION INLET SIGN: The valve inlet located at the pump operator's position will be provided with a permanent label that states "Warning Death Or Serious Injury Could Occur If Inlet Is Supplied By A Pressurized Source When The Valve Is Closed".

OVERALL TRAVEL CLEARANCE PLATE: There will be a travel clearance warning label located in the chassis cab. The travel clearance warning label will be located in easy view of the driver. The travel clearance warning label to include the following information: Overall travel clearance height in feet and inches.

GVW SIGN: The contractor will supply the final manufacturer's furnished certification of GVWR and GAWR on a nameplate affixed to the vehicle.

SHIFT SELECTOR SIGN: A nameplate indicating the "Chassis Transmission Shift Selector

Position for Pumping" will be provided in the driving compartment and located so that it can be easily read from the driver's position.

TYPE OF FUEL SIGN: A "Diesel Fuel Only" name tag will be attached to fuel fill access door.

FINAL STAGE LABEL: A nameplate will certify that the completed vehicle conforms to the motor vehicle safety standards previously certified by the chassis manufacturer and that the final stage Manufacturer has not altered the certification. All nameplates and instruction plates will be metal or plastic with the information permanently engraved, stamped, or etched thereon. Metal nameplates to be installed with plated screws. All nameplates will be mounted in a conspicuous place.

## CHASSIS DATA LABELS

The following information shall be on labels affixed to the vehicle:

Fluid Data **Engine Oil Engine Coolant** Chassis Transmission Fluid Pump Transmission Lubrication Fluid Pump Primer Fluid (if applicable) Drive Axle(s) Lubrication Fluid Air Conditioning Refrigerant Air Conditioning Lubrication Oil Power Steering Fluid Cab Tilt Mechanism Fluid Transfer Case Fluid Equipment Rack Fluid Air Compressor System Lubricant Generator System Lubricant Front tire cold pressure Rear tire cold pressure

## CHASSIS SPECIFICATIONS

2012 or newer International Work Star Conventional Cab Chassis, or equivalent

1 Door Cab

8.9 Liter DT Engine

Factory Rated at 330HP

Allison, or equivalent

3000 Series Auto

5 Speed with 5.38 Rear Ratio

16,000# Front Axle

46,000# Rear Axle

Hendrickson, or equivalent

Rear Suspension

New Paint-FD Code

New Tires-Brand Name and Tread Type shall be approved by the Fire Department

Stainless Steel Wheel Covers

30,000 Miles or Less

IHC Factory Air dryer system

Chassis to be repaired as needed on cosmetic items such as glass, seats, etc.

\*Chassis to have minimum of One (1) Year, \$ 10,000.00 Warranty on Major Components- Engine, Transmission, and Rear Ends.

#### FRONT & REAR MUD FLAPS

There shall be a pair of front and rear mudflaps installed at the rear of the fenders.

## REAR TOW EYES

There shall be two (2) tow eyes, one (1) on each side. They shall be attached to the frame rails, located in the rear center, under the tailboard.

## KUSSMAUL PUMP PLUS 1000 or equivalent

A system shall be provided that automatically charges the chassis air system and automatically charges the chassis battery system.

#### AIR COMPRESSOR

A small on-board air compressor shall be provided and mounted on the front wall of the left-hand front compartment to maintain the air pressure in the air brake system while the vehicle is not in use. A pressure switch shall sense the system pressure and activate the compressor whenever the pressure drops below a predetermined level. A selector switch shall be provided on the charger to operate the compressor either as a D.C. compressor or as an A.C. compressor. In either switch position the compressor shall operate from the vehicle battery. When D.C. position is selected, the compressor shall operate whenever the pressure switch senses low system pressure so that the vehicle air system can be charged when the vehicle is away from a 120-volt A.C. source. When the department wishes to limit compressor operation only when the vehicle is connected to the 120-volt A.C. source, the switch should be placed in the A.C. position.

Input: 12-volt DC @ 12 Amps

Output: .30 SCFM @ 80 PSI, .35SCFM @ 60 PSI

Motor Type: Permanent Magnet .10 HP

### BATTERY CHARGER

The on-board automatic battery charger shall be provided and mounted on the front wall of the left-hand front compartment to maintain the chassis battery system. The Pump Plus 1000 charger senses the batteries in the vehicle and recharges exactly as much as required. When the batteries are fully charged, all charging will stop. The state of charge is indicated on a remotely located bar graph display (on the left-hand pump panel) whenever power is applied to the vehicle. The battery saver contained in the Pump Plus 1000 charger is a three (3) Amp power supply with a relay to remove the accessory loads from the battery and connect them to the power supply when the charger is energized with A.C. power. This shall permit the charger to recharge the batteries without supplying the accessory load.

Input: 120 volts, 50/60 Hz, 3.5 Amps

Output: 12 VDC @ 15 Amps Voltage Sense: Remote, Electronic

Battery Saver: Output Voltage: 12 VDC Output Current: 3 Amps Bar Graph: Remotely located, indicates state of charge of batteries

## KUSSMAUL AUTO-EJECT RECEPTACLE or equivalent

There shall be a Kussmaul "Super Auto-Eject", or equivalent 110-volt. 15-amp shoreline receptacle furnished and installed on the left-hand pump panel. When the ignition switch is activated, the electrical current shall be interrupted before the plug is automatically ejected to prevent arcing. The plug for the receptacle shall be shipped loose to be installed on the shoreline cord.

#### MASTER BATTERY SWITCH

A master battery on/off switch with shall be provided in the cab, near the driver's door.

### BACK-UP ALARM

One (1) Back up Alarm 97 DB shall be provided and installed at the rear of the unit. It shall be wired to activate when the transmission is placed in reverse.

#### DUAL CHROME AIR HORNS

Dual Hadley 24" Stutter Tone chrome air horns shall be provided and installed on the front fenders, (1) each side. They shall be controlled by a driver's side foot switch and push button in center console.

## HALE 1000 GPM MBP SIDE MOUNT PUMP ASSEMBLY or equivalent

- 1. The pump shall be of size and design to mount on the chassis rails of a commercial and/ or custom truck chassis, and have the capacity of 1000 gallons per minute as NFPA-1901 rated performance requirements.
- 2. The entire pump shall be assembled and tested at the pump manufacturer's factory.
- 3. The pump shall function by the utilization of 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.

- 4. The entire pump, both suction and discharge passages, shall be hydrostatically tested to a pressure of 600 PSI. The pump shall be tested at the pump manufacturer's facility to performance specifications as outlined by NFPA-1901 rated performance requirements. The pump shall be free from objectionable pulsation and vibration.
- 5. The pump body and related parts shall be constructed of fine grain alloy cast iron, with a minimum tensile strength of 30,000 PSI (2,069 bar). All metal moving parts in contact with water shall be manufactured of high-quality bronze or stainless steel. Any pump utilizing castings made of lower tensile strength cast iron not acceptable.
- 6. The pump body shall vertically split on a single plane for ease of removal of the impeller assembly. Wear rings and bearings associated with the pump body shall remove easily without disturbing the piping or mounting of the pump in chassis.
- 7. The pump body shall incorporate the discharge manifold system with a minimum of one (1) 4" (10.16 cm) port and nine (9) 3" (7.62 cm) ports.
- 8. Ball bearings support the pump shaft for minimum deflection, and maximum rigidity. The ball bearings shall be heavy-duty, deep groove, bearings in the gearbox and splash lubricated.
- 9. The pump shaft shall have: one (1) mechanical seal on the suction (inboard) side of the pump. The mechanical seal shall be spring loaded, maintenance-free and self-adjusting. All mechanical seal construction shall contain a silicon carbide sealing ring, stainless steel coil spring, a VitonÒ rubber cup, and a tungsten carbide seat.
- 10. The pump impeller shall be manufactured of hard fine grain bronze of mixed flow design. Once manufactured, the impeller shall be accurately machined and balanced. The vanes of the impeller intake eyes shall be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower.
- 11. The pump impeller shall have clearance rings manufactured of bronze, easy to remove, without replacing impeller or pump volute body.
- 12. The pump shaft shall be manufactured of heat-treated, electric furnace, corrosion resistant stainless steel for longer shaft life. The pump shaft shall be sealed with a double-lip oil seal to keep road dirt and water out of gearbox.

#### **GEARBOX**

- 1. The pump gearbox shall be of sufficient size to withstand up to 16,000 lb/ft (7,257 kg/m) of drive through torque of the engine system. The drive unit shall be designed of ample capacity for lubrication reserve and to maintain the proper operating temperature.
- 2. The gearbox drive shafts shall be of heat-treated chrome nickel steel and at least  $2-\frac{3}{4}$ " (6.99 cm) in diameter, on both the input and output drive shafts. The drive shaft shall withstand the full torque of the engine.

- 5. All drive and pump shall be of the highest quality electric furnace chrome nickel steel. All bores shall be ground to size, teeth integrated and hardened, to create 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. (There will be No exceptions.)
- 4. The pump ratio shall be selected by the apparatus manufacturer to give maximum performance with the engine and transmission selected.
- 5. If the 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 incab control for rapid shift shall be provided that locks in road or pump.
- 6. All apparatus' built with automatic transmissions shall be provided three (3) green warning lights to indicate to the operator(s) when the pump has completed the shift from road to pump position. The warning lights will be located as stated: two (2) in the truck driving compartment and one (1) on the pump operator's panel adjacent to the throttle control. For manual transmissions, one (1) green warning light will be provided for the driving compartment. All lights shall have appropriate identification/instruction plates.

## PRIMING PUMP

The priming pump shall be a positive displacement, oil-less rotary vane electric motor driven pump conforming to NFPA-1901 rated performance requirements. 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 of 24 Hg vacuum at 2,000 feet (609.6m) above sea level. The electric motor shall be a 12 VDC totally enclosed unit. The priming pump shall not require lubrication. The priming pump shall operate by a single pull control valve mounted on the pump operator's panel. The control valve shall be manufactured of bronze construction.

## **BALL VALVES**

The valves including the ball shall be cast of 316 stainless steel with full flow capability. The valve shall have dual seats made of AcetalÒ Resin with dual seals made of an internally lubricated rubber compound with a steel band. The valves shall be of floating ball design with a flow pressure rating to exceed NFPA-1901 standards rating of 600 psi. The valve shall have lubrication capability from a supplied ZertÒ fitting on the adapters for the valve body with the knowledge that lubrication is not required.

All 3.0" (7.62cm) discharge valves shall be supplied with a true slow close mechanism, which is required to be no less than 70 lb (31.8kg) of hand pressure over a three second throw. The valve shall also require a maximum actuation force of 75 lb (34 kg). The 2½" (6.35cm) side mounted swing handle valve shall also have a true locking mechanism, which shall be made of a cam and pin arrangement or a twist lock for true locking when the valve is gated. All side control valves will be supplied with push pull controls unless otherwise noted.

The valve shall be warranted for a period of ten (10) years on all stainless-steel components, against defects in design and manufacturing processes. The wear items such

as the seats, seals, and "O" rings shall have a warranty of two years on replacement parts only.

## INSTRUMENT PANEL

The Instrument Panel shall be stainless steel and contain the following:

One (1) 41/2" (11.43cm) Intake Master Gauge

One (1) 41/2" (11.43 cm) Discharge Master Gauge

One (1) Pump Cooler Valve

One (1) Engine Cooler Valve

One (1) Water Level Gauge

Two (2) Test Ports

One (1) Panel Light Switch

One (1) TPG

## PIPING AND MANIFOLDS

All the piping and pump body attached manifolding shall be stainless steel... The complete piping system shall be designed to direct mount all 1-½" or larger ball valves onto the pump body or stainless-steel manifolds attached directly to the pump body. All NPT pipe thread connections larger than ¾" connections shall be avoided in the construction of the plumbing system.

#### TANK FILL

There shall be a 2" pump to tank fill stainless steel valve. Valve shall be controlled at the side pump panel with a chrome handle.

## PUMP AND ENGINE COOLER

An engine cooler and pump cooler valve shall be installed in the instrument panel. There shall be a  $\frac{3}{8}$ " turn valve installed thru the instrument panel and labeled.

## **CERTIFICATION**

The pump will perform and meet the following tests to receive a Pump Certification.

100% of rated capacity @150 PSI net pump press.

100% of rated capacity @ 165 PSI net pumps press.

70% of rated capacity @ 200 PSI net pump press.

50% of rated capacity @ 250 PSI net pump press

## 6" STEAMER INLETS

Two (2) 6" steamer inlets will be provided, one (1) on the left side and one (1) on the right side. Both inlets shall have long handle chrome vented caps and a screen.

## 2 1/2" LEFT SIDE SUCTION

One (1)  $2-\frac{1}{2}$ " (6.35 cm) stainless steel valve shall be installed on the left side of the pump panel. The valve shall be controlled at the top pump panel with a chrome handle. The valve shall come equipped with a chrome plug, chain, inlet strainer, one (1)  $2-\frac{1}{2}$ " (6.35 cm) NST chrome inlet swivel and one (1)  $\frac{3}{4}$ " bleeder/drain valve.

## TANK TO PUMP

the pump. The valve shall be 3"(/.62cm) inline, installed between the water tank and the pump. The valve shall be a quarter turn ball type, fixed pivot design and be constructed of stainless steel. The valve shall be controlled at the side or top pump panel with a chrome handle.

## **RELIEF VALVE**

There shall be one (1) suction side stainless steel relief pump valve provided on the pump system.

#### **UL TEST POINTS**

Two (2) U.L. test plugs shall be mounted on the pump panel for testing of the vacuum and pressures.

## **DOUBLE CROSS LAYS**

Two (2) 1.50 crosslays shall be located above pump compartment. Each crosslay shall have one 2" (5.08cm) stainless steel valve. The crosslays shall be controlled at the pump panel with a chrome handle. There shall be a 2-½" (6.35cm) individual line gauge and ¾" quarter—turn drain valve provided for each crosslay valve. Two (2) crosslay beds shall be capable of carrying 200' of 1.75" double jacket hose and there shall be one (1) dead lay for larger fire hose. There shall be an 18 oz. vinyl cover with bungee style tie down system.

## 2 1/2" DISCHARGES

Four (4) 2-½" (6.35cm) discharges with stainless-steel valves shall be located on the apparatus with controls at panel. The valve shall be a quarter turn ball type and fixed pivot design to allow easy operation at all pump pressures. The 2-½" (6.35cm) outlets shall be equipped with an integral, stainless steel, 30-degree elbow terminating with 2-½" (6.35cm) MNST threads. A chrome vented cap and chain shall also be supplied. Valves shall be controlled at the top pump panel with a chrome handle. A 2-½" (6.35cm) white-faced, Interlube filled pressure gauge shall be installed on the panel near the control handle to indicate pressures from 0 to 400 P.S.I. The discharge shall also come equipped with a quarter-turn, ¾" drain valve. There shall be two (2) discharges on driver side and two (2) passenger side.

## **VALVE CONTROLS**

Class 1 locking "T" style side mount control handles shall be provided for valve actuation. The controls shall be locked in any position.

## WIRING HARNESS

The Class 1 electrical wiring harness shall be manufactured using GXL wire as SAE-J1128 rated performance requirements. The electrical wiring harness shall be covered by a black split convoluted loom, rated at a minimum of 275° F. All terminals shall meet the minimum pull test as required by the manufacturers pull test and crimp measurement data. All splices shall be manufactured using the ultra-sonic splice process. The harness shall be 100% connected to a DynalabÒ circuit tester to insure continuity and correct assembly.

The Kit shall be equipped with a Class I TPG Engine Information Display for the pump operator's panel. The TPG shall provide engine RPM, system voltage display and alarm, engine oil pressure display and alarm, and engine temperature display and alarm. The TPG is available in English and Metric, and utilizes SAE J-1587 data bus for its information, and does not require any additional sensors to be mounted.

## **MASTER GAUGES**

All Class 1 gauges shall be fully filled with pulse and vibration dampening Interlube to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The 4-½"(11.43cm) white-faced, Interlube filled pressure gauge shall indicate pressures from 0 to 400 P.S.I. for the discharge, and 30" to 400 P.S.I. for the suction. The cases shall be temperature compensated with an internal breathing diaphragm to permit fully filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature oil and be sealed from the water system using an isolating diaphragm located in the stem (no exceptions). A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage. Two (2) 4-½" (11.43cm) master pump gauges shall be supplied and mounted next to each other, adjacent to the Captain pressure governor and engine instrumentation. The intake gauge shall be located to the left of the discharge gauge.

# **DISCHARGE GAUGES**

Individual Class 1 2-½ (6.35 cm) line gauges for each 2" (5.08 cm) or larger discharge shall be provided and mounted adjacent to the discharge valve control handle. The gauges shall be white-faced, Interlube filled pressure gauges and handle pressures from 0 to 400 PSI. The pressure gauge shall be fully filled with pulse and vibration dampening InterlubeO to lubricate the internal mechanisms to prevent lens condensation and to ensure proper operation to minus 40 degrees F. The cases shall be temperature compensated with an internal breathing diaphragm to permit filled cases and to allow a rigid lens with a distortion free viewing area. To prevent internal freezing and to keep contaminants from entering the gauge, the stem and Bourdon tube shall be filled with low temperature material and be sealed from the water system using an insolating Sub Z diaphragm located in the stem. A bright metal bezel shall be supplied for resistance to corrosion and to protect the lens and case from damage.

## INDIVIDUAL DRAINS

All 2" (5.08cm) or larger discharge outlets shall be equipped with a ¾" ball valve drain valve or larger.

# MASTER PUMP DRAIN

The pump shall be equipped with a Class 1 Master Pump 12 port drain to allow draining of the lower pump cavities, volute and selected water carrying lines and accessories. The drain shall have an all-brass body with a stainless-steel return spring.

## TANK LEVEL GAUGE

The Class 1 tank level gauge shall indicate the liquid level on an easy-to-read display and show 9 levels of indication. Each tank level gauge system shall include:

One (1) pressure transducer shall be mounted on the outside of the tank. All sealed foam tanks require a second transducer.

One (1) set of weather resistant connectors, connecting to the digital display, to the pressure transducer and to the apparatus power.

## SIDE MOUNTED PUMP MODULE

An aluminum extruded side mount pump module with a rearward area for a deck gun/dunnage shall be provided and located forward of the body. The pump module shall be constructed entirely of aluminum extrusions and interlocking aluminum plates. The driver and officer side pump panels shall be constructed of brushed 14-gauge stainless steel. The pump module design and mounting shall be separate from the body to allow the pump module and body to move independently of each other in order to reduce stress from frame twisting and vibration. The exterior surface of the pump module shall have a sanded finish. The pump module shall include a running board on each side of the pump module. The running board s shall be in accordance with NFPA in both step height and stepping surface. The maximum step height to each running board shall not exceed 24". The running boards shall include an aggressive surface compliant with NFPA 1901 requirements for walking surfaces. Each running board shall be bolted to the pump module and be easily removable for replacement in case of damage.

## **PUMP PANEL LIGHTS**

Pump panel lighting shall be provided for a side mount pump module in accordance with NFPA. The driver and passenger side pump control panel shall have one (1) 24" LED strip light with clear lenses mounted under a stainless-steel light shield that is directly mounted above the pump panel components.

# **BOOSTER TANK-3000 GALLON LIFETIME WARRANTY**

The tank shall be a low-profile design tank for a low center of gravity. The tank shall be rectangular in design with flat sides and top. The tank shall be constructed of 1/2" thick polyprene sheet stock. All walls and baffles shall be constructed using the same ½" thick material. The tank shall total 3000-gallons in capacity and be baffled to NFPA standards. The tank shall be constructed of 1/2" thick Polyprene sheet stock. This material shall be non-corrosive stress relieved thermoplastic, black in color, and U.V. Stabilized for maximum protection. The tank shall be of a special configuration and is so designed to be completely independent of the body and compartments. All exterior tank joints and seems shall be extrusion welded and tested for the maximum strength and integrity. The top of the tank is fitted with removable lifting eyes designed with a 3 to 1 safety factor to facilitate easy removal.

The transverse and longitudinal swash portions shall be manufactured of Polyprene material. 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 and meet NFPA rules. All swash partitions interlock with one another and are welded to each other as well as to the walls and the floor of the tank. The tank shall have a combination vent and fill tower. The fill tower shall be constructed of 1/2" thick Polyprene and shall be a minimum dimension of 12"x12" outer perimeter. The tower shall be located in the left front corner of the tank unless otherwise specified by the purchaser. The tower shall have a ½" thick removable Polyprene screen and a Polyprene

hinged type cover, Inside the fill tower, there shall be a combination vent overflow pipe. The vent overflow shall be a minimum of schedule 40 pipe with a minimum I.D. Of 4" that is designed to run through the tank, and shall be piped behind the rear wheels where specified by the purchaser to maximize traction.

There shall be one sump standard per tank. The sump shall be constructed of 1/2" black Polyprene and located in the left front corner of the tank, unless specified otherwise. The sump shall have a minimum 3"FNPT threaded outlet on the bottom for a drain plug. This shall be used a combination clean out and drain.

10" NEWTON DUMP (STRAIGHT)-rEAR CENTER or equivalent One (1) 10"x10" Steel Newton Quick'Flow Dump Valve shall be installed on the apparatus. The valve shall be bolted using high grade fasteners to the tank walls at location as follows: rear center. The dump valve setup shall be capable of discharging the water tank contents at a rate of at least 1800 G.P.M. The valve shall be controlled on the top of the valve with a manual swing handle.

### REAR DIRECT TANK FILLS

There shall be two (2) external 2.5" direct tank fill ports furnished on the rear of the apparatus, (1) each side. The tank fills shall have 2.5" Akron Brass valves with built-in 30-degree elbow and manual swing type control handles located on each valve. The valves shall be painted to match the tank. A chrome plug and chain shall be supplied and installed on each valve.

#### HOSE BED AND DIVIDER

The hose bed shall be located directly above the booster tank and shall be free from all sharp objects such as bolts, nuts, etc., to avoid damage to fire hose. The hose bed storage area, shall have a minimum capacity of sixty-five (65) cubic feet, and shall accommodate 1000' of 5" hose. The hose-bed depth shall be 12". The hose bed shall be located directly above the booster tank and shall be free from all sharp objects such as bolts, nuts, etc., to avoid damage to fire hose.

## HOSE BED FLOORING

Flooring to be constructed from extruded aluminum and be properly spaced for ventilation. The flooring shall be smooth and free from sharp edges to avoid hose damage. The hose bed floor shall be removable to provide access to inner body framework.

# ADJUSTABLE HOSE BED DIVIDER

One (1) full length hose bed divider shall be fabricated of 3/16" smooth aluminum plate with an aluminum base welded to the bottom and be fully adjustable within the hose bed. The rear top ends of each divider shall have a three inch radiused comer and shall be deburred to prevent damage to the hose. Aluminum "Uni-Strut" will be provided horizontally at the front tank wall and a poly "Uni-Strut" at the rear of the tank to allow the divider to be adjustable.

#### HOSEBED COVER

The hose bed shall have a 16 oz heavy-duty hypalon cover. This cover shall have bungee cord and hook type attachment across the front and down each side. COLOR SHALL BE

## 3000 GALLON DRY SIDE TANKER BODY

The body shall be assembled in fixtures to ensure accurate body dimensions and squareness of door openings. After proper alignment is achieved, the body panels shall be spot-welded together to ensure proper weld penetration and then stitch-welded on all exposed seams to minimize distortion of welded assemblies. A full seam weld shall not be used due to the applied heat which shall distort sheet metal and remove the protective coating from the perimeter of the welded area.

## 99" WIDE FIRE BODY

The fire body shall be 99" wide to provide the maximum amount of usable hose bed space, approximately 76" wide, and to extend the body fenderettes outward for better tire tread coverage. The fire body compartments shall be rated at 500# payload or greater.

## SUPER STRUCTURE -ALUMINUM

The body super structure shall be an all-welded configuration utilizing a combination of 3" x 3/8" Aluminum. The super structure shall be designed to totally support the full length and width of the body. The structure shall be welded to the body side compartments to incorporate the compartments into an integral part of the body weldment. All cross tubes of the structure shall be capped and butt welded at their point of termination to prevent water from lying inside the super structure. The super structure shall be bolted to the sides of the chassis frame at four (4) points.

## STEPPING, STANDING, & WALKING SURFACES

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 antislip standards. Aluminum tread plate utilized for stepping, standing, and walking surfaces shall be Alcoa No Slip type. This material shall be certified to meet the NFPA #1901 standard. Upon request by the Purchaser, manufacturer shall supply proof of compliance with this requirement.

## LIFETIME WARRANTY

The fire apparatus body shall have a Lifetime warranty from body manufacturer.

## **DUAL WALL COMPARTMENTS**

The body design shall include a "false wall" design in each lower rear compartment. This "false wall" is required in order to allow for easy accessibility to the rear electrical components. The false wall design shall have access panels in each compartment for easy access to electrical wires and components.

## BODY-FORMED SEVERE SERVICE ALL ALUMINUM BODY

The apparatus body substructure shall be constructed of high strength aluminum tubing.

Body shall have the following minimal underbody design:

- 3- Horizontal Underbody Beams (Sub-Frame), One at front, middle, and rear of body constructed of 3 x3 x.375 Aluminum 6061-T6 Tubing
- 2-Pieces of 3 x 3 x.25 6061-T6 Aluminum Tubing running from front of body to rear

transverse compartment, one each side.

- 2- Pieces of 3 x 3 x.25 6061-T6 Aluminum tubing running the full length of the body for the upper body support beams.
- 4- Pieces of 3 x 3 x .25 6061-T6 Aluminum tubing equally spaced between three horizontal underbody beams for underbody support.
- 4- Pieces 3 x 3 x .25 Aluminum Tubing, one at each corner of body to form outer corner support of body
- 4- Pieces3 x 3 x.25 606 l-T6 Aluminum Tubing, two each side to form side body wall supports. Tubing shall be at compartment breaks for added support of body.

#### COMPARTMENTATION:

The following compartments shall be fabricated from .125" aluminum plate.

L1: Street Side, rear of pump house

70" wide x 30" high x 24" deep, natural aluminum roll-up door.

L2: Street Side, rearward of axle

37" wide x 30" high x 24" deep, natural aluminum roll-up door.

R1: Street Side, rear of pump house

70" wide x 30" high x 24" deep, natural aluminum roll-up door.

R2: Street Side, rearward of axle

37" wide x 18" high x 24" deep, natural aluminum roll-up door

## SCBA BOTTLE STORAGE (6)

There shall be six (6) 8" diameter air bottle holders provided, located three each side at the wheel well area of the rear axle. The storage tube shall be constructed of high strength aluminum to provide protection for the bottles. The bottles shall be held in place by an aluminum hinged door. The door shall be painted to match the apparatus cab and body.

### DOVER ROLL-UP COMPARTMENT DOORS or equivalent

All compartments shall be equipped with Dover Roll Up Doors or equivalent with the below listed specifications:

#### **CURTAIN**

Heavy duty construction using 13/8" pitch extruded aluminum flat faced box section slats interlocked using ball and socket joint. The slats are retained in position using self-locating nylon end clips that are easily removed for repairs or maintenance. Each interlocking slat joint has its own EPDM rubber weather seal to preclude ingress of water. The combination of seal location and ball and socket joint provides excellent sealing, rigidity and noise mitigation.

#### **BOTTOM RAIL**

Heavy duty extruded aluminum section 31/2" high allowing plenty of clearance with gloved hands to bar lock and also allows for adaption of a wide range of lock products. Features include an integrated handle with a rolled edge for a non-slip grip and EPDM rubber bottom seal. Nylon ends provide smooth operation and placement of magnet to trigger compartment LED lighting and cabin indicator lights.

## **GUIDE TRACKS**

Side fix heavy duty 2.5 mm thick extruded one-piece anodized aluminum channel section. Features include recessed screw fixing for jamb free operation, integrated EPDM rubber seals and angled profile for LED lights to illuminate the complete compartment while also providing concealment of electrical wiring for switches and lights.

## RAINGUTTER AND SILL

The rain gutter section, with unique back seal, ensures no water drips from the truck body onto the head of the compartment opening. The integrated EPDM rubber head seal is a bulb type proving excellent sealing properties between head and curtain while not hampering operation of the door. During opening the seal will remove excess water and limit water ingress to the compartment. The gutter fasteners are concealed behind an aluminum extrusion cover and finished with nylon end clips for a neat aesthetic finish with no sharp edges. The sill is an extruded aluminum section into which the bottom rail seal sits. The sill also incorporates a water step barrier which sits behind the shutter in the closed position.

## ROLLER AND COUNTER BALANCE

Utilizing a 3" diameter tube and incorporating counterbalance spring(s) for light and balanced hand operation. 4" tube is used for shutters over 70" high to improve operation on larger doors. The roller is fastened to the curtain with durable and flexible nylon webbing straps that are easy to remove for maintenance and repairs.

## **BRACKETS**

Fabricated from 1.5 mm thick galvanized steel with perforated fastening holes for flexible location of stamped boss and corresponding axle location. A hollow steel axle is used for weight reduction. Incorporating a 4" diameter nylon wheel to assist operation and reduce noise. Brackets allow for minimum head room requirements and allow maximum opening size for access to the compartment. Alternative sliding door arrangements are also available.

#### LIFT BAR

A lift bar comes as standard.

### **FINISH**

The compartment doors shall be anodized aluminum finish.

## COMPARTMENT LIGHTING - DUAL

LED track-style compartment lighting shall be integrated into the door side track and run the height of the compartment and shall be angled inward to shine light onto all interior surfaces. The compartment light for each door shall be activated individually by each door when in the open position.

#### ZULETUNE CUATING

Each compartment shall be coated on the inside with Zolotone industrial coating for skid and scratch resistance.

## **ACCESS PANELS**

Removable access panels shall be provided in all lower compartments to access spring pins, fuel tank sender, electrical junction compartment and rear body mounts. Protective panels shall be located in the rear compartments providing access to the lights and associated wiring. The covers shall also serve as protective covers to prevent inadvertent damage to lights or wiring from tools or equipment located in the compartment.

## DOOR AJAR INDICATOR

A red flashing light shall be provided in the cab of truck in clear view of driver to warn of open compartment door.

## SIDE BODY FENDER

One side body fender shall be installed on each side of body between front and rear compartments and over wheel well area. Fender shall be manufactured of .125 aluminum with painted finish to match the body.

## REAR FENDERETTES

The rear fenders shall be equipped with easily replaceable, polished extruded aluminum fenderettes. The fenderettes shall be equipped with a rubber gasket molding between the body panel and the fenderette.

## **COMPARTMENT TOPS**

Compartment tops shall be covered with polished aluminum tread plate on both sides. The compartment tops shall be flanged up at hose bed wall, and shall have a 90-degree flange downward over the top of compartments.

#### **DRIP MOLDING**

Compartment tops over all side compartments shall have a 45-degree flange formed out to provide protection against water runoff.

## **FASTENERS**

All exterior fasteners used for holding panels or tread plate shall be stainless steel. In no case shall pop rivets or self-tapping screws be used.

## COMPARTMENT VENTS

All compartments shall be vented per NFPA to allow for ventilation and air circulation.

## **BODY RUB RAILS**

Sacrificial aluminum plate rub rails shall be mounted at the base of the body, extend outward a minimum 3/4", downward 2" and flange inward 1". The rub rails shall extend the full length of the main body and wrap around the rear body corners. Rub rails shall be designed to bolt to the body from the bottom side of the compartment area, so as not to damage the body side panels on initial impact and to provide for ease of replacement.

#### **HANDRAILS**

All handrails used on apparatus shall be 1-1/4" diameter "knurled" extruded aluminum supported at each end by a chrome plated stanchion. All rails shall be designed and mounted to reduce the possibility of hand slippage and to avoid snagging of hose, equipment, or clothing. Drain holes shall be provided in the bottom of all vertically mounted assist handles. Handrails shall be installed in the following locations:

Two (2) 24" vertical handrails, (one each side) at the rear One (1) 42" horizontal handrail above the rear dump valve

# REAR FOLDING STEPS FOR TANK ACCESS

The following areas shall have steps installed:

Four (4) chrome folding steps, NFPA approved size and spec on the left rear of the vehicle for hose bed access.

# SAFETY SIGN(S) AT REAR STEP AND CROSS WALKWAY(S)

Safety sign(s) shall be located on the vehicle at the rear step, and at any cross walkway(s), to warn personnel that riding in or on these areas while the vehicle is in motion is prohibited.

## **MUD FLAPS**

Heavy duty mud flaps shall be provided behind the rear wheels.

#### HARD SUCTION RACK

There shall be a hard suction rack mounted on the driver side of the tank for hard suction hose. The rack shall be fastened with high grade fasteners to the body side above the preconnect tray. This rack shall be constructed of polished aluminum diamond plate material. Rack shall have spring type latches for hose retention. The rack shall be capable of holding 2-10' sections of 4.5" suction hose and barrel strainer.

## SLIDE IN DUMP TANK STORAGE

There shall be slide in dump tank storage shall be provided on the apparatus. The 3000-gallon dump tank shall slide in the rear left side of apparatus. This storage compartment shall be capable of holding one (1) 3000-gallon dump tank with aluminum framing. Compartment shall have polished aluminum diamond plate door and positive latching. The door shall be switched to the "Open Door Indicator Light" in the cab to alert the driver if the door is not closed. There shall be poly stripping provided in the floor of the dump tank slide to prevent metal to metal contact.

## REAR TAILBOARD

The rear tailboard shall be fabricated of the same materials as used in the apparatus body. The tailboard shall be an independent assembly fastened to the rear body structural framing to provide body protection and a solid rear stepping platform. The rear of the apparatus body shall be vertical in design - otherwise known as a 'flat-back'. On the rear body surface, a sign shall be attached that states: "DO NOT RIDE ON REAR STEP, DEATH OR SERIOUS INJURY MAY RESULT." The rear tailboard and body shall be constructed such that the angle of departure shall be no less than 8 degrees at the rear of the apparatus when fully loaded (Per NFPA 1901).

#### LED TAILLIGHTS

Technic 60'Series Tri-Cluster LED or equivalent taillights shall be provided. The lights shall be located two (2) each side of the rear compartment face. The light colors shall be red for the stop/taillight, Amber Arrow for turn, and clear for the back-up light.

## DECK LIGHTS / WORK LIGHTS

Two (2) 6" Unity or equivalent deck lights shall be provided and mounted on the rear stanchions, one (1) each side. Each individual deck light shall be controlled by an individual switch mounted on each light, as well as by a single master switch in the master warning switch console. The deck lights shall also serve as rear work lights to illuminate the rear of the apparatus to meet NFPA-1901 requirements.

## CAB PERIMETER SCENE LIGHTS

There shall be two (2) Techniq E-100 or equivalent white LED lights with grommets provided, one (1) for each cab door.

#### PUMP HOUSE PERIMETER LIGHT

There shall be two (2) Techniq E-100 or equivalent white LED lights with grommets provided under the pump panel running boards, one (1) each side.

### **BODY PERIMETER SCENELIGHTS**

There shall be two (2) Techniq E-100 or equivalent white LED lights with grommets provided under at the rear step area of the body, one (1) each side shining to the rear.

## 12 VOLT BODY ELECTRICAL SYSTEM

All electrical lines in the body shall be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy solenoids and other major electrical controls shall be located in a central area near the circuit breakers. All lines shall be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. A complete wiring diagram shall be supplied with the apparatus. Wiring shall be carefully protected from weather elements and snagging. Heavy duty loom shall be used for the entire length. Grommets shall be utilized where wiring passes through panels. In order to minimize the risk of heat damage, wires run in the engine compartment area shall be carefully installed and suitably protected by the installation of heat resistant shielded loom. All electrical equipment shall be installed to conform to the latest federal standards as outlined in NFPA 1901.

#### NFPA LIGHTING PACKAGE

The following warning light package shall include all of the minimum warning light and actuation requirements for the current revision of the NFPA 1901 Fire Apparatus Standard.

#### LIGHT PACKAGE ACTUATION CENTER CONSOLE

There shall be a center console mounted between cab seats with all emergency switches and controls. Center console shall be constructed of aluminum with black Zolotone finish and have clip board storage.

## NFPA ZONE A, UPPER

A Whelen Justice JE2NFPA or equivalent 56" cab roof warning light bar shall be furnished and rigidly mounted on top of the cab roof. The light bar shall be equipped with the following:

Four Corner Red Linear LED's Four Red Forward-Facing Linear LED's Two Clear Frontward Facing LED's

The forward-facing clear LED flashers shall be disabled automatically for the "Blocking Right of Way" mode.

### NFPA ZONE C, UPPER

Two (2) Whelen L31HF LED or equivalent lights shall be mounted one (1) each side at the rear of the body. A Whelen or equivalent LED red light shall be provided on the left side and Whelen or equivalent LED amber light shall be provided on the right side.

#### LED ZONE LIGHTS

There shall be ten (10) Whelen or equivalent LED 600 Series zone lights and two (2) Whelen or equivalent ION LED zone lights mounted on the apparatus per NFPA regulations. Lights shall be wired to light control panel and have red lenses.

Lights shall be located in following areas:

Two (2) front grill

Two (2) front fenders

Two (2) mid-ship in wheel wells ahead of tandems

Two (2) mid-ship wheel wells behind tandems

Two (2) on rear lower of body near S/f/T

Tw (2) on rear lower body in rub rail (Whelen ION Series or equivalent)

# SIX (6) SCENE LIGHTS

There shall be six (6) sealed Whelen M6 LED or equivalent area scene lights, two mounted on each side of apparatus front and rear of tank facing outward and two on rear facing backward. Each scene light shall have switches and labels mounted in cab for easy usage.

#### BACK-UP ALARM

A solid-state back-up alarm shall be provided and installed at the rear of the apparatus under the tailboard. The back-up alarm shall activate automatically when the transmission is placed in reverse gear and the ignition is "on".

## **ELECTRONIC SIREN**

One (1) Whelen #295SDA1 or equivalent,100 watt electronic siren shall be provided featuring: bottom mount control head in cab, "Si-Test" self-diagnostic feature, six (6) function siren, radio repeat and public address. The electronic siren and speaker shall meet the NFPA required SAE certification to ensure compatibility between the siren and speaker. The siren control head shall have all emergency lighting controls embedded in control head and be mounted in dash.

#### SPEAKER

There shall be one (1) speaker provided. The speaker shall be a Whelen model SA315P or equivalent black nylon composite, 100-watt, with behind bumper mounting brackets. Each speaker shall be connected to the siren amplifier. The speaker(s) shall be mounted behind the bumper on the driver's side.

## PUMP ENCLOSURE WORK LIGHTS

Work lighting shall be provided inside the pump enclosure by means of one (1) LED light with om/off function connected to the pump panel light switch.

#### SCOTCH-LITE STRIPE

A four (4) inch high "Scotch-Lite" stripe shall be provided. The stripe shall be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit. The Scotch Lite stripe layout shall be determined by the Fire Department. The Scotch-Lite shall be White in color.

## FRONT CAB LETTERING

Scotch-Lite with drop shadow lettering shall be provided on the cab drivers and officer's doors per the fire department requirements. The design of the lettering on the cab doors shall be designed to fit in the area available. Lettering provided on the driver's and officer's cab doors shall be 3" high.

## REAR BODY CHEVRONS

Chevron striping shall be applied to the entire rear wall. The chevrons shall consist of 6" wide reflective striping at 45-degree angles from the tailboard in an inverted "V" pattern coming down from the center. The stripes shall alternate red reflective, yellow reflective, red reflective, etc....

## MISCELLANEOUS HARDWARE

One bag of miscellaneous hardware shall be supplied with the finished apparatus. This hardware shall consist of nuts, bolts, screws, washers, etc. used in the manufacture of the apparatus.

## **PAINT**

Manufacturer's paint process shall follow all current painting requirements that are used in the industry and the paint shall be of the highest quality and finish.

The body shall be painted: FD Code Red

Prior to reassembly and reinstallation of lights, handrails, door hardware and any miscellaneous body items, an isolation tape or gasket material must be used to prevent damage to the finish painted surfaces. A nylon washer shall be installed under each acorn nut or metal screw that is fastened directly to a painted body surface.

#### PAINT - ENVIRONMENT AL IMPACT

Truck manufacturer shall follow all current federal, state and local paint guidelines to limit the impact on the environment.

#### PAINT CHASSIS FRAME ASSEMBLY

Ine chassis trame assembly shall remain the color and paint quality as received from the chassis manufacturer. The frame and components shall not be repainted. Components that are considered part of the "frame assembly" are frame rails, cross members, axles, suspension, steering gear and the fuel tank.

## PAINT, COMPARTMENT INTERIOR

The compartment interior shall be painted with Zolotone gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.

## PAINT FINISH WARRANTY

The proposed paint finish will be warranted for a period of ten (10) years from the date of acceptance of the unit. Details of warranty coverage, limitations and exclusions shall be included in the specific warranty document.

## **TOUCH-UP PAINT**

A container of touch-up paint will be provided to match the cab color.

## WARRANTY (ONE YEAR)

A one (1) year new vehicle warranty will be provided, upon delivery and acceptance of the vehicle. The warranty will ensure that the vehicle has been manufactured to the contract specifications and will be free from defects in material and workmanship that may appear under normal use and service within the warranty period. The warranty may be subject to different time and mileage limitations for specific components and parts. This warranty is issued to the original purchaser of the vehicle.

The warranty will not apply to any parts or components that are warranted directly by their manufacturers. The warranty will not apply to routine maintenance requirements as described in the service and operator's manual. No warranty whether expressed, implied, statutory or otherwise including, but not limited to any warranty of merchantability or fitness for purpose will be imposed.

The manufacturer or representative will be notified in writing within the warranty period of any failure of the vehicle to comply with the specified warranty. If requested, the purchaser will promptly return the apparatus, component or part to the manufacturer for inspection of any defect in material or workmanship occurring within the applicable time limits.

The manufacturer will either repair or replace any defective components or parts. Repair or replacement of the defective item will be at the sole discretion of the manufacturer. The Basic Vehicle Warranty covers all components and parts unless specifically covered by other descriptions or otherwise excluded herein. Repair or replacement of components will be done without cost to the purchaser when performed within the warranty period. Warranty repairs will not constitute an extension of the original warranty period, either for the entire apparatus or any specific components or parts.

The warranty will be inclusive and in lieu of all other warranties whether written, oral or implied, including but not limited to any warranty of merchantability or fitness for purpose. The warranty will be void and the manufacturer will not be obligated to repair or replace any component or part where the necessity of such replacement or repair, in the

opinion of the manufacturer, is due in whole or in part to loads in excess of factory rated capacities, modification or alteration, accident or other misuse or abuse of the vehicle. In no event will the manufacturer be liable for special or consequential damages including but not limited to injuries to persons or damage to property or loss of vehicle use. The apparatus will be maintained and serviced, by the purchaser, according to the prescribed schedules outlined in the operators and service manuals. As a condition of the warranty the manufacturer may require that receipts or other evidence be provided to verify that maintenance and service has been performed.

# COMPONENT WARRANTY INTERVALS COMMERCIAL CHASSIS

The commercial chassis and all of the chassis related components will only be covered by the Chassis Manufacturer's warranty as provided to the vehicle manufacturer. A copy of the chassis manufacturer's warranty will be supplied to define additional details of the warranty provisions.

## ITEMS EXCLUDED FROM WARRANTY

To better understand the warranty, the following is a description of some conditions that are not covered by this warranty.

## LOOSE FASTENERS:

Nuts, bolts and screws may loosen due to road shocks, engine vibration, etc. Maintaining necessary tightness is your responsibility.

Glass and lens breakage and scratches.

Chrome, aluminum, or stainless components with bright finishes - general rust and/or staining, bluing or yellowing, rust pits and/or nicks caused by road debris, streaks, stains and corrosion caused by severe wash solutions or road salts.

OTHER: Some further examples that we are not responsible for are as follows: Traveling expense; Road calls; Unauthorized towing charges; Accident repairs, loss of apparatus use; Communications charges; Cost of rental equipment; Repair or replacement of items not furnished or installed by us. Road tests or Dynamometer testing.

Tires are covered by their respective manufacturer's warranty.

# MODIFICATIONS TO ORIGINAL EQUIPMENT

If dealers or customers cause any vehicle modifications or equipment installations to be performed and these modifications or installations adversely affect other vehicle components or vehicle performance, we will not accept any product liability or claims under the terms of this warranty. These claims and any required repairs would be the responsibility of the person doing the modification or installation.

#### CHANGES IN COMPONENT SPECIFICATIONS

Specifications for components (make or model) installed on the apparatus, manufactured by companies other than the apparatus manufacturer are subject to change without notice. Specifications for such components will be as available at the time of manufacture of the apparatus. The apparatus manufacturer will not be held liable for any specification deviations from original contract specifications on such components made by the original component manufacturer.