Cooling System: a coolant mixture protected to -30 degrees Fahrenheit

Exhaust System: horizontally mounted, discharge on right side aft of wheels

Fuel Tank: 40 gallon rear mounted, left side filler extension

Transmission: 6R140 six speed automatic with PTO Provision

Steering: power steering system

Batteries: two (2) heavy-duty 12-volt batteries

Alternator: Dual with 320 amp total capacity

Ambulance Prep Package

Cab Construction: XL Series super crew cab four (4) door steel construction, sun visors(2), tinted glass, roof clearance lights, grab handles interior

Mirrors: manually extended trailer type (2), heated

Cab Paint: single color, air bags front and air curtains side

Climate Controls: controls for heat and air conditioning

Window and Door Controls: electric window and door lock controls

Cab Instruments: standard type, cruise control, (4) upfitter switches, auxiliary power plug

Drivers and Passenger Seat: HD vinyl 40/20/40 style seats with three (3) point safety harness, power type driver's seat.

Crew Seats: HD vinyl 60/40 fold up crew bench seats, with safety belts

Printed Manuals: one (1) printed chassis operation manual

Cab Accessories: AM/FM/CD radio, two radio speakers and antenna

TIRE PRESSURE MONITORING CAPS

Tire pressure monitoring caps will be installed on each of the tires of the vehicle. The tire pressure may be monitored by noting the green indicator on the cap.

CAB SEATING AND WEIGHT ALLOWANCE

A warning label shall be installed in the cab to indicate seating positions for five (5) people. A weight allowance of 250 pounds shall be calculated for each person.

DATA PLAQUE

A data plaque shall be provided and installed on the inside of driver's door. The data plaque shall contain the required information based on the applicable components for the apparatus, applicable to the applicable NFPA standards:

- Engine oil
- Engine coolant
- Chassis transmission fluid
- Drive axle lubricant
- Power steering fluid
- Pump, generator, or other component lubrications
- Other NFPA applicable fluid levels or data as required
- Paint manufacturer, type, and color number

Location shall be in the driver's compartment or on driver's door.

DIMENSION DATA LABEL

The cab dash area shall have an apparatus dimension label installed. The label shall be highly visible, indicating the overall height, length, width and weight of the vehicle.

WARNING LABEL -- NO RIDING ON REAR

A warning label stating: "NO RIDING ON REAR OF APPARATUS" shall be installed on rear of the apparatus. The label shall be applied to the vehicle at the rear step area. The label shall warn personnel that riding in or on these areas, while the vehicle is in motion, is prohibited.

WARNING LABEL -- SEAT BELT USEAGE

A warning label, stating: "DANGER- Personnel Must Be Seated And Seat Belts Must Be Fastened While Vehicle Is In Motion Or DEATH OR SERIOUS INJURY MAY RESULT" shall be provided in the apparatus cab interior. This label shall be located so that it is visible from all seating positions.

VEHICLE FINAL STAGE MANUFACTURER LABEL

A final stage manufacturer label shall be installed by the fire apparatus body manufacturer in compliance to applicable motor vehicle standards.

REQUIRED LABELS

1. Type of Fuel Label: A "Diesel Fuel Only" label shall be attached to fuel fill access door.

2. Additional Labels: All labels, signs, name plates and instruction plates shall be permanent in nature with the information permanently engraved, stamped, or etched thereon. Labels, signs and name plates to be installed with plated screws. All labels are to be mounted in a conspicuous place.

REAR TOW EYES

Two (2) chrome plated or stainless steel bolt-on tow eyes shall be installed at the rear of the chassis mounted in recessed aluminum cast enclosures.

STAINLESS STEEL WHEEL COVERS

The apparatus shall be provided with Real Wheels wheel covers. The wheel covers shall be mirror finish stainless steel full wheel covers. The wheel covers shall come complete with stainless steel hub and lug nut covers. The wheel covers shall be for front and rear outer wheels of the single rear axle apparatus. The rear wheels shall be furnished with braided stainless steel air valve extensions.

REAR MUD FLAPS

Black mud flaps shall be installed behind the rear wheels.

CAB STEPS -- ALUMINUM TREAD PLATE

The cab steps shall be equipped with custom fabricated NFPA #1901 compliant aluminum tread plate trim and step areas. The step area for each door shall include a grip strut insert. The new surfaces shall be installed on both sides of the cab.

CAB DOOR REFLECTIVE PANELS

The cab doors shall have NFPA compliant reflective panels installed.

RESCUE BODY DESIGN AND CONSTRUCTION SPECIFICATIONS

The apparatus body shall be all aluminum constructed with extruded radii, ball corners and corner posts. The body shall have seven (7) exterior compartments. After fabrication in a body fixture, the unit shall be mounted on the specified chassis. The entire body assembly shall have a ten (10) year structural warranty.

The apparatus body shall be constructed of aluminum extrusions and .125" Type #5052-H32 alloy aluminum plate specifically designed for fire and rescue applications. The body shall be designed and engineered specifically for emergency vehicles and shall be built to meet the duty cycle for fire and rescue services. A body using modified stamped aluminum bodies designed for commercial purposes other than emergency response shall not be acceptable.

The apparatus body shall be welded construction for maximum strength and integrity for the entire life of the apparatus. The sub-body structural aluminum extrusions shall be integrated with the exterior body radii and sheet metal for a reinforced type body construction. The structural extrusions shall be Type #6061 and heat tempered to T-6 hardness. The aluminum shapes shall be designed with a force fit interlock system that shall eliminate any vibration or separation when sheets are inserted and welded to the structural members.

Fabricated bodies without 3" radius corner extrusions shall not acceptable. The ceiling of the compartments shall be free of structural members and shall be a separate panel from the roof surface.

Body Sub-Structure

The body sub-structure shall consist of 3" channels and 2" x 2" x .125" structural 6063-T6 aluminum tubing located on 12 inch centers and shall extend the full width of the body between compartment walls. The compartment floor support tubes shall be welded to the structure channels and tubing.

Body Mounting System

The body shall be mounted on 3" wide hard rubber or UHMW polymer over the chassis frame rails. The body shall be mounted to the chassis 5/8" steel "U" bolts and spring assemblies per the chassis manufacturer's guidelines. The body shall be capable of being removed from and transferred to a new chassis.

Roof Construction

The roof structure shall consist of 2" x 2" Type #5052-H32 aluminum structural "Z" sections that shall span the full width of the body. The roof structural tubes shall be welded to the aluminum roof surface and to the inner structural connector of the radius. The roof surface shall be completely welded to the roof radius, with no caulking or screws shall be utilized.

The roof radius shall be an extruded aluminum radius of Type #6061-T6 with an ultimate strength of 42,000 PSI. The shape shall be a 3" inch radius with a built in inner structural connector to form a one piece side and roof structure. The radius shall be semi-hollow shape for strength, reduced weight and to also allow passage for electrical wires. The roof and side sheets shall fit into the roof radius and shall be welded from the inside of the body.

Roof Surface

The roof surface shall be constructed of .125" thick aluminum diamond plate which shall comply to applicable sections of NFPA standards.

Exterior Body and Compartment Construction

The exterior walls shall be constructed of Type #5052-H32 heat-treated .125" aluminum plate that shall be stretch leveled to a tolerance of 0.003. The exterior wall shall interlock into place with corner extrusions. The corner radius shall be of the same heavy construction as the roof radius, except there shall be no built in drip molding. The corner radius shall be a three inch radius. All corners shall be semi hollow extruded shapes for structural strength and shall give a smooth exterior appearance without bending or forming sheet metal.

The floor, roof, and sidewalls shall be of cage construction that is built to form an independent structure which shall be self standing and rigid. The body shall then be mounted. No chassis building shall be required or permitted.

The sides shall be constructed with four corner vertical and horizontal radii with ball corners. All body radii shall be 3" arc shape with interlock edges on both sides. The extrusions shall be of an alloy of Type #6063 with a heat-treated temper of T-6. The corner and roof shall be designed to work as a system that has a double gusset connector in each corner joint. The roof, corner, and sides shall be of all welded construction; no rivets are required or permitted.

The body sides shall be fixture assembled and slide-in panel locked construction. The fixture design shall hold the corners and body side panels in place, with inner Type #6063-T6 aluminum extrusions welded place for extra reinforcement. The roof members shall be located 12 inches on centers and welded to the roof extrusions, inner structural connector to the roof members.

The exterior panels shall interlock with the roof and corner radii and specially designed compartment door frame aluminum extrusions constructed of Type #6063-T6 material. The door frame shall be designed to provide for maximum clear door openings. The door frame shall be a .250" thick aluminum extrusion. The doorframe shall have an exterior trim edge that shall channel water away from the compartment opening.

Interior Body and Compartment Construction

All exterior compartments walls, floors, and ceilings shall be constructed of .125" Type #5052-H32 alloy smooth aluminum plate. Compartments shall be of all welded construction with continuous welding in critical structural areas and strip welding on 6" centers in non-critical areas.

Compartment Floor Construction

The compartment floors shall be .125" #5052-H32 aluminum with a "lip free" and sweep out construction, which shall permit easy cleaning of the compartments. Floor drains shall be provided in the two rear corners of the compartments. The front entrance to the compartment shall have a 2" deep x 1" high recess break for compartment doors. The compartment floors shall have a .125" aluminum hat section on the underside for reinforcement. This unit shall be welded in place and shall be a minimum of 2" x 4" in size.

Fasteners

All body fasteners, bolts, nuts, and acorn nuts shall be stainless steel. No pop rivets and sheet metal screws shall be used in the body construction or attachment of equipment.

Installation of Body

The aluminum body shall be installed on the specified chassis with mounting system as specified in these specifications.

BODY COMPONENTS

WHEEL WELL PANEL CONSTRUCTION

The wheel well panel surface above the rear body fenders shall be aluminum diamond plate for

protection from mechanical damage.

WHEEL WELL LINERS

Wheel well liners designed to protect the body from impact resulting from road debris thrown by the tires shall be installed. The wheel well shall be provided with full fender liners that shall be formed so as to eliminate pockets that might trap and collect road dirt.

REAR WHEEL FENDERETTES

The wheel well openings shall be of sufficient opening to permit the utilization of tire chains or other traction devices. Polished aluminum fenderettes shall be installed at each rear wheel opening. The fenderettes shall be positioned outside of the wheel well panel to cover the tire area that extends past the body. The fenderettes shall be secured with threaded fasteners.

FUEL FILL ACCESS

An access opening designed to accommodate a Cast Products fuel fill assembly and angled insert shall be provided in the left side wheel well area.

SCBA CYLINDER STORAGE COMPARTMENT -- RIGHT SIDE

A Cast Products SCBA cylinder compartment and cast aluminum door with latch shall be provided in the forward area of the right side wheel well.

A Cast Products SCBA cylinder compartment and aluminum door with latch shall be provided in the rearward area of the right side wheel well.

RUB RAILS

The sides of the lower body area fore and aft of the wheel well area shall be provided with 3" x 1.5" x .250" extruded aluminum rub rails, with end caps or angle corners. The rub rails shall be equipped with red and white DOT type reflective striping.

PROTECTIVE COVERING -- FRONT BODY

The entire front of the apparatus body shall have a protective covering installed. The covering shall be constructed of aluminum tread plate material.

UPPER REAR BODY PANELS

The upper rear of the exterior body panels shall be smooth aluminum material.

LOWER REAR HORIZONTAL KICK PLATE

The lower rear of the apparatus body shall have kick plate installed. The panel shall be constructed of

aluminum tread plate material secured with stainless steel fasteners.

COMPARTMENT VENTILATION

All compartments shall have aluminum vents in walls of compartments. An aluminum cover shall be installed on the outside of the compartment to shield water from entering the compartment at the vent area.

COMPARTMENT FLOOR DRAINS

The exterior compartments shall be provided with rear corner floor drains to the underside of the body.

ROLL UP DOOR CONSTRUCTION

Seven (7) roll up doors shall be installed. The roll up doors shall be fabricated from anodized aluminum extrusions and shall be manufactured by ROM. The track shall be a one (1) piece aluminum assembly that has an attaching flange and finishing flange incorporated into the design that facilitates installation and provides a finished look to the door without additional trim or caulking. A low profile side seal shall be utilized to maximize usable compartment space.

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

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

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

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

REAR STEP

An 8" deep step shall be provided at the rear of the apparatus body, bolted in place and easily removable for replacement or repair. The tailboard shall be constructed of aluminum diamond plate non-slip surface in compliance with NFPA standards. The maximum height of the step assembly shall be no more than 24" from the ground when the apparatus is in the loaded condition. A label shall be provided warning personnel that riding on the rear step while the apparatus is in motion is prohibited.

HANDRAIL -- REAR STEP

Two (2) extruded aluminum non-slip handrails, approximately 36" in length, shall be provided and

mounted on the rear of the apparatus, one (1) on each side of the body.

LEFT SIDE BODY COMPARTMENTS

Compartment #L-1T

The left side forward transverse compartment shall have the approximate dimensions of 57" wide x 72" high x 23" deep at floor and 96" deep over frame, with a door opening of 52.5" wide x 57.5" high.

Equipment Layout and Mounting Provisions

1. Adjustable tracks shall be installed with tracks on each side wall.

Compartment #L-2T

The left side over wheel well transverse compartment shall have the approximate dimensions of 49" wide x 45" high x 96" deep, with a door opening of 42.5" wide x 34.5" high.

Equipment Layout and Mounting Provisions

1. Adjustable tracks shall be installed with tracks on each side wall.

Compartment #L-3

The left side rear compartment shall have the approximate dimensions of 33" wide x 69" high x 23" deep, with a door opening of 28.5" wide x 54.5" high.

Equipment Layout and Mounting Provisions

1. Four (4) adjustable tracks shall be installed, with two (2) tracks on each side wall.

RIGHT SIDE BODY COMPARTMENTS

Compartment #R-1T

The right side forward transverse compartment shall have the approximate dimensions of 57" wide x 72" high x 23" deep at floor and 96" deep over frame, with a door opening of 52.5" wide x 57.5" high.

Equipment Layout and Mounting Provisions

1. Adjustable tracks shall be installed with tracks on each side wall.

Compartment #R-2T

The right side over wheel well transverse compartment shall have the approximate dimensions of 49" wide x 45" high x 96" deep, with a door opening of 42.5" wide x 34.5" high.

Equipment Layout and Mounting Provisions

1. Adjustable tracks shall be installed with tracks on each side wall.

Compartment #R-3

The right side rear compartment shall have the approximate dimensions of 33" wide x 69" high x 23" deep, with a door opening of 28.5" wide x 54.5" high.

Equipment Layout and Mounting Provisions

1. Four (4) adjustable tracks shall be installed, with two (2) tracks on each side wall.

Rear Compartment #RR-1

The rear compartment shall be located above the frame rails and have dimensions of 50" wide x 53" high x 33" deep, with a door opening of 44" wide x 42.5" high.

Equipment Layout and Mounting Provisions

1. Four (4) adjustable tracks shall be installed, with two (2) tracks on each side wall.

ADJUSTABLE TRACKING -- COMPARTMENT EQUIPMENT MOUNTING

Adjustable aluminum equipment mounting tracks shall be installed inside the compartments with channels on the left and right walls. The tracks shall be positioned to provide support for equipment mounting. The length of the tracks shall be sized to allow for optimum use of the compartment interior.

(4) ADJUSTABLE SHELVES -- 24" DEEP

Adjustable shelves shall be constructed of .188" thick #3003 smooth aluminum plate and be mounted in specified compartments with double bolt cast aluminum shelf brackets. Each shelf shall have a broken front edge, and a broken rear edge for added strength and reinforcement.

The location shall be in the upper and lower section of the L3 compartment and in the R3 compartment.

A fixed shelf with retainer flange shall be installed against the left wall of the B1 compartment to house chargers for the hydraulic tools.

(5) ADJUSTABLE SHELVES -- 44" DEEP

Adjustable shelves shall be constructed of .188" thick #3003 smooth aluminum and be mounted in specified compartments with double bolt cast aluminum shelf brackets. Each shelf shall have a broken front edge, and a broken rear edge for added strength and reinforcement.

The location shall be two (2) in L2, two (2) in R2, one (1) in upper B1 compartment.

ADJUSTABLE SHELF -- 92" DEEP

Adjustable shelves shall be constructed of .188" thick #3003 smooth aluminum and be mounted in specified compartments with double bolt cast aluminum shelf brackets. Each shelf shall have a broken front edge, and a broken rear edge for added strength and reinforcement.

The location shall be in the upper area of L1/R1 transverse compartment.

(3) 600# ROLLOUT TRAYS -- 44" DEEP

SLIDEMASTER Model SM3-MP rollout equipment trays shall be floor mounted in the specified compartment. The 600# rated tracks shall have sealed roller bearings with steel angle framework and powder coated. The tray shall be constructed of .188" smooth aluminum plate, with a full width double channel lip on front edge to form a pull out handle. The unit shall roll fully out of the compartment, and equipped with a locking device to hold tray in both the "in and out" positions.

The location shall be one (1) in L1 compartment, one (1) in R1 compartment, one (1) in B1 compartment.

(2) VERTICAL DIDIVERS -- 44" DEEP

Two (2) dividers shall be provided and mounted vertically in the noted exterior compartment. The panel shall be constructed of .250" smooth aluminum and mounted to ceiling and floor.

The location shall be in L1 and R1 to the rear of the vertical divider behind the Stokes and Backboard storage area.

BACK BOARD AND STOKES BASKET SLIDE-IN MODULE

A vertically mounted slide-in back board and stokes basket module shall be installed in the specified compartment. The module shall be constructed of .125" aluminum. The unit shall be approximately 20" wide x 76" deep x 26" high. (with slots for two (2) back boards and one (1) stokes basket which shall be supplied by the fire department). Location shall be at the front wall of the L1/R1 transverse compartments. A full vertical panel constructed of 1/4" aluminum sheet material shall be installed at the rear of the backboard/stokes basket storage area.

Velcro fastener type straps shall be installed at each end of the backboard storage to hold the backboards in place when the vehicle is in motion.

12 VOLT ELECTRICAL SPECIFICATIONS

The following describes the low voltage electrical system on the apparatus including all panels, electrical components, switches and relays, wiring harnesses and other electrical components. The apparatus manufacturer shall conform to the latest Federal DOT standards, current automotive electrical system standards and the applicable requirements of the NFPA.

Wiring shall be stranded copper or copper alloy conductors of a gauge rated to carry 125 percent of the

maximum current for which the circuit is protected. Voltage drops shall not exceed 10 percent in all wiring from the power source to the using device. The wiring and wiring harness and insulation shall be in conformance to applicable SAE and NFPA standards. The wiring harness shall conform to SAE J-1128 with GXL temperature properties. Exposed wiring shall be run in a loom with a minimum 289 degree Fahrenheit rating. Wiring looms shall be properly supported and attached to body members. Electrical conductors shall be constructed in accordance with applicable SAE standards, except when good engineering practice requires special construction.

All wiring connections and terminations shall provide positive mechanical and electrical connections and be installed in accordance with the device manufacturer's instructions. When wiring passes through metal panels, electrical connections shall be with mechanical type fasteners and rubber grommets

Wiring between cab and body shall be split using Deutsche type connectors or enclosed in a terminal junction panel allowing body removal with minimal impact on the apparatus electrical system. Connections shall be crimp-type with heat shrink tubing with insulated shanks to resist moisture and foreign debris such as grease and road grime. Weather resistant connectors shall be provided throughout the system.

Electrical junction or terminal boxes shall be weather resistant and located away from water spray conditions. When required, automatic reset breakers and relays shall be housed in the main body junction panel.

There shall be no exposed electrical cabling, harnesses, or terminal connections located in compartments, unless enclosed in an electrical junction box or covered with a removable electrical panel. Wiring shall be secured in place and protected against heat, liquid contaminants and damage and shall be uniquely identified color coding or permanent marking and identified on a reference chart or electrical wiring schematic per requirements of applicable NFPA standards.

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

The electrical system shall include the following:

- Electrical terminals in weather exposed areas shall have a non-conductive grease or spray applied. All terminal plugs located outside of the cab or body shall be treated with a corrosion preventative compound.
- All electrical wiring shall be placed in a protective loom or be harnessed.
- Exposed connections shall be protected by heat shrink material and sealed connectors.
- Large fender washers shall be used when fastening equipment to the underside of the cab roof and all holes made in the roof shall be caulked with silicone.

- Electrical components installed in exposed areas shall be mounted in a manner that will not allow moisture to accumulate inside.
- A coil of wire must be provided behind an electrical appliance to allow them to be pulled away from mounting area for inspection and service work.
- All lights in a weather exposed area that have their sockets shall have corrosion preventative compound added to the socket terminal area.
- Warning lights shall be switched in the chassis cab with labeled rocker type switches located in an accessible location. Individual rocker switches shall be provided only for warning lights provided exceeding the minimum level of warning lights in either the stationary or moving modes. All electrical equipment switches shall be appropriately identified as to their function and mounted on a switch panel mounted in the cab convenient to the operator. For easy nighttime operation, an integral indicator light shall be provided to indicate when a circuit is energized.

A single warning light switch shall activate all required warning lights. This switch will allow the vehicle to respond to an emergency "calling for the right of way". When the parking brake is activated, a "blocking the right of way" system shall be automatically activated per NFPA requirements. "Clear" warning lights shall be automatically shed on actuation of parking brake.

Upon completion of the vehicle and prior to delivery, the apparatus shall be electrically tested and the electrical testing, certifications, and test results shall be submitted with delivery documentation per requirements of NFPA.

ELECTRICAL ENCLOSURE

One (1) electrical wiring enclosure for the 12 volt wiring shall be installed in the front lower area of compartment with removable panel.

ELECTRICAL WIRING AND HARNESS

The body shall be pre-wired with various electrical harnesses and conduits. The 12 volt electrical wiring shall be function coded and enclosed in split loom conduits, suitably secured and protected against heat and physical damage. All wiring shall be of the type and sized according to circuit load. All connection to be of a crimp type with heat shrink insulator where required.

The electrical system shall be divided into separate harnesses. The individual harness shall be connected to the electrical box with Deutsch quick connectors. The apparatus lighting shall be protected by automatic circuit breakers and/or relays. The electrical power to all apparatus lighting and accessories shall be supplied by an ignition activated solenoid.

CUSTOM FABRICATED CONSOLE AND SWITCH PANEL

A custom fabricated electrical console and enclosure shall be located between the driver. The console shall have a black crinkle coat abrasion resistant finish.