July 1, 2018

Federal Specification for the Star-of-Life Ambulance
KKK-A-1822F
Dated 1 August 2007
Change Notice 11

THIS CHANGE NOTICE IS NOT CUMULATIVE AND SHALL BE RETAINED UNTIL SUCH TIME AS THE SPECIFICATION IS REVISED.

The following changes, which form a part of FED-STD KKK-A-1822F, dated 1 August 2007, are approved by the General Services Administration, for use by all agencies.

If you have technical questions regarding this change notice, please contact John McDonald at jmcdonald@gsa.gov for assistance.

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1.1.1 DEFINITION OF AMBULANCE.

Delete paragraph 1.1.1.
Replace it with the following paragraph:

The ambulance is defined as a vehicle used for emergency medical care that provides:

a) A driver's compartment.
b) A patient compartment to accommodate an emergency medical services provider (EMSP) and one patient located on the primary cot so positioned that the primary patient can be given life-support during transit.
c) Equipment and supplies for emergency care at the scene as well as during transport.
d) Safety, comfort, and avoidance of aggravation of the patient's injury or illness.
e) Two-way wireless mobile communications.
f) Audible and Visual Traffic warning devices.

3.4.4 VEHICLE PERFORMANCE.

Delete paragraph 3.4.4.
Replace it with the following paragraph:

The ambulance shall provide a smooth, stable ride. When available from the OEM, electronic stability control (ESC) shall be furnished.

3.6.5.4 BRAKE SYSTEMS, SERVICE AND PARKING.

Delete paragraph 3.6.5.4.
Replace it with the following:

3.6.5.4 RESERVED

3.6.5.5 SPECIAL TRACTION (REAR END) DIFFERENTIAL.

Delete paragraph 3.6.5.5.
Replace it with the following paragraph:

All ambulances shall have electronic traction control (ETC) unless not furnished by the OEM. If ETC is not available from the OEM a positive traction, limited slip differential or automatic, locking type differential, shall be furnished.

3.6.5.6 SUSPENSION.

Delete paragraph 3.6.5.6.
Replace it with the following paragraph:

Vehicle shall be equipped with laterally matched sets (front and rear) of spring, torsion, hydraulic, or air suspension system components. Components shall have a rated capacity in excess of the load imposed on each member. Only corrections permitted by the OEM to compensate for lean due to normal spring tolerance variations are permitted. Correction of lean due to imbalance is not permitted.

3.6.5.8 SHOCK ABSORBERS.

Delete paragraph 3.6.5.8.
Replace it with the following:

3.6.5.8 RESERVED

3.7.1 ELECTRICAL SYSTEM.

Delete paragraph 3.7.1.
Replace it with the following paragraph:

The ambulance electrical system shall be equipped with, but not limited to, the following:

1. Dual, OEM's batteries.
2. Generating, starting, lighting, visual and audible warning systems.
3. Specified electronics equipment and devices
4. Other specified accessory wiring.
5. All electrical system components and wiring shall be readily accessible through access panels.
6. All switches, indicators, and controls shall be located and installed in a manner that facilitates easy removal and servicing.
7. All exterior housings of lamps, switches, electronic devices, connectors, and fixtures shall be corrosion resistant and weatherproofed.
8. Electrical fixtures attached to the exterior sides of the ambulance below the 75" level shall be near flush mounted and not protrude more than 2", except for such items as spotlights and ventilators.
9. All electrical devices and equipment installed, including the electromagnetic coils of high current solenoids, and relays etc, which produce RFI, shall include filters, suppressers, or shielding to prevent electromagnetic radiation and the resultant interference to radios and other electronic equipment.
10. Vehicles shall be immune from interference caused by wireless mobile communication transmissions.

3.7.5 HORNS.

Delete paragraph 3.7.5.
Replace it with the following:

The OEM's electric horn shall be furnished.

3.7.7.3 INTERNAL 12-VOLT DC POWER.

Delete paragraph 3.7.7.3.
Replace it with the following paragraph:

Two automotive "Power Point" type connectors shall be furnished, in the patient compartment. Each connector shall be rated for 12-volt DC, 20 ampere capacity, and be on a separately protected circuit.

3.9.1 DRIVER'S COMPARTMENT, CAB-BODY STRUCTURE.

Delete paragraph 3.9.1.
Replace it with the following paragraph:

All cab compartments shall be of sufficient size to accommodate a driver and passenger, with space to perform driving and control activities. There shall be a console convenient to driver in the driver's cab. The console shall contain all added switches for operation of the ambulance. Console systems added by the FSAM shall be SAE J3043 compliant and shall be labeled with their rated weight capacity.

3.9.2 CAB-BODY PROVISIONS.

Delete paragraph 3.9.2.
Replace it with the following paragraph:

An OEM two door cab shall be furnished that is suitable for the subsequent mounting of various ambulance equipment and bodies.

Driver's cab section shall provide:

a. Forward hinged doors.
b. Opening side windows.
c. Door stops.
d. External key operated door lock with two sets of keys.
e. Trim or closed panels and headliner (washable vinyl upholstery, or flooring type materials).
f. Floor covering (OEM's heat, noise and appearance trim packages).
g. Panel mounted instruments.
h. RESERVED
i. Ignition/starter switch.
j. Fuel gauge(s).
k. Oil pressure gauge.
l. Engine temperature gauge.
m. Speedometer and odometer.
n. Environmental controls (heater-defroster/air conditioner, etc.
o. RESERVED
p. Cab lighting and controls.
q. Tinted windshield.
r. All exposed interior surfaces shall be painted.

3.11.3 STORAGE COMPARTMENTS AND CABINETS DESIGN.

Delete paragraph 3.11.3.
Replace it with the following paragraph:

1) All interior enclosed stowage devices shall be tested to their rated weight capacity in accordance with the requirements of SAE J3058.
2) Stowage devices shall not come open in transit.
3) All interior enclosed stowage devices shall be labeled with their rated weight capacity.

4) All compressed gas cylinder(s) shall be mounted with a J3043 compliant restraining device(s).
5) Storage for the main oxygen cylinder, when furnished, shall be accessible for replacement from an outside position.
6) The oxygen compartment, when furnished, shall be provided with at least a 9 sq. in. of open vent to dissipate/vent leaking oxygen to the outside of the ambulance.
7) The Oxygen cylinder compartment, when furnished, shall not be utilized for storage of any other equipment.

3.11.6 LITTER FASTENERS AND ANCHORAGES.

Delete the following advisory statement from paragraph 3.11.6:

ALL LITTERS SHOULD ONLY BE USED WITH THE REQUIRED FASTENER ASSEMBLY AS PRESCRIBED BY THE LITTER MANUFACTURER.

3.12 OXYGEN, MAIN SUPPLY AND INSTALLATION.

Delete paragraph 3.12.
Replace it with the following:

When specified by the purchaser, the ambulance shall have a piped medical oxygen system. The purchaser shall specify the minimum capacity, in liters, of medical oxygen required.

The installed medical oxygen piping shall be leak tested to 80 PSI. After the successful completion of piping test, the system shall be completely assembled and the flow rate of the outlets tested with the system pressurized at normal working pressure. The system shall be capped then tagged with date and signature of person and firm performing the tests.

The main oxygen supply shall be from a compressed gas cylinder(s) that the consignee will provide and install at the time the vehicle is placed in service.

When required, a cylinder changing wrench shall be furnished. The wrench shall be chained and clipped within the oxygen cylinder compartment.

The cylinder controls shall be accessible from the inside the vehicle. A device shall be visible from the EMSP's seat that indicates cylinder pressure. The use of remote high pressure lines and gauges are not allowed.

The purchaser shall specify the type of quick disconnect, the location and the number of outlets to be furnished.

The FSAM shall install all other components and accessories required for the piped oxygen system which shall include as a minimum:

- A pressure regulator.
- Low pressure, electrically conductive, hose and fittings approved for medical oxygen.
- Oxygen piping shall be concealed and not exposed to the elements, securely supported to prevent damage, and be readily accessible for inspection and replacement.
- Oxygen shall be piped to a self-sealing duplex oxygen outlet station for the primary patient with a minimum flow rate of 100 LPM at the outlet.
- Outlets shall be marked and identified and not interfere with the suction outlet.

3.12.1 OXYGEN PRESSURE REGULATOR.

Delete paragraph 3.12.1.
Replace it with the following paragraph:

The medical, oxygen pressure reducing, and regulating valve with inlet filter at the cylinder shall have line relief valve set at 200 psi maximum, and a gauge or digital monitor with a minimum range of 0 to 2,500 psi with the gauge or display scale graduated in not more than 100 PSI increments. The regulator shall be easy to connect and preset, with a locking adjustment, at 50 +/- 5 psi line pressure.

With the regulator set at 50 +/- 5 psi, a 100 LPM minimum flow rate shall be available at all oxygen outlets.

This regulator shall perform as required at an inlet pressure range from 150 psi to 2600 psi.

3.14.1 COMMUNICATION EQUIPMENT.

Delete paragraph 3.14.1.
Replace it with the following:

3.14.1 RESERVED

3.14.2 WIRELESS MOBILE COMMUNICATION PROVISIONS.

Delete paragraph 3.14.2.
Replace it with the following paragraph:

When specified by the purchaser, ambulances will be provided with sufficient ventilated space for the specified wireless mobile communication devices

3.15.3 CONFIGURATION WORKSHEET.

Delete items 50, 53 and 54.
Replace them with the following:

50. If a medical oxygen system is required per 3.12. Specify the number and type of outlets (DISS, NCG, Chemtron, Ohmeda, Puritan Bennett, etc.) to be furnished. Specify the type and size of oxygen cylinder that will be furnished by the end user. If additional oxygen equipment is to be furnished by the FSAM, specify the manufacturer and model number to be furnished.

53. Provisions for wireless mobile communication devices are defined in 3.14.2. Specify the space required for all equipment and any antenna openings, ground plane, terminal wiring, etc required.

54. Are there provisions required for drive cameras or other electronic equipment?
If so, list here:

3.15.4 DEFINED OPTIONS (OPTION CODES).

Delete the following option codes and replace them with RESERVED:

3.15.4.2 CODE “HPL” PADDLE HANDLE DOOR LATCHES.
3.15.4.5 CODE “PSM & PSME” PARTS AND SERVICE MANUALS.

3.15.4.7 CODES “AWD & K02” OEM ALL WHEEL DRIVE.
3.15.4.17 CODES “RA, RAD & RACD”.
3.15.4.19 CODES “T5”, AND “T6”, FIVE, AND SIX SPEED MANUAL TRANSMISSION.
3.15.4.22 CODE “LEDV” BODY EXTERIOR DOT LIGHTING, LED.
3.15.4.23 CODE “SRP” RUSTPROOFING PER FED-STD 297E.
3.15.4.31 CODE “DVE2” FURNISH EXTRA INTERIOR HEIGHT.

4.3.3 CRITERIA OF CERTIFICATIONS.

Delete paragraph 4.3.3.
Replace it with the following paragraph:

The initial testing and inspections required for certification shall be performed by:

1. A Nationally recognized testing laboratory, recognized by OSHA under Appendix A to 29 CFR 1910.7.

OR:

2. An ISO/IEC 17025 accredited laboratory by an accreditation body that is recognized by the National Cooperation for Laboratory Accreditation (NACLA) or is a signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). The scope of accreditation shall include AMD tests 003-026 and the annex.

The individual certifications will remain valid for 5 years as long as the type of ambulance tested remains in production. Design changes during the 5 year certification period must be tested at the time of production release.

Certifications that appear on the ambulance need not be re-submitted (i.e.; DOT, EPA, etc.). Certification(s) will be acceptable in lieu of actual verification test during inspections providing supporting verifying data complying with 4.3.3 is on file for examination.

Certification from OEM and individual equipment manufacturers are acceptable providing they are not part of a system(s) or altered and in accordance with 4.3.4.

Type certifications of individual components and equipment products are acceptable.

Each ambulance constructed shall be tested by the FSAM to demonstrate compliance with AMD STDs 5, 9, 10, 15, 21, 25 & 26 and the annex. This is in addition to the initial type testing certification required.

Figure 3: 12-Volt DC Electrical System

Delete Figure 3, and all references to Figure 3.

Figure 5: Portable Equipment Battery Charging Circuit

Delete Figure 5, and all references to Figure 5.

END OF CHANGE NOTICE 11