



July 1, 2020

Federal Specification for the Star-of-Life Ambulance  
KKK-A-1822F  
Dated 1 August 2007  
Change Notice 13

**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](mailto:jmcdonald@gsa.gov) for assistance.

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### **3.5.1 CURB WEIGHT.**

Delete the existing paragraph and replace it with the following:

Non-permanently mounted equipment is considered to be part of the payload, not the curb weight.

Permanently mounted equipment (optional or standard) is considered to be part of the curb weight.

### **3.5.2 PAYLOAD CAPACITY.**

Delete the existing paragraph and replace it with the following:

The ambulance shall not be operated in an overloaded condition. EMSPs should determine that the actual load, to be placed on the vehicle, does not exceed the total usable payload as manufactured.

Any additional items attached to, or carried on the vehicle by the EMSP will reduce the combined weight of occupants and Cargo/Equipment that comprise the total usable payload.

Occupant weight shall be accommodated at 175 lbs. for each designated patient and seating position.

The required minimum payload (patients, passengers and cargo/non permanently mounted equipment) per vehicle shall be as follows:

1. Van ambulances (Type II) — 1,500 lbs.
2. Modular ambulances (Type I or III) — 1,750 lbs.
3. Additional duty modular ambulances (Type I AD or III AD) — 2,250 lbs.

The location of each ambulance's payload capacity, horizontal, lateral, and vertical CG shall be determined.

Horizontal and vertical CG of the loaded, completed ambulance shall be determined by completing an NTEA UltraMod spreadsheet. A copy of the UltraMod spreadsheet and lateral calculation shall be included in the handbook of instructions.

The following shall be shown on the calculations:

1. Completed vehicle at curb weight
2. 175 pounds at the lateral, horizontal and vertical center of each patient location and at the design H-Point of each designated seating and cot position
3. The maximum remaining Cargo/Equipment capacity located at the lateral, horizontal and vertical dimensional center of the patient compartment that does not result in weights that exceed the vehicle's weight rating capacities.

The total usable Cargo/Equipment capacity value of Figure 2, item 10 shall be displayed on the certification and payload signage as shown in Figure 1.

The label shall be located in a conspicuous location in the ambulance.

### **3.7.8.2 ELECTRICAL 125-VOLT AC RECEPTACLES.**

Delete the existing text and replace it with the following:

The patient compartment shall be furnished with two (2) AC duplex receptacles conforming to NEMA 5-15. All interior outlets shall be installed in accordance with Article 406 (Receptacles and Cord Conductors) of the NEC. One outlet shall be located on the primary patient action wall and the other shall be located in the right front cabinet/storage area. Both outlets shall be at least 12 in from any oxygen outlet. An indicator shall be located within each AC receptacle as a line monitor indicating a live (hot) circuit. The receptacles shall be labeled with the nominal voltage.

### **3.7.8.3 125-VOLT AC SYSTEMS.**

Delete the existing text and replace it with the following:

1. The electrical equipment and material indicated for connection to a wiring system rated 125 volts, nominal, 2-wire with ground shall incorporate a minimum 15 ampere circuit breaker which can be used as a master AC disconnect switch.
2. The AC wiring shall utilize stranded wire, Type SO or Type SEO cord with a WA suffix, rated at 600V and 194°F, covered with a minimum 300°F flame retardant wire loom, or approved wire in conduit.
3. All products shall be used only in the manner for which they were tested and found suitable.
4. Other sources of AC power shall be wired in full conformity with the requirements of this standard.
5. Grounding shall be in accordance with Section 250-.34 [Portable and Vehicle Mounted Generators] of the National Electrical Code (NEC).
6. All 125-volt AC receptacle outlets of the ambulance shall have ground fault circuit interrupter protection.
7. Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a lock nut and bushing connection; two lock nuts shall be provided, one inside and one outside of the enclosure. All cut ends of conduit shall be reamed or otherwise finished to remove rough edges.
8. Boxes are required for all inlets and/or outlets.
9. Non-metallic boxes shall be acceptable only with non-metallic conduit.
10. Boxes shall be mounted in accordance with Article 314 [OUTLET, DEVICE, PULL AND JUNCTION BOXES, CONDUIT BODIES AND FITTINGS] of the NEC.
11. No bend shall have a radius of less than five times the cable or conduit diameter, whichever is greater.
12. Tubing, conduit and loom shall be supported with clamps at the outlet boxes, distribution panel boards and splice boxes on appliances. Supports shall be provided every 24".
13. Where subject to physical damage, exposed type SO cable will be protected by guard strips, raceways or other means.
14. The branch circuit over current devices shall be rated:
  - a) Not more than the circuit conductors and
  - b) Not more than 150% of the rating of a single appliance rated 13.3 amperes or more and supplied by an individual branch circuit, or according to the appliance manufacturer
  - c) Not more than the over current protection size marked on motor-operated appliances

### **3.8.2.1 EMERGENCY LIGHTING SYSTEM CONFIGURATION.**

Delete paragraph 3.8.2.1 and replace it with the following paragraph:

The ambulance standard emergency warning light system shall contain twelve fixed red lights, one fixed white light and one fixed amber light. These lights shall function in a dual mode system as shown in Table 1 and meet the physical and photometric requirements. The upper body warning lights shall be mounted at the extreme upper corner areas of the ambulance body. The single clear light shall be centered between the two front facing, red, upper corner lights or in a dedicated housing mounted forward of the body near the cab roof. If due to limited body dimensions and physical size of the outboard forward facing lights, the lights may also be mounted in dedicated housings on the cab roof. Doors or other ancillary equipment shall not obstruct the standard warning lights. The amber light shall be symmetrically located between the two rear facing red lights. The red "grille" lights shall be located at least 30" above the ground and below the bottom edge of the windshield and be laterally separated by at least 18", measured from centerline to centerline of each lamp. The lateral facing intersection lights shall be mounted as close as possible to the front upper edge of each front fender and may be angled forward a maximum of 30°. All warning lights furnished shall be mounted to project their highest intensity beams on the horizontal plane.

Alternate approved lighting systems are NFPA 1901 compliant or SAE J2498 compliant.

### **3.14 COMMUNICATIONS.**

Delete paragraph 3.14.1 and replace it with the following paragraph

#### **3.14.1 VEHICLE DATA MANAGEMENT EQUIPMENT.**

The purchaser shall specify what type of vehicle data management equipment accommodations are required. The purchaser and FSAM shall define the necessary accommodations to be provided by the FSAM necessary to support the specified equipment

If no vehicle data management equipment provisions are required, the purchaser shall specify that no vehicle data management equipment accommodations are to be provided by the FSAM

Delete paragraph 3.14.2 and replace it with the following paragraph

#### **3.14.2 RADIO (MOBILE) PROVISIONS.**

The purchaser shall specify what type of radio communications equipment accommodations are required. The purchaser and FSAM shall define the necessary accommodations to be provided by the FSAM necessary to support the specified equipment

If no radio communications equipment provisions are required, the purchaser shall specify that no radio communications equipment accommodations are to be provided by the FSAM

Delete paragraph 3.14.3 and replace it with the following paragraph

#### **3.14.3 RESERVED**

### **3.14.4 SIREN – PUBLIC ADDRESS SYSTEM.**

Delete the existing text and replace it with the following:

A combination electronic siren with integral public address system including radio interface capability shall be provided. A “Horn/Siren” switch shall be provided. When shall activate or change the siren tone when the horn button is pushed. The speaker(s) shall be installed, outside the vehicle, in the bumper/hood area.

The siren system shall be compliant with the current edition of SAE J1849 (Emergency Vehicle Sirens).

### **3.15.3 CONFIGURATION WORKSHEET**

Delete the existing item 53 text and replace it with the following:

53. RESERVED

Delete the existing item 54 text and replace it with the following:

54. Consideration should be given to the many types of vehicle data management systems available based on your locality’s data infrastructure.

Some examples are:

Vehicle Data Recorders

Telematics

Vehicle to Everything communications (V2X) which includes:

- Vehicle to Vehicle (V2V)
- Vehicle to Pedestrian (V2P)
- Vehicle to Network (V2N)

Digital Alert Warning System (DAWS)

Traffic Preemption

Delete the existing item 55 text and replace it with the following:

55. SAE J1849 defines a Siren as, “A device or system for producing acoustical signals that continuously vary in frequency and call for the right-of-way of an emergency vehicle”

If a specific decibel level, frequency level, combination of both or a specific manufacturer’s siren and/or control system is required to fulfill the requirements of Section 3.14.4, list here:

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### **3.16.2 COLOR, PAINT, AND FINISH.**

Delete the existing text and replace it with the following:

Unless otherwise specified by the purchaser in section 3.15.3, the exterior color of the ambulance shall be gloss white in combination with a solid uninterrupted orange stripe and blue lettering and emblems. The stripe should be as close to parallel as possible with the road but a stripe transition angle is acceptable to connect the module beltline stripe with the chassis stripe. The orange stripe shall not be less than 6" wide, nor more than 14" wide and

shall encircle the entire ambulance body at the belt line below the bottom edge of cab windows but may exclude the front of the hood panel. The orange stripe shall be reflective tape. This single, solid band (except when interrupted by windows, locks, etc.), when viewed horizontally, shall appear as a stripe near parallel to the road.

The interior finish shall be the FSAM's standard light color harmonizing with the color of upholstery.

All coatings applied by the FSAM shall be applied in accordance with the coating manufacturer's directives.

After application of the final coating, surfaces shall be smooth and uniform. In lieu of the applicable requirements of section 3.20, the coating shall be in compliance with the coating manufacturer's Coating & Surface Deformation Standard Commercial Acceptance requirements.

Should the coating manufacturer not offer a Coating & Surface Deformation Standard Commercial Acceptance requirement, the applicable sections of 3.20 shall apply.

### **3.16.2.1 RESERVED**

### **4.3.3 CRITERIA OF CERTIFICATIONS.**

Delete the existing text and replace it with the following:

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 004-026, 28 and the annex.

The individual certifications issued by the ISO/IEC 17025 accredited laboratory 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.

**END OF CHANGE NOTICE 13**