Ambulance Manufacturers Division (AMD)

An Industry Division of the National Truck Equipment Association
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TO: Dia Gainor, MPA
    Executive Director
    National Association of State EMS Officials
    201 Park Washington Court
    Falls Church, VA 22046

May 4, 2012

Dear Dia,

Thank you for the opportunity to speak with you last week. To highlight our conversation, we greatly
appreciate contact with NASEMSO, and we are glad to act as a resource for information to assist
your members.

AMD not only serves our membership but also the EMS industry at large and stand ready to assist as
needed. By way of background, the AMD was founded in 1976 and became an industry division of
the NTEA in 1986 to further enhance its position in the industry and depth of professionalism.
Approximately 65 companies are members of AMD, an association that has consistently represented
more than 90% of all North American ambulance production.

In addition to the 25 consensus Standards that AMD has developed to validate the performance
requirements contained in the Federal Star-of-Life Ambulance Specification, KKK-A-1822, the group
has actively participated in both the GSA Specification and the upcoming NFPA 1917-1: Standard for
Automotive Ambulances. The AMD and NTEA are also signed partners in the research program
being conducted by the National Institute for Occupational Safety and Health (NIOSH) and are
providing the forum and committee support in which new occupant safety strategies are being
developed for the ambulance patient compartment. We believe this research program will yield future
requirements and test methodologies that will provide a new level of safety for our Nation’s EMS
personnel and their patients.

From the group’s exposure to both the KKK-A-1822F Specification and the upcoming NFPA 1917-1
Standard, we offer the following information as a highlight of some of the differences between the two
sets of requirements that may be of particular interest to NASEMSO members:

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<tbody>
<tr>
<td>Max Speed</td>
<td>4.12.3</td>
<td>Maximum speed of ambulance to be 77 mph or less, depending on tire rating.</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Validation/Testing</td>
<td>9.9.6.2, 4.7 and 4.7.8</td>
<td>Third-party certifies results for testing of any power source greater than 3kW. Ambulance Manufacturer certifies results of other required tests. ’Type tests’ valid for up to 7 years.</td>
<td>4.3.3 in KKK-A-1822F Change Notice #3, 6-25-09</td>
<td>All initial tests of an ambulance model performed by an ISO/IEC 17025 accredited laboratory. Ambulance mfr. performs six tests on each production unit. ’Type tests’ valid for up to 5 years.</td>
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<tr>
<td>Floor Height of Patient Compartment</td>
<td>N/A</td>
<td>No requirement. Annex item A.6.14.2 added during Report on Comments indicating industry std. range of 34” – 36”.</td>
<td>3.4.10.6</td>
<td>34” maximum floor height – Specification assumes 4x2 as basic ambulance drive system. 4x4 is optional, so no max height specified.</td>
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<tr>
<td>Eq. Mounting</td>
<td>6.18.2</td>
<td>Equipment weighing 3 pounds or more mounted or stored shall be contained in an enclosed compartment capable of withstanding a 10G force in all directions.</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Seating/Restraints Testing</td>
<td>6.21.1</td>
<td>Seat Integrity. On adjustable seats, use SAEJ2917 dynamic testing. Note: anthropomorphic test device (ATD) not specified for use in test – only seat/restraints tested.</td>
<td>2.1</td>
<td>Must meet all applicable Federal Motor Vehicle Safety Standards, including seating/restraints.</td>
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<tr>
<td>Seat Belt Monitoring</td>
<td>6.21.10</td>
<td>minimum seat belt visual or audible warning requirement accepted by Committee as noted in Report on Comments.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Reflective Striping</td>
<td>6.25</td>
<td>Chevrons required to cover 50% of rear surface. Chevron colors must alternate between red and several options of yellow or green. 4” retroreflective striping on 25% of width and 50% of length.</td>
<td>3.16.2</td>
<td>6” – 14” wide reflective orange stripe around beltline.</td>
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A copy of the documents mentioned in the table above accompany this letter.

As we discussed during our call, the NFPA 1917 document is scheduled to be published on June 24th of this year, although we now understand that there may now be a month delay due to motions on the document that will be considered during the NFPA annual meeting in mid-June. Regardless of the publication date, if the Standard meets the needs of the GSA, the Administration will use the 1917 Standard as their basis for future ambulance procurement. Given this, the KKK-A-1822F Specification would be abandoned and unsupported after existing GSA contracts expire, which is estimated to be as early as the 3rd Quarter, 2013.

AMD believes that the 1917 Standard will be viewed as 'the national ambulance Standard'; and manufacturers will have to make decisions as to whether they are compelled to build to these requirements, due to its status, even if customers do not require it. Meanwhile, the KKK-A-1822F Specification will continue to exist as a public document, along with the accompanying AMD Standards 001 – 025, and manufactures will be then be faced with multiple ambulance design/construction requirements, and possibly the 'blending' of both sets requirements at the desire of individual customers.

While differences exist between these two sets of requirements, the AMD wishes to stress that uniformity of requirements among the States would be as much if not of more importance to the industry than the requirements that the States elect to use. Establishing consistency of ambulance construction will enable manufacturers to minimize product customization and provide economies of scale that will additionally benefit ambulance customers.

There is already a great deal of variation in the layout and equipment options of ambulances in the marketplace, and creating additional variety in the requirements for what these already customized
vehicles must meet will unnecessarily increase costs and lead times while forcing manufacturers to reduce variation in their product offerings, possibly leading to reduced competition.

A current example of the effects of multiple ambulance Standards can be seen today in Canada, where individual Provinces have developed their own ambulance construction Standards. In the absence of a National Standard, these Provincial standards continue to evolve away from each other. For example:

- The Ontario Standard requires the ambulance manufacturer to perform cot retention pull tests in order to determine a maximum rating for the retention system, where the other provinces specify the minimum load for the pull tests, ranging from 2200 to 2750 pounds.

- For cabinet structure, Alberta requires the manufacturer to physically pull test every cabinet-to-wall and/or floor attachment, while the rest of the provinces have no requirement.

- For equipment and material retention, Ontario requires any single item weighing over 30 pounds, as well as the rated weight content of storage compartments, to be subjected to a 10g loading. Alberta has similar requirements for anything weighing over 11 pounds, while the rest of the provinces have no such requirement.

- Additionally, Quebec requires that every test be witnessed by an employee of the Quebec government and the manufacturer has to pay for the lodging and meals of the inspector, where the other provinces have no requirement for testing to be witnessed.

These variations in provincial ambulance standards have actually led to manufacturers having to hire personnel specifically to monitor and track changes these requirements. The cost of certification testing alone for a single ambulance model to cover each of the provinces and to have national distribution in Canada is approximately 5 times the cost of compliance to the KKK-A-1822F Specification for distribution across the US.

Given this, AMD supports a "model law" effort to provide States with the necessary legislative tools to provide such a uniform requirement for ambulance construction, and we are willing to support such an effort to help minimize the variation of ambulance requirements that multiple industry standards/specifications would create.

In addition to consistency in design/construction requirements for ambulances, we highly recommend a uniform model process for qualifying state inspectors of ambulance. Uniformity of the inspections and procedures themselves would be even better, but establishing minimum criteria for relevant inspector qualifications would go far to prevent the daily occurrences of vehicles being detained due to improper inspection and misapplication of requirements.

We look forward to furthering our working relationship, especially in areas of mutual interest, and to routinely share updates on our respective activities.

Thank you,

Paul Holzapfel, AMD President