



Information Report

Repair or Replacement of Components on School Buses

Background:

As with all types of motor vehicles, various components on school buses will require repair or replacement. Some components require repair or replacement as a result of failure or expected wear, for example burned out light bulbs, worn brake pads, or a leaking fuel pump. Other components require repair or replacement as a result of damage, breakdown, or even vandalism, such as a broken mirror, severely damaged body components, or damaged seat padding. How these repairs and replacements are completed, in terms of the components used and the workmanship of the technician, is important to the safe operation of the school bus.

Discussion:

Maintaining safety compliance of school buses is critical, and many equipment items and components are safety related. These items are either individual safety components or part of a safety system that is necessary for the school bus to comply with applicable Federal Motor Vehicle Safety Standards (FMVSSs) or the safety requirements of a state, local school district, or contracted service provider. For example, a damaged stop signal arm, broken emergency exit door handle, or a broken rear view mirror are deficiencies in safety components that are integral to a system required by FMVSS to meet a performance standard applicable to each system. As examples, a leaking air chamber is part of the braking system, a worn out tie rod is part of the steering system, and a seat back with missing or heavily damaged cushioning material is part of the passenger crash protection system.

Whenever a failed or damaged safety-related component is repaired or replaced, it is important to ensure that the repaired or new component performs in such a manner that the school bus continues to meet the requirements of the applicable FMVSSs and the safety requirements of the state and local school district and the contractor (if applicable) for which it is operated. This involves both the quality of the component as well as the procedures used in its repair, replacement, and installation. If a repaired or replaced component does not perform at least as well as the original equipment component, or is not installed properly, then the safety level of the school bus will be compromised.

Motor vehicle manufacturers, parts suppliers and their organizations work closely to develop requirements and guidelines for the manufacture of replacement components on motor vehicles. These include not only design and performance specifications for the component and quality of manufacture, but also the number of years for which the component must continue to be made available. All repairs and replacements should be done in accordance with the original equipment manufacturer's recommendations.

In some instances, the replacement component is made by the same company that supplied the original parts to the vehicle manufacturer. In other instances, such as light bulbs, lenses, brake fluid, and tires, the component must be labeled as complying with an applicable FMVSS.

While there are no government regulations to ensure components continue to be made available for a specified period of time, market forces usually dictate the continued availability of replacement components for all motor vehicles, including school buses, throughout their useful life. Modifications to any replacement component should not be made without approval from the original equipment manufacturer or equivalent.

Conclusions:

Whenever a component that affects the safety of a school bus needs to be repaired or replaced, it should be done in such a manner that the component and the system of which it is a part performs at least as well as the component and system originally installed on the school bus during manufacture. Since all school buses must be certified by the manufacturer as meeting all applicable FMVSSs before they are sold and first put into operation, it is important that any safety components that are repaired or replaced perform in such a manner that the school bus continues to meet the requirements of the applicable FMVSSs and the safety requirements of the state and local school district (and contractor, if applicable) in which the bus is operated. Since neither the manufacturer nor the federal government has any authority over how motor vehicles are operated and maintained by their owners, the state and local school district and contractors should establish requirements with respect to the inspection, repair, and replacement of school bus components, especially those components that may affect school bus safety. All repairs and replacements of parts should be done in accordance with manufacturer's recommendations, and modifications should not be made without their approval.

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