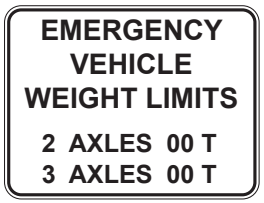
resulting from the family of typical emergency vehicles that is covered by the FAST Act:

1. Type EV2 – for single rear axle emergency vehicles (2 axles); GVW = 28.75 T

2. Type EV3 – for tandem rear axle emergency vehicles (3 axles); GVW = 43 T

The Wyoming Department of Transportation uses signs specific to emergency vehicles to ensure they can safely cross the structure. Interpretation of the sign is essential for the safety of the response crews and ensures the bridge remains safe for other users once the emergency has passed.

The following sign (or similar) is used when the bridge is load posted for emergency vehicles.



Regardless of how much of the total weight of a vehicle is actually on the bridge, the GVW must be equal or less than the limit next to the applicable vehicle. A blank indicates that vehicle is allowed to cross up to the legal GVW for that configuration.

OPERATING TIPS FOR LOCAL DEPARTMENTS

Fire apparatus operators must be familiar with the roads and bridges over which they travel. Detailed lists of bridges in your coverage zone are available from the WYDOT Bridge Program upon request. Additional guidance can be found in the following resources:

- *Fire Apparatus Safety Guide*, Fire Apparatus Manufacturers' Association (FAMA), 2013

- *Standard for a Fire and Emergency Service Vehicle Operations Training Program (NFPA 1451)*, National Fire Protection Association (NFPA), 2018

A WYDOT PUBLICATION

January 2021

Load Posting Signs for Emergency Vehicles

How They Are Used

WYOMING DEPARTMENT OF TRANSPORTATION

Load Posting Signs for Emergency Vehicles and How They Are Used

In December 2015, the Fixing America's Surface Transportation Act (FAST Act) was signed into law that revised the weight limits for Emergency Vehicles for bridges on the Interstate System and within reasonable access. The code also ensures that vehicles that are allowed on Interstate System must also be allowed access to the highway system.

An emergency vehicle as defined in the FAST Act is designed to be used under emergency conditions to transport personnel and equipment to support the suppression of fires and mitigation of other hazardous situations. The gross vehicle weight limit for emergency vehicles is 86,000 pounds. The statute imposes additional axle limits, depending upon vehicle configuration.

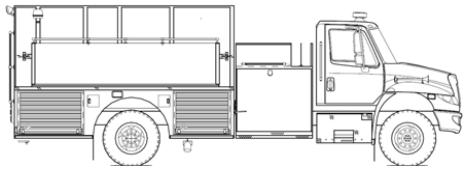
Emergency vehicles in general, especially those used in fire suppression, are often heavier and larger than typical commercial vehicles. Fire suppression requires large volumes of water leading to large loads. Use of small capacity tankers is less efficient and increases response time. Emergency vehicles with aerial devices are heavy due to the total mass required to counterbalance the horizontal and vertical reach requirements of ladders and platforms.

Bridges not designed for modern trucks and bridges with structural elements needing repair or replacement are susceptible to stresses above the safe limit due to emergency vehicle crossings. Regular inspections identify those elements that require repair or replacement to remain safe and serviceable.

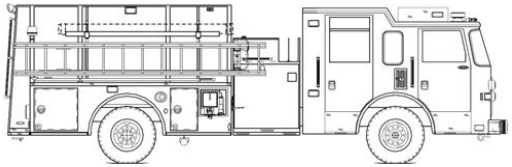
The Federal Highway Administration (FHWA) has determined that, for the purpose of load rating, two emergency vehicle configurations produce load effects in typical bridges that envelop the effects

Emergency Vehicles with Two Axles

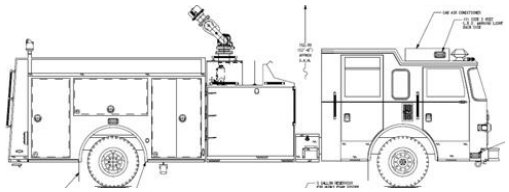
Examples[1]



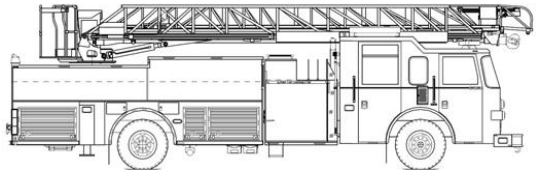
COMMERCIAL CHASSIS PUMPER
GVW: 16.5 T (min), 24.5 T (max)
Length: 24' (min), 35' (max)



CUSTOM CHASSIS PUMPER
GVW: 21 T (min), 27.5 T (max)
Length: 30' (min), 34' (max)



INDUSTRIAL FOAM PUMPER
GVW: 22 T (min), 27.5 T (max)
Length: 30' (min), 36' (max)

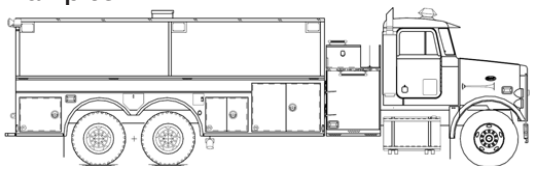


AERIAL LADDER
GVW: 22 T (min), 28.9 T (max)
Length: 36' (min), 43' (max)

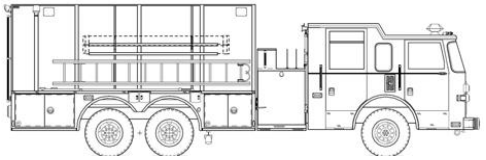
[1]Figures from Fire Apparatus Manufacturers' Association (FAMA), *Emergency Vehicle Size and Weight Guide*

Emergency Vehicles with Three Axles

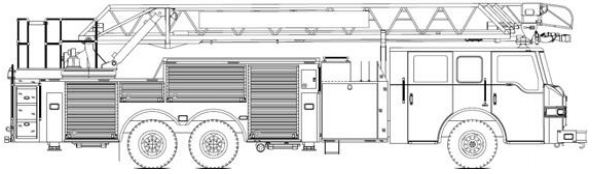
Examples[1]



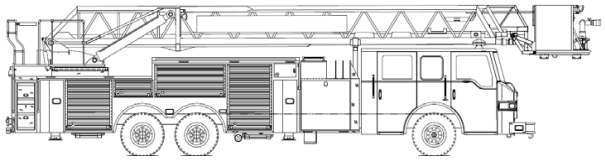
COMMERCIAL CHASSIS TANKER
GVW: 23 T (min), 37 T (max)
Length: 30' (min), 40' (max)



CUSTOM CHASSIS TANKER
GVW: 29.3 T (min), 39.4 T (max)
Length: 24' (min), 35' (max)



AERIAL LADDER
GVW: 27 T (min), 38.4 T (max)
Length: 39' (min), 43' (max)



AERIAL PLATFORM REAR MOUNT
GVW: 33.7 T (min), 43 T (max)
Length: 46' (min), 48' (max)