

TANK VEHICLE INSPECTIONS

As mandated by 527 CMR 8.00, before a Massachusetts registered tank vehicle may be used for the transportation of combustible liquids (not flammable liquids) it must be inspected, approved, and issued an approval decal which shall serve as a *permit to transport combustible liquids*.

If a tank vehicle transports both flammable and combustible liquids, either together in a split load or alternately, the vehicle may be inspected, and if approved, issued a permit to transport combustible liquids. Tank vehicles transporting combustible liquids, in specification containers in accordance with U.S. Department of Transportation (DOT), Title 49 CFR for flammable liquids are exempt from obtaining a *permit to transport combustible liquid* provided a *certificate of exemption* is obtained from the head of the fire department. (Tank vehicle owners transporting in accordance with DOT regulations may still opt for an inspection and permit.)

All permits to transport shall expire on August 31, 2014, and of each even numbered year thereafter. It is incumbent on the owners of tank vehicles to make certain that their equipment is operating safely in accordance with 527 CMR 8.00, and has been duly inspected by the fire department and a permit to transport issued or obtained a certificate of exemption, if desired.

PERMITS 527 CMR 8.04

If the transport vehicle is operating in compliance with 527 CMR 8.00, a permit to transport (fluorescent orange colored decal) should be issued. If the vehicle fails to

comply, violations should be noted, and the inspection should be rescheduled after any violations have been corrected.

Applications for an inspection must be submitted by the vehicle owner to the head of the fire department where the vehicle is parked overnight (8:04(2)).

The application shall be made on form FP44. Fire departments must make copies of this form provided by our office.

The tank vehicle owner must fill out the top half of the FP44 (application). This copy shall remain with the fire department. The bottom half of the FP44 (PERMIT) must be carried with the transport vehicle. The original PERMIT must remain with the vehicle, photocopies will not be accepted as proof of a valid *PERMIT* to transport. A permit to the transport shall consist of the FP44 *PERMIT* and the orange decal to be attached to the upper left quadrant of the cargo tank, portable tank or transfer tank (8.04(4)).

PLACARDING (Portable tanks 527 CMR 8.06)

A portable tank is any container designed primarily to be loaded onto, or on, or temporarily attached to a transport vehicle and equipped with skids, mountings, or accessories to facilitate handling of the tank by mechanical means.

Portable tanks transporting combustible liquids with capacities of 1000 gallons or more must be marked on each side and each end in accordance with section 8.05. Portable tanks having capacities of less than 1000 gallons need only be marked on opposing sides (8.06(1)).

Based on federal regulations, the vehicle must be marked with the owner or lessee's name. In addition, the proper shipping name shall be on two opposing sides (49 CFR 172.326) – information only.

If the markings on a portable tank are not visible (i.e. inside a box trailer), the transport vehicle or freight container must be marked in accordance with 8.06(1) and 8.05.

Each portable tank, which is required to be marked or placarded in accordance with this regulation, must remain marked and placarded when empty unless it is:

- Reloaded with material not subject to 527 CMR 8.00; or
- Sufficiently cleaned of residue and purged of vapor to remove any potential hazard.

Portable tanks transporting Class III combustible liquids shall be exempt from the placard requirements.

CARGO TANKS

ACCIDENT DAMAGE PROTECTION (527 CMR 8.09)

Every cargo tank must have a rear bumper or device to protect the tank and piping in the event of a rear end collision. The bumper must extend at least 4 inches below the lowest point of any piping at the rear of tank and be located so that the

bottom of the bumper and the ground not exceed 30 inches when the tank is empty. No part of the vehicle can be more than 18 inches beyond the bumper.

CLOSURES FOR MANHOLES M (527 CMR 8.11)

Manhole covers shall be designed to provide secure closure of the manhole.

All joints between covers and their seats shall be made tight against leakage of liquid or vapor.

OUTLETS (527 CMR 8.11)

Bottom outlet discharge piping must be provided with protection to prevent the accidental release of product. This may be accomplished by a shear section located just below the tank, which will break under strain and leave the valve seat and the attachment to the tank intact without losing product. The shear section must be machined in such a way to reduce the wall thickness of the piping or valve material by at least 20%. Suitable guards capable of absorbing a force of 8,000 pounds horizontally (a Volkswagen "Bug" traveling 5 mph) may be installed in lieu of a shear section.

- Internal valves in product discharge piping must be kept in working order and be closed while the vehicle is in transit.
- Product discharge piping must be located at least 12 inches above the road.
- All draw off valves or faucets must be designed so a tight hose connection can be made.

On vehicles equipped with emergency remote shutoffs Federal regulations require emergency remote shutoffs be marked in 3/4 inch contrasting colors (49 CFR 328 paragraph D) – (information only).

STATIC PROTECTION (527 CMR 8.12)

No chain or other metal attached to a tank vehicle shall be permitted to drag on the ground.

LIGHTING (527 CMR 8.13)

Electric wiring shall have current carrying capacity and mechanical strength, and must be secured, insulated, and protected from physical damage, in keeping with good engineering practices.

EXHAUST SYSTEM (527 CMR 8.14)

The exhaust system including the muffler and exhaust line must have ample clearance from the fuel system and combustible materials and shall not be exposed to leakage or spillage of product or accumulations of grease, oil and gasoline.

FIRE EXTINGUISHERS (527 CMR 8.15)

Each tank vehicle must have 1 or more hand held fire extinguishers of combined 2A: 20BC rating. Extinguishers must be kept in operating condition and located in an accessible place on each vehicle.

TRANSFER TANKS

A transfer tank is any container having a liquid capacity of less than 119 gallons into which combustible liquids are loaded, and drawn out by means of a pump assembly.

The tank must be securely mounted to the vehicle body or truck bed. It must be constructed of not less than 14-gauge steel or 1/8 inch aluminum.

The liquid must be drawn from the top of the tank by a suitable pump, which has a durable hose and self-closing nozzle.

The vehicle must have a fire extinguisher of at least 1A, 10B, C rating.

PLACARDS ARE NOT REQUIRED.

The orange decals are numbered. Please make sure the permit number is included on the FP44, both application and *PERMIT*. No part or copy of this form should be sent to the State Fire Marshal's Office, local fire departments should retain this information in their files.

PLACARDING (Cargo tanks 527 CMR 8.05)

A cargo tank is any container having a liquid capacity of 119 gallons or more intended primarily for the carriage of combustible liquids, including appurtenances, reinforcements, fittings, and closures and which:

- Is permanently attached to or forms part of a motor vehicle, or is not permanently attached to a motor vehicle but which by reason of its size,

construction or attachment to a motor vehicle is loaded or unloaded without being removed from the motor vehicle; and

- Is not fabricated under a DOT specification for portable tanks; and
- Does not solely supply fuel for the propulsion of the transport vehicle upon which it is mounted.

All cargo tanks transporting Class II or IIIA combustible liquids, regardless of the quantity being transported must be legibly marked on each side, and each end with a square-on-point red placard measuring at least 9-1/2 inches on each side, the outer 1/2 inch of which must be white, bearing the hazardous material identification number (i.e. 1993 for fuel oil) of the content, and the configuration of a flame (8.05(3)).

Cargo tanks transporting Class IIIB combustible liquids shall be exempt from the placarding provision of 527 CMR 8.05.

When a hazardous material identification number is displayed on a placard the UN hazard class number of that material must be displaced in the lower corner of each placard.

- The word "Combustible" may be used instead of the hazardous material identification number (8.05(3)).
- On cargo tanks used exclusively for the transportation of fuel oil the words "Fuel Oil" may be used (8.05(3)) and located on both sides and rear of the cargo tank
- For cargo tanks which transport flammable and/or combustible liquid petroleum distillate fuel (i.e. gasoline -1203 and fuel oil-1993) the hazardous material identification number of the flammable liquid may be used i.e. 1203 (8.05(2)).

Each cargo tank, which is required to be marked or placarded in accordance with this regulation, must remain marked and placarded when empty unless it is:

- Reloaded with a material not subject to 527 CMR 8.00; or
- Sufficiently cleaned of residue and purged of vapor to remove any potential hazard.

GENERAL (527 CMR 8.21)

No cargo tank, portable tank or transfer tank shall be mounted in the bed or body of a vehicle which contains a hoist to raise such bed or body.

Tank vehicles shall not be operated unless they are in proper repair, devoid of accumulations of grease, oil or other combustibles and free of leaks.

Whoever violates the provisions of 527 CMR 8.00 shall be subject to M.G.L. Chapter 148, section 15: *Whoever knowingly violates or knowingly causes or permits the violation of any regulation adopted and prescribed for the transportation of gunpowder and other explosives or explosive or inflammable fluids or compounds shall be punished by a fine of not more than one thousand dollars by imprisonment for not more than one year, or both.*

CERTIFICATE OF EXEMPTION

Tank vehicles transporting combustible liquids, in specification containers in accordance with DOT, Title 49 CFR for flammable liquids, are exempt from obtaining a permit to transport combustible liquids provided a Certificate of Exemption is obtained from the head of the fire department.

Application for a Certificate of Exemption must be submitted by the vehicle owner to the head of the fire department where the vehicle is parked overnight (8.04(7)).

It is not necessary for fire department to inspect tank vehicles prior to issuing a Certificate of Exemption. The applicant for exemption must affirm on the application that the tank vehicle meets the specifications for transporting flammable liquids in accordance U.S. DOT, Title 49 CFR. Upon receipt of a completed application the fire department needs only to issue the Certificate of Exemption.

Certificates of exemption shall remain in effect provided the tank vehicle is maintained in accordance with U.S. DOT, Title 49 CFR, specifications for transporting flammable liquids (no expiration date).

Since fire departments do not have to inspect vehicles before issuing a Certificate of Exemption, merely complete and return the certificate, we urge cities and towns to not charge a fee.

Original *certificates of exemption* or *permits to transport combustible liquids* must be carried in the transport vehicle at all times. Therefore, *a tank vehicle transporting combustible liquids must have either a permit to transport" or a "certificate of exemption";* otherwise they are in violation of 527 CMR 8.00

