



Think Safety!

A Publication Of The West Virginia Propane Gas Association

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Delivering Propane: Inspections And Procedures

Fall is upon us which likely means delivery personnel are scurrying about to keep up with demand.

It is important to remember what they mean to the customer – to many he or she is the company. In most situations, the delivery driver has more contact with the cus-

tomers than any other employee.

Of course, the driver should be courteous and professional, but the driver is more than just a public relations representative. An untrained or poorly trained delivery driver puts your customer's safety at risk and

exposes the company to increased liability.

In this issue of *Think Safety* we will discuss trip inspections, hose inspections, hose assembly inspections, and delivery procedures.



Trip Inspections:

Drivers are required to make pre-trip and post-trip inspections of their vehicle to make sure the vehicle is in safe operating condition. He or she should also review the last driver's inspection report made on that vehicle. If the previ-

ous report included problems noted with the vehicle, repairs should have been made and the driver should sign the inspection report to verify repairs have been made to correct the problems.

An inspection should include

the following components:

- Service brakes, including trailer brake connections for any trailer
- The parking brake
- Steering
- Lights and reflectors
- Tires
- Horn
- Windshield wipers
- Rear-vision mirrors
- Coupling devices

extinguisher, at least one spare electrical fuse or other overload protection device and warning devices for stopped vehicles such as reflective triangles.

At the end of the day, the vehicle should receive a post-trip inspection and a written report completed to verify that the vehicle is still in safe operation. Any problems should be noted for repair.

Before the driver leaves the plant, he should be satisfied that the vehicle has properly working emergency equipment including a charged fire



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Articles in this publication are for information only. Nothing in this publication is to be construed as setting standards or requirements. Please consult with appropriate regulatory and rulemaking bodies for all legal requirements.

Hose Inspections:



U.S. DOT cargo tank unloading regulations require specific delivery hose and emergency discharge system inspections during each unloading operation. Additional monthly and annual inspections of delivery hoses and testing of the internal self-closing stop valve ("belly valve") are required as well. This applies to all operators of cargo tank motor vehicles.

The off-truck remote shut-off activation device should be tested daily. The system should be able to close the internal self-closing stop valve and

the test should be at least 150 feet away when conducting the test with a wireless transmitter/receiver. The cargo tank may be in the line of sight.

Each bobtail delivery hose must include a unique identification number and the working pressure. These should be permanently marked on the hose. The portion of the hose deployed during a delivery should be visually inspected after each delivery to make sure there is no damage.

In addition, the following monthly inspections should be conducted on the delivery ap-

shut off all motive and auxiliary power equipment. The shut-off device should be successfully tested within 18 hours prior to the first delivery of the day. The person conducting

paratus:

1 Visually inspect each delivery hose assembly at least once each calendar month the delivery hose assembly is in service. The hose must be completely unrolled from the hose reel during the inspection.

2 Visually inspect the piping system at least once each calendar month the cargo tank is in service. The inspection must include fusible elements and all components of the piping system, including bolts, connections, and seals.

The following rejection criteria should be used for the piping system:

- Any external leak identifiable without the use of instruments.
- Bolts that are loose, missing, or severely corroded.
- Manual stop valves that will not actuate.
- Rubber hose flexible connectors with any condition such as leaks, extreme wear or any other condition that poses a possible safety concern.
- Stainless steel flexible connectors with damaged re-

inforcement braid.

- Internal self-closing stop valves that fail to close or that permit leakage through the valve detectable without the use of instruments.

- Pipes or joints that are severely corrode.

At least once each calendar month a cargo tank is in service, the operator must actuate all emergency discharge control devices designed to close the internal self-closing stop valve to assure that all linkages operate as designed. All internal self-closing stop valves must be opened. Each emergency discharge control remote actuator must be operated to ensure that each internal self-closing stop valve's lever, piston, or other indicator has moved to the closed position.

The operator of a cargo tank must check the internal self-closing stop valve in the liquid discharge opening for leakage through the valve at least once each calendar month

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Hose Inspections:

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the cargo tank is in service. The meter may be used as a flow measurement indicator. The meter flow must stop within 30 seconds with no meter creep within five seconds after the meter stops. On pump-actuated pressure differential internal self-closing stop valves, the valve must be closed with the remote actuator to assure that it is functioning. On other types of internal self-closing stop valves, the valve may be closed using either normal valve control or discharge control system.

The operator must note

each inspection in a record. That record must include the inspection date, the name of the person performing the inspection, the hose assembly identification number, the company name, the date the hose was assembled and tested, and an indication that the delivery hose assembly and piping system passed or failed the tests and inspections. A copy of each test and inspection record

must be kept by the dealer at his office or wherever the vehicle is housed or maintained.

The record should be kept until the next one is successfully completed.



New or Repaired Delivery Hose Assemblies:

Each operator of a cargo tank must ensure each new and repaired delivery hose assembly is tested at a minimum of 120 percent of the hose maximum working pressure. The hose should be examined while it is under pressure. After a successful test is completed on the hose, the date of the test must be permanently marked on the hose assembly with the month and year of the test.

The test must be documented. The record must include the date, the signature of the inspector, the hose owner, the hose identification number, the date of the original hose assembly and test, notes of any defects observed and repairs made, an indication of whether or not the hose assembly passed or failed the test. A copy of each test and inspection record must be retained

by the operator at its principal place of business or where the vehicle is housed or maintained until the next test of the same type is successfully completed.

A hose inspected must be rejected if it meets any of the following criteria:

Damage to the hose cover that exposes the reinforcement.

Wire braid reinforcement that has been kinked or flattened so as to permanently deform the wire braid.

Soft spots when not under pressure, bulging under pres-



sure, or loose outer covering.

Damaged, slipping, or excessively worn hose couplings.

Loose or missing bolts or fastenings on bolted hose cou-

pling assemblies.

The hose may be repaired and placed back in service if it is retested successfully.

Bobtail Delivery:

A driver should first secure the vehicle against movement by setting the handbrake and placing chock blocks in front of and behind the wheel of the truck.

Secondly, a driver should make sure that all elements of combustion are controlled. Two elements are readily available during the delivery process: fuel (propane) and oxygen (air).

Ignition, the third element, must be prevented. A spark, flame or even static electricity can provide the ignition source.

All running engines such as those of motor vehicles, lawn mowers, and etc. should be kept at least 15 feet from the point of transfer. **Propane delivery vehicles constructed according to NFPA 58 are excluded while the vehicle is being used during the delivery process.**

Smoking, open flames, metal cutting or welding torches, portable electric tools and extension lights capable of igniting propane must be kept at

least 25 feet from the point of transfer.

The bobtail should be at least 10 feet from the tank and positioned so that the driver can easily access both the shutoff valve on the bobtail and the one on the tank in case of emergency.

Of course, in order to shut off the valves, the driver must be in attendance while he is unloading the bobtail. The driver must remain within 150 feet of the cargo tank and 25 feet of the delivery hose.

If the bobtail is 3,500-gallon capacity or less, then the driver must observe the bobtail's delivery tank and the receiving tank once every five minutes while the internal self-

closing valve is open, if the unloading takes more than five minutes.

All bobtails must also be equipped with an off-truck remote shutoff that will allow the driver to close the internal self-closing valve and shut off all motor and power functions of the vehicle. This remote must function at a distance of 150 feet.

Bobtails with more than 3,500 gallons of capacity and metered delivery must have a passive system capable of shutting down the motor and all power functions unless the driver prevents it from doing so at least once every five minutes. (This is for bobtails and transports over 3,500 gallons capacity with metered delivery only.)



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The Heat is on!
West Virginia Propane Gas Association

