

Take-Away Messages

Different motor carrier safety regulations apply for nurse tanks depending if they are exclusively used for intrastate commerce or for interstate commerce (transported across state lines).

- **Annual vehicle inspections (49 CFR §396.17)**

- Interstate—Each nurse tank and towing vehicle (each identified by a unique vehicle number) must be inspected annually and either marked with a decal (see Figure 1) or as an alternative, a copy of the inspection report can be kept with the vehicle.
- Intrastate—Each towing vehicle must be inspected annually as described above. Nurse tank trailers are not required to be periodically inspected.



Figure 1—Decal noting that the vehicle was inspected according to the annual inspection requirements.

- **Daily Vehicle Inspection (49 CFR §396.11)**

- Interstate and Intrastate—Before a nurse tank is pulled on a roadway, the motor vehicle and EACH nurse tank must be inspected at the beginning and end of the day and the driver must prepare a written report each day (DVIR).
- The owner/operator of the nurse tanks must review the DVIR's and repair any defects listed on the report that would affect the safe operation of the vehicle and certify on the report that the defect was fixed or that the correction was unnecessary, before the vehicle can be used again.
- Copies of DVIR's must be kept for 3 months.
- DVIR's must include:
 - Service brakes
 - Tires
 - Coupling devices
 - Lighting devices and reflectors
 - Steering mechanism
 - Wheels and rims
 - Parking brakes
 - Horn
 - Emergency equipment
 - Rear vision mirrors
 - Windshield wipers
- Before driving a motor vehicle, the driver shall:
 - a. Be satisfied that the motor vehicle is in safe operating condition;
 - b. Review the last driver vehicle inspection report; and
 - c. Sign the report, only if defects or deficiencies were noted by the driver who prepared the report, to acknowledge that the driver has reviewed it and that there is a certification that the required repairs have been performed. The signature requirement does not apply to listed defects on a towed unit which is no longer part of the vehicle combination.

- **ASME DATA plates**—Each nurse tank must have a legible data plate or must meet the requirements of DOT Special Permit Number 13554. A *Minnesota Special* data plate is not a valid plate.

**Minimum data plate information
(tanks mfg. before 1989)**

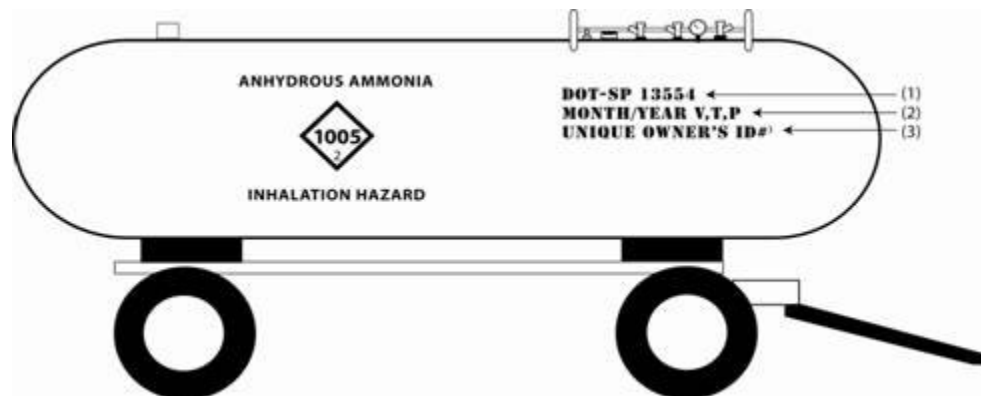
- 1) Name of manufacturer
- 2) Manufacturer's serial #
- 3) Official code "U" symbol
- 4) Max. Allowable Working Pressure (MAWP)
- 5) Year built

**Minimum data plate information
(tanks mfg. in 1989 and newer)**

- 1) Name of manufacturer
- 2) Manufacturer's serial #
- 3) Official code "U" symbol
- 4) Max. Allowable Working Pressure (MAWP)
- 5) Year built
- 6) Min. Design Metal Temperature (MDMT)

- **U.S. Department of Transportation Special Permit Number 13554**—Realistically, tanks that do not have a legible data plate must meet all of the requirements of U.S. DOT Special Permit Number 13554 or they must be removed from service. Conditions of the special permit include:

- An external visual examination, metal thickness and hydrostatic pressure test of the vessel at least once every five years by a qualified cargo tank inspector meeting the requirements of 49 CFR § 180.409(d). The tank inspection criteria are found in [DOT-SP 13554](#).
- The tank can only be used exclusively for NH₃/agricultural purposes
- Welded repairs to the tank are prohibited
- The tank must be marked as follows:



(1). **"DOT-SP 13554"** marking must be **positioned on the OUTSIDE of each package** (nurse tank). "DOT-SP 13554" marking must be width of at least 6.0 mm (0.24 inch) and a height of at least 50 mm (2.0 inches) for cargo tanks (*see 49 CFR §172.302 (b)(3)*).

(2). **Month/Year V, T, P markings** (for example, "07/2009 V, T, P") must be **positioned either:**

- (a). near the **"DOT-SP 13554"** marking;
- (b). near the **specification (name) plate**; or
- (c) **anywhere on the front head** of each nurse tank (regardless if single or dual tank setup) in at least **1.25-inch size lettering/numbers**.

(3). **Unique Owner's Identification Number** must be positioned **near the "DOT-SP 13554" marking** in letters and numbers at least ½-inch in height and width.

(4). **Owner/Operator must retain copies of:**

- (a). the cargo tank test and inspection report results
- (b). copy of special permit SP 13554
- (c). special permit authorization letter

(5). Party Status to SP 13554 (2 options):

1. Register online through The Fertilizer Institutes webpage (*www.tfi.org*). TFI will take care of renewing.
2. Register your company through the USDOT. Please note that you will need to renew your party status before the expiration date.

Markings must be readily visible and must not interfere with any other required markings or placards on the tank.

• **Anhydrous Nurse Tank Trailer Brake Requirements**

- Interstate—Brakes are required on both axels. In addition, a breakaway braking system is also required.
- Intrastate—Brakes are required for dual tank system trailers (at least one axel) or for any other implement of husbandry with a gross vehicle weight in excess of 12,000 pounds. In addition, if the nurse tank chassis is required to have brakes, it must also have a breakaway brake system.

• **Lights**

- Interstate—tail, brake, signal, marker, clearance, and identification lights are required.
- Intrastate—two reflectors required. Lights required if tank(s) obstructs the view of a towed vehicle's lights as would be the case with a dual tank trailer.

• **Marking and Placards**—Tanks with valves on one end of the tank are not required to be marked or placarded on that end on the tank. Otherwise, all of the following provisions apply. Faded or damaged markings and placards must be replaced.

- ***Reflective tape*** is required on the opposing sides of the chassis and must be at least 50% of the length of the chassis (including the drawbar) and equally spaced on the outside edges of the chassis. Tape is required along the entire length of the rear of the trailer.
- ***Other Markings:*** The words “ANHYDROUS AMMONIA” must be marked on all four sides of a tank. The words “INHALATION HAZARD” must be on the sides of the tank and all letters must be in at least two-inch lettering. All such markings must also be on the inside surfaces of dual mounted tank systems.
- ***Placards:*** Class 2.2, UN number 1005 placards must appear on all sides of a nurse tank. All such markings must also be on the inside surfaces of dual mounted tank systems. The placards must meet the strength, durability, design, size and color specified in 49 CFR 172.519 (c). The specific size of a placard is:

(1) Each placard prescribed in this subpart must measure at least 273 mm (10.8 inches) on each side and must have a solid line inner border approximately 12.7 mm (0.5 inches) from each edge.

(2) Except as otherwise provided in this subpart, the hazard class or division number, as appropriate, must be shown in numerals measuring at least 41 mm (1.6 inches) in height.

(3) Except as otherwise provided in this subpart, when text indicating a hazard is displayed on a placard, the printing must be in letters measuring at least 41 mm (1.6 inches) in height.

• **Tires and Safety Chains**

- **Safety chains** are required for all nurse tank trailers. Safety chains must supplement hitch pin with a retainer connecting the nurse tank and towing vehicle. Two independent, securely affixed chains are required. Nurse tank trailers that are used in interstate movements must have safety chains attached to the chassis frame, not the drawbar. Affixing chains to the tow vehicle rather than the nurse tank trailer is discouraged.
- **Tires** A tire shall be deemed unsafe if:
 - any part of the ply or cord is exposed
 - it has a bump, bulge or separation
 - the tread design depth is less than $\frac{2}{32}$ ($\frac{1}{16}$) of an inch measured in the tread groove nearest the center of the tire at three locations equally spaced around the circumference of the tire
 - worn to the level of the tread wear indicators in any two tread grooves at three locations
 - marked "not for highway use," or "for racing purposes only," or "unsafe for highway use;"
 - tread or sidewall cracks, cuts or snags are deep enough to expose the body cords
 - it has been re-grooved or re-cut below the original tread design depth