

Nurse Tank Inspection Report Instructions

Insert an "X" in the appropriate box indicating whether the tank has an ASME Dataplate present and legible or whether the ASME dataplate is NOT present or legible.

Following numbers correspond to each box on the Nurse Tank Inspection Report form.

1. ORIGIN INFORMATION

Insert the following information as applicable.

a. Previous NTIP Number

Insert the previous NTIP number assigned to the tank being tested. Recording this number is optional.

b. Serial Number

Insert the serial number from the ASME dataplate, if legible.

c. Manufacturer

Insert the name of the manufacturer from the ASME dataplate, if legible.

d. Date Manufactured

Insert the date manufactured from the ASME dataplate, if legible.

2. NTIP NUMBER

This number is pre-assigned to each tank. It is the number DOT will use to track the inspection history related to each individual tank.

3. CAPACITY

This is the total number of gallons (water) the tank has the capacity to contain. This number should be confirmed and based on the dimensions of the tank.

Typical tank dimensions and relative capacity: (for information only)

Capacity (Water Gallons)	Diameter	Length
1,000	41"	16'-0"
1,450	46"	17'-4"
2,000	46"	24'-1"

Formula for calculating tank capacities:

For a cylinder:

$$ID^2 \text{ (inches)} \times .0034 \times \text{length of cylinder (inches)} = \text{gallons (water)}$$

For two elliptical heads:

$$ID^3 \text{ (inches)} \times .001133 = \text{gallons (water)}$$

For two hemispherical (half globe) heads:

$$ID^3 \text{ (inches)} \times .002266 = \text{gallons (water)}$$

Assumptions:

$$7.48 \text{ gallons} = 1 \text{ Cubic Foot}$$

$$1 \text{ Gallon water} = 8.3453 \text{ Pounds}$$

ID - Inside Dimension

4. TANK IDENTIFICATION

Insert the identification number that is assigned to each respective tank by the facility. This is an internal number used by each company to identify their tanks.

5. OWNER

Insert the name of the company/individual that owns the tank to be tested.

6. FACILITY NUMBER

Insert the number of the facility to which the tank being tested is based. This is an optional number and may not apply. The facility number (may also be referred to as a unit number) is applicable to companies with several locations and each location has been assigned a facility number by their company.

7. OWNER SIGNATURE

Insert the signature of the operator of the facility. Required field by DOT.

8. ADDRESS

Insert the street address of the facility to which the tank being tested is based. This address must be a physical street address and not a P.O. Box address.

9. CITY

Insert the city of the facility to which the tank being tested is based. This city will refer to the physical street address of the facility and not a P.O. Box address.

10. STATE

Insert the state applicable to the address for the facility where the tank being tested is physically based.

11. ZIP CODE

Insert the zip code applicable to the address for the facility where the tank being tested is physically based.

12. EXTERNAL VISUAL (V)

Insert an "X" in the appropriate box indicating whether the tank has passed or failed the visual inspection based on the criteria listed below:

a. Tank Shell

Visually inspect the tank shell to ensure the tank welds are in good condition and to identify any bulges, cracks, dents, gouges, corrosion or abrasion.

b. Tank Heads

Visually inspect the tank heads to ensure the welds are in good condition.

c. Head-to-Shell Seam

Visually inspect the head-to-shell seam to ensure the welds are in good condition.

d. Valves

Visually inspect valves by checking for any thread deterioration. With the tank bled off and pressure released, operate the valve to detect difficulties in movement, deteriorated packing or worn seats. Check the gasket, handle, dust cap, plug and pressure bleed off for their condition, leakage, distortion and corrosion.

e. Piping

Visually inspect all piping for cracks or signs of leakage. The piping should also be inspected visually for thread deterioration, corrosion, signs of vibration, and distortion. Look at each pipe to verify it is properly supported.

f. Suspension System Attachments

Visually inspect the suspension of the nurse tank to verify all bolts are present, tight and properly secured to the running gear, the legs are in good condition with no cracks or elongated holes, the springs, if any, are in good condition.

g. Connecting Structures

Visually inspect connecting structures to ensure they are in good condition. The inspection should verify that welds are in good condition, cracks are not present, there is not distortion or deformation of the structures, and bolts are present and tight.

h. Corroded/Abraded Areas

Visually inspect the tank for corroded and scraped areas. The pass/fail determination should be based on whether the identified areas compromise the integrity of the tank.

i. Distortions

Visually inspect the tank for distortions. The pass/fail determination should be based on whether the identified areas compromise the integrity of the tank.

j. Dents

Visually inspect the tank for dents. For dents at welds or that include a weld, the maximum allowable depth is 1/2 inch. For dents away from welds, the maximum allowable depth is 1/10 of the greatest dimension of the dent, but in no case may the depth exceed one inch. (180.411)

k. Welds

Visually inspect welds to ensure they are in good condition and do not compromise the integrity of the tank.

l. Nuts & Bolts

Visually inspect the bolts to ensure they are present, tight with no cracks or elongated holes.

m. Markings

See attached information for proper markings and visually inspect the tank to ensure it is marked accordingly.

n. Paint

Visually inspect the paint to ensure the tank is properly protected from corrosion.

o. Other

Visually inspect the tank for any other identified deficiencies not previously identified that could compromise the integrity of the tank and list them here.

p. Other

Visually inspect the tank for any other identified deficiencies not previously identified that could compromise the integrity of the tank and list them here.

13. THICKNESS (T)

Test the thickness of the tank at the points specified below and record them on the appropriate line of the form.

Head Thickness Test Points (Test Points A-E)

Use a testing device to determine the thickness of the front and rear heads of the tank at each point designated on the "end key" diagram of the form and record them beside each corresponding letter. The thickness of these head points must be at least .203" for tanks less than 1,500 gallon capacity and .25" for tanks equal to or greater than 1,500 gallon capacity.

Liquid Level Line Test Points (Test Points F-H)

Use a testing device to determine the thickness of the liquid level line test points as designated on the "side key" diagram of the form and record them beside each corresponding letter. The thickness of these liquid level test points must be at least .239" for tanks less than 1,500 gallon capacity and .25" for tanks equal to or greater than 1,500 gallon capacity.

Around Openings (Test Points I-M)

Use a testing device to determine the thickness around openings as designated on the "side key" diagram of the form and record them beside each corresponding letter. The thickness of these liquid level test points must be at least .239" for tanks less than 1,500 gallon capacity and .25" for tanks equal to or greater than 1,500 gallon capacity.

Weld Joint Test Points (Test Points N-V)

Use a testing device to determine the thickness of the weld joint test points on the sides, top and bottom of the tank as designated on the "side key" diagram of the form and record them beside each corresponding letter. The thickness of these liquid level test points must be at least .239" for tanks less than 1,500 gallon capacity and .25" for tanks equal to or greater than 1,500 gallon capacity.

14. PRESSURE (RETEST) (P)**A. Fluid Used For Test (Hydrostatic Only)**

Verify that water was used for the pressure test by checking the box for "Yes". Follow the pressure test procedures found in 180.407(g) which includes (ii) removing the relief valves, and (vii) which requires all closures except pressure relief devices to be kept in place during the test.

B. Test Pressure (Minimum: 375 PSI)

Ensure the tank pressure is at zero and empty. Fill the tank with water and pressurize the tank to test pressure (1.5 times the maximum working pressure). If the tank has a maximum working pressure of 250 psi, the test pressure should be 375 psi. Some states require tanks with a maximum working pressure of 265 psi. In that situation, the maximum test pressure should be 397.5 psi (265 x 1.5). Record the maximum test pressure used in the space provided on the form.

C. Holding Time Of Test (Minimum 10 Minutes)

Record the amount of time the maximum pressure was maintained. This must be completed by recording the start time and stop time on the form in the space provided. This time should be a minimum of 10 minutes.

D. Gaskets

Indicate with an "X" in the "Pass" or "Fail" box whether the gaskets have been inspected and meet requirements.

E. Excess Flow Valves

Indicate with an "X" in the "Pass" or "Fail" box whether the excess flow valves have been inspected and meet requirements. It is not a DOT requirement to test the excess flow valve, however, it is recommended. The excess flow valves must be in place during the pressure test. The recommended procedure is to test to see that the excess flow valve works properly to stop the flow. It is recommended that new excess flow valves be tested immediately after being installed.

F. Re-closing Pressure Relief Valves

Indicate with an "X" in the "Pass" or "Fail" box whether the pressure relief valve has been inspected and meets requirements. The inspector must also indicate by placing an "X" in the appropriate box as to whether the pressure relief valve is new or been tested.

15. REPAIRS (IF ANY) MADE BY:

Record the name of the person who made any repairs on the tank identified during the inspection.

16. DATE

Record the date of any repairs made on the tank identified during the inspection.

17. ADDRESS

Record the physical street address of the person who made any repairs on the tank identified during the inspection.

18. CITY, STATE, ZIP CODE

Record the city, state and zip code for the address of the person who made repairs on the tank identified during the inspection. The city, state and zip code in this box should correspond to the street address listed in box #17.

19. (CHECK AS APPROPRIATE)

Enter an "X" in the appropriate box whether the defects identified previously have been corrected or if the defects identified previously need not be corrected. Enter the initials of the inspector and provide any remarks related to the correction of defects.

20. INSPECTION PERFORMED AT OWNERS ADDRESS?

Indicate the inspection was performed at the owners address as listed in box #8 above by placing an "X" in the box next to "Yes". If the inspection was performed at an address other than the one listed in box #8 above, provide the address on the form where the inspection was performed.

21. TANK "MEETS" OR "FAILS TO MEET" TEST REQUIREMENTS

Enter an "X" indicating whether the tank "meets" or "fails to meet" the DOT inspection/test requirements. The inspector may also enter any remarks that are relevant to the inspection in the space provided.

22. THIS TANK HAS BEEN WITHDRAWN FROM SERVICE

Enter an "X" in the appropriate box indicating if this tank has been withdrawn from service.

23. DOT REGISTRATION NUMBER OF TESTING FACILITY PERSON

Enter the "CT" number of the person who is listed as a registered inspector with DOT to conduct inspections.

24. INSPECTOR/TESTED BY

The registered inspector must sign their name in this box.

25. INSPECTOR/TESTED BY

The registered inspector must print their name in this box.

26. DATE

Enter the date the inspection was conducted.

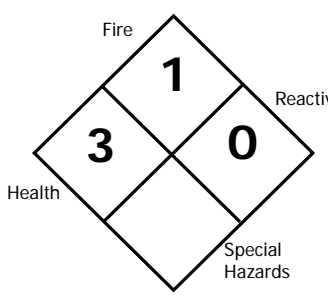
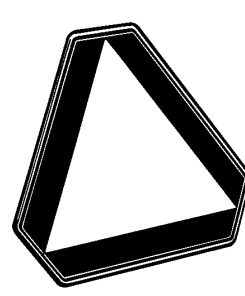
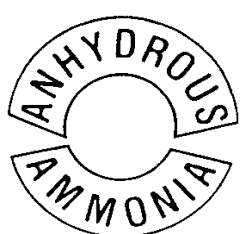
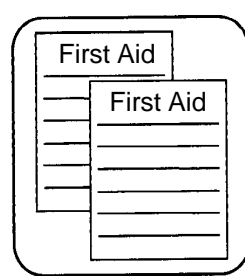

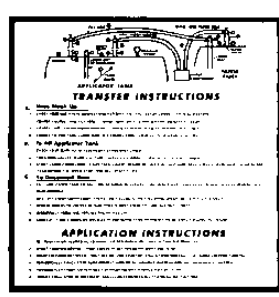

27. ADDRESS

Enter the physical street address for the registered inspector.

28. CITY, STATE, ZIP CODE

Enter the city, state and zip code of the registered inspector which corresponds to the street address entered in box #27.

Reminder: The inspector must go to www.tfi.org and click on the NTIP logo to officially enter all inspection/test results.

<p>EXAMPLES OF AMMONIA TANK MARKINGS</p>	<p>A</p> 	<p>B</p> 
<p>C</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Health and Physical Hazards</p> </div>	<p>D</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>Inhalation Hazard</p> </div>	<p>E</p>  <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 5px;"> <p>Anhydrous Ammonia</p> </div>
<p>F</p> 	<p>G</p> 	<p>H</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>CAUTION</p> <hr style="border-top: 1px dashed black;"/> <p>AMMONIA</p> </div>
<p>I</p> 	<p>J</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>CAUTION</p> <p>GLOVES & GOGGLES REQUIRED WHEN TRANSFERRING</p> </div>	<p>K</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>DANGER</p> <p>CONFINED SPACE ENTER BY PERMIT ONLY</p> </div>
<p>L</p>  <p>NTIP No: 100001 CARGO TANK INSPECTION</p> <p>THIS CARGO TANK HAS SUCCESSFULLY COMPLETED THE TEST AND INSPECTED REQUIREMENTS CONTAINED IN 180.407</p> <p>__ - __ - V, T, P</p>	<p>M</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>DOT - SP 13554</p> </div>	<p>NOTE:</p> <p>Always consult your appropriate state agency for additional requirements.</p>

Ammonia Tank Markings

Marking	Example	Storage Tank	Nurse Tank	Applicator Tank
NFPA Diamond	A	Locate decals to be seen by emergency responders.	N/A	N/A
Slow Moving Vehicle (SMV)	B	N/A	One decal on the rear of wagon.	One decal on the rear of the applicator.
Health & Physical Hazards	C	One decal located near the primary transfer point.	One decal located near the primary transfer point.	One decal located near the primary transfer point.
"Inhalation Hazard"	D	N/A	Two decals with 2" letters (minimum) on opposite sides.	Two decals with 2" letters (minimum) on opposite sides.
"Anhydrous Ammonia"	E	N/A	Four decals with 2" letters (minimum) on all four sides.	Four decals with 2" letters (minimum) on all four sides.
First Aid Information	F	One decal located in a visible location.	One decal located near the primary transfer point.	One decal located near the primary transfer point.
"1005" D.O.T. Placard	G	N/A	Four decals with one affixed to each side.	Four decals with one affixed to each side.
"Caution Ammonia"	H	Two decals with 4" letters (minimum) on opposite sides.	N/A	N/A
Transfer Instructions	I	N/A	N/A	One decal located near the primary transfer point.
"Gloves & Goggles Required"	J	One decal located near the primary transfer point.	N/A	N/A
Confined Space	K	One decal located near the manhole.	N/A	N/A
NTIP Decal (Nurse Tank Inspection Program)	L	N/A	One decal located adjacent to DOT-SP 13554 decal.	One decal located adjacent to DOT-SP 13554 decal.
"DOT-SP 13554" Special Permit Decal	M	N/A	Two decals with 2" letters (minimum) on opposite sides.	Two decals with 2" letters (minimum) on opposite sides.

ALWAYS CONSULT YOUR APPROPRIATE STATE AGENCY FOR ADDITIONAL REQUIREMENTS