



Anhydrous Ammonia Nurse Tank Safety

The most commonly-used nitrogen fertilizer source in North Dakota, anhydrous ammonia plays a vital role in the production of high-quality food and feed. Anhydrous ammonia is classified as a hazardous substance, although few problems occur when it is properly handled and applied as intended. The North Dakota Department of Agriculture (NDDA) is dedicated to protecting human safety and the environment through the regulation of anhydrous ammonia nurse tanks.

The Department of Agriculture is the designated lead agency for enforcing state laws and administrative rules relating to anhydrous ammonia. These requirements, found in Chapters 19-20.2 of the North Dakota Century Code (N.D.C.C.) and Article 7-12 of the North Dakota Administrative Code (N.D.A.C.), include design, maintenance and safety equipment requirements for anhydrous ammonia storage facilities and nurse tanks. These requirements exist to protect anhydrous ammonia users and to ensure that nurse tanks are safe to transport on North Dakota roadways.

Resources

For specific requirements for towing anhydrous ammonia nurse tanks, contact the North Dakota Department of Transportation at 701-328-2500.

To access the database of anhydrous ammonia facilities and licenses in North Dakota or to apply for a new anhydrous ammonia license or to confirm a license, visit: www.kellysolutions.com/nd/

For rules and regulations on anhydrous ammonia licenses: www.legis.nd.gov/cencode/T19C20-2.pdf

Recommended publication: **Anhydrous Ammonia: Managing the Risks**, AE-1149, by John Nowatzki, Ag Machine Systems Specialist, North Dakota State University; www.ag.ndsu.edu/pubs/ageng/safety/ae1149.pdf

This publication includes in-depth information on anhydrous ammonia safety management including:

- Types of exposure
- Protective equipment for anhydrous ammonia
- Nurse tank safety check
- Anhydrous ammonia applicator components
- Transport safety practices
- Safe field practices
- Private stationary storage facilities
- Farm transfer facilities
- Rules of nurse tank and storage container locks

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ANHYDROUS AMMONIA Nurse Tank Safety



Agriculture Commissioner Doug Goehring

General Checklist for Nurse Tank Safety

State administrative rules require that anhydrous ammonia nurse tanks be in overall good condition and constructed with ASME materials. This checklist does not reflect all the requirements needed for nurse tanks, but rather is a general outline that can be easily checked. Every nurse tank must have the following:

- ✓ Readable data plate
- ✓ Legible North Dakota Department of Transportation (NDDOT)-approved decals: “**ANHYDROUS AMMONIA,**” “**INHALATION HAZARD**” and “**1005**” on each side of tank
- ✓ Legible transfer decal
- ✓ Tanks numbered and identified with name and contact information of the owner
- ✓ Slow moving vehicle emblem
- ✓ No more than 10 percent of surface rusted or missing paint
- ✓ Properly working valves and caps
- ✓ All hoses up to date and not damaged or cracked
- ✓ Tires in serviceable condition (no cords showing)
- ✓ All pressure valves set to standards and in good working condition
- ✓ Operational liquid level gauge
- ✓ Pressure gauge designated for anhydrous use and graduated from 0 to 400 psi
- ✓ Safety chains and hooks (2) in good condition
- ✓ Appropriate hitch pin
- ✓ Wagon tongue and undercarriage in good condition
- ✓ Fittings protected from physical damage (i.e. rollover) with approved roll cage
- ✓ Breakaway protection when tanks are hooked back-to-back in tandem

Transport

NDDOT regulations set the maximum speed for a vehicle pulling a nurse tank at 25 mph with no more than two nurse tanks being pulled at once. Please contact NDDOT at 701-328-2500 for specific requirements dealing with towing nurse tanks.

Dealer Responsibility

It is illegal to fill any nurse tank that does not conform to state requirements.

***When in doubt about the condition of a nurse tank, don't use it!
Call the dealer where the tank was purchased or rented.***

Personal Protective Equipment

Personal Protective Equipment (PPE) is required when working with anhydrous ammonia to prevent personal injury. Required PPE includes protective gloves and Z87-rated safety goggles. Every tank is required to have a safety can to house the gloves and goggles. State law also requires that all nurse tanks have five gallons of clean water available in a container with a serviceable water hose.

Penalties

A person who has been found to be in violation of N.D.C.C. 19-20.2 is subject to a civil penalty up to \$5,000 per violation and a class A misdemeanor. The penalty assessed is based on the risk of violation posed to human health and the environment. The Department of Agriculture may also take out of service any nurse tank that fails to meet legal requirements. Always follow the law when using anhydrous ammonia; it is a vital but dangerous substance that our state depends on for our agriculture needs.

