HOW TO MARK YOUR AMMONIA TANKS



Office of Indiana State Chemist

175 S. University Street
Purdue University
West Lafayette, IN 47907-2063
Telephone: (765) 494-1492

Dr. Mark R. LeBlanc, Indiana State Chemist Matthew Pearson, Fertilizer Administrator Danny Starke, Agriculture Ammonia Specialist

RANQUIRAD MEYERS (O) EN MARRIAIN(els:



- MUST be in lettering at least 6" TALL.
- May be ANY sharply contrasting COLOR.
- MAY BE stenciled if desired.

STORAGE TANKS: On at least TWO sides of the storage tank or the outer TWO sides of the GROUP of storage tanks. One 'CAUTION AMMONIA' marking should be within plain sight of the transport truck connection.

NURSE TANKS:

*** PROHIBITED MARKING ***
DO NOT USE ON NURSE TANKS!!

APPLICATOR TANKS:

*** PROHIBITED MARKING ***
DO NOT USE ON APPLICATOR TANKS!!

Marking of Portable Equipment - Nurse and ApplicatorTanks:

REQUIRED TYPES OF MARKINGS:



NOTE: The PAPER EDGES of this PLACARD are approximately 10 3/4" LONG.

The '1005' Placard:

- MUST be a commercially available STICKER.
- MUST be principally GREEN in color.
- NO STENCILS OR HAND-PAINTING PERMITTED!

STORAGE TANKS: NOT REQUIRED

NURSE TANKS: On ALL FOUR SIDES of the CONTAINER EXCEPT on nurse tanks which have their ROLL CAGE on the front HEAD of the container (refered to as HEAD MOUNT type containers). On HEAD MOUNT containers ONLY, the '1005' PLACARD is REQUIRED on the TWO LONG SIDES of the container AND on the REAR of the container.

APPLICATOR TANKS: On ALL FOUR SIDES of the container.

*** PROHIBITED MARKING ***

The 'NON-FLAMMABLE GAS' Placard

The 'NON-FLAMMABLE GAS' Placard is an OBSOLETE Marking for ANY AMMONIA TANK
- AND - SHOULD NOT BE USED !!

The 'NON-FLAMMABLE GAS' Placard may NOT be used as a SUBSTITUTE FOR the '1005' placard previously described.



The 'ANHYDROUS AMMONIA' Strip Marking:

- MUST be GREEN lettering.
- LETTERING MUST BE at least 2" TALL.
- MUST BE a commercially available STICKER.
- NO STENCILS OR HAND-PAINTING PERMITTED!

STORAGE TANKS: NOT REQUIRED

NURSE TANKS: On ALL FOUR SIDES of the CONTAINER EXCEPT on nurse tanks which have their ROLL CAGE on the front HEAD of the container (herein referred to as HEAD MOUNT type containers). On HEAD MOUNT containers ONLY, the 'ANHYDROUS AMMONIA' STRIP MARKING is REQUIRED on the TWO LONG SIDES of the container AND on the REAR of the container.

APPLICATOR TANKS: On ALL FOUR SIDES of the container.

STRAIGHT - Type Strip Marking:

ANHYDROUS AMMONIA

CURVED - Type Strip Marking:

RECOMMENDED
FOR TANK HEADS
ONLY!!

The 'INHALATION HAZARD' Strip Marking

INHALATION HAZARD

STORAGE TANKS: NOT REQUIRED

NURSE TANKS:

On BOTH LONG SIDES of the CONTAINER. (E.G. The left & right sides of the container.)

APPLICATOR TANKS:

On BOTH LONG SIDES of the CONTAINER. (E.G. The front & rear of the container.)

MUST BE GREEN in color.

● LETTERING MUST BE at least 2" TALL.

MUST BE a commercially available STICKER.

● NO STENCILS OR HAND-PAINTING PERMITTED! (E.G. The front & rear of the container.)

THE SMV (SLOW MOVING VEHICLE) SYMBOL

STORAGE TANKS: NOT REQUIRED

NURSE TANKS:

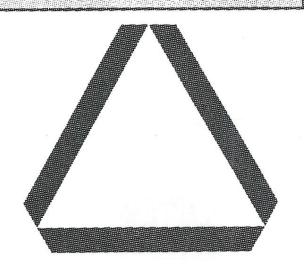
On the REAR of the CONTAINER.

APPLICATOR TANKS:

On the REAR of the CONTAINER.

ENFORCEMENT JURISDICTION:

State, County and Local Police Agencies.



PROHIBITED MARKING BOR PORTABLE EQUIPMENT (ANYTHING WITH WHEELS)

ANY AMMONIA MARKINGS NOT CONSISTENT WITH DOT SPECIFICATIONS REGARDING THE COLOR, SHAPE, SIZE AND CONTENT OF DOT MANDATED SPECIFICATIONS. (This would imply that ANY marking which REFERS to the CONTENTS of the container MUST NOT conflict with ANY PORTION of the DOT code!) THEREFORE - ALL 'CAUTION AMMONIA' (RED) MARKINGS MUST BE REMOVED!

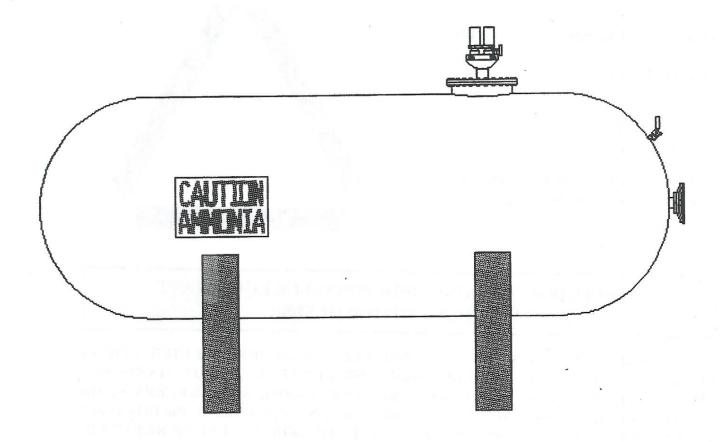
FURTHERMORE: The CONTENTS of the container MUST MATCH the container MARKINGSWHICH IDENTIFY AND PERTAIN TO THE CONTENTS OF THE CONTAINER.

For instance, when in LP GAS USE, it is NOT PERMISSIBLE to have the container in State Chemist markings which are required for any ANHYDROUS AMMONIA use of the equipment.

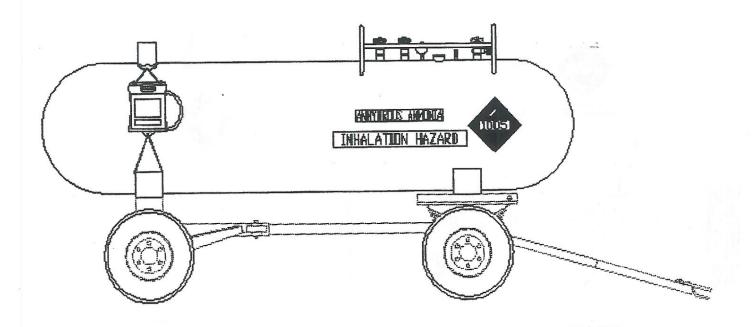
Conversely, tanks which are IN ANHYDROUS AMMONIA USE are ILLEGALLY MARKED if the MARKINGS PERTAIN TO LP GAS USE!

Dierentarion van 100 metalen en 1800 metalen e Biografie in die van 1800 metalen en 1800 metal

NEW CONTROLL

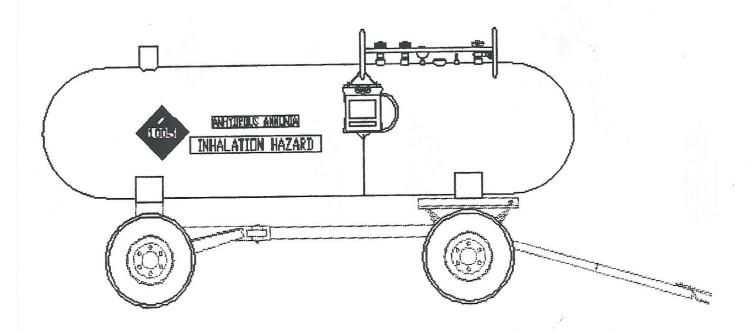


NURSE TANK - SIDE VIEWS:



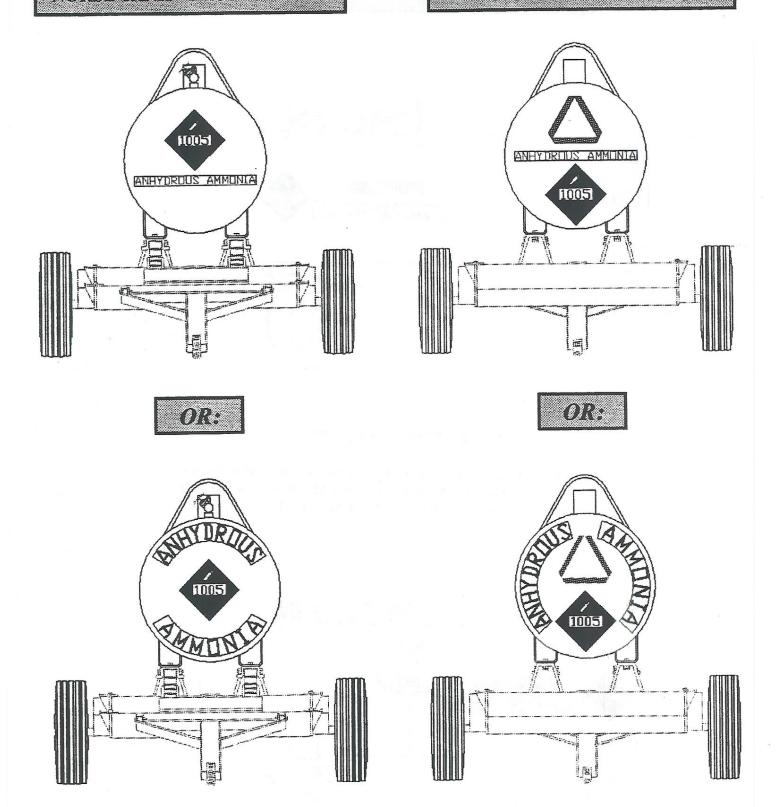
*** IMPORTANT!! ***

One of the MOST IMPORTANT ASPECTS of NURSE TANK MARKING is to DECIDE where to POSITION the WATER CONTAINER PRIOR TO THE PLACEMENT OF ANY MARKINGS ON THE CONTAINER SIDES.

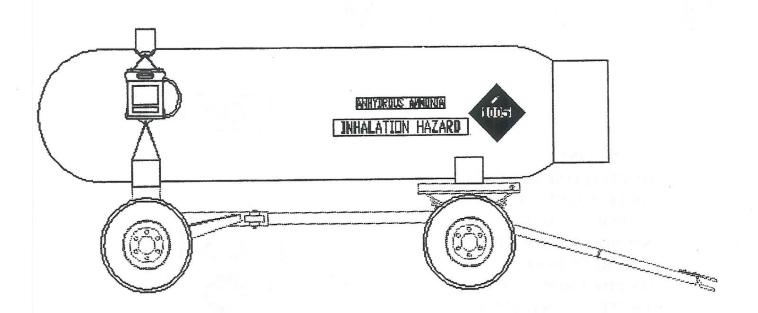


NURSE TANK - FRONT VIEWS:

NURSE TANK - REAR VIEWS:



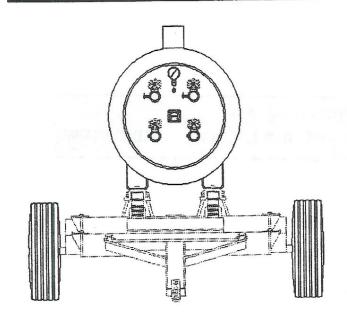
*** SPECIAL EXCEPTION *** NURSE TANK WITH A 'HEAD MOUNT' TYPE ROLL CAGE - SIDE VIEW:

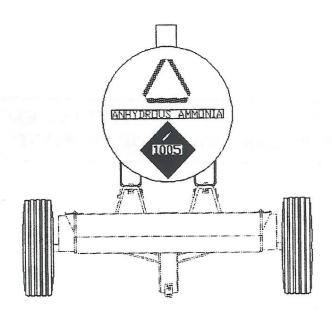


*** SPECIAL EXCEPTION *** NURSE TANK WITH A 'HEAD MOUNT' TYPE ROLL CAGE

NURSE TANK - FRONT VIEW:

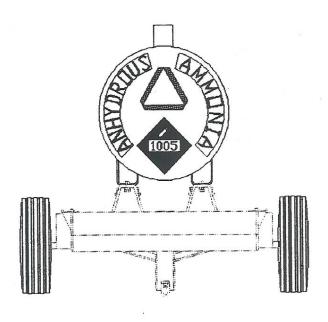
NURSE TANK - REAR VIEWS:



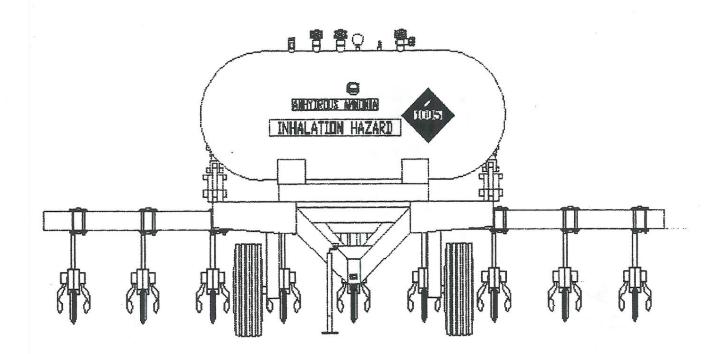


*** ONLY ***
ON CONTAINERS WITH
HEAD-MOUNT TYPE
ROLL CAGES,
NO MARKINGS ARE
REQUIRED
ON THE FRONT HEAD
OF THE CONTAINER
WHERE THE ROLL CAGE,
VALVES & FITTINGS
ARE LOCATED!

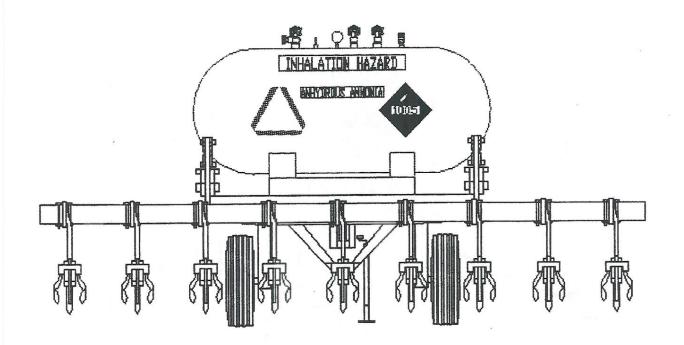
OR:



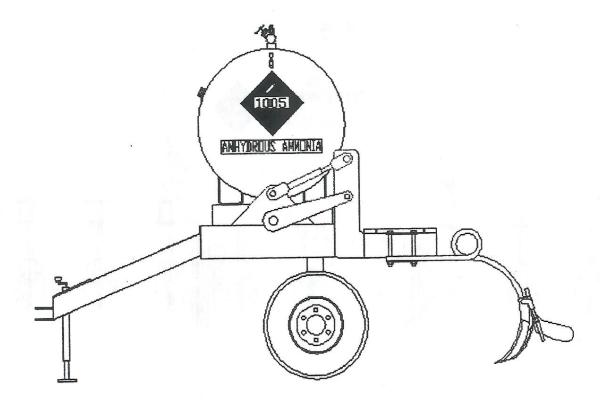
APPLICATOR TANK - FRONT VIEW:



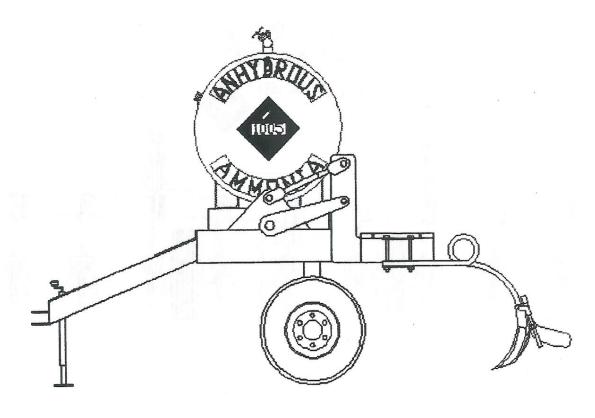
APPLICATOR TANK - REAR VIEW:



APPLICATOR TANK - SIDE VIEWS:



OR:



STATEMENT OF:

STATE CHEMIST POLICY REGARDING WATER SUPPLIES

FOR ANHYDROUS AMMONIA EQUIPMENT

WATER CONTAINERS ON NURSE TANKS MUST PASS ALL OF THESE TESTS:

<1> THE WATER CONTAINER MUST BE IN RELIABLE CONDITION.

The water container MUST: have a tight-fitting lid that will prevent leakage of indispensible first-aid water; if the water container is designed by the manufacturer to include a hose, the hose must not leak (or if it has become brittle, weathered or cracked, the hose MUST be replaced.) Each water container hose must have an effective hose clamp PROPERLY installed; the hose must be secured in such a manner as to prevent accidental leakage. The water container MUST NOT be punctured: if the water container is of plastic construction, it MUST NOT be cracked/broken from the water contents having frozen; if the water container is of metal construction, it MUST NOT be rusted out. The water container MUST ALSO be properly attached to the nurse tank so that NEITHER the water container is lost, nor any of the water is lost due to repositioning of the water container (in the event the water container should "slide beneath the nurse tank, allowing its water to leak out completely). IN GENERAL: THE WATER CONTAINER MUST NOT LEAK FOR ANY REASON WHATSOEVER!

<2> THE WATER CONTAINER MUST BE ACCESSIBLE.

IF the water container is equipped with a hose to access the water in the container... then the water container hose must be free of mud and muck; ... the water container hose must NOT be kinked such that the water flow is severely constricted; ... if the original hose barb has been broken off, then the replacement hose barb MUST NOT have a SMALLER INNER DIAMETER which would constrict (slow) the water flow through the hose for first-aid use; ... the hose MUST be secured to prevent accidental leakage in a manner that does NOT make it difficult to access the water especially for a person blinded by ammonia; ... water containers should be within easy reach of even a short person standing at ground level... TOP-MOUNT water containers should NOT be used on 1450 gallon (or on other large-diameter pressure vessels) or on tall clearance running gears.

IF the water container is NOT equipped with a hose for water access: either the water container must be EASILY removable from its bracket IF the water container does not contain a spigot (E.G. in the case of metal or plastic gerry cans) ... or else the water container must contain a spigot and be inverted for required gravity flow of the water. - FURTHERMORE - the spigot must not be clogged or otherwise function improperly.

A WIDESPREAD PRACTICE THAT MUST CEASE:

THE PRACTICE: The water container hose has been "tied" or "wired" shut with twine or wire. This makes the water supply INACCESSIBLE to those in MOST need of the first aid water: PERSONS BLINDED BY AMMONIA! Inasmuch as securing the hose in a reliable manner is important to prevent the water supply from accidently draining out, try this alternative:

THE ALTERNATIVE:

- A) Provide a replacement water container hose which has a larger outer diameter so that it will fit TIGHT into its tie-up hole in the side of the water container; AND -
- B) Make sure that the replacement water container hose is about 16"LONGER than the original hose, so that at least 12" of hose can be poked inside the tie-up hole, located on the side of the water container.

Both of the above techniques are thoughtful ways to ASSURE that the water supply will NOT be accidently drained out (that the water container is in reliable condition) AND ASSURE that the water supply is easily accessible.

<3> THE WATER CONTAINER MUST BE <u>FILLED</u> WITH <u>FRESH</u> WATER! This REQUIRES that the water fill level is MAINTAINED routinely AND that the water QUALITY is also MAINTAINED whereas the water container is rinsed out or cleaned as needed.

AS SOON AS THE FIRST TANK LEAVES THE PREMISES OF THE ANHYDROUS AMMONIA FACILITY, THE USE-SEASON FOR THAT FACILITY HAS BEGUN.

CONSEQUENTLY FROM THAT MOMENT FORWARD ALL WATER CONTAINERS
ON ALL NURSE AND APPLICATOR TANKS MUST BE 100% FILLED WITH WATER.

THE LAME EXCUSE THAT: "THE WATER TANK IS FILLED AS THE TANK CROSSES THE SCALE" (TO LEAVE THE PREMISES) ... A STATEMENT THAT SAFETY IS THE LAST ACTION TO BE TAKEN ... IS TOTALLY UNACCEPTABLE!

IT HAS BEEN LONG OBSERVED, SEASON AFTER SEASON, THAT FACILITIES WHICH OPERATE IN SUCH A MANNER HAVE ATROCIOUS WATER LEVELS.

IF A NURSE TANK CAN BE FILLED WITH 850 GALLONS OF AMMONIA PRIOR TO THE BEGINNING OF THE SEASON ... SURELY THE FIRST AID WATER SUPPLY CAN BE FILLED WITH 5 GALLONS OF WATER. NO IFS, ANDS, OR BUTS ABOUT IT!

ZERO!