COUPLING OPERATING INSTRUCTIONS

DANGER

FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS IN THIS PUBLICATION MAY CAUSE HAZARDOUS AMMONIA SPRAY RESULTING IN SERIOUS INJURY INCLUDING BLINDNESS, LUNG DAMAGE AND BURNS.

BEFORE CONNECTING OR DISCONNECTING THIS COUPLING, ALWAYS:

1. PUT ON GLOVES AND GOGGLES, AND HAVE EMERGENCY WATER AVAILABLE.

2. CLOSE ALL VALVES, AND OPEN BLEEDS TO RELIEVE PRESSURE IN BOTH THE APPLICATOR HOSE AND THE NURSE TANK HOSE.

3. DO NOT CONNECT OR DISCONNECT UNTIL FLOW FROM OPEN BLEEDS HAS STOPPED.

4. FOLLOW ALL INSTRUCTIONS IN THIS PUBLICATION.

5. DISCARD AND REPLACE THE COUPLER AND/OR NIPPLE 3 YEARS AFTER INSTALLATION OR AFTER THE DATE SHOWN ON THE PRODUCT, WHICHEVER IS EARLIER.
INSTRUCTION
PIONEER 4500 SERIES QUICK DISCONNECT COUPLING

OPERATING APPLICATION AND MEDIA
This product is intended for use with agricultural anhydrous ammonia at 250 PSI maximum pressure and requires observance of basic safety rules for handling anhydrous ammonia. These basic safety rules are available from the Fertilizer Institute, 1015 18th Street, N.W., Washington, D.C. 20036, and from Compressed Gas Association Inc., 500 Fifth Avenue, New York, New York 10036.

A quick disconnect coupling provides a means for quickly attaching the hose from a nurse tank to the applicator flow meter. When properly mounted in a clamp, it allows for disengagement of the nurse tank hose in the event of accidental separation of the nurse tank from the applicator. Upon disengagement, each coupling half automatically shuts off the flow of ammonia. See Figures 1, 2 and 3.

The user must conform to all applicable regulations in the installation and operation of this product. These regulations are available from The Fertilizer Institute and from Compressed Gas Association Inc. at the above addresses.

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INSTALLATION AND MOUNTING INSTRUCTIONS

Put on gloves and goggles, and have emergency water available.

Close all valves, including the nurse tank valve, the nurse tank hose valve, and the applicator flow meter. See Figure 3.

Slowly open bleed on nurse tank hose valve to relieve pressure in nurse tank hose. If an existing coupling is to be removed, slowly open bleed on existing coupling to relieve pressure in applicator hose. Direct bleed holes away from your face and body when doing this. Do not proceed further until all flow from all bleed holes has stopped. See Figure 3 and see ADDITIONAL SAFETY TIPS section on page 3.

If an existing coupling and an existing nipple are to be removed, unscrew each slowly. If flow of ammonia begins, immediately stop, re-tighten, and call servicemen. Do not try to take off or repair.

Mount the clamp to a structural member on the applicator at least 1/4 inch thick. Drill two 1/2" inch diameter holes spaced on 2 inch centers. Bolt the clamp securely with the two 1/2" inch bolts and lock nuts furnished. The clamp mounting should permit the coupling to pivot freely sideways and up and down. Be sure the metal warning tag is not damaged during coupling installation and that it is easily seen by the coupling user.

Attach the coupling (female half) to the applicator hose. The applicator hose must have enough length or bend to permit the coupling to move 1/2 inch forward or backward when installed in the clamp.
Insert the coupling through the clamp and install the retaining ring into the narrow groove at the front of the sleeve, using a spiral motion with a screwdriver. Be sure the ring is totally seated in the groove. See Figure 1.

Attach the nipple (male half) to the end of the nurse tank hose. Tighten securely. See Figure 2.

Attach the Quick Coupling Operating Instructions Decal (Part No. 9070034) to the nurse tank in a location where it is prominently displayed to the user. Contact the factory for a free Decal if needed.

See connecting and disconnecting instructions below.

CONNECTING AND DISCONNECTING
Follow this procedure each time the coupling is connected or disconnected.

Put on gloves and goggies, and have emergency water available.

Close all valves, including the nurse tank valve, the nurse tank hose valve, and the applicator flow meter. See Figure 3.

Slowly open bleed on coupling to relieve pressure in applicator hose. Slowly open bleed on nurse tank hose valve to relieve pressure in nurse tank hose. Direct all bleed holes away from your face and body when doing this. Do not proceed further until all flow from all bleed holes has stopped. See Figure 3 and see ADDITIONAL SAFETY TIPS section on page 3.

If disconnecting, do the following after the first 3 steps above:

A. Pull sharply to disconnect nipple from coupling;
B. Unscrew nipple from nurse tank hose.

If connecting, do the following after the first 3 steps above:

A. Inspect coupling and nipple. Do not use if (1) corroded, (2) dirty, (3) poppet valves on coupler and nipple do not open and close freely, or (4) coupling or nipple have been in service more than three years.

B. If nipple is not attached to nurse tank hose, attach it securely.

C. Insert nipple into coupling and push firmly to connect. Shake nurse tank hose to assure that nipple is properly connected.

D. Close all bleeds.

E. Open valves according to applicator manufacturer’s instructions when ready.

WARNING
If the coupling fails to connect or disconnect in a normal manner, or the poppets fail to close or move easily or there is any corrosion on the coupling or the nipple, replace the unit immediately. Failure to bleed the pressure from both halves of the coupling before connecting or disconnecting may result in hazardous ammonia spray.

IF ACCIDENTAL DISCONNECT SHOULD OCCUR
The coupling has a heavy duty sleeve spring to minimize disengagement of the nipple as a result of the weight and movement of the nurse tank hose, but if disengagement should occur when pressurized, FOLLOW ALL INSTRUCTIONS ABOVE UNDER "CONNECTING AND DISCONNECTING".

FIGURE 3
ACCIDENTAL NURSE TANK SEPARATION

Every precaution should be taken in the field to avoid an accidental separation of a nurse tank during ammonia application. Always use a safety chain and appropriate hitch pin. An accidental separation may cause damage to the equipment and expose you and others to potentially dangerous conditions from the ammonia.

If an accidental breakaway of the nurse tank should occur, FOLLOW ALL INSTRUCTIONS ABOVE UNDER THE HEADING 'CONNECTING AND DISCONNECTING'.

ANNUAL MAINTENANCE

The quick disconnect coupling must be thoroughly cleaned and functionally tested before each seasonal use. See Figures 2 and 3.

____ Put on gloves and goggles, and have emergency water available.

____ Close all valves, including the nurse tank valve, the nurse tank hose valve, and the applicator flow meter. See Figure 3.

____ Slowly open bleed on coupling to relieve pressure in applicator hose. Slowly open bleed on nurse tank hose valve to relieve pressure in nurse tank hose. Direct all bleed holes away from your face and body when doing this. Do not proceed further until all flow from all bleed holes has stopped. See Figure 3 and see ADDITIONAL SAFETY TIPS section on page 3.

____ Slowly unscrew the coupling from the applicator hose and slowly unscrew the nipple from the nurse tank hose valve. If flow of ammonia begins, immediately stop, re-tighten, and call a serviceman qualified to work on anhydrous ammonia equipment. Do not try to take off or repair.

____ Rinse the coupling and the nipple in solvent. Allow to drain and wipe clean and dry.

____ Using a screwdriver, push open fully the spring loaded poppets in each half and observe the poppets return to the closed position without hesitation. If they do not, replace the nipple or coupling immediately.

____ Retract the coupling sleeve (this may require two (2) people because of the heavy spring) exposing the locking balls and move each ball up and down. If any ball does not move freely, check the ball hole for dirt and clean. If all locking balls do not move freely, the coupling will malfunction by failing to disconnect. Replace the coupling immediately.

REPLACEMENT

Replace this coupling and/or nipple when (1) the first sign of corrosion is present; or (2) the coupling and nipple are dirty and cannot be cleaned; or (3) the poppet on the coupling or the nipple does not open or close freely; or (4) the coupling or nipple has been in service more than three years; or (5) after the date shown on the coupling or nipple whichever is earlier.

ADDITIONAL SAFETY TIPS

Because of the differences in the way applicators are equipped, the exact step-by-step procedure for using your ammonia equipment should be explained by the applicator manufacturer's instructions and by the applicator dealer. Here are some basic pointers to help you follow the recommended procedures:

____ Always wear gloves and goggles when working on equipment, transferring, hooking up or disconnecting hoses, etc.

____ Make certain emergency water is ready and handy.

____ Always work upwind.

____ Ammonia fittings on tilling and transfer lines may be designed to be hand tightened. Consult instructions from manufacturer.

____ Carry hose only by the valve body or coupling, but never by the valve handle.

____ Make sure that hose and fittings are free of dirt and rust.

____ Check that all bleeds are closed before opening valves for application.

____ Close all valves, slowly open bleeds on coupling and on nurse tank hose valve and wait for bleeding to cease before connecting or disconnecting couplings. Make sure all bleed holes are away from you.

____ If bleeding takes longer than 5-7 minutes, either that tank valve or hose valve may be faulty. Call a serviceman qualified to work on anhydrous ammonia equipment. Do not try to disconnect or repair.

____ Replace protective covers after each transfer to keep fittings clean.

____ Slow hose properly to prevent kinking or damage from vehicles or dragging on the ground.

____ Above all, follow instructions. Make each move deliberately, with thought about the consequences if something should go wrong.