



Installation Instructions

MAINTENANCE KIT FOR TP-3DC TRACTOR PROTECTION VALVE WITH DOUBLE CHECK

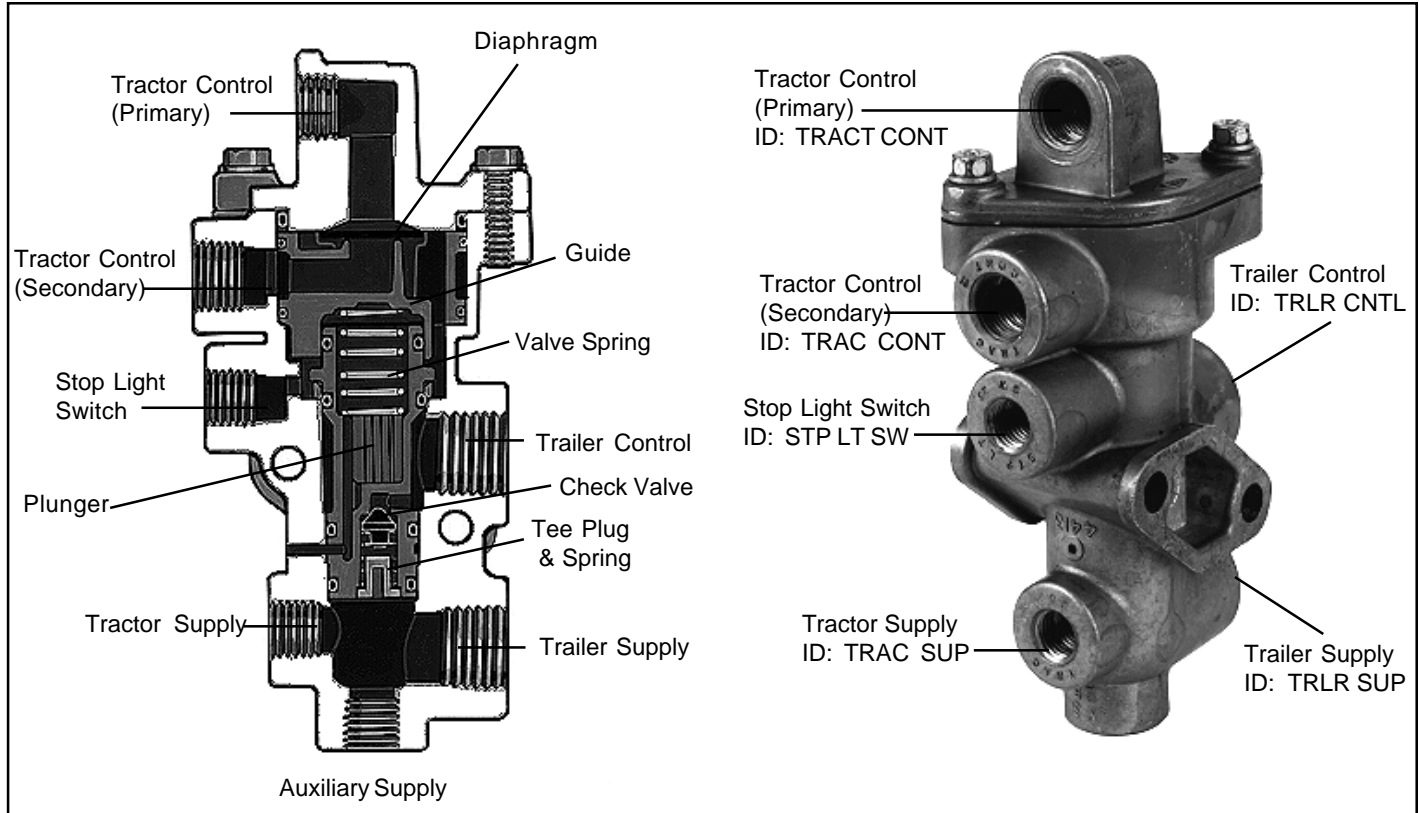


Figure 1 - TP-3DC Maintenance Kit Contents

IMPORTANT! PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO AVOID PERSONAL INJURY OR DEATH:

When working on or around a vehicle, the following general precautions should be observed at all times.

1. Park the vehicle on a level surface, apply the parking brakes, and always block the wheels.
2. Stop the engine when working around the vehicle.
3. If the vehicle is equipped with air brakes, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle.
4. Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in manner that removes all electrical power from the vehicle.
5. When working in the engine compartment the engine should be shut off. Where circumstances require that the engine be in operation, **EXTREME CAUTION** should be used to prevent personal injury resulting from contact with moving, rotating, leaking, heated, or electrically charged components.

6. Never connect or disconnect a hose or line containing pressure; it may whip. Never remove a component or plug unless you are certain all system pressure has been depleted.
7. Never exceed recommended pressures and always wear safety glasses.
8. Do not attempt to install, remove, disassemble or assemble a component until you have read and thoroughly understand the recommended procedures. Use only the proper tools and observe all precautions pertaining to use of those tools.
9. Use only genuine Bendix replacement parts, components, and kits. Replacement hardware, tubing, hose, fittings, etc. should be of equivalent size, type, and strength as original equipment and be designed specifically for such applications and systems.
10. Components with stripped threads or damaged parts should be replaced rather than repaired. Repairs requiring machining or welding should not be attempted unless specifically approved and stated by the vehicle or component manufacturer.
11. Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.

REMOVAL

1. Identify and mark or label all air lines and their connections to the TP-3DC. Then disconnect the air lines.
2. Remove the TP-3DC from the vehicle. Retain the mounting hardware.

DISASSEMBLY

Refer to Figure 2 throughout the procedures.
Scribe a line across the Cover and Body to ensure proper alignment during assembly.

1. Remove the two 1/4" hex/torx head screws that secure the cover to the body.
2. Remove and discard O-ring(1) from the cover.
3. Remove and discard diaphragm(2).
4. Remove the guide, and remove and discard O-rings(3&4) from the guide.
5. Remove the valve spring from the plunger, then remove the plunger.
6. Remove and discard O-ring(5) from the plunger.
7. Remove collar(6) and O-ring(7) from the plunger. Discard O-ring(7), retaining collar.

8. Remove and discard O-rings(8 & 9) from the plunger.

CLEANING & INSPECTION

1. Wash all metal parts in mineral spirits and dry them.
2. Inspect all parts for excessive wear or deterioration. Inspect valve seats for nicks or burrs. Check the valve spring for cracks or corrosion.
3. Inspect the bores of the valve housing for deep scuffing or gouges.

Replace all parts that were discarded and any part not found to be serviceable during inspection, using only genuine Bendix replacement parts.

ASSEMBLY

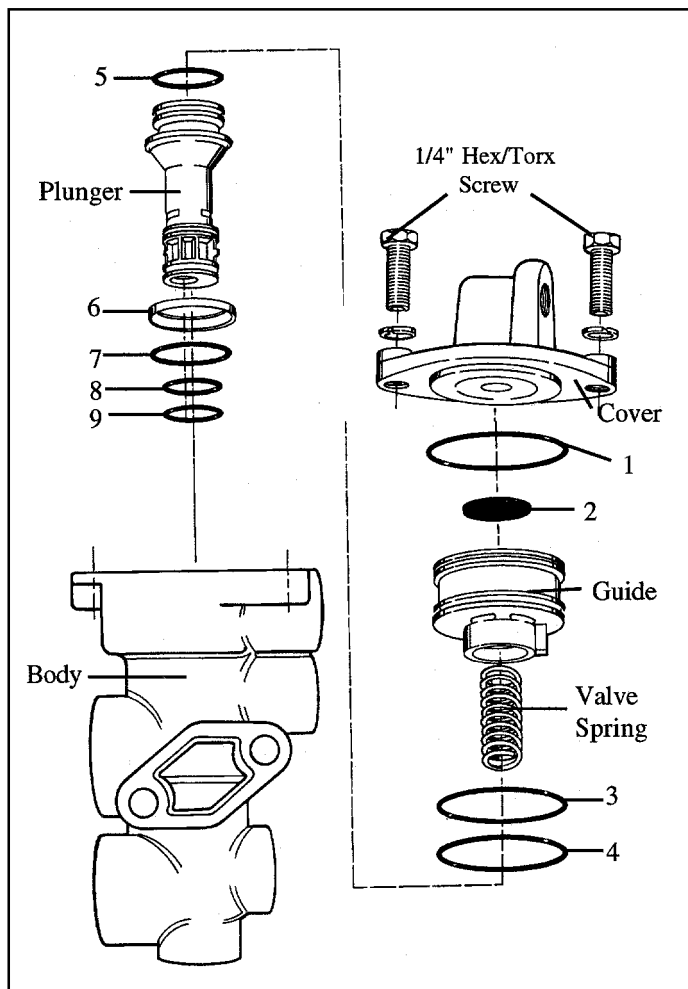
Before assembling the TP-3DC, lubricate all O-rings, O-ring grooves, body bores and rubbing surfaces with lubricant provided in the kit. Align scribe mark made in disassembly process on Cover and Body to ensure proper alignment of cover.

NOTE: When using pipe thread sealant during assembly and installation, take particular care to not allow the sealant into the valve itself. Apply the sealant beginning with the second thread back from the end.

1. Install O-rings(8 & 9) onto plunger.
2. Install O-ring(7) onto plunger and then install collar(6) over O-ring(7). Make sure the collar is fully seated and firmly in place.
3. Install O-ring(5) onto the Plunger.
4. Install the plunger in the body. Then install the valve spring into the plunger.
5. Install O-rings(3 & 4) onto the guide.
6. Properly align the guide by orienting its indexing tab with the corresponding notch in the body, then install the guide in the body.
7. Place diaphragm(2) onto the guide.
8. Install O-ring(1) onto the cover.
9. Firmly press the guide against spring pressure and install the cover on the body. Secure with the two hex/torx head screws. Torque to 30 - 60 in. lbs.

NOTE: BEFORE PLACING THE VEHICLE BACK INTO SERVICE, PERFORM "OPERATIONAL AND LEAKAGE TESTS."

Figure 2 - Exploded View of TP-3DC



OPERATIONAL AND LEAKAGE TESTS

1. Block the vehicle's wheels and fully charge the air system.
2. Place the trailer supply valve in the emergency position.
3. Disconnect the trailer control line hose coupling. Then make a service application with either the foot valve or the trailer control valve and check for leakage at the hose coupling with a soap solution. Leakage should not exceed a one inch bubble in five seconds.
4. Release the service application and place the trailer supply valve in the normal or run position. Connect the trailer control valve to a test gauge.
5. Make a service brake application and note that service air pressure is present at the trailer control line hose coupling.
6. With the ignition on, make and hold a service brake application and note that the stop lights function.
7. Remove the line at the TP-3DC primary tractor control port (TRAC CONT) and plug the end of the line. Then make a service brake application and check for leakage at the open tractor control port. Leakage should not exceed a one inch bubble in five seconds.
8. Reconnect the line to the primary tractor control port, then disconnect and plug the line at the secondary tractor control port (TRACT CONT). Then make a service brake application and check for leakage at the open tractor control port. Leakage should not exceed a one inch bubble in five seconds.

If the valve does not function as described; or if leakage is excessive, repair the valve or replace it at any authorized parts outlet.