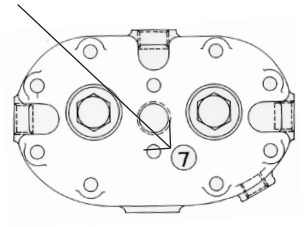
Installation Instructions

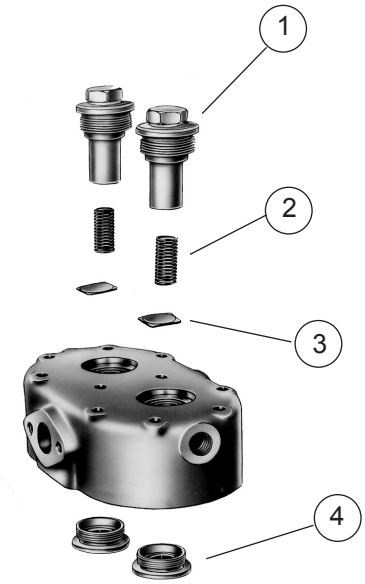
BENDIX® TU-FLO® 700 COMPRESSOR DISCHARGE VALVE MAINTENANCE KIT

⚠IMPORTANT PLEASE READ BEFORE PROCEEDING

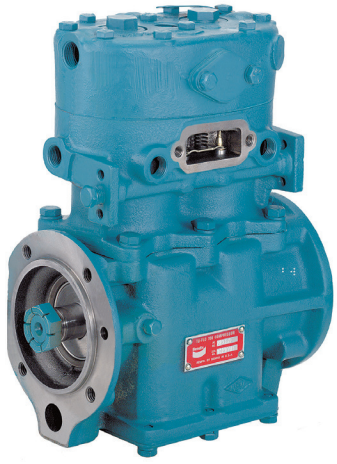
This kit should only be used to service Bendix® Tu-Flo® 700 compressors that are NOT identified with a (7) in the location illustrated below. Use of this kit in compressors identified with a (7) will result in compressor malfunction and damage.

Raised or Depressed Numeral and Circle





Kit Contents		
Item No.	**Description**	**Qty.**
1	Discharge Valve Cap Nut	2
2	Discharge Valve Spring	2
3	Discharge Valve	2
4	Discharge Valve Seats	2



Bendix® Tu-Flo® 700 Compressor

Figure 1 – Bendix® Tu-Flo® 700 Compressor Kit Contents

GENERAL SAFETY GUIDELINES

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

When working on or around a vehicle, the following guidelines should be observed AT ALL TIMES:

- **Park the vehicle on a level surface, apply the parking brakes and always block the wheels. Always wear personal protection equipment.**
- **Stop the engine and remove the ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and the ignition key should be removed. 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.**
- **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.**
- **If the work is being performed on the vehicle's air brake system, or any auxiliary pressurized air systems, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle. If the vehicle is equipped with a Bendix® AD-IS® air dryer system, a Bendix® DRM™ dryer reservoir module, or a Bendix® AD-9si® air dryer, be sure to drain the purge reservoir.**
- **Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.**
- **Never exceed manufacturer's recommended pressures.**
- **Never connect or disconnect a hose or line containing pressure; it may whip and/or cause hazardous airborne dust and dirt particles. Wear eye protection. Slowly open connections with care, and verify that no pressure is present. Never remove a component or plug unless you are certain all system pressure has been depleted.**
- **Use only genuine Bendix® brand replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, wiring, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.**
- **Components with stripped threads or damaged parts should be replaced rather than repaired. Do not attempt repairs requiring machining or welding unless specifically stated and approved by the vehicle and component manufacturer.**
- **Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.**
- **For vehicles with Automatic Traction Control (ATC), the ATC function must be disabled (ATC indicator lamp should be ON) prior to performing any vehicle maintenance where one or more wheels on a drive axle are lifted off the ground and moving.**
- **The power MUST be temporarily disconnected from the radar sensor whenever any tests USING A DYNAMOMETER are conducted on a vehicle equipped with a Bendix® Wingman® system.**
- **You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.**

DISASSEMBLY

With the compressor cylinder head removed, refer to *Figure 1* to determine which style discharge valve seat is installed in the cylinder head. *Follow the appropriate instructions below.*

OLD STYLE DISCHARGE VALVE SEATS

1. Remove and discard both discharge valve cap nuts (1) and springs (2).
2. Remove and discard both discharge valve assemblies which consist of the discharge valve seat (4), valve, and plug. These components can be removed as an assembly by inserting drill rod (.234" or 5.94 mm diameter) in two of the four discharge openings and turning counterclockwise.

   NOTE: *Do not use dowel pin stock as this material is generally too hard and will break.*

NEW STYLE DISCHARGE VALVE SEAT

1. Remove and discard both discharge valve cap nuts (1), springs (2), and valves (3).
2. Remove and discard both discharge valve seats (4).

CLEANING & INSPECTION

Remove all the carbon deposits from the discharge cavities and all the rust and scale from the cooling cavities of the cylinder head body. Scrape all the foreign matter from the body surfaces and use shop air pressure to blow the dirt particles from all the cavities.

ASSEMBLY

1. Install the new discharge valve seats (4) and torque to 70-90 ft-lbs (95-122 Nm.).
2. Install the new discharge valve (3), discharge valve springs (2), and discharge valve cap nuts (1). Tighten the discharge valve cap nuts (1) to 120-170 ft-lbs (203-230 Nm.).

CYLINDER HEAD TESTING

1. Check the discharge valve lift. Measure the discharge valve travel from the fully closed to the fully open position. Lift **MUST** be .030-.046 inches (.762-1.168 mm) if the proper components have been used.
2. Apply 120 psi (827 kPa) shop air pressure to the discharge port. Using a NON-METALLIC rod or dowel, "tap" each discharge valve five times noting that air is expelled with each tap.
3. Apply a soap solution around the cap nuts, seats, and discharge valves. Total leakage should not exceed 500 SCCM or a 1 inch (25.4 mm) bubble in **less** than 3 seconds.