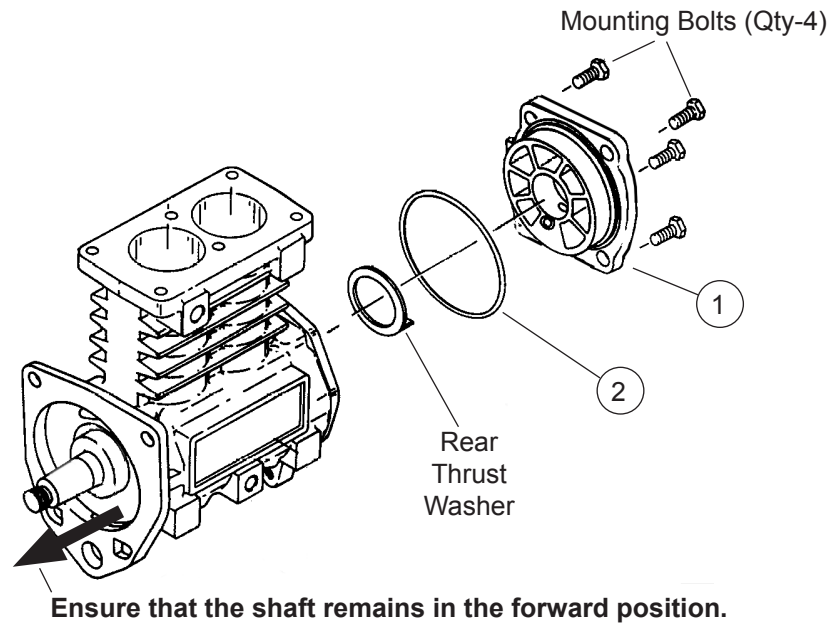


Installation Instructions



COMPRESSOR END COVER KIT



Kit Contents	
Description	Qty.
End Cover Assembly	1
End Cover Sealing Ring	1

Figure 1 – Installation Diagram

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.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.
- ▲ 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.

Follow all General Safety Guidelines including, but not limited to, those found on page 2 of this document.

REMOVAL AND DISASSEMBLY

REMOVAL

These instructions are general and are intended to be a guide, in some cases additional preparations and precautions are necessary.

1. Block the wheels of the vehicle and drain the air pressure from all the reservoirs in the system.
2. Drain the engine cooling system and the cylinder head of the compressor. Identify and disconnect all air, water, and oil lines leading to the compressor.
3. Remove the governor and any supporting bracketry attached to the compressor and note their positions on the compressor to aid in reassembly.
4. Remove the discharge and inlet fittings, if applicable, and note their position on the compressor to aid in reassembly.
5. Remove the flange or base mounting bolts and remove the compressor from the vehicle.

PREPARATION FOR DISASSEMBLY

Remove road dirt and grease from the exterior of the compressor with a cleaning solvent. Before the compressor is disassembled, the following items should be marked to show their relationship when the compressor is assembled. Mark the rear end cover in relation to the crankcase.

A convenient method to indicate the above relationships is to use a metal scribe to mark the parts with numbers or lines. Do not use marking methods such as chalk that can be wiped off or obliterated during rebuilding.

REAR COVER DISASSEMBLY

Note: It is very important to follow the instructions below to hold the crankshaft in position during the replacement of the end cover in order not to allow the front thrust washer to fall out of position.

1. Using suitable shop tools, such as vice grips, grip and retain the crankshaft in position.
2. Remove and retain the four cap screws and lockwashers or nuts and lockwashers that secure the rear end cover to the crankcase.
3. Remove the rear end cover and end cover oil seal ring and discard. Retain the rear thrust washer.

CLEANING OF PARTS

GENERAL

All parts should be cleaned in a good commercial grade of solvent and dried prior to inspection.

INSPECTION OF PARTS

CRANKSHAFT

Check the crankshaft threads, keyways, tapered ends, and all machined and ground surfaces for wear, scores, or damage. If the crankshaft journals are excessively scored or worn or out of round, the compressor must be replaced. Inspect the oil passages (front drain, rear crankshaft journal hole, and rear bearing sleeve bearing holes) and check that they are free of obstructions.

ASSEMBLY

General Note: All torques specified in this manual are assembly torques and typically can be expected to fall off after assembly is accomplished. Do not retorque after initial assembly torques fall unless instructed otherwise. A compiled listing of torque specifications is presented on the last page of these instructions.

To convert in-lbs of torque to ft-lbs of torque, divide in-lbs by 12.

$$\text{in-lbs} \div 12 = \text{ft-lbs}$$

To convert foot pounds of torque to in-lbs of torque, multiply ft-lbs by 12.

$$\text{ft-lbs} \times 12 = \text{in-lbs}$$

INSTALLING REAR COVER

1. Clean end cover flange of all previous gasket material etc., taking care not to damage or gouge the surface.
2. Verify that the clamping device used to hold the crankshaft in position is still retaining the crankshaft in position.
3. Ensure the tang of the thrust washer is inserted in the slot of the end cover. Place the oil seal ring in the groove of the rear end cover and install the end cover making sure not to pinch the seal ring. Fasten the end cover to the crankcase with the four cover cap screws. Install all bolts hand tight before tightening in a cross-pattern to 175-225 in-lbs.
4. Install the pipe fitting removed during disassembly into the end cover.

FINAL COMPRESSOR ASSEMBLY

1. Install all crankshaft keys making certain to support the crankshaft to avoid bearing damage. Install the crankshaft nut where applicable. When installing drive couplings or gears, do not exceed 120 ft-lbs torque on the crankshaft nut.
2. Use covers, plugs, or masking tape to protect all ports if the compressor is not to be installed immediately. Protect the ends of the crankshaft against damage by wrapping with masking tape or friction tape.
3. Re-install the compressor onto the engine, including any bracketry removed during disassembly.

Before returning the vehicle to service, restore the oil supply to the compressor and start the engine. Visually inspect the end cover and oil supply line fitting for leaks.

TU-FLO® 550 and 750 AIR COMPRESSOR SPECIFICATIONS

Minimum discharge line size	1/2" I.D.
Minimum coolant line size	3/8" I.D.
Minimum oil-supply line size	3/16" I.D.
Minimum oil-return line size	1/2" I.D.
Minimum air-inlet line size	5/8" I.D.
Minimum unloader line size	3/16" I.D.

TORQUE SPECIFICATIONS

Bolt, Nut, or Screw	Assembly Torque (in-lbs.)
Cylinder head	440 - 500
Unloader cover plate	175 - 225
Discharge valve seat	840 - 1080 (70-90 ft-lbs.)
Inlet valve stop	840 - 1080 (70-90 ft-lbs.)
End cover	175 - 225
Connecting rod	150 - 170
Bottom cover	175 - 225
Air strainer	125 - 150
Inlet fitting	175 - 225
Discharge fitting	175 - 225

Governor or governor adapter	175 - 225
Pipe plugs	
1/16"	35 - 50
1/8"	85 - 105
1/4"	130 - 170
3/8"	160 - 200
1/2"	200 - 270
Pipe bushing	
1/2"	175 - 225
Crankshaft nut:	
Marsden or castle	1200-1440 (100-120 ft-lbs.)
P/N 298125 (metric thread)	2640-3048 (220-254 ft-lbs.)

DIMENSIONAL DATA

Port Sizes

Water inlet	1/2" - 14 NPT
Water outlet	1/2" - 14 NPT
Air discharge	1/2" - 14 NPT
Governor	1/8" - 27 NPT
Oil inlet (end cover)	1/8" - 27 NPT
Oil return: base mount	1/2" - 14 NPT

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