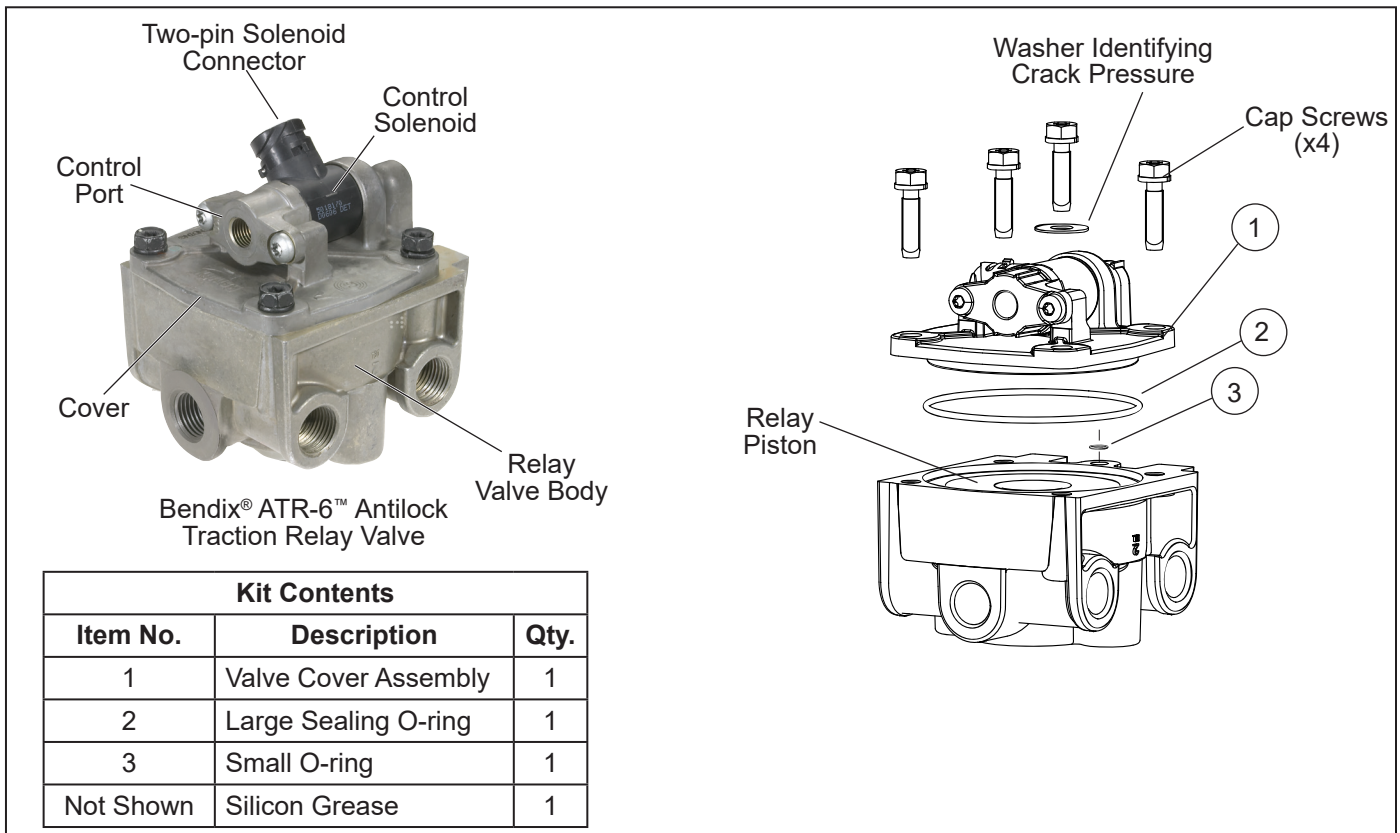


Installation Instructions



BENDIX® ATR-6™ ANTILOCK TRACTION RELAY VALVE COVER SERVICE REPLACEMENT KIT



Kit Contents		
Item No.	Description	Qty.
1	Valve Cover Assembly	1
2	Large Sealing O-ring	1
3	Small O-ring	1
Not Shown	Silicon Grease	1

Figure 1 – Bendix® ATR-6™ Antilock Traction Relay Valve (with Exploded View)

This kit is intended for the replacement of the cover assembly for a Bendix® ATR-6™ Antilock Traction Relay Valve. The following are the necessary steps to replace the cover.

PREPARATION

FOLLOW ALL STANDARD INDUSTRY SAFETY PRECAUTIONS, INCLUDING, BUT NOT LIMITED TO, THOSE LISTED ON PAGE TWO OF THIS DOCUMENT.

Park the vehicle on level ground, chock the wheels, drain the reservoirs, and turn off the ignition. Locate the ATR-6 valve on the vehicle.



It is very important to be sure that the air pressure has been completely drained from all vehicle reservoirs. Any remaining air pressure would be present underneath the relay piston, presenting a hazard to the technician during valve disassembly.

1. Clean the exterior of the valve, removing contamination, road dirt, etc. to avoid any debris entering the valve body during disassembly.

NOTE: The amount of disassembly necessary will depend upon the location, orientation, and bracketry used for the particular valve. In many cases, the valve will not need to be removed from the vehicle to make this repair.

2. Remove the electrical connection to the traction solenoid.
3. Remove the air hose from the control port on the relay valve cover. (If it is necessary to remove more air hoses from the valve, label the hoses to aid in reinstallation.)
4. Remove the four (4) cap screws (and I.D. washer) securing the cover to the body. Retain the cap screws and washer – as well as any brackets used – for reuse.
5. Remove and discard the sealing rings (2 and 3) from the cover.

NOTE: Carefully remove the cover as there could potentially be spring force acting beneath the relay piston. Be sure to observe the orientation of the cover to assist with re-assembly. Discard the original cover.



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, a Bendix® AD-9si®, AD-HF®, or AD-HFi™ 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.

CLEANING AND INSPECTION

1. Inspect the wire harnesses, air hose, and connector for corrosion, damage, etc. Replace as necessary.
2. Inspect all metal parts for deterioration and wear as evidenced by scratches, scoring, and corrosion.

ASSEMBLY

NOTE: All torques specified in this document are assembly torques and can be expected to fall off slightly after assembly. **Do not re-torque** after initial assembly torque fall-off. For assembly, hand wrenches are recommended.

Prior to assembly, lubricate the o-rings using the grease supplied in the kit.

1. Install the sealing o-rings (2 and 3) on the cover assembly (1).
2. With the cover in the same orientation as before, and any mounting brackets used, place the cover assembly (1) into position over the valve body.
3. Install the four (4) cap screws and I.D. washer in the cover and torque to 150-180 in-lbs (17-20 N•m).
4. Connect the control air hose to the valve. (If other air hoses were removed, reinstall using the labels applied to assist identification.)
5. Reconnect the wire harness to the traction solenoid.
6. Test the valve as outlined in the *Operational and Leakage Tests* section of this document before returning the vehicle to service.

GENERAL

A change in vehicle braking characteristics or a low pressure warning may indicate a malfunction in one or the other brake circuit; although the vehicle air brake system may continue to function, the vehicle should not be operated until the necessary repairs have been made and both braking circuits – including the pneumatic and mechanical devices – are operating normally. Always check the vehicle brake system for proper operation after performing brake work and before returning the vehicle to service.

OPERATIONAL AND LEAKAGE TESTS

1. Chock the wheels and fully charge the air brake system.

OPERATION TEST

1. Apply and release the brakes several times and check for prompt application and release at each wheel.
 - If an incomplete or sluggish release of the brakes is noted at some, but not all wheels, test the antilock modulator valve(s) operating those wheels for proper operation, and inspect for a kinked or obstructed air hose leading to, or from, the modulator(s).
 - If an incomplete or sluggish release is noted at all wheels, inspect for a kinked or obstructed air hose leading to, or from, the Bendix® ATR-6™ Antilock Traction Relay Valve.
2. Disconnect the ATR-6 valve's two-pin solenoid connector from the controller wire harness.
3. Apply and remove vehicle power (12 VDC) to the two-pin connector while observing the brake chambers. Note that a brake application is made and held while power is applied to the ATR-6 valve's solenoid and that it is released when power is removed.

Refer to the Bendix® ATR-6™ and ATR-3™ Antilock Traction Relay Valves Service Data Sheet, SD-13-4861, on b2bendix.com for additional traction functionality.

LEAKAGE TESTS

1. With the air system pressure charged to governor cutout, apply a soap solution to the exhaust port. The leakage noted should not exceed a 1-in. (2.54-cm) bubble in three (3) seconds.
2. Make and hold a full brake application and apply a soap solution to the exhaust port and around the cover where it joins the body. The leakage noted should not exceed a 1-in. (2.54-cm) bubble in three (3) seconds at the exhaust port.
3. Check for inlet valve and o-ring leakage. Make this check with the service brakes released. Coat the exhaust port and the area around the retaining ring with a soap solution; leakage of a 1-in. (2.54-cm) bubble in three (3) seconds is permitted.

TECHNICAL ASSISTANCE

For additional assistance, contact the Bendix Tech Team by email at techteam@bendix.com or by phone at 1-800-AIR-BRAKE (1-800-247-2725), option 2. Bendix Tech Team representatives are available Monday through Thursday, 8:00 a.m. – 6:00 p.m., and Friday, 8:00 a.m. – 5:00 p.m. ET.

<p>B2BENDIX.COM 24/7/365 ACCESS FULL SERVICE AT YOUR FINGERTIPS</p>	<p>KNOWLEDGE-DOCK.COM BLOGS, PODCASTS, AND MORE INDUSTRY INSIGHTS FROM INDUSTRY EXPERTS</p>	<p>BRAKE-SCHOOL.COM WEB-BASED TRAINING LOG ON AND LEARN FROM THE BEST</p>
--	--	--

