

## Cooler Bypass Valve Kit

### 36605-02K

- 1 T-Valve
- 1 Spring
- 1 Checkball
- 1 Small O-Ring
- 2 Medium O-Rings
- 2 Large O-Rings
- 2 Extra Large O-Rings 1 Extra



### Inspection:

1. Ensure the cooler bypass valve is properly back-flushed. Use dry compressed air to remove excess solvent.
2. If cooler line case fittings are overtightened, rubber-coated sealing washers and/or cooler line case fittings can be damaged, causing a transmission fluid leak. Torque fittings according to OEM specifications.
3. We suggest synthetic ATF be used in these types of trucks, particularly in colder climates.

## Disassembly:

1. Remove the banjo fitting from the return end of the cooler bypass line.
2. Remove and discard the spring, T-valve and checkball.
3. Remove and discard the 3 o-rings from the banjo fitting.
4. Remove and discard the o-ring at the internal threads of the return cooler fitting.
5. Remove and discard the 2 o-rings on the outboard cooler fitting.

## Ball Seating Instructions:

**NOTE:** A poor housing ball seat allows leakage. Reforming the seat is highly recommended, followed by a vacuum test to ensure proper performance.

1. Place the cooler bypass line housing bell open side up in a vise.
2. Set the OEM checkball into the pocket.
3. Punch the top of the OEM checkball smartly 2-3 times.
4. Discard the OEM checkball after reseating is verified with vacuum testing (below). The OEM checkball is softer than the Sonnax replacement, and may deform.

## Installation:

1. Ensure there are no restrictions or debris in the cooler bypass line.
2. Install 2 new o-rings on the outboard cooler fitting, as shown.
3. Install 1 new o-ring on the return cooler fitting bolt, as shown.
4. Install 3 new o-rings on the banjo fitting, as shown.
5. Install the checkball, T-valve and spring into the banjo fitting and bypass line, as shown, and reassemble.

## Final Verification Steps:

1. Vacuum testing of all cooler bypass assemblies is highly recommended. Even the new OEM assemblies have been found to leak and after service, seat deformation is common. Apply vacuum at the outboard end of the pipe to test ball seating at the return end.
2. Supply a vacuum source ( 3cfm w/30" capability) to the case-out fitting after removing the mount bolt. A large air gun rubber tip can be placed on your vacuum pump test station. Plug the opposite side of the opening by forcing it over a rubber pad or use your thumb. Vacuum should not be less than 20". If test results are low, disassemble the bypass fitting and reform the ball seat.

**Note:** Pass/fail results only apply to a vacuum tester that has been calibrated to our suggested guidelines. Visit [www.sonnax.com](http://www.sonnax.com) for information on vacuum testing.