

Oversized Cooler, Main Converter & Converter Relief Valve Kit



Part No.
122740-10K

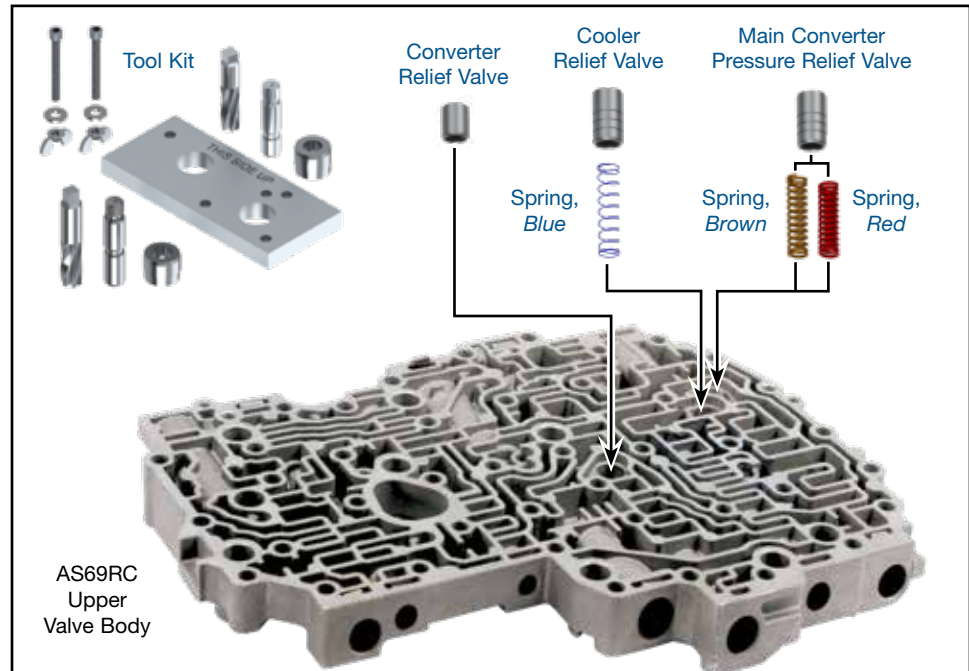
- Converter Relief Valve
- Cooler Relief Valve
- Cooler Relief Spring Blue
- Main Converter Pressure Relief Valve
- Main Converter Pressure Relief Spring Brown, Gas
- Main Converter Pressure Relief Spring Red, Diesel

Tool Kit

Part No.
122740-TL10

- Washers (2)
- Wing Nuts (2)
- Bolts (2)
- Jig Plate
- Reamer Jigs (2)
- Reamers (2)
- Guide Pins (2)

Aisin Seiki AS66RC, AS69RC



NOTE: The blue spring is always used with the cooler relief valve. The red spring is used in diesel applications with the main converter pressure relief valve. The brown spring is used in gas applications with the main converter pressure relief valve.



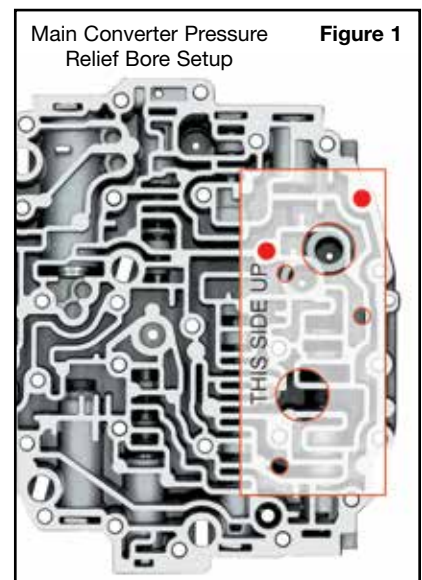
NOTE: It is necessary to clear out chips from the bore to ensure that the reamer is able to ream the entire bore.

1. Disassembly

- Remove and discard OE cooler and main converter pressure relief valves and springs.
- Remove and discard OE converter relief valve. Save spring for reuse.

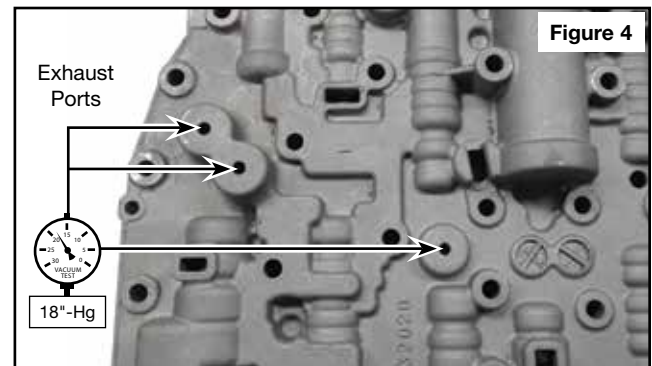
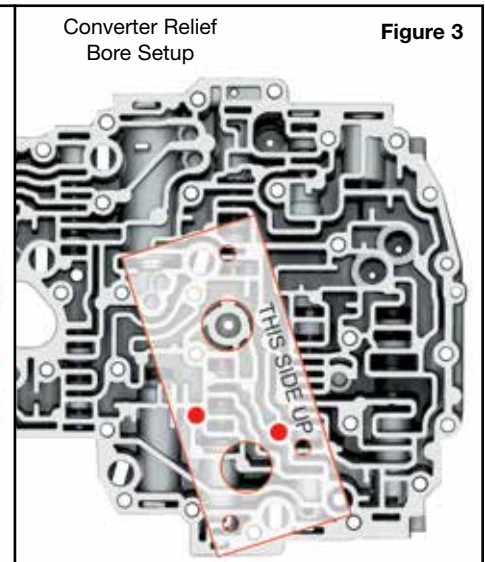
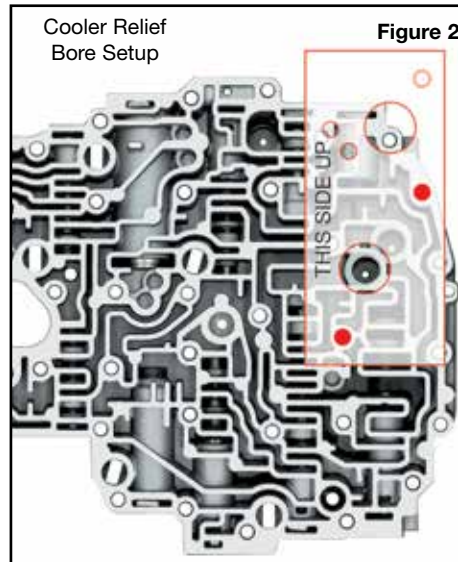
2. Bore Reaming

- Place OE upper valve body on bench with the cooler, main converter pressure relief and converter relief bores facing upwards.
- Fit two washers, over two bolts and slide them up, through channel plate holes (red circles).
- Place Sonnax jig plate over the bolts, aligning the main converter pressure relief bore (Figure 1).
- Place and loosely tighten wing nuts on the bolts. Recommend using small plate and clamp to secure casting to bench.



2. Bore Reaming (continued)

- e. Install Sonnax reamer jig for the **122740-RM10** reamer into plate hole over bore to be reamed.
- f. Slide Sonnax guide pin for the **122740-RM10** reamer through reamer jig and into casting bore until bottomed.
- g. Once guide pin, reamer jig and jig plate are aligned with bore to be reamed, securely tighten wing nuts. Ensure jig plate is tightly held in place while allowing guide pin to stroke freely in reamer jig and casting bore.
- h. Remove guide pin and insert Sonnax reamer into reamer jig.
- i. Ream bore with steady, clockwise rotation using either speed handle or regulated air drill. Once reaming is complete, spin the reamer a few more times to burnish and improve surface finish (for full reaming instructions/reamer care, please visit www.sonnax.com).
- j. Ensure the bore is clear of chips and that the reamer was able to bottom out in the bore.
- k. Reposition jig plate and clamp, with the washers and bolts (red circles, **Figure 2**).
- l. Repeat steps 2f–2k to ream the second bore.
- m. Reposition jig plate and clamp, with the washers and bolts (red circles, **Figure 3**).
- n. Repeat steps 2f-2j using reamer jig and guide pin for the **99740-RM8** to ream the smaller converter relief bore.
- o. If necessary, deburr bore entrances slightly to facilitate assembly of the oversized valves.
- p. Thoroughly clean the upper valve body after reaming.



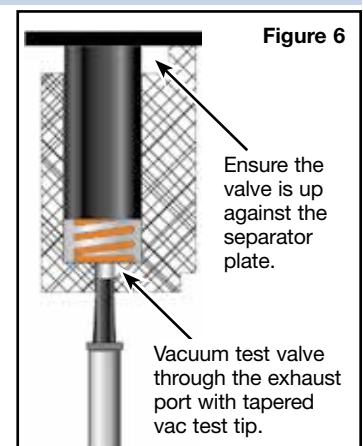
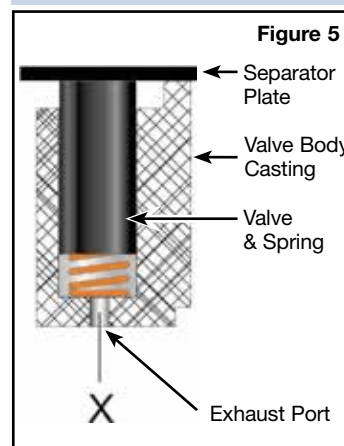
3A. Installation & Assembly: Cooler and Main Converter Pressure Relief Bores

- a. Install Sonnax springs into bores.
 - **Cooler relief bore:** Blue spring in the cooler relief bore
 - **Main converter pressure relief bore:**
Red spring = diesel application
Brown spring = gas application
- b. Install Sonnax cooler relief valve with spring pocket over spring.
- c. Install main converter pressure relief valve with spring pocket over spring.

3B. Installation & Assembly: Converter Relief Bore

- a. Reinstall OE converter relief spring
- b. Install Sonnax converter relief valve with spring pocket over spring.

Cross-Section of Relief Valves, Upper Valve Body



4. Final Testing

Vacuum test with a tapered plastic tip and ensure that valves are against the separator plate (**Figures 4, 5 & 6**).

Vacuum testing at the port(s) indicated holds the recommended minimum 18 in.-Hg.