

ATS DIESEL PERFORMANCE DeepPANS

Installation Manual v1.4:
ATS Deep Pans Extra Capacity Transmission Pan
2007½-2018 Ram 6.7L Cummins
PN: 301-900-2326

! PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION.



Figure 1 - 68-RFE Deep Pan Kit Contents

Items you may want to purchase before installation:

- New Sump Filter.....(Mopar p/n 5013470AD)
- New Spin-On Cooler Return Filter.....(Mopar p/n 5179267AC)
- Billet Aluminum Filter Coupler.....(ATS p/n 301-021-2326)

1. Park the truck on level ground and if the transmission is at operating temperature (HOT), let the transmission sufficiently cool before starting the installation.
2. Place a large diameter shallow drain pan beneath the factory transmission pan. Also, keep some rags handy as this can get messy.
3. Remove the bolts holding the front and sides of the factory pan to the transmission.
4. Loosen the bolts holding the rear of the factory pan to the transmission.
5. Slowly separate the front of the factory pan away from the transmission allowing the fluid to drain into the drain pan.
6. Hold up the factory pan and remove the remaining bolts holding the pan to the transmission.
7. While holding the pan level, lower the pan away from the transmission.
8. Pour the remaining fluid in the factory pan into the drain pan.
9. If changing the transmission filters, follow steps 10-16. If not, skip to step 17.
10. Remove the screw holding the primary oil filter to the valve body.
11. Inspect the oil filter seal from the bottom of the oil pump. If the seal is installed correctly and is in good condition, it can be reused.

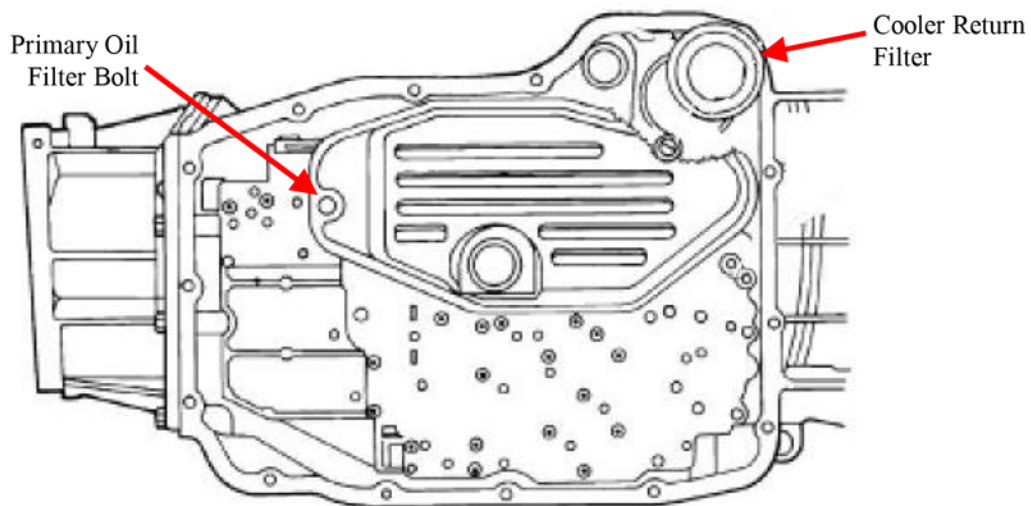


Figure 2 - Filter Locations

12. If replacing the cooler return filter, remove it drain the excess transmission fluid into the drain pan.
13. If necessary, install a new primary oil filter seal in the oil pump inlet bore. Seat the seal in the bore.
14. Place the replacement filter in position on the valve body and into the oil pump.
15. Reinstall the screw to hold the primary oil filter to the valve body. Torque this screw to 4.5 N-m (40 in-lbs).
16. Replace the cooler return filter and be sure to not over-torque the filter. It uses plastic threads which will crack if over-torqued. Torque this filter to 7-ft-lbs or $\frac{3}{4}$ turn after the gasket contacts the base.

Note: ATS strongly suggests replacing the plastic coupler with our billet aluminum filter coupler (ATS p/n 301-021-2326). These allow the installer to torque the filter in place like an oil filter to ensure a positive seal. The factory plastic couplers are very prone to cracking if over-torqued. If under-torqued, engine vibrations will eventually cause the filter to fall off. In either situation, transmission oil pressure is lost and will severely damage the transmission.

**ATS****FACTORY**

17. Apply some new transmission fluid to the o-rings on the filter extension and slide the o-ring side over the pickup on the filter, rotating slightly to reduce the possibility of pinching/cutting the o-rings.



Note: If an o-ring is damaged during installation (a piece of the o-ring shaved off by the edge of the filter), remove the damaged o-ring and replace it with one of the spare o-rings included in the kit and reinstall the filter extension.

18. Using a gasket scraper, clean any gasket or sealing material from the surface of the transmission case.
19. Place the new ATS deep transmission pan into position with the new gasket and torque the new hardware to 12 N-m (85 in-lbs).
20. Located on the side of the transmission pan is a hole tapped for 1/8NPT. If installing a transmission temperature gauge, this hole can be used for the temperature sending unit. If not, install the 1/8 NPT pipe plug included with the kit.
21. The 68RFE transmission with a deep pan requires at least 22 quarts of ATF to fill when completely dry. Transmissions equipped with the factory pan hold about 17 quarts of ATF. When dropping the factory pan to drain the transmission, only about 6-8 quarts are removed (this can be more depending on how long the transmission is left to drain). This leaves between 9 and 11 quarts still trapped inside the transmission and torque converter. From here, there are two options:
- A. If the transmission fluid appears clean and in good condition, it is ok to add new fluid without completely draining and flushing the remaining fluid in the transmission.
- If this is the case, add 8 quarts of fluid thru the fill tube.

Start the engine and allow to idle in PARK and immediately add an additional 4 quarts.

Allow the truck to idle for about 20 minutes. Then, with your foot on the brake, run through PARK, REVERSE, NEUTRAL, DRIVE and back to PARK allowing each gear to engage but DO NOT move the truck. Continue this for several cycles.

With the engine running and the truck in PARK, check the fluid level and add as necessary until it is near the full mark.

- B. If the truck is due for a full transmission service, it is possible to completely drain and flush the transmission in your driveway or garage, however, we strongly suggest having a qualified technician perform this task. Serious damage can occur if you run the pump dry. 68RFE pumps are VERY sensitive to losses in lubrication because the steel pump gears ride inside an aluminum housing and require a layer of oil between the moving parts. If this oil layer is lost, the steel gears will chew into the aluminum housing ruining the pump.

NOTE: In either case, fill the transmission with **Mopar ATF+4** or a fluid that meets **ATF+4 spec**. These can be found at nearly any parts store. We recommend avoiding ATF's that say "compatible with" or "replaces" ATF+4. Any brand is fine as long as it meets the spec. When draining the fluid, it is a good idea to keep an eye on how much drained out. If more than 8 quarts came out, for instance, if 12 quarts came out you'll need to add back that 12 plus an additional 5 (i.e. a total of 17 quarts) to make up for the increased volume supplied by the deep pan.

22. Check for leaks and if none are visible, installation is complete.

Have Any Questions?

Thank you for purchasing the ATS 68-RFE Deep Transmission Pan. Please check our website at <http://www.atsdiesel.com> for technical support and other performance products such as the 5-Star™ torque converter, ATS High Performance Valve Body and ATS High Performance Transmission. Please call or e-mail our Technical Service Department, 8:00am to 5:30pm Mountain Standard Time, Monday through Friday.

Contact Information

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We strive to make our instructions as clear and complete as possible. To achieve this, our instructions are under constant construction. We encourage you to visit our website to check for the most up-to-date manuals and diagrams as well as other information. If you have any suggestions as to how we can improve this installation manual, let us know at <mailto:Suggestions@ATSDiesel.com>.

Bill of Materials

1. ATS Deep Transmission Pan 301-100-2326
2. 68-RFE Transmission Pan Gasket 72300F
3. ATS Magnetic Drain Plug (pre-installed in pan) 402-009-1000
4. 1/8 NPT Pipe Plug
5. Billet Aluminum Filter Extension (o-rings pre-installed) 301-019-2326
6. (2) Extra o-rings
7. (15) M6-1.0 x 20mm Stainless Steel Socket Head Cap Screw

