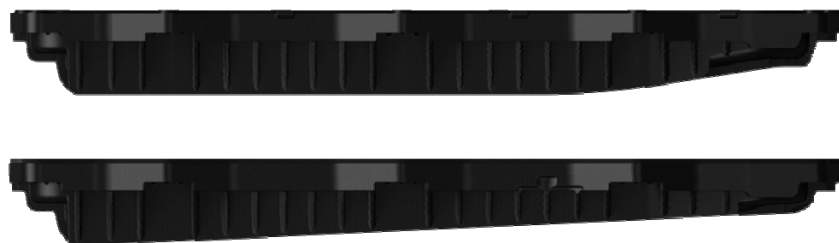


You'll also notice a deeper oil pan on the 845RE used in the Grand Cherokee. This gives not only increased fluid capacity, but also improves lubrication (despite the angle of installation) (Fig. 6).



**Figure 6:** 8HP45 Oil Pan on Bottom, 845RE Oil Pan on Top

The ZF-built transmissions can only be serviced to a certain extent while under warranty. Refer to warranty bulletin D-12-21 for more information. The 8HP70 8-speed automatic transmission is built by ZF in Germany and received as an assembly.

This new transmission will roll out in the 2013 calendar year in the Ram 1500, Jeep Grand Cherokee, and the Dodge Durango.

The 8HP70 looks similar to the 8HP45, being almost the same length, even having similar components (Fig. 7).



**Figure 7:** 8HP70 Rear, 8HP45 Front

While a few parts are interchangeable, most are not. The 8HP70 is a larger, heavier-duty version of the 8HP45.

Due to the increased size, you'll find the majority of the internal components such as rotating components, the case, and output shafts (among others), are not interchangeable. The majority of the service tools, as well as diagnostics, are common between the 8HP45 and the 8HP70.

## 8-SPEED TRANSMISSION SERVICE

The first procedure we'll cover is the manual park release. There are two different procedures: one for cars, and one for the Ram truck.

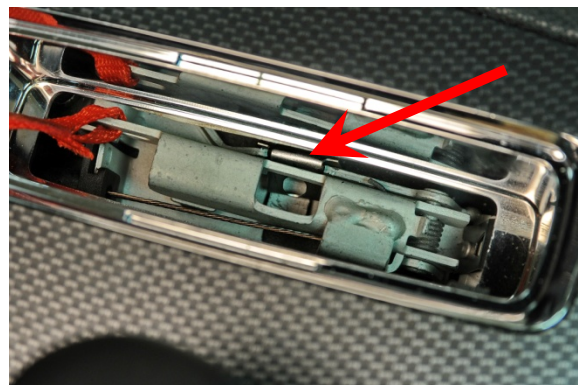
The Ram 1500 has the release behind this trim panel, above the parking brake release handle. To manually release the park lock, push this lock aside before pulling on the red strap (Fig. 8). The lever will latch into the unlock position, putting the transmission in neutral.



**Figure 8:** Slide the Lock to Release the Park Release Lever

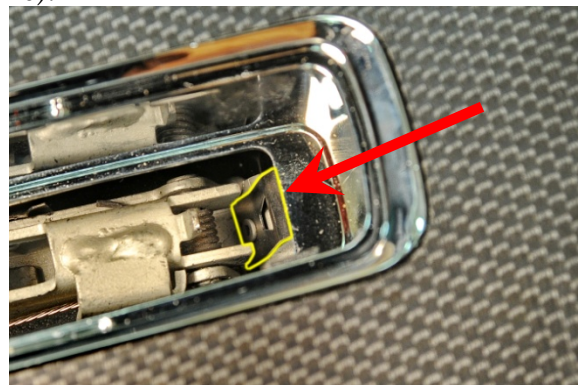
After sliding the lock to the side again, the lever will snap back into place, putting the transmission back in park.

The procedure is a bit different on the Charger and the 300. After removing the trim piece, you'll find the release lever; don't pull it just yet. You have to release this clip before pulling the strap. (Fig. 9). If the clip is not released it will break, causing the lever to rattle.



**Figure 9:** Release This Clip Before Pulling the Park Release Lever

The lever is held upright by another clip. This clip must be released before the lever is pushed back down to engage park (Fig. 10).

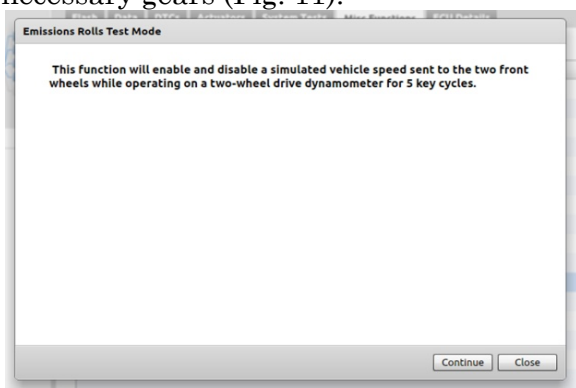


**Figure 10:** Release This Clip Before Releasing Lever

Only ZF 8- and 9-speed ATF can be used in the 8-speed transmission. A note about fluid leak diagnosis: No transmission fluid additives, including leak detection dye, can be used in the 8HP family transmissions. With that in mind, the transmission fluid used in the 8-speed family glows under UV light already. Keep this in mind when looking for other types of fluid leaks as you could get a false positive if transmission fluid is in the area.

Speaking of fluid, the fluid check and fill procedures were covered in depth in our June 2011 release for the 8HP45. It is the same procedure for the 845RE and 8HP70 with the exception of fluid volumes.

The procedure for checking and filling the fluid on an AWD Chrysler 300 or Dodge Charger is a bit different. First, you'll need to remove the front propeller shaft to gain access to the plug. Next, use wiTECH to put the vehicle into Emissions Rolls Test Mode while engaging the necessary gears (Fig. 11).



**Figure 11:** Use the Emissions Rolls Test While Checking Transmission Oil

Then you can pull the plug to check the level or top it off as needed. When you are done, install the front propeller shaft and be sure to manually disable the test mode to avoid setting trouble codes.

If the transmission needs to be removed from the vehicle for service, be aware that the transmission oil pan is made of a composite material, not stamped steel.

Be sure the weight of the transmission is evenly supported on the lifting fixture or damage to the transmission will occur. Before opening the transmission, it is important to note that a clean work area is critical due to the very tight tolerances in these transmissions.

When disassembling the transmission, it's important to note that the gear train needs to be removed vertically. The drums are aluminum and are easily damaged (Fig. 12).



**Figure 12:** The Gear Train Must Be Removed Vertically

To avoid damaging the aluminum D clutch drum and the P4 annulus drum, use special tool number 10378 (Fig. 13).



**Figure 13:** Special Tool Number 10378

Please note that the P1 carrier and P2 annulus snap rings are one-time use snap rings. During installation, use a flat-blade screwdriver to coax the snap rings into the groove in the drum.

Next, we will go over how to set up the B clutch. This segment is meant to give you an overview of the procedure, refer to service information for the complete procedure.