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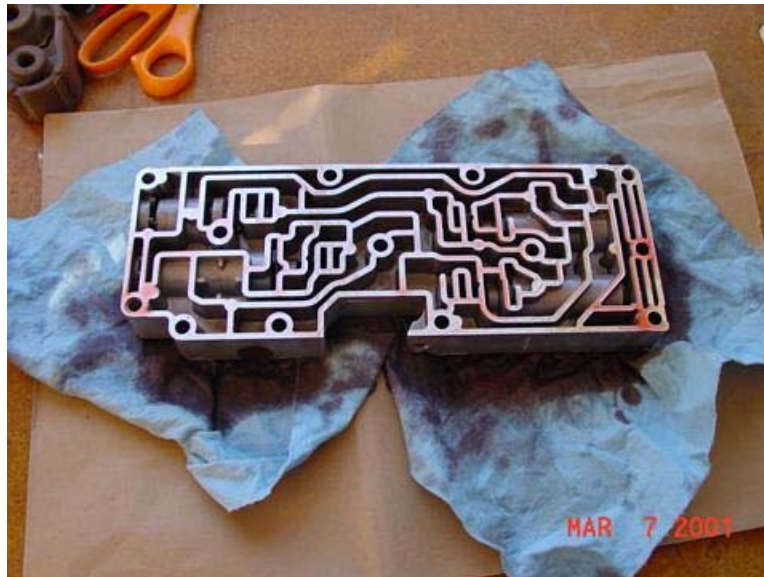
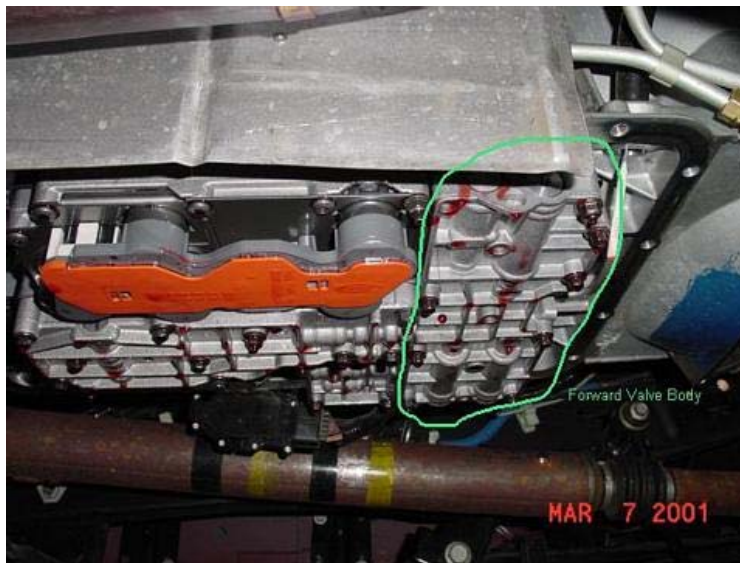
Sonnax Accumulator Valve & Tricumulator Springs Installation

Installation for 4R100 and E40D Transmissions



Removal:

Drain the transmission through the drain plug in the transmission pan. Once the transmission has been drained, remove the transmission pan from the transmission. Locate the large black plastic filter and gently pull to remove from the transmission. The filter has an o-ring that usually will get stuck and has to be removed manually.



Towards the front of the transmission and running the entire width of the transmission is the accumulator valve body. It is held by two nuts (10 mm) and eleven bolts (8 mm). Unscrew the bolts and nuts from the valve body and lower it carefully as some remaining transmission fluid will spill out.



Accumulator Valve Replacement:

Now find a clean workspace and place the accumulator valve body with the mating surface up. We usually use a large drain pan, as the remaining fluid held inside the valve body will drain out when some of the parts are removed. Using the illustration instructions locate the accumulator valve. Remove the security clip that holds the valve in. Use a pair of needle nose pliers to remove the clip. The accumulator valve is a close tolerance item and may appear stuck in the bore. If the valve will not freely fall out try pushing in on the valve and releasing quickly to let the inner spring pop out the valve. At no point in time should you use excessive force to push any part together. Prepare the new Sonnax valve for installation by placing the new o-ring around the valve in the groove. Once you have removed the factory accumulator valve replace it with the new Sonnax accumulator valve using the original spring. Once the new Sonnax valve is inserted into the bore reinstall the security clip to hold the valve in place.



Tricumulator Spring Replacement:

Inserting the Tricumulator shift springs works in very much the same way as the Sonnax valve. Once you insert the Tricumulator springs there should be two springs per bore. There will be one inner spring and one outer spring. If your bores have two springs, you will replace the original inner spring with the Tricumulator spring. If you only have one spring in the bore, you will want to add the Tricumulator spring to the original outer spring. Locate one of the bolts used to hold the valve body inside the transmission. Each bore on the valve body has a cap that has been drilled and tapped and one of these bolts can be screwed into the cap and used to pull the cap off. First, thread the bolt into the cap and gently push the cap in so the security clip can be removed. Once you have removed the clip using the bolt gently pull the cap out of the bore. Now add or replace the Tricumulator springs. There are three shifts so there are three bores that have to be removed and springs added or replaced.

Assembly:

Once you have installed the springs and valve fit the accumulator valve body back under the transmission and secure with the two nuts removed previously. Now install the bolts and tighten the bolts to 80 in-lb to 100 in-lb of torque. Once the accumulator valve body is installed and all nuts and bolts have been properly torqued, replace the transmission filter and replace the transmission pan. Torque the transmission pan bolts to 10 ft-lb to 12 ft-lb.

If you just removed the pan to install the Sonnax/Tricumulator usually you will have to add 7-8 quarts of transmission fluid but if you drained the torque converter it may take up to 18 quarts of fluid. Add the first 5-6 quarts and start the truck and firmly place your foot on the brake and using the shift lever, shift the truck through all the gears. This allows fluid to flow through everything inside the transmission. Now continue to refill the transmission checking the level after every quart added. It is also a common practice to re-torque the bolts on the pan after a week or so.