DOWNLOAD THE LATEST INSTALL MANUALS AT www.bddiesel.com

2019+ 68RFE ProTect68 Kit

1030375	ProTect68 Plate Kit

IMPORTANT! REQUIRES SPECIAL TUNING FOR PRESSURE INCREASE DIFFERENT FROM PREVIOUS MODEL YEARS

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

DOES NOT FIT 2007.5-2018 – SEE BD 1030362/1030373

READ BEFORE PROCEEDING

1030375 kit is for advanced users and tuners only. No warranty is offered other than workmanship of the product.

If used with stock TCM tuning, the 1030375 plate kit will operate at stock line pressure but with reduced cross leaks. If used in conjunction with TCM pressure tuning, the valve body is able to operate up to 250psi line pressure.

2019+ vehicles **require** special TCM tuning if running higher line pressure! Read the next section for more information.

2019+ SPECIAL TUNING REQUIREMENTS

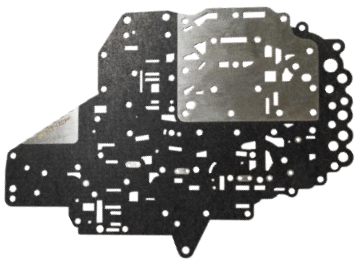
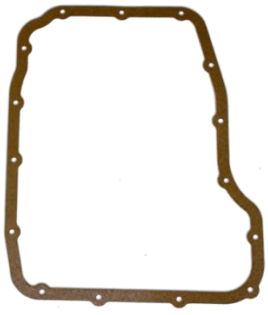
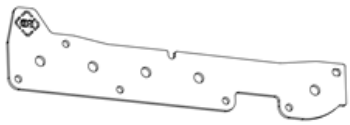
2019 and newer trucks have different TCM tuning requirements from previous model years. Earlier model years you could simply turn up the line pressure tables. 2019 and newer models have a problem in the factory tuning that can become prevalent when increasing line pressure. In higher load (higher line pressure) driving situations, clutches that are not supposed to be applied can pulse on. This is detrimental to the transmission and can even be felt when driving.

Contact your tuner and ensure they know of this issue and have the required workaround **before** installing pressure tuning from them. At this time we suggest PPEI tuning.

This plate kit can be installed without any tuning and will still offer the reduced cross leak benefits. Pressure tuning can also be added at any time later on if desired.

Kit Contents

Please check to make sure that you have all the parts listed in this kit. 1030375 includes the following:

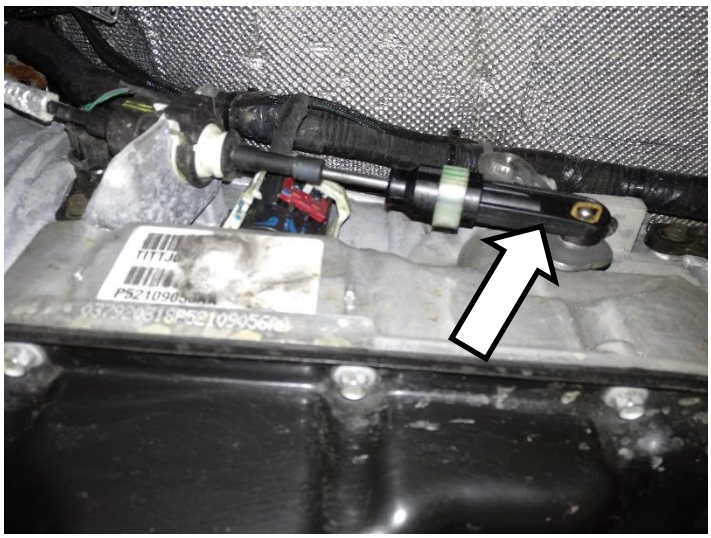
4799778	1600228	1601523	1600205
			
Seal; Clutch Feed	**Gasketed; Separator Plate**	**Gasket; Pan**	**Plate; Accumulator**
Qty: 3	**Qty: 1**	**Qty: 1**	**Qty: 1**

Tools Required

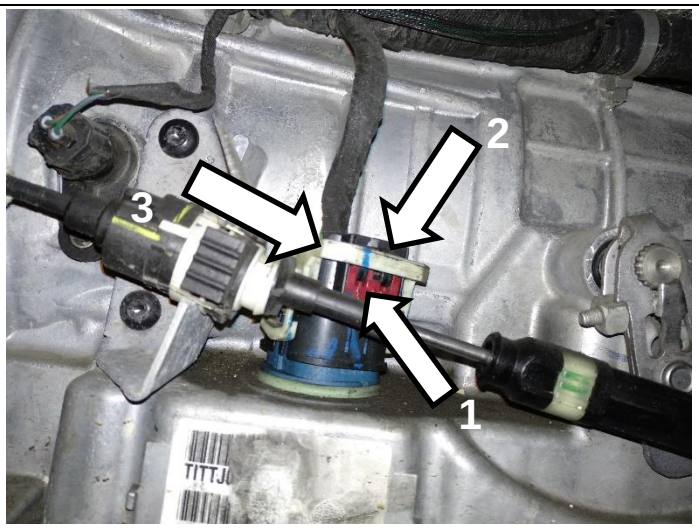
- **Drain Pan**
- **Transmission Funnel**
- **8mm Socket**
- **T25 Torx Socket**
- **Torque Wrench (in-lbs)**
- **Drill**
- **1/8” Drill Bit**
- **Brake Clean or Parts Cleaner**
- **Center Punch**
- **Scraper**

Valve Body Plate Install

1. Ensure all kit components are accounted for before starting install.
2. Disconnect vehicle batteries and secure cables away from batteries.
3. Lift transmission dip stick approx. 6 inches to avoid interference later on.
4. Raise vehicle on vehicle lift. If using a jack, use safety stands and chock wheels.
5. Remove shifter cable from transmission for better access to the main electrical connector.



6. To remove connector, push red tab (1) downwards. Then, press the black tab (2) which will allow the white handle (3) to be rotated downwards, releasing the connector from the transmission.

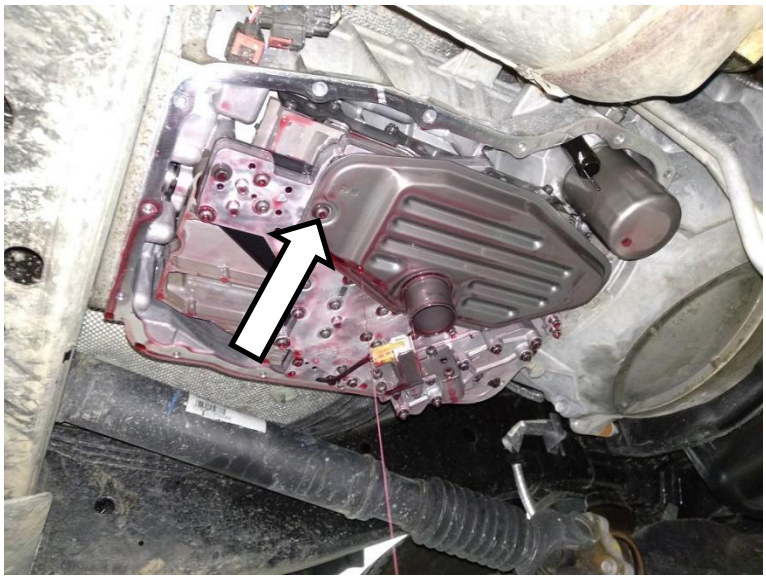


7. Position drain pan below the transmission.

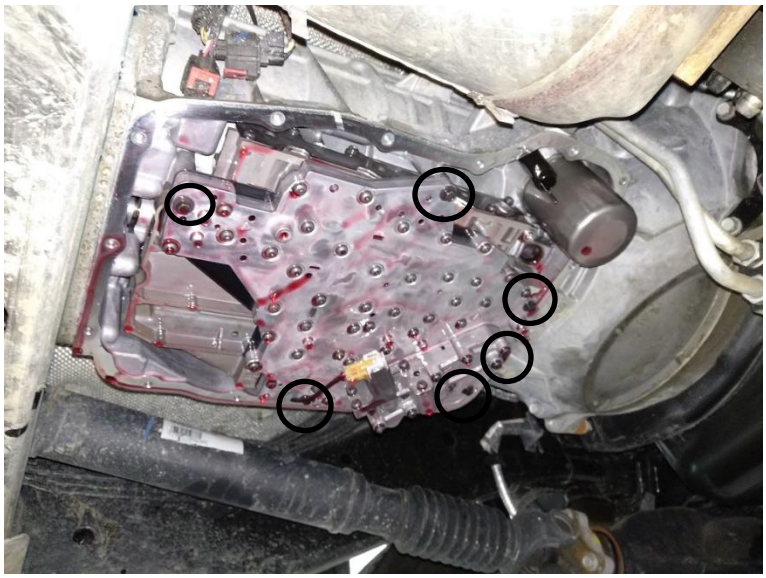
8. Remove 14 of the 15 transmission pan bolts (8mm). Loosen the remaining bolt but leave in place to keep the pan from falling. The transmission cooler lines may need to be moved to access some of the bolts, gently pry them out of the way.

9. Tap pan with a mallet to break the silicone gasket seal. Allow fluid to drain. Remove last screw and drain remainder of fluid.

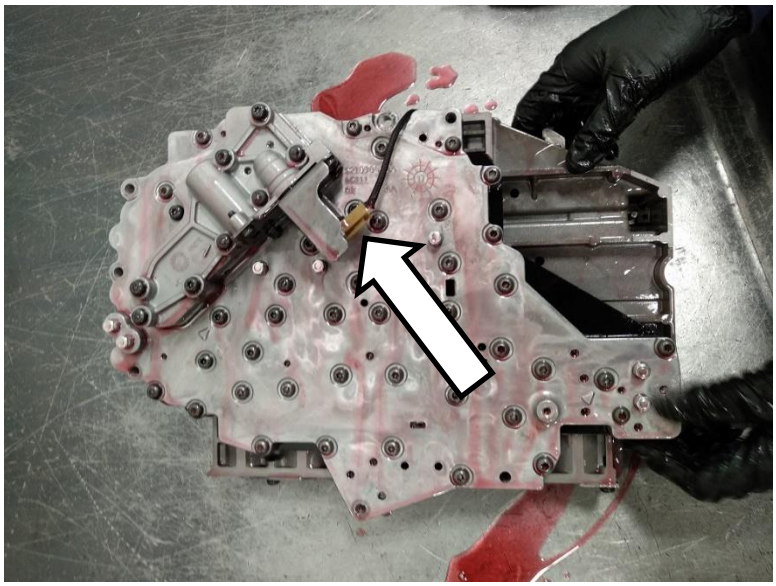
10. Remove transmission filter by removing the one T25 Torx screw.



11. Remove the six 8mm bolts securing the valve body to the transmission. Drain valve body of fluid. To remove valve body from transmission, wiggle it while pulling downwards to work the electrical connector through the case.

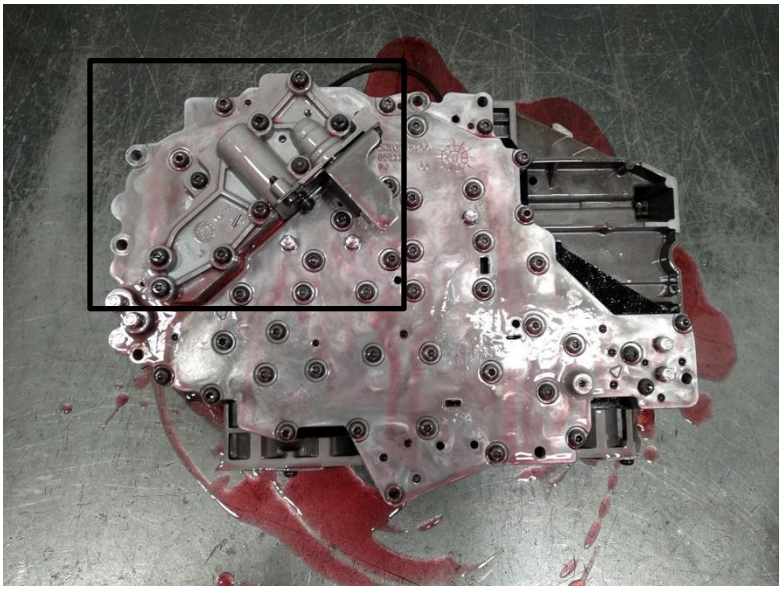


12. Place the valve body on a clean work surface and remove the electrical connector to the TCC solenoid.

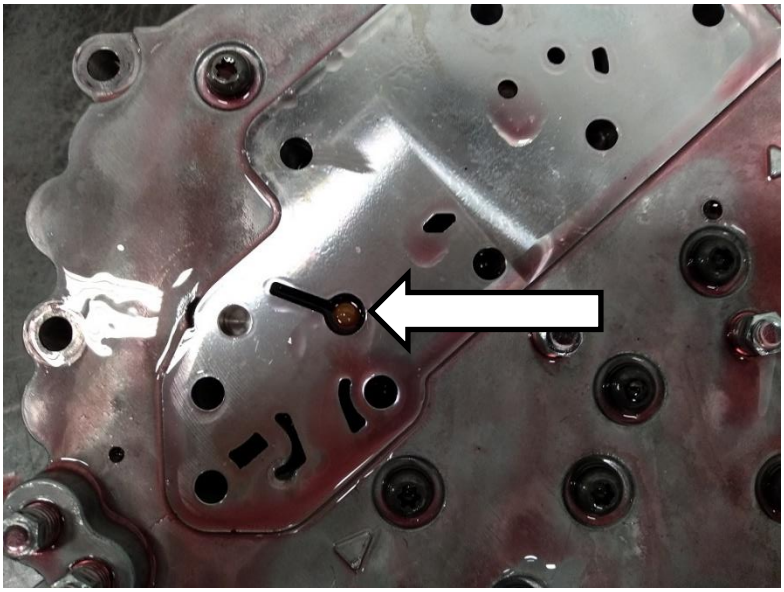


13. Remove T25 Torx screws securing the solenoid pack and TCC solenoid body to the valve body, remove TCC solenoid body and place it to the side.

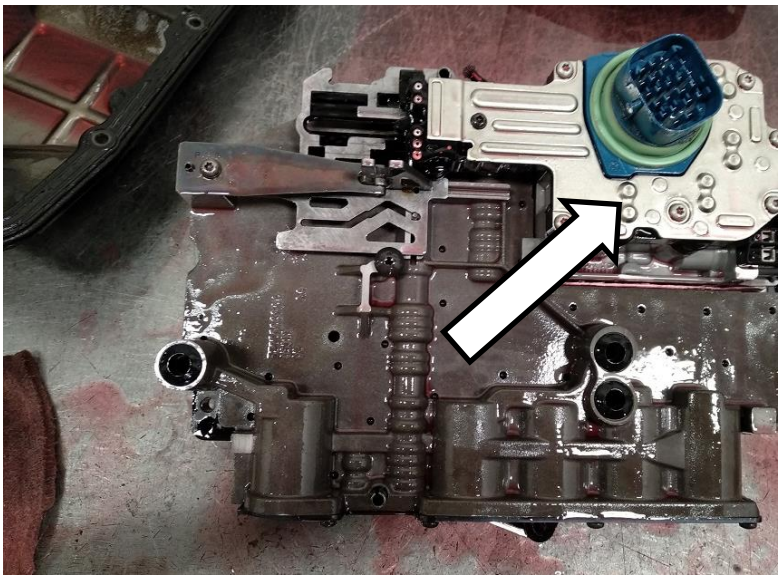
Note: Screws are different length. Longer bolts are for the TCC solenoid body.



14. Carefully remove the TCC check ball and put it aside. Do not lose the check ball as it will be reused.



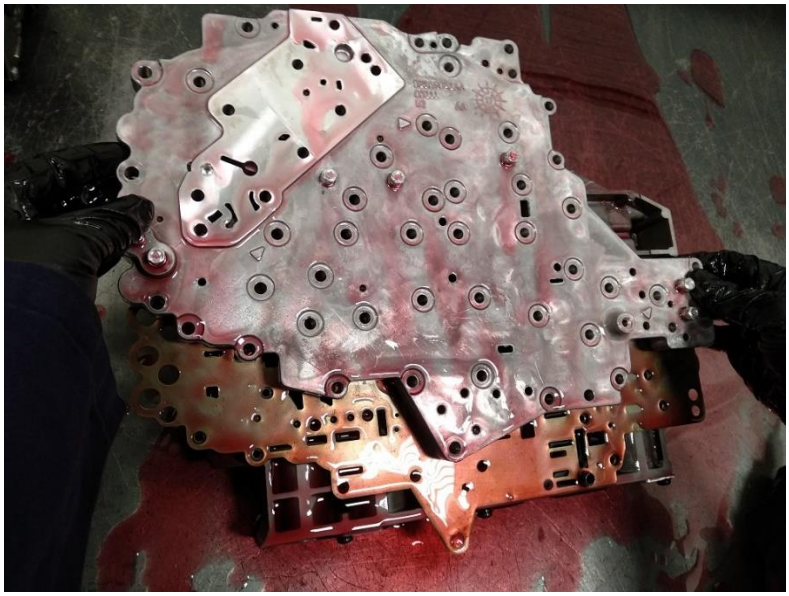
15. Lift and remove the solenoid pack.



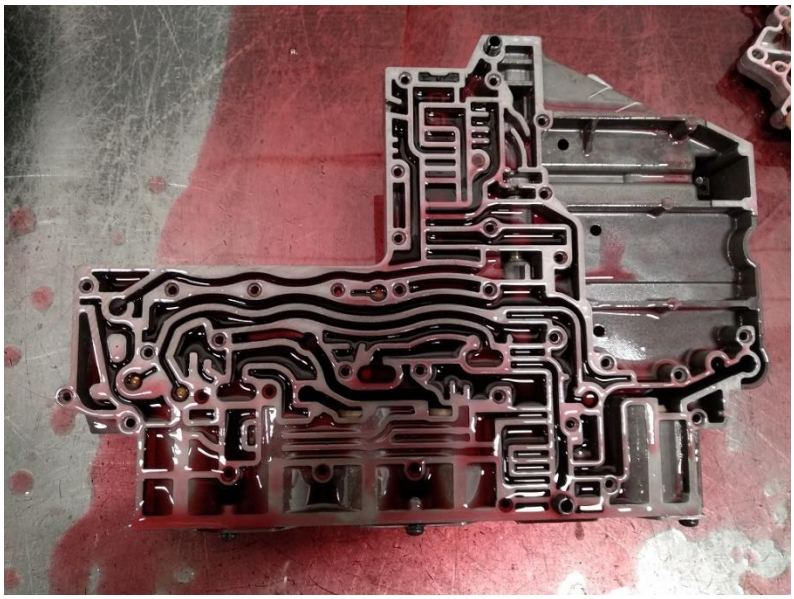
16. Remove remaining T25 Torx screws securing the valve body halves together.

Note: All remaining screws are the same length.

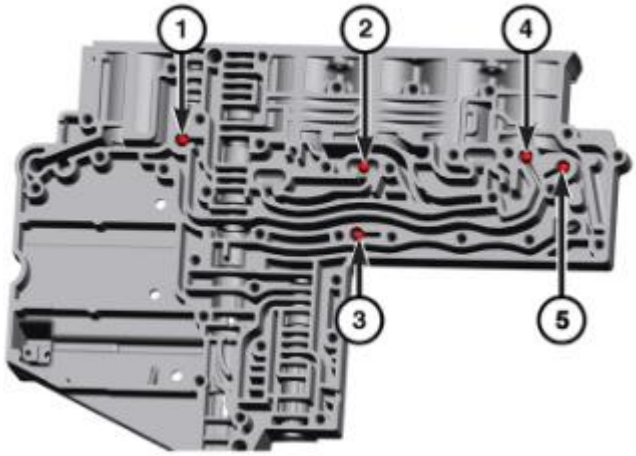
17. Carefully separate the two halves of the valve body. Separate as shown in pictures – ***do not invert the larger (top) portion as it contains plastic check balls***. The two halves will have to be wiggled apart as the alignment dowels will be holding them together.



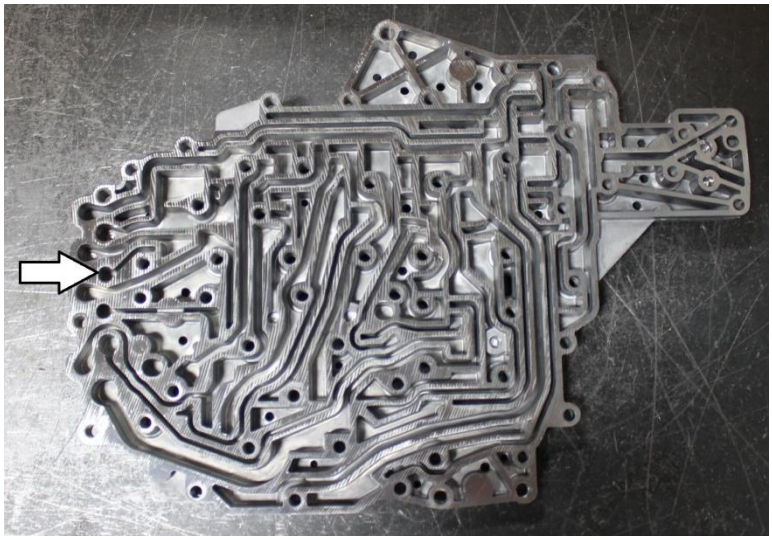
18. Remove old separator plate. Be careful not to lose any check balls. There are 5 check balls installed.

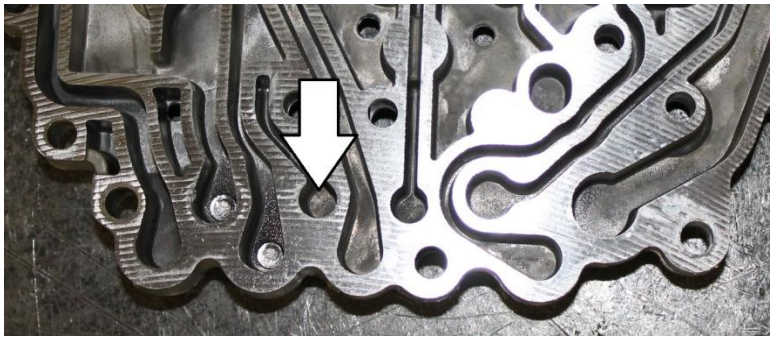


19. Check ball locations.

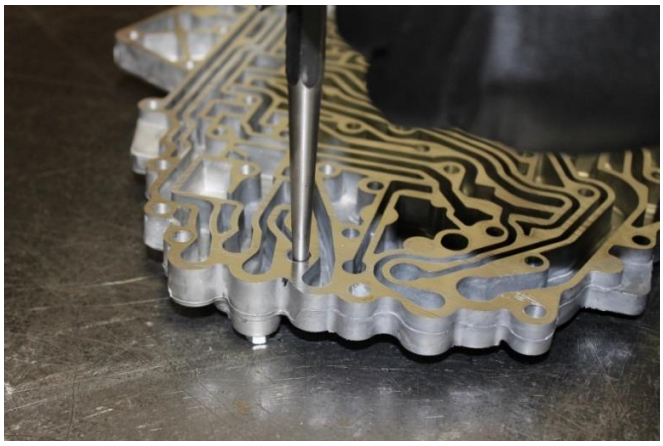


20. Thoroughly clean the bottom (smaller) half of the valve body. Locate the passage to be drilled.

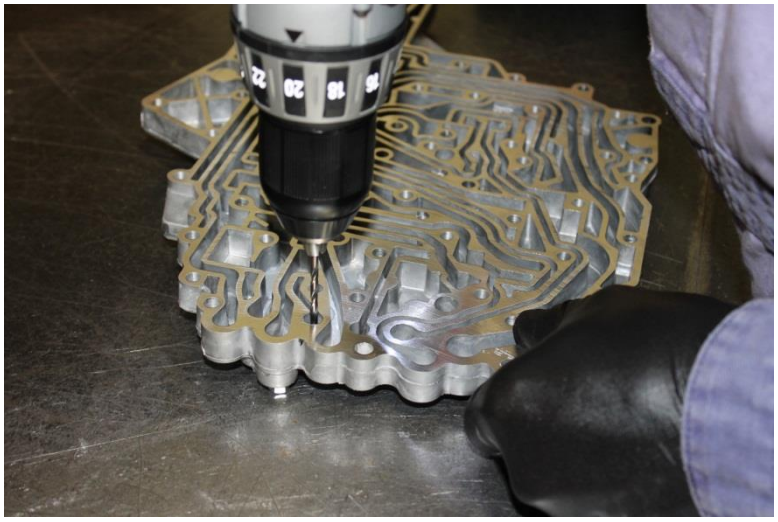




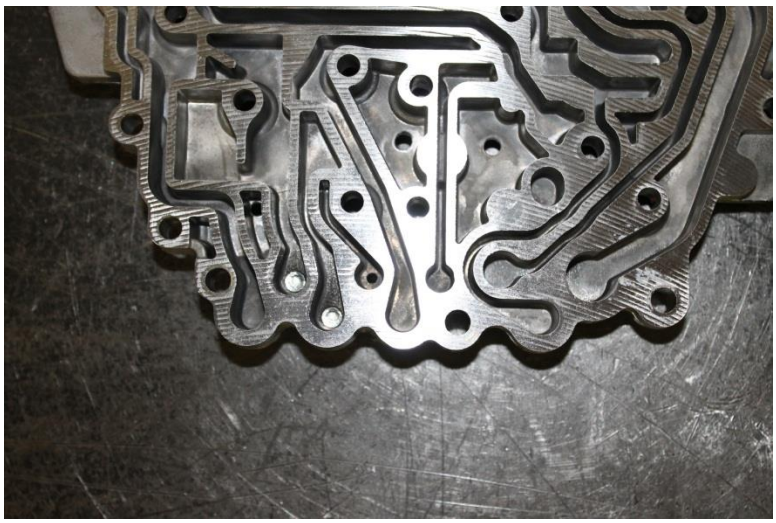
21. Punch center of hole using a center punch.

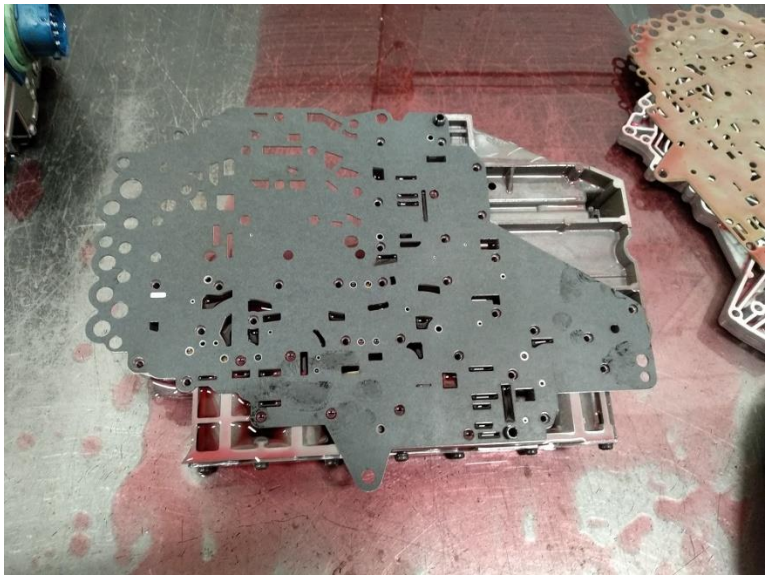
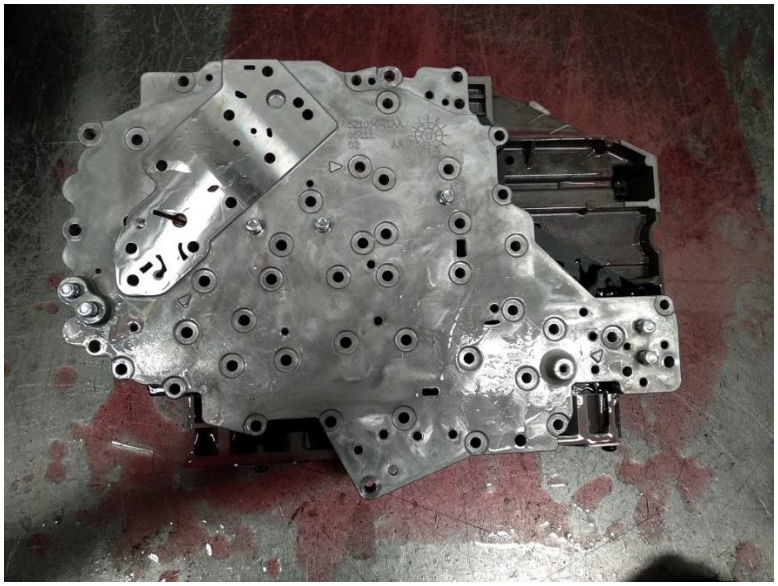
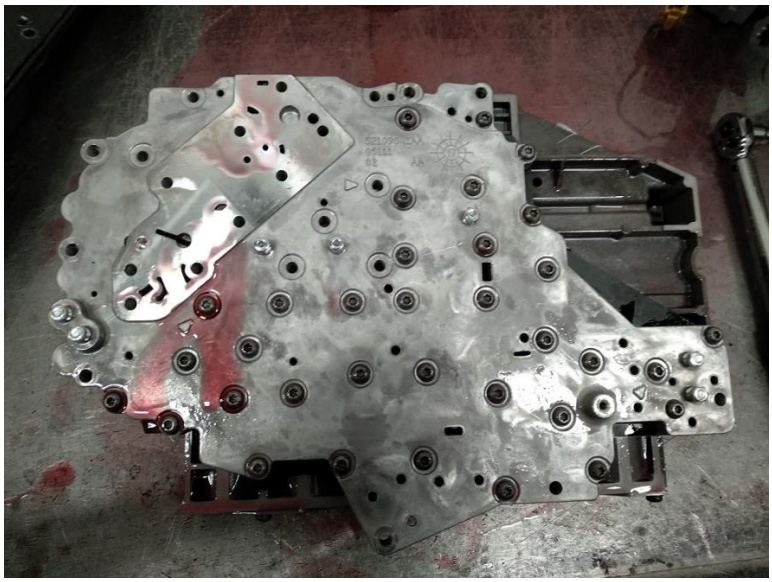


22. Drill hole with 1/8” drill bit.



23. Thoroughly remove any burrs and clean all shavings from the valve body. It is imperative that no contaminates are left as they may cause transmission damage.



24. Install the BD bonded gasketed separator valve-body plate (**1600228**).	
25. Re-install bottom (smaller) half of valve body. Ensure it fits flat on the separator plate/gasket. It may need to be worked downwards while rocking to be installed over the dowels.	
26. Install screws so they are fully seated but do not tighten until the solenoid pack has been installed.	

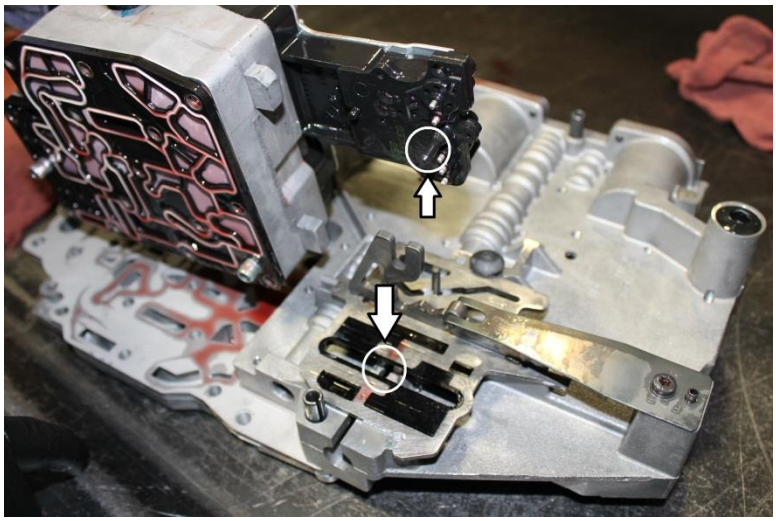
27. Remove the factory accumulator plate.

28. Install the supplied BD accumulator plate.

    Torque screws to **50 in-lbs**.

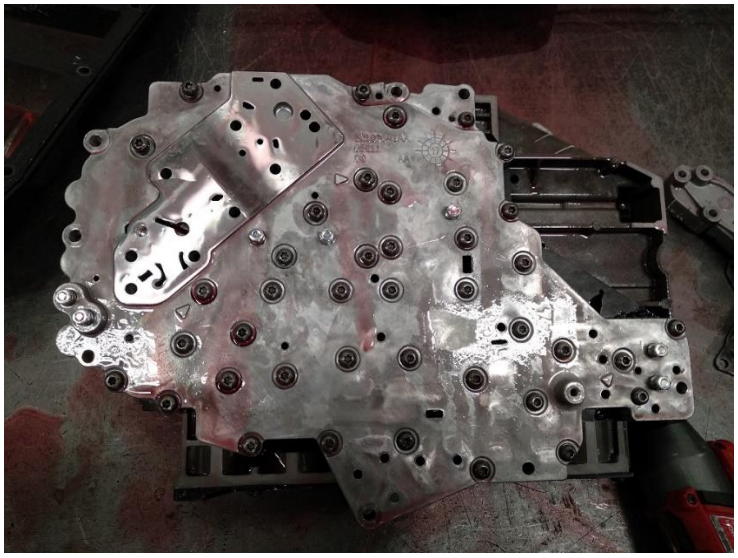
    IMPORTANT: Over or under-torqueing these fasteners can lead to blown out accumulator plates.

29. Re-install solenoid pack onto valve body. Be sure to properly align the pin on the solenoid pack with the slot on the valve body. Due to the alignment dowels, the solenoid pack may need to be wiggled down into position.

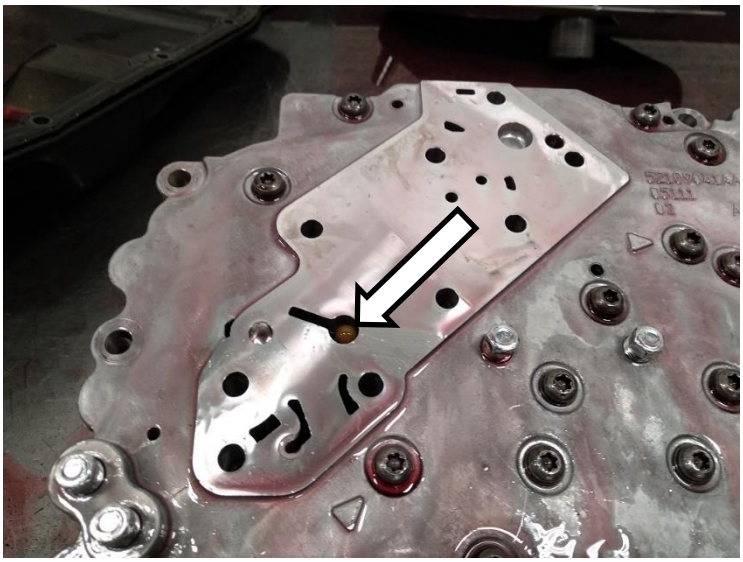


30. Install remaining short screws.

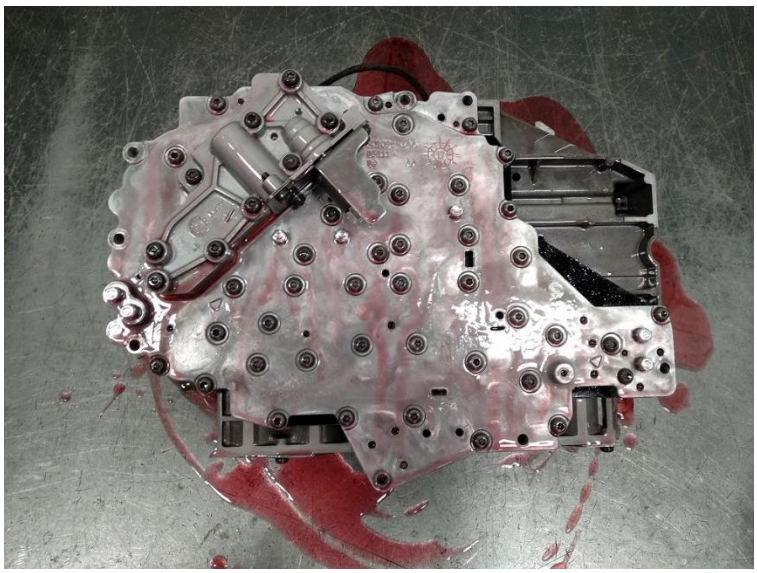
    Torque all screws to **50 in-lbs**.



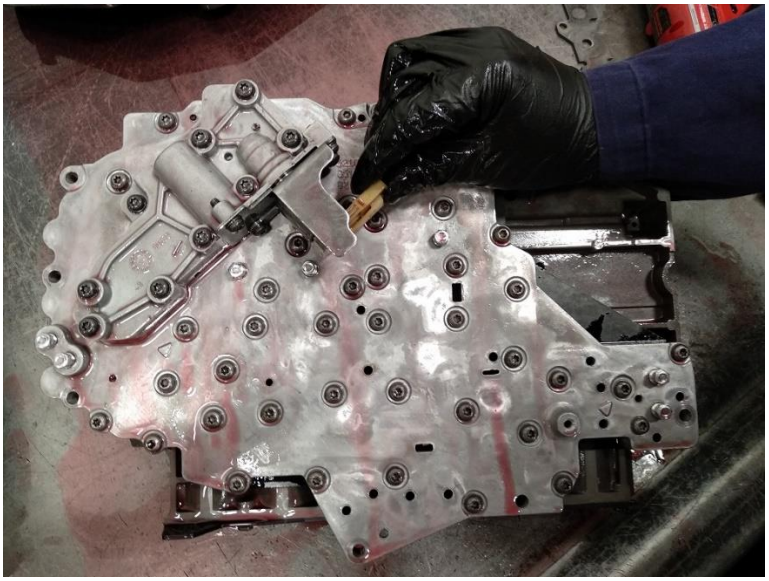
31. Install the TCC solenoid body check ball.



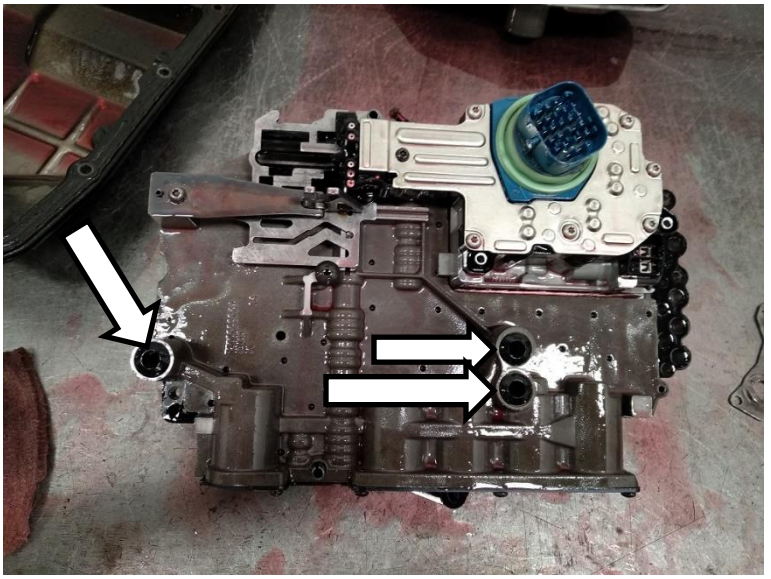
32. Install the TCC solenoid body and torque the screws to **50 in-lbs**.



33. Connect the TCC solenoid wire.



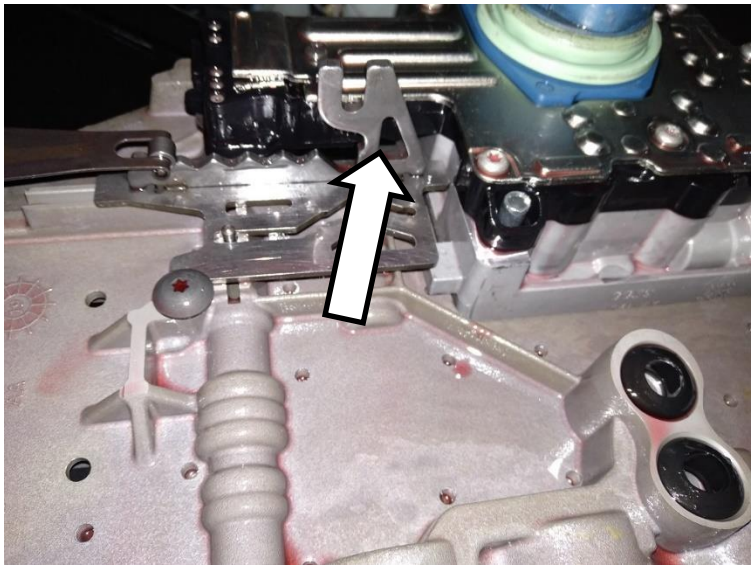
34. Inspect the three rubber seals on the top of the valve body, replace with supplied seals if they are nicked or otherwise damaged. Ensure the seal mating surface on the transmission is clean.

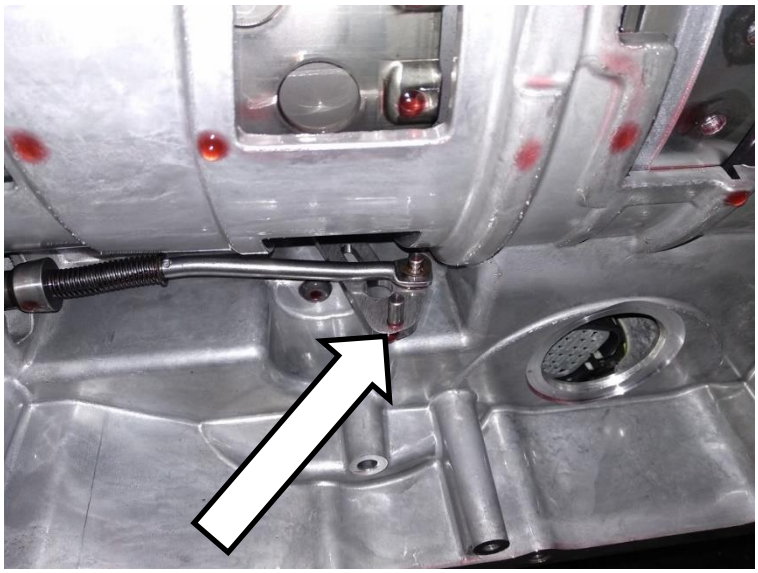


35. Wipe clean the bore on the transmission case around the electrical connector. Scrape all old silicone gasket material (if any) from the oil pan mating surfaces.

36. Check that the shift lever on the valve body lines up with the shift lever on the transmission and lift the valve body back into the transmission. Start the 8mm screws by hand, do not tighten yet. Work the shift lever on the outside of the transmission case by hand to ensure that the lever is making contact with the valve body correctly.

NOTE: Use care when reinstalling the valve body to not break off the internal shift lever pin as shown.





37. Torque the valve body attaching bolts to **105 in-lbs**.

38. If desired, install new filter(s). Otherwise, reinstall the filter/pickup assembly.

    Torque to **50 in-lbs**.

39. Place the supplied gasket on the transmission pan. Hold pan below transmission and install attaching screws.

    Torque the pan screws to **105 in-lbs**.

40. Reattach solenoid connector. Reattach shifter cable to shift lever.

41. Lower vehicle.

42. Reconnect vehicle batteries.

43. Fill transmission fluid until COLD line is met. Start and run vehicle. Move shifter through different gears twice to fill valve body. Check for leaks. Check fluid level again. Top up as required.

44. Road test. Run through upshifts several times at light throttle to ensure transmission is shifting correctly. Shifts will feel firmer with increased throttle.

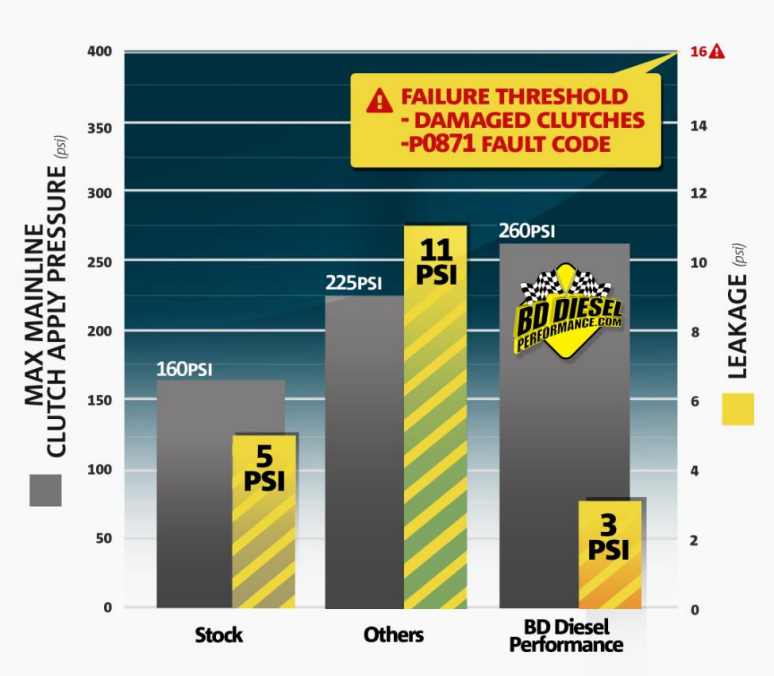
45. Recheck fluid level.

46. Note. If you would like to verify the increases in line pressure, use adapter kit (BD 1061529) in conjunction with a 300psi gauge. Pressures at wide open throttle should be between 240 – 260 PSI with a mechanical gauge.

ADAPTER KIT BD# 1061529

Use this kit with a 300 psi gauge.

47. With this kit installed you will now have the capability to run 250psi of mainline pressure. Please ensure your transmission tuner knows that you have the BD Protect68 plate with gaskets installed.



TECH Bulletin – Protect68 Kit P0871

The Protect68 kit is not designed to correct an already damaged transmission. Its purpose is to increase the reliability through increasing torque holding capacity of the transmission by increasing line pressure and eliminating cross leaks in the separator plate.

68RFE transmissions that run increased line pressure without a gasket (like the one included in this kit) may exhibit a P0871 due to cross leaks at the mating surface between the valve body halves. However, if this fault appears even after the installation of the gasket the problem may be a worn-out valve body.

By increasing main line pressure wear in the SSV bore may become more apparent. On high mileage transmissions the SSV valve bore may be worn, causing leakage into the overdrive hydraulic circuit. 2007.5-2009 trucks were highly susceptible to this damage. Model years after and including 2010 have an updated valve body that includes a hard-anodized coating which substantially increases lifespan. A hard-anodized valve body will be a dark gray color due to the coating.

The symptom would be a P0871 DTC (OD Pressure Switch Rationality fault). This DTC would normally be set in gears 1,2,3 at full throttle. If this is the case in which your vehicle has set this code before or after installing the protect68 your valve body has worn. The best solution is to purchase a new (revised) valve body from Chrysler with the hard-anodized coating. An alternative method is to ream the valve bore and install an oversized valve. This will resolve the problem for a while but it will eventually return.

If you would like to repair your valve body, please be aware that it is a difficult repair. Please take the valve body to a machine shop or a very experienced transmission repair facility that has the proper equipment.

You can purchase the repair kit from Sonnax.
Sonnax 92835-32K Oversized Solenoid Switch Valve & Plug Kit
Sonnax F-92835-TL31 Tool Kit (reamer tool)
Sonnax VB-FIX Valve Body Reaming Fixture (not required but recommended)

www.sonnax.com