

45RFE, 545RFE, 65RFE, 66RFE, 68RFE Universal Remanufactured Valve Body '99-Later

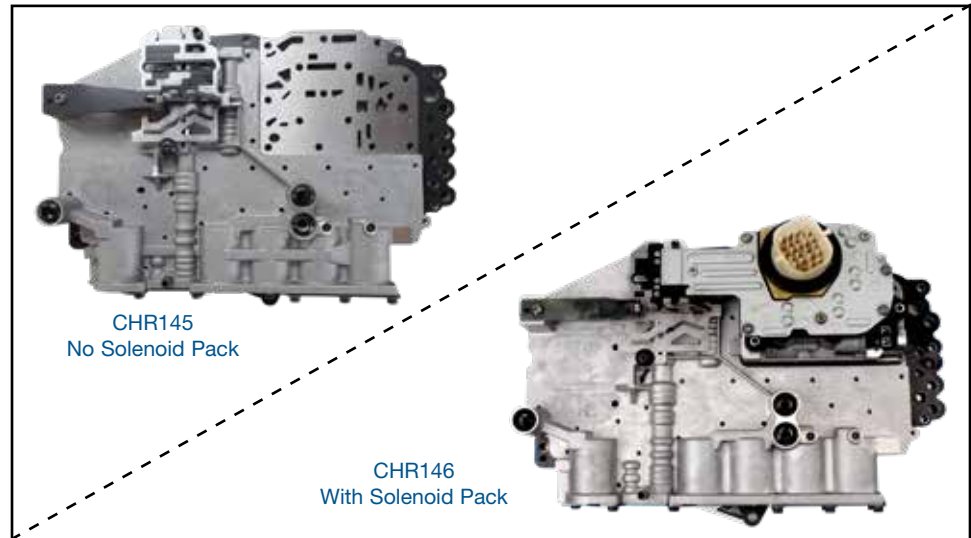
Part Nos.

CHR145 No Solenoid Pack

CHR146 With Solenoid Pack



NOTE: This uniquely designed universal remanufactured valve body will fit listed applications '99-later, whether replacing a 5 or 7 checkball original valve body.



Valve Body Installation Tips

1. Remove the gasket protector plate (**Figure 1**), and return with the core.
2. Install solenoid pack onto valve body front plate and secure with 15-25 torx bolts, torque to 53 in-lb. Verify three valve body-to-case seals are installed on top of the valve body (**Figure 1**).



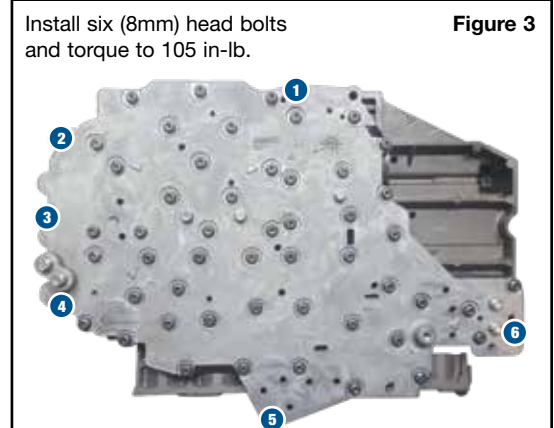
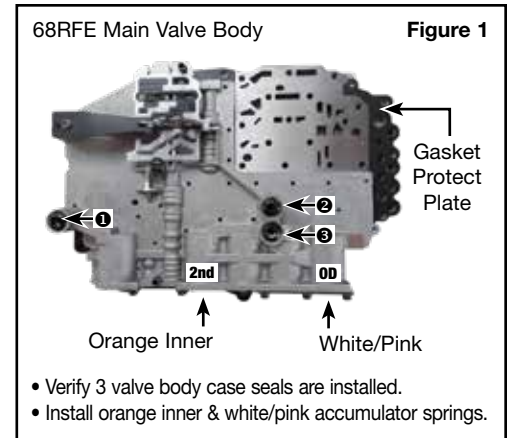
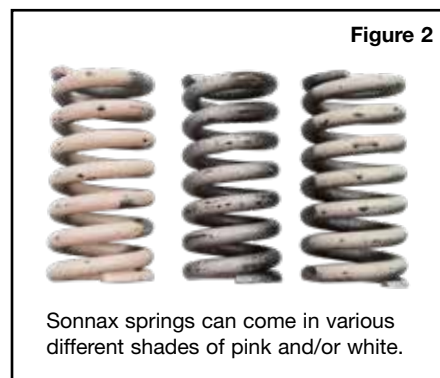
NOTE: This valve body will work with any solenoid pack, black connector, white connector or grey connector. If you are installing the black connector pack you will need to install the striker plate from your valve body. Sonnax recommends the white connector solenoid pack as it is universal.

3. Verify accumulator spring combination. If this valve body is going to be installed into a 45RFE or 545RFE application, install the valve body as is. If this valve body is going to be installed into a 68RFE, 65RFE or 66RFE application, remove accumulator cover plate, then remove OE inner and outer springs out of the 2nd accumulator and install Sonnax orange inner and plain outer springs. Remove OD accumulator spring and install Sonnax white/pink spring (**Figure 2**).

Reinstall the cover plate and install all of the retaining screws and torque to 40 in-lb (**Figure 1**).

4. Install complete valve body and solenoid assembly onto the transmission case and install six (8mm) valve body-to-case head bolts and torque to 105 in-lb (**Figure 3**).

5. Install 15 oil pan bolts and torque to 105 in-lb (**Figure 4**).



Fluid Fill and Road Test

1. Fill the transmission to factory spec with OE compatible ATF.
2. Let engine run to help warm transmission fluid to 185°.
3. Install capable scan tool to initiate quick learn.
4. Road test vehicle performing 10-15 upshift and downshift cycles through all four, five or six speeds.

NOTE: Downshift clunks, a slight bind on the 3-4 upshift, and a 2-3 flare can be common during the relearn. This condition will typically resolve itself within the 10-15 shift cycles.

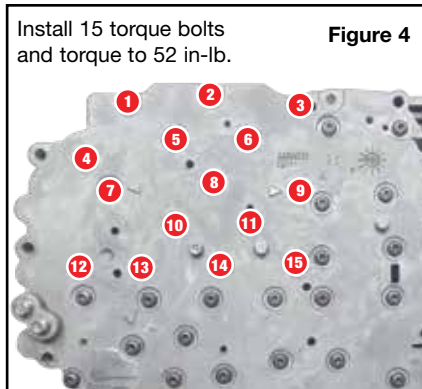


Figure 4

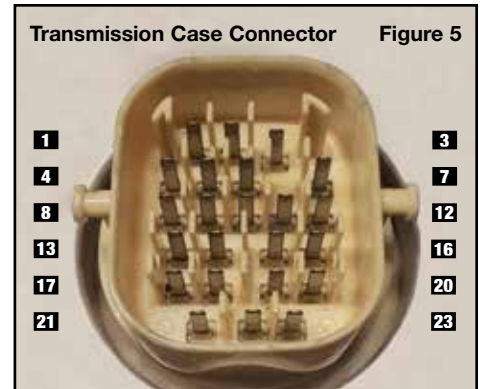


Figure 5

Bonus Diagnostic Tech

This Sonnax remanufactured valve body has been through a rigorous inspection and rebuild process, and then put through a comprehensive functional hydraulic and electronic test to ensure it meets OE performance and quality. It is designed to eliminate many pressure, shift, and converter related complaints, but will not correct complaints that stem from other areas of the transmission.

The following are common areas of failure or root causes for symptoms that could be attributed to valve body issues that should also be examined or addressed during your transmission build.

In addition, see solenoid pack terminal layout and ohm test information (Figures 5 & 6). See air test locations to verify internal integrity (Figure 7), and component application charts for troubleshooting driveability issues (Figures 8 & 9).

Common Failure Areas

1. A neutral condition after launch in Drive may be caused by a Low roller clutch/Low sprag failure. See application charts (Figures 8 & 9). The Low/Reverse Clutch is applied at a stop in 1st Gear and turns off right after launch. A neutral condition will happen if the Low roller/Low Sprag is not holding.
2. Stalling conditions or torque converter clutch engagement concerns are not valve body related. The components that control the torque converter are located in the pump. Torque converter limit valve wear out is common and can cause the stalling condition.

Solenoid Resistance Chart

Figure 6

| Solenoid | Connector Pins | Resistance |
|---------------|----------------|------------|
| LR/TCC | 10 & 2 | 1.3 Ω |
| Overdrive | 10 & 7 | 1.3 Ω |
| Underdrive | 10 & 17 | 1.3 Ω |
| 2nd Clutch | 10 & 20 | 1.3 Ω |
| 4th Clutch | 10 & 19 | 1.3 Ω |
| Multi-Select | 10 & 21 | 1.3 Ω |
| Line Pressure | 10 & 12 | 4.3 Ω |
| TOT Sensor | 22 & 23 | 9.37 Ω |

*NOTE: All resistance Ω @ room temperature.

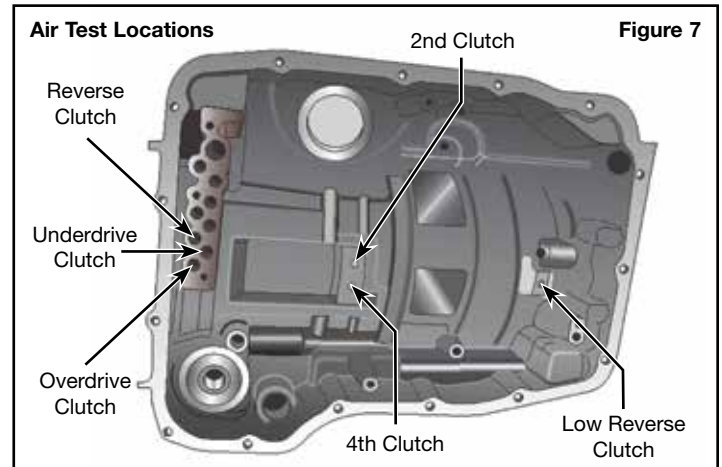


Figure 7

45RFE, 545RFE Clutch Apply Chart

Figure 8

| Selector Position | Low/Rev Clutch | UD Clutch | 2nd Clutch | OD Clutch | 4th Clutch | Rev Clutch | Low Overrun Clutch | Gear Ratio |
|-------------------|----------------|-----------|------------|-----------|------------|------------|--------------------|------------|
| Park | On | | | | | | | |
| Reverse | On | | | | | On | | 3.00:1 |
| Neutral | On | | | | | | | |
| OverDrive | 1st | On* | On | | | | Hold | 3.00:1 |
| | 2nd | | On | On | | | | 1.67:1 |
| | 2nd Prime | | On | | On | | | 1.50:1 |
| | 3rd | | On | | On | | | 1.00:1 |
| 4th | | | | Off | On | | | 0.75:1 |

*NOTE: L/R Clutch is on only with the output shaft speed below 150 RPM.

65RFE, 66RFE, 68RFE Clutch Apply Chart

Figure 9

| Selector Position | Low/Rev Clutch | UD Clutch | 2nd Clutch | OD Clutch | 4th Clutch | Rev Clutch | Low Overrun Clutch | Gear Ratio |
|-------------------|----------------|-----------|------------|-----------|------------|------------|--------------------|------------|
| Park | On | | | | | | | |
| Reverse | On | | | | | On | | 4.44:1 |
| Neutral | On | | | | | | | |
| OverDrive | 1st | On* | On | | | | Hold | 3.23:1 |
| | 2nd | | On | On | | | | 1.83:1 |
| | 3rd | | On | | | On | | 1.41:1 |
| | 4th | | On | | On | | | 1.00:1 |
| | 5th | | | | On | On | | 0.81:1 |
| | 6th | | | On | On | | | 0.62:1 |

*NOTE: L/R Clutch is on only with the output shaft speed below 150 RPM.