

SPECIFICATIONS**TRANSMISSION****GENERAL**

Component	Metric	Inch
Output Shaft End Play	0.22-0.55 mm	0.009-0.021 in.
Input Shaft End Play	0.46-0.89 mm	0.018-0.035 in.
2C Clutch Pack Clearance	0.455-1.335 mm	0.018-0.053 in.
4C Clutch Pack Clearance	0.770-1.390 mm	0.030-0.055 in.
L/R Clutch Pack Clearance	1.00-1.74 mm	0.039-0.069 in.
OD Clutch Pack Clearance	1.103-1.856 mm	0.043-0.073 in.
UD Clutch Pack Clearance	0.84-1.54 mm	0.033-0.061 in.
Reverse Clutch Pack Clearance	0.81-1.24 mm	0.032-0.049 in.
Recommended fluid	Mopar® ATF +4	

GEAR RATIOS

1ST	3.00:1
2ND	1.67:1
2ND Prime	1.50:1
3RD	1.0:1
4TH	0.75:1
5TH	0.67:1
REVERSE	3.00:1

TORQUE SPECIFICATIONS

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Fitting, cooler line at trans	17.5	-	155
Bolt, torque converter	31	23	-
Bolt/nut, crossmember	68	50	-
Bolt, driveplate to crankshaft	75	55	-
Bolt, oil pan	12	-	105
Screw, primary fluid filter	4.5	-	40
Filter, Cooler Return	9.5	7	-
Bolt, oil pump	28	-	250
Bolt, oil pump body to cover	4.5	-	40
Screw, plate to oil pump body	4.5	-	40
Bolt, valve body to case	12	-	105
Plug, pressure test port	5	-	45
Bolt, reaction shaft support	12	-	105
Screw, valve body to transfer plate	5.5	-	50

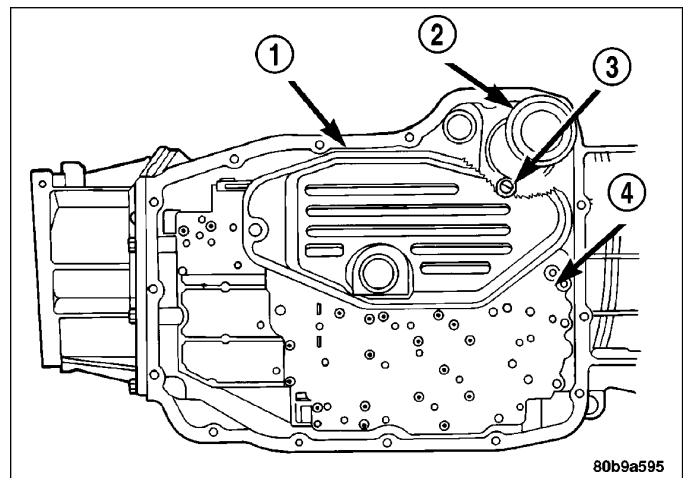
DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Screw, solenoid module to transfer plate	6	-	50
Screw, accumulator cover	7	-	60
Screw, detent spring	4.5	-	40
Bolt, input speed sensor	12	-	105
Bolt, output speed sensor	12	-	105
Bolt, line pressure sensor	12	-	105
Bolt, extension housing	54	40	-
Valve, cooler return filter bypass	4.5	-	40
Screw, manual valve cam retaining	4.5	-	40
Screw, manual selector shaft retaining	28	-	250
Cross-bolt, manual selector shaft	16	-	140

FLUID AND FILTER REPLACEMENT

For proper service intervals (Refer to LUBRICATION & MAINTENANCE/MAINTENANCE SCHEDULES - DESCRIPTION).

REMOVAL

1. Hoist and support vehicle on safety stands.
2. Place a large diameter shallow drain pan beneath the transmission pan.
3. Remove bolts holding front and sides of pan to transmission.
4. Loosen bolts holding rear of pan to transmission.
5. Slowly separate front of pan away from transmission allowing the fluid to drain into drain pan.
6. Hold up pan and remove remaining bolts holding pan to transmission.
7. While holding pan level, lower pan away from transmission.
8. Pour remaining fluid in pan into drain pan.
9. Remove the screw holding the primary oil filter (1) to valve body.
10. Separate filter from valve body and oil pump and pour fluid in filter into drain pan.
11. Inspect the oil filter seal in the bottom of the oil pump. If the seal is not installed completely in the oil pump, or is otherwise damaged, then remove and discard 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.
12. If replacing the cooler return filter (2), use Oil Filter Wrench 8321 to remove the filter from the transmission.
13. Dispose of used trans fluid and filter(s) properly.



INSPECTION

Inspect bottom of pan and magnet for excessive amounts of metal. A light coating of clutch material on the bottom of the pan does not indicate a problem unless accompanied by a slipping condition or shift lag. If fluid and pan are contaminated with excessive amounts of debris, refer to the diagnosis section of this group.

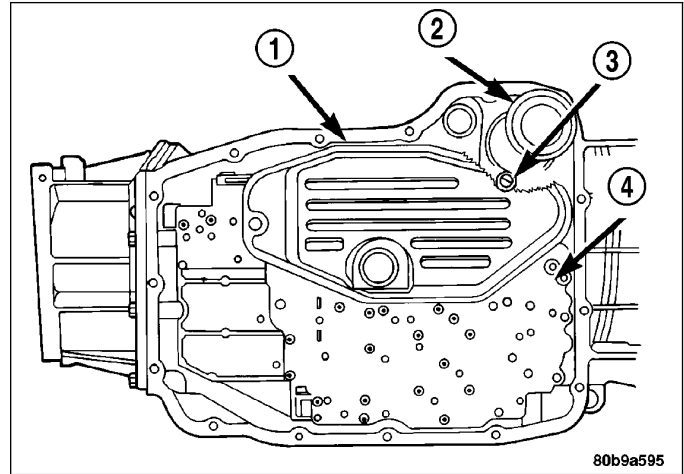
CLEANING

1. Using a suitable solvent, clean pan and magnet.
2. Using a suitable gasket scraper, clean original sealing material from surface of transmission case and the transmission pan.

INSTALLATION

CAUTION: The primary oil filter seal **MUST** be fully installed flush against the oil pump body. **DO NOT** install the seal onto the filter neck and attempt to install the filter and seal as an assembly. Damage to the transmission will result.

1. If necessary, install a new primary oil filter seal in the oil pump inlet bore. Seat the seal in the bore with a suitable tool (appropriately sized drift or socket, the butt end of a hammer, or other suitable tool).
2. Place replacement filter in position on valve body and into the oil pump.
3. Install screw to hold the primary oil filter (1) to valve body. Tighten screw to 4.5 N·m (40 in. lbs.) torque.
4. Install new cooler return filter (2) onto the transmission, if necessary. Torque the filter to 9.5 N·m (7 ft.lbs.).
5. Place bead of Mopar® RTV sealant onto the transmission case sealing surface.
6. Place pan in position on transmission.
7. Install bolts to hold pan to transmission. Tighten bolts to 12 N·m (105 in. lbs.) torque.
8. Lower vehicle and fill transmission with MOPAR® ATF +4.



TRANSMISSION FILL

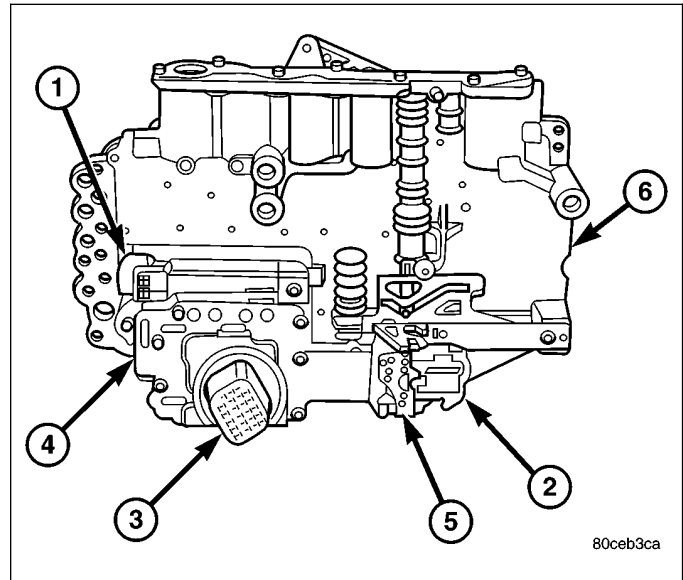
To avoid overfilling transmission after a fluid change or overhaul, perform the following procedure:

1. Remove dipstick and insert clean funnel in transmission fill tube.
2. Add following initial quantity of Mopar® ATF +4 to transmission:
 - a. If only fluid and filter were changed, add **10 pints (5 quarts)** of ATF +4 to transmission.
 - b. If transmission was completely overhauled and the torque converter was replaced or drained, add **24 pints (12 quarts)** of ATF +4 to transmission.
3. Check the transmission fluid (Refer to 21 - TRANSMISSION/AUTOMATIC - RFE/FLUID - STANDARD PROCEDURE) and adjust as required.

ASSEMBLY-TRANSMISSION SOLENOID/TRS

DESCRIPTION

The transmission solenoid/TRS assembly is internal to the transmission and mounted on the valve body assembly. The assembly consists of six solenoids that control hydraulic pressure to the six friction elements (transmission clutches), and the torque converter clutch. The pressure control solenoid is located on the side of the solenoid/TRS assembly. The solenoid/TRS assembly also contains five pressure switches that feed information to the TCM.



OPERATION

SOLENOIDS

Solenoids are used to control the L/R, 2C, 4C, OD, and UD friction elements. The reverse clutch is controlled by line pressure and the position of the manual valve in the valve body. All the solenoids are contained within the Solenoid and Pressure Switch Assembly. The solenoid and pressure switch assembly contains one additional solenoid, Multi-Select (MS), which serves primarily to provide 2nd and 3rd gear limp-in operation.

The solenoids receive electrical power from the Transmission Control Relay through a single wire. The TCM energizes or operates the solenoids individually by grounding the return wire of the solenoid as necessary. When a solenoid is energized, the solenoid valve shifts, and a fluid passage is opened or closed (vented or applied), depending on its default operating state. The result is an apply or release of a frictional element.

The MS and UD solenoids are normally applied to allow transmission limp-in in the event of an electrical failure.

The continuity of the solenoids and circuits are periodically tested. Each solenoid is turned on or off depending on its current state. An inductive spike should be detected by the TCM during this test. If no spike is detected, the circuit is tested again to verify the failure. In addition to the periodic testing, the solenoid circuits are tested if a speed ratio or pressure switch error occurs.

PRESSURE SWITCHES

The TCM relies on five pressure switches to monitor fluid pressure in the L/R, 2C, 4C, UD, and OD hydraulic circuits. The primary purpose of these switches is to help the TCM detect when clutch circuit hydraulic failures occur. The switches close at 23 psi and open at 11 psi, and simply indicate whether or not pressure exists. The switches are continuously monitored by the TCM for the correct states (open or closed) in each gear as shown in the following charts 45RFE PRESSURE SWITCH STATES and 545RFE PRESSURE SWITCH STATES :

45RFE PRESSURE SWITCH STATES

GEAR	L/R	2C	4C	UD	OD
R	OP	OP	OP	OP	OP
P/N	CL	OP	OP	OP	OP
1ST	CL*	OP	OP	CL	OP
2ND	OP	CL	OP	CL	OP
2ND PRIME	OP	OP	CL	CL	OP
D	OP	OP	OP	CL	CL
FOURTH	OP	OP	CL	OP	CL

*L/R is closed if output speed is below 100 rpm in Drive and Manual 2. L/R is open in Manual 1.

545RFE PRESSURE SWITCH STATES

GEAR	L/R	2C	4C	UD	OD
R	OP	OP	OP	OP	OP
P/N	CL	OP	OP	OP	OP
1ST	CL*	OP	OP	CL	OP
2ND	OP	CL	OP	CL	OP
2ND PRIME	OP	OP	CL	CL	OP
D	OP	OP	OP	CL	CL
4TH	OP	OP	CL	OP	CL
5TH	OP	CL	OP	OP	CL

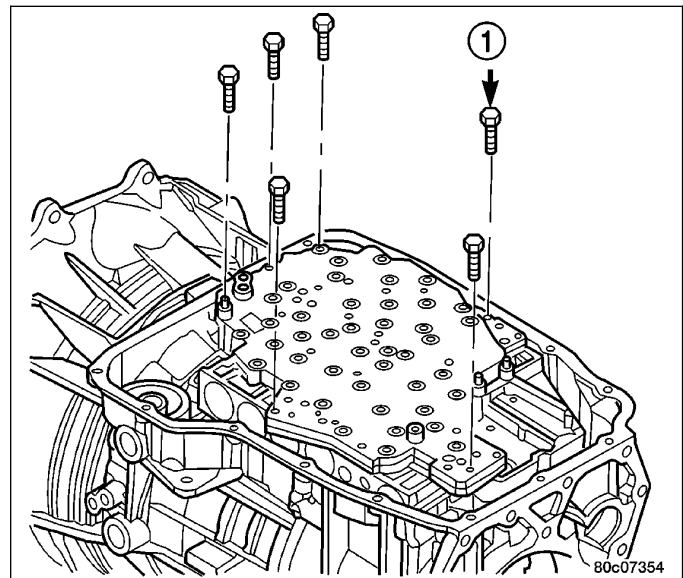
*L/R is closed if output speed is below 100 rpm in Drive and Manual 2. L/R is open in Manual 1.

A Diagnostic Trouble Code (DTC) will set if the TCM senses any switch open or closed at the wrong time in a given gear.

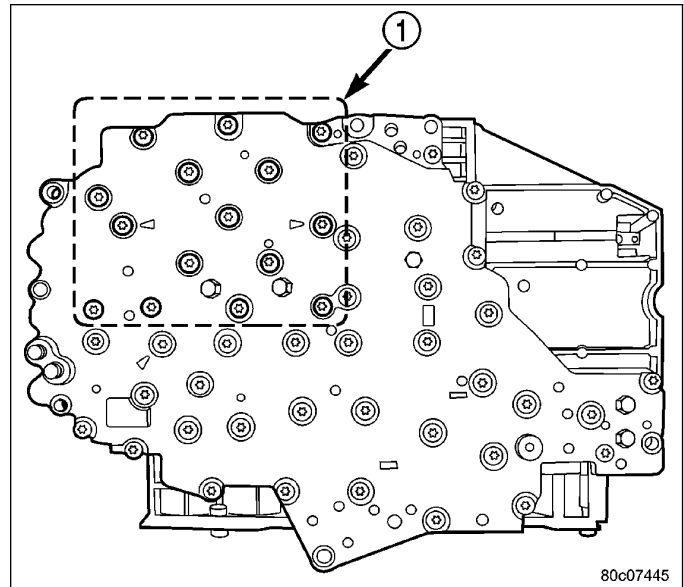
REMOVAL

NOTE: If the Transmission Solenoid/TRS Assembly is being replaced, the Quick Learn Procedure must be performed. (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/TRANSMISSION CONTROL MODULE - STANDARD PROCEDURE)

1. Remove the valve body from the transmission.
(Refer to 21 - TRANSMISSION/AUTOMATIC - 45RFE/545RFE/VALVE BODY - REMOVAL)



2. Remove the bolts (1) holding the transmission solenoid/TRS assembly onto the valve body.
3. Separate the transmission solenoid/TRS assembly from the valve body.



INSTALLATION

1. Place TRS selector plate in the PARK position.
2. Position the transmission solenoid/TRS assembly onto the valve body. Be sure that both alignment dowels are fully seated in the valve body and that the TRS switch contacts are properly positioned in the selector plate.
3. Install the bolts (1) to hold the transmission solenoid/TRS assembly onto the valve body.
4. Tighten the solenoid assembly screws adjacent to the arrows cast into the bottom of the valve body first. Tighten the screws to 6 N·m (50 in.lbs.).
5. Tighten the remainder of the solenoid assembly screws to 6 N·m (50 in.lbs.).
6. Install the valve body into the transmission.

