sonnax®

REMANUFACTURED VALVE BODIES

Tech & Install Tips

6L45, 6L50, 6L80, 6L90 Remanufactured Valve Body

Part Nos.

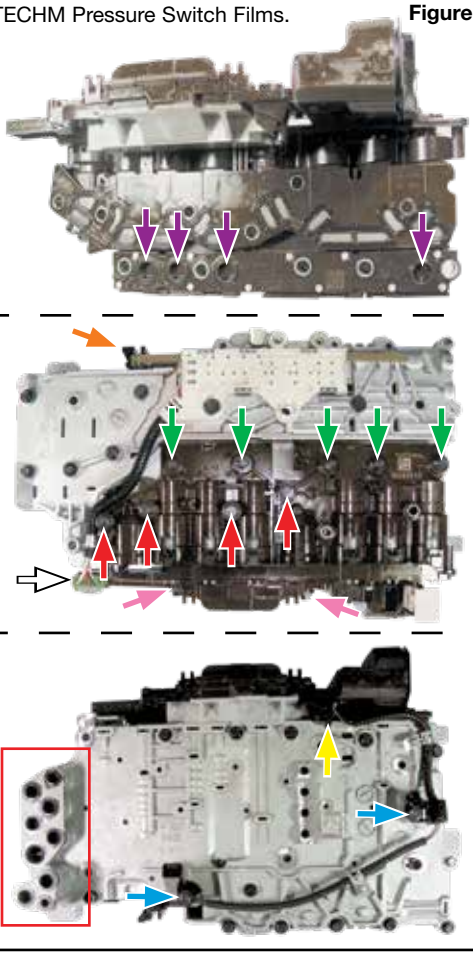
GM6L45E	Fits '06–'09 GM units only
GM6L45L	Fits '10–later GM units only
GM6L50L	Fits '10–later GM units only
GM6L80E	Fits '06–'09 GM units only
GM6L80L	Fits '10–later GM units only
GM6L90E	Fits '06–'09 GM units only
GM6L90L	Fits '10–later GM units only
BMW6L45E	Early design separator plate

6L80 Early Valve Body

NOTE: Go to www.sonnax.com for identification guide to verify the correct valve body is being installed as these different types are very similar.

CAUTION: Care must be taken when handling the TEHCM. Use an ESD ground strap so static discharge does not damage the module.

TECHM Pressure Switch Films. **Figure 1**



Valve Body Installation Tips

1. Inspect TEHCM pressure switch film and seals. Install TEHCM, onto valve body (**Figure 1**).

a. Install 10mm head bolts (red arrows). Install the two 8mm head bolts on the side.

b. Finger tighten these first, so there is no gap between the TEHCM and the valve body (pink arrows). Install 7mm head bolts (green arrows). Torque all bolts to 71 in-lb.

c. Install OE detent lever.

d. Install TRS onto valve body and ensure the plastic leg is installed into the manual valve as shown (orange arrow). Install TRS harness connector into the TEHCM (white arrow).

e. Turn valve body and TEHCM over and install input and output speed sensor and harness and torque attaching bolts to 100 in-lb (blue arrows).

f. Connect electrical connector to TEHCM (yellow arrow).

g. Install valve body to pump seals (not included) and ensure the correct valve body to support seals are installed in the transmission case (red box).

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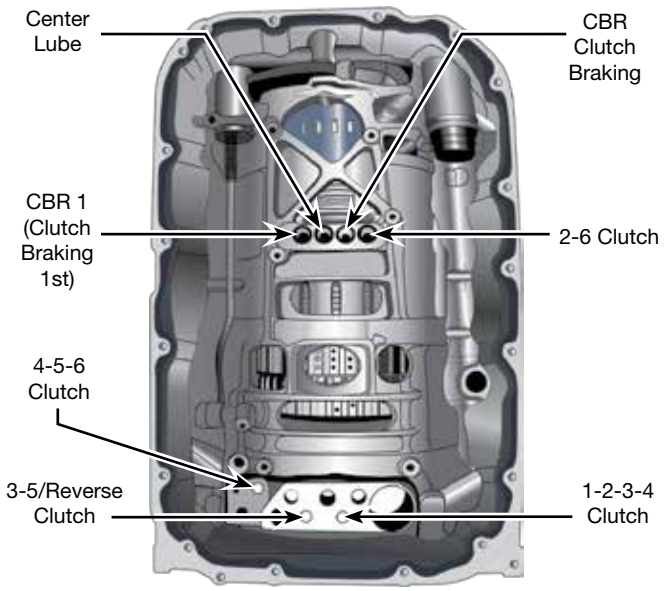
Air Test Port Location & Identification

Figure 2



2. Air Check

While valve body is out, air-check indicated circuits (**Figure 2**) using low, regulated air pressure. This will help you discover any issues prior to installing the remanufactured valve body.

3. Install Valve Body & TEHCM onto Transmission Case Indexing the Manual Valve into the Manual Linkage.

a. Install valve body to case attaching bolts and torque to 100 in-lb.

b. Install case connector sleeve then push in white electrical connector slide lock.

c. Install transmission sump filter and oil pan gasket and pan.

4. Fluid Fill & Road Test

a. Fill transmission with Dexron VI transmission fluid to factory spec.

b. Let engine run to warm up transmission fluid to approximately 185°.

c. If using the same TEHCM that came with the vehicle:

- Install scan tool and verify transmission fluid temp is correct. Perform fast adapt (battery disconnect will not suffice).
- Then skip to road test section.

d. If using Reman or New TEHCM:

- Install scan tool and connect to OE website and download and install software for programming.

NOTE: Install a battery charger before attempting to program. Some Reman TEHCMs may come with a dongle to capture TEHCM software from OE TEHCM for reinstallation into reman module. Follow instructions in the box.

- Verify transmission fluid temp is correct. Perform fast adapt (battery disconnect will not suffice).
- Then skip to road test section.

5. Road Test

a. Road test vehicle performing 10–15 upshift and downshift cycles at light throttle through all six speeds.

b. Perform 4-5 passing gear maneuvers at high speed.

NOTE: A small 2-3 upshift flare or overlap issue, clunk into 4th Gear and a 3-2 downshift clunk is common during adaptive relearn. This condition will typically resolve itself within the 10–15 shift cycles after reset is performed.

Transmission Diagnostic Tips

This remanufactured valve body has been through a rigorous inspection and rebuild process, then 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. A brake and clutch application chart (**Figure 3**) is below for additional aid in diagnosing problems.

- Forward slip or solenoid performance codes related to the 1-2-3-4 solenoid may be caused by a cracked 1-2-3-4 apply piston.
- Delayed Reverse or flared 2-3 upshift may be caused by a cracked 3-5-R drum or the pump support sealing rings leaking or a bad bushing.
- A broken or split sump filter may be caused by pressure regulator bore wear or a worn pump rotor or slide assembly. See www.sonnax.com for pump repairs.

Clutch & Brake Application Chart — Figure 3

Gear Range	1-2-3-4 Clutch	3-5 Reverse Clutch	4-5-6 Clutch	2-6 Clutch	Low & Reverse Clutch	Low Clutch Sprag
Park					ON*	
Reverse		ON			ON	
Neutral					ON*	
1st Braking	ON				ON	Holding
D-1st Gear	ON					Holding
D-2nd Gear	ON			ON		
D-3rd Gear	ON	ON				
D-4th Gear	ON		ON			
D-5th Gear		ON	ON			
D-6th Gear			ON	ON		