sonnax®

REMANUFACTURED VALVE BODIES

Tech & Install Tips

4L80-E, 4L85-E Heavy Duty Remanufactured Valve Body

Fits '97-'03 units. Smart-Tech® overrun clutch valve kit 34200-40K installed.

Part No.

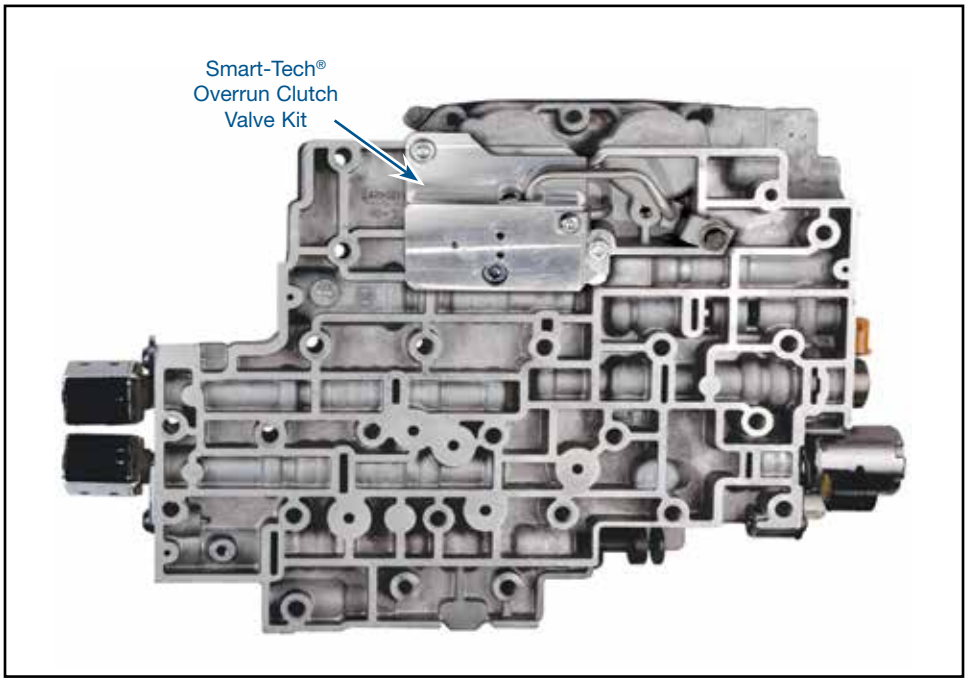
GM033

Fits '04-later units. Smart-Tech® overrun clutch valve kit 34200-40K installed.

Part No.

GM030

NOTE: The components included in these heavy duty remanufactured valve bodies may be protected by patent number 10,161,505.



Valve Body Installation Tips

1. Disassembly

a. Remove and discard three washers and three nuts retaining overrun manifold to the valve body.

b. Retain the three socket head bolts provided (**Figure 1**), and keep engaged in overrun clutch valve manifold.

c. Verify valve body upper gasket is aligned on the separator plate.

2. Installation

a. Do not install #1 checkball in case as this is omitted with Sonnax overrun clutch valve assembly.

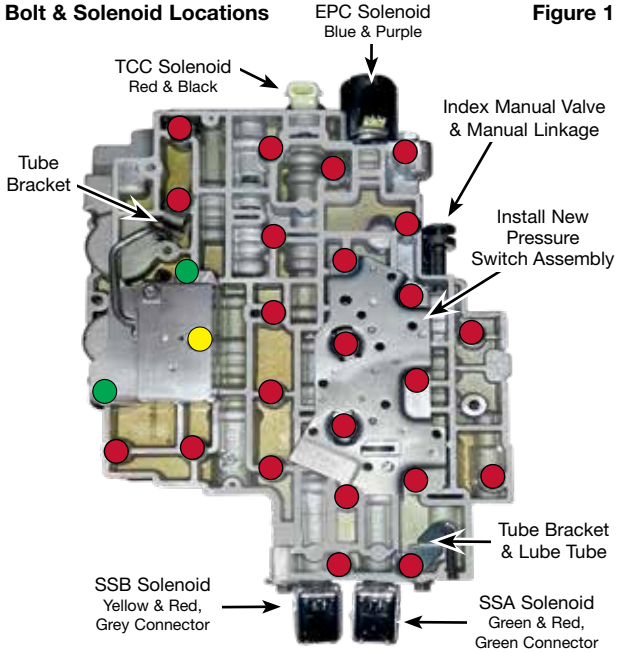
b. Install valve body onto transmission case while indexing manual valve into the manual linkage.

c. Install Sonnax pressure switch assembly and valve body to case bolts in the locations (**Figure 1**) and finger tighten.

d. Install OE lube tube, bracket and bolt, then finger tighten. Install Sonnax feed tube bracket notch over pipe and install OE bolt, then finger tighten.

e. Torque all bolts to 100 in-lb.

Bolt & Solenoid Locations **Figure 1**



Bolt Key: = 10mm Hex Head

= 2.500" Long 5mm Socket Head / = 2.350" Long 5mm Socket Head

Install color coded bolts in locations shown and torque to 100 in-lb.

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Fluid Fill & Road Test

a. Fill the transmission to factory specifications with OE compatible ATF.

b. Let engine run to help warm transmission fluid to 185ºF.

c. Road test vehicle performing 10-15 upshift and downshift cycles through all four speeds.

Bonus Diagnostic Tech

This Sonnax heavy duty 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. 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 (**Figures 3 & 4)** for air test locations to verify internal integrity, and a component application chart for trouble-shooting driveability issues.

Common Failure Areas

a. Forward engagement problems can be attributed to sealing ring wear in the forward drum.

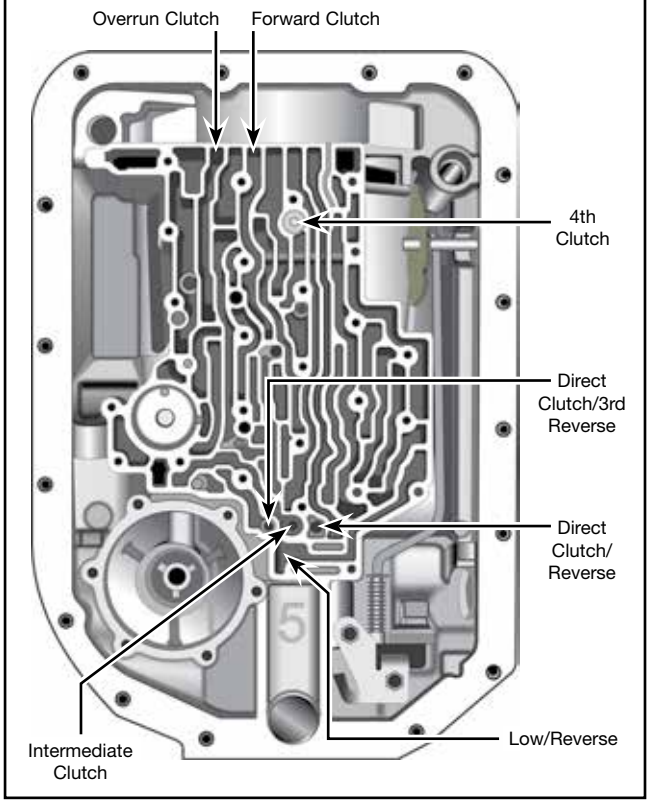
b. Delayed Reverse and 2-3 flare can be caused by a worn center support bushing or a loose retaining bolt in the case.

c. TCC slip can be caused by a cracked apply piston in the torque converter.

Figure 2

Solenoid	Wire Colors	OHM Value
SSA	Green & Red	20–40 Ohms
SSB	Yellow & Red	20–40 Ohms
EPC	Blue & Purple	3–6 Ohms
TCC	Red & Black	10–15 Ohms

4L80 Air Test **Figure 3**



Application Chart: 4L80/85-E Heavy Duty Remanufactured Valve Body with Overrun Clutch Manifold Installed **Figure 4**

Selector Position	Gear	4th Clutch	Overrun Clutch	OD Roller Clutch	Forward Clutch	Direct Clutch	Front Band	Inter-mediate Sprag	Inter-mediate Clutch	Low Roller Clutch	Rear Band	Solenoid A	Solenoid B
Reverse	R		ON	Holding		ON					ON	ON	OFF
Overdrive D4	1st		ON	Holding	ON					Holding		ON	OFF
	2nd		ON	Holding	ON			Holding	ON			OFF	OFF
	3rd		ON	Holding	ON	ON			ON			OFF	ON
	4th	ON			ON	ON			ON			ON	ON
Drive D3	1st		ON	Holding	ON					Holding		ON	OFF
	2nd		ON	Holding	ON			Holding	ON			OFF	OFF
	3rd		ON	Holding	ON	ON			ON			OFF	ON
Manual 2 D2	1st		ON	Holding	ON					Holding		ON	OFF
	2nd		ON	Holding	ON		ON	Holding	ON			OFF	OFF
Manual 1 D1	1st		ON	Holding	ON	ON				Holding	ON	ON	OFF