

# Transmission Type... 6F50/55

Rebuilder's Kwik  
Reference Guide



## Clutch Clearances

## Adjusted By:

Forward Clutch . . .033 - .095  
 Low/Reverse . . . . .040 - .100  
 Intermediate . . . . .035 - .088  
 Overdrive . . . . .044 - .090  
 Direct . . . . .039 - .092

Nothing Selective - Check Clearance Only

## Torque Specifications

Cover Assembly to Transaxle Case Bolt . . . . .12 Nm-9 Lb.-Ft.  
 Differential Carrier Baffle Bolts . . . . .12 Nm-9 Lb.-Ft.  
 Fluid Reservoir Bolts . . . . .12 Nm-9 Lb.-Ft.  
 Fluid Pump-to-Torque Converter Housing Bolts ...12 Nm-9 Lb.-Ft.  
 Main Control Cover Bolts . . . . .18 Nm-13 Lb.-Ft.  
 Manual Lever Nut . . . . .18 Nm-13 Lb.-Ft.  
 Output Shaft Speed (OSS) Sensor Bolt . . . . .12 Nm-9 Lb.-Ft.  
 Park Pawl Retainer Bolts . . . . .12 Nm-9 Lb.-Ft.  
 Solenoid Body Bolts . . . . .12 Nm-9 Lb.-Ft.  
 Stator Support Feed Tube Bolts (hex head) . . . . .12 Nm-9 Lb.-Ft.  
 Stator Support Feed Tube Bolts (torx head) . . . . .7 Nm-62 Lb.-In.  
 Stator Support-to-Torque Converter Housing Bolt 41 Nm-30 Lb.-Ft.  
 Torque Converter Housing-to-Transaxle Case Bolt 24 Nm-18 Lb.-Ft.  
 Transmission Fluid Drain Plug . . . . .9 Nm-80 Lb.-In.  
 Turbine Shaft Speed (TSS) Sensor Bolt . . . . .12 Nm-9 Lb.-Ft.  
 Valve Body Assembly Bolts . . . . .12 Nm-9 Lb.-Ft.  
 Valve Body-to-Case Bolts . . . . .12 Nm-9 Lb.-Ft.

## Unit Endplays

## Location

## Selective

Differential Bearing Preload\* . . . . .Under Bearing Race on Torque Converter Housing . . .Shim  
 Transfer Shaft Bearing Preload\* . . . . .Under Bearing Race on Torque Converter Housing . . .Shim

\*Special Tools Required

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## Clutch and Band Application Chart

<b>Gear</b>	<b>Direct (C 3,5,R)</b>	<b>Overdrive (C 4,5,6)</b>	<b>Forward (CB 1,2,3,4)</b>	<b>Low/Reverse (CB L,R)</b>	<b>Intermediate (CB 2,6)</b>	<b>One-Way</b>
<b>1</b>			<b>x</b>	<b>x</b>		<b>x</b>
<b>2</b>			<b>x</b>		<b>x</b>	<b>O/R</b>
<b>3</b>	<b>x</b>		<b>x</b>			<b>O/R</b>
<b>4</b>		<b>x</b>	<b>x</b>			<b>O/R</b>
<b>5</b>	<b>x</b>	<b>x</b>				<b>O/R</b>
<b>6</b>		<b>x</b>			<b>x</b>	<b>O/R</b>
<b>Reverse</b>	<b>x</b>			<b>x</b>		

**CB = Clutch Brake**

**O/R = Overrunning**

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### Solenoid Application Chart

Gear		SS A (VFS) NL (CB 1,2,3,4)	SS B (VFS) NH (3,5,R)	SS C (VFS) NL (CB 2,6)	SS D (VFS) NH (CB L,R/4,5,6)	SS E (On/Off) NC	TCC (VFS) NL
Park		OFF	ON	OFF	OFF	ON	OFF
Reverse		OFF	OFF	OFF	OFF	ON	OFF
Neutral		OFF	ON	OFF	OFF*	ON*	OFF
Drive	1	ON	ON	OFF	OFF**	ON***	OFF
	2	ON	ON	ON	ON	OFF	OFF
	3	ON	OFF	OFF	ON	OFF	OFF
	4	ON	ON	OFF	OFF	OFF	ON/OFF
	5	OFF	OFF	OFF	OFF	OFF	ON/OFF
	6	OFF	ON	ON	OFF	OFF	ON/OFF
Low		ON	ON	OFF	OFF**	ON***	OFF

\* Solenoid state will change if vehicle is moving forward with the selector level in the NEUTRAL position.

\*\* Turns on above 5 km/h (3 mph).

\*\*\* Turns off above 5 km/h (3 mph).

CB = Clutch Brake

NC = Normally Closed

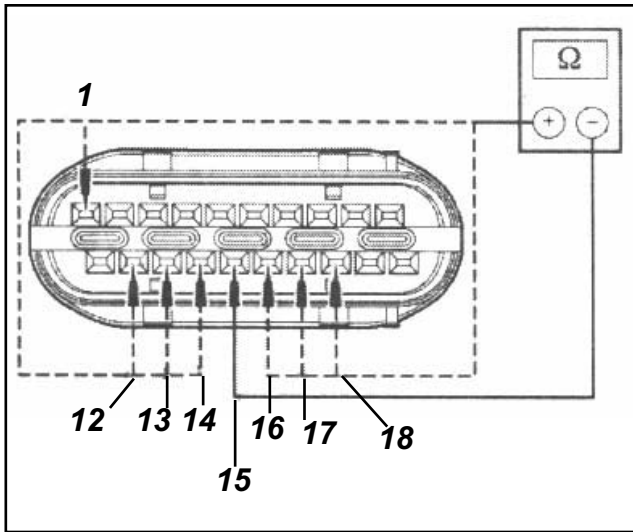
NH = Normally High

NL = Normally Low

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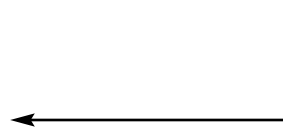
## Solenoid Resistance Chart



Shift Solenoid	Transaxle Connector Pin
SSA	15 + 13
SSB	15 + 16
SSC	15 + 17
SSD	15 + 12
SSE	15 + 1
LPC	15 + 18
TCC	15 + 14

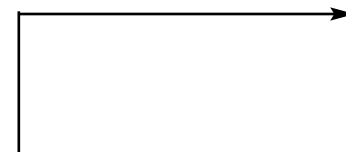
Temperature		Resistance (ohms)
°C	°F	
-20 to -10	-4 to 14	3.24 to 5.13
-10 to 0	14 to 32	3.43 to 5.32
0 to 10	32 to 50	3.62 to 5.51
10 to 20	50 to 68	3.81 to 5.70
20 to 30	68 to 86	4.00 to 5.89
30 to 40	86 to 104	4.10 to 6.08
40 to 50	104 to 122	4.38 to 6.27
50 to 60	122 to 140	4.57 to 6.46
60 to 70	140 to 158	4.76 to 6.65
70 to 80	158 to 176	4.95 to 6.83
80 to 90	176 to 194	5.13 to 7.02
90 to 100	194 to 212	5.32 to 7.21

Solenoid Resistance Values: SSA, SSB, SSC, SSD, TCC and LPC



Temperature		Resistance (ohms)
°C	°F	
-20 to -10	14 to 14	15.45 to 24.35
-10 to 0	14 to 32	16.35 to 25.25
0 to 10	32 to 50	17.25 to 26.15
10 to 20	50 to 68	18.15 to 27.05
20 to 30	68 to 86	19.05 to 27.95
30 to 40	86 to 104	19.95 to 28.85
40 to 50	104 to 122	20.85 to 29.75
50 to 60	122 to 140	21.75 to 30.65
60 to 70	140 to 158	22.65 to 31.54
70 to 80	158 to 176	23.54 to 32.44
80 to 90	176 to 194	24.44 to 33.34
90 to 100	194 to 212	25.34 to 34.24

Solenoid Resistance Values: SSE (On/Off)

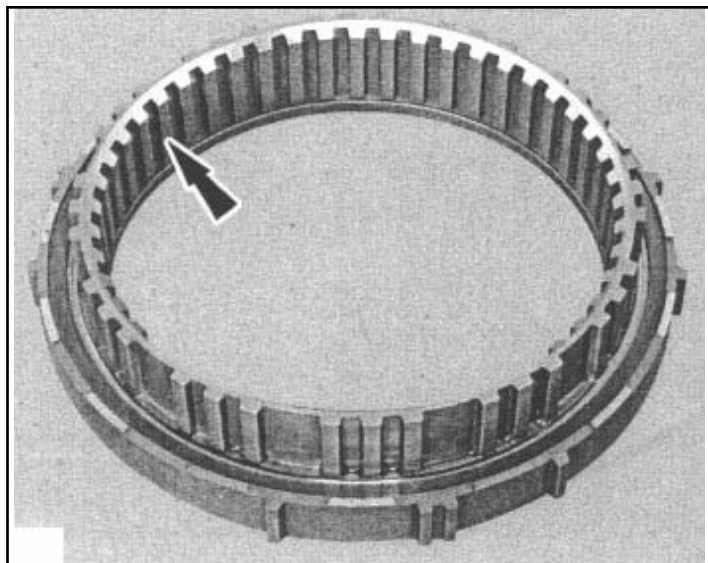


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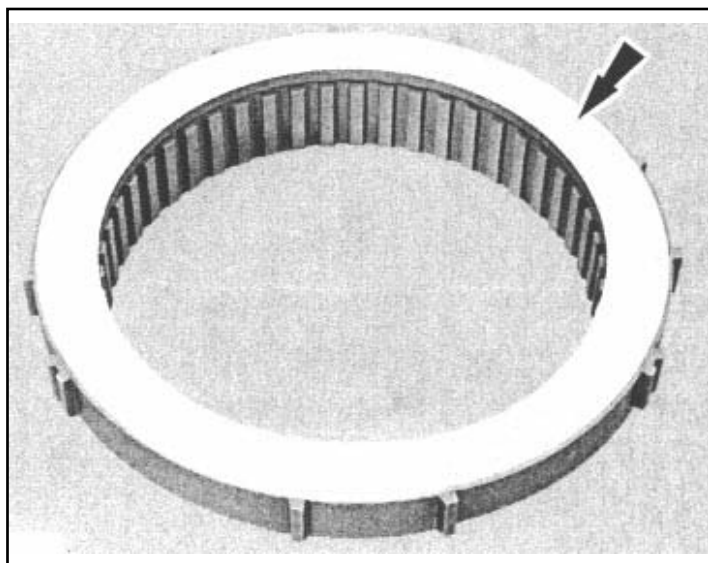
### Low One-Way Clutch



#### **NOTE**

THE LOW ONE-WAY CLUTCH CANNOT BE DISASSEMBLED.

*Clean and inspect the low one-way clutch for cracks and damaged splines. The internal splined section should rotate clockwise and lock when rotated counterclockwise. If any damage is found or the clutch does not rotate or lock, install a new low one-way clutch.*



*Inspect the forward clutch surface for damage. If the surface is burned or worn excessively, install a new one-way clutch.*

#### **CAUTION**

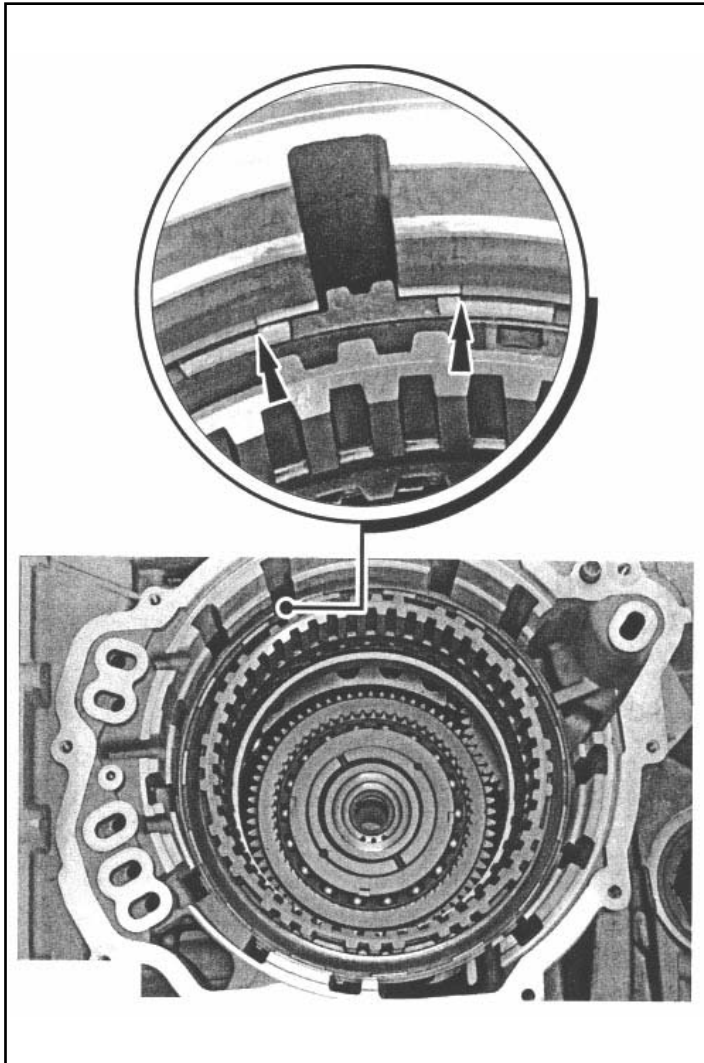
DO NOT CLEAN IN WATER OR WITH WATER-BASED SOLVENTS. DAMAGE TO THE COMPONENT MAY OCCUR.

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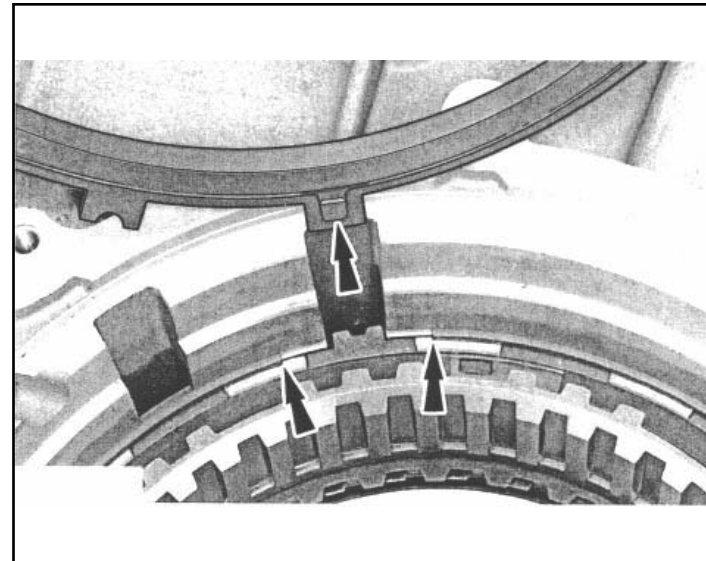
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## Technical Tips For Rebuilding This Unit



*The low one-way clutch snap ring gap must be positioned as shown so that the low/reverse clutch pressure plate tab fits into the gap when it is installed late in this procedure.*



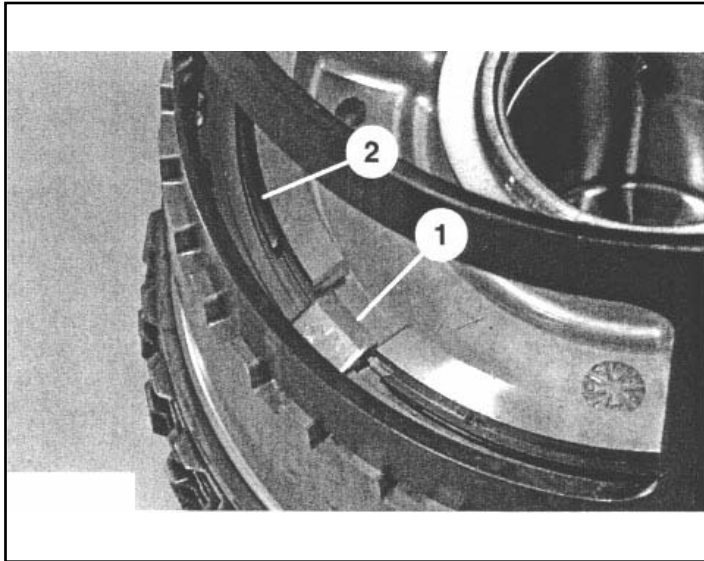
*Compare the position of the low one-way clutch snap ring gap with the tab on the low/reverse clutch pressure plate to be sure that the gap is in the right position*

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## Technical Tips For Rebuilding This Unit

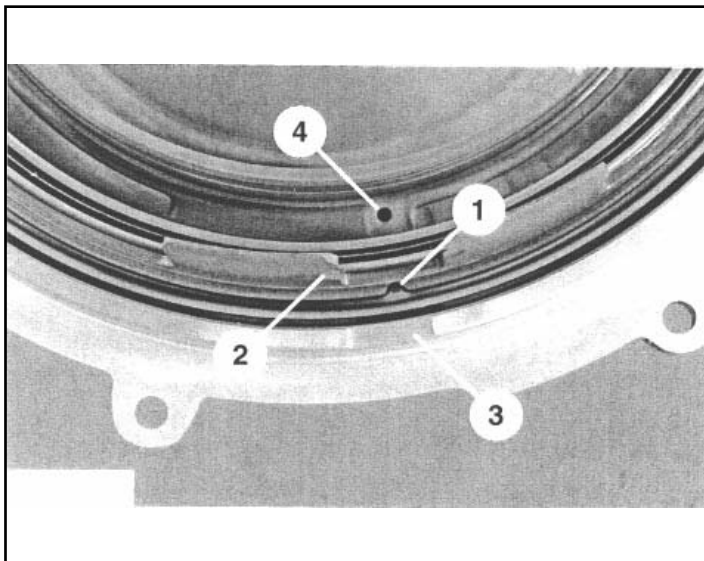


### CAUTION

ONLY COMPRESS THE DIRECT CLUTCH PISTON RETURN SPRING FAR ENOUGH TO INSTALL THE DIRECT CLUTCH CYLINDER SNAP RING. IF THE PISTON IS COMPRESSED TOO FAR, THE PISTON ALIGNMENT TAB MAY BE BROKEN OFF.

### NOTE

ALIGN THE TAB ON THE DIRECT CLUTCH CYLINDER WITH THE SLOT ON THE OVERDRIVE/DIRECT CLUTCH HUB AND SHAFT ASSEMBLY.



*Make sure the low/reverse piston bleed hole and semicircle area are aligned with the indentation in the cover and the intermediate cylinder fill hole.*

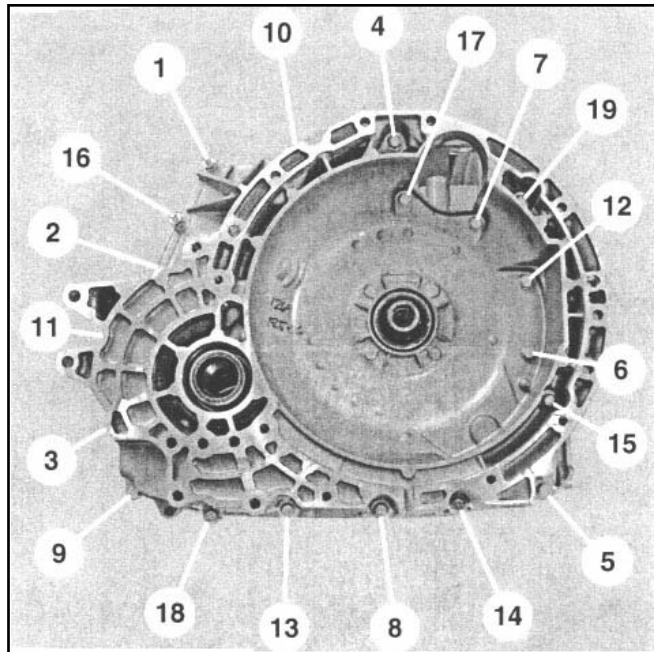
1. *Low/reverse piston bleed hole*
2. *Low/reverse piston semicircle area*
3. *Cover indentation*
4. *Intermediate cylinder fill hole*

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## Technical Tips For Rebuilding This Unit



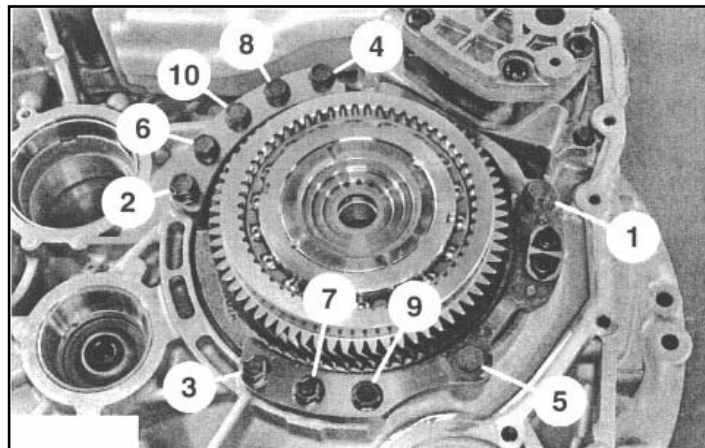
### NOTE

INSTALL THE 2 STUDBOLTS IN THE CORRECT LOCATION AS NOTED DURING DISASSEMBLY.

### NOTE

THE STUDBOLTS ARE 1 AND 16 IN THE TIGHTENING SEQUENCE. TIGHTEN BOLTS IN SEQUENCE SHOWN.

- Tighten to 24 Nm (18 Lb.-Ft.)



Install the 10 stator support bolts. Tighten in the sequence shown.

- Tighten to 41 Nm (30 lb-ft).

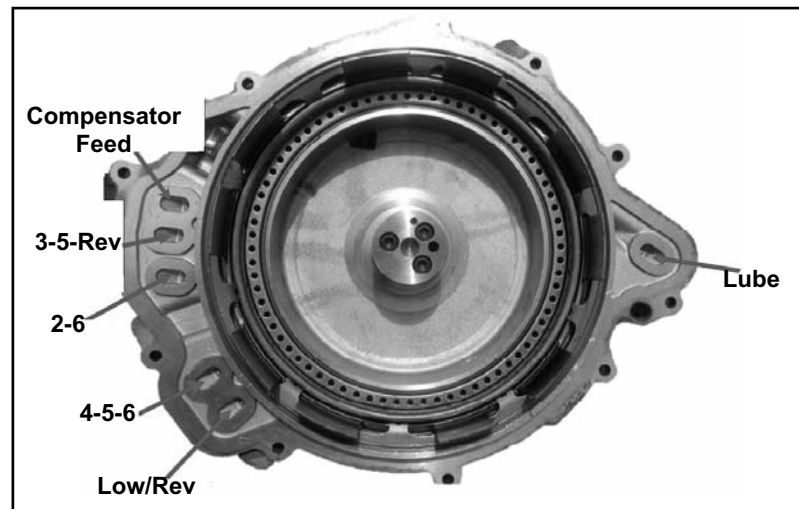
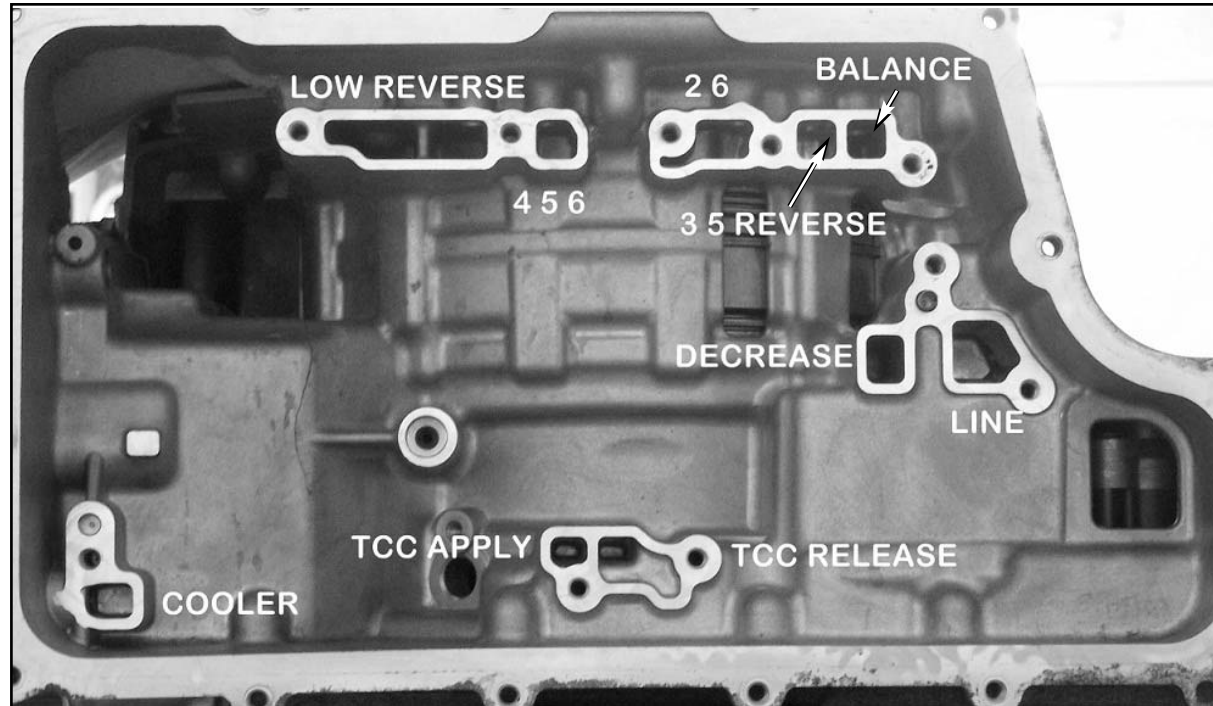


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### Airtest

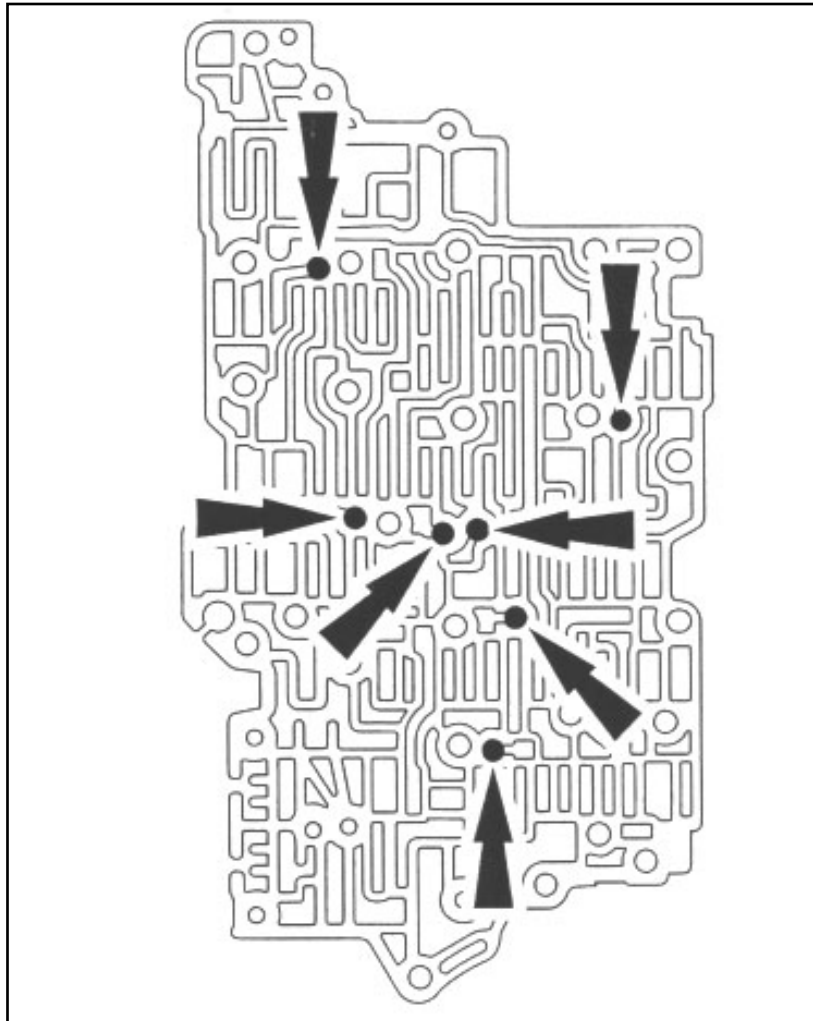


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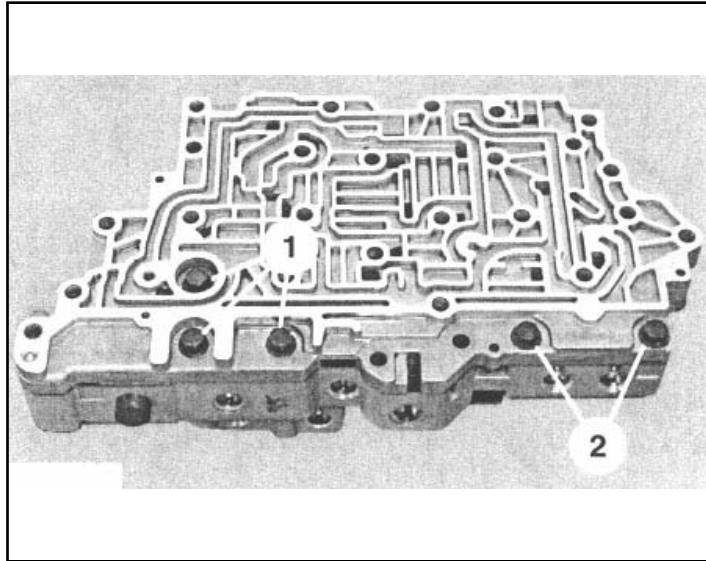
### Check Ball Locations & Fluid Type



<b>Item</b>	<b>Specification</b>	<b>Fill Capacity</b>
<b>MERCON® V Automatic Transmission Fluid XT-5-QM (or XT-5-QMC) (US); CXT-5- LM12 (Canada)</b>	<b>MERCON® V</b>	<b>9.5L (10 qt)</b>

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## Technical Tips For Rebuilding This Unit



### NOTE

INSTALL THE DIFFERENT LENGTH BOLTS IN THE CORRECT LOCATION AS NOTED DURING DISASSEMBLY.

*Install the transfer plate assembly and hand tighten the 5 bolts.*

1. 63 mm (2.48 in) bolts
2. 35 mm (1.37 in) bolts

*Tighten the 5 bolts.*

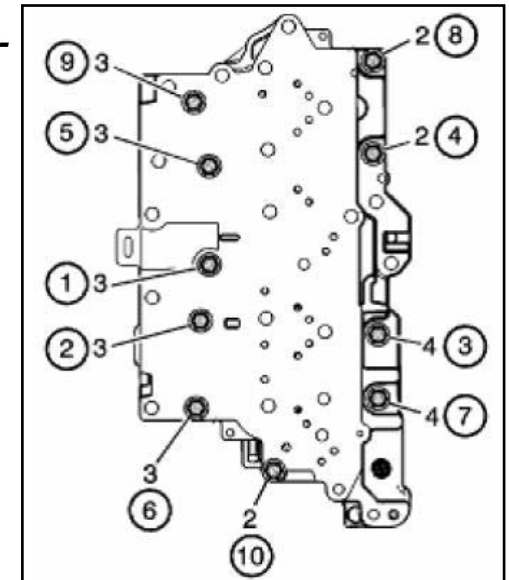
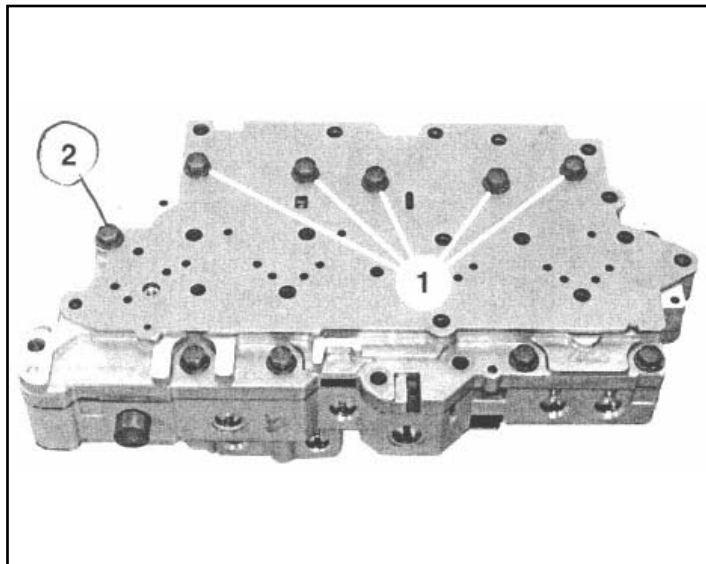
- Tighten to 12 Nm (9 lb.-ft.).

*Install the cover assembly and hand tighten the 6 bolts.*

1. 63 mm (2.48 in) bolts
2. 35 mm (1.37 in) bolts

*Tighten the 6 bolts.*

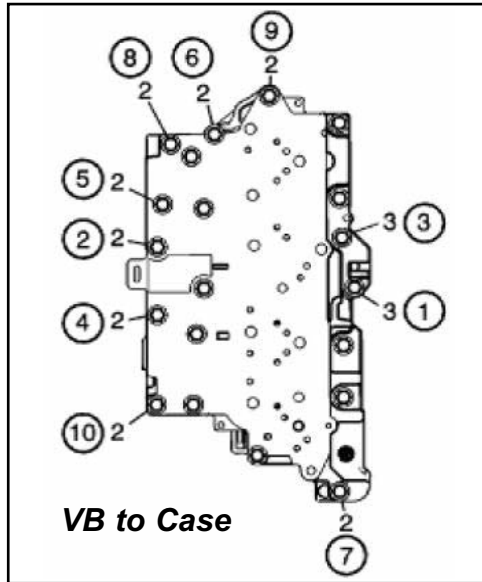
- Tighten to 12 Nm (9 lb.-ft.)



VB 1/2 Torque

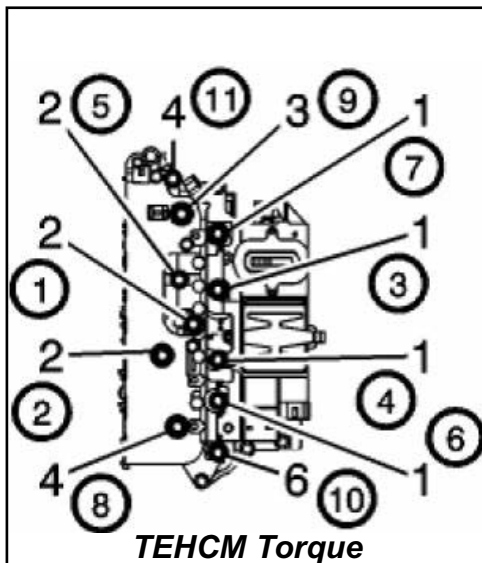
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## Technical Tips For Rebuilding This Unit



Install the 10 main control valve body bolts. Tighten the bolts in the sequence shown.

- Tighten to 12 Nm (9 lb-ft)



### NOTE

INSTALL THE DIFFERENT LENGTH BOLTS IN THE LOCATIONS NOTED DURING DISASSEMBLY.

Install the 11 solenoid body bolts hand tight.

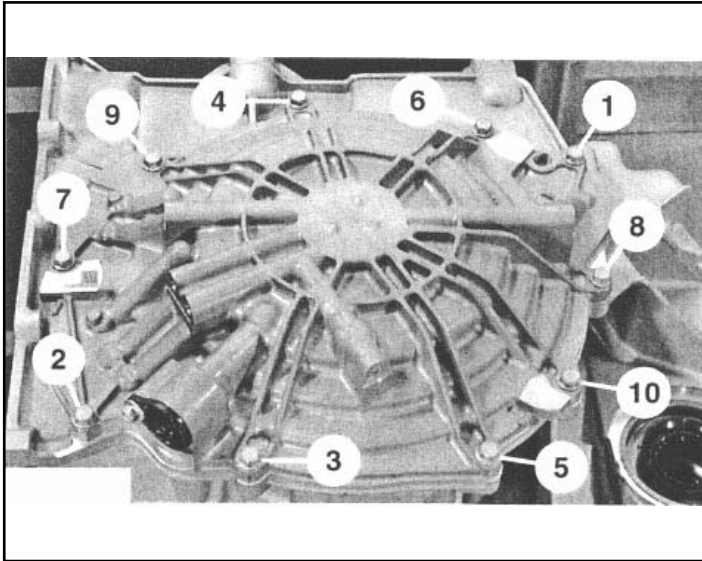
1. 42 mm (1.65 in) bolt
2. 63 mm (2.48 in) bolts
3. 80 mm (3.14 in) bolts
4. 95 mm (3.74 in) bolts

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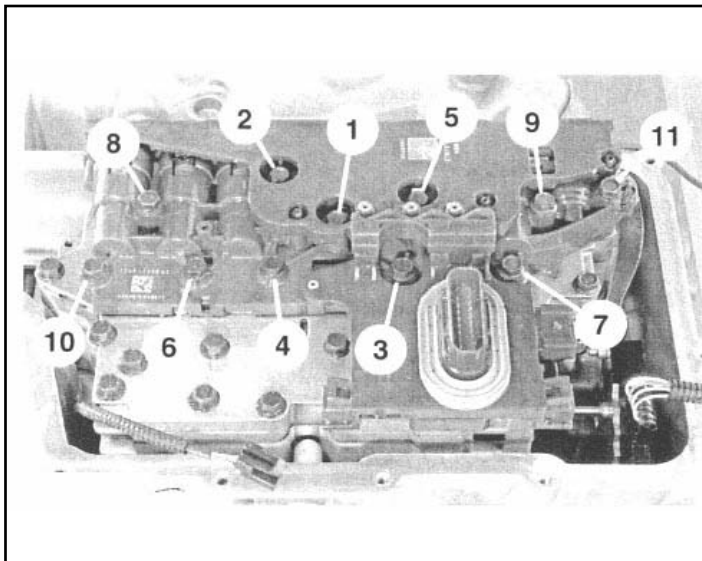


## Technical Tips For Rebuilding This Unit



*Install the cover assembly bolts and tighten the bolts in the sequence shown.*

- *Tighten to 12 Nm (9 lb.-ft.)*



*Tighten the solenoid body bolts in the sequence shown.*

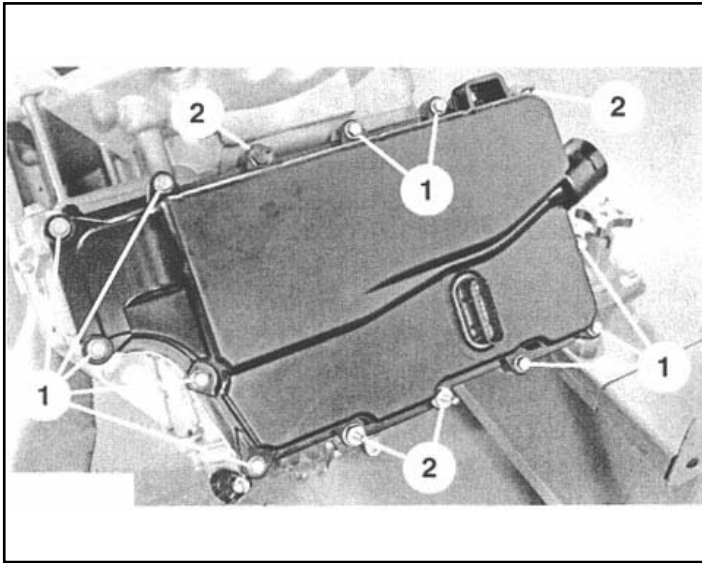
- *Tighten to 12 Nm (9 lb.-ft.).*

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### Technical Tips For Rebuilding This Unit

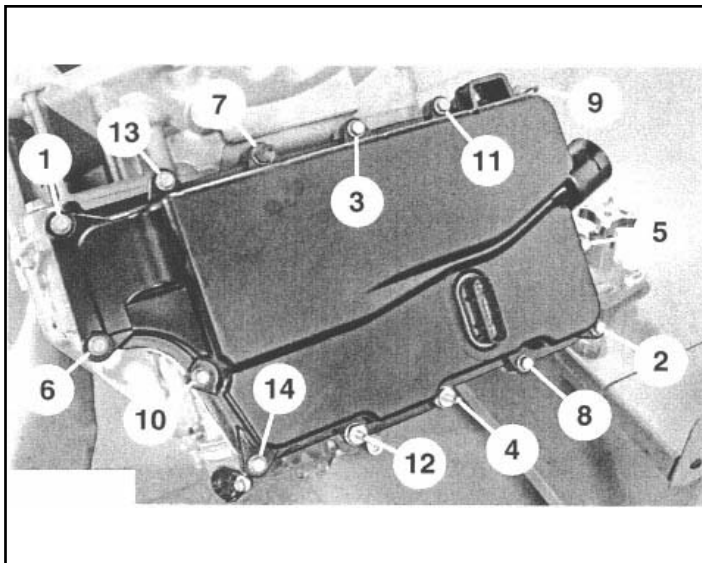


#### **NOTE**

INSTALL THE STUDBOLTS IN THE LOCATIONS NOTED DURING DISASSEMBLY.

*Install the transaxle main control cover and install the 14 bolts.*

1. Bolt location
2. Studbolt location



*Tighten the main control cover bolts in the sequence shown.*

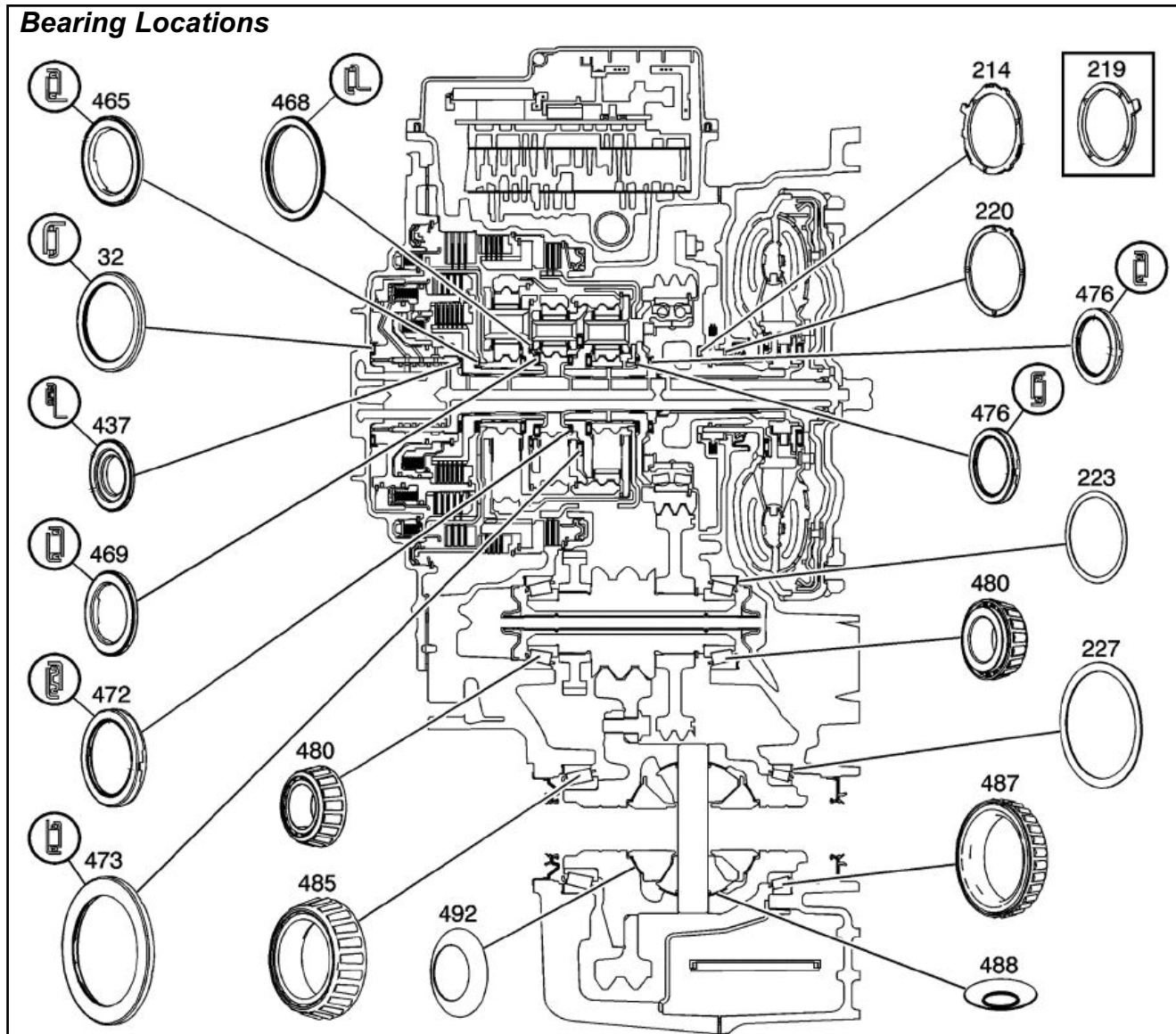
- *Tighten to 12 Nm (9 lb-ft).*

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## Technical Tips For Rebuilding This Unit



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