

Transmission Type: 6F35

Rebuilder's Kwik Reference Guide



Clutch Clearances

Low-Reverse	0.015" - 0.078"	.....	Not Adjustable
Forward 1-2-3-4..	0.002" - 0.072"	.....	Not Adjustable
Overdrive 4-5-6...	0.037" - 0.070"	.....	Not Adjustable
Intermediate 2-6	.0.009" - 0.102"	.....	Not Adjustable
Direct 3-5-R	0.016" - 0.068"	.....	Not Adjustable

Adjusted By:

Torque Specifications

Torque Specifications

Main Control Valve Body Bolts	89 Lb. In.
Main Control Cover Bolts/Stud Bolts	106 Lb. In.
Manual Control Lever Nut.....	18 Lb. Ft.
Main Control Stud Nut	89 Lb. In.
Main Control-to-Case Stud	89 Lb. In.
Output Shaft Speed (OSS) Sensor Bolt.....	89 Lb. In.
Power Transfer Unit (PTU) Bolts	52 Lb. Ft.
PTU Bracket Bolts	33 Lb. Ft.
PTU Bracket-to-Engine Bolts.....	30 Lb. Ft.
PTU Support Bracket Bolts.....	41 Lb. Ft.
PTU Vent Tube Bolt	124 Lb. In.
Pump Assembly-	
to-torque converter housing bolt (6 mm bolt)	89 Lb. In.
to-torque converter housing bolt (8 mm bolts)	26 Lb. Ft.

Pump Housing Bolts	89 Lb. In.
Rear Cross Brace Bolts.....	85 Lb. Ft.
Selector Lever Cable Bracket Bolts.....	106 Lb. In.
Separator Plate Bolts	89 Lb. In.
Solenoid Body Bolts	89 Lb. In.
Solenoid Body-to-Valve Body Bolts.....	89 Lb. In.
Starter Battery Terminal Nut	106 Lb. Ft.
Starter Solenoid Terminal Nut	44 Lb. In.
Starter Stud Bolts	19 Lb. Ft.
Torque Converter Housing Bolts	35 Lb. Ft.
Torque Converter Nuts	30 Lb. Ft.
Transaxle Case-to-Torq. Converter Housing Bolts ..	18 Lb. Ft.
Transaxle Support Insulator Bolts	41 Lb. Ft.
Transaxle Support Insulator Bracket Nuts	46 Lb. Ft.
Transmission Fluid Cooler Tube Bracket Nuts	80 Lb. In.
Transmission Fluid Drain Plug	106 Lb. In.
Transmission Fluid Filler Tube Nut.....	97 Lb. In.
Transmission Range (TR) Sensor Detent Spring Bolt	115 Lb. In.
Turbine Shaft Speed (TSS) Sensor Bolt	89 Lb. In.

Unit Endplays

Location

Selective

N/A

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Clutch Application

Gear	Direct (C 3, 5, R)	Overdrive (C 4, 5, 6)	Forward (CB 1, 2, 3, 4)	Low/Reverse (CB L, R)	Intermediate (CB 2, 6)	One-Way
1st			x	x*		x
2nd			x		x	O/R
3rd	x		x			O/R
4th		x	x			O/R
5th	x	x				O/R
6th		x			x	O/R
Reverse	x			x		

* Turns off above 6 km/h (4 mph)

CB = Clutch Brake
O/R = Overrunning

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Solenoid Application

Base Selector Lever Position	PCM Commanded Gear	Shift Solenoid					TCC (VFS) NL
		SSA (VFS) NL (CB 1,2,3,4)	SSB (VFS) NH (3,5,R)	SSC (VFS) NL (CB 2, 6)	SSD (VFS) NH (CB L,R/C 4,5,6)	SSE (On/Off) NC	
P	P	Off	On	Off	On	On	Off
R	R	Off	Off	Off	Off	On	Off
N	N	Off	On	Off	On*	On*	Off
D	1	On	On	Off	On	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
L	L	On	On	Off	Off	On	Off

*Solenoid state will change if vehicle is moving forward with the selector lever in the Neutral position

CB = Clutch Brake **NC** = Normally Closed **NH** = Normally High **NL** = Normally Low

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Solenoid Resistance

Solenoid Resistance Values: Shift Solenoid A (SSA), Shift Solenoid B (SSB), Shift Solenoid C (SSC), Shift Solenoid D (Converter Clutch (TCC) and Pressure Control Solenoid A (PCA)

Temperature		Resistance (ohms)
°C	°F	
-20 to -10	-4 to 14	3.24-5.13
-10 to 0	14-32	3.43-5.32
0-10	32-50	3.62-5.51
10-20	50-68	3.81-5.70
20-30	68-86	4.00-5.89
30-40	86-104	4.19-6.08
40-50	104-122	4.38-6.27
50-60	122-140	4.57-6.46
60-70	140-158	4.76-6.65
70-80	158-176	4.95-6.83
80-90	176-194	5.13-7.02
90-100	194-212	5.32-7.21

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Solenoid Resistance

Solenoid Resistance Values: Shift Solenoid E (SSE) (On/Off)

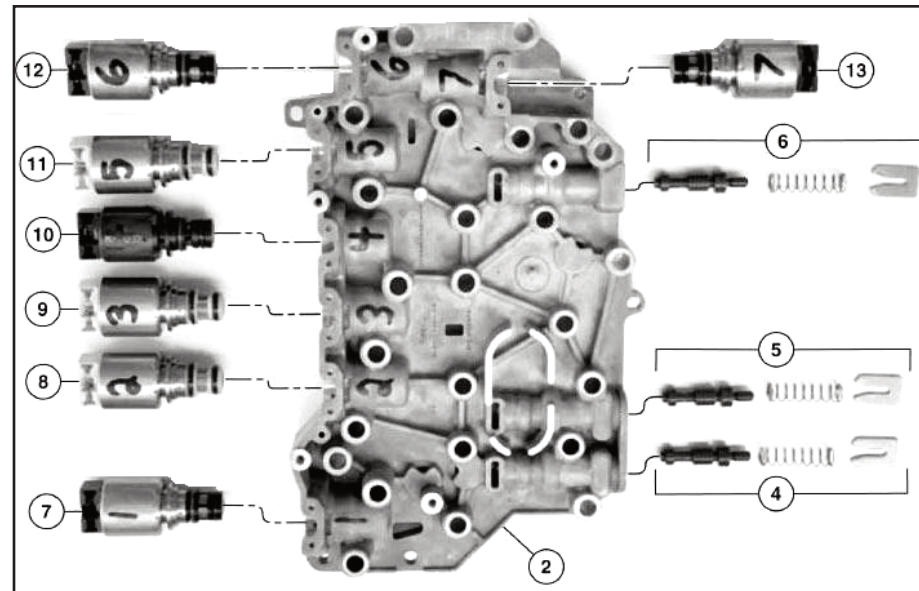
Temperature		Resistance (ohms)
°C	°F	
-20 to -10	-4 to 14	15.45-24.35
-10 to 0	14-32	16.35-25.25
0-10	32-50	17.25-26.15
10-20	50-68	18.15-27.05
20-30	68-86	19.05-27.95
30-40	86-104	19.95-28.85
40-50	104-122	20.85-29.75
50-60	122-140	21.75-30.65
60-70	140-158	22.65-31.54
70-80	158-176	23.54-32.44
80-90	176-194	24.44-33.34
90-100	194-212	25.34-34.24

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Solenoid ID



Item	Description	Item	Description
1	Main Control Valve Body-to-Solenoid Body Separator Plate	8	Shift Solenoid C (SSC)
2	Solenoid Body	9	Torque Converter Clutch (TCC)
3	Solenoid Body Lead Frame	10	ON/OFF Solenoid
4	Direct (3,5,R) clutch latch valve	11	Shift Solenoid A (SSA)
5	Intermediate (2,6) clutch latch valve	12	Shift Solenoid B (SSB)
6	Low Reverse/Overdrive (4,5,6) clutch latch valve	13	Shift Solenoid D (SSD)
7	Line Pressure Control (LPC) solenoid		

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Gear Ratio

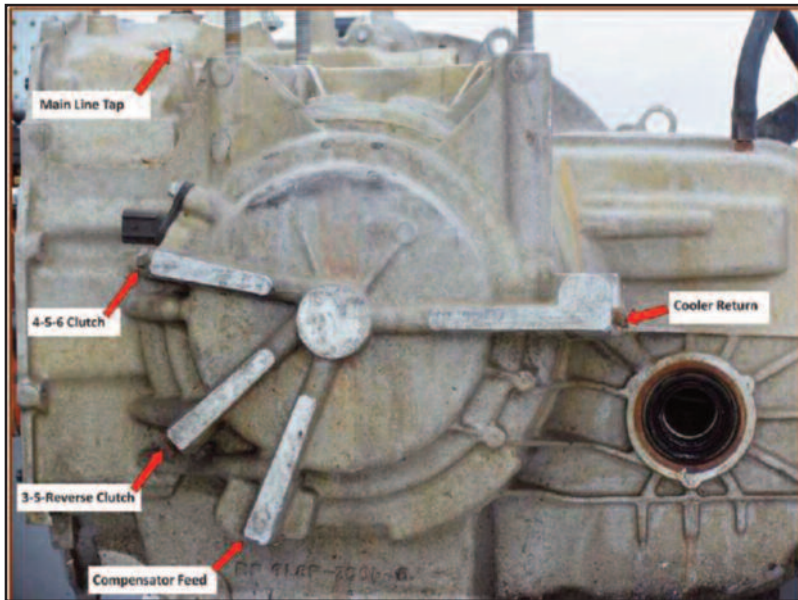
Gear	Ratio
1st/low	4.584:1
2nd	2.964:1
3rd	1.912:1
4th	1.446:1
5th	1:1
6th	0.746:1
Reverse	2.94:1

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Line Pressure



Gear	Line
Pressures at Idle*	
P	338-379 kPa (49-55 psi)
R	621-689 kPa (90-100 psi)
N	338-379 kPa (49-55 psi)
D	338-379 kPa (49-55 psi)
L	338-379 kPa (49-55 psi)
Pressure at Wide Open Throttle (WOT) Stall *	
P	338-379 kPa (49-55 psi)
R	1,868-2,068 kPa (271-300 psi)
N	338-379 kPa (49-55 psi)
D	1,868-2,068 kPa (271-300 psi)
L	1,868-2,068 kPa (271-300 psi)

*All pressures are approximate

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Sprag Rotation



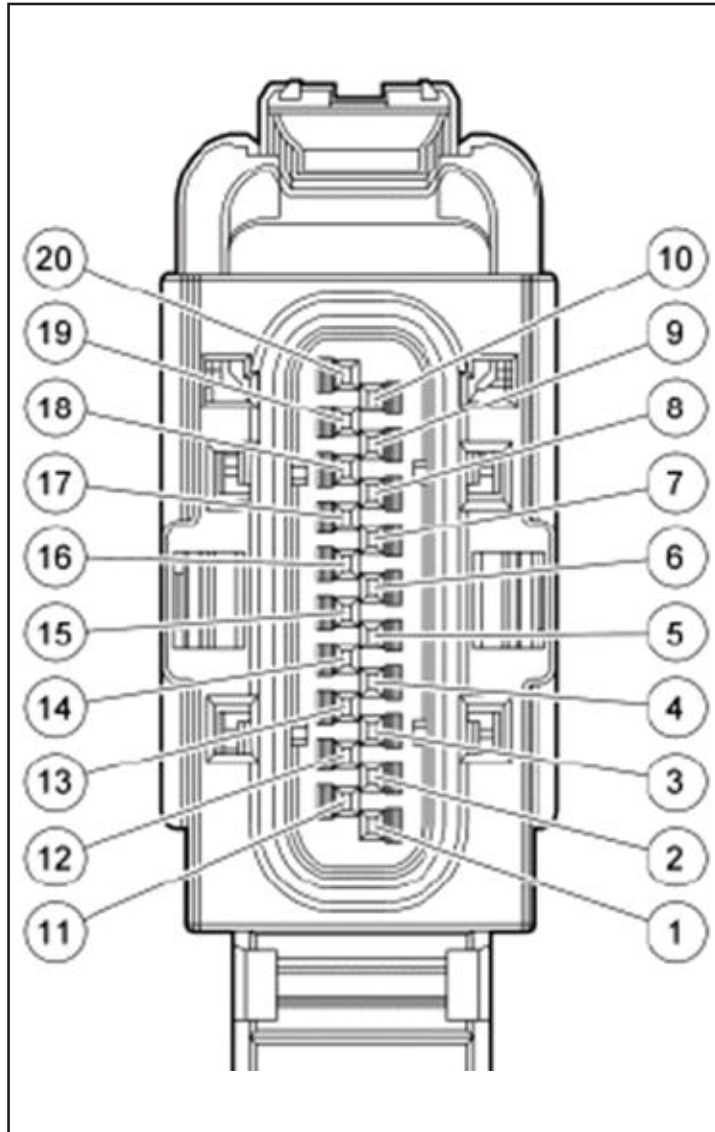
Inner Race of Sprag Must Freewheel in Direction of Arrow

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Case Connector



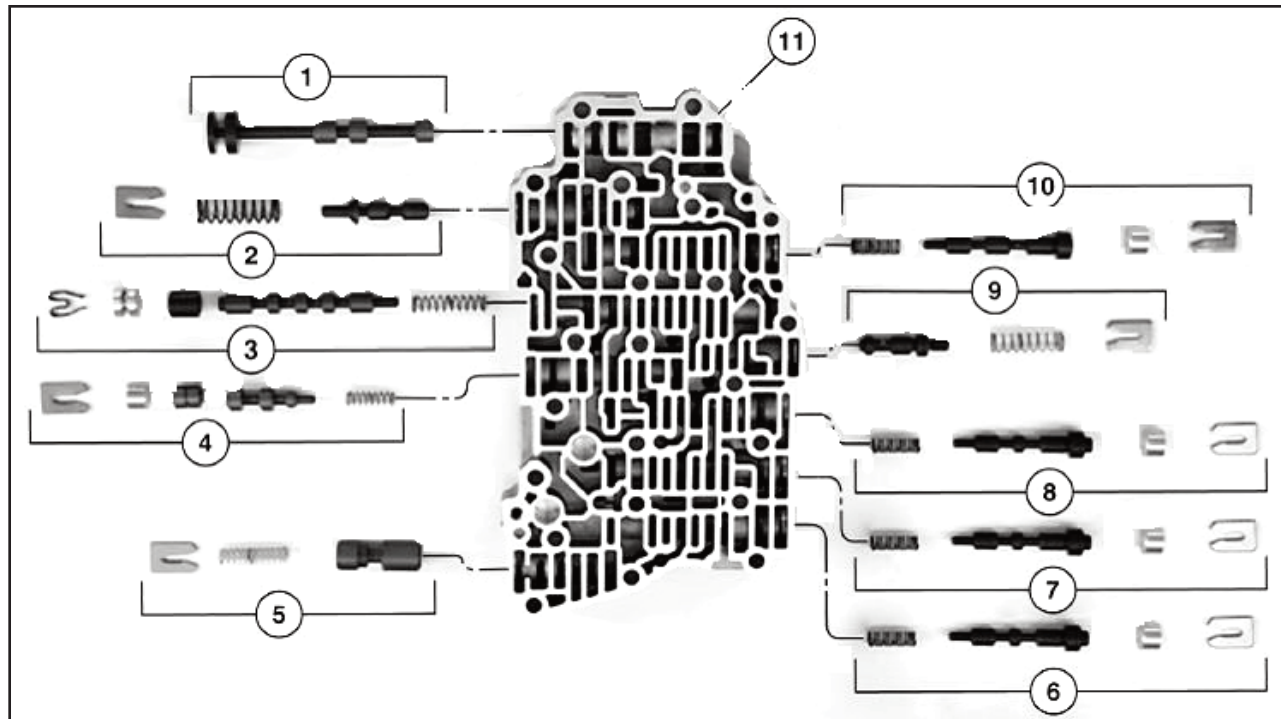
Pin Number	Circuit Function
1	Transmission Fluid Temperature (TFT) Signal Return
2	TFT Sensor
3	Line Pressure Control (LPC)
4	Shift Solenoid C (SSC)
5	Transaxle Solenoid Power Control Voltage
6	Torque Converter Clutch (TCC) Solenoid
7	ON/OFF Shift Solenoid E (SSE)
8	Shift Solenoid A (SSA)
9	Shift Solenoid B (SSB)
10	Shift Solenoid D (SSD)
11	-
12	-
13	-
14	-
15	-
16	-
17	Transmission Range (TR) Signal
18	TR and Output Shaft Speed (OSS) Sensor Power
19	OSS Sensor Signal
20	TR/OSS Sensor Ground

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Valve Body



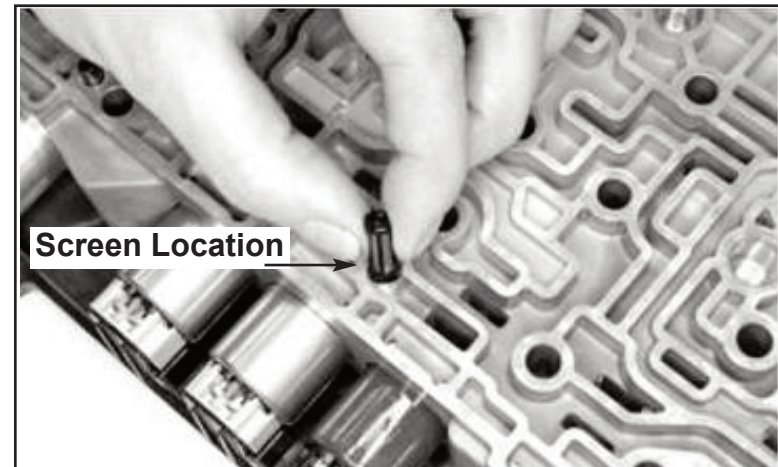
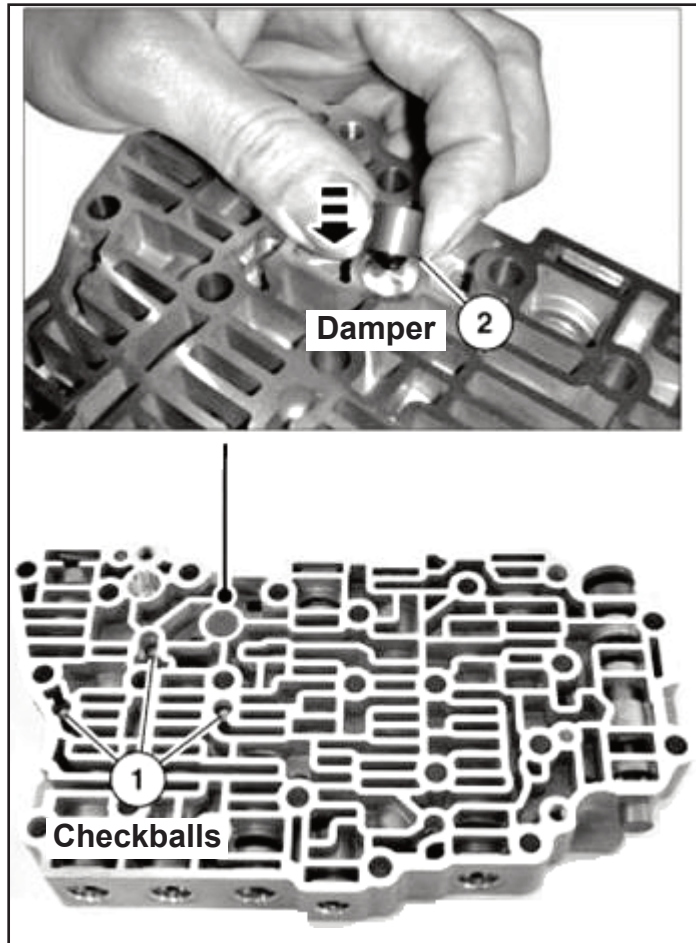
1	Manual Valve	6	3-5-R Regulator Valve
2	Solenoid Pressure Regulator	7	2-6 Regulator Valve
3	Clutch Bypass Valve	8	1-2-3-4 Regulator Valve
4	TCC Regulator/Shuttle Valve	9	1-2-3-4 Latch Valve
5	Control Pressure Regulator	10	R-4-5-6 Regulator Valve

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Checkball Locations

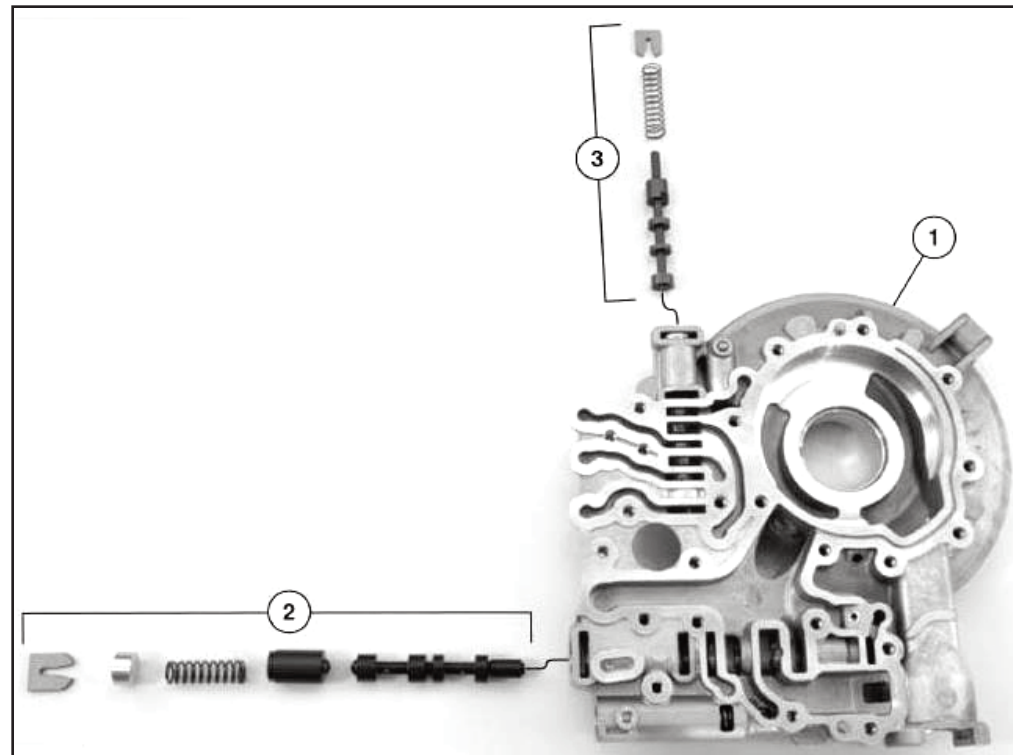


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Technical Tips for Rebuilding this unit - Pump



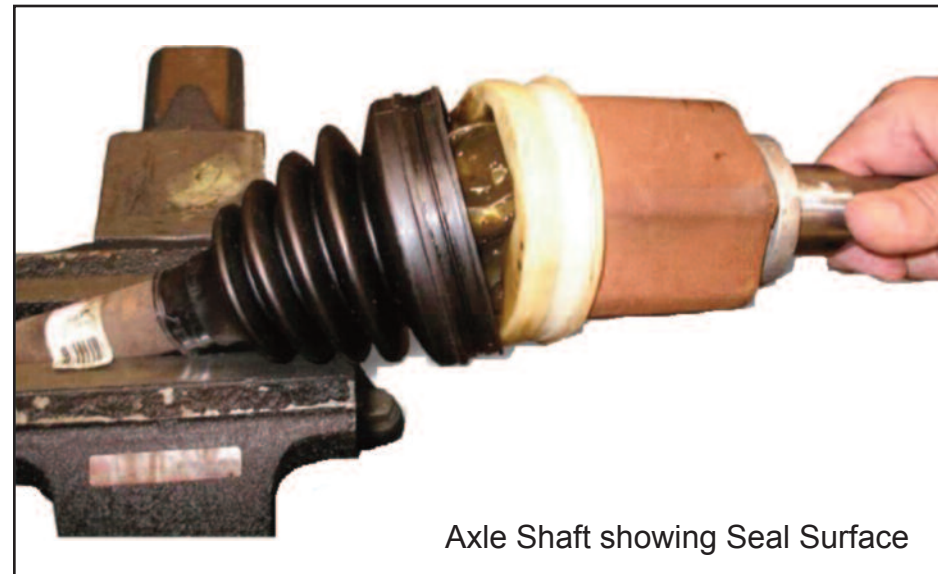
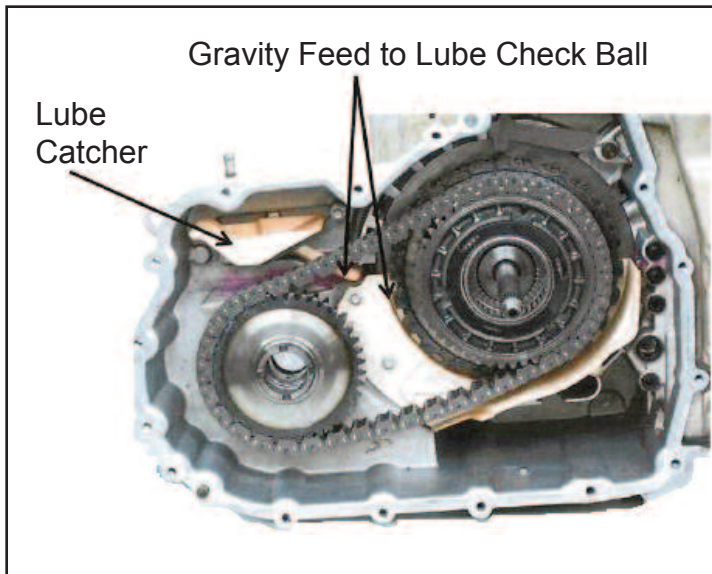
Item	Description
1	Pump Assembly
2	Main Pressure Regulator Valve Assembly
3	Torque Converter Clutch (TCC) Control Valve Assembly

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Technical Tips for Rebuilding this unit - Lube Catcher and Feed



NOTE DO NOT LEAVE LUBE CHECK BALL OUT, OR GEARTRAIN DAMAGE MAY RESULT.

FORD Escape, FORD Fusion, MERCURY Mariner and MERCURY Milan vehicles equipped with a 6F35 automatic transmission may exhibit a fluid leak from the left hand (LH) halfshaft seal. This may be due to seal and/or bushing wear caused by the halfshaft surface finish.

A service kit is now available through FORD Escape and Fusion or MERCURY for Mariner and Milan which have all the parts needed to make the repair including the bushing and seal.

Always replace the bushing when rebuilding these units. If the bushing is not contained in your rebuild kit make sure to order it separately from your supplier or your Ford Dealer.

If the surface of the half shaft is rough replace this part as well.