

Transmission Type...Subaru 4EAT

Rebuilder's Kwik
Reference Guide



Clutch Clearances

Forward Clutch.....	.045-.085"	..... Pressure Plate
Intermediate Clutch		
Direct Clutch .....	.071-.087"	..... Pressure Plate
Low/Reverse Clutch .....	.043-.067"	..... Pressure Plate
Reverse Clutch .....	.020-.031"	..... Pressure Plate
Overrun Clutch .....	.039-.055"	..... Pressure Plate
Overdrive Clutch		
Transfer Clutch.....	.008-.024"	..... Pressure Plate

Adjusted By:

Torque Specifications

Pump Halves	17-19 Ft. Lbs.
Pump To Case	See Bellhousing
Valve Body Halves	60-72 In. Lbs.
Valve Body To Case.....	60-72 In. Lbs.
Chain Cover To Case	
Pan	36 In. Lbs.
Center Support	
Extension Housing	17-19 Ft. Lbs.
Sprag Race.....	18 Ft. Lbs.
Overdrive Support	
Chain Cover	
Transfer Gears	
Governor Bolts	
Bellhousing To Main Case	28-32 Ft. Lbs.
Idler Nut	
Endcover Bolts	17-19 Ft. Lbs.
Differential Ring Gear	30-34 Ft. Lbs.
Relief Valve Housing	60-72 In. Lbs.

Band Adjustment

Intermediate Band		
2-4 Band	80 In. Lbs.	..... 3 Turns
Low/Reverse Band		
Overdrive Band		

Unit Endplays

	Location	Selective
Front Unit .022-.035"	Pump	Thrust Washer
Middle Unit .010-.022"	Ring Tower	Bearing
Pinion Pre-Load 16 In. Lbs.....	Under Bearing	Spacer
Differential (Backlash) .005-.007"	Rotate Retainer	Not Adjustable
Chain Sprocket		
Transfer Gear .010-.030"	Transfer Bearing.....	Bearing

NOTE Differential uses hypoid gear, check manual for proper setup.

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Clutch & Band/Solenoid Application Charts

Gear		Reverse Clutch	Brake Band	High Clutch	Forward Clutch	3-4 1-Way Clutch	Overrunning Clutch	Low/Reverse Brake	1-2 1-Way Clutch
Reverse		Applied						Applied	
D	1st				Applied	Applied			Applied
	2nd		Applied		Applied	Applied			
	3rd			Applied	Applied	Applied			
	4th		Applied	Applied	Applied				
3	1st				Applied	Applied			Applied
	2nd		Applied		Applied	Applied			
	3rd			Applied	Applied	Applied	Applied		
2	1st				Applied	Applied	Applied	Applied	
	2nd		Applied		Applied	Applied	Applied		
	3rd			Applied	Applied	Applied	Applied		
1st	1st				Applied	Applied	Applied	Applied	
	2nd		Applied		Applied	Applied	Applied		
	3rd			Applied	Applied	Applied	Applied		

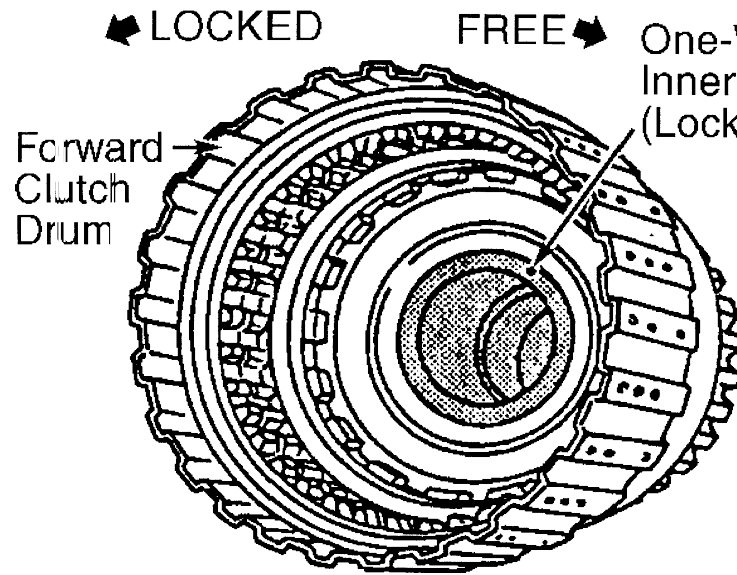
Solenoid Application Chart		
Gear	Solenoid 1	Solenoid 2
1st	On	On
2nd	Off	On
3rd	Off	Off
4th	On	Off

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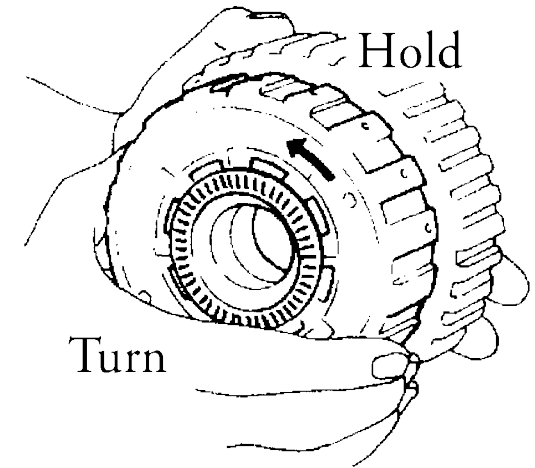
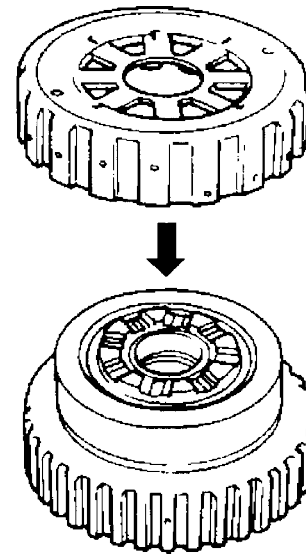
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Technical Tips For Rebuilding This Unit



Forward Clutch



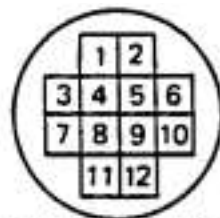
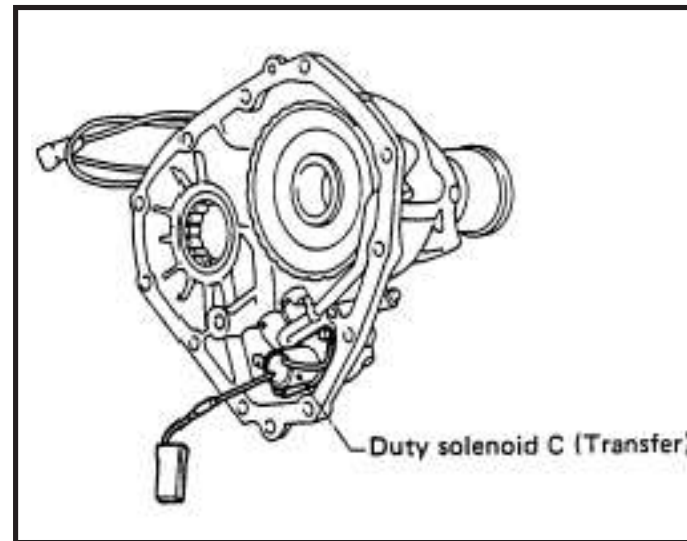
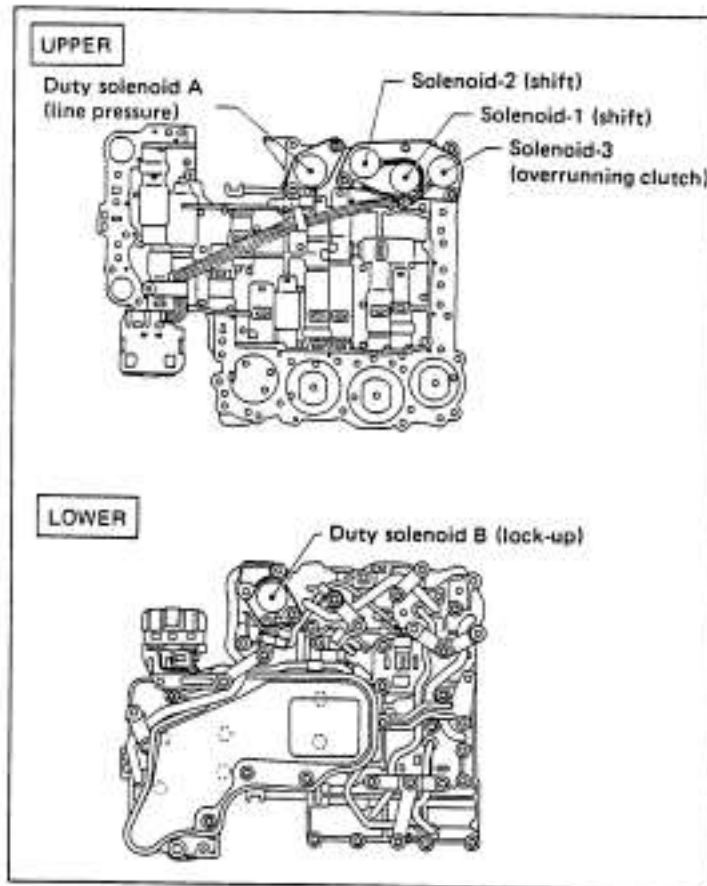
Input Sprag

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Solenoid & Harness Information



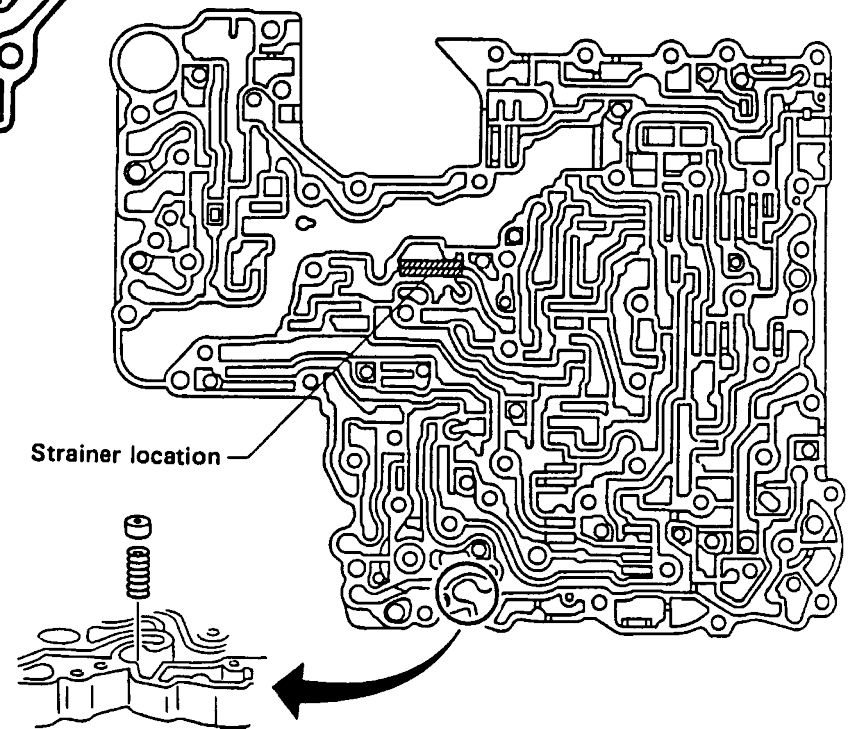
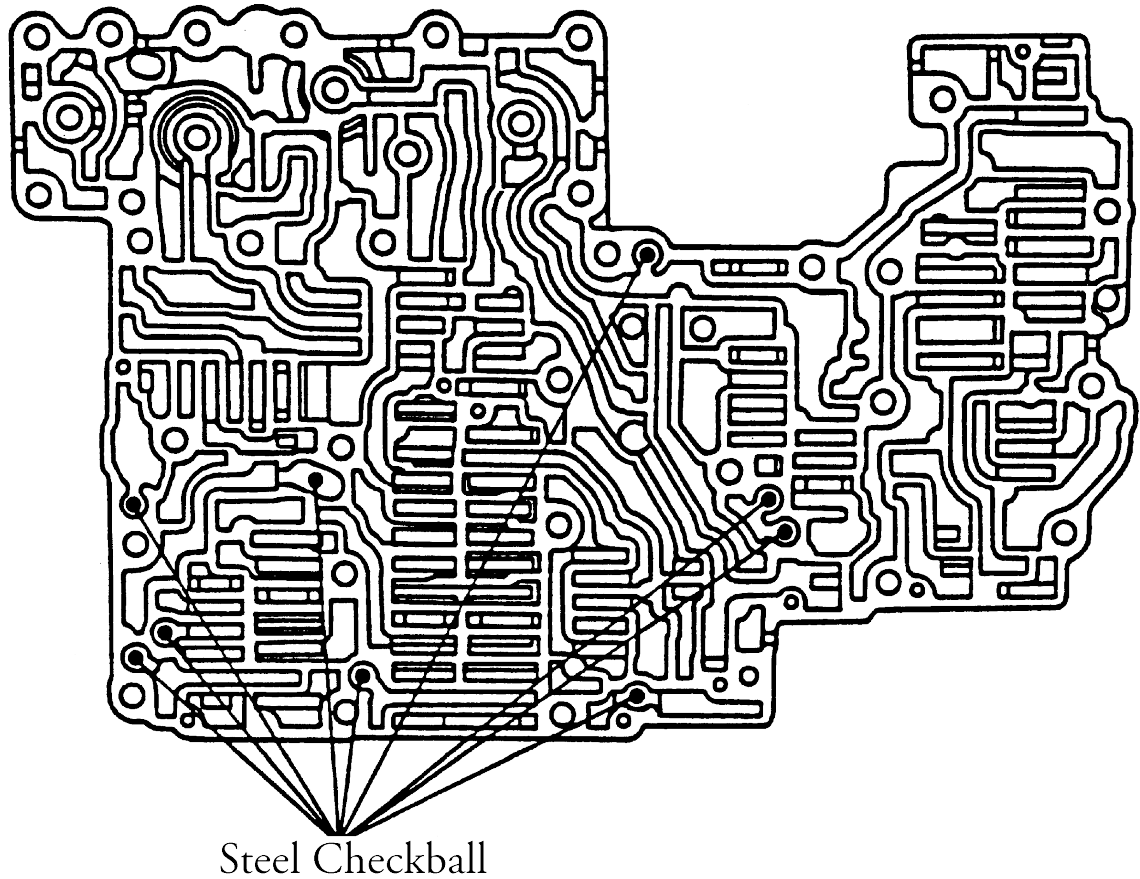
Transmission Harness

Pin #	Description	Resistance
1	#2 Shift Solenoid	25 Ohms
2	Lock-Up Solenoid	10 Ohms
3	Ground	-
4	#3 Shift Solenoid	25 Ohms
5	Temperature Sensor	2.5k Ohms (68 Degrees F)
6	Vehicle Speed Sensor (FWD)	-
7	#1 Shift Solenoid	25 Ohms
8	Ground	-
9	Temperature Sensor	2.5k Ohms (68 Degrees F)
10	Vehicle Speed Sensor (FWD)	-
11	Line Pressure Solenoid	3 Ohms
12	Duty Solenoid C (Transfer)	10 Ohms

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Checkball Locations

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3-4 Clutch031-.043" Pressure Plate
Intermediate Clutch		
Low Clutch028-.043" Pressure Plate
Low/Reverse Clutch .....	.028-.047"	..... Pressure Plate
Reverse Clutch .....	.020-.031"	..... Pressure Plate
2-4 Brake Clutch .....	.031-.047"	..... Pressure Plate
Overdrive Clutch		
Transfer Clutch.....	.008-.024"	..... Pressure Plate

Band Adjustment

N/A

Adjusted By:

Torque Specifications

Pump Halves	28-32 Ft. Lbs.
Pump Housing to Case Nuts	28-32 Ft. Lbs.
Valve Body to Case	5-7 Ft. Lbs.
Valve Body	5-7 Ft. Lbs.
Transfer Valve Body to Case	5-7 Ft. Lbs.
Pan	3-4 Ft. Lbs.
Center Support	
Extension Housing	17-19 Ft. Lbs.
Torque Converter Housing to Case	28-32 Ft. Lbs.
Drive Pinion Retainer to Case	28-32 Ft. Lbs.
Oil Seal Retainer to Case	4-6 Ft. Lbs.
One Way Clutch Inner Race	17-19 Ft. Lbs.
Transfer Reduction Driven Gear	68-74 Ft. Lbs.
Differential Ring Gear	42-48 Ft. Lbs.
Differential Drive Pinion Lock Nut	82-88 Ft. Lbs.
Chain Cover	
Governor Bolts	
Idler Nut	

Unit Endplays

Location

Selective

Total Unit .009-.021"	Between 3-4 Clutch Drum & Pump	Thrustbearing
Transfer Clutch .005-.007	Between Reduction Drive Gear &	Thrustbearing
	Transfer Clutch Drum	

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Clutch & Band/Solenoid Application Charts

Gear		Reverse Clutch	2-4 Clutch	3-4 Clutch	Low Clutch	Low/Reverse Clutch	1-Way Clutch
Reverse		Applied				Applied	
D	1st				Applied		Applied
	2nd		Applied		Applied		
	3rd			Applied	Applied		
	4th		Applied	Applied			
3	1st				Applied		Applied
	2nd		Applied		Applied		
	3rd			Applied	Applied		
	4th		Applied	Applied			
2	1st						
	2nd		Applied		Applied		
	3rd			Applied	Applied		
	4th		Applied	Applied			
1st	1st				Applied	Applied	Applied
	2nd		Applied		Applied		
	3rd			Applied	Applied		
	4th		Applied	Applied			

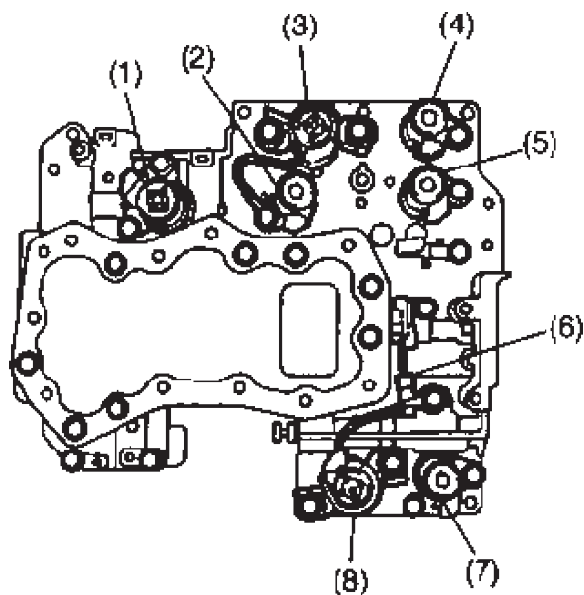
Solenoid Application Chart		
Gear	Solenoid 1	Solenoid 2
1st	On	On
2nd	Off	On
3rd	Off	Off
4th	On	Off

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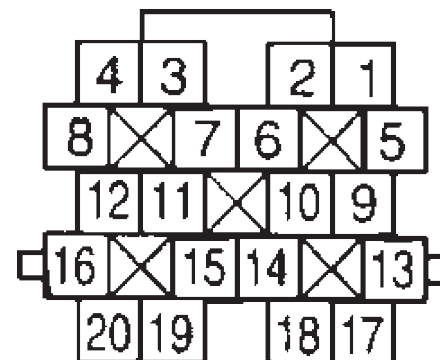
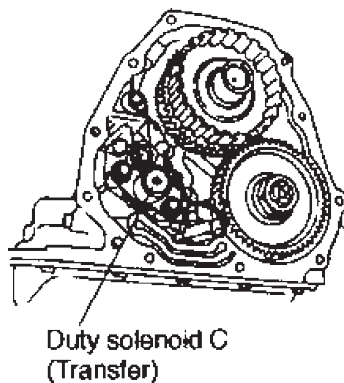
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Solenoid & Harness Information



- (1) Duty Solenoid B (Lock-up)
- (2) Low Clutch Timing Solenoid
- (3) Duty Solenoid A (Line Pressure)
- (4) Solenoid 2 (Shift)
- (5) Solenoid 1 (Shift)
- (6) ATF Temperature Sensor
- (7) 2-4 Clutch Timing Solenoid
- (8) Duty Solenoid D (2-4 Clutch)



Description	Pin #	Resistance
Vehicle Speed Sensor 1	17-18	450-650 Ohms
Vehicle Speed Sensor 2	19-20	450-650 Ohms
ATF Temperature Sensor	11-12	2,100-2,900 Ohms/ 20°C (68° F) 275-375 Ohms/ 80° C (176° F)
Turbine Speed Sensor	14-15	450-650 Ohms
Shift Solenoid 1	1-16	10-16 Ohms
Shift Solenoid 2	2-16	10-16 Ohms
Line Pressure Duty Solenoid	5-16	2.0-4.5 Ohms
Lock-up Duty Solenoid	13-16	10-17 Ohms
2-4 Clutch Duty Solenoid	9-16	2.0-4.5 Ohms
Low Clutch Timing Solenoid	3-16	10-16 Ohms
2-4 Clutch Timing Solenoid	4-16	10-16 Ohms
Transfer Duty Solenoid	6-16	10-17 Ohms

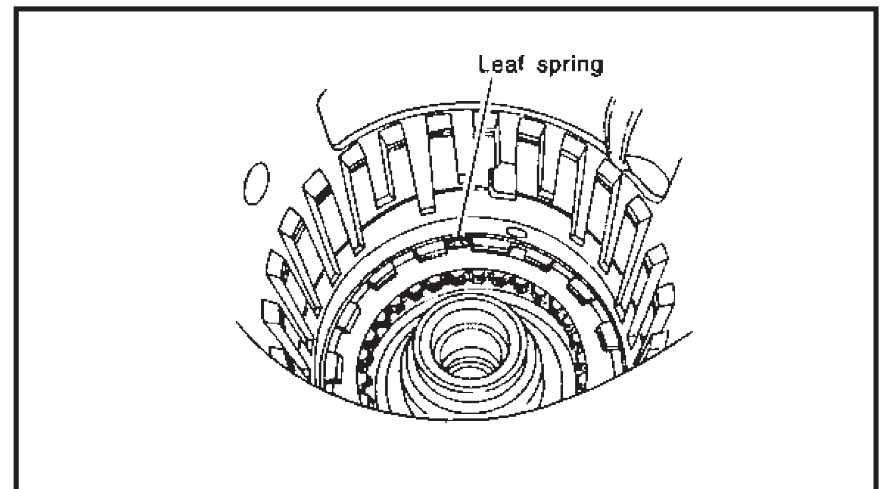
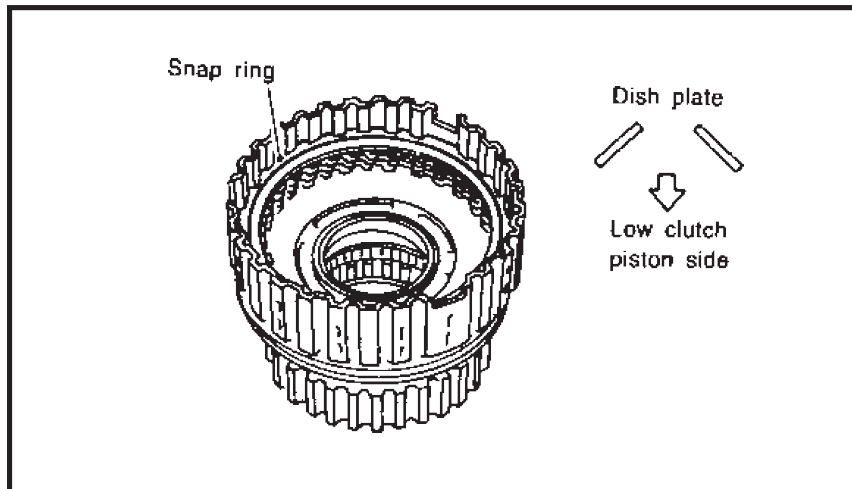
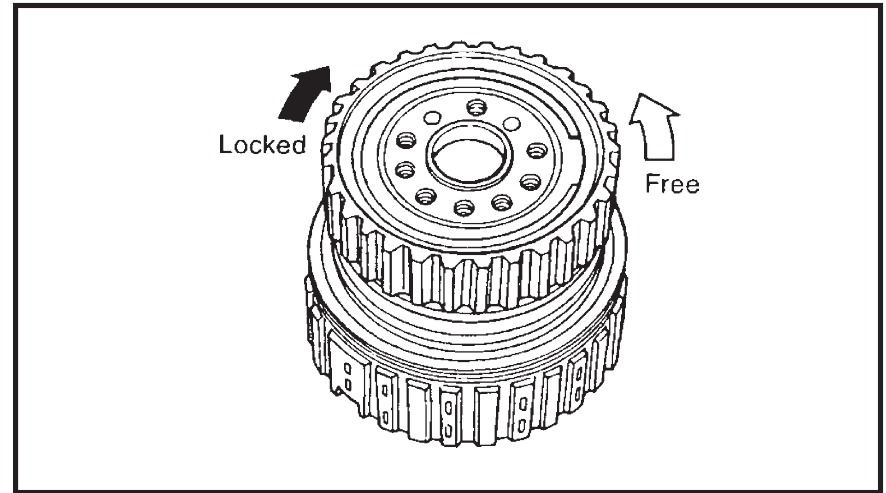
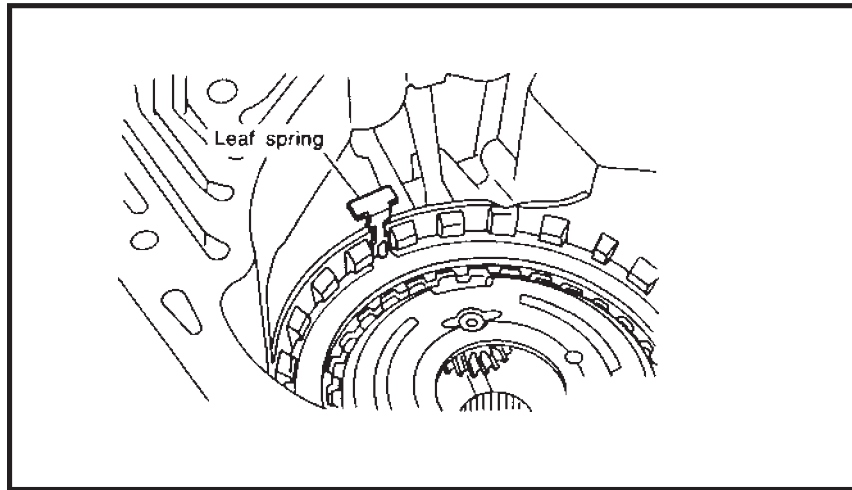
Terminal 16 = Ground

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Technical Tips For Rebuilding This Unit



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Checkball & Filter Locations

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