1. Automatic Transmission and Differential

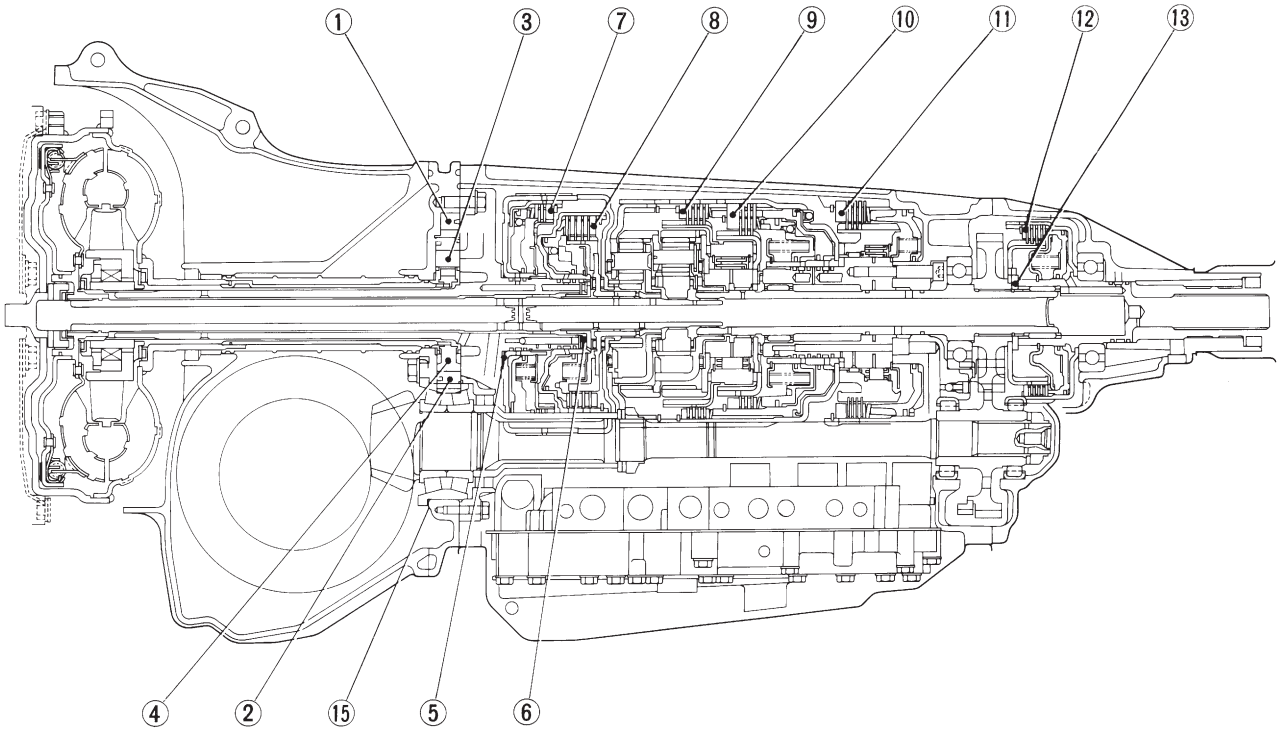
A: SPECIFICATIONS

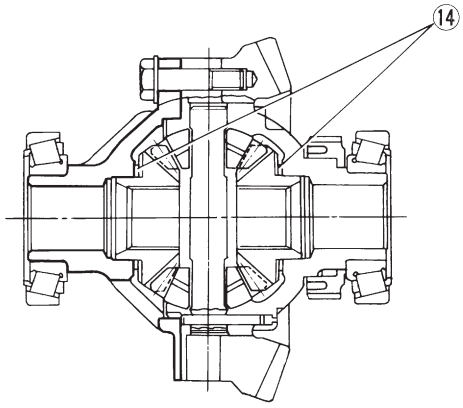
Torque converter clutch	Type		Symmetric, 3 element, single stage, 2 phase torque converter clutch coupling	
	Stall torque ratio	2200 cc	2.1 — 2.3	
		1800 cc	2.2 — 2.4	
	Nominal diameter		236 mm (9.29 in)	
	Stall speed (at sea level)	2200 cc	2,300 — 2,700 rpm	
		1800 cc	2,200 — 2,600 rpm	
	One-way clutch		Sprague type one-way clutch	
Automatic transmission	Transmission	Type	4-forward, 1-reverse, double-row planetary gears	
		Control element	Multi-plate clutch	4 sets
			Multi-plate brake	1 set
			Band brake	1 set
			One-way clutch (sprague type)	2 sets
		Gear ratio	1st	2.785
			2nd	1.545
			3rd	1.000
			4th	0.694
			Reverse	2.272
		Tooth number of planetary gear	Front sun gear	33
			Front pinion	21
			Front internal gear	75
			Rear sun gear	42
			Rear pinion	17
			Rear internal gear	75
		Selector position	P (Park)	Transmission in neutral, output member immovable, and engine start possible
			R (Reverse)	Transmission in reverse for backing
			N (Neutral)	Transmission in neutral, and engine start possible
			D (Drive)	Automatic gear change 1st ⇆ 2nd ⇆ 3rd ⇆ 4th
			3 (3rd)	Automatic gear change 1st ⇆ 2nd ⇆ 3rd ← 4th
			2 (2nd)	2nd gear locked (Deceleration possible 4th → 3rd → 2nd)
			1 (1st)	1st gear locked (Deceleration possible 4th → 3rd → 2nd → 1st)
		Control method	Hydraulic remote control	

Automatic transmission	Oil pump	Type		Variable-capacity type vane pump
		Driving method		Driven by engine
		Number of vanes		9 pieces
	Hydraulic control	Type		Electronic/hydraulic control [Four forward speed changes by electrical signals of car speed and accelerator (throttle) opening]
		Fluid		Dexron II or Dexron III type Automatic transmission fluid
		Fluid capacity		7.9 ℓ (8.4 US qt, 7.0 Imp qt)
	Lubrication	Lubrication system		Forced feed lubrication with oil pump
		Oil		Automatic transmission fluid (above mentioned.)
	Cooling	Cooling system		Liquid-cooled cooler incorporated in radiator
	Harness	Inhibitor switch		12 poles
		Transmission harness		FWD ... 11 poles AWD ... 13 poles
	Transfer	Transfer clutch		Hydraulic multi-plate clutch
		Control method		Electronic, hydraulic type
		Lubricant		The same Automatic Transmission Fluid used in automatic transmission.
		1st reduction gear ratio		1.000 (53/53)
Final reduction	Final gear ratio	Front drive	FWD	3.900 (39/10)
			AWD	4.111 (37/9)
	Speedometer gear ratio		2200 cc	0.83 (19/23)
			1800 cc	0.84 (21/25)
	Lubrication oil			API, GL-5
	Oil capacity	Front drive		1.2 ℓ (1.3 US qt, 1.1 Imp qt)
	ATF cooling system	Radiation capacity		1.651 kW (1,420 kcal/h, 5,635 BTU/h)

B: ADJUSTING PARTS

AWD





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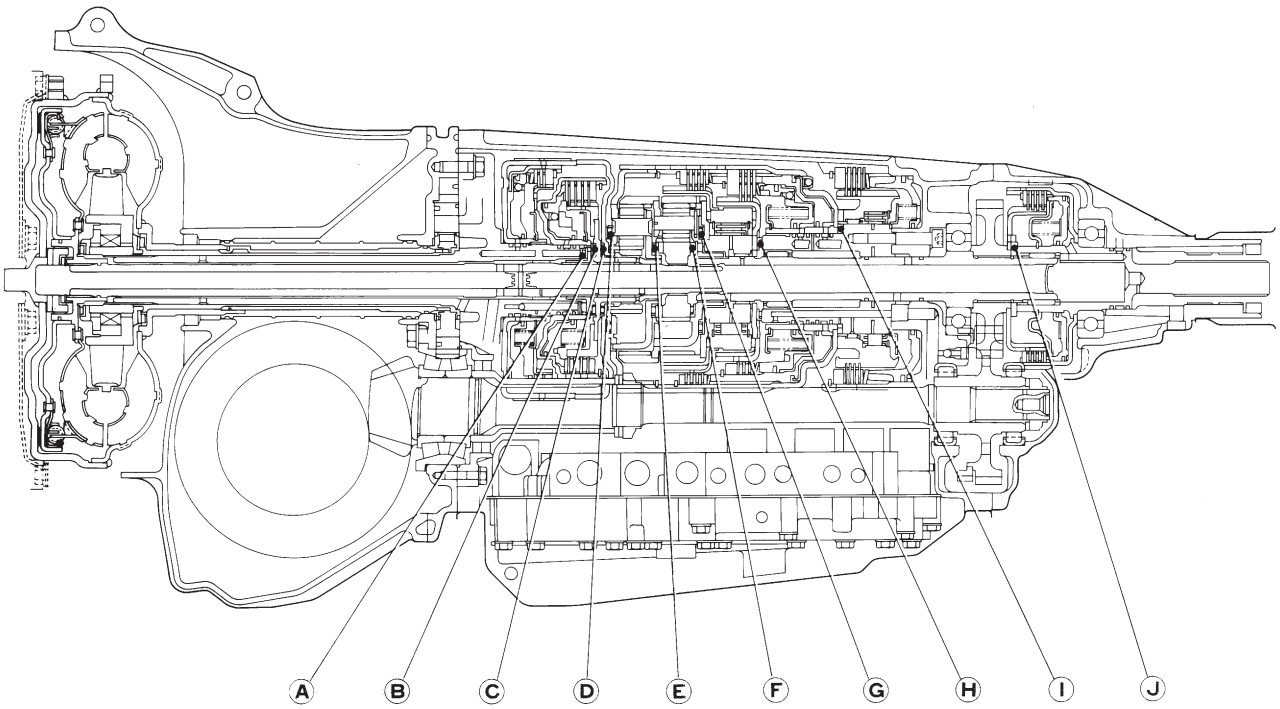
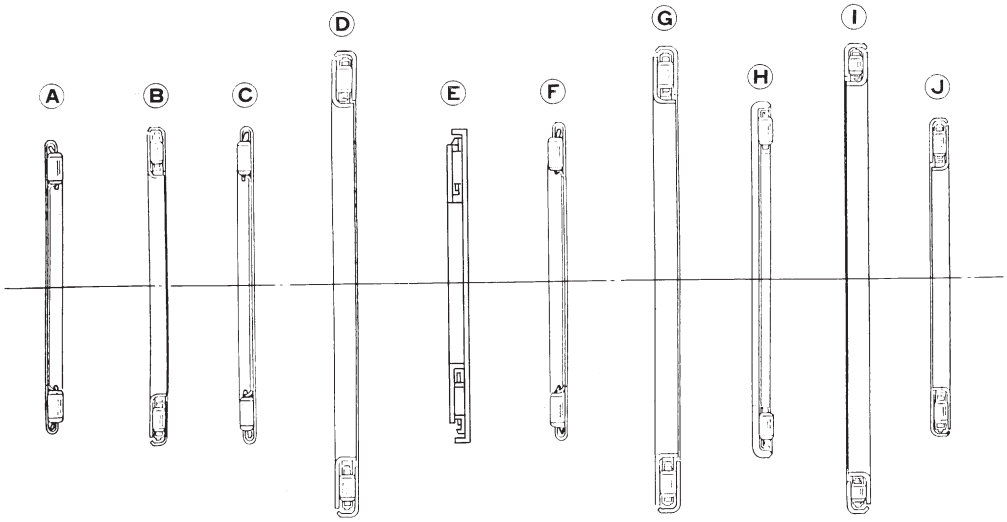
No.	Part Name	Part Number	Dimension mm (in)	Application
1	CONTROL PISTON	31235AA040 — 070	13.5 $^{-0.030}_{-0.037}$ (0.5315 $^{-0.0012}_{-0.0015}$), 13.5 $^{-0.023}_{-0.030}$ (0.5315 $^{-0.0009}_{-0.0012}$), 13.5 $^{-0.016}_{-0.023}$ (0.5315 $^{-0.0006}_{-0.0009}$), 13.5 $^{-0.009}_{-0.016}$ (0.5315 $^{-0.0004}_{-0.0006}$)	Adjusting side clearance of oil pump
2	CAM RING	31241AA000 — 030	17 $^{-0.010}_{-0.017}$ (0.6693 $^{-0.0004}_{-0.0007}$), 17 $^{-0.003}_{-0.010}$ (0.6693 $^{-0.0001}_{-0.0004}$), 17 $^{+0.004}_{-0.003}$ (0.6693 $^{+0.0002}_{-0.0001}$), 17 $^{+0.011}_{+0.004}$ (0.6693 $^{+0.0004}_{+0.0002}$)	Adjusting side clearance of oil pump
3	VANE (Oil pump)	31243AA000 — 030	17 $^{-0.030}_{-0.037}$ (0.6693 $^{-0.0012}_{-0.0015}$), 17 $^{-0.023}_{-0.030}$ (0.6693 $^{-0.0009}_{-0.0012}$), 17 $^{-0.016}_{-0.023}$ (0.6693 $^{-0.0006}_{-0.0009}$), 17 $^{+0.009}_{+0.016}$ (0.6693 $^{+0.0004}_{+0.0006}$)	Adjusting side clearance of oil pump
4	ROTOR (Oil pump)	31240AA000 — 030	17 $^{-0.030}_{-0.037}$ (0.6693 $^{-0.0012}_{-0.0015}$), 17 $^{-0.023}_{-0.030}$ (0.6693 $^{-0.0009}_{-0.0012}$), 17 $^{-0.016}_{-0.023}$ (0.6693 $^{-0.0006}_{-0.0009}$), 17 $^{+0.009}_{+0.016}$ (0.6693 $^{+0.0004}_{+0.0006}$)	Adjusting side clearance of oil pump
5	THRUST WASHER (Reverse clutch)	31299AA000 — 060	0.7, 0.9, 1.1, 1.3, 1.5, 1.7, 1.9 (0.028, 0.035, 0.043, 0.051, 0.059, 0.067, 0.075)	Adjusting end play of reverse clutch drum
6	BEARING RACE	803031021 — 27	0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0 (0.031, 0.039, 0.047, 0.055, 0.063, 0.071, 0.079)	Adjusting total end play
7	RETAINING PLATE	31567AA350 — 390	4.6, 4.8, 5.0, 5.2, 5.4 (0.181, 0.189, 0.197, 0.205, 0.213)	Adjusting clearance of reverse clutch
8	RETAINING PLATE	31567AA190 — 260	3.6, 3.8, 4.0, 4.2, 4.4, 4.6, 4.8, 5.0 (0.142, 0.150, 0.157, 0.165, 0.173, 0.181, 0.189, 0.197)	Adjusting clearance of high clutch
9	RETAINING PLATE	31567AA010, 060 — 100	8.0, 8.2, 8.4, 8.6, 8.8, 9.0 (0.315, 0.323, 0.331, 0.339, 0.346, 0.354)	Adjusting clearance of forward clutch
10	RETAINING PLATE	31567AA120 — 180	8.0, 8.2, 8.4, 8.6, 8.8, 9.0, 9.2 (0.315, 0.323, 0.331, 0.339, 0.346, 0.354, 0.362)	Adjusting clearance of overrunning clutch
11	RETAINING PLATE No. 2	31667AA180 — 250	6.5, 6.8, 7.1, 7.4, 7.7, 8.0, 8.2, 8.4 (0.256, 0.268, 0.280, 0.291, 0.303, 0.315, 0.323, 0.331)	Adjusting clearance of low and reverse brake
12	PRESSURE PLATE (Front)	31593AA150 — 180	3.3, 3.7, 4.1, 4.5 (0.130, 0.146, 0.161, 0.177)	Adjusting clearance of transfer clutch
13	THRUST BEARING (35 x 53 x T)	806536020, 806535030 — 070, 090	3.8, 4.0, 4.2, 4.4, 4.6, 4.8, 5.0 (0.150, 0.157, 0.165, 0.173, 0.181, 0.189, 0.197)	Adjusting end play of transfer clutch
14	WASHER (38.1 x 50 x T)	803038021 — 023	0.95, 1.00, 1.05 (0.0374, 0.0394, 0.0413)	Adjusting backlash of differential bevel gear
15	DRIVE PINION SHIM	31451AA050 — 100	0.15, 0.175, 0.2, 0.225, 0.250, 0.275 (0.0059, 0.0069, 0.008, 0.0089, 0.0098, 0.0108)	Adjusting drive pinion height

C: LOCATION AND INSTALLING DIRECTION OF THRUST NEEDLE BEARING





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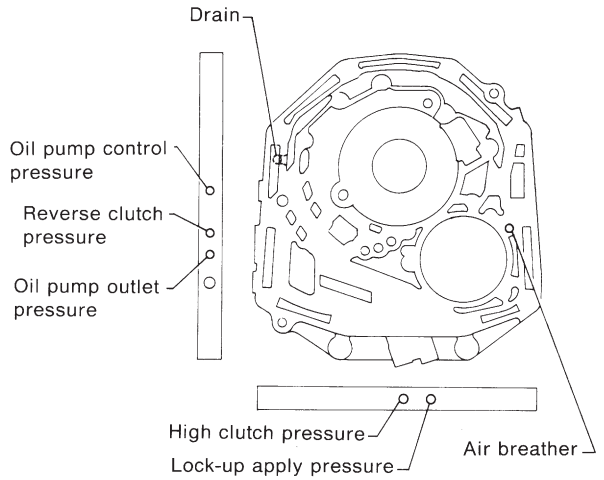
Unit: mm (in)

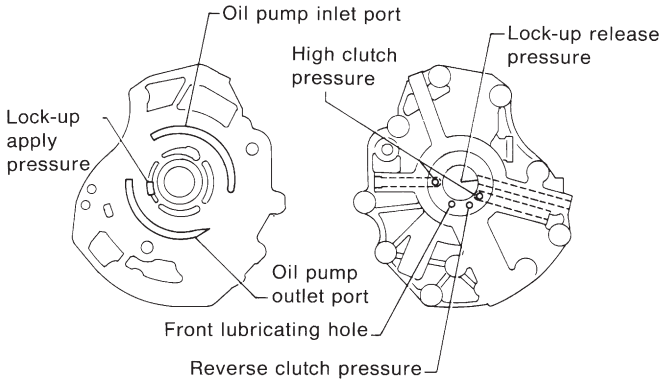
No.	Part Name	Part Number	Inside diameter	Outside diameter	Dimension	Application
A	Thrust needle bearing	806530020	30 (1.18)	47 (1.85)	3.3 (0.130)	A place of high clutch drum
B	Thrust needle bearing	806536020	36 (1.42)	53 (2.09)	3.8 (0.150)	A place of high clutch hub
C	Thrust needle bearing	806535080	35 (1.38)	53 (2.09)	2.8 (0.110)	A place of front sun gear
D	Thrust needle bearing	806558020	58 (2.28)	78 (3.07)	4.0 (0.157)	A place of front planetary carrier
E	Thrust needle bearing	806535120	35 (1.38)	53 (2.09)	4.8 (0.189)	A place of rear sun gear
F	Thrust needle bearing	806534010	34 (1.34)	53 (2.09)	3.37 (0.1327)	A place of rear internal gear
G	Thrust needle bearing	806558020	58 (2.28)	78 (3.07)	4.0 (0.157)	A place of overrunning clutch hub
H	Thrust needle bearing	806542010	42 (1.65)	59 (2.32)	3.6 (0.142)	A place of low & reverse brake
I	Thrust needle bearing	806564010	64 (2.52)	78 (3.07)	4.0 (0.157)	A place of low & reverse brake
J	Thrust needle bearing	806536020 806535030 ~ 806535070 806535090	35 (1.38)	53 (2.09)	3.8, 4.0, 4.2, 4.4, 4.6, 4.8, 5.0 (0.150, 0.157, 0.165, 0.173, 0.181, 0.189, 0.197)	Adjusting end play of transfer clutch

D: FLUID PASSAGES

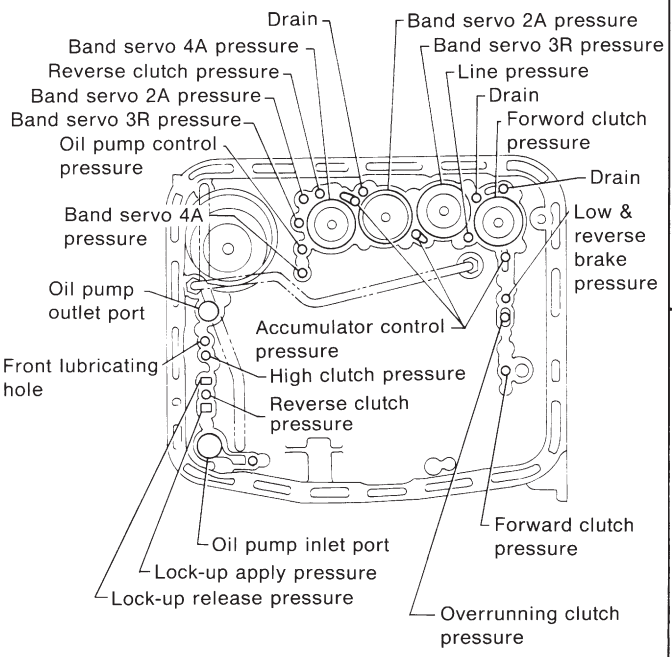
Oil pump housing



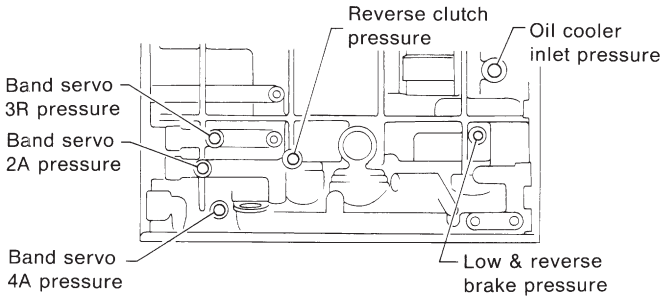
Oil pump cover



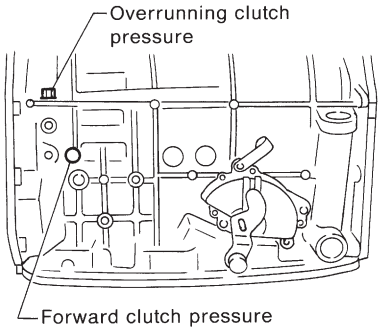
Transmission case



Transmission case LH side



Transmission case RH side



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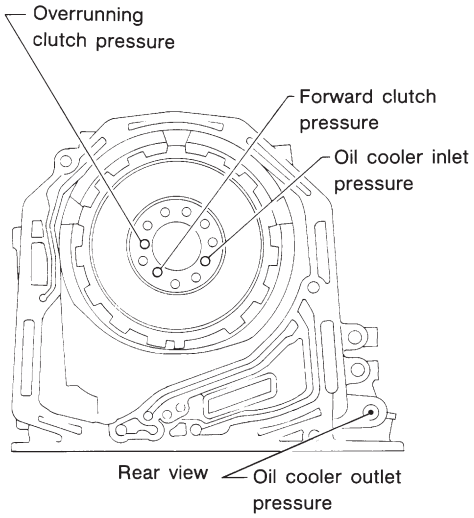
Transmission case



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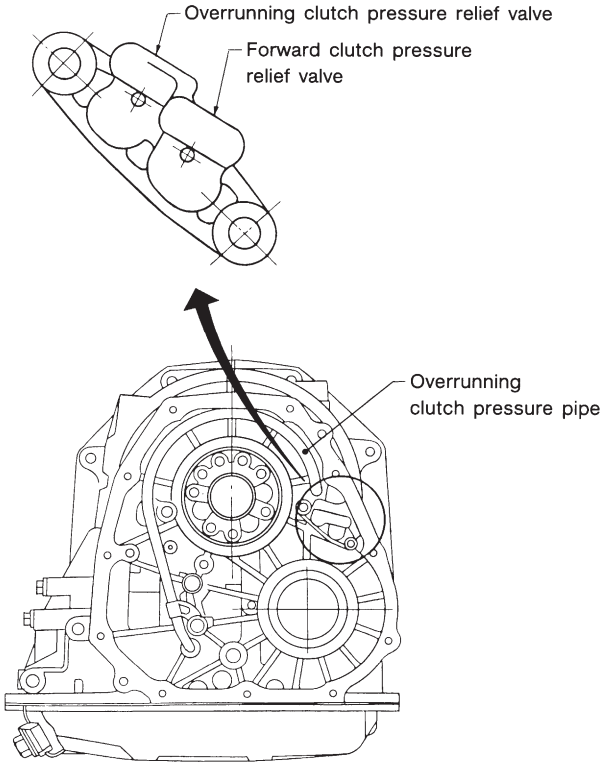
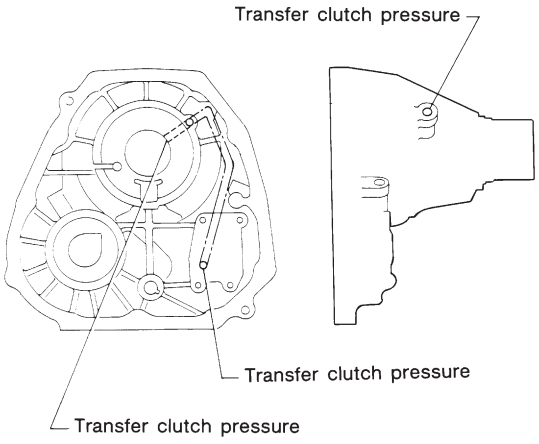
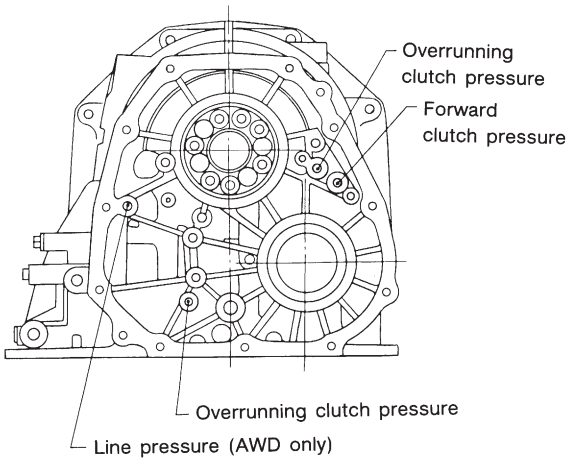


Extension case



Transmission case



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