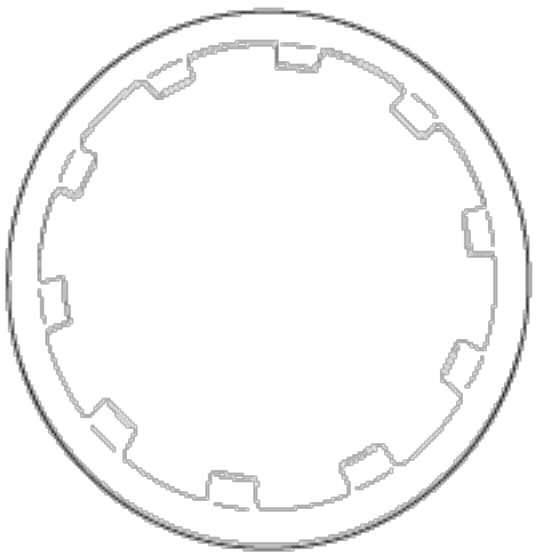
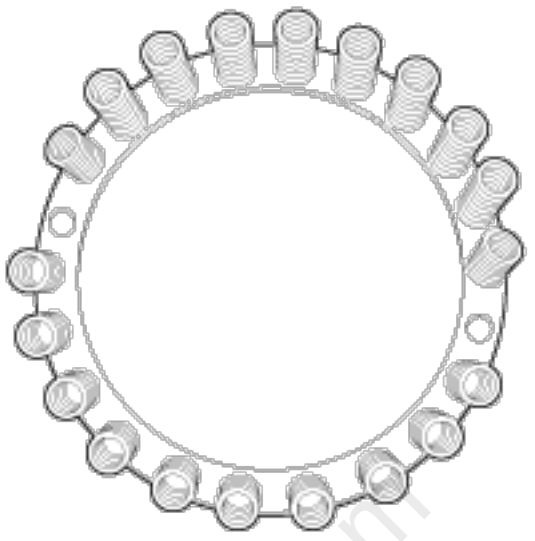
DESCRIPTION

Brakes

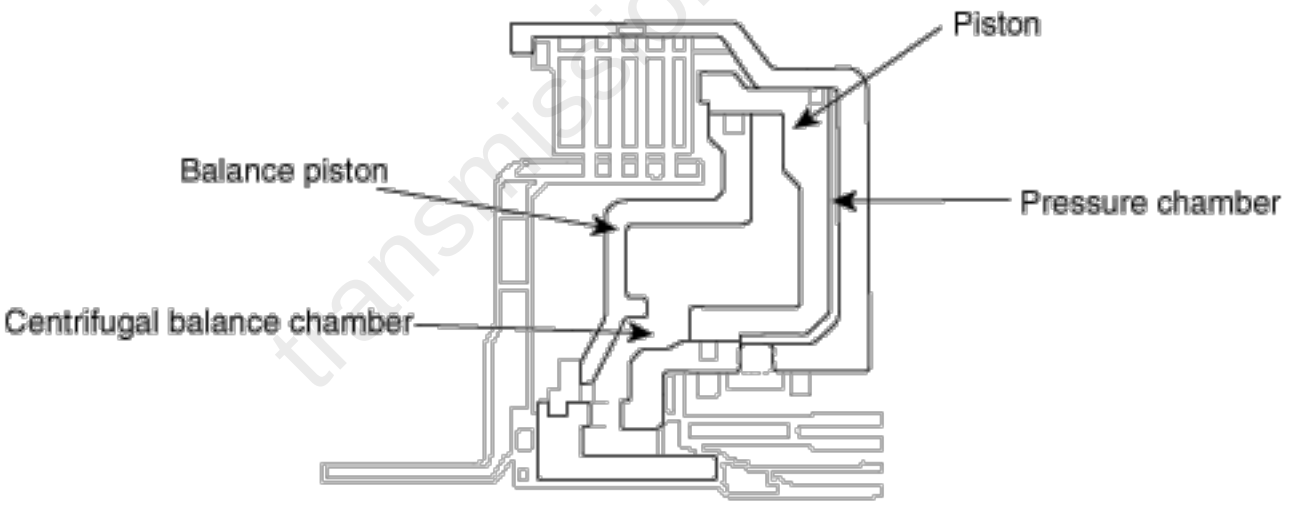
The automatic transaxle (A4CF0) uses the low and reverse brake and the second brake. The low and reverse brake is fixed by the low and reverse annulus gear and overdrive planetary carrier.
The overdrive sun gear is held on the transaxle case by the second brake.





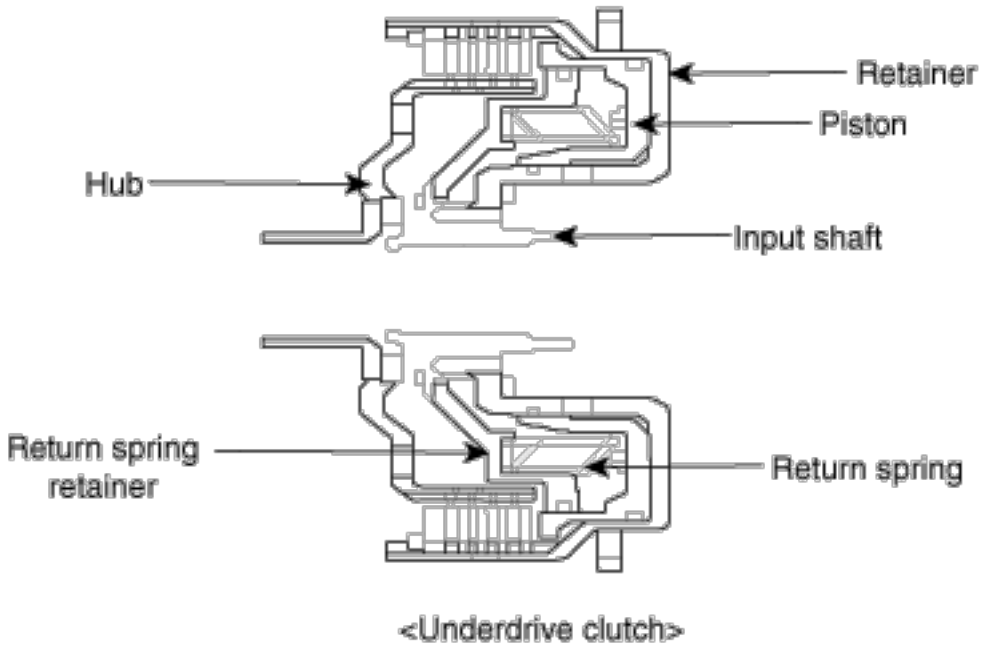
Clutch

The multiple clutches and the one way clutch are used as the transaxle device.
The retainer of each clutch is composed of the precision sheet metal parts to realize the productivity and the light weight.
The hydraulic centrifugal oil pressure balance device places inside the clutch assembly.
Generally the oil remained in the piston oil pressure chamber pushes the piston by the centrifugal force. But to prevent the piston from being pushed, the oil filled in between the piston and the return spring retainer occurs the centrifugal force and both of the power is offset so that the piston don't move. In result, it improves the durability and the shift control ability.



<Centrifugal balance device>

1. Underdrive Clutch
   The driving force of input shaft is delivered to the underdrive sun gear.
   The operating oil pressure in the underdrive clutch components operates between the piston and the retainer and pushes the piston to the clutch discs to deliver the driving force from the retainer to the hub.

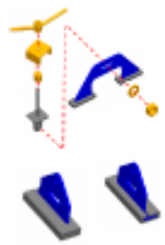
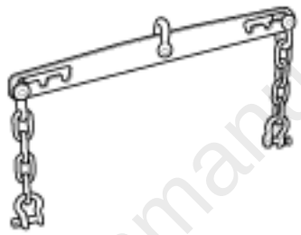
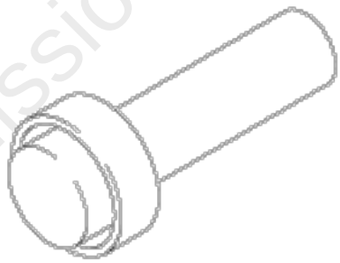
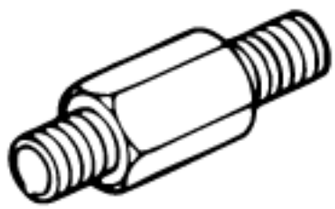


<Underdrive clutch>

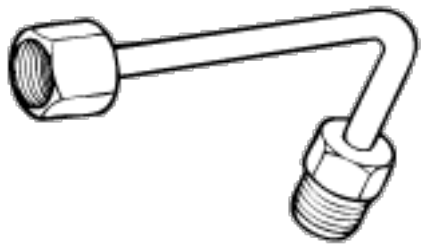
2. Reverse clutch and overdrive clutch
   The reverse clutch delivers the driving force of input shaft to the reverse sun gear.
   The overdrive clutch delivers the driving force of input shaft to the overdrive planetary carrier and the low and reverse annulus gear.
   The operating oil pressure of the reverse clutch operates between the reverse clutch retainer and reverse clutch piston and it has the whole overdrive clutch moved to deliver through the hub splines.

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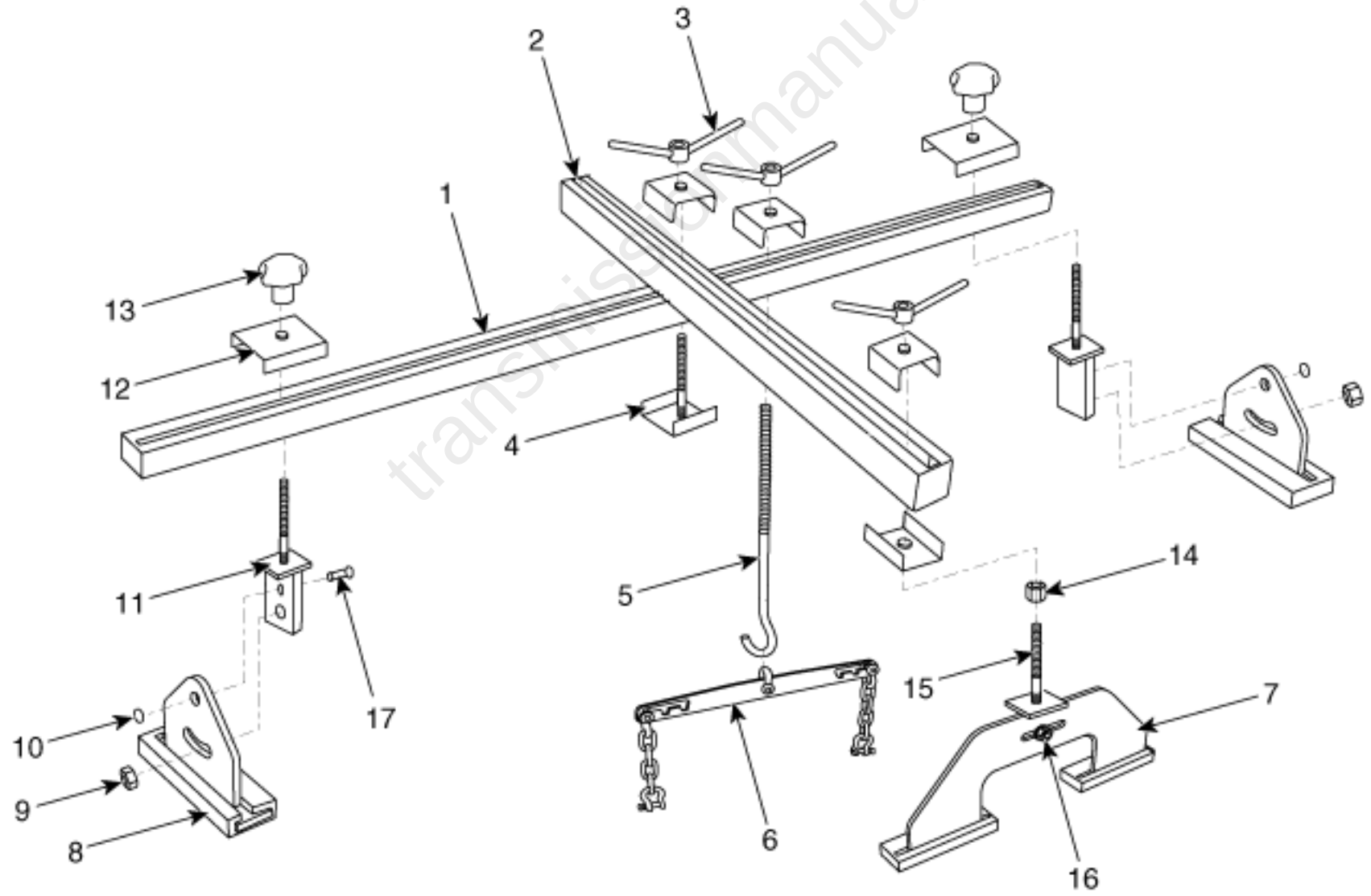
SPECIAL SERVICE TOOLS

Tool (Number and name)	Illustration	Use
09200-3N000 Engine support fixture (Beam)		Removal and installation of the transaxle. Use this adapter (SST No. : 09200-4X000) with the supporter (SST No. : 09200-2S000). ※Permit operating with 09200-38001. ※Refer to engine support fixture special tool assembly drawing below.
09200-2S000 Supporter		Removal and installation of the transaxle. Use this beam (SST No. : 09200-38001/3N000) with the adapter (SST No. :09200-4X000).
09200-4X000 Engine support fixture (Adapter)		Removal and installation of the transaxle. Use this beam (SST No. : 09200-3N000 or 38001) with the supporter (SST No. :09200-2S000). ※Refer to engine support fixture special tool assembly drawing below.
09453-2F300 Oil seal installer		Installation of transaxle case oil seal.
09452-21500 Oil pressure gage		Measure the hydraulic pressure. Use this with adapter (09452-21000, 09452-21600).
09452-21000 Oil pressure gage (Adapter)		Measure the hydraulic pressure. Use this with adapter (SST No.: 09452-21600) and gage (SST No.: 09452-21500).
09452-21600 Oil pressure gage (Adapter)		Measure the hydraulic pressure. Use this with adapter (SST No.: 09452-21000) and gage (SST No.: 09452-

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		21500).
09480-A3800 Inhibitor neutral fixed pin		Inhibitor neutral fixed
09221-03100 Engine hanger		Ring for supporting engine.

※ Engine Support Fixture Special Tool Assembly Drawing



1. 09200-3N000 (Main bar)	10. 09200-3N000 (Snap ring)
2. 09200-3N000 (Sub bar)	11. 09200-3N000 (Sub fixture)
3. 09200-3N000 (Handle)	12. 09200-3N000 (Stopper)
4. 09200-3N000 (Stopper)	13. 09200-3N000 (Nut)
5. 09200-3N000 (Bolt-1)	14. 09200-2S100 (Spacer)
6. 09200-4X000 (Adapter)	15. 09200-2S100 (Sub fixture)

7. 09200-2S100 (Supporter) 8. 09200-2S200 (Supporter) 9. 09200-3N000 (Nut)	16. 09200-2S100 (Nut) 17. 09200-3N000 (Pin)

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SPECIFICATIONS

Item		Specifications
Transmission type		A4CF0
Engine model		Gasoline 1.25
Torque converter type		3-element, 1-stage, 2-phase type
Torque converter size		Φ210 mm (8.2677 in.)
Oil pump system		Parachoid
Friction elements		Clutch: 3EA
		Brake: 2EA
		OWC: 1EA
Planetary gear		2EA
Gear ratio	1st	2.919
	2nd	1.551
	3rd	1.000
	4th	0.713
	Reverse	2.480
Final gear ratio		4.336
Fluid pressure balance piston		2EA
Accumulator		4EA
Solenoid valve		6EA (PWM:5EA, VFS:1EA)
Oil filter		1EA

- PWM : Pulse Width Modulation
- VFS : Variable Force Solenoid

Sensor

Input Speed Sensor

▷ Type: Hall effect sensor

Sensor resistance		Over 1 MΩ
Air gap(mm)in.		(1.3) 0.5118
Current consumption		22mA (Max)
Output voltage(V)	High	Over 4.8
	Low	Below 0.8V

Output Speed Sensor

▷ Type: Hall effect sensor

Sensor resistance		Over 1 MΩ
Air gap(mm)in.		(0.85) 0.0335
Current consumption		22 mA (Max)
Output voltage(V)	High	Over 4.8
	Low	Below 0.8V

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Output voltage(V)	High	Over 4.8
	Low	Below 0.8 V

Transaxle Oil Temperature Sensor

▷Type : NTC (Negative Thermal Coefficient) thermister type

Temp.[°C(°F)]	Resistance (KΩ)	Temp.[°C(°F)]	Resistance (KΩ)
-40(-40)	139.5	80(176)	1.08
-20(-4)	47.4	100(212)	0.63
0(32)	18.6	120(248)	0.38
20(68)	8.1	140(284)	0.25
40(104)	3.8	160(320)	0.16
60(140)	1.98		

Inhibitor Switch

▷ Type: Rotary

Available temperature range	-40 ~ 150°C(-40 ~ 320°F)
Output type	Single signaling

Solenoid Valve

▷ Control type : Normal open 3-way, VFS

Operating temperature	(-30~130°C) -22~226 °F
Current	1.2 A Max.
Internal resistance	3.5 ± 0.2 Ω [25°C(77 °F)]

Range	Solenoid Valve				
	PCSV-A	PCSV-B	PCSV-C	PCSV-D	ON, OFF
N, P	OFF	ON	ON	OFF	ON
1st	ON	ON	OFF	OFF	ON
2nd	ON	OFF	OFF	ON	OFF
3rd	OFF	ON	OFF	ON	OFF
4th	OFF	OFF	ON	ON	OFF
Reverse	OFF	OFF	ON	OFF	ON

Information

Item	Function
ON/OFF (ON/OFF solenoid valve)	Control the hydraulic passage for the shift control.
PCSV-A(OD & L/R control solenoid valve)	Control the overdrive clutch and low & reverse brake hydraulic pressure to the pressure control valve for shift control.
PCSV-B(24 brake control solenoid valve)	Control the 24 brake or reverse clutch hydraulic pressure to the pressure control valve for shift control.
PCSV-C(Underdrive clutch control solenoid valve)	Control the underdrive clutch hydraulic pressure to the pressure control valve for shift control.
PCSV-D(Damper clutch control solenoid valve)	Control the hydraulic pressure for the damper clutch control .

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Line pressure control solenoid valve	Line pressure control solenoid valve directly controls the hydraulic pressure inside the line pressure.

Tightening Torques

Item	N.m	Kgf.m	lb-ft
TCM installation mounting bolt/nut	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Input shaft speed sensor mounting bolt	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Output shaft speed sensor mounting bolt	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Valve body cover mounting bolt	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Oil drain plug	39.2 ~ 49.0	4.0 ~ 5.0	28.9 ~ 36.2
Control cable nut	14.7 ~ 21.6	1.5 ~ 2.2	10.8 ~ 15.9
Retainer installation nut	8.8 ~ 13.7	0.9 ~ 1.4	6.5 ~ 10.1
Shift lever assembly bolt	8.8 ~ 13.7	0.9 ~ 1.4	6.5 ~ 10.1
Torque converter mounting bolt	45.1 ~ 52.0	4.6 ~ 5.3	33.3 ~ 38.3
Starter motor mounting bolt	49.0 ~ 63.7	5.0 ~ 6.5	36.2 ~ 47.0
Roll rod support bracket bolt	107.9 ~ 127.5	11.0 ~ 13.0	79.6 ~ 94.1
	49.0 ~ 68.6	5.0 ~ 7.0	36.2 ~ 50.6
Automatic transaxle upper mounting bolt	58.8 ~ 78.5	6.0 ~ 8.0	43.4 ~ 57.9
Automatic transaxle lower mounting bolt	44.1 ~ 53.9	4.5 ~ 5.5	32.5 ~ 39.8
	42.2 ~ 53.9	4.3 ~ 5.5	31.1 ~ 39.8
Automatic transaxle support bracket bolt	58.9 ~ 78.5	6.0 ~ 8.0	43.4 ~ 57.8
Automatic transaxle bracket bolt	88.3 ~ 107.9	9.0 ~ 11.0	65.1 ~ 79.6
Inhibitor switch mounting bolt	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Manual control lever	16.7 ~ 20.6	1.7 ~ 2.1	12.3 ~ 15.2

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LUBRICANTS

Fluid

Item	Specified lubricant	Quantity
Transaxle fluid	GENUINE DIAMOND ATF-SPIIIor SK ATF- SPIII	Gasoline1.2/1.25MPI : 6.1L (1.61 U.S gal., 6.45 U.S.qt., 5.36 Imp.qt.)

Sealant

Item	Specified sealant
Rear cover Torque converter housing Oil pan	THREE-BOND TB1281B/1216C OR LOCTITE FMD-5460/5480