

1995-96 AUTOMATIC TRANSMISSION

A4AF2 & A4BF1 - Except Overhaul - Accent & Elantra

APPLICATION & LABOR TIMES

APPLICATION & LABOR TIMES

Vehicle Application	Labor Times ⁽¹⁾ R & I	Labor Times ⁽²⁾ Overhaul	Trans. Model
Hyundai			
Accent	3.8	8.9	A4AF2
Elantra (1996)	4.3	9.0	A4BF1
(1) Removal and installation of transmission from vehicle chassis.			
(2) Bench overhaul time for transmission and differential. DOES NOT include removal and installation.			

IDENTIFICATION

Transaxle identification number is stamped on transaxle housing. See **Fig. 1**. First digit, letter "G", indicates transaxle model. Second digit indicates model year, as letter "S" indicates 1995 models and letter "T" indicates 1996 models. Third digit, letter "T" indicates final gear ratio of 4.029. Fourth digit letter indicates transaxle vehicle application. Fifth digit is not used. Remaining digits are the transaxle serial number. Transaxle model and serial number may be required when ordering replacement components.

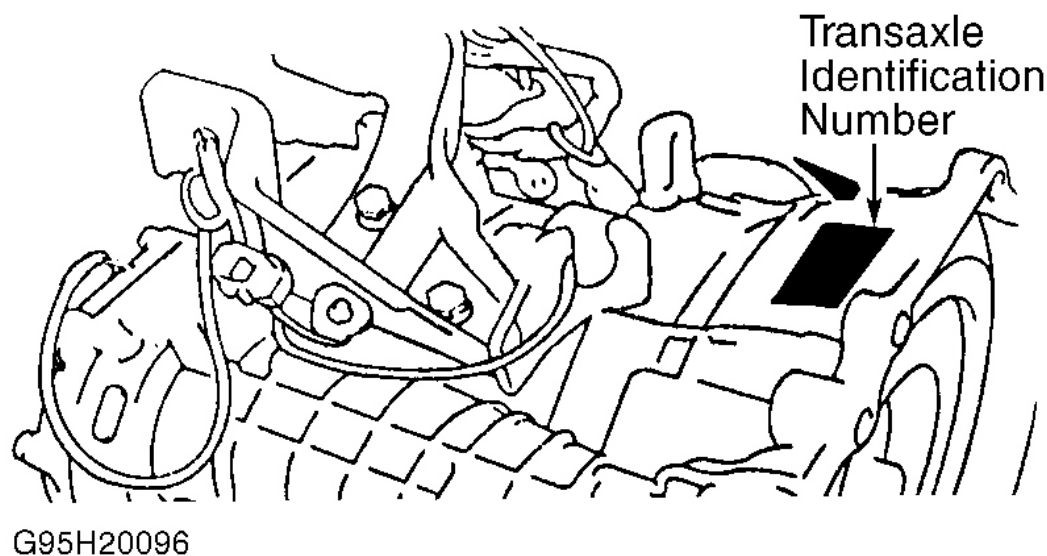


Fig. 1: Locating Transaxle Identification Number

Courtesy of HYUNDAI MOTOR CO.

DESCRIPTION

Automatic transaxle is electronically controlled and has 4 forward speeds and one reverse speed. Transaxle shifting and damper clutch lock-up (torque converter lock-up) are controlled by Transmission Control Module (TCM).

Electronic control system contains a fail-safe system in the event that an electronic component should malfunction. Fail-safe system will provide transaxle operation until malfunction is repaired. If failures exists in certain electronic components for a repeated number of times, transaxle may lock-up and remain in 2nd or 3rd gear. For more information on fail-safe system, see appropriate ELECTRONIC CONTROLS article.

OPERATION

Shift lever has 6 positions. Shift lever controls manual valve. Shift lever also controls input signal of range switch which is mounted on transaxle. Transaxle range switch delivers an input signal to TCM to indicate shift lever position. The TCM uses input signal and operates shift control solenoid valves to control transaxle shifting.

The TCM controls transaxle shift points and hydraulic pressure to various friction elements. The TCM calculates shift points from input devices and transmits electrical signal to appropriate Shift Control Solenoid Valves (SCSV) and Pressure Control Solenoid Valve (PCSV), mounted on valve body assembly to control transaxle shifting. The TCM controls damper clutch (torque converter lock-up) by operating Damper Clutch Control Solenoid Valve (DCCSV), located on valve body assembly.

An overdrive switch is mounted on driver's side of shift lever. When overdrive switch is depressed to the ON position, transaxle will automatically upshift to overdrive and O/D OFF indicator light on instrument panel will be off.

When overdrive switch is released to the OFF position, transaxle will not upshift to overdrive and O/D OFF indicator light on instrument panel will come on.

A range switch is located on passenger's side of shift lever, near console. On Accent, range switch contains an ECON (economy) mode and NORM (normal) mode. When range switch is depressed to the NORM (normal) mode, an input signal is delivered to TCM, and TCM changes shift points to provide maximum performance. When range switch is released to the ECON (economy) mode, an input signal is delivered to TCM, and TCM changes shift points to provide maximum fuel economy.

On Elantra (1996), range switch contains a NORM (normal) mode and PWR (power) mode. When range switch is depressed to the PWR (power) mode, an input signal is delivered to TCM, and TCM changes shift points to provide maximum performance. When range switch is released to the NORM (normal) mode, an input signal is delivered to TCM, and TCM changes shift points to provide maximum fuel economy.

NOTE: On Accent, if engine coolant temperature is less than 68°F (20°C), transaxle will remain in ECON mode (NORM mode on Elantra) even if range switch is in NORM mode (PWR mode on Elantra). When range switch is in ECON mode (NORM

mode on Elantra) and vehicle speed exceeds 60 MPH, transaxle will not downshift when accelerator pedal is depressed. Range switch must be in NORM mode (PWR mode on Elantra) for transaxle to downshift.

The TCM contains self-diagnostic system, which stores fault code if failure or problem exists in transaxle electronic control system. Fault codes may be retrieved to determine transaxle problem area. Fault code may be referred to as Diagnostic Trouble Code (DTC). For information on electronic transaxle components, see appropriate ELECTRONIC CONTROLS article.

Transaxle is equipped with shift and key interlock systems. Shift interlock system prevents shift lever from being moved from Park position unless brake pedal is depressed, ignition is on and release button on side of shift lever is depressed.

The key interlock system prevents ignition key from being turned to LOCK position unless shift lever is in Park position. For additional information on shift and key interlock systems, see appropriate ELECTRONIC CONTROLS article.

LUBRICATION & ADJUSTMENTS

See appropriate AUTOMATIC article in TRANSMISSION SERVICING.

ON-VEHICLE SERVICE

AXLE SHAFTS

See appropriate AXLE SHAFTS article in AXLE SHAFTS.

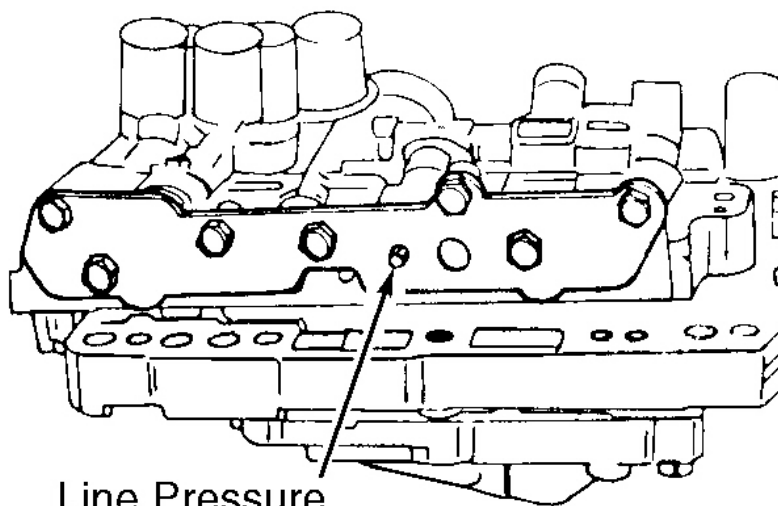
LINE PRESSURE ADJUSTMENT

NOTE: **Manufacturer specifies Mopar Plus-Type 7176 ATF for use in this transaxle. This fluid should also be used for assembly lubrication.**

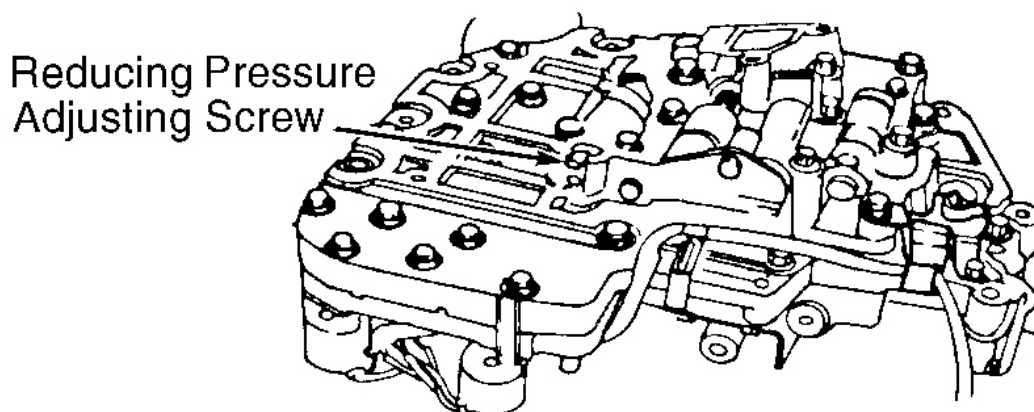
1. Remove valve body assembly. See **VALVE BODY ASSEMBLY R & I** under REMOVAL & INSTALLATION.
2. Rotate line pressure adjusting screw at regulator valve on valve body assembly to adjust line pressure. See **Fig. 2**.
3. Rotating line pressure adjusting screw clockwise one revolution decreases line pressure approximately 5.5 psi (.39 kg/cm²). Rotating line pressure adjusting screw counterclockwise one revolution increases line pressure approximately 5.5 psi (.39 kg/cm²). Standard line pressure is 124.7-130.5 psi (8.77-9.18 kg/cm²).
4. Install valve body assembly using proper procedure. See **VALVE BODY ASSEMBLY R & I** under REMOVAL & INSTALLATION. Fill transaxle with ATF. Recheck line pressure and adjust (if necessary).

REDUCING PRESSURE ADJUSTMENT

1. Valve body assembly removal is not required for reducing pressure adjustment. Drain transaxle fluid. Remove bolts, oil pan, gasket and oil filter.
2. Rotating reducing pressure adjusting screw clockwise one revolution decreases reducing pressure approximately 4.3 psi (.3 kg/cm²). See **Fig. 2**. Rotating reducing pressure adjusting screw counterclockwise one revolution increases reducing pressure approximately 4.3 psi (.3 kg/cm²). Standard reducing pressure is 59-62 psi (4.2-4.4 kg/cm²).
3. Install oil filter. Tighten oil filter bolts to specification. Using NEW gasket, install oil pan. Install and tighten oil pan bolts to specification.
4. Fill transaxle with ATF. Recheck reducing pressure and adjust (if necessary).



Line Pressure
Adjusting Screw



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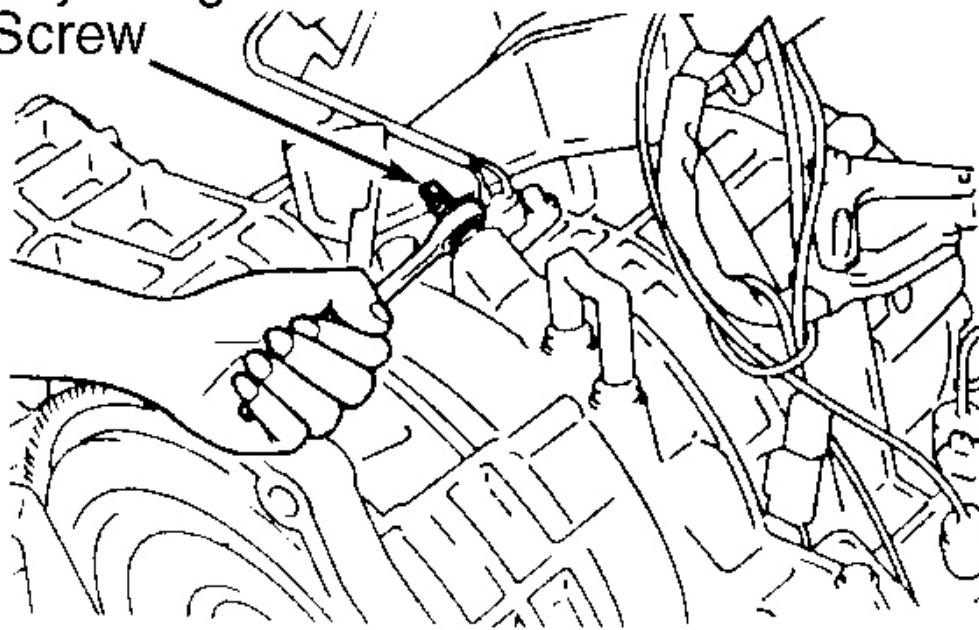
Fig. 2: Line Pressure & Reducing Pressure Adjusting Screws

Courtesy of HYUNDAI MOTOR CO.

KICKDOWN SERVO ADJUSTMENT

1. Note location of kickdown servo adjusting screw on top of transaxle. See **Fig. 3**. Ensure area around kickdown servo adjusting screw is clean.
2. Loosen kickdown servo lock nut on kickdown servo adjusting screw. Loosen kickdown servo adjusting screw. Using INCH-lb. torque wrench, tighten kickdown servo adjusting screw to 44 INCH. lbs. (5.0 N.m).
3. Loosen kickdown servo adjusting screw and then retighten to 44 INCH. lbs. (5.0 N.m) again. Loosen kickdown servo adjusting screw 3 to 3 1/3 turns.
4. Apply Sealant (DC780) on threads of kickdown servo adjusting screw. Hold kickdown adjusting screw and tighten kickdown servo lock nut to specification. See **TORQUE SPECIFICATIONS**.

Kickdown Servo Adjusting Screw



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Fig. 3: Identifying Kickdown Servo Adjusting Screw
Courtesy of HYUNDAI MOTOR CO.

VALVE BODY ASSEMBLY

Valve body assembly may be serviced on the vehicle. See **VALVE BODY ASSEMBLY R & I** under REMOVAL & INSTALLATION.

TROUBLE SHOOTING

TRANSAXLE ELECTRONIC CONTROL SYSTEM

See appropriate ELECTRONIC CONTROLS article.

TROUBLE SHOOTING

SYMPTOM DIAGNOSIS

Transaxle malfunctions may be caused by poor engine performance, improper adjustments or failure of hydraulic, mechanical or electronic components. Always begin by checking fluid level, fluid condition and cable adjustments. Perform road test to determine if problem has been corrected. If problem still exists, perform several tests on transaxle. See **TESTING**.

Damper Clutch Inoperative

- Defective Accelerator Switch Or Improper Switch Adjustment
- Defective Damper Clutch Control Solenoid Valve Or Wiring
- Defective Ignition System Engine RPM Signal
- Defective Oil Temperature Sensor
- Defective Pulse Generator "A", "B" Or Wiring
- Defective TCM
- Defective Throttle Position Sensor Or Improper Adjustment
- Defective Torque Converter
- Malfunction In Valve Body Assembly

Engine Stalls With Transaxle In Neutral, Drive Or Reverse

- Incorrect Idle Speed
- Poor Engine Performance
- Defective Damper Clutch Control Solenoid Valve Or Wiring
- Malfunction In Valve Body Assembly

Excessive Vibration & Shock During All Upshifts

- Defective Front Clutch Or Piston
- Defective Ignition System Engine RPM Signal
- Defective Pulse Generator "A" Or Wiring

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- Defective TCM
- Defective Throttle Position Sensor Or Improper Adjustment
- Malfunction In Valve Body Assembly
- Poor Engine Performance

Excessive Vibration & Shock During 1-2 Or 3-4 Upshift

- Defective End Clutch Or Piston
- Defective Ignition System Engine RPM Signal
- Defective Kickdown Band Or Kickdown Servo
- Defective Kickdown Servo Switch
- Defective Pulse Generator "A" Or Wiring
- Defective TCM
- Defective Throttle Position Sensor Or Improper Adjustment
- Improper Kickdown Servo Adjustment
- Malfunction In Valve Body Assembly
- Poor Engine Performance

Excessive Vibration & Shock During 2-3 Upshift Or 4-3 Downshift

- Defective Front Clutch Or Piston
- Defective Ignition System Engine RPM Signal
- Defective Pulse Generator "A" Or Wiring
- Defective TCM
- Defective Throttle Position Sensor Or Improper Adjustment
- Malfunction In Valve Body Assembly
- Poor Engine Performance

Excessive Vibration & Shock When Shifting From Drive To 2nd Gear Position

- Defective Ignition System Engine RPM Signal
- Defective Low-Reverse Brake Or Piston
- Defective Pulse Generator "A" Or Wiring
- Defective TCM
- Defective Throttle Position Sensor Or Improper Adjustment
- Malfunction In Valve Body Assembly
- Poor Engine Performance

Excessive Vibration & Shock When Shifting Into Any Forward Gear Or Reverse

- Defective Accelerator Switch Or Improper Switch Adjustment

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- Defective Front Clutch, Rear Clutch Or Piston
- Defective Low-Reverse Brake Or Piston
- Defective Or Improperly Adjusted Shift Cable
- Defective TCM
- Defective Throttle Position Sensor Or Improper Adjustment
- Defective Wiring, Transaxle Range Switch Or Switch Adjustment
- Incorrect Idle Speed
- Malfunction In Valve Body Assembly

Improper Shift Speeds

- Defective Pulse Generator "B" Or Wiring
- Defective TCM
- Defective Throttle Position Sensor Or Improper Adjustment
- Malfunction In Valve Body Assembly

Slips In Drive

- Defective Oil Pump
- Defective Overrunning Clutch
- Defective Or Improperly Adjusted Shift Cable
- Defective Pressure Control Solenoid Valve Or Wiring
- Defective Rear Clutch Or Piston
- Low Fluid Level
- Low Line Pressure
- Malfunction In Valve Body Assembly

Slips In Reverse

- Defective Front Clutch Or Piston
- Defective Front Clutch Retainer
- Defective Low-Reverse Brake Or Piston
- Defective Oil Pump
- Defective Or Improperly Adjusted Shift Cable
- Defective Pressure Control Solenoid Valve Or Wiring
- Low Fluid Level
- Low Line Pressure
- Malfunction In Valve Body Assembly
- "O" Ring Missing Between Valve Body Assembly &

Transaxle Housing Sudden Engine RPM Increase During Upshift

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- Defective End Clutch Or Piston
- Defective Front Clutch Or Piston
- Defective Front Clutch Retainer
- Defective Ignition System Engine RPM Signal
- Defective Kickdown Band Or Kickdown Servo
- Defective Pressure Control Solenoid Valve Or Wiring
- Defective Pulse Generator "A" Or Wiring
- Defective Throttle Position Sensor Or Improper Adjustment
- Defective TCM
- Improper Kickdown Servo Adjustment
- Low Line Pressure
- Malfunction In Valve Body Assembly

Sudden Engine RPM Increase & Shock During 3-2 Downshift

- Defective Front Clutch Retainer
- Defective Ignition System Engine RPM Signal
- Defective Kickdown Band Or Kickdown Servo
- Defective Kickdown Servo Switch
- Defective Oil Pump
- Defective Pressure Control Solenoid Valve Or Wiring
- Defective Pulse Generator "A" Or Wiring
- Defective TCM
- Defective Throttle Position Sensor Or Improper Adjustment
- Improper Kickdown Servo Adjustment
- Low Fluid Level
- Low Line Pressure
- Malfunction In Valve Body Assembly

Vehicle Moves In Neutral

- Defective Or Improperly Adjusted Shift Cable
- Defective Parking Mechanism
- Malfunction In Valve Body Assembly
- Defective Wiring, Transaxle Range Switch Or Switch Adjustment

Vehicle Starts Off Other Than 1st Gear

- Defective Accelerator Switch Or Improper Switch Adjustment
- Defective Or Improperly Adjusted Shift Cable

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- Defective TCM
- Defective Wiring, Transaxle Range Switch Or Switch Adjustment
- Malfunction In Valve Body Assembly

Vehicle Will Not Move

- Defective Low-Reverse Brake Or Piston
- Defective Oil Pump
- Defective Or Improperly Adjusted Shift Cable
- Defective Pressure Control Solenoid Valve Or Wiring
- Defective Torque Converter
- Low Fluid Level
- Low Line Pressure
- Malfunction In Valve Body Assembly

Vehicle Will Not Move In Any Forward Gear

- Defective Oil Pump
- Defective Overrunning Clutch
- Defective Or Improperly Adjusted Shift Cable
- Defective Pressure Control Solenoid Valve Or Wiring
- Defective Rear Clutch Or Piston
- Defective Torque Converter
- Low Fluid Level
- Low Line Pressure
- Malfunction In Valve Body Assembly

Vehicle Will Not Move In Reverse

- Defective Front Clutch Or Piston
- Defective Front Clutch Retainer
- Defective Low-Reverse Brake Or Piston
- Defective Oil Pump
- Defective Or Improperly Adjusted Shift Cable
- Defective Pressure Control Solenoid Valve Or Wiring
- Defective Pulse Generator "B" Or Wiring
- Defective Torque Converter
- Low Fluid Level
- Low Line Pressure
- Malfunction In Valve Body Assembly

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- "O" Ring Missing Between Valve Body Assembly & Transaxle Housing

Will Not Shift Into 4th Gear

- Defective End Clutch Or Piston
- Defective Front Clutch Retainer
- Defective Overdrive Switch
- Defective Pressure Control Solenoid Valve Or Wiring
- Defective TCM
- Defective Wiring, Transaxle Range Switch Or Switch Adjustment

Will Not Upshift From 2nd To 3rd Gear

- Defective Front Clutch Or Piston
- Defective Front Clutch Retainer
- Defective Pressure Control Solenoid Valve Or Wiring
- Defective TCM
- Malfunction In Valve Body Assembly

TESTING

ROAD TEST

1. Before road testing vehicle, ensure transaxle fluid level, fluid condition and shift cable adjustments have been checked and corrected (as necessary).
2. Road test vehicle and check for abnormal noise and clutch slippage. Specified clutch and brake are applied in designated gear. See **CLUTCH & BRAKE APPLICATION** table.
3. Ensure upshift and downshift speeds are correct in relation to throttle opening, vehicle speed and position of range switch and overdrive switch. See **Fig. 4-Fig. 6** . Range switch is located on center console, near passenger's side of shift lever. Overdrive switch is mounted on driver's side of shift lever.
4. Various test procedures given can be used to detect any slipping component and confirm proper operation of good components. Malfunction may be caused by leaking hydraulic circuits or sticking valves.
5. More testing is needed if actual cause of malfunction cannot be easily determined. Unless an obvious malfunction exists, DO NOT disassemble transaxle until hydraulic pressure tests have been performed.

CLUTCH & BRAKE APPLICATION

Shift Lever Position	(1) Elements In Use
"D" (Drive)	
1st Gear	Overrunning Clutch & Rear Clutch
2nd Gear	Kickdown Brake & Rear Clutch
3rd Gear	End Clutch, Front Clutch & Rear Clutch
4th Gear	End Clutch & Kickdown Brake

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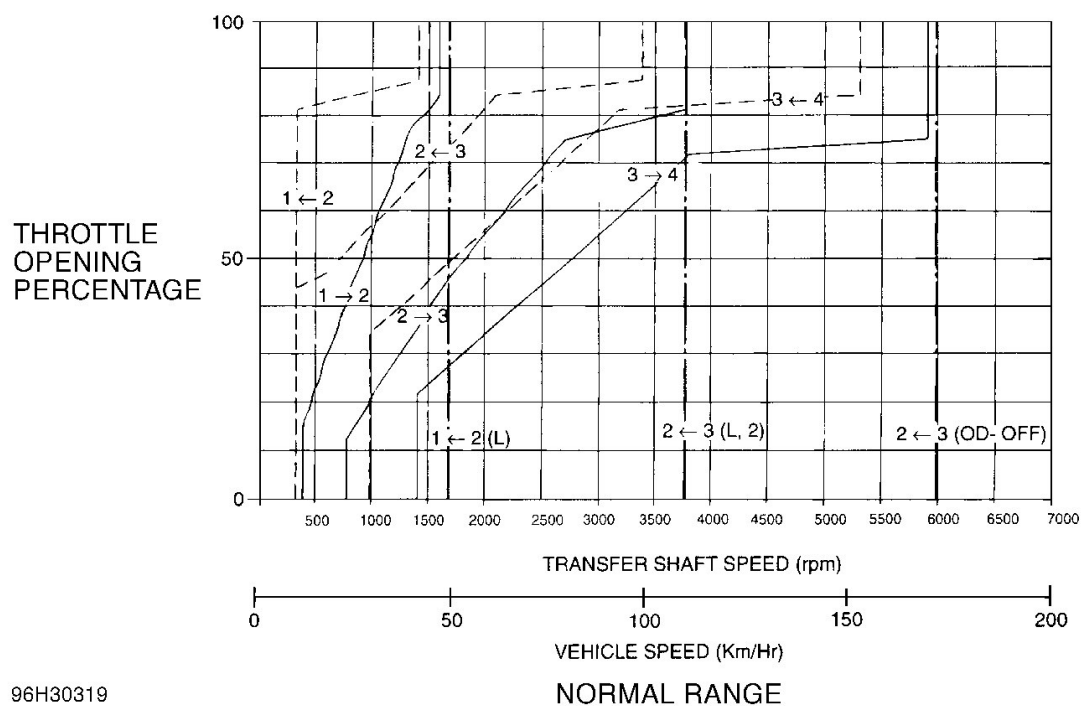
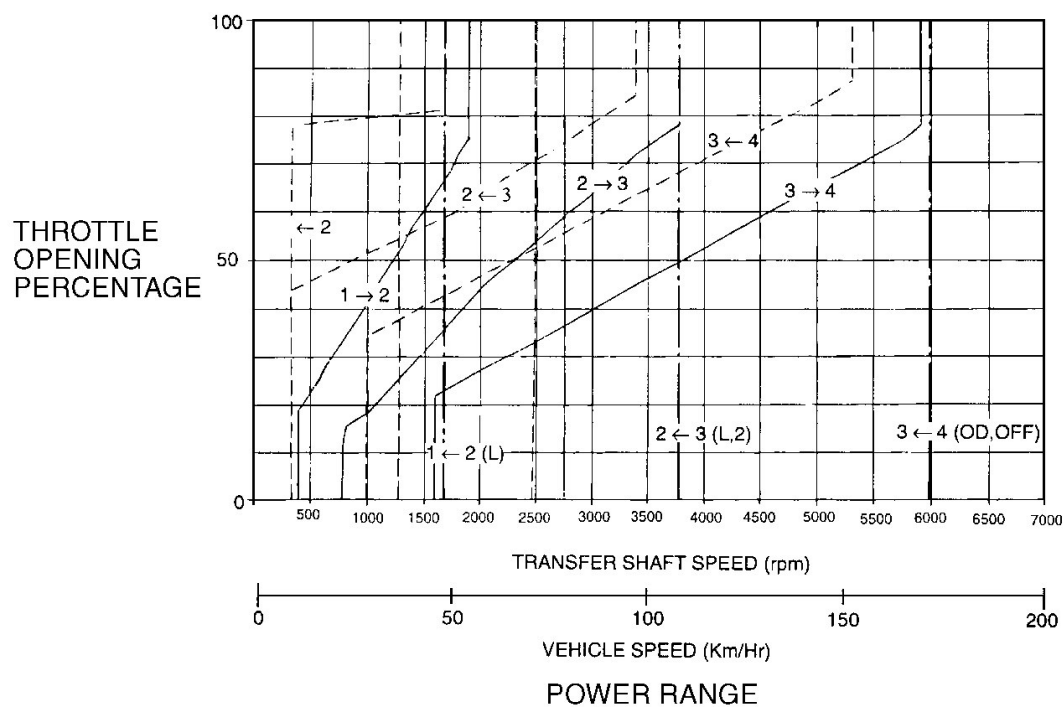
"2" (2nd Gear)

1st Gear	Overrunning Clutch & Rear Clutch
2nd Gear	Kickdown Brake & Rear Clutch
"L" (Low) 1st Gear	Low-Reverse Brake & Rear Clutch
"R" (Reverse)	Front Clutch & Low-Reverse Brake
"N" Or "P" (Neutral Or Park)	All Clutches & Brakes Released Or Ineffective

(1) Kickdown brake is the kickdown band.

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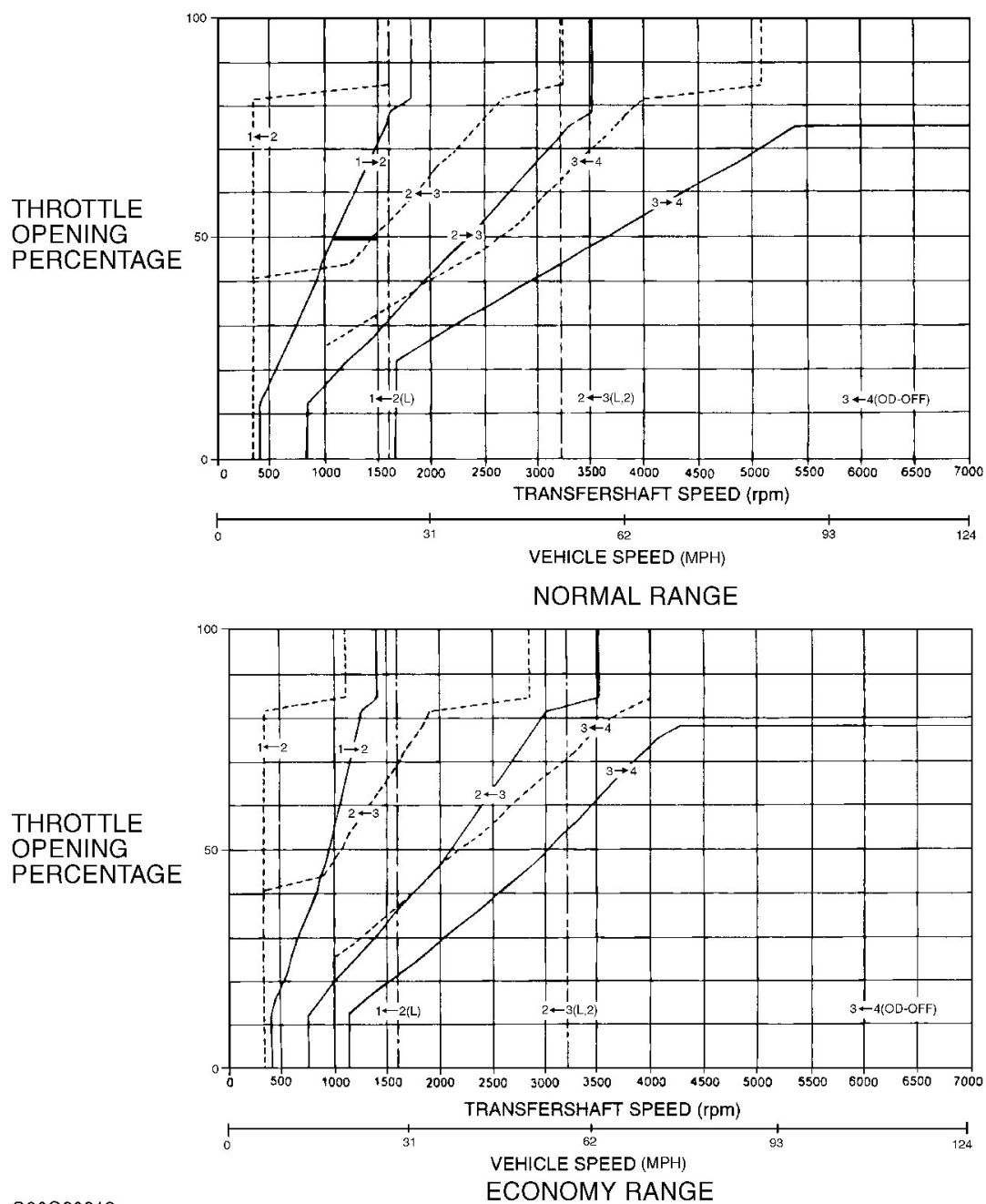


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Fig. 4: Transaxle Upshift & Downshift Speeds (Elantra)
 Courtesy of HYUNDAI MOTOR CO.

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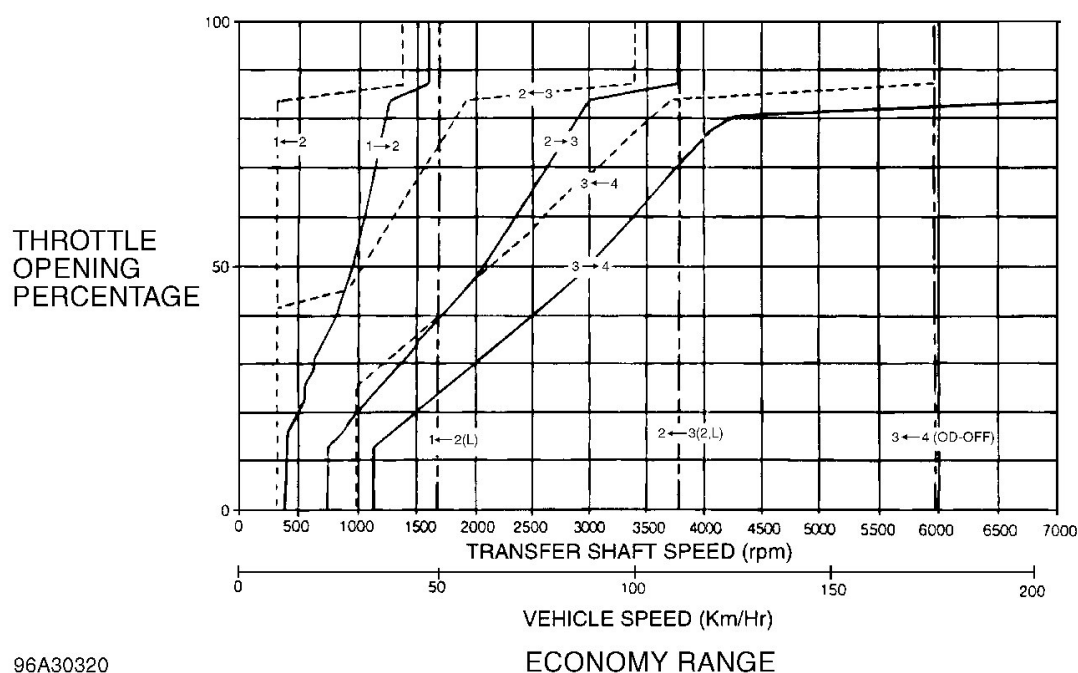
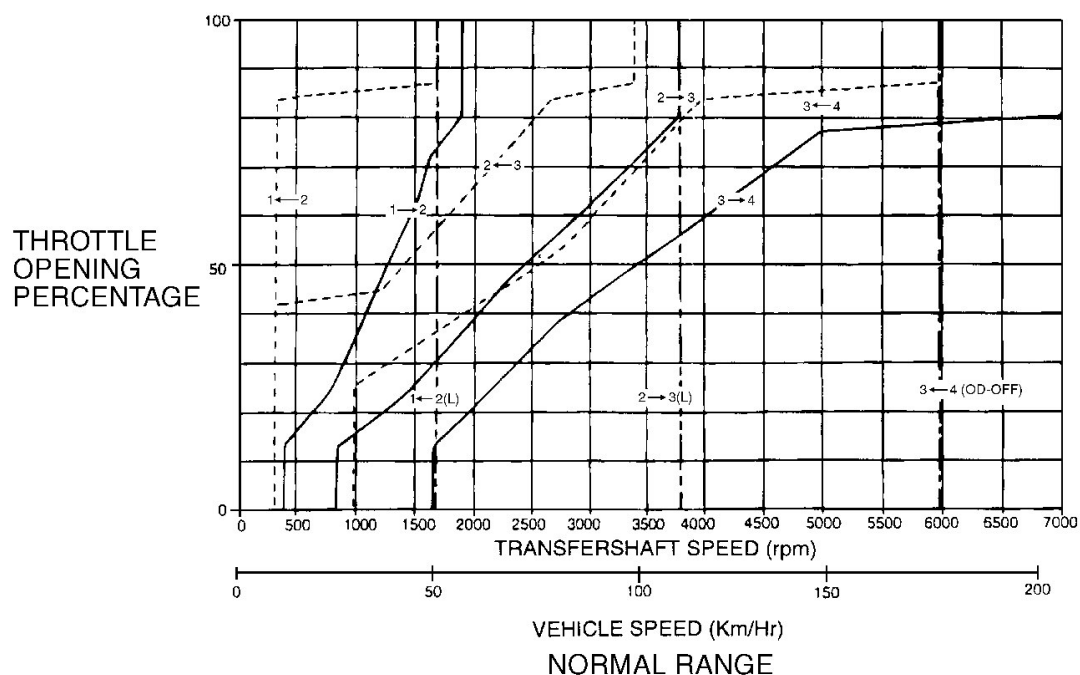


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Fig. 5: Transaxle Upshift & Downshift Speeds (Accent 1.5L SOHC)
Courtesy of HYUNDAI MOTOR CO.

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Fig. 6: Transaxle Upshift & Downshift Speeds (Accent 1.5L DOHC)
Courtesy of HYUNDAI MOTOR CO.

TORQUE CONVERTER STALL SPEED TEST

CAUTION: DO NOT perform torque converter stall speed test for more than 5 seconds

or transaxle may be damaged. If performing more than one torque converter stall speed test, place shift lever in Neutral position. Operate engine at 1000 RPM for at least 2 minutes to cool transaxle before performing next test.

1. Apply parking brake. Block all wheels. Connect tachometer and start engine. Warm engine to normal operating temperature. Ensure transaxle fluid level is correct.
2. Place shift lever in "D" position. Fully depress brake pedal. Fully depress accelerator for no more than 5 seconds and note maximum engine speed. This is the torque converter stall speed.
3. Place shift lever in "N" position. Operate engine at 1000 RPM for at least 2 minutes to cool transaxle. Repeat test procedure with shift lever in "R" position.
4. Ensure torque converter stall speed is 2300-2700 RPM. If torque converter stall speed is not within specification, see **TORQUE CONVERTER STALL SPEED TROUBLE SHOOTING** table for possible causes.
5. If torque converter stall speed exceeds specification, perform hydraulic pressure tests. See **HYDRAULIC PRESSURE TEST** under TESTING.

TORQUE CONVERTER STALL SPEED TROUBLE SHOOTING

Torque Converter Stall Speed Test Results	Probable Cause
Stall Speed RPM High In "D"	Slipping Rear Clutch Or Overrunning Clutch
Stall Speed RPM High In "R"	Slipping Front Clutch Or Low-Reverse Brake
Stall Speed RPM Low In "D" & "R"	Engine Output Low Or Defective Torque Converter

HYDRAULIC PRESSURE TEST

1. Install tachometer. Warm engine to normal operating temperature. Ensure transaxle fluid level is correct. Apply parking brake. Block rear wheels. Raise and support vehicle so front wheels can rotate.
2. Reducing pressure, kickdown brake pressure, front clutch, rear clutch, end clutch, low-reverse brake and torque converter pressure are checked at specified pressure taps on transaxle. See **Fig. 8**.
3. Remove pressure tap plug. Install pressure gauge at appropriate pressure tap. Start and operate engine at specified RPM with shift lever in position for pressure being tested. See **Fig. 7**. Pressure should be within specification.
4. If pressure is not within specification, see **HYDRAULIC PRESSURE TEST TROUBLE SHOOTING** table. If kickdown brake pressure or any clutch pressure is less than specified, line pressure adjustment may be required. See **LINE PRESSURE ADJUSTMENT** under ON-VEHICLE SERVICE.
5. If reducing pressure is not within specification, reducing pressure adjustment may be required. See **REDUCING PRESSURE ADJUSTMENT** under ON-VEHICLE SERVICE.
6. Shut engine off. Remove pressure gauge. Install and tighten pressure tap plug to specification. See **TORQUE SPECIFICATIONS**.

HYDRAULIC PRESSURE TEST TROUBLE SHOOTING

Application	Probable Cause
All Pressures Are	Restricted Main Oil Filter On Valve Body, Improper Line Pressure Adjustment, Sticking Regulator Valve In Valve Body, Loose Valve Body Bolts, Defective Oil

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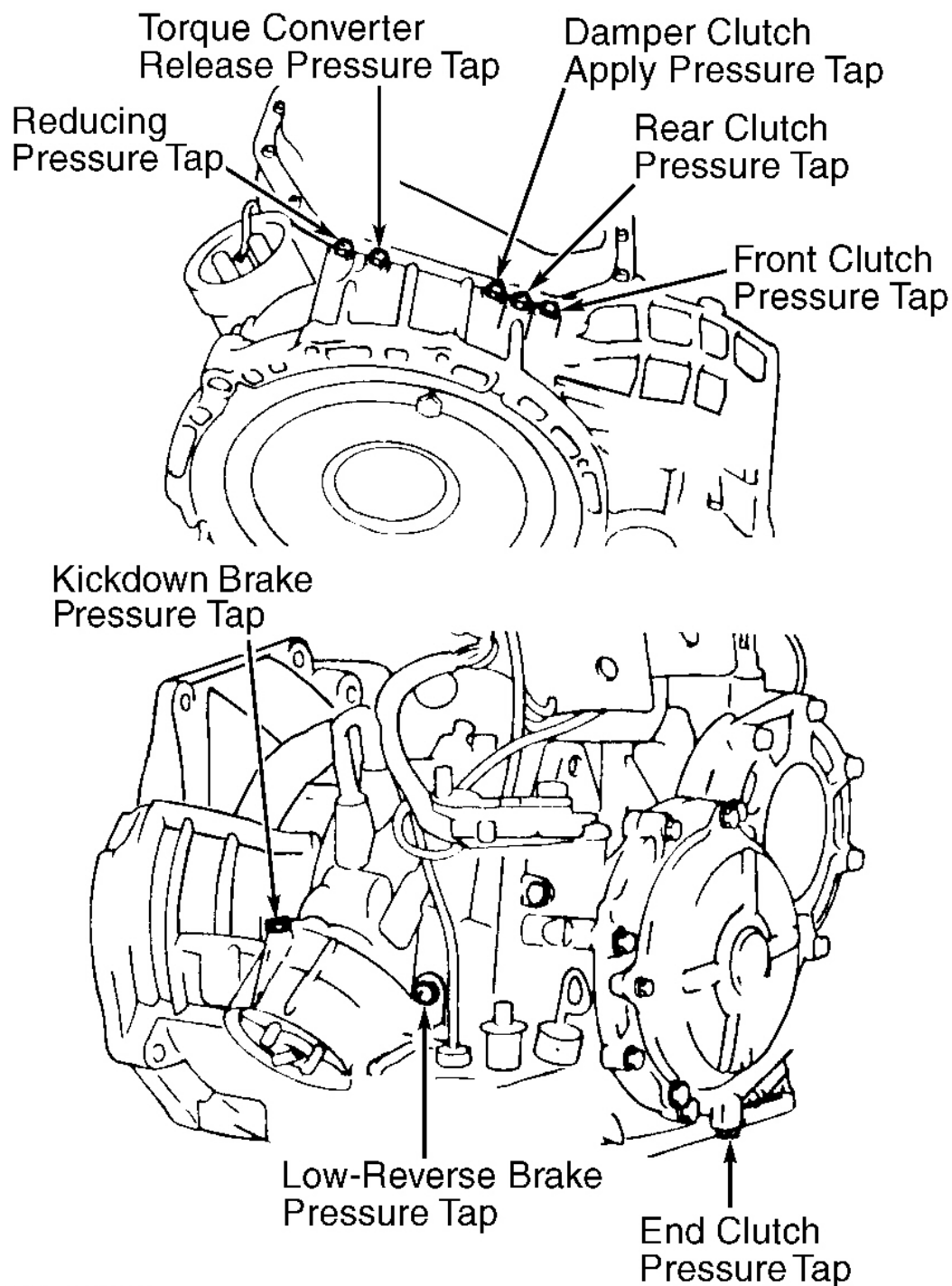
Low Or High	Pump
Improper Reducing Pressure	Improper Line Pressure Adjustment, Restricted "L" Shaped Oil Filter On Intermediate Plate In Valve Body, Improper Reducing Pressure Adjustment, Sticking Reducing Valve In Valve Body, Loose Valve Body Bolts
Improper Kickdown Brake Pressure	Defective "D" Rings Or Seal Rings On Kickdown Servo Piston Or Sleeve, Loose Valve Body Bolts, Defective Valve Body
Improper Front Clutch Pressure	Defective "D" Rings Or Seal Rings On Kickdown Servo Piston Or Sleeve, Loose Valve Body Bolts, Defective Valve Body, Defective Front Clutch Components
Improper End Clutch Pressure	Defective "D" Rings Or Seal Rings On End Clutch, Loose Valve Body Bolts, Defective Valve Body
Improper Low-Reverse Brake Pressure	"O" Ring Between Valve Body & Transaxle Housing Is Missing, Loose Valve Body Bolts, Defective Valve Body, Defective "O" Rings On Low-Reverse Brake Piston
Improper Torque Converter Pressure	Sticking Damper Clutch Control Solenoid Valve, Restricted Or Leaking Oil Cooler, Defective Seal Rings On Input Shaft, Defective Torque Converter

No.	Conditions				Standard oil pressure (psi)							
	Selector lever position	(Reference) vehicle speed mph	Engine speed rpm	Shift position	1 Reducing pressure	2 Kickdown brake pressure	3 Front clutch pressure	4 End clutch pressure	5 Low-reverse brake pressure	6 Damper clutch release pressure	7 Damper clutch apply pressure	8 Rear clutch pressure
1	N	0	Idling	Neutral	55-67	-	-	-	-	*	*	-
2	D	0	Idling	2nd gear	55-67	13-43	-	-	-	*	*	*
3	D (OD SW-ON)	68	2,500 Approx	4th gear	55-67	122-131	-	122-131	-	71-114	-	122-131
4	D (OD SW-OFF)	47	2,500 Approx	3rd gear	55-67	122-131	119-131	122-131	-	71-114	-	122-131
5	2	31	2,500 Approx	2nd gear	55-67	122-131	-	-	-	71-114	-	122-131
6	L	0	1,000 Approx	1st gear	55-67	-	-	-	73-91	*	59-73	122-131
7	R	22	2,500 Approx	Reverse	55-67	-	254-297	-	254-297	39-49	61-73	-
		0	1,000 Approx				65 or more		65 or more	*	*	

NOTE: -Indicates pressure is less than 2.8 psi.
 OD SW-ON: Overdrive switch is in ON position.
 OD SW-OFF: Overdrive switch is in OFF position.
 * - Pressure is not standard.

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Fig. 7: Hydraulic Pressure Test Specifications (Accent & Elantra)
 Courtesy of HYUNDAI MOTOR CO.



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Fig. 8: Identifying Transaxle Pressure Taps
Courtesy of HYUNDAI MOTOR CO.

REMOVAL & INSTALLATION

ELECTRICAL COMPONENTS

See appropriate ELECTRONIC CONTROLS article.

TRANSAXLE

See appropriate REMOVAL & INSTALLATION article in the AUTOMATIC TRANSMISSIONS.

VALVE BODY ASSEMBLY R & I

Removal

1. Drain transaxle fluid. Remove bolts, oil pan, gasket and oil filter. Remove oil temperature sensor, located on bottom of valve body assembly. See **Fig. 9**.
2. Push tab inward on solenoid valve electrical connector grommet, located on transaxle housing, above oil pan area. Push solenoid valve electrical connector grommet out of transaxle housing so valve body assembly can be removed.
3. Note location of valve body assembly-to-transaxle housing bolts. Remove valve body assembly-to-transaxle housing bolts. Remove valve body assembly, using care not to allow manual valve to fall from valve body assembly.

NOTE: **Manufacturer specifies Mopar Plus-Type 7176 ATF for use in this transaxle. This fluid should also be used for assembly lubrication.**

Installation

1. Install NEW "O" ring on upper surface of valve body assembly, where valve body seals against transaxle housing.
2. Install NEW "O" ring on solenoid valve electrical connector grommet where it seals against transaxle housing. Install valve body assembly and solenoid valve electrical connector grommet.
3. Ensure notch on solenoid valve electrical connector grommet is toward front of transaxle housing and wiring is properly routed.
4. Install valve body assembly-to-transaxle housing bolts. Ensure proper length bolt is installed in correct location. See **Fig. 10**.
5. Tighten valve body assembly-to-transaxle housing bolts to specification. See **TORQUE SPECIFICATIONS**. Install oil temperature sensor and oil filter. Tighten oil filter bolts to specification.
6. Ensure 5 magnets are installed in 5 depression areas on oil pan. Using NEW gasket, install oil pan. Install and tighten oil pan bolts to specification. Fill transaxle with ATF.

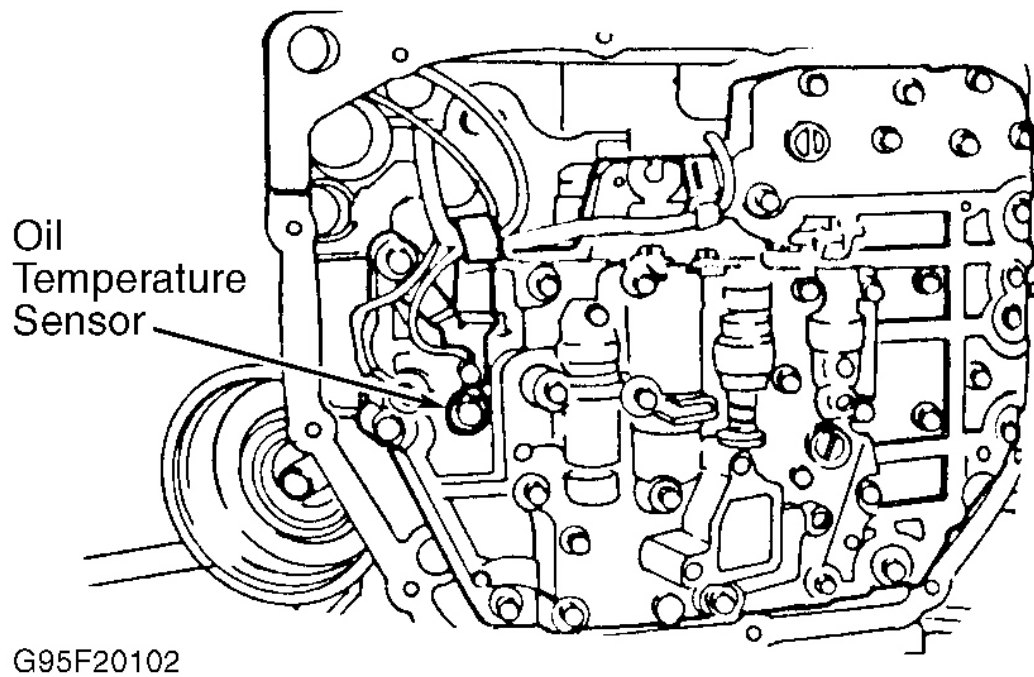
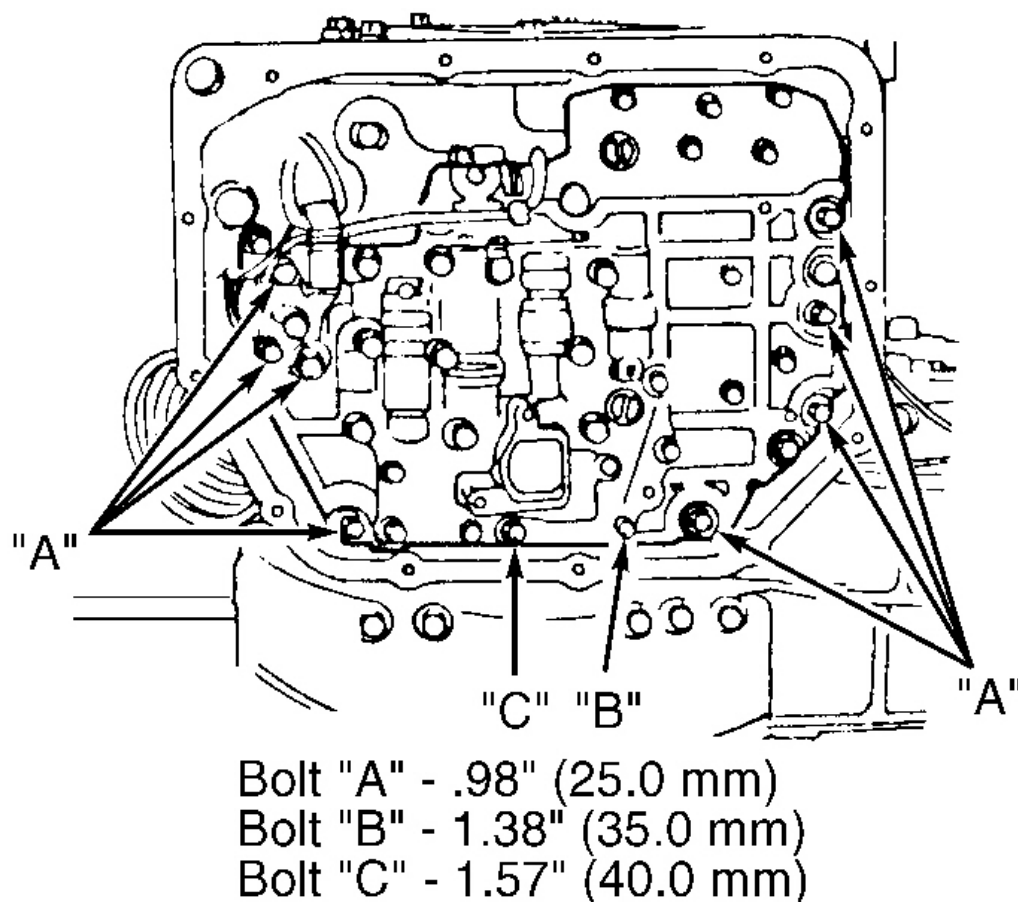


Fig. 9: Identifying Oil Temperature Sensor
Courtesy of HYUNDAI MOTOR CO.



G95G20103

Fig. 10: Valve Body Assembly-To-Transaxle Housing Bolt Locations
Courtesy of HYUNDAI MOTOR CO.

TORQUE CONVERTER

NOTE: Torque converter is a sealed unit and cannot be disassembled. Replace torque converter if defective.

NOTE: For torque converter stall speed test, see TORQUE CONVERTER STALL SPEED TEST under TESTING.

TRANSAXLE OVERHAUL

For transaxle overhaul information, refer to OVERHAUL - A4AF2 & A4AF3 for Accent, or refer to

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1995-96 AUTOMATIC TRANSMISSION A4AF2 & A4BF1 - Except Overhaul - Accent & Elantra

OVERHAUL - F4AF2 & F4BF1 for Elantra.**TRANSAXLE SPECIFICATIONS****TRANSAXLE SPECIFICATIONS**

Application	In. (mm)
Clutch Clearances	
End Clutch	.0157-.0260 (.400-.650)
Front Clutch	.0157-.0236 (.400-.600)
Rear Clutch	.0118-.0197 (.300-.500)
Differential Side Gear Backlash	.0010-.0059 (.025-.150)
Input Shaft End Play	.012-.039 (.30-1.00)
Low-Reverse Brake Clearance	
Accent	.0266-.0389 (.675-.987)
Elantra	.038-.051 (.975-1.287)
Oil Pump Gear Side Clearance	.0008-.0019 (.020-.048)
Oil Pump Housing Bushing Maximum Inside Diameter	1.690 (43.01)
Transfer Shaft End Play	0-.0023 (0-.060)

TORQUE SPECIFICATIONS**TORQUE SPECIFICATIONS**

Application	Ft. Lbs. (N.m)
Bearing Retainer Screw	13-16 (18-22)
Differential Bearing Cap Bolt	44-58 (60-79)
Differential Bearing Retainer Bolt	22-29 (30-39)
Kickdown Servo Lock Nut	11-16 (15-22)
Oil Pump-To-Transaxle Housing Bolt	13-16 (18-22)
Overrunning Clutch Outer Race-To-Planetary Carrier Assembly Bolt	17-25 (23-34)
Parking Brake Rod Support Bolt	15-20 (20-27)
Rear Cover Bolt	13-16 (18-22)
Ring Gear Bolt ⁽¹⁾	96-103 (130-140)
Torque Converter Housing Bolt	14-16 (19-22)
Transfer Shaft Lock Nut	148-169 (200-230)
	INCH Lbs. (N.m)
End Cover Bolt	35-53 (4.0-6.0)
Oil Filter Bolt	44-62 (5.0-7.0)
Oil Pan Bolt	89-106 (10.0-12.0)
Oil Pump Housing-To-Reaction Shaft Support Bolt	89-106 (10.0-12.0)
Pressure Tap Plug	71-89 (8.0-10.0)
Pulse Generator Bolt	89-106 (10.0-12.0)

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Set Screw	71-89 (8.0-10.0)
Valve Body Assembly-To-Transaxle Housing Bolt	89-106 (10.0-12.0)
Valve Body Bolt	35-53 (4.0-6.0)
(1) Tighten bolts in crisscross pattern to specification.	