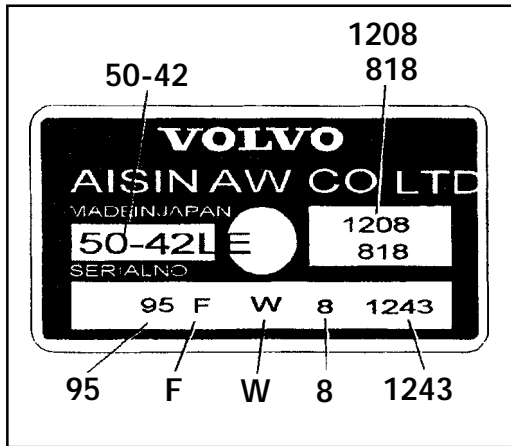


AW 50-40, 50-42, 50-42LE: AF 14, 20, 22

Transmission Identification Plate



Example:

50-42LE = Transmission designation

1208818 = Volvo P/N

95 = Year of manufacture

F = Manufactured in June (A=January and so on.)

NOTE! The letter I is not used.)

W = Transmission 50-42LE*

8 = Transmission manufactured for Volvo

1243 = Manufacturing number, starting with 0001 each month.

*) LE indicates that the transmission has the lock-up function and is electronically controlled.

This transmission is an AW50-42, manufactured in June 1995.

Applied Elements

B2 = Intermediate Clutch
B3 = Low & Reverse Clutch
B4 = Underdrive Brake Band

C1 = Forward Clutch
C2 = Direct Clutch
C3 = Underdrive Clutch

F1 = Intermediate Sprag
F2 = Low Sprag
F3 = Underdrive Sprag

S1 = Shift Solenoid A
S2 = Shift Solenoid B

POSITION		S1	S2	C1	C2	C3	B1	B2	B3	B4	F1	F2	F3
P	Parking		●							●			
R	Reverse		●						●	●			
N	Neutral		●							●			
D	1st		●	●						●		●	●
	2nd	●	●	●			●	●		●	●		●
	3rd	●		●		●	●	●			●		
	4th			●	●	●		●					
3	1st		●	●						●		●	●
	2nd	●	●	●			●	●		●	●		●
	3rd	●		●		●	●	●			●		
L	1st		●	●					●	●		●	●
	2nd	●	●	●			●	●		●	●		●

Caution: This kit contains a Duraprene valve body cover gasket. This gasket is intended to be used on covers that **are not** used in conjunction with a transmission mount. The torsional loads placed on the gasket surfaces will result in a leak on this application. It is recommended to use a sealer in place of the gasket.

Clutch Clearances

Overrun Clutch	.023" - .057"	
Intermediate Clutch	.045" - .073"	
Low/Reverse Clutch	.074" - .095"	
Forward Clutch	.060" - .074"	with 4 plates
	.045" - .058"	with 3 plates
Direct Clutch	.060" - .074"	with 4 plates
	.045" - .058"	with 3 plates
Underdrive Clutch	.060" - .074"	with 4 plates
	.045" - .058"	with 3 plates
Underdrive Brake Band	.216" - .276"	
<p>Underdrive Brake Band Procedure:</p> <p>Install piston in reverse order of disassembly. Measure length of piston stem protruding from case. Apply air to servo and re-measure length of piston stem. The difference is the piston stroke length. Specification is .216" - .276". Adjust as needed.</p>		

End Play = .015" - .035"

Line Pressures

At idle (800 -850 rpm): 60 - 85 psi at idle.
Line pressures for all engine models.

At stall: 170 - 256 psi.

Notes: Stall speeds vary with engine model.
All pressure readings taken in Drive or Reverse.

Resistance for Components

Component	Remarks	Resistance ()
Engine Speed RPM Sensor		300 - 600
Solenoid A	Resistance between the solenoid pin and the solenoid cover/ transmission housing	10 - 15
Solenoid B		10 - 15
Solenoid Lock-up		10 - 15
Solenoid - Pressure Control	Resistance between the solenoid pins	2 - 6
Oil Temperature Sensor	0 (32)	1700 - 2300
	20 (68)	765 - 1035
	40 (104)	340 - 460
	80 (176)	107 - 143
	100 (212)	64 - 86
	150 (302)	23 - 31

Checking System Pressure

Depress brake pedal.
Move gear selector into the various positions and record system pressure.

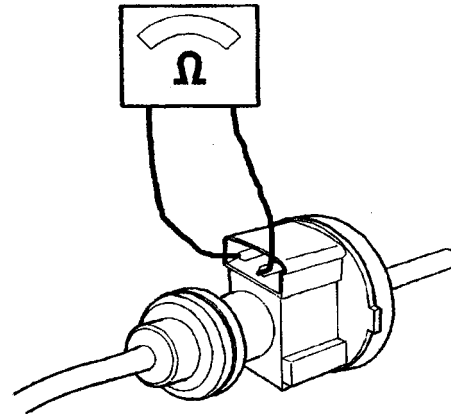
Table, AW TCM 50-42 System Pressure

Engine	Idling Speed	Gear Position (rpm)	Line Pressure (MPa) (psi)
B5202	850	D / R	0.4 / 0.6 (85 / 57)
B5204S	800	D / R	0.4 / 0.6 (85 / 57)
B5254S ¹	850 ¹	D / R	0.4 / 0.6 (85 / 57)
B5252S	850	D / R	0.4 / 0.6 (85 / 57)
B5234S	850	D / R	0.4 / 0.6 (85 / 57)
B5234T	850	D / R	0.4 / 0.6 (85 / 57)

¹⁾ 800 rpm, model years 1992-1993

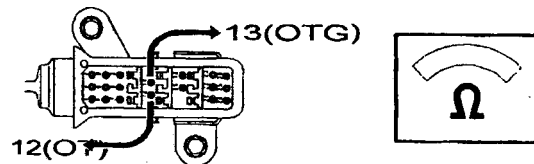
Checking Kickdown Switch Resistance

The ohmmeter should read approx. 0 Ω with the accelerator pedal (AP) fully depressed and infinite resistance in all other positions.



Checking Oil Temperature Sensor Resistance

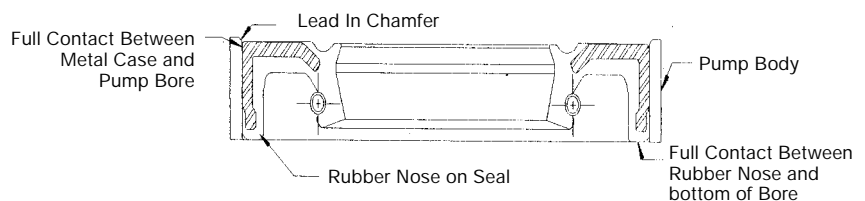
Connect an ohmmeter between the transmission connector terminals 12 and 13 (transmission side).



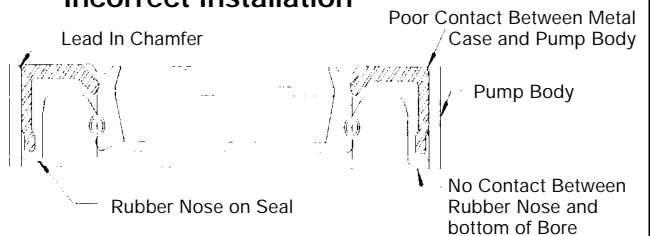
Pump Seal Installation

Some, but not all, Toyota pumps feature a deep lead-in chamfer on the pump seal bore. To ensure proper contact between the seal and the seal bore, the seal should be pressed in until it bottoms in the bore. This should be standard procedure on all seals that use a nose gasket for bore sealing. This may result in the seal being installed below the top of the pump bore face.

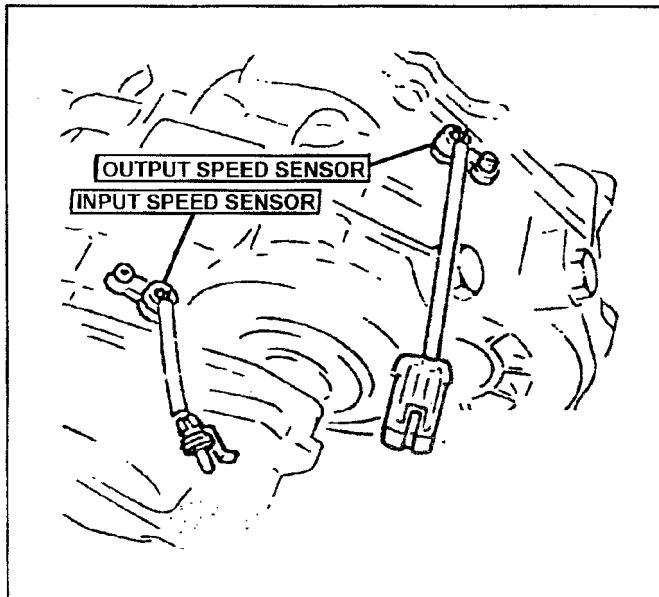
Correct Installation



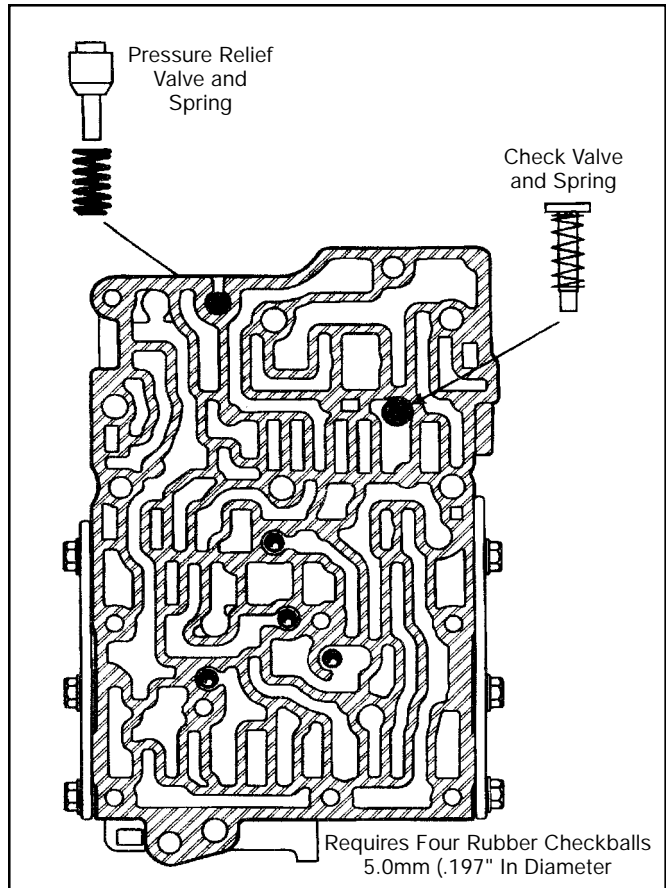
Incorrect Installation



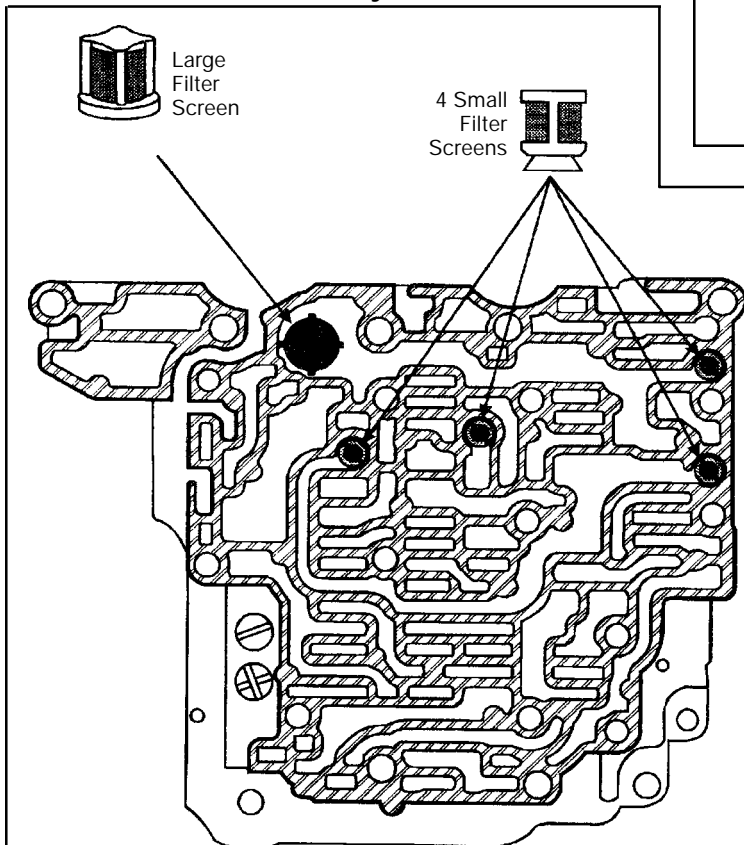
Speed Sensors



Volvo/Saab AW50-42LE "Rear" Valve Body, "Rear" Side

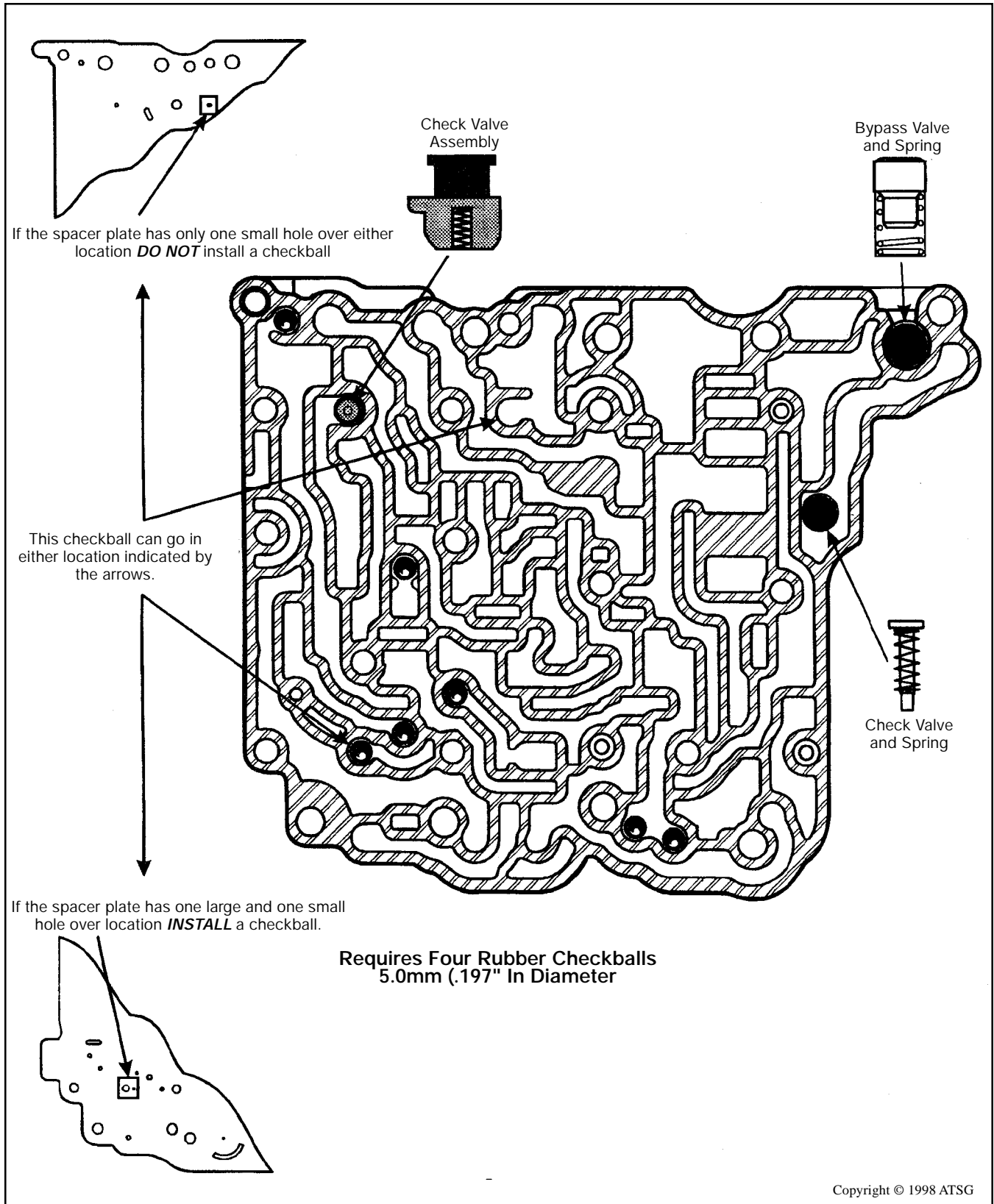


Volvo/Saab AW50-42LE "Center" Valve Body, "Front" Side

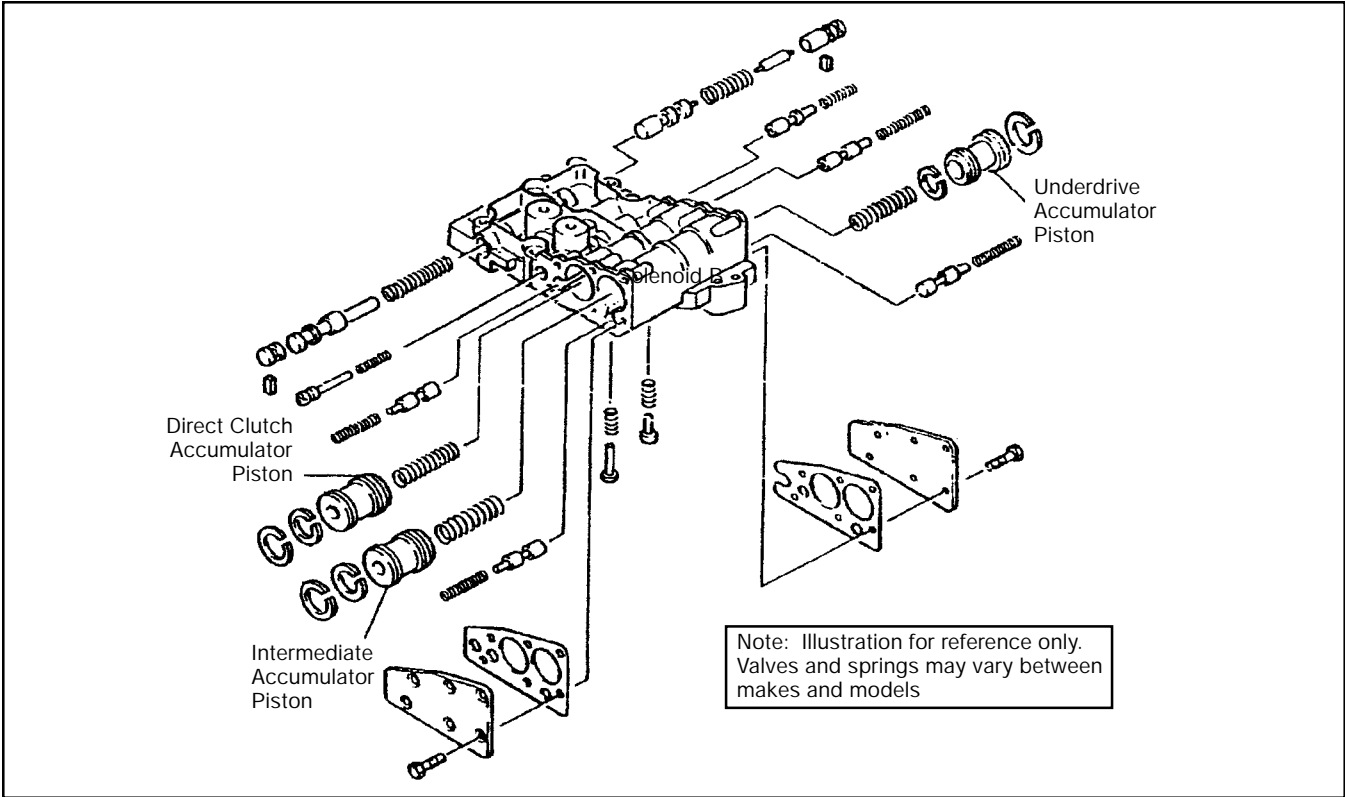


Copyright © 1998 ATSG

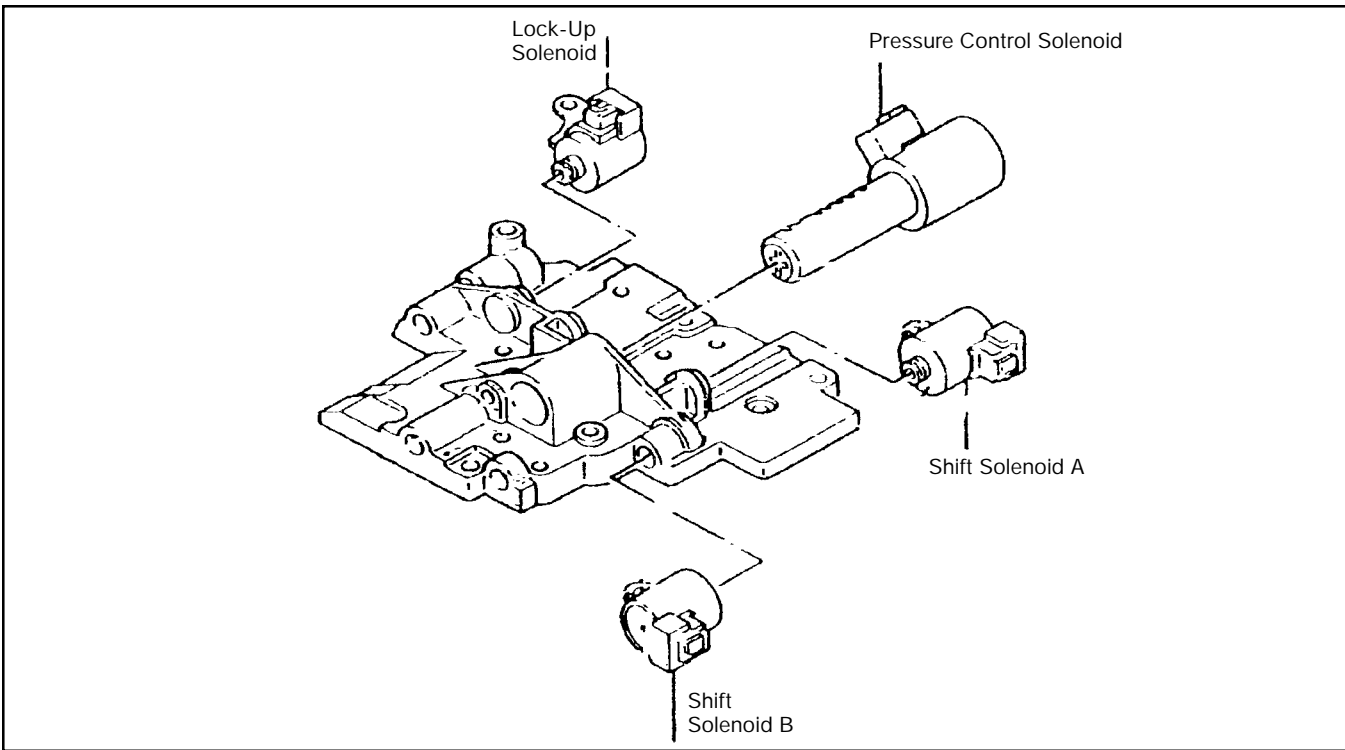
Volvo/Saab AW50-42LE "Center" Valve Body, "Rear" Side



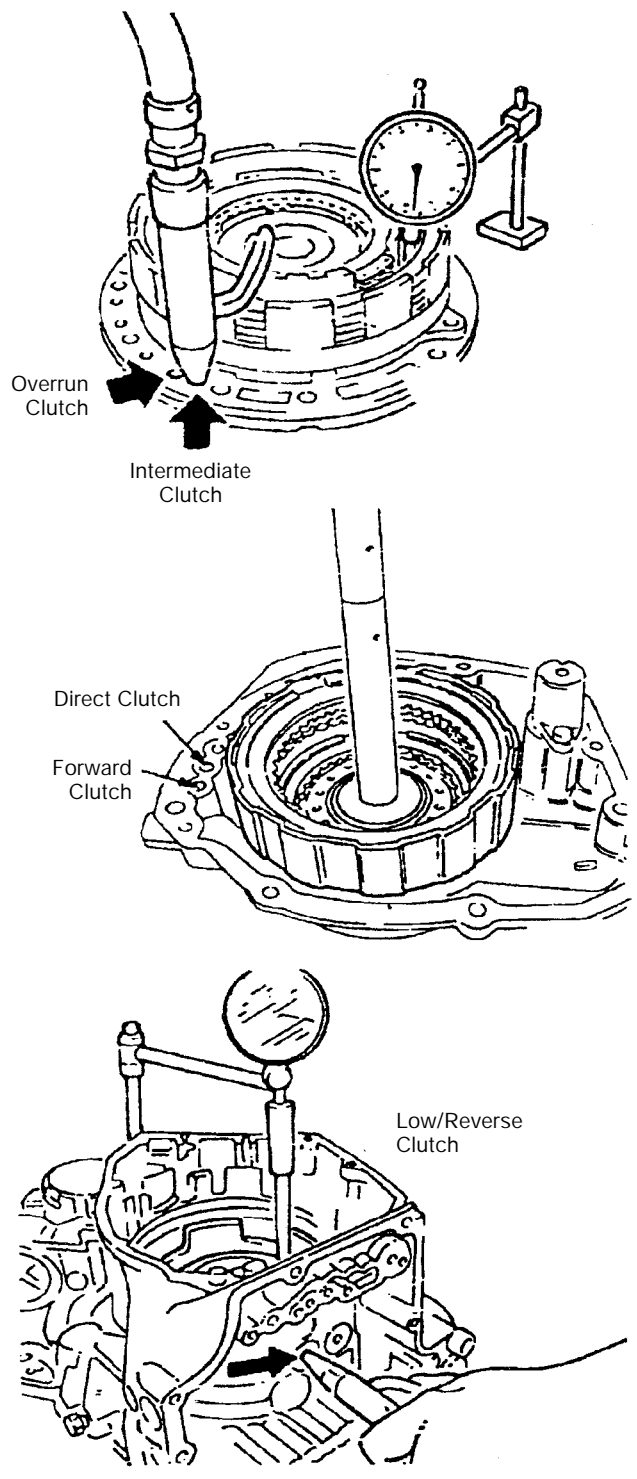
Rear Valve Body Accumulator Pistons



Front Valve Body Solenoid Location



Air Check Passages



Sprag Rotation

