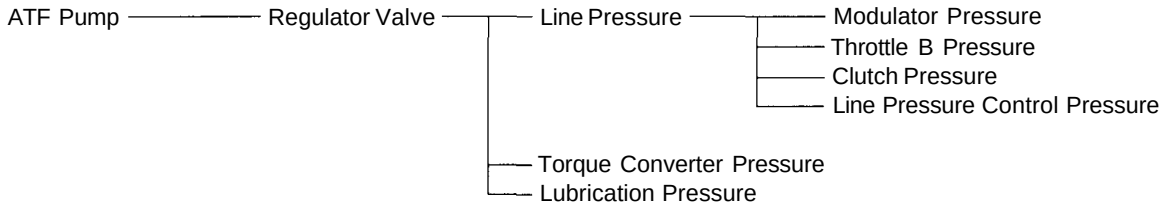


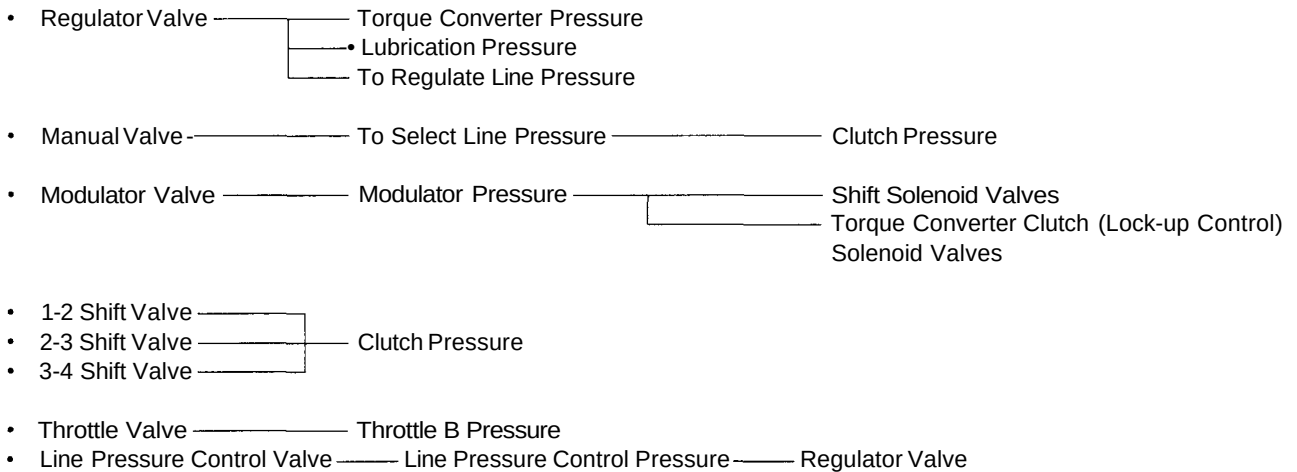
Description

Hydraulic Flow

General Chart of Hydraulic Pressure



Distribution of Hydraulic Pressure



NO.	DESCRIPTION OF PRESSURE	NO.	DESCRIPTION OF PRESSURE	NO.	DESCRIPTION OF PRESSURE
1	LINE	6C	MODULATOR	70	1ST-HOLD CLUTCH
3	LINE	6D	MODULATOR (DUTY CONTROL)	70'	1ST-HOLD CLUTCH
3'	LINE	7	LINE	71	1ST-HOLD CLUTCH
3''	LINE	10	1ST CLUTCH	72	1ST-HOLD CLUTCH
4	LINE	10'	1ST CLUTCH	90	TORQUE CONVERTER
4'	LINE	11	1ST CLUTCH	91	TORQUE CONVERTER
4''	LINE	20	2ND CLUTCH	92	TORQUE CONVERTER
4'''	LINE	25	LINE	93	ATF COOLER
5	LINE	30	3RD CLUTCH	94	TORQUE CONVERTER
5'	LINE	40	4TH CLUTCH	95	LUBRICATION
5''	LINE	50	REVERSE CLUTCH	96	TORQUE CONVERTER
5'''	LINE	55	THROTTLE B	96'	TORQUE CONVERTER
6	MODULATOR	55'	THROTTLE B	99	SUCTION
6A	MODULATOR	58	LINE PRESSURE CONTROL	X	EXHAUST
6B	MODULATOR	59	LINE PRESSURE CONTROL		

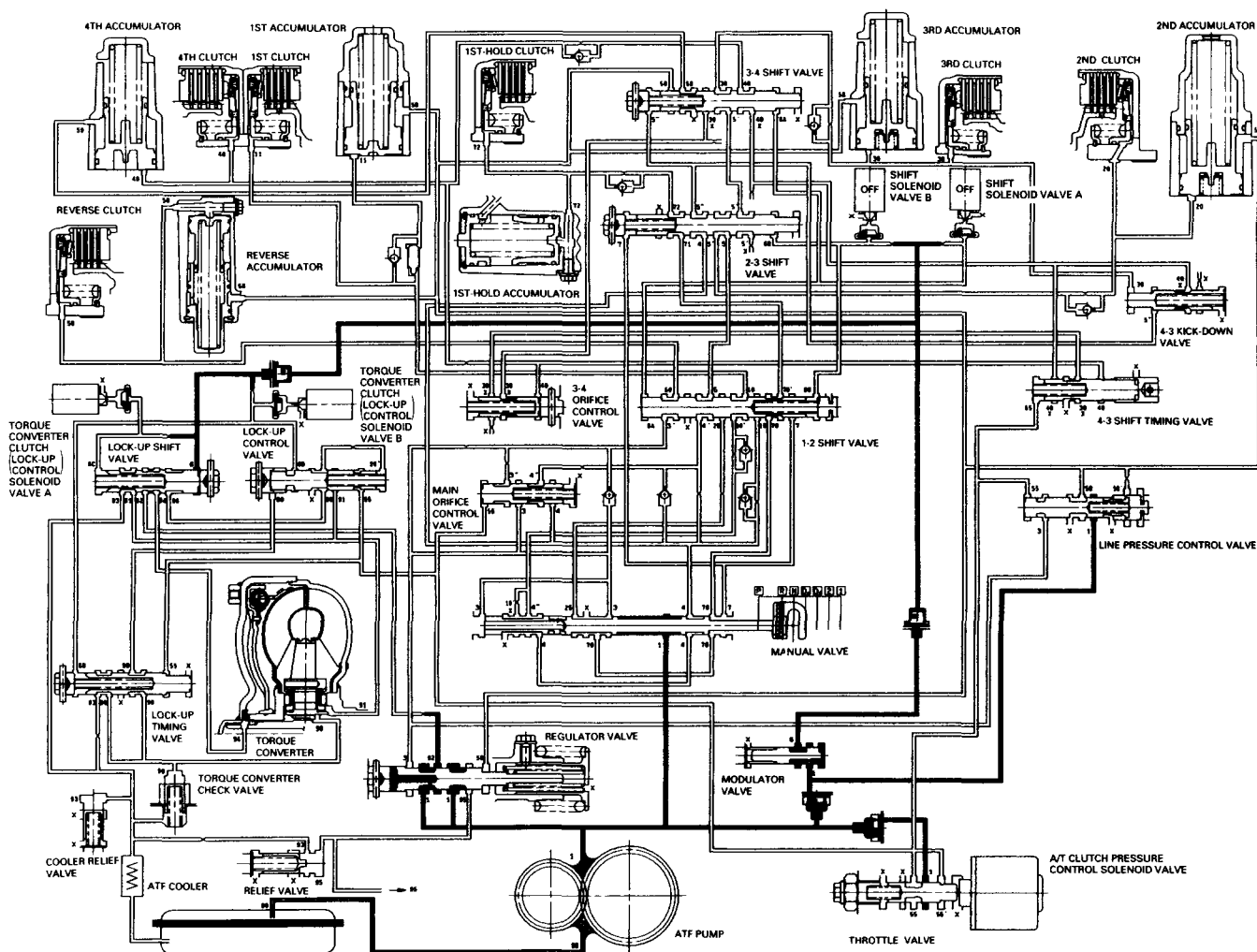


N Position

As the engine turns, the ATF pump also starts to operate. Automatic transmission fluid (ATF) is drawn from (99) and discharged into (1). Then, ATF flowing from the ATF pump becomes the line pressure (1). The line pressure (1) is regulated by the regulator valve. The torque converter inlet pressure (92) enters (94) of the torque converter through the lock-up shift valve and discharges into (90). The torque converter check valve prevents the torque converter pressure from rising. Under this condition, the hydraulic pressure is not applied to the clutches as the manual valve stops line pressure (1).

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - '01 models, the 2nd accumulator is different.



(cont'd)

Description

Hydraulic Flow (cont'd)

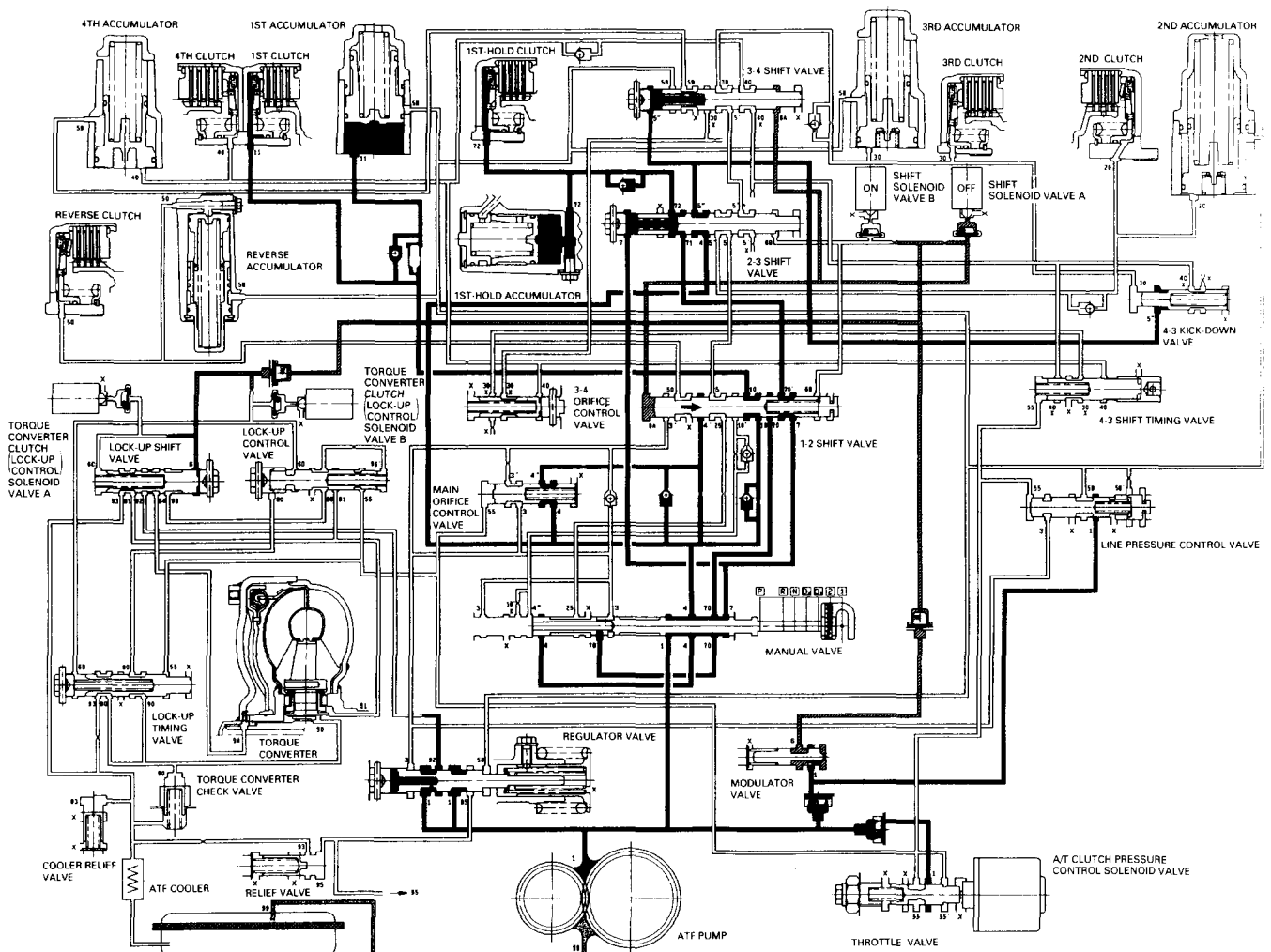
1 Position

The line pressure (1) flows to the manual valve, the modulator valve, the line pressure control valve and the throttle valve. The line pressure (1) becomes the modulator pressure (6) at the modulator valve, and the line pressure (4) and (7), and the 1st-hold clutch pressure (70) at the manual valve. The modulator pressure (6) flows to the 1-2 shift valve, the 2-3 shift valve and the 3-4 shift valve because the shift solenoid valve A is turned OFF and B is turned ON by the PCM, and the 1-2 shift valve is moved to the right side. The line pressure (4) becomes the 1st clutch pressure (10) at the 1-2 shift valve. The 1st clutch pressure (10) is applied to the 1st clutch, and the 1st clutch is engaged. The line pressure (7) becomes the 1st-hold clutch pressure (70) at the 1-2 shift valve. The 1st-hold clutch pressure (70) is applied to the 1st-hold clutch, and the 1st-hold clutch is engaged.

Power is transmitted only during deceleration through the 1st-hold clutch.

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - 01 models, the 2nd accumulator is different.



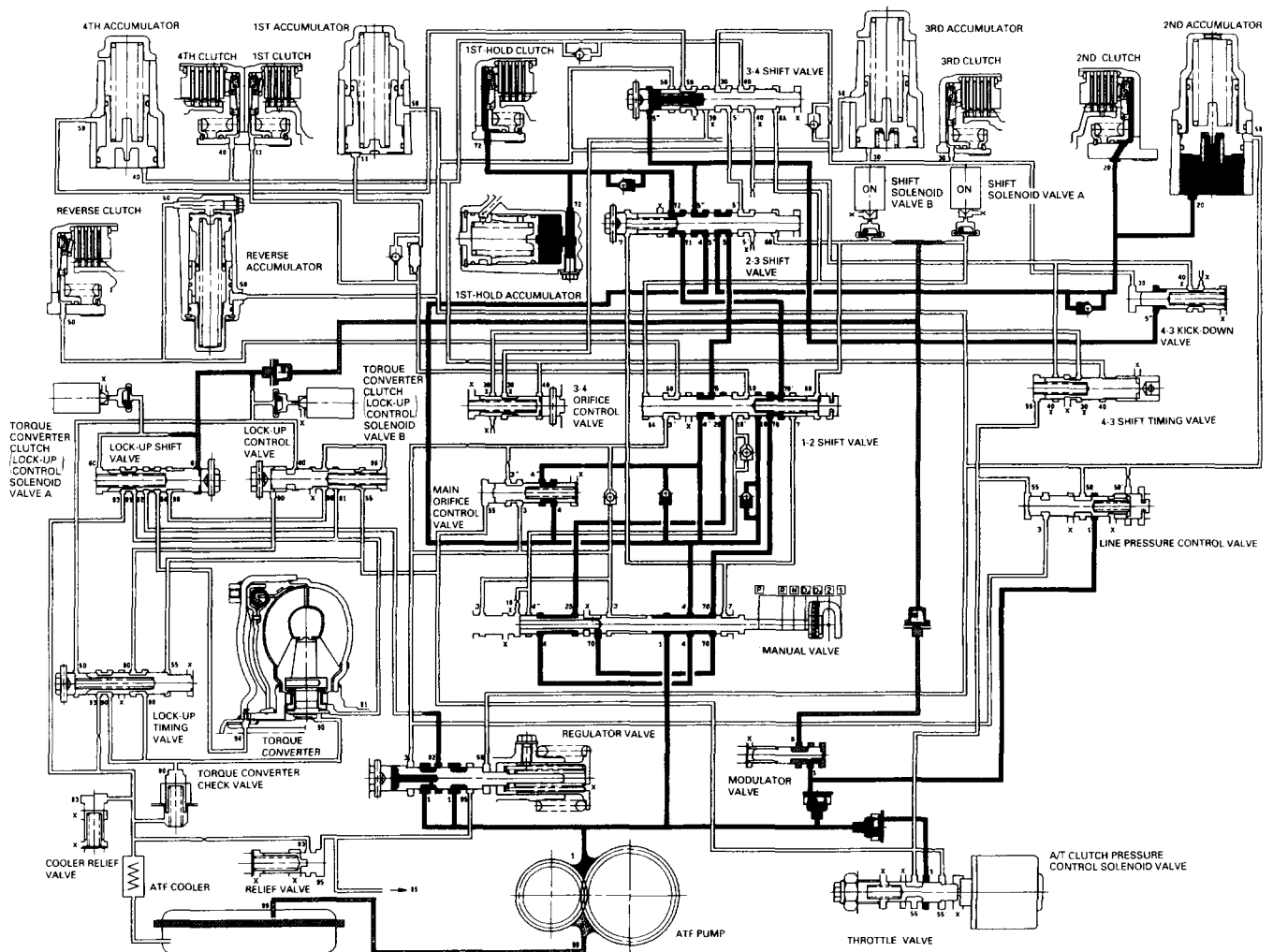


2 Position

The line pressure (1) flows to the manual valve, the modulator valve, the line pressure control valve and the throttle valve. The line pressure (1) becomes the modulator pressure (6) at the modulator valve, the line pressure (4) and the 1st-hold clutch pressure (70) at the manual valve. The modulator pressure (6) does not flow to each shift valve because shift solenoid valves A and B are turned ON by the PCM. The line pressure (4) passes through the 1-2 shift valve and the 2-3 shift valve, then changes to the 2nd clutch pressure (20) at the orifice. The 2nd clutch pressure (20) is applied to the 2nd clutch, and the 2nd clutch is engaged. The 1st-hold clutch pressure (70) passes through the 1-2 shift valve, then goes to the 1st-hold clutch. The 1st-hold clutch is engaged. Power is transmitted only during deceleration through the 1st-hold clutch.

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - '01 models, the 2nd accumulator is different.



(cont'd)

Description

Hydraulic Flow (cont'd)

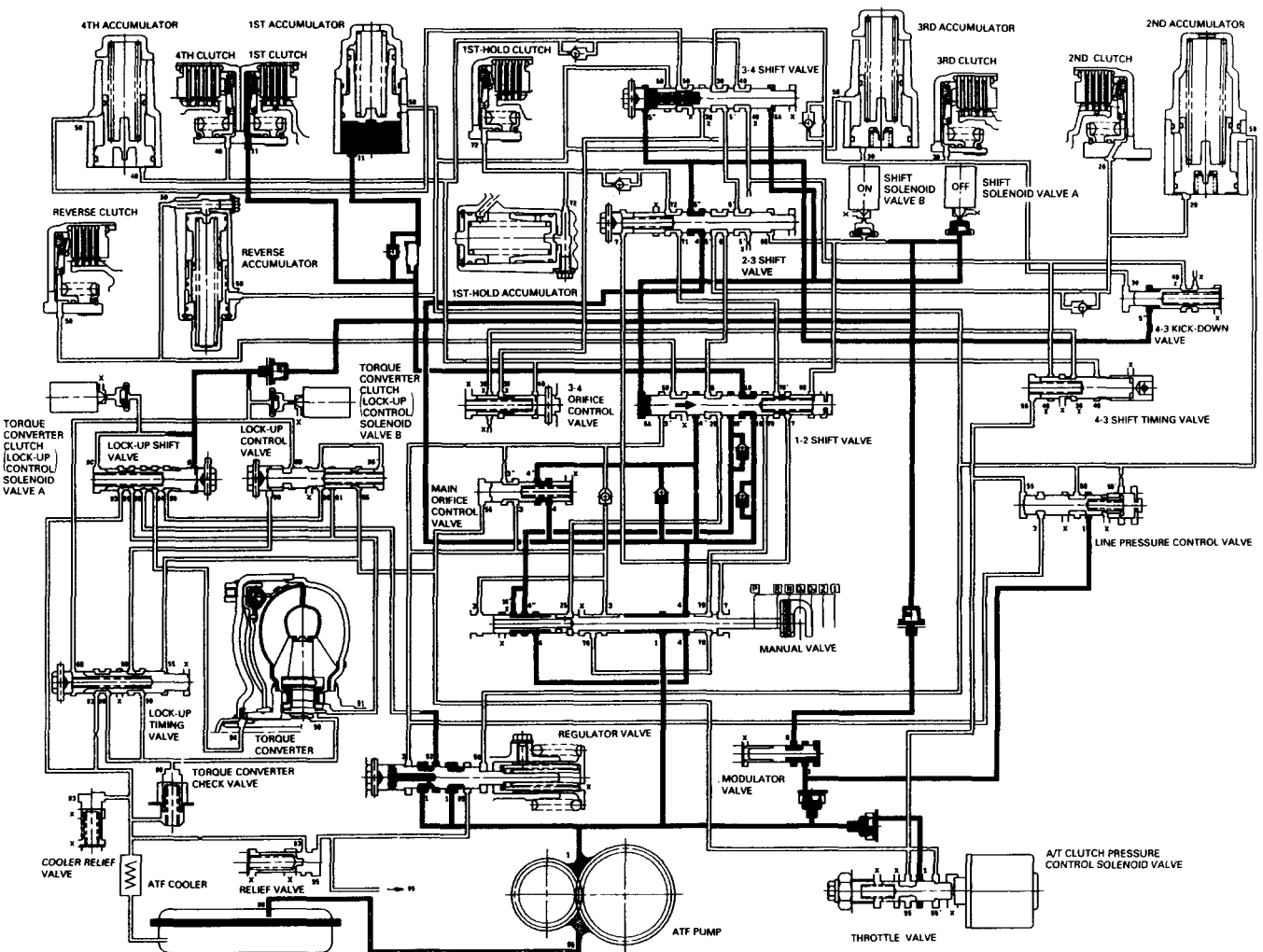
D₄ or D₃ Position

1. 1st Gear

The flow of fluid through the torque converter circuit is the same as in **[N]** position. The line pressure (1) flows through the manual valve, the modulator valve, the line pressure control valve and the throttle valve. The line pressure (1) becomes the modulator pressure (6) at the modulator valve, and the line pressure (4) at the manual valve. The modulator pressure (6) flows to the left ends of the 1-2 shift valve and the 3-4 shift valve because shift solenoid valve A is turned OFF and B is turned ON by the PCM. The 1-2 shift valve is moved to the right side, and uncovers the port to allow the 1st clutch pressure (10) to the 1st clutch. The 1st clutch pressure (10) is applied to the 1st clutch, consequently, the vehicle will move as the engine power is transmitted. In **[D4]** or **[D5]** position, the 1st-hold clutch pressure is not applied to the 1st-hold clutch because the manual valve covers the port leading to the 1st-hold clutch.

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - 01 models, the 2nd accumulator is different.





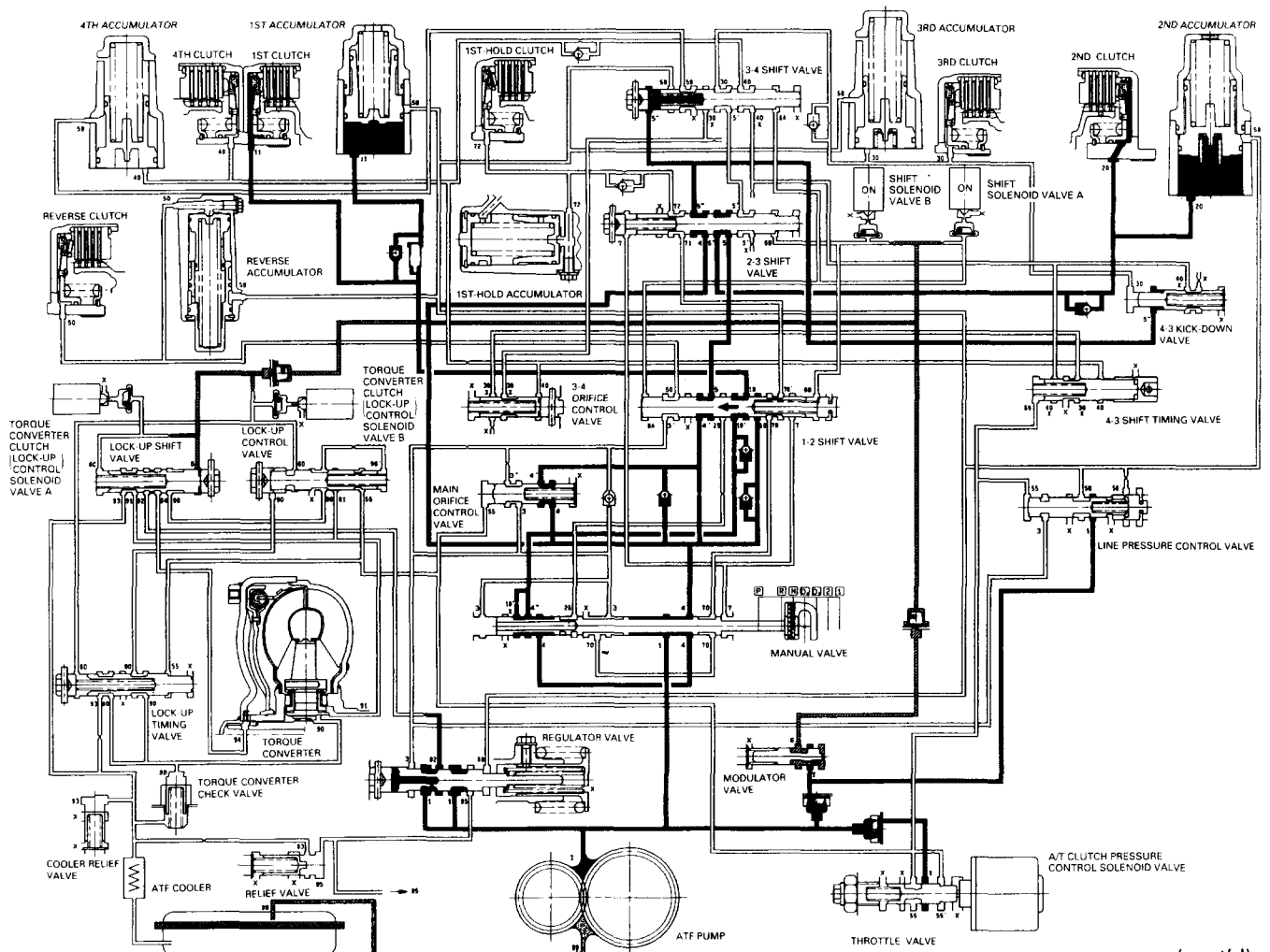
2. 2nd Gear

As the speed of the vehicle reaches the prescribed value, shift solenoid valve A is turned ON by means of the PCM. Shift solenoid valve B remains ON. The modulator pressure (6A) in the left end of the 1-2 shift valve is released by turning shift solenoid valve A ON. The 1-2 shift valve is moved to the left side and uncovers the port to allow the line pressure (5) to the 2nd clutch. The line pressure (5) becomes the 2nd clutch pressure (20) at the orifice. The 2nd clutch pressure (20) is applied to the 2nd clutch, and the 2nd clutch is engaged.

Hydraulic pressure also flows to the 1st clutch. However, no power is transmitted because of the one-way clutch.

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - 01 models, the 2nd accumulator is different.



(cont'd)

Description

Hydraulic Flow (cont'd)

D₃ or D₄ Position

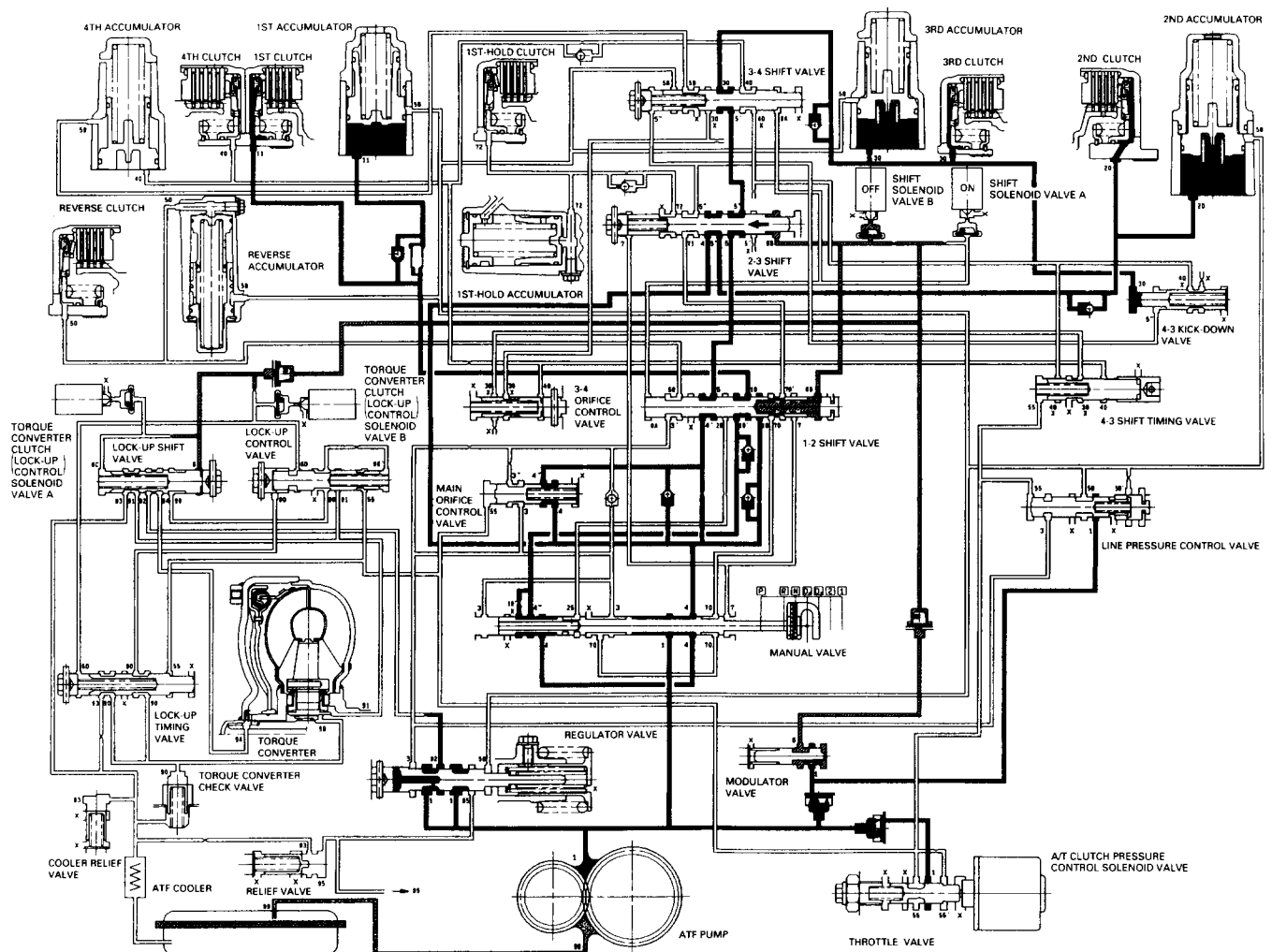
3. 3rd Gear

As the speed of the vehicle reaches the prescribed value, shift solenoid valve B is turned OFF by means of the PCM. Shift solenoid valve A remains ON. The modulator pressure (6B) flows to the right ends of the 1-2 shift valve and the 2-3 shift valve. The 2-3 shift valve is moved to the left side by the modulator pressure (6B). The 2-3 shift valve uncovers the port to allow the line pressure (5) to the 3-4 shift valve as this valve is moved to the left side. The line pressure (5') becomes the 3rd clutch pressure at the 3-4 shift valve. The 3rd clutch pressure (30) is applied to the 3rd clutch, and the 3rd clutch is engaged.

Hydraulic pressure also flows to the 1st clutch and 2nd clutch. However, no power is transmitted because of the one-way clutches.

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - 01 models, the 2nd accumulator is different.





D Position

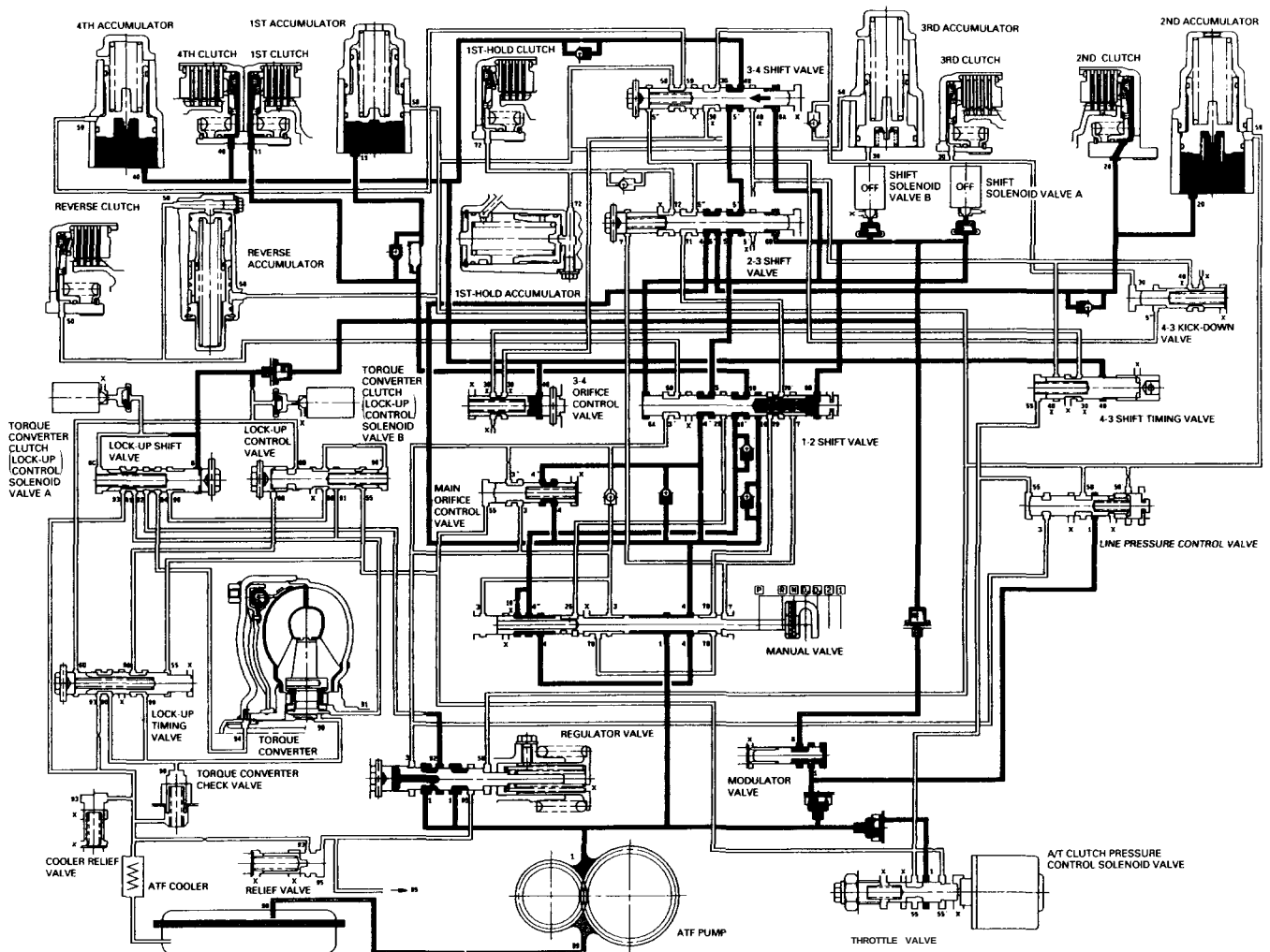
4. 4th Gear

As the speed of the vehicle reaches the prescribed value, shift solenoid valve A is turned OFF by means of the PCM. Shift solenoid valve B remains OFF. The modulator pressure (6A) flows to the right end of the 3-4 shift valve and the left end of the 1-2 shift valve. The modulator pressure (6A) in the left end of the 1-2 shift valve equals the modulator pressure (6B) in the right end of the 1-2 shift valve, so the 1-2 shift valve remains in the left side by the tension of the valve spring. The 3-4 shift valve is moved to the left side by modulator pressure (6B). The 3-4 shift valve covers the port leading to the 3rd clutch and uncovers to the 4th clutch as this valve is moved to the left side. The line pressure (5') from the 2-3 shift valve becomes the 4th clutch pressure (40) at the 3-4 shift valve. The 4th clutch pressure (40) is applied to the 4th clutch, and the 4th clutch is engaged.

Hydraulic pressure also flows to the 1st clutch and 2nd clutch. However, no power is transmitted because of the one-way clutches.

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - 01 models, the 2nd accumulator is different.



(cont'd)

Description

Hydraulic Flow (cont'd)

R Position

The flow of fluid through the torque converter circuit is the same as in **N** position.

The line pressure (1) becomes the modulator pressure (6) at the modulator valve, and the line pressure (3) at the manual valve.

The modulator pressure (6) flows to the right ends of the 1-2 shift valve and 2-3 shift valve because shift solenoid valve A is turned ON and B is turned OFF by the PCM, and those valves are moved to the left side.

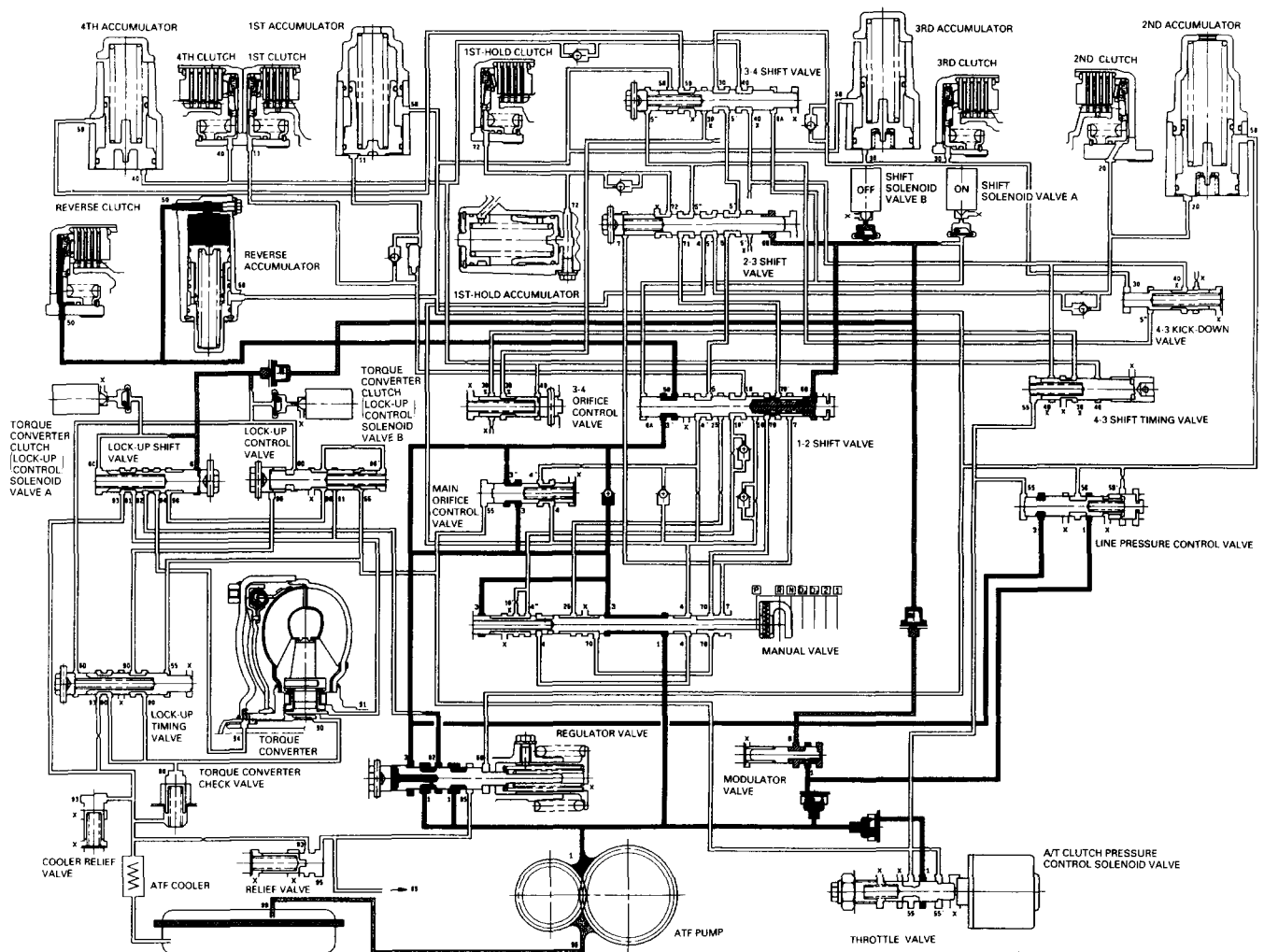
The line pressure (3) flows to the 1-2 shift valve and it becomes the reverse clutch pressure (50). The reverse clutch pressure (50) is applied to the reverse clutch, and the reverse clutch is engaged.

Reverse Inhibitor Control

When the **R** position is selected while the vehicle is moving forward at speeds over 6 mph (10 km/h), the PCM outputs the 1st signal to shift solenoid valves A and B; shift solenoid valve A is turned OFF, shift solenoid valve B is turned ON. The 1-2 shift valve is moved to the right side and covers the port to stop line pressure (3) to the reverse clutch. The line pressure (3) is not applied to the reverse clutch, and the reverse clutch pressure (50) is not applied to the reverse clutch, as a result, power is not transmitted in the reverse direction.

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - '01 models, the 2nd accumulator is different.





P Position

The flow of fluid through the torque converter circuit is the same as in **N** position.

The line pressure (1) is intercepted by the manual valve. Hydraulic pressure is not supplied to the clutches, and power is not transmitted.

NOTE:

- When used, "left" or "right" indicates direction on the hydraulic circuit.
- The hydraulic circuit is for '96 - '98 models. On '99 - 01 models, the 2nd accumulator is different.

