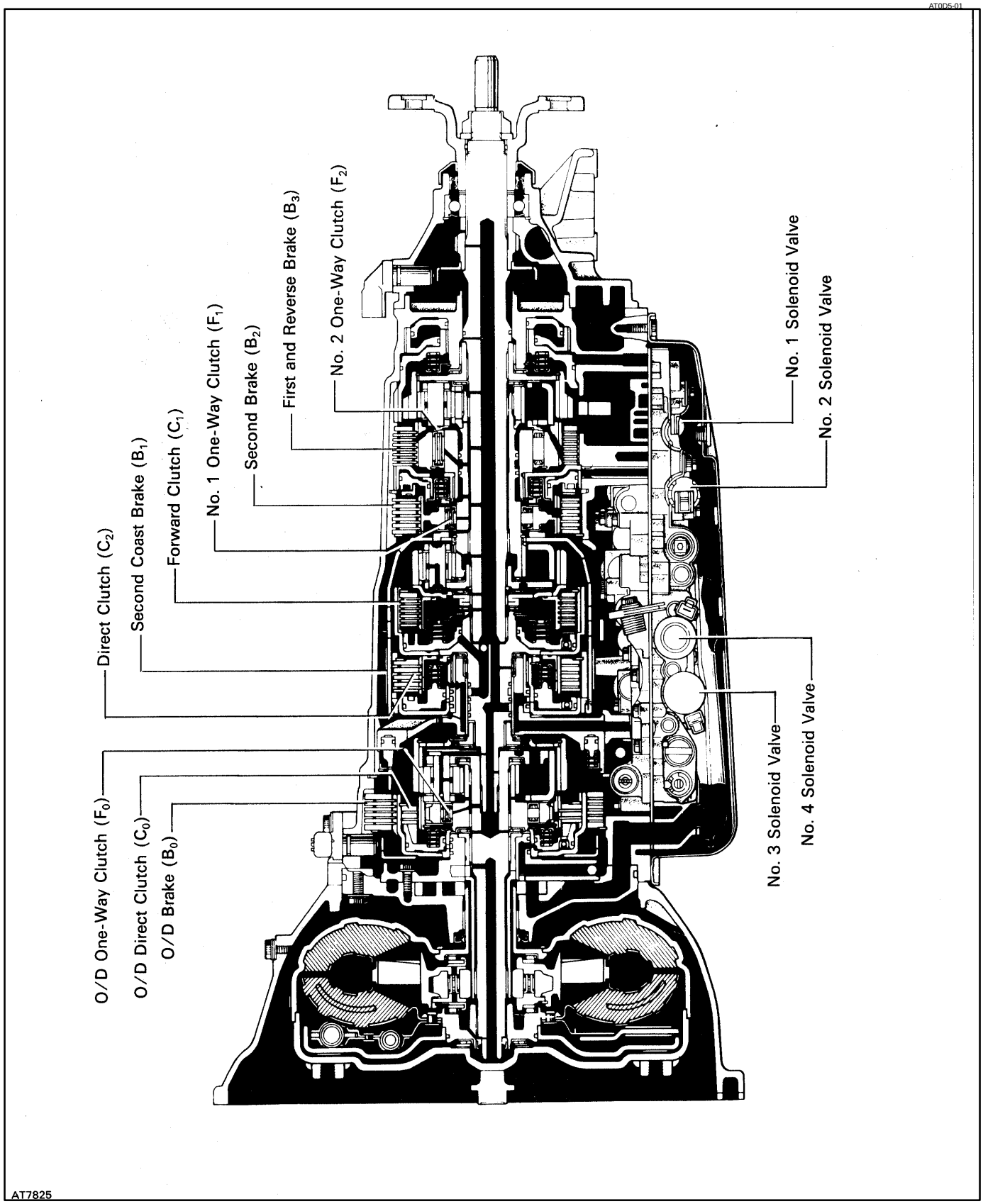
OPERATION


AT0D5-01
Direct Clutch (C_2)
Second Coast Brake (B_1)
Forward Clutch (C_1)
No. 1 One-Way Clutch (F_1)
Second Brake (B_2)
First and Reverse Brake (B_3)
No. 2 One-Way Clutch (F_2)
No. 1 Solenoid Valve
No. 2 Solenoid Valve
No. 3 Solenoid Valve
No. 4 Solenoid Valve
O/D One-Way Clutch (F_0)
O/D Direct Clutch (C_0)
O/D Brake (B_0)
AT7825

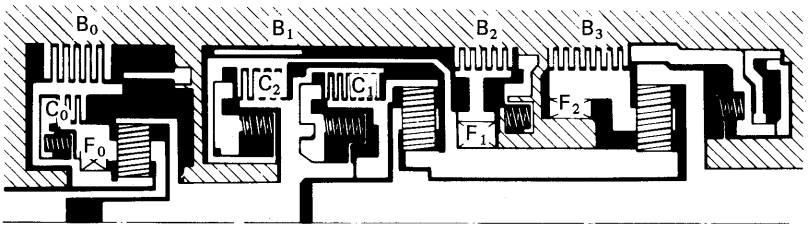
Range (i. e., Shift Lever Position)	Gear	No.1 Solenoid Valve	No.2 Solenoid Valve	C_1	C_2	C_0	B_1	B_2	B_3	B_0	F_1	F_2	F_0
P	Park	ON	OFF			●							
R	Reverse	ON	OFF		●	●			●				●
N	Neutral	ON	OFF			●							
D	1st	ON	OFF	●		●						●	●
	2nd	ON	ON	●		●		●			●		●
	3rd	OFF	ON	●	●	●		●					●
	O/D	OFF	OFF	●	●			●		●			
2	1st	ON	OFF	●		●						●	●
	2nd	ON	ON	●		●	●	●			●		●
	* 3rd	OFF	ON	●	●	●		●					●
L	1st	ON	OFF	●		●			●			●	●
	*2nd	ON	ON	●		●	●	●			●		●

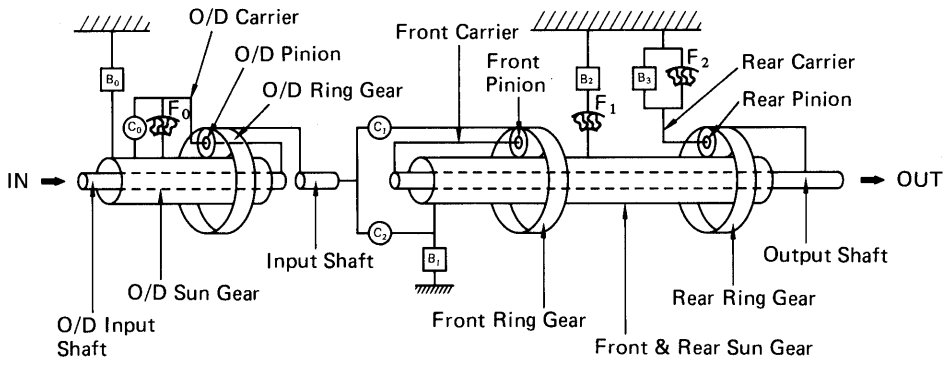
*: Down-shift only in the L position and 2nd gear, and in the 2 position and 3rd gear-no up-shift
●: Operating

V01572

1. FUNCTION OF COMPONENTS

Component		Function
C_1	Forward Clutch	Connects input shaft and front planetary ring gear.
C_2	Direct Clutch	Connects input shaft and front & rear planetary sun gear.
C_0	O/D Direct Clutch	Connects overdrive sun gear and overdrive planetary carrier.
B_1	2nd Coast Brake	Prevents front & rear planetary sun gear from turning either clockwise or counterclockwise.
B_2	2nd Brake	Prevents outer race of F_1 from turning either clockwise or counterclockwise thus preventing the front & rear planetary sun gear from turning counterclockwise.
B_3	1st & Reverse Brake	Prevents rear planetary carrier from turning either clockwise or counterclockwise.
B_0	O/D Brake	Prevents overdrive sun gear from turning either clockwise or counterclockwise.
F_1	No.1 One-Way Clutch	When B_2 is operating, this clutch prevents the front & rear planetary sun gear from turning counterclockwise.
F_2	No.2 One-Way Clutch	Prevents rear planetary carrier from turning counterclockwise.
F_0	O/D One-Way Clutch	When the transmission is being driven by the engine, this clutch connects the overdrive sun gear and overdrive planetary carrier.
Planetary Gears		These gears change the route through which driving force is transmitted in accordance with the operation of each clutch and brake in order to increase or reduce the input and output speed.





AT8491
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V01573

2. HYDRAULIC CONTROL SYSTEM

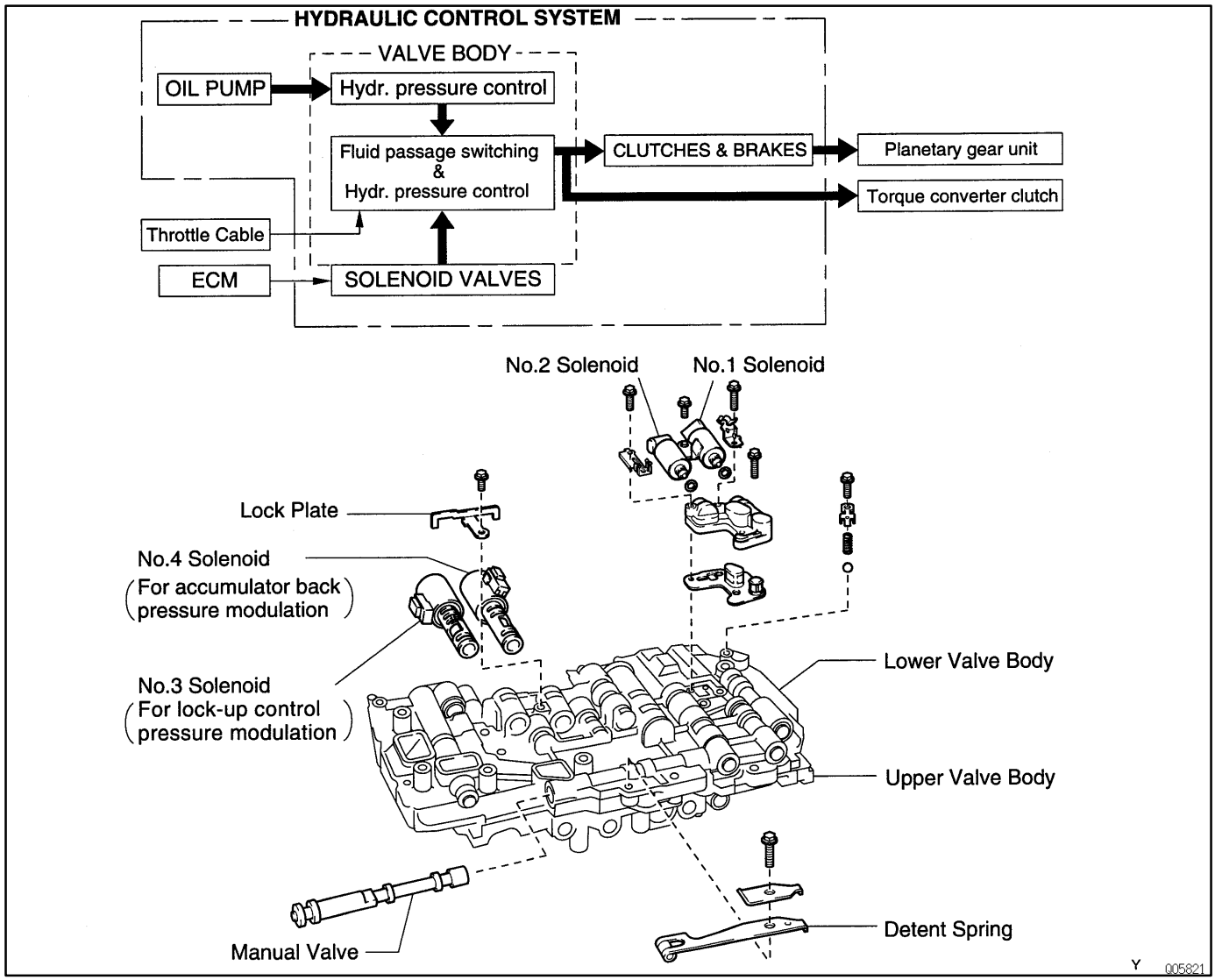
The hydraulic control system is composed of the oil pump, the valve body, the solenoid valves, the accumulators, the clutches and brakes, as well as the fluid passages which connect all of these components. Based on the hydraulic pressure created by the oil pump, the hydraulic control system governs the hydraulic pressure acting on the torque converter , clutches and brakes in accordance with the vehicle driving conditions.

There are solenoid valves on the valve body.

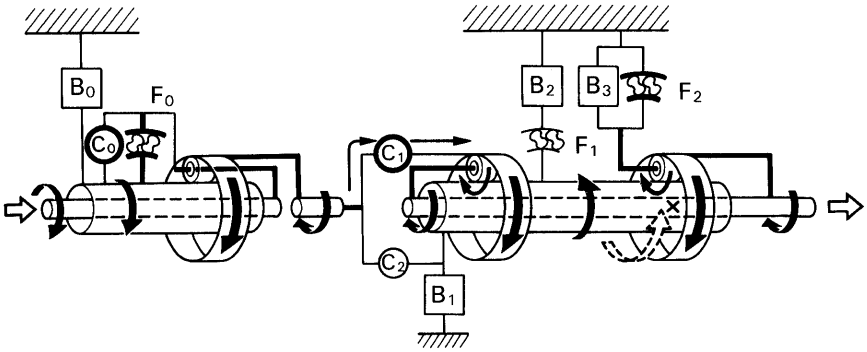
The No.1 and No.2 solenoid valves are turned on and off by signals from the ECU to operate the shift valves, and change the gear shift position.

The No.3 solenoid valve is operated by signals from the ECU to engage or disengage the lock-up clutch of the torque converter clutch.

The No.4 solenoid valve is operated by signals from the ECU to control the engagement speed and reduce gear shift shock.

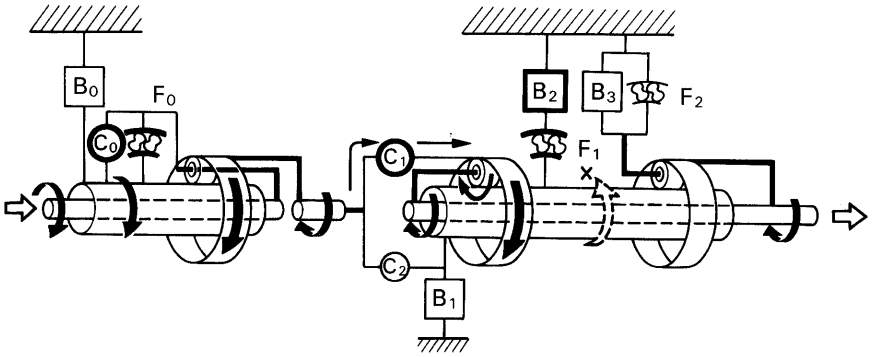


D or 2 Position 1st Gear



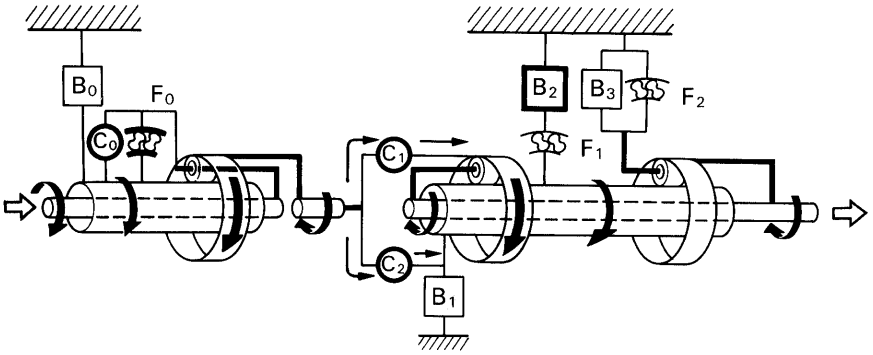
AT6675

D Position 2nd Gear



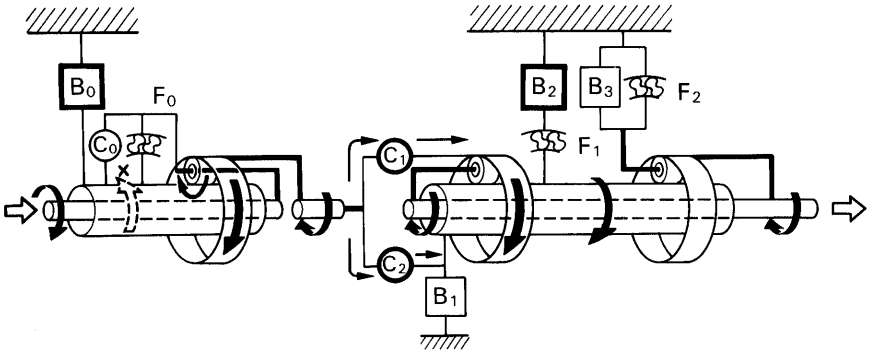
AT6676

D or 2 Position 3rd Gear



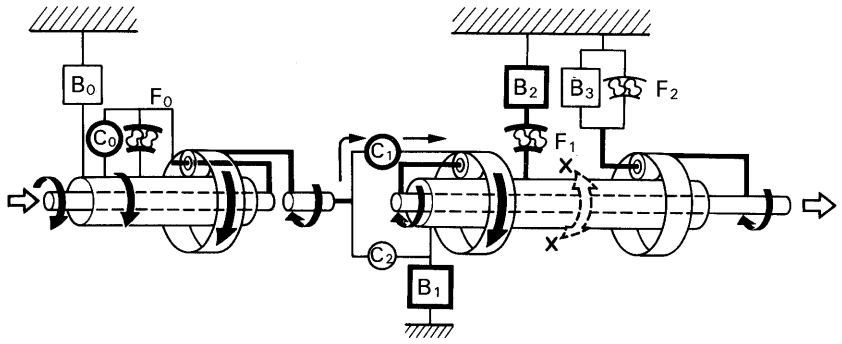
AT6677

D Position O/D



AT6678

2 or L Position 2nd Gear



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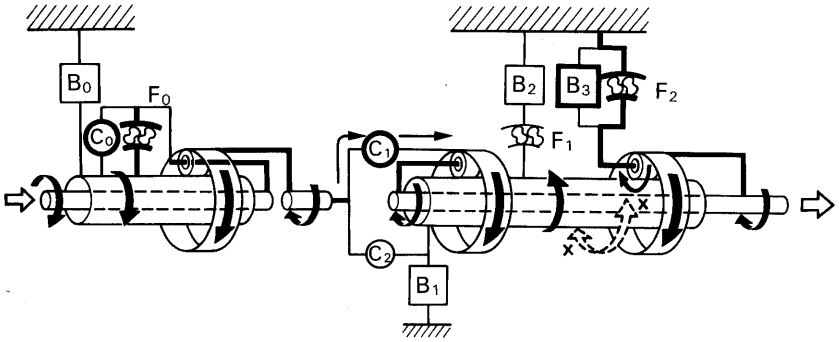
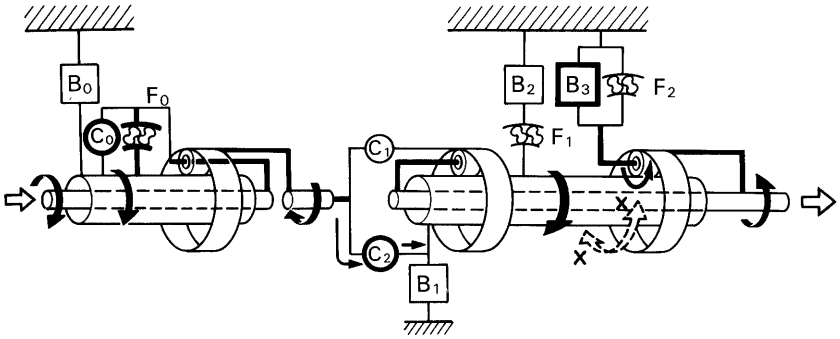
L Position 1st Gear



AT6680

R Position Reverse Gear



AT6681

V02111

3. ELECTRONIC CONTROL SYSTEM

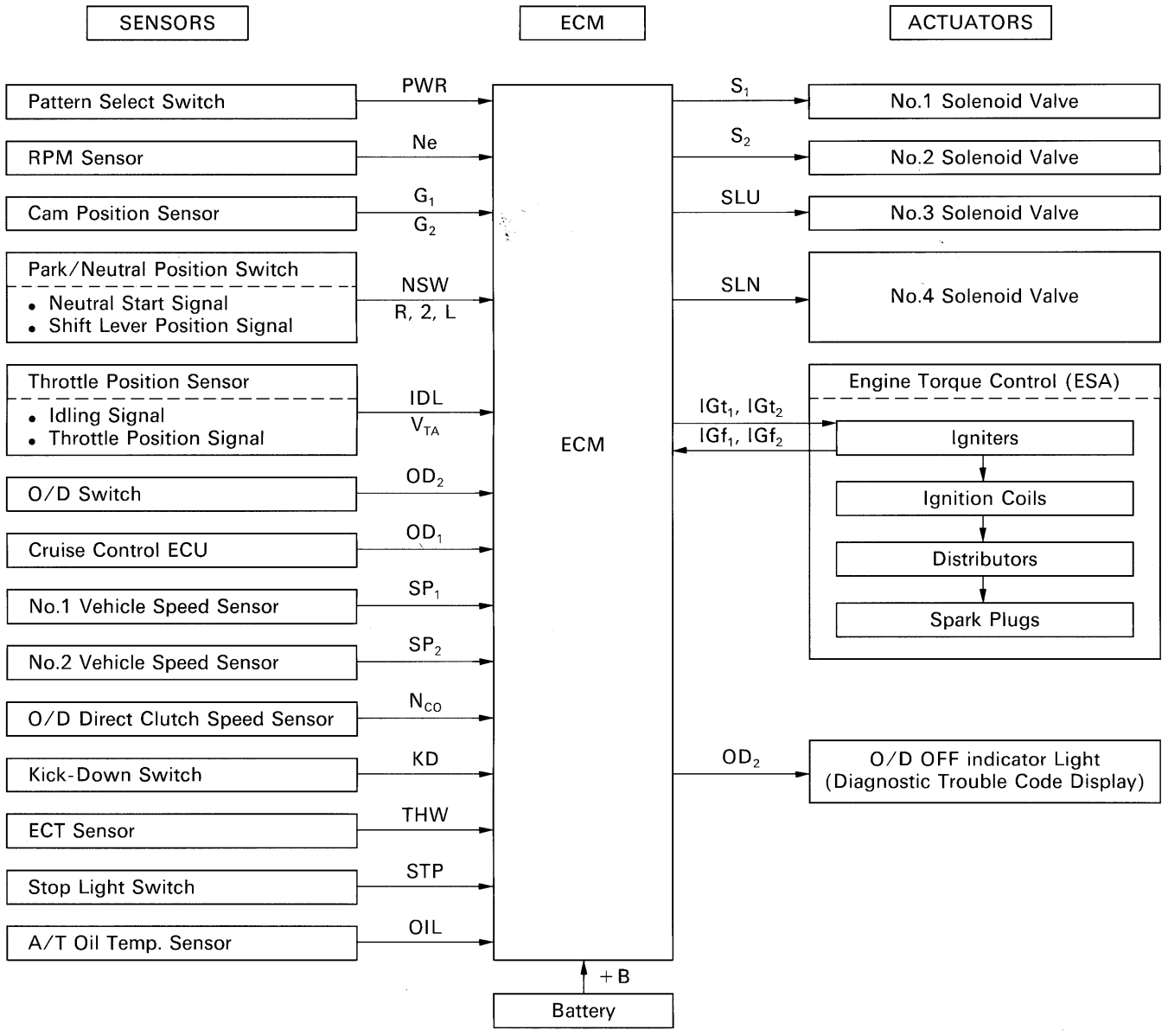
The electronic control system for the A341E, A342E automatic transmissions provides extremely precise control of the gear shift timing and lock-up timing in response to driving conditions as sensed by various sensors located throughout the vehicle and in response to the engine's running condition.

At the same time, the ECU control reduces vehicle squat when the vehicle starts out and gear shift shock.

The electronic control system is also equipped with a self diagnosis system which diagnoses malfunctions for the vehicle to continue functioning when a malfunction occurs.

CONSTRUCTION

The electronic control system can be broadly divided onto three groups; the sensors, ECU and actuators.



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