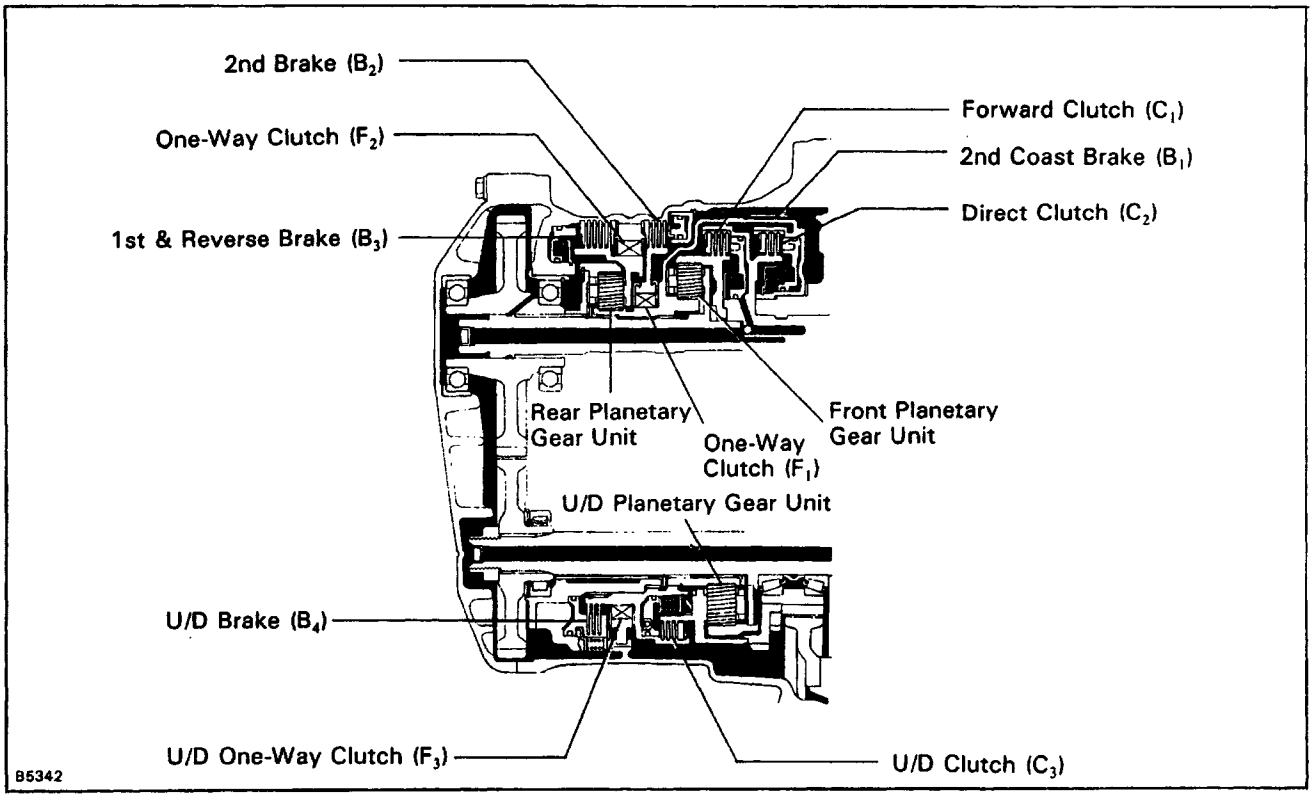
OPERATION

AX06H – 01



O ... Operating

Shift fever position	Gear position	C_1	C_2	C_3	B_1	B_2	B_3	B_4	F_1	F_2	F_3
P	Parking							○			
R	Reverse		○				○	○			
N	Neutral							○			
D	**1st**	○						○		○	○
	2nd	○				○		○	○		○
	3rd	○	○			○		○			○
	OD	○	○	○		○					
2	1st	○						○		○	○
	2nd	○			○	○		○	○		○
L	**1st**	○					○	○		○	○
	* 2nd	○			○	○		○	○		○

* Down-shift only in L range, 2nd gear — no up-shift.

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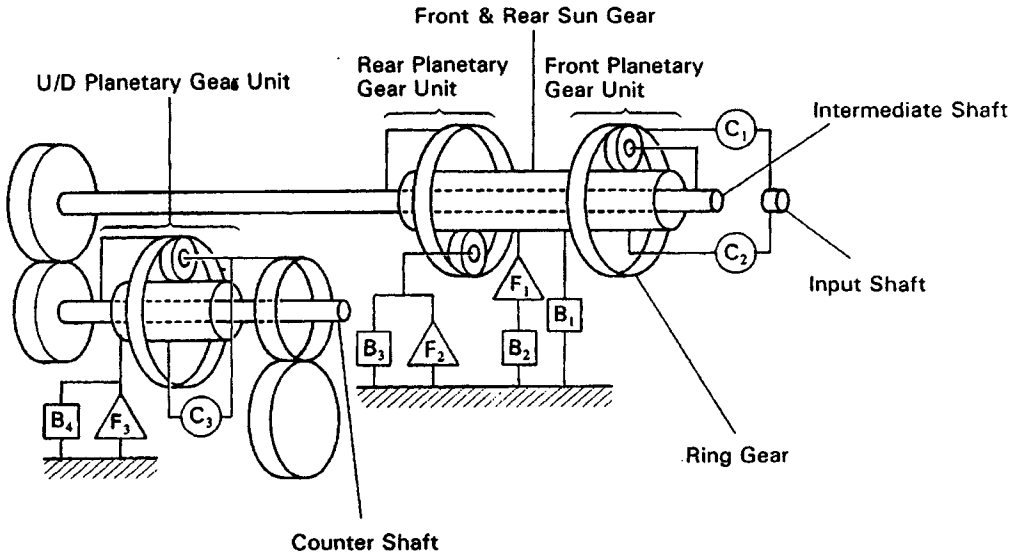
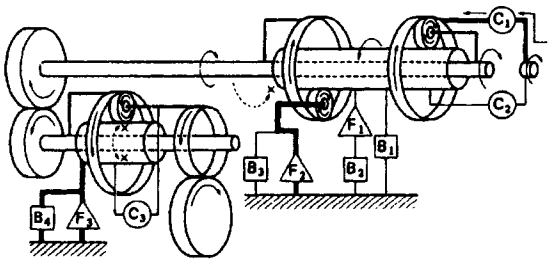
1. FUNCTION OF COMPONENTS

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_3	U/D Clutch	Connects underdrive sun gear and underdrive 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_4	U/D Brake	Prevents underdrive 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_3	U/D One–Way Clutch	Prevents underdrive planetary sun gear from turning clockwise.
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.



D or 2 Range 1st Gear



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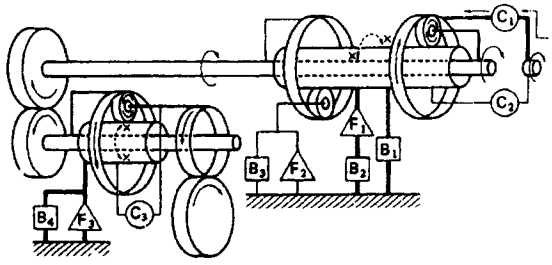
2 Range 2nd Gear



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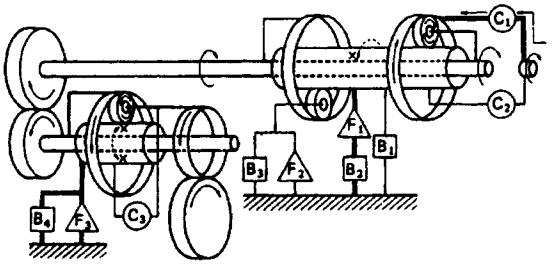
D Range 2nd Gear



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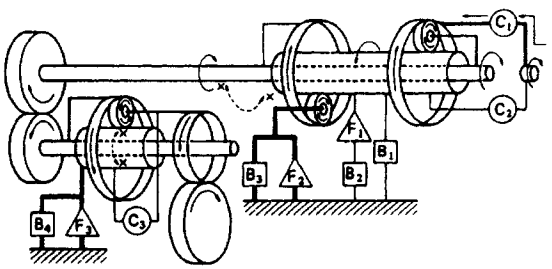
L Range 1st Gear



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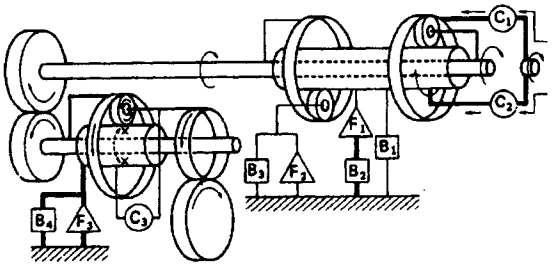
D Range 3rd Gear



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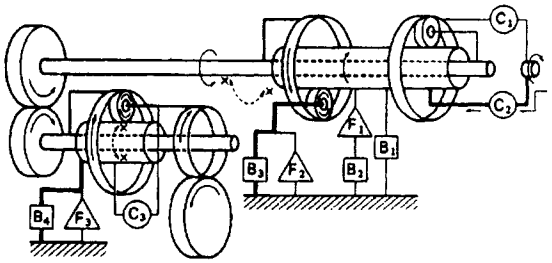
R Range Reverse Gear



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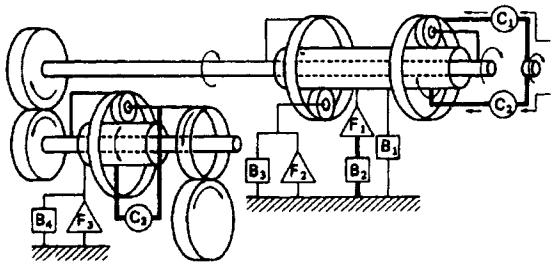
D Range O/D



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2. Hydraulic Control System

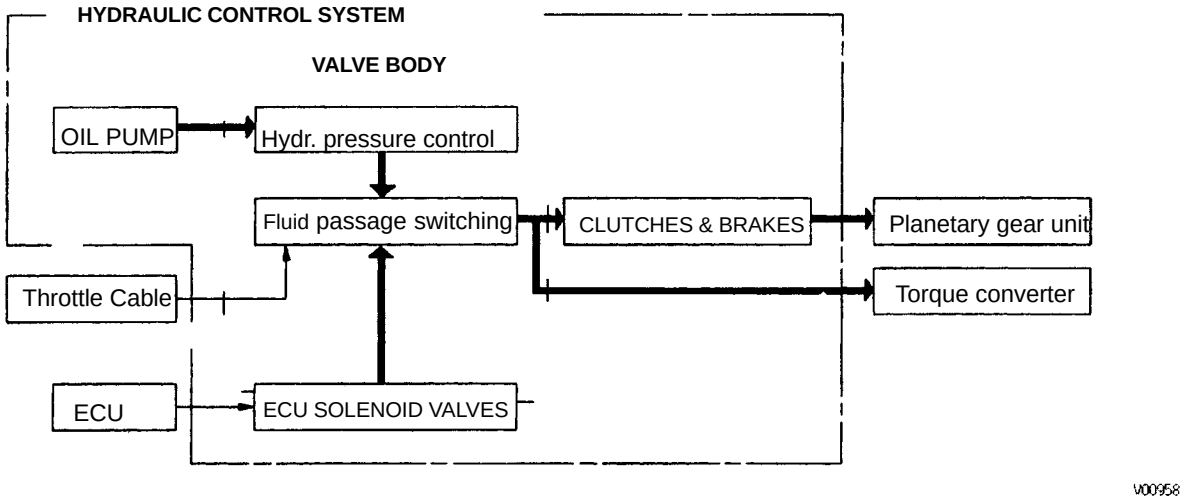
The hydraulic control system is composed of the oil pump, the valve body, the solenoid valves, the accumulators, the clutches and brakes as well as the fluid passages which connect all of these components.

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 three solenoid valves on the valve body.

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

The transaxle converter clutch switch valve is operated by signals from the PCMT to engage or disengage the lock–up clutch of the torque converter.



3. Electronic Control System

The electronic control system for controlling the shift timing and the operation of the lock–up clutch is composed of the following three parts:

(a) Sensors: These sense the vehicle speed and throttle position and send this data to the PCMT in the form of electronic signals.

(b) PCMT: This determines the shift and lock–up timing based upon the signals from the sensors.

(c) Actuators: Solenoid valves divert hydraulic pressure from one circuit of the hydraulic control unit to another, thus controlling shifting and lock–up timing.