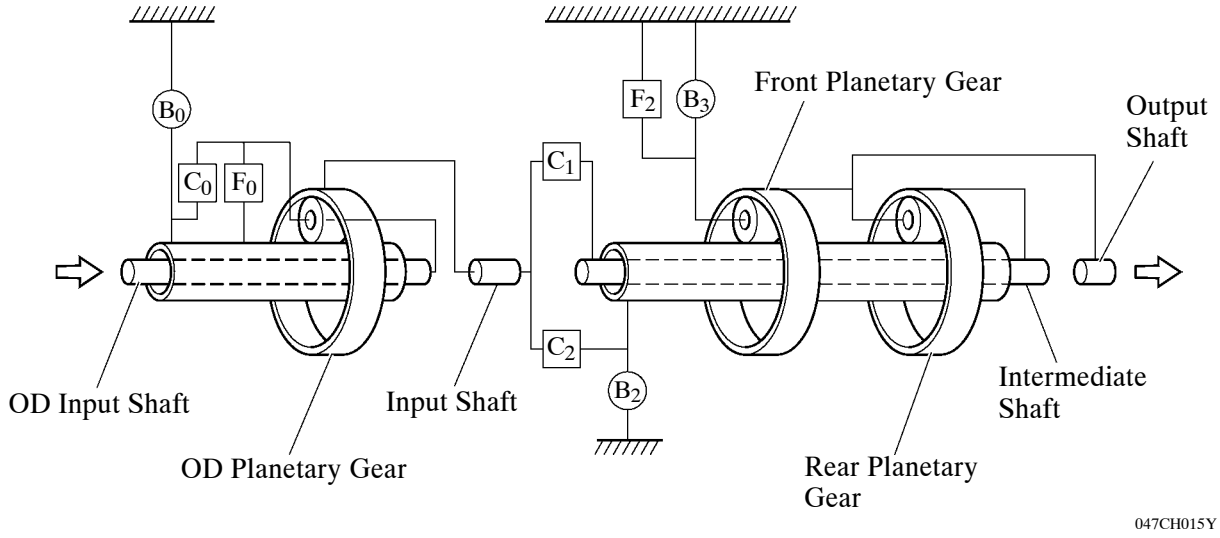
4. Planetary Gear Unit

Construction

The planetary gear unit consists of three planetary gear units, three clutches, three brakes, and two one-way clutches.



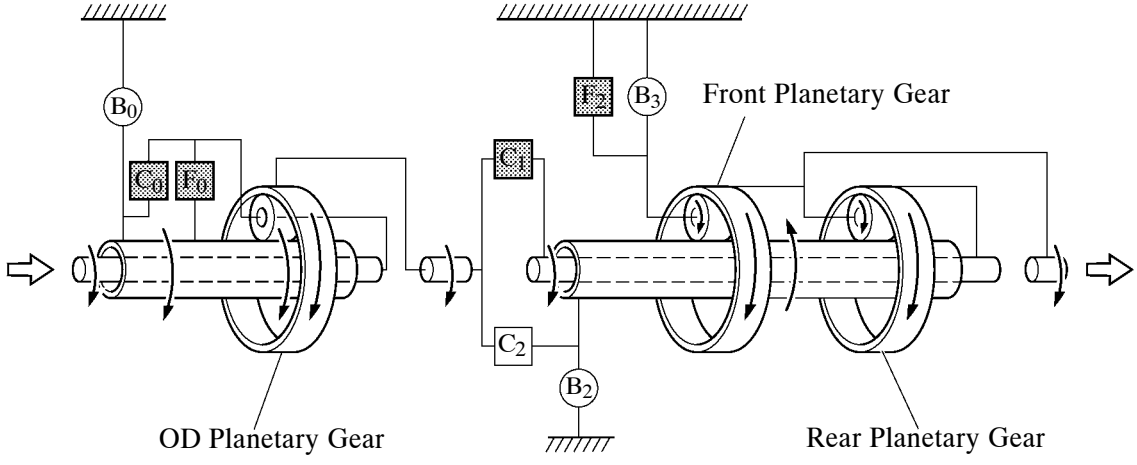
Function of Components

Component		Function
C_0	OD Direct Clutch	Connects OD planetary sun gear and OD planetary carrier.
C_1	Forward Clutch	Connects input shaft and intermediate shaft.
C_2	Direct Clutch	Connects input shaft and front & rear planetary sun gear.
B_0	OD Brake	Prevents OD planetary sun gear from turning either clockwise or counterclockwise.
B_2	2nd Brake	Prevents front & rear planetary sun gear from turning either clockwise or counterclockwise.
B_3	1st & Reverse Brake	Prevents front planetary carrier from turning either clockwise or counterclockwise.
F_0	OD One-way Clutch	When engine power is transmitted to OD input shaft, connects OD planetary sun gear and OD planetary carrier.
F_2	No. 2 One-way Clutch	Prevents front planetary carrier from turning counterclockwise.
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 speeds.

Transmission Power Flow

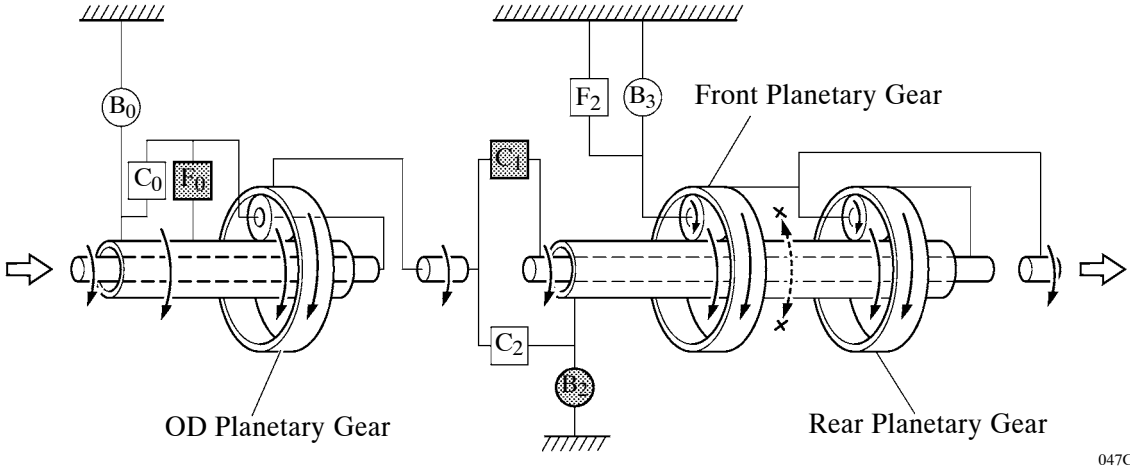
Shift Lever Position	Gear	Solenoid Valve S1	Solenoid Valve S2	Clutch			Brake			One-way Clutch	
				C_0	C_1	C_2	B_0	B_2	B_3	F_0	F_2
P	Park	OFF	OFF	○						○	
R	Reverse	OFF	OFF	○		○			○	○	
N	Neutral	OFF	OFF	○						○	
D	1st	ON	OFF	○	○					○	○
	2nd	ON	ON		○			○		○	
	3rd	OFF	ON	○	○	○				○	
	4th	OFF	OFF		○	○	○				
2	1st	ON	OFF	○	○					○	○
	2nd	ON	ON	○	○			○		○	
	3rd	OFF	ON	○	○	○				○	
L	1st	ON	OFF	○	○				○	○	○
	2nd	ON	ON	○	○			○		○	

1st Gear (D or 2 Position)

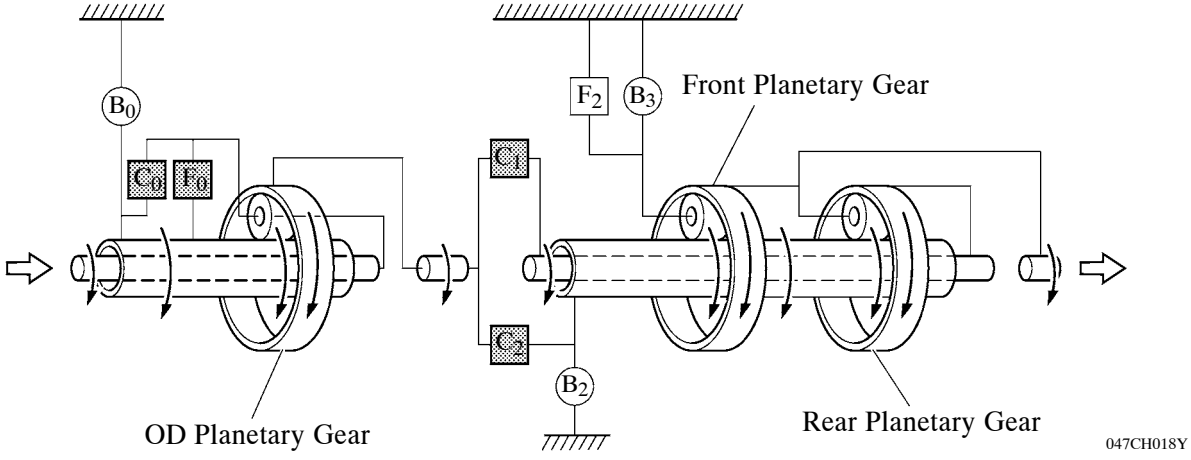


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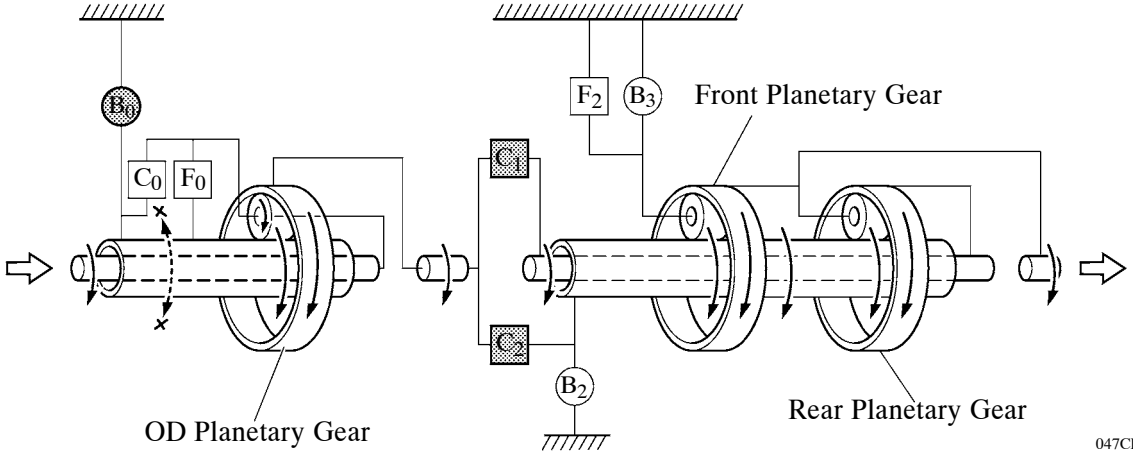
2nd Gear (D Position)



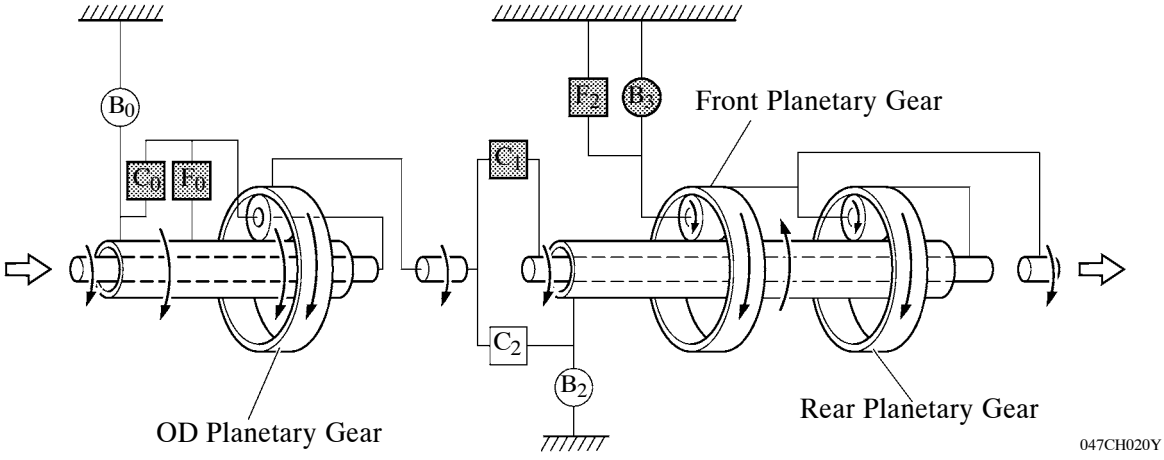
3rd Gear (D Position)



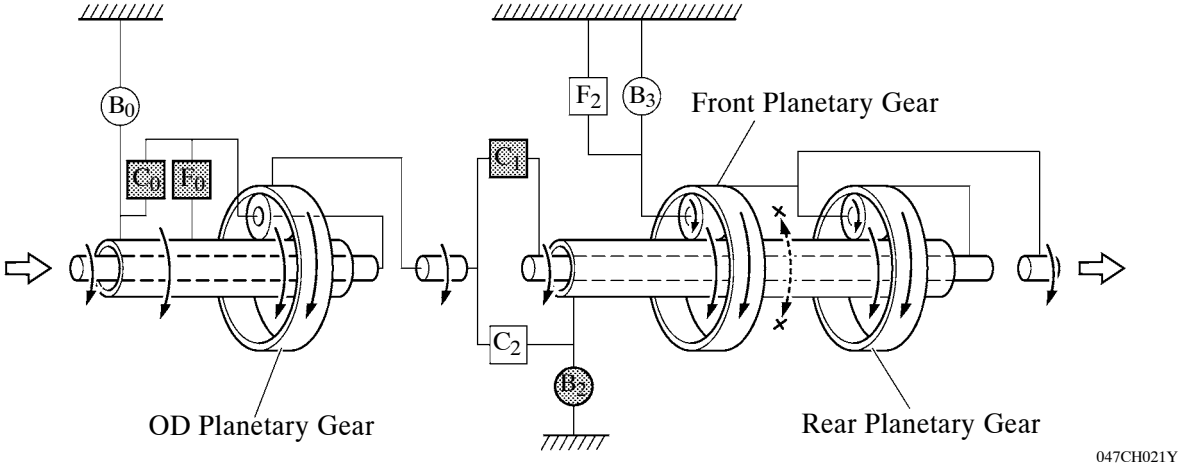
4th Gear (D Position)



1st Gear (L Position)



2nd Gear (2 or L Position)



Reverse Gear (R Position)

