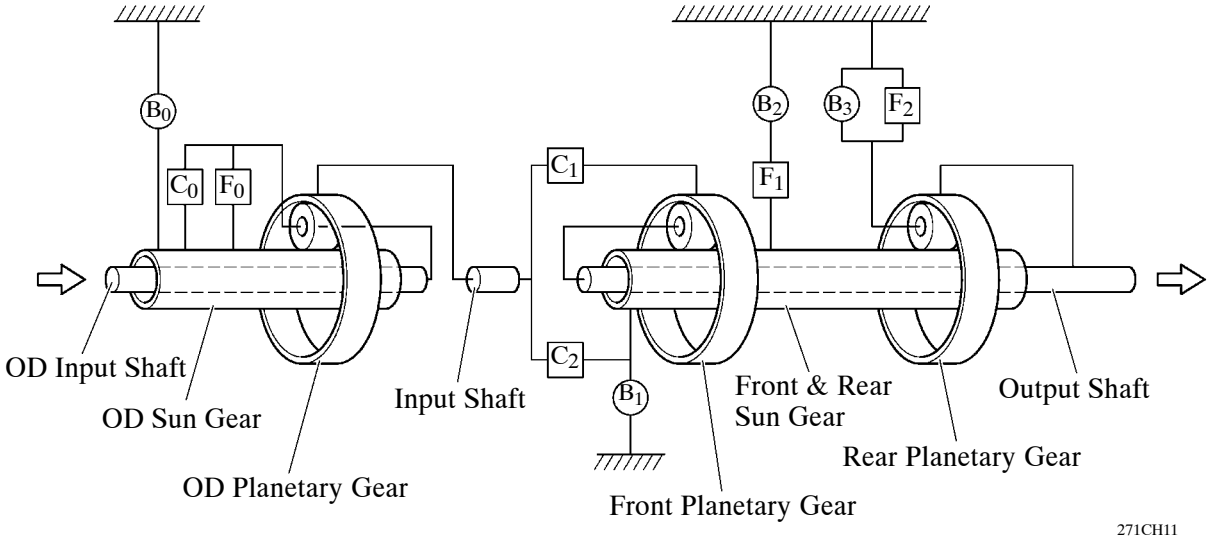
## ■ PLANETARY GEAR UNIT

### 1. Construction

The gear train consists of three multi-plate clutches, three multi-plate brakes, a single band type brake, three one-way clutches, and three planetary gear sets each consisting of a sun gear, a pinion gear and a ring gear.




### 2. Function of Components

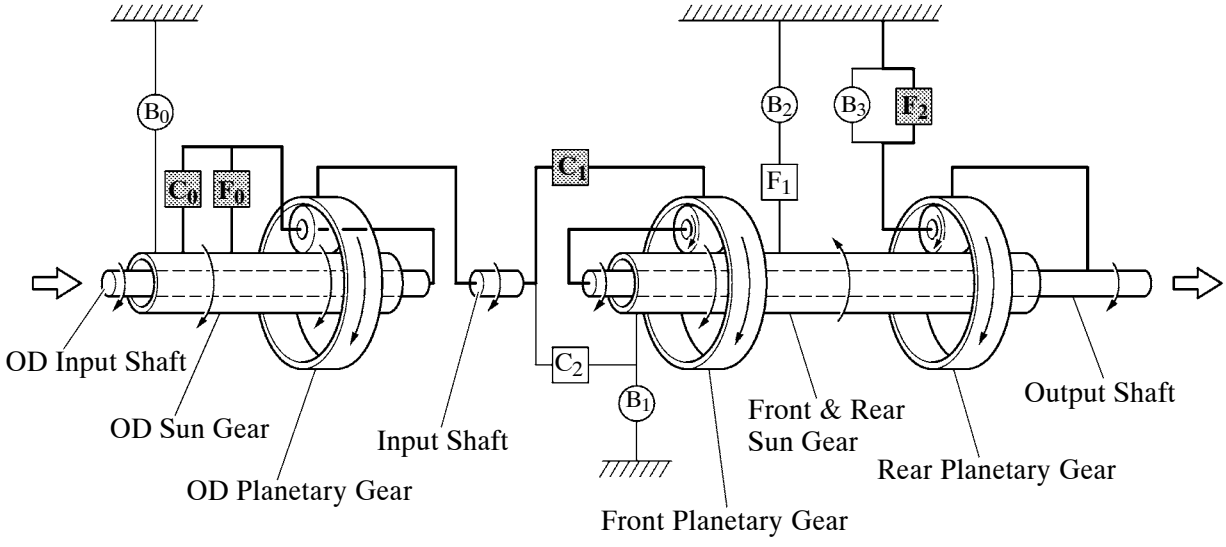
| Component | | Function |
|---|---|---|
| $C_0$ | OD Direct Clutch | Connects OD planetary sun gear and OD planetary carrier. |
| $C_1$ | Forward Clutch | Connects input shaft and front planetary ring gear. |
| $C_2$ | Direct Clutch | Connects input shaft and front & rear planetary sun gear. |
| $B_0$ | OD Brake | Prevents OD planetary sun gear from turning either clockwise or counterclockwise. |
| $B_1$ | 2nd Coast Brake | Prevents front & rear 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 front & rear sun gear from turning counterclockwise. |
| $B_3$ | 1st & Reverse Brake | Prevents rear 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 planetary carrier. |
| $F_1$ | No. 1 One-way Clutch | When $B_2$ is operating, prevents front & rear planetary sun gear from turning counterclockwise. |
| $F_2$ | No. 2 One-way Clutch | Prevents rear planetary carrier from turning counterclockwise. |
| Planetary Gears | | Change power transmission route according to clutch and brake operation, and increase or decrease output shaft revolution accordingly. |

## 3. Transmission Power Flow

### Operating Conditions

| Shift Lever Position | Gear | Solenoid Valve S1 | Solenoid Valve S2 | Clutch | | | Brake | | | | One-way Clutch | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $C_0$ | $C_1$ | $C_2$ | $B_0$ | $B_1$ | $B_2$ | $B_3$ | $F_0$ | $F_1$ | $F_2$ |
| P | Park | ON | OFF | ○ | | | | | | | | | |
| R | Reverse | ON | OFF | ○ | | ○ | | | | ○ | ○ | | |
| N | Neutral | ON | OFF | ○ | | | | | | | | | |
| D | 1st | ON | OFF | ○ | ○ | | | | | | ○ | | ○ |
| | 2nd | ON | ON | ○ | ○ | | | | ○ | | ○ | ○ | |
| | 3rd | OFF | ON | ○ | ○ | ○ | | | ○ | | ○ | | |
| | 4th | OFF | OFF | | ○ | ○ | ○ | | ○ | | | | |
| 3 | 1st | ON | OFF | ○ | ○ | | | | | | ○ | | ○ |
| | 2nd | ON | ON | ○ | ○ | | | | ○ | | ○ | ○ | |
| | 3rd | OFF | ON | ○ | ○ | ○ | | | ○ | | ○ | | |
| 2 | 1st | ON | OFF | ○ | ○ | | | | | | ○ | | ○ |
| | 2nd | ON | ON | ○ | ○ | | | ○ | ○ | | ○ | ○ | |
| L | 1st | ON | OFF | ○ | ○ | | | | | ○ | ○ | | ○ |

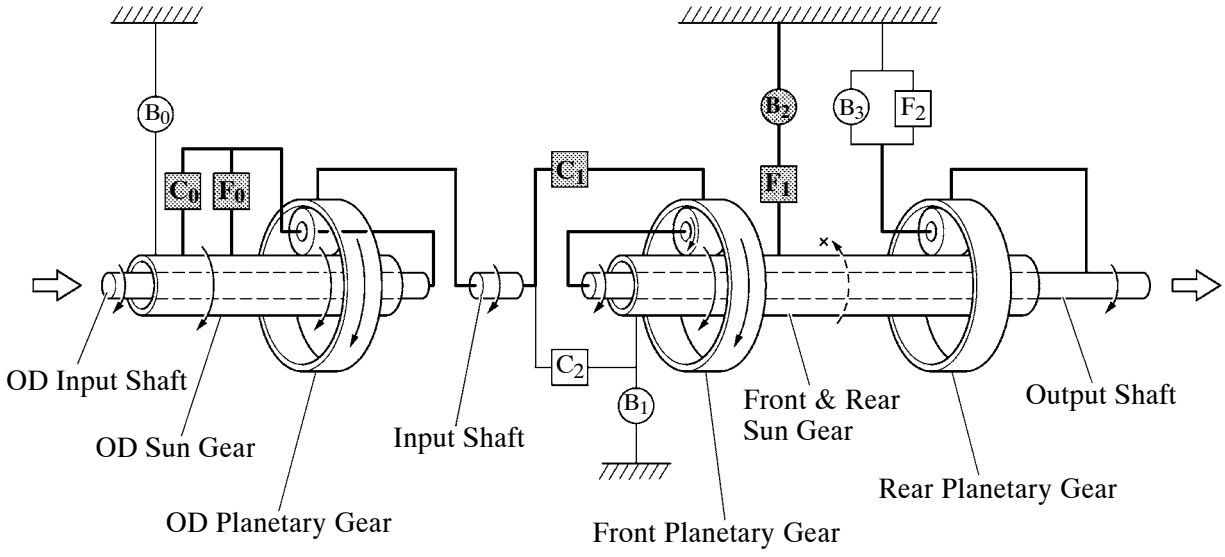
### 1st Gear (D, 3 or 2 Position)




271CH12

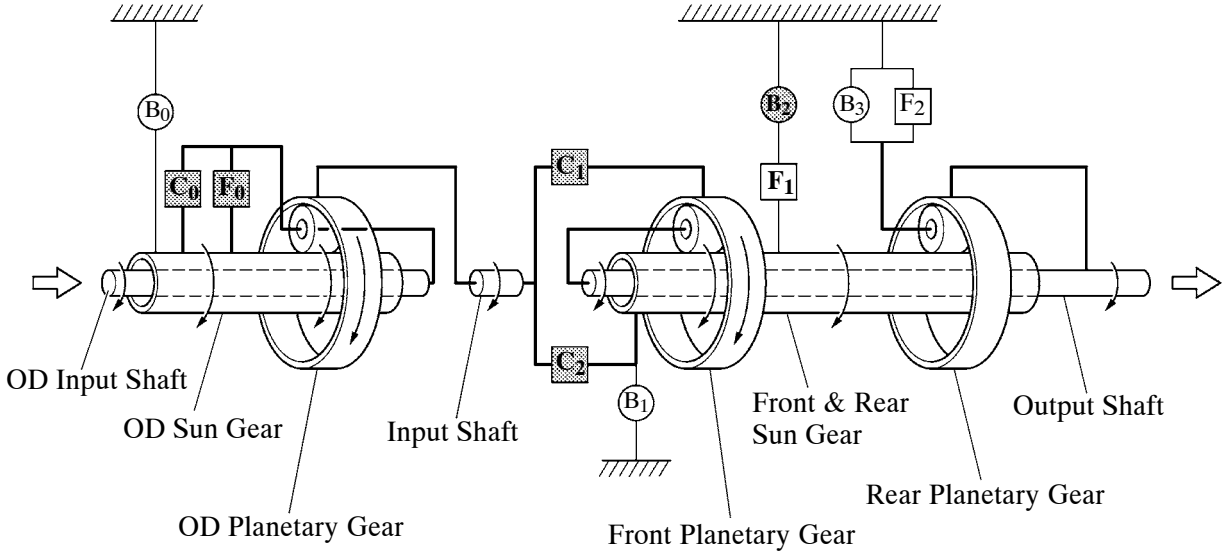
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### 2nd Gear (D or 3 Position)



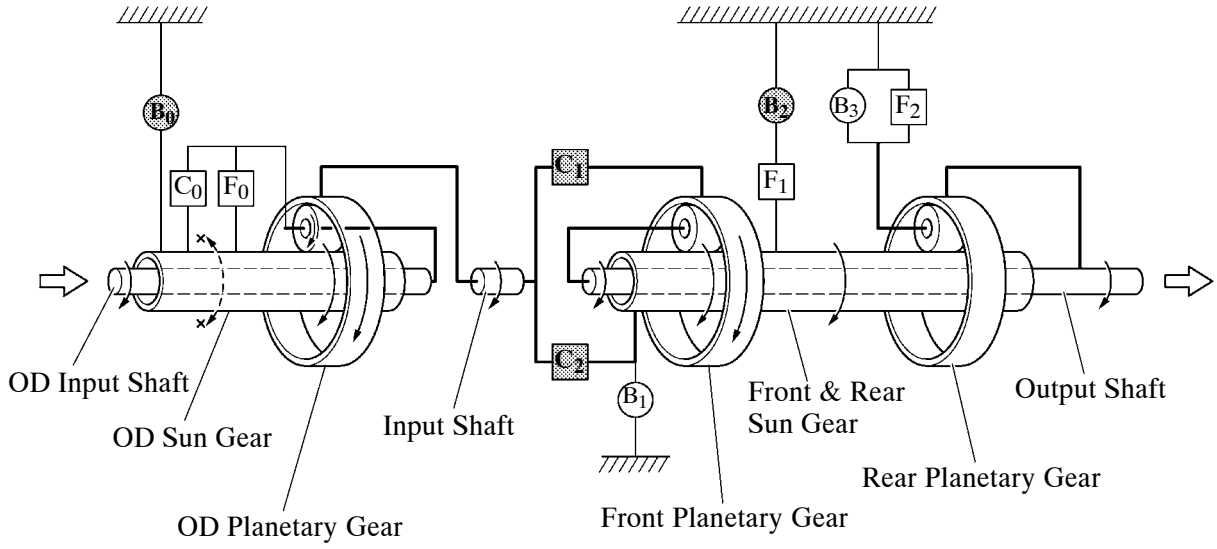

271CH13

### 3rd Gear (D or 3 Position)




271CH14

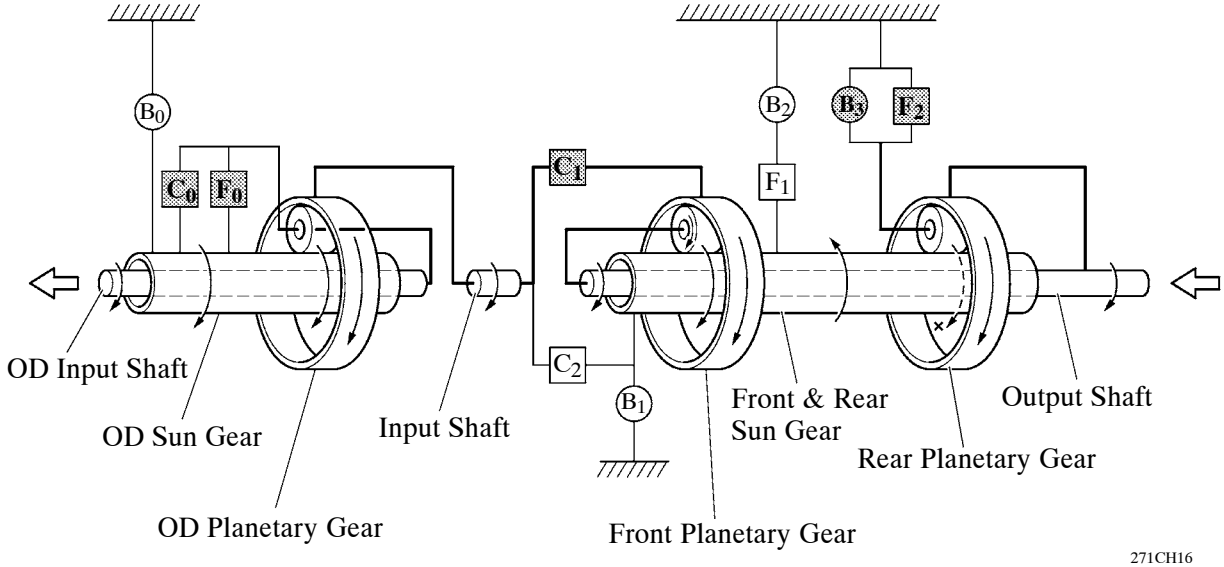
### 4th Gear (D Position)




271CH15

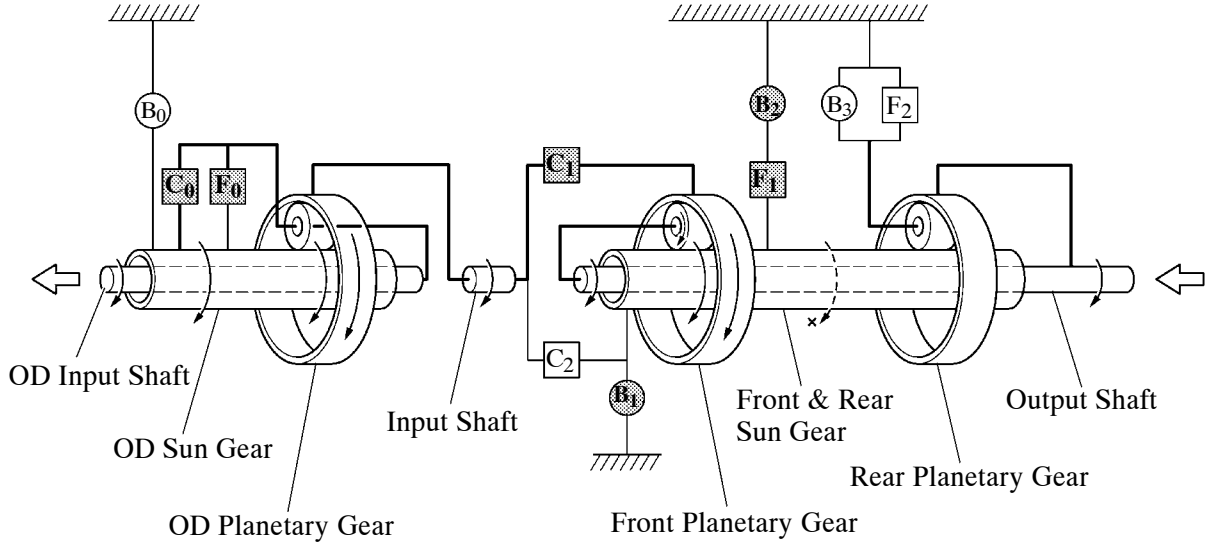


### Engine Braking in 1st Gear (L Position)



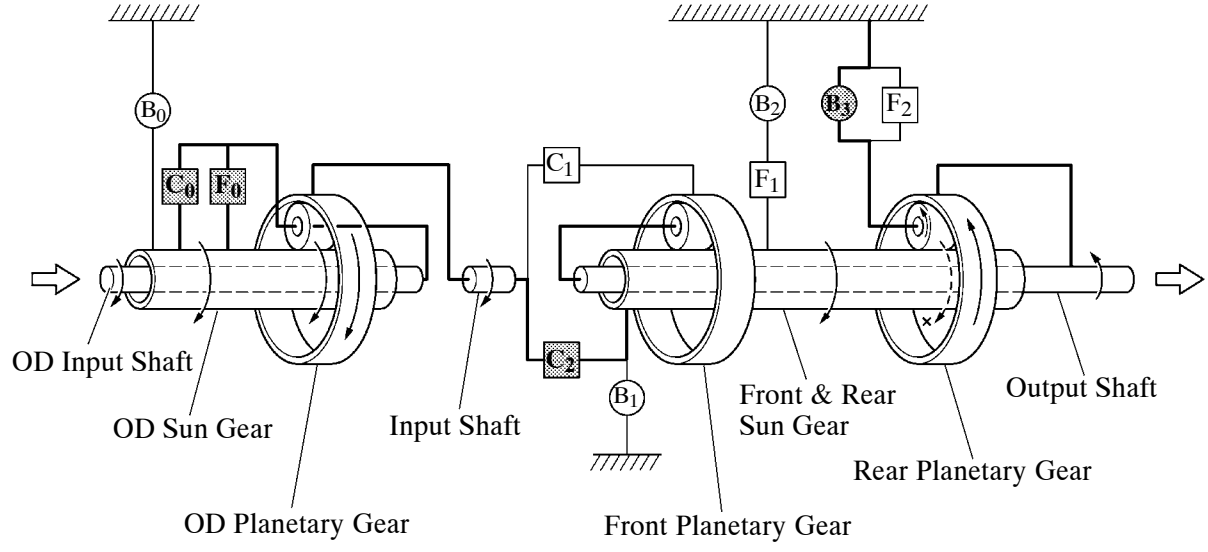

271CH16

### Engine Braking in 2nd Gear (2 or L Position)




271CH17

### Reverse Gear (R Position)




271CH18