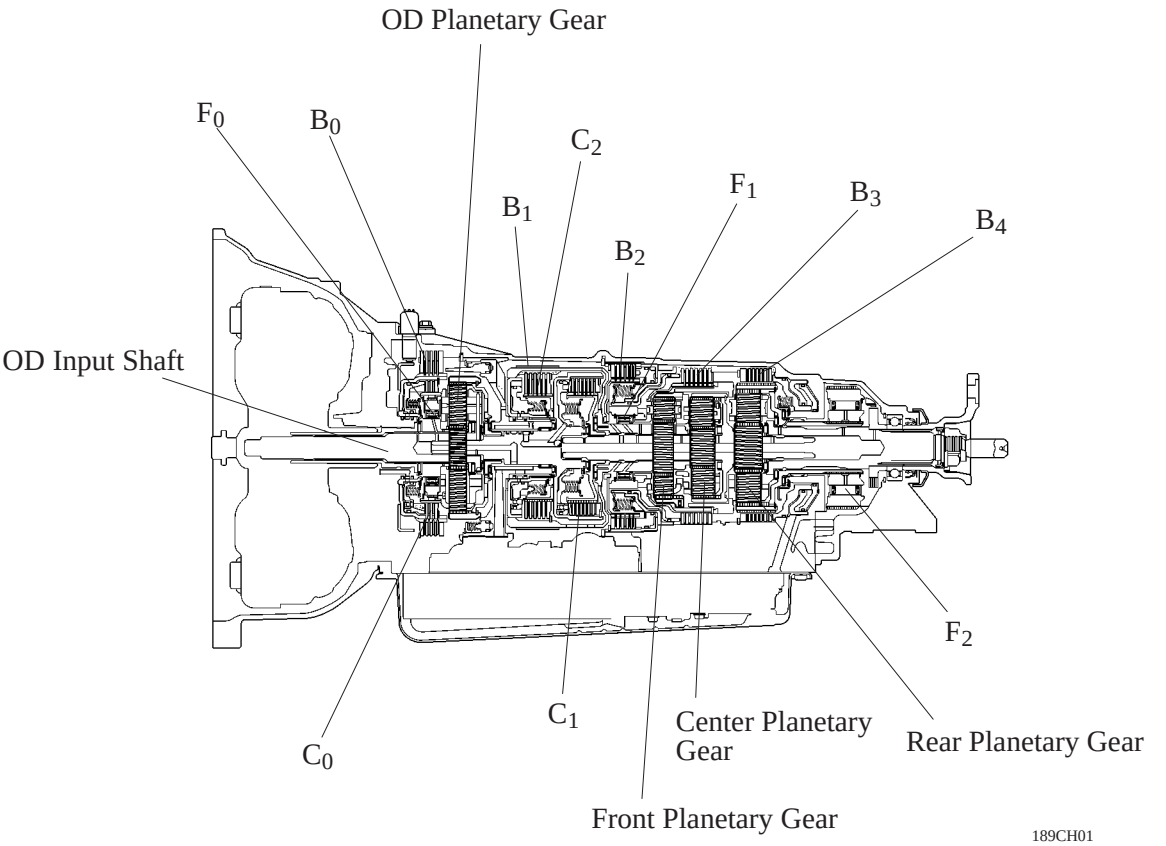
■TORQUE CONVERTER

We are strengthening parts, raising efficiency and improving fuel consumption with the use of the new 3UZ-FE engine. The torque converter clutch supports flex lock-up clutch control, thus improving the fuel economy.

■PLANETARY GEAR UNIT

1. General

The planetary gear unit of the A650E automatic transmission that has been adopted on the new LS430 is based on the A650E of the previous LS400.
Along with the increased output of the engine, we have optimized the specifications of the clutches and brakes. Additionally, mechanical loss has been reduced and fuel consumption improved.



▶ Specifications ◀

Model				New LS430	Previous LS400
Torque Converter			Stall Torque Ratio	1.85	1.90
Planetary Gear Unit	C_0	OD Direct Clutch	The No. of Discs	2	←
	C_1	Forward Clutch		6	←
	C_2	Direct Clutch		5	←
	B_0	OD Brake		4	←
	B_1	3rd Coast Brake	Band Width mm (in.)	40 (1.57)	←
	B_2	3rd Brake	The No. of Discs	5	←
	B_3	2nd Brake		6	5
	B_4	1st & Reverse Brake		6	←
	F_0	OD One-Way Clutch	The No. of Sprags	24	←
	F_1	No. 1 One-Way Clutch		20	←
	F_2	No. 2 One-Way Clutch		24	←
	OD Planetary Gear		The No. of Sun Gear Teeth	31	←
			The No. of Pinion Gear Teeth	32	←
			The No. of Ring Gear Teeth	95	←
	Front Planetary Gear		The No. of Sun Gear Teeth	41	←
			The No. of Pinion Gear Teeth	16	←
			The No. of Ring Gear Teeth	73	←
	Center Planetary Gear		The No. of Sun Gear Teeth	31	←
			The No. of Pinion Gear Teeth	21	←
			The No. of Ring Gear Teeth	73	←
	Rear Planetary Gear		The No. of Sun Gear Teeth	28	←
			The No. of Pinion Gear Teeth	19	←
			The No. of Ring Gear Teeth	66	←

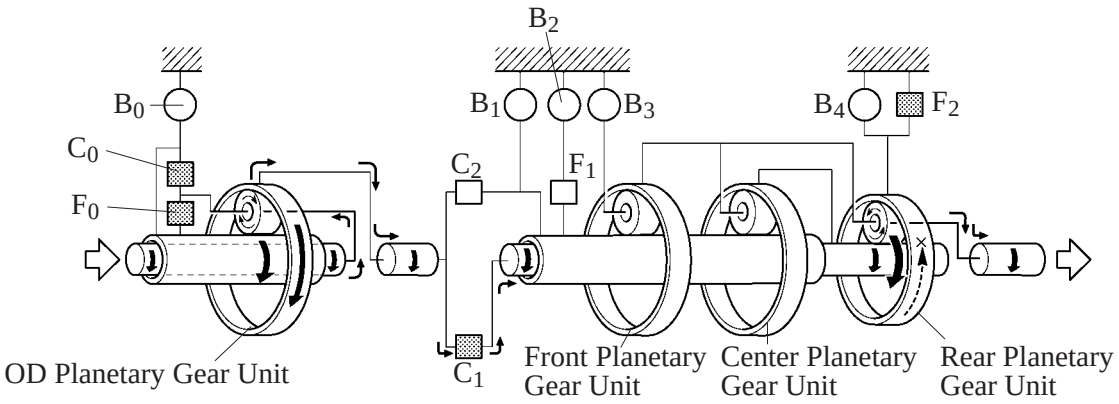
2. Motive Power Transmission

▶ Operating Conditions ◀

Shift Lever Position	Gear	Solenoid Valve No. 1	Solenoid Valve No. 2	Solenoid Valve No. 3	Solenoid Valve No. 4	C_0	C_1	C_2	B_0	B_1	B_2	B_3	B_4	F_0	F_1	F_2
P	Park	ON	OFF	ON	OFF	●										
R	Reverse	ON	OFF	OFF	ON			●	●				●			
N	Neutral	ON	OFF	ON	OFF	●										
D	1st	ON	OFF	ON	OFF	●	●							●		●
	2nd	ON	ON	ON	OFF	●	●					●		●		
	3rd	OFF	ON	OFF	OFF	●	●				●			●	●	
	4th	OFF	OFF	ON	OFF	●	●	●			○			●		
	5th	OFF	OFF	OFF	ON		●	●	●		○					
4	1st	ON	OFF	ON	OFF	●	●							●		●
	2nd	ON	ON	ON	OFF	●	●					●		●		
	3rd	OFF	ON	OFF	OFF	●	●				●			●	●	
	4th	OFF	OFF	ON	OFF	●	●	●			○			●		
3	1st	ON	OFF	ON	OFF	●	●							●		●
	2nd	ON	ON	ON	OFF	●	●					●		●		
	3rd	OFF	ON	ON	OFF	●	●			●	●			●	●	
2	1st	ON	OFF	ON	OFF	●	●							●		●
	2nd	ON	ON	ON	OFF	●	●					●		●		
L	1st	ON	OFF	OFF	OFF	●	●						●	●		●

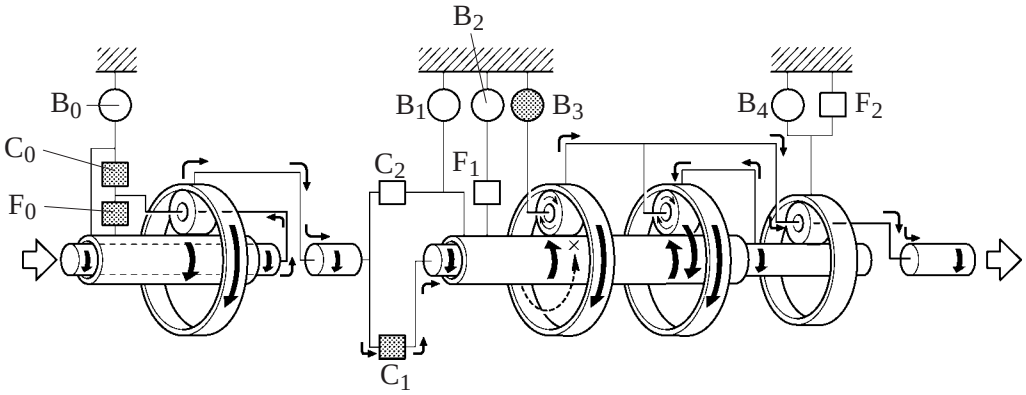
●: Operation
○: Operate but is not related to power transmission

1st Gear (D, 4, 3 or 2 Position)



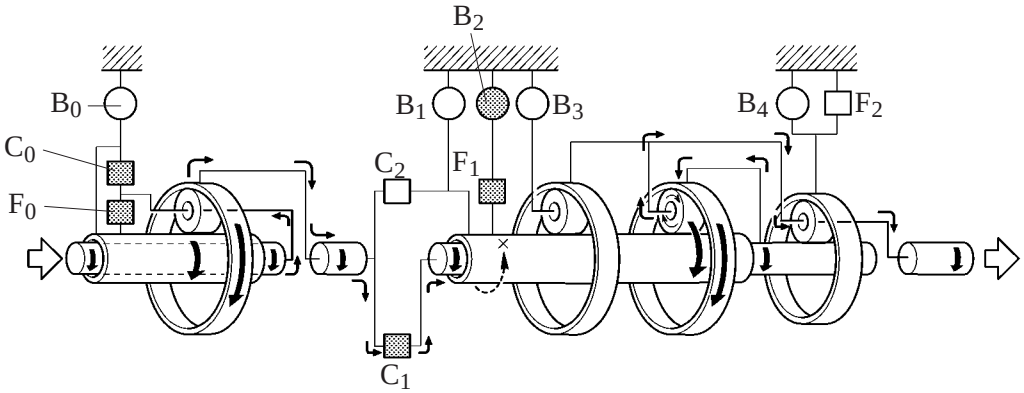
189CH02

2nd Gear (D, 4, 3 or 2 Position)



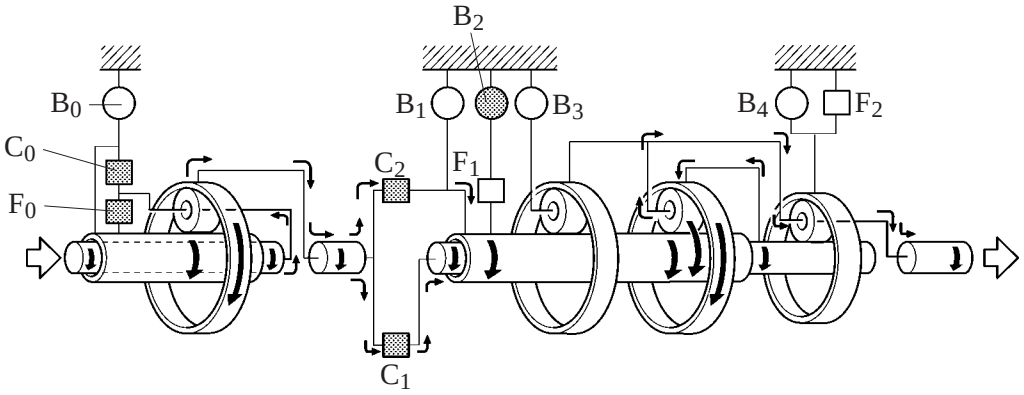
151CH03

3rd Gear (D or 4 Position)



151CH04

4th Gear (D or 4 Position)



151CH05

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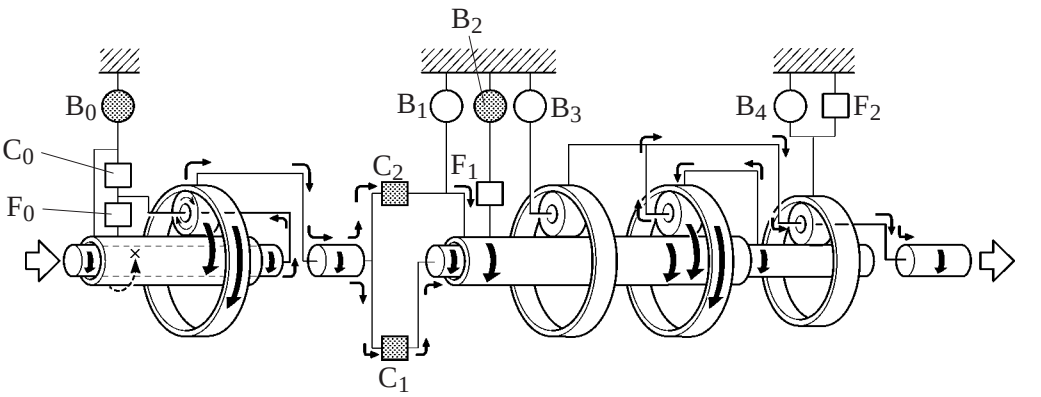
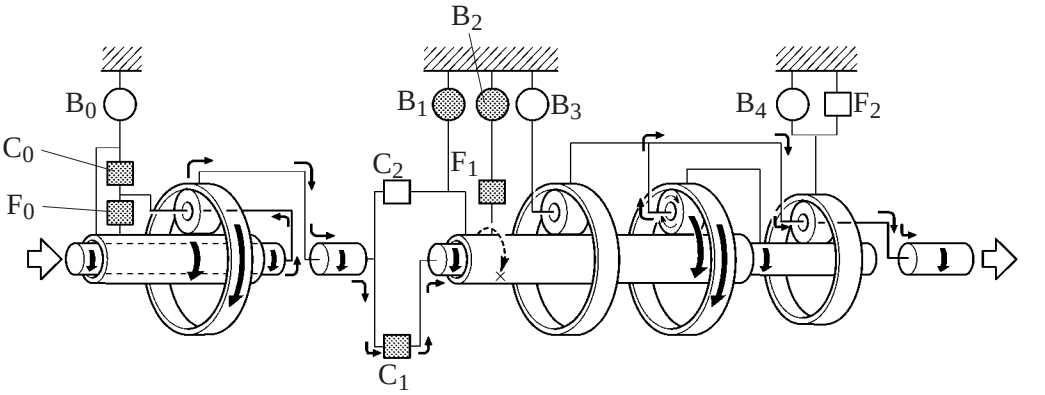
5th Gear (D Position)



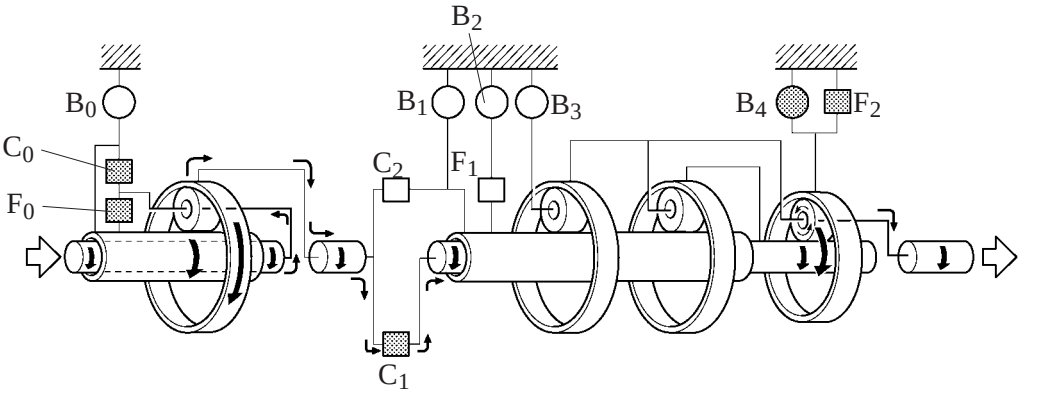
151CH06

3rd Gear (3 Position)



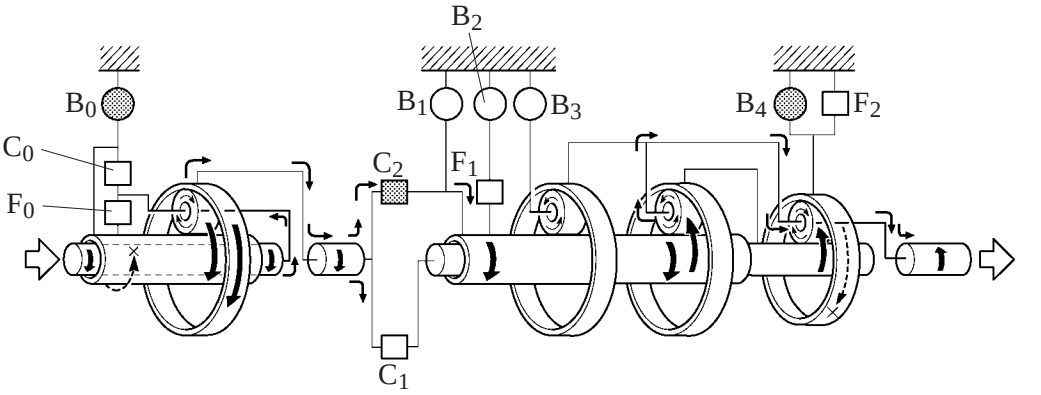
189CH03

1st Gear (L Position)



189CH04

Reverse Gear (R Position)



151CH09