

## ■ TORQUE CONVERTER AND PLANETARY GEAR UNIT

- The blades of the torque converter pump, turbine, and stator of the 1HD-FTE engine model have been optimized to achieve the torque converter characteristics that are optimized for the 1HD-FTE engine.
- In the automatic transmission of the 1FZ-FE, 2UZ-FE, and 1HD-FTE engine models, the various parts of the planetary gear unit have been increased in strength.

Components	Description of Changes
OD Planetary Gear	Pinion roller diameter increased, pinion pin diameter increased, pinion inner diameter increased.
Front Planetary Gear	Pinion roller diameter increased, pinion gear width increased, pinion inner diameter increased, pinion pin length and material changed.
Rear Planetary Gear	Pinion pin material changed, pinion gear width increased.
OD Input Shaft	Shot-peening treatment
Input Shaft	Shot-peening treatment
Intermediate Shaft	Shot-peening treatment
B <sub>2</sub> Brake	Plate sheet thickness increased.

### ► Specifications ◀

Engine Type				1FZ-FE	2UZ-FE	1HZ	1HD-T	1HD-FTE
Torque Converter	Converter Type			3-Element, 1-Step, 2-Phase, with Lock-Up Mechanism				
	Stall Torque Ratio			1.770	←	←	1,840	←
Planetary Gear Unit	C <sub>1</sub>	Forward Clutch	The No. of Discs	7	←	6	7	←
	C <sub>2</sub>	Direct Clutch		5	←	←	←	←
	C <sub>0</sub>	OD Direct Clutch		3	←	←	←	←
	B <sub>2</sub>	2nd Brake		5	←	4	5	←
	B <sub>3</sub>	1st & Reverse Brake		6	←	←	←	←
	B <sub>0</sub>	OD Brake		3	←	←	←	←
	F <sub>2</sub>	No.2 One-Way Clutch	The No. of Sprags	46	←	←	←	←
	F <sub>0</sub>	OD One-Way Clutch		22	←	←	←	←
	Front Planetary Gear		The No. of Sun Gear Teeth	28	←	←	←	←
			The No. of Pinion Gear Teeth	23	←	←	←	←
			The No. Ring Gear Teeth	75	←	←	←	←
	Rear Planetary Gear		The No. of Sun Gear Teeth	44	←	←	←	←
			The No. of Pinion Gear Teeth	20	←	←	←	←
			The No. of Ring Gear Teeth	83	←	←	←	←
	OD Planetary Gear		The No. of Sun Gear Teeth	31	←	←	←	←
			The No. of Pinion Gear Teeth	35	←	←	←	←
			The No. of Ring Gear Teeth	101	←	←	←	←