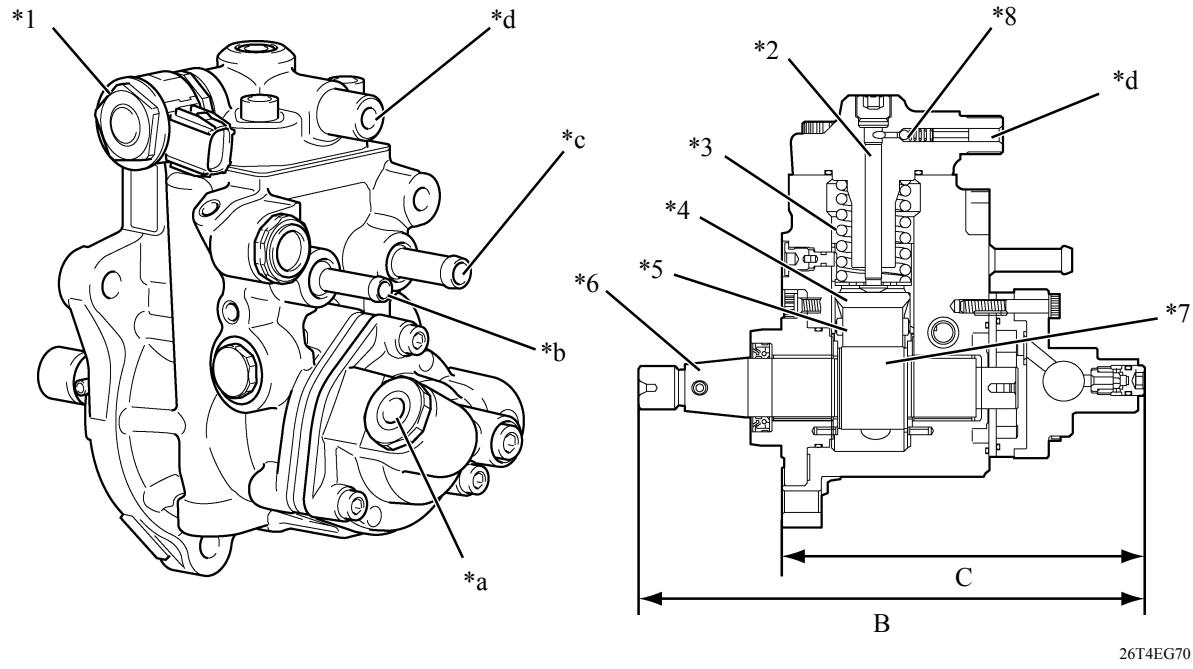
■ SUPPLY PUMP

1. Construction

- An HP5S type injection or supply pump assembly is used.
- The injection or supply pump assembly consists of a camshaft, a plunger, a check valve, a pre-stroke control valve and a feed pump.



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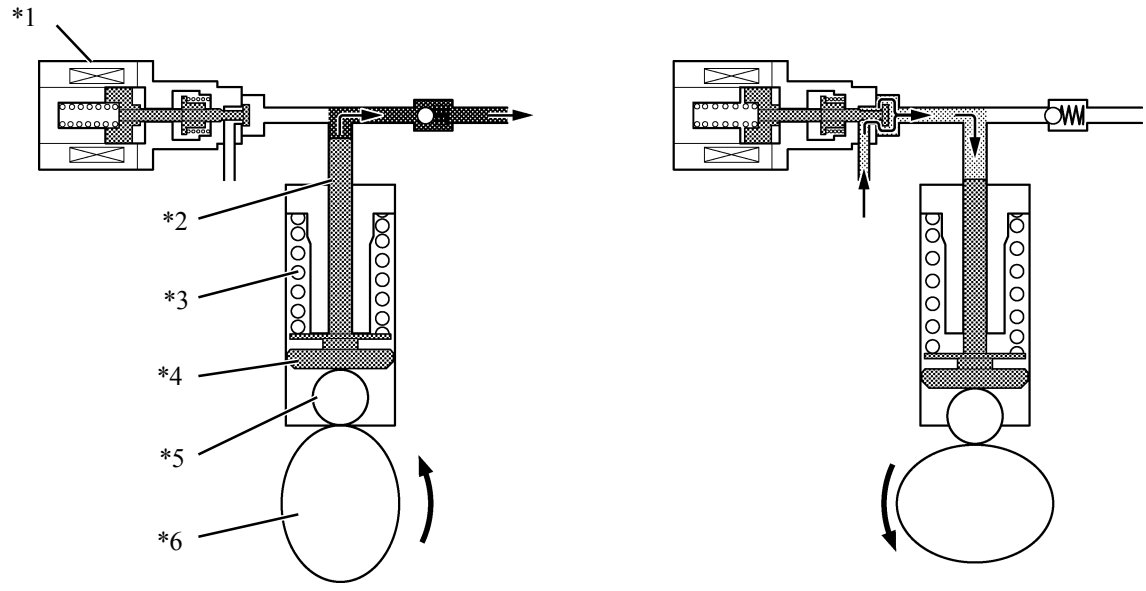
*1	Pre-stroke Control Valve	*2	Plunger
*3	Spring	*4	Shoe
*5	Roller	*6	Camshaft
*7	Double Cam	*8	Check Ball
*a	to Exhaust Fuel Addition Injector Assembly and Injection or Supply Pump Assembly	*b	Fuel Return Port (to Fuel Tank Assembly)
*c	Fuel Inlet Port (from Fuel Tank Assembly)	*d	to Common-rail Assembly

Supply Pump Specifications

Type		HP5S
Length	B	202.2 mm (7.96 in.)
	C	144.6 mm (5.69 in)
Pre-stroke Control Valve		1
Plunger		ϕ 6.5 mm × 1
Weight		3970 g (8.75 lb)

2. Operation

- When the cam rotates the roller is pushed up, and in turn the plunger is pushed upward as well. When the plunger is not pushed up by the cam, it is pushed back down by the spring.

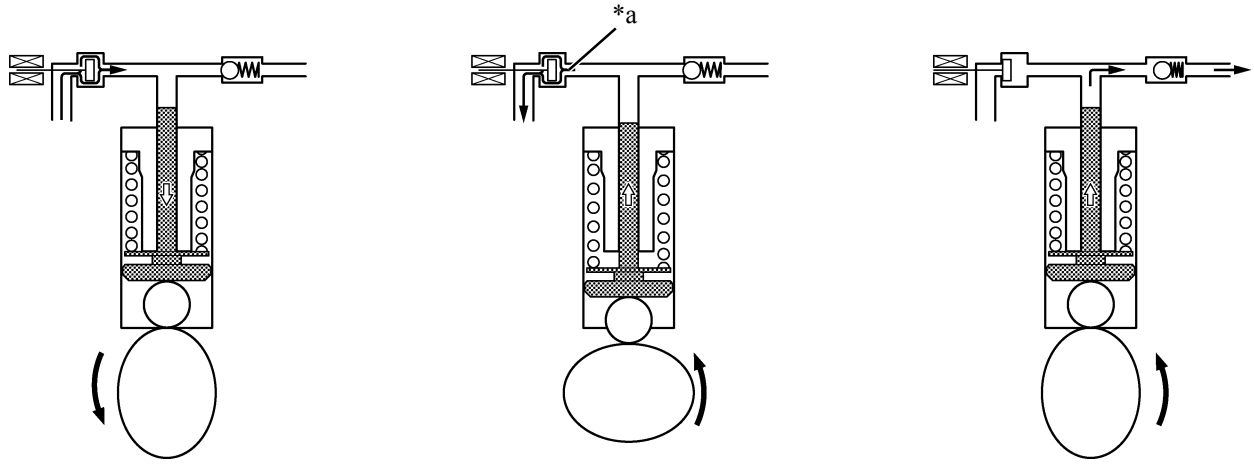


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*1	Pre-stroke Control Valve	*2	Plunger
*3	Spring	*4	Shoe
*5	Roller	*6	Double Cam

- The ECM controls the closing timing of the pre-stroke control valve while the plunger is moving up in order to adjust the fuel supply volume. As a result, the fuel pressure in the common rail assembly is controlled to the target injection pressure.
- When the pre-stroke control valve is closed while the plunger is moving up, the fuel pressure increases. When the fuel pressure exceeds the common-rail pressure, fuel is supplied to the common rail assembly.
- When the closing timing of the pre-stroke control valve is delayed, the length of pressure-fed strokes will decrease, as well as the fuel discharge volume.

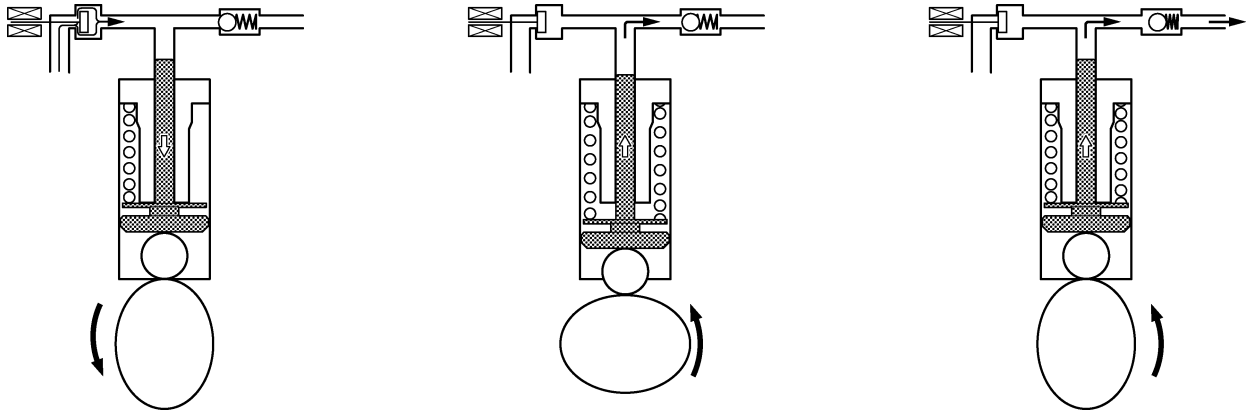


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*a	Return Fuel	-	-

- When the closing timing of the pre-stroke control valve is hastened, the length of pressure-fed strokes will increase, as well as the fuel discharge volume.
- When the pre-stroke control valve is closed while the plunger is moving up, the fuel pressure increases. When the fuel pressure exceeds the common-rail pressure, fuel is supplied to the common rail assembly.



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