

CLUTCH**3010-01****GENERAL INFORMATION****1. SPECIFICATIONS**

Item		Specifications	
		G16DF	D16DTF
Operation type		Hydraulic	←
Clutch Pedal	Type	Suspended	←
	Max. actuation travel	125 ± 3mm	135 ± 3mm
	Pedal free play	3 ~ 7mm	←
	Lateral pedal free play	2.5 mm or less	←
Clutch cover	Type	Conventional	Self-adjusting type
Clutch Disc	Type	Torsional damper spring	Single dry diaphragm (Rigid Type)
	Facing diameter	225mm	240mm
	Facing quantity	2	2
	Weight	1.33kg	1.16kg
Flywheel	Type	SMF (Single Mass Flywheel)	DMF(Dual Mass Flywheel)
Clutch master cylinder	Actuation travel	31.8 ± 0.6mm	←
	Inner diameter	15.875mm	←
Concentric slave cylinder	Max. actuation travel	19.6mm	←
	Operating pressure	Max. 40 bar	←
Clutch fluid	Specification	DOT 4R	←
	Capacity	Proper level	←
Clutch switch	Air gap	2mm	←

Modification basis	
Application basis	
Affected VIN	

2. TIGHTENING TORQUE

Item		Tightening torque	Quantity
Clutch housing mounting bolt	Upper side	85 to 100 Nm	2
	Front side	54 Nm + 20°	1
	Lower side	59 ± 3 Nm	4
Pressure plate assembly mounting bolt		24 ± 3 Nm	6
Concentric slave cylinder mounting bolt		9.8 to 15.68 Nm	2
Clutch pedal mounting bolt and nut		7.84 to 17.64 Nm	3

OVERVIEW AND OPERATING PROCESS

1. OVERVIEW

The clutch system allows the shifting by shutting off the engine power transmitted to the M/T. The system consists of the following elements.

► Driving Element

The driving element consists of two flat surfaces machined to a smooth finish.

One is the rear surface of the engine flywheel and the other is clutch pressure plate. The clutch pressure plate is fitted to the clutch steel cover which is bolted down on the flywheel.

► Driven Element

The driven element is the clutch disc with a splined hub which is free to slide horizontally along the same spline of the input shaft.

The driving and driven elements are held in contact by spring pressure. This pressure is exerted by the diaphragm spring in the clutch pressure plate assembly.

► Operating Element

The clutch release system consists of clutch pedal and concentric slave cylinder.

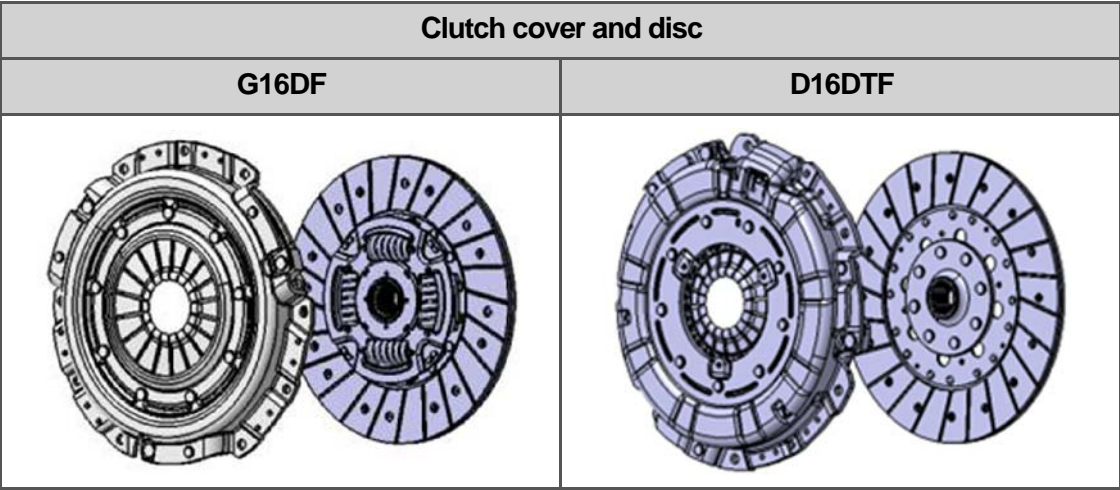
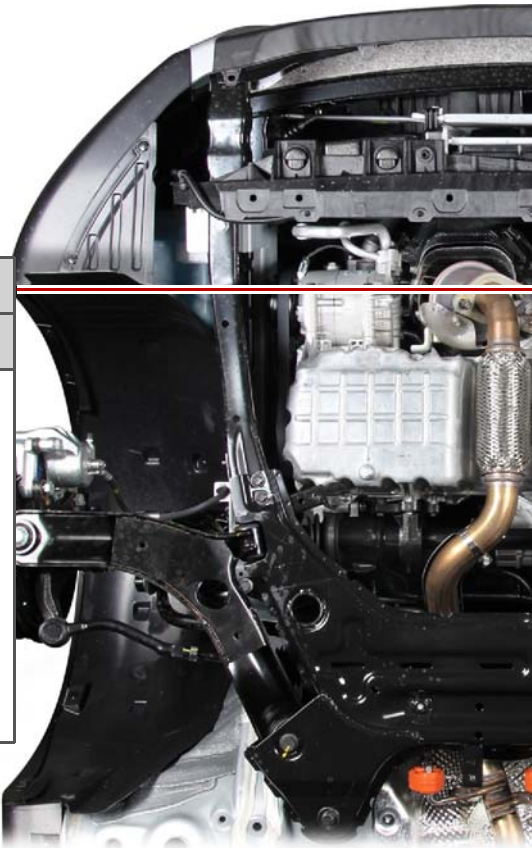
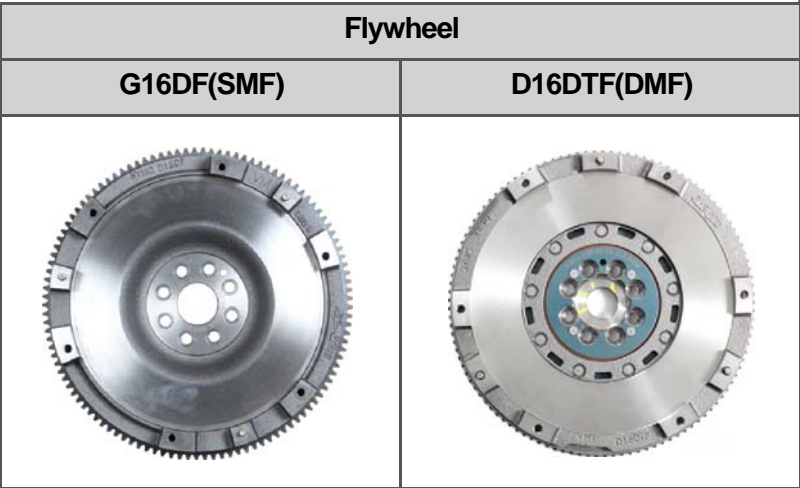
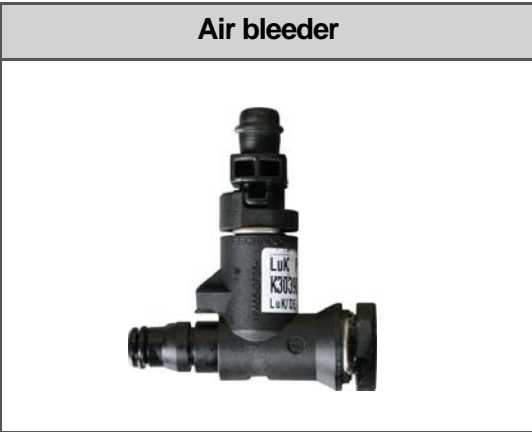
This system directly releases the clutch by using hydraulic pressure while the conventional clutch system releases the clutch by using release lever and release fork.

Therefore, this system provides higher efficiency and durability than the conventional clutch system.

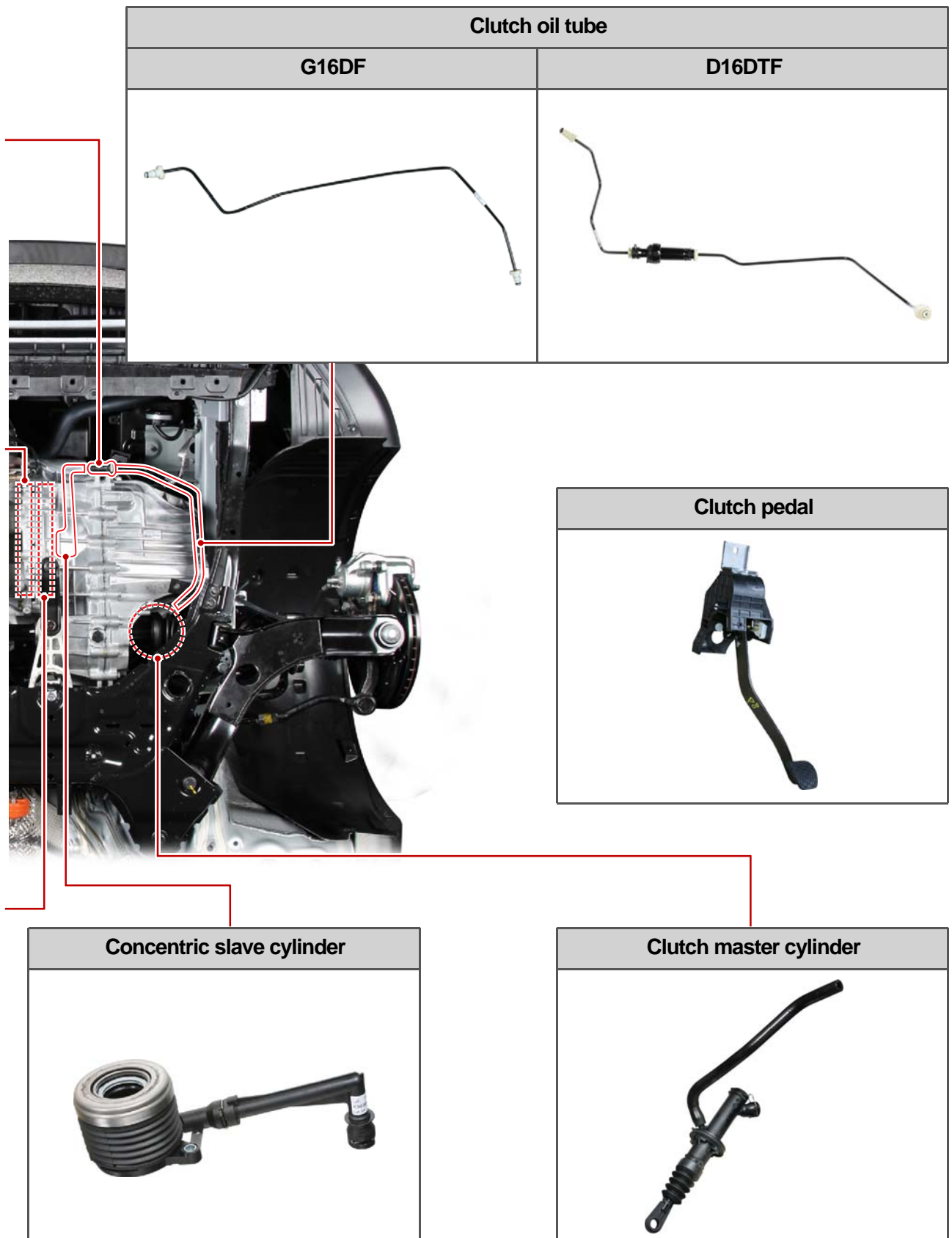
- Clutch master cylinder (with clutch pedal)
- Concentric slave cylinder (built in transmission)

Modification basis	
Application basis	
Affected VIN	

2. COMPONENTS



Modification basis	
Application basis	
Affected VIN	

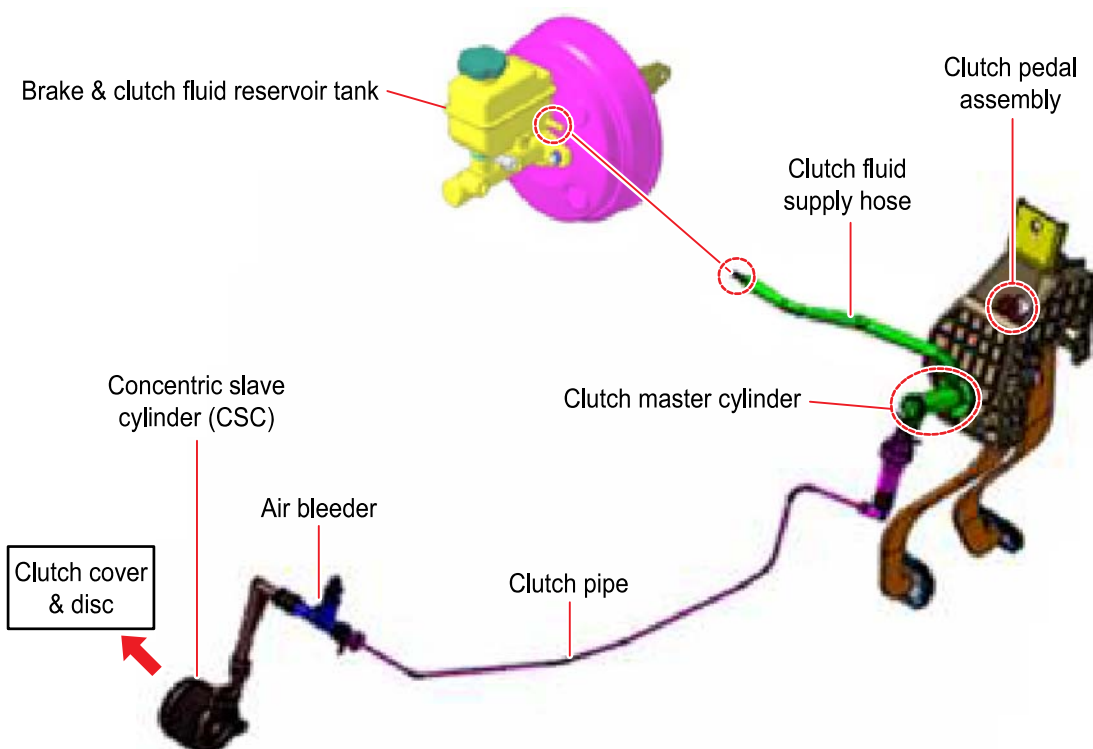


Modification basis	
Application basis	
Affected VIN	

3. OPERATING PROCESS

If the driver depresses the clutch pedal, the hydraulic pressure is generated in the master cylinder. It is transmitted to the concentric slave cylinder through the pipe, resulting in the cylinder being forced out. At this time, the clutch disc is pushed by the cylinder when the cover is pushed. This, in turn, separate the flywheel from the pressure plate. As a result, the power from the engine is cut off and the gear change can be carried out.

When the clutch pedal is released, the clutch function is deactivated and the concentric slave cylinder returns to its original position by the spring force in the cylinder.



NOTE

The hydraulic pressure is transmitted in the following order:

Clutch pedal → Clutch master cylinder → Clutch pipe → Concentric slave cylinder → Clutch cover & disc