■CLUTCH COVER

1. General

- High installed load clutch cover is applied for the 1HD-FTE engine model.
- The self-adjusting type clutch cover is used on the 1FZ-FE and 2UZ-FE engine models.

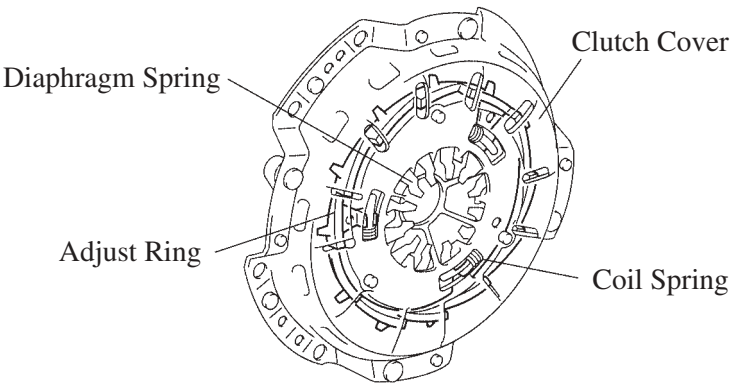
2. Self-Adjusting Type Clutch Cover

General

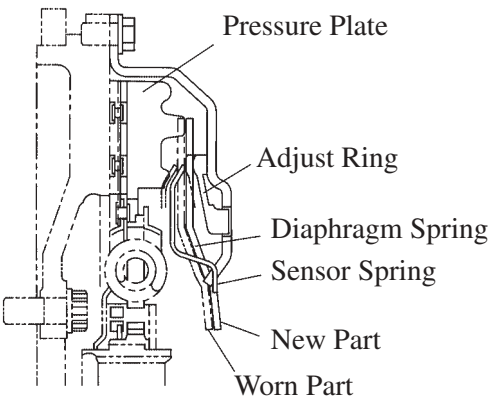
The self-adjusting type clutch cover maintains a constant diaphragm spring posture regardless of the amount of the clutch disc wear. Consequently, it maintains the clutch pedal effort constant to ensure a comfortable clutch feel and to prolong the use life of the clutch disc.

Construction

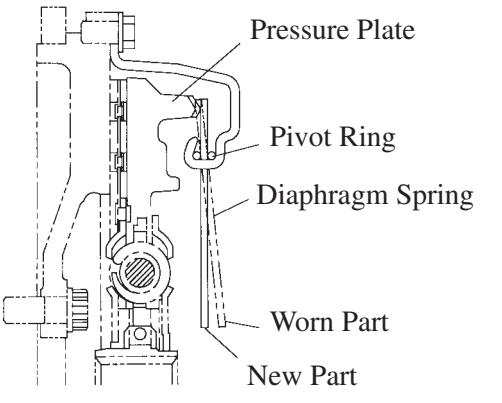
Unlike the conventional clutch cover that uses a pivot ring to support the diaphragm spring, the self-adjusting type clutch cover uses a sensor spring and an adjusting ring to support the diaphragm spring.
The adjusting ring provides a slanted portion to enable the pressure plate and the diaphragm spring to move towards the clutch disc, and coil springs are provided between the cover and the adjusting ring.
In contrast to the conventional clutch cover in which the posture of the diaphragm spring changes as the spring pivots on the pivot ring in accordance with the wearing of the clutch disc, the diaphragm spring of the self-adjusting type clutch cover moves parallel to the clutch disc while maintaining a constant posture.



147CH06



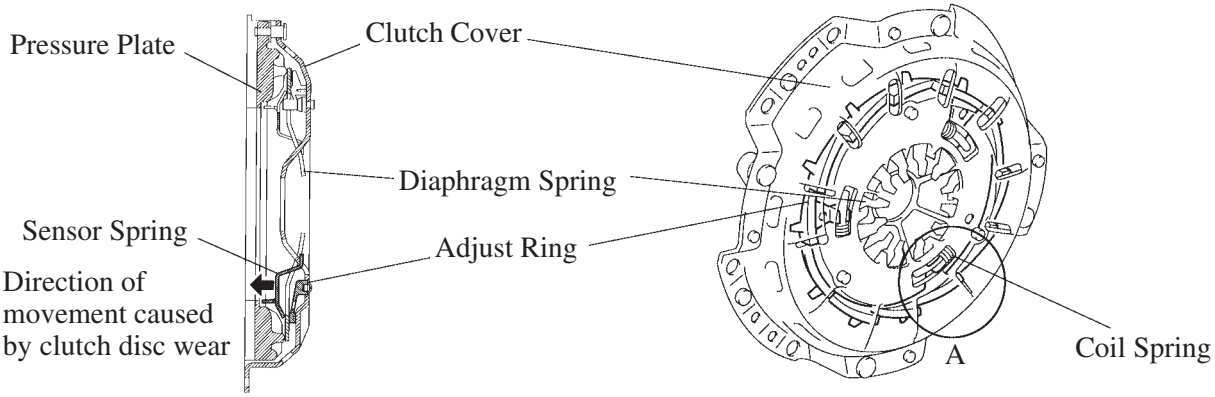
Self-Adjusting Type 147CH06

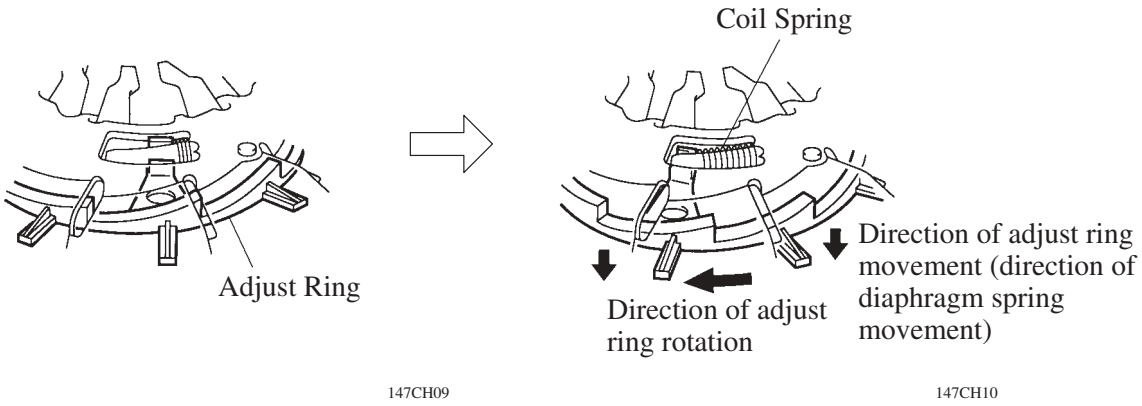


Conventional type 147CH07

Operation

When the clutch disc becomes worn, the diaphragm spring moves forward together with the sensor spring. Then, the clearance between the diaphragm spring and the clutch cover expands, and the coil springs cause the adjust ring to push out by rotating in the circumferential direction, thus reducing the clearance. As a result, the diaphragm spring constantly maintains a proper posture and load.





Before clutch disc wear **Clutch Disc Wear**

Exploded view of portion A

Service Tip

Make sure to replace the clutch cover whenever the clutch disc is replaced. If the clutch disc is replaced without replacing the clutch cover, a proper diaphragm spring posture cannot be attained, which could cause the clutch to slip and make it more difficult to operate the clutch.
Fully press the clutch pedal 10 times after replacing the clutch cover and the clutch disc in order to reset the diaphragm spring posture to its initial setting. Although the clutch pedal could feel stiff immediately after the replacement, this does not indicate an abnormal condition. A proper amount of pedal effort can be attained by repeating the operation mentioned above.