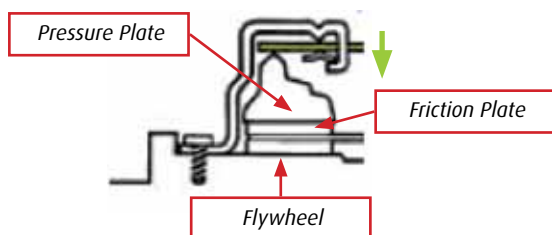


An Explanation of Principal Clutch Types

Modern passenger cars are fitted with several different types of clutches, depending on the design and specification of the drive train. The two principal designs are, push type clutches and pull type clutches. This bulletin has been produced to explain the operation of these designs.

Push Type Clutches

Conventional push type - On a push type clutch when you depress the clutch pedal, the release bearing pushes the diaphragm fingers to disengage the clutch.



Conventional push type - On a push type clutch when you depress the clutch pedal, the release bearing pushes the diaphragm fingers to disengage the clutch.



Example of a push type clutch cover

The push type clutch is the most common type of clutch used due to its ease of assembly and is suitable for a wide number of vehicles applications.

Push type clutch - Self adjusting mechanism SAT

A development of the push type clutch is the self adjusting system, which ensures the same diaphragm finger height throughout the life of the clutch, maintaining consistent pedal feel.

The other advantages of a self adjusting system are:

- Allows 20 to 30% more torque to be transmitted (direct injection engines).
- Size and weight is reduced.
- Increase in product life (to match longer manufacturer warranty's)

Valeo have designed a new type of clutch that is designed to have the same advantages of the SAT clutch and has the same appearance as a conventional push type clutch. This design of clutch is a high efficiency clutch (HEC).

More information about these clutches can be found in TSB CL010-08.

SAT is a revolutionary technology that uses a self adjusting friction wear compensator on the pressure plate. This increases its effective thickness as the drive plate facings wear. Upon detecting a reduction in friction plate thickness, the compensation device adjusts the position of the pressure plate (within the cover assembly) in order to maintain a constant pedal load.

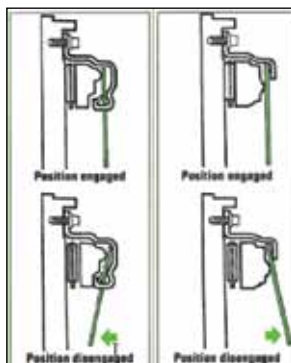


Pull type clutch

As shown in the diagram, a pull type clutch pull the diaphragm fingers away from the flywheel. The design of the pivot in the cover allows the pressure ring to come away from the friction plate, disconnecting the engine drive from the gearbox.

The advantages of a pull type system are:

- a. greater clamp loading
- b. lighter in weight
- c. smaller diameter
- d. improved cooling



Example of a pull type clutch cover

There is more information about pull type clutch and a fitting procedure in TSB CL016-09