

| Clutch | Flexible Flywheel | Explanation | All Makes

What is a flexible flywheel?

A flexible flywheel is Valeo technology where it is an evolution of a rigid flywheel. It incorporates a solid, outer flywheel and a thinner 'flex' plate. These two parts are rigidly attached together.

The aim of the flexible flywheel is to add an additional spring mass element to isolate the vibrations from the engine to the gearbox. By adding a second spring mass into the driveline, the natural frequency can be tuned to ensure this does not occur within the engines normal speed range.

Composition of the Flexible Flywheel:

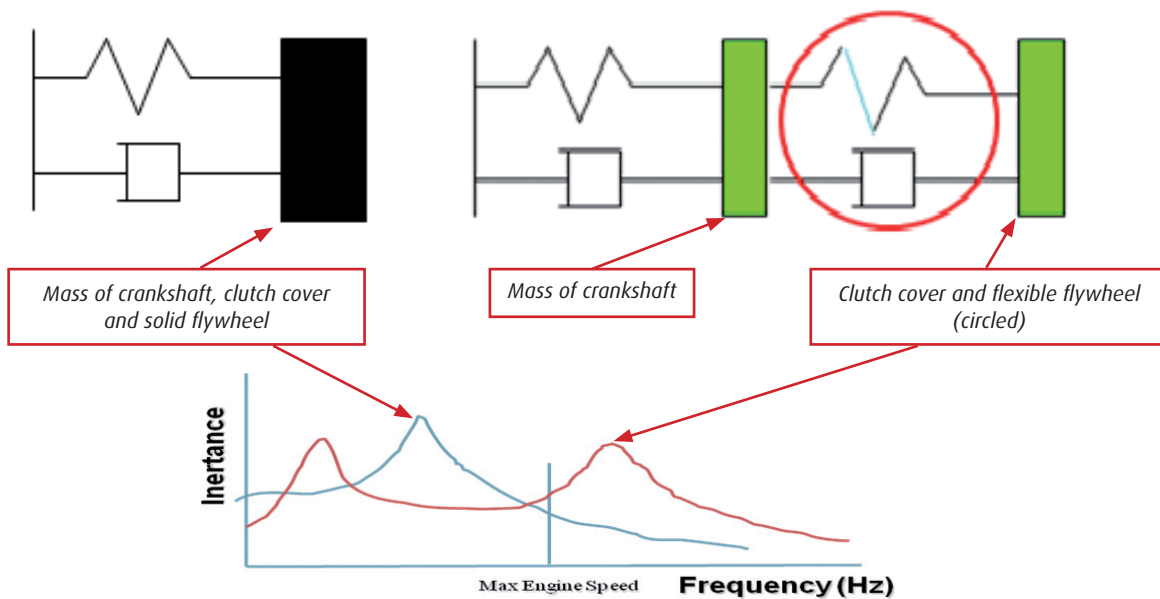
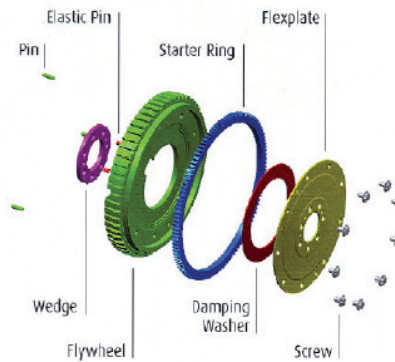


Diagram illustrating the effect on the natural frequency of the driveline by using a flexible flywheel.

There are a number of benefits of tuning the natural frequency to outside of the engines speed range. These are, a reduced engine noise at high rpm, a lower amount of vibration experienced through the pedal, reduced bending stresses on the crankshaft so a greater life expectancy of the engine.

As flexible flywheels wear, the flexible plate may weaken, causing a larger amount of deflection of the flywheel and could possible damage parts of the drive train, the clutch, the engine or the gearbox.

To ensure maximum longevity of the drivetrain, the flexible flywheel should be replaced when the clutch is due for replacement or if the condition of the flywheel cannot be confirmed.