Flywheel

The flywheel is an element in the crankshaft drive which is tasked with compensating for engine rotational irregularities and overcoming so-called idle strokes and dead centres through the absorbed kinetic energy. The flywheel mass on the flywheel therefore ensures that the engine runs smoothly, even at low speeds.

Function

The crankshaft drive has the function of converting the force generated from the combustion of the fuel-air mixture, through the up and down movement of the piston, into a rotational movement of the crankshaft and a torque.

Every piston engine has more or less pronounced rotational irregularities. These mainly depend on the number of cylinders. As a general rule: the more cylinders, the fewer rotational irregularities arise, and the more smooth the running of the engine.

The flywheel is friction locked with the crankshaft and has the task of compensating for the rotational irregularities of the engine. The flywheel stores kinetic energy through the rotational motion of the crankshaft. Due to its inertia, the flywheel continues to rotate at the points in time when the engine does not provide any power. This means the flywheel can help engines with fewer than four cylinders to overcome idle strokes, as well as the top and bottom dead centre, without jerking. The flywheel thereby ensures smooth engine running, even at low speeds, and influences the response behaviour of the engine.

Design and other tasks

Generally, the flywheel has the shrunk-on or welded-on ring gear for the starter. At the same time, the clutch bears against the flywheel. Flywheels are generally made from grey cast iron or steel.

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Source: https://www.my-cardictionary.com/dictionary/drive-system/flywheel