Dual-mass flywheel

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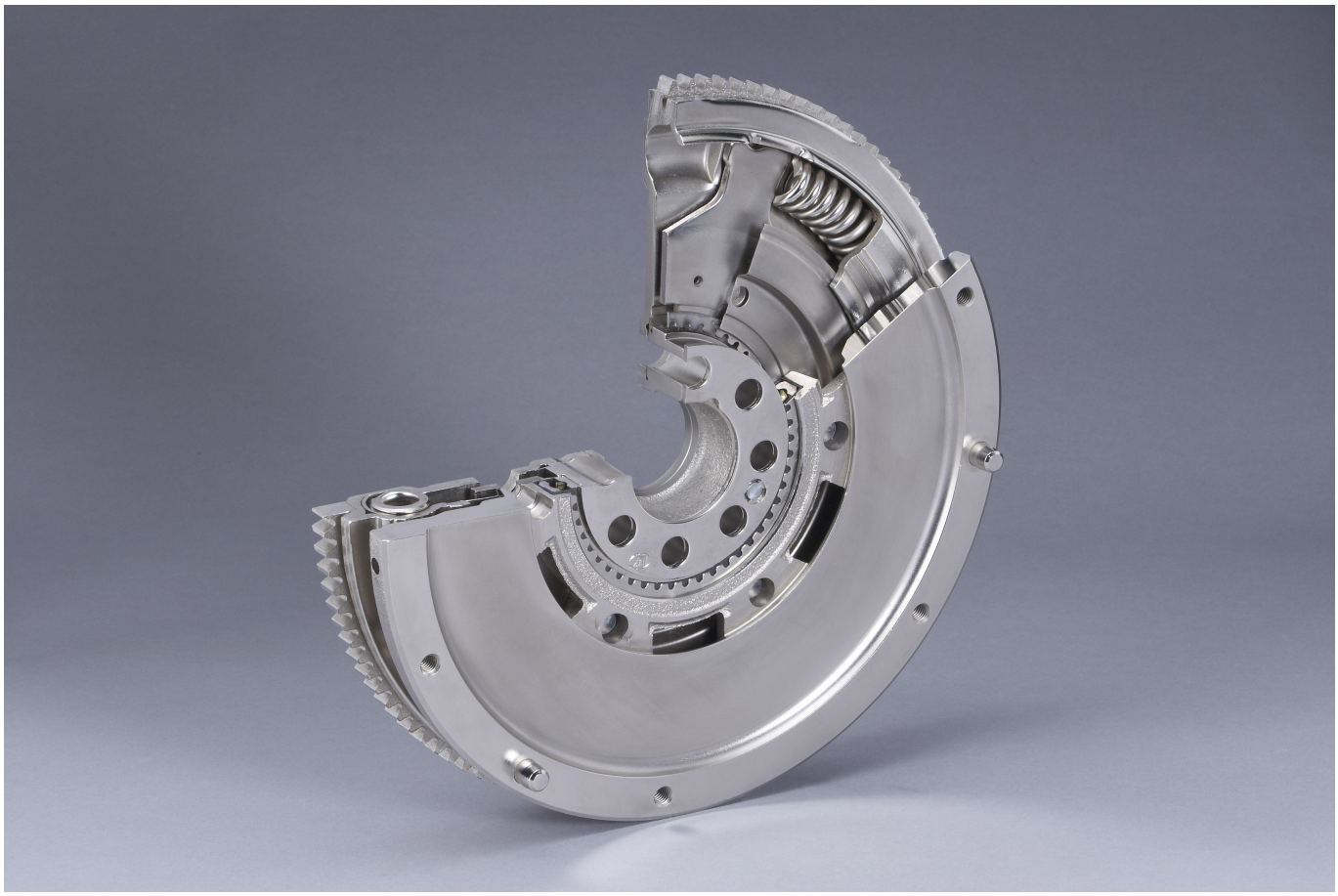
Function

Modern engines can be driven at extremely low speeds. The trend is towards increasingly higher engine torques. Furthermore, bodies are getting quieter and many components getting lighter and lighter in order to reduce weight and thus save fuel. Other measures designed to find the optimum technical solution are resulting in more sources of noise but less natural damping. The principle of the reciprocating piston engine is still with us. Its periodic combustion processes induce torsional vibration in the drive train, with the unpleasant consequences of rattling gearboxes and roaring bodies. The dual-mass flywheel (DMF) effectively isolates engine vibrations from the gearbox and the drive train, offsetting such disadvantages.



The dual-mass flywheel is a flywheel complete with a torsional vibration damper. It prevents torsional vibration from the reciprocating piston engine being transmitted to the drive train. The DMF uses a spring damping system to decouple the primary flywheel mass on the engine side and the inbound secondary

flywheel mass. The spring damping system absorbs virtually all of the torsional vibration and the resulting noises in the drive train. Vehicles with DMF benefit from increased noise and ride comfort. Furthermore, as the mass to be synchronised is less on vehicles with DMF, the gearbox can be shifted more easily and synchronisation wear is reduced.

Depreciation

DMF technology is maintenance-free.

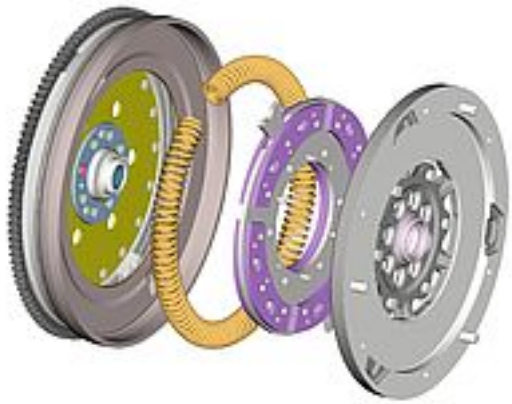
Safety

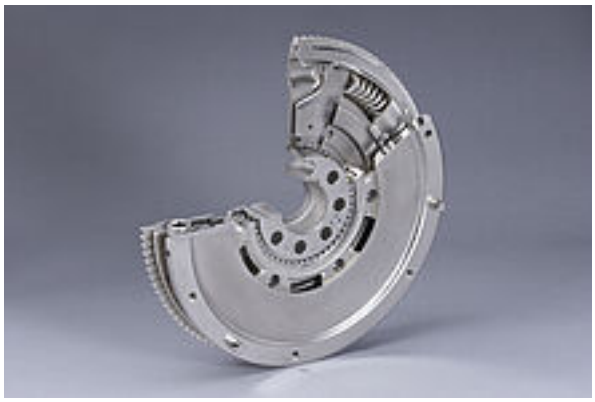
The increasingly dense traffic on our roads requires maximum concentration on the part of drivers. For this reason, it is increasingly important to keep all sources of distraction at bay. The technology of the DMF makes relaxed, safe and smooth driving possible.

Environmental protection

Alongside high levels of ride and noise comfort, the DMF promotes driving in operating ranges in which consumption is optimised, thereby making a significant contribution to the reduction of CO2 emissions. Moreover, the operational smoothness required for economical engine concepts (three-cylinder engines, for example) can be achieved with the DMF.

Images





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