

What is a Crankshaft?

A **crankshaft** is a mechanical unit that **transforms** the **reciprocating movement** of the [piston](#) into **rotary motion**. A crankshaft connects to the **piston** through a **connecting rod**. The main objective of this connecting rod is to receive reciprocating motion by the piston and delivers it to the crankshaft.

As the crankshaft gets motion by the connecting rod, it transforms this motion into rotary motion and rotates the flywheel, which further moves the vehicle wheels.

Without a crank, a [reciprocating engine](#) is unable to deliver piston's reciprocating to the drive shaft. In simple words, a reciprocating engine can't move a vehicle without a crankshaft.

The crankshaft works on the crank mechanism. It is located inside the block of the engine. The crank includes in the moving components of the [IC engine](#). It has many crankpins and cranks. The engine [connecting rod](#) attaches with the crank through these crankpins and cranks.

Different engines complete a power cycle in a different number of turns of the crankshaft. For example, a [2-stroke engine](#) completes a power cycle after one revolution of the crankshaft, while a [4-stroke engine](#) completes a power cycle after completing two revolutions of the crankshaft.

Crankshafts can be in the welded, semi-integral, or one-piece structures. This component of the engine attaches the output section of the engine to the input section.

The crank acts as a link that delivers output power in the kind of rotational kinetic energy—the piston connects with the cranking center via a connecting rod. The cranking lever enables the piston to turn the crankshaft to produce power to move the vehicle.

Interact with the attach cad file to further understand it.