

# FPM and PTFE oil seals

## INSTRUCTIONS AND PRECAUTIONS FOR PROPER INSTALLATION

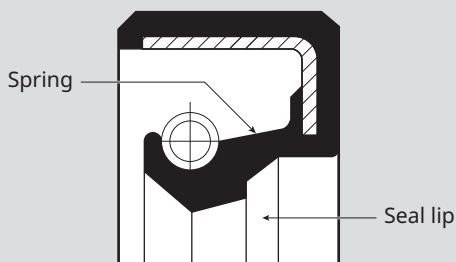
Magneti Marelli Parts & Services chain kits include two types of oil seal, one in **FPM** (fluorine rubber) and the other in **PTFE** (Polytetrafluoroethylene).

The two oil seals differ not only in terms of the material they are made of, but also in terms of the method for correct installation and relative precautions.

### FPM (fluorine rubber) oil seals

#### Characteristics

- These oil seals are considered to be the "traditional" type.
- They create a physical barrier between the internal environment, in contact with the fluid, and the external environment.
- They have a metal spring inside that applies pressure to the entire circumference of the inner oil seal lip, thus improving tightness.



#### Installation instructions

- Check the seal data (size and direction of rotation) and the type of oil seal material to be replaced.
- Remove any dirt and debris from all metal surfaces that come into contact with the oil seal.
- **Do not apply grease or lubricants to the outer surface of the oil seal or the seal housing.** If these surfaces are contaminated, external sealing will be compromised as soon as the seal is fitted.
- **Apply grease to the inner sealing lip of the oil seal and the sliding surface on the shaft only.**
- Fit the seal into position with the appropriate tools. The side showing the seal data must be facing outwards.



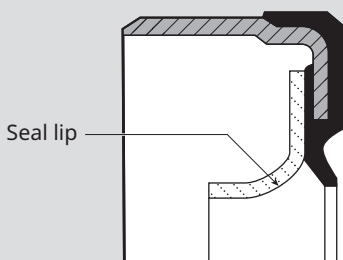
**The oil seal is effective almost immediately and the engine can be started after ten minutes.**

### PTFE (polytetrafluoroethylene) oil seal

#### Characteristics

Despite the absence of an internal metal spring, these oil seals have the following characteristics:

- Larger sealing surface in contact with the metal, providing increased tightness.
- Improved mechanical resistance to stress even at high rotation speeds.
- Improved chemical resistance to lubricants with additives.
- Improved resistance to high temperatures.
- Significant reduction in leaks due to friction.



#### Installation instructions



These oil seals are installed differently from "traditional" oil seals in FPM; the inner lip is protected by a plastic sleeve that maintains the shape of the seal and ensures perfect adhesion to the shaft. **The sleeve must only be removed when installing the oil seal.**

- Specific tools are required to install the oil seal. **Do not damage the inner lip of the seal in any way.**
- The PTFE oil seal is to be installed dry, without the use of grease and/or lubricants. **This oil seal must never be lubricated.**
- Check the seal data (size and direction of rotation) and the type of oil seal material to be replaced.
- Remove any dirt and debris from all metal surfaces that come into contact with the oil seal.
- Check the surface of the shaft, ensuring that it is free of grooves or other damage. Any irregularities must be removed.
- Place the grooved end of the sleeve on the shaft. Insert the oil seal into its housing by sliding it along the sleeve. Once the oil seal has been positioned in its housing, remove the sleeve.



**The PTFE oil seal is not immediately effective. Allow up to four hours after fitting before starting the engine to allow the seal to adapt to the shaft and achieve full tightness.**