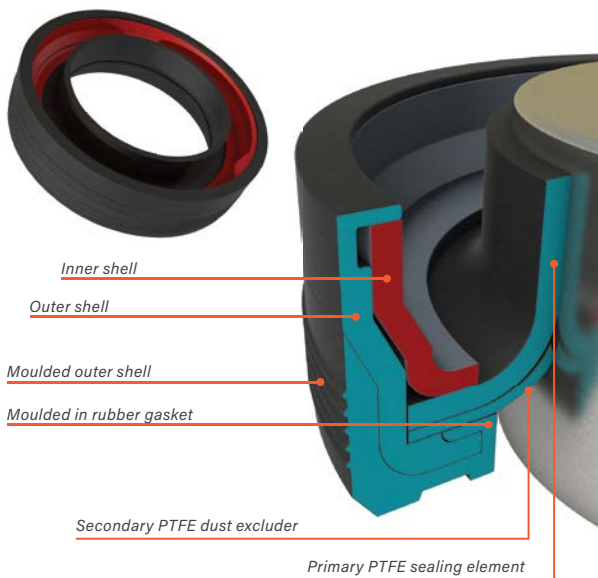


# Understanding PTFE seal technology

## PTFE SEAL INTRODUCTION

The materials used for oil seals have been developed over the years in response to increased performance requirements. The elastomeric materials used for oil seals have been changed to provide improved levels of temperature resistance and durability. The use of PTFE (Polytetrafluoroethylene) for oil seals has now become more common as not only does it provide excellent resistance to the wide range of oil conditions found in modern engines, but also provides lower friction at the shaft interface.

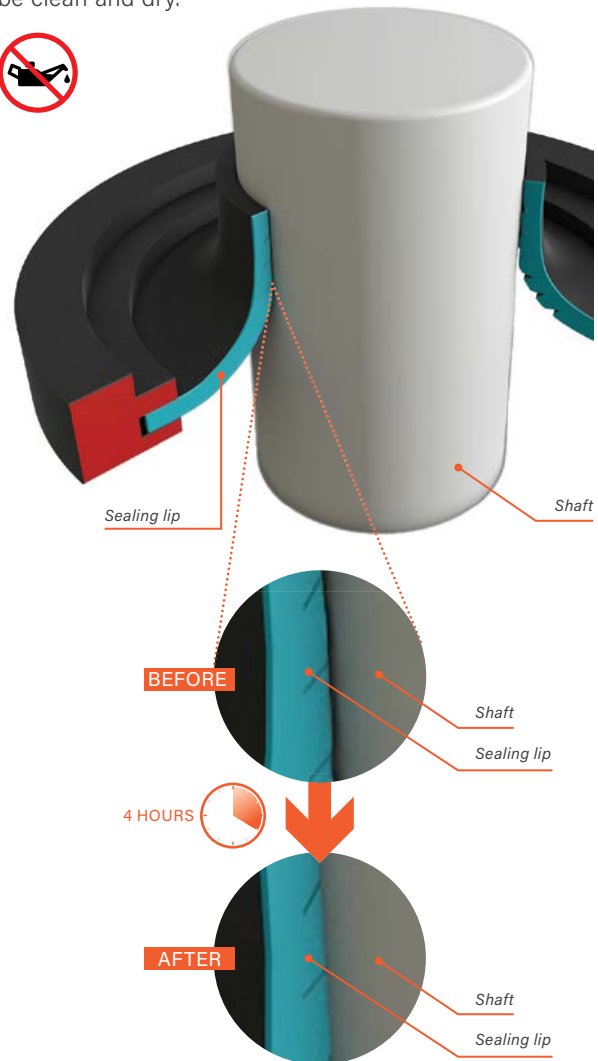


## KEY FEATURES

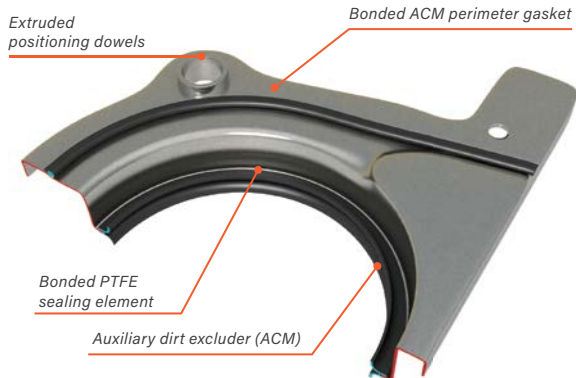
- Excellent chemical resistance against attack and contamination from engine oil.
- Provides enhanced durability and supports longer oil change intervals.
- Offers superior temperature resistance, so it is suitable for the higher temperatures found in modern engines.
- Reduces shaft wear due to the lower friction conditions.

## BEDDING IN ON A DRY SHAFT

PTFE seals require a different assembly technique when fitting to an engine. The seal normally comes with a plastic collar that fits over the shaft. The collar is withdrawn and the seal then needs a minimum of four hours to adapt to the shaft. At no stage during this process must any oil be used and all the surfaces must be clean and dry.



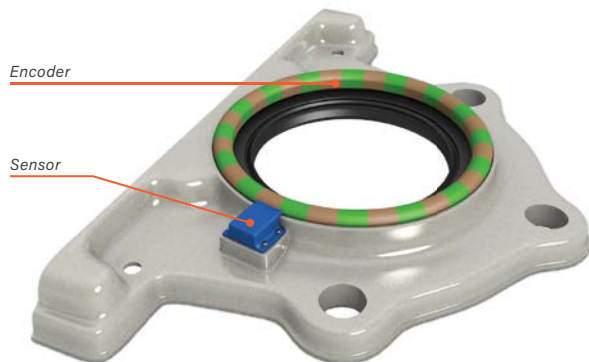
## INTEGRATED PTFE OIL SEALS



For rear crank seal applications, the oil seal housing and gasket are often now combined into a single unit known as an integrated oil seal which also provides a better level of overall sealing ability. The design of these integrated oil seals means that replacement of the individual sealing elements is not feasible and the unit will need to be replaced as a complete item.

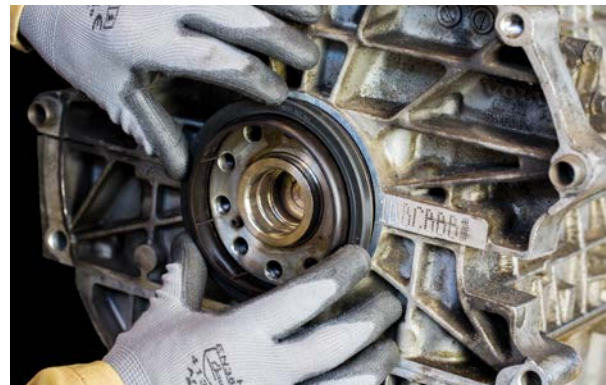
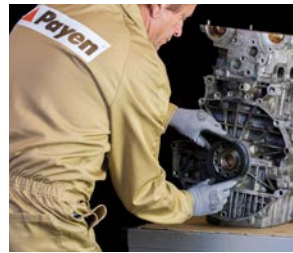
## SEAL MODULE WITH INTEGRATED ENCODER

The module can also contain the crank sensor and encoder.



## TIPS & TRICKS

- PTFE seals require careful fitting using the plastic collar provided with the seal.
- Don't remove the plastic collar before fitting and avoid touching the PTFE lip to prevent contamination.
- Always fit on a clean and dry shaft without any oil or grease.
- Fully tighten the bolts used in fitting an integrated seal before removing the plastic collar.
- Once the plastic collar is removed, make 2 full rotations, allow 4 hours for the seal to recover onto the shaft before starting the engine.



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