

## OFF ROAD ENGINE SEALING GUIDE

Modified Article	Date of Application	Date of Publication

### 1. DESCRIPTION

This document is to provide a guide as to the methods used to fit seal/s onto an Motorsport Australia Off Road Engine. Refer to the Motorsport Australia Off Road Engine Inspection and Sealing document for specific details as to the process of sealing an engine.

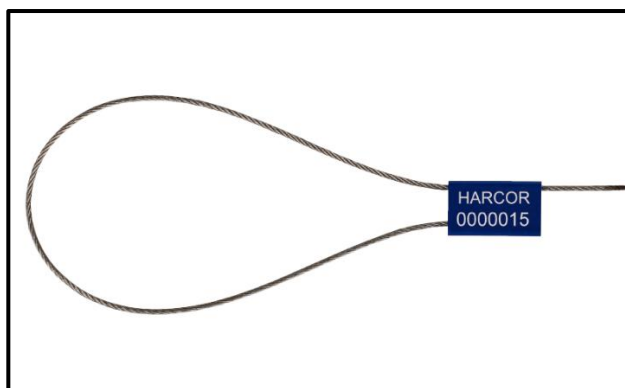
### 2. ENGINE SEALING

#### 2.1 Component Seal for an engine

- (a) The seals used must be able to withstand the conditions experienced whilst in use (heat, vibration etc.).
- (b) The seals must be fitted in suitable locations on the engine and different engines may require different locations.
- (c) The seals must be fitted in such a way that they can be expected to remain in place for the duration of the serviceable life of an engine.
- (d) Three types of seals are available:
  - (i) HARCOR Plastic Rotary Seal – suitable for areas not subject to high heat, and best used with braided seal wire.



- (ii) HARCOR Mini Cable Seal – suitable for most areas, fitted with fixed wire.



- (iii) ENVOSEAL/HARCOR Brass clasp type Seal – suitable for all areas, and best used with braided seal wire and lead retainer.



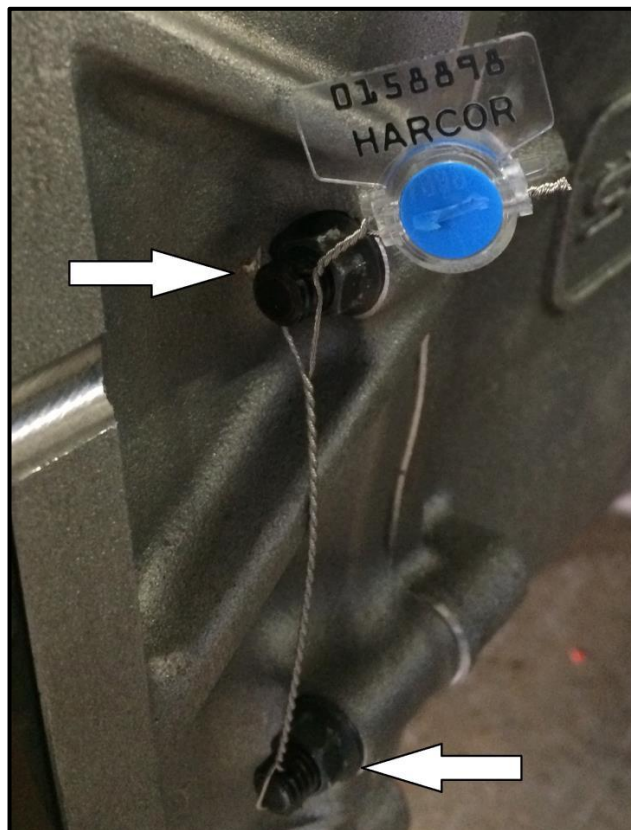
## 2.2 Location of engine seals

- (a) Engine seals must be fitted to ensure that the internal components of the engine that are related to the swept volume (crankshaft, engine block/bore) are sealed to ensure that these components cannot be changed without the removal of the seal.
- (b) Multiple seals must be fitted with a minimum of two (2) required on each engine at locations such as:
  - (i) Sump pan to engine block
  - (ii) Timing cover to engine block
  - (iii) Rear seal cover to engine block

## 2.3 Sealing methods

- (a) HARCOR Plastic Rotary Seal

Best used with braided or coated tie wire i.e. Stainless Steel 0.7mm 7 strand wire. Example of two bolts, drilled for wire and seal fitted. Wire one bolt to the other and add seal to tail.



- (b) HARCOR Mini Cable Seal

Fit to two drilled bolts/nuts OR through a hole drilled in two components i.e. sump pan flange and engine block case.

Once fitted DO NOT CUT THE WIRE as doing so will cause it to fray excessively. Leave the tail and if need be secure it in another fashion, i.e. loop it or use a small cable tie to hold it back on itself.  
Example of cable seal fitted to two bolts:

