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## Crankshaft Timing Ring

### 1100 Series

3 Issue 1

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This Technical Information Bulletin applies to 1100 Series four cylinder engines between engine serial numbers N-----U111181V and N-----U128694V.

## Introduction

The problem that is identified below does not have a known permanent solution. Until a permanent solution is known, use the solution that is identified below.

## Problem

There have been a number of isolated instances of issues with the crankshaft timing ring (Perkins part number 3116L022) on certain engines. These issues may cause the engine to operate erratically or may cause the engine to stop. The engine may not restart.

## Solution

Refer to the procedure below for the solution to the issues with the crankshaft timing ring.

The parts that may be required are: three setscrews (Perkins part number 2316T244), timing ring (Perkins part number 3116L022) and crankshaft kit (ZZ90241).

- 1 Check that the retaining screws for the timing ring are secure. If the screws are loose, follow steps 2 to 6.
- 2 If necessary, remove the timing ring. If the threaded holes in the crankshaft are damaged, replace the crankshaft assembly. Refer to Disassembly and Assembly, 'Crankshaft - Remove' for the correct procedure to remove the existing crankshaft.

### Notes:

- If necessary, degrease the threaded holes in the new crankshaft.
  - Ensure that the new setscrews (Perkins part number 2316T244) have '12.9' stamped on the head of the setscrew.
- 3 Install new timing ring to the new crankshaft. Apply several drops of Loctite 271 Threadlock to the threads on the new 12.9 setscrews. Install the new 12.9 setscrews to the crankshaft assembly. Tighten the setscrews to a torque of 15 Nm (11 lbf/ft) 1.5 kgf m. Ensure that there is no gap between the crankshaft and the timing ring.
  - 4 Install the new crankshaft to the engine. Refer to Disassembly and Assembly, 'Crankshaft - Install' for the correct procedure.
  - 5 Check the piston heights of the cylinders. Refer to Systems Operation Testing and Adjusting, 'Piston Height - Inspect' for the correct procedure.
  - 6 If necessary, replace the connecting rods. Refer to Disassembly and Assembly for the correct procedure.
- Return the original crankshaft and timing ring assembly in the original assembled condition. Return the parts to the Perkins Parts Return Centre, Eastfield, Peterborough, PE1 5NA, UK. The packages should be made for the attention of Jerome Savage. Attach a copy of the warranty claim to the package.

Record the following information if an issue with the timing ring has occurred:

- Engine serial number
- Operating hours
- Type of application
- Chassis number of application
- Downloaded ECM data
- Typical application usage.

Communicate this information to the relevant Perkins Technical Representative.

End

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