

Crankshaft - Installation

CAUTION

Always check the main bearing journal clearance (see [Crankshaft Main Bearing/Journal Checking, Measuring and Bearing Selection](#)), before final assembly of the crankshaft. Failure to correctly select crankshaft bearings will result in severe engine damage.

1. Select and fit new main and big end bearing shells using the selection processes detailed on [Crankshaft Main Bearing/Journal Checking, Measuring and Bearing Selection](#).
2. Lubricate all of the bearings with clean engine oil.
3. Ensure that the crankshaft is clean, and that the oil ways within the crankshaft are clean, free from blockages and debris.

CAUTION

The crankshaft to idler gear timing will be lost when the crankshaft is removed. Do not refit the crankshaft without first setting the crankshaft to idler gear timing. Incorrect idler gear timing will result in incorrect camshaft timing. Rotating or attempting to start an engine with incorrectly adjusted camshaft timing will result in severe engine damage.

4. Install the crankshaft to the upper crankcase, ensuring the crankshaft drive gear is correctly timed to the balancer shafts and idler gear (see [Front Balancer Shaft - Installation](#)).
5. Align the connecting rod big ends to the crankshaft pins.
6. Fit and in the correct sequence, tighten the big end caps. (see [Connecting Rod - Installation](#)).
7. Assemble the crankcases (see page [Crankcase - Assembly](#)).
 - Refit the cylinder barrels (see [Barrels - Installation](#)).
 - Refit the cylinder head (see [Cylinder Head - Installation](#)).
 - Refit the engine (see [Engine - Installation](#)).
 - Refit the fuel tank (see [Fuel Tank - Installation](#)).
 - Reconnect the battery positive, (red) lead first see ([Battery - Installation](#)) and tighten the terminals to **4.5 Nm**.
 - Refit the seat (see [Seat - Installation](#)).
 - Start the engine and ensure that the low oil pressure warning light goes out shortly after starting.
 - Stop the engine and check the engine oil level. Adjust if necessary (see [Engine Oil - Level Inspection](#)).