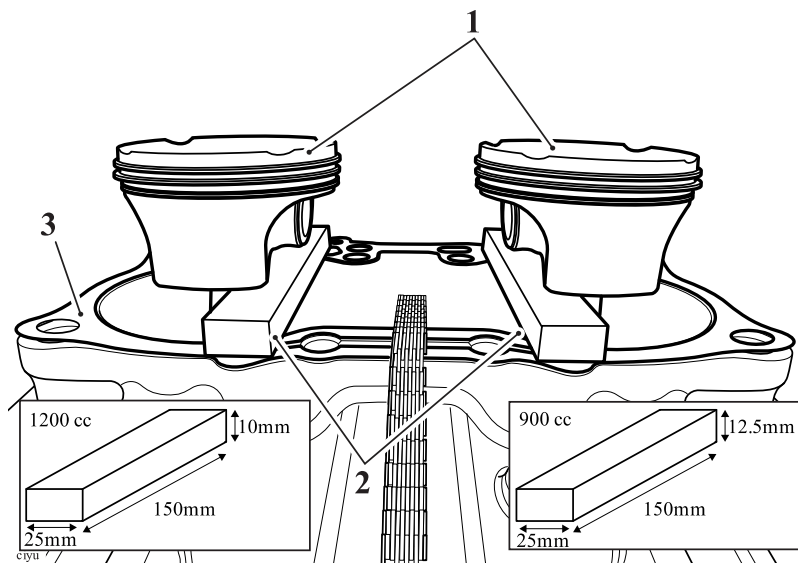


Barrels - Installation

1. Thoroughly clean the mating surfaces of the crankcase and barrels taking care not to damage the mating surfaces.
2. Fit a new base gasket and refit the locating dowels as noted during removal.
3. Using suitable spacers to support the pistons whilst preventing contact with the crankcase, rotate the crankshaft to position the pistons level with each other.



1. **Pistons**
2. **Spacer**
3. **Crankcase**

! CAUTION

Do not allow the pistons to fall against the crankcase when turning the engine. Piston and/or crankcase damage could occur if the pistons are not supported while turning the engine.

4. Ensure the piston ring end gaps are correctly positioned (see [Piston Rings - Assembly](#)).

Note

- **Ensure the barrels and pistons are clean prior to installation.**

5. Lubricate the piston rings and the cylinder bores with clean engine oil.

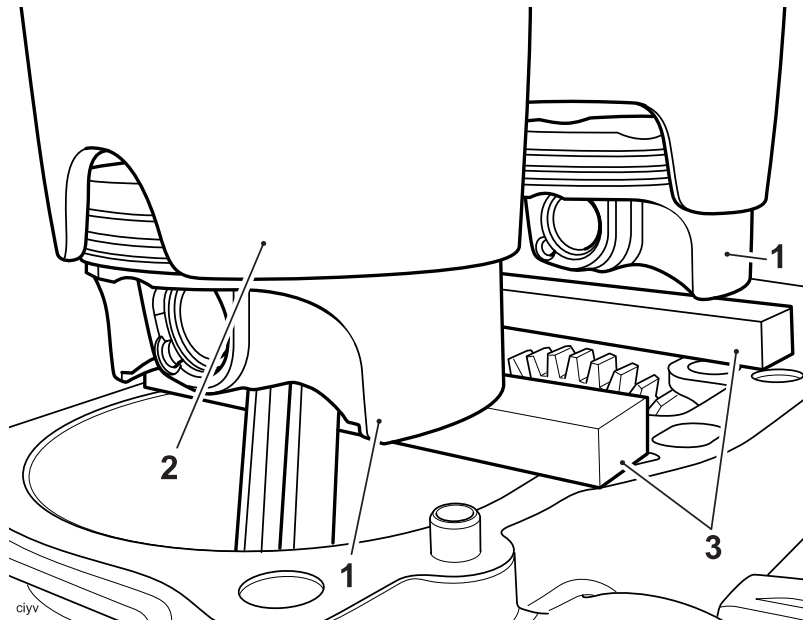
! CAUTION

Do not allow the full weight of the barrels to rest unsupported on the pistons. Failure to support the barrels is likely to result in piston ring breakage.

! CAUTION

Do not force the pistons into their bores. The base of each bore is chamfered to ease installation and excess force should not be needed. If either piston jams, lift the barrels slightly and check the rings are correctly located into their grooves before continuing. The use of force is likely to result in piston ring breakage.

6. With the aid of an assistant, ease the barrels carefully over the pistons whilst guiding the piston rings into the base of the cylinder bores.



1. Piston
2. Barrel
3. Spacer

7. Slide the barrels fully down, remove the spacers and locate on the dowels.
8. Refit the cylinder head (see [Cylinder Head - Installation](#)).
9. Refit the camshafts (see page [Camshaft - Installation](#)).
10. Recheck the tensioner plunger location against the camshaft drive chain tensioner blade.
11. Remove T3880039 - Idler Gear Timing Pin from the crankcase.
 - Refit the alternator stator (see [Alternator Rotor - Installation](#)).
 - Refit the alternator cover to the engine (see [Alternator Cover - Installation](#)).
 - Refit the camshaft cover (see [Camshaft Cover - 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](#)).