



Performance Engine Components

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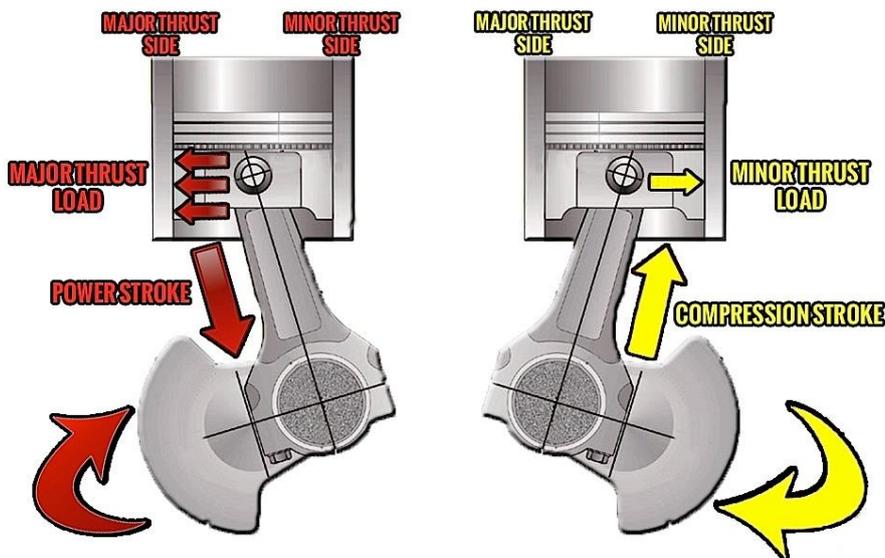
Technical release – Piston/Con rod orientation 2017#1.1

Title	Piston/Con rod orientation	Part Number(s)
Written By	DMW	Various
Date	25/4/17	
Desc	Installation instructions	

Pistons and rods need to be installed facing the correct way. To check which way they are installed, follow this guide

- Does the piston have Valve pockets?
Yes – Larger valve pockets are always inlet side.
No – Measure the Gudgeon pin offset.
- The pin offset is the distance between the centre of the Gudgeon pin hole to the outer edge of the skirts. The distance between one of the edges will be slightly shorter than the other, generally by 1mm.

The shortest edge goes towards what is known as the “major thrust side of the engine”. The thrust side is the side of most force between the piston and the bore. 90% of engines rotate clockwise so the major thrust side is the left hand side of the engine, when viewed from the oil pump / timing end.



Clockwise rotation showing pin offset to the left.



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The manifold location of the engine is irrelevant in this instance as some engines have inlet manifolds at the front, and some at the rear.

- Rod Orientation. Rods will generally have locating tags or “keeps” in the big end. It is good practice to install the rods with the keeps facing the major thrust side of an engine. This will also locate the oil way holes in the Small end correctly. If there are no keeps in a con rod, the oil hole can be faced towards the major thrust side as well.