

## 477cc piston/cylinder insertion instructions

There is a video on youtube showing the process how to exchange a cylinder in a Himalayan. On YouTube search for "Royal Enfield Himalayan Engine Upgrade to 477cc" or copy the link: <https://www.youtube.com/watch?v=PPXUHCbHlJU&t=1639s>

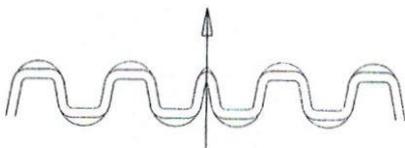
Case 1: The rings are already installed in the piston (piston is hard to move in the cylinder). Make sure in the process of inserting the new cylinder in the engine body the piston is NOT REMOVED from the cylinder. The rings are put in a specific sequence, orientation (the letter "N" upwards!) and angle towards each other which should not be disturbed by removing and then re-inserting the piston. Especially the oil ring is very delicate. To orient the piston correctly observe that the circlip is already installed on the left side, the timing chain side.



For the other side of the piston there is an additional circlip packed with the gaskets. The procedure is Plug and Play. After you have removed the old piston turn the engine to bottom dead center and gently move the connecting rod upwards, then mount the new piston (without turning it), then fit the new barrel into the case opening.

Case 2: You received the rings separately (in this case the piston moves easily in the cylinder):

The oil ring Spacer must be put in first with the ends pointing upwards, and situated at about 2 O'clock. This is followed by the bottom scraper ring which goes in with the gap at 8 O'clock, lastly the top scraper ring with the gap at 4 O'clock. Observe that the rings are NOT symmetric. The upper side is marked with a tiny "N". 12 O'clock orientation would be the cut away for the exhaust valve, the slightly wider cut away with extra space for high lift performance cams.



### **CAUTION**

WHEN INSTALLING FLEX-VENT OIL RING EXPANDER ON PISTON WITH DRAIN SLOTS ON EITHER SIDE OF THE PIN HOLE WHICH ARE CUT THROUGH THE LOWER SIDE OF THE OIL RING GROOVE THE EXPANDER **MUST** BE INSTALLED WITH THE POINTS UP AS ILLUSTRATED, AND AWAY FROM DRAIN HOLES.

The ring set should move freely. If not, check the upside/downside orientation.

The rings packaged by GARDINI INDUSTRIA have a tiny "N" at their upwards oriented side. If you received rings not from Gardini, check the orientation by moving them once installed. If they do not move freely, turn them around. They are also marked but only with a tiny groove on the upper side, which is hardly visible to the naked eye. However, if they move freely, they are oriented correctly.