ATHENA

ASSEMBLY TIPS
4-STROKE PISTON RINGS

INDICATIONS POUR L'INSTALLATION
DES SEGMENTS SUR LE PISTONS 4 TEMPS

INDICAZIONI PER L'INSTALLAZIONE
DEI SEGMENTI SU PISTONI 4 TEMPI

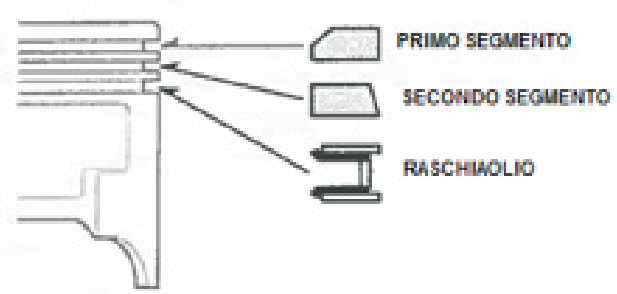
INSTRUCCIONES PARA LA INSTALACION
DE LOS SEGMENTOS EN LOS PISTONES 4 TIEMPOS

ASSEMBLY TIPS
4-STROKE PISTON RINGS

The correct installation of the piston rings is mandatory for the proper engine functioning and to achieve the best performances. In these instructions, we will always make reference to rings already cut to keep the correct gap between the ends of the ring.

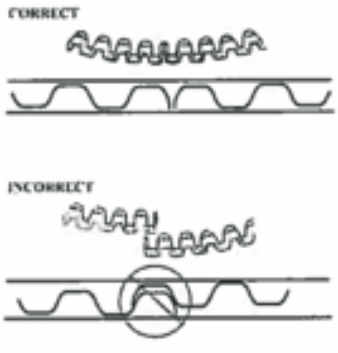
Athena ring kits are made to fit different types of pistons, so you may find components you don't need. If you are working on a piston with two grooves, you have to install just the oil ring + the top ring, while if there are three grooves machined in the piston you must run the oil ring + the second ring + the top ring. Please follow more elaborate instructions listed below.

You have to install the rings in the following order: the 3-piece oil ring, the second ring (if necessary) and the top ring, each in their respective groove, as shown in the following picture (picture 1).



picture 1

1. The oil ring is a 3-piece design consisting of the upper rail, the expander and the lower rail. The most important thing is that the ends of the expander do not overlap (picture 2).

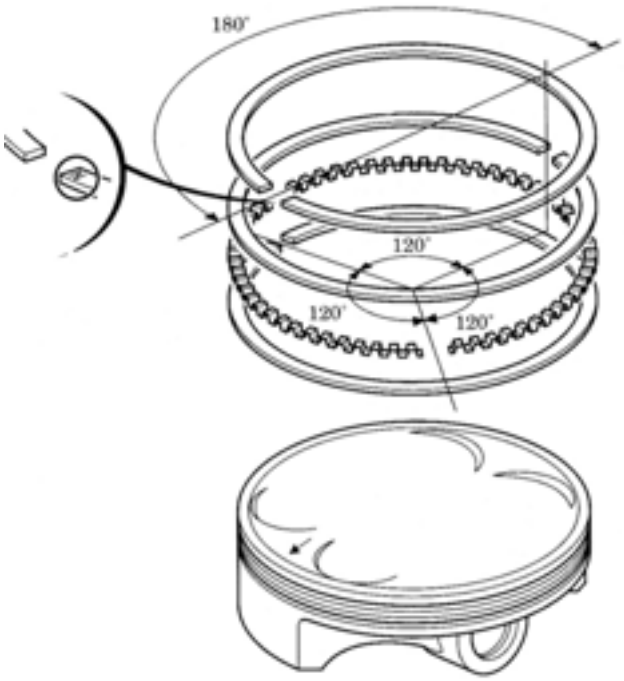


picture 2

2. On pistons with 3 grooves, you need to install the second ring in the middle. Usually this ring will look similar to the top ring but dark in color. The profile may have different shapes but is always sharp (not barrel-shaped). If you are installing rings on a piston with 2 grooves, just ignore this part and go straight to pt. 3.

3. On the first groove you have to install the top ring (or compression ring), whose surfaces are usually lighter in color (chromed or bronzed). This ring is barrel shaped on the profile. This kind of rings have some identification mark (a letter and / or a number) on one end. This mark serves to identify the upside of the ring.

4. A proper ring orientation is important to prevent any possible alignment of the ring gaps which may lead to loss of sealing, allowing gas or oil to blow-by. Each ring shall keep an orientation of 120 degrees from the next one (picture 3).



picture 3