Mugello 225 kits

These instructions are based on the latest version of the kit, using a 58mm stroke crankshaft with 107mm rod (i.e. standard Lambretta)

The optimum base squish to aim for is 1.6mm, however from 1.5mm to 1.7mm is perfectly acceptable. These are the cold build figures, as on average a gasket will shrink by .1mm when the engine has been heat cycled. So once and engine has been built and run, the figures were are looking for is 1.5 ideal, but within 1.4 to 1.6mm. The figures are based on cylinder heads with 9.4mm band)

Torque settings

M8 Main cylinder studs: 20 FT LBS (Use only quality long studs, with thick washers, and long nuts.)

M7 smaller head studs: 12 FTLBS

Manifold nuts: 12 FT LBS

Use a small amount of Loctite Blue 243 on the studs and bolts.

THREE-BOND sealer should be used on all block, cylinder and head faces, as well as the inlet manifold.

Ignition Timing

Base settings are for standard set ups, and could be different should you machine require it.

Static setting for lower revving expansions such as the JL3 14/15 DEGREES

Variable Timing (Varitronic) 19 /19.5 at idle

Static setting for Box pipes such as Ancillotti, Clubman etc 16 /17 DEGREES

Variable Timing 21 /21.5 ay idle

Basic carburettor settings – Dellorto 30mm PHBH

Fuel valve 300 minimum

Slide 45

Pilot 53 / 55

Air Mix 2 turns out from base

Atomiser AV266 to AV268 for box pipes / AV268 to AV270 for Expansions JL3 etc / AV270 to AV272 for higher revving pipes.

Needle options :-

We use X13 or X7, either need to be on the 2nd groove from the top.

Main jet for box pipes 100 to 105

Main jet for expansion 110 to 120

The above settings are for standard carburettors, we Ideally recommend the use of a variable power jet kits to be fitted.

General Set up advice

Recommended air filter is the Breath Sweet or RamAir. A fast flow fuel tap is needed, and should be measured at operating height to 550 to 600mls of fuel in one minute or under.

Fuel and Oil

For short road trips, or town running, normal unleaded could be used. But we always highly recommend Super unleaded, this is a must for longer journeys, hard riding or when the scooter is fitted with any expansion type exhaust We have found BP and Esso Supreme to give the best and most constant octane rating results.

Oil should be used at a 3% ratio. This equates to 30ml for one litre of petrol, (150mls per 5 ltrs) Fully synthetic is preferred for the longevity of the engine, piston rings etc, semi synthetic is acceptable.

Gearing recommendations

Base calculation is 5.2 for the 186 and 4.99 for the 198/200. (You can visit our downloads page – gearbox details – which lists all gearbox, sprocket and chain combinations with the final drive ratios calculated)

The best option gearbox is Italian Li 150 (early Spanish is the same) using 15/46 sprockets for the 186, and 198/200 can go to 16/47

A readily available gearbox is the Indian factory SIL GP200 gearbox. Depending on the kit and exhaust, combinations of 18/47 19/47 or 18/46 could be used.

Clutch

Five plate is the suggested minimum, six plate would be ideal for longer life or if you use the engine harder. Non synthetic gear oil with a straight 85/90 or 90 grade. Silkolene or Putoline Medium gear oil is ideal.

Spark Plug

Normal use NGK BR8ES/BR8EG

Hard Motorway riding BR9ES/BR9EG

When building and engine we always pressure test when built. We highly recommend this with all engines, but more so with kits as air leaks will cause incorrect jetting, poor running, seized or blown pistons. We sell a complete pressure testing kit if you require it, or we can offer a pressure testing service.