



performance & style

Auspufftest SCOOTERING Juli 2013

Exhaust Test SIP Performance



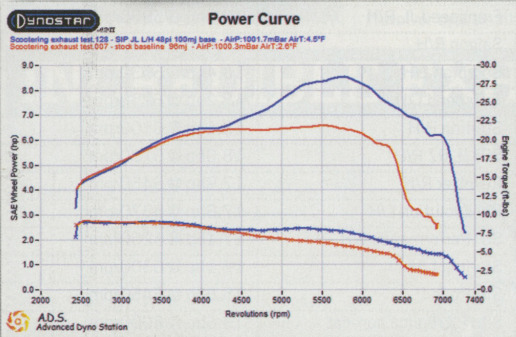
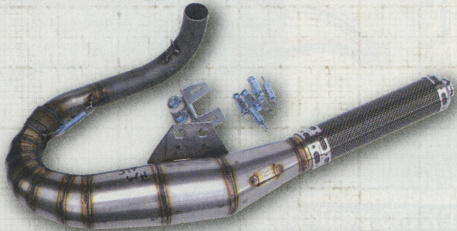
Sip Performance LH

- PRICE:** £274.88 from SIP
- MATERIAL:** Stainless steel
- FINISH:** Unpolished
- BUILD QUALITY:** Appears good apart from an ovalised cylinder joint
- MUFFLER:** Integral riveted carbon muffler
- FEATURES INCLUDED:** Slim muffler to maximise spare wheel clearance
- CLUTCH ADJUSTER ACCESS:** No problem
- SPARE WHEEL USE:** Minimal spacing required
- SOUND/NOISE:** Purposeful
- FIT:** Only spring fitting to stub, no clamping option

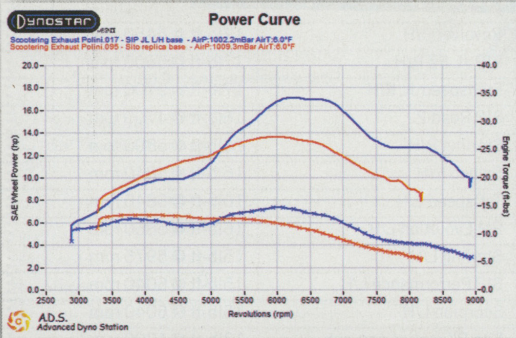


This version of SIP's JL-built, stainless steel, left-hand Performance exhaust is especially designed to maximise clearance to the spare wheel. This exhaust performs well on the PX125 engine with a wide spread of power and comparatively good performance at 4000rpm for a left-hand pipe, where many of the rival systems are weak. As such this has a gentler 'kick' than the right-hand systems, but still with a good spread of power.

SIP also produces variations of this design including one with a removable muffler which is designed to allow clearance for wide wheel kits, but as a consequence cannot be used in conjunction with a spare wheel.



SIP JL L/H vs Stock Cat



SIP JL L/H vs Stock 180



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DOUBLE THE HUMP?

You will notice that on many of the graphs for the Malossi 166 engine the curve does not follow the traditional two-stroke shallow arc, but instead has two humps like a Bactrian camel. We asked Paul from PM Tuning to explain the effect:

"The second peak occurs due to the out of phase port time area... the exhaust harmonics 'see' a second condition nicely in tune with the RPM and exhaust gas temperature increase of the engine and attempts to scavenge the gases for a second time," says Paul.

In simpler terms, the port timings on the cylinder do not correspond exactly with the tuned length of the exhaust, which is a consequence of trying to apply a 'one pipe fits all' ideology to different cylinders and kits with a wide range of port timings. This effect seems more pronounced on full expansion chambers with steeper cone angles whereas it is absent or certainly less prominent on the simpler pressed steel exhausts.

The double hump can be eliminated, and a more efficient engine produced, by adjusting the cylinder port timings or the exhaust length to suit each other more accurately, however the unusual power delivery does no harm and road riders are usually content to live with the 'double power band' as a feature of their scooter.

"In most cases this is considered a bonus as most pipes usually fizzle out after one horsepower peak," reasons Paul.

CONCLUSION

The conclusion of this test is that there is not so much an outright winner, only different exhausts to suit different applications. Of all the cone-rolled pipes we tested this time there's really not a bad one among them: every one comfortably exceeded the peak performance of the pressed steel Italian pipes. There are differences in where each pipe makes peak power, but that isn't all you should look at. Rather than a sharp, high peak you should look for the 'highest and widest' curve. A broad spread of power will usually beat a strong, momentary peak; particularly when you only have four gears to play with.

If you are looking for a replacement exhaust with standard looks, fitment and sound then our recommendation from last issue remains unsurpassed. The SIP Road 2 is an excellent all-rounder with great low-rpm performance making it suitable for city use, two-up riding and touring.

If you are after a pipe to maximise top speed of the stock PX then the higher revving PM Evolution or Scorpion will do the trick, just remember to upjet your carburettor to suit.

In terms of peak performance on the stock 125cc PX motor the Taffspeed and the PM Evolution both get honourable mentions, but the highest-widest curve belongs to the SIP RZ Mk. 1, making it probably the best all-rounder for this engine.

On the Malossi 166 kitted motor the best peak power goes to the Franspeed but the highest torque output goes to the grunty Revolver by a small margin.

Perhaps the most noticeable change is how much the Vietnamese exhausts have improved in the past few years. In previous *Scotering* exhaust shoot-outs we've encountered fit problems and lacklustre performance from some brands, but now we have the Saigon Scooter Centre pipe offering the second best peak power on the Malossi engine, and both of the Sterling exhausts performing perfectly respectably, way above the Italian chambers from the last issue. The main point all the Vietnamese exhausts have in their favour is price, because they are offering hand-made performance for the price of a pressed steel exhaust.

The exhaust that leads in terms of value for money is the TSR Revolver which boasts performance characteristics that are only a little short of the SIP RZ Mk. 1 – which is perhaps unsurprising given that the cone sets look 'extremely similar'. Those on a tight budget are likely to put aside the ethics of who copied who, and simply see it as a highly effective polished stainless exhaust, with some additional technical features for only £150. This same exhaust is also sold in German-speaking markets by LTH, badged as the RZ Mk.2. TSR says it is working with LTH to produce a revised version for the future.

Sticky

Thanks to: Piaggio UK, Mick the Plumber, Ron Daley, Little Tim and Diablo Moto and everyone who supplied exhausts for this article.

INCREDIBLE EXHAUST GIVEAWAY!

Thanks to the generosity of the following companies: SIP (SIP Road 2 and JL Performance), Beedspeed (Sterling L/H and R/H), Andy Francis Scooters (Franspeed JL), The Scooter Republic (TSR Revolver), Saigon Scooter Centre (SSC)

Milvertons (Simonini) and VE UK (Malossi, Polini, Sito+, Sito standard, Pinasco, Gianelli), we have 14 PX125 exhausts used for these tests (complete with relevant dents and battle scars) to give away to lucky readers who correctly answer the following question:

Which was the only exhaust in this test to earn a *Scotering* Recommended award?

- SIP Road 2
- SIP Road Trip
- SIP Road to Nowhere

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The first 14 correct answers drawn out of the hat will win an exhaust. Feel free to state your preferred type but if we are unable to match your preference then winners may be given another type chosen at random.

Closing Date: September 5, 2013