

JUNE 1967

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MOTORCYCLE SCOOTER & THREE-WHEELER MECHANICS

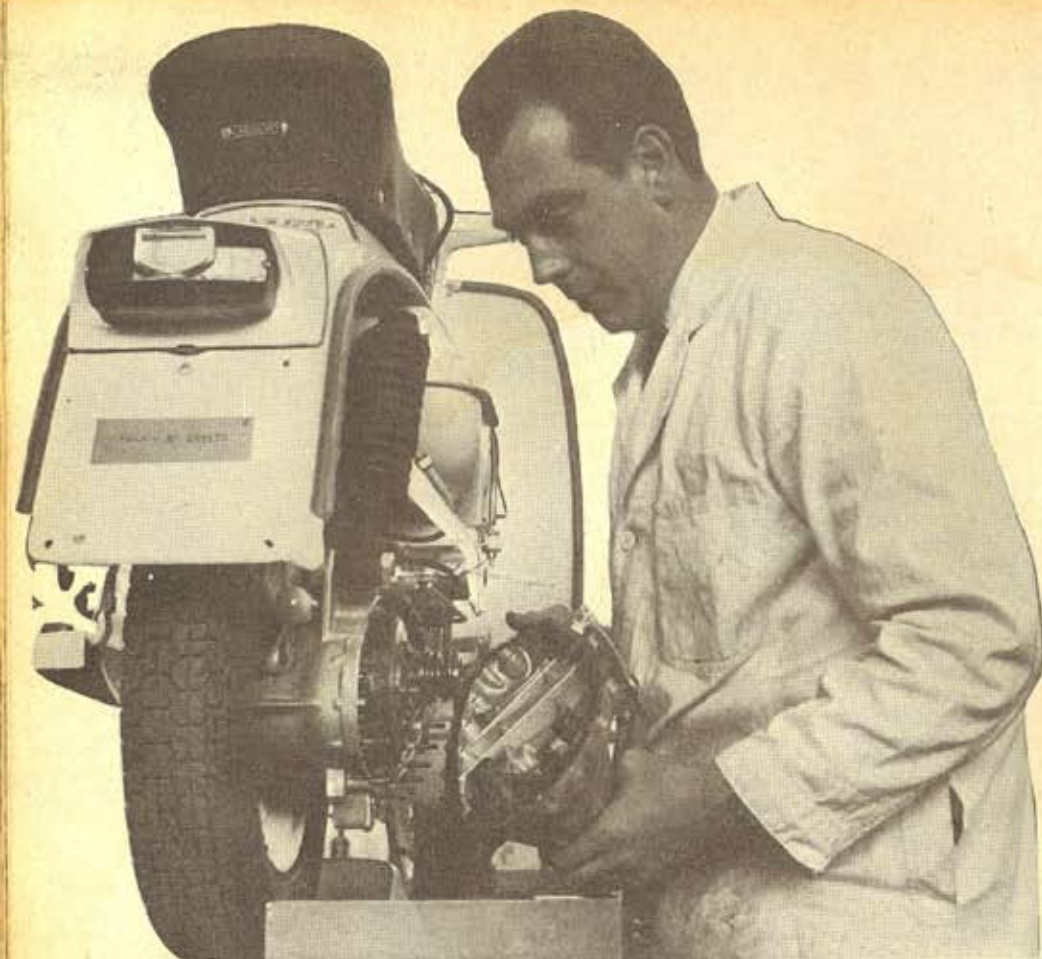
WORLD'S LARGEST

101 TOUR TIPS

**TESTING
BSA'S NEW
THUNDERBOLT**

HOX 45E

- ▶ **CHOOSE THE RIGHT OIL!**
- ▶ **HOW TO SOUP-UP A SCOOTER**
- ▶ **GET THE BEST FROM PLUGS**



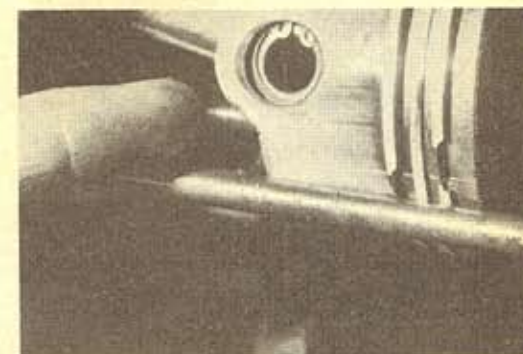
A great power-booster is this new-type Amal carb with concentric float-bowl and mixing chamber. Supertune fit a 32 mm one on to an inlet manifold of the same size. Resultant performance gain is great



The special high compression cylinder head for the Supertune 225 cc conversion. Big finned and in light alloy, it has a compression ratio of 10:1 and a squish-type combustion chamber for ace gas flow



If your bike has been tuned to any extent you will need a rev-counter. Then you will be able to calculate performance gains as well as being able to avoid damaging the engine by over-revving it



For out and out power you can trim back the piston skirt on the induction side. Unfortunately this is no good for road use as it narrows the power band to a few hundred revs and restricts flexibility

SCOOTER SOUP-UP

Supertunes of Croydon show how to get more mph from your Lambretta

► Scooters are changing their image these days. No longer are they merely ride-to-work commuter vehicles. More and more two-stroke tuners are turning their attention to scooter motors and we are now seeing these small-wheeled bombs in all manner of sporting events.

Scooter scrambling has been with us for several years and is now firmly established. High-speed trials are held at tracks like Brands Hatch, Mallory Park and Snetterton. Boss of the Santa Pod dragstrip, John Bennett, is holding special classes for scooters, as are the National Sprint Association and, finally, the scooters have performed on the cinders at the Hackney speedway stadium.

With a variety of events such as this

open to scooter owners there is every reason for them to turn their hand to tuning.

Several specialists have already got fantastic results. The Italian, Ancillotti, for instance, did a standing quarter-mile in around 15 seconds at the NSA Elvington records meet. His bike was a 225 cc Lambretta, stripped to the bare essentials.

Lambretta specialist, Malcolm Clarkson, who runs the Supertune scooter shop at Brighton Rd, South Croydon, has one ambition—to get a genuine 90 mph from a fully equipped road-going scooter.

His bikes are already doing well over 80 mph. The following are some of the methods he uses to get this phenomenal performance from his machines. You can use these ideas with little cash.



An alternative to the Amal concentric carb in the inlet department is this Wal Phillips fuel injector. Specially made for both Lambretta and Vespa models, it costs about £8. And is well worth it!



The Lambretta clutch shows a tendency to slip if constant high revs are used on take-off. To eliminate this an extra steel plate is used to pack out the assembly. No problems if this mod is done



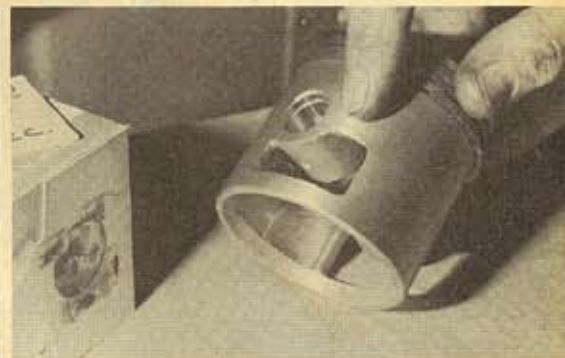
A special long-stroke con-rod assembly that Supertune have developed to give the Lambretta a capacity of 247 cc! At present it is just experimental but may be in production soon. Should be fantastic



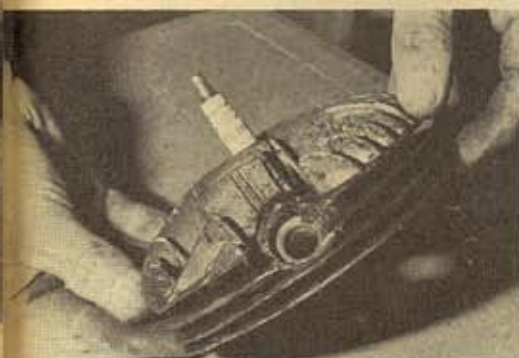
Normal scooter silencers restrict the performance so this special expansion type has been fitted. Note the extra-strong welded brackets, necessary because vibration often splits normal silencers



Another shot of the silencer showing the large diameter U-tube which connects it to the motor. Diameter is 1 3/4 in. instead of 1 1/2! Also note the conical expansion intake into the silencer unit



This is the piston from the Supertune 225 cc conversion. It is a three-ring job in light alloy with transfer port windows in the skirt. The 225 cc set-up will fit all present 200 cc Lambrettas



This special head, from a 200 cc Lambretta, has a centrally situated sparking plug. Coupled with higher compression ratio it gives a useful power boost. Other plug can be kept in place as a reserve



Opening out the transfer ports, as has been done on this 225 cc barrel, gives extra power. Square the spigot at base of ports (indicated). Note difference from standard barrel on left of picture



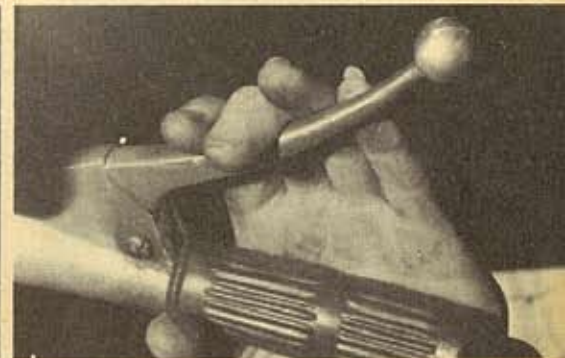
If you're using a big carburettor or fuel injector then you will need an inlet manifold to match it. The one on the left is 1 1/2 in. Just compare it with the standard manifold on the right



The double engine mount, of bonded rubber in a steel ring, makes a vast improvement to the handling. Stops twitching when accelerating from a bend. A really necessary fitting for fast scooterists



The short rear suspension damper on the right fits in place of the normal one and cuts down the overall height of the bike. Meant for sprinting it is not suitable for road use. Too low for bends!



If you plan any competitions you will need to fit these ball-ended control levers. Then, if you spill you needn't worry about sparring your hand on the lever—painful in the extreme if you did