RD50M MODS

A few straightforward modifications can turn your restricted RD50M Yamaha from a 35mph struggler into a plus 50 flyer.

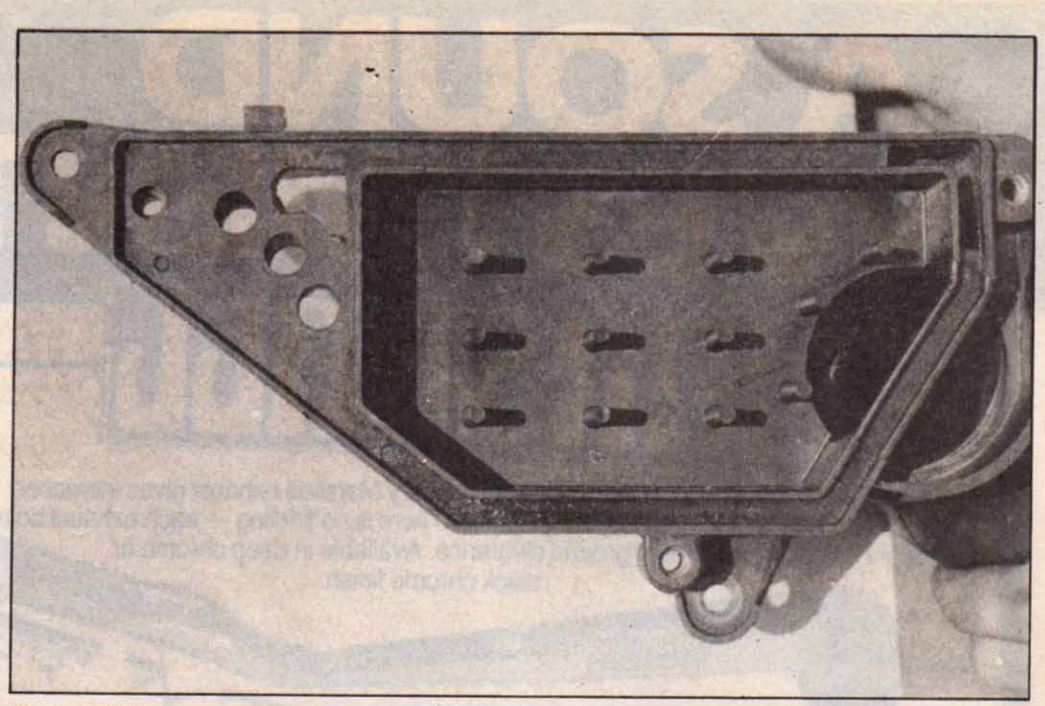
The work outlined here resulted in a speedo reading increase from 35 to 55mph. That's a considerable jump in performance and it doesn't cost the earth.

Actual top speed through the *Mechanics* radar turned out to be 51mph.

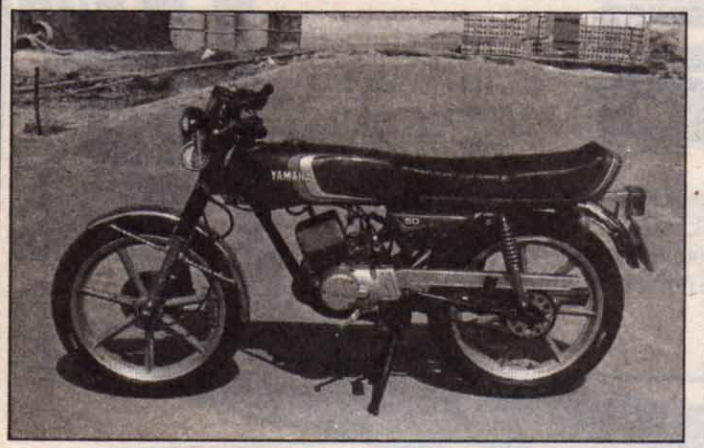
The bike could be tuned to go even faster but the modifications carried out were designed to give reliability as well as decent cruising and top speeds for those of you who have reached your 17th birthdays.

If you are 16, of course, and own a restricted moped, it is illegal to use it on the road in tuned form until you are 17.

I will start by giving all the facts in brief first and then go into further detail where necessary later.



The tuned bike was running without an air filter in the box and with the additional holes shown here.



- Raise exhaust port by 4mm
- Skim cylinder head by 0.025in.
- Lap head and barrel together with grinding paste.
- Fit two base gaskets.
- Set ignition at 1.5mm BTDC.
- Fit 60 main jet.
- Set carb needle in middle position.
- Fit Yamaha FS1E silencer.
- Remove air filter from air box.
- Drill two holes the same size as those already in the airbox.
- Fit 13 tooth drive sprocket and 39 tooth rear
- Open reed stops to 12mm.
- Fit Boyesen reed.
- Fit new NGK B9H spark plug or equivalent.
- Use four star petrol.

These are the modifications which worked on the 1980 secondhand RD50 with 10,000 miles on the clock featured here. The emphasis was on doing the job for low cost, keeping the bike reliable for road use and getting some real power out of the motor.

To carry out all the modifications outlined arm yourself with the following: new base gasket, new NGK B9H spark plug, fine grinding paste, round file, dial gauge kit, 60 main jet, secondhand FS1E silencer, 13 and 39-tooth sprockets, Boyesen reed, instant gasket, pliers, drill, socket set, and screwdriver set.

There are two jobs which will most likely involve paying someone to do the work — setting the timing, and skimming the head. Your local dealer should be able to take care of both.

Remove the barrel and raise the exhaust port by 4mm, retaining the overall shape of the port. To do a really good job, invest in a riffler file to radius (round off) the edges of all ports to give the piston rings an easier life.

Have the head skimmed by 0.025in and lap the head to the barrel using fine grinding paste. It's important to do this carefully since the head mates with the barrel minus the original head gasket. Instead use a light smear of RTV instant gasket.

Tighten the head down evenly and carefully when it comes to re-fitting. Borrow or buy a torque wrench if possible to do the job right.

If you have facilities to check the squish clearance (ie solder and micrometer) it should be about 0.040in. Make sure it is not less than 0.025in.

Before refitting the barrel if you can afford a £7 Boyesen (or similar) reed replace the original reed with it and open the stops to 12.0mm. Use the base gaskets under the barrel.

Fit the carb with a 60 main, and check that the needle is in the middle position. Get an experienced rider to check that this jetting is suitable for your engine. It worked on the bike featured here, but maybe yours might run better with a jet one size different.

Set the ignition at 1.5mm BTDC and then fit a new B9HS plug. Obviously, your points should be in good condition, as should the rest of the motor before begin tuning.

Gear up from the standard 11-48 sprockets to 13-39. This is essential to gain the extra top speed. And fit an FS1E pipe in place of the more restricted stock silencer. Remove the standard air filter. Retain the airbox, but drill two extra holes the same size as the originals. If you overdo this the motor will not pull on the main jet. Don't worry though, it's easy to block off any excess inlet area.

If you want to operate on a really tight shoestring forget the Boyesen reed. Use the stock item with the stops opened to 12mm

The next best cost cutter would be to forget the FS1E pipe.

If in doubt about any of the above modifications consult your dealer or an experienced rider before going ahead. And make sure your brakes are up to the tougher job you're about to give them.□

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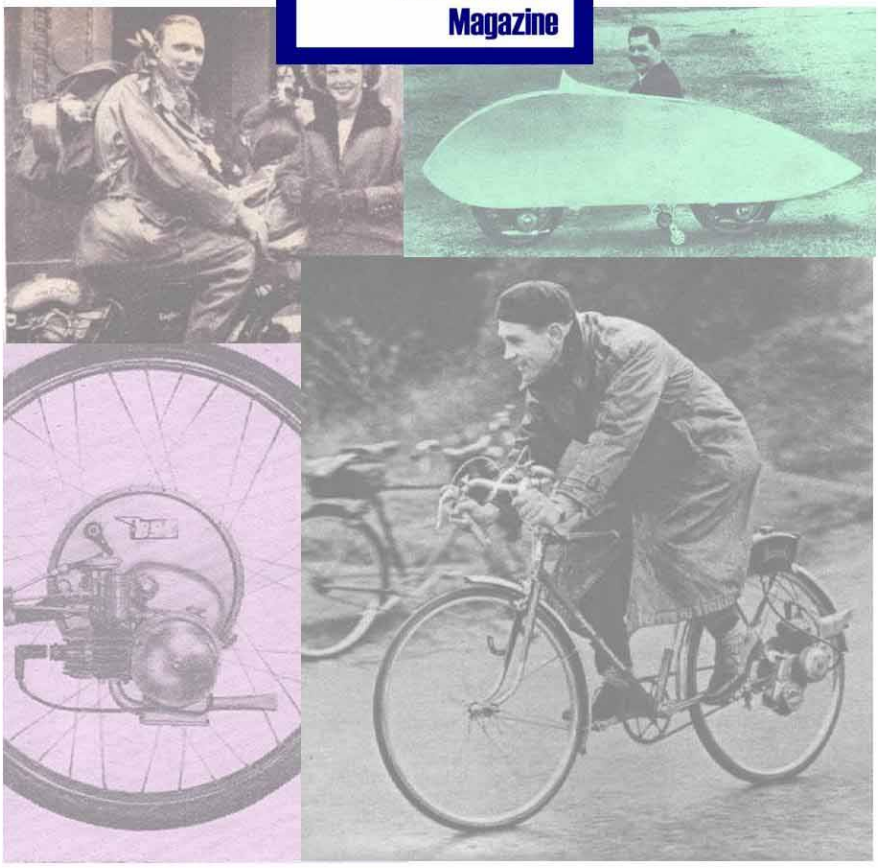

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