motor cycle and cycle trader

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SERVICE SHEET No. 15/3

SUZUKI A.100

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GENERAL INFORMATION

THE A.100 was introduced, along with the AS.50, at the Brighton Show in April 1969, and seen together the two machines appear to be identical in both size and design. This similarity is more apparent than real; in fact almost every dimension is fractionally different. The only parts common to both models are the front forks and the rear wheel, and it is important to remember when dealing with spare parts in particular, that very few parts are interchangeable

The A.100 has an engine with exactly square dimension, bore and stroke both being 50mm, and has also the familiar Suzuki features of a disc-valve for the inlet, on the crankshaft, and 'Posi-force' oiling by a throttle-controlled mechanical pump drawing oil from a separate tank. The gearbox has four ratios, changed by a foot control, and the final drive chain is totally enclosed.

With a claimed output of 9.5 bhp at 7,500 rpm, and a dry weight of 176lbs, a very good performance with a maximum of 69 mph is available.

General design of the A.100 is so very similar to the AS.50 that the servicing procedures are virtually the same for both machines. This sheet should therefore be read in conjunction with *Trader* Service Sheet No. 12/3 published on 4 November 1969 for the Suzuki AS.50.

Servicing and workshop tools

All design features are typically Suzuki, so that any dealer already familiar with the marque will not find the A.100 strange or difficult to work on. A complete range of workshop tools is available, these being in the main those used also for the AS.50, and these are essential for certain operations, which cannot be done by other methods or tools. They are listed on p. 11 of the Workshop Manual, and are illustrated on p. 12.

Service manual

This is a typical Suzuki publication, giving a written description of most servicing operations, with either photos or drawings to illustrate the work. Like the book for the AS.50, it does not cover suspension, hubs and steering head, and dealers should therefore refer to the *Trader* Service Sheet no. 12/3 in which some instructions were given for work on these components.

The later part of the manual gives figures for clearances, settings, wear limits, and torque settings, and there are servicing instructions and a wiring diagram. It is therefore essential for dealers to have this book before doing any servicing or repair work, especially as many of the figures are different from the AS.50 model.

SERVICING DATA

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Renewals

Refer to the same paragraph of *Trader* Service Sheet no. 12/3, all the information given there applies to the A.100.

Permissible wear

The Service Manual, part 9, pp. 35-40 inclusive, gives standard and limit dimensions for engine-unit parts, and figures for electrical parts. There are instructions and illustrations for many of the wear-measuring operations.

Engine settings

Carburettor See Service Manual, p. 34 for illustration and complete setting figures, and pp. 41-43 for adjustments and tuning.

Ignition Sparking plug: standard NGK B77HC, alternatives as listed in *Trader* Service Sheet no. 12/3. Gap 0.020-0.024 ins (0.5-0.6 mm).

Contact breaker gap: 0.0.14 in ± 0.002 (0.35 mm ± 0.05). Points open 20 degrees (1.86 mm) BTDC. Timing is adjusted by first setting points opening correctly, then moving the stator plate to get moment of opening correct. A table of piston travel figures is given on p. 45 of the Service Manual, and instructions on p. 44. A timing gauge and a timing buzzer (or lamp) are needed to get the setting accurate—these are standard Suzuki workshop tools.

Transmission Gearbox sprocket 13T, rear wheel sprocket 32T, chain size ½" pitch, length 51 pitches plus connecting link.

Lubrication

Engine Use Shell 2T two-stroke oil, or Duckhams two-stroke oil. The oil tank holds 2.25 pints (1.2 litres). Oil pump adjustment is given on p. 41 of the Service Manual.

Gearbox Recommended oil: SAE 20W/40 multigrade. Capacity: 1⅛ pint (750 cc), level screw alongside kickstarter spindle. Gearbox oil also lubricates primary-drive gears and clutch.

Front forks Each leg: 130 cc of SAE 30 oil, +10 or −5 cc (maximum + 13 cc). Workshop tools include a level gauge.

Torque settings

A table of settings is given on p. 48 of the Service Manual.

WORK ON THE ENGINE-UNIT

Decarbonisation

The exhaust pipe and silencer are separate units, so only the pipe need be disturbed after undoing the exhaust port ring-nut, the pipe can be swung to one side.

After loosening the plug, the four nuts holding the head are removed, and then the head and barrel can both be detached. It is advisable always to remove the barrel, in order that the rings may be inspected. In any event, once the head is removed, the base joint of the barrel will be broken and will have to be remade with a new gasket.

The head gasket is of thin aluminium and is regarded as expendable, that is to be renewed each time the head is disturbed.

Piston rings Service Manual p. 30 refers to the rings as being two different types. However, the latest production series use two identical keystone (tapered) rings, and these are fitted with the letter 'R' (stamped near the gap) facing upwards. The lower ring has an expander ring behind it. Standard gap is 0.006 ins (0.15 mm), and rings must be replaced when gap exceeds 0.016 ins (0.40 mm) —see Manual p. 36.

Silencer This is a similar design to that on the AS.50 but not upswept and the advice concerning cleaning as given in *Trader* Service Sheet no. 12/3 for the AS.50 applies. If the condition of the silencer is allowed to become very bad, it is almost impossible to remove the baffle, and a complete new silencer will then have to be fitted.

Air cleaner To remove the element, first detach the outer cap covering both hose and cleaner body, held by two cross-head screws. Next slacken the lower hose clamp, then remove three cross-head screws which hold the element in the body.

Inlet valve The outer valve cover (seat) is held by five countersunk cross-head screws and needs no extractor to remove it (as does the AS.50). If for any reason the inner seat is removed (this is not necessary unless it is damaged) do not mix

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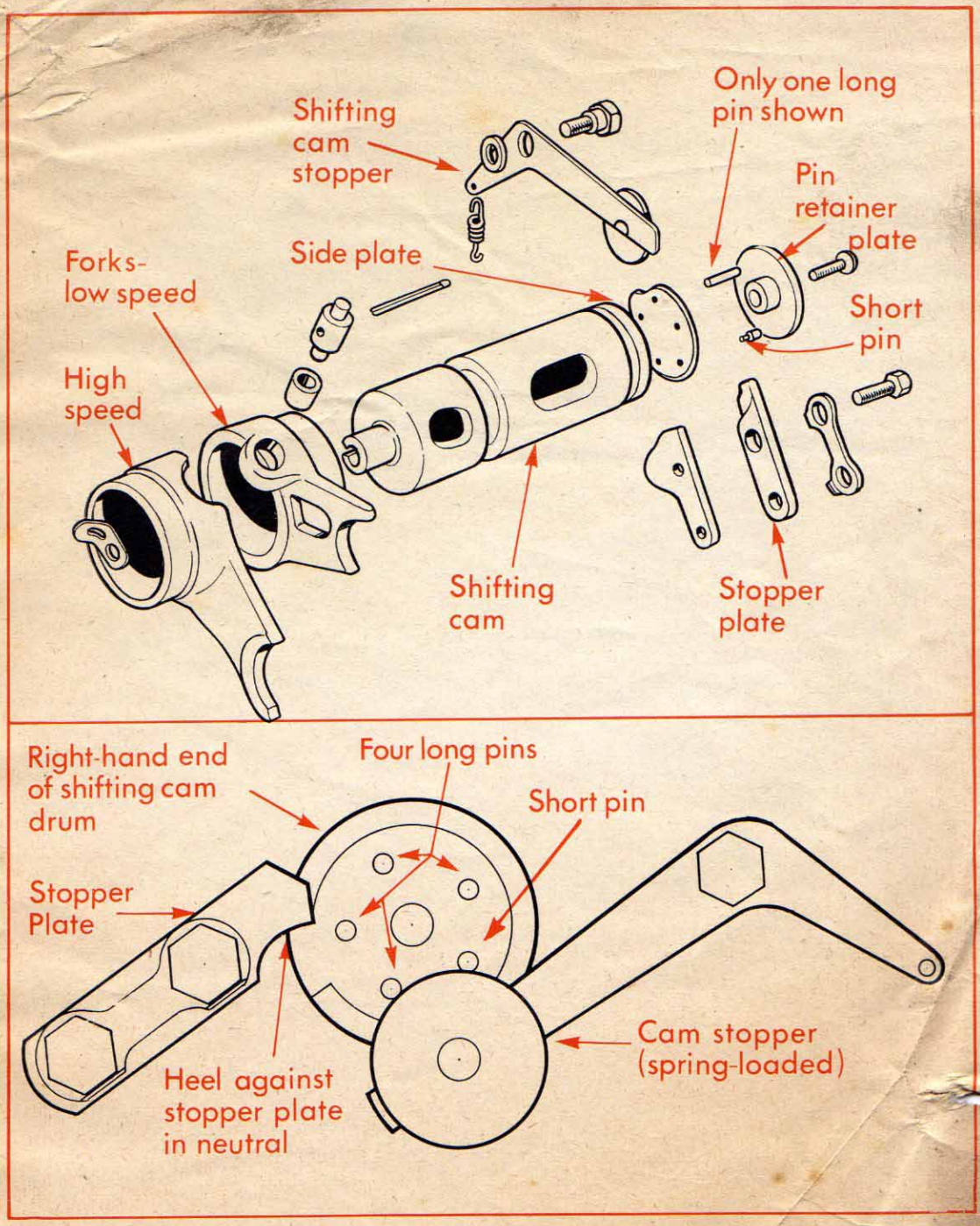

Gear shifting mechanism — forks, drum with cam grooves, side plate and pins, and cam stopper which bears against the pins to locate the gears. Correct assembly position of the side plate and pins in neutral is shown detail. The pins are covered by a circular retainer plate (not shown) which is held by a central bolt.

up the similar short screws holding this part with the longer ones holding the outer seat. (See Service Manual p.27).

Gearbox

Dismantling and re-assembly of the gearbox is not covered in the service manual in the same detail as the engine components. It is a straightforward process, and the notes given in *Trader* Service Sheet No. 12/3 (for the AS.50) apply to the A.100. Note that though the A.100 has four speeds only compared to five on the AS.50) there are still five gear pinions on each shaft; the fifth train of gears transmits kickstarter movement to the engine. (In the AS.50 these are used very in-

the correct assembly, which is important. Second gear slides on splines, and there is a circlip to locate third gear, which has a thrust washer between it and the integral low gear. On the other side of this integral gear is a large thrust washer, a radial roller bearing and then a small thrust washer, all positioned between the low gear and the kickstart gear, and this assembly is illustrated on p. 26 of the manual.

Drive shaft Starting from the magneto side, there is a thrust washer with internal splines for the second gear pinion, which is located endways by a circlip. Then come the third and low gear pinions, the latter having a thrust washer between it and the kickstarter idler pinion.

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The manual for the AS.50 gives details of the position and size of all thrust washers and circlips, but unfortunately the A.100 Manual omits this. The details are:

Countershaft Starting from the magneto side of the engine, there is a circlip holding two half-moon thrust washers into a recess in the top gear pinion — p. 25 of the manual shows a picture of gear slides on splines, and there is a circlip to locate third gear, which has a thrust washer between it and the integral low gear. On the other side of this integral gear is a large thrust washer, a radial roller bearing and then a small thrust washer, all positioned between the low gear and the kickstart gear, and this assembly is illustrated on p. 26 of the manual.

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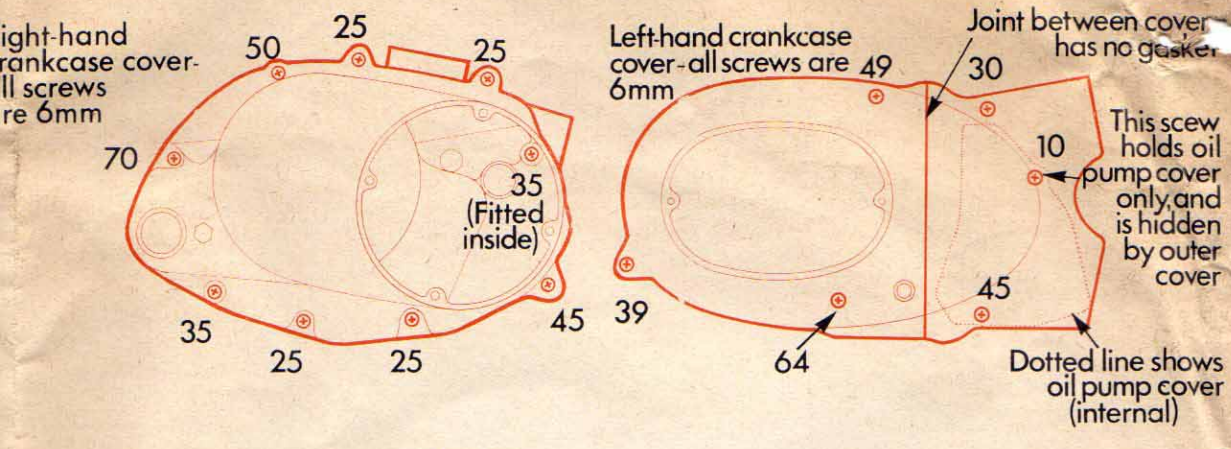
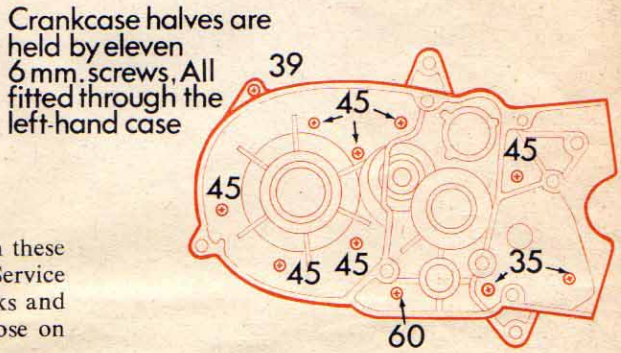
Gear shift drum and forks These are much easier to replace than on the AS.50 as there is no additional high gear fork to be fitted.

Shifting cam side plate This has five holes in which are placed four long pins and a short shouldered pin, and there is a heel which, if the gears are assembled in neutral, must be against the underside of the stopper plate. The sketch shows this and the positions of the pins.



Diagrams (not to scale) showing the lengths in mm. and positions for the screws which hold the crankcase covers and halves on the Suzuki A.100. All the screws are 6mm metric, no ISO screws are used here on this model.



FRONT FORKS AND STEERING HEAD

There is nothing in the service manual on these parts, so the instructions given in *Trader* Service Sheet no. 12/3 should be followed. The forks and steering head assemblies are identical to those on the AS.50.

Lubrication One small but welcome detail is that the fork legs now have drain plugs, so the instructions concerning draining and refilling, as given in the *Trader* Service Sheet, can be modified or ignored. Re-assembly will be easier, as the legs can be filled with oil as almost the last operation, and any over-filling can easily be corrected via the drain plug.

Steering head It should also be noted that the lower outer head race is now identified as a different part from the upper outer race, the part no. being 51622-01000. In the *Trader* Service Sheet it was assumed that the two parts were the same, this should be corrected.

BRAKES, HUBS AND REAR SUSPENSION

Information and instructions on these parts given in *Trader* Service Sheet 12/3 applies to the A.100, with one exception, which is that the brake shoes are not interchangeable.

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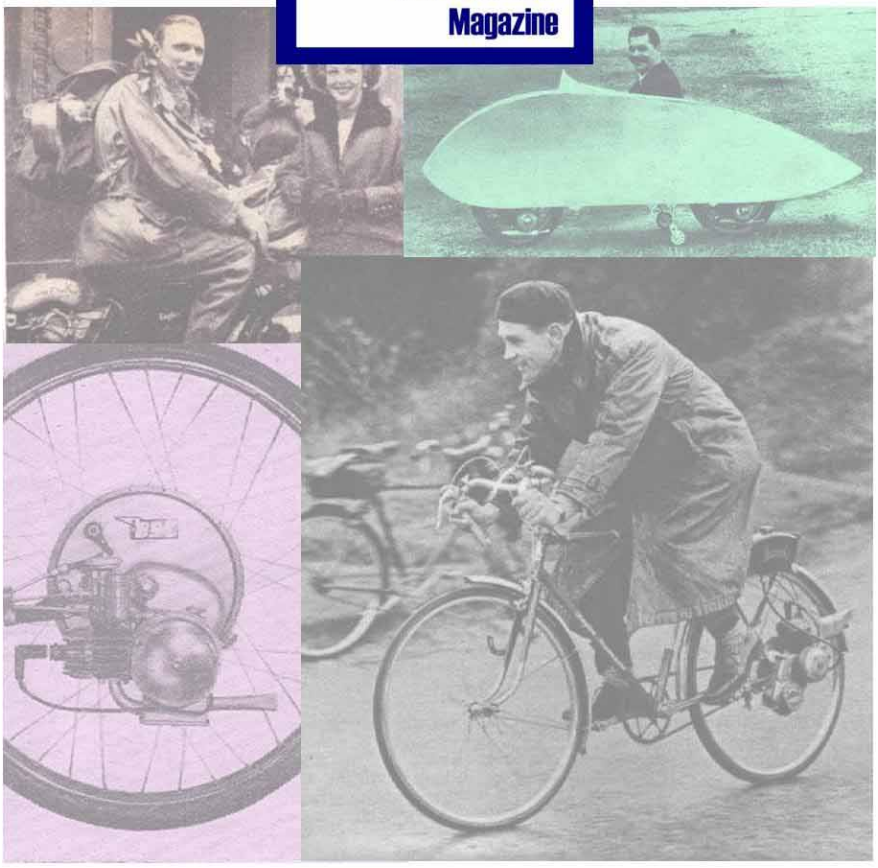

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