HONDA 125 MODELS:

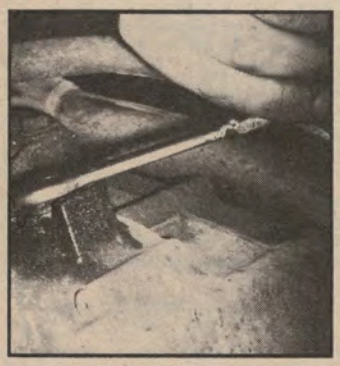
Owing to Honda's tendency to produce about a zillion variants of every machine in their range, the most complicated part of this service feature is going to be telling you what it's about. So, we are going to be dealing with the CB125S, the TL125, the SL125, the CB125J, and the 125XL. The CB125J supercedes the CB125S, and is the only model in the range with a disc front brake: the TL and SL are the out-and-out trials job and the trails version respectively, and the XL is the successor to the SL.

The good news, however, is that with the exception of the front fork oil capacities, cam chain and clutch adjustment and the disc brake on the 125J, the servicing routine is exactly the same throughout the range. Honda themselves specify three maintenance intervals; 1,500 miles and 3,000 miles and 6,000 miles. Nevertheless, if we owned a 125 we think we'd add in a few small extra jobs like cleaning out the carburettor and making a visual inspection of the inside of the brakes. These items may not be strictly necessary, but they certainly won't do any harm . . .

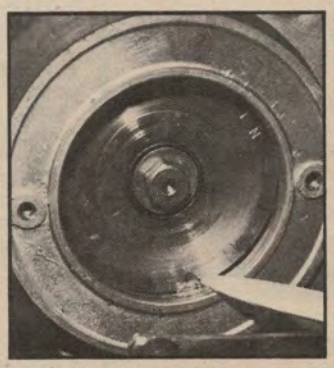
1500 MILES

The first service is simplicity itself. All you do is change the oil, lubricate and adjust the rear chain, top up the battery, and then run round with the spanners check-tightening everything.

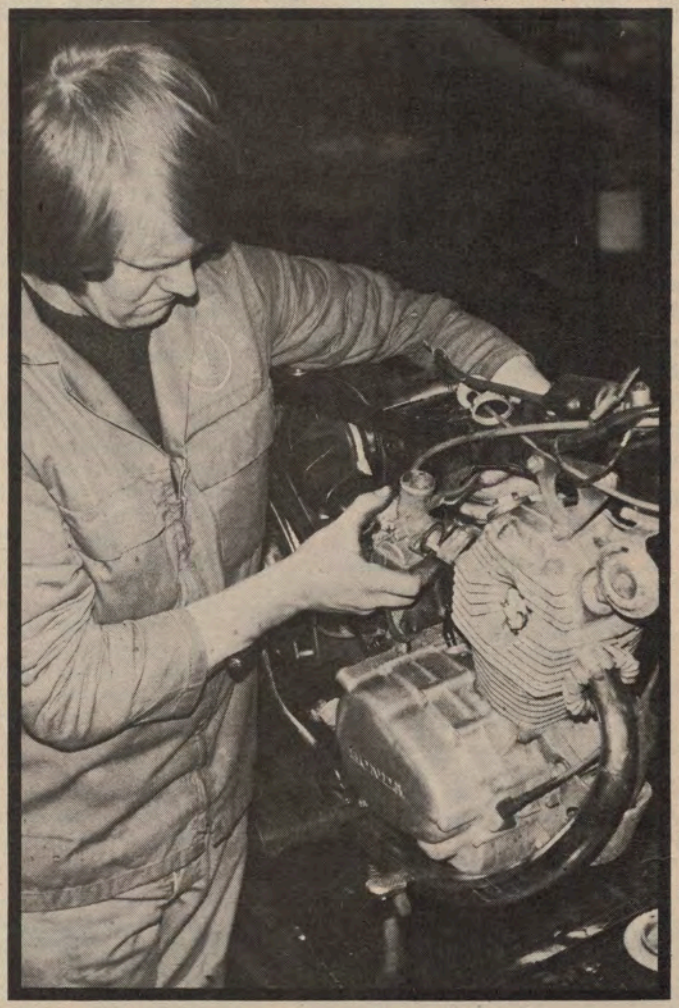
The oil sump, which is common to engine and gearbox, holds exactly one litre. When you use the dipstick for checking the level, remember that you get a correct reading when you pop the stick in the hole but ***don't*** screw the cap down. The rear chain slack should amount to half an inch of up and down movement, and this should be checked with the rear suspension compressed. Adjustment is conventional, and the rear swinging arm has alignment marks just above the spindle-slot so that you can be sure of pulling back each adjuster by the same



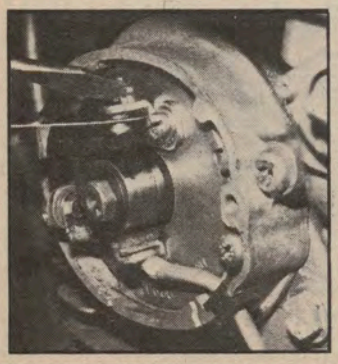
1 The oil sump is common between engine and gearbox. The drain plug is easy to reach. Sump takes one litre of 10W40.



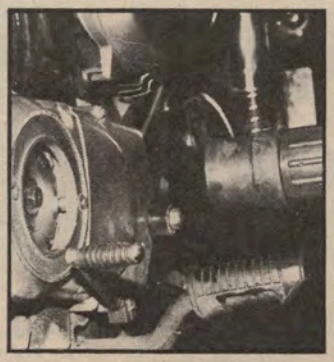
2 Remove the flywheel cover and turn the engine until the T mark on the flywheel lines up on the compression stroke.



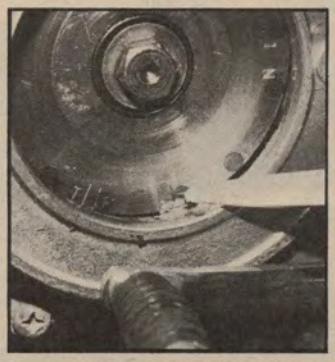
7 The gap should be .012in-.016in: setting is by slackening the two securing screws and moving the plate.



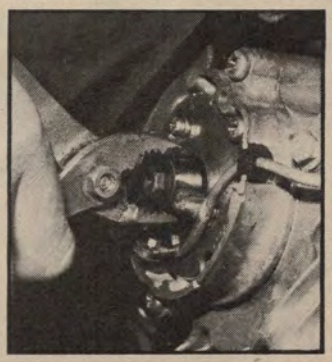
8 Timing is best checked by strobe. F mark should line up with static index at 1200 rpm, and max advance lines at 3,000.



9 Alternatively, line up max advance lines with static point, then insert a fag paper in between the contact points.



10 Now turn the ignition cam anti-clock to the full advance stop: the points should be just beginning to release the paper.



CB125S, TL125, SL125, CB125S, 125XL

SIMPLE SERVICE

amount. The spindle nut itself is split-pinned for security, so don't forget to have a few new pins to hand before you start on the job.

3000 MILES

This is the major service. Probably the best way to start is with the major engine jobs — points, plug, tappets, and timing.

The first step is to remove the flywheel cover on the left hand side. The method of removal is obvious — but remember to take care when putting it back, later on. The cover has a rubber O-ring seal round its inner flange, and this seal is easily damaged. The best method is to wipe the seal with grease to make it slippery, then locate the cover in place and tap it home gently with the heel of your hand. Resist the temptation to wiggle the cover round and round to persuade the seal to enter the side-cover housing; this can lead to the seal getting cut.

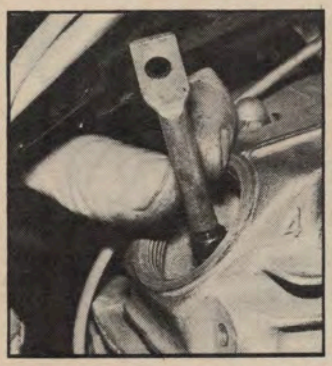
Underneath the cover you will find four marks on the flywheel. One of them is marked with a T, for top dead centre, another is F for the firing point at tickover, and the other two, about an inch away, are the maximum advance limits.

With the engine turned to the T point on the compression stroke, the tappets can be set. The correct clearance is .002 in for both valves, and there's no excuse for butchering the tiny squared adjuster-ends with pliers because Honda supply the right key in the toolkit. The big thing to remember about tappet-setting is that the engine must be cold — dead cold. If you do the job when it's warm the valves may be held off their seats until the motor reaches its running temperature. Another point is not to overtighten the tappet covers when you put them back. They only need to be nipped up, and over-tightening can crack them.

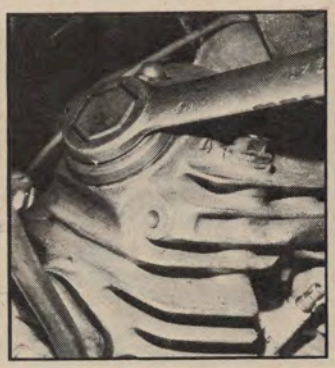
The next item on the agenda is the spark plug. It should be cleaned down inside the body with a needle, the electrodes rubbed down with sandpaper, and then the gap re-set to .025 in. If you're in the slightest doubt about it, though, renew it. We've put it down for automatic renewal at 6,000 miles, but Geoff Jones, workshop foreman at Keith Manning Motorcycles of Bracknell where the material for the service was prepared, reckons that they very often break down before that. The type to use is an NGK D8 ESL.

Another point worth mentioning here is the suppressor cap. If you need a new one for any reason, be sure to fit the correct Honda (NGK) job. Other caps may be all right, but Geoff has found several which have a higher resistance than their rated 15,000 ohms — and this can be a critical factor in this particular engine.

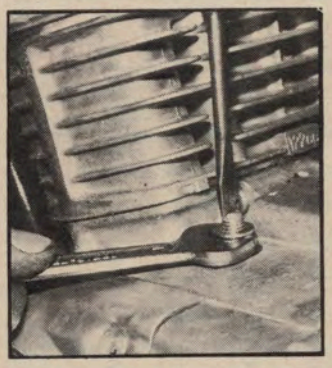
Next comes the contact breaker. The points should be cleaned with sandpaper — or, better still, a nailboard — and the gap set to .012-.016 in. Adjustment is conventional, simply slacken the two screws securing the static point and then move it until the gap is correct.



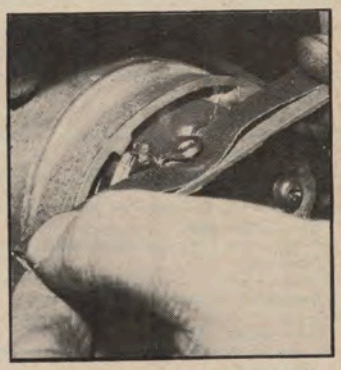
3 The tappets can then both be adjusted — but make sure the engine is ***cold.*** The clearance is .002 in for both valves.



4 Don't overtighten the tappet covers: gripping the spanner halfway along is quite enough. Overtightening may crack them.

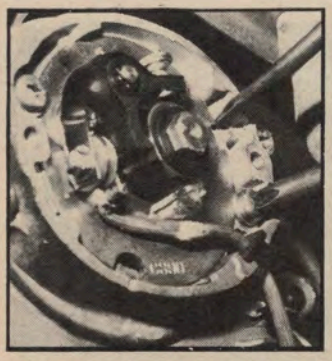


5 Camchain is adjusted by slackening the lock-nut, running the engine at 1200, and screwing screw ***out*** until chain is quiet.

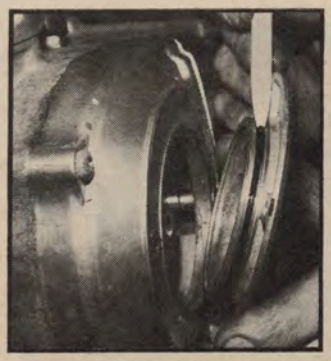


6 The points should be cleaned with sandpaper or an emery board. Renew if they're not square or you can't get pits out.

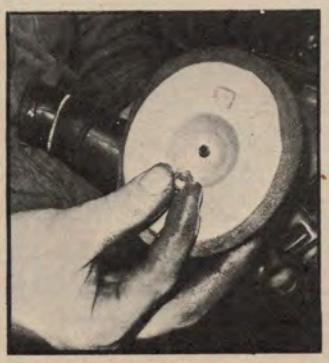
11 To move the timing, slacken the two backplate screws and twist the plate round as shown, using screwdriver as a lever.



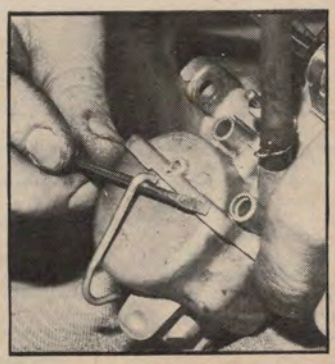
12 When replacing the flywheel cover, tap it home with your hand. 'Screwing' it in may damage this rubber O-ring seal.



13 The air filter may be a washable gauze element or a paper throw-away. Wash the foam-rubber outer and oil it lightly.



14 At 6,000, we recommend removing the carb for cleaning. Spring the wire clip out, remove float chamber, floats, and jets.



HONDA 125
DATA

ENGINE/GEARBOX OIL	1 litre SAE 10W30 or 10W40
FRONT FORK OIL	Castrol Fork Oil, engine oil SAE 10-40, or Automatic Transmission Fluid.
FORK CAPACITIES	TL, CB and J: 130-140cc (4.4.-4.7 fl. oz.) SL, XL: 180-190cc. (6.1-6.4 fl. oz.)
PLUG TYPE	NGK D8 ESL
PLUG GAP	.025in.
POINTS GAP	.012-.016 in.
DWELL ANGLE	20° ± 1°
COMPRESSION PRESSURE	10-12 kg/cm²
TAPPET SETTINGS	002 inlet & exhaust. cold.
PILOT AIR SETTING	$1\frac{1}{2} \pm \frac{1}{8}$ turn out.
MAIN JET	105
FLOAT HEIGHT	24mm.
CARB NEEDLE	Middle notch.

SERVICE SCHEDULE

JOB	1500 miles	3000 miles	6000 miles
Change engine oil	●	●	●
Wash oil filter			●
Clean & adjust plug		●	
Renew plug			●
Check points and timing		●	●
Check tappets		●	●
Adjust cam chain		●	●
Clean air filter element Change air filter element (If paper type)			●
Clean carburettor			●
Lubricate all cables		●	●
Adjust clutch		●	●
Adjust rear chain	●	●	●
Adjust brakes		●	●
Check brake shoes			●
Check brake pads (J only)		●	●
Lubricate rear chain	●	●	●
Check spokes		●	●
Check headraces		●	●
Check battery	●	●	●
General check-tighten	●	●	●
Check wheel alignment			●

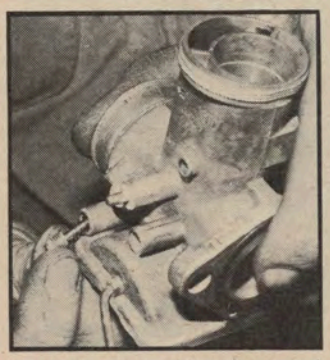
N.B. This service schedule will not necessarily conform to that laid down by the manufacturer, as we have added a few items which we consider to be desirable.

The next job is the cam-chain tension, which should be done before checking the timing. The adjusting screw for the slipper-tensioner is situated on the top left of the cranckcase just behind the cylinder. Geoff's method of adjusting it is to slacken off the locknut, start the engine and run it at 1200 rpm, screw the screw in until the chain gets noisy, and then screw it out again (which tightens the chain) until the noise has stopped. This isn't so hit-and-miss as it sounds, in fact: the only danger is in overtightening the chain, and when you do that you get an obvious whine and the engine slowing down.

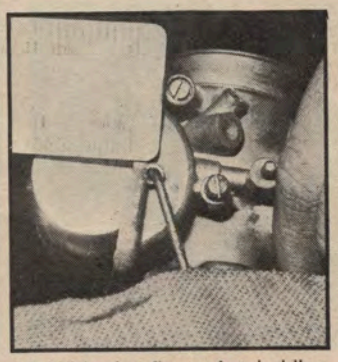
The 125J, TL and XL125 are adjusted at 1200 rpm by slackening the tensioner locking plug one turn and retightening. Tensioning is automatic. Timing can be checked by using a strobe light: the F mark on the flywheel should line up with the static index when the engine is ticking over at 1200 rpm, and with the timing fully advanced at about 3,000 rpm the two max-advance indications should be 'straddling' the static mark. The alternative is to use the time-honoured fag-paper method. The system here is to turn the timing marks to the full-advance position on the firing stroke, pop your fag-paper between the points, and then twist the ignition cam anti-clockwise with a pair of pliers to bring it too, to the full-advance condition. The points should then be just opening — i.e., just beginning to release their grip on the paper.

If the timing needs adjusting, then slacken the two screws holding the circular points-plate, insert a screwdriver in the slot provided and lever the plate round clockwise or anti-clock as required. If the strobe test reveals that the timing is right at tickover but a little out when fully-advanced — which it shouldn't, but odder things have happened — then set it so that it's correct when fully advanced: it is much more important to be within limits there than at tick-over.

Carburettor-wise, the only things you need do at 3,000 miles are to take the air filter element out and glare at it suspiciously, and re-set the slow running mixture and throttle stop if necessary. The filter element may be either wire gauze or dis-

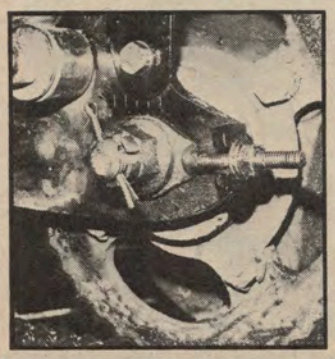


15 Clean everything in petrol and blow out the jets. Remove the pilot air screw and blow through there to clean passages.

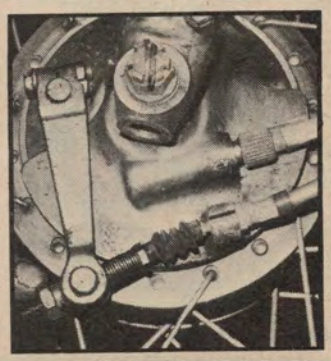


16 With the floats *just* holding the needle valve shut — not compressing the tiny spring — float height here should be 24mm.

21 Rear chain tension is $\frac{1}{2}$ in slack with suspension compressed. Note adjustment notches above spindle and split pin.



22 Watch out for the springs on the brake adjusters becoming coil-bound or nearly so: this indicates that the linings are worn.



SIMPLE SERVICE

posable paper, depending on model, year. Paper filters should be renewed any time they look dirty, or — in our opinion, not Mr. Honda's — every 6,000 miles anyway. The gauze elements, and the foam-rubber muff which surrounds some of them, should be washed in petrol every 3,000 and the foam rubber lightly oiled.

The slow-running mixture screw — which is the furthest-aft of the two adjusting screws — should simply be twisted this way and that until the engine runs sweetest and fastest at tick-over. The throttle stop should then be set to give an idle of 1200 rpm.

The only other thing left on the power unit side is the clutch cable adjustment. CB125S and SL125: slacken both cable adjusters, loosen clutch adjuster locknut, turn screw anti-clockwise until it meets resistance, then back off $\frac{1}{8}$-$\frac{1}{4}$ turn. Take up play in cable adjusters leaving $\frac{1}{8}$ inch at handlebar lever.

On the cycle parts side, there isn't much to do at all. The first thing is to check the brake adjustments — noting, as you do so, how near to being coil-bound the adjuster tension-springs are. If there isn't much left to go, then take the wheel off and check the state of the linings.

On the J model, the front disc caliper is cable-operated, and adjusted in the same way as a drum brake. Check the pad-thickness by squinting at the pads from the front: each pad has a tiny groove in its periphery, and the pads must be replaced when they — or even one of them — has worn down as far as the groove.

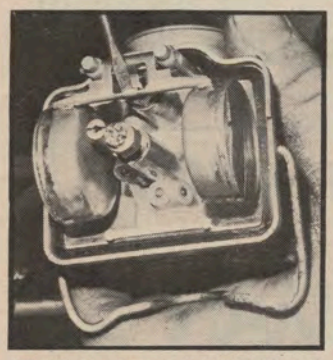
All that remains now — apart from lubricating the handlebar levers and cables and pinging the spokes and having the usual check-tightening session — is to have a glance at the headrace adjustment. With the bike on its centre-stand, find yourself a friend to grasp the bottoms of the front forks and pull them backwards and forwards while you feel round the back of the bottom fork yoke for any back - and - forth play between yoke and frame. If there isn't any, fine: but if there is, you need to slacken the big top-nut on the steering head, and then tighten down the adjusting ring under the top yoke. You won't need to move it much — a quarter of a turn, possibly, if that — and you must take care not to overdo it. When you've got rid of the play, try turning the handlebars slowly from lock to lock, with the front wheel still off the ground. If there's any stickiness or harshness you've either overtightened the bearings or the races are pitted, in which case they will have to be changed.

6,000 MILES

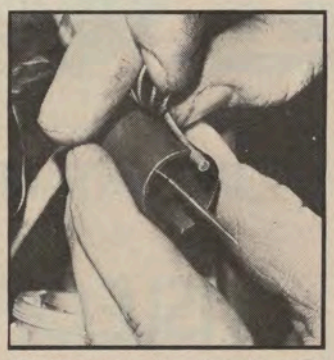
The only extra job which Honda recommend at 6,000 miles is cleaning the oil filter and changing the fronk fork oil. This is dead simple to do — you merely remove the filler plugs at the top of each leg and the drain plugs at the bottom, and pump the forks up and down until oil stops coming out — but take care when refilling to make sure you're putting in the right amount of oil. The trial bikes have longer forks with a longer travel, and so take more oil than the others (see chart).

For our money, though, we wouldn't stop there at 6,000 miles. We would take the wheels off to clean out the brake drums and check the linings thickness — which should be not less than $\frac{1}{16}$ in — and we would also check the wheel alignment and renew the air filter element and the spark plug as a matter of course. Finally, we would remove the carburettor, clean it out and blow through the jets, and check the float height and the state of the needle valve.

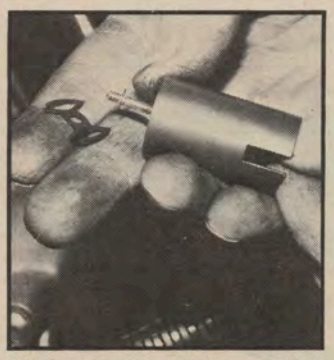
We would like to thank Geoff Jones for his know-how and Keith Manning Motor Cycles of Bracknell, where Geoff is workshop foreman, for their considerable assistance in compiling this service feature.



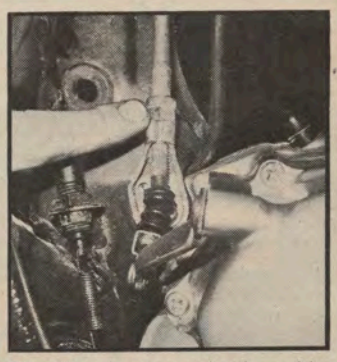
17 If it's wrong, the height can be adjusted bv inserting a screwdriver blade under the needle valve tag and bending it slightly.



18 Remove the throttle slide from the cable in the usual way, by pushing the cable inner down against the spring.

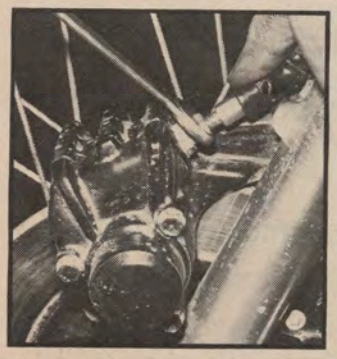


19 The needle and its securing clip can then be removed. Check the locating clip is in the ***centre*** slot in the needle.

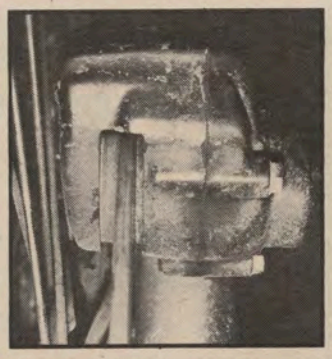


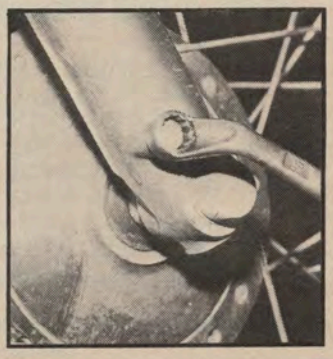
20 The bottom clutch cable adjuster should be screwed right in if possible, and the cable adjusted at the bars end.

23 The disc front brakes on the 125 J is cable-operated, and adjusted in exactly the same way as a drum brake.



24 Check pad thickness. There's a tiny groove around the periphery of the pads, and they mustn't wear down beyond that.



25 If the head races need adjusting, slacken the top nut and move the locking ring with a C-spanner. Do not overtighten.

26 The front fork oil is drained and re-filled every 6,000 miles. Note that different models use different amounts of oil.