

ALTHOUGH totally overshadowed by the range of larger capacity machines, Honda's famous "step-thru" 50, 70 and 90 models must rate among their most successful.

The original pattern of step-thrus from the earliest to the latest models are all basically similar. Whether pushrod design or overhead cam, the 50s and 70s all have the points mounted inside the flywheel, whereas the 90 ohc models have points driven off the end of the cam on the left side of the head.

The most important item on these small engines is the oil. This should be checked regularly and replaced every 1,500 miles if the bike is in fairly constant use. If the bike is used infrequently or does very short journeys, you should consider changing the oil every three months or 1,000 miles.

Another important point is that the engine must be hot when the oil is drained. Make sure the bike is on the level and allow plenty of time for it to drain thoroughly. Attention to these items helps engine life enormously.

After replacing the sump plug, don't use too much muscle on the spanner or the thread will strip after a while. When it's time for the oil filter screen and centrifugal filter to be cleaned, the right hand outer engine casing will have to be removed. Some early models have an external oil pipe which needs to be disconnected. Be careful not to overtighten the banjo bolt when replacing.

The usual procedure from here is to remove the casing and get ready to catch the clutch actuating parts which normally fall out. The order of these parts as they are assembled on the clutch is as follows: cam plate, spring (if fitted), and ball thrust plate. A sliding oil transfer tube and a small internal spring sits in the middle of the cam plate (see pic).

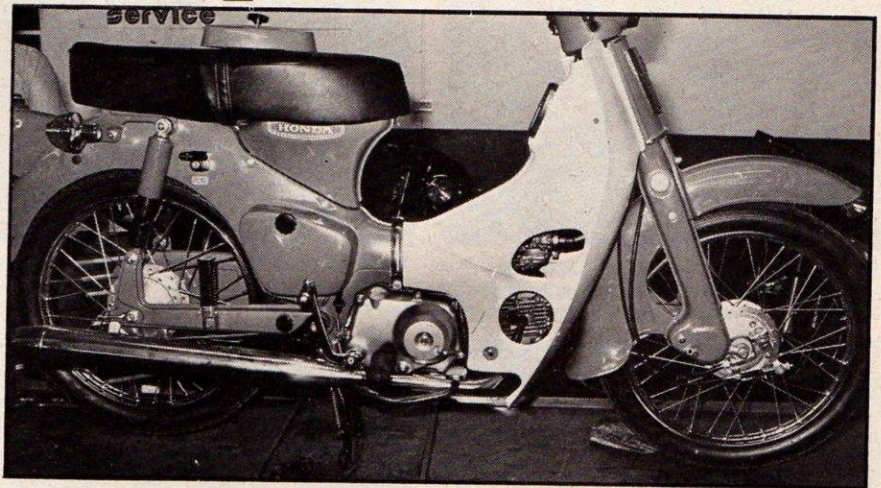
The casing can, however, be removed with these parts kept together if you remove the locking nut holding the central clutch adjusting bolt — keep the bolt pressed in towards the clutch as the casing is eased off. The parts can be held together as an assembly and laid aside in order which will avoid any confusion. The outer clutch lifter plate is fitted with a peg which locates into a hole on the inside of the casing when reassembling. Slide the clutch arm from the splines on the shift shaft and remove the screws holding the centrifugal filter cap. If the gasket under the cap is damaged, it must be renewed.

The inside of the cap and the chamber can be wiped clean with a fluff-free rag soaked with petrol — avoid getting any dirt down the hole in the end of the crank.

The filter mesh can be pulled from its slot in the main engine case below the clutch with a pair of thin-nose pliers and washed in petrol. If the rubber edge of the screen has a lip, this is installed uppermost. The other pattern has a support running across which should face down, and the narrow tapered side should be inserted towards the inside. Tighten the cap screws evenly, and replace the clutch operating cam assembly with the arm pointing towards the centre of the clutch.

Timing the models with the points inside the flywheel starts with checking the points condition and cleaning and replacing as necessary. The flywheel needs to come off for points renewal, and you will need a special puller which costs about £2.48 plus VAT from a dealer. A simple forked holding

Simple Service



Honda step-thru range

Martyn Williams explains how to look after Honda's long-lasting step-thru variants. In fact, it's servicing for the masses!

tool could easily be made to engage the flywheel slots, or the service tool is available at £5.80 plus VAT.

The timing can be checked by inserting a rag paper in between the points to see whether it's released when the flywheel 'F' mark is brought round in an anti-clockwise direction to the small point or notch at the top of the casing. Another method is to locate the points wire (normally black) behind the battery and pull the connector apart and attach a self-powered bulb or resistance meter to the points lead. The circuit to the bulb/meter is completed with a wire to a handy earth point. The tester will go off as the points open.

There is no moving points plate to alter the timing which is governed by the points gap. The points gap should be wider if they open before the mark, or closed if they open after. The fully-open gap must be between 12 and 16 thou when the timing is correct. Renew the points if they aren't within this tolerance.

The overhead cam 90 models have points

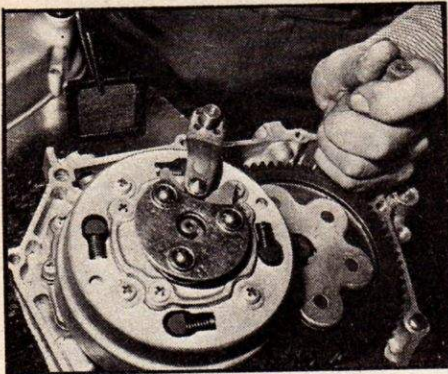
driven off the end of the camshaft. The points gap should be checked and set (12 thou) first and the timing adjusted by slackening the two screws clamping the edge of the points plate. Rotate the engine anti-clockwise so the 'F' mark on the alternator rotor aligns with the pointer in the four o'clock position inside the casing. Now make sure the points are about to open, if not, rotate the engine one revolution round to the 'F' mark again.

The points opening can be checked with a test bulb connected between the points lead terminal and earth. Switch the ignition on and check whether the points open when the rotor is backed off and brought to the mark. Move the plate to alter the timing as necessary, and finally recheck by moving the rotor as before. Don't forget to put a spot of oil on the points cam pad, and check that the spring-loaded centrifugal advance moves freely by tweaking the cam clockwise with thumb and finger.

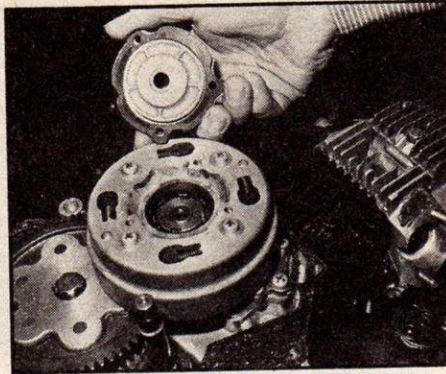
The valve clearances must be checked with the engine cold. Rotate the rotor/flywheel to the 'T' mark and check that both rockers have some play. If no clearance is evident, rotate to the 'T' mark again. The valve gap is slightly awkward to reach with the feeler, so you might find it easier to unscrew the adjuster a couple of turns to insert the feeler. There is a Honda tool available to fit the square-headed adjuster, but you can use pliers as long as the locknut is loosened properly. The feeler should be an easy sliding fit in the gap once properly adjusted.

Simple Service

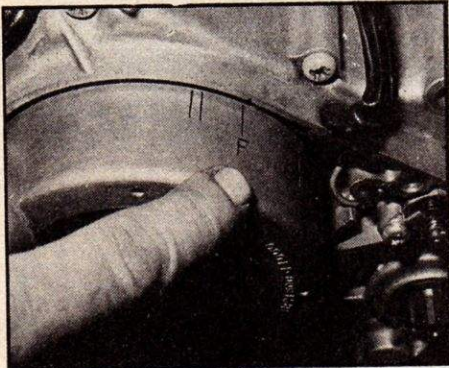
Honda



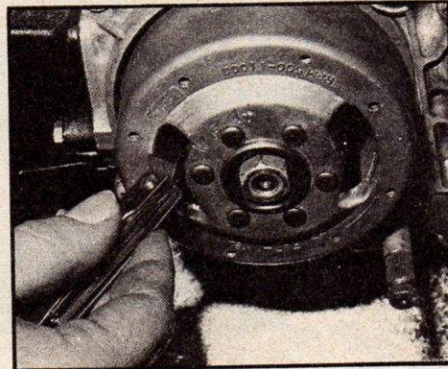
The filter mesh slides out easily as shown. Note the order of the components on the clutch and the centre tube



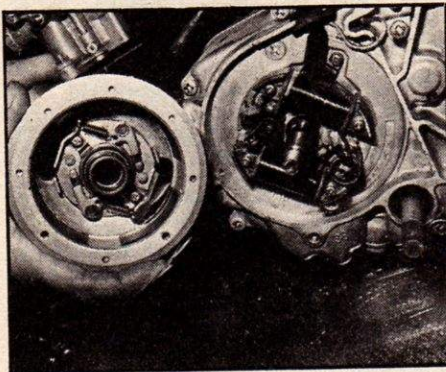
The inner chamber of the centrifugal file can be washed out with petrol. Nothing must enter the crank hole



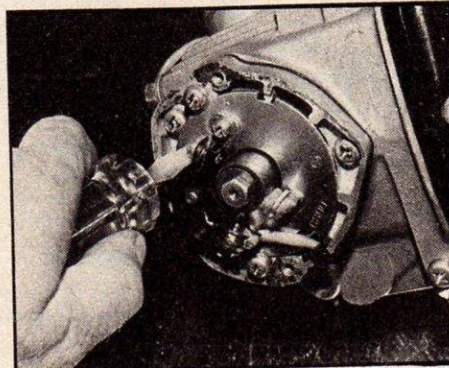
The points gap is adjusted so it opens at the F mark. Marks to the left show full advance (check with a strobe)



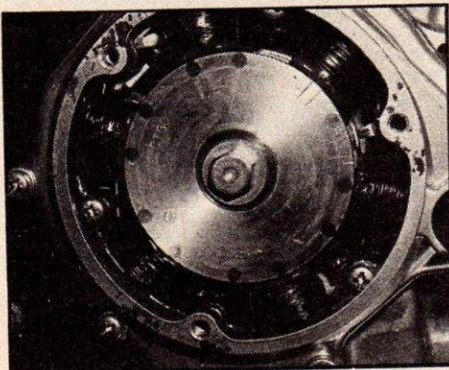
Once the timing is set, you must check the points in the fully open position to make sure gap is okay



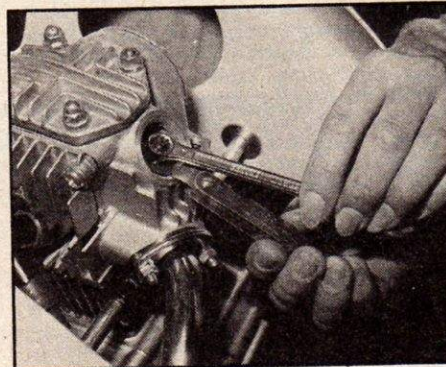
If they are not within tolerance the flywheel has to be removed to replace them. Check advance for free movement



C90s have points in the head. Check the gap and adjust by loosening and levering slot. The whole plate is . . .



. . . moved to adjust timing, which is checked against F mark shown here next to the T mark used for tappets



Clearances must be adjusted when the engine is cold. Release the locknut and gently tighten adjuster on feeler

There are three easily-recognisable types of cam chain tensioners which have been used on these models. One is an automatic hydraulic device which needs no routine attention. The automatic tensioner can be recognised by having a blank sealing bolt and no external adjustment screws. The bolt is just under the left side of the engine in a slightly angled position (see pics).

A type usually found on the 90 models normally has a screw in the centre of the sealing bolt. The screw holds a spring tensioner which is released a quarter turn and retightened as the engine idles to take up any slack.

The other common type is a spring tensioner which has two-way adjustment.

Chain slack is normally taken up by releasing the locknut holding the screw on the side of the casing near the gear lever shaft. Undo the screw about one and a half turns while the engine idles.

If cam chain noise is still apparent, leave the screw loose and remove the sealing bolt below. The screw inside the bolt hole should be gradually wound in clockwise until the cam chain rattle ceases.

Adjusting the play on the centrifugal clutch is pretty easy. Release the locknut and turn the screw clockwise until a resistance is felt. Back it off a quarter turn and lock the nut whilst holding the screw. The same procedure applies to manual clutches, but the set screw is covered by an inspection plate.

The paper element air filter is mounted near the top of the inside of the legshield. Unless the filter is badly clogged up, it only needs to be gently blown out with an air line. Once the air filter has been attended to, the carb can be checked.

There are two main types of carb depending on the age and capacity. Either a conventional type on an angled manifold, or a downdraught pattern. Both have an integral fuel tap and filter screen.

In both cases the throttle stop screw is in line with the slide. As you face the throttle screw on the upright carb, the mixture screw is just to the right. On the other type it's on the left of the throttle stop.

The engine must be hot when the idle mixture is adjusted. The nominal setting of the mixture screw on all models varies between 1½ to 1½ turns from the fully closed (clockwise) direction. Don't tighten the screw at the bottom of its travel or damage will result. Turn the mixture screw gradually in both directions to find the fastest engine speed. Alter the throttle stop

screw to maintain a normal idle speed as you adjust.

Cable-operated choke models can be adjusted for cable friction by turning the knurled nut under the knob shaft trim.

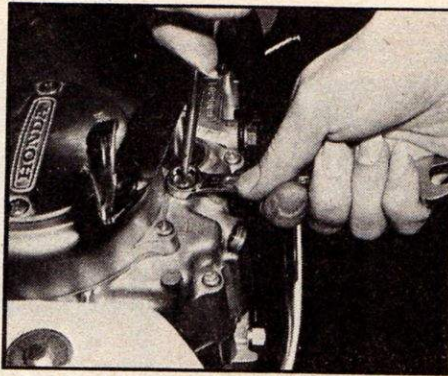
When checking the front forks, don't over grease the nipples — one shot is usually sufficient. Check the suspension arms for excessive side play and the steering head for movement when pushing with the brake applied. The rear swinging arm should also be checked for play.

The brakes on later models have an indicator which shows up wear when the brake is applied. If you can line up the arrows by pulling the brake, the shoes must be replaced. The shoes will have to be inspected on earlier models. Before adjusting the rear brake, the chain should be checked, lubricated and adjusted as necessary.

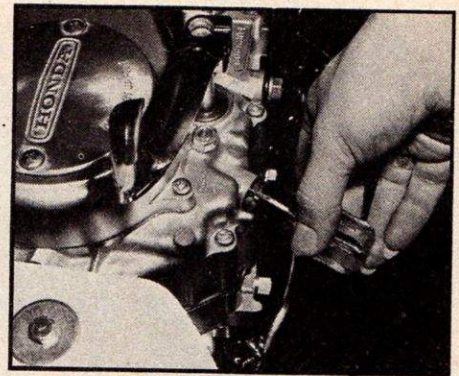
The slack in the chain is checked through the inspection hole with the bike off the stand, sitting or leaning your weight on the saddle. The up and down movement in the chain must be between 1 and 2cm (½ to ¾in).

Loosen the wheel nut(s) and turn the end adjuster nuts to tension the chain. Make sure the final position of the spindle is equal both sides in relation to the marks on the washers and the fork ends.

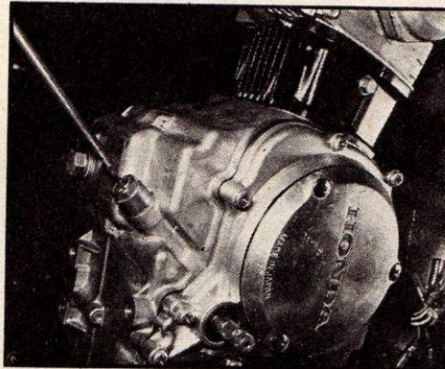
Regular maintenance should extend to the spine frame and integral rear mudguard. The inside of the mudguard and the main trunk of the frame should be checked for corrosion. This can be scraped and treated with a rust-proofing paint or brushed over with some old oil.



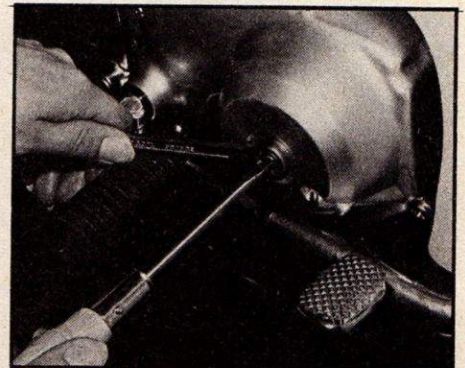
This screw releases the spring tensioner in order to take up the slack. Loosen this about one and a half turns



If the chain still rattles, wind the screw clockwise inside the seal bolt hole and finally retighten side screw



This is the other type of tensioner often found on the 90 model. Release a quarter turn and then retighten

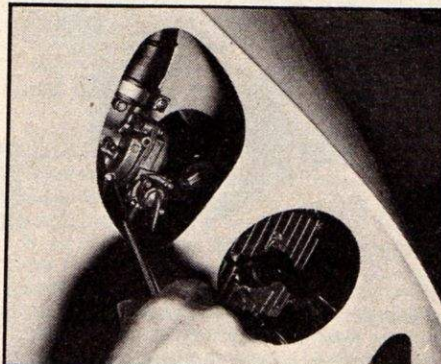


Periodic clutch adjustment is a simple task. Release locknut and wind screw in until it stops. Back off ¼ turn

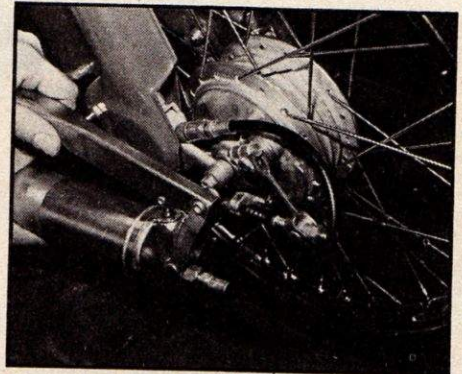
Service data

	500m (600Km)	1500m (2500Km)	3000m (4800Km)	6000m (9600Km)
Change engine oil	•			
Clean centrifugal oil filter	•			
Clean spark plugs		•		
Check contact points		•		
Check ignition timing		•		
Check tappet clearance		•		
Adjust cam chain		•		
Clean air filter		•		
Replace or clean air filter			•	
Check carb settings		•		
Clean fuel tap filter		•		
Check fuel lines		•		
Adjust clutch operation		•		
Check and lube drive chain	•			
Inspect brake shoes		•		
Check spokes and rims		•		
Check tyres pressure/wear		•		
Check front and rear suspension		•		
Grease swinging arms		•		
Check steering head bearings			•	
Check battery level				•
Check lights	•			

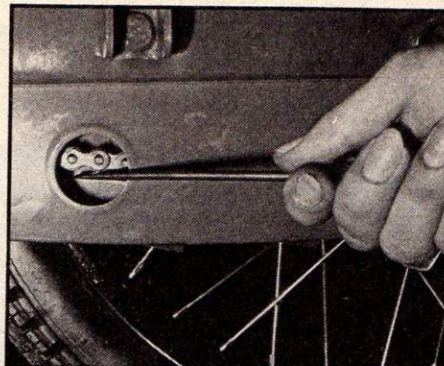
Plug: (50, 65 and 70 stepthrough) NGK C7HS. (90) NGK D6HS
 Plug gap: 0.6 to 0.7mm (24-28 thou)
 Points gap: 0.3 to 0.4mm (12-16 thou)
 Valve clearance: (cold) .05mm (2 thou)
 Timing: F mark
 Compression test: (hot) 140-170lb/sq in
 Engine oil: (C50(M) K1 and C70) .7 litre 10W-40. (C50 and C65) .8 litre. (C90) .9 litre.
 Tyre pressures: F/25 R/28
 Chain free play: 10/20mm



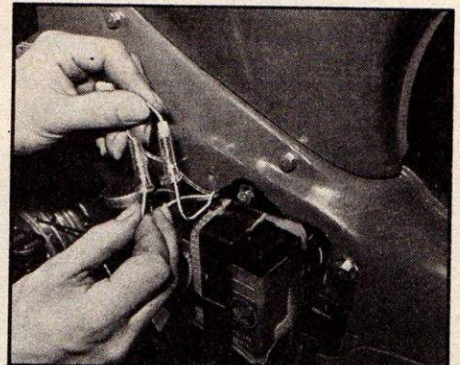
The mixture screw is being adjusted here on the conventional carb. Screws are on other side on upright model



Neglecting these suspension pivots will accelerate wear. They don't need much grease — just a little and often



The fully-enclosed chain stays free of dirt, but you must check the tension regularly if it's going to last



Keep battery level within the casing indicator lines. Connectors shown alter the battery charging rate (see text)

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