

capacity and place it beneath the engine unit to catch the old oil. Unscrew the drain plug on the underside of the crankcase and allow the oil to drain.

Remove the large hexagon-headed plug which is located just below the left-hand engine casing. Remove the plug, followed by the spring and gauze element, and then wash all these components carefully in a suitable solvent. Wipe out any residual oil from the housing with a clean lint-free rag prior to reassembly. Refit the drain plug, tightening it to a torque setting of 2.0 - 3.5 kgf m (14.5 - 25 lbf ft), and refill the engine with the correct quantity and grade of oil.

Six-monthly, or every 3600 miles (6000 km)

Repeat all service operations listed under previous headings, then carry out the following:

1 Clean the air filter

Pull off the right-hand side panel and remove the two nuts which secure the air filter cover. Withdraw the cover, checking that the sealing gasket is in good condition, pull out the retaining spring and withdraw the element assembly. Peel off the inner and outer foam sleeves. Wash all components in white spirit (Stoddard solvent) or in warm water and detergent and dry them thoroughly. Soak the foam sleeves in the specified oil, then squeeze them gently (do not wring them out or they will be damaged) to expel all surplus oil. Refit the sleeves to the element frame. On reassembly ensure that all components are correctly fitted so that unfiltered air cannot bypass the element.

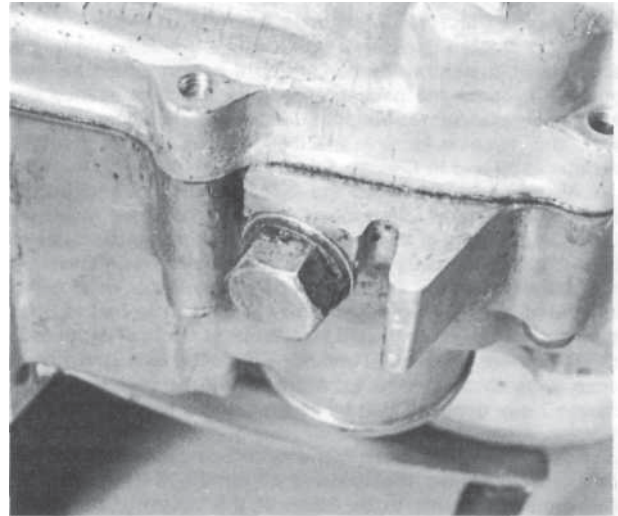
2 Check the spark plug

Remove the spark plug cap, unscrew the plug and check its condition, comparing it with the photographs on page 65. If it is badly worn or fouled it must be renewed. If it is fit for further service check the gap and reset it if necessary, as described in Chapter 3.8.

3 Check the valve clearances

It is important that the correct valve clearance is maintained. A small amount of free play is designed into the valve train to allow for expansion of the various components. If the setting deviates greatly from that specified, a marked drop in performance will be evident. In the case of the clearance becoming too great, it will be found that valve operation will be noisy, and performance will drop off as a result of the valves not opening fully. If on the other hand, the clearance is too small the valves may not close completely. This will not only cause loss of compression, but will also cause the valves to burn out very quickly. In extreme cases, a valve head may strike the piston crown, causing extensive damage to the engine. The clearances should be checked and adjusted with a **cold** engine.

Place the machine on its centre stand and remove the rocker cover, taking care not to damage the O ring. Remove the gearchange pedal and the left-hand outer cover to expose the generator rotor.



Remove plug and allow old oil to drain

Remove the spark plug, then slowly rotate the engine anti-clockwise by way of the generator rotor, watching the inlet valve. When it has opened and closed again (sunk down and risen up to its original position), rotate the engine further until the T mark on the rotor periphery aligns exactly with the raised index mark which is positioned between 12 and 1 o'clock (from the crankshaft) on the generator stator. The engine will then be in the correct position for checking the valve clearances, namely at Top Dead Centre (TDC) on the compression stroke; check that there is free play at both rockers.

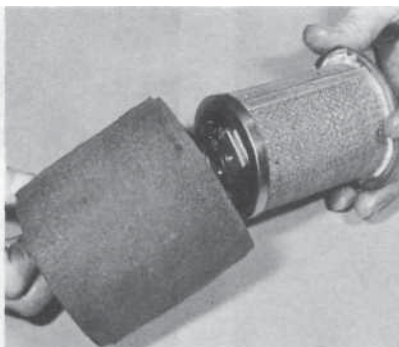
Using a 0.08 mm (0.003 in) feeler gauge, check the clearance between the top of each valve stem and its corresponding rocker. The feeler gauge must be a light sliding fit, with the rocker and valve stem **just** nipping it. If necessary, slacken the locknut, and turn the small square-headed adjuster to obtain the correct setting. Tighten the locknut, holding the adjuster at the same time to prevent it from moving. Finally, recheck the setting and then repeat the procedure on the other rocker.

4 Check the contact breaker points and ignition timing

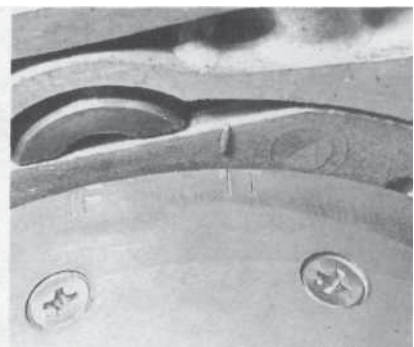
Note: since the generator stator plate is located by its countersunk retaining screws, the ignition timing can only be altered by opening or closing the contact breaker gap; therefore both operations are described as one. The full procedure is given here for ease of reference, but if the points are found to be in good condition and if the gap has not altered or is within the tolerance, then the ignition timing will be sufficiently accurate and there will be no need to carry out the full check. First remove the gearchange pedal, the left-hand outer cover, the spark plug and the left-hand side panel.



Strainer is easily removed for cleaning



Dismantle the element for cleaning and lubrication



"T" mark should align as shown

Checking the condition of the contact breaker points

The contact breaker assembly can be viewed through one of the generator rotor slots; turn the rotor until the points open. Use a small screwdriver to push the moving point open against its spring. Examine the point contact faces. If they are burnt or pitted, remove the points for cleaning or renewal, see Chapter 3.4. Light surface deposits can be removed with crocus paper or a piece of stiff card.

If the contact faces are badly burnt or pitted, or if the moving contact fibre heel shows signs of wear or damage, renew the assembly. It is essential that the points are in good condition if the ignition timing is to be correct; use only genuine Honda parts when renewing. If the faces are only mildly marked, clean them using an oilstone or fine emery but be careful to keep them square. If it is necessary to separate the moving contact from the fixed one, carefully remove the circlip fitted to the pivot post and note carefully the arrangement of washers at both the pivot post and spring blade fixing. On reassembly, the moving contact must be able to move freely; apply a smear of grease to the pivot post. Note also that the low tension lead terminal and the moving contact spring blade must be connected to each other via the small bolt, but that both must be completely insulated from the fixed contact. *The engine will not run if a short-circuit occurs at this point.*

Refit the points to the stator plate and the rotor to the crankshaft. Tighten the rotor nut to a torque setting of 4.0 - 5.0 kgf m (29 - 36 lbf ft), then apply a few drops of oil to the cam lubricating wick.

Checking the ignition timing

Disconnect the generator wiring at the connector block joining it to the main wiring loom and identify the black or black/white wire leading to the points. The best way of establishing exactly when the points open is to use either a multimeter set to its most sensitive resistance scale, or a battery and bulb test circuit; refer to Chapter 3 for details. The meter needle will flicker to indicate increased resistance as the points open, or the bulb (which will be lit when the points are closed) will glow dimmer; note that a high-wattage bulb must be used to make this more obvious to the eye.

Turn the rotor anticlockwise until the meter needle deflects (or the bulb dims); at this point the rotor 'F' mark should align exactly with the raised index mark on the stator plate.

The setting is adjusted by opening or closing the points gap to advance or retard respectively the ignition timing. Repeat the procedure to check that the timing is now correct.

When the timing is correct, measure very carefully the points gap, to ensure that the dwell angle is correct for the maximum spark intensity. If the gap is found to be outside the permitted tolerance the contact breaker points are excessively worn and must be renewed.

Fit a new set of contact breaker points; note that it is essential that only genuine Honda points are used. Refit the rotor and set the points gap to exactly 0.35 mm (0.014 in), then

repeat the procedure given above. The ignition timing should be correct.

Note: The above procedure is described in full as it is the most accurate means of setting the ignition timing. In practice there is no need to repeat the full procedure at every service interval. Instead it is sufficient to check that the points gap is within tolerances.

If a strobe timing light is available the ATU's performance can be checked. Connect the light following its manufacturer's instructions, then start the engine and allow it to idle. At idle speed the 'F' mark should align with the raised index mark; at just above idle speed the mark should appear to move as the advance begins until at 3000 rpm the two parallel lines of the full advance mark are aligned with the index mark. If the movement is stiff and jerky, or if the advance range is restricted, the rotor must be removed so that the ATU can be dismantled for cleaning and greasing.

5 General checks and lubrication

At regular intervals the control cables must be thoroughly lubricated, using light machine oil. This can be done by either disconnecting the cable upper end and fitting a proprietary cable oiler to pump oil through, or by removing the cable from the machine and hanging it up overnight so that oil can drain through the cable from a small funnel attached to its upper end. Ensure that the cables are correctly routed and adjusted on refitting. Grease the speedometer drive cable as described in Chapter 4.17.

Check all pivots and control levers, cleaning and lubricating them to prevent wear or corrosion. Where necessary, dismantle and clean any moving part which may have become stiff in operation. Similarly clean, check and grease the stand pivots and ensure that the return spring holds the stand securely.

Check around the machine, looking for loose nuts, bolts or screws, retightening them as necessary.

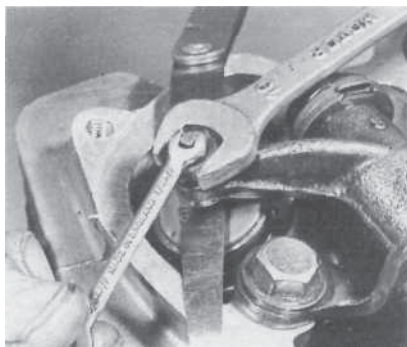
It is advisable to lubricate the handlebar switches and stop lamp switches with WD40 or a similar water dispersant lubricant.

6 Check the fuel system

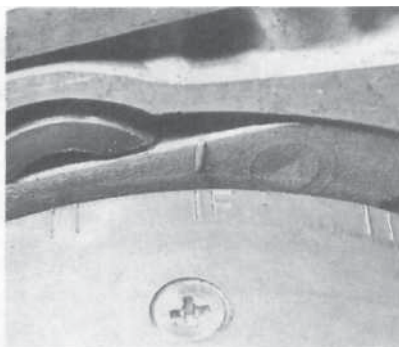
Referring to the relevant Sections of Chapter 2 (or of Chapter 7 for (T)PFC carburettors) for full details check that the petrol tank, tap, and feed pipe are in good condition and securely fastened with no leaks. Check also that the choke operates correctly. If rough running of the engine has developed, some adjustment of the carburettor pilot setting and tickover speed may be required. Do not make these adjustments unless they are obviously required; there is little to be gained by unwarranted attention to the carburettor.

Switch on the petrol tap and unscrew the float bowl drain plug, allowing a small quantity of petrol to flush through. If large amounts of dirt or water are found in the petrol, the system components must be drained and cleaned out.

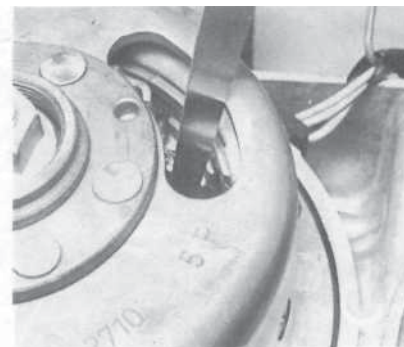
Once the carburettor has been checked and reset if necessary, the throttle cable free play can be checked. Open



Set clearance so that the feeler gauge is a sliding fit



"F" mark should align just as points separate



Contact breaker gap is measured via aperture