

Routine maintenance

For information relating to the RD350 F II and N II models, refer to Chapter 8

Specifications

Engine/transmission

| | |
|---|-----------------------------------|
| Spark plug gap | 0.7 – 0.8 mm (0.028 – 0.031 in) |
| Idle speed | 1150 – 1250 rpm |
| Throttle cable free play | 3 – 7 mm (0.12 – 0.28 in) |
| Oil pump minimum stroke setting | 0.10 – 0.15 mm (0.004 – 0.006 in) |
| Clutch cable free play at lever end | 10 – 15 mm (0.4 – 0.6 in) |

Cycle parts

| | | |
|------------------------------------|--|---|
| Front brake lever free play | 5 – 8 mm (0.2 – 0.3 in) | |
| Rear brake pedal free play | 35 – 40 mm (1.38 – 1.57 in) | |
| Tyre pressures (cold): | | |
| Up to 90 kg (198 lb) load | Front 26 psi (1.8 kg/cm ²) | Rear 28 psi (1.8 kg/cm ²) |
| 90 – 211 kg (198 – 428) load | 32 psi (2.2 kg/cm ²) | 40 psi (2.8 kg/cm ²) |
| High speed riding | 28 psi (1.9 kg/cm ²) | 32 psi (2.2 kg/cm ²) |

Recommended lubricants

| | |
|---|--|
| Engine: | |
| Capacity (tank) | 1.6 litre (2.8 Imp pt) |
| Oil grade | Air-cooled 2-stroke engine oil |
| Transmission: | |
| Capacity at oil change | 1.5 litres (2.6 Imp pt) |
| Oil grade | SAE 10W30 type SE motor oil |
| Cooling system: | |
| Capacity: | |
| Overall | 1.5 litres (2.6 Imp pt) |
| From low to full mark | 185 cc (0.32 Imp pt) |
| Reservoir tank | 215 cc (0.38 Imp pt) |
| Coolant type | 50% water, 50% high quality ethylene glycol antifreeze/ aluminium engine corrosion inhibitors |
| Front forks: | |
| Capacity: | |
| RD350 LC II | 253 cc (8.92 Imp fl oz) |
| RD350 F and N | 297 cc (10.48 Imp fl oz) |
| Oil grade: | |
| RD350 LC II | SAE 10W30 SE motor oil |
| RD350 F and N | SAE 10W fork oil |
| Oil level: | |
| RD350 LC II | 120 mm (4.72 in) |
| RD350 F and N | 106.1 mm (4.18 in) |
| Final drive chain | Aerosol chain lubricant |
| Wheel bearings | High melting-point grease |
| Steering head bearings | General purpose grease |
| Rear suspension and swinging arm bearings | General purpose grease |
| Hydraulic brake fluid | SAE J1703 or DOT 3 hydraulic fluid |
| Pivot points | Motor oil or WD40 |
| Control cables | Light machine oil |

Introduction

Periodic routine maintenance is a continuous process which should commence immediately the machine is used. The object is to maintain all adjustments and to diagnose and rectify minor defects before they develop into more extensive, and often more expensive, problems.

It follows that if the machine is maintained properly, it will both run and perform with optimum efficiency, and be less prone to unexpected breakdowns. Regular inspection of the machine will show up any parts which are wearing, and with a little experience, it is possible to obtain the maximum life from any one component, renewing it when it becomes so worn that it is liable to fail.

Regular cleaning can be considered as important as mechanical maintenance. This will ensure that all the cycle parts are inspected regularly and are kept free from accumulations of road dirt and grime.

Cleaning is especially important during the winter months, despite its appearance of being a thankless task which very soon seems pointless. On the contrary, it is during these months that the paintwork, chromium plating, and the alloy casings suffer the ravages of abrasive grit, rain and road salt. A couple of hours spent weekly on cleaning the machine will maintain its appearance and value, and highlight small points, like chipped paint, before they become a serious problem.

The various maintenance tasks are described under their respective mileage and calendar headings, and are accompanied by diagrams and photographs where pertinent.

It should be noted that the intervals between each maintenance task serve only as a guide. As the machine gets older, or if it is used under particularly arduous conditions, it is advisable to reduce the period between each check.

For ease of reference, most service operations are described in detail under the relevant heading. However, if further general information is required, this can be found under the pertinent Section heading and Chapter in the main text.

Although no special tools are required for routine maintenance, a good selection of general workshop tools is essential. Included in the tools must be a range of metric ring or combination spanners, a selection of crosshead screwdrivers, and two pairs of circlip pliers, one external opening and the other internal opening. Additionally, owing to the extreme tightness of most casing screws, an impact screwdriver, together with a choice of large or small cross-head screw bits, is absolutely indispensable. This is particularly so if the engine has not been dismantled since leaving the factory.

Daily

The checklist shown below should be carried out prior to riding the machine each day. The procedure should take only a few moments, and will significantly reduce the risk of unexpected failure in use.

- Check brake operation, fluid levels and lever/pedal adjustment
- Check clutch and throttle operations
- Check oil tank level
- Check fuel tank level
- Check coolant level
- Check tyre pressures and condition of tread and sidewalls
- Check the electrical system, particularly the horn, lights, brake lamp and turn signals

Weekly, or every 100 miles (160 km)

1 Topping up the engine oil tank

Unlock and open the dualseat to gain access to the oil filler cap; this is located just to the rear of the fuel tank. Top up with any good quality **air-cooled** (not water-cooled as might be expected) two-stroke engine oil to within about one inch of the filler neck. It is important that the tank level is maintained at all times. If it is suspected that the level has fallen too low, or if the system has been disconnected at any point, it should be bled to remove any air which may have entered. Note that

air can cause a lubrication failure which in turn can lead to engine seizure, so do not put off bleeding in the hope that it will correct itself. For details refer to Chapter 3.

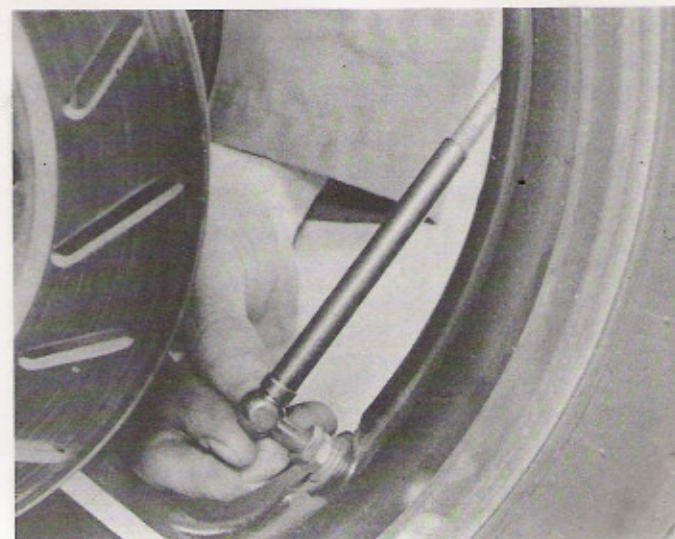
2 Checking the tyre condition and pressures

The importance of maintaining the correct tyre pressures cannot be stressed too highly, the safety of the rider and other road users being at risk if regular checks are ignored or postponed. It is a good idea to keep an accurate pocket pressure gauge with the machine's toolkit and to have access to a simple footpump at home. It should be noted that not every filling station gauge is accurate, and that tyre pressure checks should only be made when the tyres are cold to ensure consistent readings. The tyre pressures shown below are for original equipment tyres, and non-standard fitments may require modified settings. A reputable tyre supplier will be able to advise on this point when the tyres are fitted.

| Tyre pressures (cold) | Front | Rear |
|---------------------------------------|--------|--------|
| Up to 90 kg (198 lb) load | 26 psi | 28 psi |
| 90 - 211 kg (198 - 428 lb) load | 32 psi | 40 psi |
| High speed riding | 28 psi | 32 psi |



Engine oil tank filler can be reached after seat has been removed



Carry a pocket pressure gauge to check tyre and fork air pressures

When checking the tyre pressures, examine the tyre treads and sidewalls for signs of damage or excessive wear. If cracks or splitting are noted, renew the tyre or have it examined by a specialist. Remove any small stones which may have become embedded in the treads, ensuring that no damage to the fabric carcass has occurred. Check the tread depth around the tyre's circumference. The minimum permissible depth in the UK is 1 mm; this should be considered an absolute lower limit, 2 mm being a safer allowance.

3 Checking the battery electrolyte level

The level of the battery electrolyte can be checked via the translucent case, making the operation quick and simple. It is unlikely that any topping up will be required; this is usually necessary only after several months of normal use. If a sudden drop in electrolyte level is noted, find out the cause of the problem. If confined to one cell, the fault may be a cracked or split casing. If this is left unattended, the leaking electrolyte will damage the machine and the battery will fail soon afterwards. If all cells are abnormally low there may be an electrical fault causing overcharging. Again, prompt attention is called for if the battery is to be saved. Top up using only distilled water to the "MAX" level line on the battery. For full details, including precautions when dealing with battery acid, refer to Chapter 7.

4 Checking the coolant level

Check the level of the coolant in the coolant expansion tank. If this is somewhere between the full and low marks, no action need be taken. Note that the level will vary according to the engine temperature and is no cause for concern. If topping up is required, use a 50% mixture of soft or distilled water and ethylene glycol antifreeze suitable for use in aluminium engines. It is worth making up a few pints of this mixture for topping up purposes. Tap water may be used, but only if it is known to be soft; hard water will lead to scaling of the cooling system and impaired cooling. It is preferable to use only distilled or de-ionised water to avoid this problem. **Note:** When handling coolant, note the following precautions:

- Take care to avoid splashing coolant in the eyes or on skin or clothing. If coolant enters the eyes, wash it out with copious quantities of water and seek medical advice at once.
- If swallowed, induce vomiting and seek immediate medical advice.
- If splashed on the skin or clothing, wash off at once.
- If splashed on the motorcycle, wash off at once.

5 General maintenance and inspection

It is recommended that one month be considered the maximum interval for cleaning the machine, but that if possible, cleaning should be carried out on a weekly basis, especially during the winter months. This will make the cleaning job much easier and will usually bring to

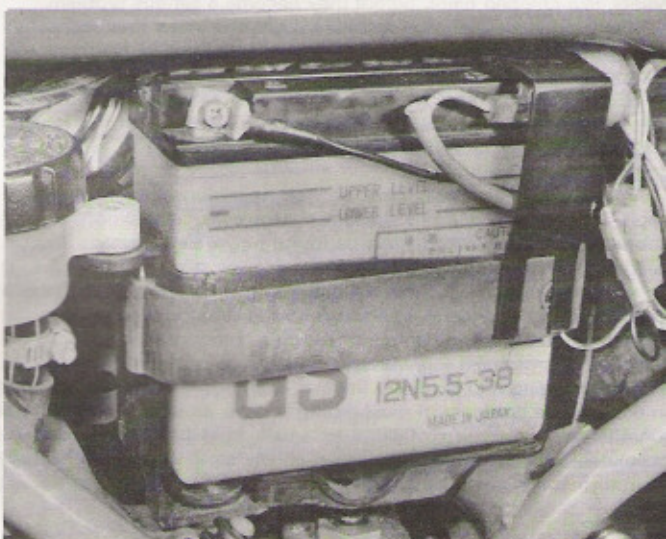
the owner's attention faults such as loose fasteners which might otherwise be missed. Although a less pleasant task in winter, remember that cleaning is even more important, if only to remove potentially corrosive road salt. If appearance is not of paramount importance, spray the cleaned machine's cycle parts (avoiding the brakes, seat and tyres!) with a silicone-based maintenance spray, such as WD40. This will inhibit corrosion and prevent electrical problems, and cleaning will be easier on the next occasion.

Monthly, or every 300 miles (500 km)

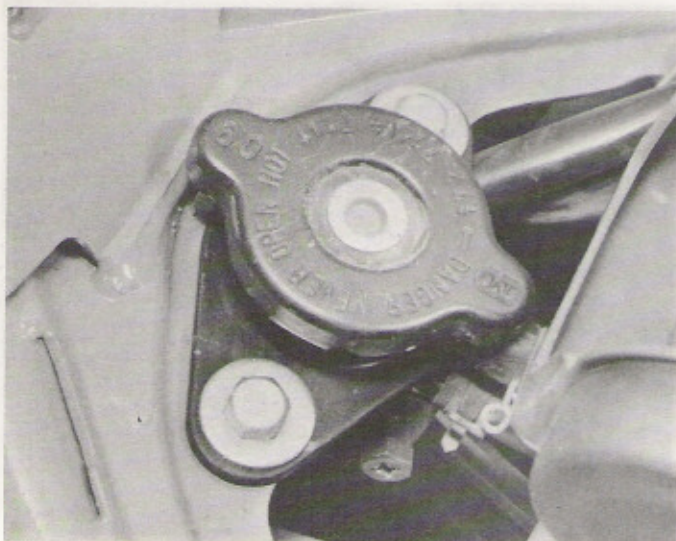
Lubricating and adjusting the final drive chain

The monthly interval prescribed for chain adjustment should be regarded as an absolute maximum. It is preferable to reduce this to about once each week, particularly during the winter months when the rate of chain wear is higher due to adverse weather conditions.

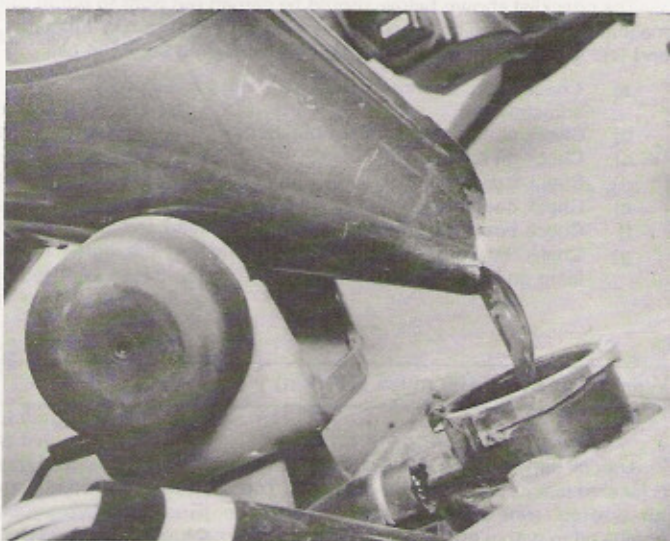
Clean off any accumulated road dirt using a stiff brush soaked in petrol or paraffin. Examine the general condition of the chain, paying particular attention to indications of impending failure such as loose or rattling rollers or cracks in rollers or side plates. If damage of this nature is found, the chain will almost certainly be in need of renewal.



Check that battery electrolyte level lies between upper and lower level lines. Do not omit to fit black plastic cover over positive terminal



Coolant filler cap is located below nose of fuel tank. **Do not** attempt to remove it when the engine is hot



Add premixed antifreeze/distilled water coolant solution as required

Lubricate the chain using one of the proprietary aerosol chain lubricants, making sure that it finds its way onto both sides of the side plates and onto the rollers. Engine oil may be used in an emergency, but note that this will tend to be flung off the chain quite quickly.

Most chains have a "tight spot", and it is here that the free play check should be made. Place the machine on its centre stand and check the amount of up-and-down movement in the lower run of the chain. Turn the wheel and repeat this check until the tightest spot is found. The machine should now be placed on its wheels and the amount of free play measured about four inches forward of the rear wheel sprocket. The correct clearance is 30 – 40 mm (1.2 – 1.6 in).

If adjustment is required, slacken the rear brake torque arm nut, remove the split pin from the rear wheel nut and slacken it. Turn the adjusters on each side of the swinging arm by a similar amount until chain free play is set correctly. Check that the alignment marks on each side are at the same position, then tighten the rear wheel spindle nut to 10.0 kgf m (72 lbf ft) in the case of the RD350 LC II model, and 10.5 kgf m (75 lbf ft) on the later models. Recheck the adjustment, then secure the nut with a new split pin and tighten the torque arm nut.

6 Monthly, or every 4000 miles (6000 km)

1 Checking, cleaning and re-gapping the spark plugs

Remove each spark plug cap in turn and unscrew the plugs using a proper plug spanner to avoid damage. The appearance of the plugs can be used to assess the general condition of the engine, using the colour photographs in Chapter 4 for guidance.

Examine the condition of the plug electrodes. If they are worn or badly contaminated the plug should be renewed. Plugs are relatively inexpensive, and attempting to reuse an old or worn plug is a false economy.

A sound plug can be cleaned using a brass wire brush of the type sold for this purpose in motor accessory shops, or by abrasive cleaning. Many garages offer this service, and inexpensive home units are available. If the abrasive method is chosen, make sure that any residual particles are removed from the plug before it is refitted.

Check the electrode gap using feeler gauges. The recommended gap is 0.7 – 0.8 mm (0.028 – 0.031 in). If adjustment is required, bend the outer, earth, electrode to give the specified gap. On no account try to bend the centre electrode; the porcelain insulator will invariably be broken.

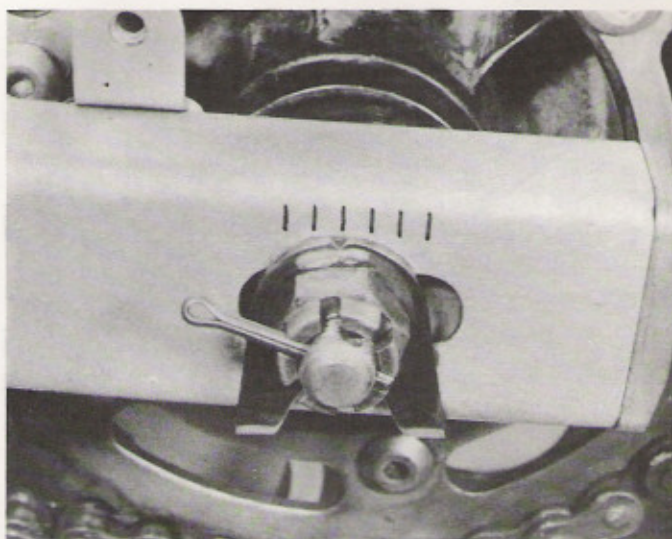
The specified spark plug fitment is NGK BR8ES. If NGK plugs cannot be obtained, an equivalent can be used, but be sure that these are of the correct reach and grade. Do not fit plugs of a different value or engine damage may result. The plug threads should be greased lightly prior to installation. Tighten the plugs firmly by hand, then tighten them by a further quarter turn with the plug spanner. This will ensure that the plugs seal correctly without risk of damage to the plug threads in the cylinder head. Alternatively, tighten the plugs using a torque wrench in conjunction with a spark plug socket to 2.0 kgf m (14 lbf ft). Remember to keep new plugs of the correct type and gap setting in the toolkit.

2 Cleaning the air filter element

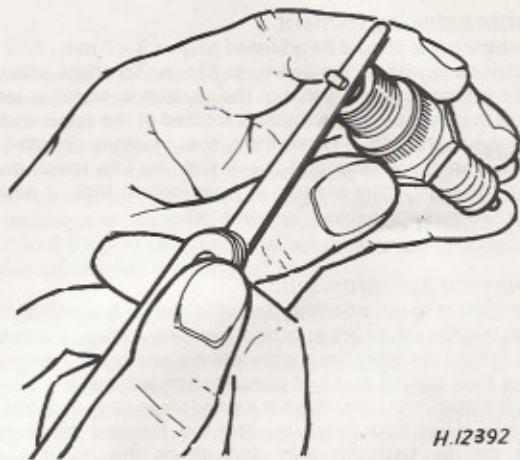
Remove the seat and both side panels. Check that the fuel tap is turned to the "ON" position (not "PRI"), then disconnect the fuel and vacuum pipes. Remove the single retaining bolt at the rear of the tank and remove the tank by grasping it and pulling it rearwards until the front of the tank comes free of the two mounting rubbers.

Release the three screws which retain the flat air filter cover and lift it away. Lift away the element and wash it in methylated spirit or in clean petrol. If using petrol, take care to avoid any possible risk of fire. When the element is dry, apply SAE 30W motor oil to it, squeezing out any excess to leave the element moist but not dripping. Refit the element, making sure that it locates properly and that the cover seals correctly.

Every 1600 miles, or every fourth cleaning, the element should be renewed. If used after this time its filtering properties will have been impaired. On no account run the machine with the filter missing or damaged; dust in the unfiltered air will enter the engine, causing accelerated wear. Before refitting the fuel tank, check the condition of the fuel and vacuum pipes. If these show signs of splitting or leakage they should be renewed.

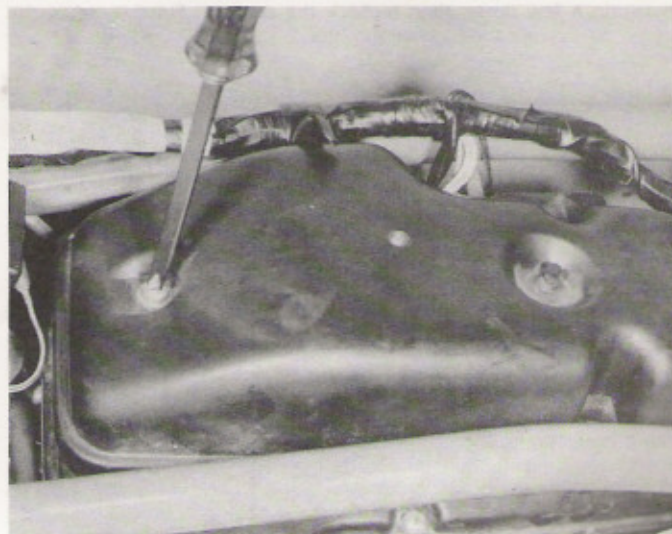


Adjust drive chain tension, noting alignment marks on swinging arm. Tighten wheel spindle nut and secure using a new split pin

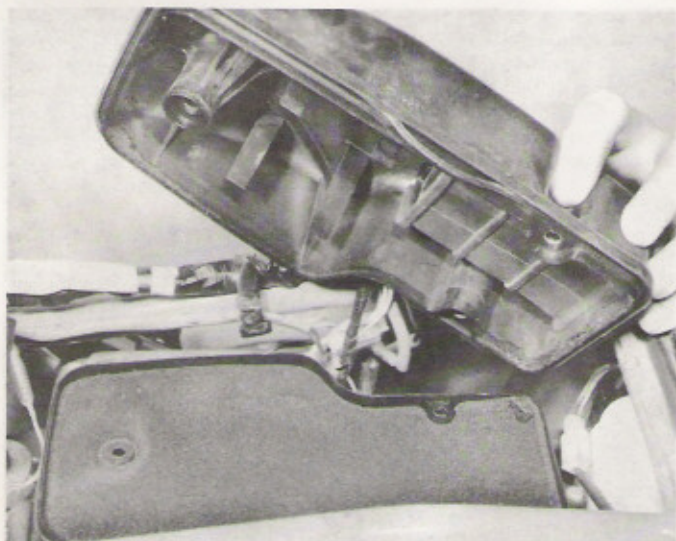


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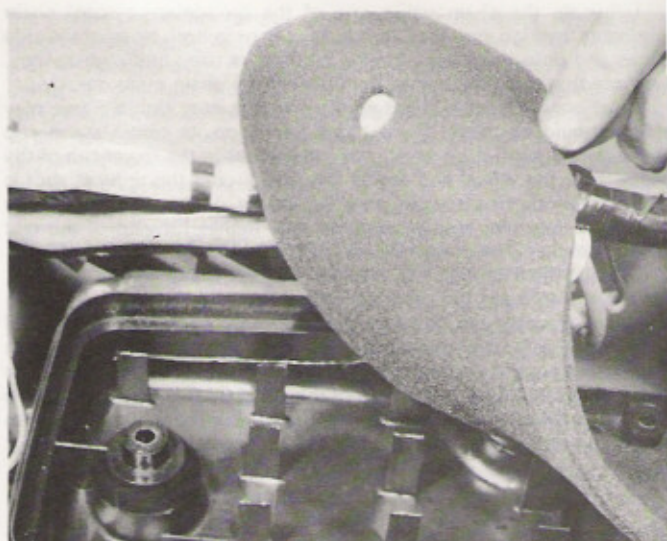
Measuring the spark plug gap



Air filter is housed below the seat, the cover being retained by three screws



Lift away the cover to reveal the oiled foam element ...



... which can be carefully lifted out for cleaning and inspection

3 Throttle cable adjustment

The throttle cable should be adjusted to give 3 – 7 mm (0.12 – 0.28 in) free play measured at the twistgrip flange. To effect adjustment, slacken the adjuster locknut and turn the adjuster in or out as required, then secure the locknut. The adjuster is located at the upper end of the cable, at the right-angle bend from the twistgrip control. After adjustment, start the engine and check that the idle speed does not alter when the handlebars are turned from lock to lock. If necessary, readjust or re-route the cable to prevent this.

4 Carburettor synchronisation

If the engine is to run smoothly and efficiently it is essential that the carburettor throttle valves are in perfect synchronisation. If one throttle valve lags behind the other the engine will run erratically, power output will be less than normal and fuel consumption will suffer.

On each carburettor body there is a small inspection plug about one inch (25 mm) down from the carburettor top. Remove the plugs, then open the throttle twistgrip fully and check the position of the synchronisation marks through the inspection holes. If necessary, slacken the adjuster locknuts on the top of the carburettors and move the adjusters to align both marks correctly. Open and close the throttle twistgrip a few times, then recheck the settings. Finally, secure the locknuts and refit the inspection plugs.

5 Checking the engine idle speed

Set the pilot air screw of each carburettor to $1\frac{1}{4}$ turns out. The setting can be found by turning the screw clockwise until it seats lightly, then unscrewing it by the prescribed amount. The pilot air screw is located on the right-hand side of each carburettor, near the inlet mounting rubber.

Start the engine and allow it to reach full operating temperature. Check the idle speed which should be between 1150 and 1250 rpm. If adjustment is required, turn the knurled adjuster on each instrument by an equal amount until the idle speed falls within the above range.

6 Checking the transmission oil level

Start the engine and allow it to run for a few minutes to distribute the transmission oil around the internal components and the inside of the casing. Stop the engine and remove the combined filler plug and dipstick. Wipe the dipstick and then place it back in the filler hole so that the plug just rests on the edge of the hole; do not screw it home. Check that the level of the oil is between the upper and lower level marks. If topping up is required, use SAE 10W/30 type SE motor oil.

Note that at every fourth check (every 16 000 miles) the oil should be changed as described later in Routine Maintenance.

7 Checking the oil pump cable adjustment RD350 LC II

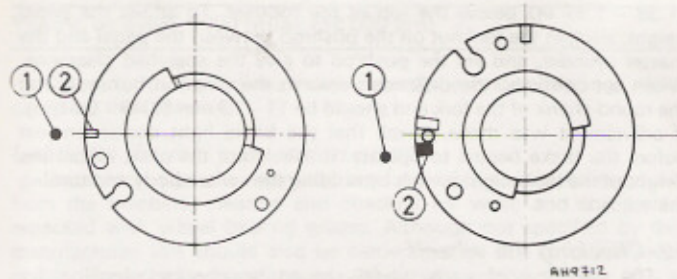
Note that the oil pump cable adjustment should be checked after any carburettor or throttle cable adjustments have been made. Remove the oil pump cover on the right-hand side of the engine. Open the throttle twistgrip fully and hold it in this position. Check that the plunger pin aligns with the reference mark on the pump pulley. If necessary, adjust the cable adjuster until the pin and mark align. When adjusted correctly, secure the adjuster locknut and grease the cable and the pulley.

RD350 F and RD350 N

The pump alignment on the later models is checked with the throttle closed. Refer to the accompanying line drawing for details of the relevant alignment work.



Transmission oil filler plug incorporates a dipstick. Level is measured with the plug resting on its threads – not screwed home



RD350 LC II

RD350 F and N

Oil pump pulley alignment marks

- 1 Plunger pin
- 2 Pulley alignment mark

8 Checking the oil pump minimum stroke setting

With the pump cover removed, start the engine and allow it to idle while observing the movement of the pump plunger. The pump is at its minimum stroke when the plunger and adjuster plate have moved fully outwards. Stop the engine at the minimum stroke position, and measure the gap between the raised boss on the pulley and the adjuster plate. Take care not to force the feeler gauge into the gap and thus get a false reading. Note the clearance, then start the engine and repeat the check several times.

Using the largest gap reading, check that this is between 0.10 mm and 0.15 mm (0.004 – 0.006 in). If the clearance is incorrect, remove the locknut and adjuster plate and lift away the shims behind it. Add or subtract shims to obtain the correct clearance. Finally, refit the shims, adjuster plate and locknut and re-check the clearance.

9 Bleeding the oil pump

This operation is necessary whenever the oil tank has run dry or if any part of the oil pump system or pipes have been disconnected. Note that air in the system can lead to lubrication failure and possible engine seizure, so do not take any chances. If the system has not been disturbed and the oil tank level has been carefully maintained, this operation can be ignored.

Check that the oil tank is full (topping up as required with any good quality 2-stroke oil for air-cooled engines), then remove the oil pump bleed screw. Allow the oil to flow out for a few minutes, until any air has been expelled. Refit the bleed screw, using a new sealing washer if required.

To bleed the oil delivery pipe, start the engine and allow it to run at about 2000 rpm or so for two minutes. With the engine running at this speed, pull the pump cable so that it is at maximum stroke. Any air will be expelled during this time. Note that there will be a tendency for the exhaust to smoke for a while after bleeding, but this should subside after excess oil in the exhaust system has burnt off.

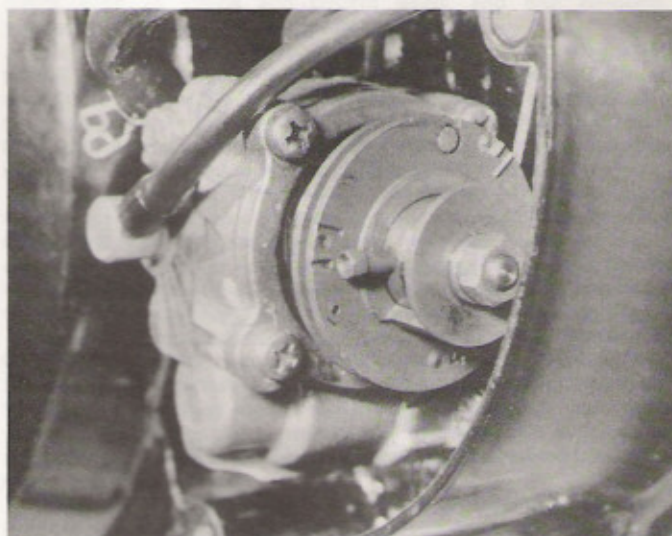
10 Clutch adjustment

Check the operation of the clutch, and check that there is about 10 – 15 mm (0.4 – 0.6 in) free play measured at the lever end. If adjustment is required, this is carried out at the lever. If there is insufficient range in the handlebar lever adjuster, screw it fully inwards and reset the in-line adjuster to remove excess free play. Fine adjustment can now be made at the lever.

To adjust the clutch release mechanism, it will first be necessary to carry out the following operations:

- a) Slacken fully both cable adjusters
- b) Remove the oil pump cover and disconnect the oil pump cable
- c) Drain the transmission oil
- d) Drain the cooling system
- e) Disconnect the radiator hose from the side cover
- f) Remove the kickstart lever
- g) Remove the right-hand side cover

In view of the amount of work involved it is probably best to time any adjustment to coincide with a normal transmission oil or engine



Set the oil pump cable so that the marks align correctly. These vary with model (see text)

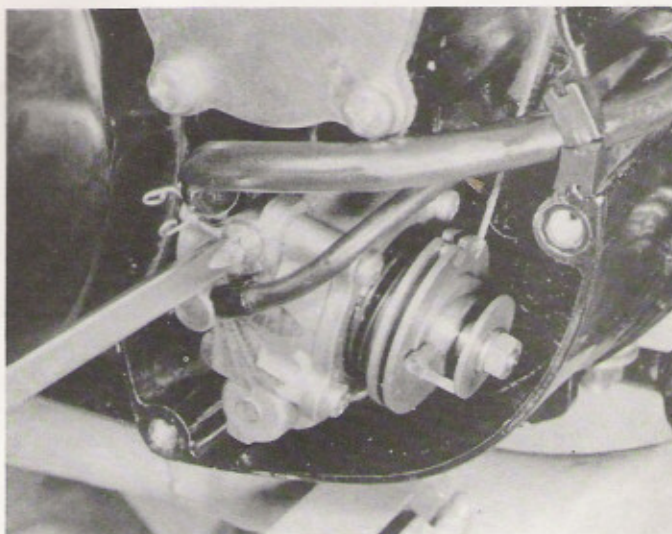
coolant change. For details of the removal of the various components and assemblies detailed above, refer to the appropriate sections of Chapters 1 and 2.

Slacken the clutch centre adjuster locknut, then set the clutch cable in-line adjuster so that the clutch actuating lever aligns with the index mark on the casing. Turn the clutch centre adjuster screw inwards until slight resistance is noted, then back it off by a quarter turn. Tighten the locknut to 0.8 kgf m (5.8 lbf ft). When reassembly is complete, check the cable adjustment as described above.

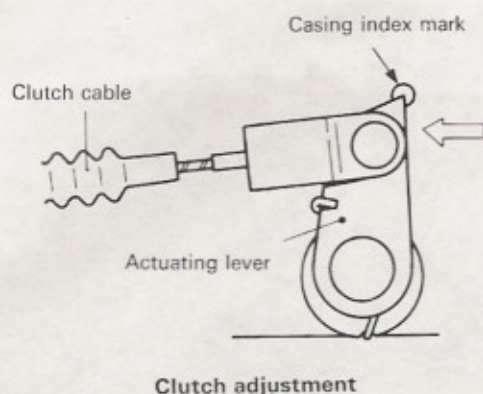
11 Checking the braking system

Check the operation of the front brake, noting any signs of leakage or sponginess in the system. If air has entered the system, or if there are any signs of leakage around the hose unions, master cylinder or brake calipers, it is imperative that the cause of the problem is traced and rectified immediately. Refer to Chapter 6 for further information.

Check the level of the hydraulic fluid via the inspection window in



Remove bleed screw and allow oil to flow from tank until free from air bubbles



the master cylinder reservoir. The fluid level will fall very gradually due to wear in the brake pads, but any sudden or drastic drop in level is indicative of a leak or seal failure and should be treated as serious.

If routine topping up is required, carefully clean the reservoir to remove any dirt or moisture. Remove the screws which retain the reservoir cap and lift away the cap and the diaphragm below it, taking great care to avoid spilling fluid on painted or plastic parts. Any drips or splashes must be washed off promptly before the surfaces become damaged. Top up the reservoir using only new DOT 3 or SAE J1703 specification hydraulic fluid, then refit the diaphragm and cap ensuring that a good seal is made.

Check the condition of the brake pads (see photograph) noting that if either is worn down to the wear limit they should be renewed as a set. Details of the pad renewal procedure will be found in Chapter 6.

The rear brake system can be checked in much the same way as described above for the front brake, noting that the rear brake reservoir is mounted remotely from the master cylinder to which it is connected by a short hose. The reservoir cap screws onto the body. Again, check the pads for wear, referring to Chapter 6 if renewal is required.

Finally, check the free play of the front brake lever and rear brake pedal. In the case of the former, there should be 5–8 mm (0.2–0.3 in) lever movement, measured at the lever end, before the brake begins to operate. This is adjusted using the adjuster screw and locknut near the lever pivot. The rear brake pedal should be set so that it is 35–40 mm

(1.38–1.57 in) below the top of the footrest. To adjust the pedal height, slacken the locknut on the pushrod between the pedal and the master cylinder, and set the pushrod to give the specified clearance. When set correctly, the distance between the pushrod hexagon and the round shank of the fork end should be 11–13 mm (0.43–0.51 in). If adjustment was made, check that the brake light comes on just before the brake begins to operate. If this is not the case, adjust the height of the brake light switch by holding the switch body and turning the adjuster nut.

12 Checking the wheels

The condition of each wheel should be checked, looking for indications of corrosion or damage. It follows that this is best carried out after the machine has been cleaned thoroughly. Check for free play or wear in the wheel bearings and for excessive runout at the wheel rim. For further details, refer to Chapter 6.

13 Checking the steering and front suspension

Check the operation of the front forks by pushing and pulling on the handlebars with the front brake applied. The forks should move smoothly, with no signs of stiffness or excessive play. Any knocking in the steering head area may be indicative of worn or badly adjusted steering head bearings.

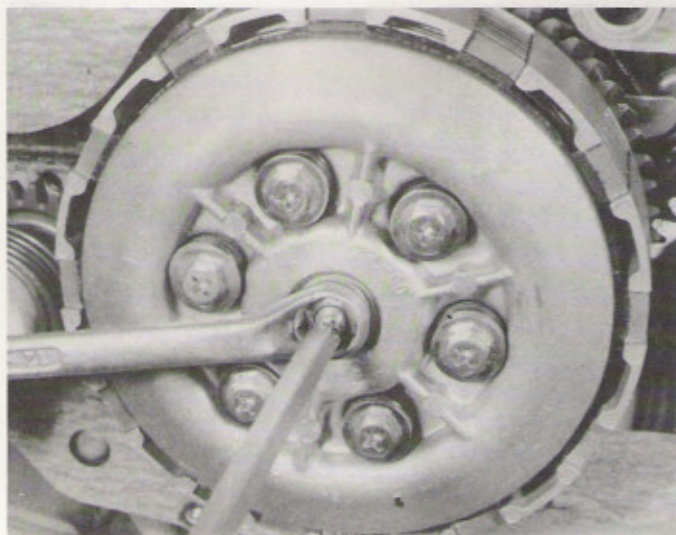
Raise the front wheel clear of the ground. Grasp the lower ends of the fork legs and push and pull them to check for play. It will be possible to feel any free movement in the steering head bearings. Turn the handlebars from lock to lock to check for roughness. If the above checks indicate wear in the steering head area, refer to Chapter 5 for details on adjustment and renewal of the steering head bearings.

Examine the surface of the fork stanchions for wear or scoring. Scoring can lead to leakage of the fork seals and consequent loss of fork air pressure and oil. Slide the fork dust seals up and clear of the lower leg to check for leaks. If oil leakage is noted, or if the forks lose air pressure quickly, the forks should be overhauled and new seals fitted. Details of this operation will be found in Chapter 5.

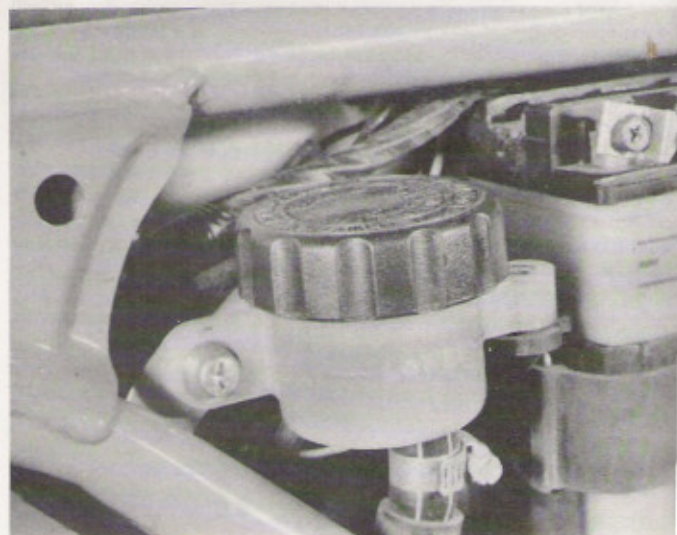
14 Checking the rear suspension

Raise the rear wheel clear of the ground and check for play in the swinging arm pivot by pushing it from side to side. If any play is found, it will be necessary to dismantle and overhaul the swinging arm pivot assembly and to check for wear in the suspension linkage. This is described in detail in Chapter 5.

Check the suspension unit for signs of leakage. If necessary, remove the unit as described in Chapter 5 for closer examination. Leakage will necessitate renewal of the unit; it is of sealed construction and cannot be overhauled.



Clutch centre incorporates a screw and locknut adjuster to set the initial clearance



Check that hydraulic fluid level lies between minimum and maximum

Yearly, or every 8000 miles (12 000 km)

Carry out the operations listed under the previous headings, then complete the following:

Lubricate the rear suspension pivots

Once each year the swinging arm assembly should be removed from the machine, cleaned and checked for wear, and the pivots repacked with wheel bearing grease. Although not specified by the manufacturer, this should also be carried out on the various linkage pivots. Preventative maintenance will greatly extend the life of the various bushes and should not be ignored. This is especially true if the machine is used through the winter months when the exposed pivots are subjected to considerable attack from salt, road dirt and water. For further details, see Chapter 5.

Two yearly, or every 16 000 miles (24 000 km)

1 Checking and greasing the steering head bearings

Remove the fork legs from the machine, then dismantle and check the steering head bearings. Renew the bearings if worn, otherwise repack with wheel bearing grease and readjust after assembly. See Chapter 5 for more information. Before the fork legs are refitted it is a good idea to change the damping oil as described below.

2 Changing the front fork oil

The front fork oil should be drained and renewed at the specified intervals to ensure consistent fork operation and to prevent internal corrosion which might occur if condensation were allowed to build up in the fork legs. It is important to make sure that the fork oil level is correct and equal in each leg, and to this end it is preferable to remove the fork legs from the machine so that this can be measured accurately with the fork leg held vertical. It should be noted that if the oil level is higher or lower than that specified, the fork spring rate will be affected. This is because the internal air volume of the fork determines the effect of fork air pressure on the overall spring rate. It follows that a difference in oil level between legs must be avoided at all costs. For a full description of the removal and refitting sequence, refer to Chapter 5, Section 3.

3 Changing the coolant

The coolant should be drained, the system flushed and new coolant added every two years. This will ensure adequate frost protection and will minimise corrosion in the system, prolonging the working life of the various parts. The procedure is described in detail in Chapter 2.

4 Changing the transmission oil

The transmission oil should be changed at the specified intervals to ensure full lubrication of the transmission components and to avoid premature wear. The operation should be undertaken with the engine hot, preferably after a run, to ensure that the oil drains fully. Place the machine on its centre stand and slide a bowl or drain tray of at least 2.0 litre (4.5 Imp pint) capacity beneath the drain plug on the underside of the crankcase. Remove the plug and wait until the old oil drains fully.

Clean the drain plug hole and the plug itself, then check that the sealing washer is in good condition; if in doubt, renew it. Refit the plug and tighten to 2.0 kgf m (14.0 lbf ft). Remove the combined filler plug and dipstick and add SAE 10W30 motor oil until it reaches the full mark on the dipstick. Note that the dipstick reading is taken with the plug just resting in the filler hole, and **not** screwed fully home. The transmission casing will take approximately 1.5 litres (2.6 Imp pint) of oil, but note that the oil level, rather than the quantity, is important. Finally, run the engine for a few minutes to distribute the new oil, then re-check the level.

General maintenance work

Apart from the specific tasks listed in the foregoing text there are numerous items of general maintenance requiring attention. These are mostly concerned with cleaning and lubrication of the various exposed

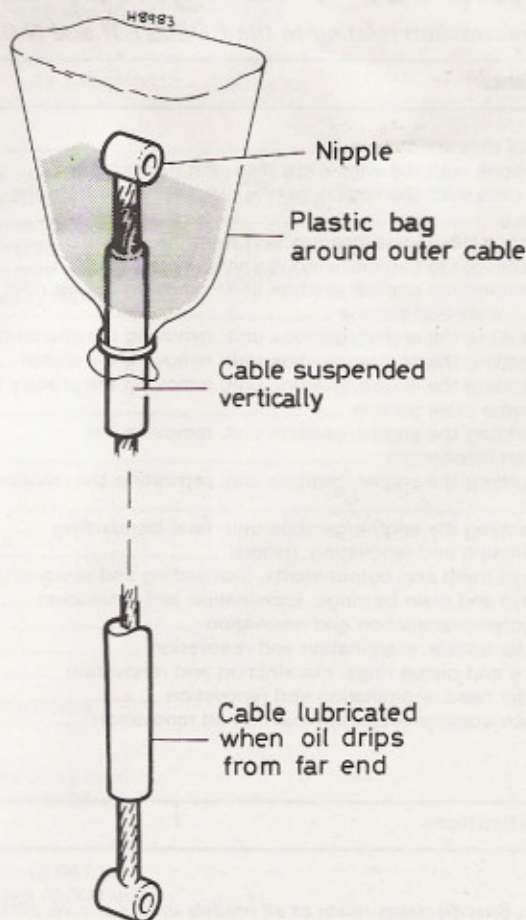
pivots, such as stands and control levers, and also checking, lubrication and renewal of the control cables.

It is not easy to give realistic mileage or calendar headings for this type of work, and much will depend on the type of use to which the machine is put and the conditions under which it is operated. As a rough guide, work to a maximum of one monthly intervals, though if the machine is used for frequent short trips during the winter, this interval can be reduced to weekly or two-weekly intervals.

Start by cleaning the machine thoroughly. This will make subsequent examination more pleasant and will highlight areas which might otherwise be overlooked. Check areas such as stand pivots carefully and tighten or renew pivot bolts. Note that only the correct hardened pivot bolts must be used. Lubrication can be by engine oil or one of the many maintenance aerosols such as WD40 or similar.

Check all control cables for signs of damage, looking in particular for fraying around the exposed ends of the inner cables. If damaged in any way, renew the cable. Cables can be lubricated overnight using the arrangement shown in the accompanying line drawing. This works well enough, but for quicker results one of the various hydraulic or aerosol type cable oilers can be used. These can be obtained from most motorcycle dealers.

Other jobs which should be undertaken after cleaning are checking for possible sources of future breakdowns; loose fasteners should be tightened and any worn or damaged electrical leads renewed or repaired. Switches can be kept clean and free from corrosion by regular applications of WD40.



Oiling a control cable