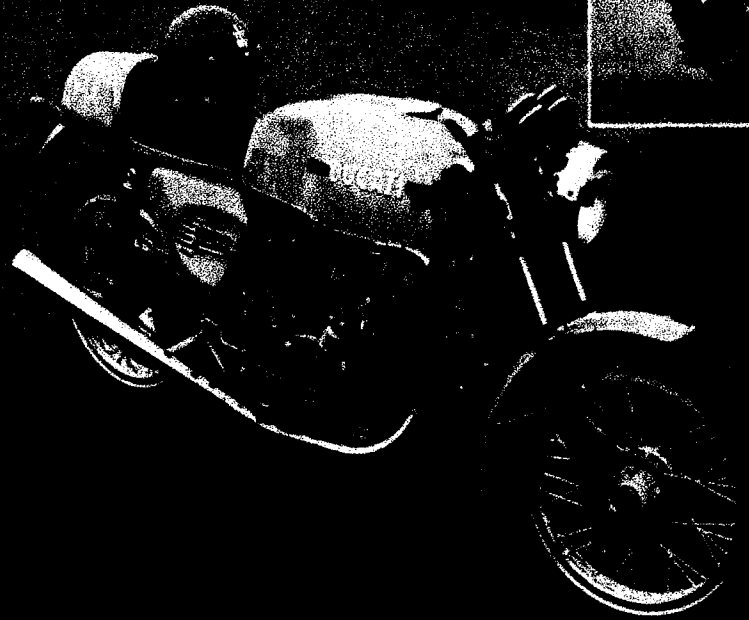
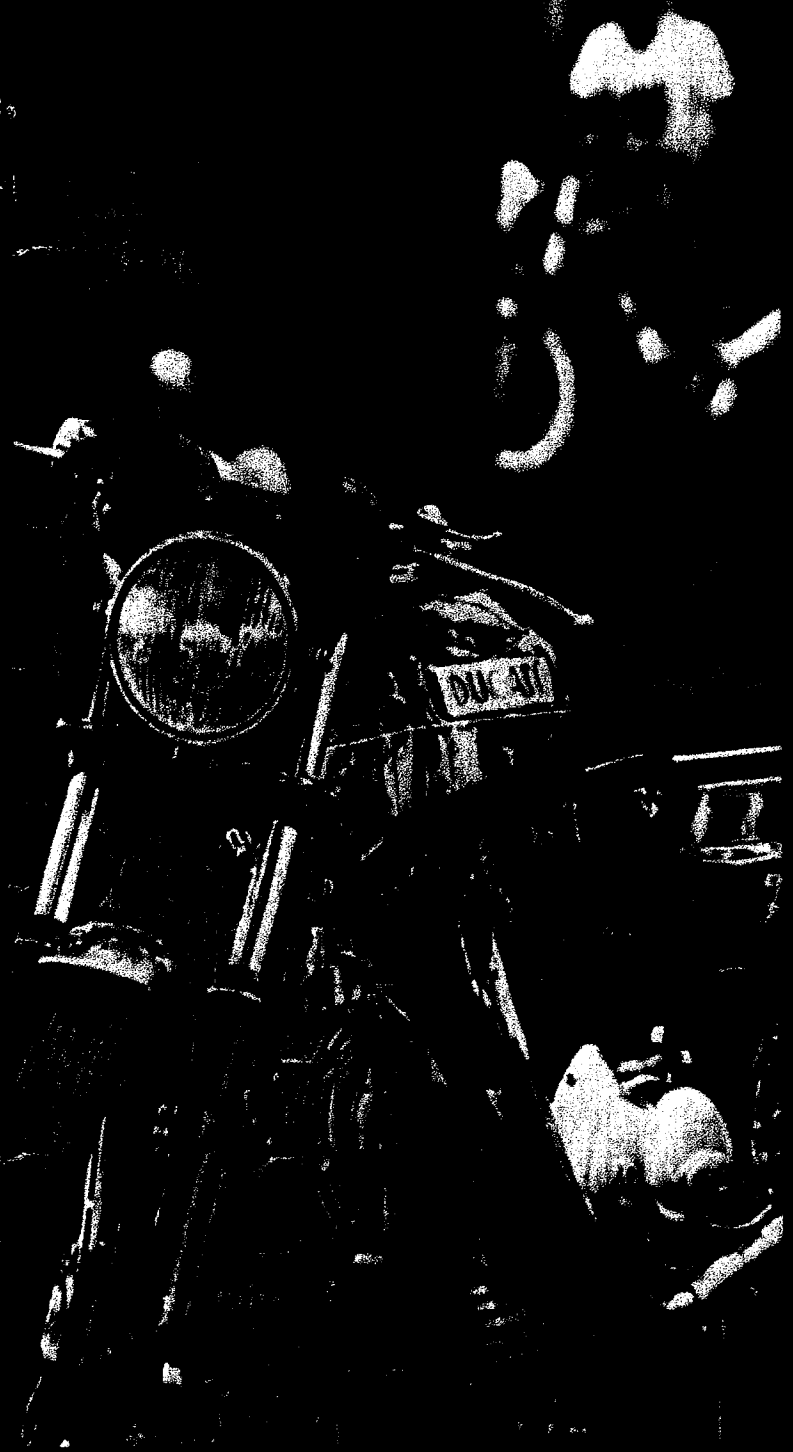


# DUCEATI

*Motor Cycles*



750

GT/SPORT



860



*Servicing*

**DUCEATI**

*Motor Cycles*

**750 SPORT/GT  
860**

Published by

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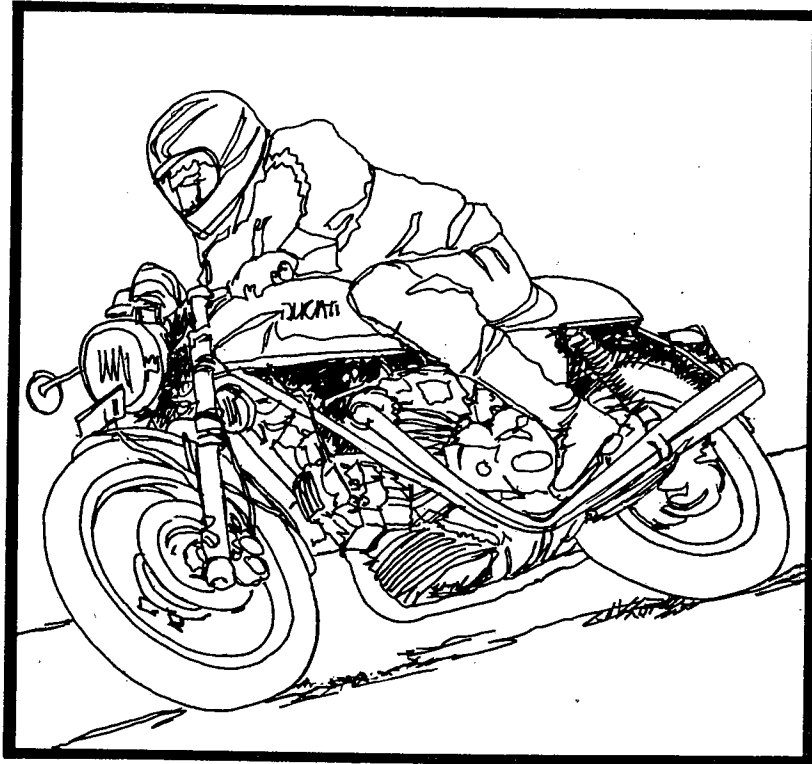
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**DUCATI**  
**▪750 GT/SPORT ▪860**

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# SPECIFICATIONS—750

## Engine

Two cylinder four stroke "L" configuration

Four stroke twin cylinder 90 degree longitudinal "L" configuration, supported in a cradle frame.

Bore: 80 mm (3.1496")

Stroke: 74.4 mm (2.9291")

Cylinder capacity: 748cc (45.629 cu. in.)

Compression ratio: 8.5:1

Deeply finned cylinders in light alloy with special cast iron liners inserted. Connecting rods in special steel, with roller cage at the big end and the small end bushed to take the gudgeon pin; Light alloy pistons, press forged with the skirt in one piece and three piston rings, one of which is an oil scraper. Cast light alloy cylinder head, closely finned with inserted valve seats.

## Timing

The timing system is provided with overhead valves, inclined at 80°, timed by an overhead camshaft. The valves are made of special steel.

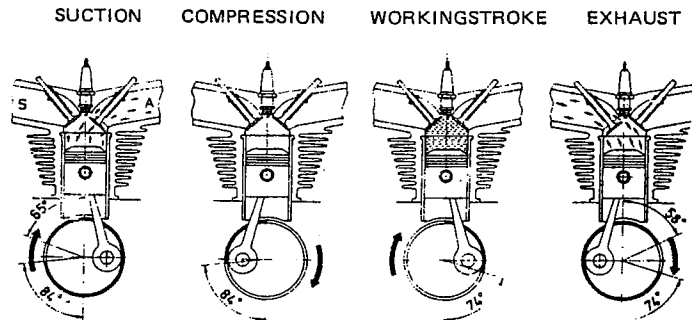


Fig. 1

With a valve/rocker clearance of 0.10 mm (0.0039") for both inlet and exhaust the timing is as follows: Inlet opens 65° before T.D.C. and closes 84° after B.D.C.; Exhaust opens 74° before B.D.C. and closes 58° after T.D.C.

The tappets are adjusted by means shims on the end of the valve stems, and the clearance should be checked after the timing has been set and with the engine cold.

The timing gears in the crankshaft and on the cam shaft are provided with reference marks and care should be taken to re-align these when assembling the engine after repair or maintenance.

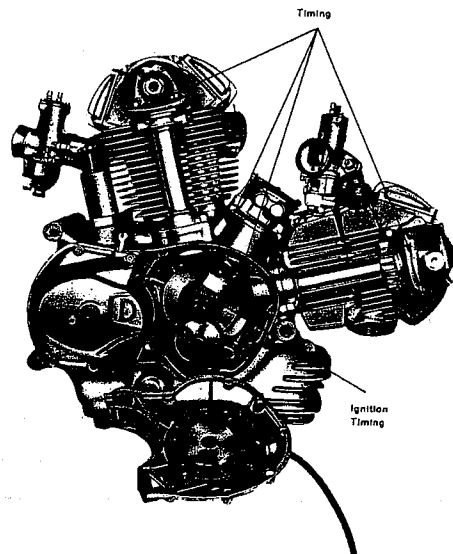


Fig. 2

IDLING ADJUSTMENT

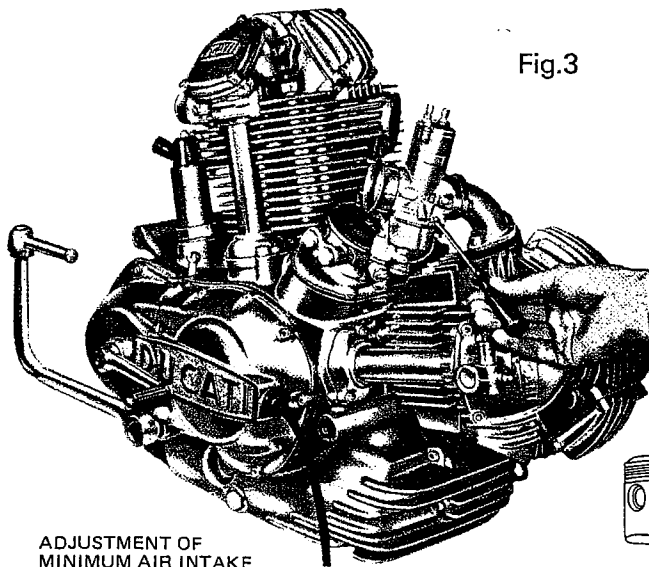


Fig. 3

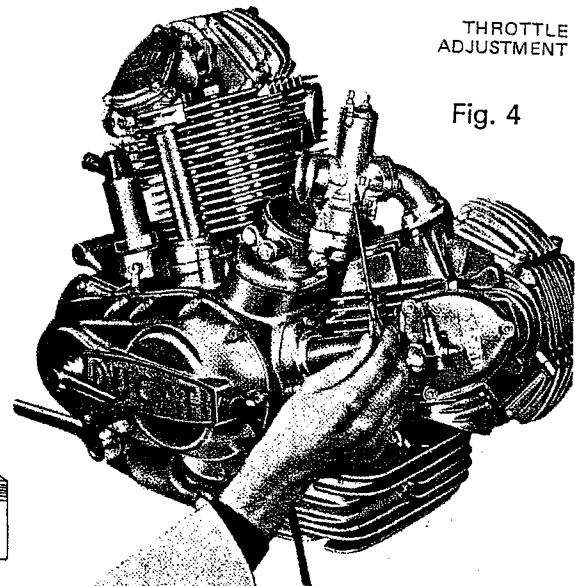
THROTTLE  
ADJUSTMENT

Fig. 4

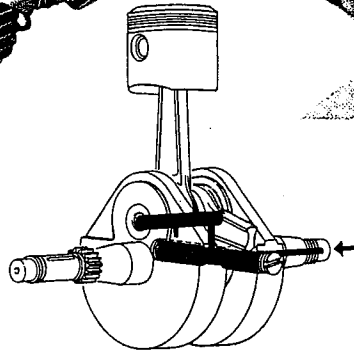
ADJUSTMENT OF  
MINIMUM AIR INTAKE

Fig. 5

### Fuel

Petrol is gravity fed to the engine through two Amal carburettors with air filters. The tank holds 17 litres (3.74 gallons) and has two three-position cocks: close-open-reserve. The reserve is about 1.6 litres (0.35 gallons)

### Lubrication

The engine is pressure lubricated by means of a gear pump driven by the crankshaft. This pump takes the oil from the lowest point in the crankcase, through a filter and forces it through a series of oilways to all parts of the engine requiring lubrication. The oil return is by gravity.

The sump capacity is about 4.5 Kg (1.10 gallons) and an oil filter with dipstick and sealing gasket allows easy oil level measurement.

The filler plug dipstick is marked with two notches to indicate lowest and highest permissible levels and the level is checked by resting the plug on the filler.

The system is quite simple and requires no special maintenance other than topping up the oil every 500 Km (300 miles) and changing the oil and cleaning the filter every 2,000 Km (1,200 miles).

### Cooling

The engine is air cooled by means of fins on both the cylinder barrel and cylinder head.

### Ignition

Ignition is by battery and coil with 10° advance when the engine is stopped and 29° automatic advance at over 1,200 r.p.m., a total of 38°.

To time the ignition see the figure on page 6. The clearance between the platinum plated contacts should be 0.3 to 0.4 mm (0.0118" to 0.0157") and should be checked with a feeler gauge.

The spark plugs are Lodge 3 HN or a similar model and are located on the left side of the cylinder head.

When replacing the plugs make sure the plug is aligned correctly in the thread so as to avoid cross threading. Screw the plug in lightly at first, then tighten it.

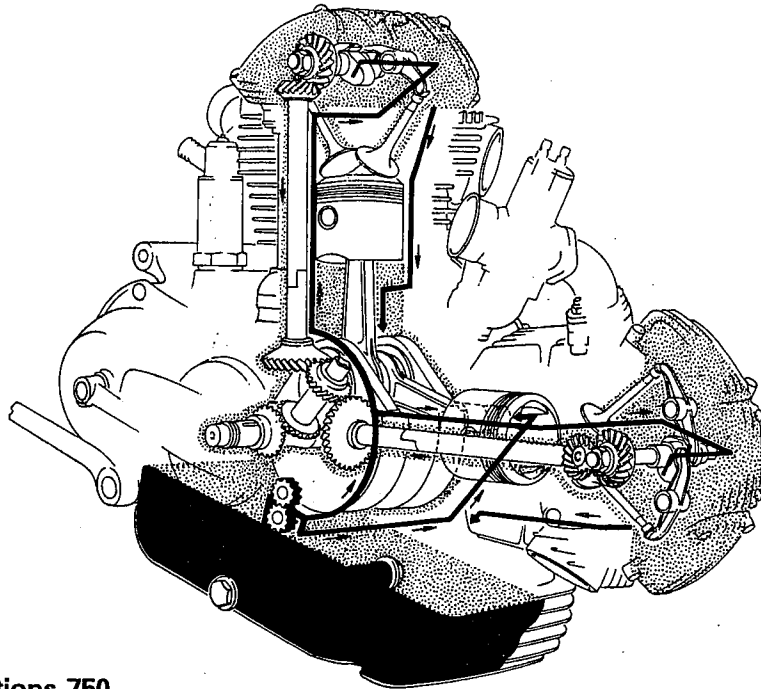


Fig. 6

### Running-in Precautions 750

During the first 1000 Km (620 miles) the rev counter should not exceed 4,500—5,000 r.p.m. and do not maintain the maximum allowed speed through the gears for long periods.

After the first 500 Km (300 miles) and after the first 1,000 Km (600 miles) with the engine still warm, change the crankcase oil, adjust the tappets, fitting the appropriate rocker shim and check the cylinder-head tie-rods as well as nuts and bolts generally. Adjust the platinum contact breaker points in accordance with the data shown under Specifications, and check the chain tension and lubrication.

### Transmission

The transmission components consist of a clutch and gearbox. The clutch is of the multiple plate type, with steel and phenolic resin discs, turning in an oil bath. It is mounted on the primary shaft of the gear box. The clutch housing, which is made of special hardened steel, turns on two internal bearings and is lubricated with the engine sprocket.

The clutch is operated by a hand lever on the left hand side of the handlebar.

The transmission between the engine and the primary shaft of the gear box is through gears with a reduction ratio of 2.448:1.

The constant mesh, 5-speed gearbox is mounted in the crankcase and is operated by a foot pedal.

Bottom gear	— 2.236:1
Second gear	— 1.562:1
Third gear	— 1.203:1
Fourth gear	— 1.000:1
Fifth gear	— 0.887:1

Transmission between the gearbox and rear wheel is effected by a chain drive with a ratio of 2.250:1.

### Frame

The frame of the Ducati 750 GT is made of high tensile steel in a stylish modern design and is of the central girder type.

### Suspension

The front suspension consists of Ducati double action, long stroke hydraulic forks.

The rear suspension is effected by a strong hinged fork with double action hydraulic shock

absorbers which can be adjusted to three different loads.

In the Ducati 750 GT the fork fulcrum spindle is fixed to the frame while the fork rotates around it through a bronze bush, giving the machine greater solidity and stability. On the left hand side bush there is a grease nipple for the spindle.

### **Wheels**

The wheels are of the spoke rim type in light alloy, the front being 19" x 2" and the rear, 18" x 3" at the rim. Both wheels have a detachable spindle. The rear wheel has a special cushion drive and can be dismantled without removing the chain.

### **Brakes**

The front brake is a disc brake with a telehydraulic control on the handlebar, while the rear brake is of the drum type, pedal controlled.

The front disc diameter is 280 mm (11.02") and the diameter of the double cam rear drum is 200 mm (7.87").

## **ELECTRICAL SYSTEM**

### **General specifications**

The electrical system consists of the following main parts:

**Headlamp** — A powerful, two filament 12 Volt, 40/45W headlamp is fitted, together with a 12 Volt, 3W parking light. Inside the headlamp there is a relay for the emergency lights as well as a circuit for the fitting of direction indicators.

**Dashboard** — This is mounted on the handlebars and contains the speedometer and tachometer as well as three warning lights for ignition key, high beam and parking light. The instruments are lit by two independent lights.

**Coils** — The two 12 Volt high tension coils are fitted under the tank and become live only when the ignition key is inserted. When replacing them be sure not to reverse the connections.

**Horn** — The 12 Volt horn is mounted under the handlebars.

**Stop lamp switch** — A new type of switch is mounted on the left and rear of the frame and is operated by the brake pedal. **IMPORTANT:** The two wires must be inserted in such a way as to avoid contact with the central sheath and they must be properly insulated.

**Key switch** — This is positioned under the saddle on the left hand side, on models fitted with an electric starter there is an additional starting position.

**Fuse box** — There are four fuses located under the saddle, inside the tool box. The fuses are F.1 15A to protect the parking light, F.2 25A to protect the headlight, F.3 15A to protect the horn and stop light and F.4 15A to protect the emergency light and direction indicator circuit. **IMPORTANT** When replacing a fuse, flex the contact springs so that they hold the fuse firmly in position.

**Battery** — The battery is a Yuasa 12N-12A-4A-12V, with 6 cells and Volt — 12Ah capacity. It has a transparent case to allow easy checking of the electrolyte level and is cushioned by a special rubber mounting. When checking the battery level with an ammeter always ensure that the engine is STOPPED.

**Regulator** — A standard 12 Volt regulator is fitted. Please note that the negative cable from the battery must be connected to the regulator frame.

**Alternator** — The alternator has an output of 150 Watts and is mounted within the engine on the clutch side. The three wires from the alternator connect directly to the regulator and it is important not to confuse them. When opening the engine take care not to damage the alternator windings.

**Plate holder** — The rear number plate is lit by a two filament 5/21 Watt bulb.

**Handlebar controls** — Left hand side: light switch and horn button.  
Right hand side: Switch for emergency lights and indicators.

#### **Fitting of Direction Indicators**

The four lamps must be mounted on the supports already designed on the motorcycle. Using cable with a 1 mm square cross section connect the front indicators to the terminals inside the headlamp and the rear ones from the fuse box terminals under the saddle, ensuring that 12 Volt, 15 Watt bulbs are used.

The handlebar control is already connected.

#### **IMPORTANT**

The engine cannot be run without a battery as there would be no current to the rectifier. In fact the engine can only be started if the battery voltage exceeds 8 volts.

The battery cables must not be detached while the engine is running as this would damage the rectifier.

#### **Advantages of the Electrical System**

The electrical system employed in the Ducati 750 GT offers several advantages over previous systems. The four fused circuits in particular simplify the tracing of electrical failures, while allowing the unaffected circuits to continue functioning.

#### **Operation of the Electrical System**

##### 1. Key inserted:

The engine can be started and the white ignition light in the centre of the dashboard remains alight until the engine is stopped. The battery is recharged while the engine is running.

**Light Switch:** Centre position — Lights off

Left position — The rear and front parking lights come on as well as the green warning light on the dashboard.

Right position — The headlight comes on and can be switched to low or high beam, the red warning light on the dashboard indicates high beam.

In all positions the battery charge remains balanced. When the headlight is switched on the small parking light is also on, giving the rider a safety light in the event of the main bulb burning out.

The horn operates.

The stop light operates.

##### 2. Key not inserted:

The engine cannot be started.

**Light Switch:** All positions remain as above.

The connection between the battery and the electronic current regulator is cut.

The horn does not operate.

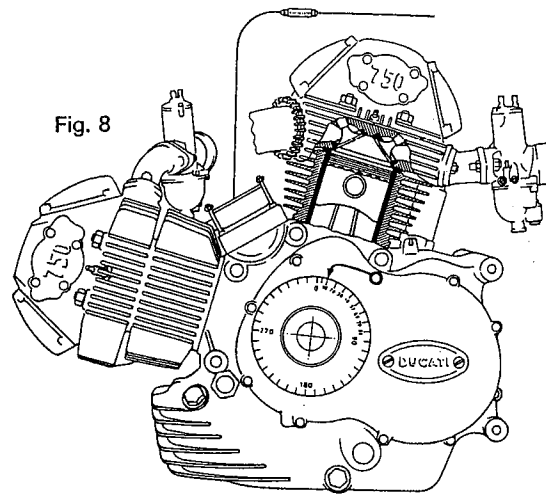
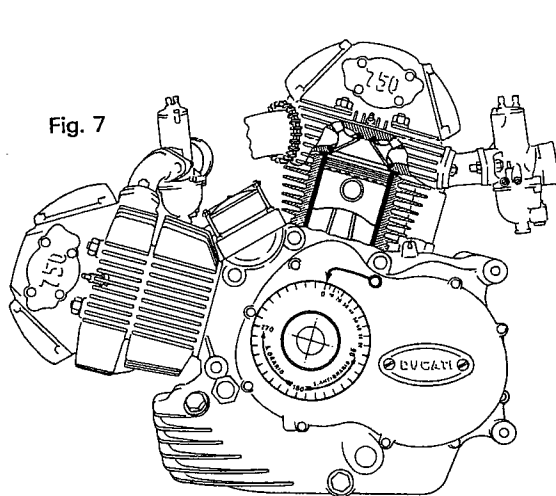
The stop light does not operate.

## **HOW TO CHECK IGNITION ADVANCE**

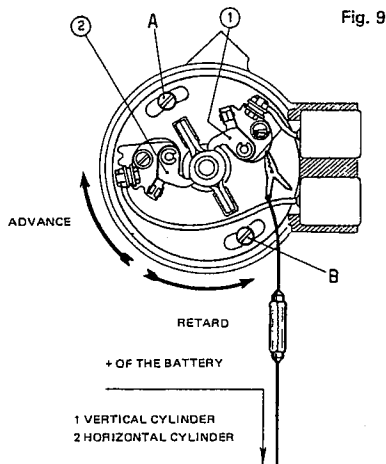
Periodically check the ignition spark advance (after the first 600 and later every 1,200 miles); ensure that the automatic advance works properly, that it is lubricated and that the springs are neither out of shape nor out of place.

The rotary movement of the automatic advance must be 14°, equal to 28° on the driving shaft. If you have any doubt get it checked by a specialist workshop. To check the spark advance, proceed as follows:

1. Remove the threaded plug which is at the driving shaft level and fit a suitable timing chart. (Fig. 7).



2. Fit an indicator on one of the screws that secure the cover.
3. Bring the piston of the vertical cylinder to T.D.C. of the compression stroke and set the indicator at "0" on the timing chart.
4. Rotate the driving shaft anti clockwise for about a quarter of a turn.
5. Connect a 12V-3W lamp to the spring of the contact breaker in series with the positive pole of the battery (Fig. 9). The lamp should light up.



6. Rotate the driving shaft slowly, clockwise, until the light goes out or its intensity is lowered. At that precise moment the indicator should show an advance of  $10^{\circ}$ . (Fig. 8).

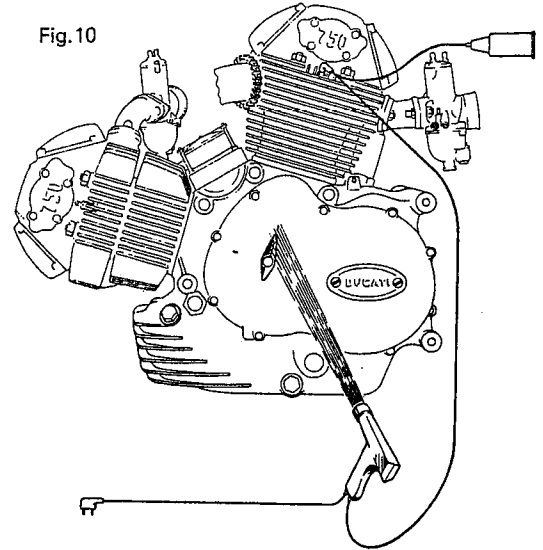
7. Repeat the above test for the sake of accuracy.
8. Repeat the test for the horizontal cylinder, taking care to set the indicator at "0" on the timing chart.
9. If the reading does not tally with the required figure, loosen the two screws (A and B) which secure the plate, and rotate it, advancing or retarding the ignition until the correct reading of  $10^{\circ}$  is obtained.
10. Bear in mind that, if the felt which lubricates the cam is allowed to dry out, the fibrous slipping block, which opens the moving part of the contact breaker arm, will tend to wear, reducing the size of the gap.

### Checking the total advance with a stroboscope

Carry out the following:

1. Mount the advance checking indicator 88713.0109 on the driving shaft centre line, flywheel side, after removing the plug 0400.49.090.
2. Connect the stroboscope light cable to the spark plug in question.
3. Start the engine and run at about 2,500—3,000 r.p.m. then shine the stroboscope on the reference mark for the cylinder being tested, placed on the clutch side cover.
4. The phasing indicator must align with the reference mark, and the ignition coil should be turned clockwise to advance and anti clockwise to retard until the two coincide.

Fig.10



## SPECIFICATIONS—860

### Engine

Four stroke twin cylinder, 90° longitudinal "L" configuration, supported in a cradle frame.

Bore: 86 mm (3.387")

Stroke: 74.4 mm (2.93")

Total Capacity: 863.9cc. (52.700 cu. in.)

Compression ratio: 9:1

The engine is basically similar in construction to the Ducati 750, with the exception of the electronic ignition system.

### Ignition

The electronic ignition system consists of the following components:

- a) Generator — with the magnetic flywheel attached to the axle on the left hand side. Access to the generator is via the left hand cover and clutch.

To time the ignition: 1. Fit the protractor wheel to the engine axle.

2. Bring the vertical cylinder to T.D.C. and set the protractor wheel at "0"

3. Rotate the engine anti-clockwise and position it at 38° in advance.

4. Turn the magnetic flywheel using a pin inserted into the hole, rotating it until the pin slips into the corresponding hole on the stator plate.

5. Tighten the three screws which fasten the stator plate.

- b) Transducers — mounted under the fuel tank.

- c) Spark plugs — Champion L 88 type.

### Data 860

With a valve/rocker clearance of 0.05-0.08 mm (0.002"-0.0031"), inlet and 0.01-0.12 mm (0.0039"-0.0047"), exhaust, the valve timing is as follows: Inlet opens at 48° before T.D.C. and closes at 83° after B.D.C. Exhaust opens at 83° before B.D.C. and closes at 48° after B.D.C.

Clearances should be set with the engine cold and after the timing has been adjusted.

### Fuel

Petrol is gravity fed to two Dellorto carburettors, type PHF 32 AD for the front cylinder and type PHF 32 AS for the rear. The main jet is set at 122, and the idle jet at 60. The taper needle equals K/6 at the second notch and the diffuser measures 32 mm.

The inlet filters are FISPA 062459 reference number 0960.91.715 for the front cylinder, and 0960.91.815 for the rear.

### Lubrication

The engine is pressure lubricated (see 750 for details of oil capacity and replacement).

### Transmission

The transmission system is essentially similar to that of the Ducati 750 with the following gear ratios utilised:

Primary reduction	2.187:1
Bottom gear	2.237:1
Second gear	1.562:1
Third gear	1.204:1
Fourth gear	1:1 (direct drive)
Secondary ratios	2.467:1
	2.533:1
	2.5:1

### Suspension

The front suspension consists of Ceriani type forks and the rear suspension of Marzocchi, hydraulic shock absorbers.

### Wheels

The wheels are similar to those fitted to the Ducati 750. Recommended tyres are front — 3.50 H18Pirelli Supersport, inflated to 31.3lb/sq. in. rear — 120/90-4.70 H18 Pirelli Supersport, inflated to 35.5lb/sq. in.

### Electrical System — 860

The system is essentially similar to that installed in the Ducati 750, with the exception of the electronic ignition circuitry. Five fuses protect the components: F1,25A, General: F2,8A, Parking Lights: F3,8A, Lights and emergency lights: F4,8A, Stop light and horn: F5, 8A, Direction indicators. The headlight is a 50/55 Watt, 12 Volt quartz iodine bulb and the dashboard warning lights are as follows:

- GEN — Red — Key inserted
- L — White — Lights on
- Hi — Blue — Main beam
- N — Green — Gears in neutral
- Yellow flash — Turn indicator

The horn has two settings, for town and country.

### Battery

Kick start models — YUASA type 12N-12A-4A, 12 Volt and 12Ah.

Electric start models — YUASA type B68, 12 Volt and 32Ah.

The battery is recharged by the alternator through an electronic voltage regulator. The alternator produces 150 Watts at 12 Volts and is installed on the right hand side of the engine.

### Emergency Switch

The emergency earthing switch on the right handlebar is required by American law. It operates by earthing out the two transducers, thus stopping the engine immediately.

Make sure the switch is returned to the RUN position after the engine has stopped.

## MAINTENANCE [750 and 860]

The continuing good condition of the motorcycle depends on proper maintenance. By following the fundamental procedures below you can avoid most serious trouble and continue to enjoy excellent performance and reliability from your motorcycle. The operations to be carried out are subdivided according to the mileage covered by the motorcycle, and the

recommendations which follow are, of course, only indicative, because lubrication, checking and adjustment depend also on the nature of the road travelled, seasonal temperatures and the length of the intervening period.

#### Every 500 Km (300 miles)

- Top up the oil level in the crankcase.
- Check the tyre pressure.
- Tighten the cylinder head bolts.
- Adjust the brakes.
- Check the clearance between valves and rockers, placing the appropriate shim on the valve stem or adjusting to restore the specified clearances.

#### Every 1,000 Km (600 miles)

- Check and adjust the distance between the spark plug electrodes to about 0.8mm (0.0315") and clean them with a small wire brush and some petrol.
- Clean the contact breaker platinum plates with a rag damped in petrol and check the distance between them, the gap should be 0.3 to 0.4mm (750 only).
- Check the valve clearances as mentioned above.

#### Every 1,500 Km (900 miles)

- Check the speedometer drive and lubricate with grease.

#### Every 2,000 Km (about 1,200 miles)

- Change the crankcase oil, draining it while the engine is hot, and making sure that the oil drains off completely.
- Remove the carburettor air filters and clean with compressed air.
- Clean out the carburettor float chamber, the main jet and the idle jet.
- Readjust the clutch to take up any wear on the plates.
- Lubricate the hinge of the rear fork.
- Dampen the lubricating wick of the contact breaker cam with thin mineral oil.
- Uniformly tighten the nipples of the spokes and check that the wheel nuts are secure.

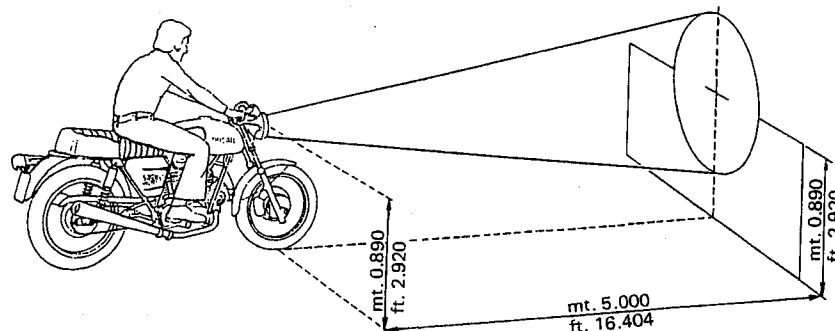
#### Every 20,000 Km (about 12,400 miles)

- Dismantle the exhaust pipes and cylinders, in order to remove the carbon deposit from the cylinder heads and pistons. This should preferably be carried out by a Ducati servicing garage.

#### Headlamp alignment — 750

It is advisable to check the alignment of the headlamp periodically as follows:

- Place the motorcycle at a distance of 5 meters (16.404 ft) from a vertical wall.
- Make sure that the ground is even and that the axis of the headlamp is perpendicular to the wall.
- The motorcycle must be held upright by the rider and not rest on the centre stand.
- Draw a cross on the wall at a height of 0.890 meters (2.920 ft).
- When the high beam is switched on, the cross should be in the centre of the beam.
- To adjust the alignment of the headlamp use the two fixing screws on the front fork or the three screws on the headlamp ring.



### **Cleaning**

The motorcycle should be washed and cleaned periodically, according to the length of time it has been in use and the nature of the roads covered.

- Clean the engine with paraffin and wipe it dry with a clean rag.
- Wash down the painted parts of the frame with water, using a sponge for washing and a chamois leather for drying.
- Never use solvents, petrol, spirit or paraffin on the paintwork as they will dull the finish.
- Grease the chromium plated parts with vaseline and polish with a chamois leather.

### **Laying the motorcycle up for long periods**

If the motorcycle has to be stored for a long period it is advisable to adopt the following procedure:

- Clean the motorcycle thoroughly.
- Empty the fuel tank.
- Take out the battery and keep it charged.
- Squirt some oil into the cylinders through the spark plug holes and turn the engine several times by hand, to distribute a thin film of oil on the cylinder walls.
- Lift the machine so that the motor rests on a block of wood and deflate the tyres.
- Cover the machine with a canvass or other waterproof cover.

### **Running-in Precautions 860**

During the first 2,500 (1,500 miles) do not exceed 4,000 r.p.m. After the first 1,000 Km (600 miles) replace the crankcase oil and filter. Subsequent oil changes should be carried out every 5,000 Km (3,000 miles) and the filter replaced every 10,000 Km (6,000 miles).

### **Periodic Disc Brake Maintenance (750 and 860)**

Clean the hydraulic pump and calipers clean but NEVER use petrol or oil. When necessary use brake fluid, taking care not to touch paintwork which could be damaged.

Maintain the level of fluid in the reservoir at about 8-10 mm below the rim. Always replace the rubber casing and tighten the cover.

Check that the hydraulic line is not damaged in any way and that there are no fluid leaks.

When the brake pads are worn to about 1.5mm of the shoulder plate they should be renewed.

### **Replacement of brake pads**

Remove the securing cotter pins and extract the pads. Clean the visible parts of the pistons with a clean rag moistened with brake fluid, NEVER with petrol or oil, when they are clean, replace the pistons in the calipers. When remounting the pistons it is advisable to release some fluid from the caliper drain screw, to avoid fluid spilling from the reservoir. Ensure that the screw is closed securely after replacing the pistons.

Clean the inner parts of the pad mountings, insert the new pads and fit new cotter pins, bending the ends with pliers to secure them.

Operate the brake lever several times to allow the new pads to settle into position and, if necessary, restore the fluid level in the reservoir.

Avoid sudden braking immediately after fitting new pads.

## CARE OF THE BATTERY

### How to prepare the battery for filling

Remove the gummed tape and the plugs before filling with electrolyte.

If the battery is provided with a long drain pipe, cut the seal about 3 cm from the end. If the battery has a short sealed tube and comes with a separate long pipe, fit the long pipe.

### Filling the battery

The electrolyte (Dilute sulphuric acid) must have a specific gravity of 1.240 in tropical climates where the average temperature exceeds 25°C (77°F) and 1.260 in mild climates.

Fill to the level of the anti-splash gauze, as indicated on the side of the battery.

The electrolyte should be cooler than 30°C (86°F) before filling.

After the battery has been filled, allow it to stand for half an hour; during this period some of the electrolyte will probably be absorbed and if so, the level must be restored by adding more dilute sulphuric acid as above.

### Charging the Battery

It is preferable to charge the battery fully before installing it in the motorcycle, applying a current of 1.2A for between 15 and 20 hours. Charge until the battery electrolyte reaches the density referred to above.

### Mounting

- Secure the battery firmly in position on the motorcycle.
- Make sure that the terminals are correctly connected, damage to electrical parts can result from current of the wrong polarity being applied.

### Maintenance

- Check the electrolyte level once a month and top up with DISTILLED WATER. Never top up with sulphuric acid.
- Always keep the battery clean and ensure that the drain tube is unobstructed.
- Recharge the battery when the horn and lights indicate that the current is low.

### Maintenance of the Electrical System

It is extremely important to refer to the wiring diagram on page 63 when carrying out inspection or repairs to the electrical system. To avoid demagnetizing the alternator take care never to reverse the polarity of current passing through it. Always use the appropriate meters when testing.

If the electronic regulator fails to function, do not tamper with it, send it to a Ducati agent for servicing, or replacement.

NEVER detach the battery cables when the engine is running or damage to the electronic regulator will result.

Refer to page 57 for further information.

## LOCATING AND REMEDYING FAULTS

The following list contains several of the most frequent faults which may arise and advice on remedying them.

### ENGINE DOES NOT START EASILY

First of all, ascertain that there is enough petrol and that the cock is turned on. (A = open; R = reserve). If this is in order, the fault may be one or more of the following:

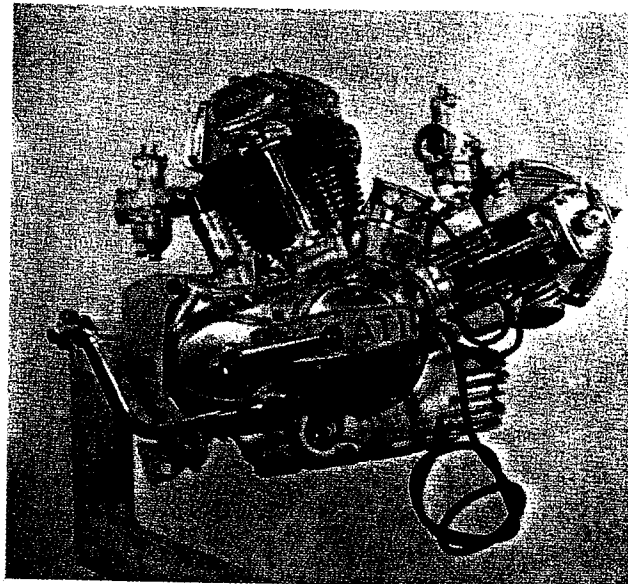
CAUSE	REMEDY
<p><b>Petrol pipe is clogged.</b></p> <p><b>Petrol filter dirty.</b></p> <p><b>Petrol cock filter is dirty.</b></p> <p><b>Carburettor float stuck.</b></p> <p><b>Carburettor float leaking.</b></p> <p><b>Jet is clogged.</b></p> <p><b>The cable of the ignition coil is broken or sparking externally.</b></p> <p><b>Defective sparking plug.</b></p> <p><b>The contact breaker points do not open.</b></p> <p><b>The contact breaker arm is seized on its pivot.</b></p> <p><b>The contact breaker points are dirty.</b></p> <p><b>The capacitor has broken down or is short circuited.</b></p>	<p>Blow through it until the obstacle is removed.</p> <p>Dismantle the filter and clean the gauze by air blast.</p> <p>Dismantle the filter and clean it by a blast of air through the gauze.</p> <p>Remove the float and clean out the float chamber.</p> <p>Change the float.</p> <p>Remove the obstacle by a strong blast of air.</p> <p>Inspect the cable insulation for faults and if necessary change the cable.</p> <p>Change or clean the plug, making sure that the insulating core is not damaged, that there are no carbon deposits on the electrodes and that the spark gap does not exceed 0.8mm (0.0315").</p> <p>Check the position to the fixed contact point.</p> <p>Check movement between rocker arm and pivot if necessary.</p> <p>Clean the contact breaker points with a rag damped in petrol</p> <p>Change the capacitor</p>

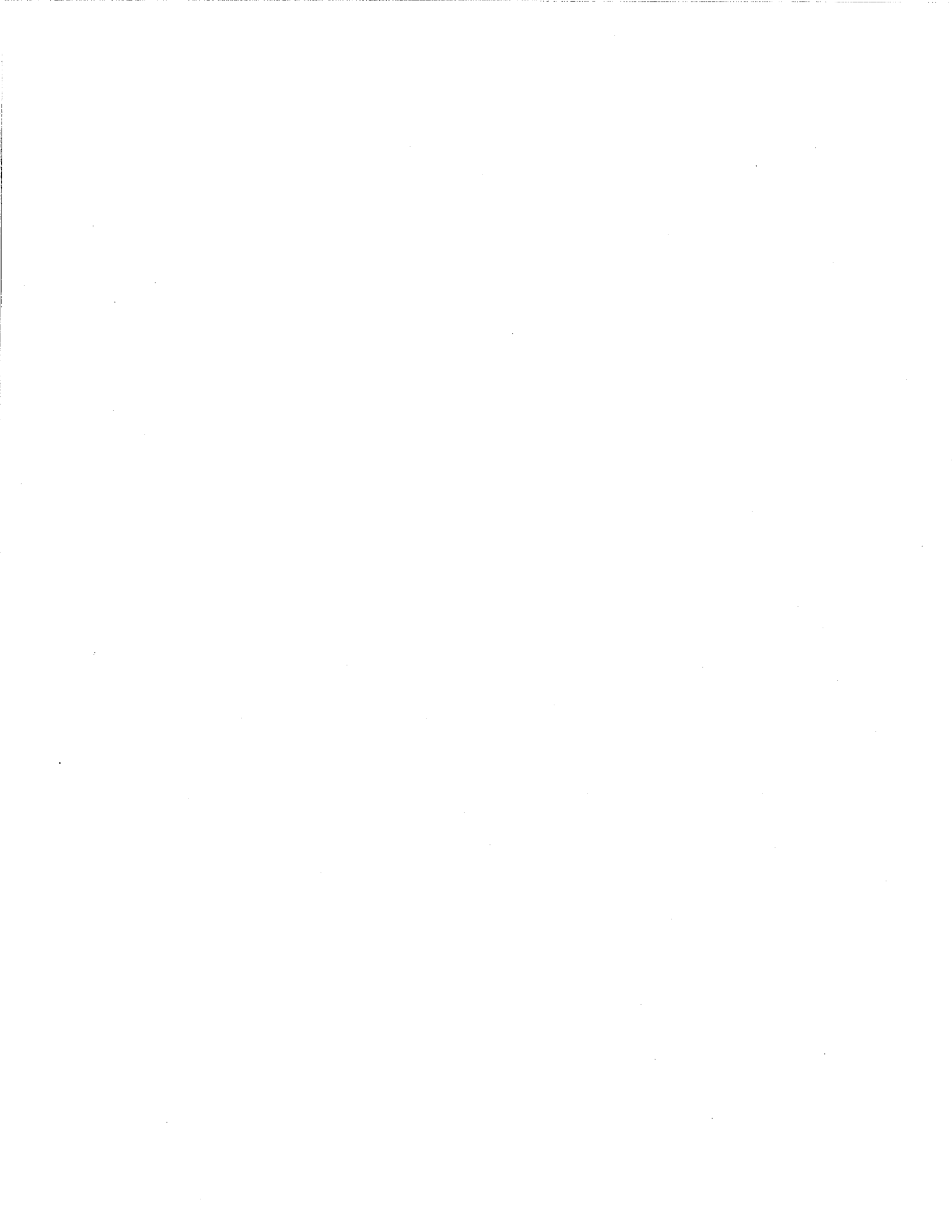
CAUSE	REMEDY
<p>Compression low.</p> <p>A valve spring is broken. Valve sticking.</p> <p>The rocker adjuster is worn out.</p> <p>The battery is discharged.</p> <p>The battery quickly discharges because of a fault or break in the recharging circuit.</p> <p>With key not inserted battery discharges.</p>	<p>Check if the sparking plug has been tightly screwed in, check the valves for gas-tightness and the tightness of the piston rings.</p> <p>Change the broken spring.</p> <p>Dismantle the valve, clean the valve stem and the bore of the valve guide, and make sure that the clearance between stem and bore does not exceed 0.8mm (0.0032").</p> <p>Recheck the clearance by fitting the rocker shim on the valve stem end.</p> <p>Recharge the battery according to the instructions on page 11.</p> <p>Disconnect the wire from the + terminal block of the battery.</p> <ul style="list-style-type: none"> <li>— Insert an ammeter in between the terminal clamp and the wire.</li> <li>— Insert the ignition key and let the engine turn, till attaining 6,000 r.p.m. The ammeter should show: <ul style="list-style-type: none"> <li>a) maximum current about 10A, with completely discharged battery.</li> <li>b) minimum current about 1A, with completely charged battery.</li> </ul> </li> </ul> <p>According to the battery load condition, you will obtain intermediate figures. These tests must be carried out with switched off headlight.</p> <p><b>Checking the Electrical System.</b></p> <p>Make sure that all the bulbs are efficient.</p> <ol style="list-style-type: none"> <li>1) With the lights switched off, the ammeter should read 0 at 1,100 r.p.m. approx.</li> <li>2) With town lights switched on (during the night) the ammeter should read 0 at 1,400 r.p.m. approx.</li> <li>3) With the antidazzle lights switched on the ammeter should read 0 at 2,300 r.p.m. approx.</li> </ol> <p>Check if there are earthed contacts in the system.</p>

CAUSE	REMEDY
<p><b>Irregular feed of petrol to the carburettor.</b></p> <p><b>Main jet partly clogged.</b></p> <p><b>Carburettor butterfly valve does not open completely.</b></p> <p><b>The float needle does not close properly.</b></p> <p><b>Petrol of bad quality.</b></p> <p><b>The spark plug is not of the right type.</b></p> <p><b>The plug is loose.</b></p> <p><b>The sparking plug cable sparks externally.</b></p> <p><b>The spark gap between the electrodes of the sparking plug is too wide.</b></p> <p><b>The sparking plug electrodes are dirty.</b></p> <p><b>The contact breaker opening is excessive. (750)</b></p> <p><b>The secondary winding of the coil is short-circuited or broken (750)</b></p> <p><b>The silencer is almost completely clogged-up.</b></p>	<p>Clean the carburettor filter, the petrol cock filter and the petrol pipe.</p> <p>Clean the main jet by means of an air blast.</p> <p>Readjust the valve travel by means of the adjustment screw of the carburettor Bowden cable.</p> <p>Clean out the carburettor and especially the needle seat.</p> <p>Empty the petrol tank and refill at a reliable garage.</p> <p>If the sparking plug overheats, you will have preignition, knocking, and missing, especially at high revs. If the sparking plug remains too cold, you will have no ignition, because the electrodes will short-circuit. Use the right type of sparking plug; we advise the use of a plug having a thermal figure of 260 of the Bosch international scale.</p> <p>Tighten the plug down well. A washer should always be placed between the sparking plug and its seating in the cylinder head.</p> <p>Change the cable or repair the insulation</p> <p>Adjust the gap to the proper width of about 0.8 mm (0.0315").</p> <p>Clean the electrodes with a wire brush.</p> <p>Readjust the exact opening of the contact which is 0.3-0.4 mm = 0.0118" to 0.0157".</p> <p>Change the coil (at a Ducati Servicing Garage).</p> <p>Clean the silencer, to ensure free discharge of the spent gases.</p>

**DISASSEMBLING  
and  
REASSEMBLING**

**DUCATI  
750 & 860  
ENGINES**





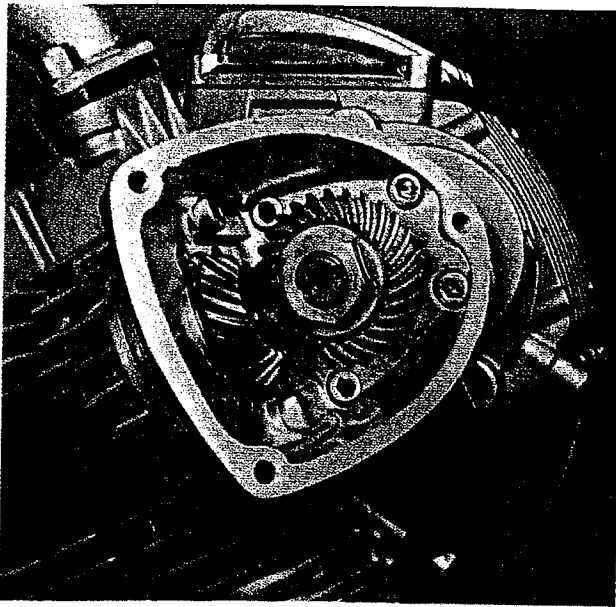
## **SERVICING DUCATI MOTORCYCLES 750 & 860**

Because of the basic similarity between the Ducati 750 and 860 models, many of the operations described in the following pages are identical for each model. To avoid repetition, most procedures are described in connection with only one model, however, the 860 owner should have no difficulty in interpreting information on the 750 and applying it to his own machine.

### **Identification Numbers**

Both the 750 and 860 models can be identified by two numbers, one for the frame and one for the engine. The frame number is printed on the steering tube and engine number appears on the crankcase near the cylinder base.

The metal plate attached to the rear right hand side of the frame carries data referring to the international classification of silencers and is not a means of identification.

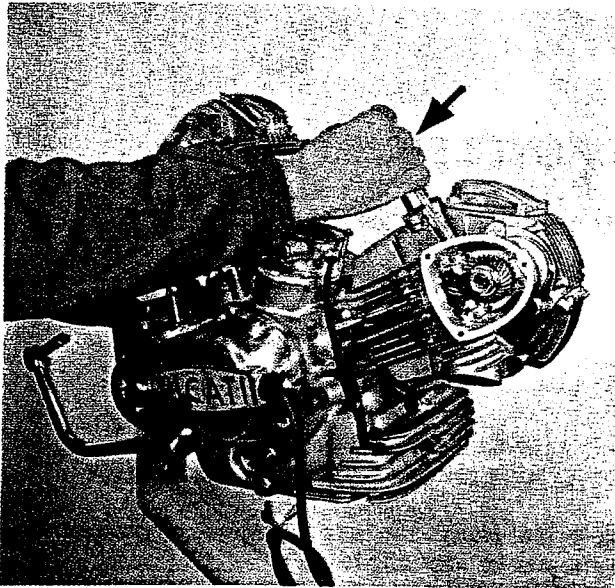


### DISASSEMBLING THE ENGINE

The two timing marks on the upper two taper gears.

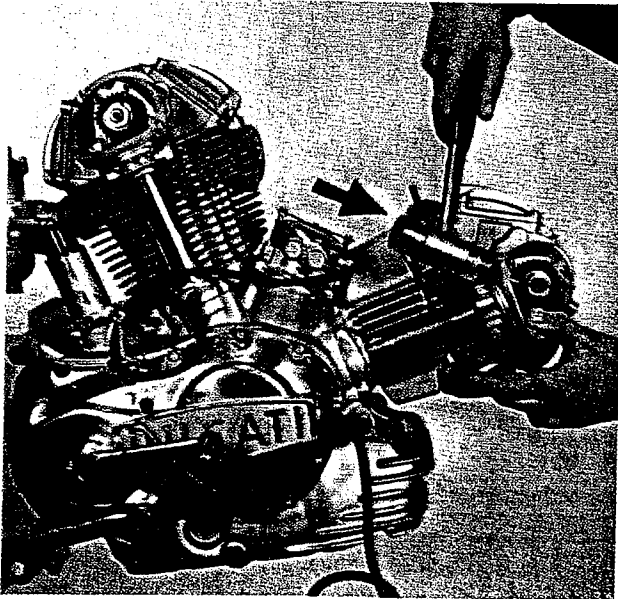
Before removing the cylinder head, remove the cover and rotate the engine until the two timing marks coincide.

During disassembly, be careful not to turn the engine since the engine will be automatically timed after you refit the head.



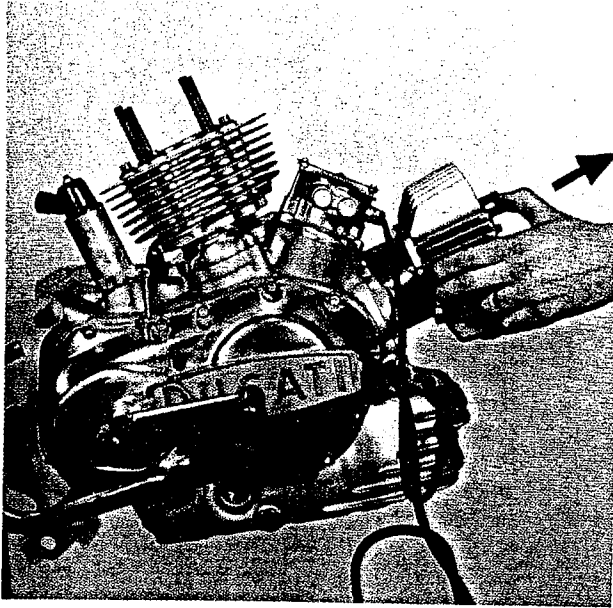
### Removing the head

By means of a 17mm polygon wrench (860—16mm) slightly loosen the four nuts in a crossed sequence. This is necessary to avoid damage to the holding head face.

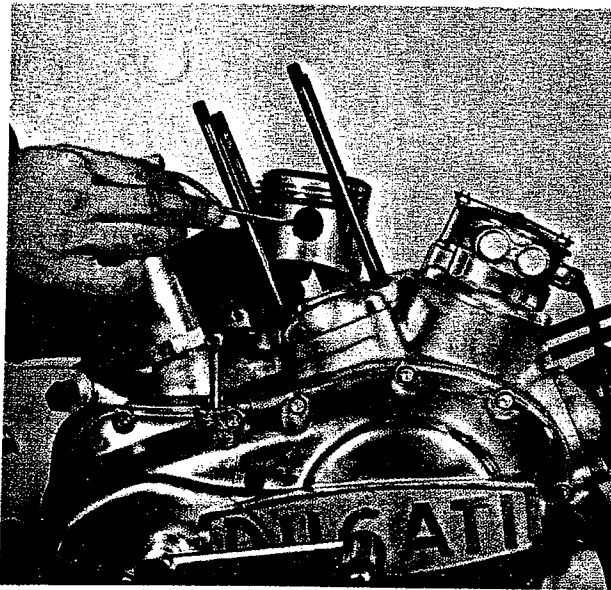


### Removing the head

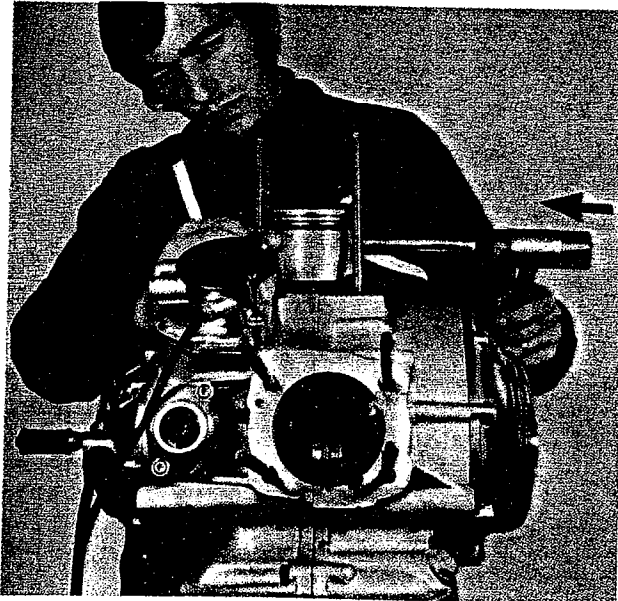
After loosening the four nuts, begin to remove the head, using a plastic hammer. Be very careful to avoid hitting the fins. Then lift the head and screw off the four nuts.



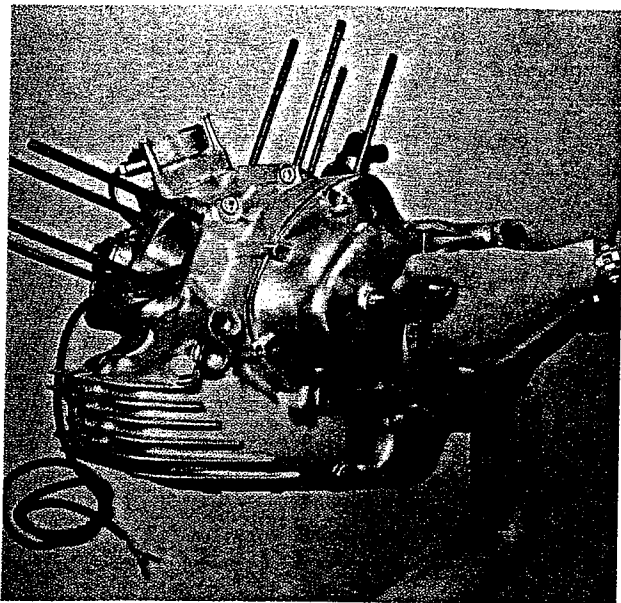
**Removing the cylinder**  
Remove the cylinder from its seat by lifting it slowly and carefully.



**Removing the circlip from the gudgeon pin**  
Remove the circlip with a pair of pointed pliers. It is important to cover the crankshaft opening with a clean cloth to prevent the circlip from falling into the engine.

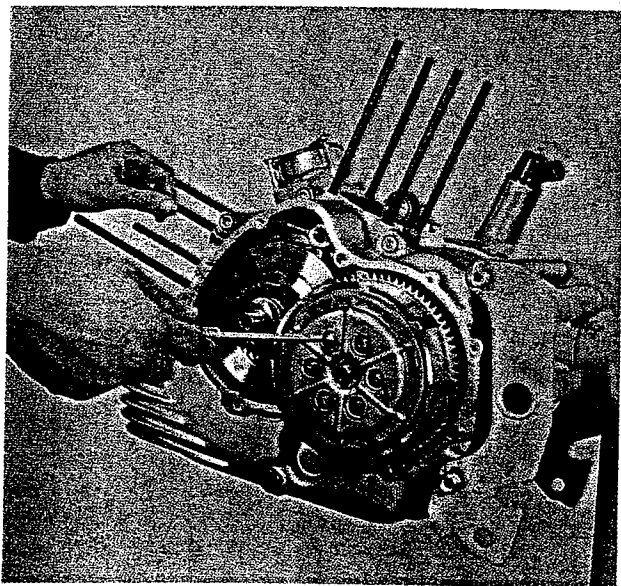


**Removing the piston**  
Tap out the gudgeon pin while holding the piston in one hand to avoid damage to the connecting rod.



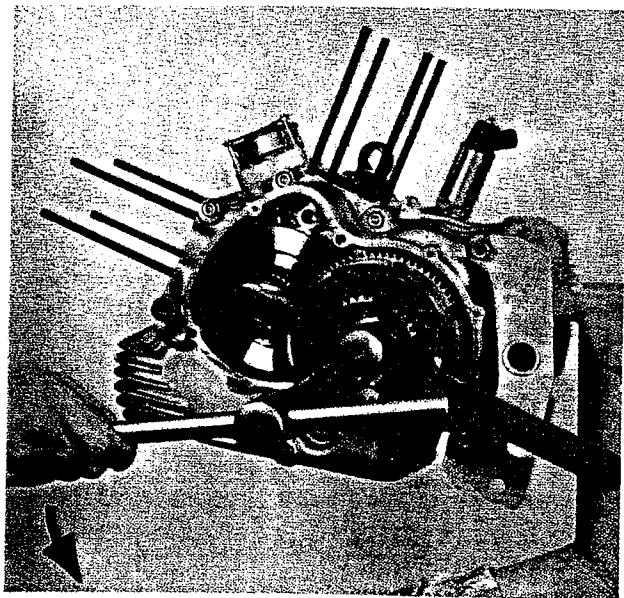
#### Removing the clutch side cover

Remove the screws holding the cover, then remove the cover by inserting extractor # 88713.0258 in place of the plug and turning the extractor until the cover comes off. Continue rotating the extractor while tapping on the cover with a plastic hammer to allow the cover to come off evenly. Never insert a screwdriver between the sealing surfaces.



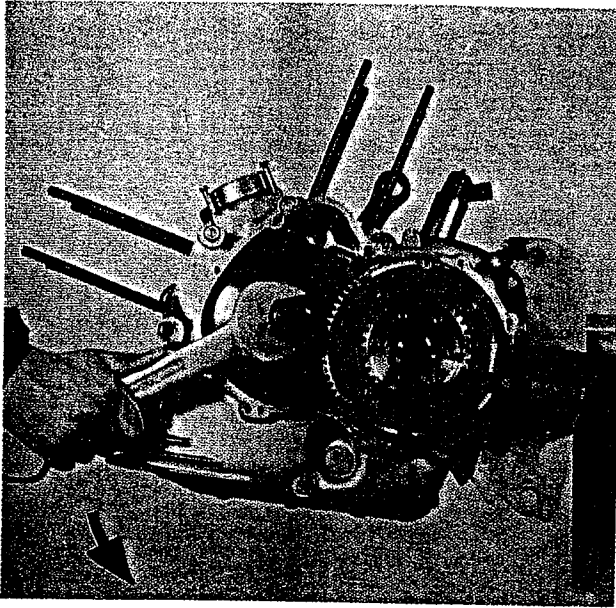
#### Removing the clutch

Remove the six screws, the springs and the cups and pull out the clutch plates.



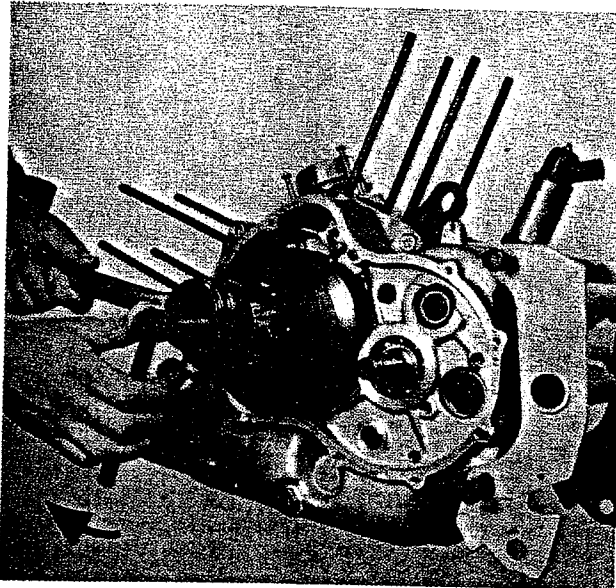
#### Removing the drum and clutch housing

In order to prevent the engine from rotating, insert the special tool # 88713.0101 as shown. Then open the lock washer and unscrew the nut, using a 30 mm wrench. Now remove the drum and the clutch housing.



#### Removing the fixing nut on the flywheel gear

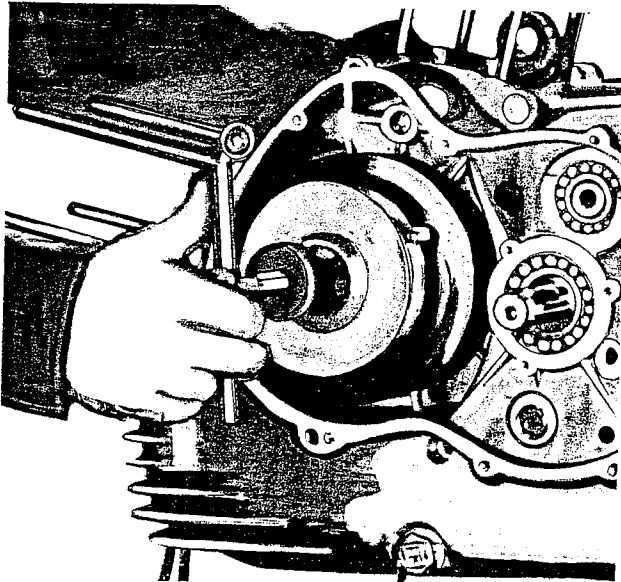
With the special tool still in position, open the lock washer and unscrew the holding nut, using a 36mm wrench.



#### Removing the flywheel-gear assembly — 750

Fit puller # 88713.0110 on the gear and allow the outer tool ring to slide until you can grip the back of the gear with a pair of pliers. Then use the puller to remove the assembly from the shaft cone.

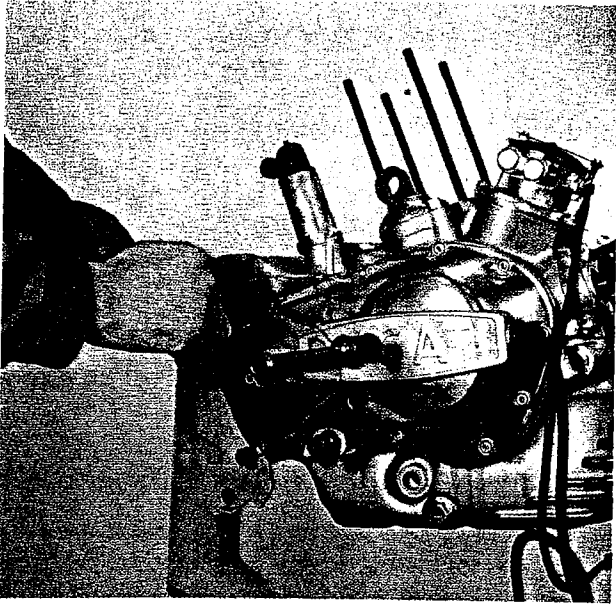
While performing this operation, use a 30mm wrench as shown to prevent the engine from rotating.



#### Removing the flywheel gear — 860

Insert the three pins of the 88713.0117 tool in the three flywheel holes and rotate tool clockwise, so that three teeth hook the flywheel.

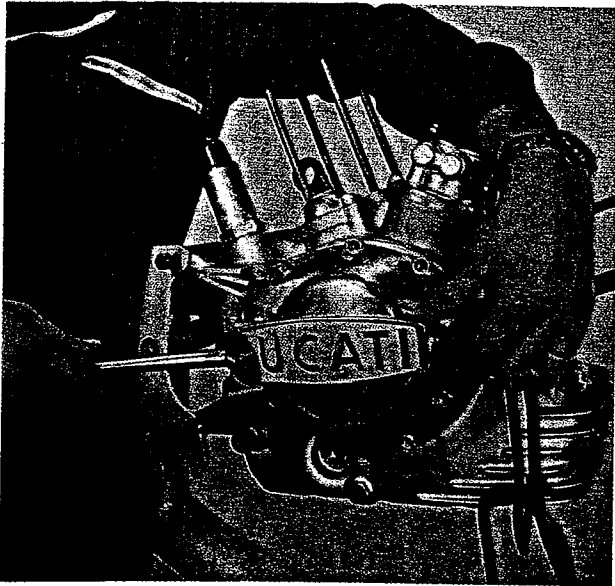
Put the tool handgrip in drawing position, then—using a plastic hammer—beat the handgrip centre until the unit comes out of the crankshaft.



#### Removing the gear selector cover

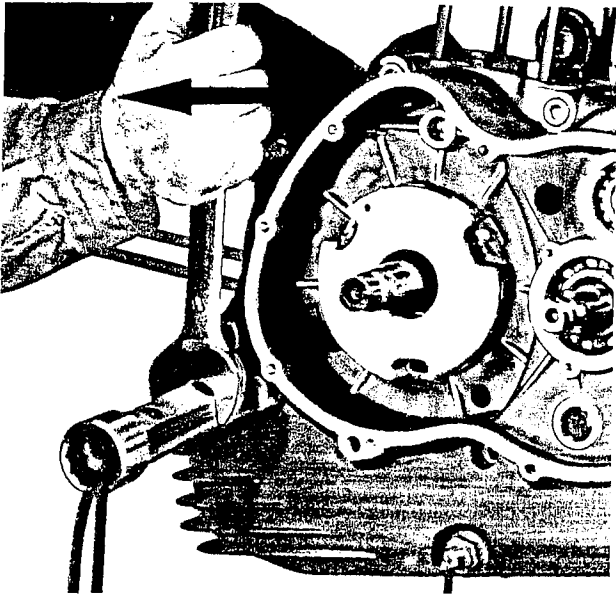
First remove the starter lever and unscrew the four cover screws.

This operation must always be performed before removing the engine from the frame.



#### Removing the timing side cover

Remove the nine screws and gently tap on the cover with a plastic hammer until it can be easily removed.



#### Removing the cable seal ring

First remove the exterior rubber cap, paying attention to slip it out entirely. Put the cables into a box spanner (30 mm) undo the ring and remove the inner rubber.

