

MO - PED 4 speed

GARELLI 50 cc



REKORD

CROSS

G. TURISMO

INSTRUCTION BOOKLET

P. S. the letters:

GB - READ - ENGLAND

DK - READ - DENMARK

monticello brianza (como) - Italy

agrati - GARELLI

gruppo industriale

MO - PED 4 speed

GARELLI 50 cc

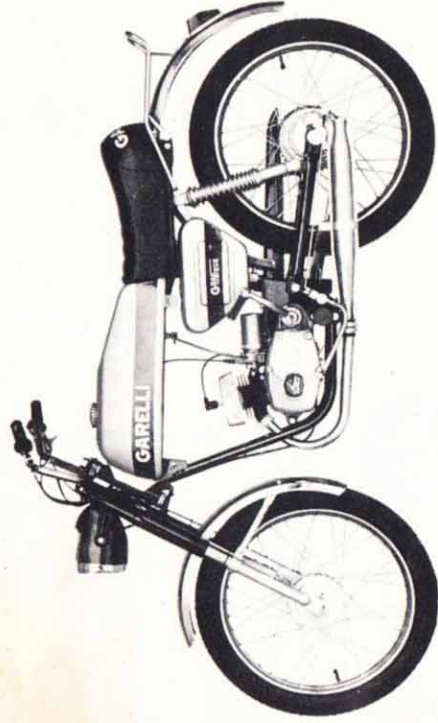


REKORD

CROSS

G. TURISMO

INSTRUCTION BOOKLET



J. G. TURISMO 50 cc (DK)



JUNIOR CROSS 50 cc (GB)

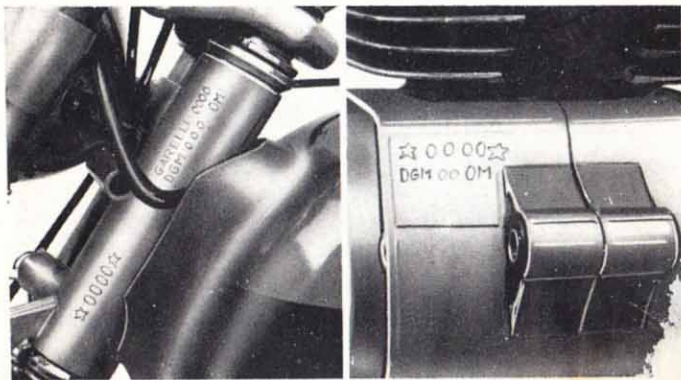


JUNIOR REKORD 50 cc (GB)

PART I IDENTIFICATION NUMBERS

The frame (Pict. 1) and engine (Pict. 2) numbers are stamped on the engine and frame in the position as shown.

When ordering spare parts it is necessary to state these numbers.



Pict. 1

Pict. 2

TECHNICAL DATA

REKORD - CROSS - G. TURISMO

Engine:

- Single cylinder 2 stroke
- Air cooled alloy cylinder head
- Cubic capacity 3 cub. inch. (49 cc.)
- Bore 1,5748 inch. (40 mm.)
- Stroke 1,4961 inch. (39 mm.)
- Brake horse power B.H.P. 6.2 (DIN.) at 8500 R.P.M. (R. C.) - B.H.P. 1.08 (DIN) at 5000 R.P.M. (G.T.)
- Compression ratio 12 : 1 (R. C.)
8 : 1 (G. T.)
- Gear-box: four speed constant mesh gear
- Gear ratios overall
 - 1st speed 10,4 : 1
 - 2nd speed 6,15 : 1
 - 3rd speed 4,5 : 1
 - 4th speed 3,58 : 1
- Primary transmission drive by helical gears ratio 3,73 : 1
- Final transmission ratio 2/2-1
(R: 11T. to 39T.) (G.T. 10 T to 44 T)
(C: 13T. to 41T.)
- Starting by pedals, (R. C.)
- Starting by kick (G. T.)

Ignition:

- 3y flywheel generator 6V-24/28W Bosch - 6 V - 24/28 W Ducati (R-C) - 6 V - 18 W (G. T.)
- Ignition timing 31° (R. C.) 23° (G. T.)
- Valve value of the sparking plug 275° (R. C.) 175°

Suspension:

- Front: telescopic
- Rear: swinging fork with telescopic suspension unit

Carburettor:

- Dell'Orto type SHB 19/19 D { SHA 14/12 { (G.T.)
- Main jet 105 { (R.C.) Jet 48 {
- Starter jet 60
- Slow jet 45

Tyres:

- Rekord { front 2,50 x 18"
- { rear 2,50 x 18"
- Cross { front 2,50 x 19"
- { rear 2,50 x 17"
- G. T. { front 2,50 x 18"
- { rear 2,50 x 18"

Tyres pressure

- F. Wheel : 1 Kg./sq. cm. (14 P.S.I.) GT
- 1,1 Kg./sq. cm. (15 P.S.I.) CROSS
- 1,1 Kg./sq. cm. (15 P.S.I.) RECORD
- R. Wheel : 1,8 Kg./sq. cm. (25 P.S.I.) GT
- 2,8 Kg./sq. cm. (39 P.S.I.) CROSS
- 3 Kg./sq. cm. (42 P.S.I.) RECORD

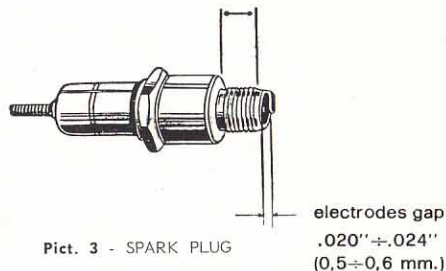
Carters:

- Sprocket: Rekord 11T. - Cross 13T. - G. T. 10)
- Wheel sprocket: Rekord 39T. - Cross 41T. - G. T. 44
- Fuel tank capacity 2,4 ca. gallons (l. 11)
- Wheel chromium steel rims

Spark plug

It is recommended to use a spark plug having value 275° (R. C.) 175° (GT) (Bosch scale)

The electrode gap spacing should be adjusted to .020"-.024" (0,5÷0,6 mm.) to clean the points, use a sharp-edged steel scraper and wire brush, or better yet, use a sand-blast type of sparking plug cleaner as generally installed at most garages.



Pict. 3 - SPARK PLUG

Flywheel magneto

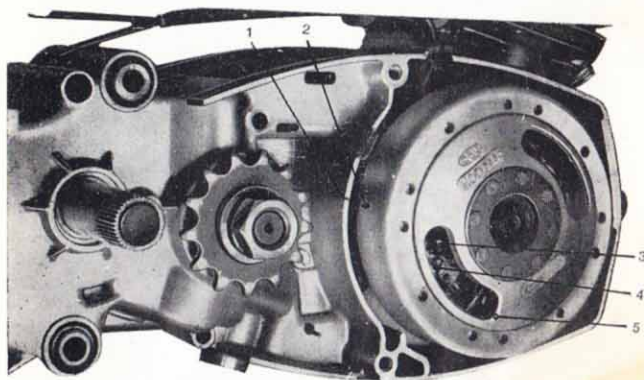
Located on the right-hand side of the engine and is accessible for adjustment of contact breaker points on timing by removal of cover.

Spacing of the contact points may be accomplished with the aid of a screw driver applied in the special notch of the contact breaker support. The locking screw having first been loosened. Once proper spacing is obtained, be sure to securely retighten the locking

The proper spacing of the contact point, in position of maximum opening is .014"-.018" (0,35 - 0,45 mm.).

The timing is correct when the contact points begin to open just as the reference mark on the flywheel comes into alignment with the mark on the crankcase housing, or as the piston reaches 133° (3,4 mm.) BTDC. for Record-Cross, .074° (1,9 mm.) BTDC for GT.

It is advisable to check the contact breaker gap after the first 300 miles and thereafter at intervals of 1.500 miles.



Pict. 4 - FLYWHEEL MAGNETO

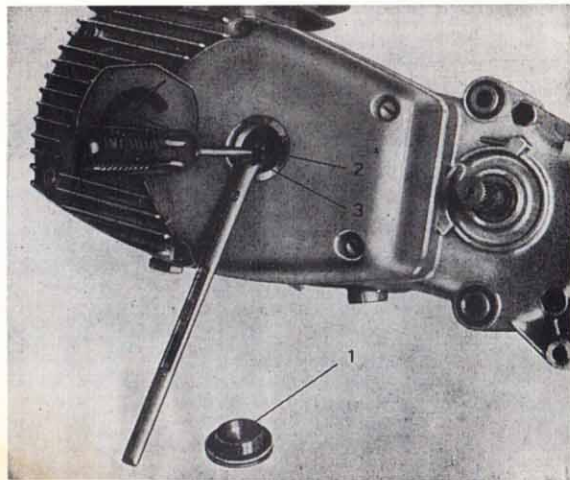
1. Timing mark on crankcase - 2. Timing mark on flywheel - 3. Contacts (gap should be .014" ÷ .018") - 4. Contact adjustment screw - 5. Notch.

CLUTCH

The clutch is located in the left crankcase half and operates in oil bath.

For access to the clutch, remove the plug situated on the left cover.

The play of the clutch pin is regulated with the screw (2) and the locknut (3).



Pict. 5 - CLUTCH VIEW

Oil plug - 2. Clutch adjusting screw - 3. Locknut.

GEAR-BOX

Of « cascade » design with gears in constant mesh.

The primary shaft and its four gears are in one piece.

The four mating gears on the secondary shaft are free and are alternately locked solidly with the shaft by a sprags (camme): their shifting is fulfilled by a concentric nut, which is at the internal side of the secondary shaft same.

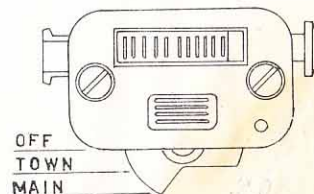
At the right end of the secondary shaft is a keyed sprocket which drives the rear wheel by means of a chain.

Lubrication is by oil which automatically circulates through the gearbox and clutch chamber.

The gear change has 5 positions:

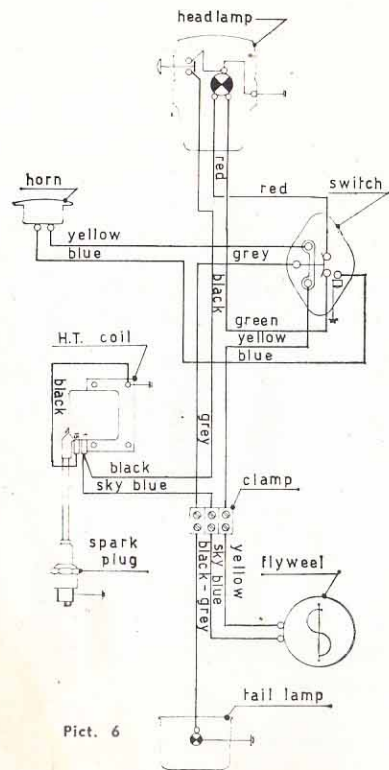
1st, neutral, 2nd, 3rd and 4 th.

SWITCH GB



SCHEMATIC LAYOUT OF ELECTRIC WIRING (DK)

G. Turismo - Bosch Flywh



Pict. 6

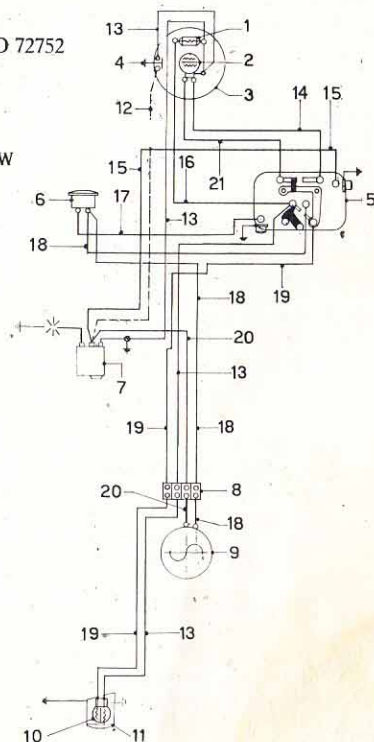
SCHEMATIC LAYOUT OF ELECTRIC WIRING (G. B.)

(Rekord Cross) Ducati Flywheel

From engine N. EO 72752

- 1 - Festoon type 6V-18W
- 2 - Bulb 6V-20/20W
- 3 - Reflector set
- 4 - Switch with key
- 5 - Switch
- 6 - Horn
- 7 - Coil
- 8 - Clamp
- 9 - Flywheel magneto
- 10 - Bulb 12V-6/18W
- 11 - Tail light
- 12 - Black
- 13 - White
- 14 - Green
- 15 - Black
- 16 - Brown
- 17 - Blue
- 18 - Yellow
- 19 - Grey
- 20 - Azure
- 21 - Red

Leads



Pict 6 b

PART II

USE OF THE MACHINE

Running-in procedures (first 1000 miles)

- During this period it is strongly recommended that the following petrol ratios and speeds are adhered to:
- Use normal petrol and FIAT MOTO 2T oil at 4% (G.T.) at 5% (R.C.)
 - do not exceed the recommended maximum speed:
 - 10 m.p.h. for 1st gear
 - 18 m.p.h. for 2nd. gear
 - 25 m.p.h. for 3rd. gear
 - 31 m.p.h. for 4th. gear
 - Do not run too long at the max permitted speeds
 - Do not climb hills with fully open throttle
 - Change, as soon as, the engine begins to labour
 - Do not accelerate with fully open throttle
 - After the first 300 miles drain the oil from the gear-box.
- Running-in is the most important period, as the further life of the engine, depends on this operation.
- After running-in use FIAT MOTO 2T oil at 3% (G.T.) at 5% (R.C.) SAE 30.

Lubrication of clutch

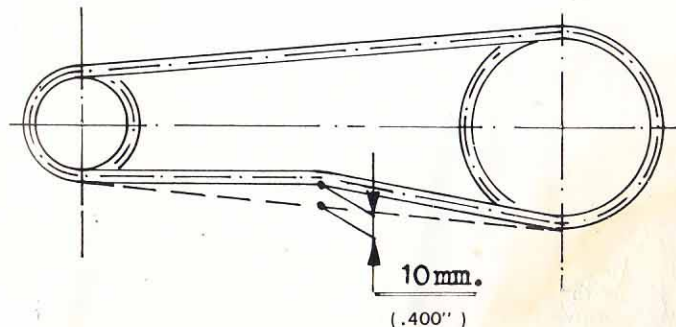
The mo-ped is normally delivered with about 500 cc. of FIAT VS + 30 oil (SAE 30). Check the oil level: unscrew the filler plug on the left cover and observe through the hole: the level is to be 400" (1 cm.) to the edge.

NOTE

During the first period of operation take care to adjust the chain tension as soon as it appears loose.

With fully loaded vehicle the chain bottom section should have about 10 mm. (.400") swinging.

Thereafter, keep checking the tension and avoid using the vehicle with a loose chain.



Starting

- Open the fuel cock in the correct position.
- If the engine is cold push down the choke reel on the carburettor.

The air control valve will now remain closed. The return to its normal position is to be operated by hand.

- Only with very cold weather it may be necessary to enrich the mixture by pushing the tickler for a while.
- When the engine is warm do not use the choke or the tickler.
- Make sure that the gear change control is set in the neutral position.
- Open the throttle (R.H. twist grip) approximately 1/2 in.
- Start the engine by means of the pedals or the kick-starter pedal.

NB. During the cold season let the engine warm up itself by running free for a minute or so before using the vehicle.

GEAR POSITIONS: (Pict. 7).

Changing up: 1st

Changing down: 2nd - 3rd - 4th.

To ride away:

With the engine already running, withdraw the clutch lever (L. H. handlebar lever) and engage first

gear by pulling up the lever end of the gear change pedal.

- Gradually release the clutch and at the same time open the throttle further.
- Accelerate slightly to reach the necessary speed for changing into the next higher gear.

Changing up

- Close the throttle and withdraw the clutch lever.
- Select a higher gear by pulling down the lever end of the gear change pedal.
- Release the clutch and re-accelerate the engine.

Changing down:

- Operate in a similar manner but, for selecting gear, push upwards the lever-end of the gear change pedal and instead of closing the throttle when the clutch is withdrawn leave it slightly open, so that the engine revolutions increase to the corresponding of the machine when in the gear which is about to be selected.

Warnings

When pulling up at traffic lights etc. it is advisable to move the gear control to the neutral position just before you come to a stop. Never stand at traffic lights with the engine running and the first gear engaged but always select the neutral position.

PART III PERIODIC MAINTENANCE

The simplest of the following operations may be performed by the owner provided he has sufficient experience and the necessary tools. All other operations should be entrusted to an authorized Agrati-Garelli Agency. The mileages indicated for the maintenance schedule are to be taken as average.

Upon delivery - Check the oil level by use of the dip stick attached to the filler plug:

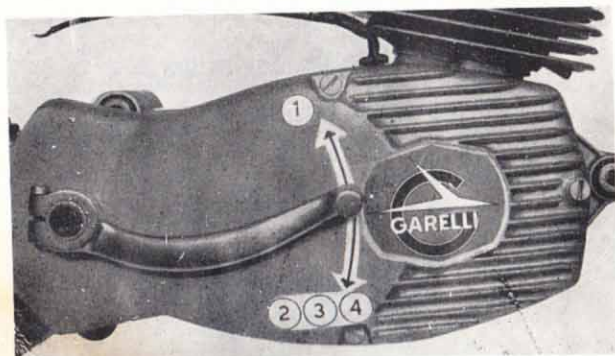
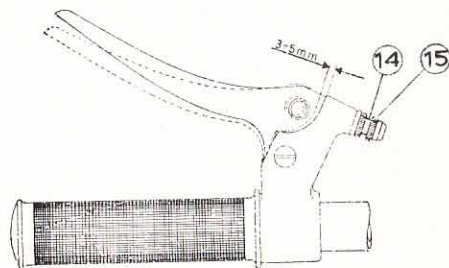
— Check the tyre pressure: (See pag. 6).

After the first 300 miles:

- Check the tightness of all screws and nuts, particularly the cylinder head nuts and spokes wheel
- Check the exhaust pipe flange nut for tightness.
- Check and adjust the play in the starting assembly
- Drain the oil from the crankcase and refill with new oil
- Clean the fuel line filter on the carburettor.
- Adjust idling speed by means of the carburettor regulating screw.
- Remove and inspect the sparking plug if necessary clean and adjust the electrode gap to $.020'' \div .024''$

Every 1000 miles:

- Repeat operations outlined in the preceeding paragraph.
- Have an authorized Garelli agency check the timing and set the contact breaker points of the magneto at $.014''$ to $.018''$ ($0,35 \div 0,45 \text{ mm.}$) gap . $0,72$ cing. Also have the lighting winding checked.



Pict 7

- Inspect and adjust the brake cable tension by means of the tensioning screw at the brake end of the cable.
- Clean and grease (moderately) the chain and, if necessary, increase the tension by means of the adjuster at the rear axle.

Every 2500 miles

Remove the cylinder head exhaust pipe and silencer. Carefully remove any carbon deposited on:

- the inside of the cylinder head
- the top of the piston
- the inlet and exhaust ports.

When scraping the top of the piston, which is made of light alloy, take care not to scratch or damage it. To clean the exhaust port, run the piston down to its lowest point so the port opening will be completely accessible.

When refitting the cylinder head the nuts must be tightened down gradually, passing, from one nut to the other diametrically opposite in turn until all are tight. Clean the exhaust silencer in the following manner:

- Take out the internal tube with the aid of a $\frac{1}{4}$ " dia. steel pin introduced in the two opposing holes at the extreme end of this tube. Tap the pin with a mallet and at the same time rotate tube back.
- Remove the carbon deposits in and on tube by using a torch flame and wire brush.
- Remove carbon in rear of baffle, **but not with use of flame**, by means of the $\frac{3}{16}$ " dia. pointed steel pin.

Clean the carburettor (fuel filter screen, float chamber, etc.).

PART IV

TROUBLES - Causes and cure

A) Engine fails to start or stops while running:

- The fuel tap is turned off or the tank is empty.** Open the fuel tap. Refill the tank with the proper petrol mixture.
- The engine is « flooded ».** Turn off the fuel tap, open full throttle and operate the pedal repeatedly until the engine starts. If this is not successful, push the machine forward as rapidly as possible. Failing again, the spark plug must be removed, dried and cleaned. Before refitting it, operate the starting pedal several times to expel the excess fuel from the cylinder.
- The fuel pipe is clogged or the filter is dirty.** Remove the fuel pipe and filter, then clean. Before refitting make sure that the fuel flows by opening the tap for a moment.
- The spark plug is dirty.** Clean and adjust as previously indicated. When refitting, make sure that the gasket is in place and take care to screw the plug in straight (one should be able to screw it by hand).

B) The engine lacks power or fails to reach its normal speed;

- 1. Exhaust noise is weak. The engine runs irregular (so-called «four-stroking»)** Excess carbon deposits, ports partially blocked or dirty exhaust silencer. Decoke (see «Maintenance» under « Every 4000 km » 2400 ml).
- 2. Intermittent running of the engine. Engine misses and carburettor backfires.** Defective spark plug or contact breaker points which fail to open all the way. Have them checked and adjusted. May also be caused by a defective coil or condenser.
- 3. The engine to stop when the throttle is open wider.** Dirty main jet: remove and clean. Or the carburettor mixture is too lean. Replace with a larger size jet, after checking first:
 - a) that the jet is not partially dirty, oxidized, etc.;
 - b) that the spark plug is not defective or dirty;
 - c) that the carburettor is clean inside (by dismantling the float chamber);
 - d) that fuel flows steadily to the carburettor and that no air leak exists in the connections between the carburettor and the cylinder and the crankcase; check that all nuts are tight and all gaskets sound, including the cylinder head gasket.

4. Exhaust is irregular. Exhaust noise is smooth and constant only when accelerating or climbing.

The fuel mixture is too rich. Change to lower size jets until operation is smooth and regular. This condition may also be caused by dirt in the fuel supply which lodges between the float needle and its seat in the float chamber cover (this is a valve that maintains the fuel level in the carburettor). Another possible cause is the improper seating of the float needle point in its seat due to excess wear. In this case the needle and the float chamber cover must be replaced.

C) The following troubles may occur to the spark plug:

- 1. Cracked insulation** The plug does not spark. Replace it.
- 2. Too close tips** The spark is short and cannot fire the fuel. Adjust the electrode gap.
- 3. Too wide tips** The plug cannot spark. Adjust the electrode gap.
- 4. Oil wet tips** Oil is an insulating element, and the current cannot flow. Clean and dry.
- 5. Fouled tips** Fouling makes « bridge » between the tips and the current flows without sparking. Polish the appropriate wire brush.

GUARANTEE

(taken from the General Sale Conditions)

The mo-ped « JUNIOR CROSS REKORD and G. TURISMO » are guaranteed for six month from the date of delivery against any defects in materials or workmanship.

Under the terms of this guarantee, all the parts which are proved to be defective will be repaired or replaced free of charges, provided they have not been subject to abuse and provided the moped has not been employed for other purposes than those for which it was intended. by the Manufacturer as indicated in his catalogue The cost of transportation, of assembling and disassembling and of any fuels and lubricants used will be to the owner's charge.

The guarantee is a void whenever:

- non original parts have been employed;
- the engine unit shows signs of abuse by incompetent people or gives evidence of repairs not properly performed;
- the machine has been used in races or competitions;
- the oil and lubricant as used were not of the perscribed quality, quantity and grade;
- the running-in instructions have not been followed.

With respect to the parts not manufactured by Gruppo Industriale Agrati-Garelli S.p.A. (such as: ball bearings, cables, electrical equipment, tyres, etc.) the guarantee applies only to the same extent as the manufacturers of such parts assume obligations for them.

In your 2-stroke engine use

MOTO 2T

especially formulated
for you by Fiat

GARELLI

Agent for
U. K. AGRATI SALES
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NOTTINGHAM NG 3 1 DA

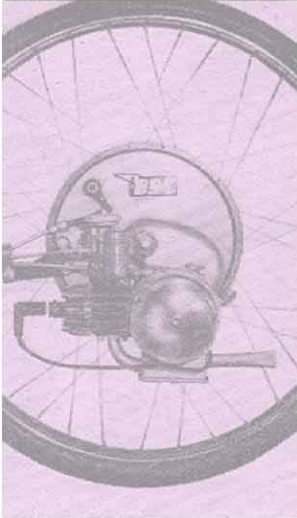
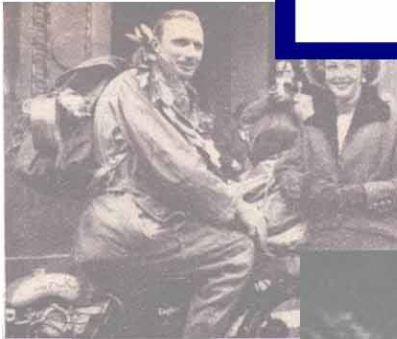
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