





OWNER'S MANUAL

AV = 2 kg 4 AR = 2 kg 3

Dear rider

First of all we wish to thank you for choosing this motorcycle of our production.

By following the instructions outlined in this manual you will ensure your bike a long and troublefree life.

Before riding, please read thoroughly this manual in order to know your motorcycle's features and how to operate it safely.

All major checking and overhaul jobs are best carried out by our dealers who have the necessary facilities to quickly and competently repair your Moto Guzzi.

Repairs or adjustments by any other than a Guzzi dealer during the warranty period could invalidate the warranty right.

Frank 2,100 Prieu Arrière 2,300

The illustrations and descriptions in this bookiet are indicative only and the manufacturer reserves itself the right to introduce any modification it may deem necessary for better performance or for constructive or commercial reasons without prior notice.

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SEIMM MOTO GUZZI S.o.A. · Technical Publications · Code 23 90 00 11 Printed in Italy · D.E.Ca · Ravenna · 200 · 10/91 - R1





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6 MAIN FEATURES

(The data in brackets [] are specific for V-65 Florida model)

Engine

Cycle

Four stroke

Cylinders

.

Cylinders disposition Bore «V» 90°

Stroke

74 mm [80 mm] 40.6 mm [64 mm]

Total displacement

349.2 cc [643.4 cc]

Compression ratio

10.3:1 [10:1]

Fiscal horsepower

6 HP [9 HP]

Valve gearing

O.H.V., push rod operated

Timing data:

Inlet:

■ opens 18° before T.D.C.

closes 50° after B.D.C.

Exhaust:

■ opens 53° before B.D.C.

■ closes 15° after T.D.C.

Valve clearance for timing adjustment check 1 mm.

Valve-rocker arms operating clearance:

■ inlet: 0.15 mm

exhaust: 0.20 mm

Lubrication

Forced lubrication with lobe pump and insufficient oil pres-

sure warn, light on panel board.

Oil filters: wire gauze inside oil pump and replaceable car-

tridge outside.

Ignition

Electronic type

Initial (fixed) advance Automatic advance (electronic)

30° about

Total advance (fixed + automatic) 41° ± 2° [38° ± 2°] Rotor to pick-up gap

Ignition spark plugs: Marelli F8 LCR; Bosch W 5DC; (for V 35 Florida only: Lodge 3HLNY, Bosch W 5D); (for V65

Florida only: Lodge 2HL)

Electrode gap

0.6 mm

10° [7°]

0.2÷0.3 mm

Carburation

No. 2 carburettors Dell'Orto PHBH 28 BD/BS [PHBH 30

BD/BS].

Exhaust

No. 2 pipes, and no. 2 silencers connected.

Generator alternator

Front, on crankshaft (14V-20A)

Starting

Electric starter (12V-0.7KW) with electromagnetic ratchet

control

Transmission

Clutch

Single driven disc dry type, with diaphagram spring; hand controlled by lever on left side handlebar.

Primary drive

By gears, ratio (Z = 13/24) 1:1.846 [(Z = 15/22) 1:1.466].

Gear box

Five speeds, frontal engagement, constant mesh gears. Pedal operated on the central L/H side of motorcycle. Gear ratios:

Low gear = 1:2.7272 (Z = 11/30) [1:2.3637 (Z = 11/26)]
2nd gear = 1:1.7333 (Z = 15/26) [1:1.6429 (Z = 14/23)]
3rd gear = 1:1.2778 (Z = 18/23) [1:1.2778 (Z = 18/23)]
4th gear = 1:1.0454 (Z = 22/23) [1:1.0556 (Z = 18/19)]
5th gear = 1:0.9091 (Z = 22/20) [1:0.9000 (Z = 20/18)]

Secondary drive

by cardan shaft, bevel gear set. Ratio: 1:3.875 (Z = 8/31). Overall gear ratios (engine/wheel).

Low gear = 1:19.5105 [13.4333] 2nd gear = 1:12.4000 [9.3369] 3rd gear = 1: 9.1410 [7.2620] 4th gear = 1: 7.4790 [5.9990] 5th gear = 1: 6.5035 [5.1150]

Suspensions

Front: Telescopic fork with oil-pneumatic shock absorbers. Rear: Swinging fork and rear dampers with adjustable external springs concentric to the oil-pneumatic shock-absorbers.

Wheels

Front and rear in light alloy rims of following sizes:

■ Front: 2.15x18"
■ Rear: 2.50x16"

Tires

Front: 90/90-18" [100/90-18"] Rear: 120/90-16" [130/90-16"]

Brakes

Front: disc type with caliper having twin braking cylinders. Control by hand lever on the R/H side handlebar.

- disc dia. 260 mm
- braking cylinder dia. 32 mm
- master cylinder dia. 13 mm

Rear: disc type with caliper having twin braking cylinders. Pedal controlled from the central R/H side of the bike.

- disc dia. 235 mm
- braking cylinder dia. 32 mm
- master cylinder dia. 15.87 mm

The rear brake is connected by an hydraulic transmission to a second brake on the front wheel (L.H.) having the same features and sizes as the hand controlled front brake (R.H.).

Dimensions and weights

Weelbase (loaded)	1.505 m
overall length	2.210 m
overall width	0.870 m
max height	1.190 m
dry weight	170 Kos

Performances

Top speed solo riding without luggages and wind-shield 150 Km/h about (over 170 Km/h). Fuel consumption 4.3 f x 100 Km [5.1 l x 100 Km].

N.B. The vehicle can be equipped with a wide windshield allowing a comfortable driving, and removable luggageholders of large capacity. All these volumes involve a limitation of vehicle aerodynamics. Therefore it is advisable particularly under full load conditions, not to overcome 120 Km/h about. However at high speed it is necessary to operate on the steering damper so increasing its braking effect (see steering damper adjustment at page. 33 flg. 22).

Refuelings

Group of part	Quantity	Recommendation
Fuel tank (reserve 5 I about)	17 l	Supergrade petrol (97 NO RM min.)
Oil sump	2	«Agip Sint 2000 SAE 10 W/50» oil
Gear box	0.900	«Agip Rotra MP SAE 80 W/90» oil [85 W/140]
Rear drive box	0.170 of wich: 0.160 0.010	«Agip Rotra MP SAE 85 W/140» oil «Agip Rocol ASO/R» oil or Molykote tipe «A» oil
Telescopic fork V 35 Florida (each leg) Telescopic fork V 65 Florida (each leg)	0.090 0.100	«Agip F.1 ATF Dexron fluid»
Braking circuits (front and rear)	_	«Agip F.1 brake fluid SAE J 1703»

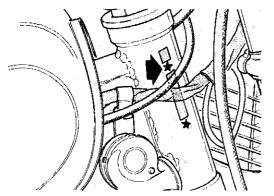
12 IDENTIFICATION DATA (fig. 3)

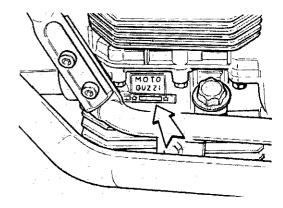
Each motorcycle is identified by an identification number on the frame downtube and on the engine crankcase.

The identification number on the frame is mentioned in the motorcycle log-book and identifies the vehicle to all legal effects.

Spare parts

In case of part replacements, ensure that **"original Moto Guzzi spare parts"** only are used. The use of non-genuine parts invalidates every warranty right.





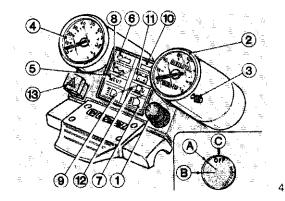
Particulars supplied on demand

V 35 Florida model can be equipped on demand with a wind-shield and side luggage-holders. In such case it is necessary to assemble the steering damper. The above mentioned particulars can be ordered and assembled at our dealers'shops.

14 INSTRUMENTS AND CONTROLS

Instruments panel (fig. 4)

- 1 Ignition key:
- «OFF» in line with «C» mark: stationary vehicle. Key removable (no contact).
- «A» in line with «C» mark: (turned clockwise) vehicle ready to be started. All circuits on. Key not removable.
- «B» in line with «C» mark: (turned clockwise) vehicle at standstill. With switch «A» (fig. 6) in position 1 or 2: parking light on. Key removable.



- 2 Speedometer (Km. or miles)
- 3 Zero reset for odometer.
- 4 Rev counter.
- Warning light (green «Neutral») lights up only when the gearbox in neutral position.
- 6 Warning light (green) for left turn signals.
- 7 Warning light (green) indicating parking lights.
- 8 Warning light (red) oil pressure gauge. Goes out when oil pressure is sufficient for normal engine lubrication. If it doesn't, this means oil pressure isn't correct and in such an event the engine should be immediately stopped and all circuits checked over.
- 9 Warning light (bleu) indicating high beam.
- 10 Warning light (green) for right turn signals.
- 11 Warning (red) indicating current delivery from generator. Should go out when engine has reached a certain number of revs.
- 12 Warning light (orange) for fuel reserve.
- 13 Switch for introduction of emergency signals.

Light and switches (fig. 5 & 6)

They are installed on the two handlebar sides.

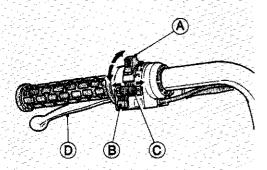
«A» switch (fig. 6)

- «0» position lights off
- «1» position parking lights
- «2» position dual beam lamp on

«A» switch (fig. 5)

With «A» switch (fig. 6) in position «2»:

- «LO» position low beam
- «HI» position high beam
- «FL» position flashing light control



Horn button and turn signal control (fig. 5)

Located on the left side handlebar:

«B» push-button el. horn control.

«C» switch:

- «R» right turn signals control.
- «L» left turn signals control.

Engine start button and stop switch (fig. 6)

Located on the right side handlebar.

With key «1» of fig. 4 (on «A» in line with mark «C») the vehicle is ready to be started.

To start the engine proceed as follows:

- ensure that switch «B» is in «1» position (run)
- pull the clutch lever completely
- on a cold engine, adjust starter lever to position «A» (see fig. 30)
- press start button «C».

To stop the engine in an emergency:

■ move switch «B» on position «2» (OFF)

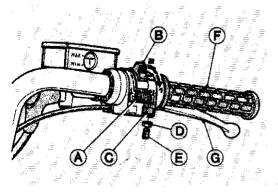
As soon as the engine stops, turn ignition key (fig. 4) in counter-clockwise direction till mark «OFF» is in line with mark «C» an take out the key from the lockset.

16 Throttle twist grip control («F» in fig. 6)

It is located on the right hand side of the handlebar: turning it inwards opens the gas and viceversa closes it. To harden the return of the throttle grip act on nut "D" and on dowel pin "E".

Clutch control lever («D» in fig. 5)

It is on the left hand side of the handlebar and it should be pulled only for starting and gear shifting.



Control lever for R.H. front brake («G» in fig. 6)

It is on the R/H handlebar and controls the master cylinder for hydraulic front brake.

Start lever (fig. 30)

This lever for cold startings is located on the left side of the vehicle.

- «A» start position
- «B» riding position

Left front and rear brake control pedal (*B» in fig. 18)

It is centrally located on the R/H side of the vehicle and it is link-connected to the master cylinder. It controls the left front brake and the rear brake, simultaneously.

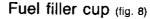
Gearbox control pedal (fig. 7)

This pedal is centrally located on the L/H side of the byke.

Positions:

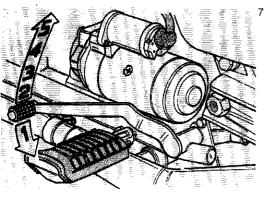
- low gear, level end towards the ground;
- 2nd, 3rd, 4th and high gear lever end upward;
- neutral between low and 2nd gear.

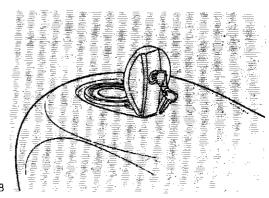
Before actuating this pedal, be sure the clutch lever is pulled completely.



To open the fuel tank cap, the key has to be rotated in anticlockwise direction.

N.B. - Fuel overflows during fuel filling have to be eliminated at once to avoid damages to the tank paint.





18 Rear brake master cylinder fluid reservoir (fig. 9)

To acceed to this reservoir it is necessary to remove the saddle and the fuel tank.

Min. and Max. levels of fluid are indicated on the transparent body of reservoir «A».

For eventual fluid filling up, remove cap «B» and the rubber diaphragm.

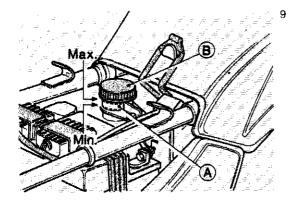
Fuel cocks (fig. 10)

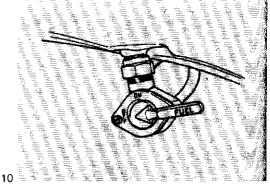
They are located under the fuel tank on the rear part. The levers of «fuels» cocks have two positions:

«ON» open: lever arrow upwards

«OFF» close: lever arrow horizontal

The left cock operates the reserve fuel warn. light on dashboard.





Terminal bock with fueses (fig. 11)

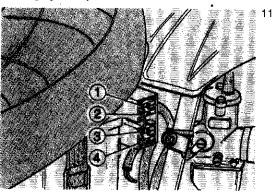
It is located centrally on the motorcycle; to acceed to it remove the right side cover. In this block no. 4 fuses of 15A are installed. Before replacing one fuse or some fuses it is necessary to cure the problem causing their blowing up.

Fuse no. «1»

Parking light - instrument lights.

Fuse no. «2»

Neutral position warn. light, generator, oil pressure, reserve, front stop light switch, high beam, low beam, flashing light relay.



Fuse no. «3»

Start relay - horn

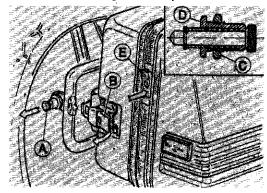
Fuse no. «4»

Rear stop switch

Side luggages (fig. 12)

To remove the juggages from side supports, unlock with the key the fixing device controlled by "B" lever. Pulling the knob of "A" safety device, luggage can be removed.

To open the side covers, push on the lower part of «E» lockset after unlocking with its key.



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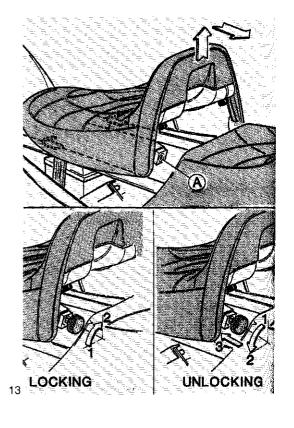
To avoid the possibility of breakage of «B» lockset it is necessary to share the load between the «A» and «B» fastenings, operating on «D» excentric shaft after release of the «C» nut.

We suggest to carry out the aforesaid operation at our dealers'shops.

N.B. The max. load allowed for every luggage is 10 kos. In every case it is necessary that the load be shared between the 2 luggages.

Saddle locking device (fig. 13)

The saddle is locked by a special device "A" located L/H in the rear side of the bike. To unlock the saddle it is necessary to make a quarter of a turn in the anticlockwise direction with the key, to remove it and at the same time to press on the lockset. The saddle will be so lifted and removed. To lock the saddle insert it in its seat on the frame and press on it, introduce the key in the lockset and turn it of a quarter of turn in the clockwise direction. The pillion saddle is fixed.



Steering lock («A» in fig. 14)

Locking:

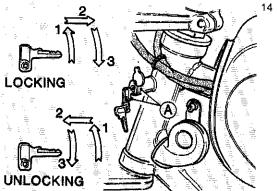
- Turn the handlebar to the right completely.
- Insert the key into the lockset, turn it anticlockwise, push it right in, rotate again in the clockwise direction, then release and have it slipping out.

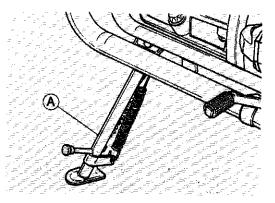
Unlocking:

Insert the key into the lockset, turn it in anticlockwise direction, then release and have it slipping out of the lockset.

Side stand («A» in fig. 15)

The bike is equipped with a side stand to be used for brief stops. Since it is automatically retractibile, for long stops it is advisable to always use the centre stand which guarantees better stability.





22 RIDING INSTRUCTIONS

Controls before starting

Ensure that:

- the fuel tank contains enough fuel;
- the oil in the sump is at the correct level;
- the ignition key is in the start position (see fig. 4);
- the following warning lights are lit: Red: insufficient oil pressure, insufficient generator output. Green: «NEUT» warning light, indicating neutral position of gearbox.
- starter control lever for cold startings is in position «A» (see fig. 30).

Starting a cold engine.

After checking the above, rotate the twist grip 1/4 of a turn, pull the clutch lever fully, ensure that the switch «B» of fig. 6 is on position 1 (run) and press start button «C» (fig. 6).

As soon as the engine has started and before returning starter lever to position «B» (fig. 30), allow the engine to idle a few minutes in the cold season or a few seconds in the hot season.

If the starter lever is left in starting position «A fig. 30 whilst riding, there would be irregular caburation and increased fuel consumption and the worst cases the cylinders might selze be cause of too much petrol going into them.

Caution - If the green light «Neutral» on the panel does not light up when mark «A» on the ignition keys is line up with mark «C» (see fig. 4), this means a gear is ergaged and the pedal has to be moved to the neutral position.

Starting a hot engine

Proceed as for a cold engine, except that in this case the starter lever has not to be adjusted to start position "A", fig. 28 as this would richen the carburation too much.

On the way

and engage the next gear. Release the clutch lever slowly, accelerating at the same time. The pedal (fig. 7) has to be actuated firmly and accompanied with the foot.

When shifting down to lower gears, operate gradually on the brakes and the throttle grip to avoid **over-revving the engine** when the clutch lever is released.

To change up or down, pull the clutch lever completely

Stopping the motorcycle

the clutch lever only when the byke is almost to a standstill, This operation has to be done with much coordination in order to keep the vehicle under control. To reduce the speed gradually by properly using the gearbox with a view to utilize the engine braking power, do this very carefully in order not to cause **the engine** to overrev.

Close the throttle, actuate the brakes gently, and pull

On wet or slippery roads, the brakes - especially the front one on the right-should be used with great caution.

To stop the engine, turn the ignition key mark «OFF» to line it up with mark «C» (fig. 4).

With steady engine always close fuel cocks.

Parking

When parking at night on insufficiently lighted roads, switch on the parking lights by turning the key (fig. 4) till mark «B» on it is in line with mark «C» (fig. 4) and light switch in fig. 6 is in position «1 or 2». Then remove the key and lock the steering. (see paragraph «Steering lock» and fig. 14).

24 RUNNING IN

During the running in period follow strictly these recommendations:

- Before starting allow the engine to warm up at idling speed for a more or less period of time, according to the external temperature.
- Avoid exceeding the maximum permissible speeds in each gear. Avoid running at the same number of revolutions for long periods but change gear frequently.
- Before stopping reduce the speed gradually to prevent the various engine groups from undergoing abrupt changes of temperature.
- Ensure all operations specified in the service voucher have been carried out at the stated mileages.

 Don't forget that proper bedding down of all components will only occur after several thousands of miles have been covered.

This will allow you to obtain excellent performance from your motorcycle for a long period of time.

Aftrer the first 500 km ÷ 1500 km

Change the crankcase oil.

Should the level fall under the minimum mark before the engine has covered $500\div1500$ km it will be necessary to change the oil instead of topping up.

Recommended oil: Agip Sint 2000 SAE 10W/50.

- Check thightness of all nuts and bolts.
- Adjust tappet clearance.
- Check the tyre pressure.

MAX. RUNNING-IN SPEEDS

Distance covered	Speeds (r.p.m.) not to be exceeded
Up to 1000 Km (600 Miles)	5000
1000 (600 Miles) to 2000 Km (1200 Miles)	6000
2000 (1200 Miles) to 4000 Km (2400 Miles)	Gradually increase the speeds up to the max. admissible limit

DIRECTIONS FOR CLEANING OF WIND-SHIELD

The wind-shield can be cleaned using most of the soaps, detersives, waxes and polishes used for plastics and glasses.

However the following precautions must be observed:

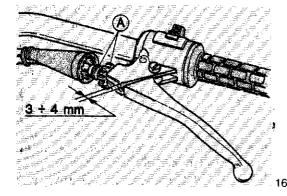
- Do not wash or clean the wind-shield when air temperature is too high and when sun exposure is excessive.
- By no reason use solvents, lye-washes or equivalent products.
- Do not use fluids containing abrasives, emery papers, erasers etc.
- Polishes may be used only after dust or dirt removal with a careful washing. Superficial damages may be abraded with soft polish.
- Fresh paint and sealant materials are easily removed, before they dry off, gently cleaning with solvent kerosene, isopropyl alcohol or butyl cellosolve (never use metyl alcohol).
- Always use soft clothes, sponges, chamois leather and hydrofil cotton acting gently.

Never use paper salviets or synthetic clothes since they may mark your wind-shield. Deep marks or scratches cannot be removed strongly abrading or using solvents.

26 MAINTENANCE AND ADJUSTMENTS

Adjusting the clutch control lever (fig. 16)

If the free play at the handlebar is more than 3 to 4 mm act on the «A» ring-nut up to get the correct play.



Checking wear of the brake pads

Every 3000 Km. check thickness of the brake pads:

wear limit: 1.5 mm.

If the pad is worn down to more than this limit, it is necessary to change the pads.

After this operation has been carried out, there is no need to drain the air from the braking circuits: it is sufficient to operate the control lever several times until the caliper pistons reach their normal position.

When replacing the pads, check also the condition of the fluid line and replace them immediately if damaged.

N.B. - When replacing the pads it is advisable, for the first 100 km, to act on the brakes carefully to allow a correct setting of the same pads.

Checking the braking discs

(«I» in figg. 17 & 18)

The brake discs are manufactured with material having a high friction coefficient, specially studied in order to be matched to the specific brake pads. The efficacy of this has been confirmed after researches and by numbers of tests.

During brakes operation, grooves are formed on the discs which contribute to further increase braking efficiency. This is clearly perceived by the lower effort required to operate the brake controls for the same deceleration results.

In case of brake pads replacement, it is advisable, for the first 100 km, to carefully operate the controls to allow the pads settling on the disc; the disc profile in fact has to form the matching groove on the new pads surface.

Braking discs must be perfectly clean, without oil, dirt or grease traces.

When a disc is replaced or overhauled, it is necessary to check the «floating». This control is done by the aid of a suitable gauge and the reading should in no case exceed 0.2 mm.

It this «floating» is higher, it is well to ensure that the discs are properly assembled on the hubs, check also the hub bearings play.

The disc securing screws are tightened with a torque wrench set to 2.2 ÷ 2.4 kgm.

Controlling the fluid level and replac- 27 ing the brake fluid in the master cylinder reservoirs (figg. 17 & 18)

For proper braking operation, these instructions should be followed strictly:

Front R/H brake circuit (fig. 17)

Periodically check the fluid level in the reservoirs, that may be checked through the «C» transparent section of the «A» master cylinder.

This level must never fall under the min, mark indicated near the transparent section.

2 Periodically check and, if necessary, top up the fluid in the reservoir «A», after undoing screw «D» of plug «E» and removing the diaphragm.

Use only fluid taken from original containers. upened just before pouring in.

3 Every 15.000 km or at least once a year, change the braking fluid.

For good operation of the circuits, it is necessary for the ducts to be always full with airless fluid.

A long and elastic movement of the control lever «B» indicates the presence of air bubbles in the ducts.

To wash the circuits, use only fresh fluid.

Never use alcohol for washing or compressed air for drying. For metal parts, use of trichloroethyiene is reccommended.

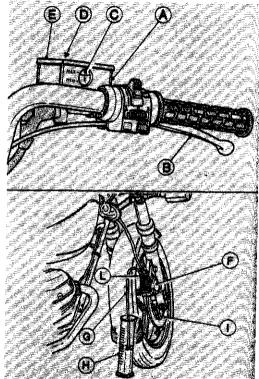
For eventual lubrication never use mineral oils or areases.

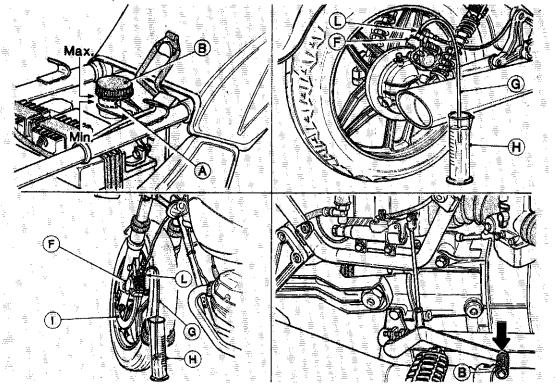
28

Not having suitable lubricants available, we suggest to lubricate the rubber particulars and metal with the same brake fluid contained in the system.

Fluid to be used: Agip F.1 Brake Fluid SAE J1703. Rear brake and L/H front brake circuit (fig. 18) Same as for front R/H brake, except for points 1 and 2:

- 1 Periodically check the fluid level in the reservoir «A»; this level should always between MIN. and MAX. reference marks on the transparent part.
- 2 Periodically or whenever necessary top up the fluid in reservoir, after removing plug «B» and the rubber diaphragm.





30 Bleeding the air from the braking circuits (figg. 17 & 18)

This operation is required when the movement of the control lever on the handlebar or the pedal is long and elastic, tue to the presence of air in the braking circuits. For bleeding or air bubbles act as follows:

Right front brake circuit (fig. 17)

- 1 Set the cehicle up on the center stand;
- 2 Turn the handlebar till the reservoir («A») is in the horizontal position.
- 3 If necessary, fill up reservoir «A». Ensure that during the bleeding operation the fluid does not drop below the minimum level.
- 4 Bleed by acting on caliper «F»;
- 5 Remove rubber covers and fit flexible pipe «G» on drain plug «L» with the other end of the pipe plunged in a transparent container «H» partially filled up with liquid of the same type.

- 6 Loosen drain plug «L».
- 7 Completaly pull brake lever «B» several times, releasing it slowly and waiting a few minutes before pulling it again.

Repeat this operation until the pipe end «G» in the transparent container «H» emits airless fluid.

8 Keep control lever «B» fully pulled and lock up plug «L». Remove plastic duct «G», and re-fit rubber cover on the drain plug.

If the air bleeding operation has been carried out correctly, a direct and efficient working of the fluid will be perceived immediately after the initial idle movement of control lever «B».

If not, repeat the operation until the above result is achieved.

Front left and rear brake circuit (fig. 18)
Proceed as per «Right front brake circuit» except (a points 2. 7 and 8;

- 7 Strongly actuate control pedal «B» etc. ...
- 8 Maintain strongly actuated control pedal «B» etc...

Adjusting the front left and rear brake pedal position (figg. 19)

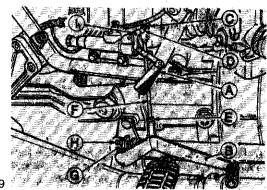
Check clearance between floater and control lever «I», proceeding as follows:

- Fit feeler gauge «A» between the master cylinder floater and control lever end:
- Correct play must be 0.05 ÷ 0.15 mm.
- If the clearance is not correct, act as follows:
- Slacken counternut «G» and screw in or out screw «H» until the corect play is obtained.

 In case control pedal «B» position is to be modified.

In case control pedal «B» position is to be modified, act as follows:

- Take out the split pin «C», remove the pin «D», slacken the counternut «E» and screw in or out the tierod «F» until control pedal comes to the desired position;
- Refit pin *D» with its split pin *C»;
- Then adjust screw «H» until the correct play between control lever «I» and master cylinder float is obtained.



32 Adjusting the rear suspension with hydraulic shock-absorbers (fig. 20)

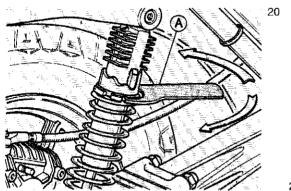
The springs of the rear dampers can be adjusted to five different positions by means of «A» special wrench. Should an irregular operation of the dampers be noticed, it is advisable to have them checked in one of our dealers workshops.

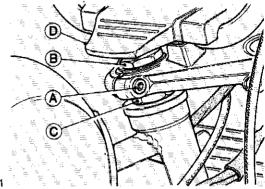
N.B. - For a good stability of motorcycle is always necessary, to make sure that both suspensions have been adjusted on the same position.

Adjusting the steering column

For safe riding, the steering has to be adjusted so as to allow free movement to the handlebar but without any play. To correctly adjust, proceed as follows:

- remove the locking plate «D»
- loosen steering head fixing bolt «A»
- undo steering head nut «B»
- screw in or out adjusting nut «C» to take up the play. This done, tighten nut «B» and steering head fixing bolt «A»





Oil-pneumatic shock-absorbers

The operating load pressures of shock-absorbers are: front shock-absorbers: Kg/cm² 1 (max.)

rear shock-absorbers: Kg/cm² 4 ± 1

To check the pressure it is advisable to use a pressure gauge having a very short pipe (better if any), as the capacity of the pipe may affect the pressure existing inside the shock absorbers.

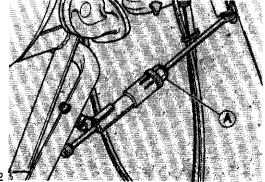
To ascertain to which extent your pressure gauge reduces, when taking the measurement, the pressure inside the shock absorber it is sufficient to carry out two consecutive measurements: the difference between the two readings gives approximately the pressure reduction occurring whenever a measurement is taken.

The measurement must be taken with be bike on the central stand and with cold shock absorbers; to charge the shock absorbers only use moistureless air.

N.B. - Our dealers have available a special pressure gauge for this checking.

Adjusting the steering damper (fig. 22)

It is located on the R/H side of motorcycle between the front bumper and the steering base. To increase or reduce the braking effect it is necessary to screw in or out "A" nut.

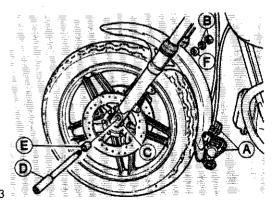


34 REMOVAL OF WHEELS

Front wheel (fig. 23)

To remove the front wheel, proceed as follows:

- Set the vehicle up on the center stand and place a stand under the engine crankcase to keep the wheel up from the ground.
- Undo screws «A» securing the calipers to fork legs and remove from these ones the calipers complete with their pipes.
- Undo the wheel axle securing nut «B».
- Undo the screws «C» securing the fork legs to the wheel axie.
- Withdraw wheel axle «D» paying attention to the mounting position of spacer «E» and «F».
- Extract the front wheel from fork legs; the reassembly operation is a reversal of the dismantling one.
- NB According to the tyre type installed, it is necessary or not to deflate in order to remove wheel.

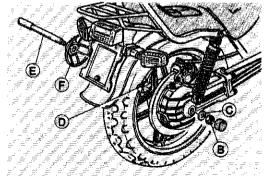


Rear wheel (fig. 24)

To remove the rear wheel from the swing arm and the drive box, proceed as follows:

- set up the bike on the center stand;
- undo nut «B» with washer «C» on the spindle, rear drive box side:
- loosen the spindle «E» locking bolt «D» on fork arm;
- withdraw spindle *E* from the drive box, the bulb, and the swing arm. If necessary, slightly lift the L.H. silencer, after having loosened the retaining nut of rear foot-rest;
- take out the disc «F»:
- lean the vehicle to the right just sufficiently to allow the wheel to be withdrawn from the rear fork arm and the rear drive box.

To re-assemble, reverse the dismantling sequence.



36 Wheel balancing

To improve the vehicle stability and reduce vibrations at high speed, the wheels have to be kept in a perfectly balanced condition.

To balance a wheel, proceed as follows:

- remove the wheel and set it up on a forked stand;
- spin the wheel slowly several times and watch if it always stops in different positions, thus indicating a correct balance:
- if one point of the wheel always stops at the bottom, put a balancing weight opposite this point.
- repeate the operation till the wheel is correctly balanced.

Tires

It is advisable to have this operation carried out by our Dealers.

These are included in the motorcycle components that have to be kept under control very carefully as the vehicle stability, riding comfort, and sometimes even the rider's safety are dependent on them.

Therefore it is unadvisable to use tire having less than 2 mm. (1/16") thickness tread.

An incorrect tire pressure may also affect the vehicle stability and cause rapid wear of the tire.

Recommended pressures are:

Front wheel:

solo riding or with pillion: 2 bar

Rear wheel:

solo riding: 2.2 bar with pillion: 2.4 bar

The above figures are for normal riding (cruising speed). If using the motorcycle at constant high speed or on highways, it is recommended to increase the pressure by 0.2 bar.

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Removing and re-fitting tires on the rims

This model fits light alloy cast rims which offer quite high mechanical resistance but are liable to get damaged from an aesthetic and functional aspect when improper tooling is used for the removing and re-fitting operations.

Under these circumstances, never use tools that have ribbings or sharp edges on the sides contacting the rims.

The contacting surface of such rims has to be very wide, smooth, and with rounded edges. The use of any of the lubricants available of the market for these purposes will greatly facilitate tire sliding and settling of tire on the rim, preventing also overloads on the tools.

It is also very important for the tire beads to be properly entered into the center rim groove.

Tires that have an arrow on their sides have to be fitted in the following way:

front wheel: with arrow turned against the riding direction;

rear wheel: with the arrow turned in the riding direction.

N.B. - Above directions are applicable, different indications on the tire excepted.

38 MAINTENANCE OPERATIONS AND LUBRICATIONS

MUES.	ITEMS	MILEAGE COVERED V	900 mi. (1500 km)	1800 mi. (3000 km)	3700 mi. (6000 km)	5600 mi. (9000 km)	7500 mi. (12.000 km
1000 -	Engine oil	3000	R	R	R	R	R
1900 -	Oil filter cartridge	6000	R	.,	R		R
	Wire gauze oil filter		С				
5400 - 5700-	Air filter	2000			С	R	
- January 1	Ignition timing		A				
5700-	Spark plugs	9000	Α	Α	Α	R	Α
- · · · · · · · · · · · · · · · · · · ·	Rocker clearance		Α	Α	Α	A	Α
ł	Carburetion		Α	Α	Α	Α	Α
<u> </u>	Nuts and bolts		Α			,,	
-	Fuel tank, filters and	pipes					
5700 - 1	Gear box oil	9000	Α	Α	Α	R	Α
5700 - 5700 -	Rear drive box oil	9000	Α	Α	Α	R	Α
7104	Wheel and steering b						
	Fork legs oil						
ŀ	Starter motor and ger	nerator		_			
2500-	Brake systems fluid	15000	Α	Α	Α	Α	Α
	Brake pads		Α	Α	Α	_A	A

A = Inspections - Adjustments - Possible replacements - Servicing / C = Cleanings / R = Replacements.

Occasionally, check the electrolyte level in battery, lubricate joints and cables; every 500 km (300 miles) check the engine oil level. In any case, renew this oil at least once a year.

7500 mi. (12.000 km)	9400 mi. (15.000 km)	11.300 mi. (18.000 km)	13.200 mi. (21.000 km)	15.100 mi. (24.000 km)	17.000 mi. (27.000 km)	18.900 mi. (30.000 km)
R	R	R	R	R≈	R	R
R		R		R		R
	С					С
	С	R		Ç.	R	
Α	Α	R	Α	Je # A	R	Α
1 A	Ä	A	Ā	A	A	A
† A	Α	Α	Α	Α	Α	Α
	Α		,			Α
		С	Ī '		С	
Α	Α	R	Α	# A	R	Α
Α	Α	R	A	Α./	R	Α
			Α			
			R			
1			Α			
Α	R	Α	Α	A: A.	Α	R
Α	Α	Α	Α	Α	Α	Α

P. 1 K. 7 M.

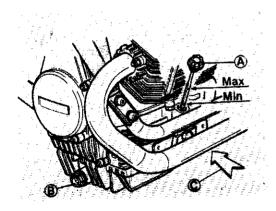
40 LUBRICATIONS

Engine lubrication (fig. 25)

Checking the oil level

Every 500 km check level of oil in crankcase. Correct level is in proximity of the top mark in dipstick «A».

If lower, top up with oil of same quality and density. This control has to be made after the engine has run for a few minutes and with the capdipstick "A" fully screwed in.



Replacing the oil

After the first 500+1000 km and later on every 3000 km or so, replace the oil in the crankcase.

This operation is done on a **warm engine**, allowing the old oil to drain completely before introducing fresh one.

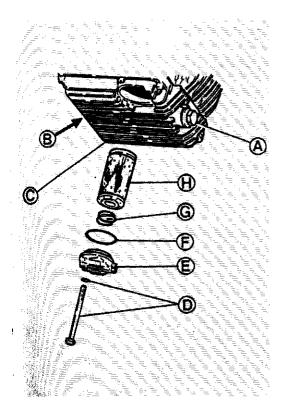
- «A» Oil filler cap and dipstick.
- «B» Oil drain cap (front side).
- «C» Oil drain cap (rear side).

Quantity required: 2 l of Agip Sint 2000 SAE 10W/50 oil.

Replacing the oil filter cartridge (fig. 26)

After the first 500-1500 Km (first oil replacement) and further every 6000 Km about, replace filter cartridge proceeding as follows:

- undo «A» and «B» drain caps from carnkcase «C» and oil filler cap «A» inf fig. 25;
- let the oil drain fully from crankcase «C»;
- undo the cartridge securing screw «D» and remove from crankcase «C» the assembly including cover «E», gasket «F», spring «G» and filter cartridge «H»;
- replace filter cartridge «H» and eventually the seal ring «F».



At the end of this operation re-fit in a reversed sequence, filling with the suggested oil quantity, before screwing in fully the oil filler cap.

It is advisable to have this operation carried out by our dealers.

Cleaning the wire gauze filter and crankcase sump

It is advisable, after the first 500+1500 Km (first oil change and cartridge replacement) and further every 15000 Km, removing the oil sump from crankcase, removing the wire gauze filter, washing them in a petrol bath; they dry with a compressed air jet both filter and sump channels.

In re-fitting the sump on the crankcase, don't forget to replace the sump gasket.

It is advisable to have this operation carried out by our dealers.

Lubrication of the gearbox (fig. 27)

Checking the oil level

Every 3000 Km check the oil level as shown in figure; if lower top up with oil of the same quantity and density.

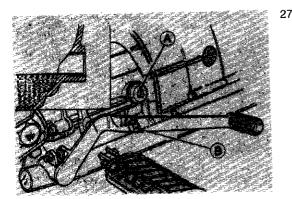
Replacing the oil

Every 9000 km, replace the oil in the gearbox. This operation has to be done on a warm engine when the oil is more fluid and easier to drain.

Do not forget to allow all the old oil to drain completely, before adding fresh one.

- «A» Filler cap.
- «B» Oil drain plug.

Quantity required: 0.900 Lof «Agip Rotra MP SAE 80 W/90» oil for V 35 Florida model [85 W/140 for V 65 Florida modell.



Lubrication of the rear drive box (fig. 28)

Checking the oil level

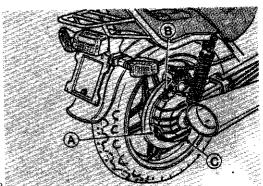
Every 3000 km check that the oil level is nearly skimming top level cap «A». If lower, top up with oil of same quality and density.

Oll change

Every 9000 km or so, change the oil in the rear drive box.

Do this on a warm engine as the oil is more easily drained.

Let the old oil drain completely before adding fresh one.



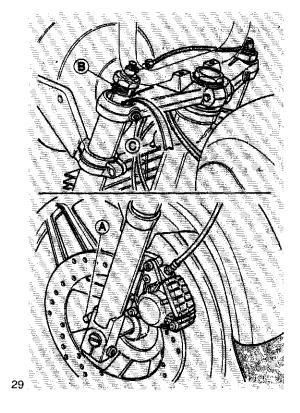
- «A» Dipstick and filler plug.
- «B» Breather plug.
- «C» Drain plug.

Quantity required: 0.160 I of «Agip Rotra MP SAE 85 W/140» oil and 0.010 I of «Agip Rocol ASO/R» or «Molykote type A» oil.

Front fork lubrication (fig. 29)

To replace the oil in the front fork legs, proceed as follows:

- remove the handlebar locking plate and the instrument panel fixed to it.
- the vehicle standing on the central stand, loosen the side screw «C» locking the steering head to the fork arm; disconnect compensating pipe and contemporary unscrew the hexagonal screw plug «B» then undo drain plug «A»;
- slightly press the front part of the bike to force out the plug «B» which is solidal to the shock absorber;
- refit plug «A» and introduce the quantity of fluid necessary (90 cc) for V 35 Florida [(100 cc) V 65 Florida] of «Agip F.1 ATF Dexron» through the space existing between the inner diameter of the fork arm and the shock absorber body;
- release the front part of the bike, refit plug «B» and lock the side screw. Repeat the same operation for the other fork leg;



44 reconnect compensating pipe and check the pressures keeping to the given values.

Various lubrications

In order to lubricate:

- Steering bearings;
- rear swinging fork bearings;
- control transmissions;
- Km./Mile speedometer drive;
- Stand articulations.

Use «Agip F.1 Grease 30» lubricant.

MOTORCYCLE CARE-PROLONGED INACTIVITY

Cleaning

Before washing

Before cleaning your vehicle it is advisable to overwith a nylon sheet the following components: exhaust silencers end pipe, clutch levers, throttle control and brake, ignition switch.

During cleaning

Avoid to spray water at high pressure on instruments rear hub and front hub.

After washing

Remove all nylon covers.

Carefully dry the full vehicle.

Have brake systems tested before using your vehicle.

N.B. For cleaning of painted parts of the propeller assembly (engine, gearbox, rear drive box, etc.), the products to be used are: Diesel oil, gasoil, Kerosene or water solutions of car neutral detergents. Im every case immediately remove these products with fresh water, absolutely avoiding the use of high temperature and high pressure water.

Prolonged inactivity

If the motorcycle is to remain inactive over long periods (for ex. the winter season) it is advisable to carry out the following operations:

- carefully clean the whole motorcycle;
- empty the fuel tank and the carburettors. If left in for a long period, fuel would be drying off;
- remove the spark plugs and introduce a few drops of engine SAE 30 oil into the cylinders. Then rotate the engine for a few turns and refit spark plugs;
- redure the tyre inflating pressure of about 20%;
- rest the motorcycle in a way such as wheels do not touch the ground;
- protect the unpainted parts with oil, so that they are preserved from rust;
- remove the battery and store it in a dry place exempt from the risk of frost and far from sunlight; check and charge once a month about;
- protect the vehicle from dust with a cover, however taking care that air can circulate.

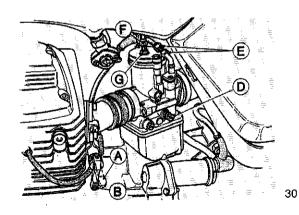
46 FUEL FEEDING

Carburettors (fig. 30)

No. 2 Dell'Orto carbs, type «PHBH 28 BD/BS» [«PHBH 30 BD/BS»]. Fig. 30 shows the PHBH 30 carburettor for V 65 Florida model.

Carburation controls

- Throttle control grip on the R.H. side of the handlebar.
- Easy starter level for **cold engine** starts located on L.H. side of vcehicle.



Starter lever positions:

«A» starting position with cold engine.

«B» riding position.

NB - Ensure that with starter lever in riding position «B» there is a play of about 3 mm, between the cable terminals and adjuster screws «E» for both carburettors.

Standard carbs. settings

Choke	O mm 28 [O mm 30]
Throttle valve	30 [40]
Atomizer	262 CE [268 T]
Main jet	112 [105]
Idle jet	42 [38]
Starter jet	60 [60]
Needle	X19 (2nd notch) [X8 (2nd notch)
Float	gr. 11 [11,3]

Idling screw adjustment: open 1 1/2 turn

Adjustment of carburation and idling speed

Adjustment of carburation using a «VACUOMETER»

In order to obtain a correct adjustment of the carburation, it is necessary to apply to anyone of our Dealers who can carry out this operation by meand of a «VACUOMETER».

Adjusting Idle speed

For adjusting the idle speed at 1200÷1300 r.p.m. screw in or out both the screws «D» of the same number of turns.

Adjusting throttle control cable play

the cables terminals and thumb screws «F» there is a play of $1 \div 1.5$ mm for both carburettors, otherwise losen nuts «G» and screw in or out thumb screw «F». At the end of this operation tighten nuts «G».

With the throttle grip fully closed, ensure that between

Replacing the air cartridge (fig. 31)

Every 9000 Km about or more frequently when riding in very dusty areas, it is suggested to replace the cartridge filter.

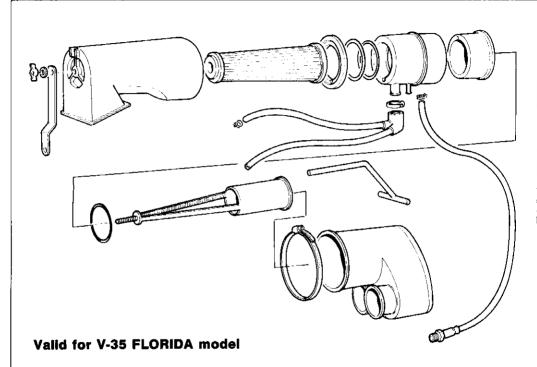
This filter is installed in a special box together with the oil breather asembly above engine unit.

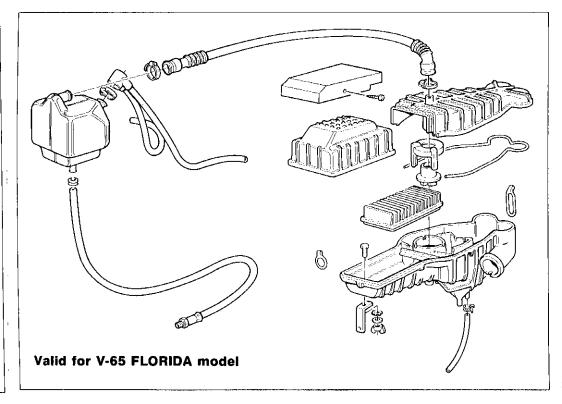
For air cartridge replacement, we suggest to apply to outorized Dealers.

Fuel tank, cocks, filters and pipes cleanings

Every 9000 Km about, or when an irregular fuel feeding to carburettors is noticed, it is advisable to have fuel tank, cocks, filters, and carbs, filters as well as pipes cleaning.

Filters, pipes and cocks channels after petrol washing, have to be dried with compressed air jet.





50 VALVE GEARING

Tappet clearance (fig. 32)

After the first 500+1500 Km and later on after about 3000 Km or so, or any time valve operation is too noisy, check tappet clearance.

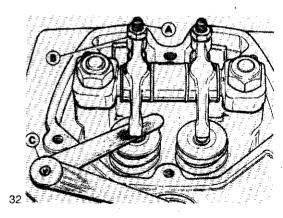
This adjustment is done with a **cold engine** with the piston at TDC, at the end of the compression stroke (valves fully closed).

After removing the rocker cover, proceed as follows:

- 1 slacken nuts «B»;
- 2 screw in or out adjusters «A» till there are the following clearances:
- inlet valves 0.15 mm
- exhaust valves 0.20 mm

This check is made using feeler gauge «C». In case of higher clearance, there will be noisy valve operation while if the valves do not close fully there will be inconveniences such as:

- Compression loss;
- overheating of the engine:
- burning of valves, etc;



Ignition advance specifications

Electronic ignition system; advance modification is made electronically.

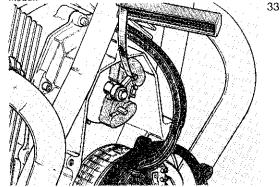
Initial advance (fixed)
 Automatic advance (electronic)
 about 30°

■ Full advance

(Fixed + sutematic) 419109 [389±39]

(fixed + automatic) 41°±2° [38°±2°]
Rotor to pick-up gap 0.2+0.3 mm
Electronic ignition system does not require any maintenance, in practice.

The data in brackets [] are specific for V 65 Florida model

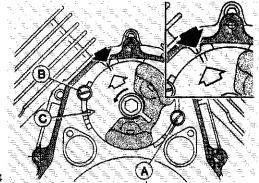


Engine is correctly set when printing stated on the drawing (in fig. 34) is in line with the reference mark on the crankcase.

To have the PICK-UP plate rotated, loosen screws «A» and «B» (fig. 34) and operate with a screrwdriver on groove «C».

For a more precise checking of fixed advance, always use a strobo light.

With engine at a lower r.p.m. than 1000 revs., notch «1» (fixed advance) printed on engine flywheel must be in line with the reference mark on the edge of the checking hole «2» (fig. 35), reference «0» on the flywheel means the «T.D.C.» (fig. 35).



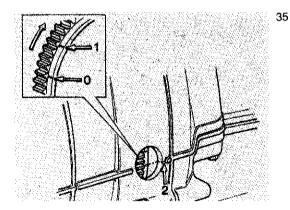
52

For the maximum advance checking, always use a strobo light type with degree indicator, maintaining engine at 4500 r.p.m.

Spark plugs

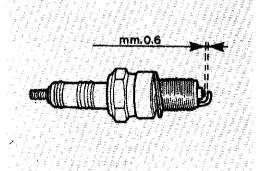
The type of spark plugs to be used is:

- Marelli F8LCR
- Bosch W5DC
- Lodge 3HLNY
- Bosch W5D (for V35 Florida model only)
- Lodge 2HL (for V65 Florida model only)



Spark plug points gap: 0.6 mm.

In re-fitting the spark plugs, ensure that they are started by hand for a few turns, completing the operation with **cold engine.** If not properly started, the cylinder head thread may get stripped. For all events, the plugs have to be replaced every 9000 km even if they appear to be still in good condition.



ELECTRIC EQUIPMENT

The electric system consists of:

battery;

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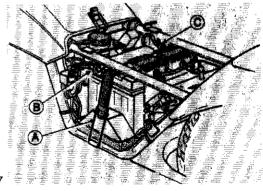
- starter motor;
 - alternator-generator;
 - pick-up assembly;
 - electronic boxes;
 - ignition coils;
 - rectifier;
 - regulator;
 - terminal block with fuses (no. 4 fuses 15A);
 - flashing light relay;
 - starter relay;
 - headlight:
 - tail light;
 - direction indicators:
 - light switch:
 - lights control devices;
 - turn lights, horn and flashing control devices;
 emergency lights switch;
 - enlergency lights switch
 enaine start device:
 - electric trumpets;
 - instrument panel warn. lights: neutral indicator (green) parking light on (green) oil pressure check (red) high beam (bleu) insufficient generator tension (red) fuel reserve (red) direction indicators (green).

Battery (fig. 37)

The battery is a 12 V type with 20 Ah capacity and is charged directly by the generator.

Access to the battery is obtained by:

- lifting the saddle and removing the side covers;
 unbooking the securing rubber hand «A» and dis-
- unhooking the securing rubber band «A» and disconnecting the electrical cables «B» and «C» (fig. 37) from the battery;
- removing the battery from its support.



37

54 Instructions on how to put a new dry battery in service

Dry type batteries stay charged for quite a long time, provided they are stored in a cool place (20-30°C = 60-86°F) and with their plugs well tightened down. When putting them in service, activate them as follows:

- Introduce pure sulphuric acid in the cells with a specific gravity of 1.27 kg/l at temperature of 25°C (77°F) till the level tops the plate separators by 5 mm or up to the level mark.
- Let the battery at rest for about 1 hour and renew the level with the same type of acid. At this stage the battery is ready to be used. For longer life, it is well to check the acid intensity in each cell. In case of readings lower than 1.26 kg/l, it is necessary to give the battery a refreshing charge to an intensyty equal to 1/10 th of its capacity. 5 hours charge is normally sufficient. Temperature should never exceed 45°C (113°F) but should it go up higher, reduce the current intensity and lenghten the charging time. Stop charging when the specific gravity has gone up again to 1.27-1.28 sp. gravity at 25°C and such a rate has remained constant for at least 3 readings at half hour intervals.

instructions for maintaining acid full batteries

Activated dry type batteries or batteries that have been received already full with acid, should be serviced as follows:

- Add distilled water (never add sulphuric acid) ensuring that the acid level always tops the plate separators by 5 mm (19").
- Always keep the battery terminals in a spotlessly clean condition and smeared with jelly.
- Always keep the top battery cover completely dry, avoiding overflows the electrolyte which will reduce insulation and corrode the battery bracket.
- Make sure the charging equipment does not give excessive or insufficient charging intensity, bearing in mind that the acid gravity should always be in between 1.24 ÷ 1.27 kg/l. If not it will be necessary to check over the insulation and the efficiency of the charging and engine starting equipment.
- All acid full batteries that have been stored shoud be periodically charged at an intensity equal to 1/10th of the capacity and at correct acid level and correct gravity of 1.27 kg/l at 25°C (77°F).
- All batteries should be installed on the machine with all retaining devices well tight and with all antivibratory devices properly adjusted.

Note - If the battery is due to be used in tropical climates (average temperature over 33°C) (92°F) it is recommended to reduce the acid gravity to 1.23 kg/l.

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Light bulbs replacement

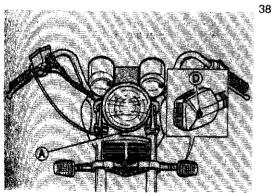
Headlight (fig. 38)

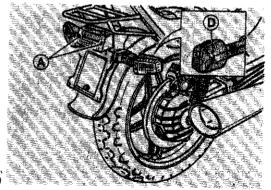
Slacken screw «A» located under the optical group, take out the optical group, extract the lamp-holders then remove the bulbs.

Tall light (fig. 39)

Undo screws «A» securing the reflector to the lamp; push the bulbs inwards, turning them at the same time to free them from their bulb holders.

Front and rear turn indicators (figg. 38-39) Undo the screws «A» securing the cups to the indicators. Push the bulbs inside at the same time turning, and extract them from bulb-holders.





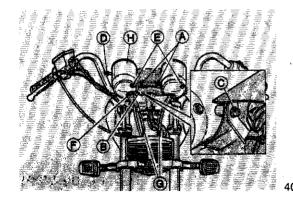
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56 Panel warn, lights (fig. 40)

- Remove the headlight;
- Undo screws «A»:
- Remove the cover «B»:
- Extract the lampsockets and replace the bulbs.

Speedo, and rev-counter (fig. 40)

- Remove the headlight;
- Undo screws «A»:
- Remove the cover «B»:
- Undo screws «C»:
- Remove the zero reset knob «D»;



Undo screws «E»:

■ Undo the «F» ring nuts and detach transmissions «G» from the instruments:

■ Take off the instruments from holders «H» and replace the bulbs.

It is advisable to have this operation carried out by our Dealers.

Bulbs

ш	^-	AI.	1~	ht:

High and low beam	45/40 W
Parking light	4 W

Tall light:

Parking	and stop,	plate ill.	5/21 V	N

Turn signals	10 W

3 W

Speedo and rev-counter

Panel warning lights 1.2 W

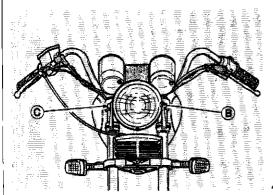
Headlight beam adjustment (fig. 41)

For safe riding and not to trouble crossing drivers the headlight has always to be kept at correct height. Horizontal setting is adjusted by screw «B» while vertical setting is adjusted by screws «C» fixing headlight to the fork sheathes and deplace it upwards and downwards until the correct height is reached.

At a disctance of 3 m. the light beam center has not to be higher than 0.865 m. with vehicle on the ground and rider on the saddle.



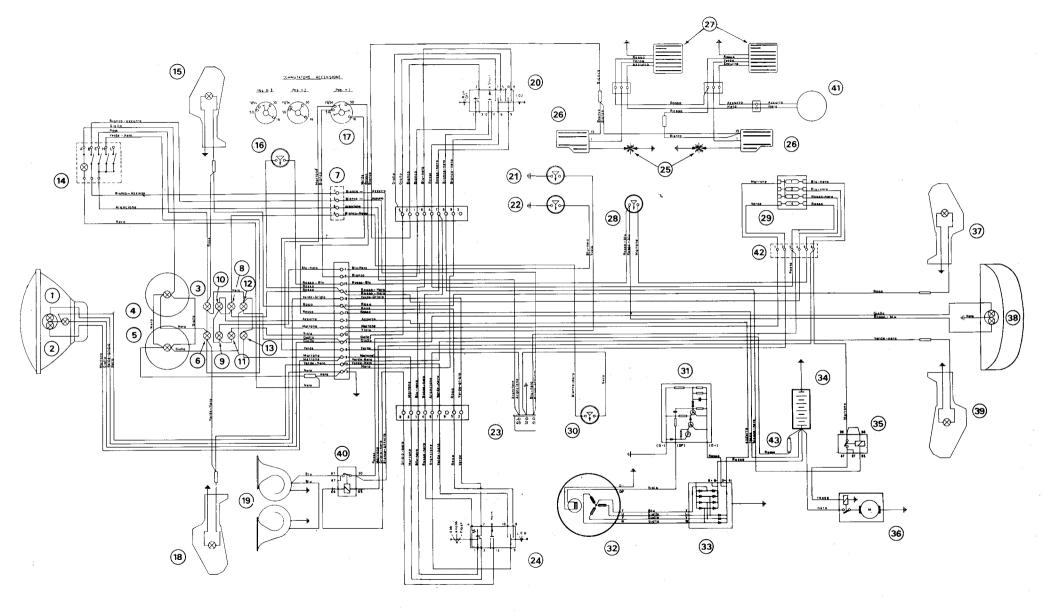
- In case of disassembly or reassembly of battery, make sure that the ignition switch is on «OFF» position;
- Do not disconnect the battery when engine is started.
- Make sure that the control box is earthed correctly.



58 Electrical wiring diagram legend

- High beam and low beam (45/40W bulb)
- 2 Front parking light (4W blub)
- 3 R.H. turn indicators warn, light (1.2W bulb)
- Speedometer (3W bulb)
- Rev. counter (3W bulb)
- L.H. turn indicators warn, light (1.2W bulb)
- 4-pole Molex com.
- 8 Fuel level warn, light (1.2W bulb)
- Oil pressure warn, light (1.2W bulb)
- 10 Generator warn, light (1.2W bulb)
- 11 Neutral position warn, light (1.2W bulb)
- 12 Parking light warn. (1.2W bulb)
- 13 High beam warn, light (1.2W bulb)
- 14 Simultaneous flashers switching
- 15 Front R.H. turn indicator (10W bulb)
- 16 Front brake STOP switch
- 17 Ignition switch
- 18 Front L.H. turn indicator (10W bulb)
- 19 Bi-tonal trompets
- Engine starting and stopping device lights switch
- Neutral position indicator 21
- 22 Oil pressure indicator
- 23 Flashing device
- 24 Control device for litahts, horn, turn signals
- 25 Ignition spark plugs
- 26 H.V. coits
- 27 Electronic ignition

- 28 Rear brake STOP switch.
- A.M.P. fuse hox
 - Fuel level warn, light manocontact
- 31 Tension regulator
- Alternator (14V 20A) 32
- 33 Rectifier
- Battery (12V 20Ah)
- 35 Starter motor relay
- 36 Starter motor
- Rear R.H. turn indicator (10W bulb) 37
- STOP and plate light (5/21W bulb)
- 39 Rear L.H. turn indicator (10W bulb)
- 40 Bi-tonal trompets relay
- 41 Pick-up
- 42 A.M.P. 6-pole connector
- 43 Spare fuse for horns



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