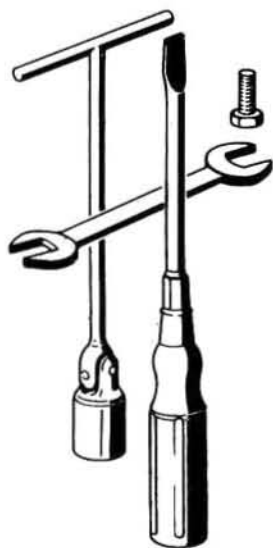




California
III

WORKSHOP MANUAL



CODE 29 92 01 01

Additions to the Workshop manual for the models V1000 G5 and 1000 SP - Code 17920161

The illustrations and descriptions in this booklet 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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ENGINE	twin cylinder - 4-stroke
– cylinder disposition	«V» 90°
– bore	88 mm
– stroke	78 mm
– displacement	948.8 cc
– compression ratio	9.2 to 1
– max torque	7.7 kgm at 5200 rpm
VALVE GEARING	O.H.V., push rod operated
CARBURATION	n. 2 carburators «Dell'Orto» type VHB 30 CD (right) VHB 30 CS (left)
LUBRICATION	pressure, by gear pump wire gauze and cartridge filters in oil sump normal lubrication pressure 3.8 to 4.2 kg/sq cm (pressure relief control valve in the sump) oil pressure sender unit in the crankcase
GENERATOR ALTERNATOR	fitted in the front part of the crankshaft (14V - 20A)
IGNITION	coil-battery ignition with double contact breaker and automatic advance with centrifugal masses
– ignition data	ignition advance (fixed) $2^{\circ} \pm 1^{\circ}$ automatic advance $33^{\circ} \pm 1^{\circ}$
– contact breaker points gap	0.37 ÷ 0.43 mm
– spark plugs	Bosch W 225 T 2; Marelli CW 7 LP; AC-AA XL; Lodge HLN Y; Champion N 9 Y
– plug points gap	0.6 mm
– ignition coils	n. 2 fitted on the frame
STARTING	electric starter (12V - 0.7 KW) with electromagnetic ratchet control ring gear bolted on the flywheel starter button (START) fitted on the R/H side of handlebar
TRANSMISSIONS	
CLUTCH	twin driven plates, dry type fitted on the flywheel side hand controlled by lever on left handlebar
PRIMARY DRIVE	by gears, ratio 1 to 1.235 (Z = 17/21)
GEARBOX	5 speeds, frontal engagement, constant mesh gears. Cush drive incorporated pedal operated on the L/H side of the bike
– gear ratios:	
Low gear	1 to 2 (Z = 14/28)
2nd gear	1 to 1.388 (Z = 18/25)
3rd gear	1 to 1.047 (Z = 21/22)
4th gear	1 to 0.869 (Z = 23/20)
5th gear	1 to 0.750 (Z = 28/21)
SECONDARY DRIVE	by cardan shaft, bevel gear set
– ratio	1 to 4.714 (Z = 7/33)
– overall gear ratios (engine-wheel)	
Low gear	1 to 11.643
2nd gear	1 to 8.080
3rd gear	1 to 6.095
4th gear	1 to 5.059
5th gear	1 to 4.366

FRAME	duplex cradle, tubular structure
SUSPENSIONS	
– front	telescopic fork «MOTO GUZZI patent» with oil pneumatic shock absorbers
– rear	swinging fork and rear dampers with adjustable external springs concentric to the oil pneumatic shock absorbers
WHEELS	light alloy castings with rims:
– front	WM 3/2.15 x 18" CP2
– rear	WM 3/2.15 x 18" CP2
TIRES	
– front	120/90 H 18
– rear	120/90 H 18
BRAKES	
– front	disc type with caliper having 2 cylinders, controlled by hand lever on the R/H side of the handlebar hydraulic transmission independent from the rear brake: disc dia. 300 mm braking cylinder dia. 38 mm master cylinder dia 12.7 mm
– rear	disc type with fixed caliper with two cylinders foot controlled with pedal on the R/H side of the bike: disc dia. 242 mm braking cylinder dia. 38 mm master cylinder dia. 15.875 mm the rear brake is connected by an hydraulic transmission to a second brake on the front wheel having the same features and size as the hand controlled front brake
DIMENSIONS AND WEIGHTS	
– wheel base (loaded)	1.565 m
– max length	2.370 m
– max width	0.890 m
– max height	1.570 m
– min. ground clearance	0.175 m
– dry weight abt	250 kg
PERFORMANCES	
– top speed	190 km/h (118 mph), solo
– fuel consumption	5.8 l x 100 km
FUEL AND OIL CAPACITIES	
– fuel tank (reserve 3 l about) (3.1/4 quarts)	25 l (6.15 US gls) supergrade petrol (98/100 NO-RM)
– oil sump	3 l (3.1/4 quarts) oil «Agip SINT 2000 SAE 10 W/50»
– gear box	0.750 l (1.3/4 pints) oil «Agip F.1 Rotra MP SAE 90»
– rear drive box (bevel gear set lubrication)	0.250 l (9 oz abt) oil of which: 0.230 l (8.1/4 oz abt) «Agip F.1 Rotra MP SAE 90» and 0.020 l (3/4 oz) «Agip Rocol ASO/R» or Molikote «A» type
– front fork (each leg)	0.060 l (2 oz abt) fluid «Agip F.1 ATF Dexron»
– braking circuits (front and rear)	fluid «Agip F.1 Brake fluid - SAE J 1703 B»

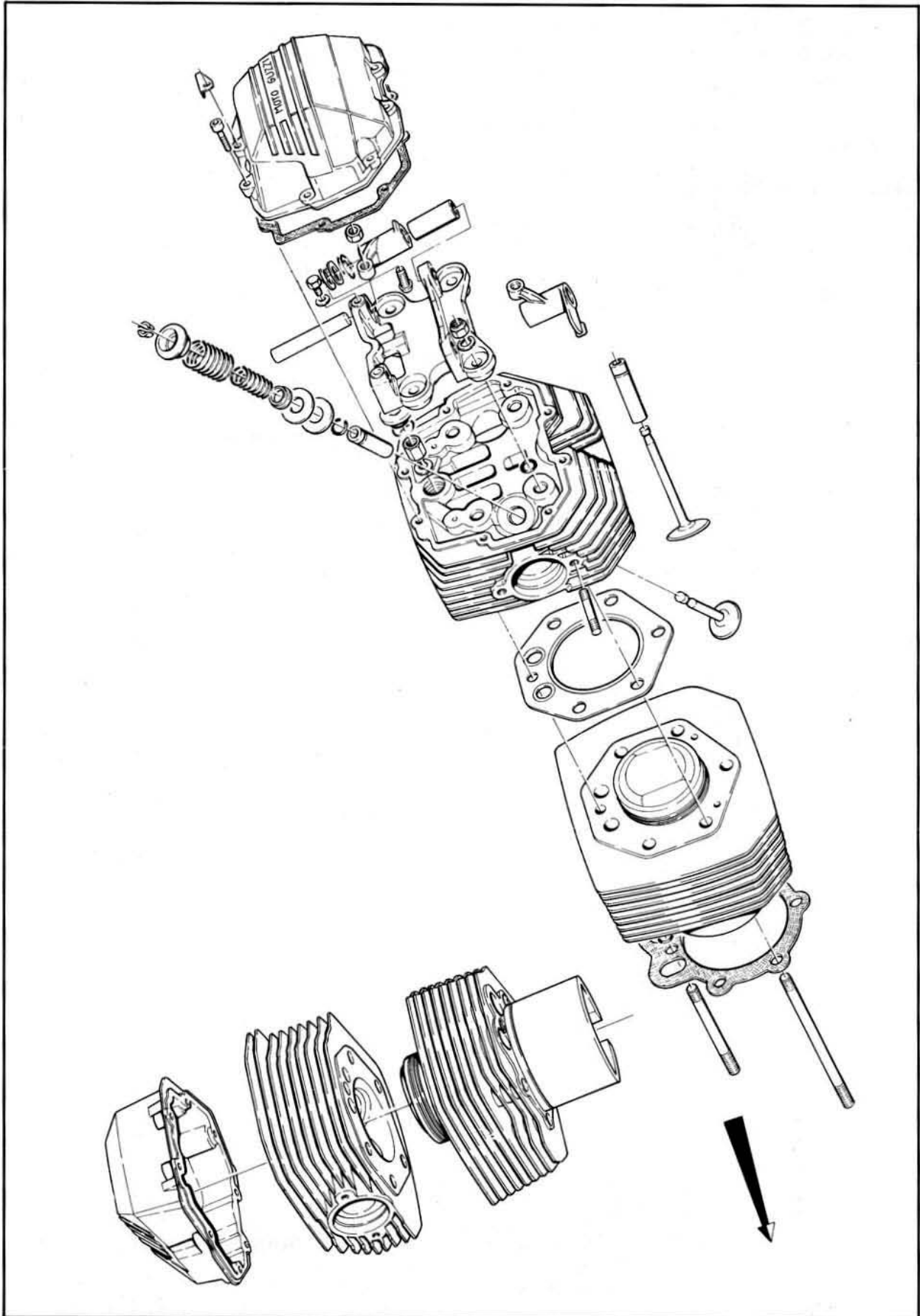
7 SERVICE SCHEDULE

ITEMS ▼	MILEAGE COVERED ►	900 mi. 1500 km	1800 mi. 3000 km	3700 mi. 6000 km	5600 mi. 9000 km	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
● Engine oil		R	R	R	R	R	R	R	R	R	R	R
● Oil filter cartridge		R					R					R
● Wire gauze oil filter		C					C					C
● Air filter				C	R		C	R			R	
● Ignition timing		A	A	A	A	A	A	A	A	A	A	A
● Spark plugs		A	A	A	R	A	A	R	A	A	R	A
● Rocker clearance		A	A	A	A	A	A	A	A	A	A	A
● Carburetion		A	A	A	A	A	A	A	A	A	A	A
● Nuts and bolts		A					A					A
● Fuel tank, filters and pipes					C		C			C		
Gear box oil		A	A	A	R	A	A	R	A	A	R	A
Rear drive box oil		A	A	A	R	A	A	R	A	A	R	A
Wheel and steering bearings									A			
Fork legs oil									R			
Starter motor and generator									A			
Brake systems fluid		A	A	A	A	A	R	A	A	A	A	R
Brake pads		A	A	A	A	A	A	A	A	A	A	A

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

● Operation required for maintaining the vehicle according to emission regulations (USA).

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.



CYLINDERS

SELECTION OF CYLINDER DIAMETER

GRADING A	GRADING B	GRADING C
88.000 \pm 88.006 mm 3.4645 \pm 3.4648"	88.006 \pm 88.012 mm 3.4648 \pm 3.4655"	88.012 \pm 88.018 mm 3.4655 \pm 3.4652"

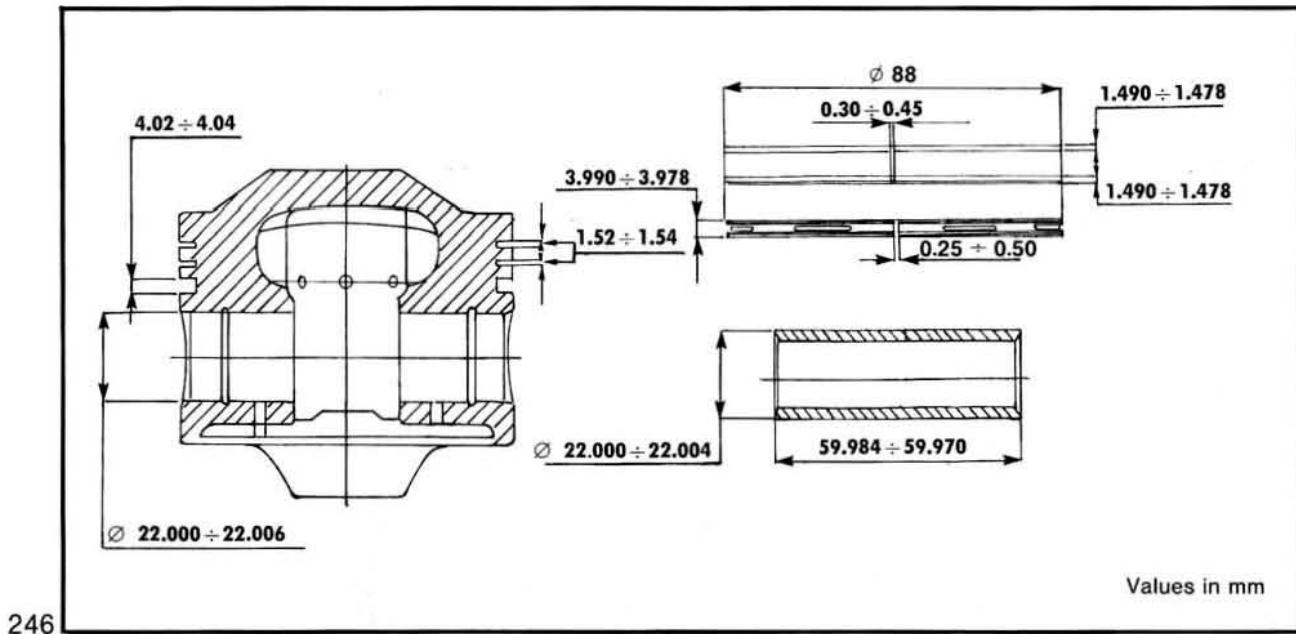
PISTONS

SELECTION OF PISTON DIAMETER

GRADING A	GRADING B	GRADING C
87.968 \pm 87.974 mm 3.4633 \pm 3.4635"	87.974 \pm 87.980 mm 3.4635 \pm 3.4637"	87.980 \pm 87.986 mm 3.4637 \pm 3.4640"

The pistons of an engine must be balanced; a weight difference between them of 1.5 gr is allowed.

When fitting a piston check that the word «SCA» (exhaust) are facing the exhaust hole in the cylinder.



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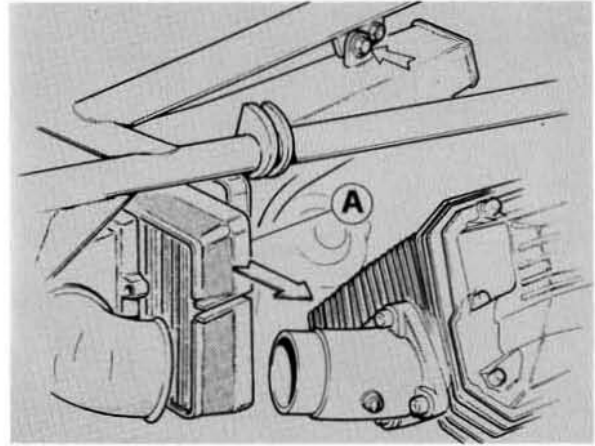
CHECKING CRANKSHAFT BALANCING

To balance statically the crankshaft it is necessary to add a weight of 1.650 \pm 1.652 kg.

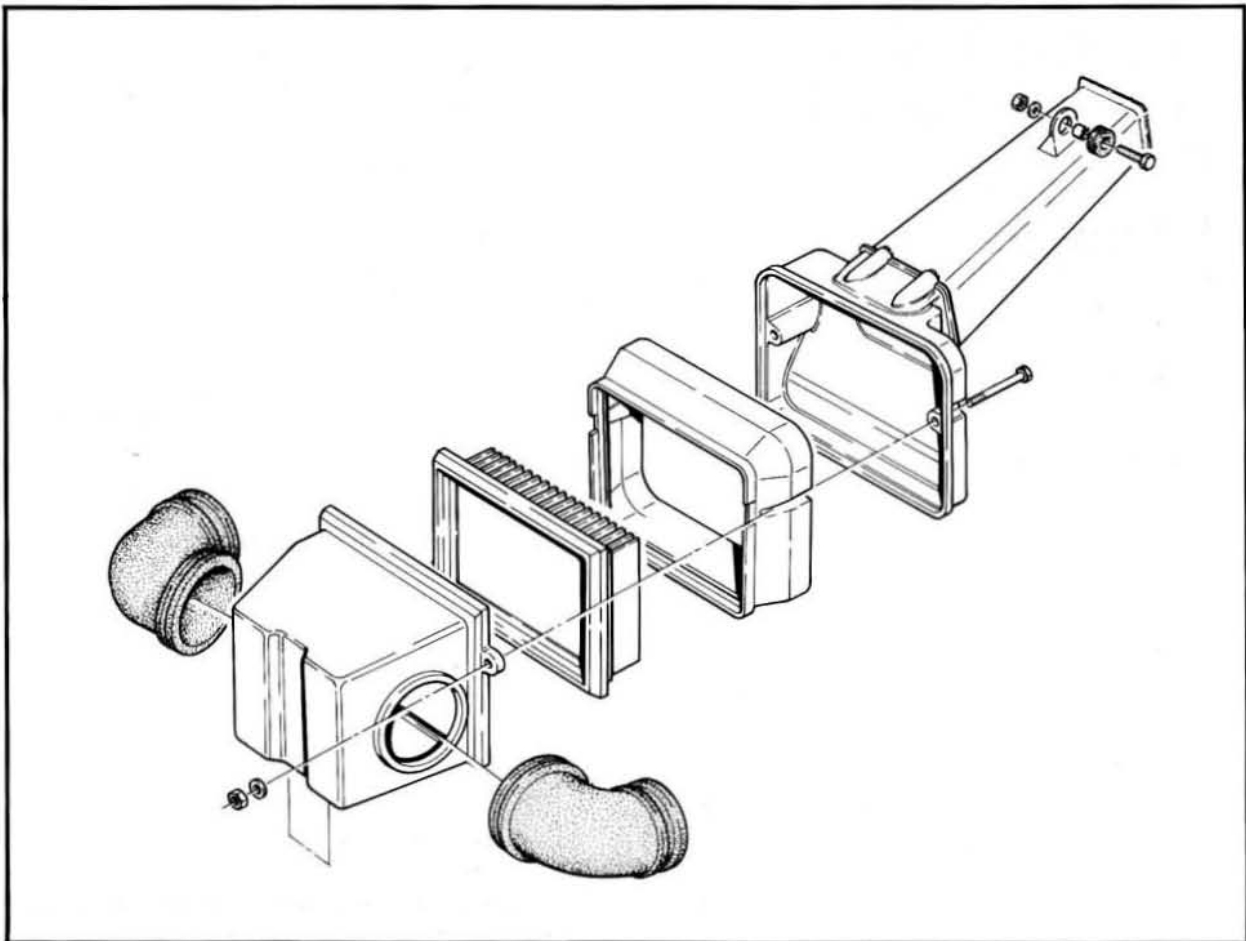
REPLACING THE AIR FILTER

Every 6000 km (3700 miles) check conditions of air filter, if necessary clean it using compressed air; it is advisable to replace it every 9000 km (5600 miles).

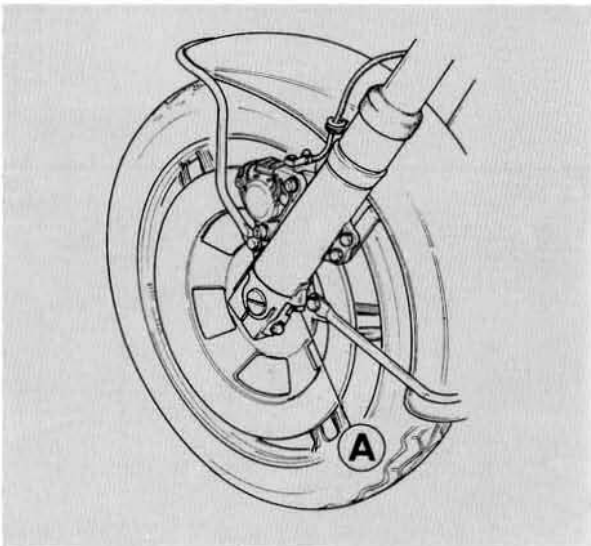
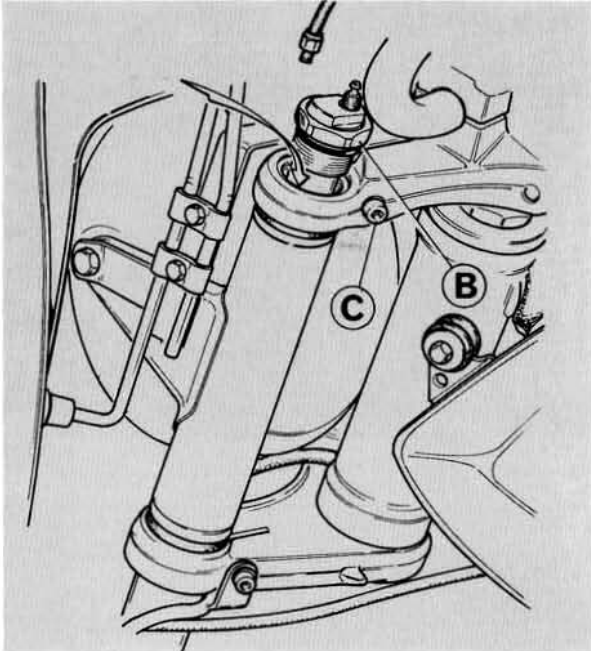
To replace the air filter lift the saddle, remove fuel tank and side covers. Take out R/H carburettor and undo the screws fixing the air intake to the bike frame: remove the two side screws and take out from the R/H side the container «A» complete with the air filter.



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FRONT FORK SPRINGS

For the values of the springs refer to mod. V 1000 G 5 (see page 102).

FRONT FORK LUBRICATION

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

- with the bike on the central stand, loosen the side screw «C» locking the steering head to the fork arm; disconnect compensating pipe and completely 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. Do this paying attention not to damage the instruments panel;
- refit plug «A» and introduce the quantity of fluid necessary (60 cc Agip F. 1 ATF Dexron) through the space existing between the inner diameter of the fork 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;
- reconnect compensating pipe and check the pressures keeping to the given values.

OIL PNEUMATIC SHOCK ABSORBERS

The operating load pressures of these shock absorbers are the following;

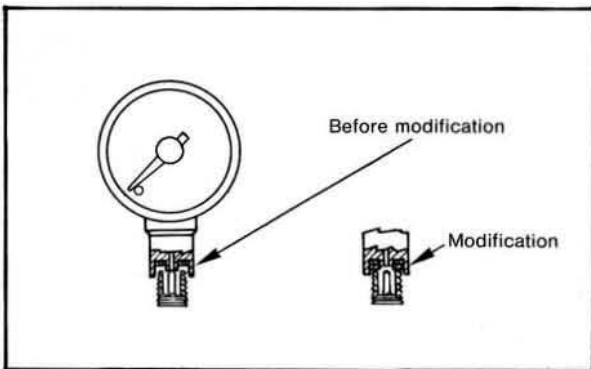
- front: 2 ÷ 3 kg/sqcm
- rear: 3 ÷ 5 kg/sqcm

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.

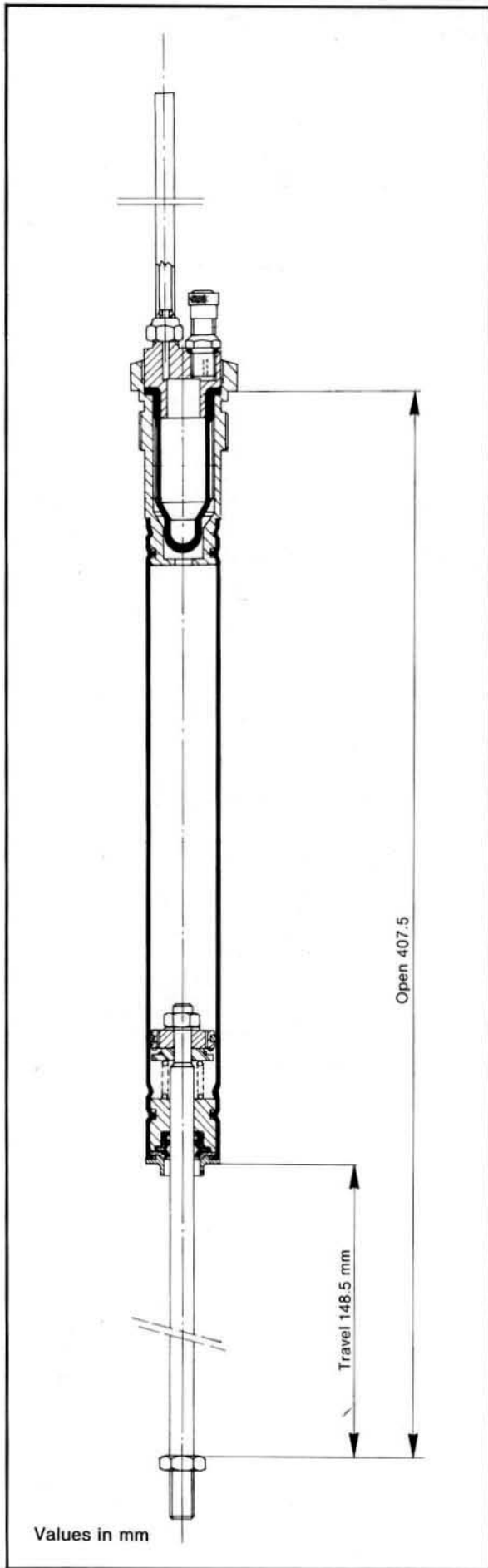
To ascertain to which extent your pressure gauge reduces, when taking the measurement, the pressure inside the shock absorber it is sufficient to carry out two consecutive measurements: the difference between the two readings gives approximately the pressure reduction occurring whenever a measurement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

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

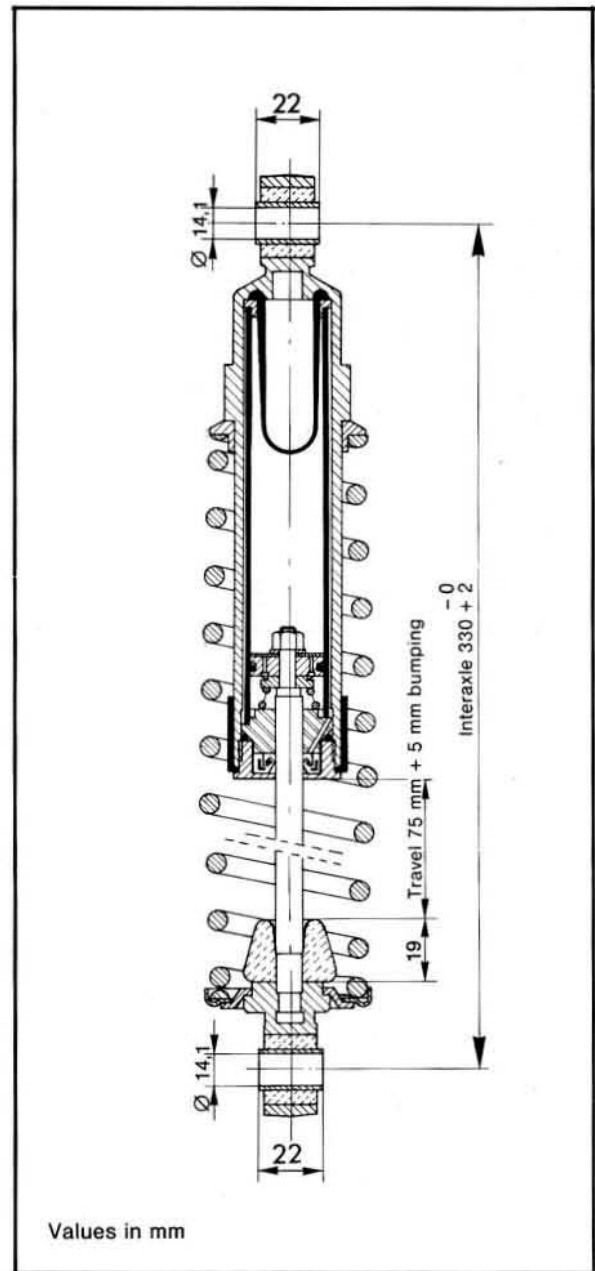
N.B. – Pressures gauges as above, are found on the market; however it can be necessary to place a supplementary gasket in the gauge head, in order that the valve stem inside the shock absorber will be pressed only when the gasket has made a perfect tightening.



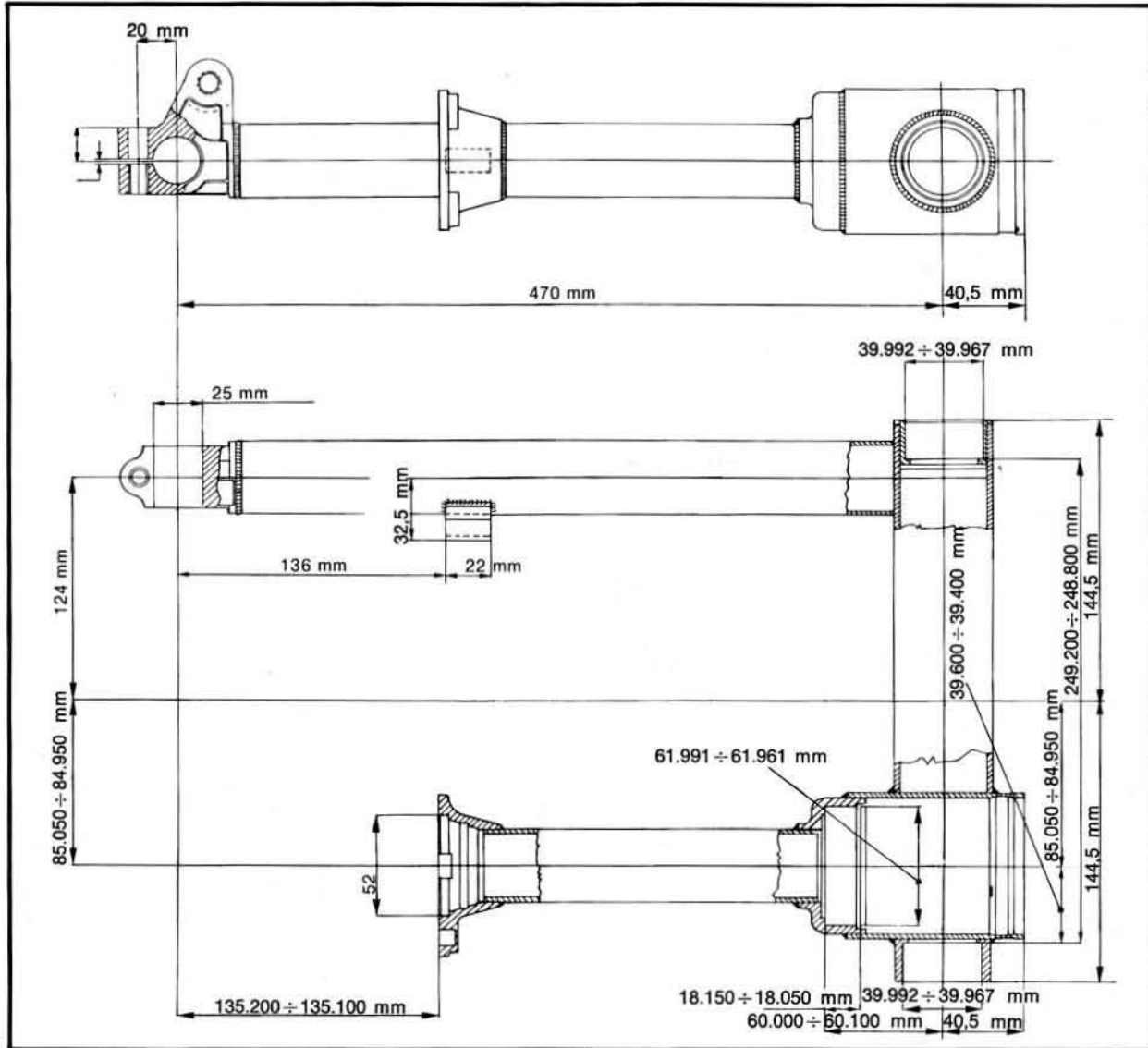
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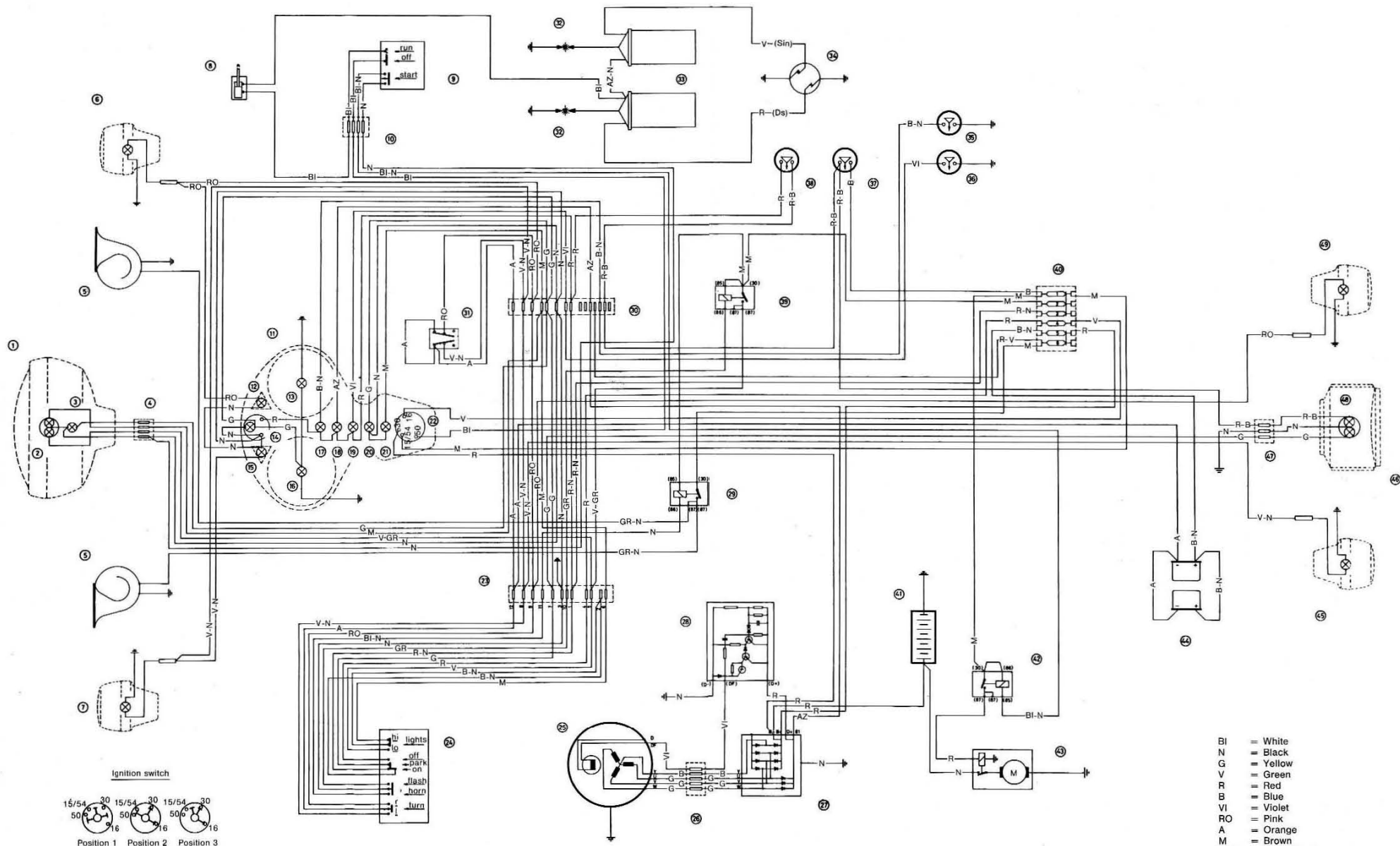
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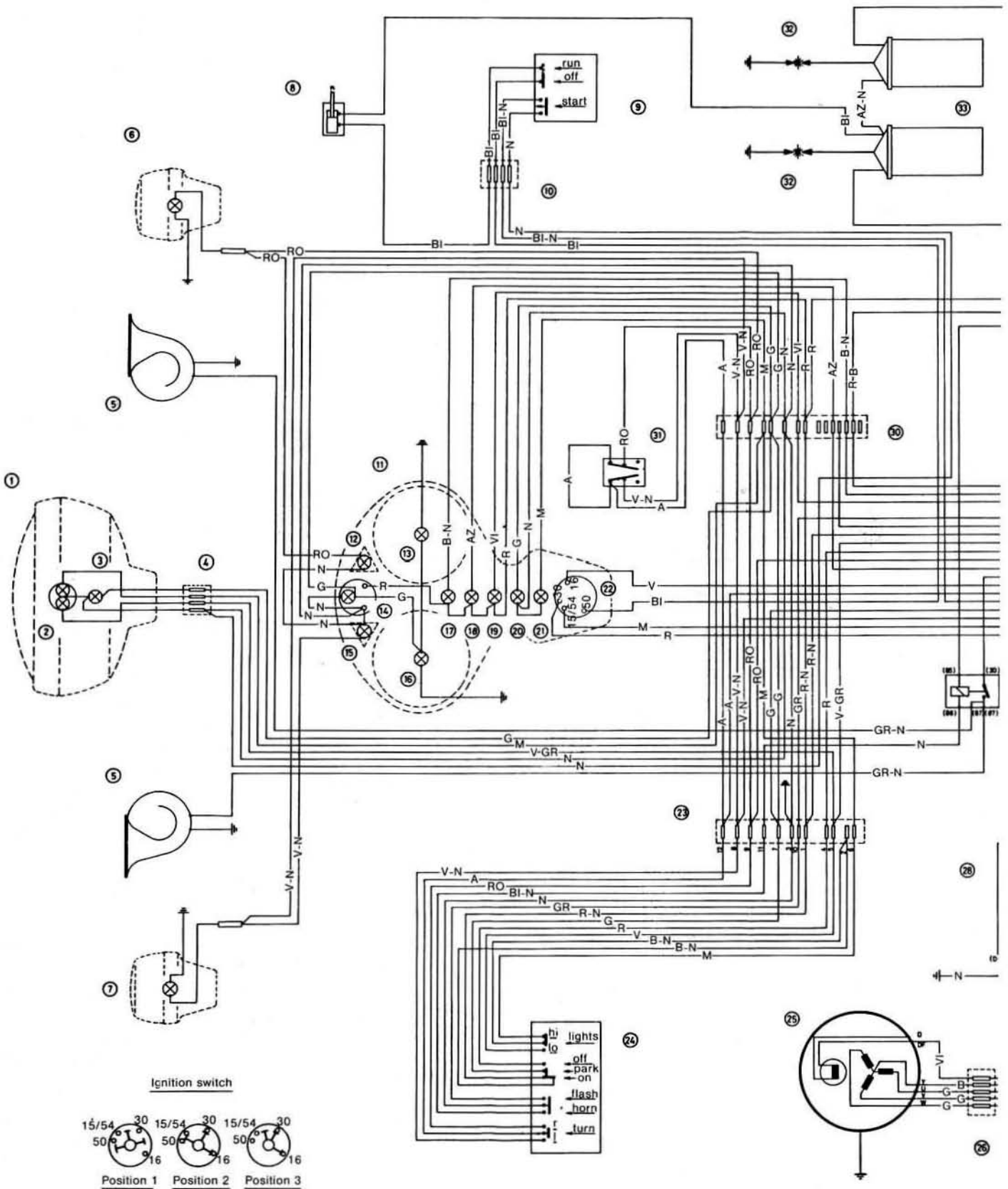
LEGEND ELECTRICAL WIRING DIAGRAM

- 1 Headlight
- 2 High and low beam bulb 60/55 W
- 3 Parking light 4 W
- 4 4-way connector Molex
- 5 Electromagnetic horns
- 6 Turn flasher, front right 21 W
- 7 Turn flasher, front left 21 W
- 8 Coils device
- 9 Engine starting and stop button
- 10 4-way connector Molex
- 11 Instrument panel
- 12 Warning light, right turn signal 1.2 W
- 13 Speedometer light 3 W
- 14 Voltmeter light 3 W
- 15 Warning light, left turn signal 1.2 W
- 16 Rev-counter light 3 W
- 17 Warning light, oil pressure 1.2 W
- 18 Warning light, generator 1.2 W
- 19 Warning light, neutral position 1.2 W
- 20 Warning light parking position 1.2 W
- 21 Warning light, high beam 1.2 W
- 22 Ignition key 1.2 W
- 23 12-way connector for device posit. 24
- 24 Flashing light - horn - turn signals - lights
- 25 Generator
- 26 Cables connector
- 27 Rectifier
- 28 Regulator
- 29 Horn relay
- 30 15-Way connector for panel cables
- 31 Flashing light switch
- 32 Spark plugs
- 33 H.T. coils
- 34 Alternator
- 35 Oil pressure solenoid
- 36 Neutral position solenoid
- 37 Rear brake switch
- 38 Front brake switch
- 39 Flashing light relay
- 40 Terminal block with fuses
- 41 Battery 12 V 24 Ah
- 42 Starter motor relay
- 43 Starter motor
- 44 Flasher box
- 45 Turn flasher, rear left 21 W
- 46 Tail light
- 47 Cable connector, tail light
- 48 Number plate, rear parking light and stop 5/21 W
- 49 Turn flasher, rear right 21 W

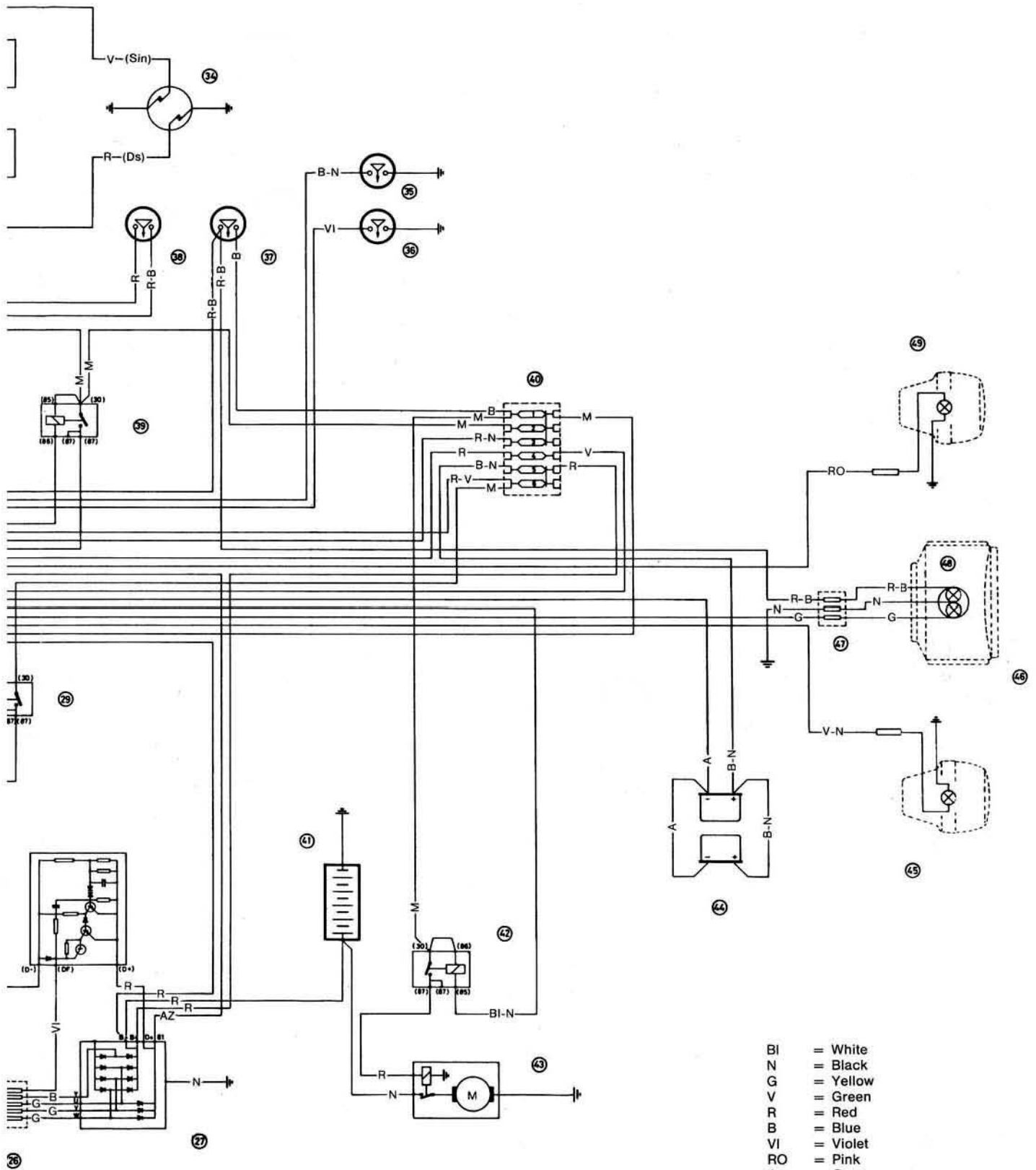


IGNITION SWITCH POSITION
 Posit. 1: No contacts
 Posit. 2: Contacts on all terminals
 Posit. 3: Contacts on terminals 16/30

- BI = White
- N = Black
- G = Yellow
- V = Green
- R = Red
- B = Blue
- VI = Violet
- RO = Pink
- A = Orange
- M = Brown
- BI-N = White-Black
- GR = Grey
- AZ = Light blue
- B-N = Blue-Black
- V-N = Green-Black
- R-N = Red-Black
- AZ-N = Light blue-Black



IGNITION SWITCH POSITION
 Posit. 1: No contacts
 Posit. 2: Contacts on all terminals
 Posit. 3: Contacts on terminals 16/30



- BI = White
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