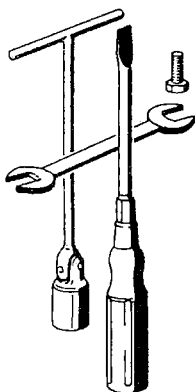




WORKSHOP MANUAL

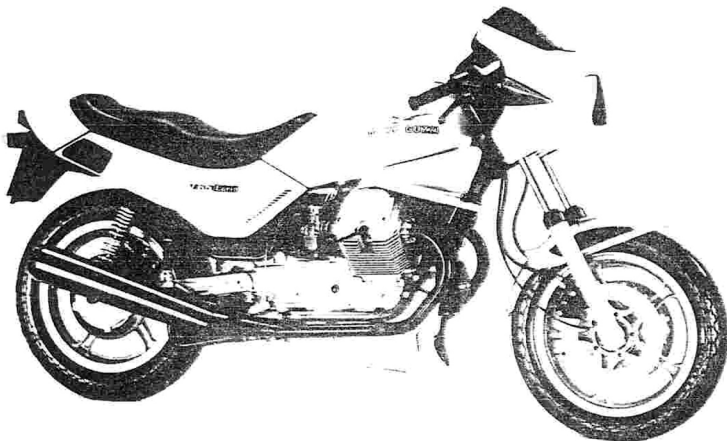
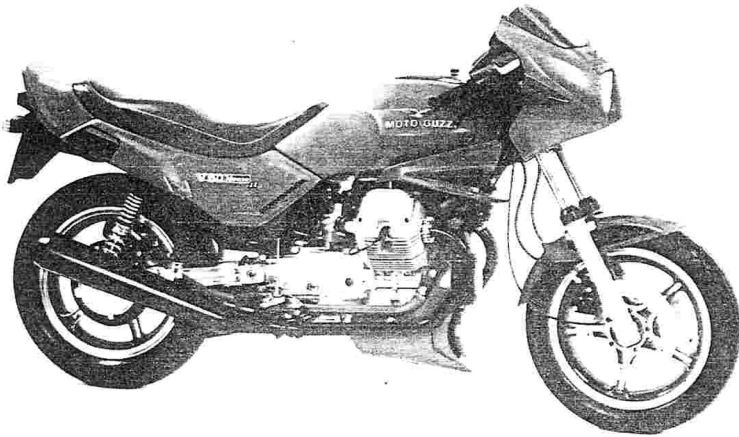
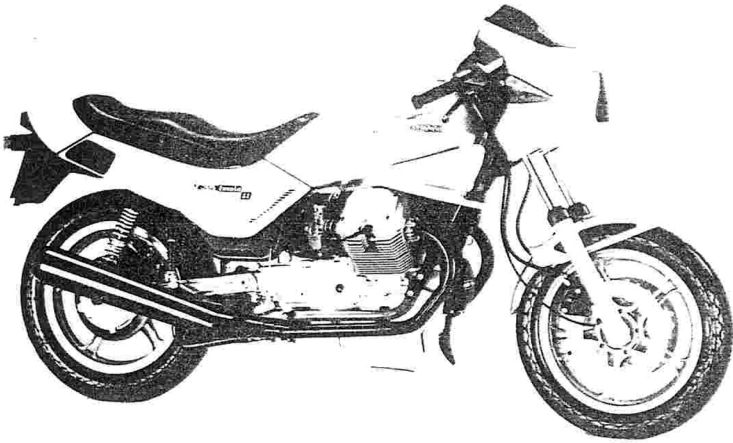


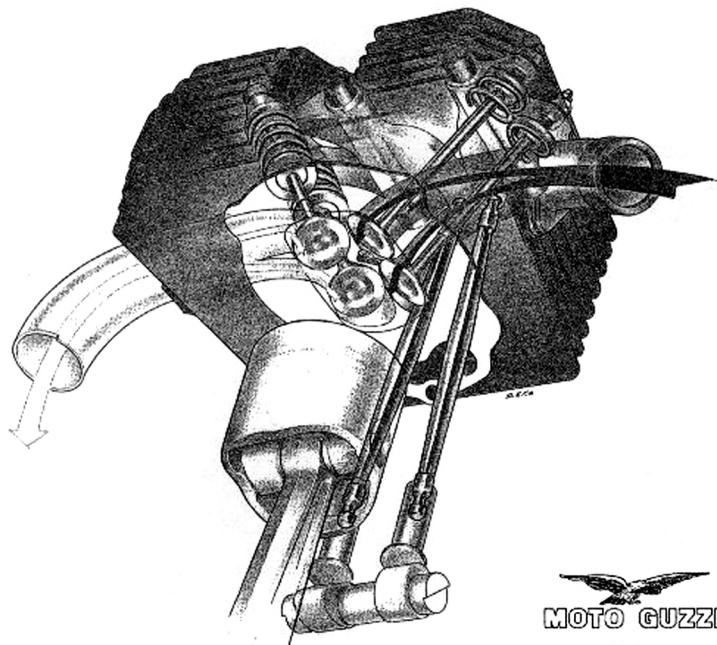
V35
Imola II

V50
Monza II

V65
Lario

COD. 27 92 01 61
Additions to the Workshop manual for the models V35 II - V35 IMOLA - V35 C - V50 III - V50
MONZA - V50 C - V65 - V65 SP - Cod. 23 92 01 80





By adopting the "four valves" system the engine thermo-dynamical efficiency was improved: higher power and torque with considerably reduced consumptions; this is due to a better filling-up and emptying of cylinders which benefits of the gas kinetic energy in ducts having reduced power leakages.

A special study has been conducted on sizes and shapes of the same ducts: the pressure waves produced during the operating cycles are exploited to complete the filling up during admission stroke and for an efficient gas drawing out during exhaust stroke.

Moreover the two inlet ducts generate, inside the explosion chamber, a high turbulence which allows a total combustion to full advantage of performances, contributing to the perfect mixture of fuel charge.

The spark plug, placed at the head top center, allows a quick and even progress of the flame front; besides, during the admission stroke, it is efficaciously cooled by low temperature gasses admitted.

These results have been achieved by a system of remarkable constructive simplicity, not involving any specific maintenance or reliability problem.

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ENGINE

Cycle
Cylinders no.
Cylinder disposition

Bore (mm)
Stroke (mm)
Total capacity (cc)
Compression ratio
Max. power (HP)
Fiscal horsepower (HP)

Valve gearing

Timing data
Inlet
Exhaust
Valve clearance for
timing check
Valve operating clear-
ance between rocker
arms and valves
inlet
exhaust

Lubrication

Ignition

Initial (fixed) advance
Automatic advance
Total (fixed + automatic) adv.

Contact breaker points gap
Spark plugs
Electrodes gap

Fuel feeding

no. 2 Dell'Orto carbs. type

Exhaust

Generator-Alternator

Starting

TRANSMISSION

Clutch

Primary drive

by gears, ratio

V35 IMOLA II	V50 MONZA II	V65 LARIO
four stroke		
2		
Vee 90°		
66	74	80
50,6	57	64
346,22	490,29	643
10,5:1	10,4:1	10,3:1
40 at 8800 rpm	50 at 7800 rpm	60 at 7800 rpm
6	8	10
4 overhead valves each cylinder, with pushrod and rocker arms		
opens 18° before T.D.C. closes 50° after B.D.C. opens 53° before B.D.C. closes 15° after T.D.C.		
1 mm.		
0.10 mm. 0.13 mm.		
forced lubrication by lobe pump and insufficient oil pressure warn. light on the instrument clu- ster. Oil filters: wirenet filter inside the sump and re- placeable cartridge outside.		
by ignition distributor with double contact bre- aker and automatic advance by centrifugal mas- ses		
10°	10°	10°
20°	25°	25°
30°	35°	35°
mm 0.35+0.45 Champion Z6; NGK C9 H 0.6 mm.		
PHBH28	PHBH30	PHBH30
no. 2 tubes and 2 silencers connected		
installed on the front side of crankshaft (14V- 20A)		
electric starter (12V-0.7 Kw) with electromagnetic ratchet control		
single disc, dry type with diaphragm spring; hand controlled by lever on L.S. of handlebar Z=(13/23) 1:1.7692 Z=(15/22) 1:1.4666 Z=(16/21) 1:1.3125		

		V35 IMOLA II	V50 MONZA II	V65 LARIO
Gearbox		5-speeds, frontal engagement, constant mesh. Pedal operated on the centre L.H. side of the bike.		
Gear ratios:		1st speed 1:2.3636 (Z=11/26) 2nd speed 1:1.6428 (Z=14/23) 3rd speed 1:1.2777 (Z=18/23) 4th speed 1:1.0555 (Z=18/19) 5th speed 1:0.9000 (Z=20/18)		
Secondary drive	Ratio	by cardan shaft, bevel gear set.		
	Overall gear ratios (engine/wheel)	1:3.875 (Z=8/31)		
	1st speed	1:16,2045	1:13,4333	1:12,0213
	2nd speed	1:11,2630	1:9,3369	1:8,3555
	3rd speed	1:8,7601	1:7,2650	1:6,4987
	4th speed	1:7,2366	1:5,9990	1:5,3685
	5th speed	1:6,1702	1:5,1150	1:4,5773
FRAME		decomposable cradle, tubular structure		
Suspension	Front	telescopic fork with oleo-pneumatic shock-absorber		
	Rear	swinging fork with adjustable springs concentric to the oleo-pneumatic shock-absorbers;		
Wheels		light alloy casting rims of sizes		
	Front	MT H2 - 2.15 x 16"		
	Rear	MT H2 - 2.50 x 16"		
Tyres	Front	100/90 V16 or 100/90 H16		
	Rear	120/90 V16 or 120/90 H16		
Brakes	Front	disc type with caliper having twin braking cylinders, controlled by hand lever on R.H. handlebar		
	Disc Ø	mm 270		
	Braking cylinder Ø	mm 32		
	Master cylinder Ø	mm 12.7		
	Rear	disc type with caliper having twin braking cylinder, controlled by pedal on the centre R.H. side of the bike.		
	Disc Ø	mm 235		
	Braking cylinder Ø	mm 32		
	Master cylinder Ø	mm 15.875		
		The rear brake is connected by an hydraulic transmission to a second brake on the front wheel (L.H.) havin the same features and sizes as the hand controlled front brake (R.H.)		
Dimensions and weights	Wheelbase (loaded)	1.455 m.		
	Max. length	2.070 m.		
	Max. width	0.660 m.		
	Max. height	1.180 m.		
	Dry weight Kg.	168	170	172
Performances	Top speed (solo riding)	over 170 Km/h	over 185 Km/h	over 195 Km/h
	Fuel consumption (l.x100/Km)	4.8	5.2	5.6

2 INSTRUMENT AND CONTROL DEVICES

2.1 Instrument panel (fig. 207)

1 Ignition key:

- «OFF» in line with «C» mark: stationary vehicle. Key removable (no contacts).
- «A» in line with «C» mark: (key turned clockwise): vehicle ready to be started. All circuits ON. Key not removable.
- «B» in line with «C» mark: (key turned clockwise); vehicle at stand-still. With switch «A» in fig. 208 on «PARK» position, parking light on. Key removable.

2 Voltmeter.

3 Rev-counter.

4 Speedometer, Km. or miles.

5 Zero reset for odometer.

6 Warn. light (green) for left turn signal.

7 Warn. light (green) for right turn signal.

8 Warn. light (bleu) indicating high beam on.

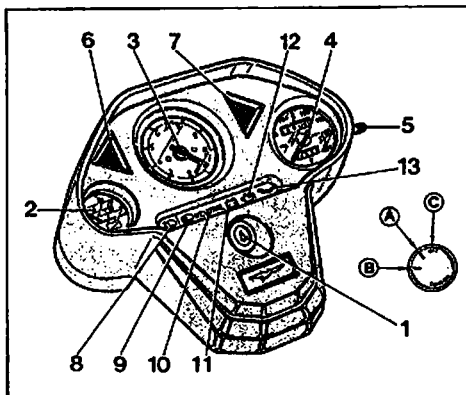
9 Warn. light (green) indicating parking lights on.

10 Warn. light (green «Neutral») lights up only when the gearbox in neutral.

11 Warning light (red) indicating current delivery from generator. Should go out when engine has reached a certain number of revs.

12 Warning light (red) oil pressure gauge. Goes out when oil pressure is sufficient for normal engine lubrication. If it does not, this means oil pressure is not correct and in such an event the engine should be immediately stopped and all circuits checked over.

13 Warning light available.



207

2.2 Lights switch - horn button and turn indicators (fig. 208)

«A» switch

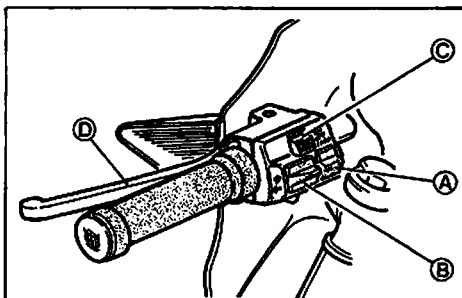
- «PARK» position parking lights.
- «ON» position dual beam lamp on.
- «OFF» position lights off.

«B» switch

- ➔ position R.H. indicator control.
- Position L.H. indicator control.

«C» push button

Horn control.



208

2.3 Starting push button - Lights switch and engine stop switch (fig. 208/A)

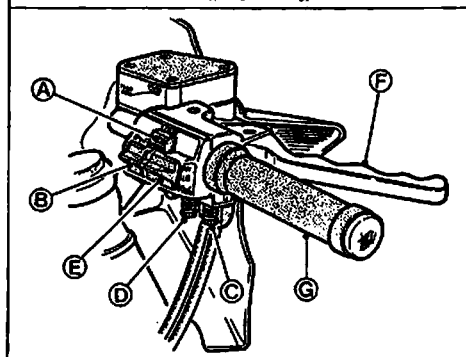
Located on the right side handlebar.

With key mark «A» in line with mark «C» (see fig. 207) the vehicle is ready to start.

«E» switch

with switch «A» (fig. 208) in «ON» position:

- «LO» position low beam.
- «HI» position high beam.
- «Flash» position headlight flash.



208/A

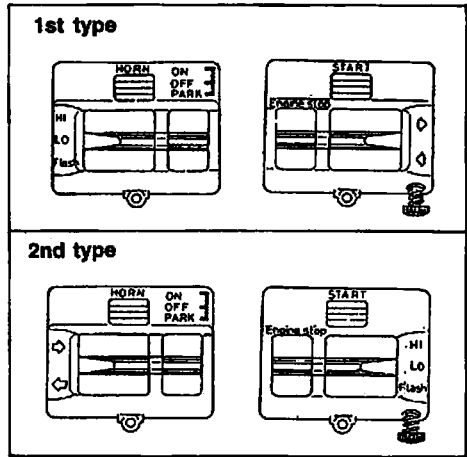
2.4 Special instructions to replace the 1st type controls with the ones of new type (for V65 Lario only).

The new controls are interchangeable with the previous ones (as pair only), the previous one not being supplied as spares anymore; therefore in case of need of one pre-modification control, it is necessary to install new controls, right and left side at the same time.

Besides, for installing the new type controls on a vehicle originally fitted with pre-modification controls, it is necessary to effect the following cable modifications on the 9-pos. connectors in the main wiring harness.

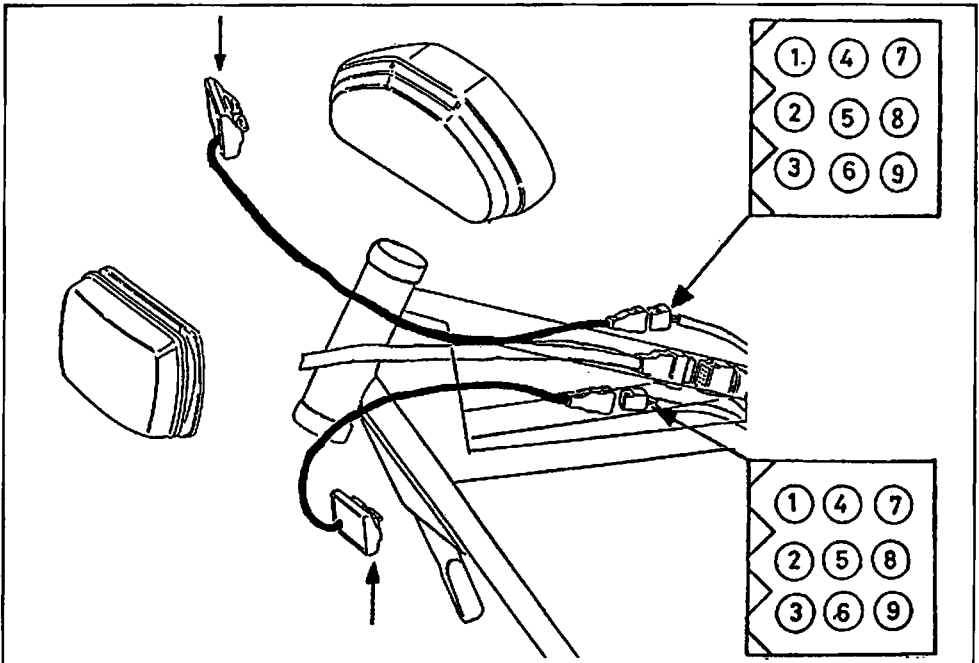
Reference numbers are printed on the connector body.

- Extract from connector of R.H. control:
 - no. 1 pink wire
 - no. 2 orange wire
 - no. 3 black/green wire
- Extract from connector of L.H. control:
 - no. 4 red wire
 - no. 5 grey/green wire
 - no. 6 brown wire
- Take the red wire removed from the L.H. connector and insert it at no. 2 of the same L.H. connector; the pink wire extracted from R.H. connector has to be inserted at no. 6 of L.H. connector; the orange wire extracted from R.H. connector has to be inserted at no. 5 of L.H. connector; the black/green wire extracted from R.H. connector has to be inserted at no. 4 of L.H. con-



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- connector; the grey/green wire extracted from L.H. connector has to be inserted at no. 2 of R.H. connector; the brown wire extracted from L.H. connector has to be inserted at no. 3 of R.H. connector.
- Add a connection wire (0.75 mm. section) between the two R.H. and L.H. connector at no. 1 of each one.
- From R.H. connector no. 8 add a wire (0.75 mm. section) and connect in parallel to no. 9 of L.H. connector.



210

3 MAINTENANCE OPERATIONS

A good maintenance and efficiency of all engine and vehicle components are mainly depending upon a careful and periodical maintenance.

The distances and periods mentioned for the different maintenance operations are referred to a normal use of motorcycle. When motorcycle is used on uneven roads or at continuous high speeds specially on highways, more frequent verifications and checks are suggested.

Your vehicle is equipped with a tool kit suitable for first emergency repairs.

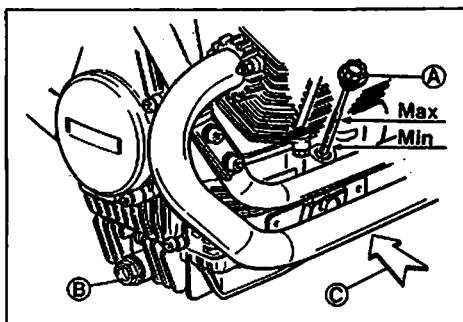
3.1 Engine lubrication (fig. 211)

Oil level check

Every 500 km check the oil level in the engine crankcase (oil must be near the max. notch engraved on the measuring stick of plug «A»).

If oil is under the prescribed level, add it in the quantity and type mentioned.

This check has to be carried out after some turns of the engine; plug «A» with measuring stick must be screwed in totally.



211

Oil change

After the first 500-1000 km and later every 3000 km about renew oil in the crankcase sump. Renewal must be arrange with **hot engine**.

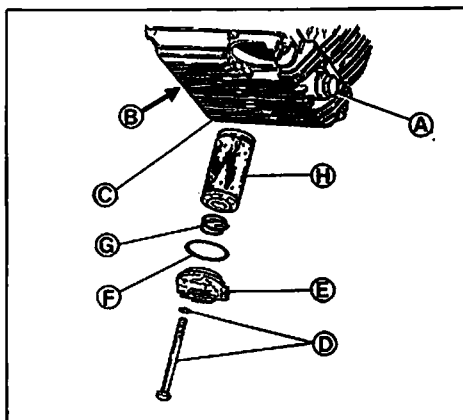
Before filling up with fresh oil, remind to have the crankcase sump completely drained out.

«A» admission plug.

«B» front side drain plug.

«C» rear side drain plug.

Quantity necessary: 2 l of «Agip SINT 2000 SAE 10W/50» oil.



212

3.2 Replacement of filtering unit in the crankcase sump (fig. 212)

After the first 500-1500 Km. (first oil change) and later every 6000 Km. about, replace the filtering unit acting as follows:

■ unscrew «A» and «B» drain plugs from sump «C» and filling plug («A» in fig. 211) too.

■ drain out oil from sump;

■ unscrew the screw with washer fastening the «D» cartridge and extract from sump the full assembly including cover «E», gasket «F», spring «G» and filtering unit «H»;

■ replace the cartridge «H» and eventually the seal ring on cover «F».

At the end of this operation reinstall all pieces in a reversed sequence with respect to removal and fill up with prescribed oil before screwing in the plug in the admission hole totally.

3.3 Cleaning of wirenet filter and engine crankcase sump

It is advisable, after the first 500-1500 Km. (first oil change and cartridge renewal) and later every 15000 Km., to remove the oil sump from crankcase, extract the wirenet filter and wash all of them in a petrol bath; then blow into the filter and the sump channels with compressed air. When reinstalling the sump on the crankcase remind that gasket sump-crankcase has to be renewed.

3.4 Gearbox lubrication (fig. 213)

Oil level check

Every 3000 km. check the level as shown in figure; if oil is under the prescribed level, add it in the quantity and type as mentioned.

Oil renewal

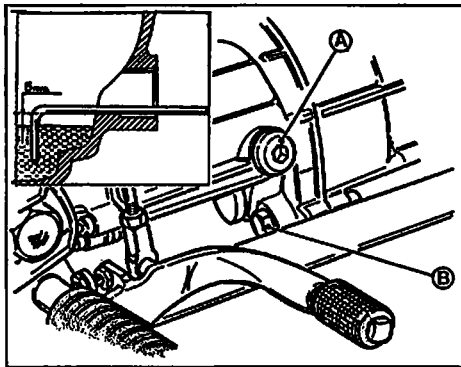
Every 9000 km. about, renew oil into the gearbox. Renewal has to be made with hot gearbox, since under these conditions oil is fluid and easy to come out.

Before filling with fresh oil, remind to have the gearbox well drained.

«A» admission plug and measuring stick;

«B» draining plug.

Quantity necessary: 0,900 l. of «Agip Rotra MP SAE 85 W/140» oil.

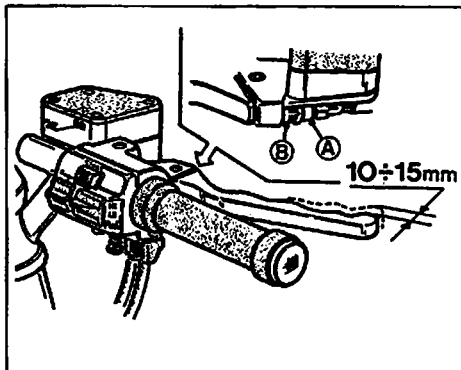


213

3.5 R.H. front brake lever adjustment (fig. 214)

Between pump float-reservoir and the control lever appendix a certain play is foreseen. It is possible to adjust this play changing the quantity of «B» washers placed on the STOP switch «A» positioned beneath the pump body-transparent reservoir.

- prescribed play 10 ± 15 mm.



214

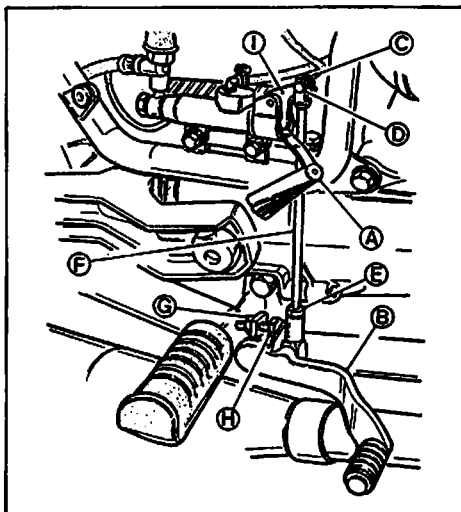
3.6 Rear and L.H. front brake control pedal adjustment (fig. 215)

Arrange checking of the play between pump control float and control lever «I» acting as follows:

- between pump float and lever appendix place a feeler gauge «A»;
- foreseen play 0.50 ± 0.15 mm.
- if the play does not correspond, you have to:
 - loosen counter-nut «G» and screw in or out screw «H» up to reaching the above play.

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

- remove cotter pin «C», extract pin «D», loosen counternut «E» and screw in or out «F» tie-rod up to getting the desired position of control pedal;
- refit pin «D» with its cotter pin «C»;
- then adjust screw «H» up to getting the prescribed play between lever «I» and pump float.



215

3.7 Valve tappet play checking (fig. 216)

After the first 500-1500 Km. and later every 3000 Km. about or when valve timing is too noisy, check the valves-rocker arms play.

Adjustment must be carried out with cold engine, piston at T.D.C., compression stroke (closed valves).

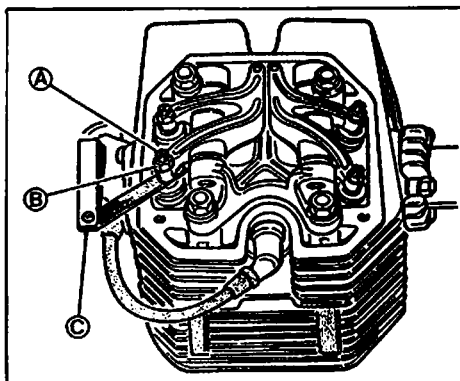
After removal of the head covers, act as follows:

- 1 Loosen nuts «B»
- 2 Screw in or out the setscrew «A» up to getting the following plays:
 - inlet valves 0.10 mm
 - exhaust valves 0.13 mm

This measure has to be taken using a special feeler gauge «C».

Take into account that if play is higher than the prescribed one, tappets are too noisy; on the contrary valves do not close perfectly causing inconveniences as:

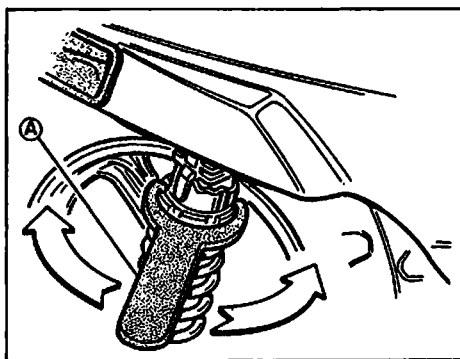
- pressure leakage;
- engine overheating;
- valves burnt etc.



216

3.8 Rear suspensions adjustment (fig. 217)

Suspension springs can be adjusted in five different positions, using a special wrench «A».



217

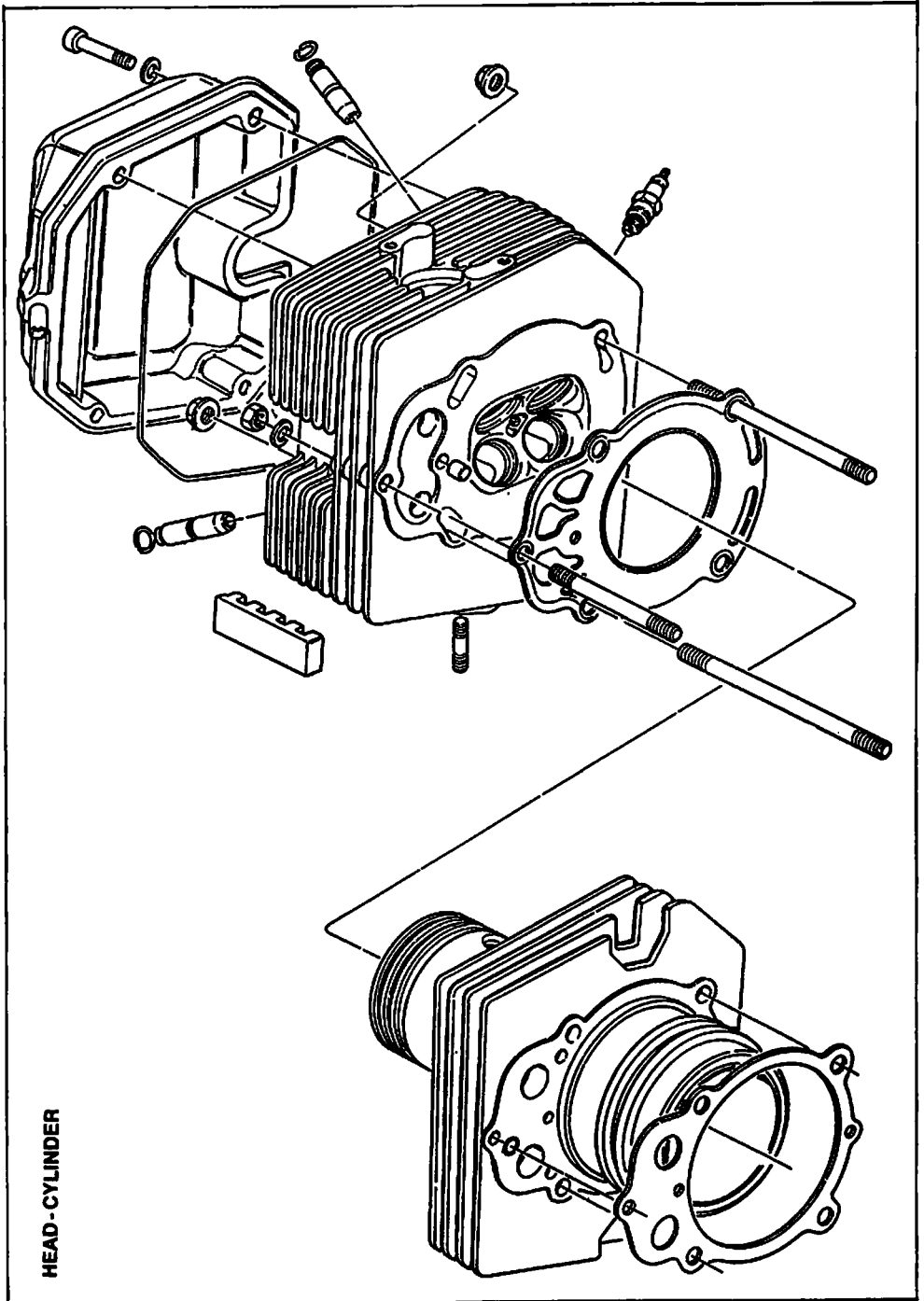
3.9 Refuelings.

Parts to fill up	Quantity	Recommendation
Fuel tank (reserve 2 l about)	18	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 85 W/140» oil
Rear drive box	0,170, of which: 0,160 0,010	«Agip Rotra MP SAE 85 W/140» oil «Agip Rocol ASO/R» oil or Molykote Tipo «A» oil
Front fork (each leg)	0,100	«Agip F.1 ATF Dexron» fluid
Braking system (front and rear)		«Agip F.1 Brake Fluid SAE J 1703 B»

3.10 Engine lubrication

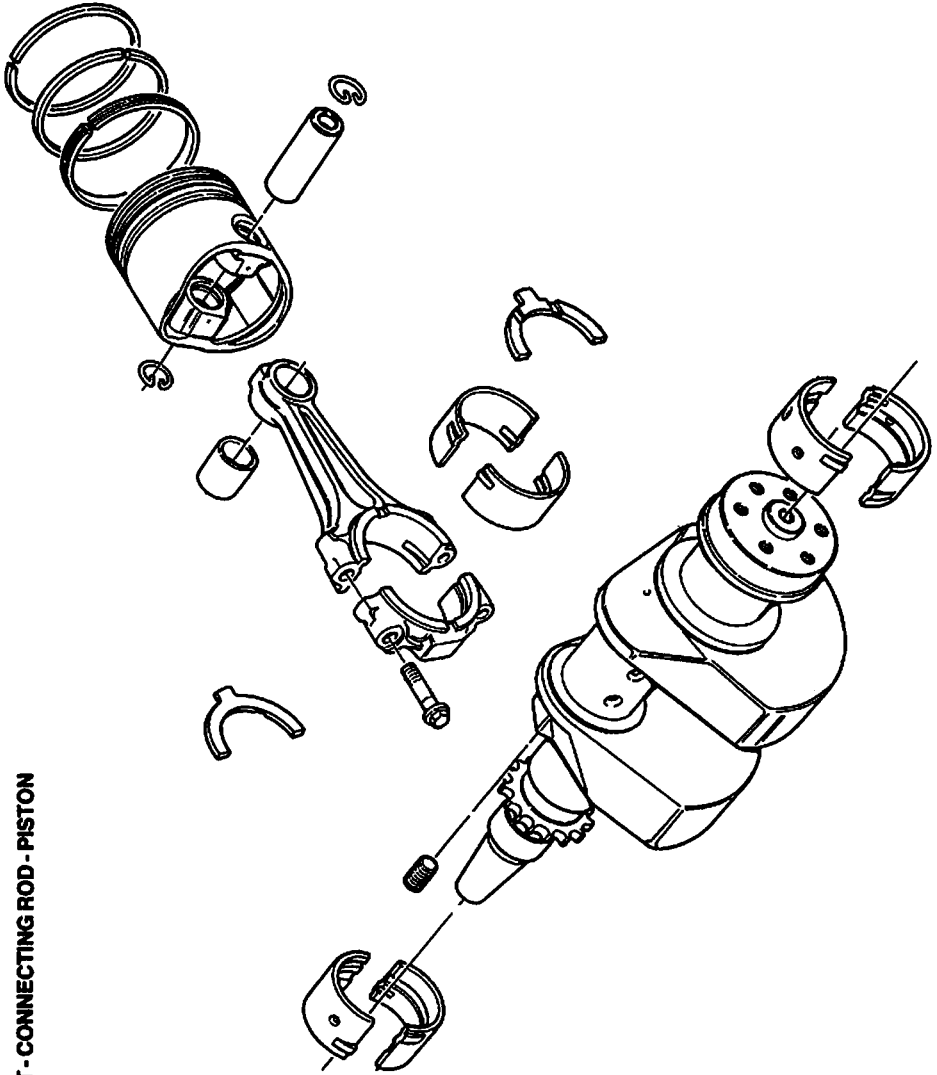
ITEMS	COVERED MILEAGE ▶	1500 km	3000 km	6000 km	9000 km	12,000 km	15,000 km	18,000 km	21,000 km	24,000 km	27,000 km	30,000 km
Engine oil		R	R	R	R	R	R	R	R	R	R	R
Oil filter cartridge		R		R				R		R		R
Wire gauze oil filter		C					C					C
Air filter				C	R		C	R		C	R	
Ignition timing		A	A	A	A	A	A	A	A	A	A	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
Carburation		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 system 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

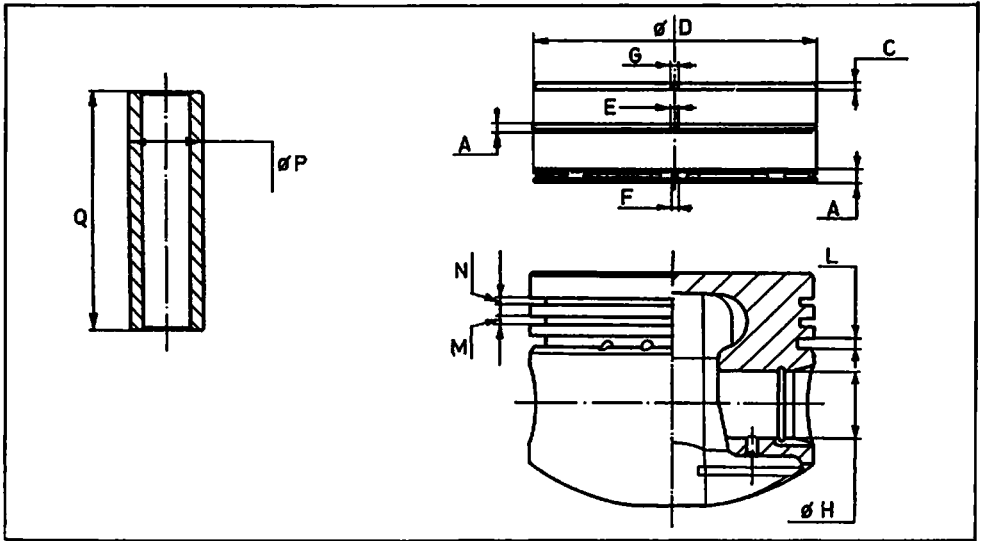
A = Inspection - Adjustments - Possible replacements - Servicing / C = Cleaning / R = Replacements.
 Operation required for maintaining the vehicle according to emission regulations (USA).
 Occasionally, check the electrolyte level in battery, lubricate joints and cables; every 500 km (300 miles) check the engine oil level.
 In any case, renew this oil at least once a year.



HEAD-CYLINDER

CRANKSHAFT - CONNECTING ROD - PISTON





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	A	B	C	D	E	F	G	H	L	M	N	P	Q
V35 IMOLA II	3,990 ÷ 3,975	1,990 ÷ 1,978	1,490 ÷ 1,478	65,982 ÷ 66,000	0,25 ÷ 0,45	0,20 ÷ 0,45	0,25 ÷ 0,45	18,002 ÷ 17,998	3,04 ÷ 3,02	1,54 ÷ 1,52	1,54 ÷ 1,52	18,000 ÷ 17,996	47,975 ÷ 47,936
V50 MONZA II	3,990 ÷ 3,975	1,990 ÷ 1,978	1,490 ÷ 1,478	73,982 ÷ 74,000	0,25 ÷ 0,45	0,20 ÷ 0,45	0,25 ÷ 0,45	18,002 ÷ 17,998	3,04 ÷ 3,02	2,04 ÷ 2,02	1,54 ÷ 1,52	18,000 ÷ 17,996	55,970 ÷ 55,924
V65 LARIO	3,990 ÷ 3,975	1,990 ÷ 1,978	1,490 ÷ 1,478	79,982 ÷ 80,000	0,3 ÷ 0,5	0,25 ÷ 0,50	0,3 ÷ 0,5	20,002 ÷ 19,998	3,04 ÷ 3,02	2,04 ÷ 2,02	1,54 ÷ 1,52	20,000 ÷ 19,996	62,970 ÷ 62,924

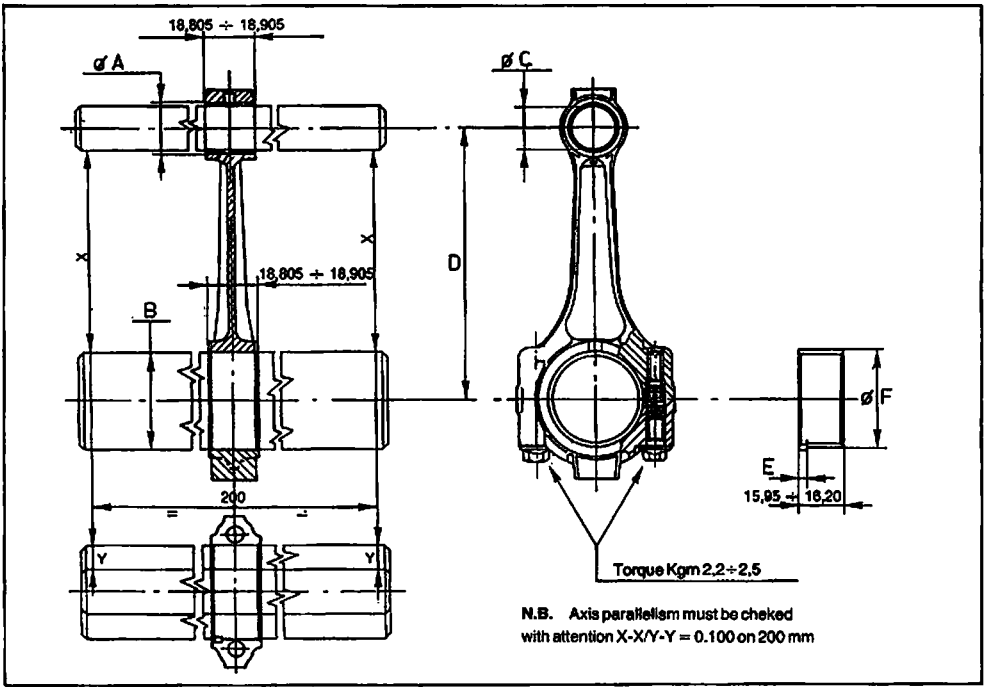
Piston diameter selection

	«A» GRADE	«B» GRADE	«C» GRADE
V35 IMOLA II	65,982÷65,988	65,988÷65,994	65,994÷66,000
V50 MONZA II	73,982÷73,988	73,988÷73,994	73,994÷74,000
V65 LARIO	79,982÷79,988	79,988÷79,994	79,994÷80,000

Cylinder diameter selection

	«A» GRADE	«B» GRADE	«C» GRADE
V35	66,008÷66,014	66,014÷66,020	66,020÷66,026
V60	74,008÷74,014	74,014÷74,020	74,020÷74,026
V66	80,000÷80,006	80,006÷80,012	80,012÷80,018

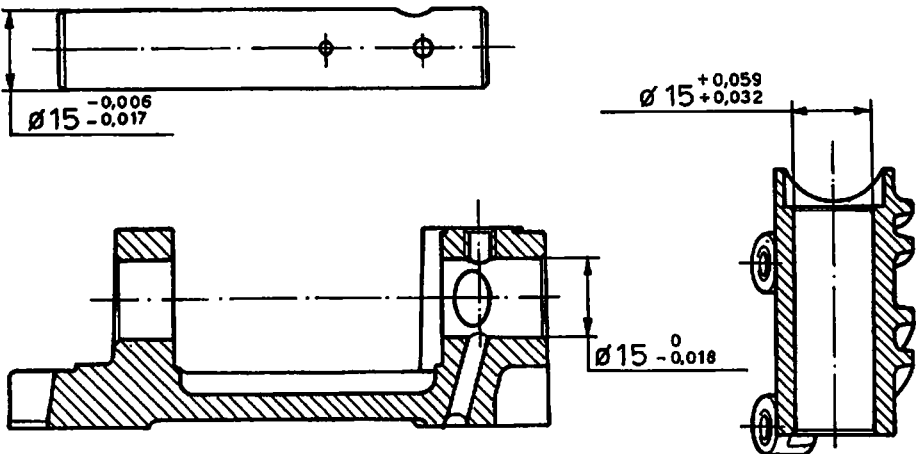
In case of installation of new assembly, cylinders of «A-B-C» sizes have to be matched together with the corresponding pistons chosen in «A-B-C» sizes. Installation tolerances pistons-to-cylinders: 0.012+0.024 mm.



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	A	B	C	D	E	F
V35 IMOLA II	20,000	38,103	18,01	106,45	2,9	38,119
	20,021	38,115	18,02	106,55	3	
V50 MONZA II	20,000	38,103	18,01	106,45	2,9	38,119
	20,021	38,115	18,02	106,55	3	
V65 LARIO	23,000	43,657	20,005	119,95	4,44	43,670
	23,021	43,670	20,015	120,05	4,57	

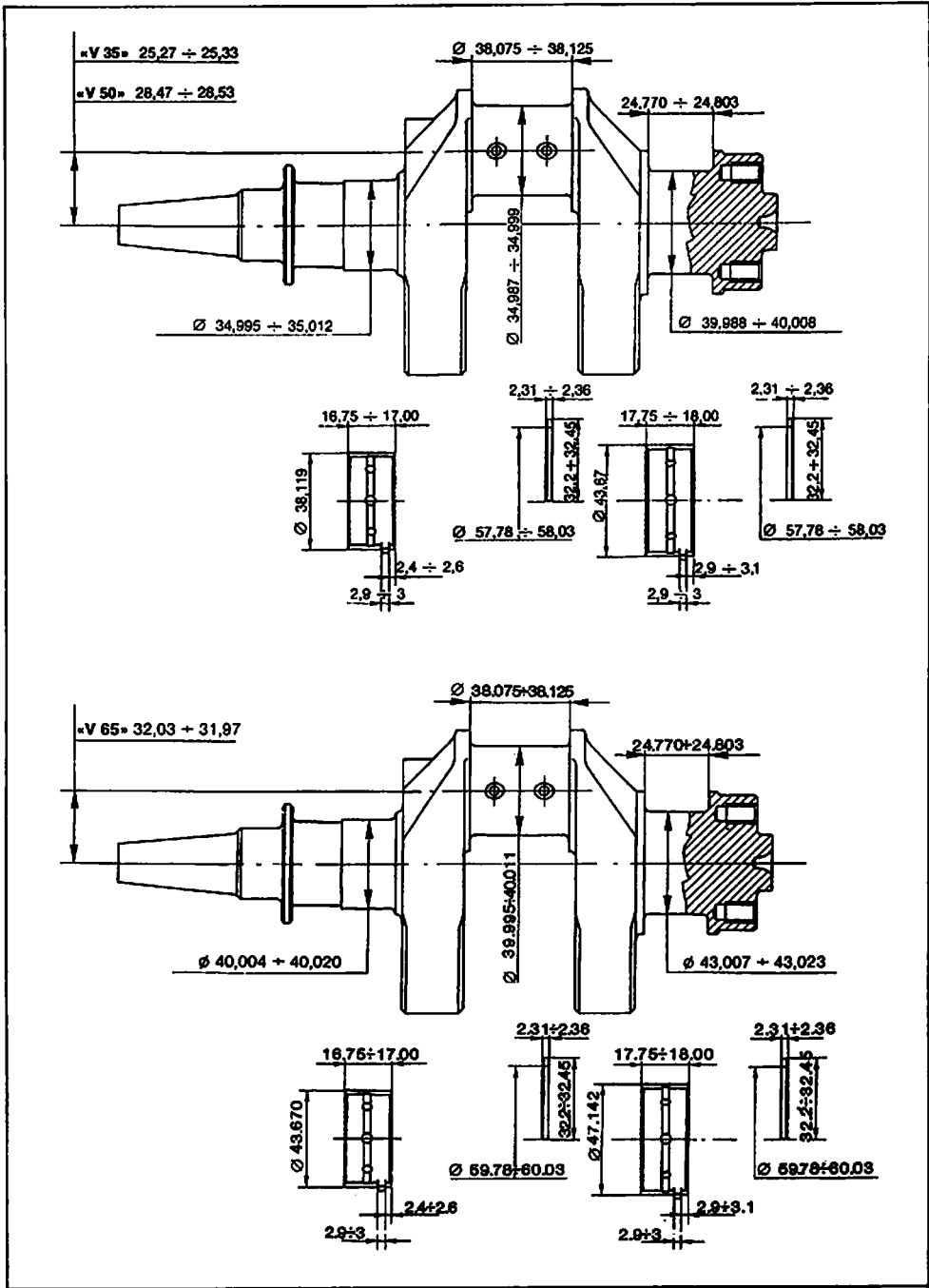
TOWER - ROCKER ARM - SHAFT

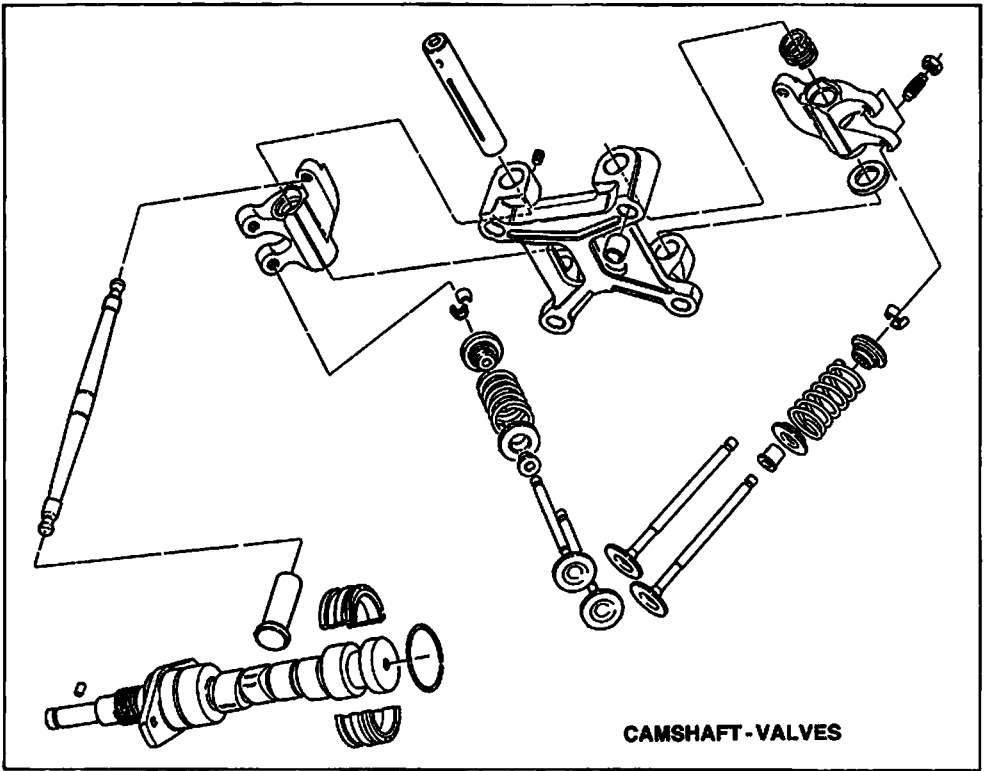


222

To statically balance the crankshaft, apply a load as follows to the crankpin:

Kg 0,884±0,887 for V35 IMOLA II
Kg 0,937±0,940 for V50 MONZA II
Kg 1,186±1,189 for V65 LARIO





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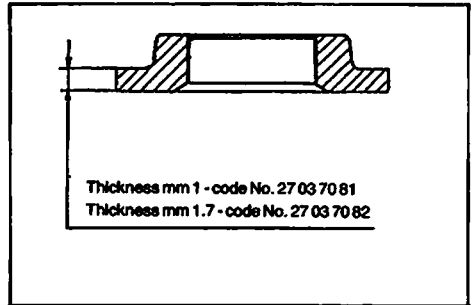
Lower caps for valve springs (for V65 Lario model only)

On a small quantity of engines we have installed heads-cylinders having lower caps of valve springs of thickness 1.7 mm. instead of 1 mm.. When overhauling, therefore, it is advisable to comply with the original data of cap thickness installed on the head:

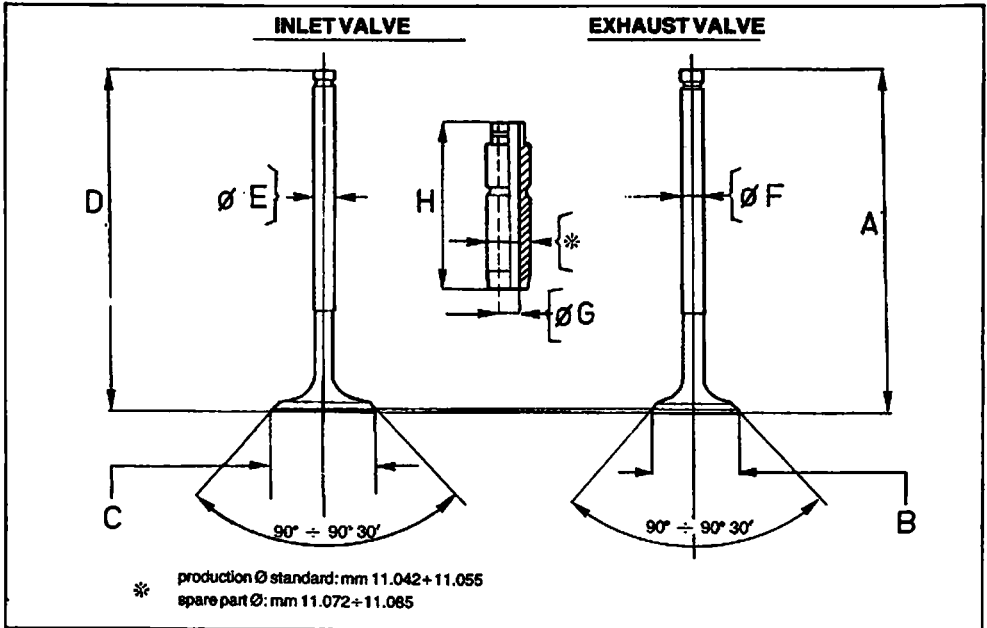
code no. 27 03 70 81 cap thickness 1 mm. (see spare parts catalogue)

code no. 27 03 70 82 cap thickness 1.7 mm.

Cap p/n 27 03 70 82 was installed on engines starting from serial no. 000524 to 000685.

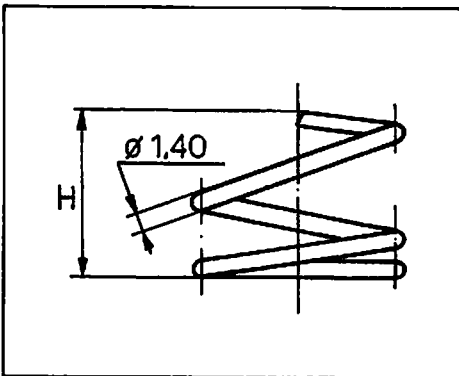


225

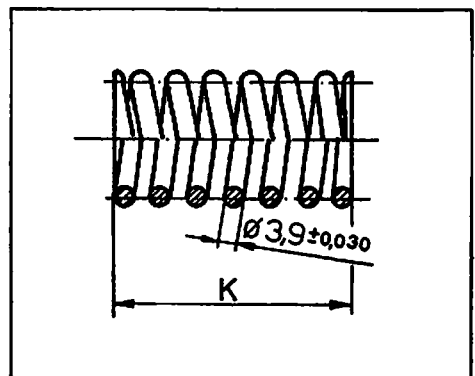


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	A	B	C	D	E	F	G	H
V35 IMOLA II	99,25 ±	21,6 ±	24,1 ±	99,25 ±	5,480 ±	5,480 ±	5,520 ±	46,5
	98,95	21,4	23,9	98,95	5,465	5,465	5,500	
V50 MONZA II	99,55 ±	24,1 ±	27,1 ±	95,65 ±	5,480 ±	5,480 ±	5,520 ±	46,5
	95,25	23,9	26,9	95,35	5,465	5,465	5,500	
V65 LARIO	95,55 ±	24,1 ±	27,1 ±	95,65 ±	5,480 ±	5,480 ±	5,520 ±	46,5
	95,25	23,9	26,9	95,35	5,465	5,465	5,500	



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ROCKER ARM SHAFT SPRING

Free length (H) = 14.5 mm
 Under load of 4 Kg. = 7.3 mm
 (installed spring)

VALVE SPRING

Free length (K) = 41.5 mm
 Under load of 26.1 Kg.
 (closed valve) = 36.3 mm
 Under load of 66.3 Kg.
 (open valve) = 28.3 mm.

5 FUEL FEEDING

5.1 Carburetors (fig. 229)

no. 2 Dell'Orto carbs. type:

V35 IMOLA II

PHBH 28 BD (R.H.)

PHBH 28 BS (L.H.)

V50 MONZA II

PHBH 30 BD (R.H.)

PHBH 30 BS (L.H.)

V65 LARIO

PHBH 30 BD (R.H.)

PHBH 30 BS (L.H.)

Carbs. setting data

Choke tube

Throttle valve

Spray nozzle

Main jet

Idle jet

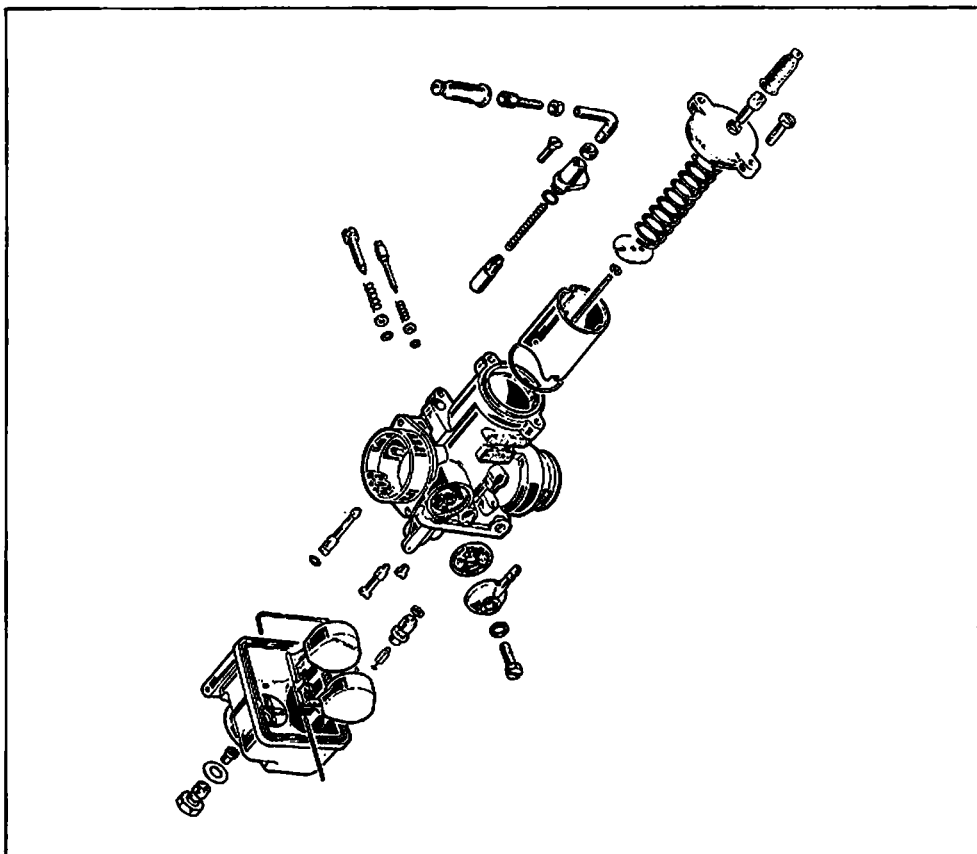
Starting jet

Needle jet

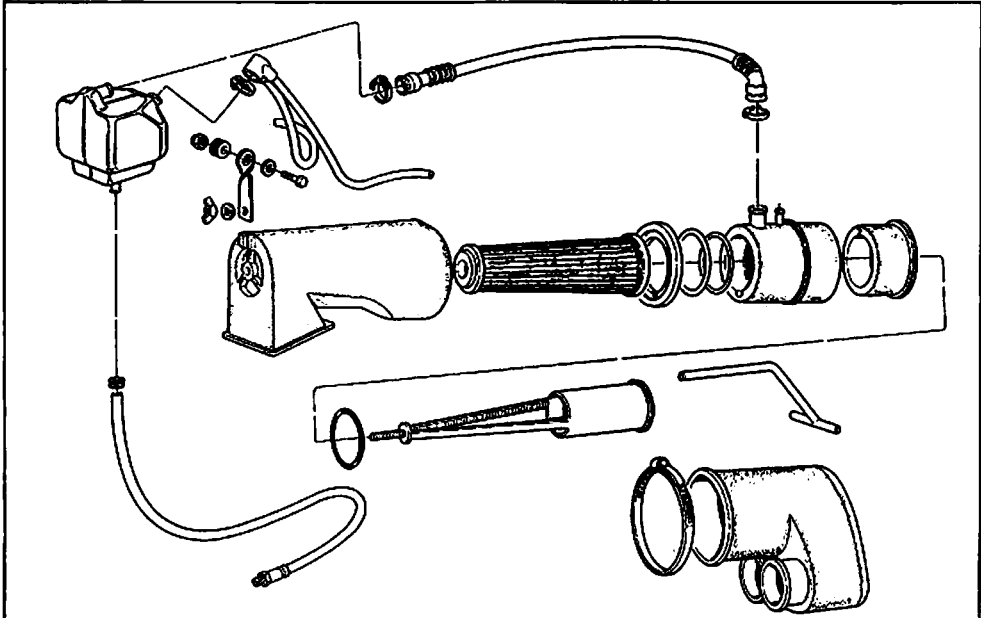
Float (gr.)

Idle mixt. adjust. screw: open

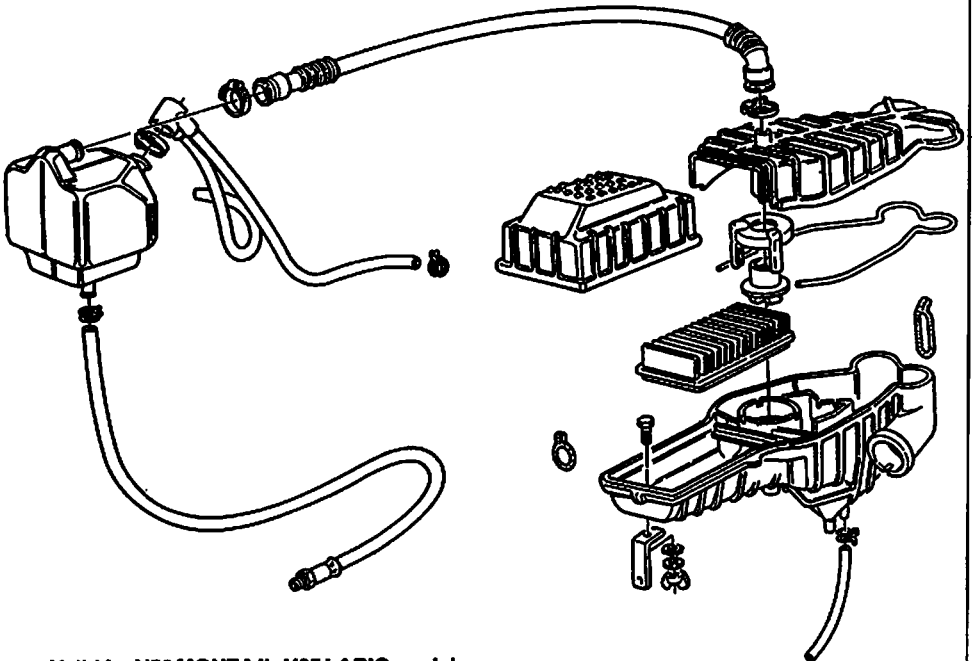
V35 IMOLA II	V50 MONZA II	V65 LARIO
28	30	30
30	40	40
262 CE	268 T	268 T
112	105	110
45	40	38
60	60	60
X24 (2nd notch)	X8 (1st notch)	X8 (2nd notch)
11,3	11,3	11
1 ½ turn	1 ½ turn	1 ½ turn



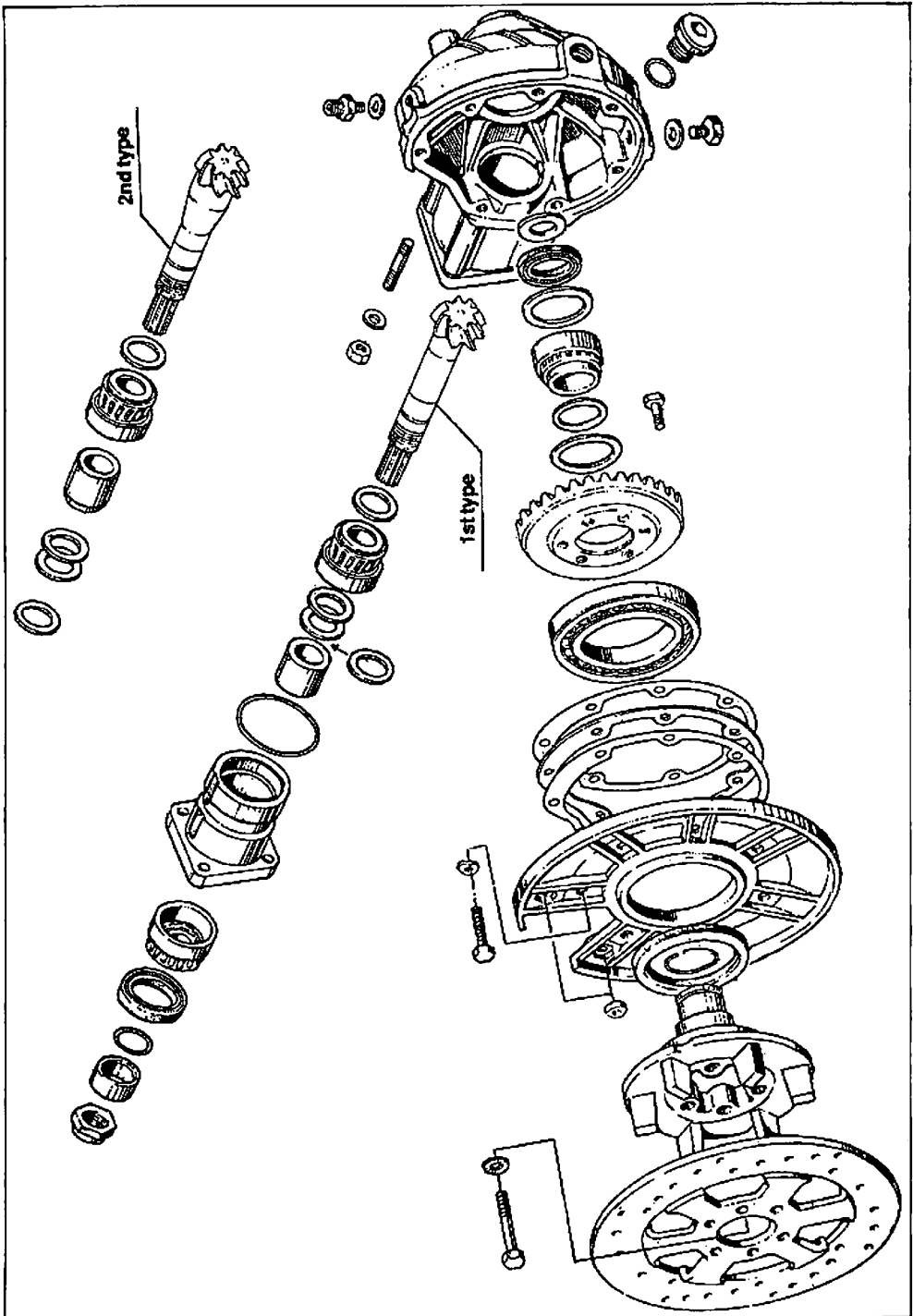
5.2 AIR CLEANER AND BREATHER WITH PIPES ASSEMBLY



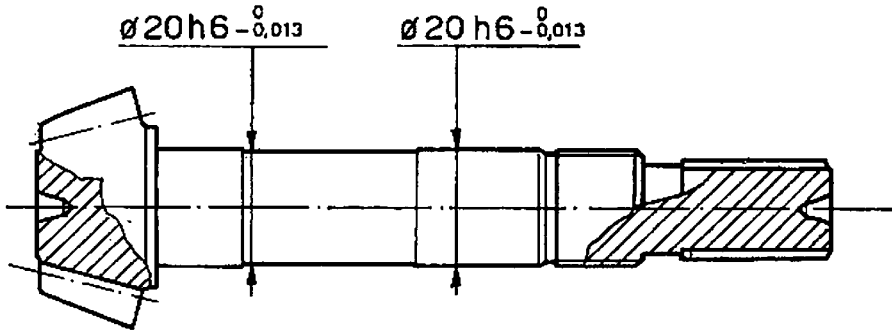
Valid for V35 IMOLA II model



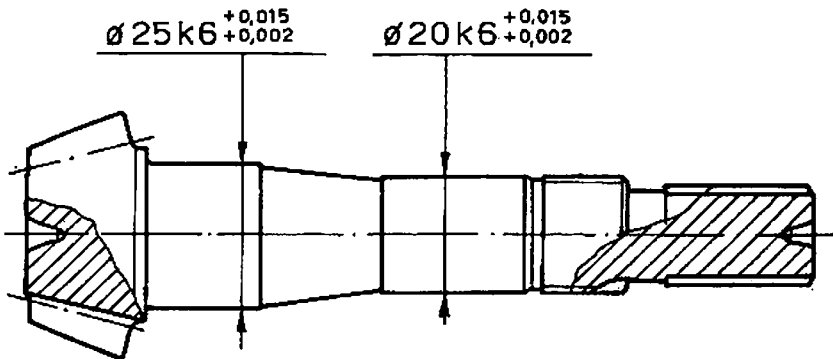
Valid for V50 MONZA II - V65 LARIO models



1st type

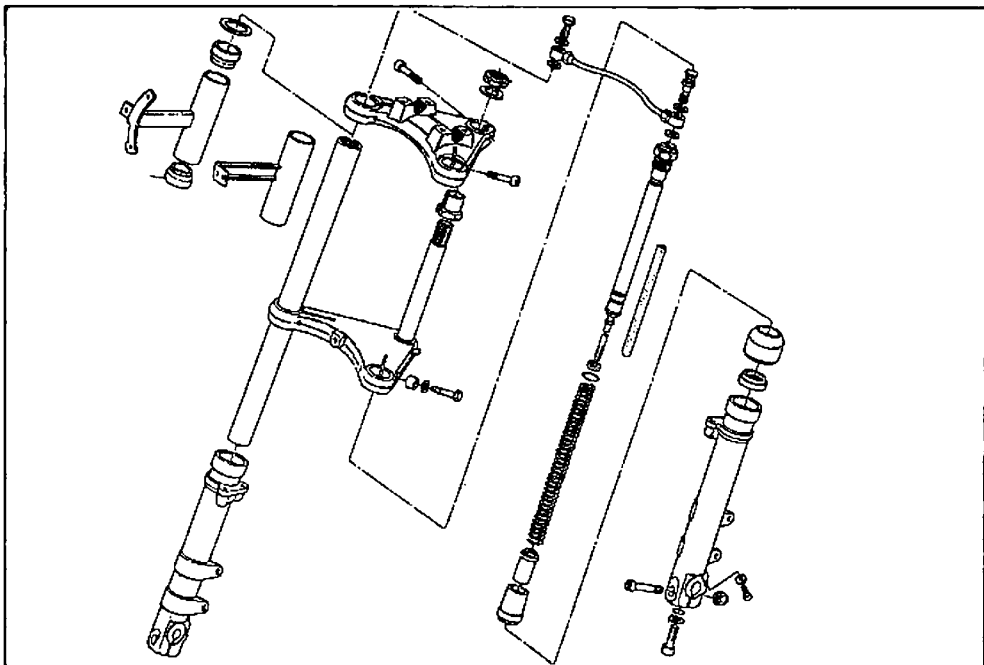


2nd type



Modification valid for previous models too

7 FRONT FORK



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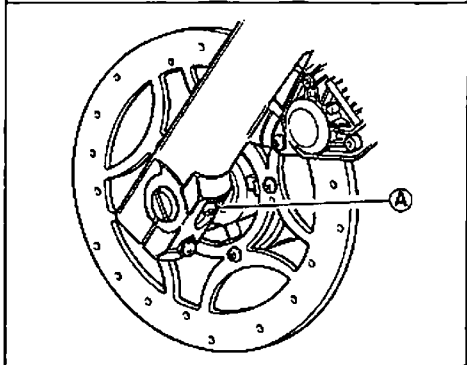
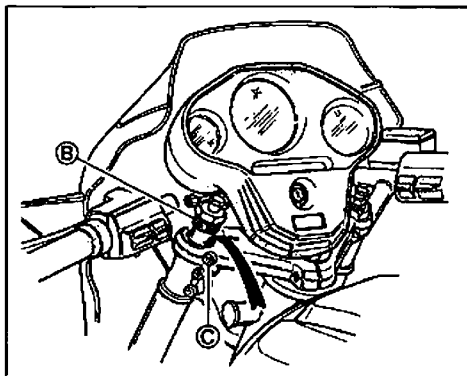
7.1 Technical data

stroke	140 mm
Ø tubes	34.24÷34.49 mm
Ø legs (inner)	34.76÷34.79 mm
oil quantity	100 cc (each leg)
dampers pressure	1 Kg/cm ²

7.2 Fork legs lubrication (fig. 234)

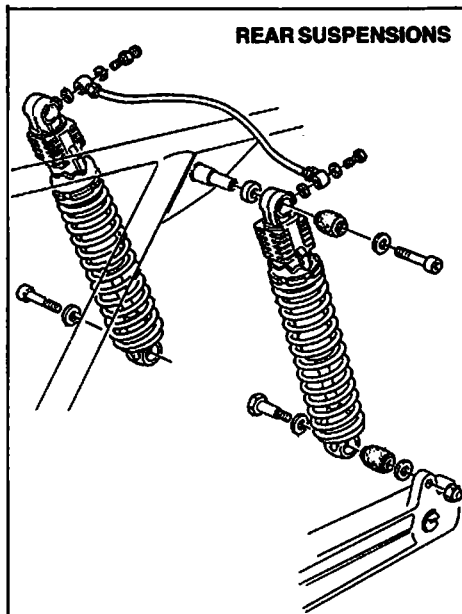
For front fork legs oil renewal, operate as follows:

- with the vehicle on the central stand, loosen side screw «C» fastening the steering head to the fork leg; disconnect the balance pipe and at the same time unscrew the upper plug with hex. head «B»; then remove the drain plug «A»;
- slightly pressing downwards the front side of vehicle, you will obtain plug «B» coming out, in one with the damper body.
- refit plug «A» and fill up with fluid in the prescribed quantity (100 cc of Agip F.1 ATF Dexron) through the space between the inner diameter of fork leg and the damper body;
- refit plug «B» after having lifted the front side of motorcycle and lock the side screw again. Repeat the same operations for the other side too;
- connect again the balance tube and re-establish the dampers pressure in compliance with prescribed figures.

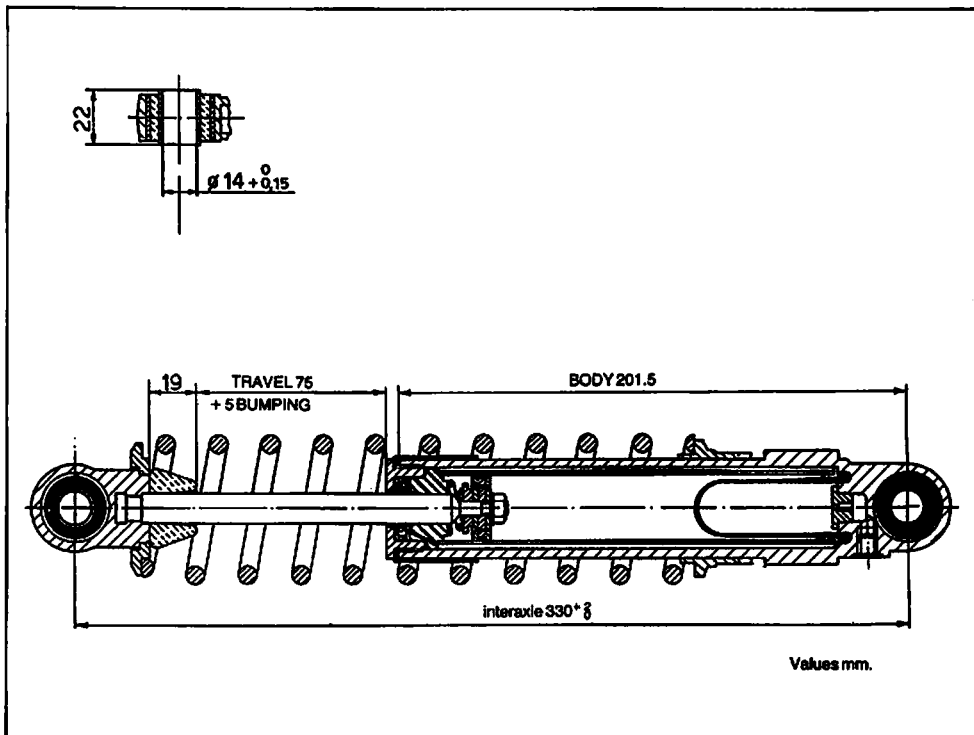


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The charge pressure of rear suspensions is $2 \pm 0.5 \text{ kg/cm}^2$.

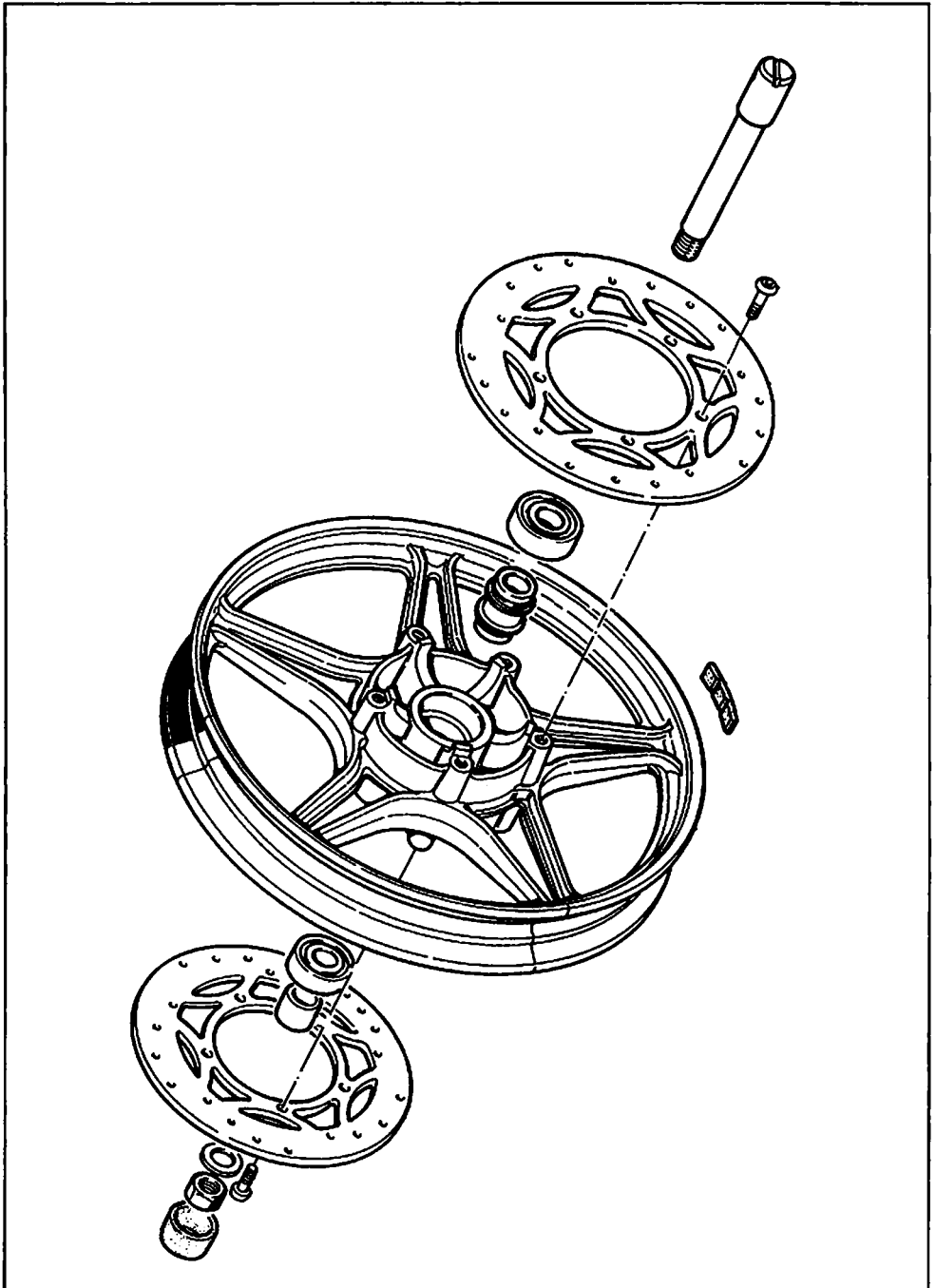


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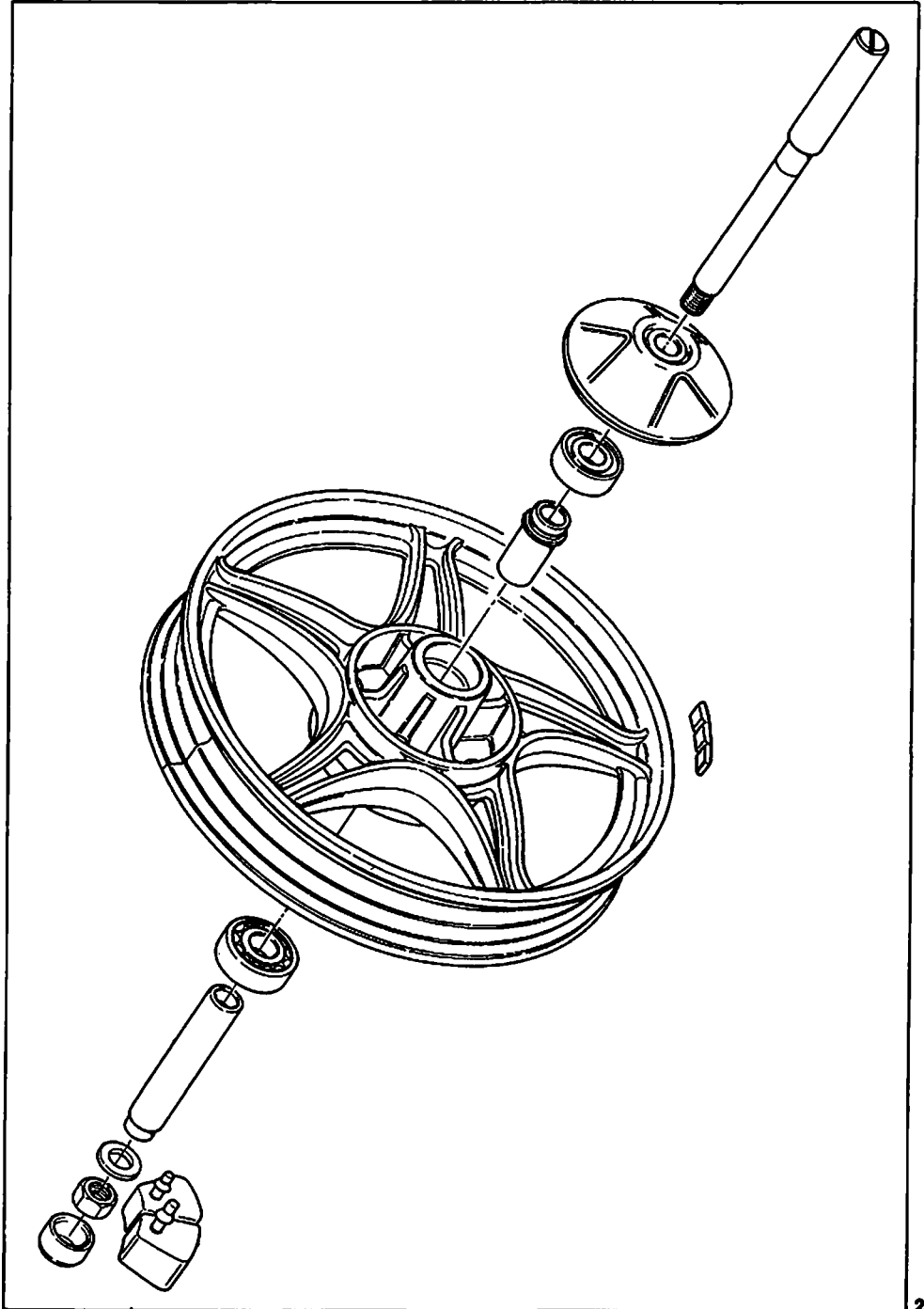


236

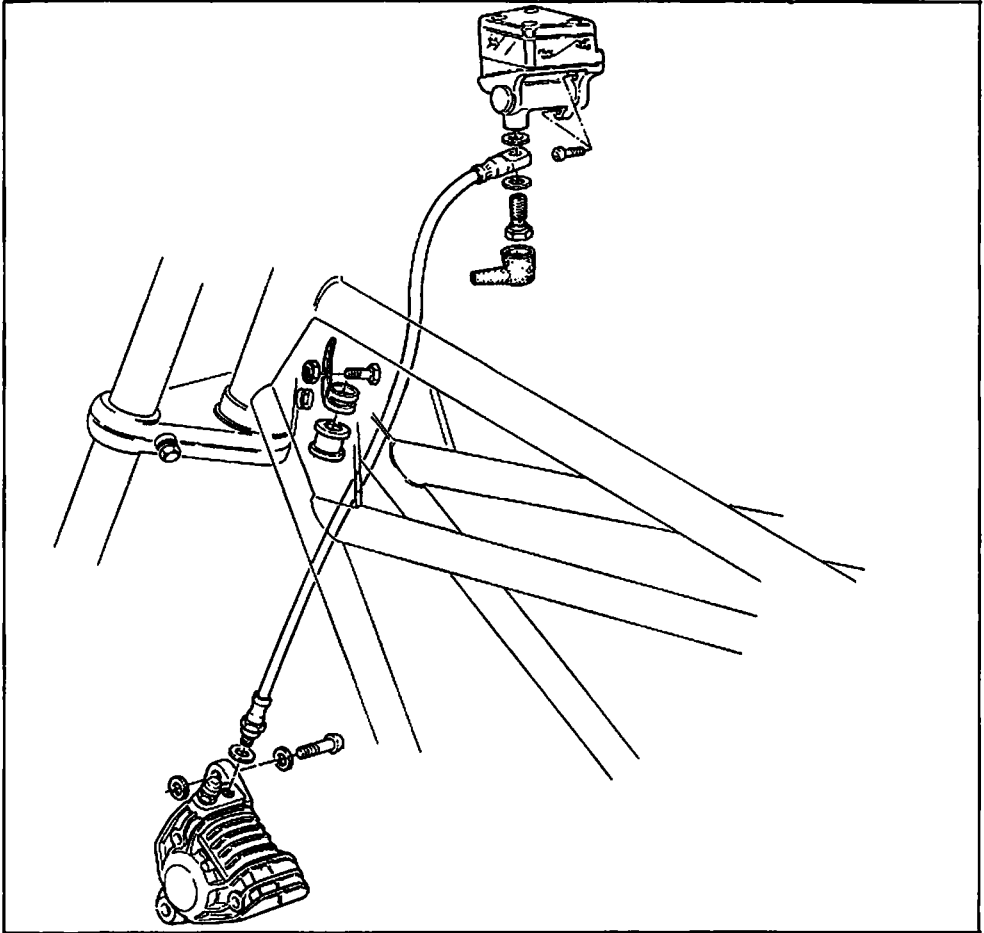
9.1 FRONT WHEEL



9.2 REAR WHEEL



9.3 R.H. FRONT BRAKING CONTROL PUMP



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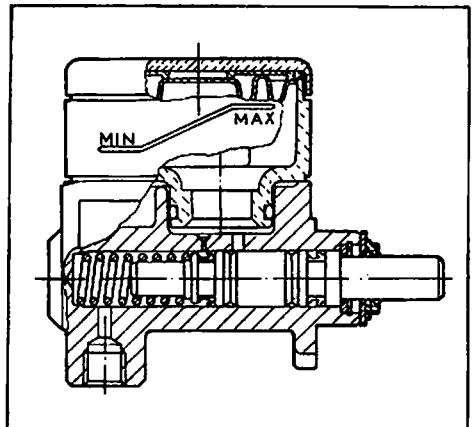
9.4 BRAKING DISCS

Thickness of front and rear braking discs (when new): $5.86 \div 6.14$ mm.

In case of replacement or overhauling of the discs, check for «wobbling»; this check has to be arranged using a dial gauge and the max. value has not to be higher than 0.2 mm.

If the disc wobbling is higher than the stated value, carefully check the installation of disc on hub and the wheel bearings play.

Locking torque of screw fastening the discs to the hubs is $2.2 \div 2.4$ kgm.



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Braking disc diameter	
FRONT DIA.	REAR DIA.
270 mm	235 mm

10 IGNITION

10.1 IGNITION SPECIFICATIONS

By ignition distributor, double breaker and automatic advance by centrifugal masses.

Initial advance (fixed)
Automatic advance
Total advance (fixed + automatic)
Breaker contacts distance:

V35 IMOLA II	V50 MONZA II	V65 LARIO
10°	10°	10°
20°	25°	25°
30°	35°	35°
mm 0.35 ÷ 0.45		

10.2 Spark plugs

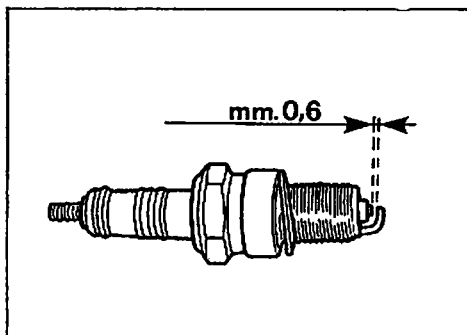
The spark plug types to be used are:

– Champion Z6; NGK C9H

Electrode gap: 0.6 mm.

When re-installing spark plugs, pay attention that are correctly seated and easily screwed into their holes; for this reason we suggest to screw in them by hand for a few turns, then tighten them with cold engine.

Even if spark plugs seem to be in very good conditions they have to be renewed after 9.000 Km.



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11 ELECTRIC SYSTEM

11.1 Headlight beam adjustment (fig. 242)

Headlight has always to be oriented at the correct height for a safe drive and not to disturb the crossing vehicles.

For the «horizontal» orientation, act on screw «A» while for «vertical» orientation, use screw «C» up to reach the prescribed height.

At a distance of 3 m. the center of high-beam must not result higher than 0.865 m. the motorcycle being on the ground and the pilot on the saddle.

Using lever «B» it is possible to quickly modify the vertical orientation, in order to conform it to the load conditions (1 or 2 persons seating on the saddle).

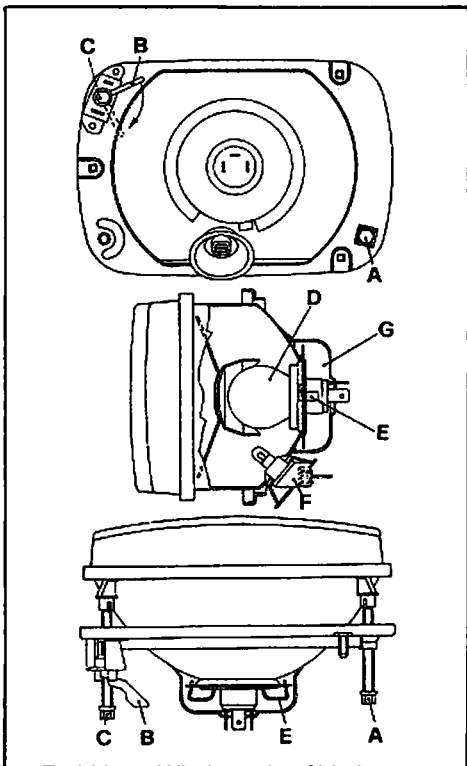
11.2 Bulbs replacement

Headlight (fig. 242)

In order to renew bulbs inside the headlight, from rear side disconnect the electrical wires; remove the rubber protecting cap «G» and release bulb «D» turning spring «E».

After having accomplished the installation, check not to have involuntary disconnected other electrical connections (particularly the feeding one of parking light).

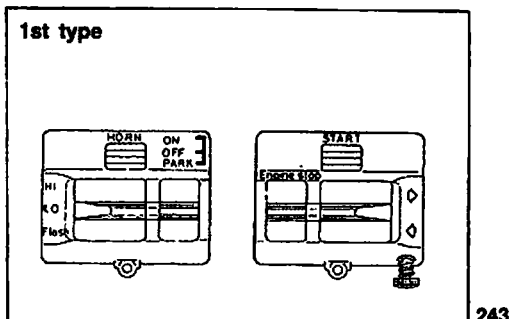
The bulb-holder with its bulb for parking light «F» is pressure inserted.



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Electrical wiring diagram legend

- 1 Speedometer (bulb 3W)
- 2 Rev-counter (bulb 3W)
- 3 Right front and rear turn indicator warn. light (1.2W-green)
- 4 Left front and rear turn indicator warn. light (1.2W-green)
- 5 «Neutral» warn. light (bulb 1.2W green)
- 6 «Oil pressure» warn. light (bulb 1.2 red)
- 7 «Generator» warn. light (bulb 1.2W)
- 8 «High beam» warn. light (bulb 1.2W - Bleu)
- 9 «Parking position» warn. light (bulb 1.2W - green)
- 10 Front parking light (bulb 4W)
- 11 Low beam 40 W
- 12 High beam 45 W (bulb 40/45W)
- 13 Front right turn flasher (bulb 21W)
- 14 Front left turn flasher (bulb 21W)
- 15 Control device: starting-stop control of engine and flashers
- 16 9-way connector
- 17 15-way connector
- 18 9-way connector
- 19 Control device: Horn - Flashing and light switch
- 20 Lights and engine ignition switch (3 positions)
- 21 Oil pressure switch
- 22 Neutral position switch
- 23 Horn
- 24 Voltmeter (bulb 3W)
- 28 Flasher box
- 29 Contact breaker
- 31 Ignition coils
- 32 Front brake switch
- 33 Rear brake switch
- 34 Rectifier
- 35 Alternator
- 36 Regulator
- 37 Battery
- 38 Terminal block with fuses (16A)
- 39 Starter motor relay
- 40 Starter motor
- 41 Rear left turn flasher (bulb 21W)
- 42 Rear right turn flasher (bulb 21W)
- 43 Tail light
- 44 Stop rear light (bulbs 21+21W)
- 45 Number plate, rear parking light (bulbs 5+5W)
- 46 6-way connector Molex

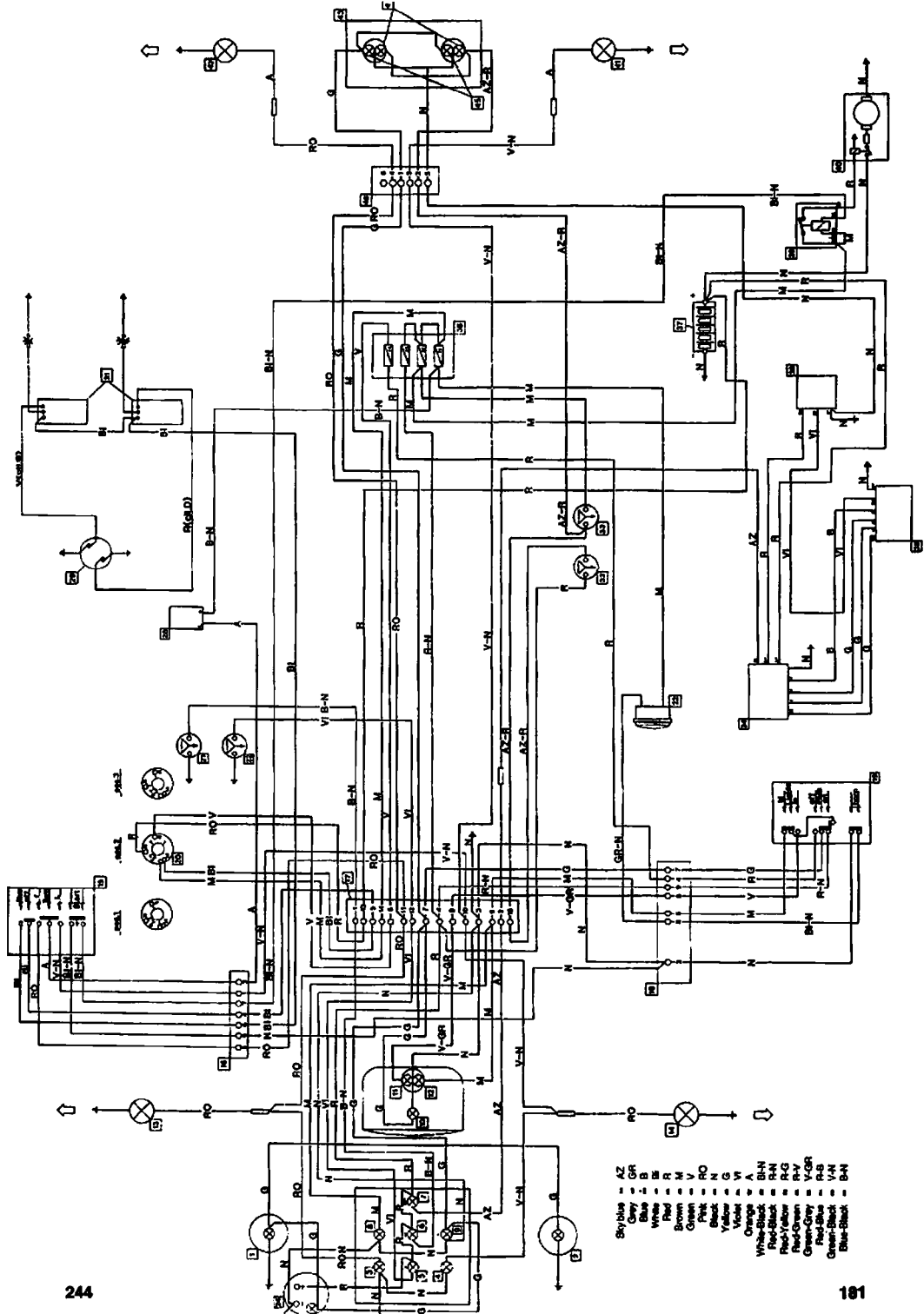


Fuse no. 1:
Flashers - horn

Fuse no. 2:
Flashing light switch - Starter motor relay - Stop rear switch

Fuse no. 3:
Warn. lights (generator - oil pressure - neutral position - high beam)

Fuse no. 4:
Parking light - Instrument lights - Lights warn. light.

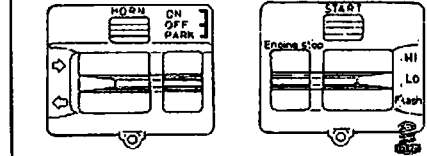


- AZ - Blue
- GR - Grey
- BL - Black
- WH - White
- BR - Brown
- RD - Red
- GN - Green
- PK - Pink
- YEL - Yellow
- VL - Violet
- OR - Orange
- WH-Blk - White-Black
- RD-Blk - Red-Black
- PK-Yel - Pink-Yellow
- RD-Grn - Red-Green
- PK-Blk - Pink-Black
- RD-Blk - Red-Black
- GR-Blk - Green-Black
- BL-Blk - Blue-Black

Electrical wiring diagram legend

- 1 Speedometer (bulb 3W)
- 2 Rev-counter (bulb 3W)
- 3 Right front and rear turn indicator warn. light (1.2W-green)
- 4 Left front and rear turn indicator warn. light (1.2W-green)
- 5 «Neutral» warn. light (bulb 1.2W green)
- 6 «Oil pressure» warn. light (bulb 1.2 red)
- 7 «Generator» warn. light (bulb 1.2W)
- 8 «High beam» warn. light (bulb 1.2W - Bleu)
- 9 «Parking position» warn. light (bulb 1.2W - green)
- 10 Front parking light (bulb 4W)
- 11 Low beam 40 W
- 12 High beam 45 W (bulb 40/45W)
- 13 Front right turn flasher (bulb 21W)
- 14 Front left turn flasher (bulb 21W)
- 15 High and low beam control device - Engine starting and stopping Headlight flashing
- 16 9-way connector
- 17 15-way connector
- 18 9-way connector
- 19 Horn control - Lights control switch - Direction indicators control
- 20 Lights and engine ignition switch (3 positions)
- 21 Oil pressure switch
- 22 Neutral position switch
- 23 Horn
- 24 Voltmeter (bulb 3W)
- 28 Flasher box
- 29 Contact breaker
- 31 Ignition coils
- 32 Front brake switch
- 33 Rear brake switch
- 34 Rectifier
- 35 Alternator
- 36 Regulator
- 37 Battery
- 38 Terminal block with fuses (16A)
- 39 Starter motor relay
- 40 Starter motor
- 41 Rear left turn flasher (bulb 21W)
- 42 Rear right turn flasher (bulb 21W)
- 43 Tail light
- 44 Stop rear light (bulbs 21+21W)
- 45 Number plate, rear parking light (bulbs 5+5W)
- 46 6-way connector Molex

2nd type



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Fuse no. 1:
Flashers - horn

Fuse no. 2:
Flashing light switch - Starter motor relay - Stop rear switch

Fuse no. 3:
Warn. lights (generator - oil pressure - neutral position - high beam)

Fuse no. 4:
Parking light - Instrument lights - Lights warn. light.

