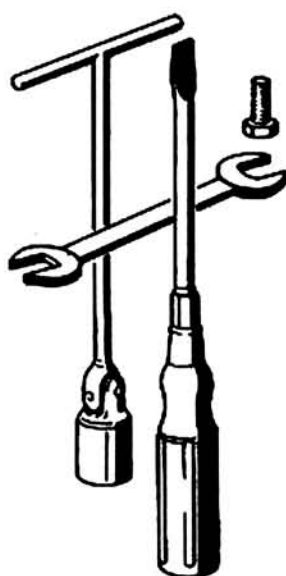




WORKSHOP MANUAL



V35
Florida

V65
Florida

COD. 23 92 01 71

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 81.



V 35 Florida



V 65 Florida

1 MAIN SPECIFICATIONS page 213

2 MAINTENANCE OPERATIONS page 217

2.1 Summary of maintenance and lubrication operations

3 ENGINE ASSEMBLY (V35 FLORIDA) page 218

3.1 Cylinder diameter selection

3.2 Piston diameter selection

4 FUEL FEEDING page 219

4.1 Carburettors

4.2 Carburettor setting data

4.3 Air filter - breather pipes assembly

5 FRONT FORK page 221

5.1 Technical data

6 REAR SUSPENSIONS page 222

7 WHEELS page 223

7.1 R.H. front brake master cylinder

8 IGNITION page 224

8.1 Ignition specifications

8.2 Spark plugs

9 ELECTRIC SYSTEM page 225

9.1 Light bulbs replacement

9.2 Bulbs

10 ELECTRIC SYSTEM DIAGRAM page 226

	V 35 Florida	V 65 Florida
ENGINE	four stroke cycle	four stroke cycle
— cylinders no.	2	2
— configuration	90° Vee	90° Vee
— bore	74 mm	80 mm
— stroke	40.6 mm	64 mm
— total capacity	349.2 cc	643.4 cc
— compression ratio	10.3 : 1	10 : 1
— Fiscal rating	6 HP	9 HP
VALVE GEARING	overhead valves with pushrod and rocker arms	overhead valves with pushrods and rocker arms
— Inlet	opens 18° before T.D.C. closes 50° after B.D.C.	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.	opens 53° before B.D.C. closes 15° after T.D.C.
— valve clearance for timing check	1 mm	1 mm
— valve operating clearance		
— inlet	0.15 mm	0.15 mm
— exhaust	0.20 mm	0.20 mm
LUBRICATION	forced pressure by lobe pump, oil tank into the engine crankcase	forced pressure by lobe pump, oil tank into the engine crankcase
— insufficient oil pressure warn. light	on dashboard	on dashboard
— Oil filters	wire gauze and cartridge filter types	wire gauze and cartridge filter types
IGNITION	electronic	electronic
— Initial (fixed) advance	10°	7°
— Automatic advance (electronic)	about 30°	about 30°
— Total advance (fixed + automatic)	41° ± 2°	38° ± 2°
— Rotor to pick-up gap	0.2 ÷ 0.4 mm	0.2 ÷ 0.4 mm

	V 35 Florida	V 65 Florida
— spark plugs	two with long thread Ø 14x1.25 Marelli F8 LCR - Bosch W5 DC Bosch W5 D - Lodge 3 HLN Electrode gap 0.6 mm	two with long thread Ø 14x1.25 Marelli F8 LCR - Bosch W5 DC Lodge 2 HL Electrode gap 0.6 mm
— Ignition coils	two	two
FUEL FEEDING		
— carburettors	no. 2 Dell'Orto PHBH 28 BD (right) & PHBH 28 BS (left) type	no. 2 Dell'Orto PHBH 30 BD (right) & PHBH 30 BS (left) type
COOLING	by air	by air
EXHAUST SYSTEM	no.2 pipes and no.2 silencers connected	no.2 pipes and no.2 silencers connected
GENERATOR-ALTERNATOR	installed on the front side of crankshaft (14V-20A)	installed on the front side of crankshaft (14V-20A)
STARTING	electric starter (12V-0.7KW) with electromagnetic ratchet control	electric starter (12V-0.7 KW) with electromagnetic ratchet control
TRANSMISSION		
— clutch	single disc, dry type with diaph- ragm spring, hand controlled by lever on L.S. handlebar	single disc, dry type with diaph- ragm spring, hand controlled by lever on L.S. handlebar
— primary drive	by gears, ratio (Z = 13/24) 1:1.846	by gears, ratio (Z = 15/22) 1:1.466
— gearbox	5-speeds, frontal engagement, constant mesh Pedal operated on the centre L.H. side of the bike	5-speeds, frontal engagement, constant mesh Pedal operated on the centre L.H. side of the bike
— gear ratios:		
1st speed	1:2.727 = (Z = 11/30)	1:2.3636 (Z = 11/26)
2nd speed	1:1.733 = (Z = 15/26)	1:1.6428 (Z = 14/23)
3rd speed	1:1.277 = (Z = 18/23)	1:1.2777 (Z = 18/23)
4th speed	1:1.045 = (Z = 22/23)	1:1.0555 (Z = 18/19)
5th speed	1:1.909 = (Z = 22/20)	1:0.9000 (Z = 20/18)
— secondary drive	by cardan shaft, bevel gear set.	by cardan shaft, bevel gear set.
— ratio	1:3.875 = (Z = 8/31)	1:3.875 = (Z = 8/31)
— overall gear ratios (engine/wheel):		
1st speed	1:19.5105	1:13.4333
2nd speed	1:12.4000	1:9.3369
3rd speed	1:9.1410	1:7.2620
4th speed	1:7.4790	1:5.9990
5th speed	1:6.5035	1:5.1150

	V 35 Florida	V 65 Florida
FRAME	decomposable cradle, tubular structure	decomposable cradle, tubular structure
SUSPENSION		
— front	telescopic fork with oil-pneumatic shock-absorbers	telescopic fork with oil-pneumatic shock-absorbers
— rear	swinging fork and rear dampers with adjustable springs concentric to the oleo-pneumatic shock-absorbers	swinging fork and rear dampers with adjustable springs concentric to the oleo-pneumatic shock-absorber
WHEELS	in light alloy with rims of following sizes:	in light alloy with rims of following sizes:
— front	2.15x18"	2.15x18"
— rear	2.50x16"	2.50x16"
TYRES		
— front	90/90-18"	100/90-18"
— rear	120/90-16"	130/90-16"
BRAKES		
— front	disc type with fixed caliper having double braking cylinder - controlled by hand lever on R.H. handlebar Ø disc 260 mm Ø braking cylinder 32 mm Ø master cylinder 13 mm	disc type with fixed caliper having double braking cylinder - controlled by hand lever on R.H. handlebar Ø disc 260 mm Ø braking cylinder 32 mm Ø master cylinder 13 mm
— rear	disc type with fixed caliper having double braking cylinder - controlled by pedal on the central R.H. side of the bike. Ø disc 235 mm Ø braking cylinder 32 mm Ø master cylinder 15.875 mm the rear brake is connected by hydraulic transmission to the front L.H. brake having in its components the same dimensions of front (R.H.) brake, hand-controlled	disc type with fixed caliper having double braking cylinder - controlled by pedal on the central R.H. side of the bike. Ø disc 235 mm Ø braking cylinder 32 mm Ø master cylinder 15.875 mm the rear brake is connected by hydraulic transmission to the front L.H. brake having in its components the same dimensions of front (R.H.) brake, hand-controlled
DIMENSIONS AND WEIGHTS		
— wheelbase (loaded)	1.505 m	1.505 m
— max. length	2.210 m	2.210 m

	V 35 Florida	V 65 Florida
— max. width	0.870 m	0.870 m
— max. height	1.190 m	1.190 m
— dry weight	170 kg	170 kg
PERFORMANCES		
— Max. speed (with the pilot only on the seat and without side bags and wind-shield)	about 150 km/h	over 170 km/h
— Fuel consumption (for 100 km)	4.3 l	5.1 l
REFUELINGS		
— fuel tank	17 l. of petrol (97 NO-RM min.) (reserve 5 l. about)	17 l. of petrol (97 NO-RM min.) (reserve 5 l. about)
— engine crankcase	2 l. Agip Sint 2000 SAE 10 W/50 oil	2 l. Agip Sint 2000 SAE 10 W/50 oil
— gearbox	0.900 l. Agip Rotra MP SAE 80 W/90 oil	0.900 l. Oel Agip Rotra MP SAE 85 W/140 oil
— rear drive box	0.170 l. of which: 0.160 Agip Rotra MP SAE 85 W/140 oil and 0.010 l. Agip Rocol ASO/R oil or Molykote «A» type	0.170 l. of which: 0.160 Agip Rotra MP SAE 85 W/140 oil and 0.010 l. Agip Rocol ASO/R oil or Molykote «A» type
— front fork (each leg)	0.090 l. of AGIP F1 ATF DEXRON fluid	0.100 l. of AGIP F1 ATF DEXRON fluid
— front and rear braking systems	Agip F.1 Brake Fluid SAE J 1703	Agip F.1 Brake Fluid SAE J 1703

2 MAINTENANCE OPERATIONS

2.1 SUMMARY OF MAINTENANCE AND LUBRICATION OPERATIONS

ITEMS	MILEAGE COVERED ▶	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		R
Wire gauze oil filter		C					C					C
Air filter				C	R		C	R		C	R	
Ignition timing		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.

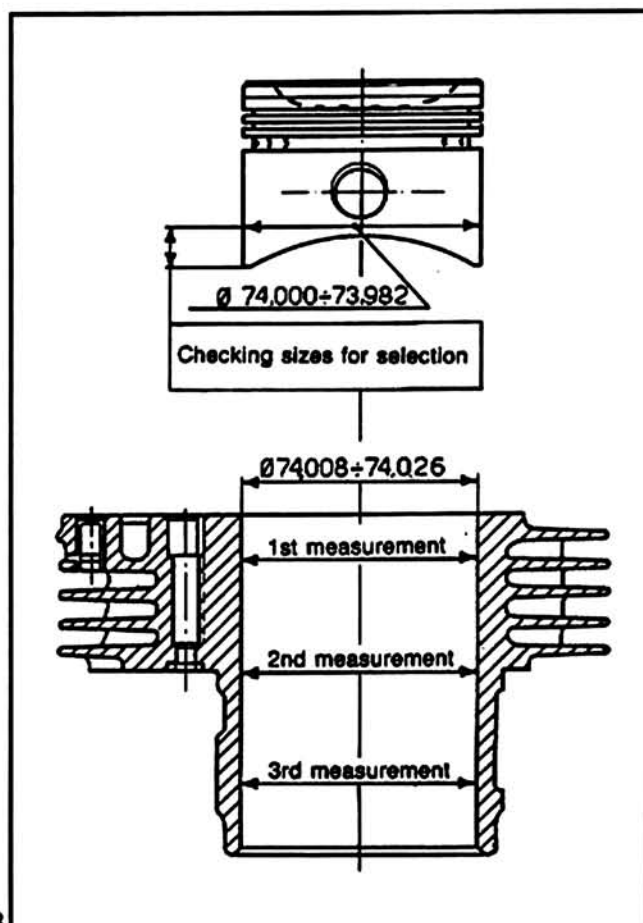
Occasionally, check the electrolyte level in battery, lubricate joints and cables; every 500 km (300 miles) check the engine oil level. In any case, renew this oil at least once a year.

3 ENGINE ASSEMBLY (V35 FLORIDA)

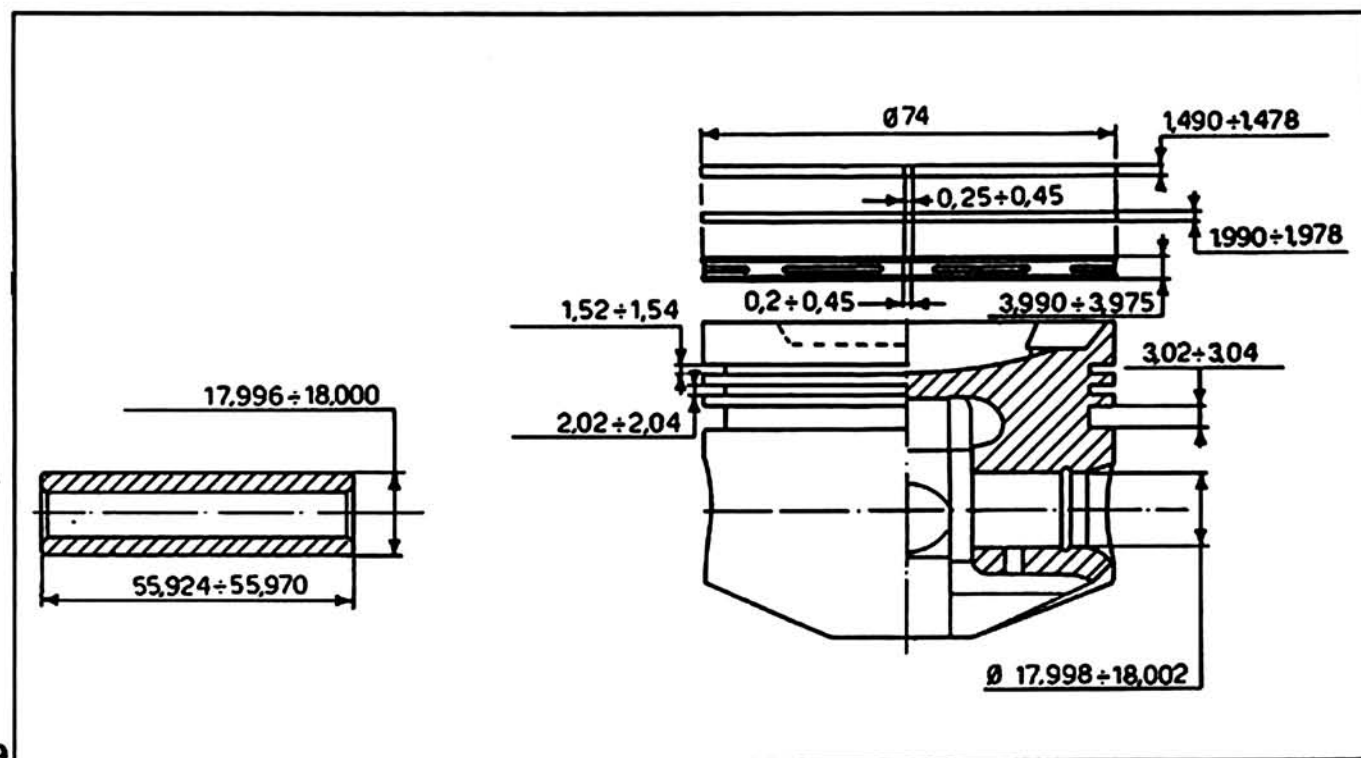
3.1 CYLINDER DIAMETER SELECTION

	GRADE «A»	GRADE «B»	GRADE «C»
V 35	74.008 ÷ 74.014	74.014 ÷ 74.020	74.020 ÷ 74.026

To statically balance the crankshaft, apply a load of 0.945 kgs. to the crankpin.



268



269

3.2 PISTON DIAMETER SELECTION

	GRADE «A»	GRADE «B»	GRADE «C»
V 35	73.982 ÷ 73.988	73.988 ÷ 73.994	73.994 ÷ 74.000

4.1 CARBURETTORS (fig. 270)

no. 2 Dell'Orto carbs. type:

V35 Florida

PHBH 28 BD (R.H.)

PHBH 28 BS (L.H.)

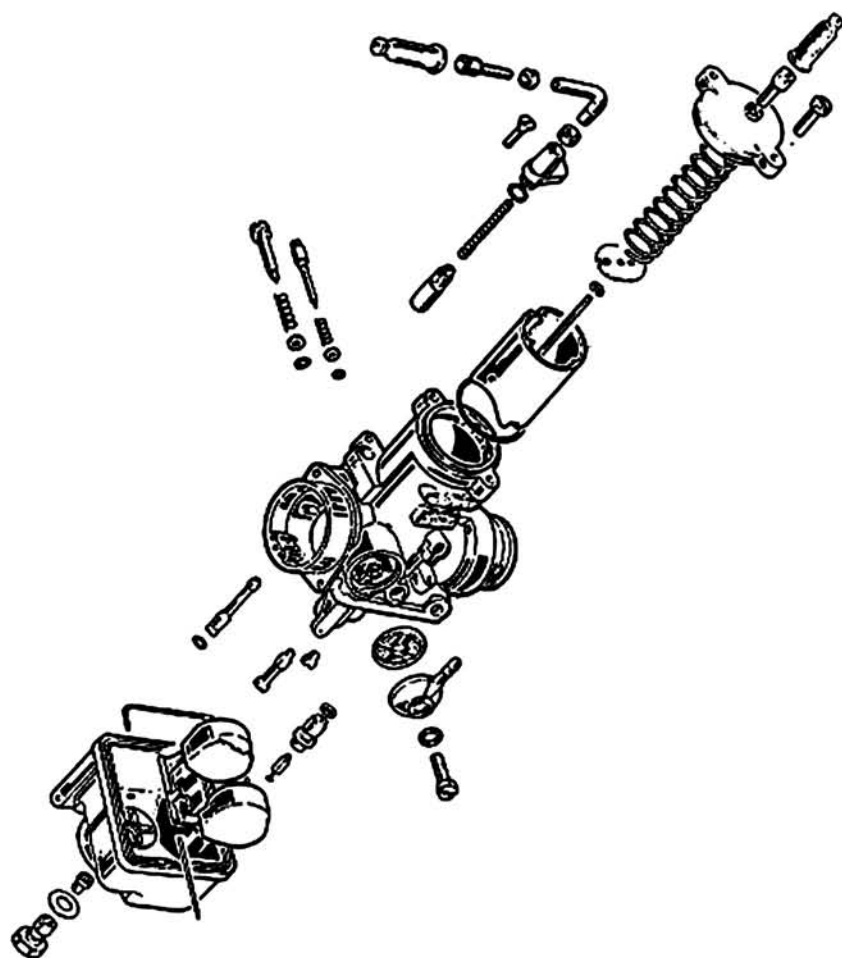
V65 Florida

PHBH 30 BD (R.H.)

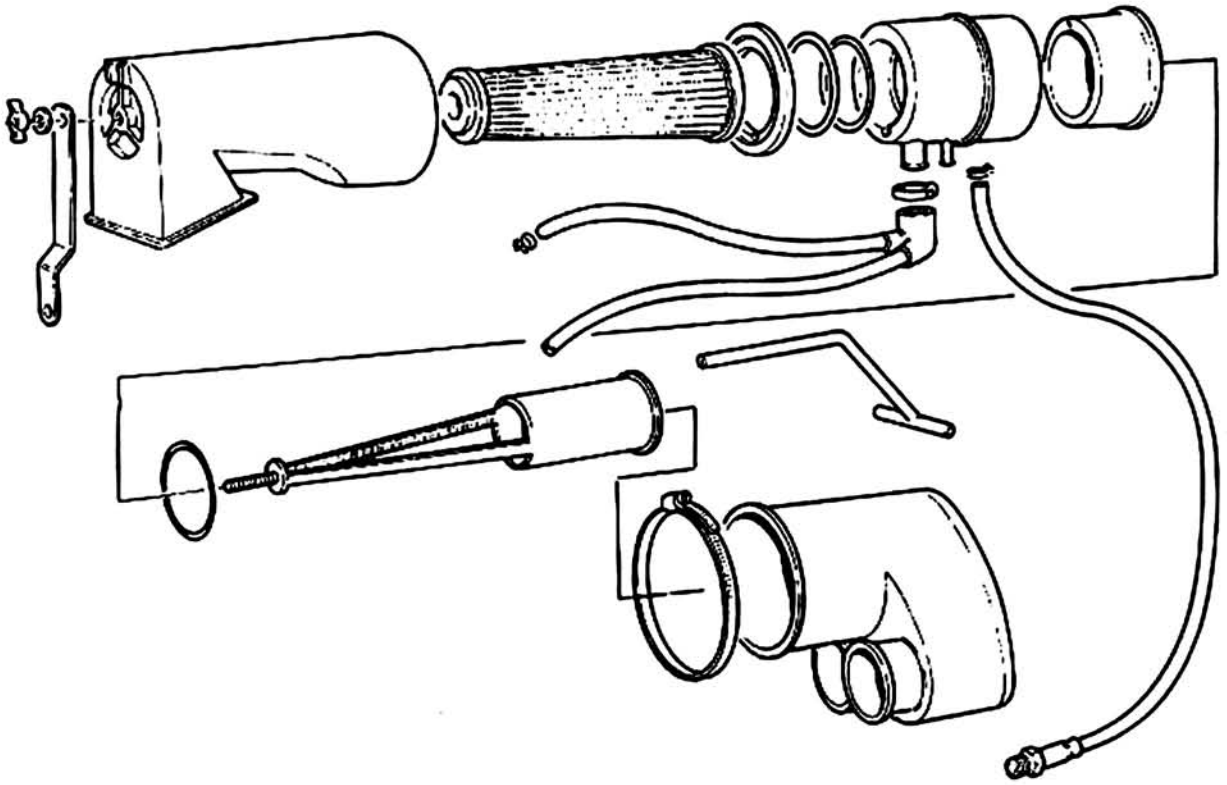
PHBH 30 BS (L.H.)

4.2 CARBS. SETTING DATA:

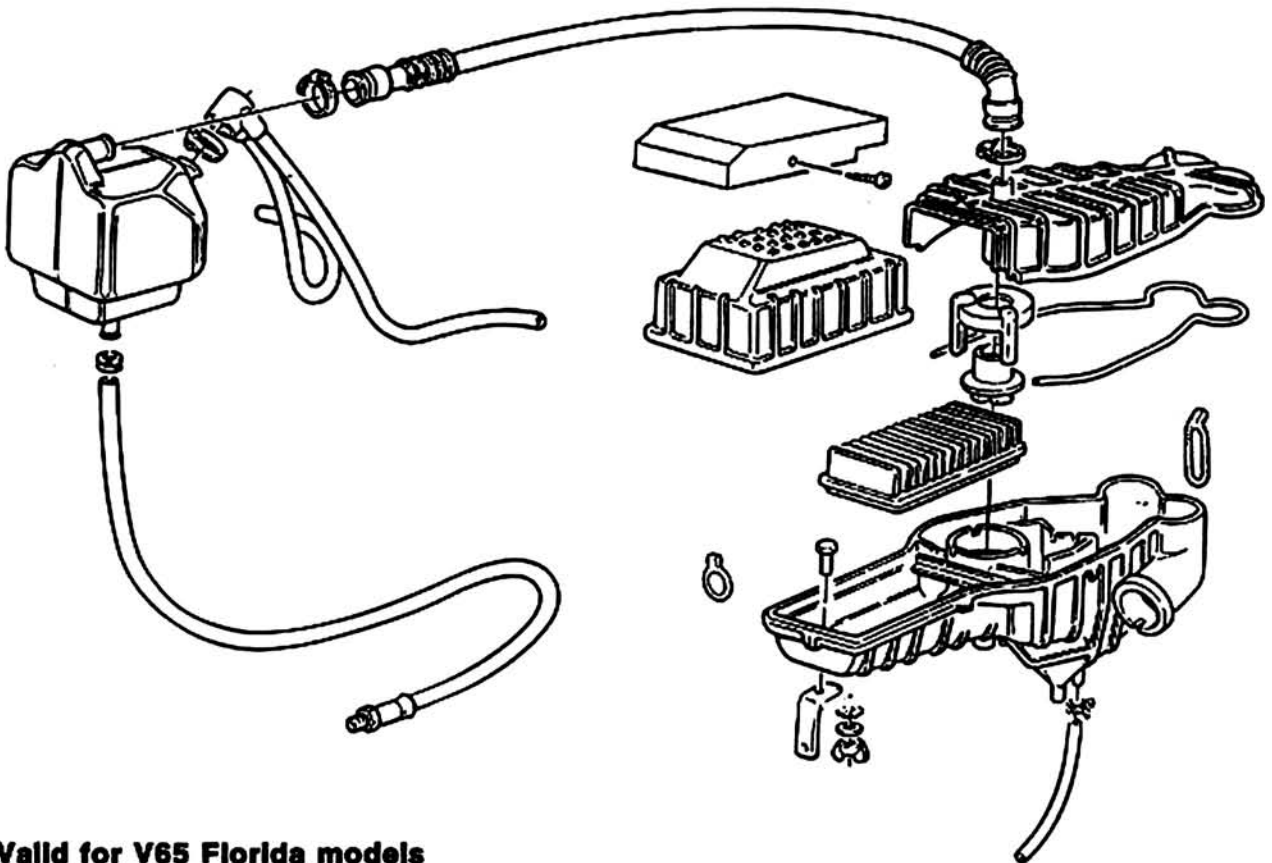
	V 35 Florida	V 65 Florida
Choke tube	Ø mm 28	Ø mm 30
Throttle valve	30	40
Spray nozzle	262 CE	268 T
Main jet	112	105
Idle jet	42	38
Starting jet	60	60
Needle jet	X 19 (2nd notch)	X 8 (2nd notch)
Float (gr.)	11	11.3
Idle mixt. adjust. screw: open	1-1/2 turn	1-1/2 turn



4.3 AIR CLEANER AND BREATHER WITH PIPES ASSEMBLY



Valid for V35 Florida model

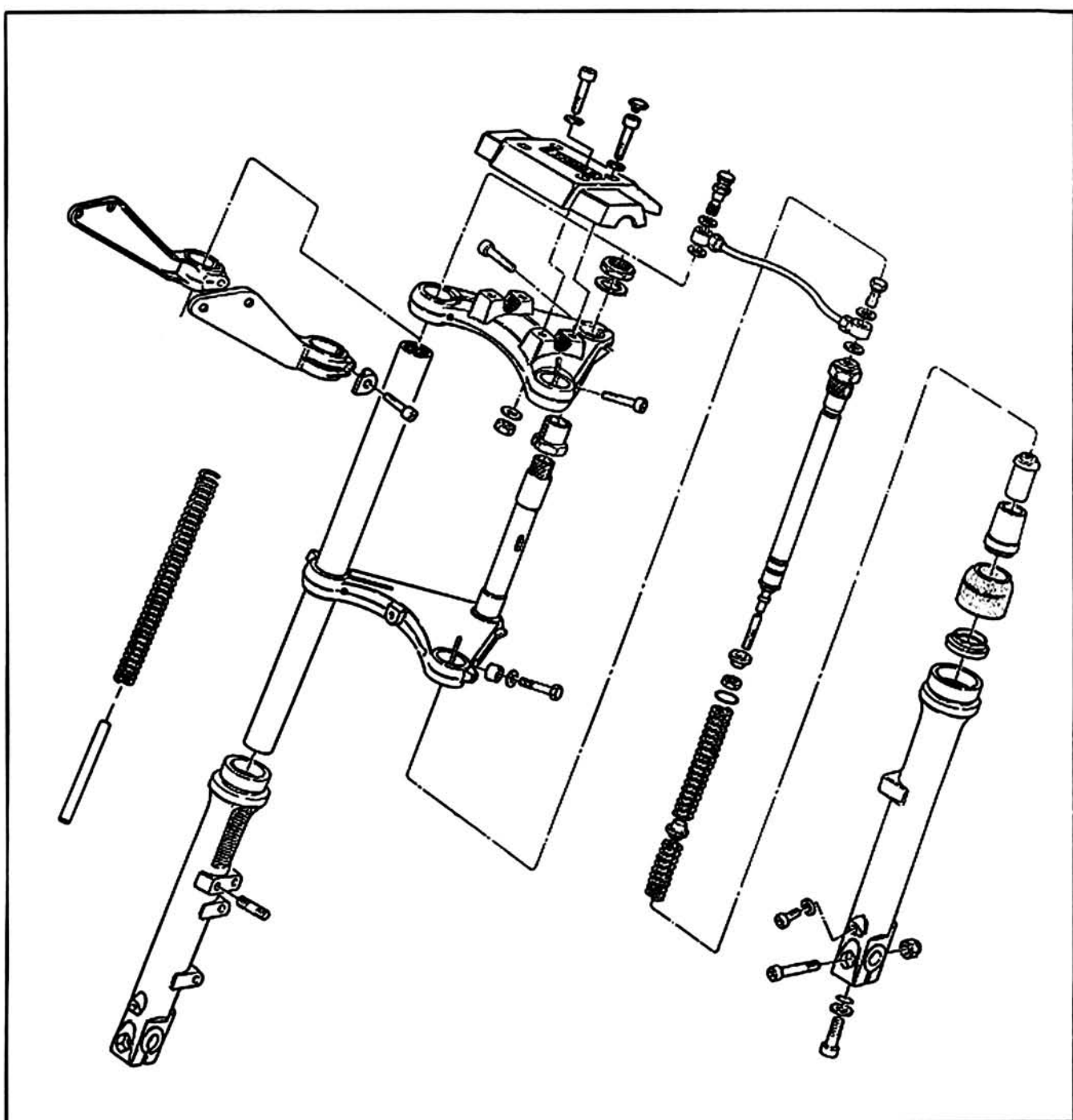


Valid for V65 Florida models

5 FRONT FORK

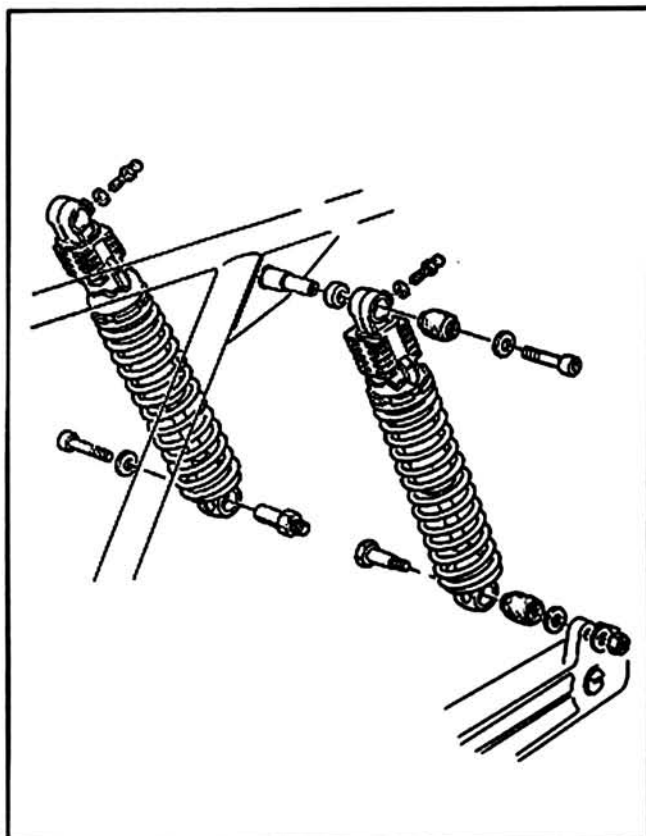
5.1 TECHNICAL DATA

	V 35 Florida	V 65 Florida
Stroke (mm)	140	145
Leg diameter (mm)	34.69 ÷ 34.71	37.95 ÷ 37.97
Inner leg diameter (mm)	34.75 ÷ 34.79	38.05 ÷ 38.07
Quantity of fluid each leg (cm ³)	90	100
Shock-absorbers pressure (kg/cm ²)	1 max	1 max

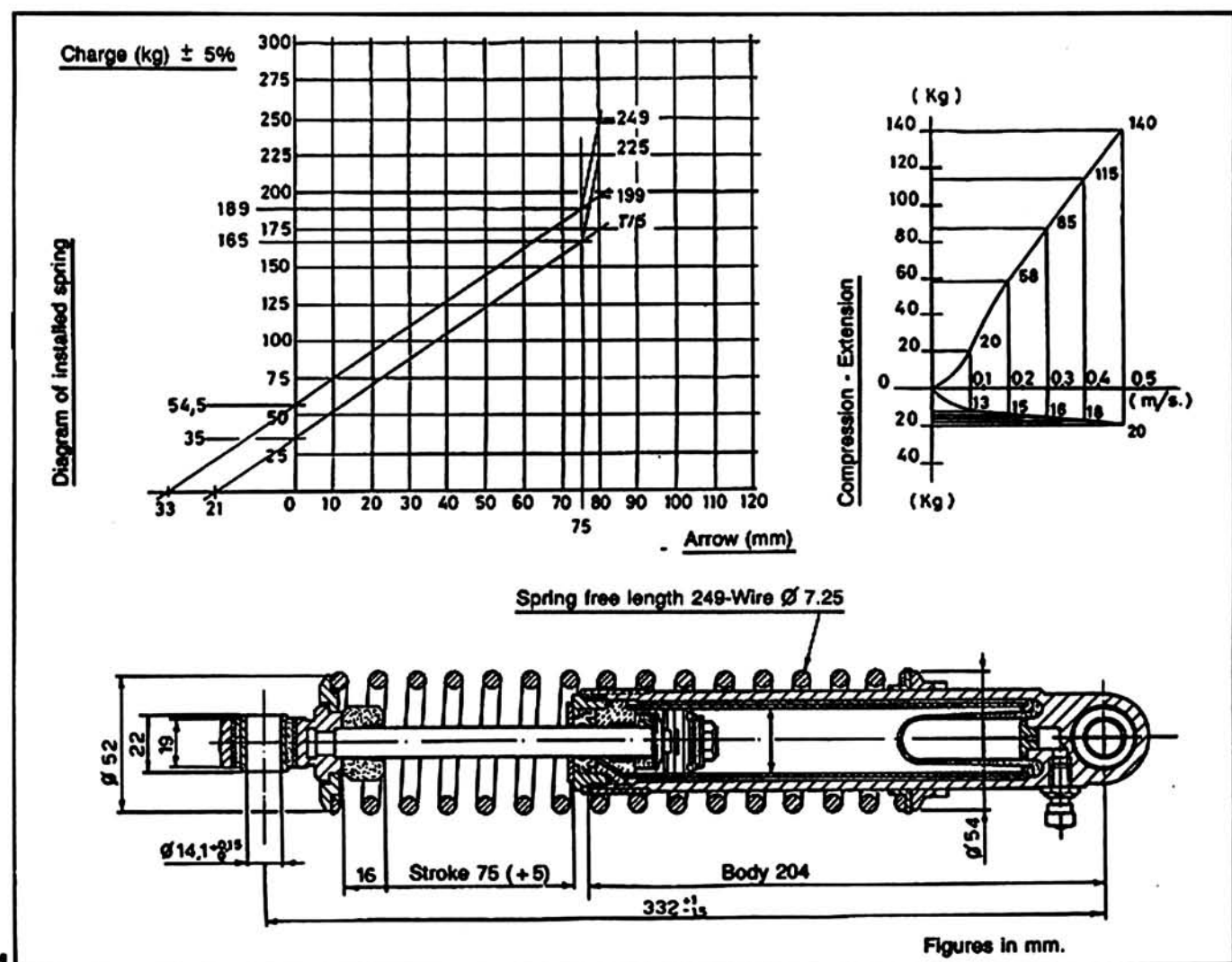


6 REAR SUSPENSIONS

The charge pressure for rear shock-absorbers is $4 \pm 1 \text{ Kg/cm}^2$.



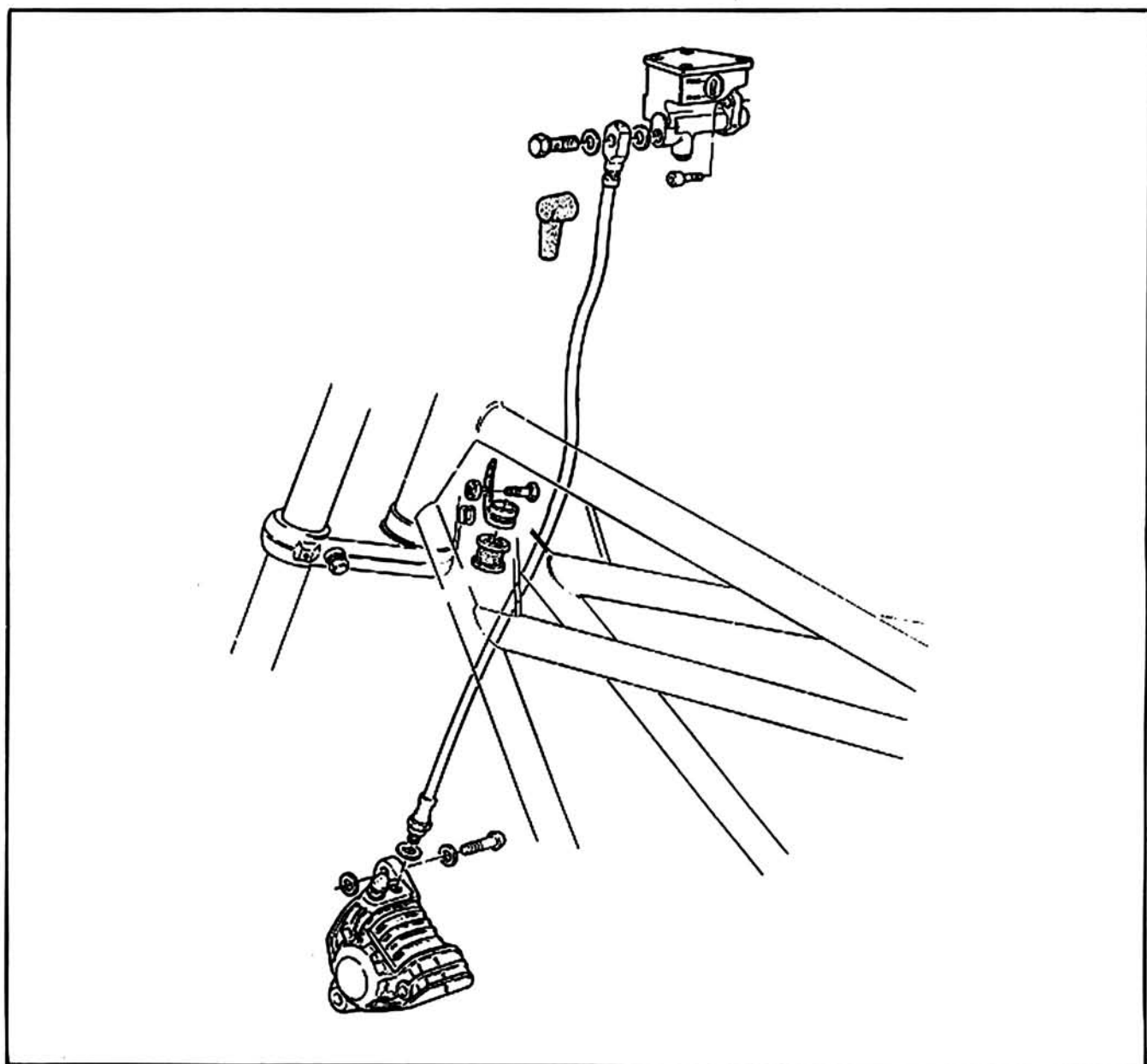
273



274

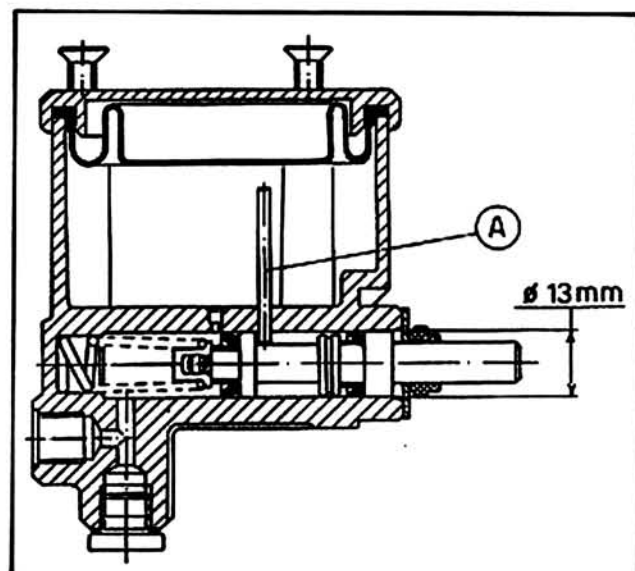
7 WHEELS

7.1 R.H. FRONT BRAKING CONTROL PUMP



275

When overhauling the float, in order to make easier the pump re-installation, insert a drift «A» dia. 2 mm. to lock the same float as shown in figure 276. Before filling up the reservoir with fluid, remove this drift.



276

8 IGNITION

8.1 IGNITION SPECIFICATIONS

(The data in parentheses are specific for the V65 Florida model).

Electronic ignition system; advance modification is made electronically.

- Initial advance (fixed) 10° [7°]
- Automatic advance (electronic) about 30°
- Full advance (fixed + automatic) $41^{\circ} \pm 2^{\circ}$ [$38^{\circ} \pm 2^{\circ}$]

Rotor to pick-up gap 0.2 ÷ 0.4 mm

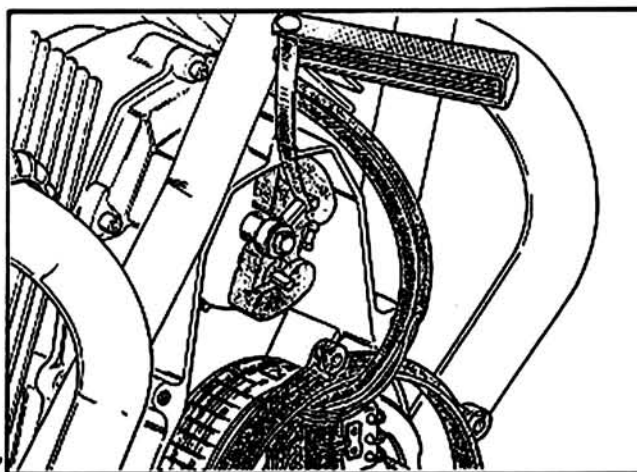
Electronic ignition system does not require any maintenance, in practice.

Engine is correctly set when printing stated on the drawing (in fig. 278) is in line with the reference mark on the crankcase (black arrow).

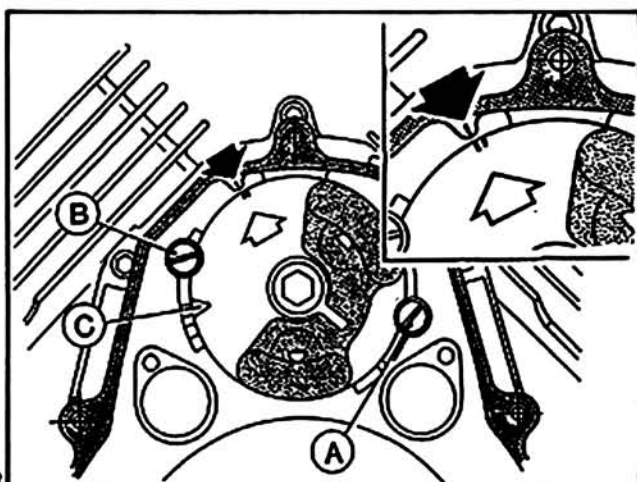
To have the PICK-UP plate rotated, loosen screws «A» and «B» and operate with a screwdriver on groove «C».

On figure the correct setting data for the V65 Florida model are shown; for setting up the V35 Florida model the other printing must be lined up with the crankcase reference mark.

277



278



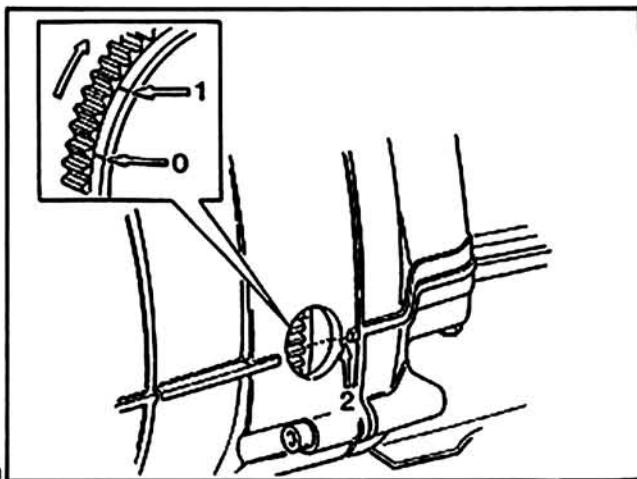
For a more precise checking of fixed advance, always use a strobo light.

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. 279),

reference «0» on the flywheel means the «T.D.C.».

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

279



8.2 SPARK PLUGS (fig. 280)

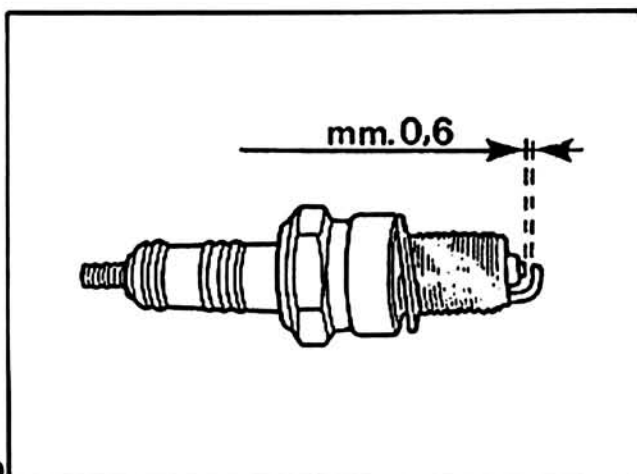
The type of spark plugs to be used is:

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

280



9 ELECTRIC SYSTEM

9.1 LIGHT BULBS REPLACEMENT

Headlight (fig. 281)

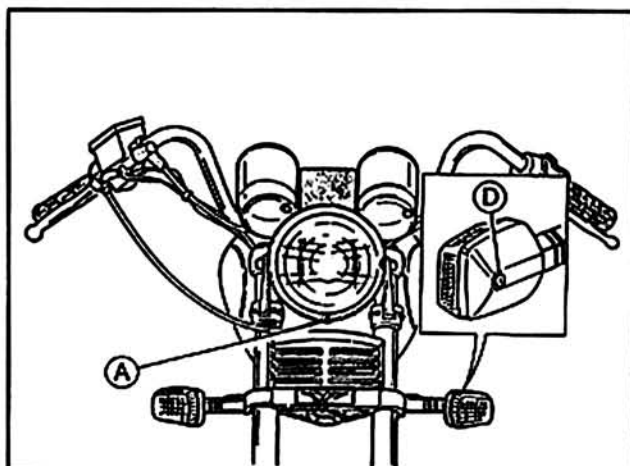
Slacken screw «A» located under the optical group, take out the optical group, extract the lamp-holders then remove the bulbs.

Tail light (fig. 282)

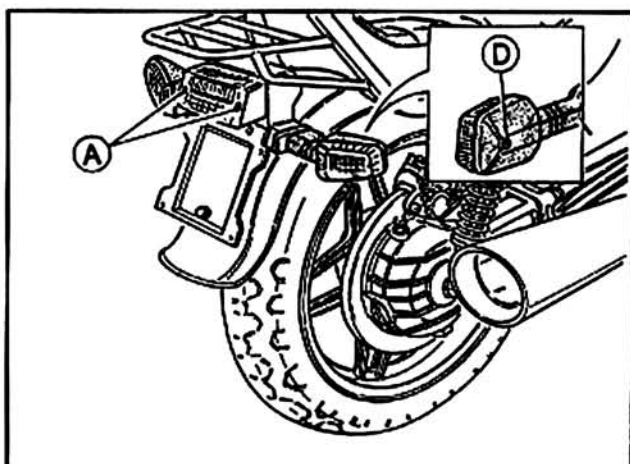
Undo screws «A» securing the reflector to the lamp; push the bulbs inwards, turning them at the same time to free them from their bulb holders.

Front and rear turn indicators (figg. 281-282)

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.



281



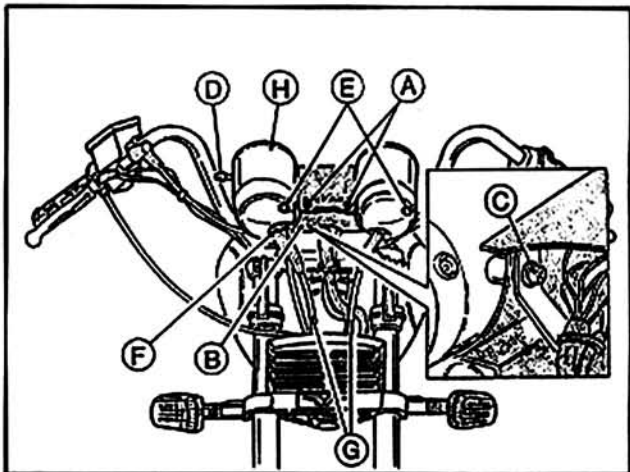
282

Panel warn. lights (fig. 283)

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

Speedo. and rev-counter (fig. 283)

- 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.



283

9.2 BULBS

Headlight:

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

Tail light:

- Parking and stop, plate ill. 5/21 W

- Turn signals 10 W

- Speedo and rev-counter 3 W

- Panel warning lights 1.2 W

WARNING - Not to damage the electronic ignition system, keep these precautions:

- 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.

What above is valid for all models of the V35, V65, V75 series equipped with electronic ignition.

ELECTRICAL WIRING DIAGRAM LEGEND

- 1 High beam and low beam (45/40W bulb)
- 2 Front parking light (4W bulb)
- 3 R.H. turn indicators warn. light (1.2W bulb)
- 4 Speedometer (3W bulb)
- 5 Rev. counter (3W bulb)
- 6 L.H. turn indicators warn. light (1.2W bulb)
- 7 4-pole Molex con.
- 8 Fuel level warn. light (1.2W bulb)
- 9 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 trumpets
- 20 Engine starting and stopping device - lights switch
- 21 Neutral position indicator
- 22 Oil pressure indicator
- 23 Flashing device
- 24 Control device for lights, horn, turn signals
- 25 Ignition spark plugs
- 26 H.V. coils
- 27 Electronic ignition
- 28 Rear brake STOP switch
- 29 A.M.P. fuse box
- 30 Fuel level warn. light microcontact
- 31 Tension regulator
- 32 Alternator (14V - 20A)
- 33 Rectifier
- 34 Battery (12V - 20Ah)
- 35 Starter motor relay
- 36 Starter motor
- 37 Rear R.H. turn indicator (10W bulb)
- 38 STOP and plate light (5/21W bulb)
- 39 Rear L.H. turn indicator (10W bulb)
- 40 Bi-tonal trumpets relay
- 41 Pick-up
- 42 A.M.P. 6-pole connector
- 43 Spare fuse for horns

Fuse no.1:
Parking light - Instrumentation lights.

Fuse no.2:
Warn. lights (Neutral pos. - Generator - Oil pressure - Fuel level - High and low beam) Front brake STOP switch - Flashing light switch.

Fuse no.3:
Starter motor relay - Horn.

Fuse no.4:
Rear brake STOP switch.

