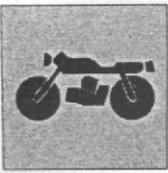




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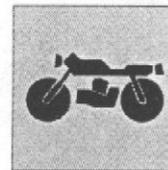
A





GENERAL

Engine	A.7
Fuel feeding	A.7
Lubrication	A.7
Cooling	A.7
Ignition	A.7
Starting	A.7
Transmission	A.7
Brakes	A.7
Frame	A.7
Suspensions	A.7
Wheels	A.7
Tyres	A.7
Electric system	A.8
Performances	A.8
Weights	A.8
Overall dimensions	A.8
Supply	A.8

**ENGINE**

Single-cylinder, two-stroke engine, with lamellar suction and electronic control C.T.S. valve on the exhaust system.

Bore	2.204 in.
Stroke	1.992 in.
Capacity	7.602 cu.in.
Compression ratio (with closed lights)	6,3:1

FUEL FEEDING

Intake setting by lamellar valve.

DISTRIBUTION DIAGRAM

TRANSFER: 124°

EXHAUST:

With closed valve 170°

With open valve 192°

Carburetor Dell'Orto PHBH 28 RD

LUBRICATION**ENGINE**

Through variable delivery pump.

SHIFTING and MAIN TRANSMISSION

Through the oil contained in the engine block.

COOLING

With liquid circulation through a pump.

Big bent radiator, constrained to the frame.

IGNITION

Electronic.

Make KOKUSAN

Ignition advance: 14° 30' before T.D.C.
(corresponding to 0.039 in. of piston stroke before T.D.C.)

Spark plug type CHAMPION N2C

Electrode gap 0.019 in.

STARTING

Electric.

TRANSMISSION

Cluster constant-mesh gears.

Primary ratio Z 20/65=1:3.25

Gear ratios

1st 2,727

2nd 1,857

3rd 1,411

4th 1,142

5th 0,956

6th 0,863

7th 0,818

Final drive ratio Z 14/43=1:3,071

Gearing chain 5/8"x1/4"

Total ratios

1st 27,224

2nd 18,538

3rd 14,092

4th 11,408

5th 9,548

6th 8,621

7th 8,167

Oil-bath multi-disc clutch type.

BRAKES**Front brake**

Perforated fixed disc, with hydraulic control and floating caliper.

Disc diameter 12.59 in.

Brake caliper BREMBO

Pad area 6.076 sq.in.

Rear brake

Perforated fixed disc, with hydraulic control and fixed caliper.

Disc diameter 9.055 in.

Brake caliper BREMBO

Pad area 3.41 sq.in.

FRAME

Double cross-member with extruded tubular and aluminium melted parts; rear tailpiece with square steel pipes.

Steering angle 30° for side

Steering axis angle 25°

Front fork caster 3.858 in.

SUSPENSIONS**Front suspension**

Tele-hydraulic fork with possible adjustment of the inner spring preload.

Producer MARZOCCHI

Legs diameter 1.496 in.

Front wheel bump position (on the sliding axis) 4.842 in.

Rear suspension

Light alloy floating fork with "banana" shaped R.H. arm. Progressive leverage suspension (SOFT DAMP system) and hydraulic mono-damper with helical spring. The spring preload can be adjusted.

Damper make MARZOCCHI

Rear wheel vertical travel 5.255 in.

WHEELS

Three-spoke light alloy **front** rim.

Make GRIMECA

Dimensions 2,75"x17"

Three-spoke light alloy **rear** rim.

Make GRIMECA

Dimensions 4,00"x17"

TYRES**Front (*)**

Manufacturer and type PIRELLI TUBELESS MT75

Dimensions 100/80-17"

or:

Manufacturer and type MICHELIN TUBELESS RADIAL

Dimensions 110/70-17"

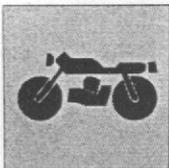
Inflation pressure (in cold condition)

driver only ²⁶ 2,0 bar PIRELLI; 1,9 bar MICHELIN

with passenger ³⁰ 2,1 bar PIRELLI; 2,0 bar MICHELIN

²⁸





Rear (*)

Manufacturer and type PIRELLI TUBELESS MT75
 Dimensions 140/70-S17"
 or:
 Manufacturer and type MICHELIN TUBELESS RADIAL
 Dimensions 150/60-ZR17"
 Inflation pressure (in cold condition)
 driver only 2,1 bar PIRELLI; 2,0 bar MICHELIN
 with passenger 2,3 bar PIRELLI; 2,2 bar MICHELIN

(*) In alternative, **PIRELLI** and **MICHELIN** on model without fairing.
MICHELIN on model with fairing.

ELECTRIC SYSTEM

The ignition system is composed by:
 - Generator: 12V-120W for a full battery recharge;
 - Starting motor 12V-500W;
 - Electronic coil;
 - Electronic device;
 - Voltage rectifier;
 - Solenoid starter;
 - Starting control system;
 - Ignition spark plug.

The electronic control of the exhaust valve is composed by the following parts:

- Opening valve control system;
 - Valve control motor 12V-3,3 W.
- The components of the electric system are:
- Double headlight with bilux lamps 12V-25/25W and parking light bulbs 12V-5W;
 - Dashboard with instruments bulbs 12V-2W and warning lights 12V-1,2W;
 - Blinker with bulb 12V-10W;
 - Battery 12V-9A;
 - NO. 4 fuses 15A, two spare-fuses;
 - Tail light with stop light 12V-21 W and parking light bulb 12V-5W.

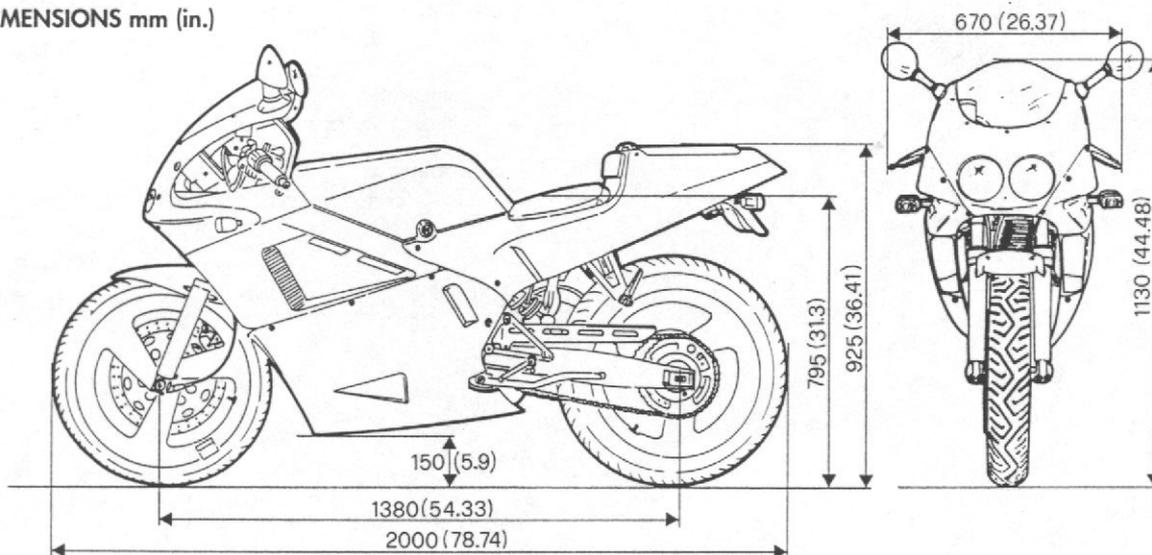
PERFORMANCES

Max. actual speed 96.1 mile/h
 Fuel average consumption 9.3 mile/l

WEIGHTS

Total dry weight (model with fairing) 266.75 lb.
 Total dry weight (model without fairing) 259.04 lb.

OVERALL DIMENSIONS mm (in.)



SUPPLY

TYPE

QUANTITY (liters)

Fuel tank	Super fuel 98-100 ON (min)	18
Reserve	(warning lamp comes ON)	4
Fuel mixture oil	AGIP 2T RACING PLUS	1
Change gear and main transmission oil	AGIP F.1 SUPERMOTOROIL SAE 15W50	0,800
Front fork oil	Specific "MARZOCCHI" SAE 7,5	(see page I.5)
Cooling system fluid	AGIP NUOVO PERMANENT EXTRA	1,5
Hydraulic brake fluid	AGIP BRAKE FLUID DOT 4	—
Drive chain lubrication	AGIP CHAIN AND DRIVE SPRAY	—
Flexible connections	AGIP GREASE 30	—

REMARK - At temperature lower than -5°C fill up the fuel tank with 1% mixture rather than petrol only.

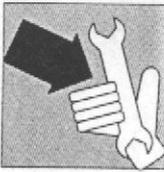
WARNING! - Use of additives in fuel or lubricants is not allowed.



Section

B





	Mileage																
	1000	1500	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000	14000	15000	16000
Spark plug	CP				CP	S			CP		S			CP		S	
Gearbox oil	S				C		S			C		S			C		S
Air filter						P					P					P	
Carburettor						P					PC					P	
Cleaning of exhaust opening, valve						P					P (*)				P		
Cleaning of combustion chamber, piston, piston rings						P					P				P		
Clutch assembly	C				C			C			C			C			C
Tyres	C				C			C			C			C			C
Hydraulic brake fluid	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Braking system											X						
Pad wearing				C			C			C			C			C	
Nuts and bolts locking	C				C			C		C			C			C	
Speedometer cable drive				L			L			L			L			L	
Flexible drives				CL			CL			CL			CL			CL	
Side leg axis						L					L					L	
Fuel and oil tanks											L					L	
Oil filters						P					P					P	
Fuel filters and pipes	P					P					P					P	
Steering column bearings	C											C					
Wheel hub bearings											C						
Front fork oil											C						
Sprocket, crown gear	C					C					S					C	
Secondary transmission chain	CL		CL	S	CL	CL	CL	CL	CL	CL							
Chain tensioner				L			L			L						L	
Throttle control	C				CL			CL			CL			CL			CL
Cooling fluid		C		C		C		C		C	S		C		C		C

- P = Cleaning.
- C = Check and eventually adjust.
- L = Lubrication.
- S = Replacement.
- X = Air bleeding, checking of disc wearing.
- (*) = Replace the exhaust valve (replacement should be made every 10,000 km).

 Operations suggested at 1000 and 3000 Kms. are mentioned on Service Coupons included in the Maintenance and Warranty booklet.

 After the first 1.000 Km, check the driving torque of the rotor fastening nut which must be: 6,7 + 7,1 Kg (65,7 + 70 Nm).





Section

C





ENGINE

Trouble	Cause	Remedy
Engine won't start or starts with difficulty	Inadequate compression	
	1. Piston seizure	Replace
	2. Con-rod small or big end seized	Replace
	3. Piston rings worn	Replace
	4. Cylinder worn	Replace
	5. Low torque cylinder head nuts	Tighten to correct torque settings
	6. Spark plug loose	Tighten
	No or weak spark	
	1. Spark plug faulty	Replace
	2. Spark plug dirty or wet	Clean or dry
	3. Spark plug gap too large	Adjust
	4. Ignition coil faulty	Replace
	5. H.T. leads damaged or short circuiting	Check
	6. Ignition switch faulty	Replace
	Fuel not reaching carburettor	
1. Tank breather pipe clogged	Clean	
2. Automatic cock locked	Replace	
3. Vacuum piping clogged	Clean	
4. Carburettor fuel filter dirty	Clean	
5. Float valve faulty	Replace	
6. Rocker blocking float valve	Free	
Carburettor flooding		
1. High fuel level in float bowls	Adjust	
2. Float valve worn or stuck open	Replace or free	
Engine cuts out easily	1. Spark plug dirty	Clean
	2. Electronic control unit faulty	Replace
	3. Carburettor jets blocked	Clean
Engine noisy	Piston noise	
	1. Excessive play between piston and cylinder	Replace
	2. Excessive coke in combustion chamber or on piston crown	Clean
	3. Piston rings or ring seats worn	Replace
	Crankshaft noise	
	1. Main bearings worn	Replace
	2. High radial and axial play at con-rod big end	Replace
	3. The countershaft is not installed properly	Arrange it right
	4. Drive shaft and countershaft gears are damaged	Replace them
	Clutch noise	
	1. Plates worn	Replace
	2. Excessive free play between clutch drum and drive plates	Replace
	Gearbox noise	
	1. Gears worn	Replace
	2. Gear splines worn	Replace
	Drive chain noise	
	1. Chain stretched or badly adjusted	Replace or adjust
	2. Engine sprocket and rear wheel sprocket worn	Replace



Trouble	Cause	Remedy
Clutch slip	<ol style="list-style-type: none"> 1. Insufficient clutch adjuster free play 2. Clutch springs weak 3. Clutch plates worn 	Adjust Replace Replace
Clutch drag (it is not disengaged)	<ol style="list-style-type: none"> 1. Excessive clutch adjuster free play 2. Spring tension uneven 3. Clutch plates bent 	Adjust Replace Replace
Gears not engaging	<ol style="list-style-type: none"> 1. Clutch not releasing 2. Gearshift forks' bent or seized 3. Gearchange pawls worn 4. Gearshift forks control pins damaged 	Adjust Replace Replace Replace
Gearchange lever doesn't return	<ol style="list-style-type: none"> 1. Selector return spring weak or broken 	Replace
Slips out of gear	<ol style="list-style-type: none"> 1. Sliding dogs worn 2. Gear splines worn 3. Sliding dog seats on gears worn 4. Splines gearshift forks' control shaft worn 5. Gearshift forks control pins worn 6. Gearshift forks worn 	Replace Replace Replace Replace Replace Replace
Engine lacks power	<ol style="list-style-type: none"> 1. Air filter dirty 2. Carburettor main jet blocked or wrong size 3. Poor quality fuel 4. Breather union loose 5. Spark plug gap too large 6. Ignition advance too low 7. Inadequate compression 8. Deposits on the exhaust valve 	Clean (foam filter) Clean or replace Replace Tighten Adjust Adjust Find cause Clean it
Engine overheating	<ol style="list-style-type: none"> 1. Excessive coke on combustion chamber and/or piston crown 2. Insufficient engine oil, or wrong oil used 3. Radiator air flow blocked 4. Poor seal at cylinder head gasket 5. Ignition advance too high 6. Clutch slipping 	Clean Top up or replace Clean Replace Adjust Adjust
Drops of coolant on spark plugs electrodes	<ol style="list-style-type: none"> 1. Faulty cylinder head gasket seal 2. Cylinder head leaking 	Replace Replace
Oil sump level increases due to presence of coolant	<ol style="list-style-type: none"> 1. Faulty water pump rotor shaft seal 	Check





FRAME, WHEELS AND SUSPENSION

Trouble	Cause	Remedy
Difficult to turn handlebars	1. Low tyre pressure 2. Bent steering head pillar 3. Steering head bearings worn or seized	Inflate Replace Replace
Handlebar vibrates	1. Front fork legs bent 2. Front wheel spindle bent 3. Frame bent 4. Front wheel rim buckled 5. Front wheel bearings worn	Replace Replace Replace Replace Replace
Suspension too hard	1. Fork backstroke too fast 2. Too much oil in the fork legs 3. Fork legs oil too thick 4. Too much pressure in the tires	Adjust Drain excess Replace Deflate
Suspension too soft	1. Fork backstroke too slow 2. Insufficient oil in front fork stanchions 3. Front fork stanchion oil of too low a viscosity 4. Weak front fork springs 5. Weak rear shock absorber spring	Adjust Top up Replace Replace Replace
Wheel (front and rear) vibrates	1. Wheel rim buckled 2. Wheel hub bearings worn 3. Wheel spindle nut loose 4. Rear swinging arm bearings worn 5. Chain tensioner incorrectly set	Replace Replace Tighten Replace Adjust
Rear suspension noisy	1. Link rod bearings or spacers worn 2. Shock absorber ball joints worn 3. Shock absorber faulty	Replace Replace Replace
Poor (front and rear) braking	1. Air in the brake system 2. Insufficient fluid in reservoir 3. Pads and/or disc worn 4. Disc damaged 5. Brake pedal incorrectly adjusted	Bleed Top up Replace Replace Adjust



ELECTRICS

Trouble	Cause	Remedy
Spark plug becomes dirty too frequently	<ol style="list-style-type: none"> 1. Mixture too rich 2. Air filter dirty 3. Piston rings worn 4. Piston or cylinder worn 	Adjust carburettor Clean (foam filter) Replace Replace
Spark plug overheats	<ol style="list-style-type: none"> 1. Mixture too lean 2. Spark plug gap too small 	Adjust carburettor Adjust
Generator charging too low or not at all	<ol style="list-style-type: none"> 1. Wires to voltage regulator connected incorrectly or short circuiting 2. Faulty voltage regulator 3. Generator coil faulty 4. Battery fluid level low 	Connect correctly or replace Replace Replace Top up with distilled water
Generator charging too high	<ol style="list-style-type: none"> 1. Voltage regulator faulty 	Replace
Battery corrosion	<ol style="list-style-type: none"> 1. Charging voltage too high or too low (When not in use the battery should be recharged at least once a month) 2. Too much or too little battery fluid; incorrect specific gravity 	Replace the battery Return to correct level; replace electrolytic fluid
The battery is discharged fast	<ol style="list-style-type: none"> 1. Battery terminals dirty 2. Battery fluid low 3. Impurities in battery fluid or specific density too high 	Clean Top up with distilled water Replace electrolytic fluid
Start motor won't start or slips	<ol style="list-style-type: none"> 1. Battery flat 2. Control button on right hand switch unit faulty 3. Starter solenoid faulty 4. Starter motor faulty 5. Control gear or flywheel crown worn 	Recharge Replace Replace Repair or replace Replace

