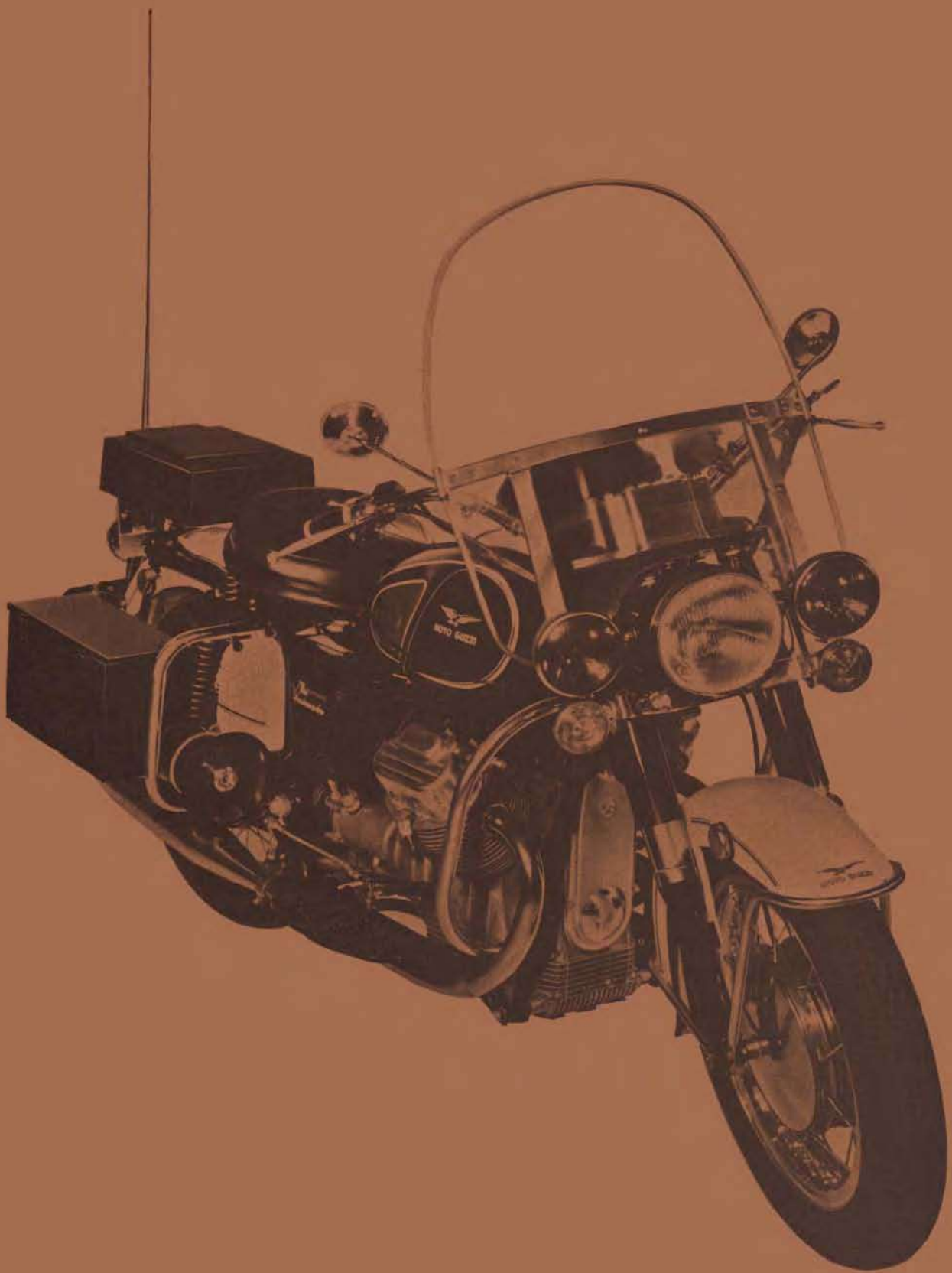
V7

700cc and 750cc

OPERATING HANDBOOK
FOR STRIPPING, CHECKING AND
ASSEMBLING OPERATIONS

MOTO GUZZI

PREMIER
MOTOR CORPORATION
HASBROUCK HEIGHTS, NEW JERSEY 07604
Sole Importer of Moto Guzzi in the United States and Canada



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V-7 700 cc.

and

V-7 750 cc.

OPERATING HANDBOOK
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INTRODUCTION

The purpose of this handbook is to supply the necessary instructions for carrying out overhauls and repairs in a rational way.

The data provided here are meant to give a general knowledge about the main checking operations to be carried out when overhauling the different groups.

The handbook is provided with illustrations, drawings and diagrams necessary to carry out stripping, checking and assembling operations.

This handbook will also be a guidance for those who wish to know the manufacturing characteristics of the parts in concern. The knowledge of such characteristics by repairing personnel will be an essential factor for performing a good job.

NOTE - The terms « RIGHT HAND » and « LEFT HAND » used in the text are to be considered as seen from the rider astride the saddle.

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MAIN FEATURES
V7 700 cc.

ENGINE

Cycle	: 4 strokes
Number of cylinders	: 2
Cylinder disposition	: « V » - 90°
Bore	: 80 mm. (3.149")
Stroke	: 70 mm. (2.755")
Displacement	: 703.717 cc. (42.93 cu. in.)
Compression ratio	: 9 to 1
Revs at max engine speed	: 6000 r.p.m.
Output at max engine speed	: 50 HP SAE
Crankcase	: in light alloy
Cylinders	: light alloy barrels with hard chrome linings
Cylinder heads	: in light alloy, hemispherical, with special cast iron inserted valve seats
Crankshaft	: steel construction
Crankshaft supports	: of anti-friction material pressed in suitable housings (as used in all F1 Race cars)
Connecting rods	: steel construction with AL-TIN alloy thin wall bearings
Pistons	: in light alloy

Valve gear

O.H.V., push rod operated via the camshaft in the crankcase and gear driven by the crankshaft.

Inlet:
— opens 24° before TDC
— closes 58° after BDC

Exhaust:
— open 58° after BDC
— closes 22° after TDC

Rocker clearance for valve timing
— 0,5 mm. (.0196")

Normal rocker clearance (cold engine):
— inlet 0.1 mm. (.00393")
— exhaust 0,2 mm. (.00787")

Carburation

Both carburetors are gravity fed from the tank.
Carburetor Make:
type Dell'Orto S.S.I. (right and left)

Lubrication

Pressure, by gear pump driven by the crankshaft.
Oil strainer in crankcase.
Normal lubricating pressure 2.5 - 3 kgs./sq. cm. (35.6 - 42.7 lbs/sq.in.)
(Controlled by relief valve)
Electrically controlled oil pressure gauge.

Cooling

By air. Cylinder and cylinder heads deeply finned.

Ignition

By battery with automatic advance Marelli distributor type S 123 A.
Initial advance: 10°.
Automatic advance: 28°.
Ignition timing 38° full advance.
Contact breaker gap: 0.42-0.48 mm. (.016-.018").
Spark plug: n. 225 in Bosch-Marelli scale or equivalent.
Plugs point gap: 0.6 mm. (.023").
Ignition coil: Marelli BE 220 D.

Starter motor

Marelli starter MT 40 H (12 V - .7 HP) with electromagnetic ratchet control. Ring gear bolted on flywheel.

Exhaust system

Dual exhaust pipes and mufflers.

TRANSMISSION

Clutch

Twin driven plates, dry type, located on the flywheel. Controlled by lever on left handlebar.

Gear box

Four speeds, frontal engagement. Constant mesh gears. Cush drive spring incorporated.
Separate case bolted on cranckase, operated by rocker, pedal on the right hand side of the machine.

Engine-gearbox ratio:	1	to	1.375	(16-22)
Internal gear ratios:				
— Low gear	1	to	2.230	(13-29)
— Second gear	1	to	1.333	(18-24)
— Third gear	1	to	0.954	(22-21)
— High gear	1	to	0.750	(24-18)

Secondary drive at rear wheel

By constant speed homokinetic double joint cardan shaft.
Bevel layshaft gear-wheel ratio: 4.625 (8-37)

Overall gear ratios:

— Low gear	1	to	14.180
— Second gear	1	to	8.473
— Third gear	1	to	6.063
— High gear	1	to	4.768

FRAME

Duplex cradle, tubular structure.

Suspension

Rear swinging fork with external adjustable springs.
Telescopic front fork incorporating hydraulic dampers.
Telescopic front fork with external adjustable spring.
Wheels: 18 x 3 spoked steel rims, front and rear.
Wheels: 18 x 3 spoked steel rims, front and rear.

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Tires

4.00 x 18 front and rear, block type « high speed ».

Front tire pressure

Solo rider / With pillion — 1,5 kgms/sq. cm. = 21 P.S.I.

Rear tire

Solo rider	1,8	kgms/sq.	cm.	=	25 P.S.I.
With pillon	2,0	kgms/sq.	cm.	=	28 P.S.I.

Note - The above recommendation is for normal riding (cruising speed). If using the machine at constant high speed or on motorways the above pressures should be increased by 0,2 kgms/sq. cm. (2,8 P.S.I.).

Brakes

Twin leading shoes expanding type front brake, operated by hand lever on the right handlebar.
Large rear brake operated by pedal on left hand side of machine.

Overall dimensions and weight

— Wheelbase	1.445 mts. (abt. 56.9")
— Length	2.230 mts. (abt. 87.5")
— Width	0.795 mts. (abt. 31.2")
— Height (dry)	1.050 mts. (abt. 41.2")
— Minimum ground clearance	0.150 mts. (abt. 5.9")
— Curb weight	243 kgs 536 Lbs

Performance

Maximum permissible speed and gradients climbable in each gear, solo riding.
Low gear 66 Kms/h (41 m.p.h.) Cimbing ability 60%
Second gear 96 kms/h (59.6 m.p.h.) Climbing ability 34%
Third gear 120 kms/h (74.5 m.p.h.) Climbing ability 23%
High gear 170 kms/h (106 m.p.h.) Climbing ability 14%

Capacities

Fuel tank: 20 liters (5.28 US gls.) including about 4 liters reserve (about 1 USA gl) - Petrol 98/100 No (Regular octane) Sump 3 liters (3¼ Quarts) Shell Super Motor Oil 100 - Transmission 0.750 liter (1¾ Pints) Shell Spirax 90 E. P. - Real wheel drive 0.180 liters (0.4 Pints) Shell Spirax 90 E. P. - Front fork dampers 0.160 liters = 5,4 oz USA « Shell Tellux 33 ».

MAIN FEATURES
V 7 750 cc.

ENGINE

Cycle	: 4 stokes
Number of cylinders	: 2 .
Cylinder disposition	: « V » 90°
Bore	: 83 mm. (3.26")
Stroke	: 70 mm. (2.75")
Displacement	: 757.486 cc. (46.21 cu. in.)
Compression ratio	: 9 to 1
Revs at maximum engine speed	: 6500 r.p.m.
Output at maximum engine speed	: 60 HP SAE
Crankcase	: in light alloy
Cylinders	: in light alloy with hard chromed barrels
Cylinder heads	: in light alloy, hemispherical, with special cast iron inserted seats
Crankshaft	: steel construction
Crankshaft supports	: in anti-friction material pressed in 2 suitable housings (as used in all F1 race cars)
Connecting rods	: steel construction with AL-TIN alloy thin wall bearings
Pistons	: in light alloy

Valve gear

O.H.V., push rod operated via the camshaft in the crankcase and gear driven by the crankshaft.

Inlet:
— opens 24° before TDC
— closes 58° after BDC

Exhaust:
— opens 58° after BDC
— closes 22° after TDC

Rocker clearance for valve timing:
— 0.5 mm. (.0196")

Normal rocker clearance (cold engine)
— inlet 0.15 mm. (.0059")
— exhaust 0.25 mm. (.0098")

Carburation

2 dell'Orto carburetors type VHB 29 CD (right) and VHB 29 CS (left) both gravity fed from the tank.

Standard carburetor setting

— Choke	29 mm.
— Throttle slide	60
— Atomizer	265
— Main jet	145
— Pilot jet	45
— Starter atomizer	80

With needle SV9 set at second notch from top:
idling screw open 1 and ½ turns for the left carburetor and 1 and ¾ — 2 turns for the right carburetor.
With needle SV5 third notch from top:
idling screw open 1½ to 2 turns for the left carburetor and 2-2½ turns for the right carburetor.
Air intake provided with dry filter.

Lubrication

Pressure, by gear pump driven by the crankshaft Oil strainer in crankcase.
Normal lubrication pressure 3.8-4.2 kgs/sq. cm. (54 to 60 lbs sq. in.) controlled by relief valve.
Electrically controlled oil pressure gauge.

Cooling

By air. Cylinder and cylinder head deeply finned.

Ignition

By battery with automatic advance distributor
Initial advance: 10°
Automatic advance: 28°
Ignition timing 38° full advance
Contact breaker gap: 0.42-0.48 mm. (.016-.018")
Spark plug: n. 225 in Bosch-Marelli scale or equivalent.
Plugs point gap: 0.6 mm. (.023")
Ignition coil.

Starting

Electric starter with electromagnetic ratchet control. Ring gear bolted on flywheel. Operated by starter button.

Exhaust system

Dual exhaust pipes and mufflers.

TRANSMISSION

Clutch

Twin driven plates, dry type, located on the flywheel. Controlled by lever on left handlebar.

Gear box

Four speeds, frontal engagement. Constant mesh gears. Cush drive incorporated.
Separate case bolted on cranckase, operated by rocker, pedal on the right side of the machine.

Engine gear-box ratio:	1	to	1.375	(16-22)
Internal gear ratios:				
— Low gear	1	to	2.230	(13-29)
— Second gear	1	to	1.333	(18-24)
— Third gear	1	to	0.954	(22-21)
— High gear	1	to	0.750	(24-18)

Secondary drive

By constant speed double joint, cardan shaft.

Layshaft bevel gears-rear wheel ratio:	4.375		(8-35)
Overall gear ratios:			
— Low gear	1	to	13.413
— Second gear	1	to	8.015
— Third gear	1	to	5.735
— High gear	1	to	4.510