

Benelli

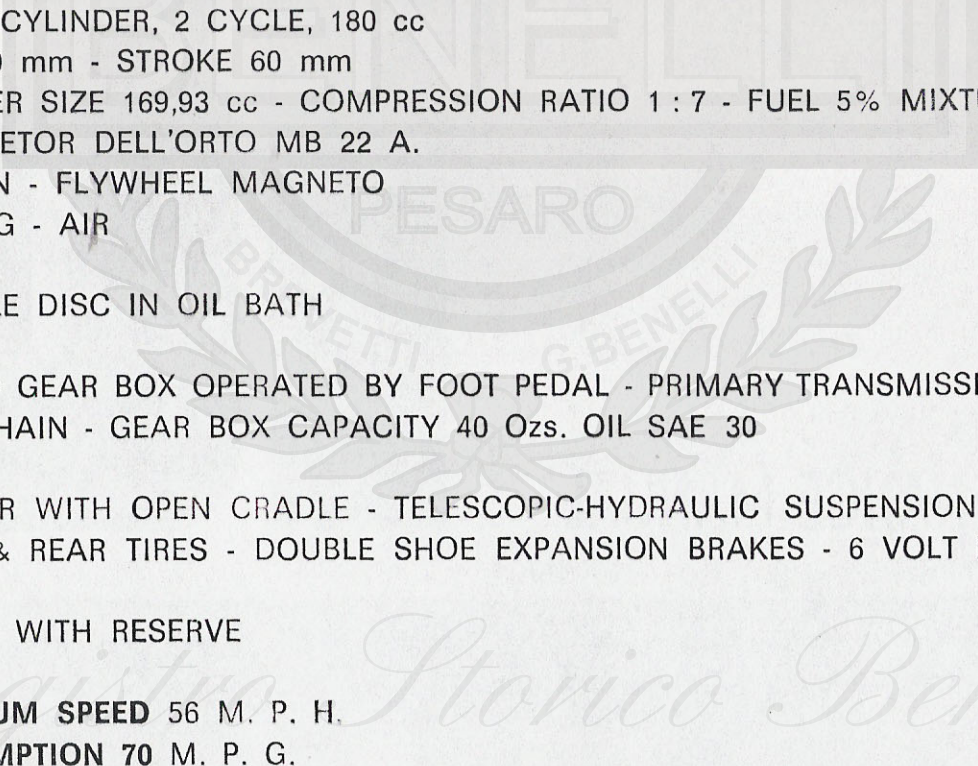
1969 - 250 cc. WORLD CHAMPIONSHIP WINNER'S

VOLCANO

OPERATION & MAINTENANCE MANUAL

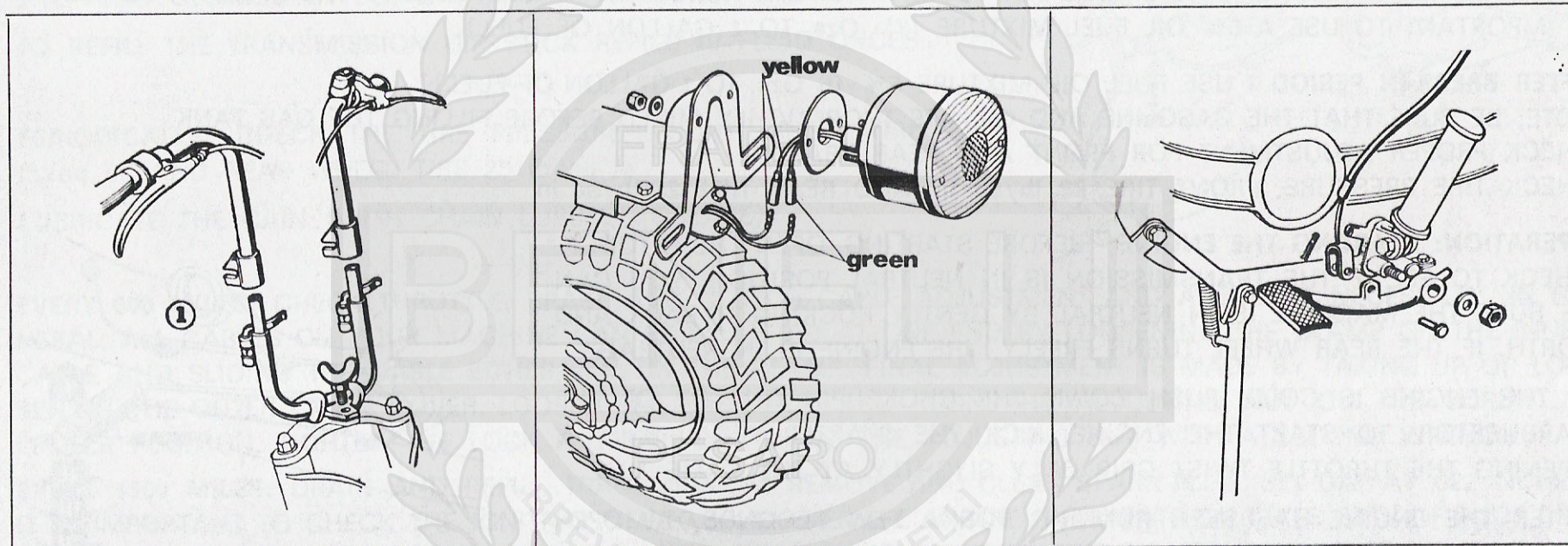
180 CC

TECNICAL CHARACTERISTICS

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- MOTOR -** SINGLE CYLINDER, 2 CYCLE, 180 cc
BORE 60 mm - STROKE 60 mm
CYLINDER SIZE 169,93 cc - COMPRESSION RATIO 1 : 7 - FUEL 5% MIXTURE OF OIL AND GASOLINE.
CARBURETOR DELL'ORTO MB 22 A.
IGNITION - FLYWHEEL MAGNETO
COOLING - AIR
- CLUTCH -** MULTIPLE DISC IN OIL BATH
- TRANSMISSION -** 4 SPEED GEAR BOX OPERATED BY FOOT PEDAL - PRIMARY TRANSMISSION WITH GEAR, SECONDARY WITH CHAIN - GEAR BOX CAPACITY 40 Ozs. OIL SAE 30
- FRAME -** TUBULAR WITH OPEN CRADLE - TELESCOPIC-HYDRAULIC SUSPENSION - 10" WHEELS - 3,00 x 10"
FRONT & REAR TIRES - DOUBLE SHOE EXPANSION BRAKES - 6 VOLT ELECTRICAL SYSTEM.
- FUEL TANK -** GALL. 1 WITH RESERVE
- PERFORMANCE -** MAXIMUM SPEED 56 M. P. H.
CONSUMPTION 70 M. P. G.

ASSEMBLY & ADJUSTMENT

YOUR BENELLI HAS BEEN CAREFULLY AND COMPACTLY CRATED TO ARRIVE IN EXCELLENT CONDITION. IT IS COMPLETELY ASSEMBLED BUT THERE ARE SOME PARTS THAT HAVE BEEN DISASSEMBLED TO FACILITATE PACKING. THEREFORE IT IS NECESSARY TO RE-INSTALL THEM IN THE PROPER POSITION. THE TOOLS NECESSARY FOR ASSEMBLY AND ADJUSTMENT ARE PACKED WITH YOUR MACHINE. REMOVE MOTORCYCLE FROM CARBOARD CONTAINER. PUT MOTORCYCLE ON SIDE STAND.



TO RE-INSTALL THE HANDLEBAR - Remove the wing bolt (included in the tool Box). Lift up the handlebar. Install the wing bolt, firmly. Loosen the two locking levers located at the center of the handlebar and slide out the pivot bolt from the slot. Turn Forward the top half handlebar and look in position the handlebar with the locking lever after the pivot bolt is inserted into the second slot.

RE-INSTALL TAILLIGHT - Making sure to connect wires of the same color.

RE-INSTALL THE BRAKE PEDAL.

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PRE-SERVING THE MOTORCYCLE

LUBRICATION - REMOVE THE OIL FILLER DIP STICK LOCATED ON THE RIGHT SIDE OF THE MOTOR, AND TOP AND TO THE REAR, AND FILL 40 FLUID ONCES SAE 30 OIL.

BREAK-IN PERIOD - FOR THE FIRST 100 MILES DO NOT EXCEED 43 MILES FOR HOUR. FOR THE FIRST 1000 MILES DO NOT OPERATE AT HIGH ENGINE SPEEDS FOR MORE THAN ONE MINUTE AT A TIME. DURING THE BREAK-IN PERIOD, IT IS IMPORTANT TO USE A 6% OIL FUEL MIXTURE (7½ Ozs. TO 1 GALLON OF FUEL).

AFTER BREAK-IN PERIOD - USE FUEL OIL MIXTURE 5% (6 Ozs. TO 1 GALLON OF FUEL).

NOTE: BE SURE THAT THE GASOLINE AND OIL ARE THOROUGHLY MIXED BEFORE FILLING THE GAS TANK.
CHECK PROPER ADJUSTMENT FOR FRONT AND REAR BRAKES.
CHECK TIRE PRESSURE, FRONT TIRE 22 lb/sq in. AND REAR TIRE 25 lb/sq in.

OPERATION: STARTING THE ENGINE - BEFORE STARTING, OPEN THE PETCOCK. CHECK TO SEE IF THE TRANSMISSION IS IN NEUTRAL POSITION. YOU CAN BE SURE THE MACHINE IS IN NEUTRAL BY GENTLY ROCKING IT BACK AND FORTH. IF THE REAR WHEEL TURNS FREELY, THE ENGINE IS IN NEUTRAL.

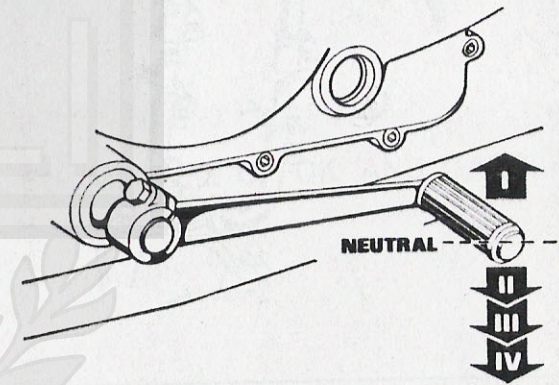
IF THE ENGINE IS COLD, PUSH DOWN THE CHOKE PIN ON TOP OF THE CARBURETOR. TO START THE ENGINE, KICK THE STARTER PEDAL BRISKLY OPENING THE THROTTLE TWIST GRIP ONLY SLIGHTLY AT THE SAME TIME.

AFTER THE ENGINE HAS BEEN RUNNING FOR A FEW SECONDS, TO OPEN AGAIN THE CHOKE PIN.

TO GAIN SPEED, DEPRESS THE CLUTCH LEVER AND WITH YOUR TOES, RAISE THE RUBBER PADDED GEAR SHIFT LEVER INTO LOW GEAR. NOW RELAX YOUR GRIP ON THE CLUTCH LEVER AND ADVANCE THE THROTTLE AT THE SAME TIME. TO SHIFT INTO 2ND, 3RD, 4TH GEAR FOLLOWS THE SAME CLUTCH AND THROTTLE MOVEMENTS, BUT DEPRESS THE LEVER INSTEAD OF RAISING IT...

STOPPING - TO STOP YOUR MACHINE, RELAX THE THROTTLE COMPLETELY AND DISENGAGE THE CLUTCH BEFORE PUTTING THE GEAR SHIFT INTO NEUTRAL AND APPLY BOTH BRAKES GRADUALLY. TO STOP THE ENGINE PRESS THE GROUND BUTTON LOCATED ON THE DIMMER SWITCH.

NOTE: ALWAYS CLOSE THE PETCOCK WHEN THE ENGINE IS NOT RUNNING.



MAINTENANCE & LUBRICATION

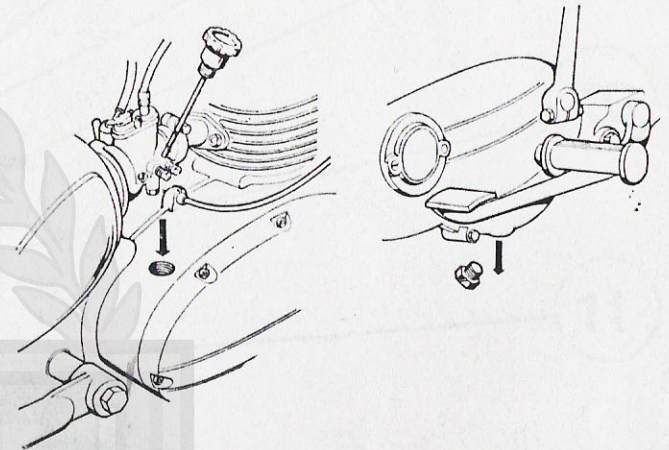
AFTER THE BREAK-IN PERIOD (1000 MILES) REPLACE THE ENGINE OIL WITH SAE 30 TYPE OIL. THE TRANSMISSION DIP STICK IS LOCATED ON THE RIGHT HAND SIDE OF THE MOTOR, ON TOP AND TO THE REAR.

TO DRAIN THE CRANK-CASE OIL, WARM UP THE ENGINE AND REMOVE THE PLUG LOCATED IN BOTTOM OF TRANSMISSION HOUSING.

TO REFIL: THE TRANSMISSION DIP STICK REFILL 40 FLUID ONCES.

PERIODICALLY: CHECK THE TIRE PRESSURE; FRONT WHEEL TIRE 22 lb/sq in. AND REAR WHEEL TIRE 25 lb/sq in.

LUBRICATE THE CHAIN (WITH CHAIN LUBE OR GREASE).



EVERY 600 MILES: CHECK THROTTLE, BRAKE AND CLUTCH CABLE ADJUSTMENT AND ADJUST IF NECESSARY. IN GENERAL, ALL CABLES ON YOUR MACHINE CAN BE ADJUSTED AT ONE END BY LOOSENING THE CLAMP ON THE INNER CABLE AND SLIDING THE CABLE EITHER WAY IN THE CLAMP. FINAL ADJUSTMENT IS MADE BY TAKING UP OR LOOSENING THE OUTER CABLE COVER. LOOSEN THE LOCK NUT AND TURN THE ADJUSTING NUT ON THE SCREW TO PROPER POSITION. TIGHTEN THE LOCK NUT WHILE HOLDING THE ADJUSTING NUT WITH A SECOND WRENCH.

EVERY 1500 MILES: DRAIN AND REFILL TRANSMISSION. REMOVE AND CLEAN SPARK PLUG, SET GAP AT .022 INCHES. IT IS IMPORTANT TO CHECK THE IGNITION TIMING WHENEVER THE ENGINE OVERHEATS OR GIVES SIGN OF POOR PERFORMANCE. IGNITION BREAKER POINT GAP SHOULD BE .016 INCHES. THE IGNITION ADVANCE MUST BE 26° OR 27 mm. (1.062") MEASURED ON THE PERIMETER OF THE FLY-WHEEL MAGNETO.

EVERY 4000 MILES: REMOVE EXHAUST PIPE, MUFFLER, CYLINDER AND CYLINDER HEAD AND CLEAN ALL CARBON DEPOSITS.

LUBRICATE WHEEL BEARINGS WITH GREASE.

LUBRICATION - OIL ALL MOVING PARTS, CLEAN FIRST WITH GASOLINE.

FRAME - GO OVER ENTIRE MACHINE AND TIGHTEN ALL NUTS AND BOLTS.

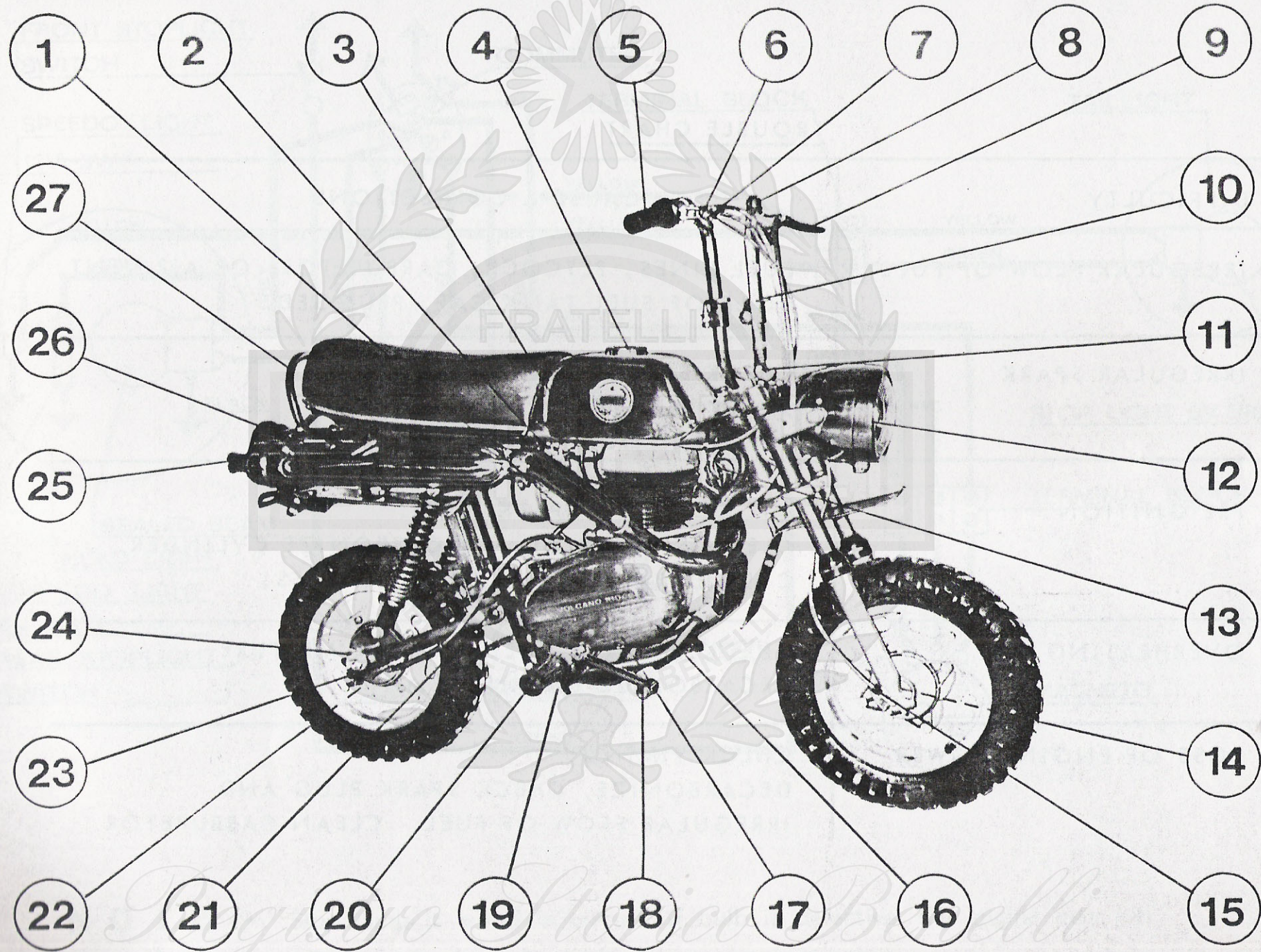
BRAKES - VISUALLY CHECK BRAKES DRUM AND CAUSE UNNECESSARY EXPENSIVE REPLACEMENT.

CABLES - VISUALLY CHECK THROTTLE, BRAKE AND CLUTCH CABLES FOR WEAR.



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|-----------------------------------|-----------------------------------|
| 1 - CARBURETOR | 15 - SPEEDOMETER CABLE |
| 2 - STARTER | 16 - REAR BRAKE PEDAL |
| 3 - FUEL PETCOCK | 17 - REAR BRAKE STOP LIGHT SWITCH |
| 4 - FUEL TANK CAP | 18 - FOOT SHIFT PEDAL |
| 5 - THROTTLE TWIST GRIP | 19 - KICKSTAND |
| 6 - FRONT BRAKE LEVER | 20 - OIL DRAIN PLUG |
| 7 - FRONT BRAKE STOP LIGHT SWITCH | 21 - OIL FILLING PLUG |
| 8 - DIMMER SWITCH | 22 - KICKSTARTER PEDAL |
| 9 - CLUTCH LEVER | 23 - REAR BRAKE CABLE ADJUSTER |
| 10 - HANDLEBAR LOCKING LEVER | 24 - CHAIN ADJUSTER |
| 11 - WING BOLT | 25 - MUFFLER |
| 12 - HEAD LIGHT | 26 - TAIL LIGHT |
| 13 - HORN | 27 - REAR LUGGAGE |
| 14 - FRONT BRAKE CABLE ADJUSTER | |

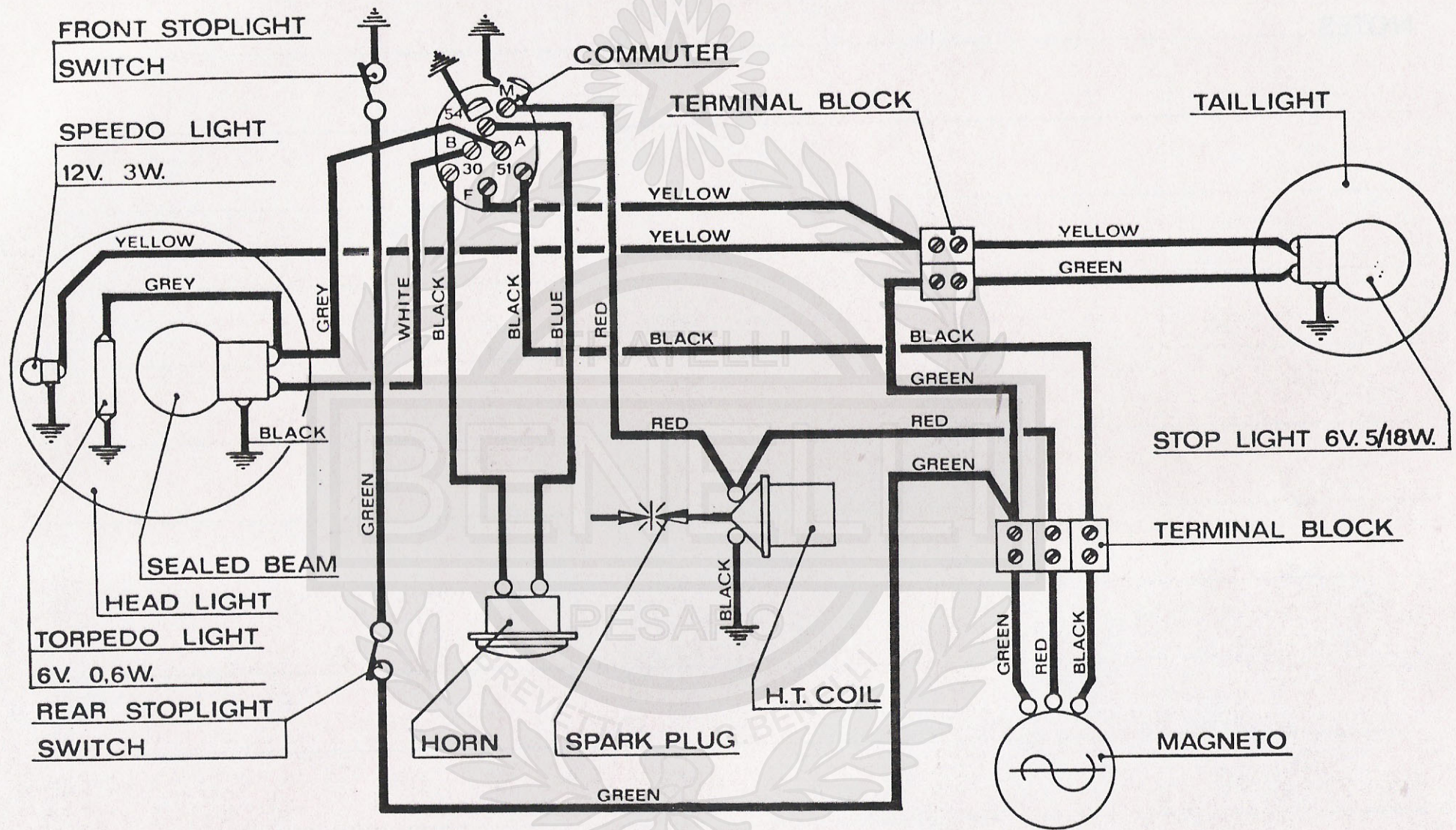
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TROUBLE CHART

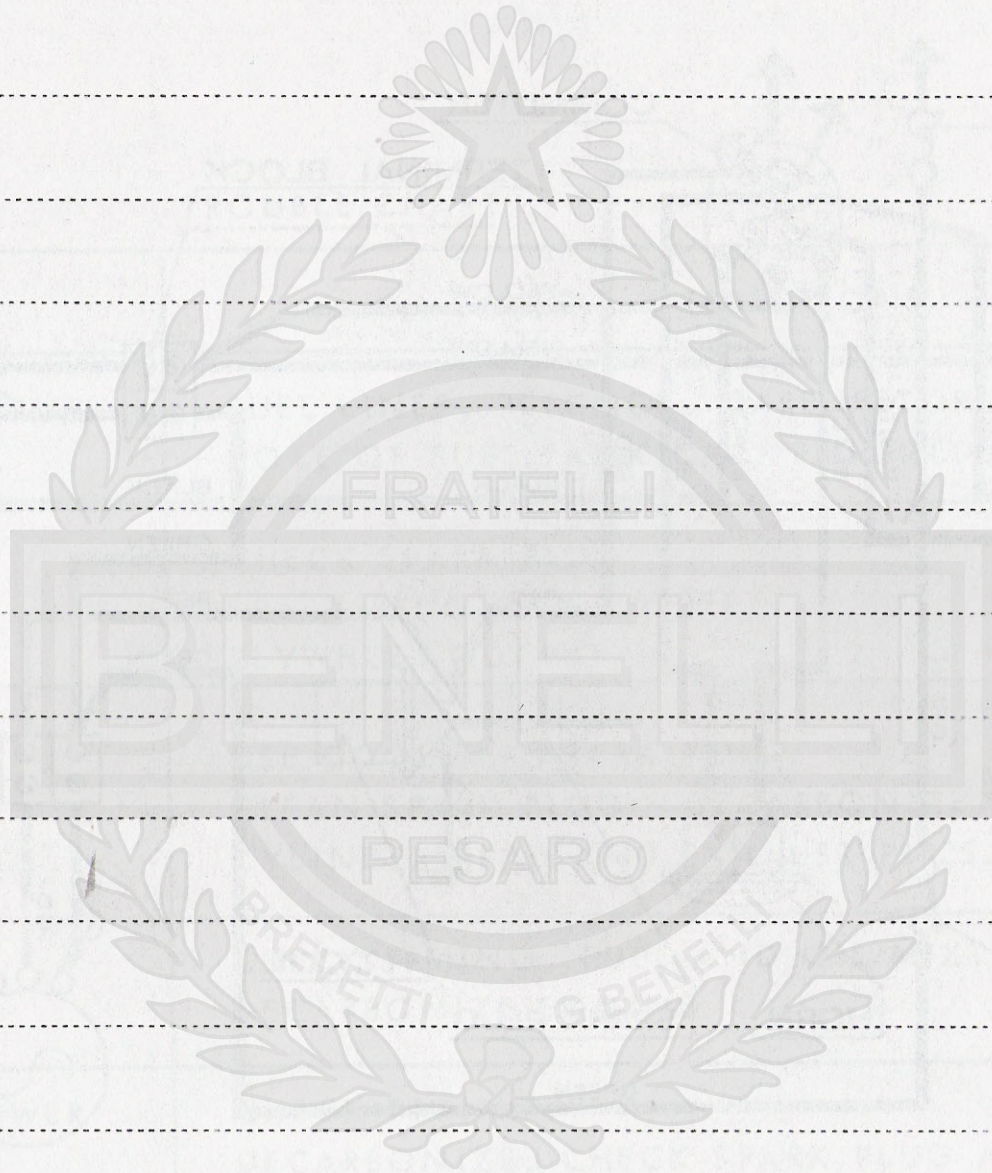
DIFFICULTY	CAUSE & CORRECTIONS
IRREGULAR FLOW OF FUEL	FUEL LINES, PETCOCK, CARBURETOR, OR AIR VENT HOLE OF FUEL TANK CAP, PLUGGED.
IRREGULAR SPARK	CHECK SPARK PLUG. SPARK PLUG GAP (.022") FLYWHEEL OUT PUT.
PREIGNITION	USE COOLER - SPARK PLUG. CLEAN SPARK PLUG - DECARBONIZE CYLINDER, CYLINDER HEAD AND EXHAUST PIPES.
OVERHEATING	CHECK TIMING, FUEL AND OIL MIXTURE. DECARBONIZE ENGINE.
LOSS OF ENGINE POWER	CHECK TIMING. DECARBONIZE, CHECK SPARK PLUG AND IRREGULAR FLOW OF FUEL. CLEAN CARBURETOR.

WIRING DIAGRAM



NOTE - Stop lamp is wired in circuit. If bulb is defective, the engine may kill when rear brake is applied while engine is running.

NOTES



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