

Solex S 3800 USER'S GUIDE

SOLEX[®] TRADE MARK REGISTERED BY MAGNETI MARELLI

USER'S GUIDE

REFERENCES IN THIS USER'S GUIDE ARE DIFFERENT TO THE SPARE-PARTS CATALOGUE

METHOD OF SEARCH

- DETERMINE, FROM THE 7 POINTS ON THE 2ND AND 3RD PAGES, THE BEST DESCRIPTION OF YOUR TROUBLE.
- NEXT OF YOUR DETERMINATE POINT ARE THE PARAGRAPH NUMBERS (1 A, 1 B, ETC.) WHICH REFERS TO THE FOLLOWING.

- FUEL SUPPLY PAGE **4**.
- IGNITION PAGE **5**.
- SERVICING PAGE **6**.

If you follow the advice in the "REPAIRS" columns your trouble could be resolved.

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SOLEX® TRADE MARK REGISTERED BY MAGNETI MARELLI

I. MOTOR WILL NOT START

Check:

1. THAT THERE IS FUEL IN THE TANK.
2. THAT THE LIGHTS ARE SWITCHED OFF.
3. THAT THE AIR FLAP (6) IS CLOSED WHEN THE MOTOR IS COLD.
THAT THE AIR FLAP (6) IS OPEN WHEN THE MOTOR IS WARM.

IF THESE CONDITIONS ARE FULFILLED AND THE MOTOR WILL NOT START, MAKE THE FOLLOWING CHECKS, IN SEQUENCE:

1. FUEL SUPPLY

DISCONNECT THE PETROL OVERFLOW PIPE (9), TAKE OFF PRESSURE AND TURN THE MOTOR.

IF PETROL IS IN THE TANK DOES PETROL FLOW NORMALLY.

IF PETROL FLOWS NORMALLY.

Check point:

- 2 Ba UNDER "FUEL SUPPLY"

IF PETROL IS DELIVERED.

Check point:

- 2 A
3 A
4 A UNDER "FUEL SUPPLY"
1 B

Check point.

- 1 H UNDER "SERVICING"

IF THE PETROL BUBBLES.

Check points:

- 1 A
1 D UNDER "FUEL SUPPLY"
1 E

2. IGNITION

IN ORDER TO ESTABLISH WHETHER FAILURE TO START IS DUE TO INCORRECT SETTING OF THE IGNITION OR A FAULTY COMPONENT, TAKE OUT THE SPARK PLUG AND TURN THE MOTOR WITH THE PLUG CONNECTED TO THE LEAD AND PLACED ON THE CYLINDER HEAD. IF THERE IS A REGULAR SPARK BETWEEN THE ELECTRODES.

Check points:

- 1 UNDER "IGNITION"
3

IF THE SPARK IS INTERMITTENT OR.

IF THERE IS NO SPARK BETWEEN THE ELECTRODES.

Check points.

- 2 UNDER "IGNITION"
1 H UNDER "SERVICING"

3. SERVICING

Check points:

- 1 A
1 B UNDER "SERVICING"
1 H

IF THE MOTOR STILL DOES NOT START AFTER THESE CHECKS HAVE BEEN MADE, TAKE THE MACHINE TO A SOLEX SERVICE STATION.

II. THE MOTOR IS DIFFICULT TO START

FIRST CHECK THAT THE LIGHTING SWITCH IS AT THE "OFF" POSITION.

THEN CHECK THE IGNITION:

SEE THE MOTOR WILL NOT START "IGNITION" OR "SERVICING"

III. THE MOTOR STARTS AND STOPS

CHECK THAT THERE HAS BEEN NO ERROR IN THE STARTING PROCEDURE.

1. E.: 1. FLAP NOT OPENED AFTER RUNNING FOR 200 METRES (MOTOR COLD).
2. FLAP CLOSED WITH THE MOTOR ALREADY WARM.
IF THE PROCEDURE HAS BEEN CORRECTLY CARRIED OUT.

Check points:

- 2 Ba
2 A
3 A UNDER "FUEL SUPPLY"
4 A

Check points:

- 1
2 UNDER "IGNITION"

IV. THE MOTOR RUNS WITH THE AIR VALVE PARTLY CLOSED

Possible causes of this fault:

1. THE JET IS TOO SMALL OR PARTLY BLOCKED
2. AIR IS ENTERING THE FUEL INTAKE SYSTEM
3. AIR IS ENTERING THE INLET PIPE OR THE CRANKCASE

Disconnect the petrol overflow pipe:

If petrol flows normally:

Check points:

- 2 Ba
- 2 Bc UNDER "FUEL SUPPLY"
- 2 Cb

- 1 D
- 1 E UNDER "SERVICING"
- 1 C

If the petrol bubbles.

Check points:

- 1 A
- 1 D UNDER "FUEL SUPPLY,"

V. FOUR-STROKE RUNNING

Check that the air flap is fully open and that the carburettor air filter is not partly blocked.

Then check the following points:

- 2 Bb
- 2 Ca UNDER "FUEL SUPPLY"
- 1 C

- 1
- 3 UNDER "IGNITION"
- 3 UNDER "SERVICING"

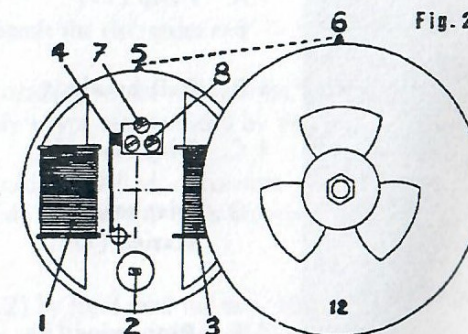
VI. MOTOR DOES NOT PULL

Check that the front tyre is inflated to the right pressure (2 kg) and that the wheels turn freely.

If BOTH ARE CORRECT, check the following points:

- 1 UNDER "IGNITION"
- 3

- 1 A
- 1 B
- 1 D
- 1 F UNDER "SERVICING"
- 1 H
- 2 A
- 2 B
- 2 D
- 3



VII. THE MOTOR IS NOISY

The noise may be due to a part which has worked loose, to play on a moving part or to carbon deposits on the motor.

Check:

1. THAT ALL MOTOR ASSEMBLIES ARE PROPERLY TIGHTENED. If the noise continues, check

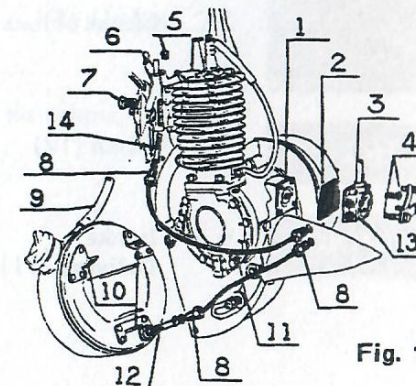
points:

- 2 A
- 2 B
- 2 C
- 2 D UNDER "SERVICING"
- 2 E
- 2 F
- 3

VIII. THE LIGHTING

DOES NOT WORK

If the lights fail, turn to the section on "IGNITION" which gives full details.



CAUSE

REMEDY

PUMP

- 1 A. **Pump (13)** **Loose**
MOTOR will NOT START
OR RUNS with flap partly closed
- 1 B. **Ball bearings** **Seized**
MOTOR will NOT START
- 1 C. **Diaphragm (2)** **Porous**
4-STROKE RUNNING
- 1 D. **Diaphragm Seating (1)** **Out of shape or fitted facing the wrong way**
MOTOR RUNS with flap partly closed.
- 1 E. **Pipe union (8)** **Loose of flange damaged**
MOTOR will NOT START, STARTS AND STOPS
OR RUNS with flap partly closed.

Check tightness: 1. of pump mounting screws (4),
2. of rod (3).

Change the pump (13)
Remove the 4 screws (4) securing the pump body. Free the pump a little from the crankcase. Take out the diaphragm (2). Slide in a new diaphragm. Refit. Check that the diaphragm seating (1) is not out of shape. If it is, fit a new one. Remove the pump (13) and diaphragm (2). Take out the seating (11). Fit a new seating with the curved side facing outwards. Bed in on the crankcase centring piece, which should be slightly expanded. Refit the pump.

Either tighten moderately or change the pipe with the faulty union after taking out the tank.

CARBURETTOR

- 2 A. **Filter (14)** **Clogged**
MOTOR will NOT START OR STARTS
with flap partly closed.
- 2 B. **Jet (7)**
- a) **Blocked**
MOTOR will NOT START OR STARTS AND STOPS.
- b) **Too big**
4-STROKE RUNNING
- c) **Too small**
RUNS with valve partly closed.
- a) **Blocked or too small**
4-STROKE RUNNING
- b) **Too big**
MOTOR RUNS with the air flap partly closed.
- 2 C. **Choke (5)** **Clogged**

Motors before model 3800, Disconnect the fuel delivery pipe (8). Insert a Ø3.5 wood screw into the carburettor seating to facilitate removal of the filter. Reassemble. Motors after model 3800. Take out the air filter. The fuel filter projects from the carburettor under the air filter. Take it out and fit a new one. Remove. Clean with air jet. Refit. Do not over-tighten. Never run a wire or needle through the calibrated aperture. Remove. Fit a jet one or two sizes smaller. Do not over-tighten. Normal 28 cc jet. Use only "SOLEX" jets. Remove. Fit a jet one or two sizes bigger. Do not over-tighten. Take out the air filter body. Clear or change the choke and refit. Take out the air filter body. Remove the choke and fit a smaller one. Refit.

FUEL TANK

- 3 A. **Filter (12)** **Blocked**
MOTOR will NOT START OR STARTS AND STOPS.

Remove the fuel tank and unscrew the intake pipe. Take out, and clean the filter. Refit. Do not over-tighten.

PIPING

- 4 A. **Intake Delivery (11)** **Blocked**
MOTOR will NOT START OR STARTS AND STOPS.

Remove the fuel tank. Take off the pipes and clear with an air jet. Reassemble. Do not over-tighten the unions. Check that the delivery pipe does not touch the crankcase.

CAUSE

REMEDY

1. SPARK PLUG Electrodes

Dirty. Gap too wide or too narrow.

MOTOR will NOT START, STARTS with difficulty OR RUNS 4-STROKE.

TAKE OUT THE AIR FILTER. TAKE OUT SPARKING PLUG. BRUSH THE ELECTRODES AND CLEAN THOROUGHLY. SET THE GAP TO 5/10 MM. (DO NOT APPLY TOO MUCH FORCE TO THE EARTH ELECTRODE SO AS NOT TO BREAK THE SOLDER.) N.B. IF A NEW SPARK PLUG HAS TO BE FITTED USE ONLY A TYPE RECOMMENDED BY THE MAKER.

2. SPARK PLUG LEAD

INSULATION

MOTOR will NOT START OR STARTS JERKILY.

Split or faulty

REMOVE THE MOTOR COVER, UNSCREW THE BRACKET HOLDING THE LEAD, DISCONNECT THE LEAD FROM THE FLYWHEEL AND FIT A NEW LEAD. ONLY "SUPPRESSED" LEADS RECOMMENDED BY SOLEX SERVICE STATIONS SHOULD BE USED.

3. MAGNETIC FLYWHEEL

MAGNETO LEAD

MOTOR will NOT START, STARTS WITH DIFFICULTY, DOES NOT PULL OR RUNS 4-STROKE.

OUT OF SETTING

REMOVE THE MAGNETO COVER. ROTATE THE ROTOR (12) BY HAND UNTIL THE TWO "BREAK" MARKERS COINCIDE. SLACKEN BY A QUARTER OF A TURN THE 2 SCREWS (8) WHICH SECURE THE FIXED CONTACT MOUNTING. SLIP A CIGARETTE PAPER BETWEEN THE MOUNTING AND THE PAWL. BY TURNING THE CAM (7) WHICH SHIFTS THE MOUNTING (4) ADJUST THE CONTACT GAP UNTIL THE CIGARETTE PAPER STARTS TO MOVE FREELY WHEN GENTLY PULLED. THEN RETIGHTEN THE SCREWS (8). BE VERY CAREFUL NOT TO LEAVE ANY PAPER BETWEEN THE CONTACTS.

IGNITION FAULTS MAY ALSO BE DUE TO THE COIL (3), THE CONDENSER OR THE BREAKER PLATE.

BULBS

FILAMENT

BROKEN OR EARTHED

REMOVE EITHER THE HEADLAMP GLASS OR THE REAR LIGHT COVER AND REPLACE THE FAULTY BULB.
6 VOLTS - 1 AMP YELLOW BULB FOR THE HEADLAMP.
12 VOLTS - AR, WHITE BULB FOR THE REAR LIGHT.

LEADS EARTH CIRCUIT

BROKEN OR FRAYED

CHANGE THE FAULTY LEAD.
CHECK THAT THE CONDUCTORS, THE TERMINAL INSULATION AND THE HEADLAMP AND REAR LIGHT INSULATION ARE IN GOOD CONDITION.

LIGHT SWITCH

DIRTY/CLEAN

THE CONTACT ON THE SWITCH AND THE CONTACT STUD ON THE LIGHTING TERMINAL.



OR MAJOR REPAIRS CONTACT A *Solex* SERVICE STATION

CAUSE

REMEDY

LEAKS

1 A.	Valve (11498)	Leaks MOTOR DOES NOT PULL AND HAS NO COMPRESSION.	Check: 1. THE VALVE SETTING (SEE PAGE 15 "DECARBONISATION"), 2. THAT THE VALVE IS NOT LEAKING
1 B.	Cylinder head gasket (10522)	Split MOTOR WILL NOT START, OIL LEAK.	REMOVE THE CYLINDER HEAD (11373). FIT A NEW GASKET (10522). GRIND THE MATING SURFACE ON THE CYLINDER HEAD. REFIT.
1 D.	Manifold gasket (408)	Split OIL LEAK. MOTOR RUNS WITH AIR FLAP PARTLY CLOSED AND WILL NOT PULL.	REMOVE THE SILENCER (11006). REMOVE THE MANIFOLD (11143) AND THE CARBURETTOR (11651). FIT A NEW GASKET (408). REASSEMBLE.
1 E.	Cylinder gasket	Worn OIL LEAK. MOTOR RUNS WITH AIR FLAP PARTLY CLOSED AND WILL NOT PULL.	REMOVE THE FUEL TANK (11648), THE SILENCER (11006). TAKE OUT THE CYLINDER (10839) WITH THE CYLINDER HEAD (11373), THE MANIFOLD (11143), THE CARBURETTOR (11651). FIT A NEW GASKET (142). REASSEMBLE.
1 F.	Crankcase gasket (10109)	Split OIL LEAK. MOTOR RUNS WITH AIR FLAP PARTLY CLOSED AND DOES NOT PULL.	REMOVE THE FUEL TANK (11648), THE CYLINDER BLOCK (10839), THE CRANKCASE COVER (10119). FIT A PAPER GASKET (10119) COATED WITH COUPER GREASE AT THE JOIN BETWEEN THE CRANKCASE AND CYLINDER MATING SURFACES.
1 G.	Inlet manifold (11143)	Locknut loose RUNS WITH AIR FLAP CLOSED.	CHECK TIGHTNESS OF NUT (10551) AND THE CONDITION OF SEAL (10547).
1 H.	Clutch (11853)	Worn or greasy MOTOR WILL NOT START, STARTS WITH DIFFICULTY OR DOES NOT PULL.	WITH THE MOTOR ENGAGED ON THE TYRE AND THE MAGNETO COVER REMOVED, PUSH THE VELOSOLEX WITHOUT DECOMPRESSION. IF THE MOTOR DOES NOT TURN THE CLUTCH IS SLIPPING. THE CLUTCH SHOULD BE SERVICED AT SOLEX SERVICE STATION.
2 A.	Cylinder (108639)	Worn MOTOR NOISY AND DOES NOT PULL.	STRIP THE CYLINDER (10839) COMPLETELY AND FIT A NEW ONE.
2 B.	Piston rings (11333)	Worn NO COMPRESSION, MOTOR NOISY AND DOES NOT PULL	REMOVE THE CYLINDER BLOCK (10839). FIT NEW RINGS (11333). REASSEMBLE.
2 C.	Gudgeon pin	Play MOTOR NOISY.	CHANGE THE COMPLETE CONNECTING-ROD ASSEMBLY (10840) OR HAVE IT CHANGED AT A SOLEX SERVICE STATION.
2 D.	Piston	Worn MOTOR DOES NOT PULL AND IS NOISY.	CHANGE THE COMPLETE CONNECTING-ROD ASSEMBLY (10840) OR HAVE IT CHANGED AT A SOLEX SERVICE STATION.
2 E.	Crankshaft ring (11474)	Play MOTOR NOISY.	REMOVE THE FUEL TANK (11648), THE CYLINDER BLOCK (10839), THE CRANKCASE COVER (10119). SEPERATE THE CONNECTING-ROD ASSEMBLY (10840) FROM THE CRANKSHAFT. FIT A NEW RING (11474). RESEMBLE.
2 F.	Bearing	Worn MOTOR NOISY.	THE NECESSARY WORK SHOULD BE DONE BY A SOLEX SERVICE STATION.
2 G.	Clutch (11853)	Mechanism or drum worn MOTOR NOISY AND DOES NOT PULL OR WILL NOT START.	THE NECESSARY WORK SHOULD BE DONE BY A SOLEX SERVICE STATION.

CARBON DEPOSITS

3.	Cylinder head (11373) Pistons Cylinder (10839) Silencer (11006) Manifold (11143)	4-STROKE RUNNING. MOTOR PINKS, DOES NOT PULL.	CARBON FILM AT EXHAUST PORT: REMOVE THE CYLINDER HEAD (11373) AFTER FIRST REMOVING THE AIR FILTER, THE LIFTING HANDLE AND THE MOUNTING STUDS. BRING THE PISTON TO BOTTOM DEAD CENTRE. SCRAPE THE CARBON OFF EXHAUST PORT. CLEAN. RESEMBLE. COMPLETE DECARBONISATION: PAGE 15.
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TOOLS

IN ADDITION TO THE STANDARD 7, 9, 12, 13, 14 MM OPEN-ENDED AND ELBOW SPANNERS, SCREWDRIVERS, ETC. SOME WORK ON THE MOTOR INVOLVES THE USE OF THE SPECIAL TOOLS LISTED ON PAGES 8 TO 14.

ORDER OF OPERATIONS

IF THE MOTOR IS TO BE TAKEN DOWN COMPLETELY, CARRY OUT THE VARIOUS STEPS IN THE ORDER LISTED ON PAGES 8 TO 14.
IF A SPECIFIC COMPONENT IS TO BE CHANGED, CARRY OUT THE APPROPRIATE STEPS IN THE ORDER SHOWN IN THE LIST BELOW.

No.	REFERENCE	OPERATIONS	No.	REFERENCE	OPERATIONS	No.	REFERENCE	OPERATIONS
-	Gudgeon pin	3-4-5-6-8-9-10	10840	CONNECTING ROD ASSEMBLY	... 3-4-5-6-8-9-10	11657	PUMP	3-15
11474	CRANKSHAFT RING	3-4-5-6-8-9-10	13853	CLUTCH	.. 3-11-12-13	116	FUEL TANK	3-6
-	CONNECTING ROD	3-4-5-6-8-9-10				11466	ROTOR	.. 3-11
11117	IGNITION COIL	3-11				-	CRANKCASE BEARING	16
11118	LIGHTING COIL	3-11	11031	AIR FILTER	.. 4	778	FLYWHEEL BEARING	.. 3-11-12
779	SPARKING PLUG	4	12546	SPROCKET	.. 3-11-12-13-14	11333	PISTON RINGS	.. 3-4-5-6-8
11656	HEADLAMP COVER	3	11309	GASKET	.. 3-11-12-13	10454	PUMP SEATING	.. 3-15
11111	FLYWHEEL COVER	3	10199	CRANKCASE GASKET	.. 3-6-8-9	11006	SILENCER	... 1
11651	CARBURETTOR	1-4-7	10522	CYLINDER HEAD GASKET	.. 4-5	11498	VALVE	.. 4-5
13035	CRANKCASE	1-2-3-4-5-6- 8-9-10-11	142	CYLINDER GASKET	..	11094	STATOR	.. 3-11-12
		12-13-14-15-17	408	MANIFOLD GASKET	.. 1-4-7		SUSPENSION	.. 1-2-6-11-12-13 -14-17
11191	CONDENSER	3-11	11501	LIFTING HANDLE	... 4-5	11652	DELIVERY PIPE	.. 3-6
10119	CRANKCASE COVER	3-6-8-9	281	PUMP DIAPHRAGM	.. 3-15	11143	MANIFOLD	... 1-4-7
11373	CYLINDER HEAD	4-5	-	PISTON	.. 3-4-5-6-8-9-10	-	CRANKSHAFT	.. 16
10869	CYLINDER	3-4-5-6-8	11120	BREAKER PLATE	... 3-11			

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METHOD OF DISMANTLING



REASSEMBLE by REVERSING the order of dismantling

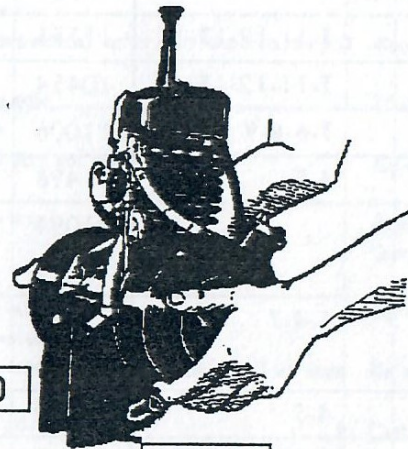
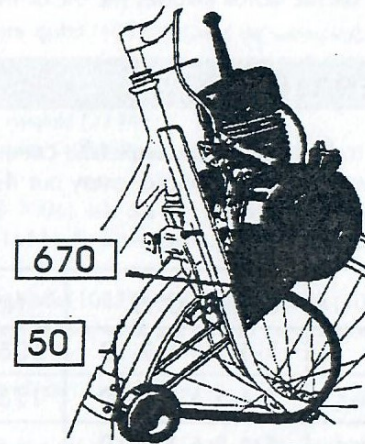
REMOVAL OF EXHAUST PIPE:

UNSCREW NUT 50 SECURING THE PIPE TO THE MUDGUARD. UNSCREW AND REMOVE BOLT 670 SECURING THE EXHAUST PIPE TO THE SUSPENSION FLANGE. FREE THE BOTTOM PIPE BRACKET FROM THE MUDGUARD.

SWING THE PIPE DOWNWARDS TO RELEASE IT FROM THE BALL JOINT.

EVERY 6,000 km, CHANGE THE SILENCER WHEN THE MOTOR IS DECARBONISED.

WHEN A NEW SILENCER IS FITTED, MAKE SURE THAT THE EXHAUST GAS OUTLET IS NOT BLOCKED BY A DROP OF PAINT.



REMOVING THE ENGINE:

UNHOOK THE DECOMPRESSION CONTROL ROD, DISCONNECT THE REAR LIGHT LEAD, UNSCREW THE SCREW SECURING CABLE 00343 TO THE VALVE LEVER, REMOVE THE CASING FROM THE CARBURETTOR STOP.

UNSCREW AND REMOVE THE TWO LOWER MOUNTING SCREWS 670.

UNSCREW THE TWO UPPER MOUNTING SCREWS 50.

LIFT THE MOTOR TO FREE IT FROM THE STUD-HOLES.

WHEN REASSEMBLING, ADJUST THE THROTTLE CONTROL (SEE PAGE 15).

3

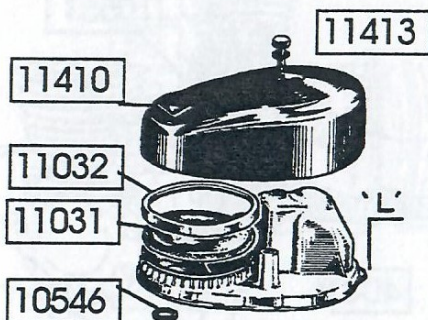
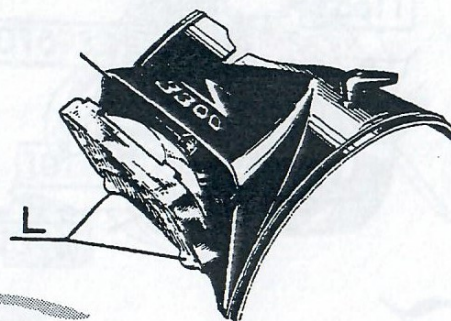
REMOVING THE FLYWHEEL COVER AND THE HEADLAMP COVER:

TO REMOVE THE flywheel cover, free it from the two rubber rings 10762. This also frees the headlamp cover after the rear light lead has been disconnected.

WHEN REASSEMBLING, adjust the light harness by pressing the two lugs (L) at the base of the headlamp glass (with the motor down on the tyre).

TO CHANGE THE front bulb, press the two lugs (L) and tilt the whole unit forward.

Bulb specifications:
FRONT 6 V-15 W,
REAR 12 V-6 W.

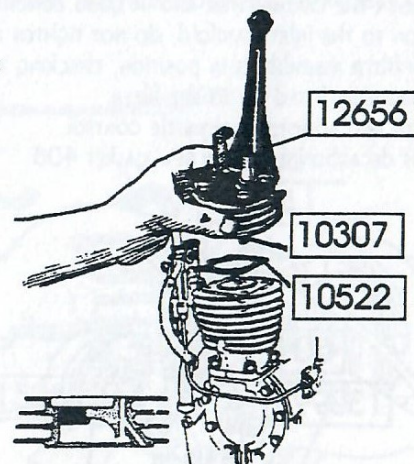


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REMOVING THE AIR FILTER CASING:

UNSCREW SCREW 11413. TAKE OUT WASHER 11612, THEN THE COMPLETE AIR FILTER CASING. TO REACH THE AIR FILTER, REMOVE COVER 10410, HOLDING THE ASSEMBLY WITH ONE HAND AND TAPPING LIGHTLY ON LUG "L" WITH A Mallet; USE A SCREWDRIVER TO REMOVE THE RETAINER 11032 THEN TAKE OUT FILTER 11031.

WHEN REASSEMBLING, REMEMBER TO FIT GASKET 10546.



5

REMOVING THE CYLINDER HEAD AND LIFTING HANDLE:

DISCONNECT THE SPARK PLUG LEAD 11660; UNSCREW WITHOUT TAKING OUT THE 4 SCREWS 10307 SECURING THE CYLINDER HEAD AND REMOVE THE CYLINDER HEAD COMPLETE WITH THE LIFTING HANDLE AND THE DECOMPRESSOR UNIT.

FIT A NEW GASKET 10522 EACH TIME THE CYLINDER HEAD IS REMOVED.

DURING CARBON REMOVAL, SCRAPE THE INSIDE OF THE CYLINDER HEAD AND RUN A 3.5 BIT THROUGH THE SLOPING CHANNEL OF THE DECOMPRESSOR. REAM THE VALVE SEATING. CHANGE THE SPRING AND THE VALVE; THE SEATING SHOULD BE LIGHTLY GROUND TO ENSURE A GOOD SEAL WHICH IS MOST IMPORTANT FOR THE RUNNING AND POWER OF THE MOTOR.

— GRINDING THE VALVE; SMEAR A FEW DROPS OF OIL ON THE VALVE SEATING; NO OTHER PRODUCT MUST BE USED.

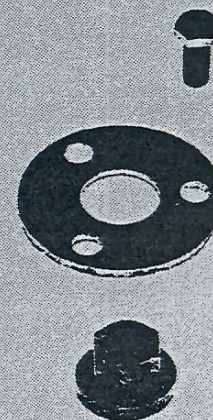
SET THE NEW VALVE IN ITS SEATING AND FOR A FEW SECONDS TURN IT IN BOTH DIRECTIONS WITH A SCREWDRIVER, APPLYING GENTLE PRESSURE.

21 MM BOX SPANNER



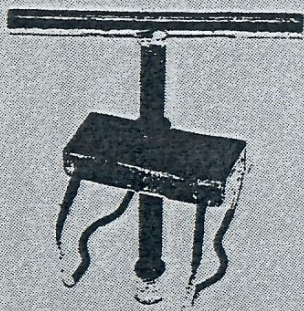
Uses:

- REMOVING THE SPARKING PLUG.
- ROTOR NUT (SEE OPERATION 11).
- CLUTCH NUTS (SEE OPERATIONS 13 AND 14).

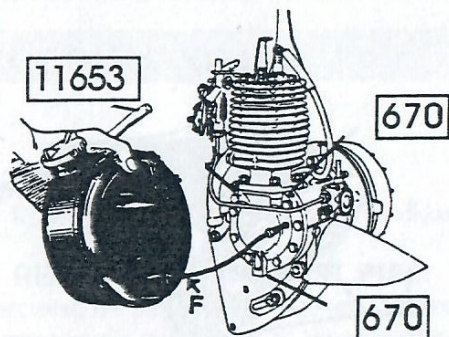


STATOR EXTRACTOR

SEE OPERATION 12 FOR USE



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6

REMOVING THE FUEL TANK:

DISCONNECT FUEL RETURN PIPE 11653, UNSCREW THE UNION ON THE FUEL INLET PIPE ON THE PUMP UNSCREW SCREW 318 SECURING THE TANK AT THE BACK, THEN COMPLETELY REMOVE THE FRONT AND BOTTOM SECURING SCREWS 670. TAKE OUT THE TANK.

WHEN REASSEMBLING, CHECK THAT FILTER "F" IS IN THE SEATING IN THE INLET PIPE AND IS CLEAN AND IN GOOD CONDITION. DO NOT OVERTIGHTEN THE UNIONS.

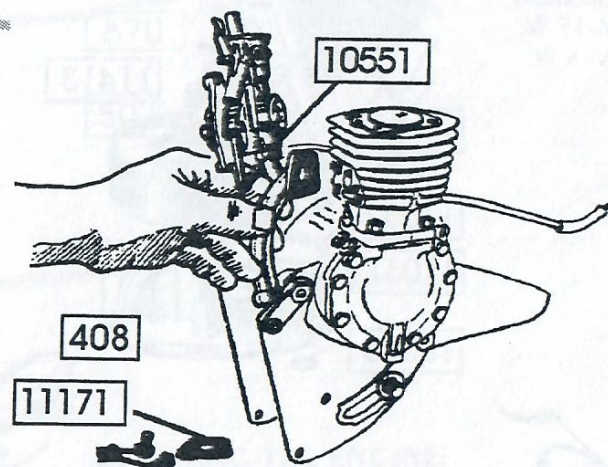
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CARBURETTOR AND MANIFOLD: REMOVING THE ASSEMBLY

RELEASE CABLE MOUNTING SCREW AND FREE THE IDLER SHEATH AND CABLE. UNSCREW THE UNION ON THE DELIVERY PIPE AND THE TWO SCREWS 11171 SECURING THE MANIFOLD. TAKE OUT THE CARBURETTOR-MANIFOLD ASSEMBLY. SEPARATE THEM BY UNSCREWING UNION 10551.

WHEN REASSEMBLING, CHECK THAT THE NYLON GASKET 10547 AND THE FILTER 13039 ARE IN THE CARBURETTOR AND IN GOOD CONDITION, FIT THE CARBURETTOR ON TO THE INLET MANIFOLD; DO NOT TIGHTEN UNION 10551 UNTIL THE AIR FILTER ASSEMBLY IS IN POSITION, CHECKING THAT THE CARBURETTOR IS PROPERLY FITTED ON TO THE FILTER.

REFIT CABLE AND SHEATH AND ADJUST THE THROTTLE CONTROL. WHEN THE MANIFOLD IS DECARBONISED, FIT A NEW GASKET 408.



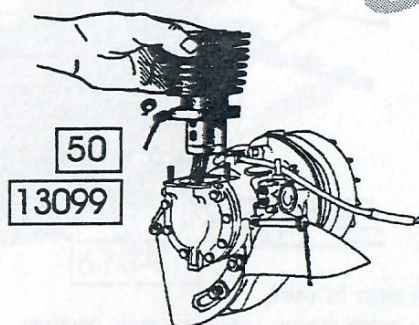
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REMOVING THE CYLINDER:

UNSREW THE FOUR NUTS 50, AND TAKE THEM OUT TOGETHER WITH THE GROWER WASHERS.

FIT THE LOCKING PIN IN PLACE OF THE BLOCKING SCREW 670; IN ORDER TO LOCK THE CONNECTING ROD ASSEMBLY AT TOP DEAD CENTRE; THEN REMOVE THE CYLINDER AND GASKET 142.

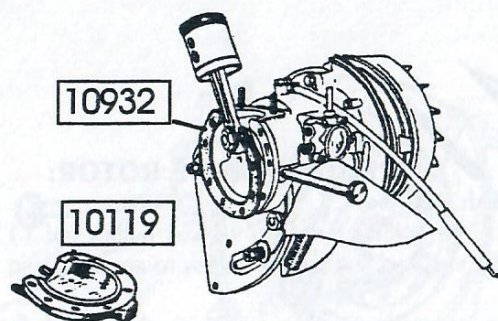
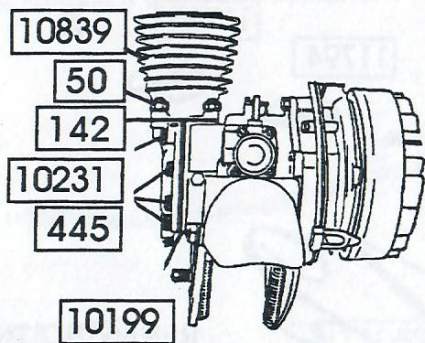
WHEN DECARBONISING, SCRAPE THE EXHAUST PORT AND THE TWO TRANSFER PORTS, RUN A 5 MM DRILL THROUGH THE VERTICAL CHANNEL OF THE DECOMPRESSION.



9

REMOVING THE CRANKCASE COVER:

UNSCREW THE EIGHT SCREWS SECURING THE CRANKCASE COVER AND REMOVE THE COVER WITH ITS GASKET. WHEN REASSEMBLING, FIT THE NEW GASKET 10392, READY COATED WITH GREASE OR OIL, THEN THE TWO LONG TOP MOUNTING SCREWS 10231 WITH THEIR WASHERS 413, BUT DO NOT TIGHTEN FULLY; CUT THE GASKET TO MATCH THE CYLINDER FACE AND PART TIGHTEN SCREWS 445 AFTER FITTING THE SEALING RING 413. FIT THE CYLINDER GASKET 412.

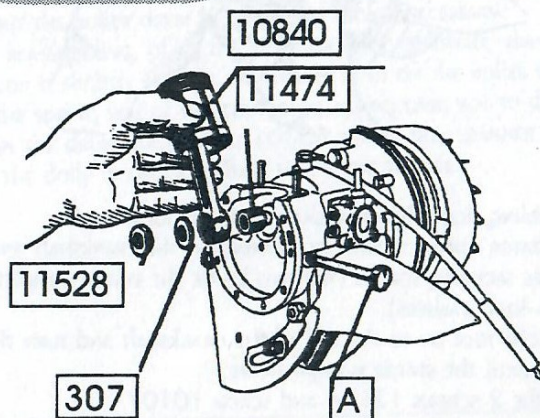


FIT THE PISTON RINGS SO THAT THE CUTS ARE NOT ABOVE EACH OTHER AND NOT IN LINE WITH THE PORTS; THEN FIT THE CYLINDER OVER THE PISTON. FIT THE FOUR CROWER WASHERS; FIT AND FULLY TIGHTEN NUTS 50 AND THEN THE TWO SCREWS 10231; FINALLY SLACKEN THE TWO NUTS ON THE CRANKCASE COVER SIDE ONE SIXTH OF A TURN. FULLY TIGHTEN THE CRANKCASE COVER BOLTS STARTING FROM THE BOTTOM AND MOVING UPWARDS. FULLY TIGHTEN THE TWO NUTS 50 ON THE CRANKCASE COVER SIDE.

10

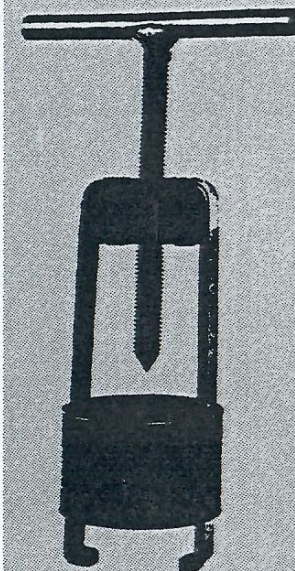
REMOVING THE CONNECTING ROD ASSEMBLY:

BLOCK THE CRANKSHAFT WITH PIN. UNSCREW NUT 11528. REMOVE WASHER 307, THE CONNECTING-ROD ASSEMBLY 10840 AND BUSH 11474. NOTE THE DIRECTION OF THE CONNECTING ROD ASSEMBLY FOR REASSEMBLY. WHEN REASSEMBLING, FIT THE BUSH 1474 ON TO THE CRANK PIN WITH THE BEVELLED SIDE INWARDS.



STARTOR BEARING EXTRACTOR

FOR USE
SEE OPERATION 12.

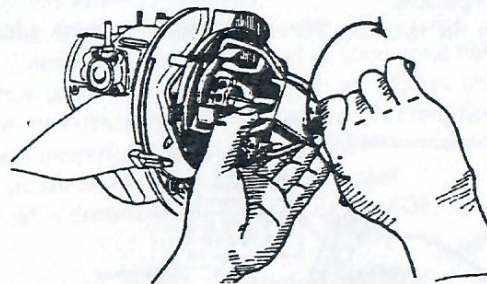
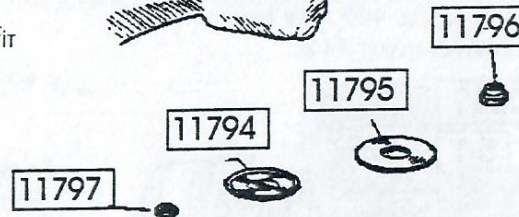
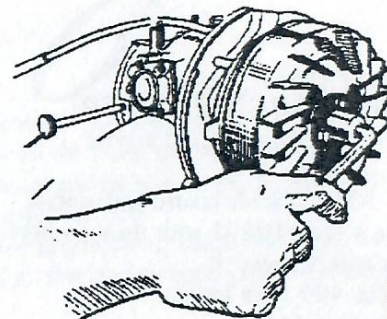


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11

REMOVING THE ROTOR:

Lock the crankshaft with pin.
Uncrew nut 11796 holding ring 11794 and rubber seal 11795;
then take out the ring and seal to give access to rotor locking nut 11796.
Fit the rotor key correctly, into the groove on the crankshaft. Refit the rubber seal and sealing washer.

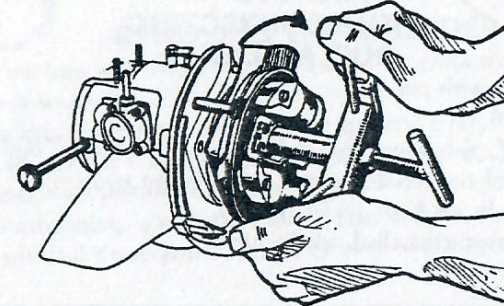


When reassembling, lock the crankshaft with the locking pin.
Position the stator complete with its bearing on the crankshaft and insert the three securing screws (the two inside the stator complete with blank fan-lock washers).
Screw the special tool on to the end of the crankshaft and turn the lugs clockwise until the stator is right home.
Fully tighten the 2 screws 12104 and screw 10307.

12

REMOVING THE STATOR:

Uncrew the sparking-plug lead terminal 11660 on the stator after first releasing the lead and raising lug 11131.
Uncrew the mounting screw 10307 on the outside of the crankcase at the top and the two screws 1204 inside the stator.
Screw the end of tool on to the crankshaft; set the tool lugs on the coil horns.
Uncrew locking pin and screw in the tool to free the stator.



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13

REMOVING THE CLUTCH:

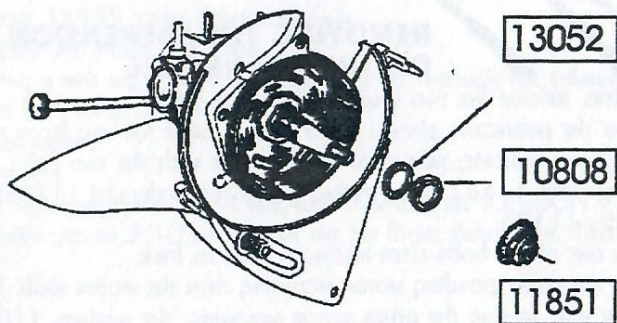
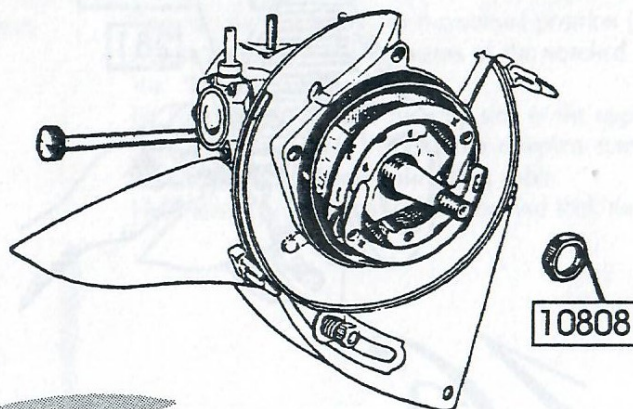
Fit the locking pin. Use the 21 mm spanner to release nut 10808.

Take out the clutch.

If the linings are worn fit new ones. If they are stuck to the moving part, the whole clutch must be changed.

When refitting the clutch make sure that the crosses are facing outwards.

Check the thickness of the pads which should be 5 mm for an 85 mm drum.



14

REMOVING THE ROLLER DRUM:

Take out the sealing cap 11851, taking care not to damage the spring seal which is located inside and cannot be seen when dismantling.

Use a 21 mm spanner to release the second nut 10808 which is very loose and take out the shim.

Take out the roller drum by hand; no tool is necessary.

When reassembling, place the drum on the crankshaft, then push it gently and turn it slightly so that the bronze bush on the roller side engages with the spring seal of the crankcase, taking care not to damage this seal.

Tighten the drum-holding nut 10808 with a box spanner without using the dolly in order to limit tightening torque.



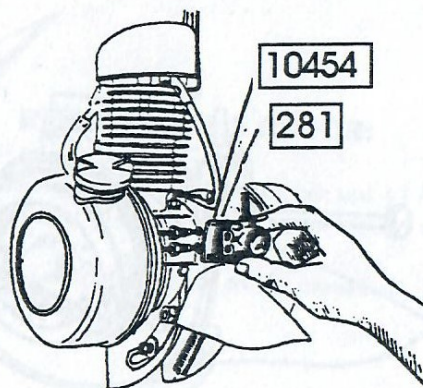
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CRANKSHAFT LOCKING PIN:

FOR USE, SEE OPERATIONS 8, 10, 11, 12, 13 AND 14



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15

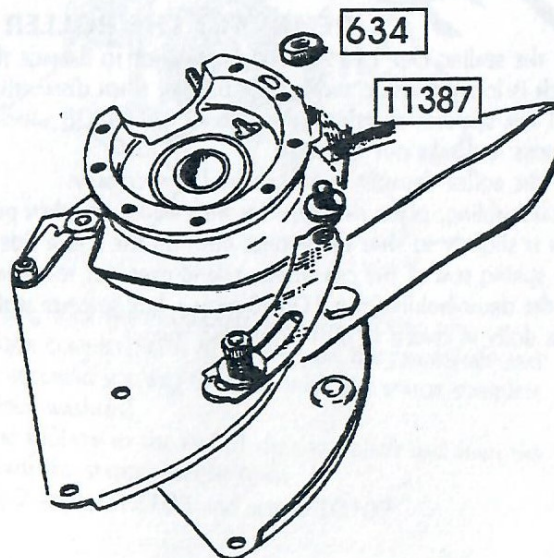
REMOVING THE PUMP:

TO REMOVE THE PUMP, REMOVE THE 4 SCREWS, AND IF NECESSARY THE TWO PIPE UNIONS; THEN SLIDE THE PUMP TO THE RIGHT. TAKE OUT THE DIAPHRAGM 281 AND THEN FREE THE DIAPHRAGM SEATING 10454. WHEN REASSEMBLING, MAKE SURE THERE ARE NO HOLES IN THE DIAPHRAGM, THAT THE BALL BEARINGS ARE NOT STICKING AND THAT THE DIAPHRAGM SEATING IS NOT OUT OF SHAPE. THE DIAPHRAGM SEATING MUST BE PLACED WITH THE FLAT FACE TO THE CRANKCASE AND MUST BE FIXED ON THE CENTRE STUD OF THE CRANKCASE WHICH MUST BE SLIGHTLY OPENED.

16

CRANKCASE R CRANKSHAFT BEARING

WHEN BEARING IS WORN THE SAME USUALLY APPLIES TO ITS SEATING OR THE SEATING OF THE ROLLER SEALING RING; THE COMPLETE CRANKCASE 13035 MUST THEREFORE BE CHANGED.



17

REMOVING THE SUSPENSION OR THE CRANKCASE

WITH PLIERS, RELEASE THE TWO SUSPENSION SPRINGS 11005. THEN TAKE THE PROTECTIVE PLATE 11129 AND UNSCREW THE TWO FRONT NUTS 634 SECURING THE CRANKCASE; TAKE THEM OUT TOGETHER WITH THE TWO BOLTS 10727 AND THE SPACERS 11387, THUS FREEING THE MOTOR MUDGUARD 11388 AND THE TWO GUIDES 11128. UNSCREW ONE OF THE BOLTS AFTER FREEING IT FROM ITS LOCK. TAKE OUT THE CORRESPONDING MOTOR MOUNTING THEN THE MOTOR SHAFT 319 FROM THE OTHER SIDE, FREEING THE OTHER MOTOR MOUNTING, THE WASHERS 310 AND 311 AND THE SILENT-BLOC 320. TO SEPARATE THE GUIDES, UNSCREW SCREWS 10231 AND NUTS 11183. WHEN REASSEMBLING, REMEMBER TO LOCK THE NUTS BY HAMMERING THE HEADS OF SCREWS 10727 AND 10231. NEVER USE ANY GREASE OR OIL TO LUBRICATE THE GUIDES WHICH MUST BE CLEANED WITH FUEL ONLY.

DECARBONISING

WHEN THE MACHINE HAS BEEN RUNNING FOR SOME TIME, CARBON IS DEPOSITED IN THE VARIOUS MOTOR CHANNELS AND REDUCES PERFORMANCE.

TO DECARBONISE, FIRST DISMANTLE:

1. THE CYLINDER HEAD 11373 AFTER FIRST REMOVING THE AIR FILTER AND LIFTING HANDLE;
2. THE CARBURETTOR 11651 AND MANIFOLD 11143.

SCRAPE THE CARBON FROM THE CYLINDER HEAD AND THE TOP OF THE PISTON.

CLEAN THOROUGHLY THE EXHAUST PORT AND THE MANIFOLD AND MAKE SURE THAT NO LUMPS OF CARBON ARE BLOCKING ANY POINT IN THE SYSTEM.

RUN A 5 MM DRILL BIT THROUGH THE VERTICAL CHANNEL OF THE DECOMPRESSOR AND A 3.5 MM BIT THROUGH THE SLOPING CHANNEL OF THE CYLINDER HEAD. CLEAN THE VALVE SEATING AND FIT A NEW VALVE AND A NEW SPRING IF NECESSARY. THE VALVE OPENING IS ADJUSTED BY SCREWING NUT 11499 RIGHT DOWN AND THEN SLACKENING BY ONE AND A HALF TURNS.

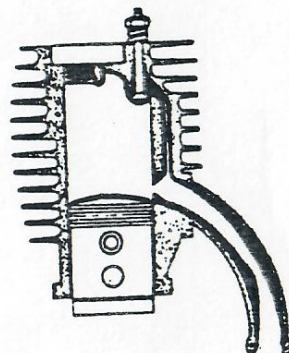
WHEN FITTING A NEW SILENCER RUN A 6 MM DRILL BIT THROUGH THE EXHAUST PIPE WHICH MAY BE BLOCKED BY A DROP OF PAINT.

WHEN REASSEMBLING:

FIT NEW GASKETS.

CHECK THE BREAKING POINT OF THE MAGNETIC FLYWHEEL; SEE IGNITION 3.

SET THE SPARK GAP TO 5/10 MM. CLEAN THE AIR FILTER. ADJUST THE THROTTLE CONTROL.



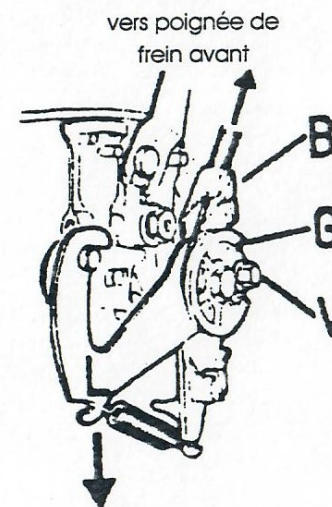
ADJUSTING THE SYNCHRONISED DRIVE

FIRST SET THE HANDLEBARS TO THE NORMAL POSITION (STEM HEIGHT 28 TO 30 MM).

ADJUST THE FRONT BRAKE BY MEANS OF THE NOTCHED TRIIGGER. MAKE SURE THAT THE KNOB IS AT THE "FULL THROTTLE" POSITION.

FIT THE IDLER SHEATH INTO THE STOP SLOT IN THE UPPER SHEATH (B) OF THE CARBURETTOR. THEN ROTATE THE CABLE THROUGH ONE COMPLETE TURN ON THE PLASTIC ROLLER (G) AND UNDER THE LOCKING RING.

HOLD LEVER (L) IN ITS LOWEST POSITION AND LOCK THE CABLE-HOLDING SCREW (V).





IMPEX
HUNGARIA

