



# SERVICING GUIDE





# SOLEX

3300

### To the Reader

This SOLEX **GUIDE** has been specially produced to enable you to deal efficiently with minor running adjustments.

The robust nature and the high quality of the SOLEX, together with its simplicity of design and ease of maintenance are a guarantee against any serious engine breakdown.

Always remember that **METHOD** is the key to successful fault-finding, i.e. the possible causes of trouble listed in this **GUIDE** should be investigated in SUCCES-SION, and not simultaneously.

For major repairs, send the SOLEX to one of our many **Service-Stations**, all of which are equipped with a test-bench and special tools, and are staffed by experts.

"After-Sales" Service

### VELOSOLEX

68, Boul. de Verdun, Courbevoie (Seine) (FRANCE)

# Compound

### CLUTCH

- It is comprised of: a drum, integral with the drive roller, and a system of bobweights and shoes integral with the crankshaft.
- The vaned rotor and the flywheel magneto cover form a fan which cools the engine when it is running and enables it to idle without overheating.

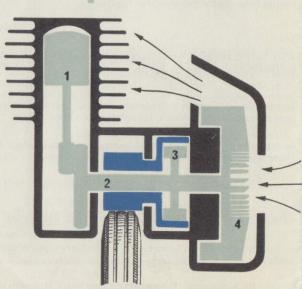
### Warning:

Never run the engine with the flywheel cover removed.

## **Principle**

- Piston and connecting rod
- Crankshaft
- 3 Shoe base plate
- 4 Rotor-fan

Roller | Drum assembly



# Diagrammatic illustration:







### STARTING THE ENGINE

When stationary, the bobweights "M", due to the action of the spring, press against the pawls on the shoes, which force the pads "G" against the drum "T", which is integral with the drive roller.

When the front wheel begins to revolve, the engine is turned.

#### ENGINE DISENGAGED

When the engine reaches its normal idling speed (1.500 r.p.m.) the bobweights "M" begin to move outwards due to the effect of centrifugal force... The pressure of the pads on the drum "T" is reduced... and the engine is disengaged. It continues running, but transmits no power.

#### NORMAL RUNNING

When the throttle is opened, the speed of the engine rises. The bobweights "M" move further away from each other, and press against the shoes. They transmit power to the drum "T", the amount of slip decreasing as the engine speed rises.

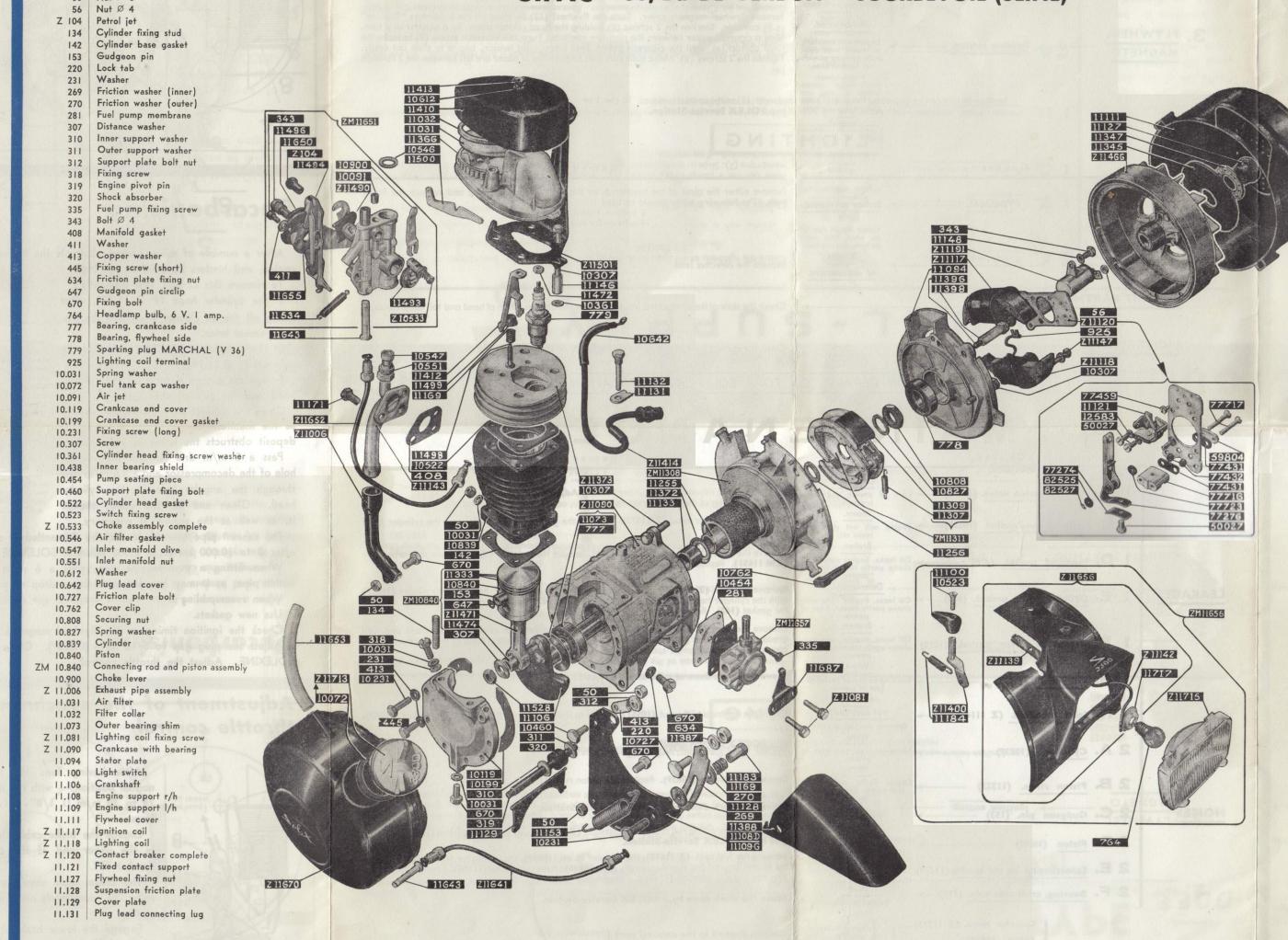
REFERENCE

50 Nut Ø 6

DESCRIPTION

# MOTOR SOLE TYPE 3300

SIFAC - 68, Bd DE VERDUN - COURBEVOIE (SEINE)



REFERENCE N°	DESCRIPTION
	H-177 00 2000 12 12 12 12 12 12 12 12 12 12 12 12 12
11.132	Drive roller cleaning screw
11.133	Oil seal
Z 11.139 Z 11.142	Contact blade Headlamp wire and terminal
Z 11.143	Inlet/exhaust manifold
11.146	Disengagement lever bush
Z 11.147	Lighting coil fixing screw Spring washer
11.153	Return spring
11.169	Decompression valve and friction
11.171	plate spring Manifold fixing screw
11.183	Friction plate tension nut
11.184	Spring
Z 11.191	Condenser Distance piece 23,5 m/m
11.256	Distance washer 2 m/m
11.307	Clutch spring
ZM 11.308	Drive roller complete Clutch pad
ZM 11.311	Clutch complete
11.333	Piston ring
11.345	Rubber deflector
11.347	Deflector washer Air filter body
11.372	Crankshaft deflector
Z 11.373	Cylinder head
11.387	Distance piece Engine mudguard
11.396	Lighting contact
11.398	Lighting contact distance piece
Z 11.400	Switch lever Air filter cover
11.412	Air filter cover support
11.413	Air filter cover fixing screw
Z 11.414 Z 11.466	Plug lead complete Flywheel magneto rotor
Z 11.471	Connecting rod complete
11.472	Sparking plug terminal nut
11.474 Z 11.490	Connecting rod big end bearing Barrel throttle
11.493	Throttle barrel gate
11.494	Cable bracket Fixing bolt
11.496	Decompression valve
11.499	Decompression valve nut
II.500 Z II.501	Decompression lever Disengagement lever
11.528	Crankshaft end nut
11.534	Return spring
Z 11.641	Fuel delivery pipe Fuel filter
11.650	Pulley (carburettor)
ZM 11.651	Carburettor complete
Z 11.652	Fuel pipe Overflow pipe
11.655	Throttle control
ZM 11.656	Headlamp assembly complete
Z 11.656 ZM 11.657	Headlamp shell with contact plate
Z 11.670	Fuel tank complete
11.687	Earthing bracket
Z 11.713 Z 11.715	Fuel tank cap  Headlamp glass assembled with
2. 11.715	deflector
11.717	Bulb socket
12.583 50.027	Washer Screw
59.804	Lock plate
77.274	Contact lever spring
77.276 77.431	Moving contact Insulating plate
77.432	Insulating bush
77.459	Eccentric screw
77.716	Moving contact support Assembly screw
77.723	Fibre washer
82.525	Fibre washer
82.527	Circlip

REFERENCE

PUMP

FEED LINES

NOISES

CARBONING-UP

### **RUNNING TROUBLES** ENGINE WILL NOT START Check : I That there is **SOLEXINE** in the tank. 2° That the lights are turned off. If the above are correct and the engine will not start, check, in the following I. FUEL SUPPLY Disconnect the fuel overflow-pipe (9)

3° That the oil has not been poured directly into the tank. That the choke (6) is closed when the engine is cold. That the choke (6) is open when the engine is warm.

decompress and turn the engine over If fuel is flowing normally.

2 Ba See " Fuel Supply ". If fuel does not flow 2 A IB See " Fuel Supply ". 3 A 4 A

If fuel bubbles when flowing.

IA See " Fuel Supply ". I D

To check whether the difficulty is caused by incorrect ignition setting or a faulty component, remove the sparking plug and turn the engine over with the plug, connected to the plug lead, laid on the cylinder head. If there is a regular spark between the electrodes.

See " Ignition ".

If the spark is intermittent. Take the machine to a SOLEX Service-Station. If there is no spark between the electrodes.

See " Ignition ". 3º MAINTENANCE

Check: See " Maintenance ".

n the engine will still not start, the SOLEX must be taken to a SOLEX Service-Station.

### DIFFICULT STARTING

Check first that the light switch is in the "off" position. Next check the ignition: See : ENGINE WILL NOT START. "IGNITION".

### **ENGINE STARTS BUT STOPS AGAIN**

Check whether, on driving away, you have : I° Forgotten to open the choke after driving 200 yards (200 meters) (when the engine is cold).

2° Closed the choke when starting with warm engine. If the choke has been used correctly.

Check: 2 Ba 2 A See " Fuel Supply 3 A 4 A See " Ignition ".

### ENGINE RUNS ONLY WITH CHOKE PARTLY CLOSED

his fault may be caused by

Io Too small, or partially blocked jet. 2° Air leak in the fuel system.

3° Air leak in the inlet manifold or the crankcase.

Thus, after disconnecting the fuel overflow-pipe. If fuel is flowing normally. Check

2 Ba See " Fuel Supply ". 2 Bc I D IE See " Maintenance " I F I H

If fuel bubbles when flowing. check:

2 Bb

IA See " Fuel Supply ". ID

**ENGINE FOUR STROKES** Check that the choke is completely open and that the carburettor air cleaner is not partially clogged by dirt. Then check:

> 2 C See " Fuel Supply " IC See " Maintenance '

**ENGINE LACKS POWER** 

Check that the front tyre is correctly inflated (28 lbs., 2 kg) and that the wheels If so, check the following:

> See " Ignition ". IA I B I D 1 E I F See " Maintenance I G 2 A 2 B 2 D

NOISY ENGINE

Noise can be caused by a loose part, parts with play in them, or by carboningup of the engine.

1° The tightness of the various parts of the engine. If the noise persists, check

2 A 2 B 2 C 2 D See " Maintenance ". 2 E 2 F

LIGHTS NOT WORKING

For lighting failures see " IGNITION" where full information will be found.

### EL-SUP Causes

Uncorrectly tightened. 1 A. Pump body. (13) Check the tightness of 1°) Fuel pump fixing screws (4). Engine will not star 2°) Stud(3). runs only wi choke partly close Stuck by gum deposits. Change the pump body (13). 1 B. Ball-valves. Engine will not run Take out the 4 pump fixing screws (4). Release the pump body from its base. Take out the Porous 1 C. Fuel pump membrane. (2) membrane (2). Slide in a new membrane. Reassemble. Check that the seating of the membrane (1) Four-stroking. is not distorted. If so, replace. Loose or damaged seating. Either tighten up without locking too hard or change the fuel pipe with its damaged union, after 1 D. Petrol pipe unions. (8) naving removed the petrol tank or starts and sto Clogged. After having removed the carburettor take out the filter, clean it and reassemble. Do not over-2 A. Filter. (14) -Engine will not ru ke partly closed. a. Blocked. Remove the jet. Clean it with compressed air. Reassemble without tightening excessively. Never Engine will not sta pass a steel wire or a needle through the calibrated orifice. CARBURETTOR 2 B. Petrol-jet. (7) b. Too large. Remove the jet. Replace by a jet one or two sizes smaller. Refit without tightening excessively. Four-stroking. Normal jet size 28 cc. Use only genuine SOLEX jets. C. Too small. Remove the jet. Replace by a jet one or two sizes larger. Refit without tightening excessively. Will run only wi choke partly close Blocked. Take off the air-cleaner body. Clean the air-jet. Reassemble. Air-jet. (5) Four-stroking. Clogged. Remove the petrol tank. Unscrew the fuel delivery pipe. Withdraw the filter. Clean it. Refit without PETROL TANK Filter. (12) tightening excessively. Engine will not star

Blocked.

Engine will not start

Cracked or defective

insulation.

or four-strokes.

that it is not in contact with the exhaust pipe.

recommended by SOLEX Service-Stations.

Dirty, gap too larg or too small. 1. PLUG Electrodes Engine will not start or starts with diff culty or four-strokes

Causes

Tank to pump. (11)

Pump to carburettor.

(Marchal V 36). After taking off the engine-cover, loosen the lead-holder, disconnect the lead from the flywheel,

replacing the spark plug use only the type recommended by the factory.

Take off the air-filter body. Remove the plug. Brush the electrodes. Clean thoroughly. Set gap to 5/10 mm (0.020"). (Do not force the central electrode or it will break) **Important!** When

Remove the petrol tank. Disconnect the feed line. Clean with compressed air. Refit without tighte-

ning excessively the nuts. Verify the positioning of the overflow pipe on the carburettor and be sure

Engine will not start or starts jerkily. Mal-adjusted. 3. FLYWHEEL Engine will not start Ignition setting MAGNETO

Insulation.

Remove flywheel-magneto cover. Turn the flywheel (12) by hand till the 2 pointers "Rupture" 5) coincide. Slacken the 2 screws (8) holding the fixed contact screw, by a quarter of a turn. Slide a cigarette paper between the platinum contacts. Turn the eccentric screw (7) to move the fixed contact (4) until the cigarette paper, kept under light tension, begins to slide out easily. Tighten the 2 screws (8). Make quite sure that no particles of paper are left between the 2 contacts

and replace by a new one. Use only plug leads with radio and television suppressor

Ignition failure can be caused by the coil (1) the condenser (2) or the contact surfaces. To check or replace such parts, take the SOLEX to a **SOLEX Service-Station**.

### LIGHTING

Causes Remedy Remove either the glass of the headlamp, or the shell of the rear lamp and replace the faulty bulb. The following bulbs should be used: BULBS **Filament** > Broken or shorted 6 volts — I amp, for headlamp 14 volts — for red tail-light.

Replace the defective lead

LIGHTING CABLES or deteriorating.

Check the state of the conductors, insulation of terminals, insulation of head and tail lamp contacts.

LIGHT SWITCH

Clean the contact lever boss and the contact point on the lighting terminal.

\* FOR ALL MAJOR REPAIRS, GO TO A SOLEX SERVICE-STATION

# Causes

Play.

Engine is noisy.

Worn.

Engine is noisy.

Four-stroking

and "pinking"

Loss of power

Leaking. 1 A. Decompression valve. (11498) --- Lack of power and con 1 B. Cylinder head gasket. (10522) --- Engine will not start an Broken. Oil leaks. Engine runs with choke partly closed. Loss of power. Manifold gasket. (408) Deteriorated. **LEAKAGES** Broken. 1 F. Crankcase cover gasket. (10199) Oil leaks. Engine runs with Worn. 1 G. Oil seal. (11133) Running on closed choke and Locking 1 H. Inlet manifold. (Z 11143) nut unscrewed. Running on closed choke. Worn. **2 A.** Cylinder. (10839) Noisy engine and loss of Worn. Engine lacks compression and power and is noisy. 2 B. Piston rings. (11333) Play. **2 C.** Gudgeon pin. (153) Worn. 2 D. Piston (10840) Engine is noisy and lac

2 E. Connecting rod big end bearing (11474)

2 F. Bearing, crankcase side. (777)->

Cylinder head. (Z 11373)

Exhaust pipe assembly. (Z 11006)

Piston. (10840)

Cylinder. (10839)

Manifold. (Z 11143)

Io the idling adjustment (see under "Idling Adjustment")

Take off the cylinder head (Z 11373). Replace the gasket (10522). Clean up the cylinder head

Remove the exhaust pipe assembly (Z 11006). Remove the manifold (Z 11143) and the carburettor (ZM 11651). Replace the gasket (408). Refit.

Remove fuel tank (Z 11670) and exhaust pipe assembly (Z 11006). Remove the cylinder (10839) with the cylinder head (Z 11373), the manifold (Z 11143), the carburettor (ZM 11651). Replace

Remove fuel tank (Z 11670), cylinder block (10839), crankcase cover (10119). Refit one well greased paper gasket (10199). Cut at the intersection of the jointing faces of the cylinder and the

Have the work done at a SOLEX Service-Station.

Check the tightness of the nut (10551), as well as the condition of the inlet manifold olive (10547).

Remove the cylinder (10839) completely and replace.

Remove the cylinder (10839). Replace the piston rings (11333). Refit.

Have the work done by a SOLEX Service-Station.

ange the connecting rod and piston assembly (ZM 10840), or have the piston (10840) exchanged by a SOLEX Service-Station.

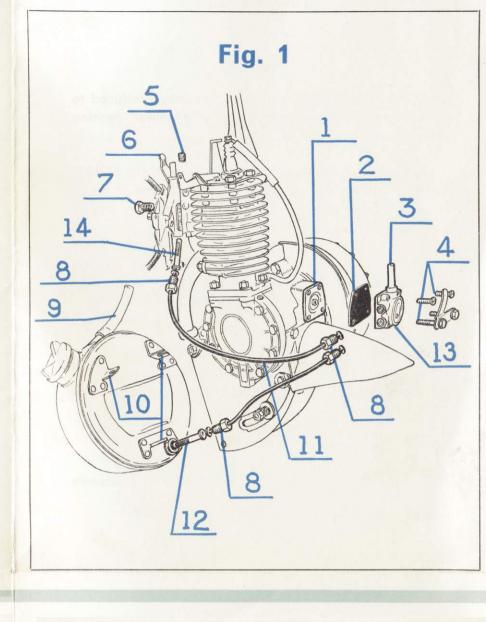
Remove the fuel tank (Z 11670), the cylinder block (10839), the crankcase cover (10119). Slide the connecting rod and piston assembly (ZM 10840) off the crankshaft (11106). Change the connecting rod big end bearing (11474). Reassemble.

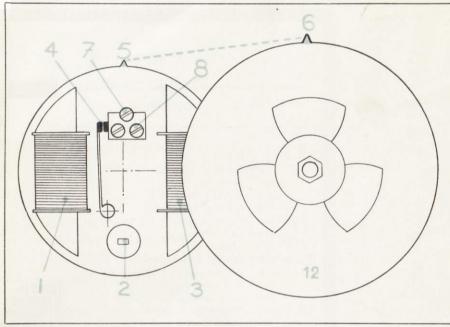
Have the work done by a SOLEX Service-Station.

Carbon deposit in the exhaust port :

Remove the cylinder head (Z 11373) after taking off the air cleaner body, the disengaging lever and the cylinder head studs. Bring the piston to bottom dead centre. Scrape the carbon deposit off the exhaust port. Clean. Reassemble.

Complete decarbonising of the engine (see opposite)





# Decarbonising

After a number of miles, carbon obstructs the various passages in the engine, and hinders its efficient running.

To remove this carbon, first dismantle:

1° the cylinder head N° Z 11.373, after taking off the air cleaner body and the disengagement lever.

2° the carburettor N° ZM 11.651 and the manifold Nº Z 11.143. Scrape the carbon deposit off the cylinder

head and the top of the piston. Clean the exhaust port thoroughly, as well

as the manifold and check that no carbon deposit obstructs the latter at any point. Pass a 5 m/m drill through the vertical

hole of the decompressor and a 3.5 m/m drill through the angular hole on the cylinder head. Clean and lap the valve; change it, as well as the spring, if necessary.

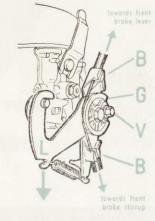
The exhaust pipe assembly cannot be dismantled; it should be changed after 8 to 10.000 km (5 to 6,500 miles) if SOLEXINE is always used. When fitting a new exhaust pipe, pass a 6 m/m drill through the outlet pipe, as it may be obstructed by a drop of paint.

When reassembling: Use new gaskets.

Check the ignition timing on the flywheel magneto.

Adjust the plug gap to 5/10 m/m (0.020"). Clean the air filter with SOLEXINE. Adjust the throttle control.

### Adjustment of the synchronised throttle control



After having fixed the handle bar in its normal position — with the down tube showing 28 to 30 m/m (1 1/8" - 1 1/4") — above the

0

0

Engage the brake cable sheath in the recess in the upper end of the carburettor control bracket "B".

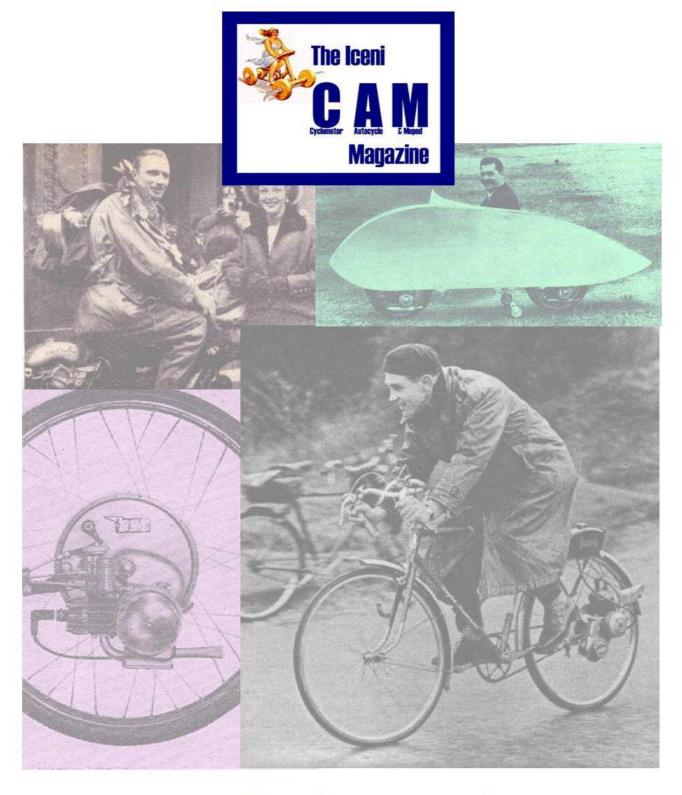
The brake cable should encircle the plastic roller "G" completely and pass under the pinch

Engage the lower brake sheath in the recess of the lower carburettor control bracket.

Adjust the front brake with a spanner. Keep lever "L" in its low position and lock

the pinch washer by screw "V".

# IceniCAM Information Service



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