

Subject: Trouble shooting

Affected engine models: All engine models:

L 1700
L 2000
L 2400

"Small", apparently neglectable causes are often responsible for a "big" effect, i.e. disturbance of engine operation. Detection of the causes is not always easy. The hints to possible trouble causes and their correction contained in this section serve as a guideline for the engine user, listing the most frequent faults. This list of causes, however, does not claim for completeness. Repair work must be done only by persons authorised to perform the specific task.

ENGINE STARTING TROUBLE

Possible Cause:	Remedy:
Battery discharged or defective.	Charge or replace battery.
Battery wiring not connected to starter motor starter motor or defective, possibly insufficient contact.	Clean connectors. Connect or replace ground wire.
Starter motor defective.	Repair or replace starter motor.
Starter relay defective.	Replace starter relay.
Insufficient compression (no valve clearance, leaky valves, engine overheated).	Adjust valve clearance, repair cylinder heads, tighten cylinder heads according to specification. Investigate and remove cause of overheat.
Engine defective (blocked or worn out).	Overhaul engine.
Ignition switched off.	Switch ignition.
Magneto defective.	Repair magneto.
Short circuit at capacitor connector, wiring or ignition switch.	Clear short circuit.
Magneto impulse coupling does not work.	Repair or replace impulse coupling, note assembly clearance.
Ignition harness disengaged, mixed up or damaged.	Fasten or replace ignition harness, ignition sequence 1-3-2-4. Note marking of sleeve nuts.
Spark plugs wet due to excess fuel.	Remove spark plugs, clean and dry. Determine and eliminate cause of excess fuel.

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Possible Cause:
Remedy:

Electrode gap of spark plug too wide.

Correct electrode gap to 0.4 to 0.5 mm or replace spark plugs.

Fuel tank empty (faulty indication of fuel gauge).

Refuel, replace fuel gauge.

Fuel valve closed or filter locked.

Open fuel valve, clean or replace filter.

Fuel line defective or not connected.

Replace or connect fuel line.

Fuel pump defective.

Repair or replace fuel pump.

Induction system leakage.

Check induction system for leakage and replace, if necessary, tighten joints.

Carburettor contaminated or locked.

Clean carburettor.

Choke not operated to its stop (cold engine).

Operate choke and check as necessary.

ENGINE OPERATING TROUBLE

The following phenomena are considered to be engine operating trouble:

- uneven and irregular engine run
- temporary interruptions
- low power
- engine overheat
- rough engine run

FUEL SUPPLY
Possible Cause:
Remedy:

Insufficient fuel flow (Fuel ventilation locked blocked or defective, filter or screens blocked).

Check tank ventilation, lines, filter, and screens and replace as necessary.

Insufficient fuel pump pressure.

Check fuel pump pressure and correct, if necessary.

Fuel pump defective.

Repair or replace fuel pump.

Float valve contaminated, jammed or worn.

Clean or replace float valve.

Wrong carburettor float level.

Adjust float level.

Carburettor float defective.

Replace float.

Carburettor diaphragm defective.

Replace diaphragm.

Lack of damping oil in carburettor.

Refill damping oil.

Possible Cause:

Remedy:

Wrong idling speed.

Adjust idling speed.

Throttle does not open fully.

Repair throttle control.

Carburettors not synchronous (2-carburettor system).

Adjust carburettor setting.

Wrong installation of carburettor gasket (at air filter).

Replace gasket, consider notches.

Choke engaged at warm engine.

Disengage choke.

Choke defective (worn out).

Repair or replace choke.

Wrong mixture setting.

Check setting and operation of carburettor and correct as necessary.

Carburettor icing.

Operate carburettor heating system.

Induction air filter badly contaminated or blocked.

Clean or replace air filter.

Induction system leakage.

Seal or replace induction system.

Wrong fuel.

Refill fuel tank with specified fuel.

IGNITION

Possible Cause:

Remedy:

Magneto defective.

Repair or replace magneto.

Wrong magneto timing.

Check and set magneto timing as necessary.

Ignition switch defective.

Check grounding wire and switch and replace as necessary.

Ignition harness loose or defective.

Fasten or replace harness.

Spark plug defective.

Replace spark plug.

Wrong spark plugs.

Use specified spark plugs.

COOLING

Possible Cause:

Remedy:

Insufficient or damaged baffling.

Repair or complete baffling. Seal leakages.



Possible Cause:
Remedy:

Carburettor shielding defective or missing (2 carburettors).

Replace carburettor shielding.

Cooling air inlet disturbance (missing spinner cross section too small).

Install spinner, increase air inlets in cowling.

Fresh air and heating system ducts defective

Replace ducts.

Cooling air outlet disturbance (Cross section too small or cowl flap does not open sufficiently).

Increase air outlet in cowling.

LUBRICATION
Possible Cause:
Remedy:

Bad engine oil quality.

Change oil. Use specified oil.

Oil screen blocked.

Remove and clean oil screen, check condition and replace, if necessary.

Oil temperature sensor or indicator defective.

Check temperature sensor and indicator and replace as necessary.

Lack of oil in the oil sump.

Check oil level and refill oil as necessary.

Oil pump defective.

Repair or replace oil pump.

Oil pressure regulating piston or spring defective.

Replace regulating piston or spring.

Oil loss due to blocked crankcase ventilation.

Clean ventilation, replace and properly install breather line (no bucklings or contractions).

MECHANICAL SYSTEM
Possible Cause:
Remedy:

No valve clearance.

Set valve clearance.

Leaking or sticking valve.

Repair cylinder head.

Strong accumulation of deposit in the combustion chamber.

Dismount cylinder heads, remove deposits.

Propeller unbalance.

Balance propeller. Check propeller blade track.

Engine suspension defective.

Replace engine suspension.

Possible Cause:

Remedy:

Excessive gas leakage at the piston.

Repair engine.

Bearing defective.

Repair engine.

Engine defective.

Repair engine.

Remarks:

This document has been translated to the best of our knowledge. In case of doubt however only the German original shall be considered authoritative.


