

pulsFOG®



K-10
K-10/O
K-10 sp

Bedienungsanleitung
Manual
Mode d'emploi
Istruzioni d'uso
Instrucción
ΟΔΗΓΙΕΣ ΧΡΗΣΗΣ

Description

The PULSFOG generator operates with a reaction motor according to the puls-jet-system.

Method of operation

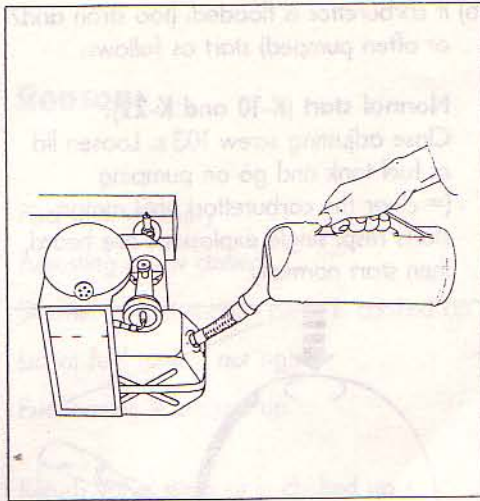
When starting, a mixture of fuel and air is processed, blown into the combustion chamber, and is ignited with the spark plug. As soon as the motor has started and warmed-up, it goes on running automatically with so called auto-ignition, without taking electricity from the batteries. After the fog tap is opened, compressed air is directed over a return valve into the solution tank. By this the solution is transported by hose pipes through the fog tap to the solution nozzle, and rectangular injected into the pulsating hot gas stream. The kinetic and heat energy of the pulsating gas stream influences at the same time the injected fogging solution, whereby this is separated into micro-fine droplets. Because of their large surface, the heat absorption is facilitated and evaporation is supported. At the end of the fog pipe, micro-fine aerosols are blown out and condense as visible fog. According to this, the PULSFOG unit is a dispersion-condensation-fog-generator.

Initiation

When you receive the PULSFOG unit, your first impulse will be to start the unit immediately. **Before** doing this, please read the operating instructions carefully, to avoid problems.

Preparation and filling of the tank

1. Fill fuel tank with clean normal gasoline from the filling station, use only as an exception premium grade gasoline. The max. content of 2.3 ltr. is sufficient for an operation of approx. 1.5 h with the K-10 unit approx. 35 min. with the K-22, and approx. 15 min. with the K-3. A normal average fog application with a K-10 unit in general only needs 1 ltr. fuel or less. In any case use the measuring pitcher with strainer when filling in the fuel. Fill solution tank. Use in any case the funnel with strainer.
2. Remove tank lid, pull out hose and suction piece and hang on holder. Loosen



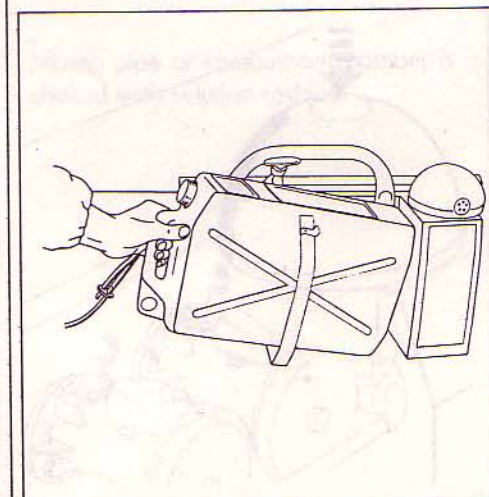
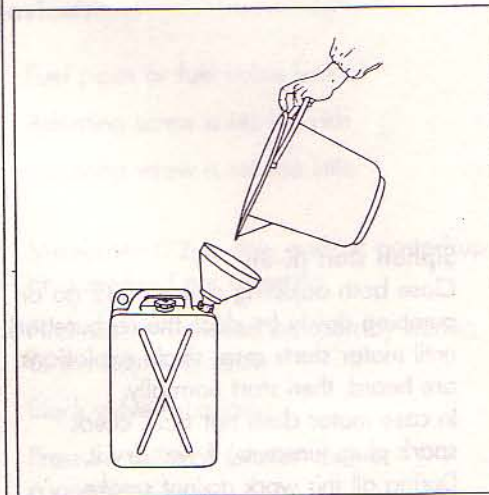
holding device of tank by pulling at the rubber fastener, removing the solution tank in upright position.

Tank may only be filled with max. 9 liters of fogging solution.

After filling the solution tank use the lid attached to the tank to close it. Then attach the tank again to the unit, unscrew the lid, and this time use the lid attached to the unit, which is provided with a hose and suction piece, insert it and close tightly with the lid.

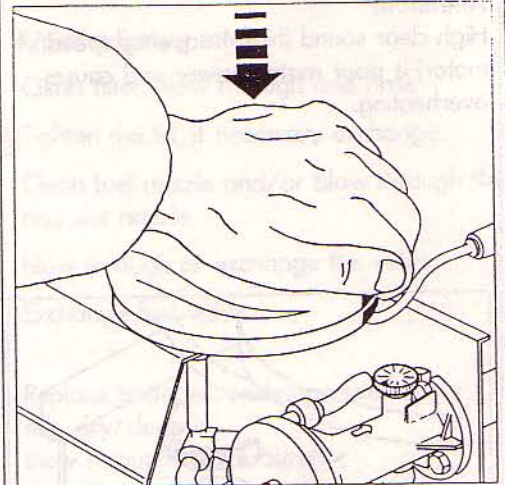
Attention:

Before filling the solution tank check whether the motor is operating.



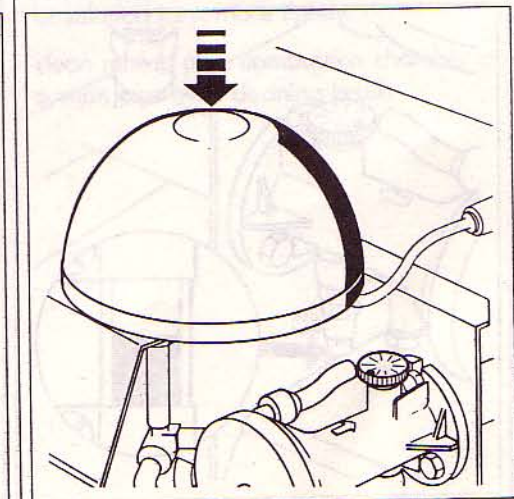
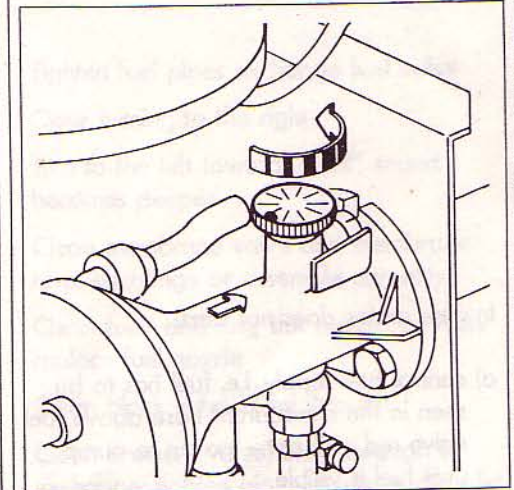
Preparation for starting

Press down primer once, electronic ignition device has to be slightly audible - if not - lift spark about 2 mm and press primer. Jump spark in the spark plug cap causes a crackling noise, i.e. the ignition device is alright. Attach ignition plug cap to spark plug.



Start the motor

1. Put the fog tap no. 120 into position "OFF".
2. Turn the adjustable screw for fuel on the carburettor to start position (start field on start arrow).
3. Pump with left ball of thumb the primer slowly several times until the motor starts. To improve the starting behaviour hold down the primer a few seconds with ball of thumb.

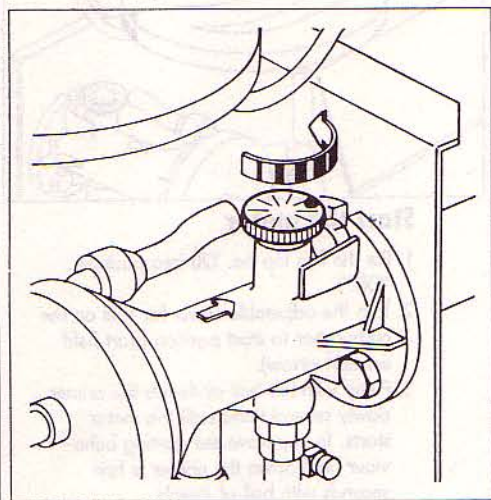


Adjust motor endurance run

After the motor has started and warmed up (approx 1/2 min) adjust it until motor runs, sounding low and strong (low frequency - optimal output).

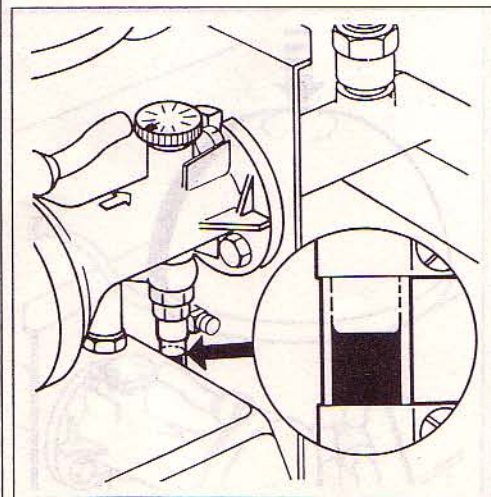
Attention:

High clear sound (high-frequency speed of motor) is poor motor power and causes overheating.



In case motor does not start:

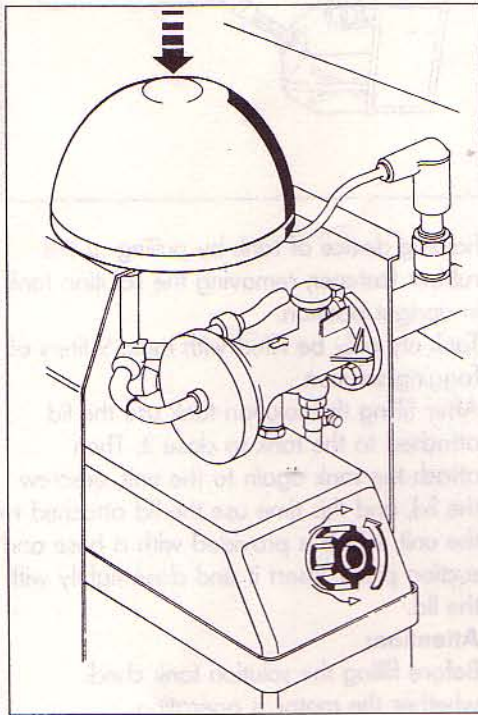
a) control fuel supply, i.e. fuel has to be seen in the transparent hose above fuel valve red, - if not - go on to pump until fuel is visible.



b) If carburettor is flooded: (too strong and/or often pumped) start as follows:

Normal start (K-10 and K-22):

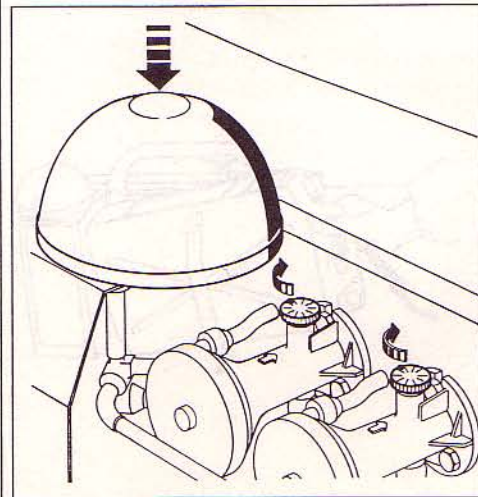
Close adjusting screw 103 z. Loosen lid at fuel tank and go on pumping (= clear the carburettor) until motor starts resp. single explosions are heard, then start normally.



Siphon start (K-3):

Close both adjusting screws 103 z go on pumping slowly (= clear the carburettor) until motor starts resp. single explosions are heard, then start normally.

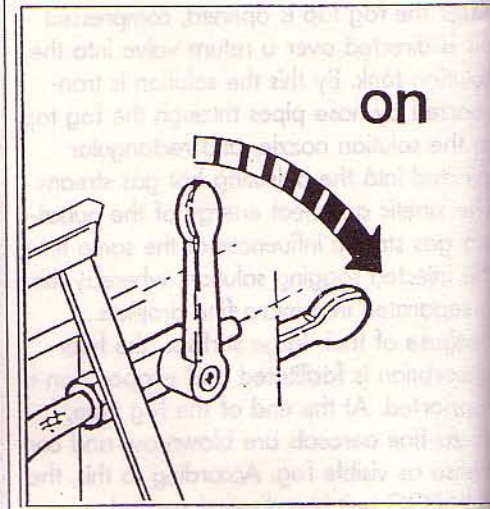
In case motor does not start, check spark plug, (unscrew) if wet dry it. During all this work do not smoke.



Fogging

Units without automatic tap: Open fog tap (push ahead to stop) Position „ON“.

As soon as pressure has built up in the solution tank, the units starts fogging.



Trouble shooting

Possible reason:

Reason:

Remedy:

1. PULSFOG motor does not start:

No fuel	Fuel tank is empty	Fill fuel tank
No fuel	Adjusting screw closed	Open adjusting screw
No fuel	Strainer in fuel suction piece is choked up	Clean filter, blow through and rinse
No fuel	Lid at fuel tank is not tight	Tighten the lid, if necessary exchange
No fuel reaches the carburettor when pressing the primer	Fuel nozzle is choked up	Clean fuel nozzle and/or blow through the ring slot nozzle
No fuel is visible in the transparent hose	Return valve sticks or is choked up	blow through or exchange the valve
Fuel in the transparent hose flows back after pumping	Fuel valve not tight	Exchange fuel valve
No ignition spark at the spark plug	Batteries empty, spark plug defective or wet	Replace batteries, exchange spark plug rep. dry/clean it
	Ignition spark is not visible on account of smoke building up at the spark plug	Blow through the carburettor
	Micro-contactor defective	Replace it
	No contact of spark plug in the spark plug socket	Fix the high-tension cable anew at the spark plug socket
No correct air supply through the return-membrane-valve	Membranes were cleaned and put together wrong membrane in the membrane valve is dirty, pasted up destroyed	Correct assembling of the cleaned membrane valve (see drawing no.) clean membrane/(s) resp. exchange

2. PULSFOG motor has bad running behaviour:

Air bubbles in the fuel	Fuel pipes or fuel valve leak	Tighten fuel pipes exchange fuel valve
Too high fuel supply to carburettor	Adjusting screw is set too rich	Close turning to the right
Fuel supply to the carburettor is not sufficient	Adjusting screw is set too little	Turn to the left towards "ON", sound becomes deeper
Air does not pass at the right measure	Membrane (72) is dirty and/or pasted up or assembled not correctly	Clean membrane valve and membrane resp. exchange or assemble correctly
Fuel supply is irregularly	Fuel nozzle is choked or open by boring of the adjusting screw	Clean fuel- and ring slot nozzle, possibly replace fuel nozzle
Primer is blown up	Block valve is hanging	Clean block valve blow through
A whistling sound is audible	Pressure valve at solution tank or connections leak	Clean pressure valve, blow through or exchange, tighten air connections close lid at solution tank more tightly
Sparks are thrown out of the exhaust pipe	Mixing pipe or combustion chamber is choked with solution residues	clean mixing pipe combustion chamber or suction pipe with cleaning brush

Trouble shooting

Possible reason:

Reason:

Remedy:

3. PULSFOG unit fogs irregularly or not at all:

Solution tank does not receive pressure	Tank lid not tight, pressure valve defective
Dosing nozzle(s) is (are) too hot	Do not run motor longer than 1/2 minute in idle running without fogging
No solution at the dosing nozzle	Fog pipes or suction piece, fog tap or dosing nozzle choked Solution tank empty

Close tank lid of solution tank more tightly maybe replace. Exchange pressure valve

Cool dosing nozzles and nozzle cane carefully with water from the outside

Clean suction piece or dosing nozzle, blow through with compressed air
Refill solution tank

4. Automatic trap activates too early or too late:

Hole at smoothing valve is too big or too small	Relieving hole at the smoothing valve grey/blue choked or too big
Solution tank does not keep pressure	Tank lid or pipes leak Smoothing valve grey/blue dirty
Rod 521 does not move anymore	Membrane 516 destroyed
No automatic release	Linkage of bars jams
Automatic releases too early	Running of unit too weak fixing cam worn off

Open the relieving hole with a needle or replace against smoothing valve with the correct hole

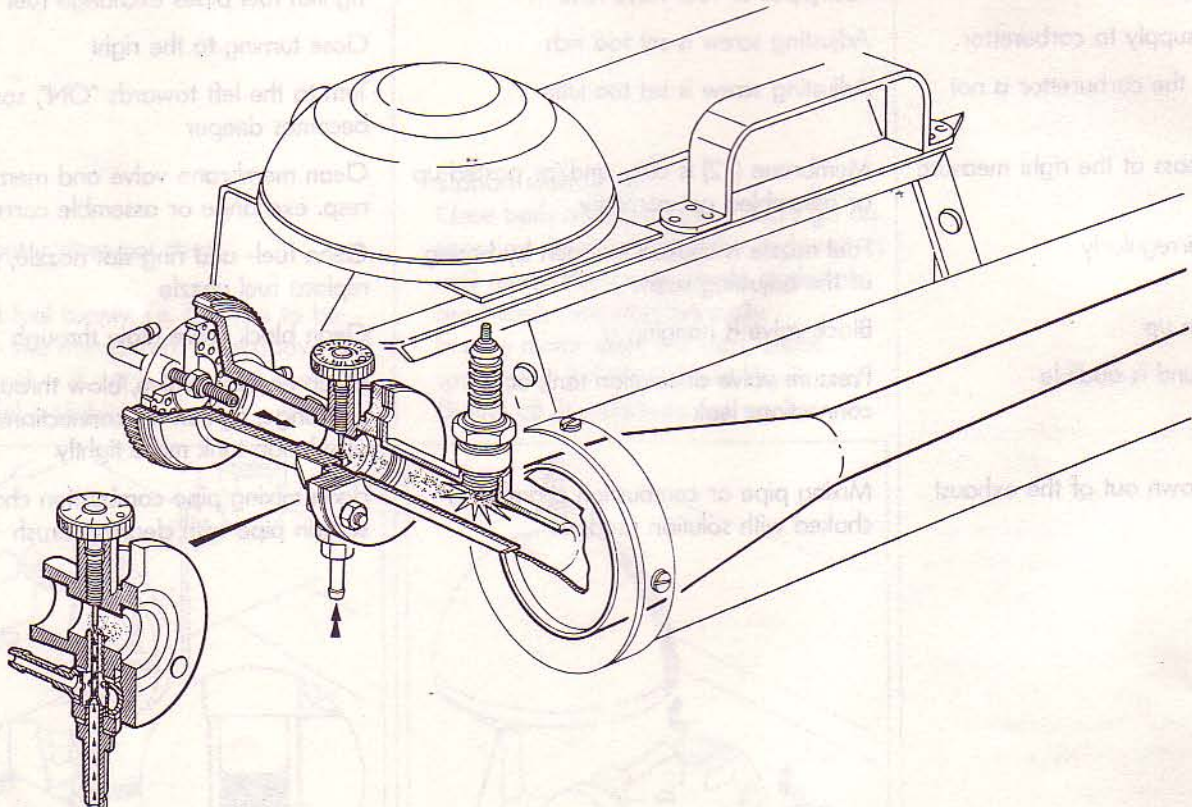
Close tank lid of solution tank tightly, check pipes whether they are tight
Replace smoothing valve

Exchange membrane

Check it as well as grid setting and adjust

Open adjusting screw more detach linkage of bars from fog tap

Sectional view of carburettor



SAFETY RULES

1. Never fill fuel tank when the unit is still hot (danger of fire)!
2. Never pour fuel into the chemical tank (danger of fire)!
3. Never touch diffusor or protective grating with unprotected hand when the unit is still running or has just been stopped (danger of burning)!
4. Never leave the unit unsupervised!
5. Never transport hot foggers in closed vehicles!
 - a) Never ship the unit with fuel or chemicals in the tanks!
 - b) If transported with fuel or chemicals in the tanks the unit has to be put on a flat ground and has to be secured against tipping over!
6. Always remove the cap from the spark plug when the fuel tank is closed (danger of sparking). Always remove cap from the spark plug while transporting!
7. Do not smoke when you fill in the fuel tank or inspect the carburettor!
8. Wear personnel protective equipment like protective suit, face mask, protective gloves and ear protectors.
Type and quality of the personnel protective equipment have to be in accordance to the regulations of the chemical producer. The filter for the face mask (full face mask) has to correspond to the A₂-B₂-P₃ filter.
9. Never carry out service or repairs within fogged rooms!
Stop unit before repairing!
10. Reattach protective devices to the fogger after repairing.
11. Seal leakages on the fogger at once!
12. Do not fog when there is a risk of dust explosion!
13. Always check that the unit functions safely before using it. For stationary application install, mount or jack up the unit in a stable position.
14. Foggers which are permanently in use should be checked if they work according to the safety rules at authorized service stations.
15. Pay attention to the respective label directions of the chemical to be used.
16. Apply inflammable products with "O" units only or BIO-units (e.g. K10/O or K10 BIO)

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