

Easy
Leak

LEAK DETECTOR

User's manual

EP Easy Leak detector consists of the following:

- 1 Smoke box unit
- 1 2.7 metres of battery cable
- 1 Oil level dipstick
- 1 2.7 metres of smoke hose
- 2 Smoke injectors
- 7 Centralizing rings for smoke injectors
- 42 Blind plugs
- ½ litre of smoke oil



Field of application:

Easy Leak detector is primarily designed to search for leaks in the intake and exhaust systems of vehicles with diesel or petrol engines. The device can emit a dense smoke, which clearly reveals bad sealing, cracks, and chinks, which allow air to leave and enter, as well as leaking gaskets and joints.

However, in fact, you can imagine lots of different places and systems where it would be possible to detect leaks using smoke. It is important to make sure that the smoke can enter the places suspected of leaks. The intake manifold may be equipped with a throttle valve, which to some extent will prevent the smoke from reaching the manifold front chamber. Even though the system is particularly efficient in detecting leaks in hoses and pipe joints, it can also be used for detecting clogged pipes and passages in cylinder heads and other passages that may be clogged due to carbon deposits or the like, or for revealing leaking control valves that are supposed to be completely leak tight. Usually, it is useless searching for small leaks in highly pressurised systems such as A/C, cooling systems, or in the turbo side. The turbo side may sometimes have a higher pressure than the machine is able to produce.

You can also profitably search for cracks in castings using smoke, but you have to be aware, however, that some cracks in castings will not appear in neither cold nor hot conditions.

In some fields of application, it may be necessary to fit a diagnostic tool in order to check various systems such as EGR, solenoid valves and many more.

Typical components where Easy Leak detector can show its worth to the full:

- Manifold system
- Crankcase vent system
- Air filter box
- Fuel tank ventilation system
- Manifold gaskets
- Intercooler pipes and hoses
- Vacuum system
- Exhaust joints
- Brake booster
- Bodywork joints
- Weather strips
- Window rail rubber
- Cable bushings

Instructions in case of bodywork leaks:

The device can be used for searching for leaks by windows and doors, which cause noise inside the car. When using the device for this kind of search, put the cabin blower on max. Do not use recirculation for this purpose during leak search. When smoke slowly emits from the test hose of the device, keep the mouthpiece close to the bodywork joints, weather strips, window rail rubber etc. Always perform search for bodywork leaks on the outside of the bodywork, never use the device inside the car. Perform the test indoor in a room with no draught.



Safety instructions:

Always abide by the below rules when working with Easy Leak detector.

Preconditions at the workplace:

Place the system or vehicle you are about to test on a level surface.

The device must always stand horizontally during use, oil filling as well as during storage.

We recommend good ventilation or air extraction in the area around the search place.

Access to a fully charged 12-volt car battery.

Remember these rules during use:

- Always place this device horizontally on a table close to the workplace, use safety glasses.
- Never use the device with the engine running.
- Keep hose and wire in a safe distance from the engine cooling fan (may start even though the engine is turned off).
- Never press smoke injector or centralizing rings hard against the search object so pressure is created.
- Never use this device in canister/carbon filter systems connected to a fuel tank (this is associated with risk of explosion).
- Make sure that canister/carbon filter has been drained of fuel fumes before connecting the device (risk of explosion).
- Start each test with the minimum amount of smoke and fill the search topic with smoke as slowly as possible.
- Never use other types of oil in the device than EP smoke oil. Filling of flammable fluids may cause risk of explosion.
- The device automatically stops after approx. 4 minutes usage, the overheating indicator starts flashing some time before automatic stop.
- Let the device cool down completely between each search (approx. 10 minutes).
- Do not connect the electrical cables to the battery of the car in case of fuel smell in the engine compartment (great risk of explosion).
- Never overfill the device with smoke oil.
- Do not consume, if possible, the oil of the device below the minimum mark on the oil dipstick.
- Never turn on the device with the oil dipstick fitted.



Filling of smoke oil and oil level control:

1. Place Easy Leak detector horizontally on the work table.
2. The oil screw is located on top of the device and is removed with a 6 mm hexagon key.
3. The oil dipstick is lowered through the hole, all the way to the bottom of the oil chamber.
4. Fill EP smoke oil to the top mark of the oil dipstick.
5. Let the device stand for 5 minutes and check the oil again. Top up, if necessary.
6. Refit the oil screw.



Start-up:

1. Place Easy Leak detector horizontally on the work table.
2. No power connected to the device.
3. The oil screw is located on top of the device and is removed with a 6 mm hexagon key.
4. Fill approx. a third to half of the enclosed EP smoke oil and wait 15 minutes. (If too much is filled, the machine cannot produce smoke.)
5. The oil dipstick is lowered through the hole, to the bottom of the oil chamber.
6. Let the device stand for 10 minutes and check the oil again. Top up, if necessary.
7. Refit the oil screw.
8. Provide 12 volts to the device, red to positive and black to negative. The yellow indicator will now light up.
9. Connect the hose on front of Easy Leak.
10. Turn on the device (on/off button); the yellow indicator will light up. The device has a time control; it automatically stops after approx. 4 minutes usage. If 4 minutes are not enough, it is possible to restart by turning it off and on again.
11. Open the air tap a little so smoke can be released (the less air, the thicker smoke).
12. Connect the hose to the car where you are going to check for leaks.

The **green** indicator will light up when power has been connected to the device.

The **yellow** indicator will light up when the on/off button is in the on-position, the device will automatically stop producing smoke after approx. 4 minutes usage, turn off and on - and it will produce smoke for another 4 minutes.

The **red** indicator will flash when it is overheating, the device will automatically turn off the hot part when it is overheated. If the device has become overheated, it must cool off for at least 15 minutes.

Typical faults: Solution:

No smoke:	Too much or too little oil
No air:	Too little power (at least 12 volt)

