# LAUNCH UK

## Smoke 2 v2

# User Manual


Pro Series Diagnostic Leak Tester

Part #1430004

www.**launchtech**.co.uk

**Introduction**
Congratulations on your purchase of the Launch UK Smoke 2.
These instructions for the Smoke2 equipment contain important information regarding the correct and safe operation of the product. Only use this product for the uses described. If the product is passed on, please ensure this document is also passed on.

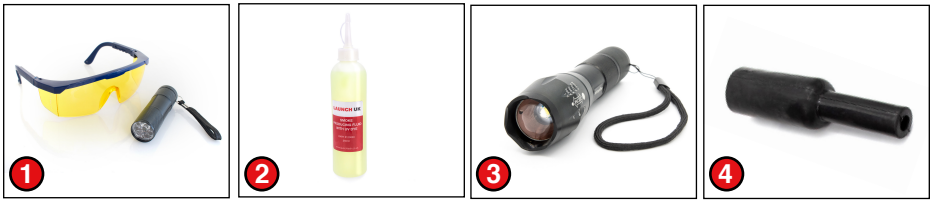
**Intended use**
The Launch UK Smoke 2 is intended for professional use in the finding of leaks in automotive systems, including those found in cars, motorcycles, light duty trucks and marine applications.

## Package Contents

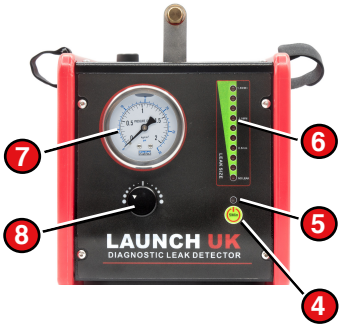

1 - Smoke 2 main unit
2 - Filling funnel
3 - Adapter cone
4 - Diffuser
5 - Smoke fluid 100ml
6 - Smoke tube
7 - Universal bladder
8 - Cap blanking set
9 - 12v power cables

## Optional accessories and spare parts

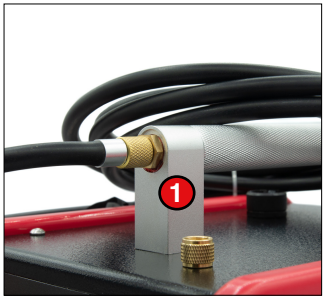
1 - UV kit (UV light and goggles)
2 - 250 ml smoke fluid
3 - White light
4 - Replacement bladder

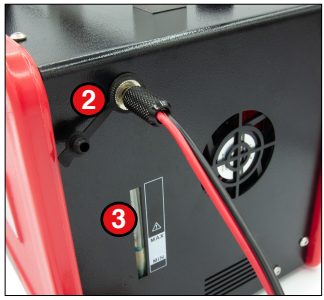



+441752 344 989
enquiries@launchtech.co.uk
www.launchtech.co.uk








## Operation

Open the Smoke fluid refill port (9) slowly and carefully add the supplied smoke fluid taking care not to exceed the MAX line on the level gauge (3), if the level is at minimum or below in normal use please top up. If the unit is overfilled, invert the Smoke2 and drain off excess fluid.
Remove the blanking plug from the smoke outlet port (1) and retain. Mount the smoke hose to the smoke outlet port.
Fit the power cable connector to the power socket (2), connect the power cable clamps to a 12V battery. Note; Red clamp to the +ve and black to the -ve posts. Ensure the battery is fully charged.
Do NOT use a 12V switched supply, only connect to a 12V battery.

1 - Smoke outlet port
2 - Power socket
3 - Smoke fluid level gauge
4 - Start/stop button
5 - LED status indicator
6 - LED Leak indicator
7 - Pressure gauge
8 - Flow dial
9 - Smoke fluid refill port

**Pressure test:**
On connecting the leads the flow indicator LED's will illuminate, press the start/stop button to start the pressurised air flow, allow 30 seconds for the system to pressurise.
Temporarily block the end of the smoke hose, the pressure gauge will indicate the system pressure, or reference value.
During a leak test if the pressure gauge reaches the reference value there is no leak.
If the pressure gauge drops below the reference value there is a leak, an indication of the level of leak can be taken from the number of LED's lit on the LED flow gauge.

**Smoke test:**
The Smoke2 operates in two modes:
Air pressure only, or air pressure plus smoke.
On start-up the cooling fan will run, and all LED leak indicator LED's will light.
To start air pressure mode, press and hold the stop/start button (4) until the LED (5) turns green. To continue to smoke mode press and hold the start/stop button (4) until the LED turns red.
To go straight to smoke mode, press the start stop button until the LED turns red, the Smoke 2 will now generate smoke and stop automatically after completing a five-minute cycle. To switch back to air pressure mode press and hold the start/stop button until the LED turns green. To stop smoke output immediately press the stop /start button and the LED will turn off.

## Basic Testing Method

**Note:** All testing is carried out with the engine and ignition OFF.
Connect to the system under test using the smoke tube alone or with one of the accessories.

Press the start /stop button until the status LED (5) turns green, the unit will start to produce pressurised air; allow approx. 30 seconds for the pressure to stabilise. If the pressure gauge reading is less than the previously established reference value, there is a leak in the system.
To help find the leak, remove the smoke tube, press the start/stop button until the LED turns red. The unit will start generating smoke, for an automatic five-minute cycle. re-attach the smoke hose to the system under test, wait around two minutes before checking for leaks.
Use a bright white light source to check for smoke exiting a leak.
The size of leak can be visualised by the displayed pressure value, and the number of LED's lit on the flow gauge (6). One LED being no leak to eight indicating a substantial leak. The flow control dial (8) is used to vary smoke output as too much smoke can make it harder to find small leaks.

For small hard to find leaks an ultraviolet torch with a 365mn light output used with yellow safety goggles will help find a leak either by illuminating the exiting smoke or by identifying a trace left at the leak exit point.
The Launch smoke fluid contains a tracer dye which shows up under UV light.

After testing, turn off smoke generation by pressing the start /stop button and allow the unit to blow out any residual smoke.
Please note: Smoke testing should not be used on oil sensitive components such as headlight housings.

**Other tests**
The Smoke2 can be used to find leaks in almost any closed system, examples include leaks in cooling systems, engines, transmissions, EGR valves, vacuum systems, etc.

**ACCESSORIES**
**The adapter cone:** Used to seal openings from approximately 20mm to 70mm.
**The cap blanking set:** These various sized caps can used to seal off openings in a system under test while smoke is introduced to the one remaining opening.
**The smoke diffuser:** Used to find air/water leaks in the vehicle cabin.
Smoke is not introduced to the vehicle cabin, the ventilation is set to fresh air, not recirculating, the blower output is set to maximum, to pressurise the cabin. The diffuser will output a steady stream of smoke, the diffuser is slowly passed around door and window seals, any leak will cause the smoke to be disturbed thereby identifying the area for attention. This test must be carried out in still air.

## Technical Specicifactions

| | |
|---|---|
| Power Supply: | 12.5V Vehicle battery, 5Amp |
| Output Pressure: | up to 1.2 bar /17.4 psi |
| Flow Rate: | Up to 7L/min |
| Smoke Adjustment: | Yes |
| Leak Status Indication: | Yes |
| Modes: | Air pressure / Smoke |
| Auto-stop cycle: | 5 mins |
| Smoke fluid capacity: | 100ml |

*Bladder accessory*

## Trouble shooting

| | |
|---|---|
| No fan, or lights on | Check power supply voltage is >12.5 V |
| No air pressure | Faulty air pump |
| Smoke fluid in delivery tube | Smoke fluid overfilled, blow through delivery tube and adjust fluid level |
| Poor/erratic smoke output | Excess smoke fluid check/adjust level |

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