

EN

Original Instructions
Version 2 – September 2023

DRAPER[®]

COMBUSTION
**LEAK
DETECTOR
KIT**

23257



Read this manual in full before using this product and retain it for future use. Always use the latest version of the manual. Please visit drapertools.com/manuals for the latest version.

1. Intended Use

Block or combustion leak tester for determining if CO₂ is present in a vehicle's cooling system. CO₂ in the cooling system For indicating a head gasket leak, cracked block or a warped head, etc. Simple to operate by adding blue detector fluid to the tester and placing tester onto the radiator; air is drawn through the liquid which will change colour to yellow if CO₂ is present. Can be used in conjunction with a cone adaptor or an adaptor within the Draper Radiator Pressure Test Kit (Stock Nos. 14455 and 23420). Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

2. Specification

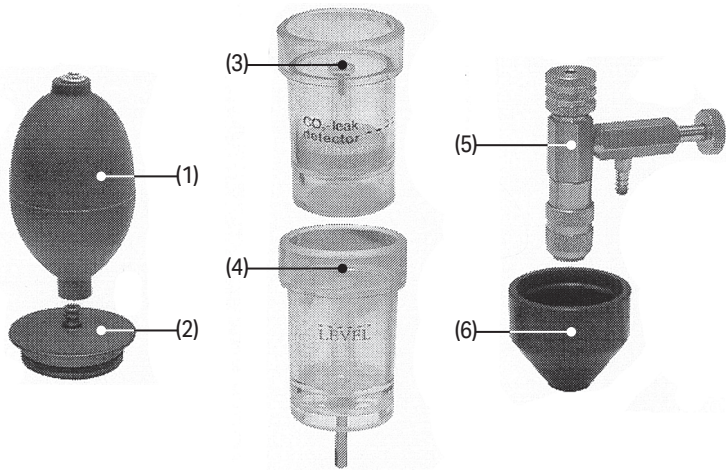
Stock No.	23257
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Part No.	CGDK
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3. Health and Safety Information

- Always ensure engine is COLD before carrying out any maintenance.
- Always ensure approved safety goggles and gloves are worn before carrying out any maintenance.
- Always release any pressure from the radiator BEFORE disconnecting the Detector Kit.
- Avoid drawing radiator coolant into the lower chamber. A small amount is sometimes unavoidable, but if the level exceeds the red line printed on the lower chamber, the following procedure must be followed:
 - Turn the brass adaptor connector in order to release the fluid.
 - Turn the connector anti-clockwise to lock it.

4. Identification



- (1) Rubber bulb
- (2) Cap
- (3) Upper chamber
- (4) Lower chamber
- (5) Radiator cap
- (6) Cone adaptor

5. Operating Instructions

5.1 Adaptor Configuration

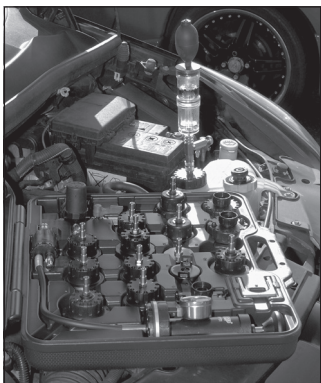


Fig. 1



Fig. 2

- The tester can be configured to fit onto a header tank or radiator when used with a radiator cap/header tank adaptor (not supplied). Fig. 1 shows the Combustion Gas Detector Kit being used in conjunction with the Draper Expert Radiator Pressure Test Kit (Stock No. 14455 – sold separately). When the tube on the lower chamber (4) is inserted into the brass connector (5) ensure that the brass ring at the top of the connector is tightened down so that it grips the tube. The brass connector will be a push fit onto the radiator or header tank adaptor. Push down until it clicks into place. To release, pull the ring at the bottom of the brass connector upwards.
- Fill the upper chamber (3) with test fluid to the dotted line.
- Fit the cap (2) onto the upper chamber and then fix the rubber bulb (1) onto the top of the cap.
- Turn on the vehicle engine and wait for steam to enter the lower chamber.
- When the steam is visible in the lower chamber, pump the rubber bulb several times to draw steam into the upper chamber. If the fluid turns yellow this indicates the presence of CO₂ in the coolant and thus possible damage to cylinder head gasket or cracked head.
- Alternatively the tester can be used without the bulb attached. In this configuration the steam will automatically pass into the upper chamber. Take care to keep hands and face away from any jet of steam being expelled from the hole in the top of the cap.
- As soon as the test is complete turn off the engine and allow the system to cool. Before removing the tester from the radiator or header tank, open the tap on brass connector to allow any remaining pressurised steam to escape. Thick gloves must be worn during this process and when the tester and connector are removed from the radiator.
- Remove the upper chamber from the lower chamber by twisting apart. Pump the bulb several times to draw fresh air into the chamber. When the air mixes with the test fluid it should return to a blue colour and can be retained for future use in spare bottle, this fluid can be used approx. 3 times.

5.2 Hand-held cone configuration

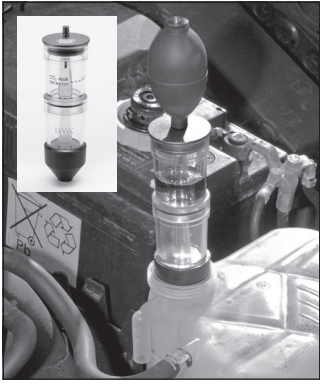


Fig. 3



Fig. 4

- Where no adaptor is available a rubber cone can be fitted to the bottom of the tester as shown in Fig.3. This allows the tester to be held in place on a header tank or radiator opening.



WARNING! Thick protective gloves must be worn when using the tester in this configuration to protect the operator from any escaping steam. Great care should be taken when placing the adaptor over the radiator or header tank opening and also when removing it.

- Fill the upper chamber (3) with test fluid up to the dotted line.
- Remove the radiator or header tank cap. Turn on the vehicle engine and wait for steam to appear. Place the tester onto the radiator or header tank opening and hold it down and steady so that it makes an effective seal against the opening.
- As soon as the steam appears in the lower chamber (4) pump the bulb (1) to draw the steam into the upper chamber. If the fluid turns yellow this indicates the presence of CO₂ in the coolant and thus possible damage to cylinder head gasket or cracked head.
- As soon as the test is complete remove the tester from the radiator or header tank (and turn the engine off). Where there is no more steam emanating from the radiator or header tank, replace the cap.
- Remove the upper chamber from the lower chamber by twisting apart. Pump the bulb several times to draw fresh air into the chamber. When the air mixes with the test fluid it should return to a blue colour and can be retained for future use.

6. Warranty

Should the tool develop a fault, return the complete tool to your nearest distributor or contact Draper Tools directly. Proof of purchase must be provided.

If, upon inspection, it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This warranty covers parts and labour for 36 months from the date of purchase. However, if the tools are hired out, the warranty period is 90 days from the date of purchase.

This warranty does not apply to any consumable parts, batteries or normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper Tools repair agent.

Visit drapertools.com/warranty for full details.

7. Explanation of Symbols



Read the instruction manual



Warning!



Wear safety glasses



Wear protective gloves

Draper Tools

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