

A-GAS REFRIG HEAL+H CHECK™ USER GUIDE



Product Information

The A-Gas REFRIG HEAL+H CHECK™ provides a comprehensive analysis of refrigerant gases in a live system to identify the presence of any contaminants, which may impact system performance, efficiency and longevity. The analysis results are presented in a detailed report showing the quality of the samples provided compared to AHRI 700 Standard. The report is accompanied by recommendations for remediation of any problems identified.

Tests Carried Out

Cylinder 1: Vapour Sample

- Non-Condensable Gases (NCG) %v

Cylinder 2: Liquid Sample

- Purity %W
- Composition %W
- Moisture by Karl Fischer
- Boiling Residue %W
- Acid – PPMW as HCl
- Chloride
- Particulates/Solids

Canister: Oil Sample

- Moisture ppm
- Viscosity cST
- Oxidation Index
- PQ Index
- TAN mg KOH/g
- Wear Metals ppm (Fe, Cr, Cu, Pb, Sn)
- Contaminants (Si, Al, Na)
- Additives ppm (Ca, Zn, P)
- Particle Count

IMPORTANT: Before Using



1. Take care not to damage the box as it is required for returning samples back to A-Gas.
2. Once you have completed sampling ensure that you return both cylinders for analysis.
3. **Always complete VAPOUR sampling before LIQUID Sampling**

DO NOT use this kit for CO₂, Ammonia, Flammable Liquids or Flammable Gases

Usage Instructions

Although every measure has been taken to adequately prepare cylinders for sampling, to avoid the introduction of contaminants, A-Gas strongly recommend that the cylinder and lines are vacuumed prior to removing samples from the system. This is achieved by connecting a gauge set to the sampling cylinder, the sampling point of system and a vacuum pump, then running the pump until a vacuum of 500 microns or less is achieved.

1. Complete the online **Request for Testing Form** by scanning the unique QR Code located on the box. QR Codes are unique to each kit.

Ensure all fields marked with * are completed correctly as these are critical for analysis and reporting.

If you can not access the online form (for example, no internet connection), complete printed form included in the box and return the completed form to the box.



2. Ensure that the seals on both sample cylinders are unbroken. NEVER use a cylinder which does not have a seal that is fully intact.
3. Ensure the use of the correct cylinder for the correct sample – Cylinder labelled '**VAPOUR**' for the vapour sample, cylinder labelled '**LIQUID**' for the liquid refrigerant sample.

Vapour Cylinder – Vapour Refrigerant Sample

1. Increase condenser operational set point to equivalent 40°C to remove all liquid from the condenser leaving superheated gas. Alternatively, for basic systems, switch off the condenser fans and run for approximately 5-10 minutes or until liquid has been removed.
2. Switch off the system and allow it to 'settle' for as long as possible (minimum 40 minutes).
3. Attach the VAPOUR sample cylinder to a suitable port at the highest possible point on the high side of the system – ideally at the condenser inlet.
4. Purge the supplied hose to remove any NCG prior to connection to the cylinder.
5. Open the cylinder valve and allow pressure to equalise between the system and the cylinder.
6. Close the cylinder valve, disconnect the cylinder and firmly hand tighten the cap.
7. Take the pressure and temperature of the gas at the point of sampling.
8. Record details on the online **Request for Testing Form** by scanning the QR code supplied on the box.

Liquid Cylinder – Liquid Refrigerant Sample

9. Place the LIQUID sample cylinder on a set of scales. Using the supplied hose, connect the LIQUID sample cylinder to a source of liquid refrigerant from the system (for example, liquid receiver).
10. Purge the hose with refrigerant from the system to the sample cylinder.
11. Use the cylinder vacuum to draw liquid refrigerant into the sample cylinder.

NOTE: Minimum 1 kg (1000 grams) of liquid refrigerant is required in the liquid sample cylinder to allow proper analysis. If insufficient liquid is provided, there won't be enough to carry out all required tests.

12. Close the valve of the sample cylinder and firmly hand tighten the cap over the valve outlet, return sample cylinder to the box.

Oil Canister – Oil Sample

13. Unscrew the lid from the Oil Test Kit and introduce oil into the oil sample bottle. The sample bottle must be filled to the 'fill to' line to ensure there is enough for all required tests. (Note: oil may be taken from the oil filter or oil separator).
14. Once filled, the oil canister must be left with the lid off for 20 minutes minimum to allow all dissolved refrigerant to boil off. If the oil is still fizzing, leave it for longer.

NOTE: The oil sample bottle is not a pressure vessel and will rupture in transit if pressurised by refrigerant.

15. Once all refrigerant has boiled out of the oil, firmly apply the lid to the sample container and return it to the protective black plastic case. The Oil Test Kit can now be returned to the box for return to your wholesaler.
16. Return sample cylinders and oil test kit in original box to your wholesaler for return back to A-Gas.

Disclaimer

1. The accuracy of the results is entirely dependent on sampling accuracy. A-Gas can only report on the quality of the samples provided, the results of which may be skewed if contaminants are introduced into the cylinders during the sampling process.
2. If insufficient liquid refrigerant or oil is provided in the sample cylinders, A-Gas may not be able to provide full analysis of all contaminants. No refund is possible in this instance.
3. The Oil Test Kit and Refrigerant Cylinder must be closed properly before transit. If either leak in transit, A-Gas may not be able to carry out all tests. No refund is possible in this instance.
4. Non compliance with above will incur non-refundable analysis fee.
5. To be used by qualified technicians holding a valid refrigerant handling license only.

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