



2020 issue one

Product Guide

Providing the means to diagnose, locate, repair and prevent fluid leakage, and making A/C systems cool air faster, work better, last longer

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Providing the means to diagnose, locate repair and prevent fluid leakage, and to make A/C systems safer, cool the air faster, work better and last longer.



Primalec are UK producers of Leak Control and Air Conditioning Service Solutions for both OEM production lines and aftermarket service. We serve automotive, refrigeration and air conditioning, and other industries too.

Founded in 1979, we have been in this business for 41 years, and producing Glo-Leak® UV-Fluorescent tracer products since 1987.

Primalec's leak control solutions are supplied to vehicle and engine manufacturing plants, as well as aftermarket distributors, around 60% of our production is exported worldwide. Together with Nitro Trace™ and Leaktronic™, Glo-Leak® UV detects fluid leaks in vehicle engines, coolant, fuel and hydraulic systems, industrial machinery, construction plant, air conditioning and refrigeration installations.

In the automotive aftermarket, mobile air conditioning is Primalec's core offering. Our expertise in this technical discipline, built up over many years, makes us the natural choice for your A/C servicing needs, including lubricants, cooling performance accelerators, refrigerant leak detection and repair, vehicle sanitising and purifying, system cleanse and retro-fit products.

During 2019 we on-shored production of our sealpro refrigerant sealants and these are now manufactured in the UK. We also re-launched our Purifier sanitising machines under our Airco Shield branding, and these have been extremely popular during the current pandemic.

As many other great companies do, I am sure you too will benefit from using our products and solutions.

Richard Doran
Director



A selection of some of the customers who benefit from using Primalec solutions:



Detect tiny leaks that the eye normally misses

Undetected leaks can be a major cause of equipment failure and/or environmental contamination. Assuring the integrity of equipment that relies on tight retention of fluids or refrigerants for safe, efficient and reliable operation can be critical to your business and professional reputation. The Glo-Leak® UV method offers a simple and reliable method of achieving this.



Primalec has been blending UV fluorescent leak tracer fluids in the UK for nearly 30 years under our Glo-Leak® trade mark.

Glo-Leak® UV is a series of special tracer fluids whose fluorescent properties make them glow under UV light. They are organic compounds which ionically bond to a substrate. Unlike pigments, these colourants are transparent.

We produce them in standard and custom formulations for many industries, especially for Automotive and for Air Conditioning and Refrigeration.

We understand the chemistry, the tribology, and your market. When you need to find leaks, you need to speak to Primalec.

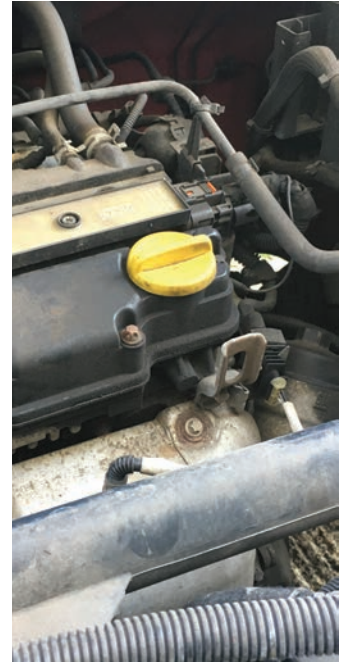
Air Conditioning and refrigeration systems and components – mobile and static.

Engines, transmissions, and fuel systems.

Hydraulics in construction plant, off-road, agricultural, industrial equipment and cranes.

Automotive coolant systems plus windscreens and body work.

- In production environments, Glo-Leak® UV testing is just part of the final hot test procedure.
- In the aftermarket, routine leak testing can reveal that preventive maintenance or repair work is needed, and - with Glo-Leak® UV - your regular servicing and repair work can be easily quality controlled.



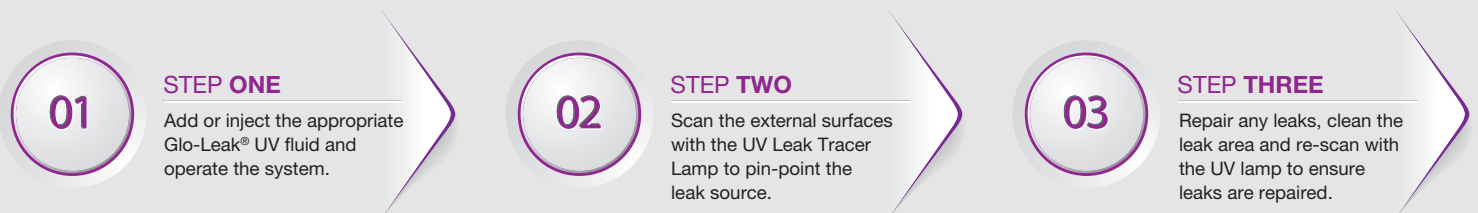
Where is the leak...



...there is the leak

No special equipment other than the UV Leak Tracer lamp is needed, and there is little or no interruption to the system's day to day operation or to your working routine.

Whichever system is being tested the basic procedure is the same:



Get it right the first time – with Glo-Leak® UV

Production line and QA leak testing

Use Glo-Leak® UV to quality control all your vehicles, engines, machine tools and equipment before sending them to your distributors and customers. Also use it for routine leak testing of hydraulic production line machinery.

Used in a wide range of industries including vehicle assembly and engine plants, OEM grade Glo-Leak® UV fluorescent test fluids are added at dosage rates from as little as 200ppm (0.02%) to create the fluorescent response you need for Quality Control of potential fluid leakage.

A slight discoloration may occur, but no contaminants are added to the host fluid, and as there is no physical change to the host liquid, there is no need to flush and recharge the system after testing. Glo-Leak® treated fluids can be left harmlessly in the system until the next routine change is due.

Why not add Glo-Leak® UV testing to routine maintenance programmes for all your oil filled machine tools?

The new fuchsia pink fluorescing Glo-Leak® UV 14386, allows a clear contrast with the yellow fluorescing tracer fluids commonly used in engines and transmissions. This allows you to test two adjacent systems with different fluorescing colours, while avoiding the risk of false diagnosis



The chart below shows the most popular blends, but we regularly customise products for different host fluids and specific operational and packaging needs, including single dose bottles from 5ml upwards.

Code	Description	Pack	Dosage in ppm	Liquid treated up to	Applications	UV light	Fluoresces
GL1400B	Glo-Leak® 131 for mineral and semi-synthetic oils For OEM oil leak testing in engines The most concentrated Glo-Leak® for oils	1 litre	250-500	2800 litre		365nm	Yellow
GL1400C		5 litre		14,000 litre			
GL1400-25		25 litre		70,000 litre			
GL1400-200		200 litre		560,000 litre			
GL1464B	Glo-Leak® 1464 for OEMs POE, PAG, PAO oils For OEM leak testing of refrigeration, air conditioning and other systems using Ester and PAG oils	1 litre	<2000	>500 litre		365nm or 400nm	Yellow
GL1464C		5 litre		>2500 litre			
GL1465B	Glo-Leak® 1465 for hard to fluoresce OEM oils For OEM leak testing of engine and hydraulic oils with UV masking additives	1 litre	500-1000	2,000 litre		365nm	Yellow
GL1465C		5 litre		10,000 litre			
GL1465-25		25 litre		50,000 litre			
GL1466B	Glo-Leak® 1466 for OEM hydraulic systems For OEM leak testing of hydraulic oils and engines with UV masking additives	1 litre	500	2,000 litre		365nm	Yellow
GL1466C		5 litre		10,000 litre			
GL1466-25		25 litre		50,000 litre			
GL1486A	Glo-Leak® 14386 for OEM hydraulic systems For OEM leak testing of hydraulic oils and lubricants where a contrasting colour is required	250ml	-	- litre		365nm or 400nm	Pink
GL1486B		1 litre		- litre			
GL1490B	Glo-Leak® 1490 for large water based systems For leak testing of large scale water cooling installations	1 litre	50-100	20,000 litre		365nm or 400nm	Yellow
GL1490C		5 litre		100,000 litre			
GL1490-25		25 litre		500,000 litre			

Automotive Aftermarket leak testing

The same test method used in many vehicle and engine production environments, these aftermarket grades of Glo-Leak® UV give you OEM standards of quality control in the aftermarket.



SP301UV

Extra-Glo UV/impact protective safety glasses, EN166/170

Our Extra-Glo Safety eyewear is DIN certified and conforms to the essential requirements of Directive 89/686/EEC and with the general requirements of Standard EN166:2001 and of EN170 (UV protection). Optical class 2. Mechanical Strength S (increased robustness). Frame mark: PRIM EN166 S CE; Lens mark: 2-1.2 PRIM 2 S CE. The amber lens gives greater comfort when working with UV light sources, and also enhances the fluorescent contrast in leak detection.

Detect leaks of engine oils, petrol and diesel fuels

Glo-Leak® 1310 is designed for use with a 365nm UVA light source and is perfect for all mineral oil based lubricants and hydraulic fluids.

Glo-Leak® 1312 is formulated to react better with near UV light sources in the 390-410nm range, as well as traditional 365nm UVA lights. Glo-Leak® 1312 is also tuned to work better with synthetic and semi-synthetic engine oils.

Detect automotive cooling system leaks

Glo-Leak® 1390 is for water cooled systems. Add Glo-Leak® 1390 to the radiator or expansion bottle (when the engine is cool) at the rate of 10ml per 3 litres of coolant, and find the coolant leaks you would otherwise have missed.

Detect rainwater ingress and wind noise

Glo-Leak® 1396 is for bodywork, windscreens, door seals, etc.

Use Glo-Leak® 1396 to find rain water leaks in windscreens, door seals, boot lids, etc., at the rate of 25ml per 10 litres of water. Apply the mixture externally to the suspected areas with a hand sprayer or a pressurised hose system. When you inspect with a UVA or UV-Blue light from the inside of the vehicle, look for a blue glow

Combine ultrasonic with Glo-Leak® 1396, and you'll be sure to catch all the leaks. See page 15

Code	Description	Pack	Dosage per 5 litres	Applications	UV light	Fluoresces
GL1310A	Glo-Leak® 1310 for automotive oils and fuels For Aftermarket leak testing in engines	250ml	Clean oil: 10-15ml		365nm	Yellow
GL1310B		1 litre	Dirty oil: 25ml			
GL1310S		6 x 25ml	Fuels: 5-10ml			
GL1312A	Glo-Leak® 1312 for automotive oils and fuels Aftermarket leak testing in engines using synthetic oils	250ml	Clean oil: 10-15ml		365nm or 400nm	Yellow
GL1312B		1 litre	Dirty oil: 25ml			
GL1312S		6 x 25ml	Fuels: 5-10ml			
GL1390A	Glo-Leak® 1390 for automotive coolants For Aftermarket leak testing of coolant systems	250ml	10ml		365nm or 400nm	Yellow
GL1390B		1 litre				
GL1390S		6 x 25ml				
GL1396A	Glo-Leak® 1396 for rainwater ingress For rainwater ingress and wind noise	250ml	12.5ml		365nm or 400nm	Blue
GL1396B		1 litre				
GL1396S		6 x 25ml				

Every time you do an Automotive leak test with Glo-Leak® UV in Automotive a donation is made to BEN. For more information about how BEN may help you and your family, visit www.ben.org.uk



UV lamps See page 7
Leak tracer kits See page 8

Mobile air conditioning

Glo-Leak® UV has been successfully and safely used in mobile air conditioners since the dying days of R12 and CFC refrigerants over 25 years ago. Glo-Leak® for Mobile A/C is engineered using the very best and purest ingredients to give the brightest fluorescence with the smallest dose size.

Carefully packaged in our unique moisture barrier dispensing containers and hermetic cartridges, Glo-Leak® for A/C contains no added solvents, and will work brilliantly with a good UVA 365, UV400 or UV+Blue tracer lamp.

For new R1234yf as well as R134a systems – belt driven and hybrid compressors.

Glo-Leak® 1234 is for new R1234yf as well as R134a systems – motor driven and hybrid compressors. It is specially formulated to mix with R1234yf but also gives superior performance to older R134a systems too.

Just as additional special processes are required to produce PAG lubricants for R1234yf, the same is true of this new Glo-Leak® formulation. Glo-Leak® 1234 is backward compatible with R134a and other refrigerants. You can add Glo-Leak into an A/C system via your A/C service machine or by using an injector, ideally using the proprietary pre-filled hermetic Concertina bottles.

For R134a systems

Glo-Leak® 1284 is for R134a automotive a/c systems, but is not suitable for R1234yf. The recommended dosage is just 5ml per 250ml of lubricant, and it is much stronger than most rival products. GL1284 can be added using the UV dye reservoir on your A/C service machine, with a mini dose injector.

Glo-Leak® 1744 is for A/C systems using CO₂ refrigerant. The very high operating pressures required for CO₂ need a leak tracer additive that can cope with those high pressures. For Extreme Performance PAG lubricants for CO₂, please see page 22.



Code	Description	Pack	Applications	UV light	Fluoresces
GL1234A		250ml: Disp. bottle 50+doses			
GL1234X	Glo-Leak® 1234 for R1234yf/R134a/Hybrid For mobile air conditioning service - with R1234yf - R134a - belt driven or electric/hybrid compressors	60ml: Inj. Concertina 10 dose		365nm or 400nm	Yellow
GL1234B		1 litre: Disp. bottle 200+doses			
GL1234-125Y		125ml: Machine Concertina			
GL1234-125W		125ml: Machine Concertina			
GL1284A		Glo-Leak® 1284 for R134a For mobile air conditioning service - with R134a - belt driven compressors			
GL1284B		1 litre: Disp. bottle 100+doses		365nm or 400nm	Yellow
GL1184A	UV-light Leak test fluid with Glo-Leak® For mobile air conditioning service - with R134a - belt driven compressors	250ml: Disp. bottle 32+doses		365nm or 400nm	Yellow
GL1744A	UV-light Leak test fluid with Glo-Leak® For mobile CO ₂ air conditioning service - CO ₂ Refrigerant	250ml: Disp. -		365nm or 400nm	Yellow

Static and marine air conditioning and refrigeration

Primalec first supplied Glo-Leak® UV/AC&R to the marine refrigeration industry in the late 1980s when refrigerant leakage first became an environmental issue. Since then Glo-Leak® has been successfully and safely used to find refrigerant leaks quickly and reliably in every type of commercial, industrial, marine and mobile air conditioner and refrigeration system, and with all types of compressors.

Glo-Leak® for AC&R is engineered to give the brightest fluorescence at the smallest dosage rate with all common refrigerants and lubricants, when using a good UVA 365, UV400 or UV+Blue tracer lamp. Carefully packaged in our unique moisture barrier dispensing containers and hermetic cartridges, Glo-Leak® contains no added solvents.



For commercial A/C - all refrigerants

Glo-Leak® 1384 is for small to medium sized commercial AC&R systems, including those with hermetic electric compressors. Use one dose of 5ml for up to 1 litre of lubricant. Add it to the system via the oil sump if present, or with a Primalec injector.

Commercial/Industrial AC&R - all refrigerants

Glo-Leak® 1484 is for Commercial, Industrial and marine A/C & Refrigeration. At more than double the concentration of Glo-Leak® 1384, it is suitable for larger AC&R systems and for use with mini-dose injectors, such as RotaJect (see page 21). Use 2.5ml per litre of lubricant.

Glo-Leak UV for CO2 systems

Glo-Leak® 1744 and 2744 are for Refrigeration & Air Conditioning systems using R744 (CO₂) as a refrigerant. The very high operating pressures required for CO₂ need a leak tracer additive that can cope with those high pressures. GL1744 is for use in smaller commercial systems including mobile A/Cs. GL2744 is for use in larger commercial and industrial systems with its higher concentration of fluorescing power. For Extreme Performance PAG lubricants for CO₂, please see page 22.

Glo-Klenz - Cleans off Glo-Leak® and other stains

This citrus based biodegradable solvent cleaner which has been specially formulated to remove spillage and residues of Glo-Leak® and other tracer dyes. It is also very effective on greases, adhesives, dirt, tar and gummy deposits. Glo-Klenz is harmless to most surfaces, and is safe to use on all metals. Now Glo-Klenz refills are offered in an economical 400% concentrate: dilute in up to 4 parts Glo-Klenz C with water to make Glo-Klenz ready-to-use (RTU).

GL1901A

Glo-Klenz RTU 250ml Trigger Spray

GL1901H

Glo-Klenz RTU 500ml Trigger Spray



Code	Description	Pack	Applications	UV light	Fluoresces
GL1384A	Glo-Leak® 1384	250ml: Disp. bottle		365nm or 400nm	Yellow
GL1384-30Y	For refrigeration and air conditioning service	30ml: Concertina			
GL1384B	- all refrigerant types	1 litre: Disp. bottle			
GL1484A	Glo-Leak® 1484	250ml: Disp. bottle		365nm or 400nm	Yellow
GL1484X	For refrigeration and air conditioning service	60ml: Concertina			
GL1484B	- all refrigerant types	1 litre: Disp. bottle			
GL1484D	- high strength	50ml: Cartridge			
GL1744A	Glo-Leak® 1744/2744	250ml: Disp. bottle		365nm or 400nm	Yellow
GL2744A	For Refrigeration and air conditioning service - CO ₂	250ml: Disp. bottle			
GL2744B		1 litre: Disp. bottle			

UV technology makes the invisible visible

Ultra violet light has many uses including sterilisation, resin and glue curing, tanning, skin treatment, and fluorescent disclosure in forensic, security, medicine, NDT and leak detection. These different applications use different wavelengths of light, e.g. UVC, UVB and UVA, and therefore need different types of UV light sources often at very specific wavelengths in the Electromagnetic spectrum.



Primaltec uses UVC in the Purifier sanitising machine on page 24 and UVA in the Medway windscreen repair resin curing lamp. But our primary focus is on Glo-Leak® UV fluorescence to detect fluid and refrigerant leakage. With the traditional Mercury vapour and halogen light sources now phased out, our Leak Tracer UV programme is now entirely LED based. These are offered within tight wavelength bands at 365nm, and 400nm in the electromagnetic spectrum.

UV light sources with a 365nm peak will fluoresce all commonly used leak test fluids. They emit very little visible light, which means you get the best fluorescent contrast (UV light is itself invisible up to about 375nm, which is why they are called ‘blacklights’). Many fluids, including our Glo-Leak® UV for refrigerant leak detection also react very well to light in the ‘near UV’ range (400nm +).

A good, reliable UV light source is a key element of any effective UV-Fluorescent leak test, forensic, security, infection control or UV curing. We have a great choice for you.

Code	Description	Wave-length in nm Range	Peak(s)	Max Power (365nm) @38cm	Beam	Battery	Length mm	Head Ømm	Lamp Wt.*	Case included
Near UV inspection lamps and torches										
UV2161	Mini Bright UV400 leak tracer torch	397 - 407	403	-	Reflector Spot	3 x AAA Alkaline	115	34	110g	No
INV2020C	Invictalux MkIII UV400 7-led inspection torch	395 - 405	400	-	15° Spot	3 x AA Alkaline	203	26	215g	No
INV2021UV4	Invictalux MkIII 3W UV-400 inspection torch	397 - 407	403	-	Reflector Spot	3 x AA Alkaline	225	32	265g	No
UVA inspection lamps and torches with a 365nm peak										
UV2165A	Mini Pro UV365 rechargeable tracer torch set	360 - 370	365	25000 µW/cm²	Reflector Spot	1 X 18659 Li-Ion	135	31.5	136g	Case 5
UV4065L	Midi Pro UV365 rechargeable tracer torch	360 - 370	365	25000 µW/cm	Reflector Spot	1 X 18659 Li-Ion	158	46-5	212g	Case 5
UV4165	Quadra UV365 rechargeable tracer lamp	360 - 370	365	4500 µW/cm²	Mid beam	-	105x180	80	560g	Yes

See the full Invictalux inspection range on page 17. *Lamp weights include batteries.

We recommend our Extra-Glo glasses (SP301UV) to protect against UV light sources and enhances fluorescent contrast in leak detection (right).

INV2021UV4
Invictalux MkIII 3W UV-400
inspection torch



From the newly upgraded Invictalux-2 modular inspection system, this new UV400 torch gives the brilliant fluorescence to Glo-Leak® fluids.

- The latest 3W single chip UV-LED give brilliant fluorescence
- Brass contact on MkIII light head
- MkIII lamp handle in strong easy-grip Santoprene covered aluminium
- 3 premium brand AA batteries included
- Also available with flexible Swan Neck extender and in various cased kits

INV2020C
Invictalux-MkIII UV400 7-led
inspection torch



- 7 premium UVA LEDs in changeable, upgradeable light heads
- Same MkIII improvements to handle and light head
- 3 premium brand AA batteries included

UV2161
Mini Bright UV400 leak tracer torch



This UV400 tracer light is a great low cost light for finding refrigerant and oil leaks in HVAC&R systems. It is powered by three AAA alkaline batteries which last up to 3 hours of continuous use.

SP301UV
Extra-Glo UV/impact protective safety
glasses, EN166/170



Our Extra-Glo Safety eyewear is DIN certified and conforms to the essential requirements of Directive 89/686/EEC and with the general requirements of Standard EN166:2001 and of EN170 (UV protection). Optical class 2. Mechanical Strength S (increased robustness). Frame mark: PRIM EN166 S CE; Lens mark: 2-1.2 PRIM 2 S CE. The amber lens gives greater comfort when working with UV light sources, and also enhances the fluorescent contrast in leak detection.

UV2165
Mini Pro UV365 rechargeable
tracer torch



This 365nm tracer light is a true blacklight at an accessible price, and is still small enough to fit in the pocket. Supplied either with a single slot charger and one Li-Ion battery or, as UV2165A, in our aluminium framed case no 5 with two batteries and a double slot charger.

UV4065L
UV-365 Rechargeable
spot lamp kit



For leak and crack detection, spot curing and forensic. This hand sized UVA lamp is so easily carried with you. It gives a very narrow band of UV output in the key peak wavelength for fluorescent disclosure and for curing of many adhesives and resins. 30,000 hours expected LED life.

- Spot beam with 25,000µw/cm² (250W/m²) at a distance of 38cm
- UVA 360-370nm with a 365nm peak; <8lux of visible light
- The beam centre is 30mm Ø; the whole light beam is 70mm Ø at 38 cm.
- Rechargeable batteries - recharge time: approx 8 hours.
- Includes: lamp, belt holster, mains battery charger, car charger, 1 rechargeable battery plus 1 x spare, Extra-Glo UV Stop glasses to EN166 and EN170 and a Primalec case 5

UV4165
Mid Beam rechargeable 365nm
UVA lamp kit



For leak and crack detection, spot curing and forensic uses, this powerful yet compact and light weight UV lamp has 4 powerful UVA-365nm LEDs, and a single white light for after inspection. 30,000 hours expected LED life.

- Light Beam: 4,500 µW/cm² (35 W/m²) at 38 cm (initial intensity)
- Blacklight filter reduces visible light output from the UV LED's to approx. 1 lux
- Battery running time: 1.5 hours continuous +/- 5 % - (2 batteries required)
- A spare set of two is supplied to keep you running. Recharge time: approx. 8 hours
- Current regulator keeps the intensity stable as the battery fades

Medway Windscreen repair UV lamp



A high quality UV lamp for fast curing of UV reactive windscreen repair resins.

- 4 suction pads keep the lamp on the windscreen
- 4W Blacklight (BL) lamp for best curing
- UV-transmitting acrylic panel protects the UV tube
- 2mm thick aluminium body which is shaped for ease of use
- Red as standard, brushed aluminium optional
- On/off rocker switch on the end panel

MED001W
Medway 12V windscreen repair lamp
with 12V auto plug and lead

MED004W
Medway 230V windscreen repair lamp
with 2 metre EU mains lead

MED004W-GB
Medway 230V windscreen repair lamp
with 2 metre GB mains lead

For the full Invictalux range
See page 17

UV Leak tracer combi kits

This is a selection of our popular leak tracer sets containing the equipment and consumables that you need to find leaks of refrigerants, oils and coolants.

NEW



GL2230B

Concertina injector set for mobile A/C with 1x GL1234X cartridge, R134a & R1234yf snap couplers.
Also available as GL2330A with R134a coupler only.

NEW



INV2021X1

New Invictalux 2021UV4 UV-400 tracer lamp with GL2230B Concertina injector set in our aluminium framed CASE1A.
R134a & R1234yf Automotive snap couplers included.



UV2161X1

MiniBright UV-400 torch with GL2230A Concertina injector set in plastic case 1P.
R134a Automotive snap couplers included.



AC2400UV

Leak Detection Combi Kit Leaktronic™ 1 & MiniPro UV Leaktronic™ 1 plus UV2165 Mini Pro rechargeable UV365 tracer torch and charger set in aluminium framed CASE2A.



UVAA-K1

Automotive UV leak detection Maxi Kit

MiniPro UV-365 rechargeable tracer light, lithium battery and charger, 250ml Glo-Leak® UV for oils, 250ml Glo-Leak® UV for coolants 2x25ml Glo-Leak® 1396 for rainwater ingress, safety glasses, Glo-Leak® UV for AC with Concertina A/injector kit GL2230B.

NEW



INV2021X3 & INV2021X3R

AC&R leak detection kit X3

Invictalux INV2021UV4, Glo-Leak GL1384A, Mini-RotaJect fluid injector, Extra-Glo safety glasses, adapters for vehicle A/Cs R134a & R1234yf, aluminium framed case.

INV2021X3R excludes Auto adapters.

Nitro Trace™ pressure leak testing system

The use of dry Oxygen Free Nitrogen (OFN) is a long established means of pressure testing air conditioning and refrigeration systems. A drop in pressure on a test gauge indicates that there is a leak. The point of leakage can then be found by using a leak spray, such as Spray Test (page 10), or with an ultrasonic tester.

Primalec provides an added dimension with Nitro Trace™ gas, a combination of OFN with Hydrogen. Hydrogen has the smallest atom of all gases, and will leak through the tiniest of leak sources, and as it can be detected using electronic hydrogen sensing technology, the leak location can be pinpointed with Leaktronic™ 3 detector. (see below and page 11). Leak spray may be also used for added assurance of the leak source.



AC2098
Nitro Trace™ gas
 Offered in non-refillable 1 litre cylinders, and in a choice of two standard kits containing all you need. Regulators, hoses and adapters are also available separately (see page 10).



AC2314B
Nitro Trace™ kit for mobile air conditioning R134a and R1234yf

With its 10 bar regulator it is designed to meet the specifications of SAE standard J2790 for refrigerant leak testing in vehicle A/Cs. This kit contains:

- Pressure Regulator - 300 Bar in, 10 Bar out - AC2091
- 90cm Hose with 1/4" SAE female swivel fittings - AC2302Y
- N2 Pressure testing gauge unit - AC2094
- Portable 1 litre Nitro Trace™ cylinder - AC2098
- Primalec aluminium case 4
- R134a automotive low pressure coupler
- R1234yf low pressure coupler



AC2312
Nitro Trace™ kit for high pressure HVACR systems

For higher pressure applications where tests must be carried out at up to 50 bar. This includes many commercial AC&R and other pressure testing operations. This kit contains:

- Pressure Regulator - 300 Bar in, 50 Bar out - AC2093
- 90cm Hose with 1/4" SAE female swivel fittings - AC2302Y
- N2 Pressure testing gauge unit - AC2094
- Portable 1 litre Nitro Trace™ cylinder - AC2098
- Primalec aluminium case 4

AC2312B also includes Automotive LP service couplers for R1234yf and R134a.



AC2314B4
Nitro Trace™ kit with Leaktronic™ 4

AC2314B with the addition of AC2686 Leaktronic™ 4

The above kit has automotive couplers for both R1234yf and R134a

Leaktronic™ 3 Electronic Nitro Trace™ leak locator

See page 11 for the full specification.

AC2092GB

N₂ Pressure regulator single stage
300 x 10 bar - BSP



AC2091

N₂ Pressure regulator single stage
300 x 10 bar - 1/4" x 10mm



AC2093

N₂ Pressure regulator single stage
300 x 50 bar - 1/4" x 10mm



AC2091

N₂ regulator 10 bar for non-refillable cylinders

Regulates the pressure from N₂ and Nitro Trace™ (N₂H₂) cylinders up to 10 Bar. With its 1/4" male fitting, it is ideal for leak detection in smaller, lower pressure systems including mobile A/Cs, as well as for flushing. According to SAE J2790, the pressure required for proper leak testing shall be less than 1.1MPa (160psig). The inlet has a 10mm female fitting to suit disposable cylinders only. Adapters for standard N₂ cylinder fittings are available separately.

AC2092

N₂ regulator 10 bar for standard N₂ cylinders

The same specifications as AC2091, but with the standard fitting refillable N₂ cylinders.

High pressure N₂ regulator for industry standard cylinders

Regulates the output pressure from N₂ and Nitro Trace™ (N₂H₂) cylinders up to a maximum of 50 Bar. With its 1/4" male and national standard fittings, it is ideal for leak detection in high pressure systems. A removable adapter also allows for the regulator to be used on the non-refillable Nitro Trace™ cylinders.

AC2092GB-KIT2

N₂ Leak test & flush set for Mobile A/C



Adapters to convert AC2091 regulators for use with full sized Nitrogen cylinders in different countries:



AC2089GB
Adapter for British Standard



AC2089FR
Adapter for French Standard

AC2089DE
Adapter for German Standard

AC2089IT
Adapter for Italian Standard

This regulator set provides all you need for leak testing and flushing operations with standard Nitrogen and Nitro Trace™ gas cylinders which have the British Standard female fitting. The kit comprises: AC2092GB regulator, 2 metre hose, R134a & R1234yf service couplers, and the AC2094 N₂ Test gauge hose & valve unit.

Other International standard cylinder fittings are also available.

AC2094

N₂ Test unit with gauge & ball valve



For pressure flushing and leak testing. This tool allows for quick and reliable nitrogen (or Nitro Trace™), pressure flushing and leakage tests on mobile and static AC&R systems.

Connects via 1/4" SAE male and female swivel fittings on the hose

AC2092GB-KIT1C

Nitro Leak test set for Mobile AC



The same as KIT2, but without the AC2094 N₂ test unit

AC2172

Spray Test micro leak locator

This non-flammable detector spray creates a bubbling effect where gas is leaking. It is a useful addition to the pressure testing process, adding confirmation to the pressure test, and will even enhance the ultrasonic sounds when using USX2 ultrasonic (see page 15).



AC2400
 Leaktronic™ 1 refrigerant leak detector


Senses all HFC, HFO, HCFC, and HC refrigerants, and blends, and its advanced heated solid electrolyte technology can detect leaks as small as 0.75 grams per year of R1234yf (1.5 grams p.a. of R134a). It has a very long life sensor, a warm up time of less than 20 seconds, and an immediate response time. It meets EN14624, SAE J2791, SAE J2913 and ASHRAE 173-2012 and of course it carries the CE mark.

AC2440A
 Leaktronic™ 2 refrigerant leak detector


All the advanced sensing characteristics of AC2400, plus numeric display screen with leak size indicator (1 to 9), visual flashing LED leak alarm near the sensor tip, audio mute function and santoprene hand grip. Leaktronic™ 2 was the world's first to pass the latest SAE J2791 test. It also meets EN14624, SAE J2913 and ASHRAE 173-2012 and of course it carries the CE mark.

AC2640A
 Leaktronic™ 3 electronic Nitro Trace™ leak locator


This new electronic leak instrument uses sensor technology specific to hydrogen at the low levels of 5ppm that are required by Standards and Directives. Detectors which are designed for other combustible gases may detect hydrogen, but not at the level required for N2H Tracer gases such as Nitro Trace™.

	AC2400 Leaktronic™ 1 Refrigerants HFC, HFO, HCFC, HC, and blends	AC2440A Leaktronic™ 2 Refrigerants HFC, HFO, HCFC, HC, and blends	AC2640A Leaktronic™ 3H Hydrogen and N2H tracer gases (Nitro Trace™)
Sensor type	Heated solid electrolyte sensor, long life	Heated solid electrolyte sensor, long life	Heated solid electrolyte sensor, long life
Sensitivity	1.5gm/yr (R134a); 0.75gm/yr (R1234)	1.5gm/yr (R134a); 0.75gm/yr (R1234)	<5ppm
Adjustable levels of sensitivity	3	3	3
Sensor life	> 10 years	> 10 years	> 300 hours
Response time	Instantaneous	Instantaneous	Instantaneous
Power supply	4 x AA Alkaline Batteries	4 x AA Alkaline Batteries	4 x AA Alkaline Batteries
Battery life	4-6 hours continuous	4-6 hours continuous	8 hours continuous
Low battery indicators	Yes	Yes	Yes
Warm up time	< 20 seconds	< 20 seconds	< 15 seconds
Probe length	43cm (17")	43cm (17")	43cm (17")
Numeric display	No	7 segment digital display	7 segment digital display
Automatic calibration	Yes	Yes	Yes
Audible leak alarm	Yes	Yes	Yes
Audio mute function	No	Yes	Yes
Leak size indicator	No	Yes - Numeric display 1 to 9	Yes - Numeric display 1 to 9
Flashing LED leak alarm at sensor	No	Yes	Yes
Compliance	EN14624 ; SAE J2791 & J2913; CE; ASHRAE 173-2012	EN14624 ; SAE J2791 & J2913; CE ASHRAE 173-2012	EU Directive 2006/40; CE
Instrument housing	High impact ABS	High impact ABS, santoprene grip	High impact ABS, santoprene grip
Carrying case	Optional - aluminium framed	Yes - aluminium framed	Yes - aluminium framed
Weight without carrying case	450 gm (instrument only);	450 gm (instrument only);	450 gm (instrument only);
Weight with carrying case	1,375 gm (with Primalec case 1)	1,375 gm (with Primalec case 1)	1,380 gm (with Primalec case 1)
Warranty	2 years (includes sensor)	2 years (includes sensor)	2 years


AC2686
 Leaktronic™ 4 NitroTrace/Hydrogen leak detector

Seal small leaks and prevent new ones



Primaltec offers two types of chemical tool to help you with mobile air conditioning leaks. Primaltec is the only European manufacturing source of Type 2 leak sealants

Airco Seal Pro

The original automotive A/C leak sealer, now made in UK. It forms a permanent seal, repairing micro leaks in both metal and elastomeric components. Some rival sealants merely form a plug on the inside of the leak, which can fail under the vacuum cycle of a normal A/C service routine.

- Permanently stops micro leaks in both metal and elastomeric parts in automotive A/Cs
- Especially valuable with hard to find leaks and expensive to repair components
- Saves huge amounts of time and money in parts and labour
- Makes previously uneconomic repairs affordable
- Ideal low cost repair for out of warranty vehicles
- Contains no refrigerant, no propellant and no dyes or other additives in the vacuum can - just Airco Seal. Now in a choice of two sizes: Airco SealPro 1 for smaller cars. Airco SealPro 2 for larger cars



Vacuum filled cans for long shelf life

There are three main types of sealant chemistry on the market today

Type E - sealants restore flexible hoses and seals by mildly swelling the elastomers. They can stop leakage from those parts, but not metal components. Primaltec AC2138 Leak Stop 1 also contains a system boosting additive.

Type P - Permanent polymeric sealants create a hard seal at the leak point, resistant to deep vacuum. Sealpro chemically reacts with the condensation which forms externally at the leak source as gas escapes under pressure. This forms a permanent seal on the micro leak. Primaltec is the only European manufacturing source of Type P leak sealants. See how it works on page 13.

Type M - Macromolecular sealants work like car radiator sealants. They use large molecules which bunch up at the leak site, forming a bung to block the leak. Primaltec does not currently offer a Type M sealant.

AC2132C

Airco Seal Pro 1 smaller systems a type P mobile A/C leak sealant



Designed for small to medium sized vehicles with a lubricant fill of up to 150ml.

AC2133C

Airco Seal Pro 2 larger systems a type P mobile A/C leak sealant



The original and still the best, Airco Seal Pro is great for medium to large vehicles with a lubricant fill from 150 to over 350ml, and is supplied with a set of Tamper Guards and labels. Airco Seal Pro has enough active ingredients to stay in the system to prevent future micro leaks developing.

AC2138C

Airco Leak Stop with Extra Cool™ a type E leak stop

AC2138E

Airco Leak Stop with Extra Cool™ 6-pack + Hose (AC2138B)

- Stops and helps to prevent small leaks in all elastomeric parts of mobile A/Cs
- Penetrates and rejuvenates o-rings, seals and flexible pipes
- Low cost treatment for older cars
- Includes an Extra Cool™ PAG top up to boost the system's oil
- The vacuum packed Leak Stop 1 can contains no dyes or propellants



AC2133BYF

Charge hose for R1234yf connection



SealPro Advanced - the permanent micro leak sealant for static AC&R



SealPro Advanced for Refrigeration and Air Conditioning systems permanently and quickly seals refrigerant leaks up to 300 microns. It gives HVACR engineers a powerful chemical tool, especially when repairing older installations in which small persistent leaks cannot be identified.

SealPro

SealPro keeps systems running without leakage. The permanent seal will also prevent any new leaks as it remains active in the system.

Sealpro contains no refrigerant, no propellant and no dyes in its hermetic long life vacuum can. So it works with all common refrigerants HFCs, HCs, HFOs, and blends including R410a & R32. Engineered to HVACR industry standards, SealProTM Advanced is easily installed into a fully-charged system, with NO pump down or recovery. Recommended for systems losing no more than 15% of the entire charge over a four-week period.

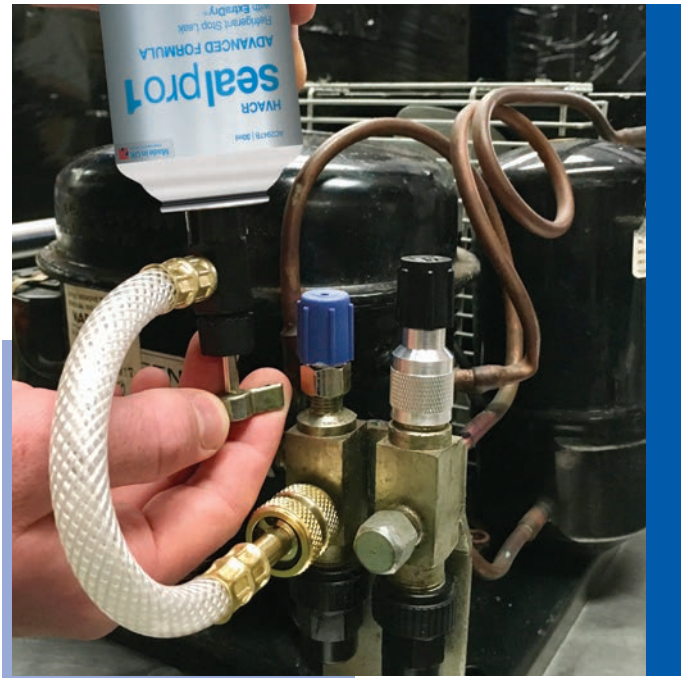
Now with ExtraDry to eliminate moisture, boost its Type P sealant performance and help prevent waxing and acid formation, SealPro is faster and more compressor-friendly than ever.

It is ideal for older systems, in which small persistent leaks cannot be identified, extending their lifetime.

So when you can find the leak, you can repair it conventionally, BUT...

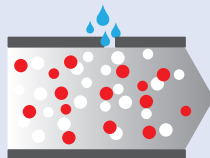
- when you can't find that micro leak and/or
- when the cost of replacement parts is uneconomical and/or
- when the parts are just not available when you need them

THEN – you should use SealPro

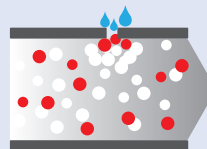


How it works

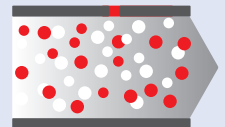
White represents refrigerant, red is SealPro and blue is condensation forming at the leak exit point externally.



SealPro finds the exit point and reacts with the condensation to start the repair.



Once the SealPro has fully formed the leakage stops and the seal is complete. It will resist even deep vacuum from inside.



There are three versions available according to the size of the system being treated.

AC2947B

SealPro 1

SMALL systems 0.07 kW up to 5.2 kW
(up to 1.5 tonnes)



AC2944B

SealPro 2

MEDIUM systems 5 kW up to 18 kW
(1.5 to 5 tonnes)



AC2948B

SealPro 3

LARGE systems over 18 kW
(5 tonnes)



Leak repair and prevention

One of the most common points of leakage in mobile A/Cs is the service valve. It is important that both the valve core and the cap are in good leak free condition, but this is often overlooked. A very easy way to ensure leak tightness here is to replace the valve cores and caps at each A/C service.

AC2155 Valve core renewal tool set



Primalec's AC2155 valve core and cap replacement tools make it easy for you. You can even change the valve core while the system is pressurised.

AC2154F Valve core and cap service kit

An easy and often overlooked way to ensure leak tightness is to replace the valve cores and caps at each A/C service. Primalec's valve core a cap kit make it easy for you. Refill packs can be found on page 28.

Service kit includes:

Valve core

x5 each of:
AC3268/AC3269/AC3271/AC3272/
AC3273/AC3274/AC3275/AC3296

x30:

AC3270

Valve tool

x1:

AC2251

Valve cap

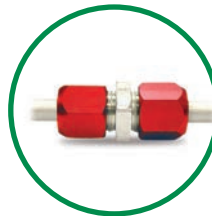
x5 each of:
AC2134L/AC2134H/AC2282/AC2283/
AC2284/AC2285/AC2286/AC2287/
AC2288/AC2289



Line splice repair kits



Problem



Solution

Line Splice – the quick, permanent, metal line repair with no line removal Damaged A/C, Transmission, Power Steering, Heater, or other metal pipework on vehicles can cost a lot in downtime, lost productivity, and customer dissatisfaction. New Line Splice is a permanent repair which is done quickly, without line removal, special tools or adhesive chemicals.

- HNBR Seal Sleeve dramatically expands the sealing surface area
- Anti-Vibration Tension Ring for long-term service in high-vibration use
- Compensates for out-of-round or other tubing imperfections
- Leak-free to 2300 psi
- Install with just a spanner or wrench



AC76020

10 Pack

2x ea. 5/8" & 5/16" Splice, +
3x ea. 1/2" & 3/8" Splice kits

AC76022

6 Pack

2x 5/8", 2x 3/8", & 1 ea. 1/2"
& 5/16" Line Splice Kits

USX-2 Superheterodyning technology

An essential addition to every engineer's diagnostic equipment, the USX-2 allows you to hear ultrasonic frequencies and thus fix minor faults before they become problematic



A necessity for preventative maintenance

Most mechanical faults and failures start out as very small defects or leaks. Such faults emit a high pitched noise as ultrasonic waves, which are beyond the range of the human ear. As the faults get more serious the noise gets more intense, the sound wavelength increases and enters the audible range. At that stage, the damage is already done. Instead, find the cause of the problem with the USX-2 before it's too late.

Primalec's USX-2 uses Superheterodyning technology to convert ultrasonic noises into audible range which mimic the natural sounds made by the defect.

Since USX2 is tuned to listen to the ultrasonic range, it is also unaffected by everyday sounds such as wind, voices, and traffic which can further hinder the technician's ability to listen for a potential problem. This allows you to detect the faults and leaks in time for preventative maintenance by listening to the sound as well as using the LED display.

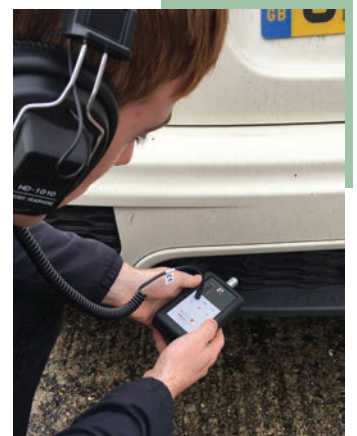
With a wide range of diagnostic uses it helps you to detect:

Mechanical Wear in:-

- Bearings, shafts, gears, cam and tappet assemblies

Leaks in all pressurised systems, including:-

- Air conditioning & Refrigeration
 - Compressed air
 - Air Brakes & Tyres
 - Vacuum leaks
 - Electrical discharge due to insulation breakdown
 - Cracks and leaks in containers, door seals, bodywork, etc.
 - Ultrasonic parking sensors
 - Fuel system flows
 - High pressure steam leakage
- ...and much more



USX2-K1

Receiver, transmitter, headphones, hollow probe, air probe, 9V batteries, case

USX2-K2

Receiver, headphones, hollow probe, air probe, 9V batteries, case



Refrigerant ID range of portable refrigerant analysers

Which refrigerant are you really dealing with?

How pure is it?

Accurate identification and analysis of the refrigerant each time you service a system will help you to diagnose and correct poor cooling performance, enhancing the quality of your work. Not only does this give you a competitive edge, you can also prevent cross contamination in your cylinders and protect your valuable A/C service equipment.

Many new refrigerants, including HFO types, are less stable and more sensitive to impurities than their predecessors. Their ability to break down faster in the atmosphere can make them more prone to break down inside the AC&R system. R1234yf, used in most new vehicles, is no exception. Since its introduction, vehicle manufacturers have developed new technical standards for mobile A/C service, which include a requirement to verify the purity of the HFO-1234 refrigerant in the system prior to recovery. Ultima and Mini-ID allow you to conform to those standards.

Depending on the model chosen, you can:

- Quickly and accurately measure refrigerant purity in systems and cylinders
- See the percentage of different refrigerants
- See the percentage of air in pure refrigerant
- Print out the test results – great for QA records, customer interaction and billing
- Replace the oil restrictor
- Upgrade the software via USB port



Powered by Neutronics technology, the Ultima ID range of portable refrigerant analysers enables you to identify the refrigerant type and to confirm its quality and purity.

AC25653
Legend ID1234yf
Refrigerant Analyser
(with printer)

AC25652
Legend ID1234yf
Refrigerant Analyser
(without printer)

The above two models offer analysis of R1234yf, R134a and hydrocarbons - ideal for mobile A/C units

AC25220
Ultima ID RI-700H Pro (with printer)
Multi refrigerant analyser for HVAC&R with printer
Offers analysis of a wider range of the refrigerants which are used in HVACR systems

AC25218
Mini ID R134a
Refrigerant identifier
or R134a

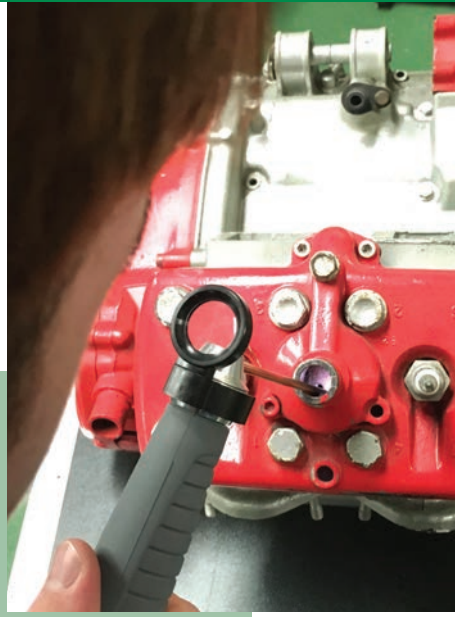
AC25219
Mini ID R1234yf
Refrigerant identifier
for R1234yf

The Invictalux bore and cavity inspector

Invictalux is a modular, multi-use inspection system comprising a hand unit and a series of interchangeable light heads and bore viewers. Invictalux is offered as individual products, or in complete sets.

2018 upgrades offer an improved switch, new solid contacts on the light heads, and the latest single chip LED technology with optical reflectors.

- The Bore Viewer magnifies and illuminates inside dark bores & cavities
 - Mouldings, small components
 - Pistons, pipes hoses, small fittings
 - Cylinders
- Light heads in white light and UV options
- Quality control, leak and flaw detection, forensic and general inspection



INV-211B



Mark III Hand Unit

INV2030BV



Bore inspector 100 module
- white

INV2020F



7-LED white torch head

INV2020S



White 13-LED light head

INV2020E



Bore inspector 100 module
- UV395-405

INV2020V



UV400 13-LED light head

INV2021V



3W UV400 light head

INV2020D



Swan neck extender

INV2020WF



7-LED inspection torch

INV2021UV4



3W UV-400 inspection torch

INV2030K1



Bore Viewer starter set

INV2020A



Invictalux inspection set

INV2021ABV



Complete Invictalux & BV set

INV2030K2



Bore Viewer advanced set

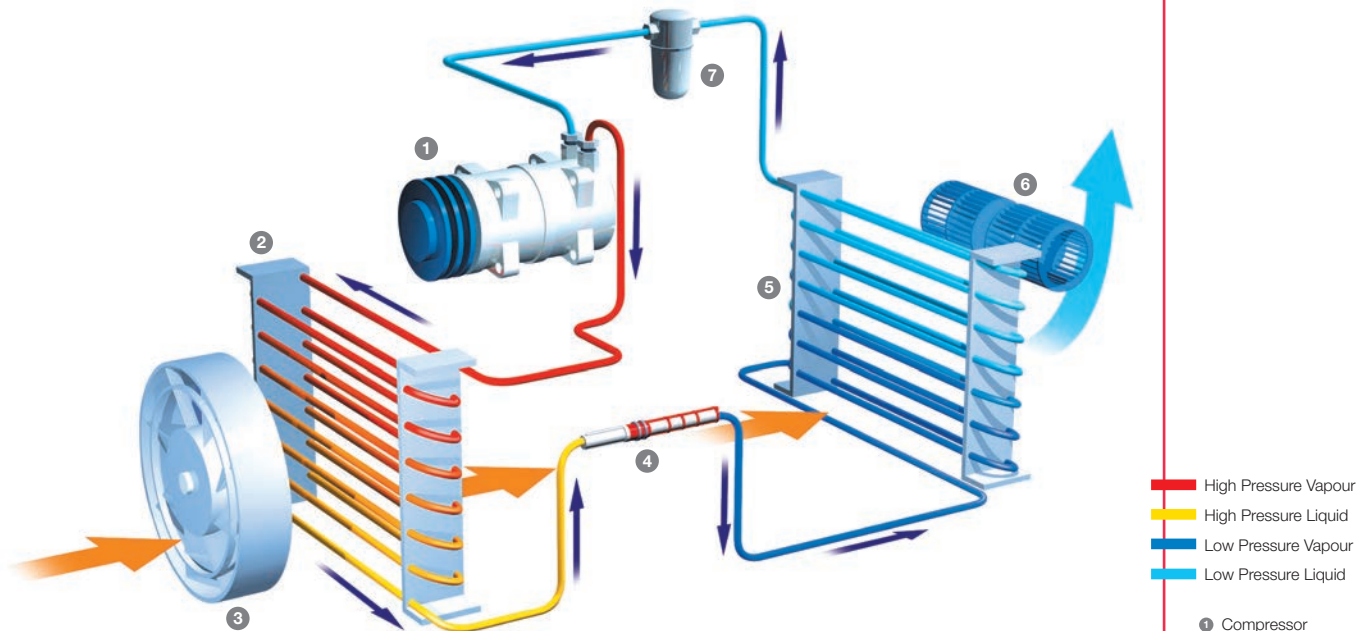
Why new generation refrigerants need next generation lubricants

R1234yf, the new Automotive HFO refrigerant, has been with us since the start of 2011 when all newly Type Approved cars had to use an AC refrigerant with a GWP below 150. Since January 2017, all newly built vehicles have had to use R1234yf because there is no commercially viable alternative. This new gas did allow car manufacturers to continue using most of the existing A/C components without major re-design, but R1234yf

- is less stable and more expensive than R134a
- requires special compressor lubricants, and
- requires more careful servicing than its predecessors

Added to that, A/C electric compressors, which need special lubricants with the correct dielectric properties, are increasingly common as more hybrids and plug-in electric vehicles join the road.

That is why you need the knowledge and experience of Primalec to provide you with the right lubricants for the job.



■ High Pressure Vapour
■ High Pressure Liquid
■ Low Pressure Vapour
■ Low Pressure Liquid

- ① Compressor
- ② Condenser
- ③ Condenser Fan
- ④ Orifice Tube
- ⑤ Evaporator
- ⑥ Blower Fan
- ⑦ Accumulator

What is the A/C lubricant for?

Its main job is of course to lubricate the moving parts of the refrigerant compressor, dissipate heat, seal the compression chambers and valves and keep the seals and flexible pipes throughout the system in good condition, minimising leakage through elastomer degradation.

The oil shares its home with the refrigerant, so the two must be compatible and mix well together, and with all the different materials used in a mobile A/C system. Good miscibility lets the circulating refrigerant carry oil safely round the system to the o-rings, seals and flexible pipework and back to the compressor.

Electric compressors add a further dimension in that refrigerant and oil come into contact with live electrical parts, so they need a lubricant with the correct de-electric profile.

That is why it is important to use the right oil for the job.

Key points for R1234yf:

- Normal Aftermarket R134a PAG oils do not mix with R1234yf
- R1234yf is relatively unstable and needs optimally additised double end-capped HFO-PAG oils, blended from select base stocks
- Electric compressors must have the correct di-electric profile and compatibility with R1234yf
- R1234yf is mildly flammable
- One or two VMs specify a POE for electric R1234yf compressors

To make your job easier and more profitable, Primalec has teamed up with world leading specialists in synthetic lubricant chemistry to bring you a complete yet compact range of Mobile AC oils that you can trust.

Snow Leopard R1234yf and Hybrid/electric series A/C lubricants



Snow Leopard technical lubricants offer OEM-quality solutions

Inspired by that rare and beautiful feline that inhabits the high Himalayas, Snow Leopard Technical Lubricants are made for the alternating hot and cold environments of A/C and refrigeration systems.

Formulated from select synthesised oils, refined with special additives to meet and exceed the needs of your compressor, Snow Leopard oils have the power and performance to lubricate and protect your refrigerant system and to optimise the performance of any AC&R system.



HFO-PAG and MRL85 are available in bottles and Concertina cartridges.



HFO-PAGs for R1234yf + R134a + Hybrid/ev

NEW formula Snow Leopard HFO-PAG46e and HFO-PAG100e are the right oils to use in R1234yf systems when, as most VMs do, a PAG based lubricant is specified.

These low moisture HFO-PAGs are now fully compatible with electric compressors found in Hybrids and plug-in EVs. They also give better lubricity and performance in all R134a systems than any ordinary R134a PAG oil. Their lower hygroscopicity and exceptional viscosity index enhances compressor life by ensuring efficient running even at high temperatures.

That means that Snow Leopard HFO-PAGs can be considered as a genuine 'one type fits all' solution. When you choose these top level lubricants, you escape the risk of using the wrong oil.

Key points:

- Optimum miscibility with R1234yf and R134a refrigerants
- Optimised additive technology <3% by weight
- Select double end-capped base fluid with >80% capping efficiency for superior lubricity
- Low hygroscopicity minimises moisture ingress
- High Viscosity Index for efficiency at high temperatures
- Good chemical stability



60ml Concertina

250ml

260ml butterfly Concertina

260ml bayonet Concertina

Snow Leopard HFO PAG46

AC55046X	AC55046A	AC55046W	AC55046Y
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Snow Leopard HFO PAG100

AC55100X	AC55100A	AC55100W	AC55100Y
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POE for R1234yf + R134a + Hybrid/EV

MRL85 is a polyolester (POE) based lubricant that has been chemically engineered with an additive package for good miscibility with R1234yf.

Some VMs specify a POE oil for their R134a hybrid and electric vehicles, and one or two have done so for R1234yf vehicles.

Being compatible with R1234yf, R134a, and with electric compressors, MRL85 is your preferred choice for mobile AC compressors when the vehicle manufacturer has specified a POE.



With Snow Leopard oils, just 3 part numbers will cover the market

AC55046A - 250ml | Snow Leopard HFO-PAG46e AC lubricant R1234yf/R134a/HYB/EV

AC55100A - 250ml | Snow Leopard HFO-PAG100e AC lubricant R1234yf/R134a/HYB/EV

AC54085A - 250ml | Snow Leopard MRL85 POE AC lubricant - R1234yf/R134a/HYB/EV

Other pack sizes and types are available, including our unique Concertina hermetic cartridges.

60ml Concertina 250ml

260ml butterfly Concertina

260ml bayonet Concertina

1 Litre

Snow Leopard MRL85

AC54085X	AC54085A	AC54085W	AC54085Y	AC54085B
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For R1234yf fittings and adapters

See page 26

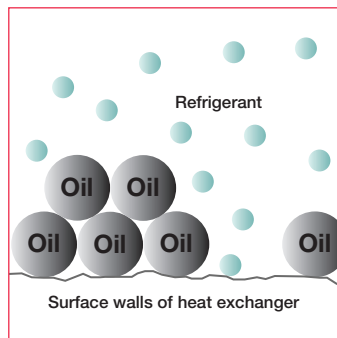
Snow Leopard Extra Cool™ PAG oils for R134a

These high performance PAG lubricants restore original cooling power to older vehicle A/Cs.

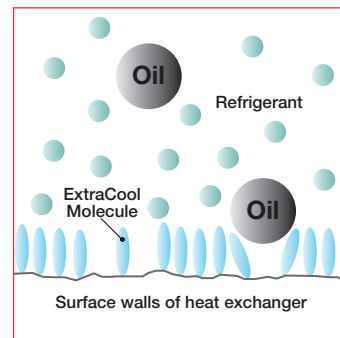
Their special additive package removes gummy deposits built up over years, and forms a slippery thin film boundary layer on metal surfaces. The resultant faster refrigerant flow, better oil return and more efficient heat exchange help restore the original cooling power to older A/Cs.

ExtraCool™ gives these driver benefits

- Up to 15% faster cool down on hot days
- Up to 15% cooler vent temperatures while you drive
- Faster refrigerant flow, more efficient heat exchange
- Better lubricity, lower friction, less wear, longer compressor and system life.



Oil layers attach to heat exchanger surface which impedes heat transfer



Activated polar ExtraCool molecules displace oil molecules, facilitating better heat transfer



ExtraCool R134a PAGs also contain Glo-Leak® UV for leak detection. They are great when topping up a system which has already been treated with Glo-Leak®, so as to maintain the oil's uv-fluorescence and also when refilling with oil after a system flush and/or a change of compressor. They should not be used with R1234yf.

ExtraCool™ is also available as a concentrate in our patented Concertina injector cartridges.

260ml butterfly Concertina 260ml bayonet Concertina 250ml bottle 1 litre bottle

Snow Leopard Extra Cool™ PAG46

AC53046W	AC53046Y	AC53046A	AC53046B
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Snow Leopard Extra Cool™ PAG100

AC53100W	AC53100Y	AC53100A	AC53100B
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Snow Leopard Extra Cool™ PAG150

AC53150W	AC53150Y	AC53150A	AC53150B
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ExtraCool™ AC

ExtraCool R134a PAGs also contain Glo-Leak® UV for leak detection. They are great when topping up a system which has already been treated with Glo-Leak®, so as to maintain the oil's uv-fluorescence and also when refilling with oil after a system flush and/or a change of compressor. They should not be used with R1234yf.

AC2222X

ExtraCool™ A/C for 2 standard or 1 large vehicle in 60ml injectable Concertina

AC2223V

Glo-Leak® ExtraCool™ A/C 2-in-1 single treatment in 30ml injectable Concertina

Inject ExtraCool™ A/C into the system using one of our Concertina injectors on page 21

AC2222C

ExtraCool™ A/C in vacuum can



Airco Lube Standard every day R134a PAGs

Airco Lube PAGs are standard mono end capped oils. They are fully synthetic and additised polyalkylene glycols which are well suited to automotive aftermarket use, in most normal climatic and environmental conditions experienced in Europe. They should not be used with R1234yf.

Available in ISO grades 46, 100 and 150. Packaged in Primaltec's unique moisture barrier treated polymer bottle under a nitrogen blanket and heat sealed lid.

250ml 1 Litre

Airco Lube PAG46

AC2173A	AC2173B
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Airco Lube PAG100

AC2174A	AC2174B
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Airco Lube PAG150

AC2175A	AC2175B
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Concertina hermetic injection system for oils and additives

Concertina bellows style cartridges are factory pre-filled with Snow Leopard lubricants, Glo-Leak® UV or Extra Cool™ A/C for injection into pressurised systems, such as air conditioners. An integral 1-way valve in the cartridge neck keeps it collapsed after the liquid has been forced out by back pressure or drawn by vacuum. Thanks to their hermetic nature, partly used Concertinas can be disconnected with no fear of moist air entering, making it very easy to use a HFO-PAG46 for a newer R1234yf vehicle and then ExtraCool™ R134a PAG100 oil on the next.

Benefits

- Pre-filled with the best lubricants
- Easy to switch from one oil type to another
- Integral valve stops air ingress
- Easier disposal, less waste than standard bottles
- Cleaner, easier to use.



There are two types of Concertina:

- 1 The soft skin vacuum activated Concertinas are typically fitted to air conditioning service machines in place of standard bottles via either a female coupling unique to equipment manufacturers, or an industry standard fitting. See photo top right. By simply fitting a conversion coupling to your machine, you can now upgrade to the Concertina system. See also pages 4, 19 & 20.
- 2 The injectable hard skin cartridges are for direct injection to the pressurised system. Place the cartridge inside a Concertina tool, connect its hose to the system's low pressure service port, and a measured amount of liquid is forced in by the turn of your hand without de-gassing or adding refrigerant. Concertina cartridges can be found in the relevant sections of the catalogue - Glo-Leak® UV, Snow Leopard HFO and ExtraCool PAGs, MRL85 lubricants, and Extra Cool A/C.

Concertina injectors

This robust and durable new metal injector tool is designed for frequent daily use. RotaJect accepts factory pre-filled 30ml and 60ml hermetic Concertina cartridges, and the graduated scale allows precise dosage of small amounts of Glo-Leak® and other additives in multiples of 2.5ml upwards. With the addition of AC2266-2 main hose and cap assembly (see below), you can also fill the chamber with liquid from a bottle to inject up to 90cc of oil, dye, or other additives to a pressurised system at the turn of your hand.



- AC2266X**
RotaJect injector tool
for pre-filled 30/60ml cartridges
- AC2266-2**
Main hose and cap assembly
for use with bottled liquids
- AC2266C**
Standard RotaJect 90ml/3oz
Oil & dye injector tool AC&R 1/4"
- AC2266D**
Standard RotaJect 90ml/3oz
Oil & dye injector tool 1/4" & R134a
- AC2143Y**
Concertina hose for
Glo-Leak® UV
- AC2143X**
Concertina hose for lubricant



You may be able to convert an existing AC service machine to the Concertina Hermetic bottles using these adapters:

- CON-023** (blue for oil) or
CON-023Y (yellow for Glo-Leak®)
Female connector for the bayonet type

- CON-010** (orange)
Female connector for butterfly system



- AC2230D**
Concertina 1 injector



Our entry level injector for prefilled Glo-Leak®, lubricant and other additives. Accepts the 30/60ml factory pre-filled Concertina cartridges, and its clear graduated scale allows for accurate dosing. Included are the 3-part injector tool, a charge hose and an R134a coupler. R1234yf coupler available separately.

- AC2231**
Replacement concertina 1 injector tool
(no hose or quick connector)

Other oil & dye injectors

See page 23

Extreme performance CO₂ refrigerant compressor lubricants



Great Chemistry, brought to you in partnership with **Shrieve**

Snow Leopard Extreme Performance PAGs for CO₂

CO₂ (R744) is a leading natural refrigerant under adoption as a future primary non-ozone depleting technology. A high level of development in the area of CO₂ based systems for commercial and industrial applications is in progress, most notably in the areas commercial refrigeration and heat pumps.

Snow Leopard EP PAGs are Extreme Performance double end-capped lubricants, which have been developed to retain their superior lubricity at the very high pressures and temperature found in CO₂ systems. EP PAGs are used in commercial refrigeration CO₂ systems, and are also required for some vehicle air conditioners.

EP PAGs do not suffer the decrease in viscosity that POEs experience under dilution, and so maintain excellent wear properties. EP PAGs are significantly less hygroscopic than uncapped PAGs, having high chemical, thermal and hydrolytic stability with excellent lubricity. These CO₂ PAGs are OEM approved by leading manufacturers.

AC56046

Snow Leopard EP-PAG46 for CO₂

AC56068

Snow Leopard EP-PAG68 for CO₂

AC56100

Snow Leopard EP-PAG100 for CO₂

Zerol Alkylbenzene lubricants for HCs and nia refrigerants.

ZEROL 350 (VG 68) Alkylbenzene oils are widely used in stationary industrial ammonia (R717) refrigeration systems with extensive OEM approval in this applications. Compared to traditional mineral oil based technology, ZEROL ABs offer higher thermal stability, higher oxidative stability, and lower volatility, extending lubricant lifetime and reducing downtime and maintenance costs.

ZEROL AB technology also provides superior anti-wear and load carrying capacity compared with mineral oils and so it is a cost-effective synthetic alternative to mineral oils in many other applications, including the latest generation of hydrocarbon refrigerants, as well as HFCs and HCFCs.

AC57032

Zerol 150 Alkylbenzene lubricant ISO VG 32

AC57046

Zerol 250 Alkylbenzene lubricant ISO VG 46

AC57068

Zerol 350 Alkylbenzene lubricant ISO VG 68

For more information about these lubricants, please ask for a copy of our HVACR brochure and the relevant Product Data Sheets.

Airco Flush cleans A/C systems internally

Flushing internal pipework and heat exchangers of AC&R systems removes any moisture, excess oil, gummy deposits and small metallic or carbon debris. It is important for three reasons:

1. Optimum A/C performance requires the correct amounts and proportions of both refrigerant and oil: flushing lets you start the recharge with an empty system.
2. Whenever the system is opened to replace a part, moisture and other impurities can enter. Flushing eliminates these contaminants.
3. When replacing a failed compressor, any remaining metal and carbon debris can result in the expensive new component also failing. Your component supplier may not honour the warranty if there is no evidence that a proper flushing has been carried out.

Whenever an AC&R system is opened for repair, we recommend internal flushing to optimise performance and prevent damage.

AC2141B
Airco Bio Flush
1 litre

AC2141C
Airco Bio Flush
5 litres



A single treatment internal coil cleaner and flush with the advantageous characteristics:

- Low odour, non-hazardous, non-toxic
- Non-flammable - flash point 70°C
- Bio-degradable, non-polluting
- Compatible with all refrigerants, refrigerant oils
- Oil soluble surfactants clean all internal surfaces
- Neutralises and removes organic and mineral solvents

AC2320
Airco Flush
cylinder kit



This kit enables individual components, hoses and pipelines to be cleansed with ease. Designed to work with Airco Bio Flush or any light flushing agent with pressurised oxygen free nitrogen (OFN) or very dry compressed air to chase it round the system. This kit includes:

- 1 litre flushing cylinder
- Flexible hose with Teflon washers
- Pistol operated flush gun



AC2315
Airco Flush clamp boxed set

A comprehensive new set of flushing clamps with four pairs of adapter washers for different pipe sizes, two spare cones, and supplied for convenience in a moulded case.



We also offer an alternative clamp, which is available as a single or in pairs:

AC2171C
Universal flush adapter
1 pair

AC2171D
Universal flush adapter
Single

AC2162
50ml FlowJect inline injector



Fill the chamber from a bottle or can, connect to your charge hose and to the low (suction) side of the system, and up to 60ml of oil, dye or other additives will flow in with the refrigerant.

Airco Lube Vacuum Pump Oils



250ml	1 Litre	5 Litre
Airco Lube VPO 46		
AC2180A	AC2180B	AC2180C
500ml	1 Litre	5 Litre
Airco Lube VPO 68		
AC2178H	AC2178B	AC2178C
Airco Lube VPO 100		
-	AC2179B	AC2179C

Designed to lubricate and protect all types of Vacuum pump, ensuring long and trouble free service. Vacuum Pump Oil offers anti-wear properties, oxidation resistance, rust protection combined with low foam tendencies. Available in ISO grades 46, 68 & 100 and suitable for all types of reciprocating and rotary vacuum pumps that require these specifications.

AC2267
RotaJect 20ml Oil & dye injector tool AC&R 1/4"



This robust and durable new metal injector tool is designed for frequent daily use. Its 20ml chamber makes it ideal for injecting Glo-Leak UV test fluids or small amounts of other additives from 2.5ml to 20ml.

Airco Refresh Total

A single treatment total release aerosol canister in a choice of three fragrances. Airco Refresh eliminates odours and sanitises the whole vehicle interior, including the hidden evaporator chamber and air channels. Just place the can in the passenger foot well, switch the fan to half speed, press the button and exit the vehicle with all doors and windows closed.



AC2239V Vanilla
AC2239M Spearmint
AC2239F Fresh Water

AC2139

Airco Breeze Multi



- Non-tacky, non-foaming
- Quick and easy to use
- Economical - concentrated product treats up to three vehicles per can
- Also good for domestic and commercial evaporators

A multi-treatment spray in a Sea Breeze fragrance supplied with a long pipe to penetrate deep into the evaporator chamber to deodorise and sanitise the whole vehicle interior.

It removes harmful bacteria and bad smells from vehicle A/Cs and cabins, leaving a pleasant long lasting 'Sea Breeze' aroma. Economical and easy to apply Airco Breeze Multi is the simple way to rid your customers' air conditioned cars of 'old socks' or 'dead mouse' odour. Its non-tacky, non-foaming formula treats up to three cars. Airco Breeze Multi, when applied professionally, cleans and disinfects the evaporator chamber and air channels, including evaporator surfaces, killing bacteria and mould in the process. It takes only minutes to perform a lasting cleansing. Each treatment is supplied with an extension tube.

A/C Diagnosis with temperature measurement

Use these thermometers to help diagnose an A/C's health just like you would measure your children's temperature when they are unwell.

Remember that the cooling efficiency of the radiator is also important to A/C system health.

AC2240S

Solar Temp digital thermometer



Ideal for checking vent temperatures with its long stainless steel probe and clear digital read-out. Min/max display with hold feature.

- Temperature: -50°C $+150^{\circ}\text{C}$ with hold feature
- Resolution: 0.1°C
- Accuracy $\pm 1^{\circ}\text{C}$ (-20 ~ $+80^{\circ}\text{C}$) $\pm 3^{\circ}\text{C}$ outside this range
- Power: Solar
- Probe length: 120mm
- Screen size: 25mm x 10mm

AC2241

Digi-Thermo digital thermometer



Also good for measuring vent temperature, with a 90cm (3ft) flexible lead allows readings to be taken from outside the vehicle. Min/Max and alarm functions.

- Temperature: -50°C $+300^{\circ}\text{C}$
- Resolution: 0.1°C
- Accuracy: $\pm 1^{\circ}\text{C}$
- Power: DC1.5V
AAA alkaline battery
- Probe length: 100mm
(+ handle)
- Screen size: 32mm x 14mm

AC2242

Digital hygro-thermometer



Measures the internal and outside ambient temperatures and humidity, with timer, Min/Max and alarm functions.

- Temperature: -50°C $+70^{\circ}\text{C}$
- Humidity: 20% - 99%
- Resolution: Temperature 0.1°C
- Accuracy: $\pm 1^{\circ}\text{C}$ Humidity $\pm 1\%$
- Power: 1.5V
AAA alkaline battery
- Screen size: 63mm x 43mm



Enjoy the comfort and safety of Purified air, winter and summer

The Airco Shield Purifier is an ozone generator with the power to destroy bacteria, viruses, fungi, protozoa as well as all the unpleasant odours that accumulate in confined spaces, including the chamber behind the dashboard where the A/C chills the air.

Ozone gas (O₃) is the second most powerful steriliser in the world. It is very efficient in eliminating bad odours, and has long been known for its anti-pathogenic effects. Ozone's killing action upon bacteria, viruses, fungi, and protozoa has been documented in numerous scientific studies over several decades.

Although very powerful, ozone is unstable and has a short life-cycle. The targeted contaminants are destroyed completely by oxidation, using up ozone's extra atom and the ozone reverts safely back to oxygen (O₂) - no odour, no germs.

The result: cleaner, fresher air inside the vehicle, improved concentration, comfort and safety.

How the Purifier works

Airco Shield Purifier creates ozone using short wave ultra violet inside a chamber within the machine. Using the natural power of ozone eliminates bad smells, smoke, mildew, bacteria and allergens. Ozone is one of the most powerful and effective eliminators of tobacco smoke and many other contaminants, including odours from pets, rodents, mould, mildew, fast food, cooking and other sources.

- Leaves a medically safer in-car environment
- Destroys germs - bacteria, viruses, mould spores, and protozoa
- Leaves a freshened clean air interior
- Eliminates nasty odours at source without masking them
 - Bad smells from the A/C system
 - Smoke, take-away food and drink residues
 - Pet odours, body odour, vomit
- No consumables, no chemicals or REACH compliance to worry about, more profit on each job

Eliminating these hazards provides a healthier, more comfortable living environment in the car, van, truck, tractor, caravan, boat and other small rooms and spaces.

Purified air inside 30 minutes



Tough on odours, tough on the causes of odours

AC29170

Airco Shield Purifier: a great added value service offering

For a modest investment and no consumable costs, you get a valuable new customer service proposition, with consumer flyers and mirror hangers to help you sell the service.

Why not add this sanitising treatment as an optional extra to every vehicle service or valet job, and as a stand-alone service.

A typical vehicle cleansing lasts just 30 minutes with just a few minutes of technician's time.

A variable electronic timer control with LCD and auto shut off means that the machine does the work for you, while you do other jobs, and is off when you re-enter the treatment area or vehicle.

FOR PROFESSIONAL USE ONLY



R1234yf specific fittings

AC2021HA



R1234yf extra long HP service coupler with R1234yf HP male - will only connect/disconnect when the valve wheel is closed

AC2021LA



R1234yf extra long LP service coupler with R1234yf LP male - will only connect/disconnect when the valve wheel is closed

AC2022H-A



R1234yf HP service coupler, 12mmF & 1/4" adapter will - only connect/disconnect when the valve wheel is closed

AC2022L-A



R1234yf LP service coupler, 12mmF & 1/4" adapter will - only connect/disconnect when the valve wheel is closed

AC2023H



R1234yf snap coupler - HP x 1/4" male, Push-on auto connect without a valve wheel

AC2023L



R1234yf snap coupler - LP x 1/4" male, Push-on auto connect without a valve wheel

AC2040



R1234yf cyl.adapter-1/2" ACME-LH fem x 1/4" SAE, Converts SAE (CGA166) YF cylinders to 1/4" RH hose fitting

AC14048



Parker R1234yf HP Coupler M12 Fem 90°

AC14049



Parker R1234yf LP Coupler M12 Fem 90°

AC2052



M12-1.5 LH male x 1/4" SAE male, Converts M12 fem service coupler to 1/4" hose fitting

AC2053



M12-1.5 Fem. X 1/4" Fem

AC2054



R1234yf HP male x 1/4" SAE fem, Can be used with AC2057 to make the same adapter as AC2058

AC2055



R1234yf LP male 1/4" SAE Fem, Can be used with AC2057 to make the same adapter as AC2058

AC2057



21.8-1/14 DIN-477 LH fem x 1/4" SAE LH male, Converts male DIN-477 YF cylinder fitting to 1/4" SAE male RH thread

AC2058



21.8-1/14 DIN-477 LH fem x R1234yf HP, Converts male DIN-477 cylinder fitting to YF Male High Pressure port

AC2059



21.8-1/14 DIN-477 LH fem x R1234yf LP converts male DIN-477 cylinder fitting to YF Male High Pressure port

Explanation of the above adapters for R1234yf

Standards for R1234yf service connectors and hoses are as set out in SAE Standards J639, J2888, and J2844. According to these standards, the high pressure service port has a 17mm dia. male connection and the low pressure port has a 14mm dia. male. The service couplers have female M12 x 1.5-6g connections to mate with the corresponding male on the hose. The other end of the hose has the same male M12.

However, most European machines use 1/4" SAE fitting on their hoses. That is why Primatec's R1234yf service couplers are supplied with both options - M12 female and 1/4" male, while the R1234yf snap couplers have 1/4" male only. The Parker R1234yf Couplers have the M12 female only. The cylinder connection is also at variance. The SAE standard specifies the cylinder fitting with a 1/2", 16 TPI ACME left hand

male thread, meaning that the refrigerant cylinder supply hose needs a female 1/2", 16 TPI ACME left hand female. Dupont uses these fittings. Again, however, there are variations in Europe and cylinders are commonly supplied with the 21.8-14 TPI male thread. The above range of fittings and adapters should cover all your needs.





























AC3296-20



R1234yf valve core Pack of 20

See page 19 for safe and efficient operation R1234yf also needs special oils and Glo-Leak® UV leak tracer fluids.

R134a specific fittings

<p>AC2020</p>  <p>R134a Extra long high side coupler 90°x 1/4" male for some BMW, Volvo and other models</p>	<p>AC2020A</p>  <p>R134a Extra long high side coupler 90°x male port for some BMW, Volvo and other models</p>	<p>AC2026H</p>  <p>R134a Valved service port high side 1/4"</p>	<p>AC2026L</p>  <p>R134a Valved service port low side 1/4"</p>	
<p>AC2165HB</p>  <p>R134a Adapter high side to low side straight - Renault Laguna and some other models</p>	<p>AC2165HH</p>  <p>R134a Snap coupler high to high extension</p>	<p>AC2165LL</p>  <p>R134a Snap coupler low to low extension</p>	<p>AC2027L-14</p>  <p>Parker R134a Low Side Coupler M14 Female 90°</p>	<p>AC2027H-14</p>  <p>Parker R134a High Side Coupler M14 Female 90°</p>
<p>AC2028</p>  <p>M14 male x 1/4" SAE male</p>	<p>AC2164H</p>  <p>R134a Snap coupler high side 90°</p>	<p>AC2164L</p>  <p>R134a Snap coupler low side 90°</p>	<p>AC2164HB</p>  <p>R134a Adapter high side to low side 90°</p>	
<p>AC2036</p>  <p>Cylinder adapter 21.8-14 x 1/4 FL</p>	<p>AC2037</p>  <p>Cylinder adapter 21.8-14 x R134a high</p>	<p>AC2041</p>  <p>1/2" ACME RH male x 1/4" SAE female</p>	<p>AC2042</p>  <p>1/2" ACME RH female x 1/4" SAE male</p>	
<p>AC2135L</p>  <p>Port converter 1/4" low side with cap</p>	<p>AC2135J</p>  <p>Port converter 1/4" high side with cap</p>	<p>AC2135H</p>  <p>Port converter 3/16" high side with cap</p>	<p>AC2135LR</p>  <p>Port converter 1/4" low side 90° with cap</p>	
<p>AC2135JR</p>  <p>Port converter 1/4" high side 90° with cap</p>	<p>AC2135HR</p>  <p>Port converter 3/16" high side 90° with cap</p>	<p>AC2276</p>  <p>R134a Primary port low side M10x1.25</p>	<p>AC2277</p>  <p>R134a Primary port high side M12x1.5</p>	
<p>AC2278</p>  <p>R134a Steel primary port low M13x1</p>	<p>AC2279</p>  <p>R134a Steel primary port high M15x1</p>	<p>AC2280</p>  <p>R134a Al. primary port low M13x1</p>	<p>AC2281</p>  <p>R134a Al. primary port high M15x1</p>	

Valves, valve cores and caps

AC3268-20



Valve core high flow M8
Peugot/Volvo

AC3269-20



Valve core JRA high flow

AC3270-30



Valve core standard

AC3271-20



Valve core GM high flow M8

AC3272-20



Valve core R134a high flow M8

AC3273-20



Valve core R134a high flow M10

AC3274-20



Valve core Renault M5

AC3275-20



Valve core Audi

AC3296-20



R1234yf valve core
Pack of 20

AC2050



Sight glass filtered diagnostic
tool, 1/4" SAE male fittings

AC2134L



Valve cap R134a low blue

AC2134H



Valve cap R134a high red

AC2282



Valve cap low M9x1 blue

AC2283



Valve cap high M10 red

AC2284



Valve cap 1/4" black

AC2285



Valve cap 3/16" black

AC2286



Valve cap high 16mm red

AC2287



Valve cap 13mm blue

AC2288



Valve cap low M9x1.0 blue

AC14756



Sight glass kit with AC2050
PLUS Hoses & Couplers
for R134a

SPKIT01



SPKIT01 Safety glove and goggle set 1
conforms to EN166, EN374 and EN388.
The kit includes the SP2025G Anti-Mist
Goggle Polycarbonate Liquid/Dust/Molten
Metal, together with the robust SP37675
chemical safe flock lined nitrile gloves.




































SP2025G

PPE Anti-mist safety goggles
Liquid/Dust/Molten Metal EN166.1.8.349

SP37675

PPE Chemical resistant safety gloves
Cat.3 EN388/EN374

O-rings and seals

AC3250	AC3250V	AC3251	AC3252	AC3253	AC3254
					
8x2 HNBR	8x2 Viton	No. 6 O-ring	No. 8 O-ring	No. 10 O-ring	No. 12 O-ring
AC3255	AC3256	AC3257	AC3258	AC3259	AC3260
					
Double lip O-ring 8mm	Double lip O-ring 13mm	Double lip O-ring 16mm	O-ring Nippon Denso G8	O-ring Nippon Denso G6	O-ring
AC3261	AC3262	AC3264	AC3265	AC3266	AC3267
					
O-ring	O-ring Harrison V5/A6	O-ring	O-ring Nippon Denso equal	O-ring	O-ring
AC3281	AC3282	AC3283	AC3284	AC3285	AC3286
					
O-ring Citro-Peugeot P0 brown	O-ring Citro-Peugeot P1 brown	O-ring Renault 13mm	O-ring Renault 16mm	O-ring Renault 11mm	O-ring sleeve gasket size 6
AC3287	AC3288	AC3289	AC3235	AC3236	AC32357
					
O-ring sleeve gasket size 8	O-ring sleeve gasket size 10	O-ring sleeve gasket size 12	6.4x1.95	6.7x1.6	6.6x2.0
AC3238	AC3239	AC3240	AC3241	AC3242	AC3243
					
6.8x1.90	8.4x1.7	9.5x2.5	11.0x2.5	14x2.5	15.54x2.62
AC3244	AC3245	AC3246	AC3247	AC3248	AC3249
					
16.5x2.0	16.5x2.0	21.6x2.4	24x2.6	24x2.4	17.8x2.4

AC Service kits

Primatec offers the following standard selection of vehicle AC service kits of generic parts. Other kits can be provided, including with your custom contents subject to minimum order quantities.



AC3251 O-Ring Ø6 7.60 x 1.78 20 Pieces	AC3252 O-Ring Ø8 10.62 x 1.78 20 Pieces	AC3253 O-Ring Ø10 14.0 x 1.78 20 Pieces	AC3254 O-Ring Ø12 17.17 x 1.78 15 Pieces	AC3255 O-Ring double 13mm 3 Pieces	AC3256 O-Ring double 8mm 3 Pieces	AC3257 O-Ring double 15mm 3 Pieces
AC2134L Valve cap R134a Low pressure 3 Pieces	AC2134H Valve cap R134a High Pressure 3 Pieces	AC2136L Port Converter R12 - R134a Low Pressure 1/4" 2 Pieces	AC2136H Port Converter R12 - R134a High pressure 1/4" 2 Pieces	AC2136H Port Converter R12 - R134a High Pressure 3/16" 2 Pieces	AC3258 O-Ring Nippon Denso Ø6 10.6 x 2.4 5 Pieces	AC3259 O-Ring Nippon Denso Ø6 8.07 x 1.83 5 Pieces
AC3260 O-Ring 8.62 x 1.83 5 Pieces	AC3261 O-Ring 4.8 x 1.5 5 Pieces	AC3262 O-Ring 20.22 x 3.53 5 Pieces	AC3263 O-Ring Nippon Denso 13.5 x 2.4 5 Pieces	AC3264 O-Ring 7.6 x 1.9 5 Pieces	AC3265 O-Ring 7.6 x 1.78 3 Pieces	AC3266 Valve core High Flow Ball Plug/Valve 5 Pieces
						AC3267 Valve core JPA High-Flow 5 Pieces
						AC3268 Valve core JPA High-Flow 5 Pieces
						AC3269 Valve core JPA High-Flow 5 Pieces
						AC3270 Valve core Standard Row 10 pieces
						AC2251 Valve core removal tool 1 Piece
						AC3280 O-ring picking tool 1 piece

AC2154A Service kit A

- x20 **AC3251** O-ring
- x20 **AC3252** O-ring
- x20 **AC3253** O-ring
- x15 **AC3254** O-ring
- x3 **AC3255** O-ring
- x3 **AC3256** O-ring
- x3 **AC3257** O-ring
- x5 **AC3258** O-ring
- x5 **AC3259** O-ring
- x5 **AC3260** O-ring
- x5 **AC3261** O-ring
- x5 **AC3262** O-ring
- x5 **AC3263** O-ring
- x5 **AC3264** O-ring
- x3 **AC3265** O-ring
- x3 **AC3266** O-ring
- x3 **AC3267** O-ring
- x5 **AC3268** Valve core
- x5 **AC3269** Valve core
- x10 **AC3270** Valve core
- x3 **AC2134H** Valve cap
- x3 **AC2134L** Valve cap
- x2 **AC2135L** Retro port
- x2 **AC2135J** Retro port
- x1 **AC2135H** Retro port
- x1 **AC2251** Valve tool
- x1 **AC3280** O-ring picker

AC3251 O-ring No.8 7.60 x 1.78 20 pieces	AC3252 O-ring No.8 10.52 x 1.78 20 pieces	AC3253 O-ring No.10 14.0 x 1.78 20 pieces	AC3254 O-ring No.12 17.17 x 1.78 20 pieces	AC3255 O-ring double flens 3 pieces	AC3256 O-ring Double 13mm 3 pieces	AC3257 O-ring double 15mm 3 pieces
AC3263 O-ring 5 pieces	AC3264 O-ring 5 pieces	AC3265 O-ring Nippon Denso 5 pieces	AC3266 O-ring 5 pieces	AC3267 O-ring 5 pieces	AC3261 O-ring 5 pieces	AC3260 O-ring 5 pieces
AC3259 O-ring Nippon Denso Ø6 5 pieces	AC3258 O-ring Nippon Denso Ø6 5 pieces	AC3282 O-ring Harrison 5 pieces	AC3288 O-ring sleeve Size 10 2 pieces	AC3288 O-ring sleeve Size 8 2 pieces	AC3286 O-ring sleeve Size 6 2 pieces	AC3281 O-ring P.O. Cin-Plugnet 3 pieces
AC3282 O-ring sleeve size 12 2 pieces	AC3288 O-ring sleeve size 10 2 pieces	AC3286 O-ring sleeve size 8 2 pieces	AC3281 O-ring P.O. Cin-Plugnet 3 pieces	AC3282 O-ring P1 Cin-Plugnet 3 pieces	AC3283 O-ring 13mm Renault 3 pieces	AC3285 O-ring 11mm Renault 3 pieces
						AC3284 O-ring 16mm Renault 3 pieces
						AC3280 O-ring picking tool

AC2154D Service kit D

- x20 **AC3251** O-ring
- x20 **AC3252** O-ring
- x20 **AC3253** O-ring
- x15 **AC3254** O-ring
- x3 **AC3255** O-ring
- x3 **AC3256** O-ring
- x3 **AC3257** O-ring
- x5 **AC3258** O-ring
- x5 **AC3259** O-ring
- x5 **AC3260** O-ring
- x5 **AC3261** O-ring
- x5 **AC3262** O-ring
- x5 **AC3263** O-ring
- x5 **AC3264** O-ring
- x3 **AC3265** O-ring
- x3 **AC3266** O-ring
- x3 **AC3267** O-ring
- x3 **AC3281** O-ring double
- x3 **AC3282** O-ring double
- x3 **AC3283** O-ring double
- x3 **AC3284** O-ring double
- x3 **AC3285** O-ring double
- x2 **AC3286** O-ring sleeve
- x2 **AC3287** O-ring sleeve
- x2 **AC3288** O-ring sleeve
- x2 **AC3289** O-ring sleeve
- x1 **AC3280** O-ring picker



AC2154F

Valve core and cap service kit

- x5 **AC3268** Valve core
- x5 **AC3269** Valve core
- x5 **AC3271** Valve core
- x5 **AC3272** Valve core
- x5 **AC3273** Valve core
- x5 **AC3274** Valve core
- x5 **AC3275** Valve core
- x5 **AC3296** Valve core
- x30 **AC3270** Valve core
- x1 **AC2251** Valve tool
- x5 **AC2134L** Valve cap
- x5 **AC2134H** Valve cap
- x5 **AC2282** Valve cap
- x5 **AC2283** Valve cap
- x5 **AC2284** Valve cap
- x5 **AC2285** Valve cap
- x5 **AC2286** Valve cap
- x5 **AC2287** Valve cap
- x5 **AC2288** Valve cap
- x5 **AC2289** Valve cap



AC3231

Orifice tube service kit G1

without extractor tool

AC3232

Orifice tube service kit G2

with extractor tool as illustrated

- AC3201** White 0.072
- AC3205** Yellow 0.062
- AC3210** Black T-top 0.072
- AC3213** Orange 0.057
- AC3214** Blue 0.067
- AC3215** Orange T-top 0.057
- AC3216** Red 0.062
- AC3217** Green 0.052
- AC3219** Purple T-top 0.062
- AC3221** Brown 0.062

AC3233 - O-RING

AC3238 6.8 x 1.78 Qty: 10	AC3241 10.6 x 2.85 Qty: 10	AC3242 13.8 x 2.4 Qty: 10	AC3247 23.5 x 2.5 Qty: 10	AC3249 17.12 x 2.6 Qty: 10	AC3250 8 x 2 Qty: 10
AC3251 7.66 x 1.78 Qty: 10	AC3252 10.82 x 1.78 Qty: 10	AC3253 14 x 1.78 Qty: 10	AC3254 17.17 x 1.78 Qty: 10	AC3258 10 x 2.4 Qty: 10	AC3260 9.2 x 1.8 Qty: 10
AC3261 4.5 x 1.5 Qty: 10	AC3262 20.22 x 3.53 Qty: 10	AC3263 13.4 x 2.4 Qty: 10	AC3264 7.8 x 1.9 Qty: 10	AC3265 4.47 x 1.78 Qty: 10	AC3267 6.07 x 1.78 Qty: 10

AC3233

O-ring kit



Air conditioning solutions for new generation refrigerants

Use the chart below to select the right oils for the vehicle you are working on.

Refrigerant Type	Compressor Type	Oil Type	Cross ref examples	Primaltec Code		
				AircoLube	Snow Leopard	
R134a	Belt driven	PAG 46	ND-8, SP10, ZXL100, WSH-M1C231-B, YN-12, JLM12260, NO52-154-VXOO	AC2173	AC53046	AC55046
		PAG 100	ND-9, SP20, ZXL200, RS20	AC2174	AC53100	AC55100
		PAG 150	SP15, UCON-488	AC2175	AC53150	-
	Electric	HFO-PAG46e		-	-	AC55046
		HFO-PAG100e		-	-	AC55100
		POE	ND-11, SE-10Y, MA68EV	AC2177	-	AC54085
R1234yf	Belt driven	HFO-PAG46e	ND-12, SPA2, PS-D1, WSH-M1C321-B, VC200yf, FD46XG	-	-	AC55046
		HFO-PAG100e		-	-	AC55100
	Electric	HFO-PAG46e	FD46XG is a hermetic PAG	-	-	AC55046
		HFO-PAG100e		-	-	AC55100
		HFO-POE	ND-11	-	-	AC54085

Snow Leopard R1234yf oils are also compatible with R134a. HFO-PAG46e & HFO-PAG100 are double end-capped polyalkylene glycol oils with optimal additisation that meet OEM specifications. HFO-PAG46e may be used in all mobile AC systems, whether belt driven or electric, for which a PAG is specified by the VM. MRL85 is a POE based lubricant that meets OEM specifications for use in all MAC systems for which a POE is specified by the equipment manufacturer.

CO ₂ R744	EP-PAG46	Extreme PAG RL46 CO ₂ system lubricant	AC56046
	EP-PAG68	Extreme PAG RL68 CO ₂ system lubricant	AC56068
	EP-PAG100	Extreme PAG RL100 CO ₂ system lubricant	AC56100
Hydrocarbons (HCs) R290 R600 R600a & Ammonia R717	Alkylbenzene	Zerol 150 Alkylbenzene lubricant ISO VG 32	AC57032
		Zerol 250 Alkylbenzene lubricant ISO VG 46	AC57046
		Zerol 150 Alkylbenzene lubricant ISO VG 68	AC57068

Leak control matters Detect, locate, cure and prevent fluid and refrigerant leaks

Selection chart for mobile air conditioners

Refrigerant Type	Mobile Air Conditioner Compressor Type	Oil Type	Recommended Glo-Leak® Types		Leaktronic™ Types	Nitro Trace	USX-2
R134a (HFC)	Belt driven	PAG 46	GL1284	GL1234	Leaktronic™-1 AC2400 or Leaktronic™-2 AC2440A	Compatible	Compatible
		PAG 100	GL1284	GL1234			
		PAG 150	GL1284	GL1234			
	Electric	HFO-PAG46e	-	GL1234			
		HFO-PAG100e	-	GL1234			
		POE	-	GL1234			
R1234yf (HFO)	Belt driven	HFO-PAG46e	-	GL1234			
		HFO-PAG100e	-	GL1234			
	Electric	HFO-PAG46e	-	GL1234			
		HFO-PAG100e	-	GL1234			
		HFO-POE	-	GL1234			

Glo-Leak® 1234 is blended to suit the particular stability requirements of HFO-1234yf and the di-electric criteria for electric compressors. It is used at low dosage rates, minimising the amount of additive required.

For Nitro Trace™ N2H tracer gas, use AC2640A Leaktronic™ 3 or AC2686 Leaktronic™ 4



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