Koura Klea®

R-134a to Klea® 456A (R-456A) Service Equipment Conversion Guide

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Important Information

Please read before servicing a system using Klea® 456A

Klea® 456A is a new alternative refrigerant which is compatible with existing R-134a Air-Conditioning systems, providing similar A/C cooling performance.

Legal Obligations. This document does not outline your legal obligations relating to the servicing of the A/C system, including in particular any obligations arising from EU Regulation (EU) No 517/2014 and EU Directive 2006/40/EC and their UK implementing regulations, on, among other things, certification, training (and that of your employees), record keeping, letters of assurance, and recovery, reclaiming, and recycling of fluorinated gases.

You should at all times comply with all applicable local laws and regulations and nothing in these guidelines should be construed as creating an obligation where such an obligation would conflict with any such law or regulation.
The manufacturer does not accept any liability in relation to your or your employees' non-compliance with all applicable laws and regulations.

Only for trained professionals. These guidelines assume you are a professional trained in relevant safety procedures, the proper maintenance of A/C systems and F-Gas certified in the proper handling and disposal of refrigerant. Please do not use this product unless you have such training and experience.

Use professional judgement. These guidelines should always be applied in accordance with your professional judgement at the time of servicing the vehicle, with each individual model of vehicle in mind. The manufacturer is not liable for any failure or damage related to use of Klea® 456A where such failure or damage is due to non-compliance with these guidelines or best practices.

Warranties. It is your responsibility to make customers aware that Klea® 456A is an aftermarket product and is therefore not necessarily approved by the original equipment manufacturer (OEM). The customer should be asked to check the terms of any warranty or guaranty given by the OEM if they have a concern that using Klea® 456A will invalidate the warranty/guarantee.

How to convert existing R-134a service equipment to use Klea® 456A

It is recommended that Klea® 456A systems should be serviced using new dedicated Klea® 456A service equipment.

However, this document explains how it may be possible to convert redundant R-134a service equipment no longer required, to enable it to use this new Klea® 456A refrigerant.

Equipment Required

- Current R-134a service charging equipment
- Redundant R-134a service charging equipment (without refrigerant identifier)
- Klea® 456A refrigerant cylinder

R-134a to Klea® 456A Service Equipment Conversion Guide

The following gives a step by step guide on the process to convert redundant R-134a service equipment no longer required, to enable it to use this new Klea® 456A refrigerant.

Basically, it is a matter of recovering all of the R-134a from the redundant R-134a service equipment with the current R-134a service equipment, then charging the empty service equipment with the Klea® 456A refrigerant, however there are a few care points that need to be adhered to, as shown in the following step by step guide.

1. Connect the current R-134a service equipment to the redundant R-134a service equipment which is to be converted to Klea® 456A
2. Following the service equipment instructions, start the refrigerant recovery from the redundant R-134a service equipment to the current R-134a service equipment

3. Ensure the refrigerant is fully recovered by conducting a deep recovery
   - Sometimes refrigerant can get partially trapped within the unit pipework and takes a little while to be released
   - Monitor the recovering service equipment pressure gauges over a period of some 20 minutes for any pressure increase and repeat the recovery process to ensure all refrigerant is fully recovered
4. Following the service equipment instructions, start the vacuum process and vacuum for 20 minutes
   - This helps to ensure the service equipment pipework and the internal cylinder is absolutely completely empty
5. Monitor and check the weight status of the redundant service equipment internal cylinder to verify it is empty
   - You may need to remove the service equipment cover and connect directly onto the internal cylinder to ensure full recovery
6. Where at all possible, the following items should also be serviced;
   - change the service equipment filters – dryer and mechanical
   - change the refrigerant oil to Shrieve Zerol HD46
7. Connect the redundant R-134a service equipment charging lines to Klea® 456A refrigerant cylinder
8. Fill the redundant R-134a service equipment internal cylinder with Klea® 456A
9. The final steps required are to clearly identify the change of refrigerant on the service equipment to Klea® 456A
   - A new Klea® 456A label in a prominent position, ideally over the original label
10. The service equipment is now converted to operate using Klea® 456A refrigerant

FAQs

- **What if there is still a small amount of R-134a remaining in the service equipment after a deep recover and vacuum**
  - As Klea® 456A contains ~45% of R-134a, small amounts can be accommodated
- **Does the system need to be flushed with Klea® 456A?**
  - No, if the conversion guidelines are followed this is not necessary.
- **How stable is the Klea® 456A composition?**
  - The composition remains stable and within specification as long as the service equipment internal cylinder maintains a minimum of 40% fill
- **What if the service equipment internal cylinder is below 40% fill capacity?**
  - If it falls below the 40% level, there is a potential for the % composition to drift outside of optimum specification,.
- **Is the process any different when 'topping up' with Klea® 456A, rather than with R-134a?**
  - "Topping up" with any refrigerant is not recommended, as this does not allow measurement of the correct quantity of refrigerant charge in the vehicle. You must follow applicable laws and regulations in servicing A/C systems.
  - The vehicle system should be recovered and recharged with the correct quantity of Klea® 456A in line with these guidelines
- **What should be done with the oil coming out with the (recovered) R-134a charge?**
  - Any recovered or removed R-134a oil should be discarded and replaced with Zerol HD46
- **Can I use the same leak detection devices?**
  - Yes, because Klea® 456A contains a percentage of R-134a, existing leak detection equipment is suitable for use with Klea® 456A too
- **Is Klea® 456A compatible with the refrigerant dye?**
  - Yes
- **Is there a different rate of oil recovery?**
  - The oil recovery rate will be similar to R-134a
- **What should I do if I suspect the Klea® 456A is out of specification / mixed with R-134a?**
  - In this scenario, the cylinder should be returned to your supplier for re-composition