

SERVICE POLICY LETTER

Reference number:	SPL-12-0568V3	Issued: 26 October 2016
Subject:	Introduction of New Air Conditioning System Refrigerant and Equipment	
Applicable to:	All Dealers	
Distribute to:	After Sales Manager Executive Manager Service Manager	Warranty Staff Technician(s) Parts Staff

Reason for Version 3 of this Service Policy Letter (SPL-12-0568).

This document was last issued on 18 October 2016. We have issued it again to remind you about the special price offer for the Service Equipment. The change in the document has a black line adjacent to it in the margin. Please destroy all copies of SPL-12-0568 and replace them with this Service Policy Letter SPL-12-0568V3.

Dear Colleagues,

As you have been told already in Service Policy Letter No. SPL-30-0570 "17MY V8 Vantage S, V12 Vantage S, Vanquish, Rapide and Rapide S Launch Information", Aston Martin Lagonda Ltd. will fill with HFO-R1234yf refrigerant the air conditioning systems of all 17MY vehicles to be sold in a state of the European Union (EU) or in one that issues EU Certificates of Conformity.

This must be done to make sure that Aston Martin Lagonda vehicles comply with EU regulations, in those countries in which this legislation applies.

Dealers that service an air conditioning system that is filled with HFO-R1234yf will need applicable equipment. Their technicians will then be able to complete maintenance tasks and to obey the standards set by legislation.

To make sure that Dealers are able to meet the legal requirements of this legislation, Aston Martin Lagonda Ltd. have negotiated a special price so that all Dealers who are interested have the opportunity to purchase this equipment through Aston Martin Lagonda Ltd. Parts Operations. With this offer, which is available for a limited period only, we hope to minimise the financial impact of these legislative changes on our Dealers.

IMPORTANT

The special price offer for the Robinair ac1234-8 Air Conditioning Service Unit will expire on Friday 28 October 2016. Please make sure that you make your order request by email to Mark Thomson (mark.thomson@astonmartin.com) by this date.

Refer to "Robinair AC1234-8 special price offer" at the end of this document.

The background to the changes is as follows:

HFO-R1234yf Refrigerant for Vehicle Air Conditioning Systems

EU Directive 2006/40/EC bans the use, in vehicles first registered after 1 January 2017, of refrigerants that have a Global Warming Potential (GWP) of more than 150. This European Parliament Directive is also known as the MAC Directive (MAC – Mobile Air Conditioning systems). The aim of the Directive is to enforce the use of refrigerants that have a GWP lower than 150 (carbon dioxide has a GWP of 1 – R134a, the refrigerant currently used in vehicle air conditioning systems, has a GWP of 1300).

Note: Aston Martin Lagonda Ltd. will secure a 12-month registration extension (derogation) for unregistered EU vehicles affected by this legislation. This will be subject to a separate notification.

To meet this Directive, Aston Martin Lagonda will fill the air conditioning systems of affected 17 MY vehicles with HFO-R1234yf. Honeywell manufacture HFO-R1234yf (HFO - Hydro-Floro-Olefin, also known as tetrafluoropropene), which has a GWP of 4.

Affected vehicles are those which may be first registered on or after 1 January 2017 in a state of the European Union (EU) or in one that issues EU Certificates of Conformity.

Applicable countries are therefore:

Any state of the European Union (EU), and those that follow:	
Azerbaijan	The Philippines
Hong Kong	Russia
India	Singapore
Indonesia	South Korea
Israel	Switzerland
Lebanon	Thailand
Malaysia	Turkey
Morocco	Ukraine
Norway	

HFO-R1234yf, compared with R134a, has the characteristics that follow:

- The cooling characteristics of HFO-R1234yf are almost the same as those of R134a, but an Integrated Heat Exchanger (IHx) will be installed. The IHx will make sure that an HFO-R1234yf system's performance will be the same as that of other vehicles with R134a-filled systems.
- Most storage and maintenance procedures are almost the same for HFO-R1234yf as for R134a.
- HFO-R1234yf is more expensive than R134a.
- HFO-R1234yf is not compatible with R134a. R134a must not be added to HFO-R1234yf systems. If the two refrigerants are accidentally mixed, you must remove the contaminated refrigerant and fill the system again. To prevent the contamination of servicing equipment by the incorrect refrigerant, the equipment must be able to detect automatically which type of refrigerant is in a vehicle's air conditioning system. It must also stop the refrigerant recovery procedure before the equipment is contaminated.
- Compressors and compressor oils suitable for R134a are not suitable for HFO-R1234yf. But compressors and compressor oils suitable for HFO-R1234yf are suitable for use in R134a systems.
- HFO-R1234yf is slightly more flammable than R134a, but no more toxic and no more of an irritant to eyes, nose and throat. Some additional education and training (to SAE J2845) will be needed for Dealers' staff. The risks to technicians' health and safety from frostbite and asphyxiation are no greater than those currently found.
- Current leak detection equipment is suitable for the two refrigerants, but it must meet Society of Automotive Engineers (SAE) standards J2843 and J2913. Equipment to recover, recycle and recharge refrigerant must meet standards that include SAE J2099, J2843, J2888, and J2927.

Service equipment considerations for HFO-R1234yf

The change to HFO-R1234yf refrigerant is mandated by EU legislation. This new refrigerant necessitates the use of compatible servicing equipment. If, wittingly or unwittingly, you service the air conditioning system of a vehicle that has been incorrectly filled with R134a refrigerant, or if you contaminate the air conditioning system of a Customer's vehicle with R134a refrigerant, then you risk prosecution for contravening EU legislation.

In addition, servicing equipment must be able to inject more than one type of compressor oil into the air conditioning system of a vehicle. Currently, 17MY Aston Martin and Lagonda vehicles use Denso ND12 PAG oil (V8-engined vehicles) or Sanden SP-A2 PAG oil (V12-engined vehicles) in those vehicles that have air conditioning systems filled with HFO-R1234yf refrigerant. A servicing unit used on any applicable Aston Martin or Lagonda vehicle must be able to inject the two types of compressor oil.

The final factor is cost: HFO-R1234yf refrigerant is up to ten times more expensive than R134a. Thus, any servicing equipment must be able to recover as much refrigerant as possible, with the minimum of wastage.

Robinair AC1234-8 fully automatic air conditioning service unit for HFO-R1234yf

As you have been told already in Service Policy Letter No. SPL-30-0570 "17MY V8 Vantage S, V12 Vantage S, Vanquish, Rapide and Rapide S Launch Information", we are delighted to announce the availability of a new piece of equipment for Aston Martin Lagonda Dealers.

It is essential that all Aston Martin Lagonda Dealerships have equipment adequate to meet new environmental standards.

Aston Martin Lagonda Ltd. recommend the Robinair AC1234-8 fully automatic air conditioning service unit for HFO-R1234yf. The Robinair unit will be available through Aston Martin Lagonda Ltd. Parts Operations at a special offer price of £4,000.00 (€4,800.00). The offer is available for a limited period only.

The Robinair AC1234-8 fully automatic air conditioning service unit for HFO-R1234yf refrigerant represents a valuable investment in service and in productivity.

This unit will make sure that franchised Dealerships are sufficiently well equipped to resolve Customer worries with confidence, speed and efficiency, and so improve levels of Customer satisfaction.

The Robinair AC1234-8 unit can automatically detect what type of refrigerant is in a vehicle's air conditioning system: if the unit detects an incorrect refrigerant, it will stop operation. This protects the unit and your Dealership from the risk of contamination – of the unit itself and of a Customer's vehicle.

This unit is able to inject two different types of compressor oil, and will prompt the Technician to select the correct oil for the vehicle being serviced. This will save you the cost of purchase of more than one HFO-R1234yf-compatible servicing unit.

The unit is very efficient in operation, and will minimise wastage of very expensive refrigerant.

The unit is also fully automatic in operation. This releases your Technician for other work while a vehicle's air conditioning system is serviced.

The Robinair AC1234-8 unit is one of the first to meet the more stringent standards applicable to the service of HFO-R1234yf-filled vehicle air conditioning systems. It has the features that follow:

- Integrated Refrigerant Identifier which meets standard SAE J2927.
- Fully automatic – no manually operated valves.
- Powerful compressor with a capacity of 500 g/min.
- Extra-large dryer filler cartridge of 700 cc.
- 21 languages.
- Visual and acoustic signals if there are error messages when completed.
- Professional refrigerant management with evaluation of recovery and charge volume.
- Integrated printer for detailed reports.
- Use USB or Bluetooth to show results on the PC (in preparation).
- Deep Recovery Function – total recovery saves costs and protects the environment.
- The intelligent electronic control of refrigerant weight, pressure and temperature guarantees a minimum of refrigerant waste at the service process.
- The unit meets standards SAE J2099, J2788, J2843 and J2888.
- Maximum accuracy (± 15 g) during recovery and flushing.
- 99 % of the refrigerant is evacuated from vehicle and hoses.
- Double-stage vacuum pump with delivery volume of 170 l/min.
- Integrated flushing program combined with optional flushing kit.
- Automatic UV dye injection.



Robinair AC1234-8 Fully Automatic Air Conditioning Service Unit for HFO-R1234yf refrigerant

Robinair AC1234-8 special price offer

Aston Martin Lagonda Ltd. have negotiated a special price so that all Dealers who are interested have the opportunity to purchase this equipment.

These units are available through Aston Martin Lagonda Ltd. Parts Operations as follows:

Part Number	Description	Price
43-28477	Robinair AC1234-8 AC Service Unit	£4,000.00 (€4,800.00)

To place an order, and so that we can make delivery arrangements, please send an email to Mark Thomson, Senior Manager, Parts Sales at mark.thomson@astonmartin.com.

The offer is available for a limited period only. Please email Mark Thomson before the close of business on the 28 October to place your order.

If you have any questions about this Policy Letter, please speak to Client Services - Technical on Tel: +44 (0) 1926 644720.

Thank you for your continued support.

Yours faithfully

Phil Eaglesfield
Director of Client Services