



Countries: CANADA, UNITED STATES Document ID: IK2300021
 Availability: ISIS, Bus ISIS, NotSIR Revision: 1
 Major System: ELECTRIC VEHICLE Created: 10/5/2023
 Current Language: English Last Modified: 11/3/2023
 Other Languages: NONE Author: Josh Bowman
 Viewed: 196

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Coding Information

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Title: Servicing Air Conditioning Systems on Electric Vehicle

Applies To: Electric Vehicles

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

11/03/2023 - Initial Article Release

DESCRIPTION

This document will guide the user through information required to know before servicing air conditioning systems on an electric vehicle.

SYMPTOMS

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
N/A	N/A

Customer Observations or Concerns:

During any service event of the A/C system

SPECIAL TOOLS / SOFTWARE

Tool Description	Tool Number	Comments	Instructions	Notes
Yellow Jacket Refrigerant Management System	37830	or equivalent: SAE J2788 and J2788H Compliant	See machines manual	SAE J2788 compliant machines do not have oil injection to avoid cross-contamination of oils
R-134a POE Oil Injector	37957 - YellowJacket	or equivalent		Use ONLY on Electric Vehicles
R-134a PAG Oil Injector	37956 - YellowJacket	or equivalent		Use ONLY on Internal Combustion Engines (ICE) Vehicles

SERVICE PARTS INFORMATION

Kit Description	Part Number	Quantity Required	Notes
N/A	N/A	N/A	N/A

Recommended Guidelines when servicing High-Voltage A/C Systems

**WARNING:**

To prevent personal injury or death, **DO NOT** attempt to service the High Voltage A/C system without proper training.

**WARNING:**

HV compressors require unique A/C refrigerant compressor oil that is non-conductive. The specific type of oil is identified by the vehicle maker. **All non-conductive POE oils are not the same.**

**WARNING:**


As little as **1% standard PAG oil** can reduce the dielectric properties of the approved POE oils and damage the system.

CAUTION:

Many of the A/C system parts will require replacement if the system is contaminated.

1. Use only SAE J2788 compliant machines and follow machine flushing procedures as per the A/C machine manufacturer **BEFORE** servicing an electric vehicle
2. Where possible use a dedicated A/C machine for all EV A/C systems that use POE oil to prevent cross contamination
3. It is best practice to empty the oil recovery bottle to understand how much oil is lost within the system during the recovery process for replacement purposes
4. **ALWAYS** use a dedicated oil injector for each type of oil to avoid contamination. Refer to the accessories listed above as an example for PAG and POE oil injectors
5. Refer to the proper service manual for recovery, evacuation and charge procedures

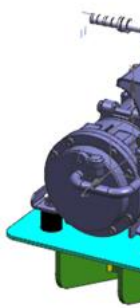
SYSTEM SPECIFICATIONS**TRANS-AIR A/C SPECIFICATIONS | FEATURE 048HEP | PRODUCTION 07/25/2023 TO PRESENT**

VEHICLE MODEL	REFRIGERANT CHARGE R134a (2644032R1)		OIL FILL (additional) POE/HAF68		Compressor PN charged w/
	FRONT (LB)	REAR (LB)	FRONT (OZ)	REAR (OZ)	
Short Wheel Base (SWB), Standard A/C System	4.1	3.1	1.6	2.8	
Short Wheel Base (SWB), High Performance A/C System	4.5	3	2.31	2.75	
Long Wheel Base (LWB), Standard A/C System	4	4.3	1.6	3.2	
Long Wheel Base (LWB), High Performance A/C System	4.4	4.3	2.3	3.2	


PRO-AIR MODINE A/C SPECIFICATIONS | FEATURE 048CXZ | PRODUCTION 11/14/23 - 07/25/23

VEHICLE MODEL	REFRIGERANT CHARGE R134a (2644032R1)	OIL FILL (additional) POE/HAF68	Compressor PN charged w/

	FRONT (LB)	REAR (LB)	FRONT (OZ)	REAR (OZ)
Short Wheel Base (SWB), Standard A/C System	6	6.2	1.6	2.8
Short Wheel Base (SWB), High Performance A/C System	6.5	6.2	2.31	2.75
Long Wheel Base (LWB), Standard A/C System	6	6.5	1.6	3.2
Long Wheel Base (LWB), High Performance A/C System	6.5	6.5	2.3	3.2



PRO-AIR EMERSON A/C SPECIFICATIONS | FEATURE 048CXZ | PRODUCTION 6/07/2021 - 10/18/2022

VEHICLE MODEL	REFRIGERANT CHARGE R134a (2644032R1)		OIL FILL POE/HAF68		Compressor PN charged v
	FRONT (LB)	REAR (LB)	FRONT (OZ)	REAR (OZ)	
Short Wheel Base (SWB), Standard A/C System	6	6.1	No Additional	No Additional	
Short Wheel Base (SWB), High Performance A/C System	6.5	6.1	No Additional	No Additional	
Long Wheel Base (LWB), Standard A/C System	6	7.1	No Additional	No Additional	
Long Wheel Base (LWB), High Performance A/C System	6.5	7.1	No Additional	No Additional	

WARRANTY INFORMATION

Warranty Claim Coding:

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Times:

Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES

[Master Service Information Site](#)

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