



87-24-02 - ID.4 - Cleaning the Refrigerant Circuit R1234YF

Release date: 4/2/2024

Condition

Applicable Vehicles					
Model	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
ID.4	2021-2024	All	All	All	All

Revision Table			
Instance Number	Published Date	Version Number	Reason For Update
2073537/1	4/2/24	87-24-02	Original publication.

Debris can be dispersed throughout the refrigerant circuit after A/C component damage. In order to maintain A/C operating efficiency, it is important to flush the refrigerant circuit after A/C component repairs.

NOTICE

This bulletin must be read in its entirety before beginning repair.

Technical Background

In cases where an air conditioning system component (such as a compressor or other system component) has failed and debris from the compressor or component is circulated throughout the refrigerant circuit, the refrigerant circuit must be cleaned of any and all debris or damage to the replacement components will result.

NOTICE

If the HV system is disabled the cooling performance test cannot be performed and separate diagnosis is required. The HV AC compressor must have a GFF diagnosis log with completed test plans of all compressor related faults before replacing the HV AC compressor.

NOTICE

Any replacement of A/C compressors-regardless of the reason for failure must complete the A/C flush procedure to ensure the proper amount of oil is re-introduced into the refrigerant system.



Production Solution

No production change required.

Service

Tools



Figure 1. The VAS581005 Air Conditioning Service System with Flushing Device.

Use an approved R1234yf servicing machine and the R1234yf Flush Kit RTI360831840 (Figure 1).

Used for effective refrigerant handling and air conditioning circuit flushing after air conditioning component failure.



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 NOTICE

The VAS 6338/1 Adapter Set for Refrigerant Circuits along with an additional adapter VAS 6338/38 for the expansion valve bypass this kit, contains the adapters necessary to complete a thorough flush operation of a contaminated circuit. Elsa contains the technical information for each model regarding the necessary adapter applications and connections of the servicing station for the flush operation. See *Heating, Ventilation & Air Conditioning >> Refrigerant R1234yf-Servicing >> 00 General Technical Data>> Refrigerant Circuit removing contaminates>> Refrigerant Circuit, Flushing with Refrigerant R1234yf in Elsa*

Procedure

To access the expansion valve for removal you must remove the Heating Ventilation Unit.

Refer to Elsa Pro –Elsa2Go Heating, Ventilation & Air Conditioning 87 Air Conditioning Front Heater and A/C Unit, R134a/R1234yf Heater and A/C Unit Air Intake Housing, Removing and Installing.

 DANGER

Deactivation of the HV battery is required. Perform the HV battery test plan in Guided Functions.

1. If an air conditioning component has been diagnosed as the root cause of the failure, and this particular component has been verified to have released debris through the circuit, continue with the flush procedure.
2. Switch the power to the servicing station ON and begin by recovering the refrigerant from the system through the normal service fittings.

 NOTICE

For all compressor replacements it is mandatory to flush the system of all oil in the system. The replacement compressor comes with a full charge of oil for a complete A/C system.



During the entire process avoid interrupting the power to the station. The station's internal memory will keep a log of all operations and can conveniently be recalled and printed. If the power is interrupted, the station will lose the memory of the refrigerant volume recovered.



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3. Disconnect the service hoses from the AC service ports of the refrigerant circuit.

The VAS 6338/1 adapters will be used to bypass the following:

- Compressor.
- Expansion Valve.
- The VAS 6338/80 adaptor will be used to bypass expansion valve 1 N636

NOTICE

The desiccant cartridge must be removed for the flushing process. After the flush procedure is complete replace the receiver drier or drier cartridge. For ID.4 the front bumper does not need to be removed as stated in the repair manual.

To access the Receiver Drier Cap perform the following steps below to remove the lock carrier.

NOTICE

For reinstallation torque specifications refer to Elsa Pro/Elsa2Go Body>50 Body Front>Lock Carrier>Overview-Lock Carrier.

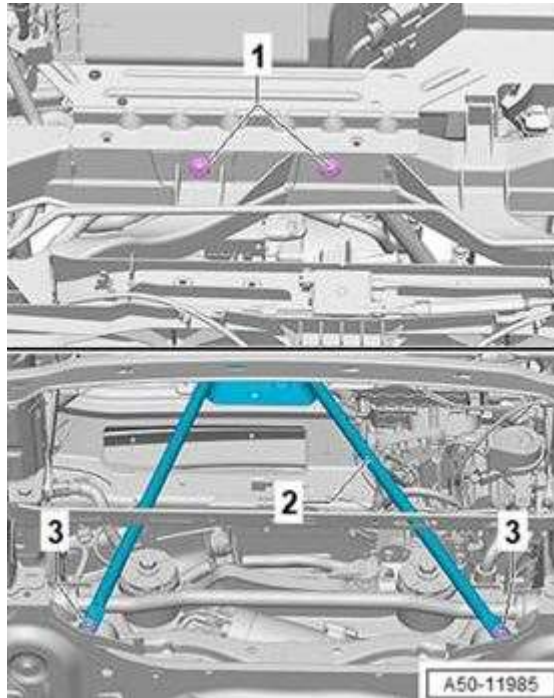


Figure 2. Lock carrier brace

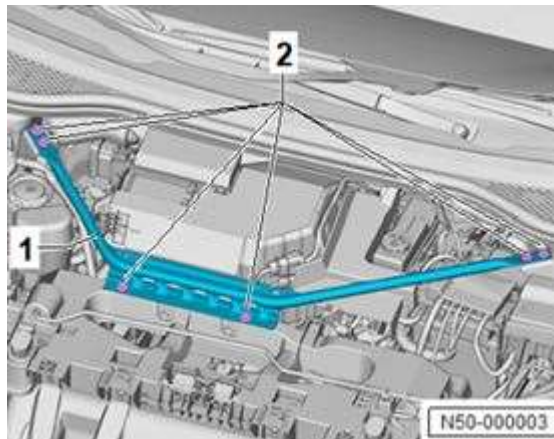


Figure 3

4. Remove the lock carrier brace.

Remove the front underbody trim panel. Refer to ⇒ Body Exterior; Rep. Gr.66 [Underbody Trim Panel; Front Underbody Trim Panel, Removing and Installing] .

Remove the bolts -1- from the lock carrier.

Remove the bolts -3-.

Remove the connecting piece -2- downward.

(Figure 2)

NOTICE

Refer to ElsaPro/Elsa2Go - Body > 50 Body Front > Lock Carrier Brace > Removing and Installing.

5. Remove the impact member.

(Figure 3)

NOTICE

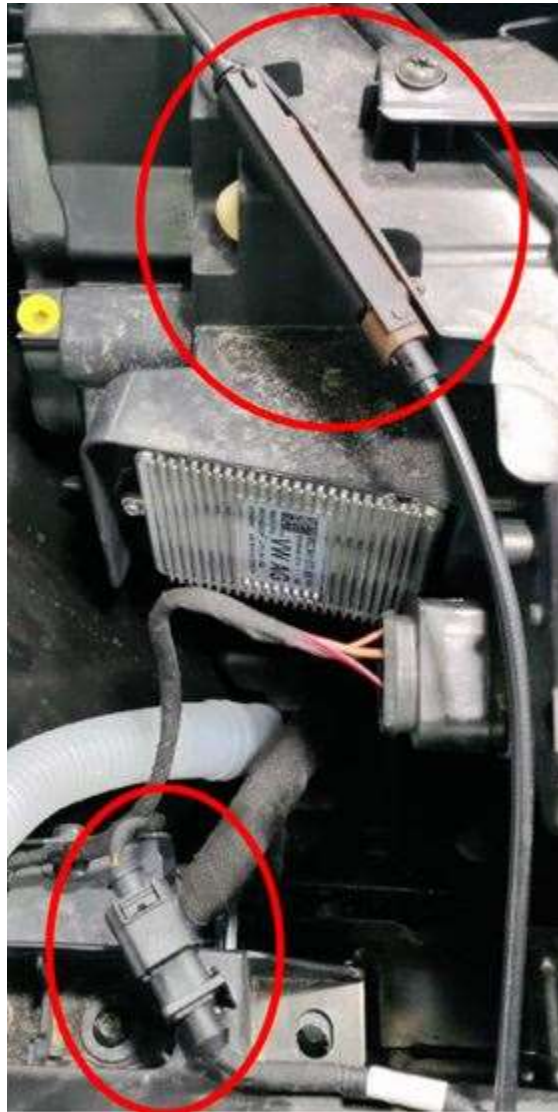
Refer to ElsaPro/Elsa2Go - Body >50 Body Front > Lock Carrier > Impact member > Removing and Installing.



Figure 4. Coolant reservoir set aside.

6. Support the hood using suitable tools and equipment.

Release the coolant reservoir and set it away from the lock carrier. (Figure 4)



7. Disconnect the hood release cable and 2 pin hood switch connector F266. (Figure 5)

NOTICE

Refer to ElsaPro/Elsa2Go – Body >55 Hoods-Lids >Hood > Release Cable, Removing and Installing.

Figure 5. Disconnect hood switch and hood cable.



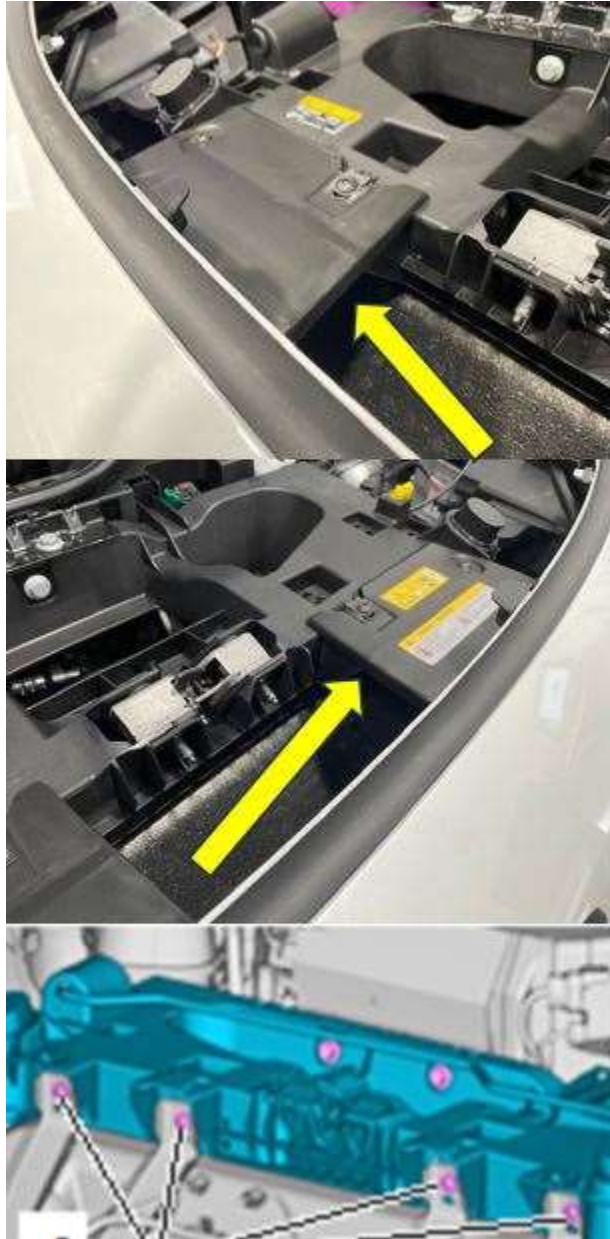
Figure 6. Set aside washer solvent filler neck.

8. Disconnect and set aside the washer solvent filler neck. (Figure 6)



Figure 7. Remove radiator module bracket.

9. Remove the radiator module bracket. (Figure 7)



10. Perform the following steps below to remove the lock carrier.

Remove the four bolts under bumper cover.

(Figure 8)

NOTICE

Refer to ElsaPro/Elsa2Go – Body > 50 Body Front > Lock Carrier, Removing and Installing.

Figure 8

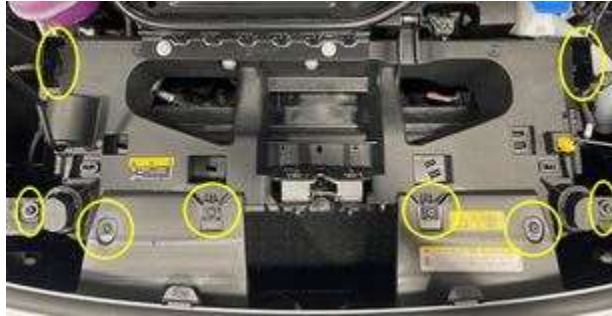


Figure 9.

11. Perform the following steps below to remove the lock carrier. (continued)

Remove the ten bolts from the lock carrier.

(Figure 9)

! NOTICE

Refer to ElsaPro/Elsa2Go – Body > 50 Body Front > Lock Carrier, Removing and Installing.



12. Perform the following steps below to remove the lock carrier. (continued)

(Figure 10)

Pivot out the lock carrier -1- in the direction of - arrow A- under the tab -9-.

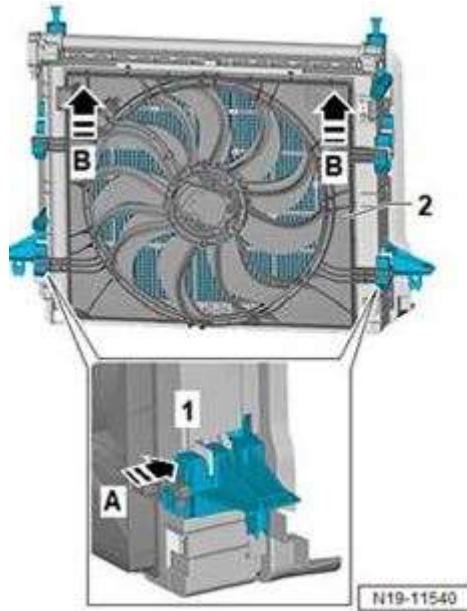
-Remove the lock carrier -1- in the direction of - arrow B-.

NOTICE

Refer to ElsaPro/Elsa2Go – Body > 50 Body Front > Lock Carrier, Removing and Installing.



Figure 10. Lock carrier removal



13. Release the radiator fan module.

Disconnect the connector for the Radiator Fan - VX57 - -arrow-.

Push in the left and right tabs -1- for the fan shroud in the -direction of the arrow A-. (Figure 11)

NOTICE

Refer to ElsaPro/Elsa2Go - Motor 19 Cooling System > Radiator/Radiator Fan > Fan Shroud with Radiator Fan, Removing and Installing.

Figure 11. Release the fan module



14. Lay the fan module away from the condenser to access the condenser carrier trim piece, (Figure 12)

Figure 12.



15. Access the receiver drier cap by gently pulling back the condenser carrier trim.

(Figure 13)

Figure 13.



16. Remove condenser drier cap and remove receiver drier cartridge.

(Figure 14)

Figure 14.



17. Remove expansion valve and install flush plate VAS 6338/38. (Figure 15)

Figure 15. Installation of front expansion valve bypass adaptor VAS 6338/38.



18. Remove expansion valve N636 and install adaptor VAS 6338/80 (Figure 16)

NOTICE

At this time place the bypass adaptor in the closed position as shown in Figure 16.

Figure 16. Installation of A/C Line connection block adaptor VAS 6338/80.



Figure 17. A.C hose adaptor 6338/44.

19. Remove A/C Recovery machine high side coupler from hose.

Install flush adaptor VAS 6338/48 to high side A/C recovery machine hose. (Figure 17)

NOTICE

You do not have to remove low side A/C hose coupler. The low side coupler will be connected to the flush tank filter adaptor.



Figure 18. Installation of VAS 6338/3 and 6338/12.

20. Disconnect A/C compressor hoses from the compressor.

Install flush adaptor VAS 6338/3 on the high side compressor hose.

Install flush adaptor VAS 6338/12 on low side compressor hose.

Attach high side A/C Recovery machine hose with VAS 6338/48 fitting to low side compressor hose adaptor VAS 6338/12.

Attach the Yellow recovery tank hose to high side adaptor VAS 6338/3.

(Figure 18)

NOTICE

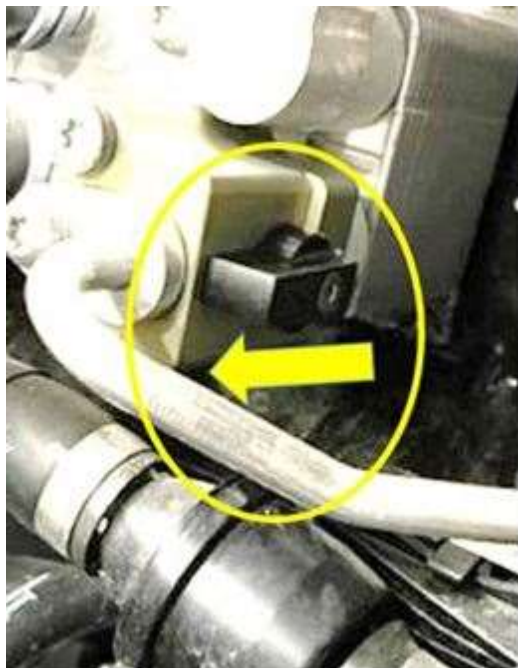
This connection strategy allows for a system flush in the opposite direction of the normal refrigerant flow.



21. Connect the low side A/C machine coupler to the flush tank filter adaptor. (Figure 19)

Figure 19.

22. Perform an extended 3 cycle flush.



23. During the 3rd flush cycle move the VAS6338/80 adaptor valve to the open position. (Figure 20)

Figure 20.




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- 24. After the flush process completes remove any adapters that were installed from the VAS 6338/1.
- 25. Install a new Expansion Valve and Receiver Drier Cartridge. Reassemble all refrigerant lines.
- 26. Print the extended flush log of the job and attach to the repair order.
- 27. Connect the station in the usual manner through the service fittings and perform the normal evacuation and refrigerant recharge operations.

Warranty

 NOTICE
<p>The procedure outlined in this Technical Bulletin must be included with the warranty repair(s) and not claimed independently. You may claim 1/5 of the cost of A/C System Flush filter 0268056100 (See VWHub/Service/Volkswagen Special Tools and Equipment for current pricing) A print out from the approved R1234yf servicing machine of the flush procedure must be attached to the warranty claim and provided in Doctl.</p>

To determine if this procedure is covered under Warranty, always refer to the Warranty Policies and Procedures Manual ¹⁾					
Model(s)	Year(s)	Eng. Code(s)	Trans. Code(s)	VIN Range From	VIN Range To
ID.4	2021-2024	All	All	All	All
SAGA Coding					
Claim Type:			Use applicable Claim Type ¹⁾		
Service Number:	Damage Code	HST	Damage Location (Depends on Service No.)	Parts Manufacturer (removed part)	
Use Service Number of Defective Component	Use damage code appropriate for root cause of failure	--	Use applicable when indicated in Elsa (L/R)	Use Vendor code from failed component --- ²⁾	
Labor Operation ³⁾ : Refrigerant drain and fill			8703XXXX = Claim appropriate SRT for vehicle and engine in Elsa		
Labor Operation ³⁾ : Air Conditioner Check			8701XXXX = Claim appropriate SRT for vehicle and engine in Elsa		



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Labor Operation ³⁾ : Air Conditioner Clean	8701XXXX = Claim appropriate SRT for vehicle and engine in Elsa	
Labor Operation ³⁾ : Replace Receiver-Drier	87551999 = 120 TU	
Labor Operation ³⁾ : Replace Expansion Valve,	87701950 = 20 TU	
Labor Operation ³⁾ : Heating Ventilation unit R/I	85151950 = 50 TU	
Labor Operation ³⁾ : Cowl Panel Trim R/I	66441900 = See Elsa for latest time units.	
Labor Operation ³⁾ : Deactivate HV system	93108300 = 30 TU	
Labor Operation ³⁾ : R/I N636 Expansion Valve, ID.4	87701960 = 20 TU	
Outside Material: R1234yf Flush Kit filter 0268056100	1/5 of the cost of A/C System Flush Filter (See VWHub /Service/Volkswagen Special Tools and Equipment for current pricing).	
Diagnostic Time ⁴⁾		
GFF Time expenditure	01500000 = 00 TU max.	NO
Road Test	01210002 = 00 TU 01210004 = 00 TU	NO
Technical Diagnosis	01320000 = 00 TU max.	NO
Claim Comment: Input "As per Technical Bulletin 2073537" in comment section of Warranty Claim.		
<p>¹⁾ Vehicle may be outside any Warranty in which case this Technical Bulletin is informational only.</p> <p>²⁾ Code per warranty vendor code policy.</p> <p>³⁾ Labor Time Units (Tus) are subject to change with ELSA updates.</p> <p>⁴⁾ Documentation required per Warranty Policies and Procedures Manual.</p>		



Required Parts and Tools




Part Description	Part No:	Quantity
Receiver-Drier	Vehicle Specific	1
Expansion Valve	Vehicle Specific	1

Tool Description	Tool No:
<p>Air Conditioning Service System</p> 	<p>MAHLE R1234yf A/C Service Unit VAS581005 Or Robinair R1234yf – ROB1234YFX Or MAHLE RTI4608046401 Or Ecotechnics EEAC830BVW</p> <p>R1234yf Flush Kit RTI360831840</p>
<p>Air Conditioning System Flushing Device Filter</p> 	<p>R1234yf Air Conditioning Unit – Filter – External Flush Item: 0268056100</p>



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<p>Engine Bung Set</p> 	<p>VAS6122</p>
<p>Adapter set for refrigerant circuits</p> 	<p>VAS 6338/1</p>
<p>Refrigerant circuit adapter for MAHLE A/C Service Unit and R1234yf Flush Kit</p> 	<p>VAS6338/48</p>




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<p>Refrigerant circuit adapter for expansion valve bypass</p> 	<p>VAS6338/38</p>
<p>Adapter bypass for A/C compressor line</p> 	<p>VAS 6338/3</p>
<p>Adapter bypass for A/C compressor line</p> 	<p>VAS 6338/12</p>



<p>Adapter N636 expansion valve bypass.</p>  <p>The image shows a brass-colored metal adapter with a black plastic top. It has two ports on the front and a larger port on the side. The text 'VW VAS 6338/80' is visible on the side of the adapter.</p>	<p>VAS6338/80</p>
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Additional Information

All part and service references provided in this Technical Bulletin are subject to change and/or removal. Always check with your Parts Dept. and Repair Manuals for the latest information.