Technical Bulletin

Model(s)	Year(s)	Eng. Code(s)	Trans. Code(s)	VIN Range From	VIN Range To
All Models (except Routan)	**1998 - 2017**	**All**	**All**	**All**	**All**

Condition

87 16 22 October 24, 2015 **2019947** Supersedes T.B. V871516 dated November 20, 2015 to include new model years.

Air Conditioning, Cleaning of the Refrigerant Circuit (U.S. Only)

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.

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.

Production Solution

No production change required.

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Service

Tools

- **Use the ROB134APF Air Conditioning Service System with VAS 6337/1A Air Conditioning System Flushing Device** (Figure 1) Used for effective refrigerant handling and air conditioning circuit flushing after air conditioning component failure.
- Now air conditioning system refrigerant recovery, evacuation, recharge and refrigerant circuit cleaning after component failure can be performed with a single servicing station.

Figure 1. The ROB134APF Air Conditioning Service System with VAS 6337/1A Air Conditioning System Flushing Device.

The VAS 6338/1 Adapter Set for Refrigerant Circuits. Along with an additional adapter (VAS 6338/33 for the front expansion valve bypass for the Touareg) 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 R134A-Servicing >> 00 General Technical Data>> Refrigerant Circuit removing contaminates>> Refrigerant Circuit, Flushing with Refrigerant R134A* in *Elsa.*

Note:

MY2016 Jetta, Passat and Beetle have a new expansion valve and a flush adaptor is currently unavailable. The expansion valve is always replaced after flushing. It is recommended to drill out the old expansion valve and use as the flush adaptor as per the Elsa Repair Manual.

All other refrigerant recovery, evacuation and recharge operations are performed using the usual procedure specified in Elsa. An operations manual will accompany each servicing station that will describe operation of the unit.

Procedure

Front A/C:

1. If an air conditioning component has been diagnosed as the root cause of the failure and this component is suspected of releasing debris through the circuit, continue the diagnosis to determine if this is the case.

2. Turn the power to the servicing station on and begin by recovering the refrigerant from the system through the normal service fittings.

Tip:

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 process, and the oil volume recovered, oil volume added, refrigerant volume recovered, etc. will have to be manually determined.

3. Disconnect the service hoses. The VAS 6338/1 adapters will be used to bypass the following:

- Compressor.
- Receiver-drier.
- Expansion Valve/ Restrictor (if equipped).

If vehicle is equipped with a restrictor, remove the restrictor and reconnect the line.

Note:

For models with receiver drier desiccant cartridge the desiccant cartridge must be removed for the flushing process.

Before flushing the A/C circuit, inspect the Receiver-drier cartridge screen for any tears and for any desiccant material that may have been released into the A/C circuit. If the Receiver-drier screen is torn, replace the condenser prior to starting the flushing procedure.

For vehicles where the receiver drier is located on the condenser and DOES NOT have a remove-able desiccant cartridge, the receiver drier must be left in the system and flushed through.

After the flush procedure is complete replace the receiver drier or drier cartridge.

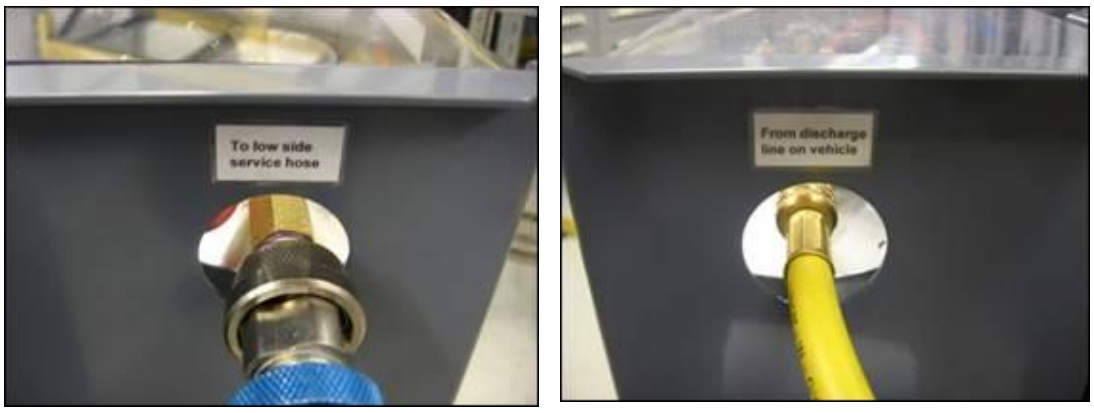

Figure 2. A flushing attachment port.

- This connection strategy allows for a system flush ***in the opposite*** direction of the normal refrigerant flow (Figure 4).

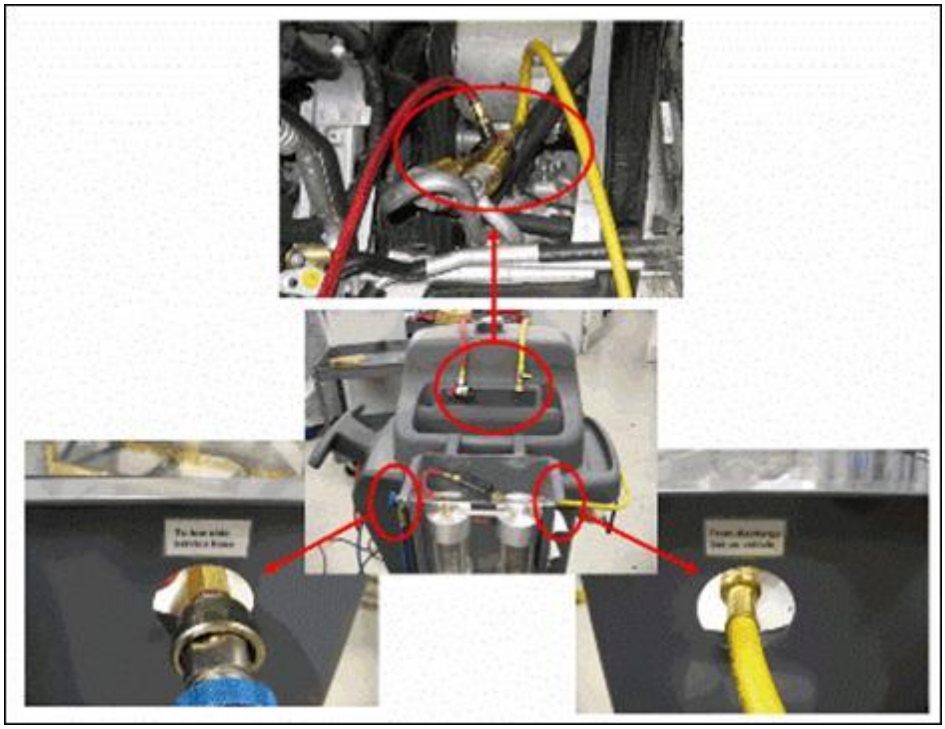

Figure 4. Connection strategy: Vehicle to service station to flushing device.

Figure 5. *The first cycle.*

- The flush program will begin with an evacuation of the system and a rate of rise test. This is necessary to test the integrity of the connections before the flush cycles begin. If the rate of rise test passes, the program will proceed into the flush cycles. (Figures 5 – 7). These cycles will occur automatically in succession.

Figure 6. The second cycle.

Figure 7. The third cycle.

- The debris is then rinsed from the circuit and contained within the filtration in the flusher. After the flush program, the system will be evacuated.

5. After the system is evacuated, remove any adapters that were installed from the VAS 6338/1.

6. Replace Expansion Valve (if equipped), Receiver-drier and Restrictor (if equipped).

7. Connect the station in the usual manner through the service fittings and perform the normal evacuation and refrigerant recharge operations.

8. Print a log of the job and attach to the repair order.

Touareg with Four Zone Climate Control – Rear A/C

For Touareg with four zone climate control, the flush process will be repeated for the additional air conditioning unit (rear of vehicle) according to the repair information in Elsa.

Figure 8. The location of the connections inside the left front wheelhouse on a Touareg with four zone climate control.

Figure 9. Location of rear air conditioning unit and expansion valve.

1. Separate the front and rear air conditioning systems for individual rinse operations.

The VAS 6338/1 contains the necessary adapters to separate the systems for the individual rinse operations.

4. When complete, remove any adapters that were installed from the VAS 6338/1.

5. Replace defective components.

6. Connect the station in the usual manner through the service fittings and perform the normal evacuation and refrigerant recharge operations.

7. Print a log of the job and attach to the repair order.

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A/C Components Replacement

The following components must be replaced:

- Expansion Valve (if equipped)
- Restrictor (if equipped)
- Receiver-drier

Warranty

Note:

The procedure outlined in this Technical Bulletin must be included with the warranty repair(s) and not claimed independently.

You may claim $4.25 per A/C System flush for the A/C System Flush Machine Behr filter BAI783400103 (which represents ¼ the cost of a replacement filter).

You may claim $17.88 per A/C System flush for the A/C System Flush Machine Bosch filter 17707-6 (which represents ¼ the cost of a replacement filter).

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**
All Models (except Routan)	**1998 - 2017**	**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 Damaged 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]: Air Conditioner Clean, All Vehicles, Front A/C only (except Touareg with four zone climate control)	**87012999 = 140 TU**	
Labor Operation [3] : Refrigerant drain and fill **(2015> Golf/GTI, Golf R, Golf SportWagen Only)**	**87031700 = 60 TU**	
Labor Operation [3] : Refrigerant drain and fill	**87031700 = 50 TU**	
Labor Operation [3]: Air Conditioner Clean, Touareg with four zone climate control.	**87013099 = 310 TU**	
Labor Operation [3]: Air Conditioner Check, All Vehicles.	**87010150 = 30 TU**	
Labor Operation [3]: Replace Expansion Valve, if equipped.	**8770XXXX = Claim appropriate SRT for vehicle and engine in Elsa**	
Labor Operation [3]: Replace Restrictor, if equipped.	**8777XXXX = Claim appropriate SRT for vehicle and engine in Elsa**	
Labor Operation [3]: Replace Receiver-Drier	**8755XXXX = Claim appropriate SRT for vehicle and engine in Elsa**	
Outside Material: A/C Flush Machine Behr filter, Part No. BAI783400103	**$4.25 total per A/C System Flush which accompanies a repair (this amount equals ¼ of the cost of the A/C flush machine filter)**	
OR		
Outside Material: A/C Flush Machine Bosch filter, Part No. 17707-6	**$17.88 total per A/C System Flush which accompanies a repair (this amount equals ¼ of the cost of the A/C flush machine filter)**	
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 2019947" in comment section of Warranty Claim.		
[1] Vehicle may be outside any Warranty in which case this Technical Bulletin is informational only		

[2] Code per warranty vendor code policy.
[3] Labor Time Units (TUs) are subject to change with ELSA updates.
[4] Documentation required per Warranty Policy & Procedures Manual.

Required Parts and Tools

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

Tool Description	Tool No:
Air Conditioning Service System. 	ROB134APF
Air Conditioning System Flushing Device 	VAS 6337/1A

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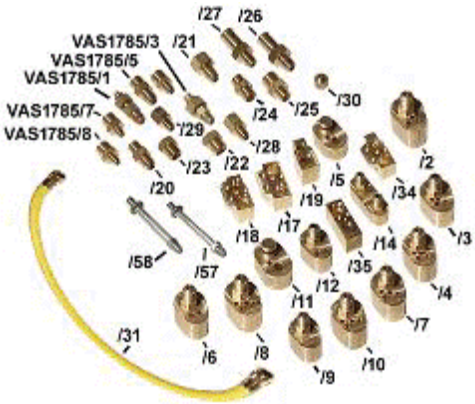
Air Conditioning System Flushing Device Filter 	**Behr - BAI783400103** **OR** **Bosch – 17707-6**
OR	
Air Conditioning System Flushing Device Filter 	**Bosch – 17707-6**
Adapter set for refrigerant circuits 	**VAS 6338/1**

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Additional adapter for bypass of the front expansion valve for Touareg 	**VAS 6338/33**
Additional refrigerant circuit adapter 	**VAS6338/36**
Additional refrigerant circuit adapter 	**VAS6338/38**

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Additional refrigerant circuit adapter 	**VAS6338/40**
Additional refrigerant circuit adapter 	**VAS6338/41**
Additional refrigerant circuit adapter 	**VAS6338/42**

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.

Document Control Revision Table			
Instance Number	**Published Date**	**Version Number**	**Reason For Update**
2019947/10	10/24/16	V871622	Update model year applicability.
2019947/1	4/29/09	V870903	Original publication.