



87-18-06 - Air Conditioning, Cleaning of the Refrigerant Circuit (U.S. Only)

Release date: 5/12/20

Condition

Applicable Vehicles					
Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
All Models (except Routan)	1998 - 2017	All	All	All	All
Jetta	2018	All	All	All	All

Revision Table			
Instance Number	Published Date	Version Number	Reason For Update
2019947/14	5/12/20	87-18-06	Tool number added to table. Removal of Behr Flush Kit VAS 6337/1A
2019947/13	11/7/19	87-18-06	Note added to technical background.
2019947/12	4/17/18	V871806	To add new flushing device adaptor 6338/74 for Jetta, Passat and Beetle, plus include model year 2018 Jetta.
2019947/11	11/9/17	V871712	To modify note text about receiver-drier above figure 2.
2019947/10	10/24/16	V871622	Update model year applicability.
2019947/1	4/29/09	V870903	Original publication.

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Debris can be dispersed throughout the refrigerant circuit after A/C system 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 A/C system component (such as a compressor or other system component) has failed and debris from the compressor or system 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.

**Note:**

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

Production Solution

No production change required.

Service

Tools



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

- 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.

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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.

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.

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.



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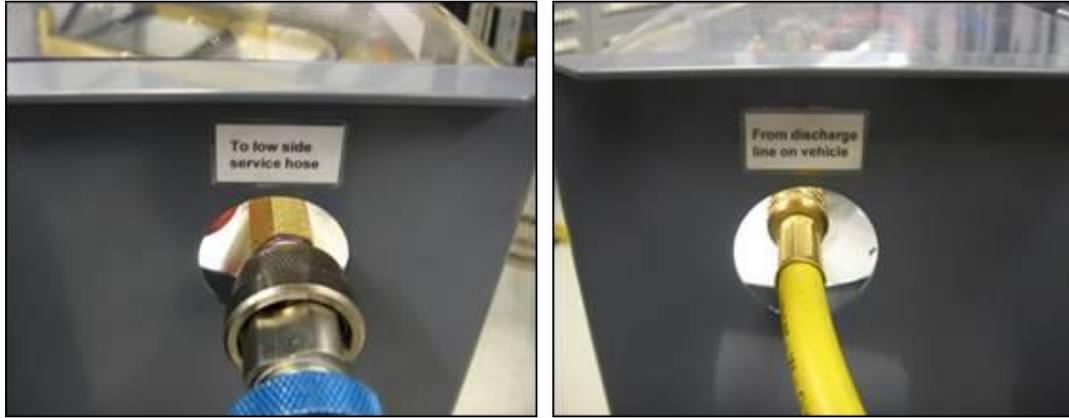


Figure 2. Example of a flushing attachment port.

- This connection strategy allows for a system flush *in the opposite* direction of the normal refrigerant flow (Figure 3).

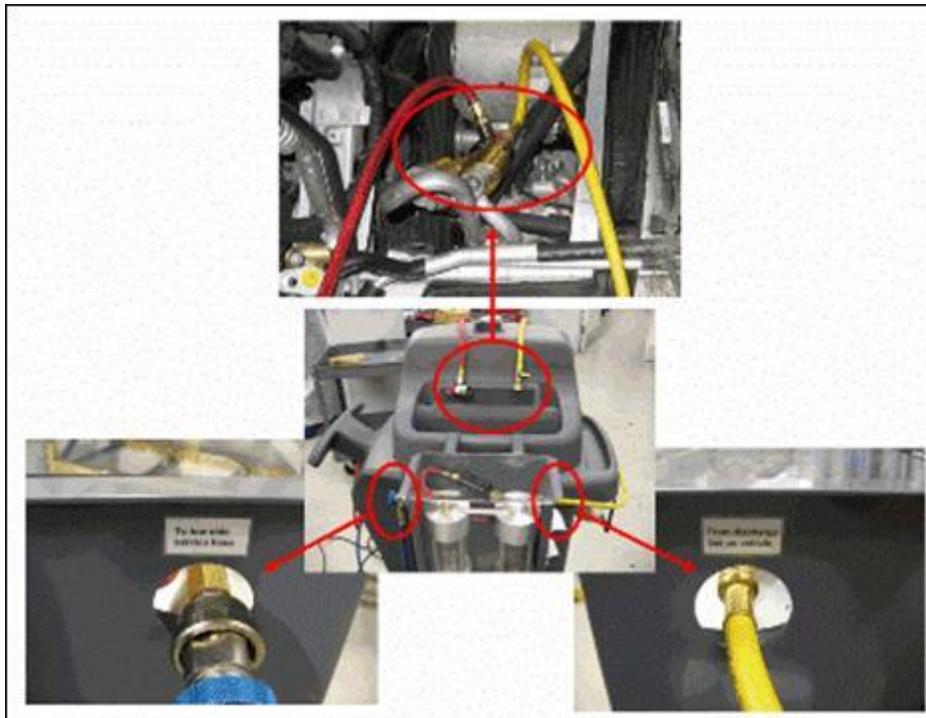


Figure 3. Connection strategy: Vehicle to service station to flushing device.



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Figure 4. 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 4 – 6). These cycles will occur automatically in succession.



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Figure 5. The second cycle.

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Figure 6. 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.

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

1. Separate the front and rear air conditioning systems for individual rinse operations (Figure 7).

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



Figure 8. Location of rear air conditioning unit and expansion valve.

2. Bypass the rear expansion valve with an adapter (Figure 8).

3. When complete, remove any adapters that were installed from the VAS 6338/1.
4. Replace defective components.
5. Connect the station in the usual manner through the service fittings and perform the normal evacuation and refrigerant recharge operations.
6. 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 \$5.32 per A/C System flush for the A/C System Flush Machine Behr filter BAI783400103 (which represents ¼ the cost of 1 replacement filter).

You may claim \$23.75 per A/C System flush for the A/C System Flush Machine Bosch filter 17707-6 (which represents ¼ the cost of 1 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
Jetta	2018	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⁾	



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Labor Operation ³⁾ : Refrigerant drain and fill	870317XX = Claim appropriate SRT for vehicle in Elsa	
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⁾ : 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 Bosch filter, Part No. 17707-6	\$23.75 total per A/C System Flush which accompanies a repair (this amount equals ¼ of the cost of the A/C flush machine filter)	
Outside Material : A/C Flush Machine Behr filter, Part No. BAI783400103 (For use with previous flush kit Behr VAS 6337/1A)	\$5.32 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.		



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- 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:
<p>Air Conditioning Service System.</p> 	<p>ROB134APF Or latest machine version</p>



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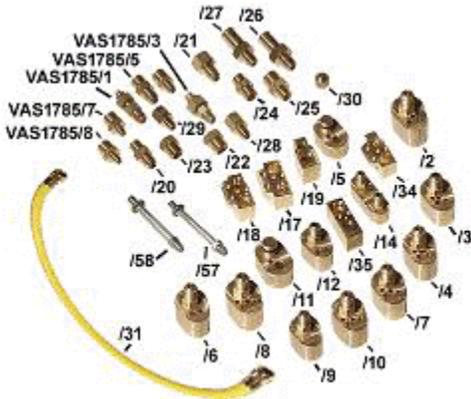
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<p>Air Conditioning System Flushing Device</p>  <p>12 11 13 16 14 15 17</p>	<p>17707 Kit, Flusher Filter</p>
<p>Air Conditioning System Flushing Device Filter</p> 	<p>Bosch – 17707-6</p>
<p>Air Conditioning System Flushing Device Filter (For previous version of Behr VAS 6337/1A)</p> 	<p>Behr – BAI783400103</p>



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<p>Adapter set for refrigerant circuits</p> 	<p>VAS 6338/1</p>
<p>Additional adapter 33 for bypass of the front expansion valve for Touareg</p> 	<p>VAS 6338/33</p>
<p>Additional refrigerant circuit adapter 36</p> 	<p>VAS 6338/36</p>



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<p>Additional refrigerant circuit adapter</p> 	<p>VAS6338/38</p>
<p>Refrigerant Circuit Adapter 74</p> 	<p>VAS 6338/74 MY 2016-2017 Passat and Beetle MY 2016-2018 Jetta</p>
<p>Additional refrigerant circuit adapter</p> 	<p>VAS6338/40</p>
<p>Additional refrigerant circuit adapter</p> 	<p>VAS6338/41</p>



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<p>Additional refrigerant circuit adapter</p> 	<p>VAS6338/42</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.