



Technical Service Bulletin

87 Faint noise heard in cabin from air conditioning circuit

87 19 93 2044717/9 July 12, 2019. Supersedes Technical Service Bulletin Group 87 number 18-86 dated April 9, 2018 for reasons listed below.

| Model(s) | Year | VIN Range | Vehicle-Specific Equipment |
|----------|-------------|-----------|----------------------------|
| A6, A7 | 2012 - 2015 | All | 2.0L or 3.0L gas engine |

Condition

| REVISION HISTORY | | |
|------------------|------------|--|
| Revision | Date | Purpose |
| 9 | - | Revised <i>Warranty</i> (Updated Labor Operation) Revised <i>Required Parts and Tools</i> (Added Tools table) |
| 8 | 04/09/2018 | Revised <i>Warranty</i> (Added 2.0 TFSI Labor Operations) |
| 7 | 02/13/2018 | Revised <i>Warranty</i> (Changed the Labor Operation order) |

Customer states:

- A faint, high-pitched “whine” or high frequency buzzing noise is heard in the cabin when the air conditioning is set to “Low” and the fan speed is no higher than 2. The audio system must be off and there should be no other noises in the cabin, otherwise, the noise may not be heard.

Technical Background

This noise can be created due to an anomaly in the acoustic characteristic in the refrigerant circuit under these specific settings (air conditioning set to “Low” and fan speed no higher than 2). There is no technical fault with the air conditioning system and no functional issue with the climate control system.

Production Solution

Not applicable. The refrigerant circuit architecture in the A6 and A7 models to which this bulletin applies is no longer in production.

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Service

The noise symptom must be readily duplicated before any repair is performed. It is a good idea to ask the customer to duplicate the noise symptom for the technician to ensure that the repair resolves the customer's specific concern.

If the noise cannot be duplicated, do not perform any repair to the vehicle. If the noise can be duplicated consistently, proceed as follows:

1. Perform a complete recovery and flush of the air conditioning refrigerant circuit (Figure 1 and Figure 2).



Figure 1. A/C flushing unit.



Figure 2. Flushing fitting set.



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2. Remove the air conditioning compressor, empty the compressor of the PAG oil completely, then reinstall it to the vehicle. The compressor does not need to be replaced.



Figure 3. Mounting bolt centering sleeves on the air conditioning compressor housing.



Note:

It is imperative that the compressor mounting bolt centering sleeves be reinstalled with the compressor (Figure 3). Failure to reinstall these sleeves will result in compressor failure (as well as possible engine and/or ancillary component damage) in a short period of time. If any sleeves were misplaced during the removal and reinstallation process, new sleeves should be ordered and installed on the compressor housing before reassembly. Compressor or consequential component damage resulting from a failure to install the centering sleeves will not be accepted under warranty.



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3. Replace the low side refrigerant line that connects the air conditioning compressor suction port to the hybrid refrigerant line to the expansion valve (Figure 4). Be certain to use new O-rings at these and all refrigerant circuit joints that are disconnected.

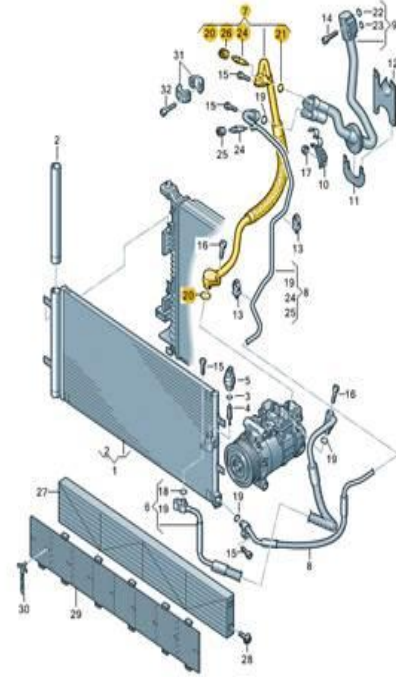


Figure 4. The low side line that needs to be replaced.

4. Install the balance weight (part number 4G0513621A) with 2 bolts (part number N 10653601) to the line in the position shown in the illustration (Figure 5).

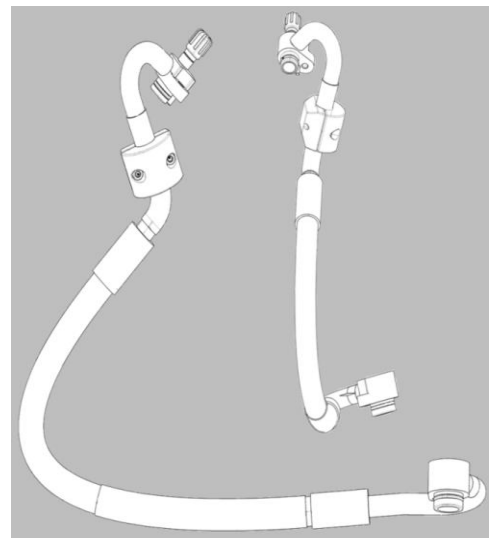


Figure 5. Balance weight position on the low side line.



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5. Recharge the refrigerant circuit with the specified volume. Replace the PAG oil completely with new PAG oil at the specified volume. Do not reuse the original oil extracted during the system flush. Use only the Denso PAG oil (part number G 052300A2) (Figure 6). Do not use a substitute.



Figure 6. Denso PAG oil.

6. No additional air conditioning components need to be replaced. Recheck the air conditioning system under the same settings used to duplicate the noise symptom and confirm that the noise issue is resolved.

Warranty

| | | | |
|--------------------------|---|-----------|---------|
| Claim Type: | <ul style="list-style-type: none">• 110 up to 48 Months/50,000 Miles.• G10 for CPO covered vehicles – Verify Owner.• If the vehicle is outside any warranty, this Technical Service Bulletin is informational only. | | |
| Service Number: | 8745 | | |
| Damage Code: | 0020 | | |
| Labor Operations: | For All Models: | | |
| | Refrigerant drain + fill (if necessary) | 8703 1750 | See SRT |
| | Air conditioner clean | 8701 2950 | See SRT |
| | For A6 with 2.0 Liter Engine: | | |
| | Compressor remove + reinstall | 8734 1913 | See SRT |
| | Charge air cooler remove and reinstall | 2143 1913 | See SRT |
| | Receiver-drier insert remove + reinstall | 8755 5500 | See SRT |



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| | | | |
|-------------------------|--|--------------|---------|
| | Crossmember remove + reinstall | 5034 1900 | See SRT |
| | Expansion valve remove + reinstall (Includes compressor/evaporator line remove and reinstall) | 8770 1950 | See SRT |
| | -or- | | |
| | For A6 or A7 with 3.0 Liter Engine: | | |
| | Compressor remove + reinstall (for 3.0 liter A6 or A7) | 8734 1941 | See SRT |
| | Additional radiator front remove and reinstall | 1980 1941 | See SRT |
| | Charge air compressor remove and reinstall | 2114 1941 | See SRT |
| | Charge air coolers remove and reinstall | 2143 2091 | See SRT |
| | Receiver-drier insert remove + reinstall | 8755 5550 | See SRT |
| | Crossmember remove + reinstall | 5034 1900 | See SRT |
| | Expansion valve remove + reinstall (Includes compressor/evaporator line remove and reinstall) | 8770 1950 | See SRT |
| Diagnostic Time: | GFF | No allowance | 0 TU |
| | Road test prior to service procedure | 0121 0002 | 10 TU |
| | Road test after service procedure | 0121 0004 | 10 TU |
| Claim Comment: | As per TSB #2044717/9 | | |

All warranty claims submitted for payment must be in accordance with the *Audi Warranty Policies and Procedures Manual*. Claims are subject to review or audit by Audi Warranty.



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Required Parts and Tools

| Always check with your Parts Department and/or ETKA for the latest information and parts bulletins. | | |
|---|--|----------|
| Part Number | Part Description | Quantity |
| 4G0260707X Use appropriate part number for the hose according to the VIN in ETKA | Air conditioner hose (Compressor for the hybrid line) | 01 |
| 4G0513621A |  Balance Weight | 01 |
| N 10653601 |  Bolt | 02 |



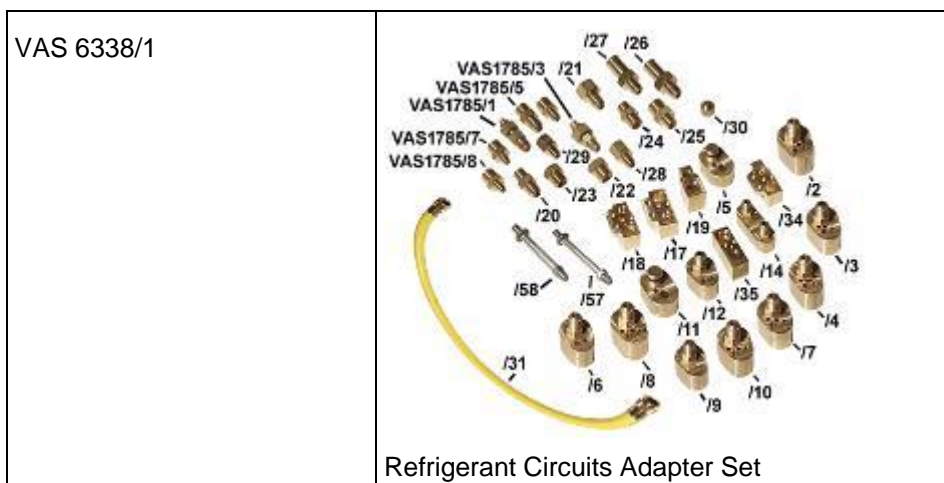
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| | | |
|------------|--|---------------|
| G 052300A2 |  <p>PAG oil for Denso Refrigerant Compressors</p> | 0.5 |
| See ETKA | Fasteners, Bolts, Nuts, and Screws as needed per the Repair Manual | See ETKA/ELSA |

| Tool Number | Tool Description |
|-------------|--|
| ROB134APF |  <p>Robinair A/C Service Unit</p> |



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Additional Information

All parts and service references provided in this TSB (2044717) are subject to change and/or removal.

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