Technical Bulletin

Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
Golf/GTI	2015	All	All	All	All

Condition

87 14 10 September 25, 2014 **2038368**

Air Conditioning Does Not Cool and or Compressor is Noisy

One or more of the following conditions are exhibited:

- The air conditioning does not cool, or the cooling performance is very weak.
- The air conditioning system cools, but the compressor is noisy. The noise is characterized as a grinding or groaning noise.
- Either symptom may be intermittent.
- No DTCs are stored.

Technical Background

The condition may be caused by a faulty A/C compressor regulator valve (N280). The internal components of the valve can be obstructed and incapable of full function. This loss of refrigerant regulation from N280 can cause noise from the air conditioning compressor and/or affect the HVAC cooling.

Production Solution

Final production countermeasures pending.

Service

Since either symptom may be intermittent, the diagnostic process can affect the reproducibility of the condition. Begin the diagnosis by isolating the cause before performing the basic checks.

Cases of noise:

When diagnosing cases of noise, use chassis ears or a technician's stethoscope to make sure that the root cause of the noise is from the air conditioning compressor. The noise can change or may be absent depending on the setting on the HVAC control unit. In many cases, the noise is more pronounced with the system switched OFF.

Cases of low or no cooling performance:

Perform the following diagnostic steps:

1. Connect a manifold gauge set to monitor the refrigerant circuit pressures.
2. With the engine at idle, switch the climate control unit to full cold and full fan.
3. Using the diagnostic tester, monitor the measuring value for the air conditioner compressor regulating valve N280 signal. The actual and specified values will be plausible and will show a normal regulating range of current for cooling request (0.600 A – 0.680 A). However, there will be equalized pressure readings on the high and low sides of the circuit (no pressure generation from the compressor).
4. Evacuate the refrigerant circuit to determine the refrigerant volume. The refrigerant volume will likely be in specification. Should the refrigerant volume be too low, investigate a potential refrigerant leak in the circuit. It is not likely that the refrigerant level will be too great since this should store a DTC.
5. If the air conditioning compressor is found to be the root cause of either of these conditions, Replace the compressor.

Note:

The N280 regulating valve is not available as a replacement part apart from the compressor assembly.

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Air conditioning compressor replacement:

Figure 1: Sanden compressor identification tag.

Figure 2: Denso compressor identification tag.

The originally installed compressor on the MY 2015 Golf/GTI is manufactured by Sanden (Figure 1). The replacement compressor is manufactured by Denso (Figure 2).

Note:

All MY2015 GTI/Golf have Sanden factory compressors. The replacement compressor is 100% Denso.

It is necessary to flush the system to clean the refrigerant circuit of Sanden PAG. Failure to do so can cause damage to the new compressor.

- The flushing procedure can be found in Elsa at: Heating, Ventilation & Air Conditioning>>Refrigerant R134a Servicing >>00 General Technical Data>> Refrigerant circuit removing contaminates>>Refrigerant Circuit, Cleaning (Flushing), with Refrigerant R134a. The procedure is also described in Technical Service Bulletin 2019947.
- The correct adapters for the 2015 Golf/GTI can be found in Elsa at: Ventilation & Air Conditioning>>Refrigerant R134a Servicing >>00 General Technical Data>> Refrigerant circuit removing contaminates>>Refrigerant Circuit, Cleaning (Flushing), with Refrigerant R134a >>Adapter for Assembling Flushing Circuit.

Note

This bulletin is specifically for N280 malfunction. The expansion valve can be reinstalled after the flushing procedure.

Figure 3: Compressor manufacturer specific PAG oils.

The replacement compressor will come with the specified type of PAG oil for the compressor (Figure 3). The amount of PAG oil supplied with the replacement compressor may not be the exact amount required to replenish the refrigerant circuit. Drain and measure the PAG oil in the replacement compressor to determine the required amount. If the amount needs to be adjusted, do so using the correct type of PAG oil specified in ETKA. Refer to Elsa for the correct oil capacity for the compressor being installed.

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Warranty

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**
Golf/GTI	**2015**	**All**	**All**	**All**	**All**

SAGA Coding			
Claim Type:	**Use applicable Claim Type [1)]**		
Service Number:	**Damage Code**	**HST**	**Damage Location (Depends on Service No.)**
8734	**0010**	**--**	**Use applicable when indicated in Elsa (L/R)**

Parts Manufacturer	Golf/GTI	SYP

Labor Operation [3)] : Refrigerant drain and fill	**87031700 = 60 TU**
Labor Operation [3)] : A/C compressor remove and reinstall (1.8/2.0 TSI)	**87341970 = 50 TU**
Labor Operation [3)] : A/C compressor remove and reinstall (2.0 TDI)	**87701955 = 60 TU**
Labor Operation [3)] : Radiator grill remove and reinstall	**66051900 = 20 TU**
Labor Operation [3)] : Receiver drier replace (non-Modine)	**87555550 = 30 TU**
Labor Operation [3)] : Receiver drier replace (Modine)	**87555552 = 40 TU**
Labor Operation [3)] : Expansion valve remove and reinstall	**87701900 = 50 TU**
Labor Operation [3)] : Air conditioner clean	**87012999 = 140 TU**

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Outside Material: A/C Flush Machine filter, Part No. BA1783400103	**$3.51 total per A/C System Flush which accompanies a repair (this amount equals ¼ of the cost of the A/C flush machine filter)**	
Causal Part:	**5Q0820803F**	
Diagnostic Time [4)]		
GFF Time expenditure	**01500000 = 20 TU max.**	**YES**
Road Test	**01210002 = 10 TU** **01210004 = 10 TU**	**YES**
Technical Diagnosis	**01320000 = 20 TU max.**	**YES**
Claim Comment: Input "As per Technical Bulletin 2038368" 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
 Oil for refrigerant compressor - Denso	G 052300A2	0.2 (Max if required)
Air conditioner compressor	5Q0820803F	1
Seal ring	4D0260749B	1
Seal ring	4E0260749A	1
Seal ring	8E0260749C	1
Seal ring	4E0260749B	1
Drier insert with mounting parts	5Q0298403A	1

Tool Description	Tool No:
 Robinair A/C Service Unit	ROB134APF

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 **Air Conditioning Flush Tool**	**VAS 6337/1A**
 **Refrigerant Circuit Adapter 3**	**VAS 6338/3**
 **Refrigerant Circuit Adapter 12**	**VAS 6338/12**
 **Refrigerant Circuit Adapter 38**	**VAS 6338/38**

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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.