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Technical Bulletin

Subject: **Passenger's Side Airbag, On Board Diagnostic (OBD)**

Group: **01**

Number: **00-03**

Model(s): **All**

2000 ►

Date: **Apr. 24, 2000**

Supersedes T.B. group 01 number 99-21 dated Dec. 8, 1999

Black revision bars indicate additions or changes to original document.

Service

Additional diagnostic procedures have been established to prevent unnecessary replacement of airbag components. In addition, certain airbag wiring harness terminals and connectors can now be repaired using VAS 1978 Wire Harness Repair Kit. Follow all diagnostic procedures in this bulletin and Repair Manual before beginning repair.

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CAUTION!

ALWAYS review and follow all CAUTIONS and WARNINGS in the Repair Manual regarding Airbags!

Airbag On Board Diagnostic (OBD)

For diagnosis using the VAS 5051, see VAS 5051 Tester.

For additional VAG 1551 information, see Repair Manual, *Body On Board Diagnostic (OBD)*, Repair Group 01.

Rapid Data Transfer HELP
Enter address word XX

◀ Indicated on display

Note:

With the address word 00 the automatic test sequence is carried out i.e., the DTC memories of all systems in the vehicle capable of On Board Diagnostic (OBD) are checked via the rapid data transfer.

Press buttons -1- and -5- to insert "Airbag" address word 15.

Rapid Data Transfer Q
15 - Airbag

◀ Indicated on display

- Press -Q- button to confirm input.

1J0 909 608 D AIRBAG VW 3-S V03→
Coding 0068 WSC12345

◀ Indicated on display

- See parts catalog for latest control module version.

- Press → button.

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Rapid Data Transfer
Select function XX

Q

◀ Indicated on display

Press buttons -0- and -2- to select "Check
DTC Memory" function 02.

Rapid Data Transfer
02 – Check DTC Memory

Q

◀ Indicated on display

Press -Q- button to confirm input.

X DTC Recognized

◀ Indicated on display (number of DTCs
recognized)

The stored DTCs are displayed and printed
out one after the other.

Eliminate DTCs by referencing DTC table.
See page 4.



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Airbag Diagnostic Trouble Code (DTC) Table

VAG 1551 Scan Tool Display	Possible cause	Corrective Action
00589 Passenger-side airbag igniter -N131- Resistance value too large Resistance value too small Short circuit to B+ Short circuit to Ground (GND)	Improper or damaged connection Faulty wiring or connections	- Check terminals and connectors for damage. If damaged or deformed, repair using VAS 1978 Repair Kit or replace wiring harness ¹⁾ .
	Passenger-side airbag igniter -N131- faulty	- Check terminals and connectors for damage. If damaged or deformed, repair using VAS 1978 Repair Kit or replace wiring harness ¹⁾ . - Read Measuring Value Block. See page 5.
65535 Control module malfunctioning	Electrical interference as a result of external sources, poor Ground (GND) connections or positive connections to control module -J234-	- Test wiring and connections to control module according to wiring diagram ²⁾ . ■
	Control module -J234- faulty	- Replace control module ²⁾ . ■

1) Prior to main wiring harness replacement, see Technical Bulletin Group 97 number 99-04 dated Aug. 25, 1999.

2) Replace control module only if DTC 65535 is displayed or vehicle has been involved in an accident.

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Measuring value block, reading

WARNING!

Check wiring via visual inspection only. Do not check continuity or resistance of airbag igniter circuits.

Only check wiring with ignition switched off.

Rapid data transfer HELP
Select function XX

◀ Indicated on display. If VAG 1551 is still in another function:
- Press buttons -0- and -6- to select "End Output" function.

Rapid data transfer HELP
06 – End output

◀ Indicated on display:
- Press -Q- button to confirm entry.

Rapid Data Transfer HELP
Enter address word XX

◀ Indicated on display
- Press buttons -1- and -5- to insert "Airbag" address word 15.

Rapid Data Transfer Q
15 - Airbag

◀ Indicated on display
- Press -Q- button to confirm input.

1J0 909 608 D AIRBAG VW 3-S V03→
Coding 0068 WSC12345

◀ Indicated on display
- See parts catalog for latest control module version.
- Press → button.

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Rapid data transfer	HELP
Select function XX	

- ◀ Indicated on display.
- Press buttons -0- and -8- to select "Read Measuring Value Block" function.

Rapid data transfer	Q
08 – Read measuring value block	

- ◀ Indicated on display
- Press -Q- button to confirm entry.

Read measured value block
Input display group number XXX

- ◀ Indicated on display
- Press buttons -0-, -0- and -1- to select display group 001 and confirm entry with -Q- button.

Read measured value block	1	→		
	1	2	3	4

- ◀ Indicated on display (1–4 = Display Fields)
- Explanation of individual display fields on display is found in evaluation of display group numbers.
- If displayed values in all display fields are "Correct":
- Press → button.

Note:

To change to another display group, proceed as follows:

Display Group	VAG 1551	VAG 1552
Higher	Press button -3-	Press ↑ button
Lower	Press button -1-	Press ↓ button
Skip	Press button -C-	Press button -C-

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Note:

Check DTC memory after completing "Read Measuring Value Block" function 08.

For additional information, see Repair Manual, *Body On Board Diagnostic (OBD)*, Repair Group 01.

Display group 001

Display group 001						
Read Measuring Value Block 1				→	◀ Indicated on display	
xxxx	xxx	xxx	xxxx			
1	2	3	4	◀ Display fields	Specification	Evaluation
				Right seat belt tensioner igniter -N154-	Correct	See Page 8
				Left seat belt tensioner igniter -N153-	Correct	
				Passenger's side airbag igniter 1 -N131-	Correct	
				Driver's side airbag igniter -N95-	Correct	

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Evaluating display group 001

Display field	Designation	Display contents	Corrective action
1	Driver's side airbag igniter -N95-	Correct	- No faults present.
		Trig. Ground Trig. positive	- Visual check of wiring. - Watch display and check connectors of appropriate current circuit for correct engagement and tight fit. - If display changes to "Correct," erase DTC memory.
		Too low	- Pull igniter connector off airbag unit. Display changes to "too high": - Visual check of wiring. Repair as necessary using VAS 1978 Repair Kit. - Fit airbag igniter connector onto igniter #1 on VAS 5056. Display changes to "correct": - Replace airbag unit. Display remains on "too low": - Disconnect top connector on spiral spring/return spring with slip ring from adapter harness. Display changes to "too high": - Replace spiral spring/return spring with slip ring. Display remains on "too low": - Repair short circuit as necessary using VAS 1978 Repair Kit or replace wiring harness ¹⁾ .

¹⁾ Prior to main wiring harness replacement, see Technical Bulletin Group 97 number 99-04 dated Aug. 25, 1999.

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Display field	Designation	Display contents	Corrective action
1	Driver's side airbag igniter -N95-	Too high	<ul style="list-style-type: none"> - Pull igniter connector off airbag unit. - Fit airbag igniter connector onto inert igniter #1 on VAS 5056. <p>Display changes to "Correct":</p> <ul style="list-style-type: none"> - Replace airbag unit. <p>Display remains on "too high"</p> <ul style="list-style-type: none"> - Disconnect adapter harness from top connector of spiral spring/return spring with slip ring. - Connect spiral spring/return spring with slip ring to inert igniter #2 on VAS 5056 <p>Display changes to "Correct":</p> <ul style="list-style-type: none"> - Replace adapter harness. <p>Display remains on "too high":</p> <ul style="list-style-type: none"> - Disconnect driver's circuit wiring harness from bottom connector of spiral spring/return spring with slip ring. - Connect driver's circuit wiring harness to inert igniter #2 on VAS 5056. <p>Display changes to "Correct":</p> <ul style="list-style-type: none"> - Replace spiral spring/return spring with slip ring. <p>Display remains on "too high":</p> <ul style="list-style-type: none"> - Press button on VAS 5056. <p>Display remains on "too high":</p> <ul style="list-style-type: none"> - Repair as necessary using VAS 1978 Repair Kit or replace wiring harness¹⁾.

1) Prior to main wiring harness replacement, see Technical Bulletin Group 97 number 99-04 dated Aug. 25, 1999.

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Evaluating display group 001

Display field	Designation	Display contents	Corrective action
2	Passenger's side airbag igniter 1 -N131-	Correct	- No faults present.
		Trig. Ground Trig. Positive Too low	- Visual check of wiring. - Watch display and check connectors of appropriate current circuit for correct engagement and tight fit. - If display changes to "Correct," erase DTC memory. - Separate connector between wiring harness and adapter cable to airbag unit. Display changes to "too high": - Replace airbag unit. Display remains on "too low": - Repair using VAS 1978 Repair Kit or replace wiring harness ¹⁾ .
		Too high	- Connect passenger's circuit wiring harness to inert igniter #2 on VAS 5056. See Page 12. - Press button on VAS 5056 to simulate short circuit. Display changes to "too low": - Replace airbag unit. Display remains on "too high": - Repair using VAS 1978 Repair Kit or replace wiring harness ¹⁾ .

¹⁾ Prior to main wiring harness replacement, see Technical Bulletin Group 97 number 99-04 dated Aug. 25, 1999.

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Evaluating display group 001

Display field	Designation	Display contents	Corrective action
3	Left seat belt tensioner igniter -N153- 1)	Correct	- No faults present.
		Too high Too low Trig. Ground Trig. Positive	- Visual check of wiring. - Watch display and check connectors of appropriate current circuit for correct engagement and tight fit. - If display changes to "Correct," erase DTC memory. - Replace seat belt tensioner.
4	Right seat belt tensioner igniter -N154-1)	Correct	- No faults present.
		Too high Too low Trig. Ground Trig. Positive	- Visual check of wiring. - Watch display and check connectors of appropriate current circuit for correct engagement and tight fit. - If display changes to "Correct," erase DTC memory. - Replace seat belt tensioner.

1) Only valid for vehicles with electric belt tensioners. The display is not relevant for vehicles with mechanical belt tensioners.

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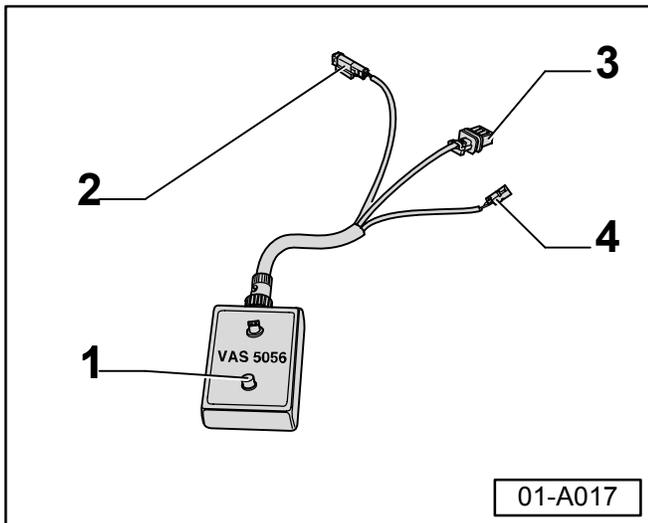
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VAS 5056 test box

It is possible to use VAS 5056 in conjunction with VAG 1551/1552 or VAS 5051 to diagnose airbag system faults.

WARNING!

Check wiring via visual inspection only. Do not check continuity or resistance of airbag igniter circuits. Only check wiring with ignition switched off.



VAS 5056, components

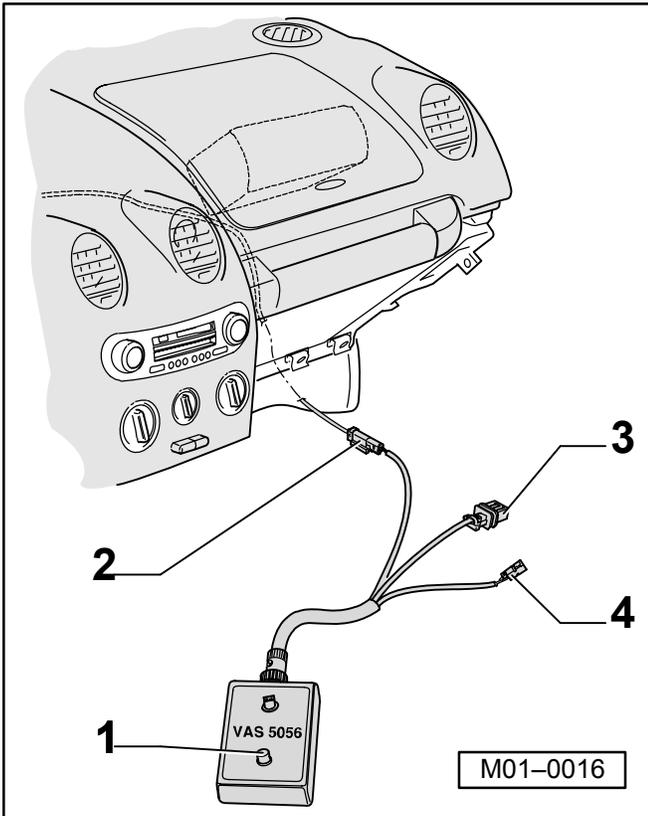
- 1 - Button
- Used to simulate short circuit in harness through connectors.
- 2- Adapter harness (VAS 5056/1) with connectors for inert igniter #2.
- Used to connect inert igniter #2 to airbag harness.
- 3 - Not Applicable
- 4 - Not Applicable



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Airbag, connecting test box to front passenger airbag components, example

- Remove glove box.
- ◀ - Separate wiring harness to airbag unit and connect yellow 2-pin connector -2- from VAS 5056/1 to passenger airbag wiring harness.
- View display. See Evaluating display group 001 for specific diagnostic instructions.

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Wire harness, repair

Note:

No other procedure or materials, other than those in VAS 1978, may be used for wire harness repairs, specifically soldering, wire nuts, generic repair kits, etc.

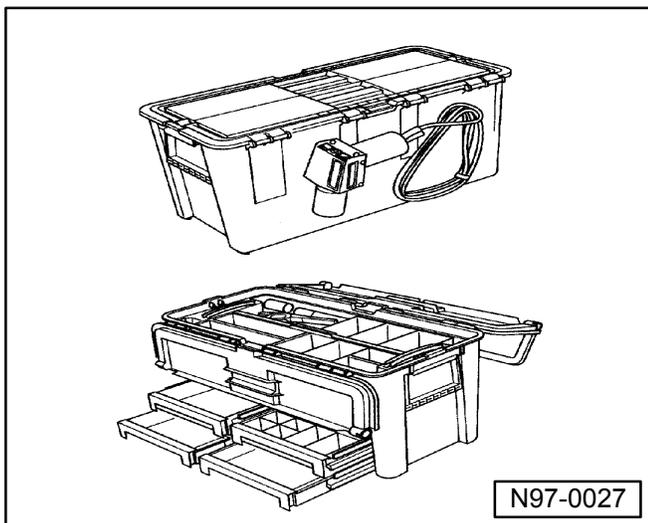
Always review Safety Precautions in VAS 1978 Instruction Manual prior to performing any wiring harness repairs.

CAUTION!

Shielded wiring for components, such as speed sensors or knock sensors, may not be repaired, but must ALWAYS be replaced.

DO NOT use solder wire when repairing a wiring harness.

Only use approved methods and materials if wiring harness repairs are required.



If wiring harness repairs are required:

- ◀ – Use only VAS 1978 Wire Harness Repair Kit.
- If wire harness cannot be repaired using this procedure and materials contained in VAS 1978, then replace wire harness.

Note:

Main wire harness replacement requires contact with your OTS, see Technical Bulletin Group 97 number 99-04 dated Aug. 25, 1999

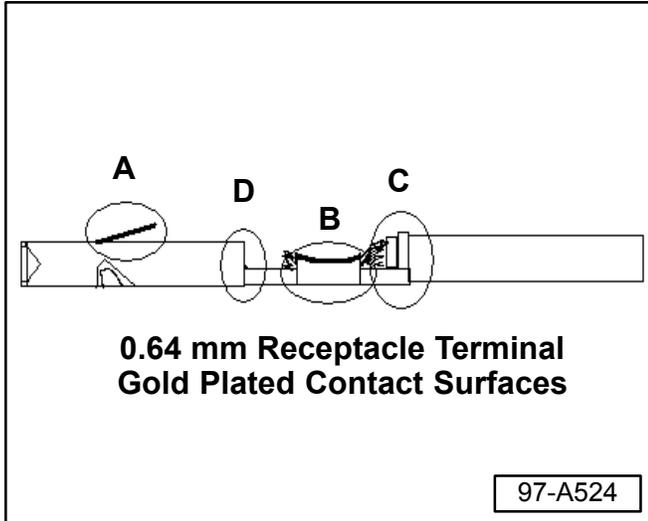
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Terminal, inspection

◀ Replace terminal when one of following conditions occur:

Terminal is bent or unintentionally deformed.

Terminal is cracked or torn at crimped areas -B- and -C-.

Wire insulation has been drawn into core crimp -B-.

Material is cracked at transition bend -D-.

Terminal coating shows signs of moisture or "greasy" coating. Terminal surface should be bright and shiny.

Primary lock tab(s) -A- should be straight and stand away from terminal.

Note:

During terminal extraction, primary lock tab(s) may have been pressed into terminal. Straighten using sharp edge to carefully lift tab.