



45-21-01 – Autonomous Emergency Braking (AEB) (U.S. Only)

Release date: 12/18/2023

Condition

Applicable Vehicles					
Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
Golf, GTI	2020-2024	All	All	All	All
Jetta	2019-2024	All	All	All	All
Atlas, Tiguan LWB	2018-2024	All	All	All	All
Arteon	2019-2024	All	All	All	All
Atlas Cross Sport	2020-2024	All	All	All	All
ID.4	2021-2024	All	All	All	All
Taos	2022-2024	All	All	All	All

Revision Table			
Instance Number	Published Date	Version Number	Reason For Update
2062957/4	12/18/22	45-21-01	Update to model year applicability.
2062957/3	7/21/22	45-21-01	Update to model year applicability.
2062957/1	7/22/21	45-21-01	Original publication.



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Technical Background

The customer reports that the vehicle performed an unwarranted Autonomous Emergency Braking (AEB).

Ensure that the customer is familiar with the various Driver Assist systems and the system limitations via the owner's manual and videos available at knowyourvw.com.

Review of the Self Study Programs (SSP 890253 –Driver Assistance Systems, SSP 860193 - Adaptive Cruise Control and Lane Change Assist, and new model SSPs for specific Driver Assist information for that model), is recommended before performing this TSB.

Participation in the instructor-led training 860292 - Volkswagen Driver Assistance Systems is recommended before performing this TSB.

Production Solution

No current production solutions.

Service

1. Perform preliminary diagnosis

1a. Preliminary Inspection:

Prior to connecting a scan tool, perform the following checks:

- Perform a vehicle walk around to check for signs of damage or misalignment from previous damage or repair (i.e. bumpers, front grill, front VW emblem, windshield inc. interior mirror and sensor mounting). Areas of concern should be inspected/repared and system retested before continuation of this Technical Bulletin.
- Check the trailer hitch (on equipped vehicles) for signs of trailer or hitch carrier usage. Use of a trailer or hitch carrier that does not connect to the vehicle electrical system can cause a change in vehicle ride height. This change can cause a temporary misalignment of the front radar sensor.
- Continue to step 1b.

1b. Scan tool diagnosis:

Connect the scan tool and scan the vehicle for any stored fault codes.

- If any stored faults are found, follow the test plan and perform repairs as necessary. After repairing the concern, retest the vehicle. If the concern persists, continue to step 2. If the issue is no longer present, return the vehicle to the customer.
- If no fault codes are stored continue to step 2.



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2. Customer Questionnaire

Have the customer complete the attached questionnaire and use the information to determine which of the below scenarios apply.

Customer Concern	System	Diagnostic Step
Occurs at low speed (<5mph)	Maneuver Braking	Follow GFF test plans for Park Distance Control (PDC). This Technical Bulletin does not apply.
Occurs only in reverse	Back up Assist	Follow GFF test plans for Park Distance Control (PDC). This Technical Bulletin does not apply.
Occurs only with the cruise control engaged (ACC)	Adaptive Cruise Control (ACC)	Follow GFF test plans for cruise control. This Technical Bulletin does not apply.
Occurs at speed above 5mph	Front Assist	Continue to Step 3. Data Collection

3. Data Collection:

Perform the test plan “Technical Product Information” in O.D.I.S. Service.

To locate the test plan:

- Select self test -> Diagnostic capable system -> 0013 Distance control (ACC) -> Technical Product Information.
- Once the test plan is complete, save the GFF log to the desktop as an .html file.

Gather MVB information (via guided functions):

- Select O.D.I.S. on the OBD screen.
- Click on each module one at a time:
 - AW 13 - Distance Control module/Adaptive Cruise Control
 - AW 8B - Distance Control Module 2/Adaptive Cruise Control 2 (where equipped)
 - AW A5 - Front Sensors Driver Assistance System (where equipped)
 - AW 17 – Instrument Cluster
- Use the dropdown box just above the module list, select MVB and then green forward arrow.
- Display all MVB information for that selected module.
- On the right side menu of O.D.I.S., select "OBD Log".
- Select "New">"Add">"Display".
- Repeat for each of the modules available as above.



NOTICE

The data may be used only to provide the customers products and services they request; support their vehicle, products and services; diagnose, repair and track service and quality issues; communicate with them about their vehicle, products or services; install and configure changes and updates to their products or services; comply with legal requirements; protect the safety, property or rights of Volkswagen and the Volkswagen Group family of companies; owners, registered users, drivers, passengers or others; or prevent and detect fraud or misuse of the vehicles, products or services.

4. Data Evaluation:

Open the saved log and select expand all so all tabs are open. Scroll through the log to locate the **Test step: J428pro** information.

The data should appear similar to the following:

Test step: J428pro

Action: Message

Control module data:J428 - Control Module for Adaptive Cruise Control

Date (dd.mm.yyyy) / Time (hh:mm:ss) / Odometer reading (km) / Trigger type

24.09.2020 / 08:30:03 / 49685 / City emergency brake function (last entry)

12.09.2020 / 14:56:50 / 48780 / Advance warning (last entry)

12.09.2020 / 14:51:39 / 48779 / Advance warning (second to last entry)

11.07.2020 / 16:02:07 / 42108 / Brake support (last entry)

08.06.2020 / 08:41:41 / 39827 / Brake support (second to last entry)

01.05.2020 / 08:23:47 / 37104 / Automatic braking (last entry)

05.11.2019 / 15:23:22 / 20956 / Automatic braking (second to last entry)

Control module data:J285 - Instrument Cluster Control Module

Date (dd.mm.yyyy) / Time (hh:mm:ss) / Odometer reading (km)

01.11.2020 / 19:24:26 / 52586

- Ensure that the current vehicle date/time are correct under Control module data: **-J285-** Instrument Cluster Control Module (take note for later use if incorrect and then set correctly)
- Using the information under “Control module data: **-J428-** Control Module for Adaptive Cruise Control” refer to the attached example and chart below:



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Type of Trigger	Result	Next Steps
No triggers shown	No warning or brake event recorded	Refer customer to knowyourvw.com and owner’s manual for system operation and limitations.
Only Advance warning trigger(s) stored on event date(s) given by customer	Only a pre-warning or warning given	Refer customer to knowyourvw.com and owner’s manual for system operation and limitations. This Technical Bulletin does not apply.
Automatic braking trigger(s) stored on event date(s) given by customer	Partial and-or full braking event recorded	Continue to Step 5.

5. Checking Misalignment Angle

- Check for customer usage of hitch carriers or frequent travel with vehicle loaded (refer to customer questionnaire) as this can affect the misalignment angle.
- Check the MVB misalignment angle in AW13. Ensure the angle is within specification (-0.8° to +0.8°). If outside the specifications, perform a calibration of the **-J428-** using vehicle appropriate test plan and retest the system. Refer the customer to the Owner’s Manual and www.knowyourvw.com for an explanation of the system operation and limitations.
- If no issues are found with the misalignment angle and no evidence of vehicle hitch use is suspected continue to Step 6.

6. Engineering Review

Necessary information for engineering review:

- Obtain a photo of the Grill, Emblem, Bumper Cover, windshield mounted camera, and the back of the Radar Sensor, which will show all printed detail on it.
- Obtain photos of the **-KX2-** Instrument Cluster and of the Radio while the engine is running. The photos should include the vehicle’s current time and date (with a clock next to it) as well as the mileage.
- A google maps printout (screenshot of aerial view and street view) of the location noted by the customer with GPS coordinates visible (make sure the red flag on the map is located on the site noted by the customer).
- Open a VTA ticket and attach all information gathered:
 - All GFF logs (including **-J428-** test plan and all MVBs).
 - Completed questionnaires filled out by the customer for each event they say occurred.
 - All required photos (see examples below).
- The Helpline Consultant will review the information is complete before requesting engineering review.



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Example Pictures:



Front bumper cover



Front grille area



Front emblem



Vehicle time/date



Radar sensor



Forward camera/windshield



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Mileage



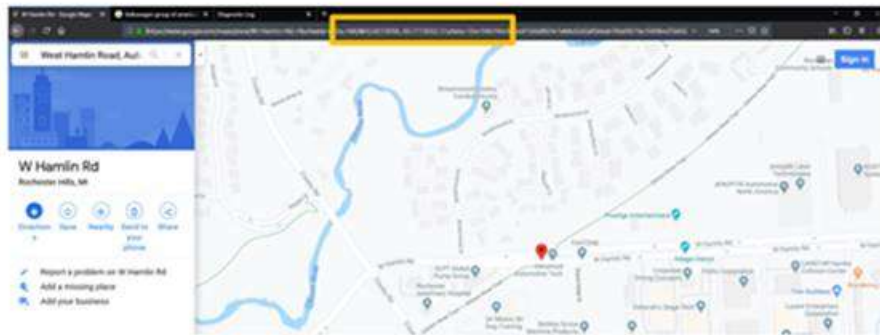
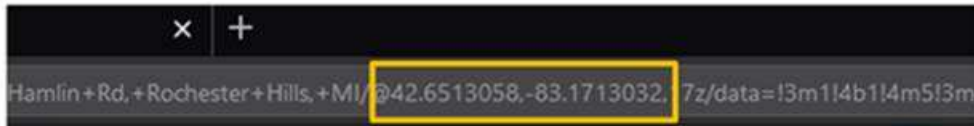
Google satellite view



Google street view

The GPS coordinates are contained in the web page address marked in Red

<https://www.google.com/maps/place/W+Hamlin+Rd,+Rochester+Hills,+MI/@42.6513058,-83.1713032,17z/data=!3m1!4b1!4m5!3m4!1s0x8824c1efdb32d3af:0xbab1f4a0921bc104!8m2!3d42.6513019!4d-83.1691145>





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The engineering review can take more than 24 hours to complete so, please insure all required information is gathered and attached before calling Technical Assistance.

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	2020-2023	All	All	All	All
Jetta	2019-2023	All	All	All	All
Atlas, Tiguan LWB	2018-2023	All	All	All	All
Arteon	2019-2023	All	All	All	All
Atlas Cross Sport	2020-2023	All	All	All	All
ID.4	2021-2023	All	All	All	All
Taos	2022-2023	All	All	All	All

SAGA Coding

Claim Type:	Use applicable Claim Type ¹⁾
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Service Number:	Damage Code	HST	Damage Location (Depends on Service No.)
9163	0039	--	--

Parts Manufacturer	
Atlas, Arteon, Atlas Cross Sport, ID.4	WVO ²⁾
Golf, GTI, Jetta, Tiguan LWB, Taos	3ME ²⁾



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Labor Operation ³⁾ : Charge battery		27068950 = See Elsa for latest time units.
Labor Operation ³⁾ : Radar Sensor Calibration (where directed)		See GFF time expenditure.
Causal Part: Select GFF Time expenditure		01500000
Diagnostic Time ⁴⁾		
GFF Time expenditure	01500000 = Actual GFF printout (50 TU Max.)	YES
Road Test	01210004 = 10 TU	YES
Technical Diagnosis	01320000 = 10 TU max.	YES
Claim Comment: Input “As per Technical Bulletin 2062957” 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 Policies and Procedures Manual.		

Required Parts and Tools

No Special Parts required.

Tool Description	Tool No:
Midtronics Battery Tester/Charger	GRX3000VAS or MTRMSP0702 battery maintainer/charger
VAS Diagnostic Tool	VAS 6150/X & VAS 6160/X and ODIS Service with: current online updates

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.

Example:

The customer has described two events

On August 11,.2020, at about 15:45, about 300 miles, braking event

On September 3, 2020, at about 10:00, about 1000 miles, warning

The vehicle data is as follows:

Data from the instrument cluster:

Date (dd.mm.yyyy) / time (hh:mm:ss) / mileage (km)

04.09.2020 / 10:18:37 / 1087

Triggered:

Date (dd.mm.yyyy) / time (hh:mm:ss) / mileage (km) / trigger type

03.09.2020 / 09:53:29 / 1050 / prior warning (last)	A	sole prior warning
29.08.2020 / 07:47:52 / 935 / prior warning (last but one)	A	sole prior warning
27.08.2020 / 16:04:57 / 899 / braking assistance (last)	C/D	braking assistance
22.08.2020 / 13:35:61 / 750 / braking assistance (last but one)	C/D	braking assistance
11.08.2020 / 15:43:00 / 277 / acute warning (last)	A	acute warning
11.08.2020 / 15:43:00 / 277 / automatic braking (last)	C/D	plus automatic braking

There were a total of six triggering points. The two oldest entries occurred at the same time.

Customer Questionnaire and Complaint Documentation "Front Assist"

If reporting more than one incident please use a separate questionnaire for each incident

1. When did the incident with "Front Assist" occur?

Date _____ Time _____

2. Where did the incident with "Front Assist" occur?

Please provide, for example, the street and the nearest intersection or the Interstate and the nearest exit (precise as possible).

State _____

City _____

Street (driving) _____

Nearest Intersection _____

Driving direction _____

Street Address (if possible) _____

GPS DATA if possible _____

Can you provide pictures from the incident location? _____ If yes, please provide to the dealership.

3. Please give a detailed description of what occurred.
Please include details as to weather, traffic, speed etc.

4. Has this occurred more than once at the same location? _____

5. Is there any video that can be provided from the incident? _____ If yes, please provide to the dealership.

6. Driving speed at onset of incident _____

7. Speed after braking event _____

8. Was there an ABS activation? _____ Could a noise be heard? _____

9. Was the driver accelerating during the incident? _____
10. Was the ACC (Adaptive Cruise Control) switched on?

11. Was the driver turning the steering wheel?

12. If yes, in which direction, left or right? _____
13. Was there a vehicle directly in front of your vehicle? _____ If so, how far?(Distance in yards) _____
14. What was the distance to the vehicle in the next lane? (Distance in yards)

15. Were there any obstructions in the road (pedestrians, animals, debris)?

16. Do you travel regularly with the vehicle loaded (heavy items in the trunk/cargo area or on a trailer hitch carrier)? _____
17. Please make a precise sketch with vehicles, their speeds, and driving directions (Please outline or indicate the customer's vehicle in the sketch!)
18. Was there a warning in the instrument cluster and/or an acoustic signal? _____
If yes, which symbol was shown in the instrument cluster? _____
Please make a precise sketch or provide photo.

19. Please confirm Google maps and street view picture. (May be provided by the dealer.)