

**46-19-01 - At PDI - Vibration / Pulsation or Noise when Braking (U.S. Only)**

Release date: 12/8/2021

Condition

Applicable Vehicles					
Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
All	2018-2022	All	All	All	All

Revision Table			
Instance Number	Published Date	Version Number	Reason For Update
2010245/28	12/8/2021	46-19-01	Include model year 2022 vehicles.
2010245/26	6/4/20	46-19-01	Include model year 2021 vehicles.
2010245/25	10/17/19	46-19-01	Include model year 2020 vehicles.
2010245/24	1/10/2019	V461901	Include model year 2019 vehicles.
2010245/1	9/9/04	V460402	Original publication.

Technical Background

Vibration / Pulsation or noise when braking may be due to Brake Disc corrosion protection which has not been completely removed by normal braking or surface rust built up during transportation.

**Note:**

This Technical Bulletin only applies once at PDI. Please note that vehicles in dealer inventory should be maintained per the recommended 30 days maintenance procedure to prevent excessive rust build up.

Production Solution

No production change required.



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Service

Vehicle Inspection



Note:

Abide by ALL traffic laws and be mindful of the vehicles around you while operating the vehicle.

Step 1:

- Check and adjust the Tire pressure.
- Accelerate the vehicle to greater than 55 MPH (80 km/h).
- Apply the brakes firmly.

Step 2:

The following steps only apply to vehicles with Electronic Parking Brake (EPB):

- For vehicles equipped with Electronic Parking Brake (EPB), DO NOT APPLY PARKING BRAKE WHILE VEHICLE IS IN MOTION.
- Affected rear brake discs will have uneven color across the friction surface. This will determine if the rear discs need to be sanded.
 - If it was determined that the rear brake discs need to be sanded: Clean the rear brake discs. Once completed, road test the vehicle to determine if the noise/vibration was eliminated. If the noise/vibration has not been eliminated, clean the front brake discs.
 - If it was determined that the rear discs do not need to be sanded: Clean the front brake discs.

The following steps only apply to vehicles without Electronic Parking Brake (EPB):

- Accelerate vehicle to 30 MPH (50 km/h).
- Carefully apply Parking Brake.
 - If vibration or noise is observed from the rear of the vehicle, clean the rear brake discs. Once completed, road test the vehicle to determine if the noise/vibration was eliminated. If the noise/vibration has not been eliminated, clean the front brake discs.
 - If vibration or noise is only observed from the front of the vehicle, clean the front brake discs.

Disassembly Inspection

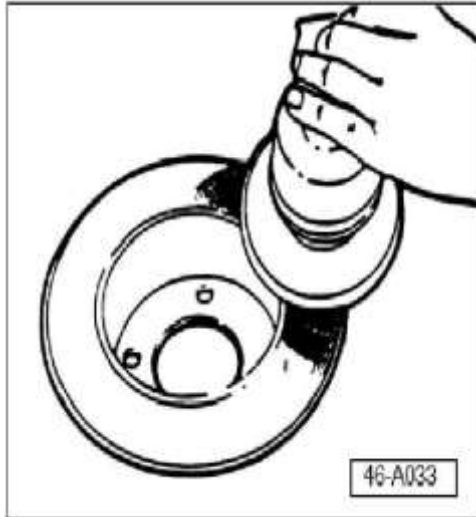
- Remove Wheels, disassemble Brake Calipers, and remove Brake Disc. See the appropriate Repair Manual for the vehicle you are servicing.
- Paint mark Brake Discs for reinstallation (Left/Right).
- Paint mark Brake Pads for reinstallation (Left/Right, Inner/Outer).
- Using a micrometer, measure Brake Disc thickness. See appropriate Repair Manual in Elsa for minimum brake disc thickness.
- Inspect all brake components for damage from outside influences.



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Brake Disc Surface Cleaning



Remove remaining corrosion protection coating or surface rust as follows:

- Sand Brake Disc surfaces until clean metal is visible using leading edge of 40-grit sanding disc in a clockwise direction (1-2 minute per surface).



Replace sanding disc prior to moving to next Brake Disc surface.

To achieve a crosshatch pattern:

- Repeat sanding process using trailing edge of 80-grit sanding disc in a counterclockwise direction.

Replace sanding disc prior to moving to next Brake Disc surface.

Clean all Brake Disc friction surfaces using soap and water solution.



Tip:

Brake Discs must be free of dust and particles left behind due to the sanding process.



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Deglaze and Clean Brake Pads



- Place 80-grit sand paper on flat hard surface.
- Carefully sand Brake Pads until the surface glazing is removed.



Note:

Use one new 80 grit sand paper sheet per set of brake pads.



Tip:

See appropriate Repair Manual in Elsa for new Brake Pad thickness dimensions.

Reassembly

- Install Brake Discs, Brake Pads, Brake Calipers, and Wheels. See appropriate Repair Manual in Elsa for vehicle you are servicing.
- Road test vehicle to confirm vibration or noise concern is corrected.



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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
All (except Routan)	2018-2022	All	All	All	All
SAGA Coding					
Claim Type:		Use applicable Claim Type ¹⁾			
Service Number	Damage Code		HST	Damage Location	
4650	0020		--	001 – Left 002 – Right	
4653	0020		--	001 – Left 002 – Right	
Parts Manufacturer		Passat,Tiguan,Golf R, eGolf, Atlas, Atlas Cross Sport, Arteon, ID.4		WWO ²⁾	
		Jetta, Beetle/Beetle Cabrio, Golf/Golf SportWagen, Alltrack, Tiguan LWB, Taos		3ME ²⁾	
Tiguan/Arteon					
Front Brake Service Only					
Labor Operation 3): Remove and Reinstall Front Wheels			44052000 = See Elsa for latest time units		
Labor Operation 3): Remove and Reinstall Front Brake Carriers			46142050 = See Elsa for latest time units		
Labor Operation 3): Remove and Reinstall Front Discs			46502050 = See Elsa for latest time units		



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Labor Operation 3): Sanding Front Discs and Pads	46503099 = 35 TU
OR	
Rear Brake Service Only	
Labor Operation 3): Remove and Reinstall Rear Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Brake Carriers	46152050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Discs	46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Rear Discs and Pads	46503099 = 35 TU
OR	
Front and Rear Brake Service	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Carriers	46142050 = See Elsa for latest time units and 46152050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = See Elsa for latest time units and 46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Front and Rear Discs and Pads	46503099 = 50 TU
OR	
Atlas, Atlas Cross Sport, Tiguan LWB	
Front Brake Service Only	
Labor Operation 3): Remove and Reinstall Front Wheels	44052000 = See Elsa for latest time units

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Labor Operation 3): Remove and Reinstall Front Brake Carriers	46142050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front Discs	46502050 = See Elsa for latest time units
Labor Operation 3): Sanding Front Discs and Pads	46503099 = 35 TU
OR	
Rear Brake Service Only	
Labor Operation 3): Remove and Reinstall Rear Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Brake Carriers	46152050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Discs	46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Rear Discs and Pads	46503099 = 35 TU
OR	
Front and Rear Brake Service	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Carriers	46142050 = See Elsa for latest time units and 46152050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = See Elsa for latest time units and 46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Front and Rear Discs and Pads	46503099 = 50 TU
OR	
Passat	



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Labor Operation 3): Remove and Reinstall Front Discs	46502050 = See Elsa for latest time units
Labor Operation 3): Sanding Front Discs and Pads	46503099 = 35 TU
Rear Brake Service Only	
Labor Operation 3): Remove and Reinstall Rear Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Discs	46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Rear Discs and Pads	46503099 = 35 TU
OR	
Front and Rear Brake Service	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = See Elsa for latest time units and 46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Front and Rear Discs and Pads	46503099 = 50 TU
OR	
Jetta/Beetle/Beetle Cabrio	
Front Brake Service Only	
Labor Operation 3): Remove and Reinstall Front Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front Discs	46502050 = See Elsa for latest time units



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Labor Operation 3): Remove and Reinstall Front Brake Carriers	46142050 = See Elsa for latest time units
Labor Operation 3): Sanding Front Discs and Pads	46503099 = 35 TU
Rear Brake Service Only	
Labor Operation 3): Remove and Reinstall Rear Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Discs	46532050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Brake Carriers	46152050 = See Elsa for latest time units
Labor Operation 3): Sanding Rear Discs and Pads	46503099 = 35 TU
OR	
Front and Rear Brake Service	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = See Elsa for latest time units and 46532050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Brake Carriers	46142050 = See Elsa for latest time units and 46152050 = See Elsa for latest time units
Labor Operation 3): Sanding Front and Rear Discs and Pads	46503099 = 50 TU
OR	
MY18-19 Golf SportWagen, Alltrack	
Front Brake Service Only	
Labor Operation 3): Remove and Reinstall Front Wheels	44052000 = See Elsa for latest time units



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Labor Operation 3): Remove and Reinstall Front Brake Carriers	46142050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front Discs	46502050 = See Elsa for latest time units
Labor Operation 3): Sanding Front Discs and Pads	46503099 = 35 TU
OR	
Rear Brake Service Only	
Labor Operation 3): Remove and Reinstall Rear Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Discs	46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Rear Discs and Pads	46503099 = 35 TU
OR	
Front and Rear Brake Service	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front Carriers	46142050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = See Elsa for latest time units and 46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Front and Rear Discs and Pads	46503099 = 50 TU
Golf/Golf R/eGolf	
Front Brake Service Only	
Labor Operation 3): Remove and Reinstall Front Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front	46142050 = See Elsa for latest time units

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Brake Carriers	
Labor Operation 3): Remove and Reinstall Front Discs	46502050 = See Elsa for latest time units
Labor Operation 3): Sanding Front Discs and Pads	46503099 = 35 TU
OR	
Rear Brake Service Only	
Labor Operation 3): Remove and Reinstall Rear Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Brake Carriers	46152050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Discs (Golf R & eGolf)	46532050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Rear Discs (Golf, Golf GTI)	46532050 = See Elsa for latest time units (carrier included)
Labor Operation 3): Sanding Rear Discs and Pads	46503099 = 35 TU
OR	
Front and Rear Brake Service	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Carriers	46142050 = See Elsa for latest time units and 46152050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = See Elsa for latest time units and 46532050 = See Elsa for latest time units
Labor Operation 3): Sanding Front and Rear Discs and Pads	46503099 = 50 TU
ID.4	



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Front Brake Service Only	
Labor Operation 3): Remove and Reinstall Front Wheels	44052000 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front Brake Carriers	46142050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front Discs	46502050 = See Elsa for latest time units
Labor Operation 3): Sanding Front Discs and Pads	46503099 = 35 TU
Taos	
Front Brake Service Only	
Labor Operation 3): Remove and Reinstall Front Discs	46502000 = See Elsa for latest time units
Labor Operation 3): Sanding Front Discs and Pads	46503099 = 35 TU
Rear Brake Service Only	
Labor Operation 3): Remove and Reinstall Rear Discs	46532000 = See Elsa for latest time units
Labor Operation 3): Sanding Rear Discs and Pads	46503099 = 35 TU
OR	
Front and Rear Brake Service	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Carriers	46142050 = See Elsa for latest time units and 46152050 = See Elsa for latest time units
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = See Elsa for latest time units and 46532050 = See Elsa for latest time units



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Labor Operation 3): Sanding Front and Rear Discs and Pads		46503099 = 50 TU
Causal Part:		Select 46503099
Outside Material		
1 Axle Serviced		
40-grit, 6-inch sanding disc And 80-grit, 6-inch sanding disc	Part No: PN01117 or equivalent and Part No: PN01116 or equivalent	\$10.00
OR		
2 Axles Serviced		
40-grit, 6-inch sanding disc And 80-grit, 6-inch sanding disc	Part No: PN01117 or equivalent and Part No: PN01116 or equivalent	\$20.00
Diagnostic Time ⁴⁾		
GFF Time expenditure	01500000 = 00 TU max.	NO
Road Test	01210002 = 10 TU 01210004 = 10 TU	YES
Technical Diagnosis	01320000 = 00 TU max.	NO
Claim Comment: Input "As per Technical Bulletin 2010245" in comment section of Warranty Claim.		
<p>¹⁾ Vehicle may be outside any Warranty in which case this Technical Bulletin is informational only.</p> <p>²⁾ Code per warranty vendor code policy.</p> <p>³⁾ Labor Time Units (TUs) are subject to change with ELSA updates.</p> <p>⁴⁾ Documentation required per Warranty Policies and Procedures Manual.</p>		

Required Parts and Tools

No Special Parts required.

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Tool Description	Tool No:	Quantity
6-inch Dual Action sander (Blue Point®)	AT441A or equivalent	-
40-grit, 6-inch sanding disc (3M®)	PN01117 or equivalent	4 (One Axle Serviced) or 8 (Two Axles Serviced)
80-grit, 6-inch sanding disc (3M®)	PN01116 or equivalent	4 (One Axle Serviced) or 8 (Two Axles Serviced)
80-grit sand paper	Obtain from local supplier	4 Sheets
Micrometer (7mm-22mm)	-	-
Metric Scale (0mm-20mm)	-	-

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.