Technical Bulletin

Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
All (except Routan)	2014-2017	All	All	All	All

Condition

46 16 07 August 23, 2016 **2015173** Supersedes Technical Bulletin V461605 dated May 4, 2016 to include model year 2017 applicability.

Brake Disc Pulsation or Vibration (U.S. Only)

When applying brakes at highway speeds the following symptoms may occur:

- Brake pedal pulsation
- Vibration felt in vehicle body
- Steering wheel shakes

Technical Background

For brake vibration or pulsation concerns, brake disc machining is allowed between 6 and 12 months or 6,000 and 12,000 miles (whichever comes first) from the warranty in service date.

Production Solution

No production change required.

Service

Note:

All policies and procedures outlined in this technical bulletin also apply to sublet brake disc machining. Improperly machined brake discs may cause brake pulsation/vibration after several months in service. The servicing facility will be responsible for these failures.

Procedure:

- Remove wheels and separate brake calipers from carrier as outlined in Repair Manual Group 44 – Wheels, Tires, Vehicle Alignment and Group 46 – Brakes – Mechanical components in Elsa.

Brake Disc Inspection

A detailed brake disc inspection is needed to determine if the brake disc should be machined or replaced.

- Inspect brake disc friction surfaces on both sides of the brake disc for:
- Severe discoloration (bluing)
- High heat surface damage (raised hard spots)
- Visible cracks

Brake discs showing any of the above described conditions are **NOT** serviceable. Parts must be replaced in accordance with the Volkswagen Warranty Policy and Procedure Manual.

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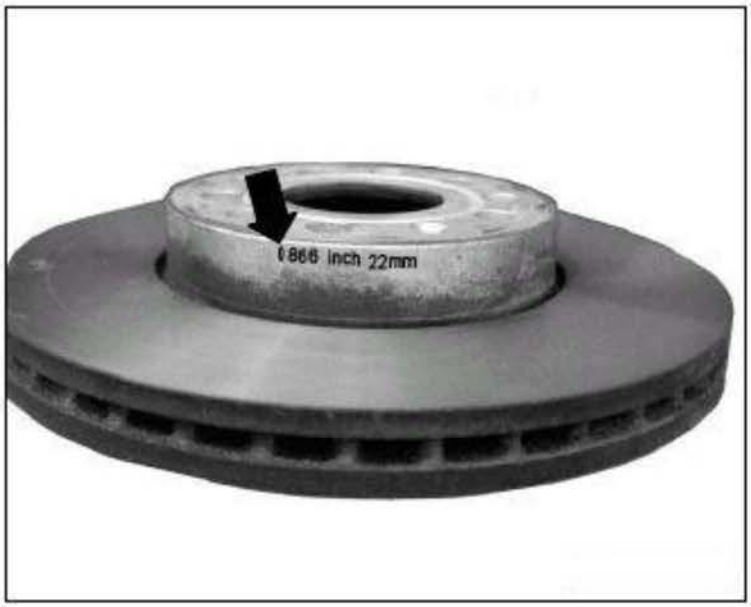
Disc Thickness Measuring

Technician must record the beginning thickness measurements on the back of the repair order.

Each brake disc has the minimum allowed thickness cast, stamped or laser-etched into the disc hub.

- Measure the brake disc thickness in 4 locations using either the Pro Cut International™ disc thickness measuring tool Part No. 50-902 or the Hunter Engineering Company disc thickness measuring tool Part No. 25-99-2. Measurements **MUST** be taken at the same distance from the brake disc outer circumference to ensure consistency.



Note:

The brake disc thickness measurement must exceed the minimum specification after the machining process is completed in order to be re-used. If the brake disc thickness measurement does not meet this requirement, then replace the brake disc.

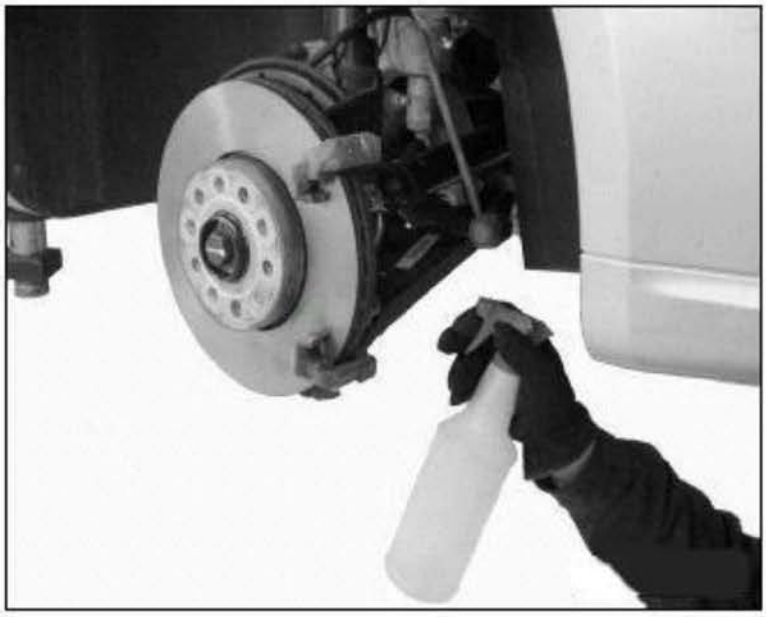
Brake Disc Machining

Note:

All brake discs must be machined.

Recommended on-car brake lathes are either the PRO-CUT International ™ PFM 9.0, or the Hunter Engineering Company model OCL 400. This design of brake lathe will produce a surface quality which will provide proper brake performance without a brake pad to brake disc break-in period.

To ensure that a high quality brake disc finish is produced, brake lathe cutting tools must be maintained as directed by the lathe or tool manufacturer.



- Follow the brake lathe manufacturer's instructions for set-up and machining.
- Wash the brake disc with a soap and water solution upon completion of resurfacing to remove all machining particles.

Technician must record the final thickness measurements on the back of the repair order.

- Re-measure brake disc thickness in 4 locations using either the Pro Cut International™ disc thickness measuring tool Part No. 50-902 or the Hunter Engineering Company disc thickness measuring tool Part No. 25-99-2. If recorded brake disc measurement is less than the minimum thickness, the brake disc **MUST** be replaced.

Note:

Always replace brake discs in pairs (front axle or rear axle). Do not replace all 4 brake discs unless it is required.

- Measure brake disc lateral run out using Pro Cut Disc Lateral run out measuring kit Part No. 50-700FC or the Hunter Disc Lateral run out measuring kit Part No. 25-128-2 with a dial indicator.
- Run out must not exceed 0.1mm.
- If brake disc exceed the 0.1mm specification replace the applicable brake discs.

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Warranty

<table>
<tr><td colspan="6">To determine if this procedure is covered under Warranty, always refer to the Warranty Policies and Procedures Manual [1)]</td></tr>
<tr><td>Model(s)</td><td>Year(s)</td><td>Eng. Code(s)</td><td>Trans. Code(s)</td><td>VIN Range From</td><td>VIN Range To</td></tr>
<tr><td>All
(except Routan)</td><td>2014-2017</td><td>All</td><td>All</td><td>All</td><td>All</td></tr>
<tr><td colspan="2">Claim Type:</td><td colspan="4">Use applicable Claim Type [1)]</td></tr>
<tr><td colspan="6">SAGA Coding</td></tr>
<tr><td colspan="2">Service Number</td><td>Damage Code</td><td>HST</td><td colspan="2">Damage Location
(Depends on Service No.)</td></tr>
<tr><td colspan="2">4650</td><td>0013</td><td>--</td><td colspan="2">Use applicable when indicated in Elsa (L/R)</td></tr>
<tr><td colspan="2" rowspan="2">Parts Manufacturer</td><td colspan="2">Passat, CC,Tiguan,Eos,Touareg, Golf R,eGolf and MY14 Golf</td><td colspan="2">WWO [2)]</td></tr>
<tr><td colspan="2">Jetta/Beetle/Beetle Cabrio, MY14 Jetta SportWagen and MY15-17 Golf/Golf SportWagen</td><td colspan="2">3ME [2)]</td></tr>
<tr><td colspan="6">On Car Lathe is available (All vehicles)</td></tr>
<tr><td colspan="3">Labor Operation 3): Remove and Reinstall Front and Rear Wheels</td><td colspan="3">44052004 = 50 TU</td></tr>
<tr><td colspan="3">Labor Operation 3): Front and Rear Disc Resurfacing – On Vehicle</td><td colspan="3">46504699 = 120 TU
And
46534699 = 120 TU</td></tr>
<tr><td colspan="6">Or</td></tr>
<tr><td colspan="6">If On Car Lathe is unavailable:</td></tr>
<tr><td colspan="6">CC/Tiguan/Eos</td></tr>
</table>

Labor Operation 3): Remove and Reinstall Front and Rear Wheels	**44052004 = 50 TU**
Labor Operation 3): Remove and Reinstall Front and Rear Carriers	**46142050 = 90 TU And 46152050 = 90 TU**
Labor Operation 3): Remove and Reinstall Front and Rear Discs	**46502050 = 10 TU And 46532050 = 10 TU**
Labor Operation 3): Front and Rear Discs Machining	**46504699 = 160 TU And 46534699 = 160 TU**
Or	
Passat	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	**44052004 = 50 TU**
Labor Operation 3): Remove and Reinstall Front and Rear Discs	**46502050 = 70 TU And 46532050 = 70 TU**
Labor Operation 3): Front and Rear Discs Machining	**46504699 = 160 TU And 46534699 = 160 TU**
Or	
Jetta/Beetle/Beetle Carbio and MY14 Jetta SportWagen	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	**44052004 = 50 TU**
Labor Operation 3): Remove and Reinstall Front and Rear Brake Carriers	**46142050 = 90 TU And 46152050 = 90 TU**

Labor Operation 3): Remove and Reinstall Front and Rear Discs	**46502050 = 10 TU And 46532050 = 10 TU**
Labor Operation 3): Front and Rear Discs Machining	**46504699 = 160 TU And 46534699 = 160 TU**
Or	
Touareg	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	**44052004 = 50 TU**
Labor Operation 3): Remove and Reinstall Front and Rear Discs	**46502050 = 110 TU And 46532050 = 90 TU**
Labor Operation 3): Front and Rear Discs Machining	**46504699 = 160 TU And 46534699 = 160 TU**
Or	
MY15-17 Golf SportWagen	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	**44052004 = 50 TU**
Labor Operation 3): Remove and Reinstall Front Carrier	**46142050 = 80 TU**
Labor Operation 3): Remove and Reinstall Front and Rear Discs	**46502050 = 10 TU And 46532050 = 90 TU (includes carrier)**
Labor Operation 3): Front and Rear Discs Machining	**46504699 = 160 TU And 46534699 = 160 TU**

Or	
MY14 Golf	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = 50 TU
Labor Operation 3): Remove and Reinstall Front and Rear Carrier	46142050 = 90 TU And 46152050 = 80 TU
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = 10 TU And 46532050 = 10 TU
Labor Operation 3): Front and Rear Discs Machining	46504699 = 160 TU And 46534699 = 160 TU
Or	
MY15-17 Golf/Golf R/eGolf	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = 50 TU
Labor Operation 3): Remove and Reinstall Front Carrier	46142050 = 80 TU
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = 10 TU And 46532050 = 90 TU (carrier included)
Labor Operation 3): Front and Rear Discs Machining	46504699 = 160 TU And 46534699 = 160 TU
Outside Labor: Sublet Machining	Sublet Machining not to exceed Elsa SRT
Causal Part:	Select Labor
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 2015173" 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

No Special Parts required.

Description	Part No:	Quantity
Pro Cut ™ Disc Thickness Measuring Tool	50-902	1
Hunter Disc Thickness Measuring Tool	25-99-2	1
Pro Cut Disc Lateral Run out Measuring Tool	50-700FC	1
Hunter Disc Lateral Run out Measuring Tool	25-128-2	1
PRO-CUT International ™PFM 9.0	PCIPFM90VW	1
Hunter Engineering Company Model OCL 400	HUNOCL400VW	1

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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.

Document Control Revision Table			
Instance Number	**Published Date**	**Version Number**	**Reason For Update**
2015173/24	8/23/16	V461607	To include model year 2017 applicability.
2015173/23	5/4/16	V461605	Update warranty labor operation for Jetta, Beetle, Beetle Convertible and Jetta SportWagen.
2015173/1	6/11/07	V460701	Original publication.