



# Technical Bulletin

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Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
All (except Routan)	2014-2018	All	All	All	All

## Condition

**46 17 03** November 21, 2017 **2015173** Supersedes Technical Bulletin 46-16-07 (V461607) dated August 23, 2016 to include model year 2018 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.



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## Procedure:

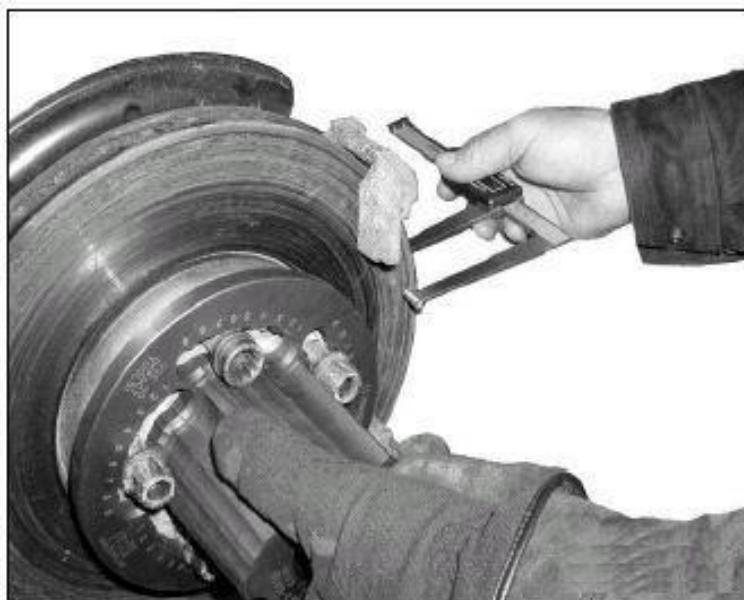
- Remove wheels and separate brake calipers from carrier as outlined in Repair Manual Group 44 – Wheels, Tires, Vehicle Alignment and Group 46 – Brakes – Mechanical components in Elsa.

## 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.



## 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.



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**! 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.

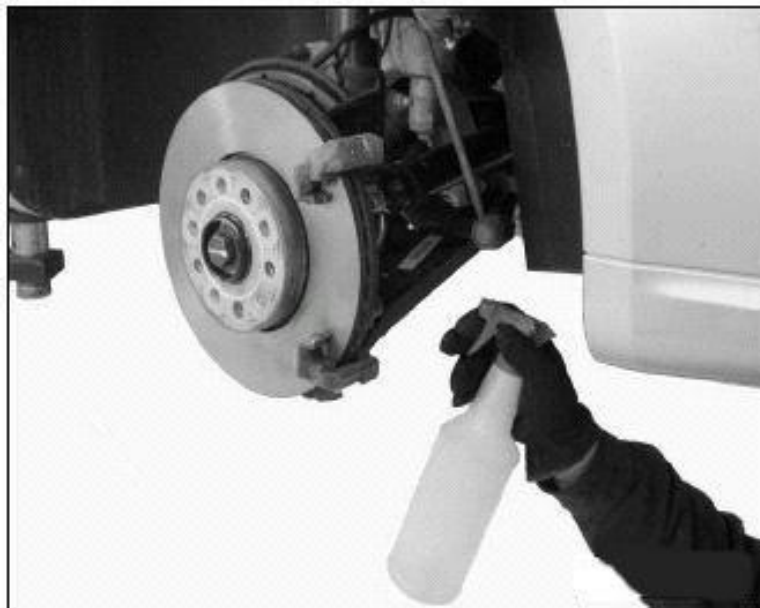
Recommended on-car brake lathes are either the PRO-CUT International™ PFM 9.0, or the Hunter Engineering Company model OCL 400. This design of brake lathe will produce a surface quality which will provide proper brake performance without a brake pad to brake disc break-in period.

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.



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- 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.



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- 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

<b>To determine if this procedure is covered under Warranty, always refer to the Warranty Policies and Procedures Manual <sup>1)</sup></b>					
Model(s)	Year(s)	Eng. Code(s)	Trans. Code(s)	VIN Range From	VIN Range To
All (except Routan)	2014-2018	All	All	All	All
Claim Type:		Use applicable Claim Type <sup>1)</sup>			
<b>SAGA Coding</b>					
Service Number	Damage Code	HST	Damage Location (Depends on Service No.)		
4650	0013	--	Use applicable when indicated in Elsa (L/R)		
Parts Manufacturer	Passat/CC/Tiguan/Eos/ Touareg/Golf R/e Golf and MY14 Golf/Atlas		WWO <sup>2)</sup>		
	Jetta/Beetle/Beetle Cabrio, MY14 Jetta SportWagen and MY15-18 Golf/Golf SportWagen/Alltrack/Tiguan LWB		3ME <sup>2)</sup>		
On Car Lathe is available (All vehicles)					
Labor Operation 3): Remove and Reinstall Front and Rear Wheels			44052004 = 50 TU		
Labor Operation 3): Front and Rear Disc Resurfacing – On Vehicle			46504699 = 120 TU And 46534699 = 120 TU		



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Or	
If On Car Lathe is unavailable:	
CC/Tiguan/Eos	
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	
Tiguan LWB	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = 50 TU
Labor Operation 3): Remove and Reinstall Front and Rear Carriers	46142050 = 80 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



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<b>OR</b>	
<b>Atlas</b>	
<b>Labor Operation 3): Remove and Reinstall Front and Rear Wheels</b>	<b>44052004 = 50 TU</b>
<b>Labor Operation 3): Remove and Reinstall Front and Rear Carriers</b>	<b>46142050 = 80 TU</b> <b>And</b> <b>46152050 = 80 TU</b>
<b>Labor Operation 3): Remove and Reinstall Front and Rear Discs</b>	<b>46502050 = 10 TU</b> <b>And</b> <b>46532050 = 10 TU</b>
<b>Labor Operation 3): Front and Rear Discs Machining</b>	<b>46504699 = 160 TU</b> <b>And</b> <b>46534699 = 160 TU</b>
<b>Or</b>	
<b>Passat</b>	
<b>Labor Operation 3): Remove and Reinstall Front and Rear Wheels</b>	<b>44052004 = 50 TU</b>
<b>Labor Operation 3): Remove and Reinstall Front and Rear Discs</b>	<b>46502050 = 70 TU</b> <b>And</b> <b>46532050 = 70 TU</b>
<b>Labor Operation 3): Front and Rear Discs Machining</b>	<b>46504699 = 160 TU</b> <b>And</b> <b>46534699 = 160 TU</b>
<b>Or</b>	
<b>Jetta/Beetle/Beetle Carbio and MY14 Jetta SportWagen</b>	
<b>Labor Operation 3): Remove and Reinstall Front and Rear Wheels</b>	<b>44052004 = 50 TU</b>





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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	
MY15-18 Golf SportWagen, Alltrack	
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)



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<b>Labor Operation 3): Front and Rear Discs Machining</b>	46504699 = 160 TU And 46534699 = 160 TU
<b>Or</b>	
<b>MY14 Golf</b>	
<b>Labor Operation 3): Remove and Reinstall Front and Rear Wheels</b>	44052004 = 50 TU
<b>Labor Operation 3): Remove and Reinstall Front and Rear Carrier</b>	46142050 = 90 TU And 46152050 = 80 TU
<b>Labor Operation 3): Remove and Reinstall Front and Rear Discs</b>	46502050 = 10 TU And 46532050 = 10 TU
<b>Labor Operation 3): Front and Rear Discs Machining</b>	46504699 = 160 TU And 46534699 = 160 TU
<b>Or</b>	
<b>MY15-18 Golf/Golf R/eGolf</b>	
<b>Labor Operation 3): Remove and Reinstall Front and Rear Wheels</b>	44052004 = 50 TU
<b>Labor Operation 3): Remove and Reinstall Front Carrier</b>	46142050 = 80 TU
<b>Labor Operation 3): Remove and Reinstall Front and Rear Discs</b>	46502050 = 10 TU And 46532050 = 90 TU (carrier included)
<b>Labor Operation 3): Front and Rear Discs Machining</b>	46504699 = 160 TU And 46534699 = 160 TU



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Outside Labor: Sublet Machining		Sublet Machining not to exceed Elsa SRT
Causal Part:		Select Labor
Diagnostic Time <sup>4)</sup>		
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.		
<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 Policy Procedures Manual.</p>		

## Required Parts and Tools

No Special Parts required.

Description	Part No:	Quantity
Pro Cut <sup>TM</sup> 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 <sup>TM</sup> 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
2015173/25	11/21/2017	V461703	To include model year 2018 applicability.
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.