



# Technical Bulletin

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Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
All (except Routan)	2013-2015	All	All	All	All

## Condition

**46 14 06 July 3, 2014 2015173** Supersedes T. B. V461403 dated April 2, 2014 to remove model year 2012 applicability and add model year 2015 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.

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## 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.



### 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.

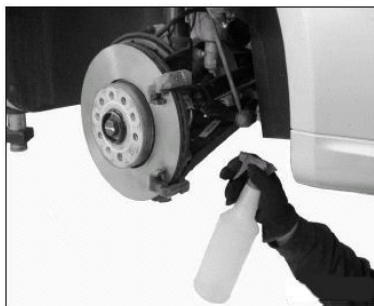
## Brake Disc Machining

**! 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.



- 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.

## 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)	2013-2015	All	All	All	All
<b>Claim Type:</b>			<b>Use applicable Claim Type <sup>1)</sup></b>		
<b>SAGA Coding</b>					
Service Number	Damage Code	HST	Damage Location (Depends on Service No.)		
4650	0013	--	Use applicable when indicated in ElsaWeb (L/R)		
<b>Parts Manufacturer</b>	Passat , Eos, CC, Tiguan, Touareg, 2013 – 2014 Golf		WWO <sup>2)</sup>		
	Jetta, Jetta SportWagen, Beetle, Beetle Convertible, 2015 Golf		3ME <sup>2)</sup>		
<b>On Car Lathe is available (All vehicles)</b>					
<b>Labor Operation 3): Remove and Reinstall</b>			<b>44052004 = 50 TU</b>		



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<b>Front and Rear Wheels</b>	
<b>Labor Operation 3): Front and Rear Disc Resurfacing – On Vehicle</b>	<p>46504699 = 120 TU          And          46534699 = 120 TU</p>
<b>Or</b>	
<b>If On Car Lathe is unavailable:</b>	
<b>CC, Tiguan, Jetta, Jetta SportWagen, Beetle, Beetle Convertible, Passat</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 Discs</b>	<p>46502050 = 70 TU          And          46532050 = 70 TU</p>
<b>Labor Operation 3): Front and Rear Discs Machining</b>	<p>46504699 = 160 TU          And          46534699 = 160 TU</p>
<b>OR</b>	
<b>Touareg</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 Discs</b>	<p>46502050 = 70 TU          And          46532050 = 90 TU</p>
<b>Labor Operation 3): Front and Rear Discs Machining</b>	<p>46504699 = 160 TU          And          46534699 = 160 TU</p>
<b>OR</b>	
<b>Eos</b>	



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Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = 50 TU
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = 90 TU And 46532050 = 90 TU
Labor Operation 3): Front and Rear Discs Machining	46504699 = 160 TU And 46534699 = 160 TU
OR	
2013 – 2014 Golf	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = 50 TU
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = 90 TU And 46532050 = 90 TU
Labor Operation 3): Front and Rear Discs Machining	46504699 = 160 TU And 46534699 = 160 TU
OR	
2015 Golf	
Labor Operation 3): Remove and Reinstall Front and Rear Wheels	44052004 = 50 TU
Labor Operation 3): Remove and Reinstall Front Carriers	46142050 = 80 TU
Labor Operation 3): Remove and Reinstall Front and Rear Discs	46502050 = 10 TU And 46532050 = 90 TU
Labor Operation 3): Front and Rear Discs Machining	46504699 = 160 TU



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	<b>And</b> <b>46534699 = 160 TU</b>	
<b>Outside Labor: Sublet Machining</b>	<b>Sublet Machining not to exceed Elsa SRT</b>	
<b>Causal Part:</b>	<b>Select Labor</b>	
<b>Diagnostic Time <sup>4)</sup></b>		
<b>GFF Time expenditure</b>	<b>01500000 = 00 TU max.</b>	<b>NO</b>
<b>Road Test</b>	<b>01210002 = 10 TU</b> <b>01210004 = 10 TU</b>	<b>YES</b>
<b>Technical Diagnosis</b>	<b>01320000 = 00 TU max.</b>	<b>NO</b>
<b>Claim Comment: Input "As per Technical Bulletin 2015173" in comment section of Warranty Claim.</b>		
<sup>1)</sup> Vehicle may be outside any Warranty in which case this Technical Bulletin is informational only <sup>2)</sup> Code per warranty vendor code policy. <sup>3)</sup> Labor Time Units (TUs) are subject to change with Elsa updates. <sup>4)</sup> Documentation required per Warranty Policy Procedures Manual.		



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## 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

## 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.