Technical Bulletin

Model	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
Passat	2012-2014	2.0L TDI (CKRA)	ALL	ALL	ALL

Condition

21 15 05 June 15, 2015 **2036110** Supersedes Technical Bulletin V211503 dated January 21, 2015 to update note about engine oil circuit flushing.

Engine Lacks Performance, Shaft of Turbine Fan of Turbo Charger Broken or Seized

Check Engine Light ON, Reduced Performance or Noise from Turbocharger. DTC P0299 may be stored in ECM.

DTC	Description
P0299	Turbo/Super Charger Underboost

Technical Background

In the case of a damaged turbocharger it is important to follow the steps contained in this document to avoid repeat repairs.

Production Solution

Implemented into production.

© 2015 Volkswagen Group of America, Inc.
All rights reserved. Information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of Volkswagen Group of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites, without the prior expressed written permission of the publisher.

Service

Tip:

This bulletin only applies, if the symptoms described here are identical with the damage on the customer vehicle.

Check the damage as follows:

- Remove the engine cover according to the repair manual.
- Loosen the intake hose on the turbocharger according to the repair manual.
- Check whether the impeller housing shows signs of contact with the turbine fan.
- Check whether the shaft of the turbocharger turbine fan:
  - Has excessive free play.
  - Is damaged.
  - Is broken or seized.

To confirm a broken shaft on the turbocharger the diesel particulate filter (DPF) must be detached on the turbocharger. This is the only way to check the turbocharger for damage and engine oil ingress on the exhaust side (figure 1).

If no damage is found this technical bulletin does not apply.

- If turbocharger is found to be damaged, the DPF must be reattached at the turbocharger before proceeding to the following steps:

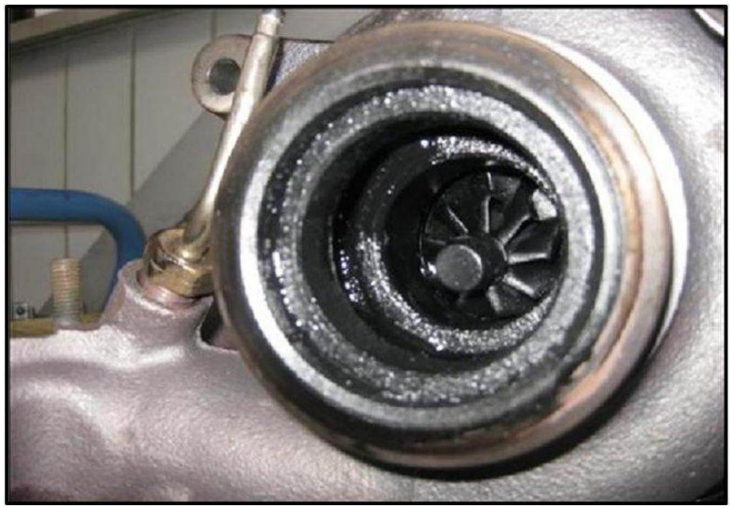

Figure 1 (broken turbocharger shaft, engine oil ingress on exhaust side)

© 2015 Volkswagen Group of America, Inc.
All rights reserved. Information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of Volkswagen Group of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites, without the prior expressed written permission of the publisher.

Tip:

In addition, an endoscope can be fed through the threaded hole of the removed oxygen sensor to check:

The exhaust side of the turbocharger for damage and engine oil ingress.

The DPF for engine oil ingress.

Note:

The complete engine oil circuit must be flushed out before replacing the turbocharger to avoid a repeat repair. To do this, proceed as follows:

Step 1

- Replace the oil filter according to the repair manual and thoroughly clean the inside of the oil filter housing.
- Drain the engine oil according to the repair manual.
- Unscrew the banjo bolt for the oil supply pipe on the cylinder block. Replace the banjo bolt with the hex head bolt with part number WHT 005 747 (figure 2, in green) and tighten it according to the repair manual to block oil supply to the damaged turbocharger.

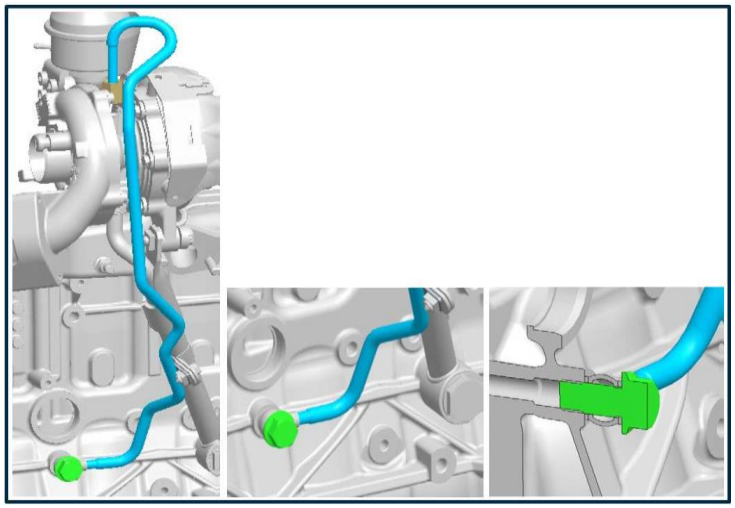

Figure 2

Note:

Flush out the oil circuit while the faulty turbocharger/particulate filter is installed and the intake hose removed from the turbocharger.

- Fill up the engine oil according to the manufacturer guidelines.
- Run the engine at idle speed for about 15-20 minutes.
- Replace the oil filter according to the repair manual and thoroughly clean the inside of the oil filter housing.
- Replace the oil filter housing cap (03L 115 433).
- Drain the engine oil according to the repair manual.

© 2015 Volkswagen Group of America, Inc.
All rights reserved. Information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of Volkswagen Group of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites, without the prior expressed written permission of the publisher.

Step 2

- Change the oil pump according to the repair manual and clean the inside of the oil pan.
- Replace the turbo charger with exhaust manifold according to the repair manual.
- Replace the oil supply pipe for the turbocharger according to the repair manual and attach it to the cylinder block with a new banjo bolt and new seal rings according to the repair manual/parts information.
- Replace the oil return pipe from the turbocharger according to the repair manual/parts information.
- Replace the turbocharger support according to the repair manual/parts information and the banjo bolt for the support (oil return) in the cylinder block according to the repair manual.
- Check the complete boost air system including intercooler for dirt or debris and clean it as necessary.
- Check the DPF for damage or oil ingress, if oil ingress is found it is necessary replace the DPF according to the repair manual/parts information.
- Fill up the engine oil according to the manufacturer guidelines.
- Perform the guided fault finding and delete the ECM fault memory.

© 2015 Volkswagen Group of America, Inc.
All rights reserved. Information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of Volkswagen Group of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites, without the prior expressed written permission of the publisher.

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**
Passat	2012-2014	2.0L TDI (CKRA)	ALL	ALL	ALL

SAGA Coding			
Claim Type:	Use applicable Claim Type [1]		
Service Number:	Damage Code	HST	Damage Location (Depends on Service No.)
2130	0010	--	Use applicable when indicated in ElsaWeb (L/R)

Parts Manufacturer	Passat	KKK [2]

Labor Operation [3] : Drain and fill engine oil. Replace drain plug for oil supply pipe, oil filter housing cap, oil filter and thoroughly clean inside of oil filter housing.	10012999 = 60 TU
Labor Operation [3] : Replace Turbocharger	21301983 = 290 TU
Labor Operation [3] : Replace Oil Pump	17201983 = 20 TU
Labor Operation [3] : Remove + Reinstall Oil Pan	17501933 = 160 TU
Labor Operation [3] : Remove and Install Particulate Filter	26741933 = 370 TU
Labor Operation [3] Use ONLY if Particulate Filter replacement is necessary	26745583 = 30 TU
Labor Operation [3] : Check boost air system	21010199 = 10 TU

© 2015 Volkswagen Group of America, Inc.
All rights reserved. Information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of Volkswagen Group of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites, without the prior expressed written permission of the publisher.

Labor Operation [3] : Charge Battery	**27068950 = 10 TU**	
Causal Part: Turbo Charger	**03L 253 056 ****	
Diagnostic Time [4]		
GFF Time expenditure	**01500000 = 30 TU max.**	**YES**
Road Test	**01210004 = 10 TU**	**YES**
Technical Diagnosis **Includes: loosen and attach intake hose and particulate Filter, Inspect turbo charger**	**01320000 = 140 TU max.**	**YES**
Claim Comment: Input "As per Technical Bulletin 2036110" 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

Part No:	Part Description	Quantity
WHT 005 747	Hex. head bolt (for flushing)	1x
The following parts must be ordered separately according to the parts catalogue depending on the requirements and the vehicle:		
03L 253 056 QX	Turbo charger	1x
03L 115 105 F	Oil Pump	1x
03L 145 771 AN	Engine oil supply pipe for turbo charger	1x
03L 145 736 D	Engine oil return pipe for turbo charger	1x

© 2015 Volkswagen Group of America, Inc.
All rights reserved. Information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of Volkswagen Group of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites, without the prior expressed written permission of the publisher.

03L 145 535 D	Support (engine oil return) for turbo charger	1x
WHT 005 635	Banjo bolt (support)	1x
03L 115 433	Oil filter lid	1x
03L 115 562	Oil filter with seal	2x
According to parts catalogue	Engine oil (Long Life)	8.6 l
According to parts catalogue	Bolts and seals	— (as required)
561 253 053 A	Exhaust pipe with catalyst and diesel particulate filter	1x (if Necessary)

No special tools required.

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.

© 2015 Volkswagen Group of America, Inc.
All rights reserved. Information contained in this document is based on the latest information available at the time of printing and is subject to the copyright and other intellectual property rights of Volkswagen Group of America, Inc., its affiliated companies and its licensors. All rights are reserved to make changes at any time without notice. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, nor may these materials be modified or reposted to other sites, without the prior expressed written permission of the publisher.
Copyright 2011 - 2015 Service Repair Solutions, Inc.