

**From:** Non-responsive content removed  
**To:** [REDACTED]  
**CC:** [REDACTED]  
**Date:** 10/18/2010, 5:20:19 PM  
**Subject:** Re: Analysis results [REDACTED] pumps"

Hello Mr. [REDACTED]

I have reduced the distribution list, since a large distribution list doesn't help us any further.

I have highlighted the answers to your questions in red below.

I was in [REDACTED] with my colleague Mr. [REDACTED] late last week for a process analysis. Over an evening beer we discussed the failures at your plant.

Not to annoy you, but because we want to find out why the failures are occurring at your plant; several questions remain unanswered:

- \* Is the tank for the initial filling of the vehicles within the hall or outside?
- \* Is it an underground tank?
- \* Is the tank secured against the entry of external water?
- \* Can condensation water form in the tank?
- \* Was the tank filled shortly before or after the failure of the first 5 pumps?
- \* Do you have the the analysis results of the fuel samples from the affected vehicles?  
Where are these samples?

With best regards

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AUDI AG

[REDACTED]

74146 Neckarsulm

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[www.audi.com](http://www.audi.com)

Domicile/Sitz: Ingolstadt  
Court of Registry/Registergericht: Local District Court Ingolstadt  
Commercial Register No./HRB Nr.: 1  
Chairman of the Supervisory Board/Vorsitzender des Aufsichtsrats: Martin Winterkorn  
Vorstand/Board of Management: Rupert Stadler (Vorsitzender/Chairman), Ulf Berkenhagen, Michael Dick, Frank Dreves, Peter Schwarzenbauer, Thomas Sigi, Axel Strotbek

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**INFORMATION Redacted PURSUANT TO THE FREEDOM OF INFORMATION ACT (FOIA), 5 U.S.C. 552(B)(6)**

>

>From: Non-responsive content removed

>Sent: Friday, October 15, 2010, 1:22 PM

Non-responsive content removed

>Subject: RE: Analysis results "China pumps"

>

>Hello Mr. [REDACTED],

>I have taken the liberty of removing most of the distribution list... ;-)

>

>Item 1) Why should the iron hydroxide deposits be due to the impact of water during transport?

>After they were removed, the pumps were transported 10,000 km over 2 weeks for analysis; who can say with certainty that there was no water contact? I think it is unlikely, since the pump connections were surely sealed, weren't they?  
In addition, you also found such deposits immediately after removal.

>

>Here is the examination from our local lab on the deposits found for the 1 pump that was not OK.

>For more exact clarification, I suggest that the lab experts exchange information amongst themselves.

>Dr. [REDACTED] is the main contact person for the [REDACTED] lab.

>

> < Message: [REDACTED] chemical composition test result of "metal powder" >>

>

>Item 2) Please clarify your question as to the supply chain with [REDACTED] through [REDACTED] @ [REDACTED] can you please help here?

>

>Item 3) Gasoline in the remaining fuel in the RP2 pump:

>Are there any findings as to which concentrations of gasoline result in the failures? I am not familiar with any systematic examinations. I will pose this question to Bosch on Wednesday.

>As every doctor knows: "The dosage makes the poison..."

>

>

>Regards

>

>Non-responsive content removed

>

>

>

>

>From: Non-responsive content removed

>Sent: Thursday, October 14, 2010 12:29 AM

Non-responsive content removed

>Subject: Analysis results "[REDACTED] pumps"

>

>Hello all,

>

>Bosch presented additional analysis results today of the 5 pumps that were removed from the blocked vehicles in [REDACTED]. Deposits were discovered on all the pumps.

>These deposits consist of iron hydroxide [Fe (OH)<sub>2</sub>]. It is created from a reaction between iron and water (statement from Bosch).

>

>The remaining fuel from the RP2 from the Q verification run (Simmerl pump) contained gasoline according to the gas chromatography. The concentration cannot be determined; we will have to wait for the fuel sample.

>

>Furthermore, the 5 pumps that were removed in the delivery state (pump did not rotate) in [REDACTED] arrived at Bosch today. Analysis is underway.

>

>

>[REDACTED], how are the engines delivered in [REDACTED]? Are the containers leak-proof? Please clarify and provide information

>

>

>

>With best regards

>

>[REDACTED]

>

>[REDACTED]

>AUDI AG

>

>74146 Neckarsulm

>[REDACTED]

>

>

>[www.audi.com](http://www.audi.com)

>

>Sitz/Domicile: Ingolstadt

>Court of Registry/Registergericht: Local District Court Ingolstadt

>Commercial Register No./HRB Nr.: 1

>Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Martin Winterkorn

>Vorstand/Board of Management: Rupert Stadler (Vorsitzender/Chairman), Ulf Berkenhagen, Michael Dick, Frank Dreves, Peter Schwarzenbauer, Thomas Sigi, Axel Strotbek

>

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>

**From:** Non-responsive content removed  
**To:**  
**CC:**

**Date:** 10/21/2010, 8:35:00 AM  
**Subject:** Re: Analysis results "IN pumps"

Please delete the previous mail with the incorrect subject!

Best regards

Non-responsive content removed

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**From:** Non-responsive content removed  
**Sent:** Thursday, October 21, 2010, 9:34 AM

Non-responsive content removed

**Subject:** Re: Analysis results "Non-responsive content removed"

Hello Mr. [redacted]

4 of the 5 returned HP pumps from [redacted] (rail pressure too high) had brown deposits on roller or camshaft (similar to [redacted] but somewhat weaker). Pictures will follow. Since the metering units (MU) are OK, we currently do not have an explanation for the excessive rail pressure.

If such a vehicle is found again, please let me and Bosch know before the repair.

We should drive the vehicle the next item, to ensure that the deviation of rail pressure is recorded in MSG (occurs from delta\_p 300 bar; was previously approx. 250 bar on the roller).

To find an explanation for the brown deposits, we also have to examine the fuel side! Please forward the mail to the responsible planning department, so we can get answers from [redacted] Development (like [redacted]).

Another explanation for the deposits would be "high temperature" in the fuel / pump. Can you image that these pumps/vehicles had a different sequence on the assembly line/roller for whatever reason?

Thank you!

Best regards

Non-responsive content removed



AUDI AG

85045 Ingolstadt

Non-responsive content removed

---

From: Non-responsive content removed

Sent: Thursday, October 21, 2010, 9:09 AM

Non-responsive content removed

Subject: FW: Analysis results "pumps"

Hello Mr. Non-responsive content removed

Can you please have these process questions answered?

Regards,

Non-responsive content removed

---

From: Non-responsive content removed

Sent: Tuesday, October 19, 2010 12:19 AM

To: Non-responsive content removed

Cc:

Subject: Re: Analysis results "pumps"

Hello Mr. Non-responsive content removed

- \* Is the tank for the initial filling of the vehicles within the hall or outside? (Addendum: MLA, MLB1, MLB2)
- \* Is it an underground tank?
- \* Is the tank secured against the entry of external water?
- \* Can condensation water form in the tank?
- \* Was the tank filled shortly before or after the failure of the first 5 pumps?
- \* Additional question: Where is the fuel withdrawn from the tank (lowest point, immersion pipe, ...??)

With best regards

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AUDI AG

74146 Neckarsulm

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Domicile/Sitz: Ingolstadt

Court of Registry/Registergericht: Local District Court Ingolstadt

Commercial Register No./HRB Nr.: 1

Chairman of the Supervisory Board/Vorsitzender des Aufsichtsrats: Martin Winterkorn

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**From:** Non-responsive content removed  
**To:** [Redacted]  
**CC:** [Redacted]  
**Date:** Tuesday, 15 January 2008 4:52:00 PM  
**Subject:** Re: Slides on particles in the intake valve  
**Attachments:** [CP4\\_Beanstandungen\\_FeP080115.pdf](#)

Hello [Redacted]

We will come up to you in 10 minutes.

Best regards

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AUDI AG

85045 Ingolstadt

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Domicile/Sitz: Ingolstadt  
Court of Registry/Registergericht: District Court of Ingolstadt  
Commercial Register No.: 1 Chairman of the Supervisory Board: Martin Winterkorn

Vorstand/Board of Management: Rupert Stadler (Chairman), Ulf Berkenhagen, Michael Dick, Frank Dreves, Axel Strotbek, Ralph Weyler, Werner Widuckel

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**From:** Non-responsive content removed  
**Sent:** [Redacted]  
**To:** [Redacted]  
**Cc:** [Redacted]  
**Subject:** Slides on particles in the intake valve

Hello [Redacted]

Here are the revised slides.

<<CP4\_Beanstandungen\_FeP080115.pdf>>

Best regards

Non-responsive content removed

Robert Bosch GmbH

Non-responsive content removed

GERMANY  
[www.bosch.com](http://www.bosch.com)

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Domicile: Stuttgart, Court of Registry: Local Court of Stuttgart Commercial Registry no. 14000 Chairman of the Supervisory Board: Hermann Scholl; Management Board: Franz Fehrenbach, Siegfried Dais; Bernd Bohr, Wolfgang Chur, Rudolf Colm, Gerhard Kümmel, Wolfgang Malchow, Peter Marks; Volkmar Denner, Peter Tyroller

**From:** Non-responsive content removed  
**To:** [REDACTED]  
**CC:**  
**Date:** 06/21/2010 11:01:10 A.M.  
**Subject:** FW: Overheads from Q meeting  
**Attachments:** [2010-06-09 Q Gespräch Audi RB.pdf](#)

**From:** Non-responsive content removed  
**Sent:** Monday, June 21, 2010 11:25 AM

Non-responsive content removed

**Subject:** Overheads from Q meeting

Hello Mr [REDACTED]

Please find attached the overheads shown at the Q meeting on 06/09/2010, as requested.  
Best regards / mit freundlichen Grüßen

Non-responsive content removed

Robert Bosch GmbH

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[www.bosch.com](http://www.bosch.com)

Headquarters: Stuttgart, Court of Registry: Amtsgericht Stuttgart, HRB 14000;  
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Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks,  
Peter Tyroller; Uwe Raschke



**From:** Non-responsive content removed  
**To:** [Redacted]

**CC:** [Redacted]  
**Date:** 09.05.2011 14:30:54  
**Topic:** Re: Minutes of Top Q-meeting on Bosch CP4 cleanliness  
**Attachments:** [105036 Protokoll Top Q-Gespräch Sauberkeit CP4.pdf](#)  
[105036 1 Anlage zum Protokoll Top Q-Gespräch.pdf](#)

**From:** Non-responsive content removed  
**Sent:** [Redacted]  
**To:** [Redacted]  
**Subject:** Re: Minutes of Top Q-meeting on Bosch CP4 cleanliness

Dear colleagues,

Our activities for your information.

Best wishes,

Non-responsive content removed

**From:** Non-responsive content removed  
**Sent:** Friday, 6. May 2011 10:44  
**To:** Non-responsive content removed  
**Cc:** [Redacted]  
**Subject:** Minutes of Top Q-meeting on Bosch CP4 cleanliness

Mit freundlichen Grüßen / Best regards

Non-responsive content removed

Robert Bosch GmbH

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Sitz/Domicile: Stuttgart, Registergericht/Court of Registry: Amtsgericht Stuttgart, HRB 14000;  
Aufsichtsratsvorsitzender/Chairman of the Supervisory Board: Hermann Scholl; Geschäftsführung/Management: Franz Fehrenbach, Siegfried Dais;  
Bernd Bohr, Rudolf Colm, Volkmar Denner, Wolfgang Malchow, Peter Marks,  
Peter Tyroller; Stefan Asenkerschbaumer, Uwe Raschke, Wolf-Henning Scheider

**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 11/24/2008, 11:24:04 AM

**Subject:** Re: [REDACTED] FW: Status report CP4 drivetrain damage WK45 v\_24\_11\_08

Hello,

FYI: I found an error in the legend: the colors for "with customer" and "Field" are mixed up in the legend

Best regards

Non-responsive content removed

Robert Bosch GmbH

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[www.bosch.com](http://www.bosch.com)

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Bernd Bohr, Rudolf Colm, Gerhard Kümmel, Wolfgang Malchow, Peter Marks;  
Volkmar Denner, Uwe Raschke, Peter Tyroller

**From:** Non-responsive content removed

**Sent:** Monday, November 24, 2008, 11:07 AM

Non-responsive content removed

**Subject:** [REDACTED] FW: Status report CP4 drivetrain damage WK45 v\_24\_11\_08

Hello [REDACTED]

Please put 8.000ml HPP in the list as a field pump and not an endurance run pump.

This report is not reported with the launch report.

This will make the table correct again.

- 3 field pumps
- 2 endurance run pump
- 1 field pump reported but has yet to turn up.

**Yours sincerely,**

Volkswagen AG

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**From:** Non-responsive content removed  
**Sent:** Tuesday, November 18, 2008, 1:29 PM  
**To:** Non-responsive content removed  
**Cc:**  
**Subject:** Re: Status report CP4 Drivetrain damage WK45

Dear Mr [REDACTED]

For the weekly status, I am currently evaluating the so-called [REDACTED] list. New field breakdowns from VW are being reported by Mr [REDACTED] to Mr [REDACTED] which in turn is entering this into his list to be forwarded to me.

As of today, only the USA breakdowns with customer have been entered there, which I have added to my overview. I have put them in an Excel file for you (see Appendix) This comprises the USA breakdowns from the list maintained by Mr [REDACTED] and the USA breakdowns which Mr [REDACTED] is maintaining in his list (only ever CP4.1. BIN5) As you can see, 3 USA Endurance run or trial breakdowns are listed, namely cases A, D, E (A, D in both lists and E in Mr [REDACTED]'s list)

With customer, there are only two cases (B and C) in both lists. Other cases are neither registered with Mr [REDACTED] or Mr [REDACTED]. In this regard, I have also requested all entries from the [REDACTED] plant and from Development They also do not know about any other BIN5 CP4.1 failures

If you cannot find the data for the two cases you mentioned in the list, please send a mail to Mr [REDACTED] who collects and reports the failures centrally for VW.

Best regards

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Robert Bosch GmbH

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Volkmär Denner, Uwe Raschke, Peter Tyroller

**From:** Non-responsive content removed  
**Sent:** Saturday, November 15, 2008, 12:19 PM

Non-responsive content removed

**Subject:** FW: Status report CP4 Drivetrain damage WK45

Dear Mr [redacted]

Please correct the number of failures for the 2.0 I 4V CR BIN5 engine to "4".  
Yours sincerely,

**From:** Non-responsive content removed

**Sent:** Friday, November 14, 2008, 4:38 PM

Non-responsive content removed

**Subject:** Status report CP4 Drivetrain damage WK45

Dear all,

Please find enclosed the status report for the CP4 drivetrain damage as of WK4 5  
and the Failure list as of 14.11.2008.

<Non-responsive content removed> Liste Triebwerksschäden CP4 14 11 08\_mit internem WE.xls>> <<Status CP4 Triebwerksschäden-2008-KW45.pdf>>

**Explanations about the slides:**

The slides show the status of reported CP4 drivetrain failures up to and including the calendar week named.  
The attached Excel list was used for the evaluation.  
The slides are distributed every Friday if new cases were added to the database or if measures were updated

- Slide 1: Failures Audi/VW vehicles with customer
- Slide 2: Statistics for 0km/field failures CP4.1 [redacted]
- Slide 3: Statistics for 0km/field failures CP4.2 [redacted] released)
- Slide 4: Statistics for all drivetrain failures CP4.1/2 [redacted] with measures implemented
- Slide 5: Statistics for all drivetrain failures CP4.1/2 [redacted]
- Slide 6-11: current production activities for the prevention of drivetrain damage

Best regards

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Robert Bosch GmbH

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Bernd Bohr, Rudolf Colm, Gerhard Kümmel, Wolfgang Malchow, Peter Marks;  
Volkmar Denner, Uwe Raschke, Peter Tyroller

**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 3/26/2009, 4:47:21 PM

**Subject:** FW: US\_07 TDI CR: High pressure fuel pump...breakdown

**Attachments:** [9M288024\\_parts.pdf](#)  
[9M288024\\_tow in.pdf](#)

Hi [REDACTED],

Please only request the pump and send to Mr [REDACTED] if poss.

Thank you.

[REDACTED]

>

---

>From: Non-responsive content removed

>Sent: Thursday, March 26, 2009, 2:54 PM

>To: Non-responsive content removed

>Cc:

>Re: US\_07 TDI CR: High pressure fuel pump...breakdown

>

>Hello [REDACTED],

>

>Received the following parts today:

>

>

>

> Do you want to have only the pumps or all parts of the breakdown?

>

>

>

Kind regards,

[REDACTED]

>

>



Grüne Kopie

Date: 3/19/2009

Page 1/1

Shipping Invoice No. 2009/03-1080

Internal Address

Non-responsive content removed

Tax-ID: Non-responsive content removed

Volkswagen AG

Non-responsive content removed

Mfg. Code:

DUNS:

Supplier:

Contact Person:

Telephone: Non-responsive content removed

Non-responsive content removed

Part Number	Description	Produced in	Unit Price	Quantity	Amount
03L130089	DISTRIBUTOR LINK	DEU	10.00	1	10.00 USD
03L130277A	INJECTION UNIT	DEU	11.00	4	44.00 USD
03L130755A	HIGH-PRESSURE PUMP	DEU	14.59	1	14.59 USD
5N0906129B	BRACKET	DEU	5.00	1	5.00 USD

**Comment**

Requested by M. [Redacted]

Total Amount: 73.59 USD

I HEREBY CERTIFY THAT THE INFORMATION ON THIS INVOICE IS TRUE AND CORRECT AND THAT THE CONTENTS OF THIS SHIPMENT ARE AS STATED ABOVE.

"Defective Parts - No commercial value"

(Signature)

Wareneinnahme Wolfsburg

25. März 2009

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Closure date:

3/19/2009

Logistic Provider:

FedEx Express

Processed by:

Non-responsive content removed

Recipient

Dealer: USA 444 23324  
EA11003EN-00589[0]  
Claim type: 1-10 Warranty Vehicle Warranty  
Sales model: 1K577M Wagon 2.0 BasicUS1  
Vehicle ID no.: 3VWTL71K99M  
Manufacturer: VOLKSWAGEN PKW  
Delivery date: 12/24/2008  
DMS delivery:  
Reception date: 01/30/2009  
Repair completion date:

Claim no.: 51532 / 01  
DMS claim number: 51532  
Case number:  
TPI number:  
Engine number: CBEA Engine plant: C 080911  
Gearbox number: KQC 0000890  
Production date: 10/15/2008  
Production plant: VW DE MEXICO, PUEBLA  
Warranty limits (days): 37  
02/11/2009 Mileage Km/Miles: 2525

Comment claim / hand written comment:  
N ONCE HIGH PRESSURE PUMP BAD REPLACE FUEL S  
YSTEM PER TECH L

Entry date: 02/11/2009  
Date of print: 02/13/2009  
Printing user:  
Name of user:

Service no.: 2045 Fuel pump  
Damage code: 0010 MECHANICAL FAULT,CR  
Fitted part: 03L 130 755 A PUMP  
Damage causing part:  
Partscheckroom result:  
Parts recipient importer:

Tow in: Yes  
Damage location:  
Quantity: 1,00  
Dispatch type: Parts Logistics  
Parts recipient manufacturer:  
C.R.P

Repair code: 2  
Parts manufacturer:

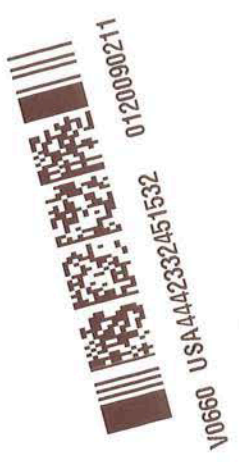
Non-responsive content removed



V0660 USA4442332451532 0120090211



3VWTL71K99M28802403L130755A 00101





**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 5/13/2009, 11:55:43 AM

**Subject:** 1st opinion on the following goods received dated 5/13/2009 VA99080 / VA99083 (4VW195-197)

Dear Sirs,

The following pumps have been received and are being analyzed.

Best regards,

Non-responsive content removed

Robert Bosch GmbH

Non-responsive content removed

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, HCommercial Register No. 14000; Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais; Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks, Peter Tyroller; Uwe Raschke

QMM no.	QC no.	Customer material	GA	PNR.	Line and series	DM	WE_AZ		Complaint	Final finding	Failure location	Engine/Veh. ID no.	Customer followup no.
4VW195	230002480861	03L130755	40	507	02-0418	1/16/2009	5/13/2009	9509	Does not start. After stopping at traffic light s		Non-responsive content removed	3C9E [REDACTED]	VA 99080
4VW196	230002480862	03L130755A	40	508	01-1008	3/6/2008	5/13/2009	17701	Loss of power, Check light		USA	71K89 [REDACTED]	VA 99083
4VW197	230002480863	03L130755A	40	508	04-0437	5/10/2008	5/13/2009	9009	Vehicle does not start, Check light		USA	71K39 [REDACTED]	VA 99083

**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 5/15/2009, 1:49:00 PM

**Subject:** FW: 2. opinion on the following goods received dated 5/13/2009 VA99083 (4VW196-197)

... has been added.

With best wishes,

---

**From:** Non-responsive content removed

**Sent:** Friday, May 15, 2009, 2:37 PM

**Non-responsive content removed**

**Subject:** 2nd opinion on the following goods received dated 5/13/2009 VA99083 (4VW196-197)

Dear Sirs,

The following pumps were analyzed. The result of the finding is drivetrain damage.  
The 8D reports have been prepared.

Best regards,

Non-responsive content removed

Robert Bosch GmbH

Non-responsive content removed

Non-responsive content removed

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000;  
Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais;  
Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks,  
Peter Tyroller; Uwe Raschke





**BOSCH**

011

0 445 010 508

CR/CP4S1/R35/20

03L 130 755 A



01 060308

BPT 1008



0003



Made in

Non-responsive content removed





**BOSCH**

011

0 445 010 508

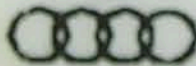
CR/CP4S1/R35/20

03L 130 755 A



04 100508

BPT 0437



0004



Made in

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**WE\_AZ**

**KM**

**Complaint**

**5/13/2009**

**17701**

**Power  
Check**

**5/13/2009**

**9009**

**Vehicle Start  
Check**

**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 8/6/2009, 1:51:42 PM

**Subject:** 2nd opinion on the following goods received dated 7/31/2009 BPT0414  
(4VW237)

**Attachments:** [4VW237.pdf](#)

Dear Sirs,

The pump mentioned below was analyzed.

Preliminary analysis result (intermediate result):

\* Leaking at shaft seal

The pump is being analyzed further. I will send you the results as soon as possible.

Best regards,

Non-responsive content removed

Robert Bosch GmbH

Non-responsive  
content removed

Non-responsive content removed

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000;  
Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais;  
Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks,  
Peter Tyroller; Uwe Raschke

QMM no.	QC no.	Customer material	GA	Part no.	Line + Series	DM	WE_AZ	KM	Complaint	Intermediate result	Failure location	Engine/ VIN	Customer follow-up no.
4VW237	230002569289	03L130755A	40	508	01-0414	29.02.2008	31.07.2009	14360	Drivetrain damage	Pump leaking	USA	3VWCL71K 99M [REDACTED]	BPT0414

**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 12.08.2009 07:51:01

**Thema:** 3.0L Metal Damage VIN: WVGFM77LX9D [REDACTED] Make: VW

Hi [REDACTED],

if there is metal particle in high pressure pump inside, please send the pump and fuel samples to [REDACTED]. When it possible, send a photo from the identification plate of the pump. Is there any damage in the cylinder head?

Shipping address pump and fuel samples:

Non-responsive content removed

Non-responsive content removed

Regards

**From:** Non-responsive content removed

**Sent:** Tuesday, August 11, 2009 4:49 PM

**To:** Non-responsive content removed

**Cc:**

**Subject:** FW: 3.0L Metal Damage

[REDACTED]

I have advised the Helpline to ask this dealer to not perform any repairs to the vehicle until we have contacted them. Can you please engage in this case? I would like to get someone to this vehicle to get fuel samples and we need to get the parts back from the vehicle. I would recommend that the parts and fuel samples be sent directly to [REDACTED] for analysis. The engine should also be checked for compression.

[REDACTED]

Please advise which parts you would want from this car. High pressure pump, fuel sample, ....

Regards,

Non-responsive content removed

U.S.A.

Non-responsive content removed



**From:** [redacted]  
**Sent:** Monday, August 10, 2009 6:56 PM  
**To:** Non-responsive content removed  
**Cc:** [redacted]  
**Subject:** 3.0L Metal Damage

[redacted]

Can you take a look at this case and the picture (fuel filter housing) and let me know where you want to go next. I am having the tech forward me the other pictures and I will get them to you as soon as I get them. Thank you in advance.

Access Code: 490327      Date Opened: Mon Aug 10 2009 12:38:00 GMT-0400 (Eastern Daylight Time)  
case Code : MC-355290      Job Number : 31563364  
Technician : [redacted]      Technician Phone: null  
Dealer Name: [redacted]      [redacted]  
Corp Contact: [redacted]      Corporate Phone: [redacted]  
Consultant: [redacted]      Dealer Code: [redacted]  
Concern Group: Non-responsive content removed  
Group Assigned To: [redacted]  
Assignee: crandem  
Ticket Status: Open: Technician in Process

VIN: WVGFM77LX9D [redacted]      Make: VW  
Model Code: 7L60Y3      Year: 2009      Mileage: 2205  
Engine: 3.0L      Transmission: Automatic  
Country: USA      Service Date: Tue Jun 16 2009 20:00:00 GMT-0400 (Eastern Daylight Time)

08/10/2009 12:38:01: US/Eastern: [redacted] Initiated: Issue Opened by Dealership  
08/10/2009 12:38:01: US/Eastern: [redacted] Initiated: check vehicle crank no start  
in tank fuel pump comes on fuel in lines before high pressure pump broke lines open to injectors no fuel coming out  
08/10/2009 12:58:57: US/Eastern: [redacted] Open: Consultant in Process: Customer Comments: check vehicle crank no start in tank  
fuel pump comes on fuel in lines before high pressure pump broke lines open to injectors no fuel coming out  
08/10/2009 12:58:57: US/Eastern: [redacted] Open: Consultant in Process: Workshop Findings: tech states fuel pum in the tank does  
come on.  
08/10/2009 12:58:57: US/Eastern: [redacted] Open: Consultant in Process: Advised the tech to attach a fault log, check pressure supply  
to the high pressure pump while cranking, get a fuel sample, check fuel filter for any kind of contamination, update the vta with results.  
08/10/2009 13:57:49: US/Eastern: [redacted] Open: Dealer Updated: metal filings in filter housing  
08/10/2009 17:13:59: US/Eastern: [redacted] Open: Consultant in Process: Please remove the metal filings, find out if they are magnetic,  
place them on a white piece of paper with a pen or pencil to show the size comparison and please take a picture.  
08/10/2009 17:53:06: US/Eastern: [redacted] Open: Technician in Process: Advised the tech to attach the pictures to the VTA ticket.  
08/10/2009 18:17:39: US/Eastern: [redacted] Open: Dealer Updated: filings are magnetic  
08/10/2009 18:22:00: US/Eastern: [redacted] Open: Consultant in Process: thanks for the update, call in for further direction.  
08/10/2009 18:51:18: US/Eastern: [redacted] Open: Technician in Process: Forwarding the case to Product Support.  
08/10/2009 18:53:10: US/Eastern: [redacted] Open: Technician in Process: Advised the tech to forward the rest of the pictures to my e-mail.  
I attached the 1st picture and am sending the case to [redacted] for review.

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Volkswagen of America, Inc.  
3800 Hamlin Road  
Auburn Hills, MI 48326

Non-responsive content removed

**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 11/23/2009, 6:33:00 PM

**Subject:** FW: Investigation Report 1933 - CP4

**Attachments:** [09-UA 1933 - \[REDACTED\]-USA - HDP-Schaden CP4 - Hr. \[REDACTED\].pdf](#)

... and again no indication of poor fuel (here on the "old failure" Q7 with 1,790 km/miles in California USA) !  
The poor fuel must turn up at some point if it exists!

>With best wishes,

>

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>

>From: Non-responsive content removed

>Sent: Monday, November 23, 2009, 5:23 PM

>To: Non-responsive content removed

>Re:: Investigation Report 1933 - CP4

>

>Hello Mr [REDACTED],

>

>Here is the Investigation report 1933 concerning: CP4 damage

>

>

>

>With best wishes,

>

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Audi AG, Neckarsulm

Non-responsive content removed

>[www.audi.com](http://www.audi.com)

>

>Sitz/Domicile: Ingolstadt

>Registergericht/Court of Registry: Local District Court Ingolstadt

>HRB Nr./Commercial Register No.: 1

>Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Martin Winterkorn

>Vorstand/Board of Management: Rupert Stadler (Vorsitzender/Chairman), Ulf Berkenhagen, Michael Dick, Frank Dreves, Peter Schwarzenbauer, Axel Strotbek, Werner Widuckel

>

>Wichtiger Hinweis: Die vorgenannten Angaben werden jeder E-Mail automatisch hinzugefügt und lassen keine Rückschlüsse auf den Rechtscharakter der E-Mail zu.

>Important Notice: The above information is automatically added to this e-mail. This addition does not constitute a representation that the content of this e-mail is legally relevant and/or is intended to be legally binding upon AUDI AG.

>

## Investigation Report no. 09/ 1933



Audi

Materials Engineering Non-responsive content removed

Department <small>Non-responsive content removed</small>	Client <small>Non-responsive content removed</small>	Phone <small>Non-responsive content removed</small>	Date 10/13/2009		
Vehicle	Subject 1x DF Sample (USA)	Part number			
QTS number	Mileage / time	Breakdown <input checked="" type="checkbox"/>	A-fault <input type="checkbox"/>	fault <input type="checkbox"/>	C-fault <input type="checkbox"/>
Field <input checked="" type="checkbox"/>	Hall damage case <input type="checkbox"/>	Number of problems parts	Supplier	Material	

**Procedure / Investigation Request** (to be completed by client)

HPP damage (CP4) -&gt; Fuel analysis

(WAIAM74L89D Non-responsive content removed)**Investigation result**

- The biodiesel-free fuel meets the requirements of German DIN 51628 standard except for an excessive sulfur content of 12 ppm.
- All parameters seen as critical for the case of damage tend to be not worthy of notice. The lubrication capability is not great but still complies with the standard. Water content, viscosity, TAN and FAME content are also to be regarded as OK.  
→ A direct association between this fuel sample and the mentioned fault pattern cannot be established

Parameters investigated:		Sample	DIN 51628
▪ Density at 15 °C	[kg/m <sup>3</sup> ]	<b>839.1</b>	820-845
▪ FAME content	[Vol.-%]	<b>&lt; 0,1</b>	7
▪ Monoaromatic compounds	[Vol.-%]	<b>20.4</b>	-
▪ Diaromatic compounds	[Vol.-%]	<b>1.5</b>	-
▪ Tri+ aromatic compounds	[Vol.-%]	<b>0.1</b>	-
▪ Polyaromatic compounds	[Vol.-%]	<b>1.7</b>	max. 8
▪ Total aromatic compounds	[Vol.-%]	<b>22.0</b>	-
▪ Sulfur content	[mg/kg]	<b>12.1</b>	max. 10
▪ Oxidation stability (Rancimat)	[hours]	<b>&gt;48</b>	min. 20
▪ Oxide ash	[Weight %]	<b>&lt; 0,001</b>	max. 0.01
▪ Water content	[mg/kg]	<b>35</b>	max. 200
▪ Kin. viscosity	[mm <sup>2</sup> /s]	<b>2.77</b>	200-4.50
▪ Lubrication capability	[µm]	<b>401</b>	max. 460
▪ Acidic number (TAN)	[mgKOH/g]	<b>0.004</b>	
▪ var. metal contents <sup>1)</sup> (ICP scan)	[mg/kg]	<b>not measurable</b>	
▪ Total contamination	[mg/kg]	<b>8</b>	max. 24

<sup>1)</sup> Silver, aluminum, boron, barium, calcium, cadmium, chrome, copper, iron, potassium, magnesium, manganese, molybdenum, Sodium, nickel, phosphorous, lead, silicon, tin, titanium, vanadium, zinc.

Investigation result: PetroLab 68/09 no. 1

Costs of investigation Image access no.

Author <small>Non-responsive content removed</small>	Phone <small>Non-responsive content removed</small>	seen	Completed on 11/23/2009
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EA11003EN-00603[0]



EA11003EN-00604[0]





EA11003EN-00605[0]





11003EN-00606[0]



**From:** Non-responsive content removed  
**To:** [REDACTED]

**CC:**

**Date:** 10.02.2009 16:10:45 AM

**Subject:** HPP failures

**Attachments:** [Status V6-TDI Bin5 - HDP Ausfälle KW40.ppt](#)

Hi all,

Here is the preliminary summary of HPP failures

[REDACTED] does [REDACTED] have any other knowledge about the failures?

Best regards

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AUDI AG

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74148 Neckarsulm

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Sitz/Domicile: Ingolstadt

Registergericht/Court of Registry: Local District Court Ingolstadt

HRB Nr./Commercial Register No.: 1

Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Martin Winterkorn

Vorstand/Board of Management: Rupert Stadler (Vorsitzender/Chairman), Ulf Berkenhagen, Michael Dick, Frank Dreves, Peter Schwarzenbauer, Axel Strotbek, Werner Widuckel

Wichtiger Hinweis: Die vorgenannten Angaben werden jeder E-Mail automatisch hinzugefügt und lassen keine Rückschlüsse auf den Rechtscharakter der E-Mail zu.

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**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 10/5/2009, 3:32:00 PM

**Subject:** FW: 3. opinion on the following goods received dated 9/25/2009 3429289 (4A223)

**Attachments:** [WG Erstbefund 2te USA-Ausfallpumpe.msg](#)

With best wishes,

Non-responsive content removed

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**From:** Non-responsive content removed

**Sent:** Thursday, October 01, 2009, 1:06 PM

**Non-responsive content removed**

**Subject:** Re: 3rd opinion on the following goods received dated 9/25/2009 3429289 (4A223)

Dear Mr [REDACTED]

Please check the pumps for traces of corrosion as in case of development pumps - Thanks.

Best regards,

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**From:** Non-responsive content removed

**Sent:** Thursday, October 01, 2009, 10:05 AM

**Non-responsive content removed**

**Subject:** 3rd opinion on the following goods received dated 9/25/2009 3429289 (4A223)

Dear [REDACTED]

Attached is the corrected overview table. The result of the fuel analysis is OK: 50.8 mg/kg 50.8 mg/kg H<sub>2</sub>O, no RME.

About 10 ml fuel sample was taken from the pump.

The 8D report is being prepared. Measurement is given in the latest status of CP4 drivetrain damage.

EA11003EN-00609[1]

QMM no.  
QC no.  
Customer material  
GA  
Part no.  
Line + Serial no.:  
DM  
WE\_AZ  
KM  
Complaint  
Final finding  
Failure location  
Engine/veh. ID no.  
Customer follow  
up no.

4A223  
230002626484  
059130755AL  
40  
0445.010.613  
02-0321  
2/6/2009  
9/25/2009  
1,790  
No specification from AUDI  
Drivetrain damage  
USA  
WA1AM74L89D [REDACTED]  
3429289

Best regards,

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Robert Bosch GmbH

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ontent removed

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ved

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000;  
Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais;  
Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks,  
Peter Tyroller; Uwe Raschke



From: [REDACTED]  
Sent: Wednesday, September 30, 2009, 11:35 AM  
To: [REDACTED]  
Cc: [REDACTED]

Subject: Re: 2. opinion on the following goods received dated 9/25/2009 3429289 (4A223)

Dear Mr [REDACTED]

the customer parts no. (059 instead of 03L) and the veh. no. (last 6 digits) are incorrect. Please correct them.

Please make your fuel analysis faster.  
Are there any residues in the pump?

Dear Dr [REDACTED]

Which case is this?  
Have we analyzed a fuel sample for this?  
Can I have your USA failure overview of the last 4 cases?

With best wishes,

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d

AUDI AG

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From: Non-responsive content removed  
Sent: Wednesday, September 30, 2009, 9:50 AM

Non-responsive content removed

Subject: 2. opinion on the following goods received dated 9/25/2009 3429289 (4A223)

Dear Sirs,

The following pump was analyzed.  
The result of the finding is drivetrain damage.  
Fuel sample was analyzed.  
Measurement is given in the latest status of CP4 drivetrain damage.

EA11003EN-00609[3]

Best regards,

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Robert Bosch GmbH

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Non-responsive content removed

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000;  
Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais;  
Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks,  
Peter Tyroller; Uwe Raschke

**From:** Non-responsive content removed

**To:**

**CC:**

**Date:**

**Subject:** FW:

**Attachments:** [AW Verbleibt beanstandete USA-Pumpen \(2 Stück\) - QTS 3429289; 4A223, LL 1790 km.msg](#)

Dear Mr [redacted]

Here are images of the second pump, again with minimal signs of corrosion (indication of free water).

I am still waiting for the results from the comparison pumps from our analysis center in JhP (probably receive them tomorrow).

[redacted] How are your Field USA DTD looking? Have you also found corrosion at the first pump?

Thank you.

Best regards

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Robert Bosch GmbH

Non-responsive content removed

70442 Stuttgart

Germany

[www.bosch.com](http://www.bosch.com)

Non-responsive content removed

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000; Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais; Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks, Peter Tyroller; Uwe Raschke

**From:** Non-responsive content removed

**Sent:** Wednesday, September 30, 2009 3:10 PM **To:** [redacted]

**Cc:** [redacted]

**Subject:** First findings, 2nd USA Failure pump

Dear [redacted]

The 2nd return feed pump from the Audi USA tests (0445010613 #080428-0876 with 141925km) has Category I drivetrain damage and also indications of water in fuel at RS, tappet body, tappet spring and spring plate. VVT-No. 2009-CP4\_0500

!st !ga!s ! ! ! ! ! !

Robert Bosch GmbH

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[www.bosch.com](http://www.bosch.com)

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Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000; Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks, Peter Tyroller; Uwe Raschke

Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais;

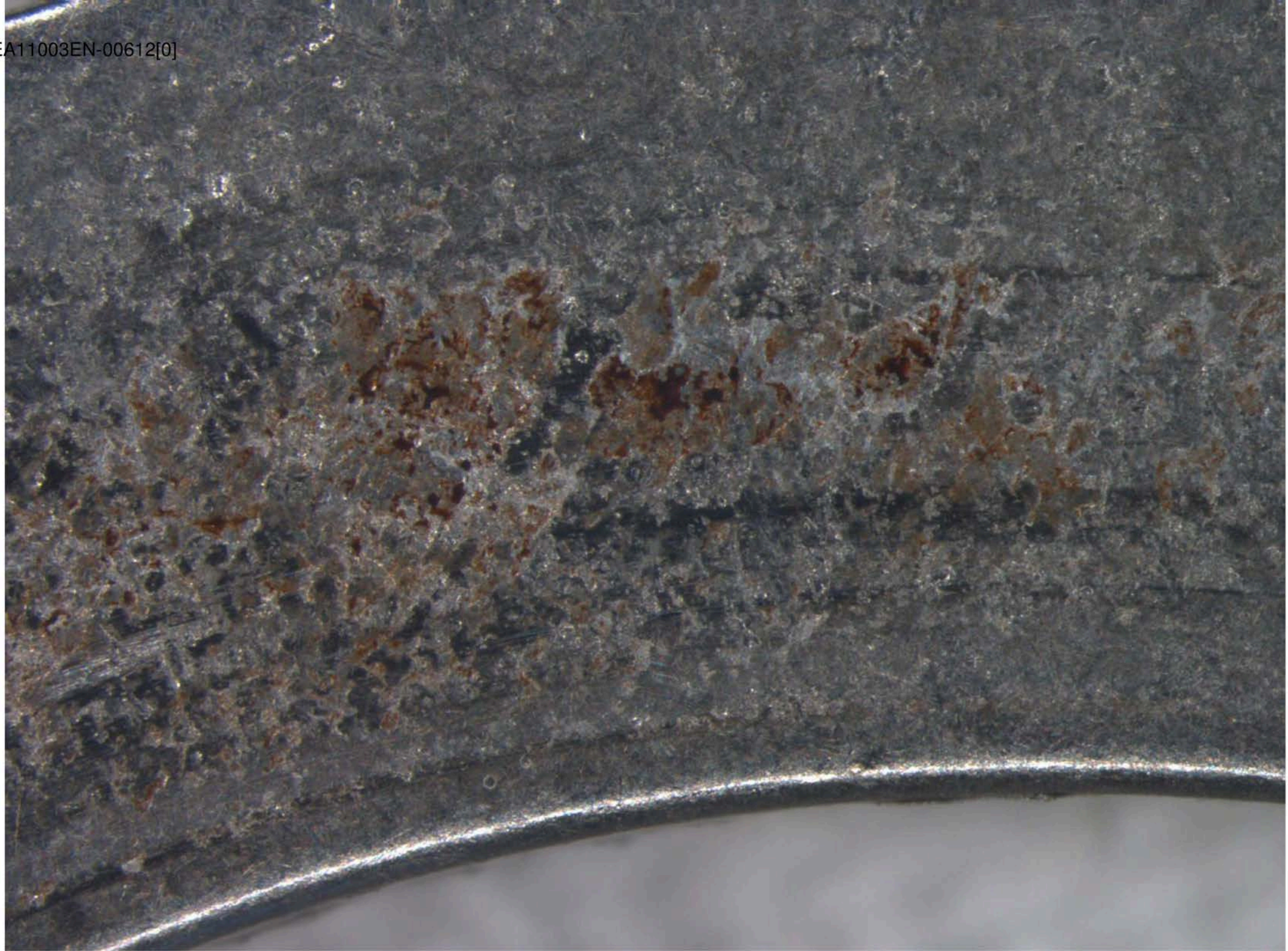


EA11003EN-00611[0]



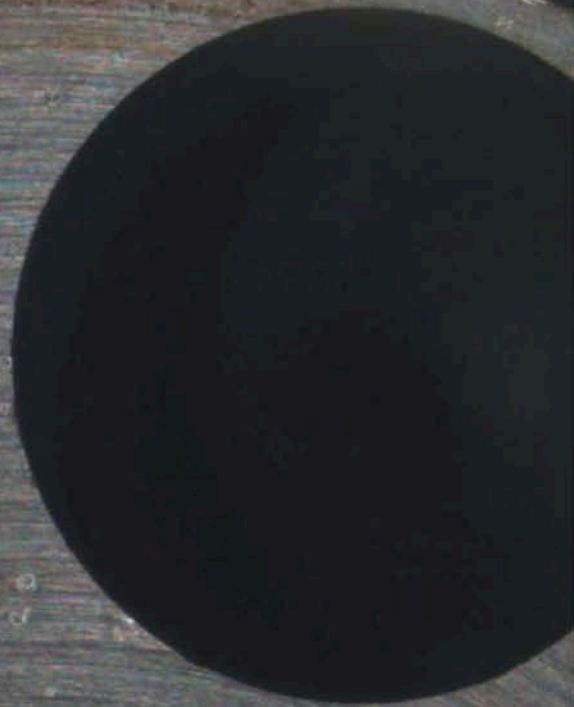


EA11003EN-00612[0]



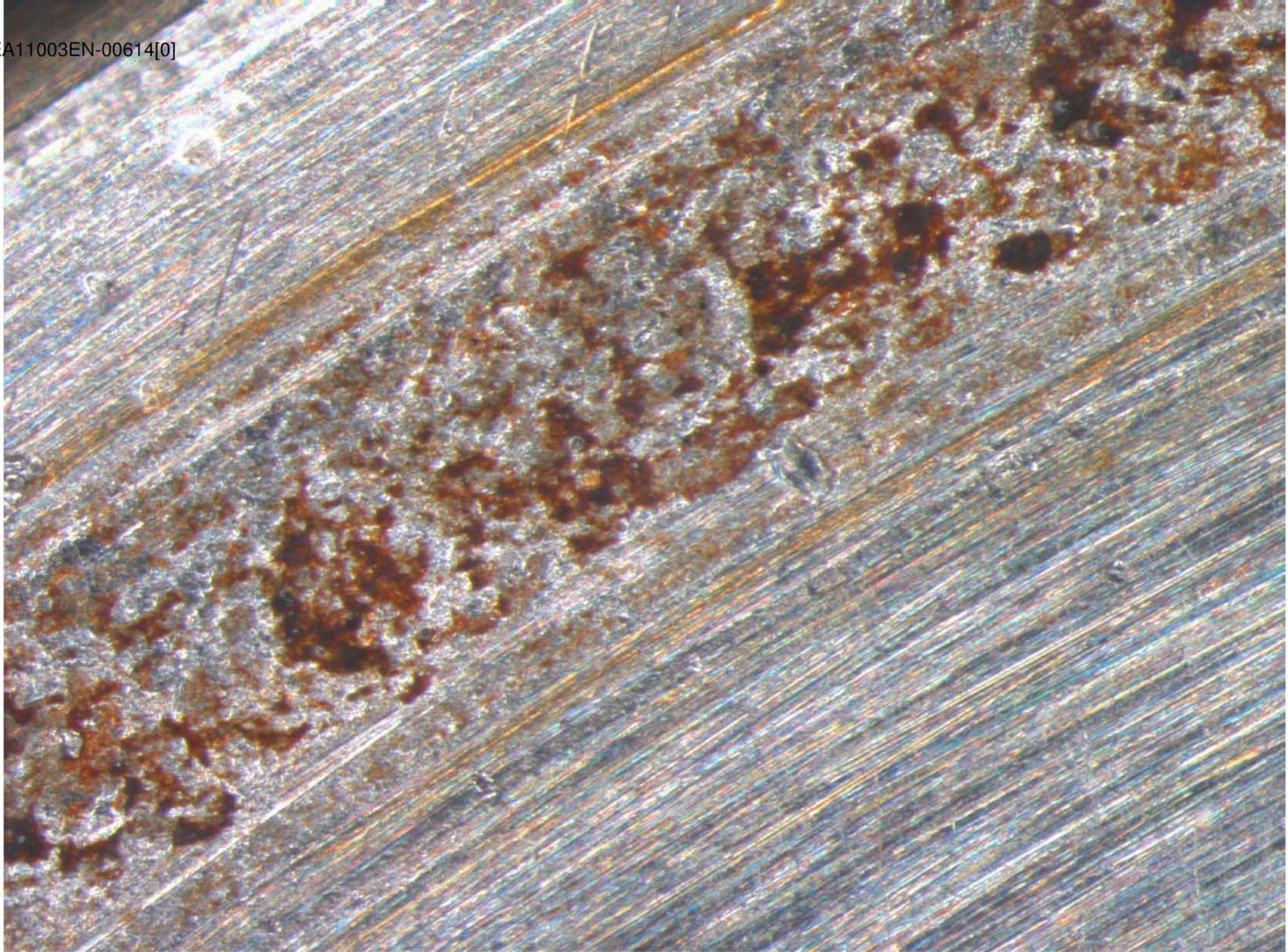


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EA11003EN-00614[0]



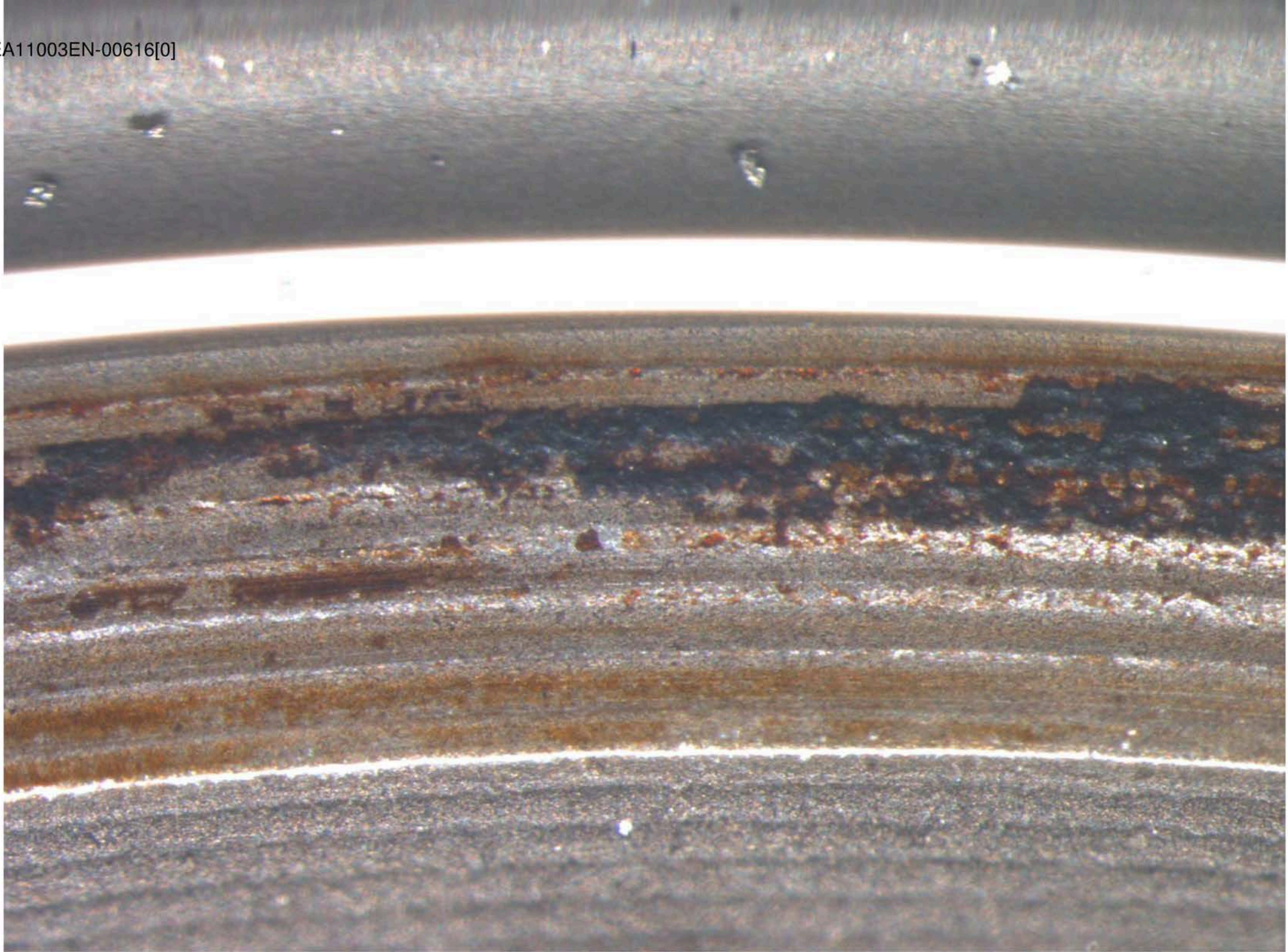


EA11003EN-00615[0]





EA11003EN-00616[0]

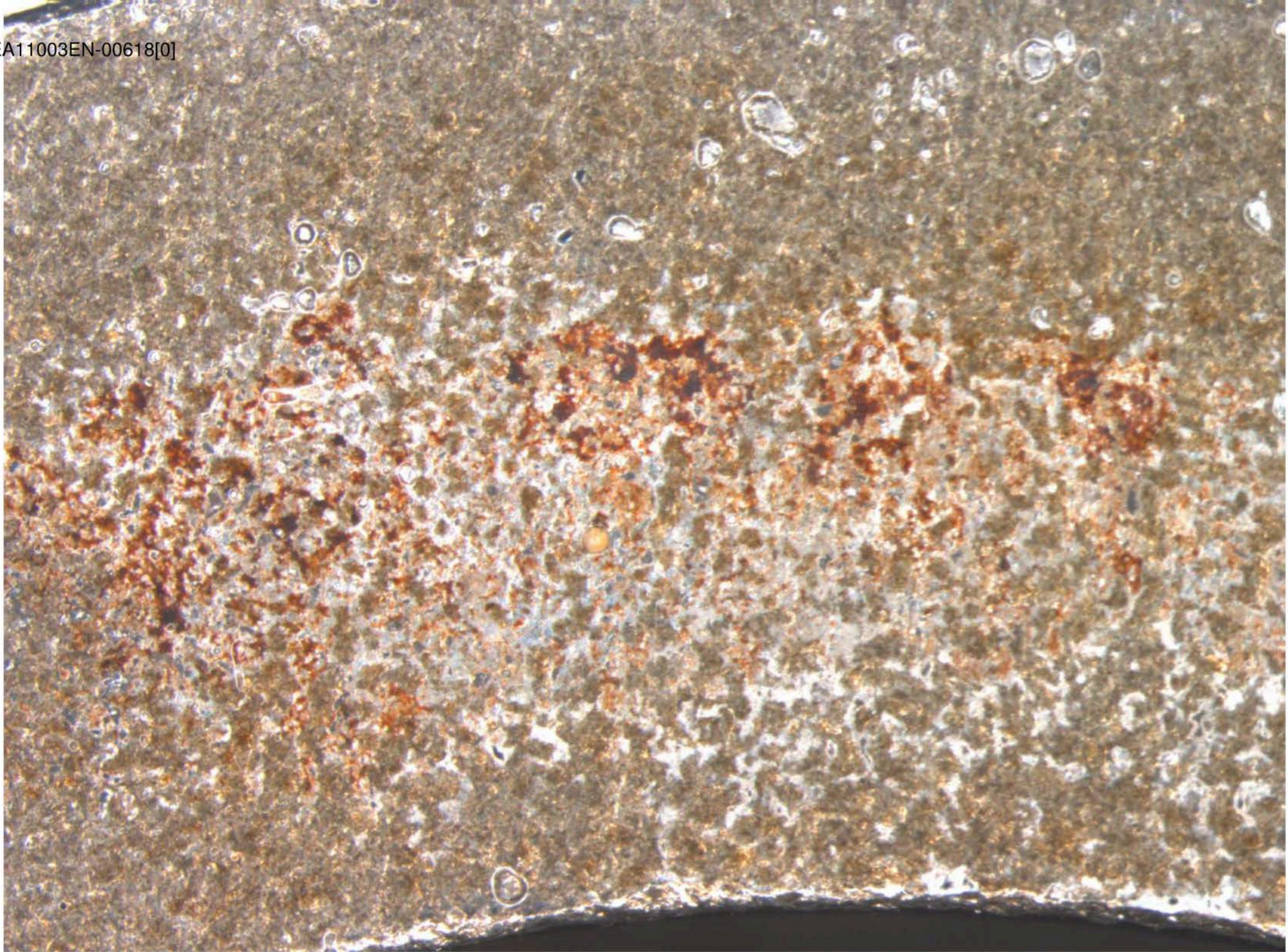








EA11003EN-00618[0]





**From:** Non-responsive content removed

**To:**

**CC:**

**Date:** 9/29/2009, 8:55:51 AM

**Subject:** Re: Remaining defective USA pumps (2 pieces) - QTS 3429289; 4A223, mileage: 1790 km

Dear [redacted]

1 pump has been received and was subject to a preliminary analysis yesterday.  
The tentative result is: **Drivetrain damage**  
Detailed analysis is still continuing.

Best regards

[redacted]  
Robert Bosch GmbH

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content removed

Non-responsive content removed

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000;  
Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais;  
Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks,  
Peter Tyroller; Uwe Raschke

---

**From:** Non-responsive content removed

**Sent:** Tuesday, September 29, 2009, 7:32 AM

**To:** Non-responsive content removed

**Cc:** Remaining defective USA pumps (2 pieces)

**Priority:** High

Dear [redacted]

Have you received the US pumps? We have to give a response today on the SC at least for the remaining right.

Best regards

[redacted]  
Robert Bosch GmbH

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EA11003EN-00619[1]

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removed

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000;  
Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais;  
Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümmel, Wolfgang Malchow, Peter Marks,  
Peter Tyroller; Uwe Raschke





# BOSCH

011

0 445 010 613

CR/CP4S2/R75/40

059 130 755 AL

02.090206

BPT 0321

0002



Made in

Non-responsive content removed



From: [REDACTED]

To: [REDACTED]

CC: [REDACTED]

[REDACTED]

Date: 03.11.2009 15:32:10

Subject: 2nd opinion on the following goods received dated 10/28/2009 AV3 857456 (4VW273)

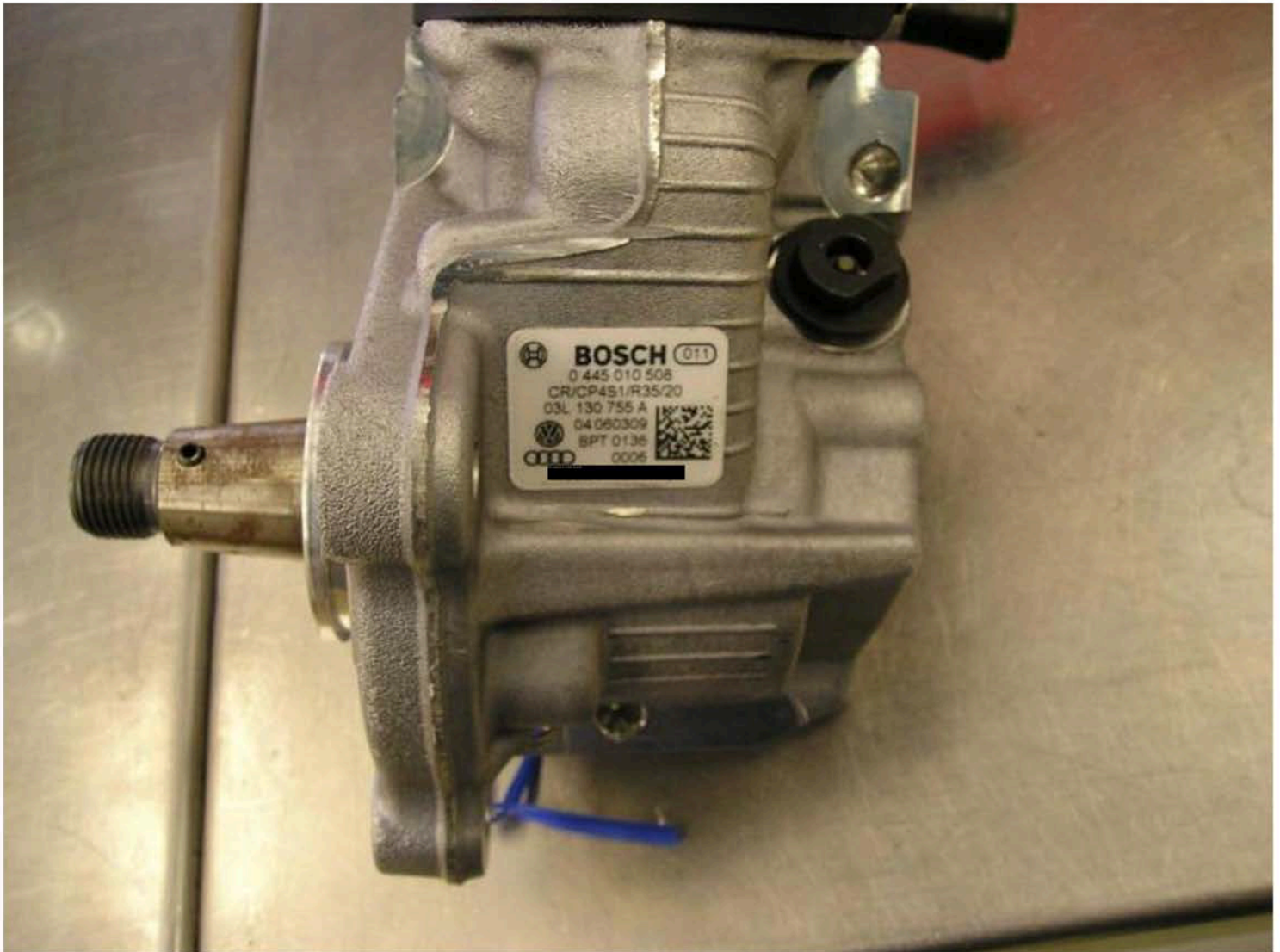
Dear Sirs,

Following pump was analysed. The result of the finding is

**drivetrain damage.**

The fuel sample is currently being analyzed. No deposits and no traces of corrosion found.  
 Measurement is given in the latest status of CP4 drivetrain damage.  
 The 8D report is being prepared.

Case No.	QC No.	Function Material	CA	TTN	Lines + Serial	IS	WF_AZ	NR	Strukturierung	Modifikation	Enddatum	Meßeinheiten	Kundenref. / Vorgang-Nr.
AVW273	2388288980	03L130755A	75	508	04-0130	04-01-2009	20-10-2009	30307	A 4 Inc Pump (CP4) USA SAJAWUS2181	Triebwerksbedarf			AV3 857456

[REDACTED]  
Robert Bosch GmbH

70442 Stuttgart GERMANY

[www.bosch.com](http://www.bosch.com)

Domicile: Stuttgart, Court of Registry: Local District Court Stuttgart, Commercial Register No. 14000;

Bernd Bohr, Rudolf Colm, Volkmar Denner, Gerhard Kümme, Wolfgang Malchow, Peter Marks,

Chairman of the Supervisory Board: Hermann Scholl; Management: Franz Fehrenbach, Siegfried Dais;

Peter Tyroller; Uwe Raschke

**From:** Non-responsive content removed  
**To:** [REDACTED]  
**CC:** [REDACTED]  
**Date:** 11/23/2009, 5:23:10 PM  
**Subject:** Investigation Report 1933 - CP4  
**Attachments:** [09-UA 1933 - \[REDACTED\] USA - HDP-Schaden CP4 - Hr. \[REDACTED\].pdf](#)

Dear Mr [REDACTED]

Here is the Investigation report 1933 concerning: CP4 damage

>With best wishes,

>

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>

Audi AG, Neckarsulm

Non-responsive content removed

D-74148 Neckarsulm, PO Box 1144, NSU-Strasse 1

Non-responsive content removed

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>

Sitz/Domicile: Ingolstadt

Registergericht/Court of Registry: Local District Court Ingolstadt

HRB Nr./Commercial Register No.: 1

Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Martin Winterkorn

Vorstand/Board of Management: Rupert Stadler (Vorsitzender/Chairman), Ulf Berkenhagen, Michael Dick, Frank Dreves, Peter Schwarzenbauer, Axel Strotbek, Werner Widuckel

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## Investigation Report no. 09/ 1933



Audi

Materials Engineering Non-responsive content removed

Department <small>Non-responsive content removed</small>	Client <small>Non-responsive content removed</small>	Phone <small>Non-responsive content removed</small>	Date 10/13/2009		
Vehicle	Subject 1x DF Sample (USA)	Part number			
QTS number	Mileage / time	Breakdown <input checked="" type="checkbox"/>	A-fault <input type="checkbox"/>	fault <input type="checkbox"/>	C-fault <input type="checkbox"/>
Field <input checked="" type="checkbox"/>	Hall damage case <input type="checkbox"/>	Number of problems parts	Supplier	Material	

**Procedure / Investigation Request** (to be completed by client)

HPP damage (CP4) -&gt; Fuel analysis

(WAIAM74L89D Non-responsive content removed)**Investigation result**

- The biodiesel-free fuel meets the requirements of German DIN 51628 standard except for an excessive sulfur content of 12 ppm.
- All parameters seen as critical for the case of damage tend to be not worthy of notice. The lubrication capability is not great but still complies with the standard. Water content, viscosity, TAN and FAME content are also to be regarded as OK.  
→ A direct association between this fuel sample and the mentioned fault pattern cannot be established

Parameters investigated:		Sample	DIN 51628
▪ Density at 15 °C	[kg/m <sup>3</sup> ]	<b>839.1</b>	820-845
▪ FAME content	[Vol.-%]	<b>&lt; 0,1</b>	7
▪ Monoaromatic compounds	[Vol.-%]	<b>20.4</b>	-
▪ Diaromatic compounds	[Vol.-%]	<b>1.5</b>	-
▪ Tri+ aromatic compounds	[Vol.-%]	<b>0.1</b>	-
▪ Polyaromatic compounds	[Vol.-%]	<b>1.7</b>	max. 8
▪ Total aromatic compounds	[Vol.-%]	<b>22.0</b>	-
▪ Sulfur content	[mg/kg]	<b>12.1</b>	max. 10
▪ Oxidation stability (Rancimat)	[hours]	<b>&gt;48</b>	min. 20
▪ Oxide ash	[Weight %]	<b>&lt; 0,001</b>	max. 0.01
▪ Water content	[mg/kg]	<b>35</b>	max. 200
▪ Kin. viscosity	[mm <sup>2</sup> /s]	<b>2.77</b>	200-4.50
▪ Lubrication capability	[µm]	<b>401</b>	max. 460
▪ Acidic number (TAN)	[mgKOH/g]	<b>0.004</b>	
▪ var. metal contents <sup>1)</sup> (ICP scan)	[mg/kg]	<b>not measurable</b>	
▪ Total contamination	[mg/kg]	<b>8</b>	max. 24

<sup>1)</sup> Silver, aluminum, boron, barium, calcium, cadmium, chrome, copper, iron, potassium, magnesium, manganese, molybdenum, Sodium, nickel, phosphorous, lead, silicon, tin, titanium, vanadium, zinc.

Investigation result: PetroLab 68/09 no. 1

Costs of investigation Image access no.

Author <small>Non-responsive content removed</small>	Phone <small>Non-responsive content removed</small>	seen	Completed on 11/23/2009
---	--	------	----------------------------

Non-responsive content removed

**From:** Non-responsive content removed  
**To:** [Redacted]

**CC:**

**Date:** 10.19.2010 08:04:35 PM

**Subject:** FW: FW: Analysis Report Q7 MY10 3.0TDI (WA1VMAFE6AD [Redacted]) with DTC P0088

**Attachments:** Non-responsive content removed [Redacted] [AK Q7TDI MY10 Raildruck WA1VMAFE6AD \[Redacted\] 14092010.pdf](#)

Hi all,

The fuel sample and HPP are being sent to AoA. Then we will send all parts on to [Redacted] It takes a long time because it is special [Redacted] shipping

**From:** Non-responsive content removed  
**Sent:** Monday, October 18, 2010 9:29 AM  
**To:** [Redacted]  
**Subject:** FW: FW: Analysis Report Q7 MY10 3.0TDI (WA1VMAFE6AD [Redacted]) with DTC P0088

[Redacted] please clarify

**From:** Non-responsive content removed  
**To:** [Redacted]  
**Sent:** Non-responsive content removed  
**Subject:** FW: FW: Analysis Report Q7 MY10 3.0TDI (WA1VMAFE6AD [Redacted]) with DTC P0088

Hi [Redacted]

I hope you are doing well. Can you please respond. Lets speak on the phone in the next few days.

Greetings from [Redacted]

**From:** Non-responsive content removed  
**To:** Non-responsive content removed  
**Sent:** Mon, Oct 18, 7:46:46 AM 2010  
**Subject:** FW: Analysis Report Q7 MY10 3.0TDI (WA1VMAFE6AD [Redacted]) with DTC P0088

Hello Mr [Redacted]

Where are the fuel samples???

We would really like to know what was in the tank.

**From:** Non-responsive content removed  
**Sent:** Monday, October 18, 2010, 10:17 AM  
**To:** Non-responsive content removed  
**Cc:** [Redacted]  
**Subject:** FW: Analysis Report Q7 MY10 3.0TDI (WA1VMAFE6AD [Redacted]) with DTC P0088

Hello [Redacted]

I cannot escape the feeling that we somehow have a bypass in the system even if it's in the filter (overflow function in filter supply or similar)!

With best wishes,

[Redacted]

**From:** Non-responsive content removed



EA11003EN-00624[1]

**Sent:** Monday, October 18, 2010, 8:07 AM

**To:** Non-responsive content removed

Non-responsive content removed

**Subject:** FW: Analysis Report Q7 MY10 3.0TDI (WA1VMAFE6AD ) with DTC P0088

Dear

Have the removed parts been sent for analysis?

If so, to whom?

The analysis of the fuel filter is also important. Why are such large particles passing through the filter?

With best wishes,

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Sitz/Domicile: Ingolstadt

Registergericht/Court of Registry: Local District Court Ingolstadt

HRB Nr./Commercial Register No.: 1

Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Martin Winterkorn Vorstand/Board of Management Rupert Stadler  
(Vorsitzender/Chairman), Ulf Berkenhagen, Michael Dick, Frank Dreves, Peter Schwarzenbauer, Thomas Sigi, Axel

Strotbek

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**From:**

**Sent:** Wednesday, September 29, 2010, 4:37 PM

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**Subject:** Analysis Report Q7 MY10 3.0TDI (WA1VMAFE6AD ) with DTC P0088

Hi all,  
Please find attached an analysis report for a MY10 Q7 3.0I TDO with data memory entries regarding rail pressure (incl. P0088- "Fuel rail/system pressure too high"). The report is a little late because I first wanted to wait to see what measures would be taken by the dealer.

It was found that considerable amounts of dirt were entered into the fuel tank, which in part got into the injection hydraulics. The recommendation by AoA was to replace the entire fuel system. As this is not a warranty case, the dealer is trying to reach a compromise. However, the high-pressure fuel pump was replaced and the entire fuel system flushed/cleaned. The functionality is initially secure, however some additional problems cannot be ruled out over the run time.

Feel free to get in touch if you have any questions.

Best wishes,

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EA11003EN-00624[3]

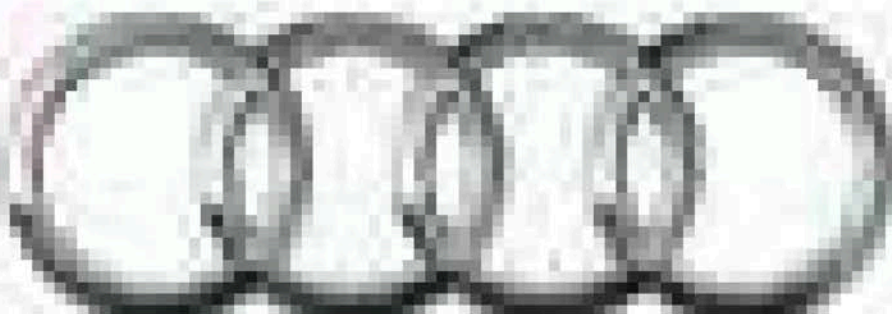
United States of America

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removed

<http://www.audiusa.com>



Rings\_4C\_S\_Claim-left\_USA



Truth In Engineering



# Analysis report

## Product Quality Analysis Audi of [redacted]

**Date created:**

9/14/2010

**Model:**

Q7 3.0I TDI

**Mileage:**

3517

**Location of**

Non-responsive content removed

WA1VMAFE6A [redacted]

**Model year**

2010

**FRED report no.:**

-

**Attachments:**

- Photos metering unit
- Photo Fuel filter

### Customer complaint/analysis order:

The case was escalated to [redacted] via Product Support. The vehicle arrived in the workshop with the following P codes:

P0088 Fuel Rail/System Pressure - Too High  
 1110 1001 break/short-circuit to ground  
 conditions met  
 static  
 Warning lamp on

P0088 Fuel Rail/System Pressure - Too High  
 1110 0010 lower limit exceeded  
 conditions met  
 static  
 Warning lamp on

Previously, errors P0087 (Rail fuel pressure too low) and P0191 (Fuel Rail Pressure Sensor Circuit Range/Performance) were reported by dealer.

### Analysis results/items of note:

A mud-like contamination of the fuel system was found. Since the dirt is fully soluble in fuel and seemingly only entered the injection hydraulics sporadically, the functions of different components were impaired at different points in time.

### Next steps/note:

Prior to the [redacted] analysis, the high-pressure fuel pump, pressure control valve, metering unit and pressure sensor were already replaced. When replacing the components, there was no sign of contamination of the injection hydraulics. The measurements and photos were made available to the Technical Department [redacted].  
 AoAs recommendation was to perform a complete replacement of the fuel tank and injection system. The dealer tried to keep its costs - i.e. its customer's costs - to a minimum and only replaced the high-pressure fuel pump and rinsed/cleaned the fuel system.



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# Analysis report

## Product Quality Analysis Audi of



### Analysis steps/Procedure:

- Exporting the data memory upon arrival:

P0088 Fuel Rail/System Pressure - Too High  
 1110 1001 break/short-circuit to ground  
 conditions met  
 static  
 Warning lamp on

P0088 Fuel Rail/System Pressure - Too High  
 1110 0010 lower limit exceeded  
 conditions met  
 static  
 Warning lamp on

P0088 Fuel Rail/System Pressure - Too High  
 1110 1001 Fault state  
 2 dec Priority  
 3 dec Frequency counter  
 255 dec Healing counter  
 5663 km Mileage  
 09/08/10 Date  
 11:17:08 Time  
 966 rpm engine speed  
 8.0 mg/h Injection volume  
 95 l Capacity of fuel tank  
 26.1 °C Temperature  
 619.2 bar Pressure  
 4 No units  
 0011 0110 Switch positions

P0088 Fuel Rail/System Pressure - Too High  
 1110 0010 Fault state  
 2 dec Priority  
 1 dec Frequency counter  
 255 dec Healing counter  
 5663 km Mileage  
 09/08/10 Date  
 11:17:11 AM Time  
 966 rpm engine speed  
 7.0 mg/h Injection volume  
 95 l Capacity of fuel tank  
 26.1 °C Temperature  
 799.8 bar Pressure  
 5 No units  
 0011 0110 Switch positions



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# Analysis report

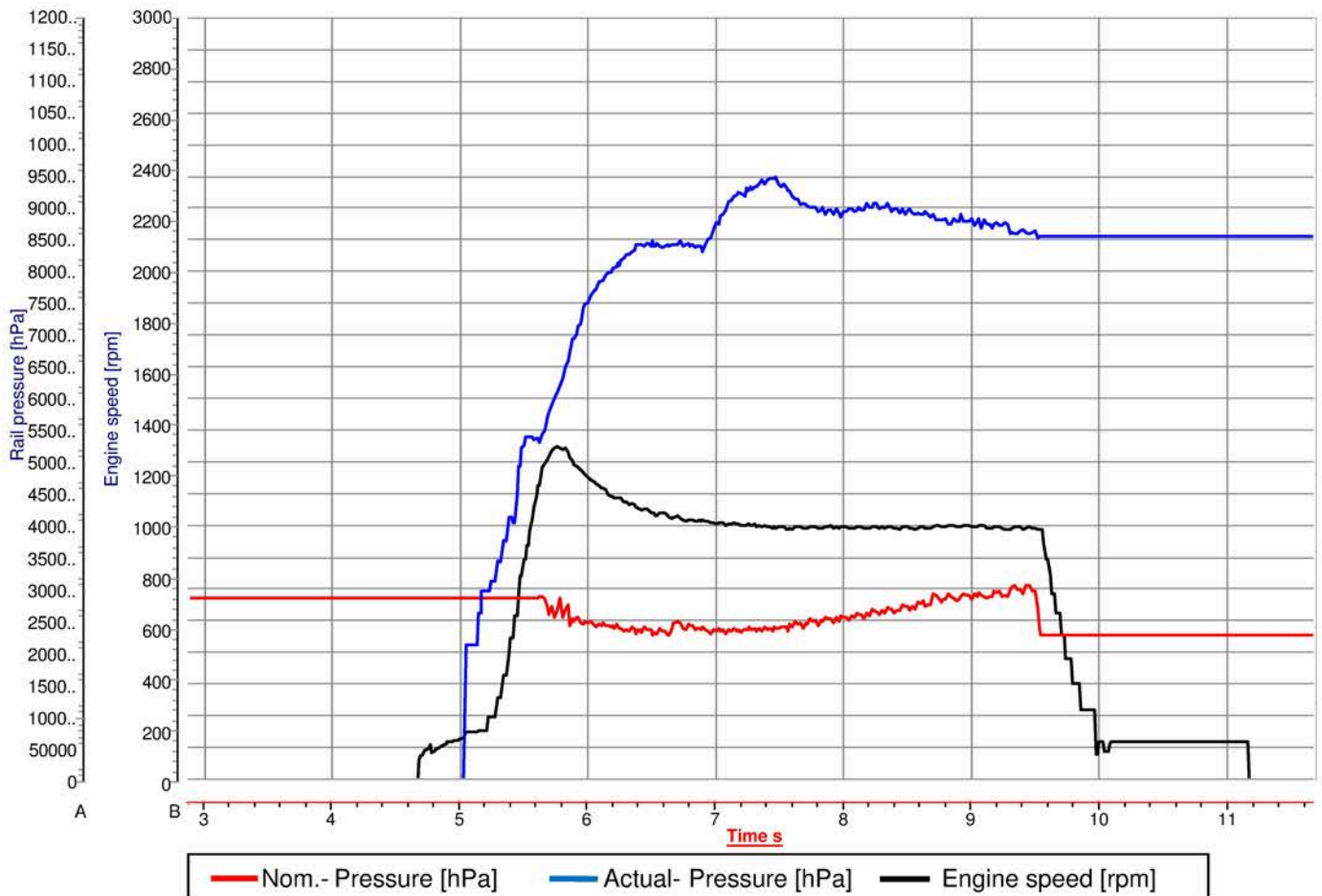
## Product Quality Analysis Audi of

Non-responsive content removed



- CCP measurement with INCA:

Fig. 1 shows the error pattern upon arrival. After the engine start, the system cannot regulate the rail pressure. The actual pressure very quickly exceeds the threshold in the diagnosis which caused the engine to cut out.



**Fig. 1:** Taking stock of the rail pressure regulator after starting the engine

- Engine start with metering unit removed: same fault pattern as in Fig. 1
- Engine start with pressure control valve removed (prevent lateral interlocking through data memory entry by plugging in a "Dummy pressure control valve"): As in this case, the pressure control valve should open up completely (state without flow), no engine start should take place. Motor still started up -> Functioning of pressure control valve not OK.



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# Analysis report

## Product Quality Analysis Audi of

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- The mechanic replaced the pressure control valves separately before. After discussions with Bosch, the valve was once again replaced incl. rail in order to rule out the tightening torque having an influence on the functionality of the pressure control valve.
- After replacing the pressure control valve incl. rail, the engine no longer started up with the valve removed (and "dummy valve" plugged in) -> pressure control valve OK

Fig. 2 shows an excerpt from the measurements taken during a test drive after the repairs above were made.

The vehicle started up and remained in driving condition as long as the rail pressure was being controlled via the pressure control valve **and** metering unit.

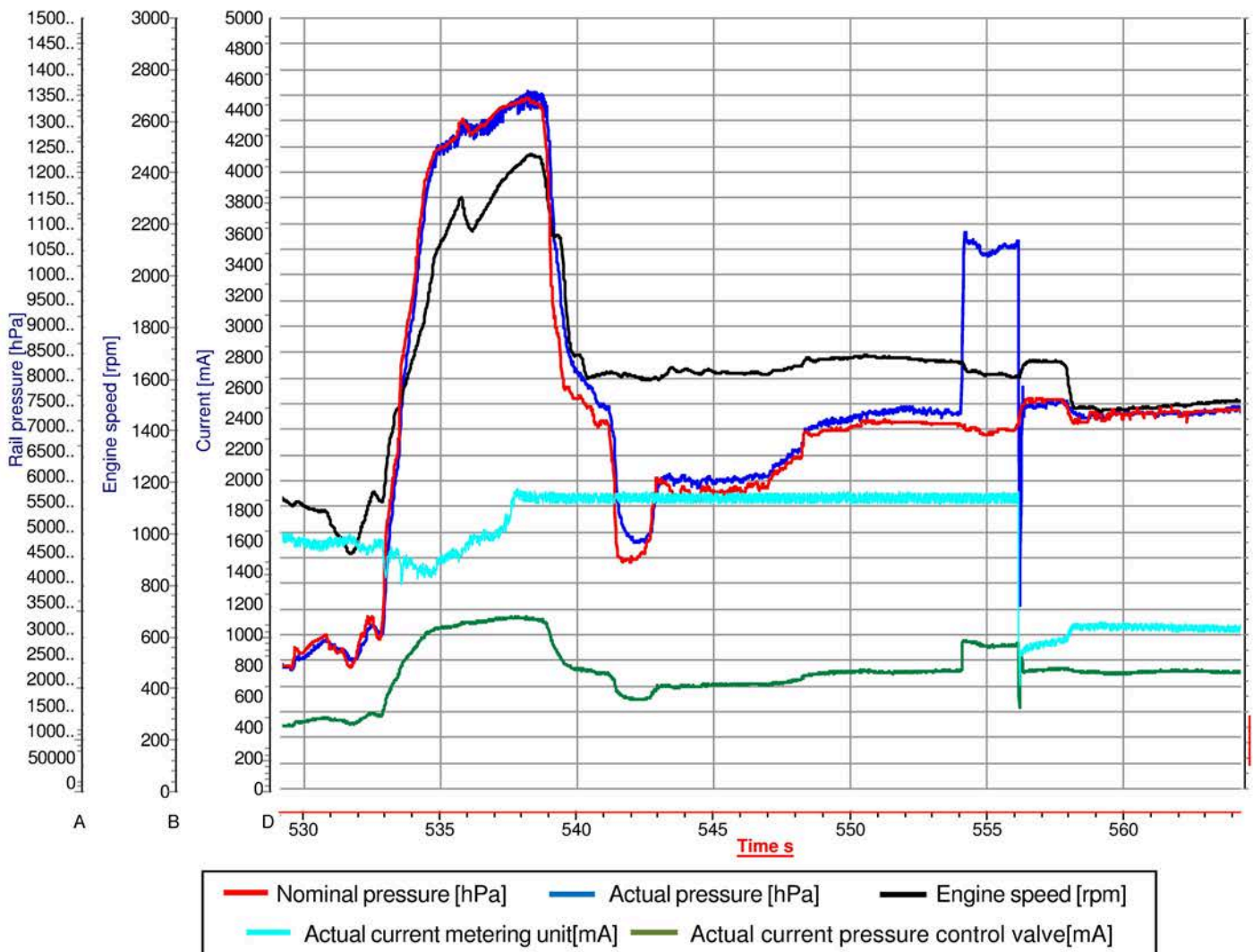


Fig. 2: Excerpt from measurements with switch over from CPC-(PCV+UM) to metering unit regulation



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## Analysis report

### Product Quality Analysis Audi of

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After switching to a pure metering unit operation, the system was no longer able to keep the pressure at the nominal level which again resulted in the data memory entry P0088. According to the measurement value of the metering unit current, the metering unit should have been completely closed

which was obviously not the case otherwise there wouldn't have been any more fuel available -> Conclusion: Metering unit faulty.

- After removing the metering unit, clear contamination could be seen (see Fig. 1+2) which impaired pressure regulation. The same deposits were found in the replaced rail and in the fuel filter (Fig. 3).

Dirt got into the injection hydraulics via the fuel tank and caused the fault pattern described above.

#### Attachments:



**Fig. 1:** Dirt in the metering unit



**Fig. 2:** Dirt, photo of metering unit

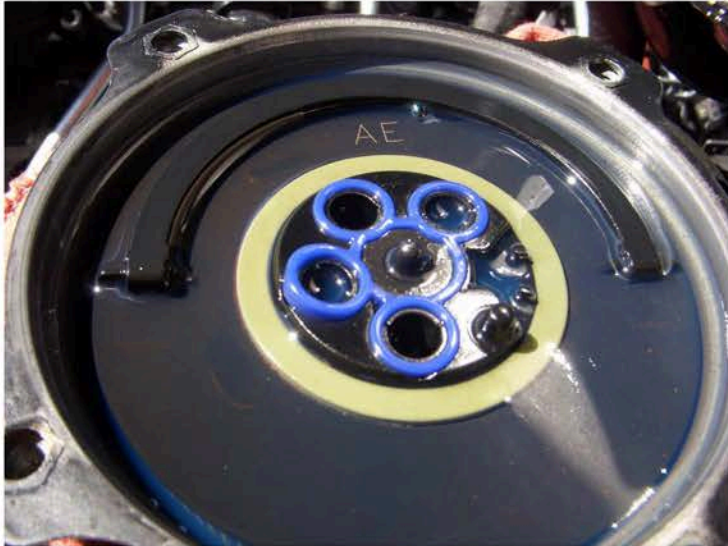


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# Analysis report Product Quality Analysis Audi of

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**Fig. 3:** Film of dirt on the fuel filter



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**From:** Non-responsive content removed  
**To:** [Redacted]  
**CC:** [Redacted]  
**Date:** 11/3/2010, 1:06:31 PM  
**Subject:** kl. Nachtrag\_Tabelle HD-Pumpen US07  
**Attachments:** [03.11.10---Voranalyse HD-Pumpen US07.pdf](#)

For information!

Kind regards,

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>  
>-----  
>From: Non-responsive content removed  
>Sent: Wednesday, November 03, 2010, 12:49 PM  
>To: Non-responsive content removed  
>Cc: [Redacted]  
>Re:: Table high-pressure fuel pumps US07

>  
>Dear Mr [Redacted]

>  
> Here is the table for the HP pumps - latest update.

>  
>  
>  
>  
>  
>  
>  
>With best wishes,

> Non-responsive content removed

> Non-responsive content removed  
> [Redacted]

> \*\*\*\*\*

>Volkswagen Sachsen GmbH  
>Sitz/Domicile: Zwickau  
>Registergericht/Court of Registry: Local District Court Chemnitz  
>HRB no./ Commercial Register No.: 1666  
>Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Jochem Heizmann  
>Geschäftsführer/Executive Directors: Frank Löschmann (Speaker/Managing Director), Henry Mehnert, Robert Stauß

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>

>

AL no.	VIN no.	Bosch Material	Serial no. Bosch	ProdDat Bosch	KM LL (Mileage)	Engine no.	CP4 date	Customer complaint	Preliminary analysis	Cause:	Analysis Bosch
2	3VWTL7AJ1AM	445,010,508	BPT0831	11/25/2009	5,119	CJA030072	12/07/09-SZ,C	Engine does not start, metallic chips metering unit	Chips collection at screen MU and in the pump chamber below MU	<b>DTD</b> <b>(Drivetrain damage)</b>	8-D report
6	3VWRL7AJ7AM	445,010,508	BPT0143	9/17/2009	6,638	CJA017859	09/24/09-C,C	Engine does not start, restart	externally without complaint; MU screen without complaint; no deposits in the pump chamber below MU		8-D report
7	3VWAL7AJ2AM	445,010,508	BPT 1100	7/18/2009	7,078	CJA003968	06/04/09 - C,C	P0087-Rail system pressure too low	externally without complaint; MU screen without complaint; no deposits in the pump chamber below MU		8-D report
21	3VWPL7AJXAM	445,010,508	BPT 00074	11/3/2009	6,977	CJA025707	11/11/2009 - SZ,C	chips in fuel system	externally without complaint; MU screen without complaint; no deposits in the pump chamber below MU		8-D report
24	WVWNM7AJXAM	445,010,508	BPT 0361	2/13/2010	3,103	CJA042995	02/26/2009 - SZ,C	chips in fuel system	Chips collection at screen MU and in the pump chamber below MU	<b>DTD</b>	8-D report

09/16/2010 to Mr [REDACTED] - MW [REDACTED] for analysis by Bosch

	3VWRL7AJ6AM				5,860	CJA042758	02/25/10-SZ,C				t.b.d.
--	-------------	--	--	--	-------	-----------	---------------	--	--	--	--------

10/27/2010 - Preanalysis [REDACTED]

3	3VWTL7AJXAM	445101508	BPT0319-0007	40011	10,933	CJA006199	07/06/2009- C,C	Engine does not start	externally without complaint; MU screen without complaint; no deposits in the pump chamber below MU	t.b.d.	t.b.d.
2	3VWRL7AJ6AM	455010508	BPT0250-0006	39944	13,907	CJA014772	9/9/2009 - C,C	P0087 Fuel rail/system pressure too low	Chips collection at MU screen and in the pump chamber below MU + red liquid in pump chamber	<b>DTD</b>	t.b.d.
1	3VWAL7AJXAM	445010508	BPT0243-0007	40056	39,944	CJA003036	05/25/09-C,C	Engine does not start	Chips collection at screen MU and in the pump chamber below MU	<b>DTD</b>	t.b.d.



**From:** Non-responsive content removed  
**To:** [REDACTED]  
**CC:**  
**Date:** 2/17/2011, 10:11:29 AM  
**Subject:** Bosch

Dear Mr [REDACTED]

The first verbal phone statement from Bosch for this HP pump is as follows: DTD - customer at fault - deposits corrosion - improper fuel

I should receive any preliminary (8D) report before "midday" today.

(Ser. no.: 6 USA : 39 3VWTL7AJ2AM [REDACTED] Bosch data: 04300310 -BPT0048- KM-LL:4.868  
Engine no.: CJA051563 -P0087- Fuel system pressure too low - DTD - Metal shavings in metering unit - Pump chamber and screen)

Best regards

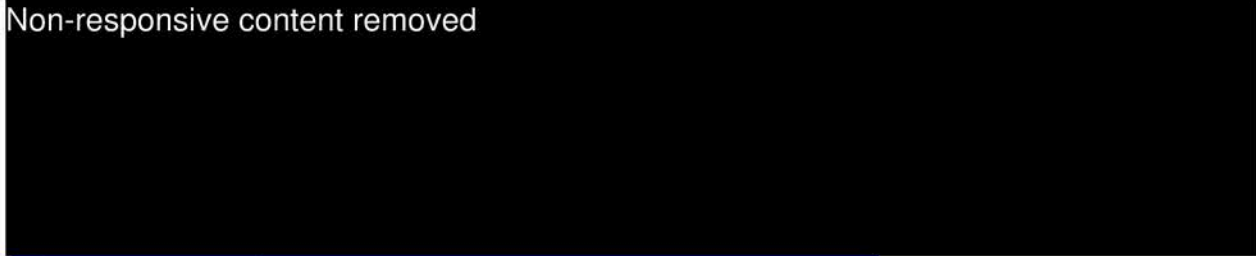
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> \*\*\*\*\*  
Volkswagen Sachsen GmbH  
Sitz/Domicile: Zwickau  
Registergericht/Court of Registry: Local District Court Chemnitz  
HRB Nr./ Commercial Register No.: 1666  
Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Hubert Waltl  
Geschäftsführer/Executive Directors: Hans-Joachim Rothenpieler (Speaker/Managing Director),  
Henry Mehnert, Robert Stauß



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**From:** Non-responsive content removed  
**To:**  
**CC:**




**Date:** 3/3/2011, 8:28:40 AM  
**Subject:** HP fuel pumps US - 07 Complaints - Fuel samples  
**Attachments:** [03.03.11-Kraftstoffproben.pdf](#)  
[25.02.11--11-01-397 MFC Q Dieselpromen Bericht.pdf](#)

Dear Mr. 

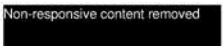
Please find attached the documents for the 10 diesel fuel samples from the USA with their assignment to damage cases (which were delivered to ). You should weight the data from the lab report for possible damage causes and their classification. I do not have the necessary prerequisites to do so. Please evaluate this classification with 

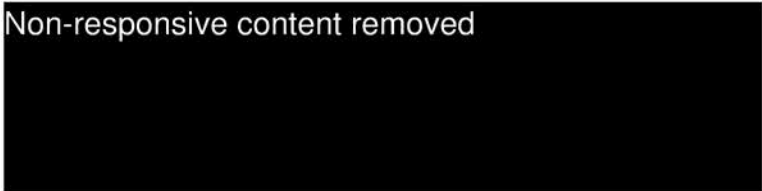
Thank you

I have no info about diesel sample no. 1

On 02/22/11 here in  we carried out a preliminary analysis of the 20 delivered problem HP pumps with Bosch. You will receive the results and the latest status as soon as. The delay is due to my vacation.

Best regards





EA11003EN-00630[1]

Domicile/Sitz: Zwickau

Court of Registry/Registergericht: Amtsgericht Chemnitz

HRB Nr./ Commercial Register No.: 1666

Chairman of the Supervisory Board/Vorsitzender des Aufsichtsrats: Hubert Waltl

Executive Directors/Geschäftsführer: Hans-Joachim Rothenpieler (Speaker/Managing Director),  
Henry Mehnert, Robert Stauß

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**Fuel samples - HP pumps  
2.0l-103kW TDI CR US07**

Serial no.	Bosch HP pump data			CS complaint	KM Mil	Analysis completion date	VIN no.	Market	Failure date	Analysis	Caused by	Goods Receipt
2	10/30/2009	BPT 0240	0445.010.508	car lost power, died, particle at filter	00000787	2/3/2011	3VWTL8AJ4AM	US	9/13/2010	Drivetrain damage	Customer	12/7/2010
3	2/6/2010	BPT 0909	0445.010.508	MIL on, P0272 Cyl.4, found metal at	00010234	1/25/2011	3VWPL7AJ5AM	US	10/22/2010	OK according to spec.	OK	12/7/2010
4	4/19/2010	BPT 0430	0445.010.508	spor. no power/acceleration	00003112	t.b.d.	3VWRL7AJ2AM	US	9/22/2010	OK according to spec.	OK	12/7/2010
5	9/8/2009	BPT 0250	0445.010.508	MIL on; P0087, P0191, no start	00015976	1/13/2011	3VWPL8AJ3AM	US	10/11/2010	Drivetrain damage	Bosch	12/7/2010
6	3/30/2010	BPT 0048	0445.010.508	found faulty fuel high pressure pump	00004868	1/14/2011	3VWTL7AJ2AM	US	9/24/2010	Drivetrain damage	Customer	12/7/2010
7	4/17/2010	BPT 0468	0445.010.508	Vehicle has crank no start, MIL on	00007375	1/13/2011	3VWPL7AJ7AM	US	10/12/2010	Drivetrain damage	Bosch	12/7/2010
8	2/13/2010	BPT 0234	0445.010.508	Vehicle has crank no start, MIL on	00018121	1/13/2011	3VWTL7AJXAM	US	10/27/2010	Drivetrain damage	Bosch	12/7/2010
9	3/4/2010	BPT 0267	0445.010.508	MIL on; P0087, system pressure too low	00008084	1/13/2011	3VWRL7AJ9AM	US	9/29/2010	Drivetrain damage	Bosch	12/7/2010
10	7/4/2009	BPT 1133	0445.010.508	MIL on, metal debris in fuel system	00028756	1/12/2011	3VWPL7AJ1AM	US	10/4/2010	Drivetrain damage	Customer	12/7/2010



## HQM induseriv GmbH

Durch DAP Deutsches Akkreditierungssystem Prüfwesen GmbH  
nach DIN EN ISO/IEC 17025:2005 akkreditiertes Prüflaboratorium.

Die Akkreditierung gilt für die in der Urkunde  
aufgeführten Prüfverfahren.

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18.02.11  
ml  
0520/11

### Test report

Test report no. 11-01-397

Test object 10 diesel samples for comparison analysis

Your test order 402 – 01 – 11, date 01/19/11  
in writing, [redacted]

Persons responsible [redacted]

Receipt of samples 1/24/2011	Start of test 1/25/2011	End of test 2/14/2011
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The scope of testing exclusively covers the aforementioned test order, and the test specimens which were submitted with it. Publishing extracts of the test report without our written permission is not permitted.  
We will keep the samples for you for at least 3 months.  
All accredited test procedures are identified with \*\*.

#### Attachments

2 pages of report  
3 pages of appendices



## Contents

We received 10 samples of diesel fuel from the customer from the USA for a comparison-based chemical analysis.

Customer took and named the samples.

Sample no.	Description
1	419400 AM010968
2	403189 AM128523
3	403089 AM677976
4	403160 AM687474
5	425072 AM688311
6	425038 AM617425
7	426074 AM627198
8	408077 AM141520
9	419303 AM674940
10	422531 AM644784

## Test results

Determining the water content as per DIN 51777-1\*\*

Sample no.	Water content %
1	not measurable
2	not measurable
3	not measurable
4	not measurable
5	not measurable
6	not measurable
7	not measurable
8	not measurable
9	not measurable
10	not measurable

Fine dirt particles >1µm based on DIN 12662

100ml were taken from the homogenized samples and filtered using a 1µm fine-grained filter.

Sample no.	Fine dirt particles in mg/l
1	45
2	26
3	not measurable
4	not measurable
5	not measurable
6	not measurable
7	not measurable
8	not measurable
9	37
10	not measurable

The residual dirt found in Sample 1 is documented for overview purposes in Appendix 1





Determining the density based on DIN 51757\*\*

Sample no.	Density 15°C (g/cm <sup>3</sup> )
1	0.832
2	0.833
3	0.838
4	0.826
5	0.825
6	0.838
7	0.830
8	0.845
9	0.851
10	0.833

Gas-chromatic analysis

The results from the GC analyses are documented in the Appendix.  
Samples 5-8 show a comparably higher proportion of light fluid components.

**Assessment**

The results of the analyses that were conducted in part show clear differences with respect to composition and properties.

Since diesel fuels, as is the case for gasoline, are mixes of carbohydrates manufactured from crude oil, such fluctuations are process-specific.

The higher proportion of a light fluid component found in samples 5, 6 and 8 may point to a supplemental addition of additives to the fuels.

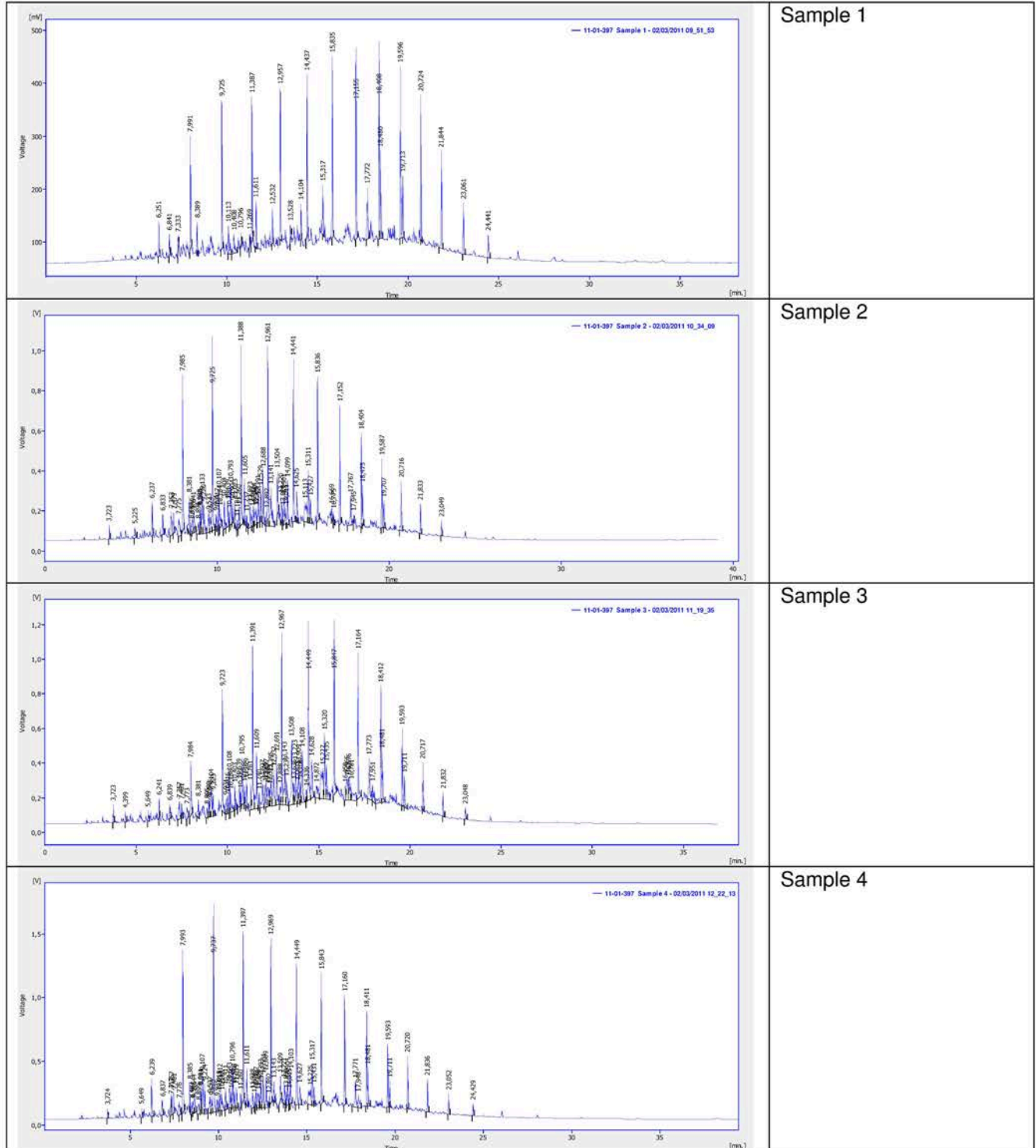
Samples 1, 2 and 9 also exhibit a comparably increased volume of fine dirt.

- End of the test report -



## Appendix – Test report no.: 11-01-397

## Spectra from GC analyses









Appendix – Test report no.: 11-01-397

	<p>Sample 9</p>
	<p>Sample 10</p>
	<p>Reference German diesel sample</p>

Snapshot of fine dirt analysis for overview purposes

	<p>Sample 11 45 mg/l</p>
--	------------------------------