

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

PE14-030

FORD

12/19/2014

APPENDIX I

Engineering Review

Non Conf - Eng Review

PART 1 OF 2

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**From:** Estes, Eric (E.E.)  
**Sent:** Thursday, May 21, 2009 6:28 PM  
**To:** Estes, Eric (E.E.); 'Abe Ghaphery'; 'Andrew Williams'; 'Anthony Fleenor'; 'Costas Chrysochoidis'; 'Geoff Jacks'; 'Robert Kinnear'; 'Simon Malsbury'; 'Mark Karwowski'; 'Jim.Duehring@TRW.COM'; 'Salim.Semssar@TRW.COM'; 'Sanjay.Singh@TRW.COM'; 'Martha Abundis'; 'phil.browne@trw.com'; 'andy.ausband@trw.com'; 'Greg Bendzinski'; 'Glenn.Bailey@TRW.COM'; 'William.Olsen@TRW.COM'; 'Paul IRELAND'; 'Jason Johnson-contr'; Bouse, William (W.J.); Bahena, Miguel (Mike.); Diez, Timothy (T.P.); Christiansen, Jens (J.F.); Porter, Wesley (W.); Frey, Martin (M.F.); Hochrein, Brad (B.G.); Rossi, Roberto (R.A.)  
**Subject:** 2010 CD3 #4 warranty return  
**Attachments:** #4 gear warranty return data.pdf

Just got an email on another 2010 CD3 warranty return#4, **C1B00-62(B93) & C200D-49(motor rotational angle sensor)** unsure what "B" motor position fault set. See the attachment for the diagnosis the tech used and codes set from the other modules. This time the Interactive Online Diagnosis picked up the codes prior to the U3000-96(B69) but did not pick up the snap shot data I talked today with the diagnostic programmers on why the snapshot did not work so they are looking into that now. I will hot process this gear back for evaluation hopefully I see this gear next week, I will update everyone with tracking number.

*Eric J. Estes*

Warranty Analyst - TRW Automotive  
6-Sigma Center 15010 S. Commerce Dr.  
Dearborn, Michigan 48120  
Ph.#(313) 390-3843 Fax#(888) 502-9600

Year = MY10

Model = CD334

Engine = 2.5L

VIN = 3MEHM0HA9AR [REDACTED] STD

PCM = AE5A-12A650-GE

ABS = AE5C-2C219-FB

**DCDC = Could not retrieve part number from mandatory module!**

GEM\_SJB = AG1T-14B476-CB

IC = AE5T-14C026-BH

OCS = 9E53-14C371-AD

PSCM = AE5C-14D003-AK

RCM = 9E53-14C028-AB

 **Current DTCs {retrieved 21 May 2009 12:41:37}**

DTC	Snap Shot Data	Source
C1277	N/A	ABS
P1000:00	N/A	PCM

 **Historic DTCs {retrieved 21 May 2009 12:41:37}**

DTC	Snap Shot Data	Source
U3000:96	00	PSCM

 **DTCs cleared since initial read:**

DTC	Snap Shot Data	Source
B1676	N/A	ABS
U0100	N/A	ABS
B1318	N/A	GEM_SJB
U0161:00	N/A	IPC
U3003:16	N/A	IPC
C1B00:62	N/A	PSCM
C200D:49	N/A	PSCM
U0415:00	N/A	PSCM
B00A0:63	N/A	RCM
U3003:16	N/A	RCM

**Start: Thu May 21 11:46:00 EDT 2009****Menu Selection: Inspection and Verification** **IV1: VISUAL INSPECTION**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)

Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

<b>No</b>
<b>Go to Known Concerns</b>

### KC1: KNOWN CONCERNS

- Ignition ON, engine OFF.
- Press Read Vehicle Information button to retrieve DTCs from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

#### Vehicle Information:

VIN 3MEHM0HA9AF [REDACTED]

#### System Related CMDTCs Active {retrieved 21 May 2009 11:46:07}

DTC	Description	Source	Status
U3000:96	Control Module : Component Internal Failure	PSCM	Historic
C1B00:62	Steering Angle Sensor : Signal Compare Failure	PSCM	Historic
C200D:49	Motor Rotation Angle Sensor : Internal Electronic Failure	PSCM	Historic
U0415:00	Invalid Data Received from ABS Control Module : No Sub Type Information	PSCM	Historic

#### System Related CMDTCs cleared since initial read:

OASIS symptom code:

- Chassis \ Steering/Handling (303000)
- OASIS will return known TSBs and SSMs for the specific symptom code(s) and DTC(s) listed above.

Recent Warranty Repair History: No recent repair history on vehicle

Review the OASIS results below for any known concerns related to the current vehicle.

<b>SSM: 20782 2008- 2010 FUSION, MILAN, MKZ - NO LONGER INCLUDE THE STEERING WHEEL LOCKFEATURE.</b> ALL 2008 - 2010 FUSION, MILAN, AND MKZ VEHICLES BUILT AFTER 12/1/2007 HAVE INCORPORATED AN ELECTRONIC PASSIVE ANTI-THEFT SYSTEM (EPATS) KEY SYSTEM FOR THEFT PROTECTION AND REPLACING THE MECHANICAL STEERING WHEEL LOCK FEATURE THEFT PROTECTION. IMPORTANT: DO NOT REPLACE THE STEERING COLUMN FROM A PRE-12/1/2007 BUILT VEHICLE WITH THE NEW EPATS EQUIPPED COLUMN. THE COLUMNS ARE NOT INTERCHANGEABLE. A DEALER THAT INTERCHANGES THE COLUMNS COULD BE SUBJECT TO GOVERNMENT FINES UP TO \$6,000 PER VEHICLE FOR RENDERING INOPERATIVE A REQUIRED SAFETY FEATURE. Effective Date: 05/06/2009	1 out of 5 303000
<b>SSM: 20795 2010 FUSION/MILAN - 2.5L/3.0L EPAS EQUIPPED VEHICLES - SQUEAK AND RATTLE</b> SOME 2010 FUSION/MILAN EQUIPPED WITH 2.5L OR 3.0L AND ELECTRONIC POWER ASSIST STEERING (EPAS) MAY EXHIBIT INCREASED LEVELS OF ROAD NOISE, THAT CAN BE HEARD	1 out of 5 303000

INSIDE THE VEHICLE WHILE DRIVING. THE STEERING GEAR/DASH SEAL -(BASE PART NUMBER 3611B) MAY NOT BE PROPERLY SEALED. THE CORRECT POSITION OF THE STEERING GEAR/DASH SEAL CAN BE FOUND IN WORKSHOP MANUAL SECTION 211-02. NOTE: THIS ROAD NOISE DOES NOT IMPACT THE FUNCTION OR DURABILITY OF THE STEERING SYSTEM AND IT IS CONSIDERED A CUSTOMER IRRITATION.

Effective Date: 05/14/2009

Search criteria with no matching OASIS results:

U3000  
C1B00  
C200D  
U0415

- Are any of the listed known concerns related to the customer complaint?

No
<b>GO to Diagnostic Trouble Code (DTC) Charts.</b>

☰ Detected DTCs / DTC Index

## EPAS

## Current DTCs {retrieved 21 May 2009 11:46:07}

DTC	Description / Action	Source
N/A	No DTCs to report	

## Historic DTCs {retrieved 21 May 2009 11:46:07}

DTC	Description / Action	Source
U3000:96	<p>Control Module: Component Internal Failure</p> <p><b>Description:</b> The PSCM is self monitoring and will carry out self-tests at specific intervals (initial power up, power down, during normal operation, etc.). Each self-test requires the voltage supply to the PSCM to be at or above a specific level (above 6 volts, above 9 volts, between 10 and 17 volts, etc.) for the test to take place. If one or more of the self-tests should fail, then the module will set one or more DTCs.</p> <ul style="list-style-type: none"> <li>• DTC U3000:41 (Control Module: General Checksum Failure) - If at any time during normal operation the module detects an internal software error with more than 6 volts supplied to the PSCM, then DTC U3000:41 will be set.</li> <li>• DTC U3000:46 (Control Module: Calibration/Parameter Memory Failure) - At any time during normal operation with more than 6 volts supplied to the PSCM the module determines that one or more calibration files are missing or that they are corrupt or that the incorrect EPAS gear is installed on the vehicle, then DTC U3000:46 will be set.</li> <li>• DTC U3000:49 (Control Module: Internal Electronic Failure) - If at any time during normal operation with more than 6 volts supplied to the PSCM, the module detects a software or internal hardware error then the DTC U3000:49 will be set.</li> <li>• DTC U3000:61 (Control Module Signal Calculation Failure) - If the PSCM detects that assist torque calculation is faulty due to a software failure in the module, then DTC U3000:61 will be set.</li> <li>• DTC U3000:72 (Control Module Actuator Stuck Open) - During initial power up with voltage greater than 9 volts, the PSCM will check the internal relay for voltage. If voltage is not present the module will make several attempts to close the relay. If the voltage remains undetected after this test period, then DTC U3000:72 will be set.</li> <li>• DTC U3000:96 (Control Module: Component Internal Failure) - This DTC will set if there is an internal failure of the PSCM due to temperature, power supply or if multiple failures have occurred over a short period of time.</li> </ul> <p><b>Possible Causes:</b></p> <ul style="list-style-type: none"> <li>• Heat shield missing.</li> <li>• Steering gear internal failure.</li> <li>• Incorrect EPAS gear installed.</li> <li>• Ice/frost build up on relay contacts.</li> <li>• Heavy loads on the EPAS gear.</li> <li>• Excessive ambient temperatures.</li> </ul> <p><b>Diagnostic Aids:</b></p> <p>For DTC U3000:41, the PSCM will remove steering assist, enter into a manual mode and transmit an invalid steering angle message over the HS-CAN bus. The module will also send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:46, initially the PSCM will use a default steering assist and may set DTC U2100:00. If DTC U3000:46 returns on the next ignition cycle, then the PSCM will remove steering assist, enter into a manual mode and send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:49, the presence of this DTC may or may not affect steering assist. It will depend on what other DTCs (if any) are set along with U3000:49. Diagnose all other DTCs before diagnosing U3000:49.</p> <p>For DTC U3000:61, the PSCM will remove steering assist, enter into a manual mode and transmit an invalid steering angle message over the HS-CAN bus. The PSCM will also send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:72, this DTC indicates that a specific internal relay is either stuck open or has excessive resistance. In cold climates or climates where frost is possible, the relay contacts could develop a layer of frost which may prevent a clean connection between the relay contacts. It may be necessary to allow the vehicle to remain outside overnight in a cold climate to duplicate the DTC trigger conditions. If U3000:72 sets again on subsequent ignition cycles, then the PSCM will remove steering assist, enter into a manual mode and send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:96, the presence of this DTC may or may not affect steering assist. It will depend on what other DTCs are set along with U3000:96. If steering assist is affected the PSCM will send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p><b>Action:</b> GO to Pinpoint Test C</p>	PSCM

**DTC U3000:96 (PSCM) - Control Module: Component Internal Failure****+ C: DTC U3000: Control Module - Signal Calculation Failure and Component Internal Failure****- C1: VERIFY PRESENCE OF EPAS GEAR HEAT SHIELD**

- Make sure the EPAS gear heat shield is present and installed correctly. Refer to Section 211-02.
- **Is the heat shield present and is it installed correctly?**

Yes
Go to C2.

Start: Thu May 21 11:46:00 EDT 2009

Menu Selection: Inspection and Verification

**+ IV1: VISUAL INSPECTION****+ KC1: KNOWN CONCERNS****+ Detected DTCs / DTC Index****+ Menu Selection: Inspection and Verification****+ IV1: VISUAL INSPECTION**

Start: Thu May 21 11:46:00 EDT 2009

Menu Selection: Inspection and Verification

**+ IV1: VISUAL INSPECTION****+ KC1: KNOWN CONCERNS****+ Detected DTCs / DTC Index****+ Menu Selection: Inspection and Verification****+ IV1: VISUAL INSPECTION****+ KC1: KNOWN CONCERNS****+ Detected DTCs / DTC Index****DTC U3000:96 (PSCM) - Control Module: Component Internal Failure****+ C: DTC U3000: Control Module - Signal Calculation Failure and Component Internal Failure****- C1: VERIFY PRESENCE OF EPAS GEAR HEAT SHIELD****- C2: TEST DRIVE TO CHECK FOR RETURNING DTCS.**

Exit: Thu May 21 12:00:00 EDT 2009

Start: Thu May 21 11:46:00 EDT 2009

**Menu Selection: Inspection and Verification****[+] IV1: VISUAL INSPECTION****[+] KC1: KNOWN CONCERNS****[+] Detected DTCs / DTC Index****[+] Menu Selection: Inspection and Verification****[+] IV1: VISUAL INSPECTION****[+] KC1: KNOWN CONCERNS****[+] Detected DTCs / DTC Index****DTC U3000:96 (PSCM) - Control Module: Component Internal Failure****[+] C: DTC U3000: Control Module - Signal Calculation Failure and Component Internal Failure****[+] C1: VERIFY PRESENCE OF EPAS GEAR HEAT SHIELD****Exit: Thu May 21 12:00:00 EDT 2009****Resume: Thu May 21 12:16:00 EDT 2009****[+] C2: TEST DRIVE TO CHECK FOR RETURNING DTCS. - Fault outcome**

- Cycle the ignition to OFF and then back to RUN.

NOTE: Always drive the vehicle in a safe manner according to driving conditions and obey all traffic laws.

- Test drive the vehicle in the following manner:

- With the engine running/ready, stop the vehicle on an unsealed concrete or asphalt surface (in order to provide adequate friction for a thorough test).
- With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.
- Return the steering wheel to the center position and move the vehicle forward approximately 32 cm (1 ft).
- With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.
- Return the steering wheel to the center position and move the vehicle forward approximately 32 cm (1 ft).
- With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.

NOTE: The next portion of the test drive will require the vehicle to be driven at highway speeds.

NOTE: The test period is a cumulative time of 10 minutes. Stopping, going slower than 72 km/h (45 mph) or faster than 96 km/h (60 mph) will not affect the test as long as a total time of 10 minutes is spent between 72-96 km/h (45-60 mph) with at least 4 lane changes during that time/speed window.

- Continue test driving the vehicle in the following manner:

- Bring the vehicle to a minimum speed of 72 km/h (45 mph), maximum of 96 km/h (60 mph).
- Maintain that speed for at least 10 minutes.
- During this 10-minute time period, make a minimum of 4 lane changes or turns that achieve a steering wheel angle of at least 20 degrees.
- The test drive is complete.

- Press Read Vehicle Information button to retrieve DTCs from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

**Vehicle Information:**

VIN 3MEHM0HA9AR STD

### System Related CMDTCs Active {retrieved 21 May 2009 12:41:37}

DTC	Description	Source	Status
U3000:96	Control Module : Component Internal Failure	PSCM	Historic

### System Related CMDTCs cleared since initial read:

- Is DTC U3000:61 and/or U3000:96 present?

Yes

INSTALL a new EPAS gear.  
Refer to Section 211-02.

Exit: Thu May 21 12:42:00 EDT 2009

Start: Thu May 21 11:46:00 EDT 2009

Menu Selection: Inspection and Verification

+ IV1: VISUAL INSPECTION

+ KC1: KNOWN CONCERNS

+ Detected DTCs / DTC Index

DTC U3000:96 (PSCM) - Control Module: Component Internal Failure

+ C: DTC U3000: Control Module - Signal Calculation Failure and Component Internal Failure

+ C1: VERIFY PRESENCE OF EPAS GEAR HEAT SHIELD

Start: Thu May 21 11:46:00 EDT 2009

Menu Selection: Inspection and Verification

+ IV1: VISUAL INSPECTION

+ KC1: KNOWN CONCERNS

+ Detected DTCs / DTC Index

DTC U3000:96 (PSCM) - Control Module: Component Internal Failure

+ C: DTC U3000: Control Module - Signal Calculation Failure and Component Internal Failure

+ C1: VERIFY PRESENCE OF EPAS GEAR HEAT SHIELD

Start: Thu May 21 11:46:00 EDT 2009

Menu Selection: Inspection and Verification

+ IV1: VISUAL INSPECTION

+ KC1: KNOWN CONCERNS

**+ Detected DTCs / DTC Index**

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**+ Menu Selection: Inspection and Verification**

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**+ IV1: VISUAL INSPECTION**

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**From:** Mrozek, Robert (R.M.)  
**Sent:** Tuesday, October 27, 2009 1:05 PM  
**To:** Quijada, Jorge (J.); Rogero, Antonio (A.); Annadi, Hari (H.)  
**Cc:** Snider, Tim (T.O.); Mrozek, Robert (R.M.)  
**Subject:** 2010 EPAS CD3 Claim # 40862 VIN#3FAHP0HA1AR [REDACTED]

Jorge/Hari -

We have the attached CD3 EPAS claim with little useful description and no contact information. The dealer is a Dollar/Thrifty Rental company and I am not sure how to make contact with them w/o any information in the claim outside of making cold calls to them.

Who is the FCSD contact for HSAP and any suggestion on how we can follow up on this claim? Thank you.

# Claim Detail Report

Note: All costs are in US dollars

Model Year = 2010; Claim Key = 40862

## Vehicle Information

Model Year: 2010

Market Derived: F- FORD

Body/Cab Type: CFA - 4 DOOR SEDAN 4 LTR

Version/Series: 3-[N/A]

Drive Type: CTA-2 WHL L/H FRONT DRIVE

Vehicle Line: C-MAX-FUSION/MILAN/MKZ (ZEPHYR)  
(06-10)

Warranty Start Date: 25-JUN-2009

Production Date: 06-JUN-2009

VIN: 3FAHP0HA1AR [REDACTED]

## Claim Information

Document Number: 06316801

Repair Date: 17-SEP-  
2009

Distance: 5216

TIS: 3

## Dealer Information

Dealer Name: DTAC - HOUSTON

Dealer Code: 46569 - \*

Address: 8620 PANAIR

City: HOUSTON

State: TX Zip Code: 77061

Country: USA Region Code: NA

Phone: (\*)(\*.\*.)

## Expense Information

Customer Paid Amount:	.00
Deductible Amount:	.00
Dealer Paid Amount:	.00
Labor Cost:	85.00
Misc. Expense Amount:	.00
Part Markup Amount:	187.96
Material Cost:	1127.76
Total Cost Gross:	1212.76

Cust. Concern Code: H50 - STEERING GEAR/PUMP TROUBLES

Condition Code: 42 - DOES NOT OPERATE PROPERLY

Technician Comment: REPLACE RACK AND PINION

Customer Comment: NO POWER STEERING

<u>Labor Op Code</u>	<u>Labor Op Description</u>	<u>Labor Op Cost</u>
3504A	STEERING GEAR ASSEMBLY REMOVE AND INSTALL OR REPLACE	85.00

<u>Causal Full Part Number</u>			<u>Extended</u>		
<u>Flag</u>	<u>PREF BASE SUFF</u>	<u>Description</u>	<u>CPSC</u>	<u>Quantity</u>	<u>Amount</u>
Y	AESZ 3504 B	GEAR ASY-STEERING	10201	1	1127.76

DTC Sections: Mil. Light On = \*

Flag Test Type Malfunction Cd Malfunction Cd Description Monitor Cd Monitor Cd Description

*Rob Mrozek*

Electric Power Steering Supervisor  
CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [r.mrozek@ford.com](mailto:r.mrozek@ford.com)

2010 MY Ford Fusion, Mercury Milan and Hybrid (excluding 3.5L V6) - EPAS

TRW Rack Mounted System

Volume:

2010 MY: 172,586 (December)

Model	2010 MY
3.0L V-6 Engine	38,292
I-4 Engine	112,752
Hybrid	21,542

1/3 volume  
of cycle/Motor

After 3-4 faults  
(intermittent), the  
system will shut down  
the EPAS.

TRW only!

Reports:

- A – Inop/No/Lack of Assist, Intermittent, "Locked Up", Uneven/Stiff/Hard/Binding
- B1 – Other Steering Complaints (Wander/Pull/etc)
- B2 – Trac Light On/Other Lights – Replaced Column

Category	AWS	CQIS	VOQ	Total
A	81	62	0	143
B1	1	3	0	4
B2	13	2	0	15

Overall Rates:

$$A = 0.8 \text{ R/1000}$$

$$A+B1+B2 = 0.9 \text{ R/1000}$$

Rates by Engine Type (A's only):

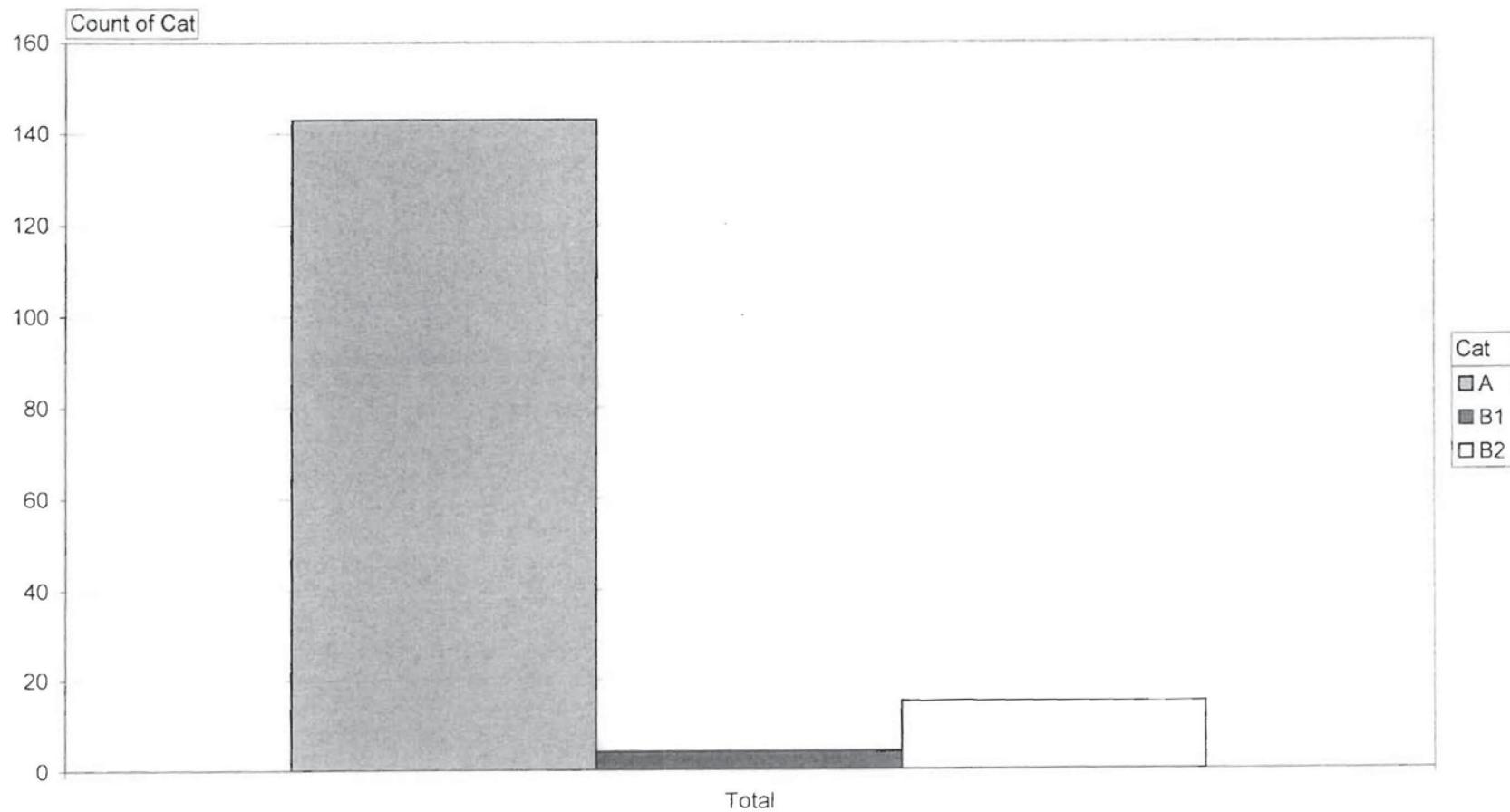
$$\text{V-6} = 0.7 \text{ R/1000}$$

$$\text{I-4} = 0.9 \text{ R/1000}$$

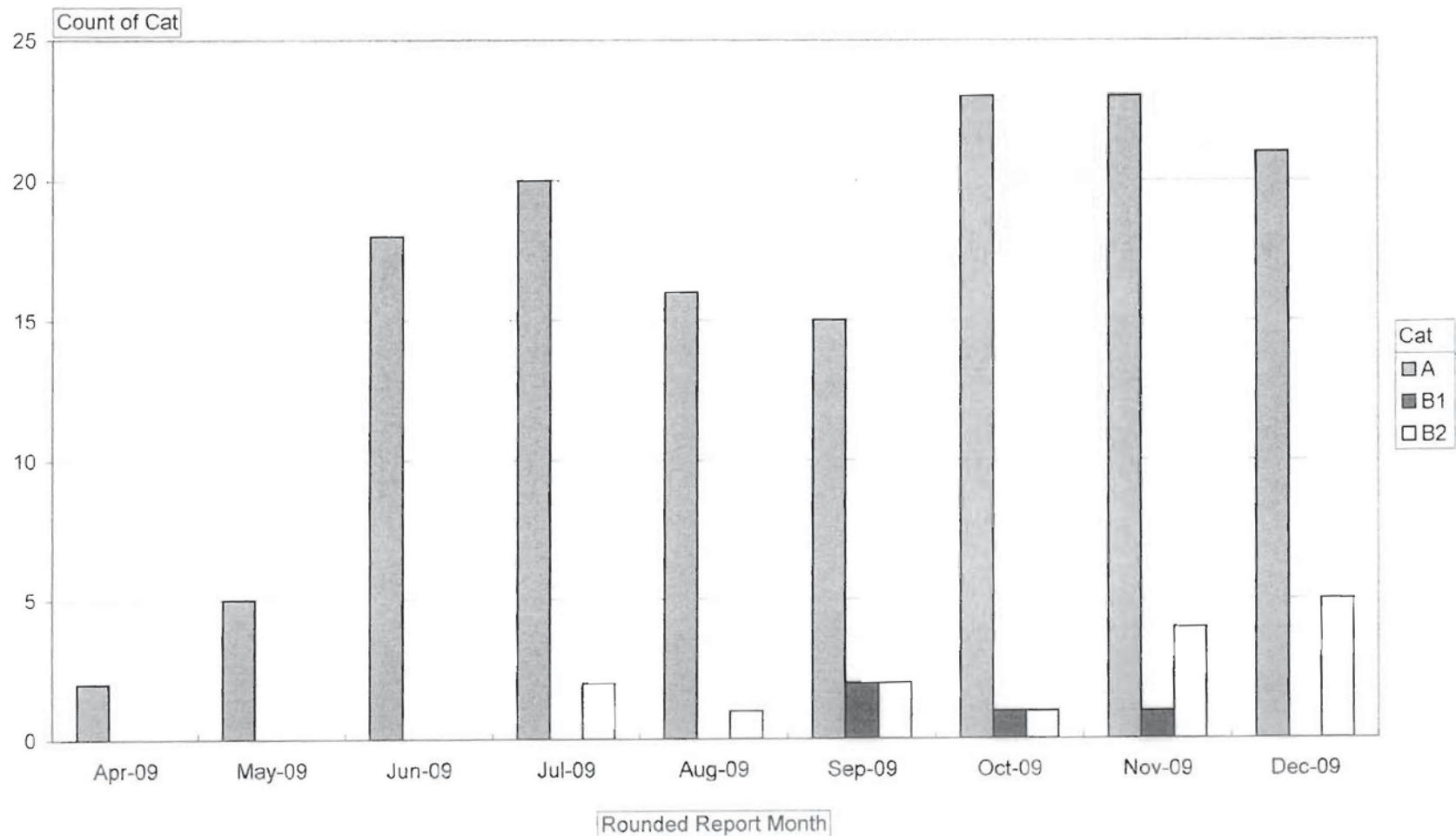
$$\text{Hybrid} = 1.4 \text{ R/1000}$$

One alleged crash (Hit curb and blew tire)

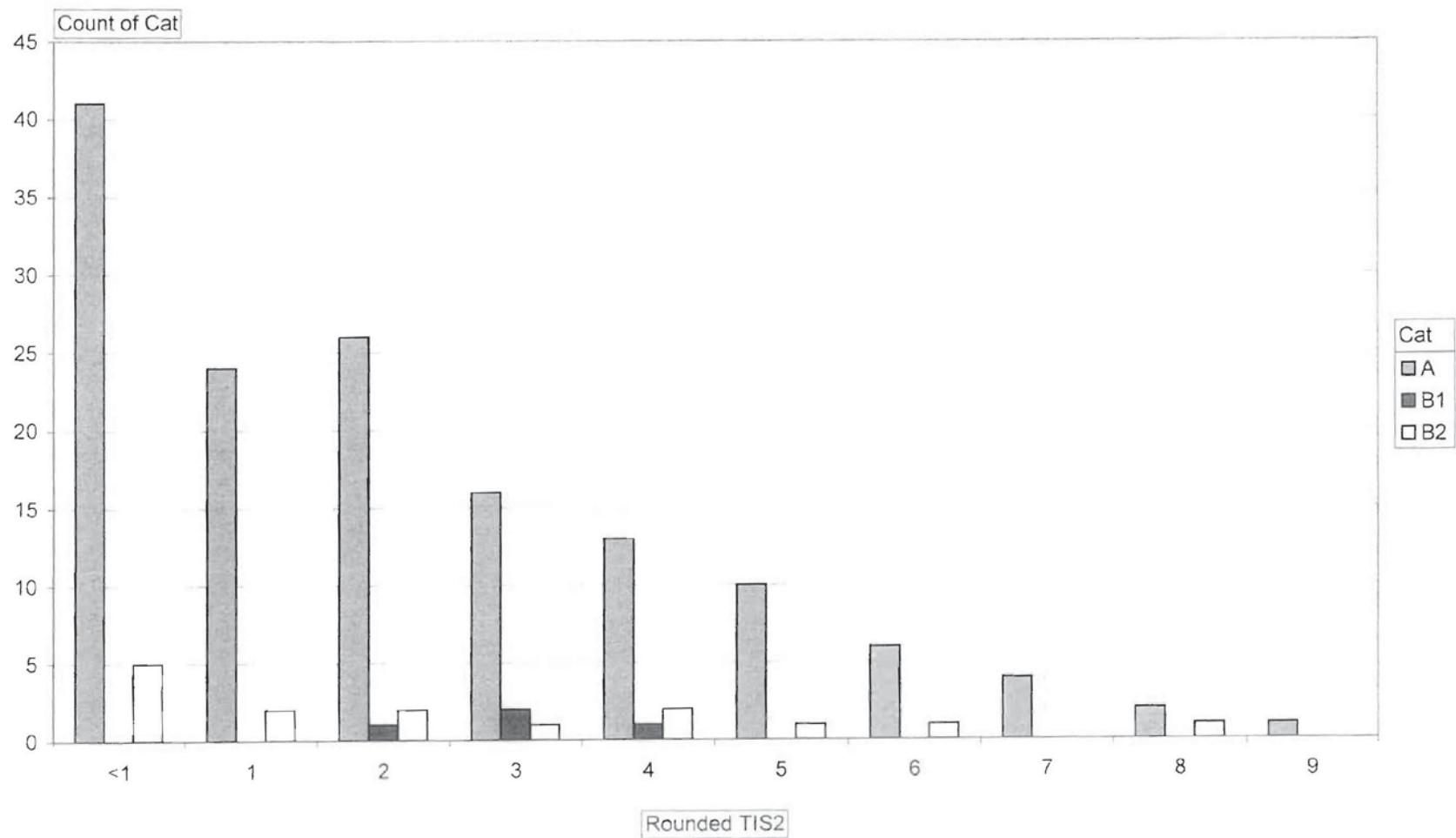
### Total Counts - Fusion



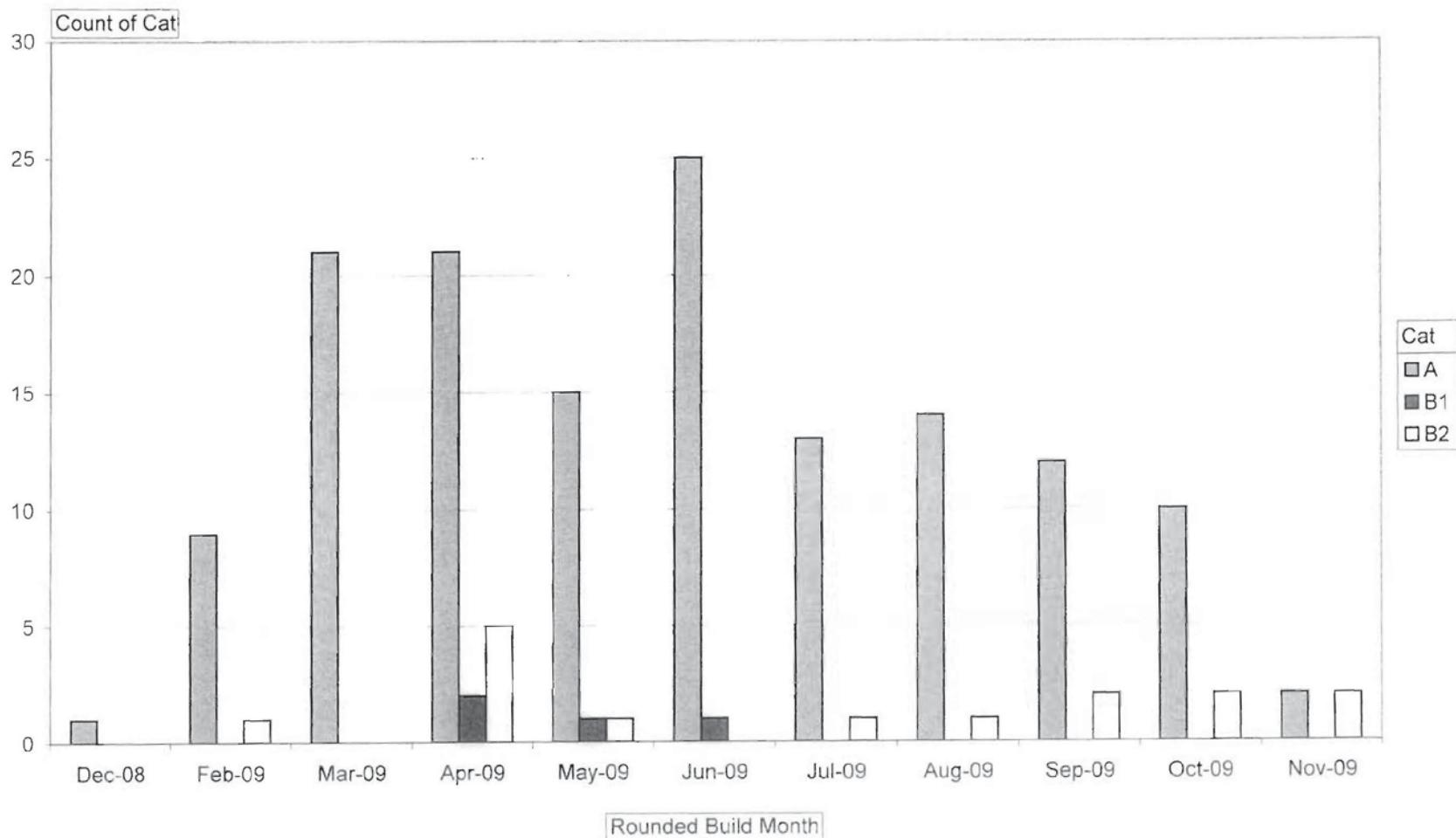
### Report Month - Fusion



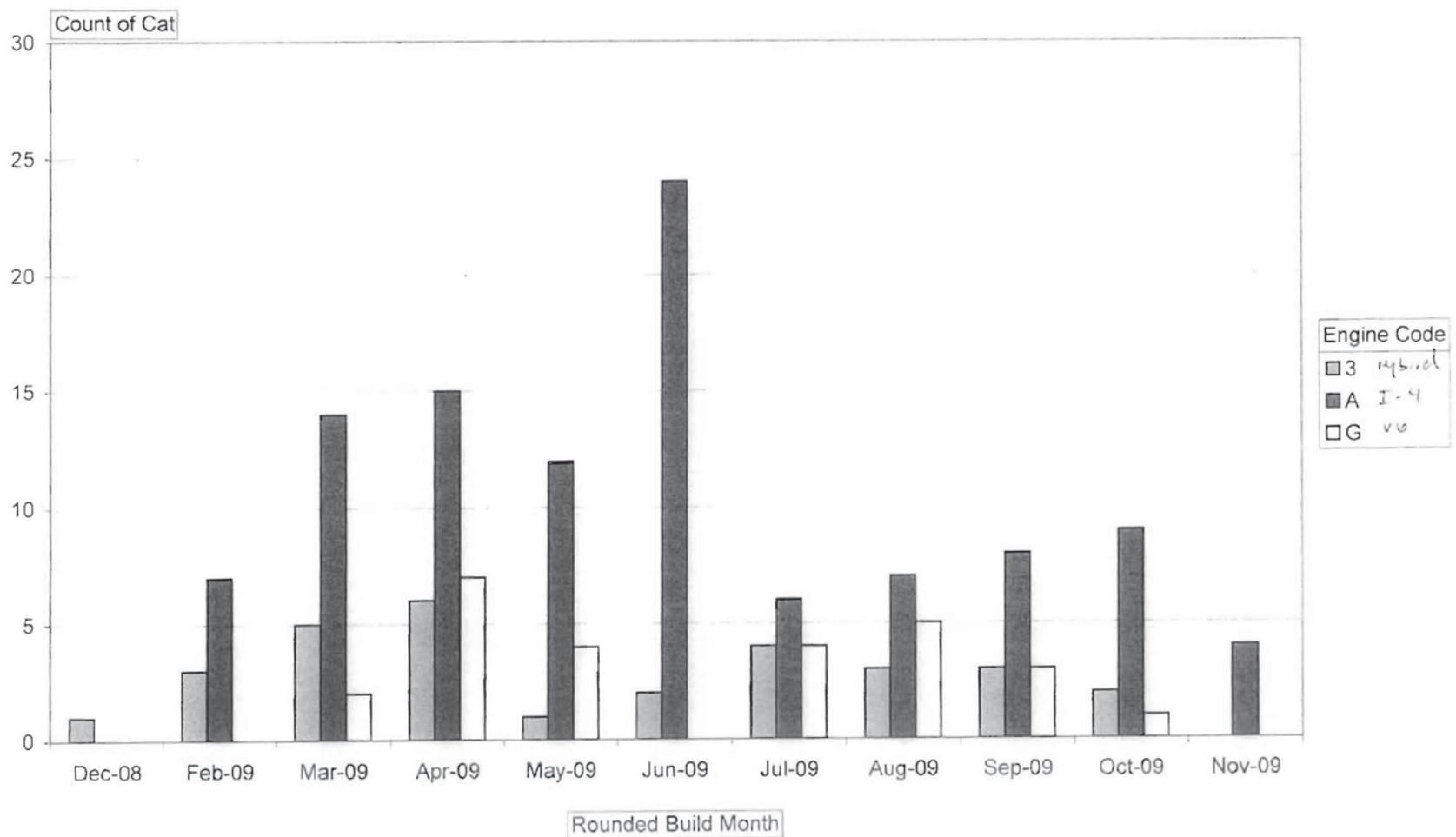
### TIS - Fusion



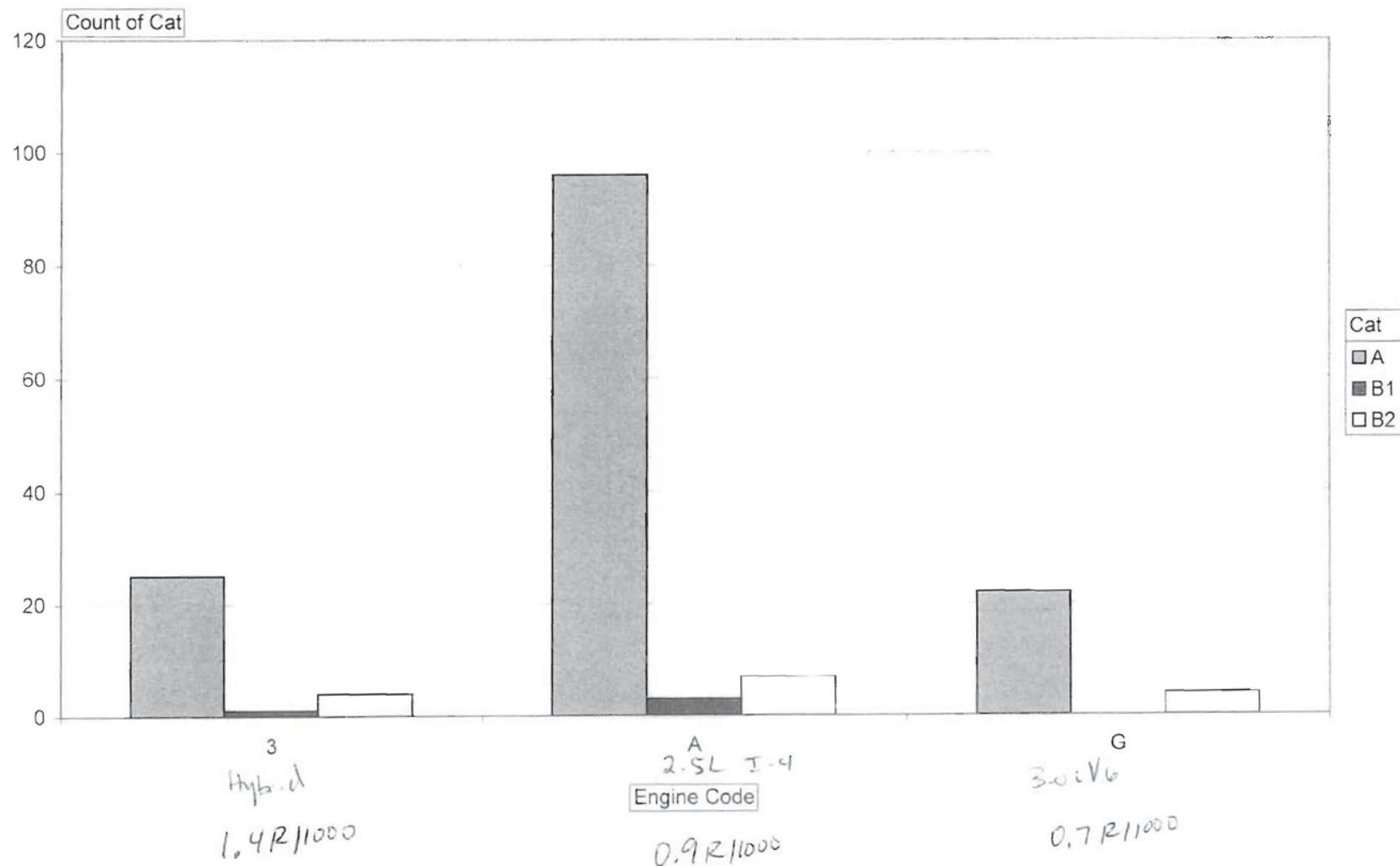
### Build Month - Fusion



### Build Month and Engine Code - Fusion



## Engine Code - Fusion



## Warranty Claims

Claims for Inquiry: fusion

Inquiry: fusion

CLAIM_KEY:	[REDACTED]	RPR_DT:	10/20/2009	MILGE:	642	TXN_CD:	2		
MDL_YR:	2010	AWS_VL_CD:	ML	VIN_CD:	3MEHM0JA6AH[REDACTED]				
PART_NUM_CAUS_PREF:	*			PRODN_DT:	9/16/2009				
PART_NUM_CAUS_BASE:	3504			WRTY_START_DT:	10/2/2009				
PART_NUM_CAUS_SUFF:	*			TRANS_CD:	C/W6				
DEALER:	MAGUIRE FORD-LINCOLN-MERCURY			ENG_CD:	C/SB				
CUST_CONC_CD:	C50	COND_CD:	1	DLR_CD:	624	ST_PROV_CD:	NY	CNTRY SOLD:	USA

CUST\_TXT: "C/S STEERING STOPPED WORKING, HIT CURB ADN BLEW TIRE"

TECH\_TXT1: "TESTED GEAR SASSEMBLY, ROAD TESTED , CODE TEST U0415 PIN TEST MEMEORY ALL NORMAL PASSED ELECTRONIC POWER TEST ASSIST WORKING NORMAL REPLACED T WHEEL DUE TO STEERING CONCERNS ROAD TEST ALLWORK"

TECH\_TXT2: ING TO SPEC

## CQIS Reports for Inquiry fusion

Inquiry: fusion	Report No: 9LABZ012	Report Date: 12/1/2009	Source: CQIS
Model Year: 2010	Model: FUSION	VIN: 3FADP0L31AR [REDACTED]	PGM Type:
Symptoms: 3 03 1 50 CHASS. FUNCTION		STRG/HANDLING HIGH EFFORT	
Addl. Symptom: NO STEERING ASSIST		Odometer: 97 M	
Engine: 2.5 ATKINS	Transmission: CVT AUT	Build Date: 9/29/2009	Warranty Start:
Dealer: 03170 Go Courtesy Ford	FCSD Region:	City: Littleton	State: CO
Customer First Name:	Last Name:	City:	State:
Causal Component:			Photo: 0

### Comment Type: Comments:

REPAIR WEB FORM DATA -CONCERN: NO P/S ASSIST DISPLAY READS P/S FAULT/DIAGNOSTIC  
 REPAIR CS: INSTALLED IDS RETRIEVE CODES MULTIPLE CODES, FOUND WIRING HARNESS  
 REPAIR CUT AT STEERING GEAR, SENSOR FOR TORQUE SENSOR AND ANGLE SENSOR 6 WIRE  
 REPAIR S IN HARNESS SPLICED WIRES USING SOLDIER AND HEATSHRINK, CLEARED ALL C  
 REPAIR ODES STILL NO P/S ASSIST ALL CODES HAVE BEEN REMOVED EXCEPT U300 STILL  
 REPAIR NO ASSIST AND DISPLAY STILL READS FAULT NO OTHER FAULT FOUND, INTERAC  
 REPAIR TIVE SHOWS TO REPLACE GEAR?PARTS REPLACED: WIRING REPARTECH QUESTION  
 REPAIR SHOULD I REPLACE GEAR OR AM I MISSING SOMETHING?WERE YOU ABLE TO VERI  
 REPAIR FY THE CONCERN? YES IS THERE AN APPROPRIATE PINPOINT TEST IN THE WSM FO  
 REPAIR R THIS CONCERN? YES WAS THE PINPOINT TEST FOLLOWED? YES  
 RECOMM GARY, THE LOG FOR THE GUIDED DIAGNOSTIC IS SHOWING THAT THIS VEHICLE HA  
 RECOMM S ONLY HAD A VISUAL INSPECTION AND IS NOT SHOWING ANY DTC, HOWEVER ISE  
 RECOMM E THAT THE DIAGNOSTICS WERE PERFORMED ON VIN 3FADP0L38AR [REDACTED] JUST LA  
 RECOMM ST WEEK. COULD YOU PLEASE VERIFY THE VIN ON THE VEHICLE OF CONCERN AND  
 RECOMM IF IT IS THE 3FADP0L38AR [REDACTED] SUBMIT A REQUEST ON THAT VIN IF IT IS  
 RECOMM THIS VEHICLE, PLEASE COMPLETE THE GUIDED DIAGNOSTIC AND IF YOU NEED F  
 RECOMM URTHER ASSISTANCE, UPDATE THIS FORM WITH YOUR FINDINGS.  
 REPAIR TECHNICIAN REPLY WE HAVE 2 DIFFERENT VEHICLES WITH THE SAME CUT WIRES  
 REPAIR FROM FACTORY IDENTICLE CUTS FROM SOME SORT OF INSTALL  
 RECOMM GARY, I HAVE MADE AN INQUIRY INTO THE CUT WIRES THAT YOU ARE DESCRIBIN  
 RECOMM G AND WILL FOLLOW UP WHEN MORE INFORMATION IS AVAILABLE. IN THE MEAN T  
 RECOMM IME, PLEASE COMPLETE THE GUIDED DIAGNOSTICS FOR THE DTC THAT IS SETTING  
 RECOMM G. ALSO, YOU ENTERED DTC U3000. I AM ASSUMING THIS TO BE U3000. THERE  
 RECOMM SHOULD ALSO BE SUB-TYPE INFORMATION FOR THIS DTC. I.E U3000???. PLEASE  
 RECOMM PROVIDE THE ENTIRE DTC SO WE CAN BETTER ASSIST YOU.  
 REPAIR THE FSE CONTACTED THE HOTLINE TO DISCUSS THE CODE U3000 SET IN THE PSC  
 REPAIR M. THE TECH HAS GONE THROUGH THE INTERACTIVE VEHICLE DIAGNOSTICS AND I  
 REPAIR T STATED TO REPLACE THE ASSEMBLY. THE FSE IS WANTING TO KNOW IF THERE  
 REPAIR ARE ANY OTHER REPAIRS THAT CAN FIX THE CODE U3000. SUGGESTED TO VERIFY  
 REPAIR THE INTERACTIVE DIAGNOSTICS WAS FOLLOWED AND TO VERIFY THE CIRCUIT RE  
 REPAIR PAIRS. IF THE INTERACTIVE DIAGNOSTICS LEADS TO MODULE REPLACEMENT THEN  
 REPAIR REPLACE THE MODULE AS NECESSARY

## CQIS Reports for Inquiry fusion

Inquiry: fusion	Report No: 9KSBM008	Report Date: 11/19/2009	Source: CQIS
Model Year: 2010	Model: FUSION	VIN: 3FAHP0JA2AR [REDACTED]	PGM Type:
Symptoms: 3 03 1 50 CHASS. FUNCTION		STRG/HANDLING HIGH EFFORT	
Addl. Symptom: LACK ASSIST ON LONG SWEEP TURN		Odometer: 3725 M	
Engine: 2.5L DOHC	Transmission: 6SP 6F MI	Build Date: 3/27/2009	Warranty Start: 6/4/2009
Dealer: 02771 Jack Demmer Ford, Inc	FCSD Region:	City: Wayne	State: MI
Customer First Name:	Last Name	City:	State:
Causal Component:		Photo: 0	

### Comment Type: Comments:

REPAIR WEB FORM DATA CONCERN: LOST POWER STEERING TWICE ON SWEEPING LEFT TURN  
 REPAIR TURNED OFF VEHICLE FOR SEVEN SECONDS AND VEHICLE WAS OK. DIAGNOSTICS:  
 REPAIR ROADTEST SEVERAL MILES TURNING RT AND SEVERAL SWEEPING LT TURNSPARTS  
 REPAIR REPLACED NONFTCH QUESTION: ANY KNOWNCONCERNS OF THIS TIMEFWFRE YOU A  
 REPAIR BLE TO VERIFY THE CONCERN? NOIS THERE AN APPROPRIATE PINPOINT TEST IN  
 REPAIR THE WSM FOR THIS CONCERN? NOWAS THE PINPOINT TEST FOLLOWED?  
 RECOMM ANTHONY, AFTER A SEARCH OF THE HOTLINE DATABASE I DID NOT FIND ANY COM  
 RECOMM MON TRENDS FOR THE POWER STEERING SYSTEM LOSING ASSIST WHEN TURNINGON  
 RECOMM A 2010 FUSION. SINCE WE NEED TO CHECK FOR ANY CODES THAT MIGHT BE STOR  
 RECOMM ED FOR THIS CONDITION, I SUGGEST YOU USE <A HREF="HTTP://WWW.VREP.FORD  
 RECOMM TECHSERVICE DEALERCONNECTION COM/VDIRS/SSM/SSM.ASP?SSM=20831" TARGET=  
 RECOMM \_BLANK>SSM 20831</A> TO ADDRESS THIS CONDITION SSM 20831 THE 2010 FUS  
 RECOMM ION/MILAN WORKSHOP MANUAL SECTION 211-00A HAS BEEN UPDATED WITH  
 REPAIR TECHNICIAN REPLY: U3000.49 IN POWER STEERING  
 RECOMM ANTHONY, WE ARE NOT SEEING A COMMON TREND RELATED TO THE U3000:49. PLE  
 RECOMM ASE CONTINUE WITH THE INTERACTIVE DIAGNOSTIC, WHEN THE DIAGNOSTIC HAS  
 RECOMM YOU PERFORM THE PARKING LOT TESTS TRY TO PERFORM ON A UNPAINTED/UNSEAL  
 RECOMM ED SURFACE (ROUGH CONCRETE IS BEST). THE FRICTION BETWEEN THE TIRES AN  
 RECOMM D CONCRETE WILL LOAD THE RACK AND GIVE A BETTER TEST RESULT. ONCE THIS  
 RECOMM TEST IS COMPLETE, UPDATE THIS FORM AND WE CAN REVIEW THE LOG FROM THE  
 RECOMM TESTS (THIS UPLOADS INTO OUR SYSTEM AUTOMATICALLY).  
 REPAIR TECHNICIAN REPLY: AFTER PERFORMED INTERACTIVE TEST, SYSTEM COMES BACK A  
 REPAIR S A PASS AND STATES TO RETURN TO CUSTOMER WITH NO CODES.  
 RECOMM ANTHONY, SINCE THE CODE HAS NOT RETURNED AT THIS TIME, BUT THE VEHICLE  
 RECOMM PREVIOUSLY HAD AN INTERNAL COMPONENT FAILURE CODE STORED, I ADVISE TO  
 RECOMM PERFORM A VOLT DROP OF ALL POWERS AND GROUNDS TO THE RACK (ENSURE YOU  
 RECOMM USE A VOLT DROP SINCE A LOAD TEST WILL NOT BE SUFFICIENT SINCE THE RAC  
 RECOMM K DRAW SO MUCH AMPERAGE) ALSO ENSURE ALL PINFITS AND CONNECTIONS AT TH  
 RECOMM E RACK ARE GOOD. IF THIS ALL CHECKS OUT, I ADVISE TO REPLACE THE EPAS R  
 RECOMM ACK BECAUSE OF THE CODE PREVIOUSLY STORED AND THESYMPTOM WHICH OCCURRE  
 RECOMM D

## CQIS Reports for Inquiry fusion

Inquiry: fusion	Report No: 9JTBA020	Report Date: 10/20/2009	Source: CQIS
Model Year: 2010	Model: FUSION	VIN: 3FAHP0HAXAR [REDACTED]	PGM Type:
Symptoms: 3 03 1 99 CHASS. FUNCTION		STRG/HANDLING NOT LISTED	
Addl. Symptom: U2011 EPAS CONCERN		Odometer: 5223 M	
Engine: 2.5L DOHC	Transmission: 6SP 6F MI	Build Date: 2/17/2009	Warranty Start: 6/2/2009
Dealer: 01170 Discovery Ford Lincoln M FCSD Region:		City: Moses Lake	State: WA
Customer First Name:	Last Name	City:	State:
Causal Component:		Photo: 0	

Comment Type: Comments:

REPAIR WEB FORM DATA -CONCERN: WHEN TURNING SHARP, LEFT OR RIGHT, FORWARD FOR REPAIR BACKWARD; STEERING WHEEL WILL VIOLENTLY KICK BACK AND "STEERING FAULT"  
REPAIR T" APPEARED ON MESSAGE CENTER. PULLED VEHICLE OVER AND CYCLED KEY ON A REPAIR ND OFF AND STEERING RETURNED TO NORMAL. MESSAGE CENTER BLANK UNTILCOND REPAIR ITION OCCURS AGAIN. DIAGNOSTICS: PULLED CODES-U2011 PRESENT DESCRIPTIO REPAIR N-U2011-MOTOR FAILURE TYPE-49 INTERNAL ELECTRONIC FAILURE STATUS-08 REPAIR (NOT CURRENT DTC)-FAULT PREVIOUSLY DETECTED, NOT CURRENTLY PRESENT PA REPAIR RTS REPLACED- NONE AT THIS TIME TECH QUESTION: CAN YOU GIVE US A PATH REPAIR TO FOLLOW? WERE YOU ABLE TO VERIFY THE CONCERN? YES IS THERE AN APPROPRI REPAIR ATE PINPOINT TEST IN THE WSM FOR THIS CONCERN? WAS THE PINPOINT TEST F REPAIR OLLOWED?  
RECOMM HELLO DAVID, IT IS CRITICAL TO FOLLOW THE EPAS INTERACTIVE DIAGNOSIS U RECOMM SING THE IDS AND VCM TO INSURE THE FREEZE FRAME DATA AND READINGS AREU RECOMM LOADED. PLEASE FOLLOW THE 211-00A SECTION OF THE WSM.  
TECH/C TECH COMMENTS: FOUND CONNECTION NOT PROPERLY SEADED

## CQIS Reports for Inquiry fusion

Inquiry: fusion	Report No: 9IPCE010	Report Date: 9/16/2009	Source: CQIS
Model Year: 2010	Model: FUSION	VIN: 3FAHP0JG1AR [REDACTED]	PGM Type:
Symptoms: 3 03 1 99 CHASS FUNCTION		STRG/HANDLING NOT LISTED	
Addl. Symptom: EPAS HARNESS MELTED ON EXHAUST		Odometer: 2147 M	
Engine: 3.0L 4V	Transmission: 6SP 6F MI	Build Date: 7/13/2009	Warranty Start: 7/31/2009
Dealer: 02749 Ken Boggs Ford	FCSD Region:	City: Opelika	State: AL
Customer First Name:	Last Name	City:	State:
Causal Component:		Photo: 0	

### Comment Type: Comments:

RECOMM DAVID,WE HAVE NO SIMILAR REPORTS. PLEASE FORWARD PICTURES SHOWING THE RECOMM HARNESS DAMAGE TO PMCEACH1@FORD.COM. PLEASE REPAIR THE WIRING PER WSM RECOMM MANUAL PROCEDURES AND VERIFY THE REPAIR. PLEASE ADVISE WHETHER A HARNE RECOMM SS RETAINER WAS MISSING, NOT ATTACHED, OR WHETHER THE DAMAGE WAS RESUL RECOMM TANT OF ROAD DEBRIS OR SOME OTHER USE ISSUE?

REPAIR WEB FORM DATA -CONCERN: NO POWER STEERING, ABS, T.C., LIGHTS ARE ON.DI REPAIR AGNOSTICS: CHECK CODES. INSPECT WIRING HARNESS. FOUND HARNESS BURNED ON REPAIR EXHAUST NEAR P.S. RACK.PARTS REPLACED:: NONETECH QUESTION: KNOWN CONCE REPAIR RNS? ANY PREVIOUS WIRING ISSUES WITH HARNESS HITTING EXHAUST?WERE YOU REPAIR ABLE TO VERIFY THE CONCERN? YESIS THERE AN APPROPRIATE PINPOINT TEST I REPAIR N THE WSM FOR THIS CONCERN? NOWAS THE PINPOINT TEST FOLLOWED? NO REPAIR TECHNICIAN REPLY: I HAVE ALREADY REPAIRED THE HARNESS, THE CUSTOMER IS REPAIR COMING TO PICK UP THE VEHICLE NOW. CANNOT TAKE PICTURES. I REMOVED THE REPAIR HARNESS, REPAIRED THE GREEN WIRE CKT # CBP42. WIRE WAS SHORTED TO GROU REPAIR ND ON EXHAUST PIPE JUST BELOW CAT. CONV. WHERE HARNESS LEAVES SUBFRAME REPAIR HARNESS RETAINER. INSULATION WAS MELTED, NETWORK WIRES WERE ALSO MEL REPAIR TED TOGETHER. NO RETAINERS WERE MISSING OR BROKEN. DISCONNECTED WIRE H REPAIR ARNESS FROM P.S. MODULE AND REPAIRED WIRE, ALSO WRAPPED HARNESS WITH E REPAIR XHAUST INSULATIVE FABRIC AND METAL TAPE. REROUTED HARNESS AROUND HEAT REPAIR SHIELD AND PLUGGED IN. REPLACE FUSE F42 IN SMART JUNCTION BOX. RETEST. REPAIR PASS.

RECOMM DAVID,THANK YOU FOR THE UPDATE TO THE FORM. THE FIX INFORMATION WILL B RECOMM E FORWARDED FOR REVIEW. PLEASE CONTACT THE TECHNICAL HOTLINE AGAIN IF RECOMM FURTHER DIAGNOSTIC ASSISTANCE IS REQUIRED.

ADD-ON FORWARDING TO SME

## CQIS Reports for Inquiry fusion

Inquiry: fusion	Report No: 9HTAK256	Report Date: 8/20/2009	Source: CQIS
Model Year: 2010	Model: FUSION	VIN: 3FAHP0HG0AR [REDACTED]	PGM Type:
Symptoms: 3 03 1 50 CHASS. FUNCTION		STRG/HANDLING HIGH EFFORT	
Addl. Symptom: INTERM NO ASSIST		Odometer: 8548 M	
Engine: 3.0L 4V	Transmission: 6SP 6F MI	Build Date: 4/15/2009	Warranty Start: 4/30/2009
Dealer: 05224 Thoroughbred Ford	FCSD Region:	City: Kansas City	State: MO
Customer First Name:	Last Name	City:	State:
Causal Component:		Photo: 0	

### Comment Type: Comments:

REPAIR WEB FORM DATA -CONCERN: POWER STEERING HAS LOST ASSIST A COUPLE OF TIME  
REPAIR ES INTERMITTITLY, DIAGNOSTICS: TEST DROVE 41 MILES. DID NOT HAVE A PROBL  
REPAIR EM. CHECKED FOR CODES AND HAD A C2000. WENT TO THE INTERACTIVE DIAG AN  
REPAIR D WENT TO PINPOINT TEST B. CHECKED ALL CONNECTORS ON GEAR. FOUND NO PR  
REPAIR OBLEMS. DID B2 DRIVE CYCLE TEST. DID NOT DISPLAY ANY CODES. TEST DROVE  
REPAIR WHILE WATCHING PIDS AND ALL ARE REACTING TO STEERING WHEEL MOVEMENT AN  
REPAIR D OR SPEED. PARTS REPLACED; NONETECH QUESTION: NEED SOME ASSISTANCE W  
REPAIR ITH ANY IDEAS. WERE YOU ABLE TO VERIFY THE CONCERN? NO IS THERE AN APPRO  
REPAIR PRIATE PINPOINT TEST IN THE WSM FOR THIS CONCERN? YES WAS THE PINPOINT  
REPAIR TEST FOLLOWED? YES

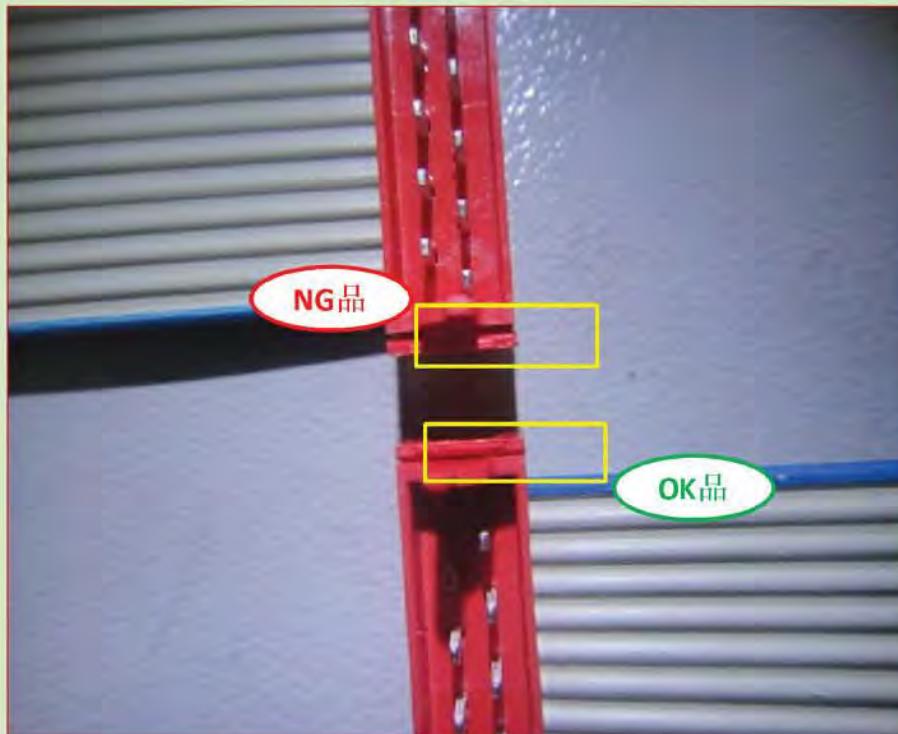
RECOMM TIM REMOVE THE BELLOWS BOOT ON THE RACK AND IF RUSTY REPLACE THE RACK

RECOMM WE HAVE ALSO SEEN WATER INTRUSION INTO THE MODULE ON THE RACK CAUSE E

RECOMM RRATIC OPERATION

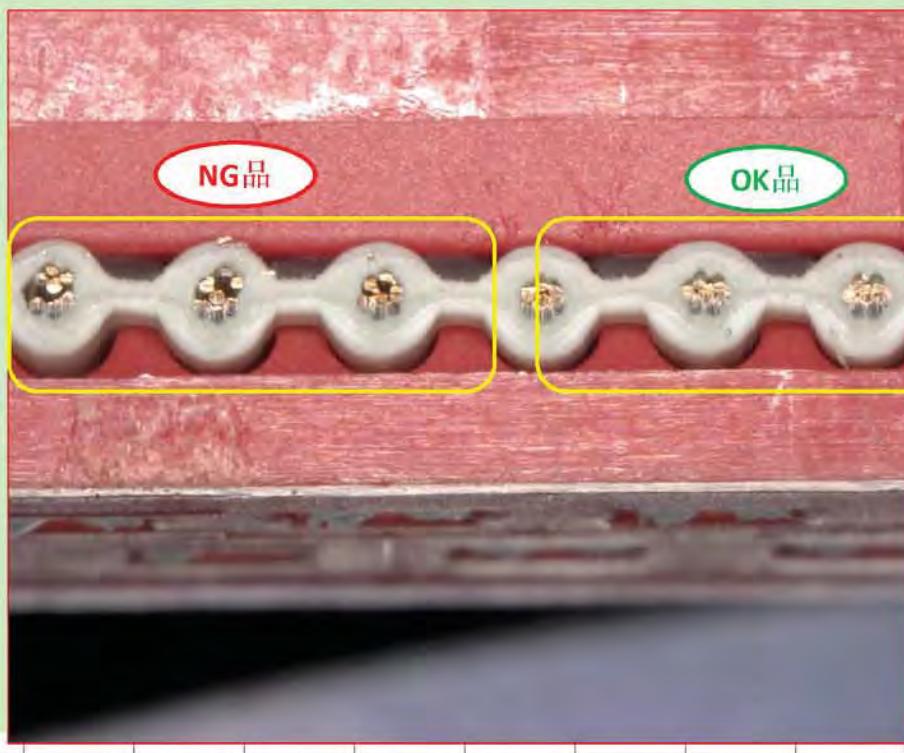
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**From:** Quis, Rudolf (R.)  
**Sent:** Friday, May 13, 2011 12:30 PM  
**To:** Bahena, Miguel (Mike.); Mattern, Don (D.); Surella, Matthew (M.M.); Bouse, William (Bill.); Diez, Timothy (T.P.); Birkenbeil, Thomas (T.); Hahn, Stephan (S.); Napoli, Laura (L.)  
**Cc:** Schusteritz, Klaus (K.); Hilprecht, Ulrike (U.)  
**Subject:** AW: B3A Woodpecker

Do you have also information on the established countermeasures.

You mentioned for example the diagnostic.

This is also something Tyco told me.

They are selling this relay also to other OEM, but this failures are occurring on TRW only.  
So their assumption is that the TRW fault diagnostic is to sensible.

Best regards / Mit freundlichen Grüßen

### **Rudolf Quis**

Lead System Engineer C1MCA EPAS  
Chassis Steering  
Ford Werke GmbH  
D-MC/1-C2  
Spessartstrasse  
50725 Cologne-Merkenich  
Germany

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Fax. +49/221/9033183  
Ford internal: 87033868  
e-Mail: [rquis@ford.com](mailto:rquis@ford.com)

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Henry-Ford-Straße 1, 50735 Köln  
Sitz der Gesellschaft: Köln  
Registergericht Köln, HRB 54183  
Vorsitzender des Aufsichtsrats: Stephen Odell  
Geschäftsführung: Bernd Matthes (Vorsitzender), Wolfgang Booms, Dirk Heller, Caspar Hohage, Dr. Hermann H. Hollmann, Rainer Ludwig, Rüdiger Minnrat, Dr. Wolfgang Schneider

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**Von:** Bahena, Miguel (Mike.)  
**Gesendet:** Freitag, 13. Mai 2011 14:21  
**An:** Quis, Rudolf (R.); Mattern, Don (D.); Surella, Matthew (M.M.); Bouse, William (Bill.); Diez, Timothy (T.P.); Birkenbeil, Thomas (T.); Hahn, Stephan (S.)  
**Cc:** Schusteritz, Klaus (K.); Hilprecht, Ulrike (U.)  
**Betreff:** RE: B3A Woodpecker

Rudi,

Since the start of CD3/ rfr production we have seen B3A/B43 faults due to multiple root causes (at least 7 or 8 that I can think of). In general the numbers of failures has been dramatically reduced but not 100 % eliminated.

Attached is a file that summarizes all TRW Rack EPAS B3a and relay failures showing all the different root causes, and failure run charts.

Yes for CD3/ **rfr** U502 we employ Hot Puma at QAO and Marion but there are investigations to move this testing to Anting.

Unfortunately the B3a diagnostic is highly sensitive and I do think the start point relay is robust enough to the sensitivity of the diagnostic. Because of this I think we need to move to a solid state electronic PIR function to move the needle further. Thanks.

Sincerely,

**Mike Bahena**  
D3/D4 Electric Power Steering Systems  
Ford Motor Co.  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)

< Datei: Tyco SPR relay returns 27-04-11.xls >>

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**From:** Quis, Rudolf (R.)  
**Sent:** Friday, May 13, 2011 7:42 AM  
**To:** Bahena, Miguel (Mike.); Mattern, Don (D.); Surella, Matthew (M.M.); Bouse, William (Bill.); Diez, Timothy (T.P.); Birkenbeil, Thomas (T.); Hahn, Stephan (S.)  
**Cc:** Schusteritz, Klaus (K.); Hilprecht, Ulrike (U.)  
**Subject:** B3A Woodpecker

There has been activities in the past (CD3 and **rfr** to reduce Tyco relay failures, like woodpeckering, Puma tester and fault diagnostic changes.

Currently C1 is facing B3A failures as well.

Is someone able to pull together all this thing and give us an overview?

Are CD3 / **rfr** not seeing this issues?

Best regards / Mit freundlichen Gruessen

### **Rudolf Quis**

Lead System Engineer C1MCA EPAS

Chassis Steering

Ford Werke GmbH

D-MC/1-C2

Spessartstrasse

50725 Cologne-Merkenich

Germany

Tel. +49/221/9033868

Fax. +49/221/9033183

Ford internal: 87033868

e-Mail: [rquis@ford.com](mailto:rquis@ford.com)

Ford-Werke GmbH

Henry-Ford-Straße 1, 50735 Köln

Sitz der Gesellschaft: Köln

Registergericht Köln, HRB 54183

Vorsitzender des Aufsichtsrats: Stephen Odell

Geschäftsführung: Bernhard Maltes (Vorsitzender), Wolfgang Booms, Dirk Heller, Caspar Hohage, Dr. Hermann H. Hollmann, Rainer Ludwig, Rüdiger Minralh, Dr. Wolfgang Schneider

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**From:** Rossi, Roberto (R.A.)  
**Sent:** Monday, February 23, 2009 11:22 PM  
**To:** 'Mark Karwowski'; Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Diez, Timothy (T.P.); Bouse, Bill (W.J.); Christian Helming; Craig Zeki; Geoff Jacks; Martha Abundis; Mike Davies; Paul IRELAND; Simon Malsbury  
**Cc:** Abe Ghaphery; Andrew Williams; Angel Andres; Derek Lord; Jim Duehring; Jon CHALMERS; JuanCarlos cano; Mark PHILLIPS; Mike APPLETON; Phil Browne; Robert Kostadina; Ron Caldwell; Nicastri, Paul (P.R.); Brackett, Tom (T.P.); Liu, Ron (D.R.)  
**Subject:** B3A Fault from Hermosillo (3FADP0L36AR [REDACTED] Optical Analysis

The following are files from the optical analysis of the motor relay contacts.

Thanks,

Roberto Rossi  
Chassis Electronics Supervisor  
313-805-4157

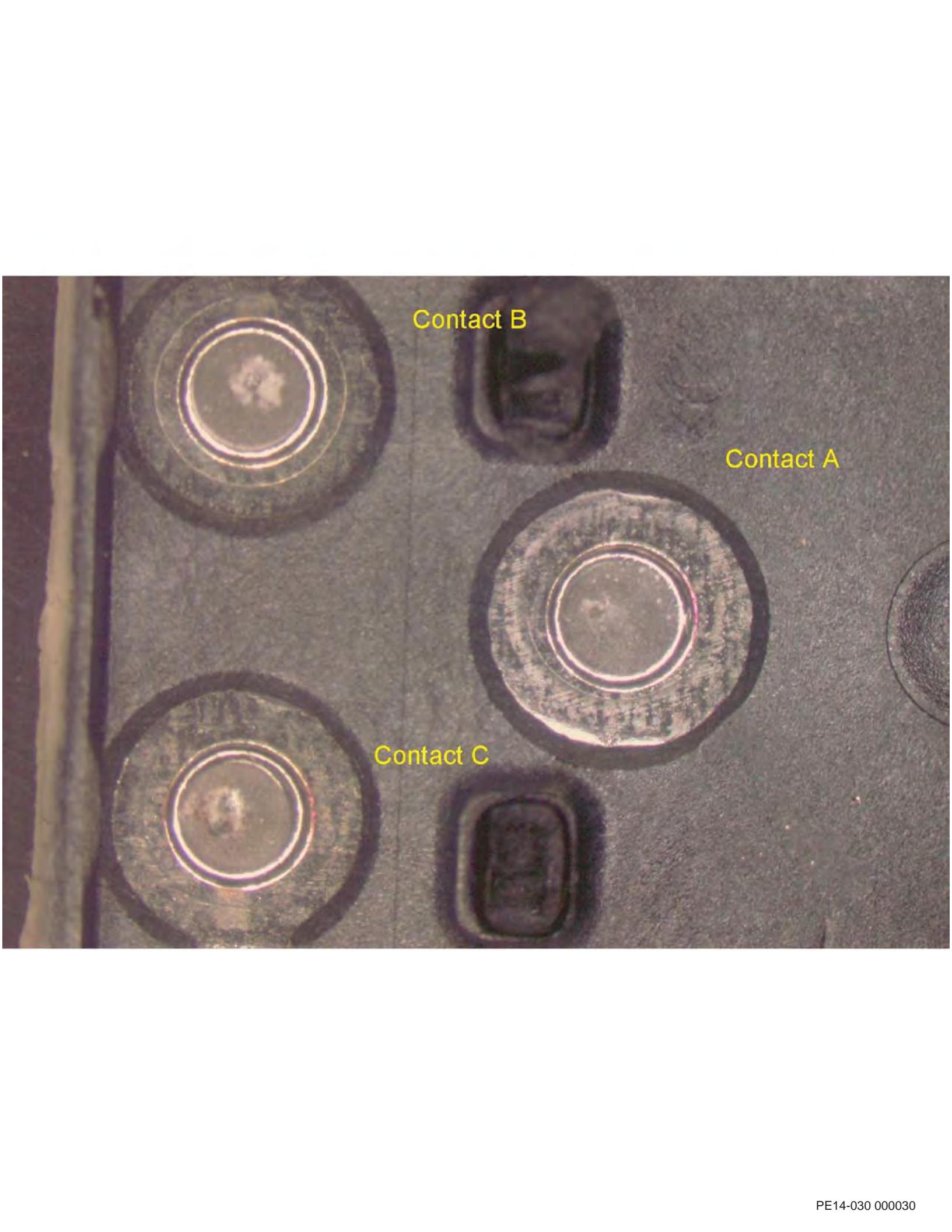
*Lord Jesus Christ, Son of the Father, send now Your Spirit over the earth. Let the Holy Spirit live in the hearts of all nations that they may be preserved from degeneration, disaster and war. May The Lady of All Nations be our advocate. Amen.*

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**From:** Nicastri, Paul (P.R.)  
**Sent:** Monday, February 23, 2009 5:25 PM  
**To:** Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Mince, Robert (R.W.); Brackett, Tom (T.P.); Mrozek, Robert (R.M.)  
**Subject:** TRW EPAS Relay Pictures

I've attached the optical microscope picture of the contacts from the suspect relay.

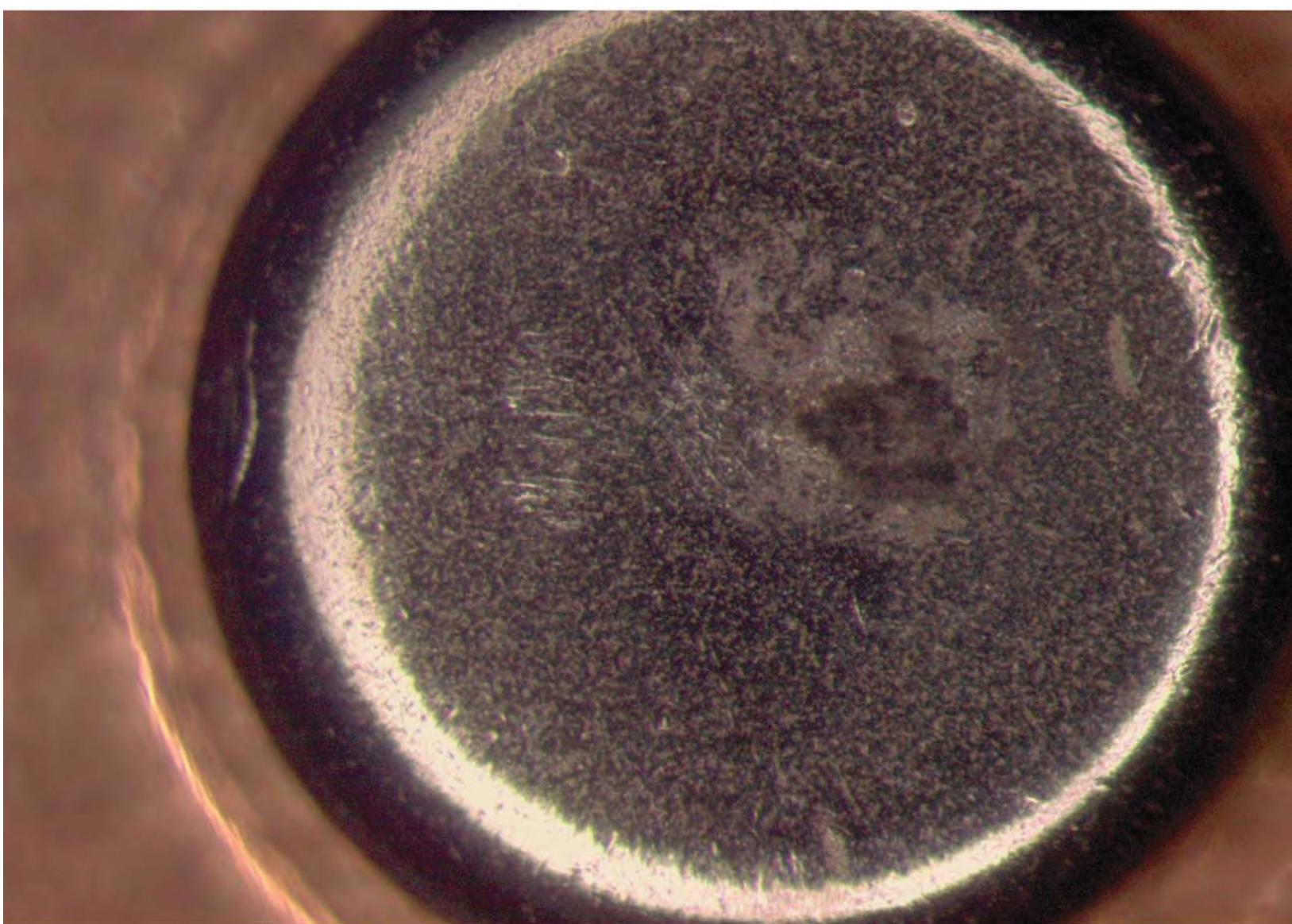




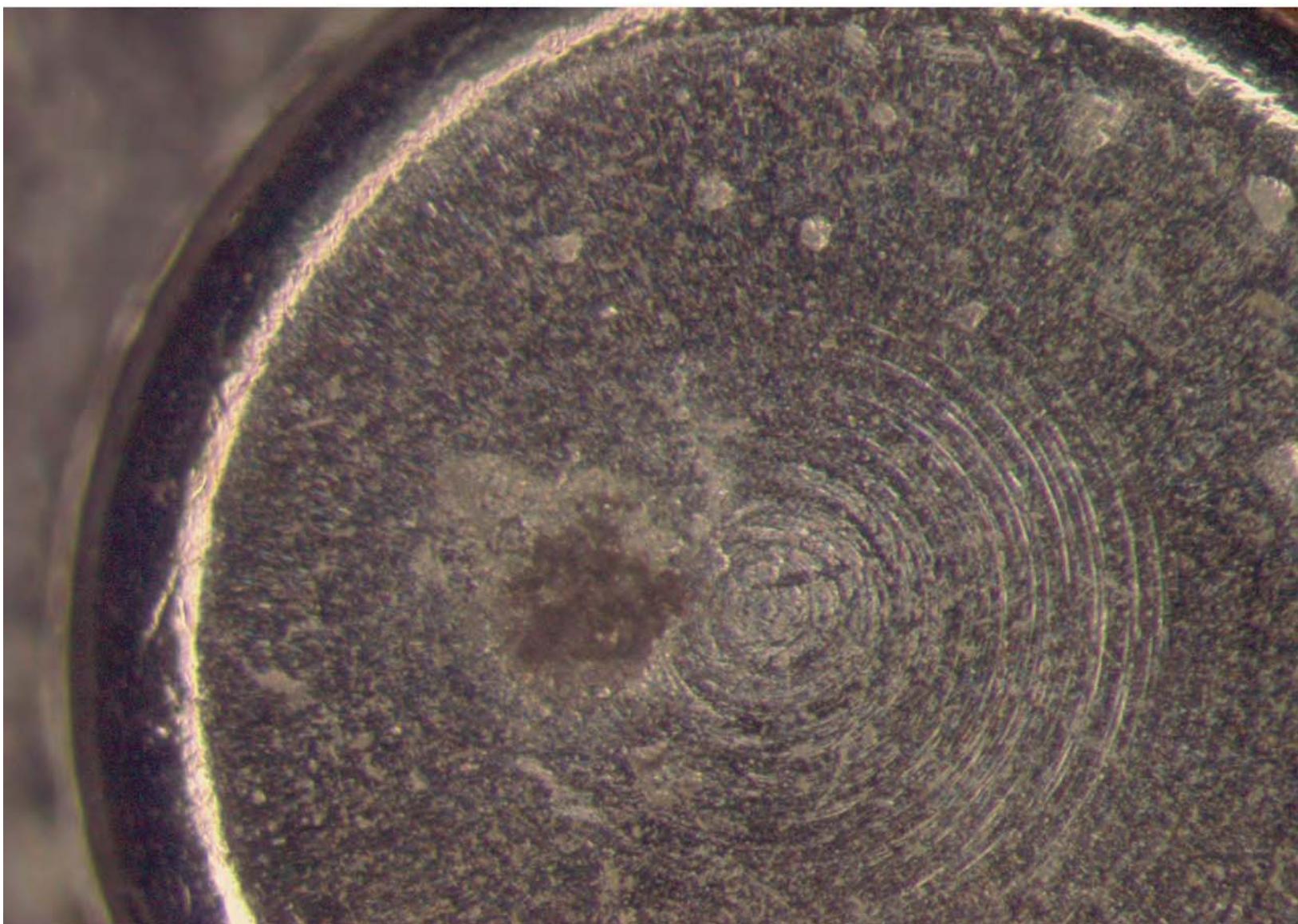
Contact B

Contact A

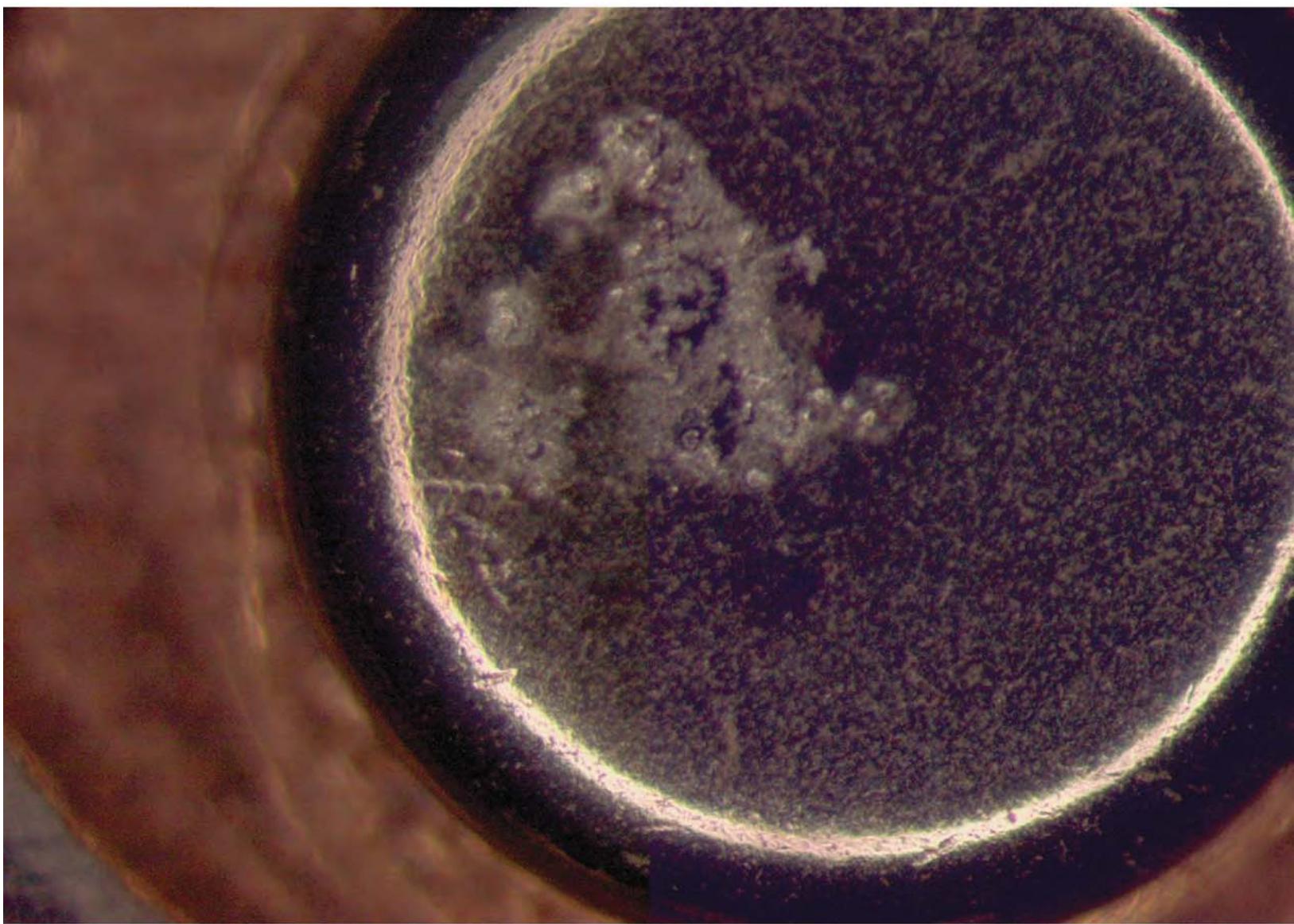
Contact C



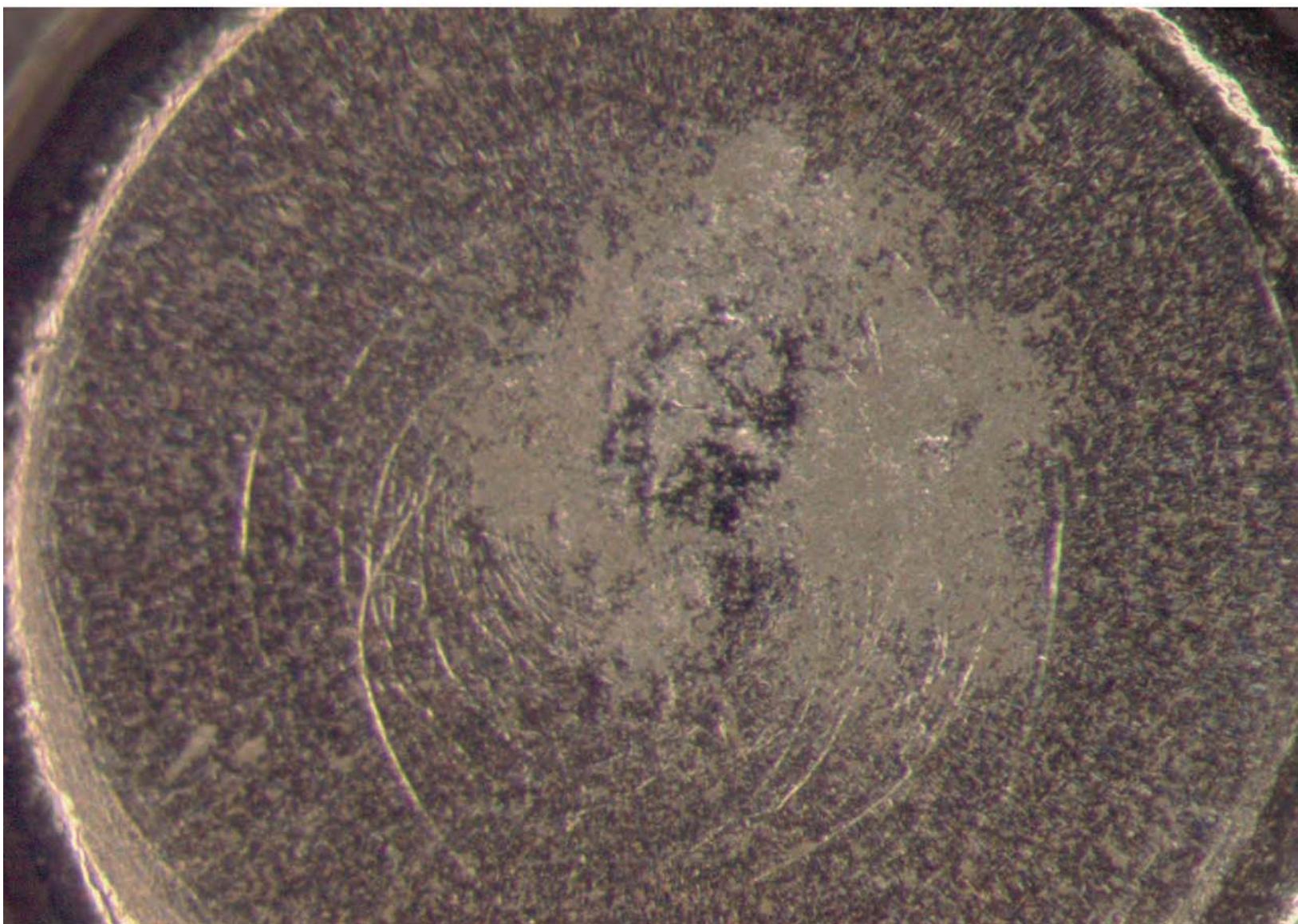
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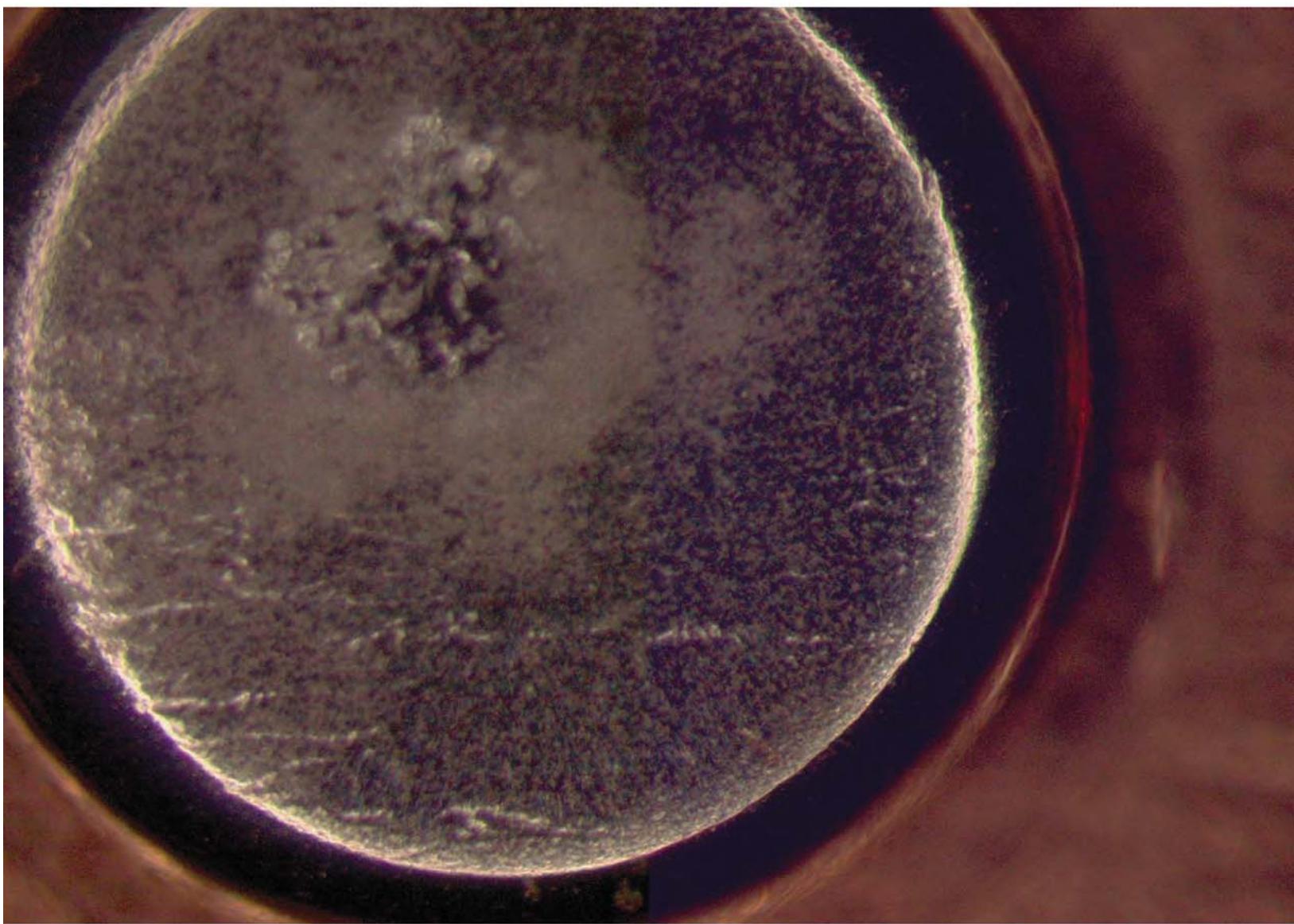
PE14-030 000032



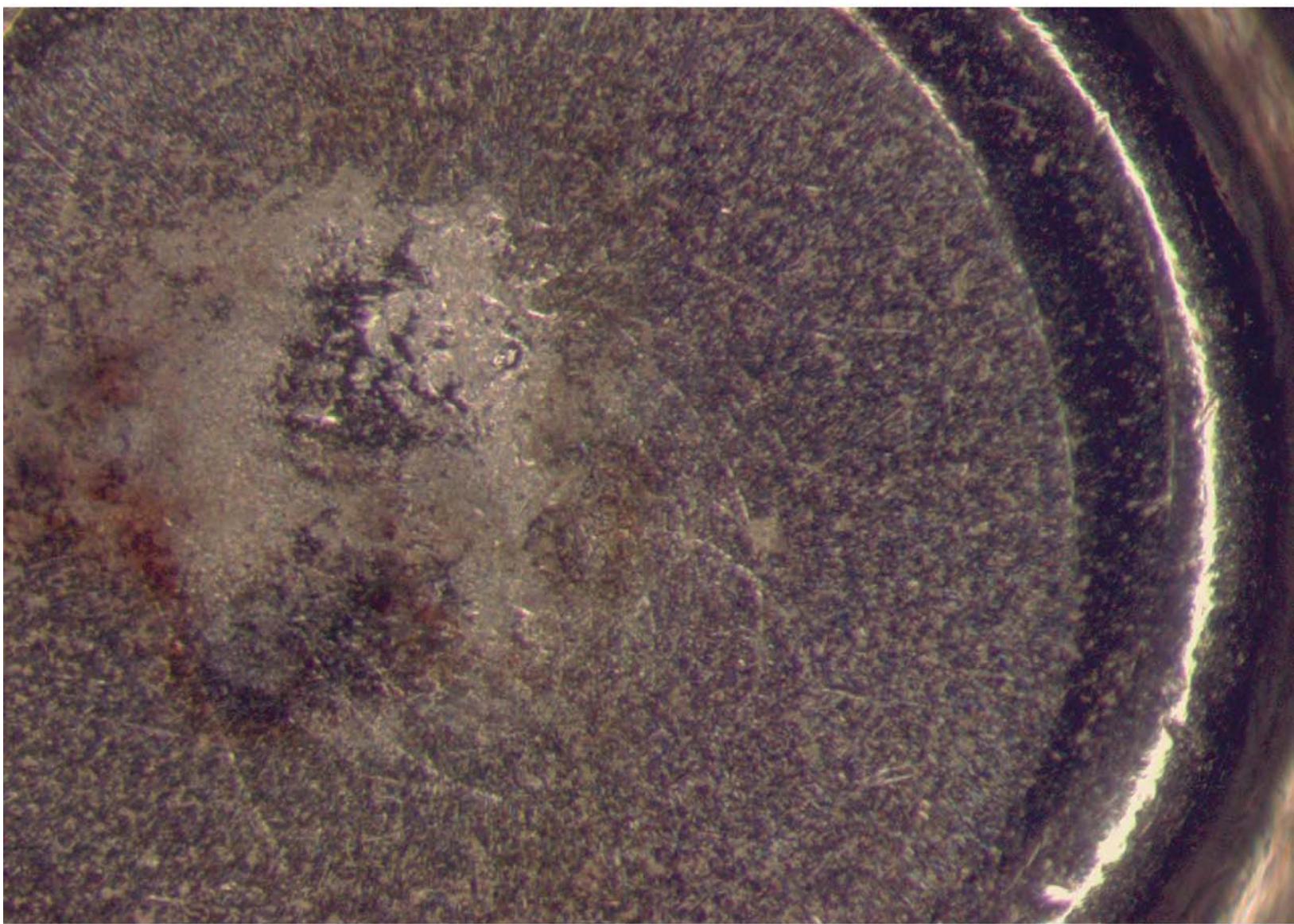
PE14-030 000033



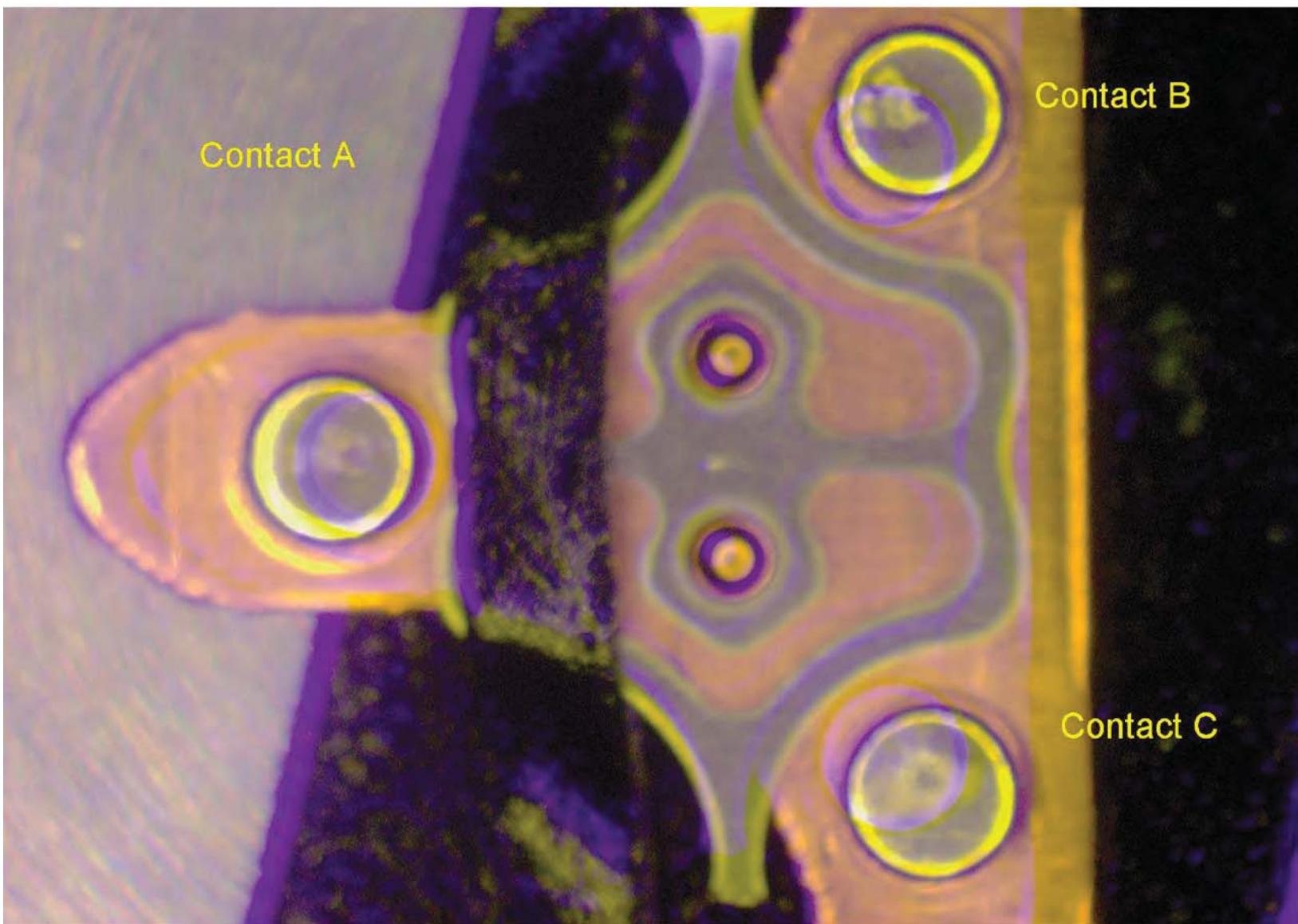
PE14-030 000034



PE14-030 000035



PE14-030 000036



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**From:** Bahena, Miguel (Mike.)  
**Sent:** Saturday, February 21, 2009 2:27 PM  
**To:** Mince, Robert (R.W.); Frey, Martin (M.F.); Hochrein, Brad (B.G.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Mrozek, Robert (R.M.)  
**Subject:** B3a is not very high on the radar at HSAP

Per 2 sources the B3a is not on the radar of the HSAP Plant or Launch Management team.

There is not awareness that this is a repeat quality issue. HSAP incoming quality is concerned with containment and is working with the local TRW support.

Obviously we will not tell TRW, but I wanted you to be aware.

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)  
Pager: [Click Here <<<<mailto:3138053680@messaging.sprintpcs.com>>>>](http://Click Here <<<<mailto:3138053680@messaging.sprintpcs.com>>>>)

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**From:** Diez, Timothy (T.P.)  
**Sent:** Wednesday, November 10, 2010 4:12 PM  
**To:** Rossi, Roberto (R.A.)  
**Subject:** B9a on C346 DEMS Fleet Issue

Rob,

Last week, I reported to you a B9a issue on a C346 Dems fleet vehicle. TRW removed the gear and analyzed. The root cause was already known. The root cause was an interaction issue between the power regulator and the CPU. It was also identified during CD3 warranty analysis. For CD3 warranty, TRW fixed the issue with a software change. The same software fix was implemented for C346.

Please let me know if you require more information on this issue.

Sincerely,  
Tim Diez  
Ford Electric Power Steering, EESE  
313-805-1060; Fax: 313-317-4387  
e-mail: [tdiez@ford.com](mailto:tdiez@ford.com)  
cube 3C071, Building 5

# B9A Software Fix for Regulator Double Start up

ID	Task Name	Duration	Start	Finish	Timeline																								
					'10	Jun 27, '10	Jul 11, '10	Jul 25, '10	Aug 8, '10	Aug 22, '10	Sep 5, '10	Sep 19, '10	Oct 3, '10	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T
1	SW Implementation	14 days	Tue 7/13/10	Sun 8/1/10	SW Implementation																								
2	UK Validation Testing	16 days	Mon 8/2/10	Mon 8/23/10	UK Validation Testing																								
3	Perform Confidence and PUPD	16 days	Mon 8/2/10	Mon 8/23/10	Perform Confidence and PUPD testing																								
4																													
5	26 Mile Validation Testing	5 days	Mon 8/2/10	Sun 8/8/10	26 Mile Validation Testing																								
6	Electronic Endurance	5 days	Mon 8/2/10	Sun 8/8/10	Electronic Endurance																								
7																													
8	CD3xx <sup>PERFORM PUPD</sup>	35 days	Mon 8/2/10	Fri 9/17/10	CD3xx																								
9	Validation Testing	5 days	Mon 8/2/10	Sun 8/8/10	Validation Testing																								
10	SW Validation, Paperwork and F	5 days	Mon 8/9/10	Sun 8/15/10	Validation, Paperwork and PN implementation																								
11	PURL 3 Drive and Evaluation	5 days	Mon 8/16/10	Sun 8/22/10	PUR_3 Drive and Evaluation																								
12	EOL Plant Trail at Assembly Pla	5 days	Mon 8/23/10	Sun 8/29/10	ECL Plant Trail at Assembly Plant																								
13	Software Approval TSA, Concess	5 days	Mon 8/30/10	Fri 9/3/10	Software Approval TSA, Concessions etc.																								
14	Flash at Plant for Production @	0 days	Fri 9/3/10	Fri 9/3/10	Flash at Plant for Production @ Anting																								
15	Paperwork EPP	5 days	Mon 9/6/10	Sun 9/12/10	Paperwork EPP																								
16	Release Gear Assembly	5 days	Mon 9/13/10	Fri 9/17/10	Release Gear Assembly																								
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29	U502 2011	36 days	Mon 8/16/10	Sun 10/3/10	U502 2011																								
30	Validation Testing	5 days	Mon 8/16/10	Sun 8/22/10	Validation Testing																								
31	SW Validation, Paperwork and F	5 days	Mon 8/23/10	Sun 8/29/10	SW Validation, Paperwork and PN implementation																								
32	PURL 3 Drive and Evaluation	5 days	Mon 8/30/10	Sun 9/5/10	PURL 3 Drive and Evaluation																								
33	EOL Plant Trail at Assembly Pla	5 days	Mon 9/6/10	Sun 9/12/10	EOL Plant Trail at Assembly Plant																								
34	Software Approval TSA, Concess	5 days	Mon 9/13/10	Fri 9/17/10	Software Approval TSA, Concessions etc.																								
35	Flash at Plant for Production @	0 days	Fri 9/17/10	Fri 9/17/10	Flash at Plant for Production @ Anting																								
36	Paperwork EPP	5 days	Mon 9/20/10	Sun 9/26/10	Paperwork EPP																								
37	Release Gear Assembly	5 days	Tue 9/28/10	Sun 10/3/10	Release Gear Assembly																								

Redacted for Relevance

6 to 8 weeks for Hormosilla

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**From:** Bahena, Miguel (Mike.)  
**Sent:** Wednesday, July 21, 2010 5:01 PM  
**To:** 'Robert.Kostadina@TRW.COM'; 'Hemang Mehta'; Mohammed Yasin; 'Douglas Sherman'  
**Cc:** Napoli, Laura (L.); Snider, Tim (T.O.); 'Angel Andres'; Mrozek, Robert (R.M.); 'JuanCarlos cano'  
**Subject:** B9A SW fix Timing for CD3 ~~rfr~~ /U502 Current Production

Mohammed, Rob, Doug, Hemang,

Can you please send us the timing for PURFL3 SW available with the B9a fix for current production?

CD3

~~rfr~~  
U502(I'm not sure when Laura is working this in)

We need to start the WERS concern process and get QAO prepared to start re-flashing. Thanks.

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)

RVA 2805

TR - 0075 = RVA 2961

Concern Tracking Number	
Concern ID#	
Concern Description	CDS EPAS Glass Fiber Contamination
Concern Open Date	8-Sep-08
Concern Days Open	73
Active/inactive Flag	Active
On Track to Key Dates	No
On Track to Selected Dates	No
Implementation Flag	Yellow
Function	CHASSIS
Lead Organization	VRT
P-O-SF-SC	SUPPLIER-PROCESS
Primary Indicator	WARRANTY
Severity Rating	
Concern Create Date	15-Nov-08
Concern Status	TEAM WORKING ON
Concern Type	CHRONIC
Roadmap View	VEHICLE LINE
Overdue Task	STEERING
Resolution Scheme	JUST GO IT
Key Supplier	TRW
Failure Rate	
Potential Population	
Freeze Flag	N
Data Roadmap: Main Folder:	
Roadmap Workstream:	Workstream Description: FIND AND FIX
WCC(s)	WCC
Service Part Number(s) and Description	Part Number
CBGs (primary first)	Short Description: GLOBAL
Assembly Part(s)	Part Code: A3
Stamping Plants:	Plant Description: HERMOSILLO PLANT
PTO Plant(s)	Plant Code: VBT
Engines(s)	Plant Description: Engine Description: Engine Code: Transmission Code: ECU Code: CDS Description: VFG Code: VFG Description: VRT Code: VRT Description: Function Code: Function Description:
Transmissions(s)	H22 STEERING REQUIRES EXTRA OR UNEVEN EFFORT
ECU's	H50 STEERING GEAR/PUMP TROUBLES
Description/VEGART/Function(s)	N58 STEERING NOISY
Symptom Population	Vehicle Description: Market: Start MY: End MY: DE: FUSION (NA-HSAP) GLOBAL 2010 2010 DH: FUSION HYBRID (NA-HSAP) GLOBAL 2010 2010 ML: MILAN (NA-HSAP) GLOBAL 2010 2010 NC: MILAN HYBRID (NA-HSAP) GLOBAL 2010 2010
Team	CDS ID: AROGERO Name: Rogers, Alvaro Role: Telephone: Access: E-mail: BlackBerry: AROGERO 52-462-2 W N N
	FULLDA Name: Ulua, Fernando Team Lead: 52-462-598162 R N N
	OZAGUR Name: Izquierdo, Gildardo Team Member: 566767 R N N
	HANNATI Name: Avied, Han Function Leader: 1-313-2654746 W N N
	JOQUADA Name: Quada, Jorge Concern Champion: 52-462-2569514 R N N
Work Plan	Action: Comment: Author: Start Date: Original Planned Date: Actual Finish Date: Days Open: Responsible Person: Delegate To:
	Determine First Documentation: 8-Sep-08 8-Sep-08 0
	Define/Identify issue: 8-Sep-08
	Assign to Team Leader: 8-Sep-08 8-Nov-08 59
	Containment Service: 8-Sep-08
	Containment Production: AI-EPB level activation test at ambient temperature + hot activation test: AROGERO: 8-Nov-08 8-Sep-08 11-Sep-08 11-Sep-08 14-Sep-08 R
	Parts/Vehicle Obtained From Field: 8-Sep-08
	Root Cause Analysis and Understand: Glass fiber contamination: AROGERO: 8-Nov-08 8-Sep-08 11-Sep-08 12-Sep-08 4
	Service Fix Identified: 8-Sep-08
	Design/Process Fix Developed and Engineered: 8-Sep-08
	Process/Testing Verification Evidence Reviewed and Documented: 8-Sep-08
	CASIS-S5M: 8-Sep-08
	TIB Approval Process: 8-Sep-08
	Calibration Release Process: 8-Sep-08
	Permuted Concepts Action Implementation in PTO or supplier Plant: 8-Sep-08
	Service Part Available to the Final/LUB issued: 8-Sep-08

	Permanent Corrective Action Implementation at Lead Assembly Plant (PCA)	PTCO Portugal Sep 30th 2009 1)Case AROGERO 9-Nov-09 8-Sep-09 14-Jun-10 25-Jan-10	73
Task Description: task of moving machine and buffers before and after laser cleaning 2)Covering completely feeding coil body module assembling core machine machine MacGregor machine - bridge feeding position Nov 27th 2009 3)Moving Department/Parts Reduction - Zal Body Implement new Ionization Bar (deionizer air knife) - Base Plate Implement new Ionization Bar (deionizer air knife) - Cover Implement new Ionization Bar (deionizer air knife) Oct 11th 2009 4)TYCO production line-implement deionizer air knife for the cover 5)Improvement of the cleaning station (vacuum & blowing) in the Coil Body Estimated date for HSAP Jun 25th 2010.			
Unsuspended Warranty Actions Implemented: Mfg Control Plan Updated/Implemented SDS/Capsule Memory Updated Make Good Assessment Team Defined Migration Plan			
Task	Action	Task	Responsible Person Start Date Planned Finish Date Actual Finish Date Days Open
Determine First Documentation Define/Identify Issue Assign to Team Leader Containment Service Containment Production Parts/Vehicle Obtained From Field Root Cause Analyzed and Understood Service Fix Identified Design/Process Fix Developed and Engineered Process/Testing Verification Evidence Reviewed and Documented DASIS-SSM TSB-Approval Process Calibration Release Process Permanent Corrective Action Implementation at PTO or Supplier Plant Service Part Available to the Field/TSB issued Permanent Corrective Action Implementation at Lead Assembly Plant (PCA) Unsuspended Warranty Actions Implemented Mfg Control Plan Updated/Implemented SDS/Capsule Memory Updated Make Good Assessment Team Defined Migration Plan			
Fx Implementation Dates	Vehicle/Eng/Trans/CCC	Fx Start MY	Fx End MY Fx Implement Start Month/Yr Fx Implement End Month/Yr Fx Oabor Take Rate % Vehicle Vin
Unsuspended Warranty Fx Implementation Dates	DE_M01	2010	2013 201001 201307 100
	DH_M01	2010	2013 201001 201307 100
	ML_M01	2010	2013 201001 201307 100
Vehicle/Eng/Trans/Market			
Fx Implement Start Month/Yr Fx Implement End Month/Yr			
Containment %	0		
Investment Cost	0		
Variable Cost Change	0		
GLOBAL Roadmap Data	Vert Line/CCC(Engine/Trans as appropriate)	User/System Entered	3MIS R/1000 3MIS CPU 3MIS TOW 3MIS CDR 1YIS R/1000 1YIS CPU 1MIS R/1000 1MIS CPU
DE_H02			
User/System Entered			
Option Data			
BSAQ Data			
%Addressed			
Vehicle Projected Improvement			
Option Projected Improvement	DE_H50	User/System Entered	0.31 0.31 3.11 0.05 0.36 0.09
Option Data			
BSAQ Data			
%Addressed			
Vehicle Projected Improvement			
Option Projected Improvement	DE_A50	User/System Entered	0 0 0 0 0.00 0.03
Option Data			
BSAQ Data			
%Addressed			
Vehicle Projected Improvement			
Option Projected Improvement	DE_H52	User/System Entered	0.17 0.06 0 0 3.58 0.36
Option Data			
BSAQ Data			
%Addressed			

Vehicle Projected Improvement Option Projected Improvement	DH_N58	User/System Entered																
Option Data BSAQ Data Unaddressed			0.15	0.14	0													
Vehicle Projected Improvement Option Projected Improvement			2	2	0													
Option Data BSAQ Data Unaddressed			0.002	0.003									0.001	0.001				
Vehicle Projected Improvement Option Projected Improvement	ML_H42	User/System Entered																
Option Data BSAQ Data Unaddressed																		
Vehicle Projected Improvement Option Projected Improvement	ML_H50	User/System Entered																
Option Data BSAQ Data Unaddressed																		
Vehicle Projected Improvement Option Projected Improvement	ML_H58	User/System Entered																
Option Data BSAQ Data Unaddressed			0.32	0.02	0													
Vehicle Projected Improvement Option Projected Improvement			2	0	0													
Option Data BSAQ Data Unaddressed			0.006	0									0.006	0				
Vehicle Projected Improvement Option Projected Improvement	DH_H80	User/System Entered																
Option Data BSAQ Data Unaddressed																		
Vehicle Projected Improvement Option Projected Improvement	GLOBAL Unreserved Warranty Savings	Vehicle Line/Market	2009 CY	2010 CY	2011 CY	2012 CY	2013 CY											
Reduce Part Cost Monthly Repair Volume Part Price Reduction Part Savings Per Month Labor Reduction Monthly Repair Volume Labor Time Savings Per Repair Labor Savings Per Month Other Savings Per Month Monthly Savings Unreserved Warranty Absorption by Market (Engine/Tires as appropriate)	Vehicle/Line/Market/GCC	PERCENTAGE																
GLOBAL Calendar Month Projection (in thousands of dollars)	Vehicle/Market/GCC	J F M A M J S O N D																
GLOBAL Calendar Year Total Warranty Spend (in thousands of dollars)	Vehicle Line/Market	2009 CY	2010 CY	2011 CY	2012 CY	2013 CY												
GLOBAL Main to Sub/Sub to Main Improvement Projection	Vehicle/Line/GCC/Engine/Tires as appropriate	HTIS User/System Entered	3MIS R/1000 3MIS CPU	3MIS TGW	3MIS Cost Sel M	1YIS R/1000 1YIS CPU	1MIS R/1000 1MIS CPU											
GLOBAL Main to Sub/Sub to Main Calendar Month Projection (in thousands of dollars)	Vehicle/Market/GCC	J F M A M J S O N D																
GLOBAL Main to Sub/Sub to Main Calendar Year Total Warranty Spend (in thousands of dollars)	Vehicle Line/Market	2009 CY	2010 CY	2011 CY	2012 CY	2013 CY												
GLOBAL VUPT Toggle Improvement Projection	Vehicle/Line/GCC/Engine/Tires as appropriate	HTIS User/System Entered	3MIS R/1000 3MIS CPU	3MIS TGW	3MIS Cost Sel M	1YIS R/1000 1YIS CPU	1MIS R/1000 1MIS CPU											
GLOBAL VUPT Toggle Calendar Month Projection (in thousands of dollars)	Vehicle/Market/GCC	J F M A M J S O N D																
GLOBAL VUPT Toggle Generalized Roadmap Savings (in thousands of dollars) - 5 Years projection	Vehicle Line/Market	2009 CY	2010 CY	2011 CY	2012 CY	2013 CY												
Top Concern	Concern Group Code	Concern Group Description	Date Identified as Top Concern	Days as Top Concern	Concern Status													
VRT Replicated Internal Indicators	Tasks	Critical A	Before	Aftr	Responsible Person	Start Date	Planned Finish Date	Actual End Date	Days Late									
VRT Actual Improvements	Vehicle	Market	1MIS R/1000 1MIS CPU	1MIS R/1000 3MIS CPU	3MIS TGW													
VRT Comments Run Information	Date Repair Diagnosis	Comments Plant	Author Organization Source	Origination Type	Validation Source	2008-12	2009-01	2009-02	2009-03	2009-04	2009-05	2009-06	2009-07	2009-08	2009-09	2009-10	2009-11	RYG PCAR
Global BD Sig-Sign WERS Alert Number WERS Number AM Issue # Concern Forums	Steering Rack Replaced Number	A3 Forum Name	FCB	62	FCB	0	0	0	3	12	9	20	7	7	3	3	0	X

Attachments	Title	File Name	File Type	Date Attached
Comments: General	Date	Comments	Author	
Comments: Why Red	Date	Comments	Author	
Comments: Why Made Inactive	Date	Comments	Author	
Comment History	Date	Field	Transaction	Transaction Author
	11-Nov-09	Action Open	(2) was opened	AROGERO
	11-Nov-09	Action Open	(2) was opened	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H20-MI-3MIS	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H20-MI-3MIS	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H22-MI-3MIS	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H22-DE-3MIS	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H22-DE-3MIS	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H22-DE-3MIS	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H22-DE-3MIS	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H22-DE-3MIS	AROGERO
	11-Nov-09	Roadmap Percentage Changed	Roadmap Percentage was changed for H22-DE-3MIS	AROGERO
	10-Nov-09	ECB Link Added	An ECB link has been added.	AROGERO
	10-Nov-09	ECB Link Added	An ECB link has been added.	FULLDA

9-Nov-09	Action Actual Finish Date Changed	(2) Actual Finish Date was changed from 14-Sep-2009 to 15-Sep-2009	AROGERO
8-Nov-09	Action Planned Finish Date Changed	(2) Planned Finish Date was changed from 14-Jan-2010 to 25-Jan-2010	AROGERO
6-Nov-09	Containment Production Actual Finish Date entered.	Containment Production Actual Finish Date was entered	AROGERO
5-Nov-09	BSAQ - Assessment R-Y-G Change	BSAQ - Assessment R-Y-G changed from NO ASSESSMENT to YELLOW	SYSTEM
6-Nov-09	BSAQ-Concern Status Change	BSAQ - Concern Status Changed from JUV to TWD.	SYSTEM
6-Nov-09	BSAQ-PCA( Planned Finish Date entered)	BSAQ - Permanent Corrective Action Implementation at Lead Assembly Point (PCA) Planned Finish Date was entered	AROGERO
6-Nov-09	Root Cause Understood Actual Finish Date entered	Root Cause Understood Actual Finish Date was entered	AROGERO
8-Nov-09	Concern Champion Assigned	Concern Champion Assigned JQUADADA	AROGERO
6-Nov-09	Team Leader Assigned	Team Leader Assigned FULLDA	AROGERO
6-Nov-09	CCC Change	Latest CCC codes are HQ2,H50,NS-B	AROGERO
6-Nov-09	Vehicle Line Change	Latest Vehicle Line Market codes are DE-US,OH-US,ML-US MD-US	AROGERO
6-Nov-09	Concern Open Date Changed	Concern Open Date is now 03-SEP-09	AROGERO
6-Nov-09	Concern Created	Concern was created	AROGERO
8-Nov-09	Lead Organization Changed	Lead Organization is now YKT	AROGERO

Concern Tracking Number:	SAQ2009103623						
Concern Title:	CD3 EPAS Link Relay Armature Weld failure						
Concern Description:	EPAS Link Relay Armature Weld failure.						
Concern Open Date:	23-Sep-09						
Concern Days Open:	56						
Active/Inactive Flag:	Active						
On Track to Key Dates:	No						
On Track to Selected Dates:	No						
Implementation Flag:	Yellow						
Function:	CHASSIS						
Lead Organization:	VRT						
P-D-SF-SO:	SUPPLIER-PROCESS						
Primary Indicator:	WARRANTY						
Severity Rating:							
Concern Create Date:	6-Nov-09						
Concern Status:	TEAM WORKING ON						
Concern Type:	CHRONIC						
Roadmap View:	VEHICLE LINE						
Quarterback:	STEERING						
Resolution Scheme:	JUST DO IT						
Key Supplier:	TRW						
Failure Rate:							
Potential Population:							
Freeze Flag:	N						
Date Roadmap Matri:							
Frozen:							
Roadmap Workstream:	Workstream Description FIND AND FIX						
WCC(s):	WCC						
Service Part Number(s) and Description:	Part Number						
CBGs (primary first)	Short Description GLOBAL						
Assembly Plant(s):	Plant Code A3						
Stamping Plant(s):	Plant Code HERMOSILLO PLANT						
PTO Plant(s):	Plant Code						
Engine(s):	Engine Code						
Transmission(s):	Transmission Code CCC Code						
CCC & Description/VFG/VRT/Function(s):	Transmission Description CCC Description	VFG Code	VFG Description	VRT Code	VRT Description	Function Code	Function Description
	H22	V87	STEERING REQUIRES EXTRA OR UNEVEN EFFORT	F02	CHASSIS	F2	CHASSIS
	H50	V87	STEERING GEAR/PUMP TROUBLES	F02	CHASSIS	F2	CHASSIS
Symptom Population	N58 Vehicle Code DE DH ML MO	STEERING NOISY Vehicle Description FUSION (NA-HSAP) FUSION HYBRID (NA-HSAP) MILAN (NA-HSAP) MILAN HYBRID (NA-HSAP)	V87 Market GLOBAL GLOBAL GLOBAL GLOBAL	STEERING Start MY 2010	F02 End MY 2010 2010 2010 2010	CHASSIS	CHASSIS
Team	CDS ID AROGERO FULLOA GIZAGUIR HANNADI JOQUIJADA	Name Rogerio, Antonio Ulloa, Fernando Izaquiere, Gildardo Annadi, Hari Quijada, Jorge	Role Concern Market Start MY 2010	Telephone 52-662- 2	Access W	E-mail N	Blackbelt N
Work Plan	Acton	Comment Laser Sampling/ Lens poor application.	Author AROGERO	Comment Date 11-Nov-09	Start Date 23-Sep-09	Original Planned Date 28-Sep-09	Planned Finish Date 6-Nov-09
	Determine First Occurrence Define/Identify Issue Assign to Team Leader Containment Service Containment Production	Segregate/separate suspected material: Laser Sampling/ Lens Cleaning Oct 9th 2009 at TYCO Portugal. Steering Gears received at Plant: Nov 9th 2009	AROGERO	11-Nov-09	23-Sep-09	28-Sep-09	6-Nov-09
	Parts/Vehicle Obtained From Field Root Cause Analyzed and Understood	Laser Sampling/ Lens poor application.	AROGERO	8-Nov-09	23-Sep-09	28-Sep-09	30-Sep-09
	Service Fix Identified Design/Process Fix Developed and Engineered Process/Testing Verification Evidence Reviewed and Documented OASIS-SSM TSB-Approval Process Calibration Release Process			23-Sep-09			58

Cold weld  
 or  
 offset bridge  
 Martha 011 52' 442' 154' 1560' cell

Permanent Corrective Action Implementation at PTO or Supplier Plant										
Service Part Available to the Field/TSB Issued										
Permanent Corrective Action Implementation at Lead Assembly Plant (PCA)										
	Laser Sampling/ Lens Cleaning	AROGERO	9-Nov-09	23-Sep-09	23-Sep-09	20-Oct-09	12-Dec-09			
welding station Preventive Maintenance 2 times per week instead of 1 time per 2 weeks: Cci 22rid at TYCO Portugal Steering Gears at Plant; Dec 12th, 2009										
Unexpended Warranty Actions Implemented										
Mfg Control Plan Updated/Implemented	no	AROGERO	6-Nov-09	23-Sep-09	22-Oct-09	22-Oct-09	58			
SDS/Corporate Memory Updated	no	AROGERO	6-Nov-09	23-Sep-09	22-Oct-09	22-Oct-09	58			
Make Good Assessment Team Defined			23-Sep-09		23-Oct-09		58			
Migration Plan										
Tasks	Action	Task	Responsible Person	Start Date	Planned Finish Date	Actual Finish Date	Days Open			
Determine First Occurrence										
Define/Identify Issue										
Assign to Team Leader:										
Containment Service										
Containment Production										
Parts/Vehicle Obtained From Field										
Root Cause Analyzed and Understood										
Service Fix Identified										
Design/Process Fix Developed and Engineered										
Process/Testing Verification Evidence Reviewed and Documented										
OASIS-SSM										
TSB-Approval Process										
Calibration Release Process										
Permanent Corrective Action Implementation at PTO or Supplier Plant										
Service Part Available to the Field/TSB Issued										
Permanent Corrective Action Implementation at Lead Assembly Plant (PCA)										
Unexpended Warranty Actions Implemented										
Mfg Control Plan Updated/Implemented										
SDS/Corporate Memory Updated										
Make Good Assessment Team Defined										
Migration Plan										
Fix Implementation Dates:	Vehicle/Eng/Trans/CCC	Fix Start MY	Fix End MY	Fix Implement Start Month/Yr	Fix Implement End Month/Yr	Option Take Rate %	Vehicle Vin			
DE M01		2010	2013	200912	201307	100				
DH M01		2010	2013	200912	201307	100				
ML M01		2010	2013	200912	201307	100				
Unexpended Warranty Fix Implementation Dates:	Vehicle/Eng/Trans/Market	Fix Implement Start Month/Yr	Fix Implement End Month/Yr							
Containment %:	0									
Investment Cost:	0									
Variable Cost Change:	0									
GLOBAL Roadmap Data:	Veh.Line/CCC(Engine/Trans as appropriate)	HTIS User/System Entered	3MIS R/1000	3MIS CPU	3MIS TGW	3MIS Cust Sat	1YIS R/1000	1YIS CPU	1MIS R/1000	1MIS CPU
Option Data	DE H22	User/System Entered								
BSAQ Data			0.31	0.31	3.11	0.05	0.38	0.05		
%Addressed			2	2	2					
Vehicle Projected Improvement			0.006	0.006	0.062					
Option Projected Improvement							0.003	0.003		
Option Data	DE H50	User/System Entered								
BSAQ Data			0	0	0	0	0.06	0.03		
%Addressed			0	0	0					
Vehicle Projected Improvement			0	0	0					
Option Projected Improvement							0	0		
Option Data	DE NS8	User/System Entered								
BSAQ Data			0.17	0.06	0	0	1.58	0.36		
%Addressed			2	0	0					
Vehicle Projected Improvement			0.003	0	0.062					
Option Projected Improvement							0.001	0		
Option Data	DH H22	User/System Entered								

Option Data													
BSAQ Data													
%Addressed													
Vehicle Projected													
Improvement													
Option Projected													
Improvement													
DH N58	User/System Entered												
Option Data													
BSAQ Data													
%Addressed													
Vehicle Projected													
Improvement													
Option Projected													
Improvement													
ML H22	User/System Entered												
Option Data													
BSAQ Data													
%Addressed													
Vehicle Projected													
Improvement													
Option Projected													
Improvement													
ML H50	User/System Entered												
Option Data													
BSAQ Data													
%Addressed													
Vehicle Projected													
Improvement													
Option Projected													
Improvement													
ML N58	User/System Entered												
Option Data													
BSAQ Data													
%Addressed													
Vehicle Projected													
Improvement													
Option Projected													
Improvement													
DH H50	User/System Entered												
Option Data													
BSAQ Data													
%Addressed													
Vehicle Projected													
Improvement													
Option Projected													
Improvement													
GLOBAL Unexpected Warranty Savings:	Vehicle Line/Market	2009 CY	2010 CY	2011 CY	2012 CY	2013 CY							
Reduced Part Cost													
Monthly Repair Volume													
Part Price Reduction													
Part Savings Per Month													
Labor Reduction													
Monthly Repair Volume													
Labor Time Savings Per Repair													
Labor Savings Per Month													
Other Savings Per Month													
Monthly Savings													
Unexpended Warranty	Vehicle/Market/CCC	PERCENTAGE											
Allocation by VU/CCC/Market (Engine/Trans as appropriate):													
GLOBAL Calendar Month Projection(in thousands of dollars)	Vehicle/Market/CCC	J	F	M	A	M	J	J	A	S	O	N	D
GLOBAL Calendar Year Total Warranty Spend(in thousands of dollars)	Vehicle Line/Market	2009 CY	2010 CY	2011 CY	2012 CY	2013 CY							
GLOBAL Main to Sub/Sub to Main Improvement Projection	Veh Line/CCC(Engine/Trans as appropriate)	HTIS User/System Entered	3MIS R/1000	3MIS CPU	3MIS TGW	3MIS Cust Sat	1YIS R/1000	1YIS CPU	1MIS R/1000	1MIS CPU			
GLOBAL Main to Sub/Sub to Main Calendar Month Projection(in thousands of dollars)	Vehicle/Market/CCC	J	F	M	A	M	J	J	A	S	O	N	D

GLOBAL Main to Sub/Sub to Main Calendar Year Total Warranty Spend(in thousands of dollars)	Vehicle Line/Market	2009 CY	2010 CY	2011 CY	2012 CY	2013 CY																
GLOBAL VL/PT Toggle	Veh-Line/CCC(Engine/Trans as appropriate)	HTIS User/System Entered	3MIS R/1000	3MIS CPU	3MIS TGW	3MIS Cust Sal M	J	J	A	S	1YIS R/1000	1YIS CPU	1MIS R/1000	1MIS CPU								
Improvement Projection			F	M																		
GLOBAL VL/PT Toggle	Vehicle/Market/CCC	J																				
Calendar Month																						
Projection(in thousands of dollars)																						
GLOBAL VL/PT Toggle	Vehicle Line/Market	2009 CY	2010 CY	2011 CY	2012 CY	2013 CY																
Calendared Roadmap																						
Savings (in thousands of dollars)- 5 Years																						
Projection:																						
Top Concern	Concern Group Code	Concern Group Description	Date Opened as Before	Days as Top Concern After	Concern Status	Concern Person	Start Date	Planned Finish Date	Actual Finish Date	Days Open												
VRT Replicated Internal Indicators	Tasks	Critical X																				
VRT Actual Improvements	Vehicle	Market	1MIS R/1000	1MIS CPU	3MIS R/1000	3MIS CPU	3MIS TGW															
VRT Comments	Date	Comments	Author																			
Bin Information	Repair Diagnosis	Plant	Origination Source	Origination Total	Validation Source	2008-12	2009-01	2009-02	2009-03	2009-04	2009-05	2009-06	2009-07	2009-08	2009-09	2009-10	2009-11	RYG PCAI				
Global 8D So-Soma Number	SteeringRack Replaced	A3	ECB	62	ECB	0	0	0	3	12	9	20	7	7	2	2	0	Y				
WERS Alert Number																						
WERS Number																						
AIM Issue #																						
Concern Forums:	Forum Name	Forum Date																				
Attachments:	Title	File Name	File Type	Date																		
Comments: General	Date	Comments	Author																			
Comments: Why Red	Date	Comments	Author																			
Comments: Why Made Inactive	Date	Comments	Author																			
Concern History:	Date	Field	Containment Production Actual	Transaction	Transaction	AROGERO																
	11-Nov-09	Containment Production Actual	Production																			
		Finish Date entered	Actual Finish																			
			(2) Planned	AROGERO																		
		Action Planned Finish Date	Changed																			
	11-Nov-09	Roadmap Percentage	Roadmap	AROGERO																		
		Changed	Percentage																			
	11-Nov-09	Roadmap Percentage	Roadmap	AROGERO																		
		Changed	Percentage																			
	11-Nov-09	Roadmap Percentage	Roadmap	AROGERO																		
		Changed	Percentage																			
	11-Nov-09	Roadmap Percentage	Roadmap	AROGERO																		
		Changed	Percentage																			
	11-Nov-09	Roadmap Percentage	Roadmap	AROGERO																		
		Changed	Percentage																			
	10-Nov-09	ECB Link Added	An ECB link	FULLOA																		
			has been																			
			added:																			
			Vehicle																			
			Line:DE,DH,																			
	9-Nov-09	Action Actual Finish Date	(2) Actual	AROGERO																		
		Cleared	Finish Date																			
	9-Nov-09	Action Planned Finish Date	(2) Planned	AROGERO																		
		Changed	Finish Date																			
	9-Nov-09	Action Planned Finish Date	(2) Planned	AROGERO																		
		Changed	Finish Date																			
	6-Nov-09	Action Actual Finish Date	(2) Actual	AROGERO																		
		Cleared	Finish Date																			
	6-Nov-09	Action Actual Finish Date	(2) Actual	AROGERO																		
		Cleared	Finish Date																			
	6-Nov-09	BSAQ-Concern Status Change	BSAQ- Concern	SYSTEM																		

6-Nov-09	Action Actual Finish Date Cleared	{2} Actual Finish Date	AROGERO
6-Nov-09	Action Planned Finish Date Changed	{2} Planned Finish Date	AROGERO
6-Nov-09	BSAQ - Assessment R-Y-G Change	BSAQ-Assessment R-Y-G	SYSTEM
6-Nov-09	Action Actual Finish Date Cleared	{2} Actual Finish Date	AROGERO
6-Nov-09	BSAQ - Assessment R-Y-G Change	BSAQ-Assessment R-Y-G	SYSTEM
6-Nov-09	Action Open	{2} was	AROGERO
6-Nov-09	Action Open	{2} was	AROGERO
6-Nov-09	BSAQ-Concern Status Change	BSAQ-Concern	SYSTEM
6-Nov-09	BSAQ - Assessment R-Y-G Change	BSAQ-Assessment R-Y-G	SYSTEM
6-Nov-09	BSAQ-Concern Status Change	BSAQ-Concern	SYSTEM
6-Nov-09	PCAI Actual Finish Date entered	Permanent Corrective Action Implementation at Lead	AROGERO
6-Nov-09	Containment Production Actual Finish Date entered	Containment Production Actual Finish	AROGERO
6-Nov-09	BSAQ-PCAI Planned Finish Date entered	BSAQ-Permanent Corrective Action Implementation	AROGERO
6-Nov-09	Root Cause Understood Actual Finish Date entered	Root Cause Understood Actual Finish	AROGERO
6-Nov-09	Team Leader Assigned	Team Leader	AROGERO
6-Nov-09	Concern Champion Assigned	Concern Champion	AROGERO
6-Nov-09	Team Leader Assigned	Team Leader	AROGERO
6-Nov-09	CCC Change	Latest CCC codes are	AROGERO
6-Nov-09	Vehicle Line Change	Latest Vehicle Line-Market	AROGERO
6-Nov-09	Concern Creation	Concern was	AROGERO
6-Nov-09	Lead Organization Changed	Lead Organization	AROGERO
6-Nov-09	Concern Open Date Changed	Concern Open Date is	AROGERO

Sørensen A  
ENDOFDATA

CHANGE PROGRESS FORM		VEHICLE LINE				FNA	FOE	VOL	TRW		
<b>CPF</b>		CD3xx	C1MCA	D3 (GTDI)							
<b>NO.: TRW EPAS</b>		X			ORIGINATOR	<b>WB</b>					
<b>PAGE 1 OF 1 PAGES</b>					ADDRESSEE						
ORIGINATOR: Bill Bouse DATE: August 25, 2009					COPY SENT	Y					
					ATTACHMENT	N					
					FOR INFO	MB,	RQ				
					RESPONSE	Y					
<b>EPAS MODEL:</b> <b>2011 Tune update to CD3</b>					ACTION REQ.						
					FOR FILE						
					DATE OF IMPLEMENTATION:						
					FORD:	<b>2011 MY CD3</b>					
<b>DESCRIPTION OF CHANGE:</b>  Implement a new tuning for the 2011 MY CD3 program. To be timed as part of the AE5C 3200 CC gear delivered to Ford for all prototypes and production per program timing already provided.											
<b>BACKGROUND/COMMENTS:</b>  Vehicle dynamics has requested an update to the tuning for the CD3 program.  Vehicle tuning file (.par) will be delivered to TRW systems engineering on or before September 11, 2009.											
<b>INITIAL AND DATE:</b> WB 25 August 2009                    ENGINEERING                    Cost Estimating											
<b>COST VARIANCE/UNIT:</b>											
<b>INVESTMENT:</b>											
Chassis Engineering		FNA APPROVED	<input type="checkbox"/>	SIGNATURE:							
		FNA CANCELLED	<input type="checkbox"/>	SIGNATURE:							
		FOE APPROVED	<input type="checkbox"/>	SIGNATURE:							
EESE Engineering		FOE CANCELLED	<input type="checkbox"/>	SIGNATURE:							
		FNA APPROVED	<input type="checkbox"/>	SIGNATURE:							
		FNA CANCELLED	<input type="checkbox"/>	SIGNATURE:							
TRW		FOE APPROVED	<input type="checkbox"/>	SIGNATURE:							
		FOE CANCELLED	<input type="checkbox"/>	SIGNATURE:							
		TRW NA APPROVED	<input type="checkbox"/>	SIGNATURE:							
CPE		TRW NA CANCELLED	<input type="checkbox"/>	SIGNATURE:							
		TRW EU APPROVED	<input type="checkbox"/>	SIGNATURE:							
		TRW EU CANCELLED	<input type="checkbox"/>	SIGNATURE:							
APPROVED <input type="checkbox"/> SIGNATURE: CANCELLED <input type="checkbox"/> _____											

Signatures only on demand

---

**From:** Martha Abundis <Martha.Abundis@TRW.COM>  
**Sent:** Thursday, September 24, 2009 6:03 PM  
**To:** Hochrein, Brad (B.G.); Harris, Jonathan (J.E.); Quijada, Jorge (J.); McIntyre, Kathryn (K.L.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Hernandez, Victor (V.M.); Bouse, William (Bill.); Aaron Blancas; Alexander Kleist; BaoYuan Tian; Douglas Sherman; Frank Fan; Geoff Collins; Geoff Jacks; Greg Collier; Jacky Shi; Jeff Jiang; Jim Rau-nonTRW; Keith Dusina; Mark Karwowski; Martha Abundis; Mike Davies; Pavel Vetz; Phil Browne; Philip Warren-Green; Robert Kostadina; Romance Zhu; Rudy Shuryan; Salim Semssar; Sanjay Singh; Simon Malsbury; Filipe.Matos@tycoelectronics.com; hugo.gomes@tycoelectronics.com  
**Subject:** EPAS loss of assistance  
**Attachments:** QAO EPP Timing.pdf

All -

Attached the QAO EPP timing showed yesterday by Greg Collier.

Martha



---

**From:** Dukkipati, Srinivas (S.)  
**Sent:** Tuesday, January 29, 2013 6:25 PM  
**To:** Surella, Matthew (M.M.); Hefner, Rachel (R.)  
**Cc:** Brezee, Shane (S.B.)  
**Subject:** EPAS RACK DATA

Matt & Rachel,

Please see the attachment, I pulled **rfr** too for HPAS reference.



EPASRACKDATA....



EPASGERAHTIS...

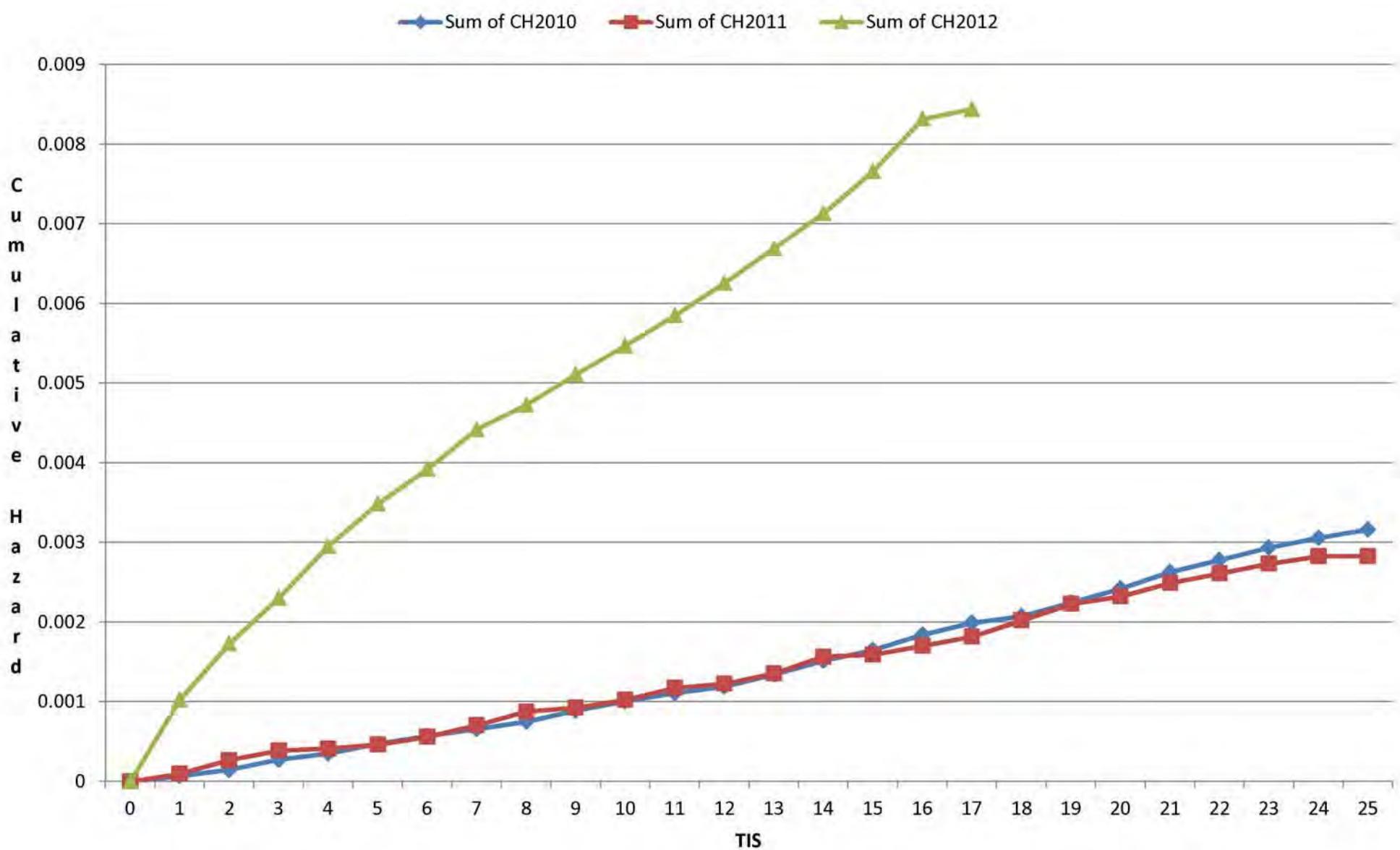
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1																			
2			3504-GEAR ASY-STEERING																
3																			
4																			
5		EXPLORER (NA-CAP)													FOCUS (NA-MP)				
6																			
7	R/1000	2011	2012	2013		CPU	2011	2012	2013		R/1000	2012	2013		CPU	2012	2013	R/1000	
8	0 MIS		0.13		0.16	0.05	0 MIS	0.13	0.24	0.07	0 MIS		0.18	0.05	0 MIS	0.17	0.07	0 MIS	
9	1 MIS		0.45		0.55	0.28	1 MIS	0.54	0.83	0.45	1 MIS		1.24	0.38	1 MIS	0.96	0.49	1 MIS	
10	2 MIS		0.72		0.81	0.46	2 MIS	0.90	1.31	0.68	2 MIS		1.96	0.62	2 MIS	1.46	0.82	2 MIS	
11	3 MIS		1.14		1.15	0.61	3 MIS	1.45	1.82	0.87	3 MIS		2.53	1.00	3 MIS	1.89	1.36	3 MIS	
12	4 MIS		1.71		1.49	0.77	4 MIS	2.31	2.29	1.03	4 MIS		3.12	1.00	4 MIS	2.39	1.36	4 MIS	
13	5 MIS		2.34		1.97	0.87	5 MIS	3.19	2.96	1.18	5 MIS		3.61	/0	5 MIS	2.86	/0	5 MIS	
14	6 MIS		2.88		2.48	1.06	6 MIS	3.91	3.63	1.46	6 MIS		4.05	/0	6 MIS	3.36	/0	6 MIS	
15	7 MIS		3.19		3.28	1.22	7 MIS	4.35	4.72	1.66	7 MIS		4.51	/0	7 MIS	3.89	/0	7 MIS	
16	8 MIS		3.62		4.27	1.28	8 MIS	4.89	6.04	1.75	8 MIS		4.81	/0	8 MIS	4.26	/0	8 MIS	
17	9 MIS		3.99		5.51	1.56	9 MIS	5.44	7.70	2.16	9 MIS		5.17	/0	9 MIS	4.69	/0	9 MIS	
18	10 MIS		4.54		6.55	/0	10 MIS	6.11	9.14	/0	10 MIS		5.48	/0	10 MIS	5.07	/0	10 MIS	
19	11 MIS		5.52		8.33	/0	11 MIS	7.48	11.53	/0	11 MIS		5.90	/0	11 MIS	5.57	/0	11 MIS	
20	12 MIS		7.01		9.79	/0	12 MIS	9.48	13.54	/0	12 MIS		6.30	/0	12 MIS	6.09	/0	12 MIS	
21	13 MIS		8.85		10.97	/0	13 MIS	11.93	15.13	/0	13 MIS		6.69	/0	13 MIS	6.55	/0	13 MIS	
22	14 MIS		10.92		12.63	/0	14 MIS	14.73	17.41	/0	14 MIS		7.19	/0	14 MIS	7.11	/0	14 MIS	
23	15 MIS		13.16		13.26	/0	15 MIS	17.82	18.29	/0	15 MIS		7.62	/0	15 MIS	7.55	/0	15 MIS	
24	16 MIS		15.29		13.56	/0	16 MIS	20.73	18.68	/0	16 MIS		8.02	/0	16 MIS	8.02	/0	16 MIS	
25	17 MIS		17.47		13.56	/0	17 MIS	23.72	18.68	/0	17 MIS		8.30	/0	17 MIS	8.36	/0	17 MIS	
26	18 MIS		18.94		/0	/0	18 MIS	25.77	/0	/0	18 MIS		8.55	/0	18 MIS	8.69	/0	18 MIS	
27	19 MIS		19.96		/0	/0	19 MIS	27.15	/0	/0	19 MIS		8.87	/0	19 MIS	9.06	/0	19 MIS	
28	20 MIS		20.81		/0	/0	20 MIS	28.36	/0	/0	20 MIS		9.15	/0	20 MIS	9.25	/0	20 MIS	
29	21 MIS		21.52		/0	/0	21 MIS	29.38	/0	/0	21 MIS		9.15	/0	21 MIS	9.25	/0	21 MIS	
30	22 MIS		22.06		/0	/0	22 MIS	30.08	/0	/0	22 MIS		9.15	/0	22 MIS	9.25	/0	22 MIS	
31	23 MIS		22.33		/0	/0	23 MIS	30.42	/0	/0	23 MIS		/0	/0	23 MIS	/0	/0	23 MIS	
32	24 MIS		22.33		/0	/0	24 MIS	30.42	/0	/0	24 MIS		/0	/0	24 MIS	/0	/0	24 MIS	
33	25 MIS		22.33		/0	/0	25 MIS	30.42	/0	/0	25 MIS		/0	/0	25 MIS	/0	/0	25 MIS	
34	26 MIS		22.33		/0	/0	26 MIS	30.42	/0	/0	26 MIS		/0	/0	26 MIS	/0	/0	26 MIS	
35	27 MIS		22.33		/0	/0	27 MIS	30.42	/0	/0	27 MIS		/0	/0	27 MIS	/0	/0	27 MIS	
36	28 MIS		/0		/0	/0	28 MIS	/0	/0	/0	28 MIS		/0	/0	28 MIS	/0	/0	28 MIS	
37	29 MIS		/0		/0	/0	29 MIS	/0	/0	/0	29 MIS		/0	/0	29 MIS	/0	/0	29 MIS	
38	30 MIS		/0		/0	/0	30 MIS	/0	/0	/0	30 MIS		/0	/0	30 MIS	/0	/0	30 MIS	
39	31 MIS		/0		/0	/0	31 MIS	/0	/0	/0	31 MIS		/0	/0	31 MIS	/0	/0	31 MIS	
40	32 MIS		/0		/0	/0	32 MIS	/0	/0	/0	32 MIS		/0	/0	32 MIS	/0	/0	32 MIS	
41	33 MIS		/0		/0	/0	33 MIS	/0	/0	/0	33 MIS		/0	/0	33 MIS	/0	/0	33 MIS	
42	34 MIS		/0		/0	/0	34 MIS	/0	/0	/0	34 MIS		/0	/0	34 MIS	/0	/0	34 MIS	
43	35 MIS		/0		/0	/0	35 MIS	/0	/0	/0	35 MIS		/0	/0	35 MIS	/0	/0	35 MIS	
44	36 MIS		/0		/0	/0	36 MIS	/0	/0	/0	36 MIS		/0	/0	36 MIS	/0	/0	36 MIS	

Redacted for Relevance

Redacted for Relevance

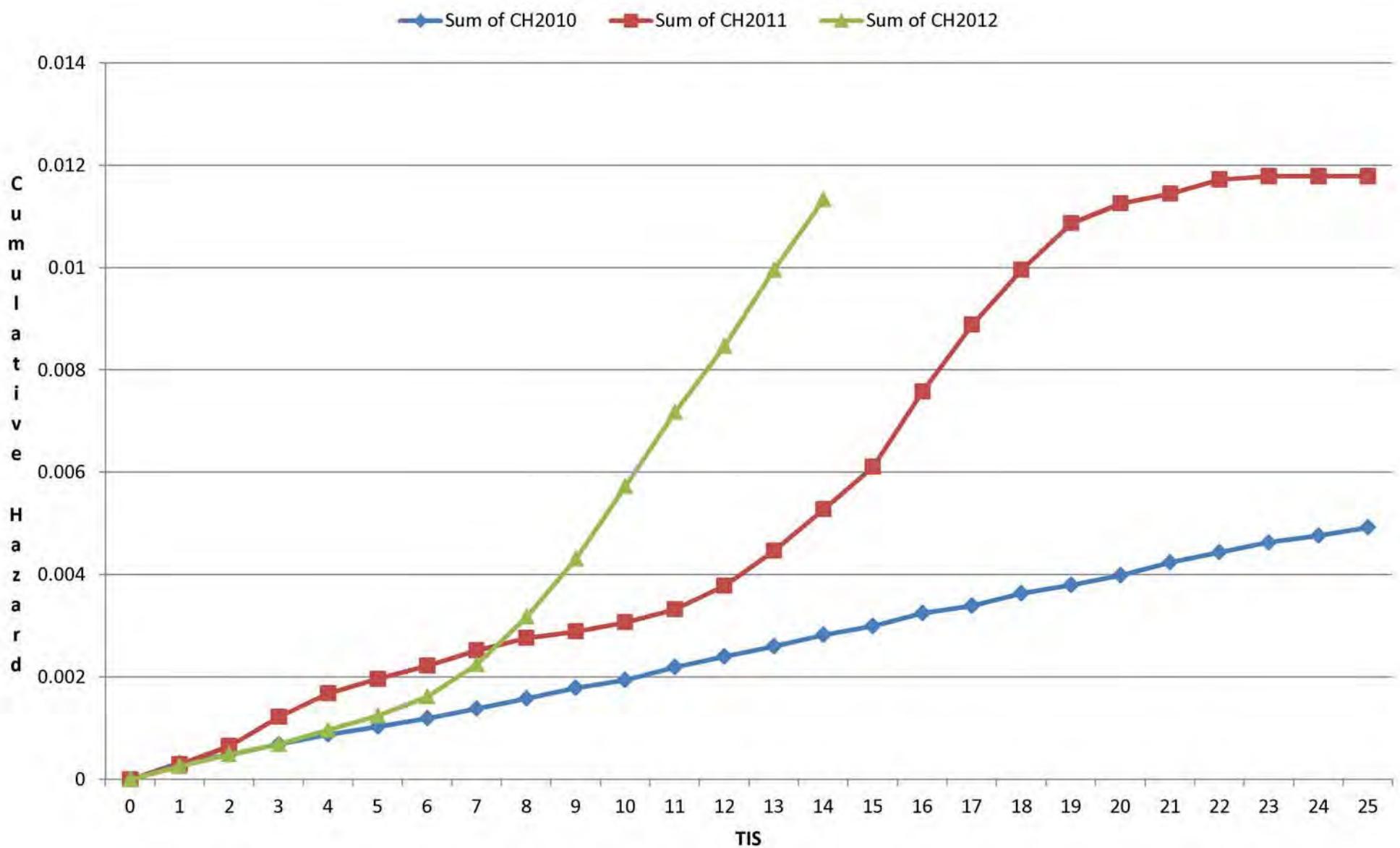
# **FOCUS- STEERING GEAR**

## **Cumulative Hazard Chart**



# FUSION- STEERING GEAR

## Cumulative Hazard Chart

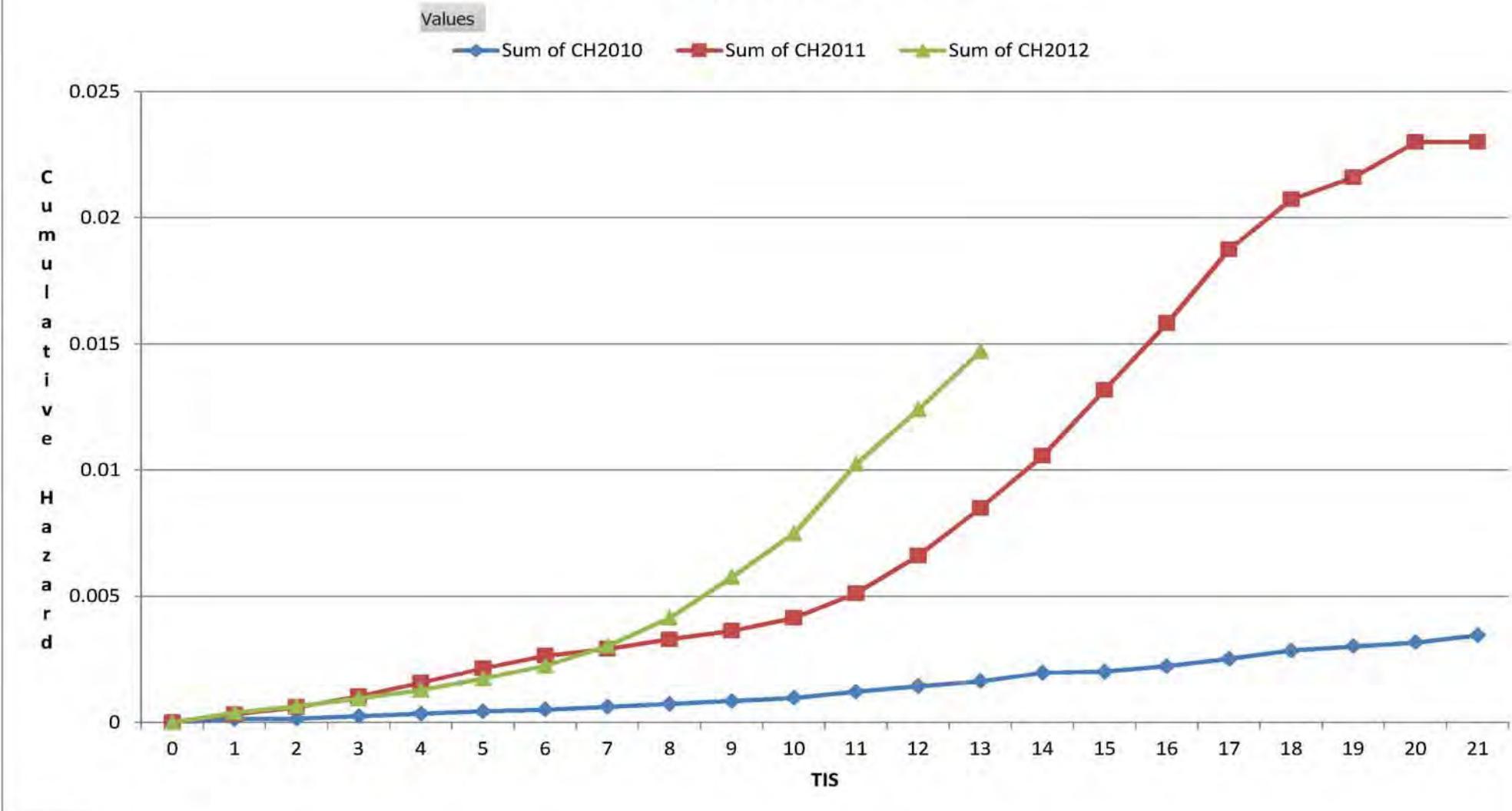


# EXPLORER- STEERING GEAR

Vehicle Line AWS PART NUM BASE (CAUSL)

Sum of CH2010 Sum of CH2011 Sum of CH2012

## Cumulative Hazard Chart



Time

Redacted for Relevance

---

**From:** Biyashev, Russ (.)  
**Sent:** Friday, July 23, 2010 6:59 PM  
**To:** Snider, Tim (T.O.); Estes, Eric (E.E.)  
**Subject:** EPAS Replacement

Eric & Tim

Could you please take a look at the attached claim. I have not talked to the technician - but looks like an EPAS rack replacement... Would be interesting to get this part back?



Claim 741848 EPAS  
Replaced.pdf...

Thank you,

**Russ Biyashev**  
**Ford Motor Company**  
**Chassis Brake Controls**  
Phone: 313.805.4793  
Text: [3138054793@vtext.com](mailto:3138054793@vtext.com)  
Email: [rbiyashe@ford.com](mailto:rbiyashe@ford.com)

# Claim Detail Report

*Note: All costs are in US dollars*

Model Year = 2010; Claim Key = [REDACTED]

## Vehicle Information

Model Year: 2010

Market Derived: F - FORD

Body/Cab Type: C/FA - 4 DOOR SEDAN-4 LITE

Version/Series: \*-[N/A]

Drive Type: C/A-2 WHL L/H FRONT DRIVE

Vehicle Line: C/DE-FUSION/MILAN/MKZ (ZEPHYR) [06-11]

Warranty Start Date: 21-APR-10

Production Date: 17-MAR-10

VIN: 3FAHP0HA9AR [REDACTED]

## Claim Information

Document Number: [REDACTED]

Repair Date: 25-MAY-10

Distance: 862

TIS: 2

## Dealer Information:

Dealer Name HARWOOD FORD SALES LTD

Dealer Code: B6229 - \*

Address: 1303 SUTHERLAND DRIVE P.O.BOX 2200

City: BROOKS

State: AB Zip Code: T1R1C8

Country: CAN Region Code: NA

Phone: (403)362-6900

## Expense Information

Customer Paid Amount:	.00
-----------------------	-----

Deductible Amount:	.00
--------------------	-----

Dealer Paid Amount:	.00
---------------------	-----

Labor Cost:	249.62
-------------	--------

Misc. Expense Amount:	100.35
-----------------------	--------

Part Markup Amount:	476.74
---------------------	--------

Material Cost:	1757.27
----------------	---------

Total Cost Gross:	2006.89
-------------------	---------

Cust. Concern Code: H39 - TRACTION CONTROL/ADV TRAC WARNING LIGHT TROUBLES

Condition Code: 42 - DOES NOT OPERATE PROPERLY

Technician Comment: VERIFIED CONCERN FOUND CODES C1277,U0131,U0121,U0415. FOUND SSM 21243 AND COMPLETED WIGGLE TEST. FOUND NOTHING WENT OR HAPPENED ACCORDING TO SSM. TEST DROVE VARIOUS TIMES AND FINALLY GOT SYSTEM TO ACT UP FINDING THAT SAS WOULD READ LEFT AT 49,590 DEGREES AND WOULD STICK AT THAT POINT TILL CAR WAS TURNED OFF AND ON. FOLLOWED PINPOINT TEST FOR C1277 AND FOUND NO RESULTS. CHECKED FOR COMMUNICATION BE

Customer Comment: PLEASE INSPECT FOR TRACTION CONTROL LIGHT ON

<u>Labor Op Code</u>	<u>Labor Op Description</u>	<u>Labor Op Cost</u>
3504E47		25.62
3504E45		25.62
3504A	STEERING GEAR ASSEMBLY REMOVE AND INSTALL OR REPLACE	145.17
OSL	OUTSIDE LABOR	53.21

<u>Causal</u>	<u>Full Part Number</u>			<u>Part</u>			<u>Extended</u>
<u>Flag</u>	<u>PREF</u>	<u>BASE</u>	<u>SUFF</u>	<u>Description</u>	<u>CPSC</u>	<u>Quantity</u>	<u>Amount</u>

Y STE 10 \* 110201 1 1668.58

**DTC Sections:** Mil. Light On = Y

<b>Flag</b>	<b>Test Type</b>	<b>Malfunction Cd</b>	<b>Malfunction Cd Description</b>	<b>Monitor Cd</b>	<b>Monitor Cd Description</b>
	KOEC	U0131			
N	KOEO	C1227	SPEED WHEEL SENSOR LR INPUT SHORT CIRCUIT TO BATTERY	24	CCM VEHICLE
Y	KOER	U0121	LOST COMMUNICATION WITH ANTI-LOCK BRAKE SYSTEM (ABS) CONTROL MODULE	47	NETWORK COMM
Y	KOER	U0415	INVALID DATA RECEIVED FROM ANTI-LOCK BRAKE SYSTEM (ABS) CONTROL MODULE	47	NETWORK COMM

Any comments? You can contact

*[webmaster](#)*

75125

---

**From:** Markus.Nowak@hella.com  
**Sent:** Thursday, July 29, 2010 1:22 PM  
**To:** Estes, Eric (E.E.)  
**Cc:** Angie Caudill; Anthony Fleenor; Engelbert Lu; Jim Loria; Michael Fontana; Diez, Timothy (T.P.); Snider, Tim (T.O.); Thomas.Surmann@hella.com  
**Subject:** FR 210 interrim findings

Hello Eric,

like discussed on the phone some minutes ago:  
FR 210 was analyzed today and we were able to reproduce a open circuit on the segment PCB side of the CS.  
The resistance could be reproduced from a single digit Ohm range to a Mega Ohm range.  
This is the good news.

The bad news is that there is a slight stress mark on the CS cable that might indicate overturning. Since Hella did not open the CS we can not tell for sure what the RC for the open is.  
For further analysis the CS will be sent to Tyco since the next analysis step on the CS would be destructive and we should better not do that on Hella side and push it to Tyco.

Tomorrow you will receive some nice pics that we took today.

I hope we can have some more results available by next week in case the part arrives quick enough at Tyco.

Thats it so far.

Mit freundlichen Grüßen / Best regards

\*\*\*\*\*  
i.A. Dipl.-Ing. (FH) Markus Nowak  
Hella KGaA Hueck & Co.  
Quality Manager Internal Factory  
Actuators & Sensors  
Berghäuser Str. 30  
D - 45663 Recklinghausen / Germany

Tel.: + 49 / (0)2361 / 307 - 35249  
Mobil.: +49 / (0)172 / 5601465  
Fax.: + 49 / (0)2361 / 307 - 47 35249  
<mailto:Markus.Nowak@hella.de>  
<http://www.hella.de>

\*\*\*\*\*

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Hella KGaA Hueck & Co., Rixbecker Str. 75, 59552 Lippstadt, Handelsregister Amtsgericht Paderborn HRB 6857  
Komplementäre: Dr. Jürgen Behrend und Hella Geschäftsführungsgesellschaft mbH, Lippstadt, Amtsgericht Paderborn,  
HRB 5650 und Hella Beteiligungs GmbH & Co. KG (Amtsgericht Paderborn HRB 5418)

Geschäftsführer der Hella Geschäftsführungsgesellschaft mbH: Dr. Rolf Breidenbach (Vorsitzender), Carsten Albrecht,  
Dr. Wolfgang Ollig, Stefan Osterhage, Bernd Spies  
Vorsitzender des Aufsichtsrates: Prof. Dr. Michael Hoffmann-Becking

---

**From:** Bouse, William (Bill.)  
**Sent:** Monday, July 20, 2009 6:44 PM  
**To:** 'Martha Abundis'; Estes, Eric (E.E.); Bahena, Miguel (Mike.); Anthony Fleenor; Costas Chrysochoidis; Greg Bendzinski; Geoff Jacks; Jason Johnson-contr; Paul IRELAND; Simon Malsbury  
**Cc:** Hochrein, Brad (B.G.); Chacon, Jose (A.); Christiansen, Jens (J.F.); Frey, Martin (M.F.); Puleri, Michael (M.J.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Porter, Wesley (W.); Abe Ghaphery; Andrew Williams; Dean Flower; Mark Karwowski; Phil Browne; Robert Kinnear; Salim Semssar; Sergio Alvarez; Thiha Than; William Olsen  
**Subject:** FR-0004 Ribbon Cable Issue

TRW Team, on FR-0004 we are relying on a manual process to make sure that the connector is put into the EPP without damaging the terminals on the ribbon cable. Updating the job instructions is really not a fix, good to have but for sure does not mean it will never happen again. So the current timing that I have been able to gather is to look at the concern 5 weeks from now. Not acceptable for such a fix, unless I am missing something this is being added to the existing tooling to add a guidance feature. Need to get this into production as quickly as possible. It has been 2 months since we removed this gear from the car and we are over a month from a concept review, not acceptable.

-----Original Message-----

From: Martha Abundis [mailto:[Martha.Abundis@TRW.COM](mailto:Martha.Abundis@TRW.COM)]  
Sent: Monday, June 15, 2009 5:10 PM  
To: Estes, Eric (E.E.); Bahena, Miguel (Mike.); Bouse, William (W.J.); Anthony Fleenor; Costas Chrysochoidis; Greg Bendzinski; Geoff Jacks; Jason Johnson-contr; Paul IRELAND; Simon Malsbury  
Cc: Hochrein, Brad (B.G.); Chacon, Jose (A.); Christiansen, Jens (J.F.); Frey, Martin (M.F.); Puleri, Michael (M.J.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Porter, Wesley (W.); Abe Ghaphery; Andrew Williams; Dean Flower; Mark Karwowski; Phil Browne; Robert Kinnear; Salim Semssar; Sergio Alvarez; Thiha Than; William Olsen  
Subject: Re: Updated: Ford/TRW EPAS Warranty Meeting

Mike,

Attached Bully data for the B9A ECU.

>>> "Estes, Eric (E.E.)" <[eestes@ford.com](mailto:eestes@ford.com)> 6/1/2009 12:35 PM >>>

When: Occurs every Monday effective 6/8/2009 until 12/7/2009 from 11:00 AM to 12:00 PM (GMT-05:00) Eastern Time (US & Canada).

Where: Teleconference 866-228-1482 code 3753904

\*~\*~\*~\*~\*~\*~\*~\*~\*

At this time we have moved the warranty meeting to every Monday starting at 11am for one hour to cover the five warranty returns. See chart attachment for updated information on all 5 warranty returns. (see below for the webmeeting call-in numbers)

Any questions on the returns email back, next Mondays meeting will explain more detailed information of the three gears in analysis.

<<2010 CD3 EPAS Warranty Return Chart.xls>>

This is a Bi-weekly meeting that meets on Mondays and I scheduled this meeting for 11:30am to 12:00pm at this time due to TRW/Ford scheduling conflicts. We can agree on a permanent time for all to attend we just need to remember that the UK will need to report at times and they are 5 hours ahead of us.

At this meeting we will go over the current status of warranty returns and in-process returns.

Updates on any warranty process or EPAS gear activity:

- \* EPAS Diagnosis at dealers
- \* Gears in process to WPAC
- \* WPAC Gear Reviews
- \* Received Gears
- \* Status of Current Returns (Fred Beans Ford return).

Let me know of schedule conflicts and if I need to invite additional people to this meeting. Thanks

Eric Estes invites you to this warranty meeting, call-in numbers below and if needed webmeeting for web conference.

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#### Teleconference Access Information

USA Toll-Free: 866-228-1482

USA Caller Paid/International Toll: 816-423-4291

Participant Code: 3753904

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Web Meeting Address: <https://www.webmeeting.att.com>

Meeting number(s): 8662281482 or 8164234291

Participant Code: 3753904

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**From:** Estes, Eric (E.E.)  
**Sent:** Friday, October 02, 2009 6:17 PM  
**To:** Bouse, William (Bill.); Snider, Tim (T.O.)  
**Cc:** Simon Malsbury; 'Robert Kostadina'  
**Subject:** FR0051(No Com)

Bill/Tim FR0051 (No Com) returned and analyzed at 26-mile for an over-voltage to the main micro(badly burned). We have pics but nobody sent them to me yet but I feel this is a external voltage spike issue because the vehicle came in for a no start & abs lamp on for the same no communication issue and the tech replaced the PCM & ABS module to fix vehicle(see attached AWS history report) the abs module was denied by the RTDA group so that module does not show up in AWS.

Simon/Rob could you send the pictures of the micro to Tim & Bill thanks

We can call the dealer to see if they can remember what happened.

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

FAIP0HA1AR [REDACTED] DE C/DE F C/FA \* C/A A3 C/W6 C/SB 09-05-09 121153 USA -1 5001 AE5Z 3504 B F02 S10 V87 H50 42 AWS  
Claim Key: 22803 Doc #: 03133904 Trx Code: 2 Labor Hrs: 3.3 Labor Cost: 245.5 Material Cost: 1315.72 Total Cost: 1561.22 Dlr Cd-Sub Cd: 00475-\* Name: BURNS FORD-MERCURY, INC. Ph: 803-2864414 St: SC Ctry Cd: USA Reg Cd: NA Repr Date:25-JUN-2009  
DIST(Mile):386 **Cust Comments:** CUSTOMER STATE VEHICLE IS HARD TO TURN **Tech Comments:** NO POWER STG WENT TO SELF TEST PSCM NO COMMUNICATION CK POWER SUPPLY AND GROUNDS FINE REMOVED WHEELS REMOVED OUTER TIE ROD ENDS REMOVED SUB FRAME REPLACED RACK AND PINION REINSTALLED PERFORMED ALIGNMENT SET TOE ON REAR SET TOE ON FRONT TEST DROVE FINE

3FAHP0HA1AR [REDACTED] DE C/DE F C/FA \* C/A A3 C/W6 C/SB 09-05-09 121153 USA -1 3A04 9L8Z 7Z490 A F04 S11 V48 P66 42 AWS  
Claim Key: 22802 Doc #: 03133901 Trx Code: 2 Labor Hrs: 12.5 Labor Cost: 929.88 Material Cost: 216.06 Total Cost: 1145.94 Dlr Cd-Sub Cd: 00475-\* Name: BURNS FORD-MERCURY, INC. Ph: 803-2864414 St: SC Ctry Cd: USA Reg Cd: NA Repr Date:25-JUN-2009  
DIST(Mile):386 **Cust Comments:** CUSTOMER STATES DURING UP SHIFT TRANSMISSION FLARES OUT AND BACK IN GEAR **Tech Comments:** CHK FLUID LEVEL SELF TEST NO DTCS TEST DRIVE 3 4 SHIFT FLARE CHK LINE PRESSURES CONTACT HOTLINE CONFIRM SOLENOID BODY ID & STRATEGY MATCHED CHK FLUID FOR DEBRIS REMOVED SIDE COVER CHK VALVE BODY FOR BOLT TORQUE TEST DROVE STILL HAS PROBLEM RE CONTACT HOTLINE REMOVE MAIN CONTROL VALVE BODY DISASSEMBLE & INSPECT RECONDITION INSTALL VALVE BODY FILL WITH FLUID CLEAR KAM PERFORM SOLENOID

3FAHP0HA1AR [REDACTED] DE C/DE F C/FA \* C/A A3 C/W6 C/SB 09-05-09 121153 USA -1 2G01 AE5Z 12A650 GE F04 S11 V52 D02 42 AWS Claim Key: 24488 Doc #: 03133902 Trx Code: S07 Labor Hrs: 3 Labor Cost: 223.17 Material Cost: 537.92 Total Cost: 761.09 Dlr Cd-Sub Cd: 00475-\* Name: BURNS FORD-MERCURY, INC. Ph: 803-2864414 St: SC Ctry Cd: USA Reg Cd: NA Repr Date:25-JUN-2009  
DIST(Mile):386 **Cust Comments:** CUSTOMER STATES THEFT LIGHT IS FLASHING AND VEHICLE WILL NOT CRANK **Tech Comments:** PERFORM SELF TEST UNABLE TO COMMUNICATE WITH PCM CHECK FOR BLANK PCM CK FOR POWER AND GROUND FOLLOW PIN POINT TEST QA PERFORM NETWORK TEST NETWORK FAILS ALL MODULES PINPOINT TEST A NO MODULES COMMUNICATE PINPOINT TEST AD CK HSCAN NETWORK RESISTANCE 2.9 OHMS HSCAN NETWORK SHORTED WIRING IN MODULE

Report#:

Received: 09/22/2009

CCRG/EPRC:

Reviewed  
Status:

Date:

Vehicle:

2010,FUSION,SE .SEDAN  
3FAHP0HA1AR [REDACTED]

Build Date: 05/09/2009

Odometer :

386 M

Engine: 2.5L DOHC

Calibration: ADE1F40A

Transmission:

6SP 6F MID

Axle:

A/C: YES

Dealer:

USA 00475 Burns Ford-Mercury, Inc.

Phone#: (803) 286-  
4414

City:

Lancaster

State: South Caroli

Country: USA

Originator:

CHARLES ERDY

Symptom:

3 01 A 04 CHASS.,SERVICE BRAKE ,INDICATOR,T/C LIGHT

Status:

VFG: V21 BRAKING

Additional Symptom:

DENIED

Fix:

Causal Component :

MODULE-BRK ANTI/LK -- RPL

Condition Code:

Region Code: S2

Region Name: Charlotte

**KOEO:**

**KOEC:**

**KOER:**

REPAIR 09/22/2009 08:57AM DOUG KREMER MSS - TSO - DIGITAL IMAGE RTDA

COMPLAINT OF LIGHTS ON ALL THE TIME TECHNICIAN FOUND NO  
COMMUNICATION

WITH ABS MODULE WIRING INSPECTED FOR CHAFFING TERMINAL FIT  
GOOD RESET

STILL NO COMM WITH ABS CALLING FOR APPROVAL

RECOM 09/22/2009 08:57AM DOUG KREMER MSS - TSO - DIGITAL IMAGE RTDA  
M

ADVISED CLAIM ALREADY SUBMITTED INTO ACESIIG THEREFORE RTDA  
IS UNABLE

TO GET CODE FOR THIS REPAIR

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**From:** Estes, Eric (E.E.)  
**Sent:** Wednesday, October 28, 2009 9:50 PM  
**To:** Bahena, Miguel (Mike.); Snider, Tim (T.O.); Mrozek, Robert (R.M.); Costas Chrysochoidis  
**Cc:** Beattie, Mike (M.A.); Dorony, Kenneth (K.R.)  
**Subject:** FR0070- Friction code P07AE-09 ( NTF on return gear)

I found out through the Interactive diagnosis that this tech did not hit the clear button at the beginning of step "F4", before the road test. I talked to the tech at the dealer and he told me he everytime he started and drove the vehicle had no assist, but not 100% sure he cleared the codes, he told me he did but this was worked on over one month ago. The clear code button is not on the diagnostic page that we can see, but should state "complete" when done on the technician's online diagnosis page.

So I asked Mike Beattie if there is a way to make the tech clear the codes before going forward on the road test in the diagnostics that way there is no confusion with the status of the code for current or historic and there is no confusion on the last step before EPAS rack replacement.



#70 gear warranty  
return data....

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

**Year = MY10****Model = CD338****Engine = 2.5L****VIN = 3FAHP0HA4AR [REDACTED]****IDS Version = Not Available****PCM = AE5A-12A650-GE****ABS = AE5C-2C219-FB****ACM = 9E5T-19C158-AC****FCIM = 9E5T-18A802-AC****FDIM = 9E5T-19C116-AE****GEM\_SJB = AG1T-14B476-CA****HVAC = 9E5H-14C178-AK****IC = AE5T-14C026-BH****OCS = 9E53-14C371-AD****PSCM = AE5C-14D003-AK****RCM = 9E53-14C028-AB** **Current DTCs {retrieved 24 September 2009 12:05:05}**

DTC	Snap Shot Data	Source
P1000:00	N/A	PCM

 **Historic DTCs {retrieved 24 September 2009 12:05:05}**

DTC	Snap Shot Data	Source
P07AE:09	00	PSCM

 **DTCs cleared since initial read:**

DTC	Snap Shot Data	Source
C1277	N/A	ABS
U0131:00	N/A	IPC

---

Start: Thu Sep 24 11:01:34 EDT 2009

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Menu Selection: Inspection and Verification **IV1: VISUAL INSPECTION**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.  
**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BBJ) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

No
Go to Known Concerns

□ KC1: KNOWN CONCERNS

- Ignition ON, engine OFF.

NOTE: If present, diagnose DTC U3000:96 before diagnosing any other DTCs.

- Press Read Vehicle Information button to retrieve DTC's from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

**Vehicle Information:**

VIN 3FAHPOHA4AR [REDACTED]

**System Related CMDTCs Active {retrieved 24 September 2009 11:00:25}**

DTC	Description	Source	Status
Pass	System pass	PSCM	

**System Related CMDTCs cleared since initial read:**

OASIS symptom code:

— Chassis \ Steering/Handling (303000)

- OASIS will return known TSB's and SSMs for the specific symptom code(s) and DTC(s) listed above.

Recent Warranty Repair History: No recent repair history on vehicle

Review the OASIS results below for any known concerns related to the current vehicle.

<b>SSM: 20782 2008- 2010 FUSION, MILAN, MKZ - NO LONGER INCLUDE THE STEERING WHEEL LOCKFEATURE.</b>	1 out of 1 303000
ALL 2008 - 2010 FUSION, MILAN, AND MKZ VEHICLES BUILT AFTER 12/1/2007 HAVE INCORPORATED AN ELECTRONIC PASSIVE ANTI-THEFT SYSTEM (EPATS) KEY SYSTEM FOR THEFT PROTECTION AND REPLACING THE MECHANICAL STEERING WHEEL LOCK FEATURE THEFT PROTECTION. IMPORTANT: DO NOT REPLACE THE STEERING COLUMN FROM A PRE-12/1/2007 BUILT VEHICLE WITH THE NEW EPATS EQUIPPED COLUMN. THE COLUMNS ARE NOT INTERCHANGEABLE. A DEALER THAT INTERCHANGES THE COLUMNS COULD BE SUBJECT TO GOVERNMENT FINES UP TO \$6,000 PER VEHICLE FOR RENDERING INOPERATIVE A REQUIRED SAFETY FEATURE. Effective Date: 05/06/2009	
<b>SSM: 20795 2010 FUSION/MILAN - 2.5L/3.0L EPAS EQUIPPED VEHICLES - SQUEAK AND RATTLE</b>	1 out of 1 303000
SOME 2010 FUSION/MILAN EQUIPPED WITH 2.5L OR 3.0L AND ELECTRONIC POWER ASSIST STEERING (EPAS) MAY EXHIBIT INCREASED LEVELS OF ROAD NOISE, THAT CAN BE HEARD INSIDE THE VEHICLE WHILE DRIVING. THE STEERING GEAR/DASH SEAL -(BASE PART NUMBER 3611B) MAY NOT BE PROPERLY SEATED. THE CORRECT POSITION OF THE STEERING GEAR/DASH SEAL CAN FOUND IN WORKSHOP MANUAL SECTION 211-02. NOTE: THIS ROAD NOISE DOES NOT IMPACT THE FUNCTION OR DURABILITY OF THE STEERING SYSTEM AND IT IS CONSIDERED A CUSTOMER IRRITATION. Effective Date: 05/14/2009	
<b>SSM: 20831 2010 FUSION/MILAN ELECTRONIC POWER ASSIST SYSTEM (EPAS) - INTERACTIVE DIAGNOSIS</b>	1 out of 1 303000
THE 2010 FUSION/MILAN WORKSHOP MANUAL SECTION 211-00A HAS BEEN UPDATED WITH INTERACTIVE DIAGNOSTICS. THIS SECTION PROVIDES NEW INFORMATION ABOUT DIAGNOSTIC TOOLS FOR THE ELECTRONIC POWER ASSIST STEERING (EPAS) AND THE POWER STEERING CONTROL MODULE (PSCM). THIS NEXT GENERATION OF VEHICLE DIAGNOSTIC SOFTWARE IS DESIGNED TO AID TECHNICIANS IN IDENTIFYING VEHICLE CONCERNs BY ALLOWING PINPOINT TEST DIAGNOSTICS TO DIRECTLY ACCESS THE VEHICLE THROUGH A VEHICLE COMMUNICATIONS MODULE (VCM), DISPLAY TEST MEASUREMENTS IN REAL TIME AND PROVIDE LOGICAL DIAGNOSTIC PROGRESSION BASED ON TECHNICIAN INPUT. NOTE: IF DIAGNOSTIC TROUBLE CODES ARE PRESENT, DO NOT CLEAR THE CODES UNTIL USING INTERACTIVE DIAGNOSIS, THIS WILL HELP CAPTURE 'FREEZE FRAME' DATA DURING THE DIAGNOSTICS OF ANY DTC. Effective Date: 06/06/2009	
<b>SSM: 20903 2010 FUSION/MILAN/MKZ, FUSION/MILAN HYBRID - REMOVAL AND INSTALLATION OFINSTRUMENT PANEL REINFORCEMENT PLATE. - SERVICE TIP</b>	1 out of 1 303000
2010 FUSION/MILAN/MKZ AND FUSION/MILAN HYBRID, BUILT PRIOR TO 06/25/2009 WHERE REMOVAL AND REINSTALLATION OF INSTRUMENT PANEL REINFORCEMENT PLATE (BASE PART NUMBER 54017A28) IS NECESSARY, MAKE SURE TO USE HAND TOOLS TO REMOVE ANY FASTENERS AND FOLLOW WORKSHOP MANUAL SECTION 211-04. WHEN REINSTALLING THE FASTENERS, MAKE SURE TO ONLY APPLY 47 LB-IN (5.4NM) OF MAXIMUM TORQUE. FAILURE TO USE HAND TOOLS AND FOLLOW WSM SECTION 211-04 MAY DAMAGE THE INSTRUMENT PANEL RETAINER CLIPS AND/OR INSTRUMENT PANEL SURFACES. IF DAMAGE TO THESE COMPONENTS IS PRESENT, PROCEED WITH NORMAL SERVICE REPAIRS AND REFER TO FORD CATALOG FOR THE LATEST AND GREATEST SERVICE PART AVAILABILITY. Effective Date: 07/23/2009	

- Are any of the listed known concerns related to the customer complaint?

<b>No</b>
<b>GO to Diagnostic Trouble Code (DTC) Charts.</b>

Detected DTCs / DTC Index

- DTCs retrieved are listed below. If the DTCs are related to the concern, proceed as directed.
- If there are no DTCs relevant to the customer concern then proceed to Symptom Chart.

Current DTCs {retrieved 24 September 2009 11:00:25}

DTC	Description / Action	Source
Pass	System pass	PSCM

Historic DTCs {retrieved 24 September 2009 11:00:25}

DTC	Description / Action	Source
Pass	System pass	PSCM

DTCs cleared since initial read:

Exit: Thu Sep 24 11:05:18 EDT 2009

Start: Thu Sep 24 11:37:36 EDT 2009

Menu Selection: Inspection and Verification

IV1: VISUAL INSPECTION

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.  
**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

### VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

<b>No</b>
<b>Go to Known Concerns</b>

#### █ KC1: KNOWN CONCERNS

- Ignition ON, engine OFF.

NOTE: If present, diagnose DTC U3000:96 before diagnosing any other DTCs.

- Press Read Vehicle Information button to retrieve DTCs from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

#### Vehicle Information:

VIN 3FAHP0HA4AR [REDACTED]

**System Related CMDTCs Active {retrieved 24 September 2009 11:36:24}**

DTC	Description	Source	Status
P07AE:09	Transmission Friction Element G Performance/Stuck Off ; Component failure	PSCM	Historic

#### System Related CMDTCs cleared since initial read:

OASIS symptom code:

— Chassis \ Steering/Handling (303000)

- OASIS will return known TSBs and SSMs for the specific symptom code(s) and DTC(s) listed above.

4s

0s      20s

Review the OASIS results below for any known concerns related to the current vehicle.

<b>SSM: 20782 2008- 2010 FUSION, MILAN, MKZ - NO LONGER INCLUDE THE STEERING WHEEL LOCKFEATURE.</b> ALL 2008 - 2010 FUSION, MILAN, AND MKZ VEHICLES BUILT AFTER 12/1/2007 HAVE INCORPORATED AN ELECTRONIC PASSIVE ANTI-THEFT SYSTEM (EPATS) KEY SYSTEM FOR THEFT PROTECTION AND REPLACING THE MECHANICAL STEERING WHEEL LOCK FEATURE THEFT PROTECTION. IMPORTANT: DO NOT REPLACE THE STEERING COLUMN FROM A PRE-12/1/2007 BUILT VEHICLE WITH THE NEW EPATS EQUIPPED COLUMN. THE COLUMNS ARE NOT INTERCHANGEABLE. A DEALER THAT INTERCHANGES THE COLUMNS COULD BE SUBJECT TO GOVERNMENT FINES UP TO \$6,000 PER VEHICLE FOR RENDERING INOPERATIVE A REQUIRED SAFETY FEATURE. Effective Date: 05/06/2009	1 out of 2 303000
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<b>SSM: 20795 2010 FUSION/MILAN - 2.5L/3.0L EPAS EQUIPPED VEHICLES - SQUEAK AND RATTLE</b> SOME 2010 FUSION/MILAN EQUIPPED WITH 2.5L OR 3.0L AND ELECTRONIC POWER ASSIST STEERING (EPAS) MAY EXHIBIT INCREASED LEVELS OF ROAD NOISE, THAT CAN BE HEARD INSIDE THE VEHICLE WHILE DRIVING. THE STEERING GEAR/DASH SEAL -(BASE PART NUMBER 3611B) MAY NOT BE PROPERLY SEALED. THE CORRECT POSITION OF THE STEERING GEAR/DASH SEAL CAN BE FOUND IN WORKSHOP MANUAL SECTION 211-02. NOTE: THIS ROAD NOISE DOES NOT IMPACT THE FUNCTION OR DURABILITY OF THE STEERING SYSTEM AND IT IS CONSIDERED A CUSTOMER IRRITATION. Effective Date: 05/14/2009	1 out of 2 303000
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**SSM: 20831 2010 FUSION/MILAN ELECTRONIC POWER ASSIST SYSTEM (EPAS) - INTERACTIVE DIAGNOSIS**1 out of 2  
303000

THE 2010 FUSION/MILAN WORKSHOP MANUAL SECTION 211-00A HAS BEEN UPDATED WITH INTERACTIVE DIAGNOSTICS. THIS SECTION PROVIDES NEW INFORMATION ABOUT DIAGNOSTIC TOOLS FOR THE ELECTRONIC POWER ASSIST STEERING (EPAS) AND THE POWER STEERING CONTROL MODULE (PSCM). THIS NEXT GENERATION OF VEHICLE DIAGNOSTIC SOFTWARE IS DESIGNED TO AID TECHNICIANS IN IDENTIFYING VEHICLE CONCERNS BY ALLOWING PINPOINT TEST DIAGNOSTICS TO DIRECTLY ACCESS THE VEHICLE THROUGH A VEHICLE COMMUNICATIONS MODULE (VCM), DISPLAY TEST MEASUREMENTS IN REAL TIME AND PROVIDE LOGICAL DIAGNOSTIC PROGRESSION BASED ON TECHNICIAN INPUT. NOTE: IF DIAGNOSTIC TROUBLE CODES ARE PRESENT, DO NOT CLEAR THE CODES UNTIL USING INTERACTIVE DIAGNOSIS, THIS WILL HELP CAPTURE 'FREEZE FRAME' DATA DURING THE DIAGNOSTICS OF ANY DTC.

Effective Date: 06/06/2009

**SSM: 20903 2010 FUSION/MILAN/MKZ, FUSION/MILAN HYBRID - REMOVAL AND INSTALLATION OF INSTRUMENT PANEL REINFORCEMENT PLATE. - SERVICE TIP**1 out of 2  
303000

2010 FUSION/MILAN/MKZ AND FUSION/MILAN HYBRID, BUILT PRIOR TO 06/25/2009 WHERE REMOVAL AND REINSTALLATION OF INSTRUMENT PANEL REINFORCEMENT PLATE (BASE PART NUMBER 54017A28) IS NECESSARY, MAKE SURE TO USE HAND TOOLS TO REMOVE ANY FASTENERS AND FOLLOW WORKSHOP MANUAL SECTION 211-04. WHEN REINSTALLING THE FASTENERS, MAKE SURE TO ONLY APPLY 47 LB-IN (5.4NM) OF MAXIMUM TORQUE. FAILURE TO USE HAND TOOLS AND FOLLOW WSM SECTION 211-04 MAY DAMAGE THE INSTRUMENT PANEL RETAINER CLIPS AND/OR INSTRUMENT PANEL SURFACES. IF DAMAGE TO THESE COMPONENTS IS PRESENT, PROCEED WITH NORMAL SERVICE REPAIRS AND REFER TO FORD CATALOG FOR THE LATEST AND GREATEST SERVICE PART AVAILABILITY.

Effective Date: 07/23/2009

Search criteria with no matching OASIS results:

P07AE

- Are any of the listed known concerns related to the customer complaint?

No

GO to Diagnostic Trouble Code (DTC) Charts.

Exit: Thu Sep 24 11:48:25 EDT 2009

Start: Thu Sep 24 12:06:18 EDT 2009

Menu Selection: Inspection and Verification

 IV1: VISUAL INSPECTION

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.  
**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned	Battery junction box (BJB) fuses 1

steering column.	(50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

No
Go to Known Concerns

#### KC1: KNOWN CONCERNS

- Ignition ON, engine OFF.

NOTE: If present, diagnose DTC U3000:96 before diagnosing any other DTCs.

- Press Read Vehicle Information button to retrieve DTCs from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

#### Vehicle Information:

VIN 3FAHP0HA4AR119771

#### System Related CMDTCs Active {retrieved 24 September 2009 12:05:05}

DTC	Description	Source	Status
P07AE:09	Transmission Friction Element G Performance/Stuck Off : Component failure	PSCM	Historic

#### System Related CMDTCs cleared since initial read:

OASIS symptom code:

— Chassis \ Steering/Handling (303000)

- OASIS will return known TSBs and SSMs for the specific symptom code(s) and DTC(s) listed above.

Recent Warranty Repair History: No recent repair history on vehicle

Review the OASIS results below for any known concerns related to the current vehicle.

**SSM: 20782 2008- 2010 FUSION, MILAN, MKZ - NO LONGER INCLUDE THE STEERING WHEEL LOCKFEATURE.**1 out of 2  
303000

ALL 2008 - 2010 FUSION, MILAN, AND MKZ VEHICLES BUILT AFTER 12/1/2007 HAVE INCORPORATED AN ELECTRONIC PASSIVE ANTI-THEFT SYSTEM (EPATS) KEY SYSTEM FOR THEFT PROTECTION AND REPLACING THE MECHANICAL STEERING WHEEL LOCK FEATURE THEFT PROTECTION. IMPORTANT: DO NOT REPLACE THE STEERING COLUMN FROM A PRE-12/1/2007 BUILT VEHICLE WITH THE NEW EPATS EQUIPPED COLUMN. THE COLUMNS ARE NOT INTERCHANGEABLE. A DEALER THAT INTERCHANGES THE COLUMNS COULD BE SUBJECT TO GOVERNMENT FINES UP TO \$6,000 PER VEHICLE FOR RENDERING INOPERATIVE A REQUIRED SAFETY FEATURE.

Effective Date: 05/06/2009

**SSM: 20795 2010 FUSION/MILAN - 2.5L/3.0L EPAS EQUIPPED VEHICLES - SQUEAK AND RATTLE**1 out of 2  
303000

SOME 2010 FUSION/MILAN EQUIPPED WITH 2.5L OR 3.0L AND ELECTRONIC POWER ASSIST STEERING (EPAS) MAY EXHIBIT INCREASED LEVELS OF ROAD NOISE, THAT CAN BE HEARD INSIDE THE VEHICLE WHILE DRIVING. THE STEERING GEAR/DASH SEAL -(BASE PART NUMBER 3611B) MAY NOT BE PROPERLY SEATED. THE CORRECT POSITION OF THE STEERING GEAR/DASH SEAL CAN FOUND IN WORKSHOP MANUAL SECTION 211-02. NOTE: THIS ROAD NOISE DOES NOT IMPACT THE FUNCTION OR DURABILITY OF THE STEERING SYSTEM AND IT IS CONSIDERED A CUSTOMER IRRITATION.

Effective Date: 05/14/2009

**SSM: 20831 2010 FUSION/MILAN ELECTRONIC POWER ASSIST SYSTEM (EPAS) - INTERACTIVE DIAGNOSIS**1 out of 2  
303000

THE 2010 FUSION/MILAN WORKSHOP MANUAL SECTION 211-00A HAS BEEN UPDATED WITH INTERACTIVE DIAGNOSTICS. THIS SECTION PROVIDES NEW INFORMATION ABOUT DIAGNOSTIC TOOLS FOR THE ELECTRONIC POWER ASSIST STEERING (EPAS) AND THE POWER STEERING CONTROL MODULE (PSCM). THIS NEXT GENERATION OF VEHICLE DIAGNOSTIC SOFTWARE IS DESIGNED TO AID TECHNICIANS IN IDENTIFYING VEHICLE CONCERN BY ALLOWING PINPOINT TEST DIAGNOSTICS TO DIRECTLY ACCESS THE VEHICLE THROUGH A VEHICLE COMMUNICATIONS MODULE (VCM), DISPLAY TEST MEASUREMENTS IN REAL TIME AND PROVIDE LOGICAL DIAGNOSTIC PROGRESSION BASED ON TECHNICIAN INPUT. NOTE: IF DIAGNOSTIC TROUBLE CODES ARE PRESENT, DO NOT CLEAR THE CODES UNTIL USING INTERACTIVE DIAGNOSIS, THIS WILL HELP CAPTURE 'FREEZE FRAME' DATA DURING THE DIAGNOSTICS OF ANY DTC.

Effective Date: 06/06/2009

**SSM: 20903 2010 FUSION/MILAN/MKZ, FUSION/MILAN HYBRID - REMOVAL AND INSTALLATION OF INSTRUMENT PANEL REINFORCEMENT PLATE. - SERVICE TIP**1 out of 2  
303000

2010 FUSION/MILAN/MKZ AND FUSION/MILAN HYBRID, BUILT PRIOR TO 06/25/2009 WHERE REMOVAL AND REINSTALLATION OF INSTRUMENT PANEL REINFORCEMENT PLATE (BASE PART NUMBER 54017A28) IS NECESSARY, MAKE SURE TO USE HAND TOOLS TO REMOVE ANY FASTENERS AND FOLLOW WORKSHOP MANUAL SECTION 211-04. WHEN REINSTALLING THE FASTENERS, MAKE SURE TO ONLY APPLY 47 LB-IN (5.4NM) OF MAXIMUM TORQUE. FAILURE TO USE HAND TOOLS AND FOLLOW WSM SECTION 211-04 MAY DAMAGE THE INSTRUMENT PANEL RETAINER CLIPS AND/OR INSTRUMENT PANEL SURFACES. IF DAMAGE TO THESE COMPONENTS IS PRESENT, PROCEED WITH NORMAL SERVICE REPAIRS AND REFER TO FORD CATALOG FOR THE LATEST AND GREATEST SERVICE PART AVAILABILITY.

Effective Date: 07/23/2009

Search criteria with no matching OASIS results:

P07AE

- Are any of the listed known concerns related to the customer complaint?

No

GO to Diagnostic Trouble Code (DTC) Charts.

Detected DTCs / DTC Index

- DTCs retrieved are listed below. If the DTCs are related to the concern, proceed as directed.
- If there are no DTCs relevant to the customer concern then proceed to Symptom Chart.

Current DTCs {retrieved 24 September 2009 12:05:05}

DTC	Description / Action	Source
N/A	No DTCs to report	

Historic DTCs {retrieved 24 September 2009 12:05:05}

DTC	Description / Action	Source
P07AE:09	<p>Transmission Friction Element G Performance/Stuck Off: Component failure</p> <p><b>Description:</b> The PSCM will monitor the amount of force needed to assist with vehicle steering when the ignition is ON and the voltage supply to the PSCM is above 6 volts, all other EPAS sensors are functioning correctly and the EPAS gear is providing assist.</p> <ul style="list-style-type: none"> <li>• DTC P07AE:09 (Transmission Friction Element G Performance/Stuck Off: Component Failure) - If the amount of friction in the steering system exceeds the allowable threshold, DTC P07AE:09 will be set. Low air pressure in the tires could cause DTC P07AE:09 to set.</li> </ul> <p><b>Possible Causes:</b></p> <ul style="list-style-type: none"> <li>• Low tire air pressure.</li> <li>• Damaged steering gear bellows boot</li> <li>• Contaminated gear/rack.</li> <li>• Inner tie rods</li> <li>• Steering gear internal failure.</li> </ul> <p><b>Diagnostic Aids:</b> During the ignition cycle when the DTC was set the following will happen: steering assist will be reduced, the PSCM will transmit an invalid steering angle message over the HS-CAN bus and the module will also send a message to the IPC to display the SERVICE POWER STEERING message in the message center. During the very next ignition cycle after the DTC was set the following will happen: the PSCM will remove steering assist and enter into a manual mode, the module will transmit an invalid steering angle message over the HS-CAN bus and the module will also send a message to the IPC to display the SERVICE POWER STEERING NOW message in the message center.</p> <p><b>Action:</b> GO to Pinpoint Test F</p>	PSCM

DTCs cleared since initial read:

**DTC P07AE:09 (PSCM) - Transmission Friction Element G Performance/Stuck Off: Component failure**

**F: DTC P07AE: Transmission Friction Element G Performance/Stuck Off - Component Failure**

#### Normal Operation

The power steering control module (PSCM) monitors various inputs and outputs of the electronic power assist steering (EPAS) system in order to keep the system operating at peak capacity. Information provided by sensors (steering torque, vehicle speed, vehicle travel distance, etc.) are all compared to programmed and learned information. Likewise, outputs like the motor and steering rack (travel) are tested against programmed and learned information.

#### Note:

The smart junction box (SJB) is also identified as the generic electronic module (GEM).

**F1: MONITOR THE SJB LEFT FRONT TIRE PRESSURE (LF\_PRES) AND RIGHT FRONT TIRE PRESSURE (RF\_PRES) PIDS**

- Ignition ON, engine OFF.
- Access the GEM\_SJB and monitor the LF\_PRES PID. Stored Value: 29.4 psi
- Access the GEM\_SJB and monitor the RF\_PRES PID. Stored Value: 29.9 psi
- Compare the PID readings to the information on the vehicle certification (VC) label.
- **Is the air pressure in the tires correct as indicated on the VC label?**

Yes
Go to F2.

---

**□ F2: CHECK FOR UNLOADED STEERING RACK TRAVEL FEEL.**

- With the vehicle in NEUTRAL, position it on a hoist. Refer to Section 100-02.
- Ignition OFF.
- Raise the vehicle until the front wheels no longer touch the ground.
- Rotate the steering wheel from lock-to-lock and inspect the steering rack travel for the following:
  - Abnormal noises
  - Rough spots
  - Sticky spots
  - Tight spots
- **Is steering rack travel smooth and free of any abnormal noises, rough, sticky and tight spots?**

Yes
Go to F4.

---

**□ F4: TEST DRIVE TO CHECK FOR RETURNING DTCS. - Fault outcome**

- Cycle the ignition to OFF and then back to RUN.
- NOTE: Always drive the vehicle in a safe manner according to driving conditions and obey all traffic laws.
- Test drive the vehicle in the following manner:
    - With the engine running/ready, stop the vehicle on an unsealed concrete or asphalt surface (in order to provide adequate friction for a thorough test).
    - With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.
    - Return the steering wheel to the center position and move the vehicle forward approximately 32 cm (1 ft).
    - With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.
    - Return the steering wheel to the center position and move the vehicle forward approximately 32 cm (1 ft).
    - With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.

NOTE: The next portion of the test drive will require the vehicle to be driven at highway speeds.

NOTE: The test period is a cumulative time of 10 minutes. Stopping, going slower than 72 km/h (45 mph) or faster than 96 km/h (60

mph) will not affect the test as long as a total time of 10 minutes is spent between 72-96 km/h (45-60 mph) with at least 4 lane changes during that time/speed window.

- Continue test driving the vehicle in the following manner:
  - Bring the vehicle to a minimum speed of 72 km/h (45 mph), maximum of 96 km/h (60 mph).
  - Maintain that speed for at least 10 minutes.
  - During this 10-minute time period, make a minimum of 4 lane changes or turns that achieve a steering wheel angle of at least 20 degrees.
  - The test drive is complete.
- Press Read Vehicle Information button to retrieve DTCs from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

**Vehicle Information:**

VIN 3FAHP0HA4AP [REDACTED]

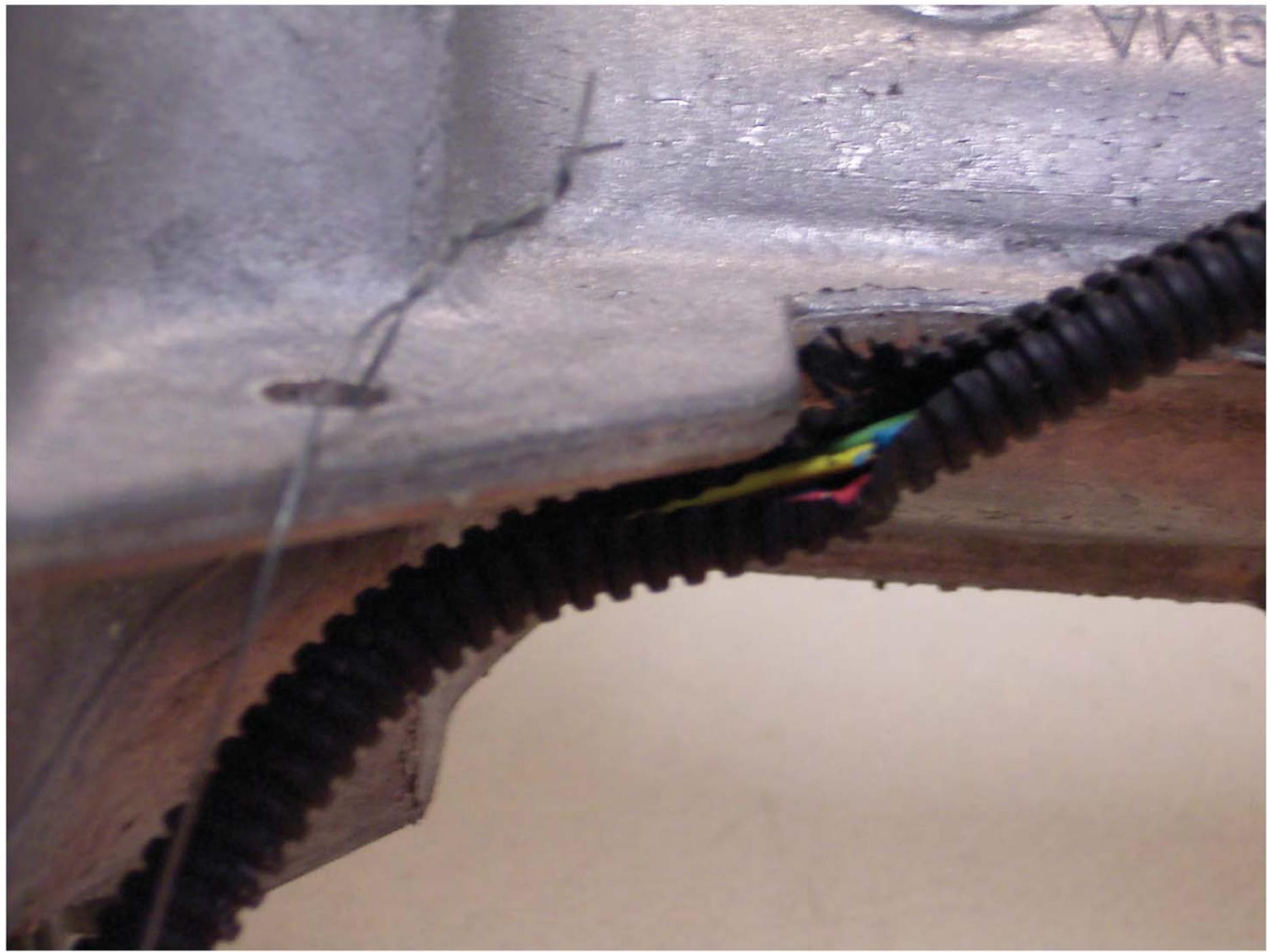
**System Related CMDTCs Active {retrieved 24 September 2009 12:05:05}**

DTC	Description	Source	Status
P07AE:09	Transmission Friction Element G Performance/Stuck Off : Component failure	PSCM	Historic

**System Related CMDTCs cleared since initial read:**

- Is DTC P07AE:09 present?

Yes
INSTALL a new EPAS gear. Refer to Section 211-02.



PE14-030 000085



PE14-030 000086



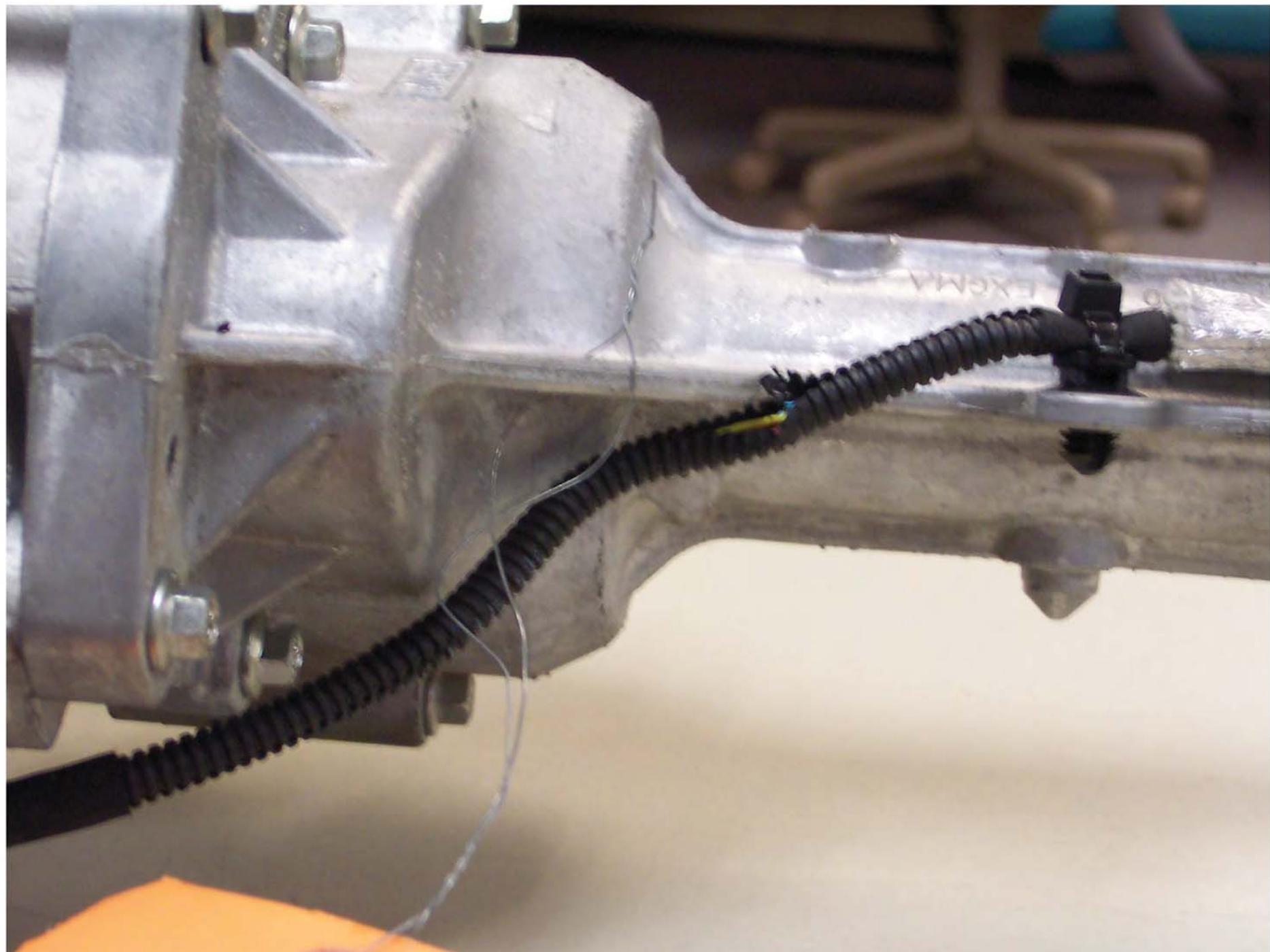
PE14-030 000087



PE14-030 000088



PE14-030 000089



PE14-030 000090

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**From:** Estes, Eric (E.E.)  
**Sent:** Thursday, January 28, 2010 7:45 PM  
**To:** Bahena, Miguel (Mike.); Snider, Tim (T.O.); Diez, Timothy (T.P.); Mrozek, Robert (R.M.)  
**Subject:** FR0123 TS damage  
**Attachments:** FR0123 - Damaged TS harness.pdf; EPAS Gear 001.jpg; EPAS Gear 002.jpg; EPAS Gear 003.jpg; EPAS Gear 004.jpg; EPAS Gear 005.jpg; EPAS Gear 006.jpg

This is one we did not have time for in yesterday's TS meeting but not sure if we can close this out since the dealer cut-out the evidence of a damaged TS harness. See attachments for pics & the interactive diagnosis. Vehicle was not in a wreck or had other repairs only came in for this complaint and the vehicle has 22k miles so unsure how this TS harness was damaged.

Eric

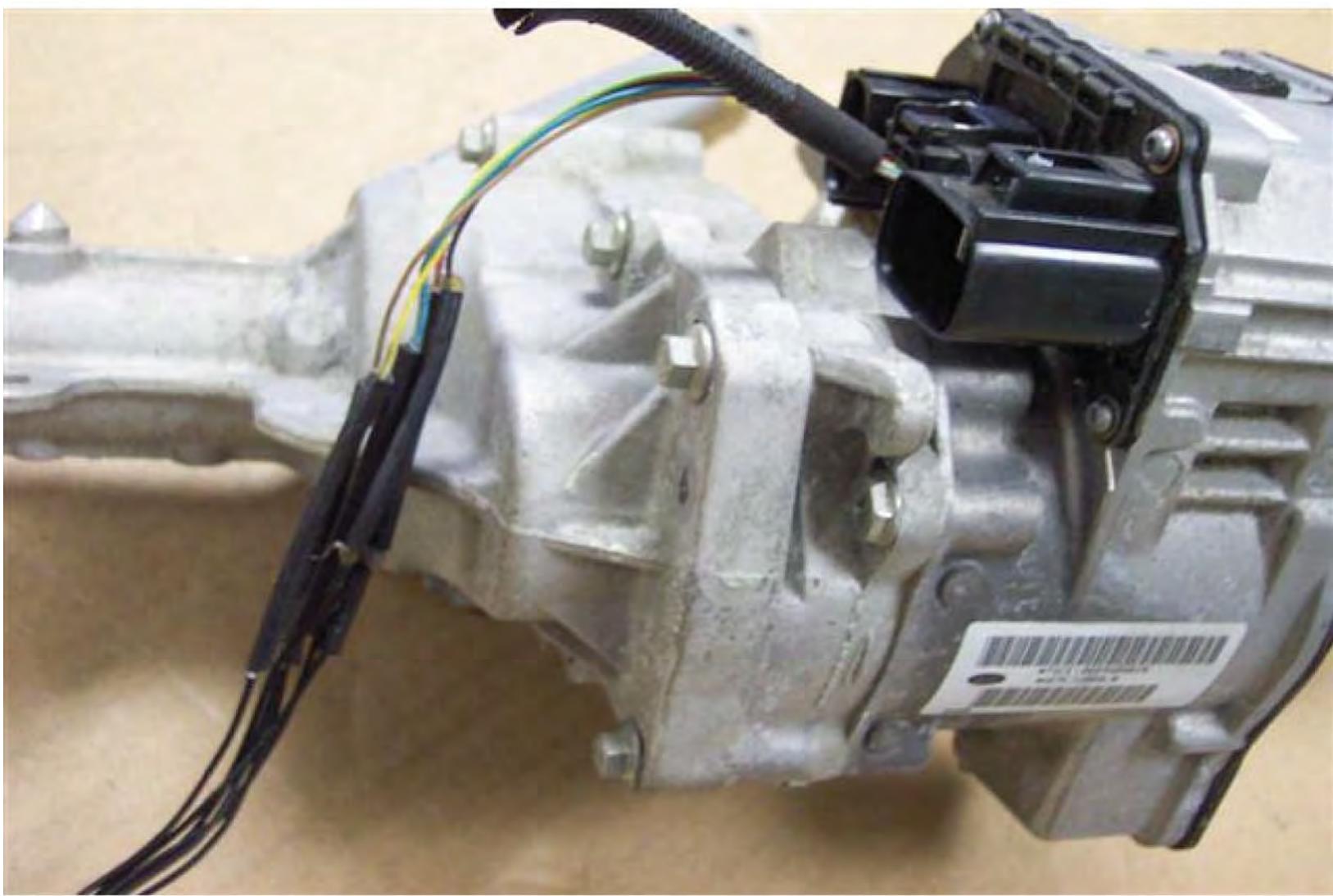
-----Original Message-----

**From:** Kerr, Jody (J.)  
**Sent:** Tuesday, January 26, 2010 3:50 PM  
**To:** Estes, Eric (E.E.)  
**Subject:** Emailing: EPAS Gear 001.jpg, EPAS Gear 002.jpg, EPAS Gear 003.jpg, EPAS Gear 004.jpg, EPAS Gear 005.jpg, EPAS Gear 006.jpg

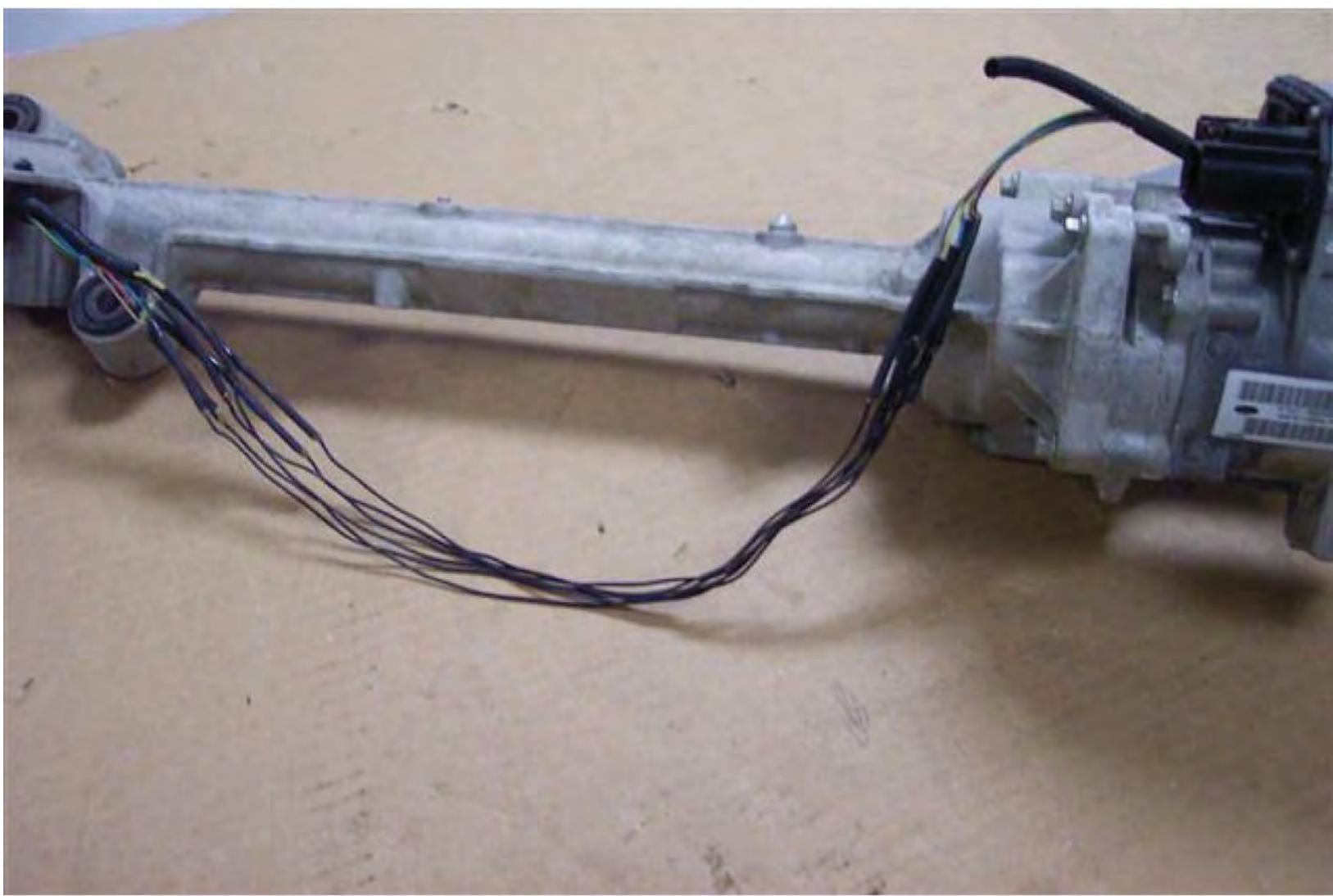
The message is ready to be sent with the following file or link attachments:

EPAS Gear 001.jpg  
EPAS Gear 002.jpg  
EPAS Gear 003.jpg  
EPAS Gear 004.jpg  
EPAS Gear 005.jpg  
EPAS Gear 006.jpg

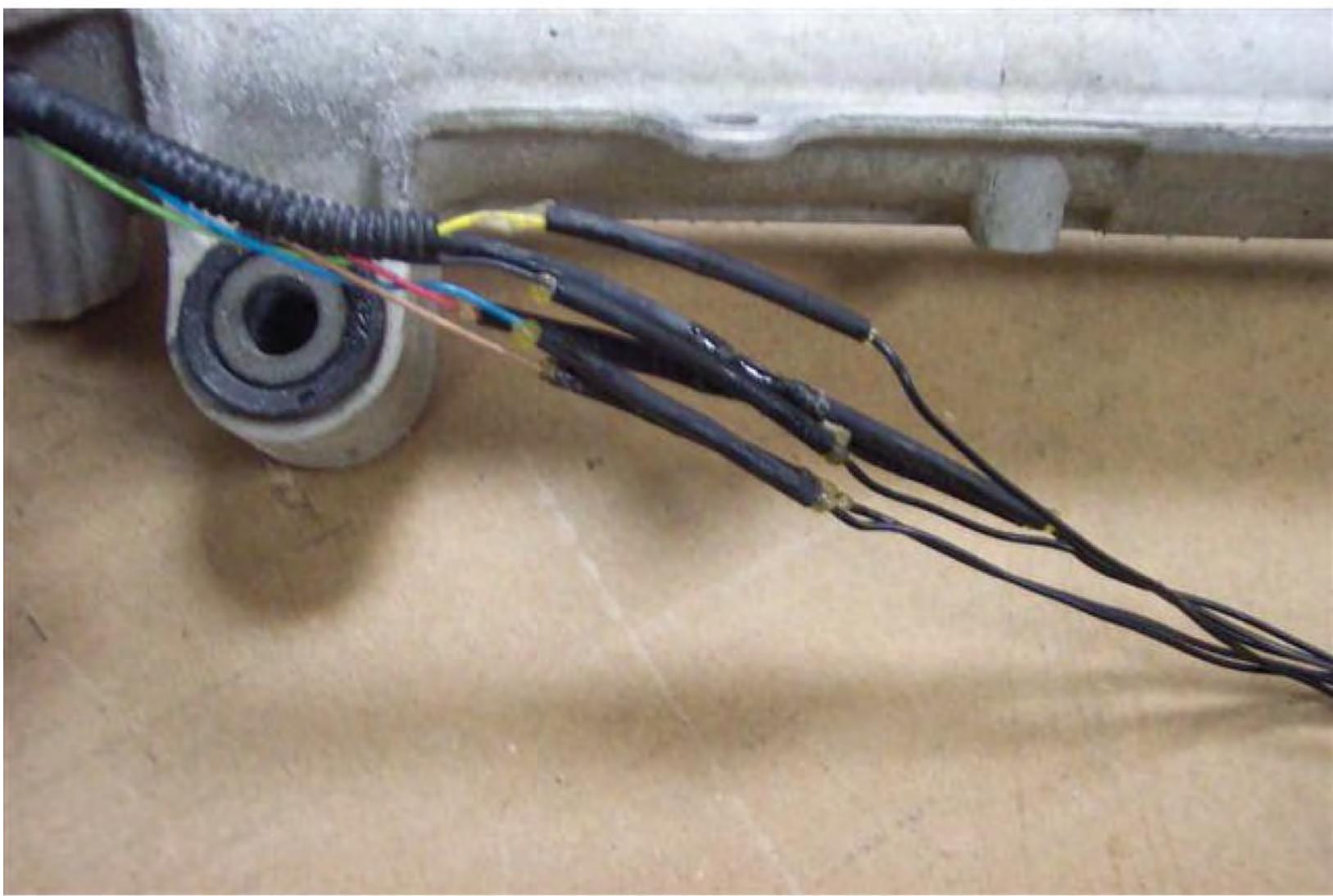
Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.



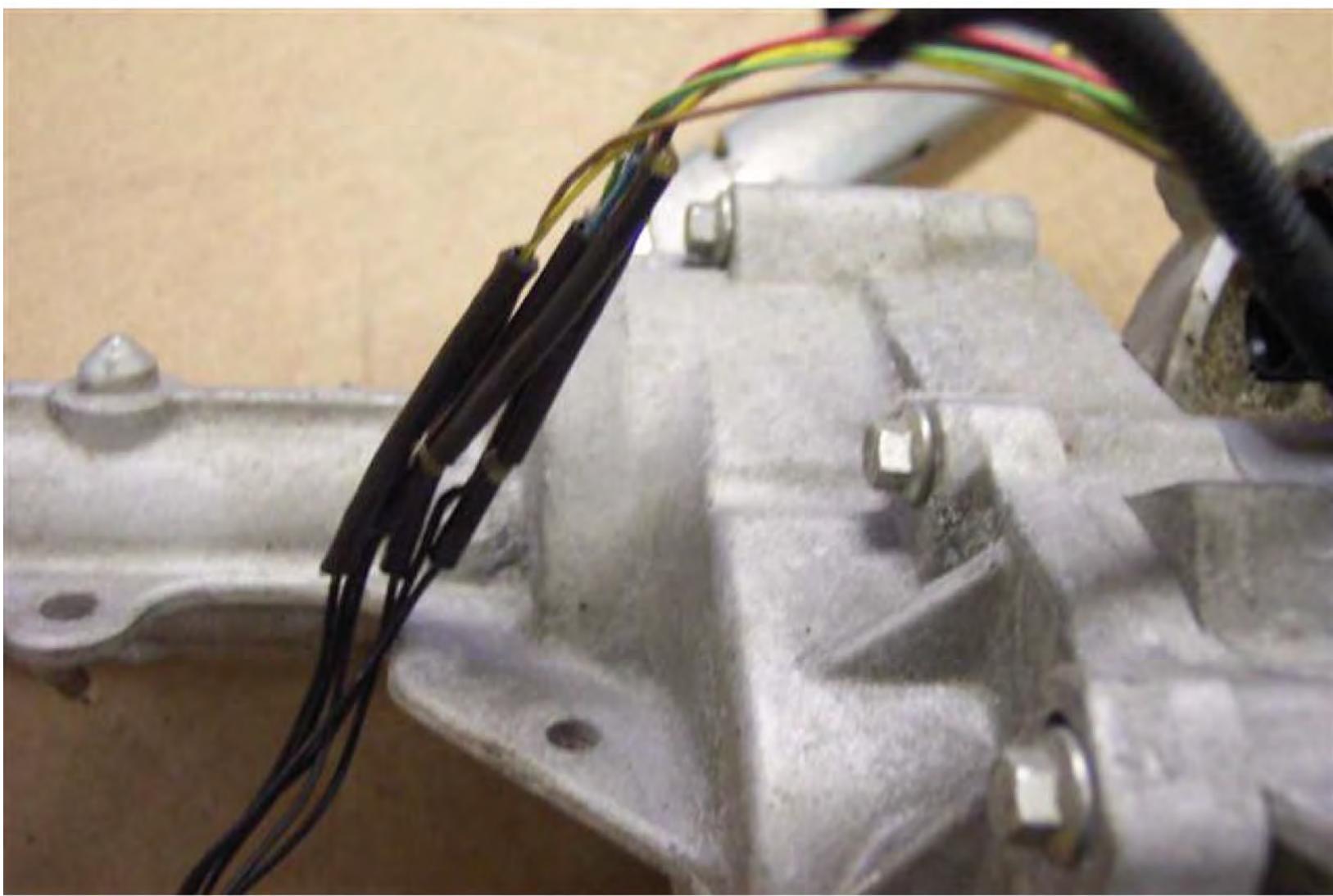
PE14-030 000092



PE14-030 000093



PE14-030 000094



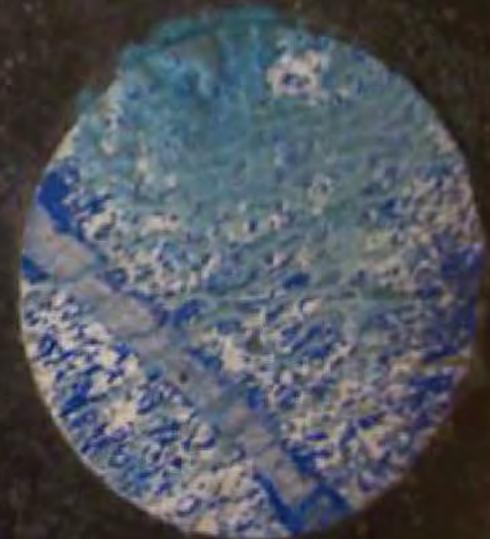
PE14-030 000095

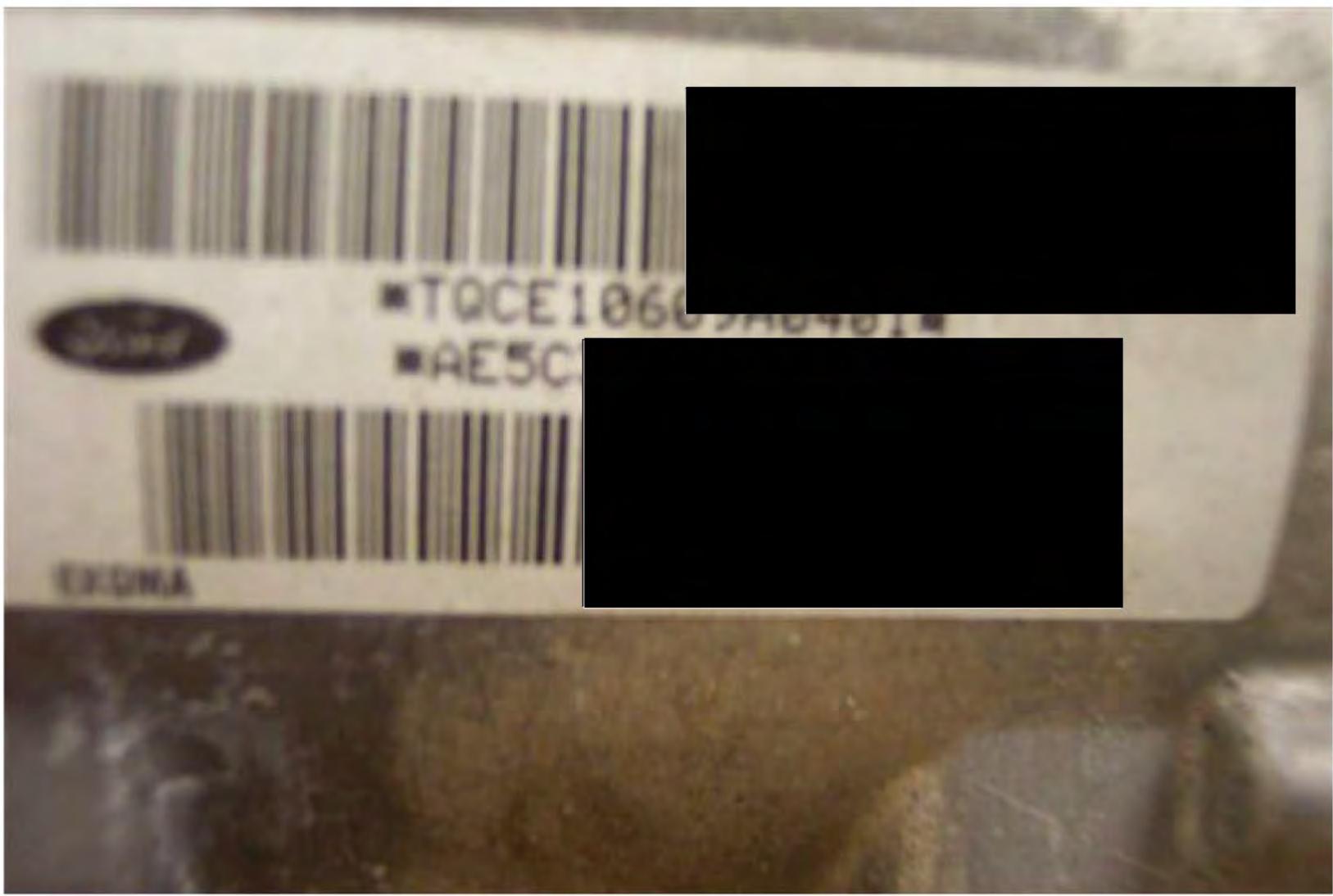
A0017166  
B9040



0904011777  
0900221173  
090121175

F82AMEJ7





Year = MY10

Model = CD338

Engine = 2.5L

VIN = 3FADP0L32AR [REDACTED]

IDS Version = Not Available

PCM = AE5A-12A650-KH

ABS = 9E58-2D053-AH

ACM = AR3T-14D655-AB

APIM = 9L2T-14D205-AE

DSP = AL3T-14C589-AB

FCIM = AR3T-14D017-DB

GEM\_SJB = AG1T-14B476-CB

HVAC = AE5H-18D619-HL

IC = AE5T-14C026-AF

OCS = 9E53-14C371-AD

PAM = AE5T-15K866-AC

PSCM = AE5C-14D003-AK

RCM = 9E53-14C028-AB

SODL = 9E5T-14D368-AF

SODR = 9E5T-14D368-AF

TCM = 9E58-7J104-AE

DCDC = 9E58-14D459-AD

BECM = AE58-14C197-AC

ACCM = 9E5H-14D491-AF

Current DTCs {retrieved 28 December 2009 09:43:35}

DTC	Snap Shot Data	Source
U0100:00	N/A	APIM
P1000:00	N/A	PCM

Historic DTCs {retrieved 28 December 2009 09:43:35}

DTC	Snap Shot Data	Source
U3000:96 00		PSCM
C200B:2F 0A3301003302FFFF33067FFF000000000000000000330C7FD1118FD11728D118FF0CF40CFFFFF40D64FDAAD0	PSCM	
C200C:2F 0A3301003302FFFF33067FFF000000000000000000330C7FD1118FD11728D118FF0CF40CFFFFF40D64FDAAD1	PSCM	

DTCs cleared since initial read:

DTC	Snap Shot Data	Source
C1B00:86 N/A		ABS
B1A69:11 N/A		HVAC

Start: Mon Dec 28 09:40:26 EST 2009

**Menu Selection: Inspection and Verification****IV1: VISUAL INSPECTION**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.  
**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

<b>No</b>
<b>Go to Known Concerns</b>

**KC1: KNOWN CONCERNS**

- Ignition ON, engine OFF.

NOTE: If present, diagnose DTC U3000:96 before diagnosing any other DTCs.

- Press Read Vehicle Information button to retrieve DTC's from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

**Vehicle Information:**

VIN 3FADP0L32AF [REDACTED]

**System Related CMDTCs Active {retrieved 28 December 2009 09:30:28}**

DTC	Description	Type	Source	Status
U3000:96	Control Module : Component Internal Failure	KOEC	PSCM	Historic
C200B:2F	Steering Shaft Torque Sensor 1 : Signal Erratic	KOEC	PSCM	Historic
C200C:2F	Steering Shaft Torque Sensor 2 : Signal Erratic	KOEC	PSCM	Historic

**System Related CMDTCs cleared since initial read:**

OASIS symptom code:

— Chassis \ Steering/Handling (303000)

- OASIS will return known TSB's and SSMs for the specific symptom code(s) and DTC(s) listed above.

**Menu Selection: Inspection and Verification** **IV1: VISUAL INSPECTION**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.  
**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

No
<a href="#">Go to Known Concerns</a>

### KC1: KNOWN CONCERNS

- Ignition ON, engine OFF.

NOTE: If present, diagnose DTC U3000:96 before diagnosing any other DTCs.

- Press Read Vehicle Information button to retrieve DTCs from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

### Vehicle Information:

VIN 3FADPOL32AR [REDACTED]

### System Related CMDTCs Active {retrieved 28 December 2009 09:43:35}

DTC	Description	Type	Source	Status
U3000:96	Control Module : Component Internal Failure	KOEC	PSCM	Historic
C200B:2F	Steering Shaft Torque Sensor 1 : Signal Erratic	KOEC	PSCM	Historic
C200C:2F	Steering Shaft Torque Sensor 2 : Signal Erratic	KOEC	PSCM	Historic

### System Related CMDTCs cleared since initial read:

OASIS symptom code:

— Chassis \ Steering/Handling (303000)

- OASIS will return known TSBs and SSMs for the specific symptom code(s) and DTC(s) listed above.

Recent Warranty Repair History: No recent repair history on vehicle

Review the OASIS results below for any known concerns related to the current vehicle.

<b>TSB: 09-12-13 FUSION/MILAN HYBRID - CHANGE IN BRAKE PEDAL TRAVEL AND/OR ABS CONTROL/BRAKEWARNING LAMP - DTC C1011:1C, C1011:1F OR C100A:64 - BUILT ON OR BEFORE 5/15/2009</b>	1 out of 4 303000
SOME 2010 FUSION AND MILAN HYBRID (HEV) VEHICLES MAY EXPERIENCE ELECTRONIC NOISE ON THE MAIN POWER FEED CIRCUIT TO THE BRAKE CONTROL MODULE WITHIN THE 14290 WIRING HARNESS. DEPENDING ON THE FREQUENCY AND DURATION OF THE NOISE IT MAY GENERATE A FALSE DIAGNOSTIC TROUBLE CODE (DTC) (C1011-1C, C1011-1F, OR C100A-64) IN THE BRAKE MODULE. THIS TURNS OFF THE BRAKE BY WIRE MODE, DEFAULTING TO DIRECT PEDAL ACTIVATION OF THE BRAKE SYSTEM, INCLUDING FULL VACUUM BRAKE ASSIST. SEE THE TSB FOR DETAILS AND FOLLOW SERVICE PROCEDURE STEPS TO CORRECT THE CONDITION.	
See TSB for complete details: Effective Date: 06/12/2009	
<b>SSM: 20782 2008- 2010 FUSION, MILAN, MKZ - NO LONGER INCLUDE THE STEERING WHEEL LOCKFEATURE.</b>	1 out of 4 303000
ALL 2008 - 2010 FUSION, MILAN, AND MKZ VEHICLES BUILT AFTER 12/1/2007 HAVE INCORPORATED AN ELECTRONIC PASSIVE ANTI-THEFT SYSTEM (EPATS) KEY SYSTEM FOR THEFT PROTECTION AND REPLACING THE MECHANICAL STEERING WHEEL LOCK FEATURE THEFT PROTECTION. IMPORTANT: DO NOT REPLACE THE STEERING COLUMN FROM A	

PRE-12/1/2007 BUILT VEHICLE WITH THE NEW EPATS EQUIPPED COLUMN. THE COLUMNS ARE NOT INTERCHANGEABLE. A DEALER THAT INTERCHANGES THE COLUMNS COULD BE SUBJECT TO GOVERNMENT FINES UP TO \$6,000 PER VEHICLE FOR RENDERING INOPERATIVE A REQUIRED SAFETY FEATURE.  
Effective Date: 05/06/2009

**SSM: 20795 2010 FUSION/MILAN - 2.5L/3.0L EPAS EQUIPPED VEHICLES - SQUEAK AND RATTLE**

SOME 2010 FUSION/MILAN EQUIPPED WITH 2.5L OR 3.0L AND ELECTRONIC POWER ASSIST STEERING (EPAS) MAY EXHIBIT INCREASED LEVELS OF ROAD NOISE, THAT CAN BE HEARD INSIDE THE VEHICLE WHILE DRIVING. THE STEERING GEAR/DASH SEAL -(BASE PART NUMBER 3611B) MAY NOT BE PROPERLY SEATED. THE CORRECT POSITION OF THE STEERING GEAR/DASH SEAL CAN FOUND IN WORKSHOP MANUAL SECTION 211-02. NOTE: THIS ROAD NOISE DOES NOT IMPACT THE FUNCTION OR DURABILITY OF THE STEERING SYSTEM AND IT IS CONSIDERED A CUSTOMER IRRITATION.

Effective Date: 05/14/2009

1 out of 4  
303000

**SSM: 20903 2010 FUSION/MILAN/MKZ, FUSION/MILAN HYBRID - REMOVAL AND INSTALLATION OF INSTRUMENT PANEL REINFORCEMENT PLATE. - SERVICE TIP**

2010 FUSION/MILAN/MKZ AND FUSION/MILAN HYBRID, BUILT PRIOR TO 06/25/2009 WHERE REMOVAL AND REINSTALLATION OF INSTRUMENT PANEL REINFORCEMENT PLATE (BASE PART NUMBER 54017A28) IS NECESSARY, MAKE SURE TO USE HAND TOOLS TO REMOVE ANY FASTENERS AND FOLLOW WORKSHOP MANUAL SECTION 211-04. WHEN REINSTALLING THE FASTENERS, MAKE SURE TO ONLY APPLY 47 LB-IN (5.4NM) OF MAXIMUM TORQUE. FAILURE TO USE HAND TOOLS AND FOLLOW WSM SECTION 211-04 MAY DAMAGE THE INSTRUMENT PANEL RETAINER CLIPS AND/OR INSTRUMENT PANEL SURFACES. IF DAMAGE TO THESE COMPONENTS IS PRESENT, PROCEED WITH NORMAL SERVICE REPAIRS AND REFER TO FORD CATALOG FOR THE LATEST AND GREATEST SERVICE PART AVAILABILITY.

Effective Date: 07/23/2009

1 out of 4  
303000

**SSM: 21110 2010 FUSION/MILAN, TAURUS/MKS, FLEX/MKT - UPDATED ELECTRONIC POWER ASSIST SYSTEM (EPAS) - INTERACTIVE DIAGNOSIS -**

THE 2010 FUSION/MILAN/TAURUS/MKT WORKSHOP MANUAL SECTION 211-00A HAS BEEN UPDATED WITH INTERACTIVE DIAGNOSTICS. THIS SECTION PROVIDES NEW INFORMATION ABOUT DIAGNOSTIC TOOLS FOR THE ELECTRONIC POWER ASSIST STEERING (EPAS) AND THE POWER STEERING CONTROL MODULE (PSCM). THIS NEXT GENERATION OF VEHICLE DIAGNOSTIC SOFTWARE IS DESIGNED TO AID TECHNICIANS IN IDENTIFYING VEHICLE CONCERN BY ALLOWING PINPOINT TEST DIAGNOSTICS TO DIRECTLY ACCESS THE VEHICLE THROUGH A VEHICLE COMMUNICATIONS MODULE (VCM), DISPLAY TEST MEASUREMENTS IN REAL TIME AND PROVIDE LOGICAL DIAGNOSTIC PROGRESSION BASED ON TECHNICIAN INPUT. NOTE: IF DIAGNOSTIC TROUBLE CODES ARE PRESENT, DO NOT CLEAR THE CODES UNTIL USING INTERACTIVE DIAGNOSIS, THIS WILL HELP CAPTURE 'FREEZE FRAME' DATA DURING THE DIAGNOSTICS OF ANY DTC.

Effective Date: 11/25/2009

1 out of 4  
303000

Search criteria with no matching OASIS results:

C200B  
C200C

- Are any of the listed known concerns related to the customer complaint?

<b>No</b>
<b>GO to Diagnostic Trouble Code (DTC) Charts.</b>

Detected DTCs / DTC Index

- DTCs retrieved are listed below. If the DTCs are related to the concern, proceed as directed.
- If there are no DTCs relevant to the customer concern then proceed to Symptom Chart.

PSCM - Power Steering Control Module(DTCs Present)  
Historic CMDTCs(3 DTCs) (28 December 2009 09:43:35)

DTC	Description / Action
U3000:96	<p>Control Module: Component Internal Failure <b>Description:</b> The PSCM is self monitoring and will carry out self-tests at specific intervals (initial power up, power down, during normal operation, etc.). Each self-test requires the voltage supply to the PSCM to be at or above a specific level (above 6 volts, above 9 volts, between 10 and 17 volts, etc.) for the test to take place. If one or more of the self-tests should fail, then the module will set one or more DTCs.</p> <ul style="list-style-type: none"> <li>• DTC U3000:41 (Control Module: General Checksum Failure) - If at any time during normal operation the module detects an internal software error with more than 6 volts supplied to the PSCM, then DTC U3000:41 will be set.</li> <li>• DTC U3000:46 (Control Module: Calibration/Parameter Memory Failure) - At any time during normal operation with more than 6 volts supplied to the PSCM the module determines that one or more calibration files are missing or that they are corrupt or that the incorrect EPAS gear is installed on the vehicle, then DTC U3000:46 will be set.</li> <li>• DTC U3000:49 (Control Module: Internal Electronic Failure) - If at any time during normal operation with more than 6 volts supplied to the PSCM, the module detects a software or internal hardware error then the DTC U3000:49 will be set.</li> <li>• DTC U3000:61 (Control Module Signal Calculation Failure) - If the PSCM detects that assist torque calculation is faulty due to a software failure in the module, then DTC U3000:61 will be set.</li> <li>• DTC U3000:72 (Control Module Actuator Stuck Open) - During initial power up with voltage greater than 9 volts, the PSCM will check the internal relay for voltage. If voltage is not present the module will make several attempts to close the relay. If the voltage remains undetected after this test period, then DTC U3000:72 will be set.</li> <li>• DTC U3000:96 (Control Module: Component Internal Failure) - This DTC will set if there is an internal failure of the PSCM due to temperature, power supply or if multiple failures have occurred over a short period of time. <b>Possible Causes:</b> <ul style="list-style-type: none"> <li>• Heat shield missing.</li> <li>• Steering gear internal failure.</li> <li>• Incorrect EPAS gear installed.</li> <li>• Ice/frost build up on relay contacts.</li> <li>• Heavy loads on the EPAS gear.</li> <li>• Excessive ambient temperatures.</li> </ul> <b>Diagnostic Aids:</b> <p>For DTC U3000:41, the PSCM will remove steering assist, enter into a manual mode and transmit an invalid steering angle message over the HS-CAN bus. The module will also send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:46, initially the PSCM will use a default steering assist and may set DTC U2100:00. If DTC U3000:46 returns on the next ignition cycle, then the PSCM will remove steering assist, enter into a manual mode and send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:49, the presence of this DTC may or may not affect steering assist. It will depend on what other DTCs (if any) are set along with U3000:49. Diagnose all other DTCs before diagnosing U3000:49.</p> <p>For DTC U3000:61, the PSCM will remove steering assist, enter into a manual mode and transmit an invalid steering angle message over the HS-CAN bus. The PSCM will also send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:72, this DTC indicates that a specific internal relay is either stuck open or has excessive resistance. In cold climates or climates where frost is possible, the relay contacts could develop a layer of frost which may prevent a clean connection between the relay contacts. It may be necessary to allow the vehicle to remain outside overnight in a cold climate to duplicate the DTC trigger conditions. If U3000:72 sets again on subsequent ignition cycles, then the PSCM will remove steering assist, enter into a manual mode and send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <ul style="list-style-type: none"> <li>• For DTC U3000:96 the instrument cluster will display the POWER STEERING ASSIST FAULT in the message center when this DTC is set</li> </ul> </li></ul>

**DTC U3000:96 (PSCM) - Control Module: Component Internal Failure****C: DTC U3000: Control Module - Signal Calculation Failure and Component Internal Failure****Normal Operation**

The power steering control module (PSCM) monitors various inputs and outputs of the electronic power assist steering (EPAS) system in order to keep the system operating at peak capacity. Information provided by sensors (steering torque, vehicle speed, vehicle travel distance, etc.) are all compared to programmed and learned information. Likewise, outputs like the motor and steering rack (travel) are tested against programmed and learned information.

**Note:**

If a damaged bellows boot(s) was discovered during Inspection and Verification and this pinpoint test DOES NOT lead to the installation of a new EPAS gear or bellows boot(s), then go to Pinpoint Test K to address the damaged boot(s) before returning the vehicle to the customer.

**C1: CHECK PSCM DTCS. - Fault outcome**

- Review the returned PSCM DTCs.
- Is DTC U3000:96 present?

Yes
INSTALL a new EPAS gear. REFER to Section 211-02.

Yes
INSTALL a new EPAS gear. REFER to Section 211-02.

Exit: Mon Dec 28 13:25:38 EST 2009

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**From:** Michael Fontana <Michael.Fontana@TRW.COM>  
**Sent:** Monday, June 28, 2010 3:36 PM  
**To:** Estes, Eric (E.E.); Bahena, Miguel (Mike.); Mrozek, Robert (R.M.); Diez, Timothy (T.P.); Snider, Tim (T.O.); Anthony Fleenor; Costas Chrysochoidis; Geoff Jacks; Guillermo Aguilar; Jason Johnson; Jim Loria; JoseJ Lopez; Mike Davies; Samuel Arreola; Simon Malsbury  
**Cc:** Ulloa, Fernando (F.F.); Annadi, Hari (H.); Frey, Martin (M.F.); Puleri, Michael (M.J.); Rossi, Roberto (R.A.); Hernandez, Victor (V.M.); Abe Ghaphery; Andrew Williams; Angie Caudill; Engelbert Lu; Greg Bendzinski; Mark Karwowski; Salim Semssar; Sanjay Singh; Sergio Alvarez  
**Subject:** FR0203 - Motor PCB Clearance Issue Confirmed  
**Attachments:** Image1.jpg

Team,

See attached picture for conclusive proof of Pin PL2.12 being shorted to the ground plane on the Motor PCB.

Best Regards,

Michael Fontana  
Product Engineer - TRW Electronics  
Electric Power Steering  
(586) 232-8533

>>> Estes, Eric (E.E.) 5/26/2010 8:08 PM >>>

Use the link below to join the webmeeting

General TRW warranty gear review

I need to extend the meeting to the end of July, also added & deleted some Attendee's

To start the online webmeeting

- 
1. Go to <https://www.meetingcenter.net>
  2. Join a meeting
  3. Click on "Attend a Meeting"
  3. Enter meeting# 596 168 143

Audio conference information: Call-in toll-free number: 1-866-2519196 (US)

Call-in number: 1-248-2265571 (US)

Show global numbers:

<https://www2.audiocontrols.net/WebExAdaptor/globalnumber?participantcode=1842273552&tollfreecc=1&tollfree=86-2519196&tollnumbercc=1&tollnumber=248-2265571>

Leader PIN:

Conference Code: 184 227 3552

To add this meeting to your calendar program (for example, Microsoft Outlook or Lotus Notes), do the following:

\* For all calendar programs (except Lotus Notes), click the following link, or copy the link and paste it into your Web browser:

<https://intercall.webex.com/intercall/j.php?ED=133176832&UID=490638792&ICS=MS&LD=1&RD=2&ST=1&SHA2=e8Me0IGaDKrn1IfNqsgvh2NEAyycJZ4Arz5ydaapeil=>

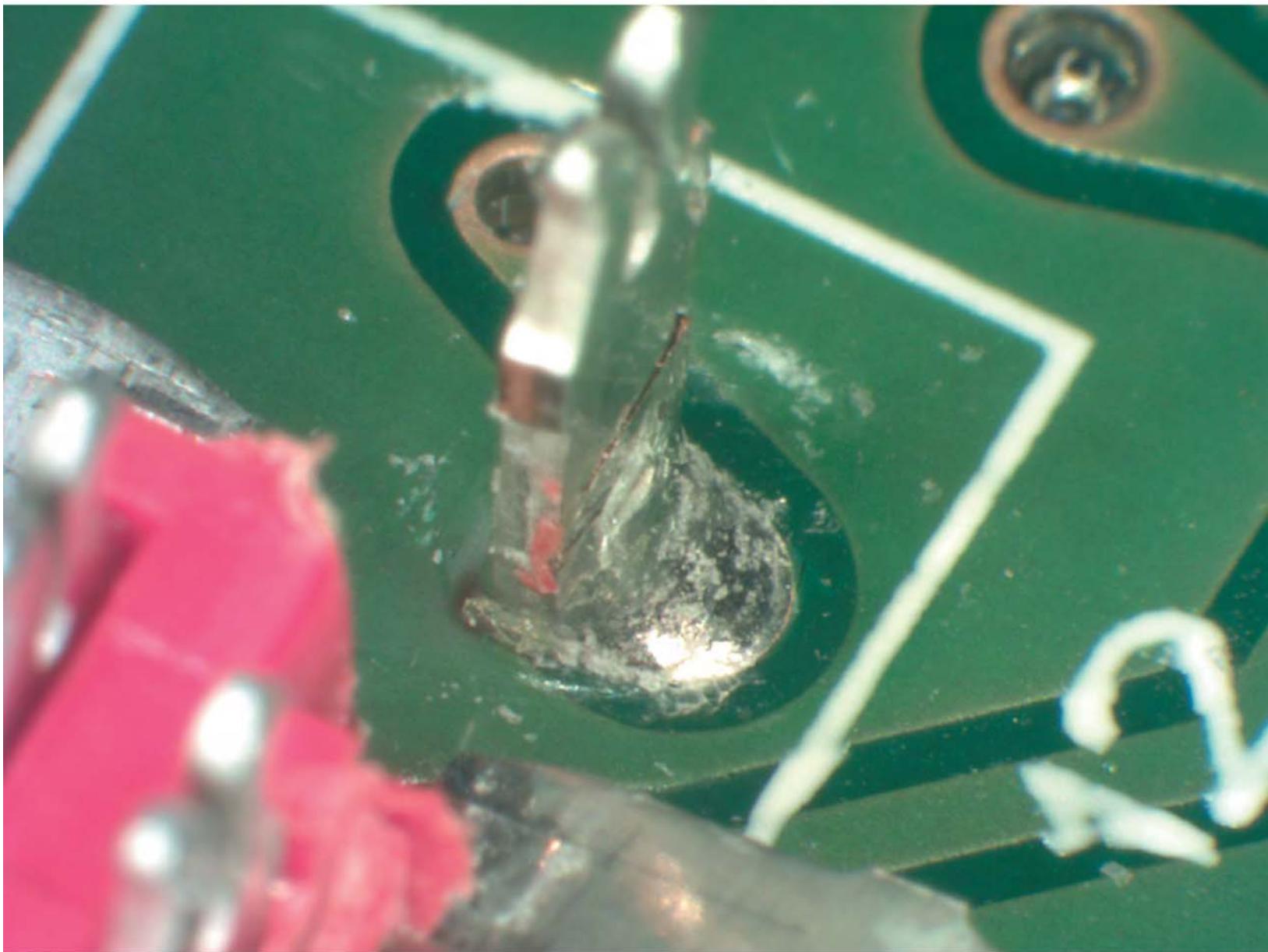
\*For Lotus Notes, follow these steps:

1. Right-click the attached iCalendar format (\*.ics) file, then choose View.
2. Click Import All. A new broadcast email message is added to your Inbox.
3. Open the new message.
4. Click Respond button. A menu appears.
5. Click Accept.

To check whether you have the appropriate players installed for UCF (Universal Communications Format) rich media files, go to <https://intercall.webex.com/intercall/systemdiagnosis.php>

If you need MeetingCenter technical support, please call 1-800-508-8758 or 1-706-634-4551 or email [mcsupport@intercall.com](mailto:mcsupport@intercall.com).

Eric J Estes  
TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493



PE14-030 000107

Concern: Customers are alleging the power steering lacks assist or is locking up

Vehicle Model: Fusion and Milan

Model Year: 2010

Engine: C/S3 ATK-CYC 2.5 4V PFI I4 GAS/ELEC  
C/SB 2.5L DOHC PFI 170HP DURATEC HE

20060 units built with S3 engine  
111255 units built with SB engine

Part Number Involved: 7E5Z 3504 A  
7E5Z 3504 B  
AE5Z 3504 B ←

Data Summary: 75 reports (AWS) of loss of power steering assist  
67 reports indicate the steering gear was replaced; using part number AE5Z-3504-B

Repair cost range: \$0 to \$2845.98

Average Repair Cost \$1,522.16  
per vehicle (74 units):

Mileage at time of repair	
0-2499	39
2500-4999	14
5000-7499	10
7500-9999	2
10000-12499	2
12500-14999	2
15000-17499	4
22500-24999	1
74	

Time in Service	
-1	1
0	11
1	17
2	12
3	14
4	11
5	2
6	3
7	3
74	

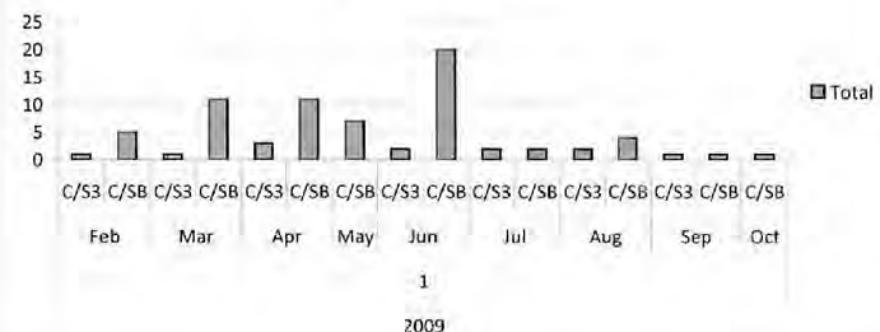
Repairs by Engine Code	
C/S3	12
C/SB	62
74	

State/Province	
TX	9
MI	8
PA	7
OH	6
CA	5
MA	4
IN	4
MD	3
NM	3
OK	2
SC	2
NJ	2
NY	2
IL	2
WI	2
MS	2
MO	2
NC	1
KS	1
ID	1
CO	1
MT	1
FL	1
NH	1
MN	1
AL	1
74	

Parts Demand By Month (MMP)	
12 2009	0
11 2009	13
10 2009	31
09 2009	30
08 2009	22

Production Date	
10-Feb-09	1
14-Feb-09	2
17-Feb-09	1
18-Feb-09	1
19-Feb-09	1
11-Mar-09	3
12-Mar-09	3
14-Mar-09	1
18-Mar-09	1
19-Mar-09	2
20-Mar-09	1
23-Mar-09	1
3-Apr-09	1
6-Apr-09	1
8-Apr-09	1
14-Apr-09	1
15-Apr-09	4
17-Apr-09	2
20-Apr-09	1
23-Apr-09	1
24-Apr-09	1
30-Apr-09	1
7-May-09	1
8-May-09	1
9-May-09	1
12-May-09	1
18-May-09	1
23-May-09	1
28-May-09	1
1-Jun-09	1
3-Jun-09	1
4-Jun-09	1
9-Jun-09	2
10-Jun-09	1
11-Jun-09	1
12-Jun-09	2
13-Jun-09	2
15-Jun-09	2
16-Jun-09	2

### Production Month



07 2009	56
06 2009	18
05 2009	13
04 2009	12
03 2009	1
02 2009	51
01 2009	0
total 2009	247

17-Jun-09	1
18-Jun-09	1
19-Jun-09	2
20-Jun-09	2
26-Jun-09	1
8-Jul-09	1
15-Jul-09	1
17-Jul-09	1
24-Jul-09	1
4-Aug-09	2
6-Aug-09	1
8-Aug-09	1
10-Aug-09	1
12-Aug-09	1
16-Sep-09	1
18-Sep-09	1
1-Oct-09	1

74

Prod Month 2009	S3 2.5L Hybrid			SB - 2.5L Duratec		
	Number of reports	Production Vol	R/1000	Number of reports	Production Vol	R/1000
Feb	1	676	1.47929	5	3034	1.647989
Mar	1	1397	0.71582	11	7018	1.567398
Apr	3	3249	0.923361	11	12028	0.914533
May		2962	0	7	11296	0.619688
Jun	2	1887	1.059883	20	14466	1.382552
Jul	2	2481	0.806127	2	12839	0.155775
Aug	2	1490	1.342282	4	9754	0.410088
Sep	1	2426	0.412201	1	13510	0.074019
Oct		2026	0	1	17640	0.056689
	12	18594	0.645369	62	101585	0.610326

---

**From:** Pienta, Alan (A.)  
**Sent:** Friday, October 14, 2011 3:38 PM  
**To:** Napoli, Laura (L.); Diez, Timothy (T.P.)  
**Cc:** Rossi, Roberto (R.A.)  
**Subject:** FW: B9A Issue

Laura,  
Please see summary below of ground wire / cap strap program implementation.  
Let me know if you need anything else.

AI

Tim,  
Thanks for the quick response!

AI

---

**From:** Diez, Timothy (T.P.)  
**Sent:** Friday, October 14, 2011 11:17 AM  
**To:** Pienta, Alan (A.)  
**Cc:** Rossi, Roberto (R.A.)  
**Subject:** RE: B9A Issue

AI,

Enclosed is a summary of the EMC vehicle configurations with TRW EPAS.

Redacted for Relevance

2011MY U502: cap strap  
2012MY U502: ground wire  
2013MY U502: ground wire

2010MY CD3 - no cap or wire

C346N: ground wire

Redacted for Relevance

Sincerely,  
Tim Diez  
Ford Electric Power Steering, EESE  
313-805-1060; Fax: 313-317-4387  
e-mail: [tdiez@ford.com](mailto:tdiez@ford.com)  
cube 3C071, Building 5

---

**From:** Pienta, Alan (A.)  
**Sent:** Friday, October 14, 2011 9:57 AM  
**To:** Diez, Timothy (T.P.)  
**Subject:** B9A Issue

Tim,  
In the B9A meeting the issue regarding the history of the ground strap implementation and cap strap implementation and on which programs and time frame they were implemented was questioned. I did not have the full background.

Can you please provide me with a brief summary of the programs which had these fixes implemented and when they were implemented? Maybe you have a matrix already?

AI

---

**From:** Snider, Tim (T.O.)  
**Sent:** Friday, July 23, 2010 3:21 PM  
**To:** JuanCarlos cano  
**Cc:** Kostadina, Robert; 'Mathew Alder'; Bahena, Miguel (Mike.); Diez, Timothy (T.P.)  
**Subject:** FW: B9A SW fix Timing for CD3/D3/U502 Current Production  
**Attachments:** Microsoft Project - Timing for B9A .pdf

JC,

Based off Rob's timing, when would PPAP parts arrive at Hermosillo? Are you putting a timing plan together? And, could TRW support Job 2 TT on Sept 27. Looks like it. I'm thinking we do this change for 2011 Job 2, support TT build, and then, since this is a quality fix, implement for production after TT build. Which also means Hermosillo EOL would have to accommodate the pulled ahead Job 2 software part numbers.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))  
CD3 Steering Engineering  
Ford Motor Company  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

-----Original Message-----

From: Robert Kostadina [<mailto:Robert.Kostadina@TRW.COM>]  
Sent: Thursday, July 22, 2010 4:39 PM  
To: Bahena, Miguel (Mike.); Douglas Sherman; Hemang Mehta; Mohammed Yasin  
Cc: Napoli, Laura (L.); Mrozek, Robert (R.M.); Snider, Tim (T.O.); Angel Andres; JuanCarlos cano  
Subject: Re: B9A SW fix Timing for CD3/D3/U502 Current Production

Attached is the timing.

>>> "Bahena, Miguel (Mike.)" <[mbahena1@ford.com](mailto:mbahena1@ford.com)> 7/21/2010 1:00 PM >>>  
Mohammed, Rob, Doug, Hemang,

Can you please send us the timing for PURL3 SW available with the B9a fix for current production:

CD3  
D3  
U502(I'm not sure when Laura is working this in)

We need to start the WERS concern process and get QAO prepared to start re-flashing. Thanks.

Sincerely,

Mike Bahena  
D3 Electric Power Steering Systems  
Ford Motor Co.

Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)

ID	Task Name	Duration	Start	Finish	Timeline																								
					'10	Jun 27, '10	Jul 11, '10	Jul 25, '10	Aug 8, '10	Aug 22, '10	Sep 5, '10	Sep 19, '10	Oct 3, '10	S	T	M	F	T	S	W	S	T	M	F	T	S	W	S	T
1	SW Implementation	14 days	Tue 7/13/10	Sun 8/1/10	SW Implementation																								
2	UK Validation Testing	16 days	Mon 8/2/10	Mon 8/23/10	UK Validation Testing																								
3	Perform Confidence and PUPD	16 days	Mon 8/2/10	Mon 8/23/10	Perform Confidence and PUPD testing																								
4																													
5	26 Mile Validation Testing	5 days	Mon 8/2/10	Sun 8/8/10	26 Mile Validation Testing																								
6	Electronic Endurance	5 days	Mon 8/2/10	Sun 8/8/10	Electronic Endurance																								
7																													
8	CD3xx	35 days	Mon 8/2/10	Fri 9/17/10	CD3xx																								
9	Validation Testing	5 days	Mon 8/2/10	Sun 8/8/10	Validation Testing																								
10	SW Validation, Paperwork and F	5 days	Mon 8/9/10	Sun 8/15/10	Validation, Paperwork and PN implementation																								
11	PURL 3 Drive and Evaluation	5 days	Mon 8/16/10	Sun 8/22/10	PURL 3 Drive and Evaluation																								
12	EOL Plant Trail at Assembly Pla	5 days	Mon 8/23/10	Sun 8/29/10	ECL Plant Trail at Assembly Plant																								
13	Software Approval TSA, Concess	5 days	Mon 8/30/10	Fri 9/3/10	Software Approval TSA, Concessions etc.																								
14	Flash at Plant for Production @	0 days	Fri 9/3/10	Fri 9/3/10	Flash at Plant for Production @ Anting																								
15	Paperwork EPP	5 days	Mon 9/6/10	Sun 9/12/10	Paperwork EPP																								
16	Release Gear Assembly	5 days	Mon 9/13/10	Fri 9/17/10	Release Gear Assembly																								
17																													
18																													
19																													
20																													
21																													
22																													
23																													
24																													
25																													
26																													
27																													
28																													
29	U502 2011	36 days	Mon 8/16/10	Sun 10/3/10	U502 2011																								
30	Validation Testing	5 days	Mon 8/16/10	Sun 8/22/10	Validation Testing																								
31	SW Validation, Paperwork and F	5 days	Mon 8/23/10	Sun 8/29/10	SW Validation, Paperwork and PN implementation																								
32	PURL 3 Drive and Evaluation	5 days	Mon 8/30/10	Sun 9/5/10	PURL 3 Drive and Evaluation																								
33	EOL Plant Trail at Assembly Pla	5 days	Mon 9/6/10	Sun 9/12/10	EOL Plant Trail at Assembly Plant																								
34	Software Approval TSA, Concess	5 days	Mon 9/13/10	Fri 9/17/10	Software Approval TSA, Concessions etc.																								
35	Flash at Plant for Production @	0 days	Fri 9/17/10	Fri 9/17/10	Flash at Plant for Production @ Anting																								
36	Paperwork EPP	5 days	Mon 9/20/10	Sun 9/26/10	Paperwork EPP																								
37	Release Gear Assembly	5 days	Tue 9/28/10	Sun 10/3/10	Release Gear Assembly																								

Redacted for Relevance

Redacted for Relevance

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**From:** Bahena, Miguel (Mike.)  
**Sent:** Wednesday, January 13, 2010 12:51 AM  
**To:** Bahena, Miguel (Mike.)  
**Subject:** FW: Chassis ECB summary

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Tuesday, January 12, 2010 1:09 PM  
**To:** Mrozek, Robert (R.M.); Estes, Eric (E.E.)  
**Cc:** Snider, Tim (T.O.); [salim.semmsar@trw.com](mailto:salim.semmsar@trw.com)  
**Subject:** RE: Chassis ECB summary

Rob,

The B3a (FR-0098) was an offset bridge. The gear was built on Sept 26th, 2009 which was before the 100 % Laredo X-ray came on-line, but after Hot Puma Activation testing started. The 100 % x-ray came on-line the week of Oct 1st, but I am working on getting the exact date of the first clean shipment.

Mike

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Mon 1/11/2010 8:11 PM  
**To:** Estes, Eric (E.E.); Bahena, Miguel (Mike.)  
**Cc:** Snider, Tim (T.O.); Mrozek, Robert (R.M.)  
**Subject:** FW: Chassis ECB summary

Eric -

Can we get an update on the attached Oct vehicle build ECB claims? Need some firm updates. Need by Tuesday please.

<<oct 09 epas ecb claims.xls>>

Bahena -

Does the one B3A have an answer perhaps from your visit to Tyco?

*Rob Mrozek*

Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

---

**From:** Frey, Martin (M.F.)

**Sent:** Monday, January 11, 2010 5:22 PM  
**To:** Snider, Tim (T.O.); Bahena, Miguel (Mike.); Mrozek, Robert (R.M.)  
**Subject:** FW: Chassis ECB summary

Do we know much about the 7 Fusion claims for Oct?

Martin Frey  
Manager Electric Steering/Advanced Features/R&P Gear  
Chassis Engineering  
Cell # 313 805 6301

---

**From:** Annadi, Hari (H.)  
**Sent:** Monday, January 11, 2010 3:42 PM  
**To:** Allard, Chris (C.E.); Allen, David (D.R.); Rendi, Anthony (A.J.); Castellano, Jim (J.C.); Roberts, Mark (M.A.); Caris, John (J.C.); Perri, Ron (R.J.); Frey, Martin (M.F.)  
**Cc:** Branik, David (D.P.); Dimovski, Bill (Z.); Patel, Harendra (H.M.); Boullin, Stephanie (S.); Steele, Kimberly (K.A.); Waldron, Rob (R.M.); Doorlag, Chad (C.A.); Skwirsk, Tom (T.V.); Mrozek, Robert (R.M.); Surella, Matthew (M.M.); Syed, Shaheen (Q.); Serina, Flaminia (F.); Richardson, Brian (B.D.); Rogero, Antonio (A.)  
**Subject:** Chassis ECB summary

Attached is the Chassis ECB summary sorted by the repairs that have the highest claims in the last 4MOP. We will be scheduling deep dives on the Top 10 issues at the FQR's starting from 1/26/10. Please be prepared to present ICA and PCA for your issues. Thanks.

<<2010 MY VRTRDMultiVehLine Chassis 2010\_0105.xls>>

*Hari Annadi*  
Chassis Quality Supervisor  
Master Black Belt  
Building # PDC 2B-A57  
Work Cell: 313 805 4746  
Ford Motor Company, Dearborn, Michigan  
email: [hannadi@ford.com](mailto:hannadi@ford.com) <<mailto:hannadi@ford.com>>

---

**From:** Docimo, Tony (A.F.)  
**Sent:** Sunday, November 06, 2011 7:00 PM  
**To:** Surella, Matthew (M.M.); McIntyre, Kathryn (K.L.); Perri, Ron (R.J.); Napoli, Laura (L.); Wheeler, Ngina (N.); Stroud, Nathan (JNS.)  
**Cc:** Jackson, Bradley (B.G.); Farmer, Marty (M.F.); Keinath, Wayne (W.)  
**Subject:** FW: EPAS Quality Issue

**Importance:** High

Do we have cutoff yet on any of the critical X's on the EPAS Quality issue?

Thanks,  
Tony

---

**From:** Fisher, Marcy (M.J.)  
**Sent:** Wednesday, November 02, 2011 10:20 AM  
**To:** Docimo, Tony (A.F.)  
**Subject:** FW: EPAS Quality Issue

Fyi status

---

**From:** Fisher, Marcy (M.J.)  
**Sent:** Tuesday, November 01, 2011 5:46 PM  
**To:** Collins, Ron (R.J.)  
**Subject:** RE: EPAS Quality Issue

Great news on finding some parts and having some info about root cause.  
Now, need clean cutoff/ICA and PCA for the error states identified to date.

---

**From:** Collins, Ron (R.J.)  
**Sent:** Tuesday, November 01, 2011 5:43 PM  
**To:** Fisher, Marcy (M.J.)  
**Subject:** RE: EPAS Quality Issue

We have a TRW review with Bennie coming up. Their VPs are coming in, just FYI. Multiple steering issues on agenda, not just Explorer.

The status of B9A codes for Explorer (and Re CD3, and C346):

- One warranty return part found with contamination in Hall effect sensor causing a short.
- TRW is tearing down other warranty return parts looking for similar contamination in the same region.
- This contamination is at the microscopic level in an IC, so difficult to find (scan with a microscope looking for debris).
- TRW is also at the IC maker confirming clean room procedures are being properly followed.

- One warranty return part repeated yesterday on a vehicle
- Vehicle was instrumented when the fault occurred and issue was captured with data logger
- Problem was with the encoder, not the hall effect.
- TRW is tearing down part now to determine encoder issue

Both of the above are encouraging progress in finding root cause, and key in moving us forward. We should have more later this week.

Thanks

Ron Collins  
Chief Engineer, North American Chassis Engineering  
Ford Motor Company  
email: [rcollin4@ford.com](mailto:rcollin4@ford.com)

---

**From:** Fisher, Marcy (M.J.)  
**Sent:** Tuesday, November 01, 2011 5:30 PM  
**To:** Collins, Ron (R.J.)  
**Subject:** EPAS Quality Issue

Ron, Can you please provide a status update on the EPAS issue on Explorer? (I wasn't able to attend your FQR last week as I had to be out of the office.) We have a VQR on Thursday and Bennie in CAP for 3 days next week. Thanks - Marcy

---

**From:** Napoli, Laura (L.)  
**Sent:** Monday, January 23, 2012 3:15 PM  
**To:** Surella, Matthew (M.M.); 'Guillermo Aguilar'; Estes, Eric (E.E.); Flanagan, Thomas (T.P.); 'James Parker1'  
**Subject:** FW: Ford /TRW B9A Review Strategy

Info on B3A and A3A...1 LIC raises a fault.

Jim, can you tell us if B43 is the same?

---

**From:** Geoff Jacks [mailto:[Geoff.Jacks@TRW.COM](mailto:Geoff.Jacks@TRW.COM)]  
**Sent:** Tuesday, November 15, 2011 11:18 AM  
**To:** Estes, Eric (E.E.); Napoli, Laura (L.); Jim Duehring  
**Subject:** RE: Ford /TRW B9A Review Strategy

Yes - A3A exactly the same as B3A.

>>> "Napoli, Laura (L.)" <[lnapoli@ford.com](mailto:lnapoli@ford.com)> 15/11/2011 16:01 >>>  
Thanks Geoff. Can you confirm that the same is for A3A?

---

**From:** Geoff Jacks [mailto:[Geoff.Jacks@TRW.COM](mailto:Geoff.Jacks@TRW.COM)]  
**Sent:** Tuesday, November 15, 2011 10:45 AM  
**To:** Estes, Eric (E.E.); Napoli, Laura (L.); Jim Duehring  
**Subject:** Re: Ford /TRW B9A Review Strategy

All,

Humble pie time. I've spoken to the software guys and they have confirmed that the B3A will be raised with only 1 LIC. Sorry for any confusion I may have caused.

Regards

Geoff

>>> Estes, Eric (E.E.) 14/11/2011 16:48 >>>  
We need everyone to call in and review the B9A strategies and 8D revisions.

If I left someone out of this meeting that should be attending please forward on.

Let me know if you have any question, thanks

Hello ,

Eric Estes invites you to attend this online meeting.

Topic: B9A Review

Date: Tuesday ,  
Time: 9:30-10:30 am, Eastern Daylight Time (New York, GMT-04:00)  
Meeting Number: 592173581  
Meeting Password: (This meeting does not require a password.)

---

To join the online meeting (Now from iPhones too!)

1. Go <https://trwnameduser.webex.com>
2. Enter Meeting Number: 592173581
3. Click "Join Now".

To view in other time zones or languages, please click the link:

<https://trw.webex.com/trw/j.php?ED=144609377&UID=1159864637&ORT=MiMxMQ%3D%3D>

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

TRW Limited

Registered in England, No. 872948

Registered Office Address: Stratford Road, Solihull B90 4AX

TRW Limited

Registered in England, No. 872948

Registered Office Address: Stratford Road, Solihull B90 4AX

---

**From:** Diez, Timothy (T.P.)  
**Sent:** Friday, December 04, 2009 2:32 PM  
**To:** Rossi, Roberto (R.A.); Mrozek, Robert (R.M.); Bahena, Miguel (Mike.); Snider, Tim (T.O.)  
**Cc:** Hodgson, Keith (K.M.)  
**Subject:** FW: FR0074

FYI...

A note on prevent recurrence for the field return 0074. FR0074 is the field return with the ribbon cable pin causing a short circuit between traces on the motor sense assembly pcb.

Thanks.

Sincerely,  
Tim Diez  
Ford Electric Power Steering, EESE  
313-805-1060; Fax: 313-317-4387  
e-mail: [tdiez@ford.com](mailto:tdiez@ford.com)  
cube 3C071, Building 5

-----Original Message-----

From: Mike Davies [mailto:[Mike.Davies@TRW.COM](mailto:Mike.Davies@TRW.COM)]  
Sent: Friday, December 04, 2009 9:27 AM  
To: Martha Abundis; Phil Browne  
Cc: Diez, Timothy (T.P.); Eric Estes; Geoff Jacks  
Subject: FR0074

Hello Martha

In a call with Tim Diez today, we were discussing the 8D which will be raised for FR0074. This is the motor PCB relayout which Nidec is addressing.

Tim has requested that we include in the 8D that as part of the section 7 in the document, we include an action that the PCB design rules are updated to consider such tolerance overlap situations between component legs and pcb layers. I will try to ensure this is done, but as you are the supplier of the 8D to Ford (and your memory is younger than mine) please can you make a note of this so we do not overlook it at the appropriate time.

Thanks  
Mike

TRW Limited  
Registered in England, No. 872948  
Registered Office Address: Stratford Road, Solihull B90 4AX

---

**From:** Estes, Eric (E.E.)  
**Sent:** Monday, March 22, 2010 4:34 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Mrozek, Robert (R.M.); Guillermo Aguilar; 'Angel Salazar'; Guillermo Aguilar; Greg Bendzinski  
**Subject:** FW: FR0167

Tim here is another damaged torque sensor harness on a Hybrid same location as FR0160.

Angel could you find anywhere on the line where torque sensor harness could be contacted from the 2.5L hybrid motor installation, exhaust & etc?

VIN: 3FADP0L30AR [REDACTED] Dealer: 03148 Barbee's Freeway Ford, Miles: 7166, vehicle build date: 6/20/2009, gear build, 6/14/2009, Eng.: 2.5L Hybrid, &

RO date: 2/23/2010

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

---

**From:** Tigney, Maurice (M.)  
**Sent:** Friday, March 19, 2010 3:57 PM  
**To:** Estes, Eric (E.E.)  
**Subject:** fr0167



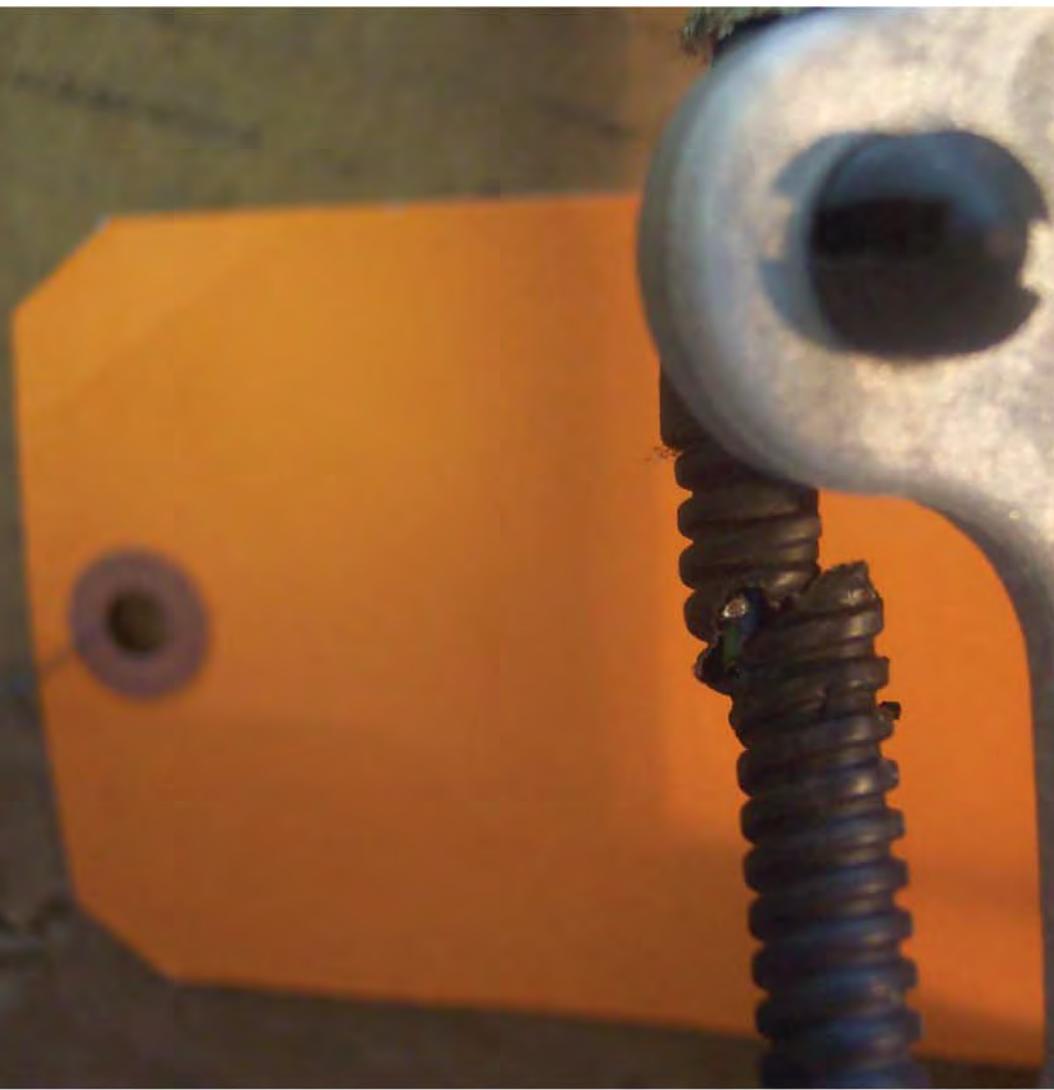
000\_0003.jpg



000\_0004.jpg



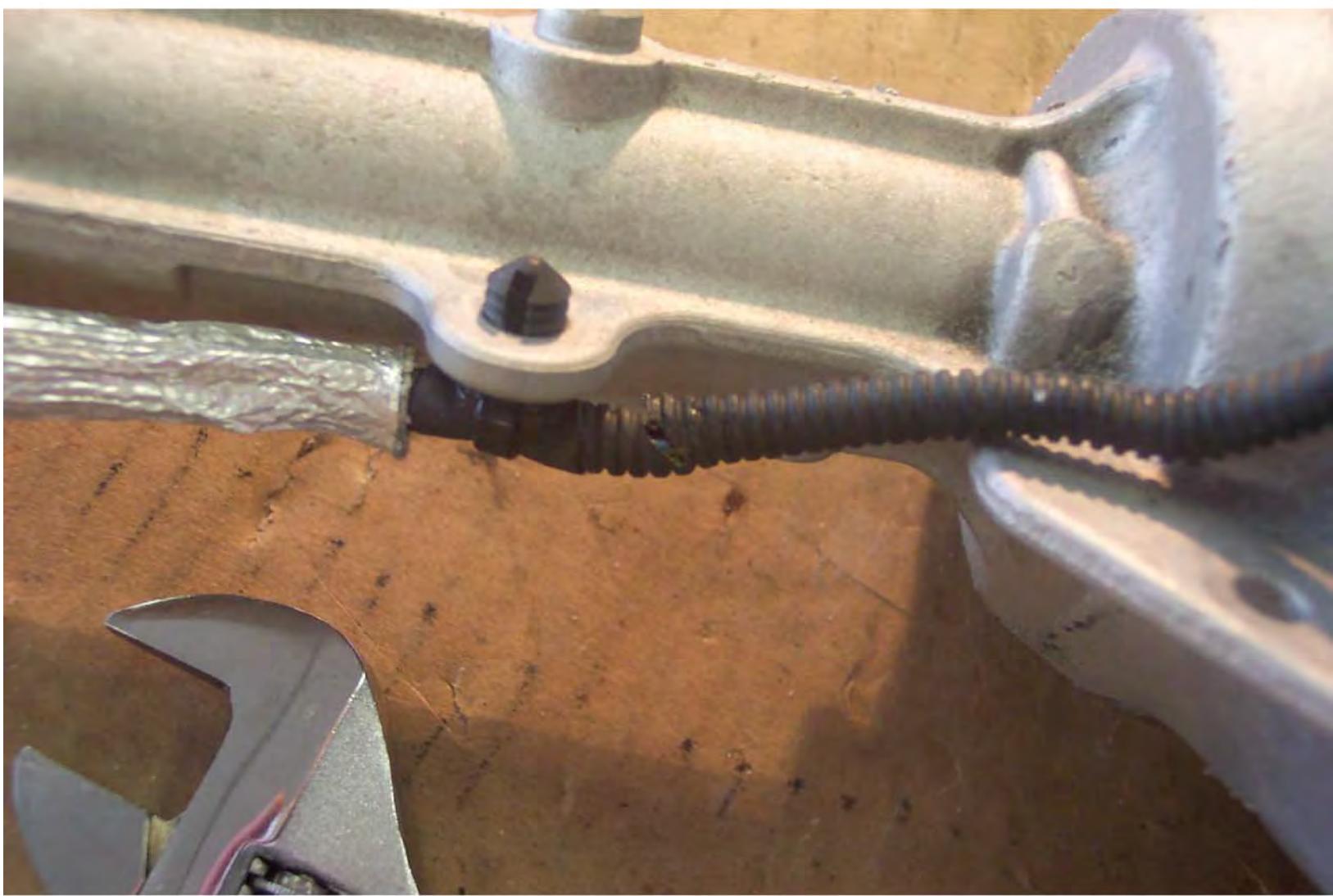
000\_0002.jpg



PE14-030 000124



PE14-030 000125



PE14-030 000126

---

**From:** Estes, Eric (E.E.)  
**Sent:** Monday, May 11, 2009 8:55 PM  
**To:** Beattie, Mike (M.A.)  
**Cc:** Chacon, Jose (A.); Bouse, William (W.J.); Christiansen, Jens (J.F.); Bahena, Miguel (Mike.); Dorony, Kenneth (K.R.)  
**Subject:** FW: Report Summary for the CQIS Report#9EKAV151

Mike in logviewer I did not see this code U2011 listed, would that have been the C1277 ABS code that was listed? because the tech did not mention anything about ABS . If this U3000-96 was a hard fault that would not clear that should be listed under current code retrieved not historic?

Eric

---

**From:** JCHACON3@ford.com [mailto:JCHACON3@ford.com]  
**Sent:** Monday, May 11, 2009 4:28 PM  
**To:** Chacon, Jose (A.)  
**Subject:** Report Summary for the CQIS Report#9EKAV151

**Attachments :** 0

<b>Report# :</b>	9EKAV151 ACR			<b>Received:</b>	05/11/2009
<b>CCRG/EPRC:</b>				<b>Date:</b>	
<b>Vehicle:</b>	2010,FUSION,SE ,SEDAN ,3FAHP0HG6AR [REDACTED]			<b>Build Date:</b>	04/13/2009
<b>Odometer :</b>	409 M	<b>Engine:</b>	3.0L 4V	<b>Calibration:</b>	
<b>Transmission:</b>	6SP 6F MID	<b>Axle:</b>		<b>A/C:</b>	YES
<b>Dealer:</b>	USA 01376 Pacifico Ford, Inc.			<b>Phone#:</b>	(215) 492-1700
<b>City:</b>	Philadelphia	<b>State:</b>	Pennsylvania	<b>Country :</b>	USA
<b>Originator:</b>	LES SLOSS				
<b>Symptom:</b>	3 03 1 55 CHASS.,STRG/HANDLING ,FUNCTION,LOSS OF STRG				
<b>Status:</b>					
<b>VFG:</b>	V89 RIDE & HANDLING				
<b>Additional Symptom:</b>	NO ASSIST - RENTAL UNIT				
<b>Fix:</b>	<b>Causal Component :</b>				
<b>Condition Code:</b>					
<b>Region Code:</b>	N3	<b>Region Name:</b>	Philadelphia		

**DTCs:**

KOEO:U2011  
KOEC:U3000

KOER:

**Comments**

:

- REPAIR 05/11/2009 03:42PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG  
FAV REQUEST. UNIT HAS NO POWER ASSIST. TRW REQUESTED FEEDBACK FOR ANALYSIS.
- ADD-ON **05/11/2009 03:48PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG**  
SERVICE WRITER INDICATES THIS VEHICLE IS A RENTAL UNIT THAT BELONGS TO DOLLARE RENTAL CAR. THE VEHICLE HAS NO POWER ASSIT AND/OR IT WAS TOWED  
TO THE DEALER AT THE BEGINNING OF THE MONTH. SW STEVE INDICATED THE MESSAGE CENTER DISPLAYED - POWER STEERING ASSIST FAULT.
- ADD-ON **05/11/2009 04:06PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG**  
ASKED SW TO SPEAK WITH TECHNICIAN LESS. LESS INDICATED THE STEERING ASSIST IS HARD. TECHNICIAN WAS UNABLE TO DRIVE THE VEHICLE. DURING DIAGNOSIS THE TECHNICIAN USED THE INTERACTIVE DIAGNOSIS OUTLINED IN THE ON-LINE WORKSHOP MANUAL. THE IDS DISPLAYED TWO CODES: U2011-49-48 FOR THE PSCM MODULE AND CODE U3000-96-C8 PSCM. LESS FOLLOWED THE PINPOINT TEST AND CLEARED THE CODES. RE-RAN THE DIAGNOSTICS AND CODE U3000-96-C8 PSCM CAME COMING BACK. FURTHER PINPOINT TEST DIAGNOSIS INDICATED TO REPLACE THE EPAS ASSEMBLY. ASKED LESS IF ANY OTHER WARNING LIGHT OR CONCERN WITH THE VEHICLE. LESS INDICATED NONE. VEHICLE STARTS AND RUNS O.K. NO OTHER CODES IN THE NETWORK, BESIDES THE EPAS CODES. LESS INDICATED THEY ORDERED A NEW ASSEMBLY SINCE 05/05/09 AND WERE TOLD THE PART IS D99. ADVISED LESS TO MONITOR PACO TICKET FOR UPDATES. IF ANY CONCERN PLEASE CALL JOSE AT 1-313-317-7047
- ADD-ON **05/11/2009 04:07PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG**  
THE VEHICLE IS STILL NOT REPAIRED AND/OR IT IS AT THE DEALER WAITING FOR THE BACK ORDER PARTS.
- ADD-ON **05/11/2009 04:09PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG**  
DEALER ORDERED REPLACEMENT PART # AE5Z-3504-B WITH ENGINEERING # AE5C-3504-BB. DEALER P&A ORDER 01376. DEALER REPAIR ORDER: 28039 LINE 1. PARTS MANAGER E-MAIL ADDRESS: CPRIOLE@PACIFICOCARS.COM

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**From:** Estes, Eric (E.E.)  
**Sent:** Wednesday, June 10, 2009 1:53 PM  
**To:** Bouse, William (W.J.); Bahena, Miguel (Mike.); 'Greg Bendzinski'; 'Robert Kinnear'; 'Jason Johnson-contr'; Chacon, Jose (A.); Anthony Fleenor; 'Mark Karwowski'; 'Abe Ghaphery'; 'Simon Malsbury'; 'Robert Kostadina'; Mrozek, Robert (R.M.)  
**Subject:** Local Dealer with EPAS codes  
**Attachments:** #7 gear warranty return data.pdf

It looks like we have a vehicle at a local dealer in Garden City at Metropolitan Lincoln-Mercury setting codes U2011-49 & U3000-96(C69).

I don't know if we are interested in getting this gear? Greg do we have any gears available for service?

Let me know if we want to go out and check this vehicle out today or tomorrow.

*Eric J. Estes*

Warranty Analyst - TRW Automotive  
6-Sigma Center 15010 S. Commerce Dr.  
Dearborn, Michigan 48120  
Ph.#(313) 390-3843 Fax#(888) 502-9600

Year = MY10

Model = CD334

Engine = 3.0L

VIN = 3MEHM0JGXAR [REDACTED] STD

PCM = AE5A-12A650-NE

ABS = AE5C-2C219-FB

ACM = AR3T-14D655-AB

APIM = 9L2T-14D205-AE

**DCDC = Could not retrieve part number from mandatory module!**

DSP = AL3T-14C589-AB

FCIM = AR3T-14D017-DB

GEM\_SJB = AG1T-14B476-CB

HVAC = AE5H-18D619-FL

IC = AE5T-14C026-BH

OCS = 9E53-14C371-AD

PAM = AE5T-15K866-AC

PSCM = AE5C-14D003-AK

RCM = 9E53-14C028-AB

SODL = 9E5T-14D368-AF

SODR = 9E5T-14D368-AF

Current DTCs {retrieved 9 June 2009 09:22:31}

DTC	Snap Shot Data	Source
P1000:00	N/A	PCM

Historic DTCs {retrieved 9 June 2009 09:22:31}

DTC	Snap Shot Data	Source
U0155:00	N/A	ACM
U0121:00	N/A	IPC
U0131:00	N/A	IPC
U3000:96	00	PSCM
U0028:08	N/A	RCM

DTCs cleared since initial read:

DTC	Snap Shot Data	Source
C1277	N/A	ABS
U2011:49	N/A	PSCM

Start: Tue Jun 9 09:13:00 EDT 2009

Menu Selection: Inspection and Verification

IV1: Inspection and Verification

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

### VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned	Battery junction box (BJB)

steering column.	fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

Yes	No
<b>For damaged steering gear bellows boots. Go to IV2.</b> <b>For all others,</b> <a href="#">Click for details.</a>	<b>Go to Known Concerns</b>

#### □ Menu Selection: Inspection and Verification

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

## VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

Yes	No
<b>For damaged steering gear bellows boots. Go to IV2.</b> <b>For all others,</b>	<b>Go to Known Concerns</b>

**Click for details.****IV1: VISUAL INSPECTION**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

<b>No</b>
<b>Go to Known Concerns</b>

Start: Tue Jun 9 09:13:00 EDT 2009

**Menu Selection: Inspection and Verification****IV1: Inspection and Verification**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft	Wiring, terminals or

couplings/U-joints	connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

Yes	No
<b>For damaged steering gear bellows boots. Go to IV2.</b> <b>For all others,</b> <a href="#">Click for details.</a>	<b>Go to Known Concerns</b>

#### □ Menu Selection: Inspection and Verification

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

#### VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

Yes	No
<b>For damaged steering gear bellows boots. Go to IV2.</b> <b>For all others,</b> <a href="#">Click for details.</a>	<b>Go to Known Concerns</b>

#### □ IV1: VISUAL INSPECTION

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

## VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

No
Go to Known Concerns

### KC1: KNOWN CONCERNS

- Ignition ON, engine OFF.
- Press Read Vehicle Information button to retrieve DTC's from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

### Vehicle Information:

VIN	3MEHMOJGXAR	STD
-----	-------------	-----

### System Related CMDTCs Active {retrieved 9 June 2009 09:15:41}

DTC	Description	Source	Status
U3000:96	Control Module : Component Internal Failure	PSCM	Historic

### System Related CMDTCs cleared since initial read:

- OASIS symptom code:  
 — Chassis \ Steering/Handling (303000)
- OASIS will return known TSB's and SSMs for the specific symptom code(s) and DTC(s) listed above.

Recent Warranty Repair History: No recent repair history on vehicle

Review the OASIS results below for any known concerns related to the current vehicle.

SSM: 20782 2008- 2010 FUSION, MILAN, MKZ - NO LONGER INCLUDE THE STEERING WHEEL LOCKFEATURE.
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1 out of 2 303000
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ALL 2008 - 2010 FUSION, MILAN, AND MKZ VEHICLES BUILT AFTER 12/1/2007 HAVE INCORPORATED AN ELECTRONIC PASSIVE ANTI-THEFT SYSTEM (EPATS) KEY SYSTEM FOR THEFT PROTECTION AND REPLACING THE MECHANICAL STEERING WHEEL LOCK FEATURE THEFT PROTECTION. IMPORTANT: DO NOT REPLACE THE STEERING COLUMN FROM A PRE-12/1/2007 BUILT VEHICLE WITH THE NEW EPATS EQUIPPED COLUMN. THE COLUMNS ARE NOT INTERCHANGEABLE. A DEALER THAT INTERCHANGES THE COLUMNS COULD BE SUBJECT TO GOVERNMENT FINES UP TO \$6,000 PER VEHICLE FOR RENDERING INOPERATIVE A REQUIRED SAFETY FEATURE.

Effective Date: 05/06/2009

**SSM: 20795 2010 FUSION/MILAN - 2.5L/3.0L EPAS EQUIPPED VEHICLES - SQUEAK AND RATTLE**

SOME 2010 FUSION/MILAN EQUIPPED WITH 2.5L OR 3.0L AND ELECTRONIC POWER ASSIST STEERING (EPAS) MAY EXHIBIT INCREASED LEVELS OF ROAD NOISE, THAT CAN BE HEARD INSIDE THE VEHICLE WHILE DRIVING. THE STEERING GEAR/DASH SEAL -(BASE PART NUMBER 3611B) MAY NOT BE PROPERLY SEATED. THE CORRECT POSITION OF THE STEERING GEAR/DASH SEAL CAN FOUND IN WORKSHOP MANUAL SECTION 211-02. NOTE; THIS ROAD NOISE DOES NOT IMPACT THE FUNCTION OR DURABILITY OF THE STEERING SYSTEM AND IT IS CONSIDERED A CUSTOMER IRRITATION.

Effective Date: 05/14/2009

1 out of 2  
303000

**SSM: 20831 2010 FUSION/MILAN ELECTRONIC POWER ASSIST SYSTEM (EPAS) - INTERACTIVE DIAGNOSIS**

THE 2010 FUSION/MILAN WORKSHOP MANUAL SECTION 211-00A HAS BEEN UPDATED WITH INTERACTIVE DIAGNOSTICS. THIS SECTION PROVIDES NEW INFORMATION ABOUT DIAGNOSTIC TOOLS FOR THE ELECTRONIC POWER ASSIST STEERING (EPAS) AND THE POWER STEERING CONTROL MODULE (PSCM). THIS NEXT GENERATION OF VEHICLE DIAGNOSTIC SOFTWARE IS DESIGNED TO AID TECHNICIANS IN IDENTIFYING VEHICLE CONCERNs BY ALLOWING PINPOINT TEST DIAGNOSTICS TO DIRECTLY ACCESS THE VEHICLE THROUGH A VEHICLE COMMUNICATIONS MODULE (VCM), DISPLAY TEST MEASUREMENTS IN REAL TIME AND PROVIDE LOGICAL DIAGNOSTIC PROGRESSION BASED ON TECHNICIAN INPUT. NOTE; IF DIAGNOSTIC TROUBLE CODES ARE PRESENT, DO NOT CLEAR THE CODES UNTIL USING INTERACTIVE DIAGNOSIS, THIS WILL HELP CAPTURE 'FREEZE FRAME' DATA DURING THE DIAGNOSTICS OF ANY DTC.

Effective Date: 06/06/2009

1 out of 2  
303000

Search criteria with no matching OASIS results:  
U3000

- Are any of the listed known concerns related to the customer complaint?

<b>No</b>
<b>GO to Diagnostic Trouble Code (DTC) Charts.</b>

Detected DTCs / DTC Index

## EPAS

## Current DTCs {retrieved 9 June 2009 09:15:41}

DTC	Description / Action	Source
N/A	No DTCs to report	

## Historic DTCs {retrieved 9 June 2009 09:15:41}

DTC	Description / Action	Source
U3000:96	<p><b>Control Module: Component Internal Failure</b></p> <p><b>Description:</b> The PSCM is self monitoring and will carry out self-tests at specific intervals (initial power up, power down, during normal operation, etc.). Each self-test requires the voltage supply to the PSCM to be at or above a specific level (above 6 volts, above 9 volts, between 10 and 17 volts, etc.) for the test to take place. If one or more of the self-tests should fail, then the module will set one or more DTCs.</p> <ul style="list-style-type: none"> <li>• DTC U3000:41 (Control Module: General Checksum Failure) - If at any time during normal operation the module detects an internal software error with more than 6 volts supplied to the PSCM, then DTC U3000:41 will be set.</li> <li>• DTC U3000:46 (Control Module: Calibration/Parameter Memory Failure) - At any time during normal operation with more than 6 volts supplied to the PSCM the module determines that one or more calibration files are missing or that they are corrupt or that the incorrect EPAS gear is installed on the vehicle, then DTC U3000:46 will be set .</li> <li>• DTC U3000:49 (Control Module: Internal Electronic Failure) - If at any time during normal operation with more than 6 volts supplied to the PSCM, the module detects a software or internal hardware error then the DTC U3000:49 will be set.</li> <li>• DTC U3000:61 (Control Module Signal Calculation Failure) - If the PSCM detects that assist torque calculation is faulty due to a software failure in the module, then DTC U3000:61 will be set.</li> <li>• DTC U3000:72 (Control Module Actuator Stuck Open) - During initial power up with voltage greater than 9 volts, the PSCM will check the internal relay for voltage. If voltage is not present the module will make several attempts to close the relay. If the voltage remains undetected after this test period, then DTC U3000:72 will be set.</li> <li>• DTC U3000:96 (Control Module: Component Internal Failure) - This DTC will set if there is an internal failure of the PSCM due to temperature, power supply or if multiple failures have occurred over a short period of time.</li> </ul> <p><b>Possible Causes:</b></p> <ul style="list-style-type: none"> <li>• Heat shield missing.</li> <li>• Steering gear internal failure.</li> <li>• Incorrect EPAS gear installed.</li> <li>• Ice/frost build up on relay contacts.</li> <li>• Heavy loads on the EPAS gear.</li> <li>• Excessive ambient temperatures.</li> </ul> <p><b>Diagnostic Aids:</b></p> <p>For DTC U3000:41, the PSCM will remove steering assist, enter into a manual mode and transmit an invalid steering angle message over the HS-CAN bus. The module will also send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center. For DTC U3000:46, initially the PSCM will use a default steering assist and may set DTC U2100:00. If DTC U3000:46 returns on the next ignition cycle, then the PSCM will remove steering assist, enter into a manual mode and send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:49, the presence of this DTC may or may not affect steering assist. It will depend on what other DTCs (if any) are set along with U3000:49. Diagnose all other DTCs before diagnosing U3000:49.</p> <p>For DTC U3000:61, the PSCM will remove steering assist, enter into a manual mode and transmit an invalid steering angle message over the HS-CAN bus. The PSCM will also send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:72, this DTC indicates that a specific internal relay is either stuck open or has excessive resistance. In cold climates or climates where frost is possible, the relay contacts could develop a layer of frost which may prevent a clean connection between the relay contacts. It may be necessary to allow the vehicle to remain outside overnight in a cold climate to duplicate the DTC trigger conditions. If U3000:72 sets again on subsequent ignition cycles, then the PSCM will remove steering assist, enter into a manual mode and send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:96, the presence of this DTC may or may not affect steering assist. It will depend on what other DTCs are set along with U3000:96. If steering assist is affected the PSCM will send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p>	PSCM

**Action:** GO to Pinpoint Test C

**DTC U3000:96 (PSCM) - Control Module: Component Internal Failure****C: DTC U3000: Control Module - Signal Calculation Failure and Component Internal Failure****Normal Operation**

The power steering control module (PSCM) monitors various inputs and outputs of the electronic power assist steering (EPAS) system in order to keep the system operating at peak capacity. Information provided by sensors (steering torque, vehicle speed, vehicle travel distance, etc.) are all compared to programmed and learned information. Likewise, outputs like the motor and steering rack (travel) are tested against programmed and learned information.

**Note:**

If a damaged bellows boot(s) was discovered during Inspection and Verification and this pinpoint test DOES NOT lead to the installation of a new EPAS gear or bellows boot(s), then go to Pinpoint Test K to address the damaged boot(s) before returning the vehicle to the customer.

**C1: VERIFY PRESENCE OF EPAS GEAR HEAT SHIELD**

- Make sure the EPAS gear heat shield is present and installed correctly. Refer to Section 211-02.
- **Is the heat shield present and is it installed correctly?**

<b>Yes</b>
<b>Go to C2.</b>

Start: Tue Jun 9 09:13:00 EDT 2009

**Menu Selection: Inspection and Verification****IV1: Inspection and Verification**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- **Is an obvious cause for an observed or reported concern found?**

Yes	No
<b>For damaged steering gear bellows boots. Go to IV2.</b> <b>For all others,</b> <a href="#">Click for details.</a>	<b>Go to Known Concerns</b>

■ **Menu Selection: Inspection and Verification**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

### VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

Yes	No
<b>For damaged steering gear bellows boots. Go to IV2.</b> <b>For all others,</b> <a href="#">Click for details.</a>	<b>Go to Known Concerns</b>

■ **IV1: VISUAL INSPECTION**

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

### VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)

Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

No
Go to Known Concerns

#### KC1: KNOWN CONCERNS

- Ignition ON, engine OFF.
- Press Read Vehicle Information button to retrieve DTCs from the vehicle. NOTE: DTCs may be displayed from previous diagnostic actions.

#### Vehicle Information:

VIN | 3MEHMOJGXAF [REDACTED] STD

#### System Related CMDTCs Active {retrieved 9 June 2009 09:15:41}

DTC	Description	Source	Status
U3000:96	Control Module : Component Internal Failure	PSCM	Historic

#### System Related CMDTCs cleared since initial read:

- OASIS symptom code:  
 — Chassis \ Steering/Handling (303000)
- OASIS will return known TSBs and SSMs for the specific symptom code(s) and DTC(s) listed above.

Recent Warranty Repair History: No recent repair history on vehicle

Review the OASIS results below for any known concerns related to the current vehicle.

<b>SSM: 20782 2008- 2010 FUSION, MILAN, MKZ - NO LONGER INCLUDE THE STEERING WHEEL LOCKFEATURE.</b>  ALL 2008 - 2010 FUSION, MILAN, AND MKZ VEHICLES BUILT AFTER 12/1/2007 HAVE INCORPORATED AN ELECTRONIC PASSIVE ANTI-THEFT SYSTEM (EPATS) KEY SYSTEM FOR THEFT PROTECTION AND REPLACING THE MECHANICAL STEERING WHEEL LOCK FEATURE THEFT PROTECTION. IMPORTANT: DO NOT REPLACE THE STEERING COLUMN FROM A PRE-12/1/2007 BUILT VEHICLE WITH THE NEW EPATS EQUIPPED COLUMN. THE COLUMNS ARE NOT INTERCHANGEABLE. A DEALER THAT INTERCHANGES THE COLUMNS COULD BE SUBJECT TO GOVERNMENT FINES UP TO \$6,000 PER VEHICLE FOR RENDERING INOPERATIVE A REQUIRED SAFETY FEATURE. Effective Date: 05/06/2009	1 out of 2 303000
<b>SSM: 20795 2010 FUSION/MILAN - 2.5L/3.0L EPAS EQUIPPED VEHICLES - SQUEAK AND RATTLE</b>  SOME 2010 FUSION/MILAN EQUIPPED WITH 2.5L OR 3.0L AND ELECTRONIC POWER ASSIST STEERING (EPAS) MAY EXHIBIT INCREASED LEVELS OF ROAD NOISE, THAT CAN BE HEARD INSIDE THE VEHICLE WHILE DRIVING. THE STEERING GEAR/DASH SEAL -(BASE PART NUMBER 3611B) MAY NOT BE PROPERLY SEALED. THE CORRECT POSITION OF THE STEERING GEAR/DASH	1 out of 2 303000

SEAL CAN FOUND IN WORKSHOP MANUAL SECTION 211-02. NOTE: THIS ROAD NOISE DOES NOT IMPACT THE FUNCTION OR DURABILITY OF THE STEERING SYSTEM AND IT IS CONSIDERED A CUSTOMER IRRITATION.

Effective Date: 05/14/2009

**SSM: 20831 2010 FUSION/MILAN ELECTRONIC POWER ASSIST SYSTEM (EPAS) -  
INTERACTIVE DIAGNOSIS**

THE 2010 FUSION/MILAN WORKSHOP MANUAL SECTION 211-00A HAS BEEN UPDATED WITH INTERACTIVE DIAGNOSTICS. THIS SECTION PROVIDES NEW INFORMATION ABOUT DIAGNOSTIC TOOLS FOR THE ELECTRONIC POWER ASSIST STEERING (EPAS) AND THE POWER STEERING CONTROL MODULE (PSCM). THIS NEXT GENERATION OF VEHICLE DIAGNOSTIC SOFTWARE IS DESIGNED TO AID TECHNICIANS IN IDENTIFYING VEHICLE CONCERNS BY ALLOWING PINPOINT TEST DIAGNOSTICS TO DIRECTLY ACCESS THE VEHICLE THROUGH A VEHICLE COMMUNICATIONS MODULE (VCM), DISPLAY TEST MEASUREMENTS IN REAL TIME AND PROVIDE LOGICAL DIAGNOSTIC PROGRESSION BASED ON TECHNICIAN INPUT. NOTE: IF DIAGNOSTIC TROUBLE CODES ARE PRESENT, DO NOT CLEAR THE CODES UNTIL USING INTERACTIVE DIAGNOSIS, THIS WILL HELP CAPTURE 'FREEZE FRAME' DATA DURING THE DIAGNOSTICS OF ANY DTC.

Effective Date: 06/06/2009

1 out of 2  
303000

Search criteria with no matching OASIS results:  
U3000

- Are any of the listed known concerns related to the customer complaint?

No

**GO to Diagnostic Trouble Code (DTC) Charts.**

Detected DTCs / DTC Index

## EPAS

## Current DTCs {retrieved 9 June 2009 09:15:41}

DTC	Description / Action	Source
N/A	No DTCs to report	

## Historic DTCs {retrieved 9 June 2009 09:15:41}

DTC	Description / Action	Source
U3000:96	<p><b>Control Module: Component Internal Failure</b></p> <p><b>Description:</b> The PSCM is self monitoring and will carry out self-tests at specific intervals (initial power up, power down, during normal operation, etc.). Each self-test requires the voltage supply to the PSCM to be at or above a specific level (above 6 volts, above 9 volts, between 10 and 17 volts, etc.) for the test to take place. If one or more of the self-tests should fail, then the module will set one or more DTCs.</p> <ul style="list-style-type: none"> <li>• DTC U3000:41 (Control Module: General Checksum Failure) - If at any time during normal operation the module detects an internal software error with more than 6 volts supplied to the PSCM, then DTC U3000:41 will be set.</li> <li>• DTC U3000:46 (Control Module: Calibration/Parameter Memory Failure) - At any time during normal operation with more than 6 volts supplied to the PSCM the module determines that one or more calibration files are missing or that they are corrupt or that the incorrect EPAS gear is installed on the vehicle, then DTC U3000:46 will be set .</li> <li>• DTC U3000:49 (Control Module: Internal Electronic Failure) - If at any time during normal operation with more than 6 volts supplied to the PSCM, the module detects a software or internal hardware error then the DTC U3000:49 will be set.</li> <li>• DTC U3000:61 (Control Module Signal Calculation Failure) - If the PSCM detects that assist torque calculation is faulty due to a software failure in the module, then DTC U3000:61 will be set.</li> <li>• DTC U3000:72 (Control Module Actuator Stuck Open) - During initial power up with voltage greater than 9 volts, the PSCM will check the internal relay for voltage. If voltage is not present the module will make several attempts to close the relay. If the voltage remains undetected after this test period, then DTC U3000:72 will be set.</li> <li>• DTC U3000:96 (Control Module: Component Internal Failure) - This DTC will set if there is an internal failure of the PSCM due to temperature, power supply or if multiple failures have occurred over a short period of time.</li> </ul> <p><b>Possible Causes:</b></p> <ul style="list-style-type: none"> <li>• Heat shield missing.</li> <li>• Steering gear internal failure.</li> <li>• Incorrect EPAS gear installed.</li> <li>• Ice/frost build up on relay contacts.</li> <li>• Heavy loads on the EPAS gear.</li> <li>• Excessive ambient temperatures.</li> </ul> <p><b>Diagnostic Aids:</b></p> <p>For DTC U3000:41, the PSCM will remove steering assist, enter into a manual mode and transmit an invalid steering angle message over the HS-CAN bus. The module will also send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center. For DTC U3000:46, initially the PSCM will use a default steering assist and may set DTC U2100:00. If DTC U3000:46 returns on the next ignition cycle, then the PSCM will remove steering assist, enter into a manual mode and send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:49, the presence of this DTC may or may not affect steering assist. It will depend on what other DTCs (if any) are set along with U3000:49. Diagnose all other DTCs before diagnosing U3000:49.</p> <p>For DTC U3000:61, the PSCM will remove steering assist, enter into a manual mode and transmit an invalid steering angle message over the HS-CAN bus. The PSCM will also send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:72, this DTC indicates that a specific internal relay is either stuck open or has excessive resistance. In cold climates or climates where frost is possible, the relay contacts could develop a layer of frost which may prevent a clean connection between the relay contacts. It may be necessary to allow the vehicle to remain outside overnight in a cold climate to duplicate the DTC trigger conditions. If U3000:72 sets again on subsequent ignition cycles, then the PSCM will remove steering assist, enter into a manual mode and send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p> <p>For DTC U3000:96, the presence of this DTC may or may not affect steering assist. It will depend on what other DTCs are set along with U3000:96. If steering assist is affected the PSCM will send a message to the instrument cluster to display the POWER STEERING ASSIST FAULT message in the message center.</p>	PSCM

Action: GO to Pinpoint Test C

**DTC U3000:96 (PSCM) - Control Module: Component Internal Failure****C: DTC U3000: Control Module - Signal Calculation Failure and Component Internal Failure****Normal Operation**

The power steering control module (PSCM) monitors various inputs and outputs of the electronic power assist steering (EPAS) system in order to keep the system operating at peak capacity. Information provided by sensors (steering torque, vehicle speed, vehicle travel distance, etc.) are all compared to programmed and learned information. Likewise, outputs like the motor and steering rack (travel) are tested against programmed and learned information.

**Note:**

If a damaged bellows boot(s) was discovered during Inspection and Verification and this pinpoint test DOES NOT lead to the installation of a new EPAS gear or bellows boot(s), then go to Pinpoint Test K to address the damaged boot(s) before returning the vehicle to the customer.

**C1: VERIFY PRESENCE OF EPAS GEAR HEAT SHIELD**

- Make sure the EPAS gear heat shield is present and installed correctly. Refer to Section 211-02.
- **Is the heat shield present and is it installed correctly?**

Yes
Go to C2.

**C2: TEST DRIVE TO CHECK FOR RETURNING DTCS. - Fault outcome**

- Cycle the ignition to OFF and then back to RUN.

**NOTE:** Always drive the vehicle in a safe manner according to driving conditions and obey all traffic laws.

- Test drive the vehicle in the following manner:
  - With the engine running/ready, stop the vehicle on an unsealed concrete or asphalt surface (in order to provide adequate friction for a thorough test).
  - With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.
  - Return the steering wheel to the center position and move the vehicle forward approximately 32 cm (1 ft).
  - With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.
  - Return the steering wheel to the center position and move the vehicle forward approximately 32 cm (1 ft).
  - With the vehicle in gear and the brakes applied, turn the steering wheel lock-to-lock.

**NOTE:** The next portion of the test drive will require the vehicle to be driven at highway speeds.

**NOTE:** The test period is a cumulative time of 10 minutes. Stopping, going slower than 72 km/h (45 mph) or faster than 96 km/h (60 mph) will not affect the test as long as a total time of 10 minutes is spent between 72-96 km/h (45-60 mph) with at least 4 lane changes during that time/speed window.

- Continue test driving the vehicle in the following manner:
  - Bring the vehicle to a minimum speed of 72 km/h (45 mph), maximum of 96 km/h (60 mph).
  - Maintain that speed for at least 10 minutes.
  - During this 10-minute time period, make a minimum of 4 lane changes or turns that achieve a steering wheel angle of at least 20 degrees.
  - The test drive is complete.
- Press Read Vehicle Information button to retrieve DTC's from the vehicle. **NOTE:** DTCs may be displayed from previous diagnostic actions.

**Vehicle Information:**

VIN	3MEHMOJGXAR	STD
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**System Related CMDTCs Active {retrieved 9 June 2009 09:22:31}**

DTC	Description	Source	Status
U3000:96	Control Module : Component Internal Failure	PSCM	Historic

**System Related CMDTCs cleared since initial read:**

- Is DTC U3000:61 and/or U3000:96 present?

Yes
<b>INSTALL a new EPAS gear. Refer to Section 211-02.</b>

Exit: Tue Jun 9 09:33:00 EDT 2009

Start: Tue Jun 9 09:13:00 EDT 2009

**Menu Selection: Inspection and Verification**

## IV1: Inspection and Verification

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

**VISUAL INSPECTION CHART**

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

Yes	No
<b>For damaged steering gear bellows boots. Go to IV2.</b> <b>For all others, Click for details.</b>	<b>Go to Known Concerns</b>

## IV2: Inspection and Verification

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

## VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	
Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

Yes	No
<b>For damaged steering gear bellows boots. Go to IV2.</b> <b>For all others, Click for details.</b>	<b>Go to Known Concerns</b>

## IV1: VISUAL INSPECTION

- Verify the customer concern.
- Visually inspect the electronic power assist steering (EPAS) system for obvious signs of mechanical or electrical damage.

**NOTE:** When inspecting the bellows boots make sure to use a strong light source and an inspection mirror.

## VISUAL INSPECTION CHART

Mechanical	Electrical
Binding or misaligned steering column.	Battery junction box (BJB) fuses 1 (50A) and 2 (50A)
Loose steering column shaft bolts.	Smart junction box (SJB) fuse 42 (10A)
Steering column shaft couplings/U-joints	Wiring, terminals or connectors.
Steering gear	
Steering gear bellows boots	
Inner tie-rod ends	

Outer tie-rod ends	
Tire pressure	
Tires	

- Is an obvious cause for an observed or reported concern found?

No
Go to Known Concerns

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**From:** Martha Abundis <Martha.Abundis@TRW.COM>  
**Sent:** Friday, October 09, 2009 2:23 PM  
**To:** Hochrein, Brad (B.G.); Harris, Jonathan (J.E.); Miralles, Juan (J.); Quijada, Jorge (J.); McIntyre, Kathryn (K.L.); Bahena, Miguel (Mike.); Brandenburg, Manfred (M.); Frey, Martin (M.F.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Snider, Tim (T.O.); Hernandez, Victor (V.M.); Bouse, William (Bill.); Aaron Blancas; Alexander Kleist; BaoYuan Tian; Douglas Sherman; Frank Fan; Geoff Collins; Geoff Jacks; Greg Collier; Jacky Shi; Jeff Jiang; Jim Rau-nonTRW; Keith Dusina; Mark Karwowski; Martha Abundis; Mike Davies; Pavel Vetz; Phil Browne; Philip Warren-Green; Robert Kostadina; Romance Zhu; Rudy Shuryan; Salim Semssar; Sanjay Singh; Simon Malsbury; Filipe.Matos@tycoelectronics.com; hugo.gomes@tycoelectronics.com  
**Subject:** Meeting notes - EPAS loss of assistance 10/9

#### Part 2805

- Washing to quantify particles in the product - Sample once per shift
- Two projects with washing actions at the beginning and washing actions at the end, now Tyco is analyzing the results to be presented next Tuesday
- For next Tuesday Run chart for particles counted
- 
- Reports for 2805, 2849 and the 8D's will be finished and submitted next Monday

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**From:** Estes, Eric (E.E.)  
**Sent:** Wednesday, August 11, 2010 3:06 PM  
**To:** JoseJ Lopez; Samuel Arreola; Guillermo Aguilar  
**Cc:** Anthony Fleenor; Snider, Tim (T.O.)  
**Subject:** New gear testing in QAO

Gears outside the Ford requirements over 6months in service and under 24,000 miles

These new TS gears do not need to be tested, these are closed claims

FR0289

FR0291

FR0292

FR0298- I will close will overwound torque sensor

The gears that need to be tested are:(they are over 24,000 miles)

FR0293

FR0294

I will send the PFR's today

Eric

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**From:** Pienta, Alan (A.)  
**Sent:** Wednesday, August 31, 2011 6:24 PM  
**To:** Ron.Caldwell@TRW.com  
**Cc:** Mathew Alder; Rajinder SINGH; Diez, Timothy (T.P.)  
**Subject:** Nidec Motor

Ron,  
My name is Alan Pienta. I am with Ford Motor Company and work with Tim Diez in Chassis Electronics on TRW EPAS programs.

Tim and I were discussing the Nidec 150K capacity increase and recent issues arising with the B9A fault code. We would like to know how Nidec validates their magnetization process and ultimately the flux density of the magnets used. Is the process a significant characteristic? Do you know if anything has changed in the process with the capacity increase such as change in sub suppliers, etc.?

Regarding the SREA, do you know what validation was completed and when? Can you forward the results to me or let me know who has the data?

Thanks,  
Alan Pienta  
EPAS Electronics Engineer

I grew 101 rec'd., no inbreeding

18 claims: → 3 loose connectors suspicious - SSM take off

→ 4 valid EMS issues → misaligned

1 New law needs to be set up for the WPA.

10

- ① Next Site 25°
  - ↳ Meeting w/ mining engineer to discuss improvements
- ② Look at what follows for this chapter
- ③ Evaluation leading to initiation of work
- ④ Application DTC
  - ↳ Application DTC
  - ↳ Application PNT w/ completion plus bonus
- ⑤ Work w/ PNT w/ completion plus bonus

Fusion EDAS

'10 MY

should perform  
better than the

11-12 M4 car

11-12 had the

ribbon cable issue

2006 - 2010 Fusion / Milan / Zephyr - Mkz  
 Alleged loss of steering from CDR

Engine Description	(All)					
Count of VIN	Model Year					
Causal Part Base	2006	2007	2008	2009	2010	Grand Total
3504	2028	844	272	123	597	3864
3A713	1862	884	159	62	15	2982
Unknown	683	586	205	127	384	1985
3600	540	534	347	140	134	1695
3A696	822	413	253	90	12	1590
3524	872	359	25	18	28	1302
	499	353	184	123	142	1301
3A719	742	225	83	63	9	1122
FRONT	141	162	169	122	111	705
3A705	286	78	78	13	3	458
3A130	181	142	74	30	18	445
NPF	129	76	47	18	60	330
3A674	197	60	49	12	7	325
3N824	136	96	31	31		294
3001	50	52	63	30	18	213
3D758	20	72	14	34	47	187
TIRE	37	40	66	15	11	169
3530	27	20	18	54	21	140
3511	51	28	7	9	7	102
3A697	39	24	20	15		98
3514	30	12	5	4	5	56
3A006	31	16	3	6		56
*	1	2	1	2	49	55
3E764		18	12	3	4	37
3078	9	15	1	4	1	30
3691	10	5	5	1	9	30
3B676	19	8	2		1	30
3C529	14	5		2	3	24
7326			5	5	11	21
3F690	5	4	7	2	2	20
SWHEEL	6	3	4	4	3	20
3719	15	1	3			19
3R807	9	6	3	1		19
3C611	4	4	3		7	18
3L547	10	2	1		3	16
3084	3	3	3	5		14
3329	5	5	3	1		14
3N623	11	1				12
3082	4	1	3	3		11
3Z719	8	3				11
3A005	4	1	2		3	10
3085	3	1	2	3		9
12A581	3	2	1	1	2	9
3304	2	1	1	1	2	7
3332	1	2	1	2	1	7
7A214		3	2	1	1	7
3A714	4	2				6
3050	3	1		1		5



PE14-030 000152



PE14-030 000153



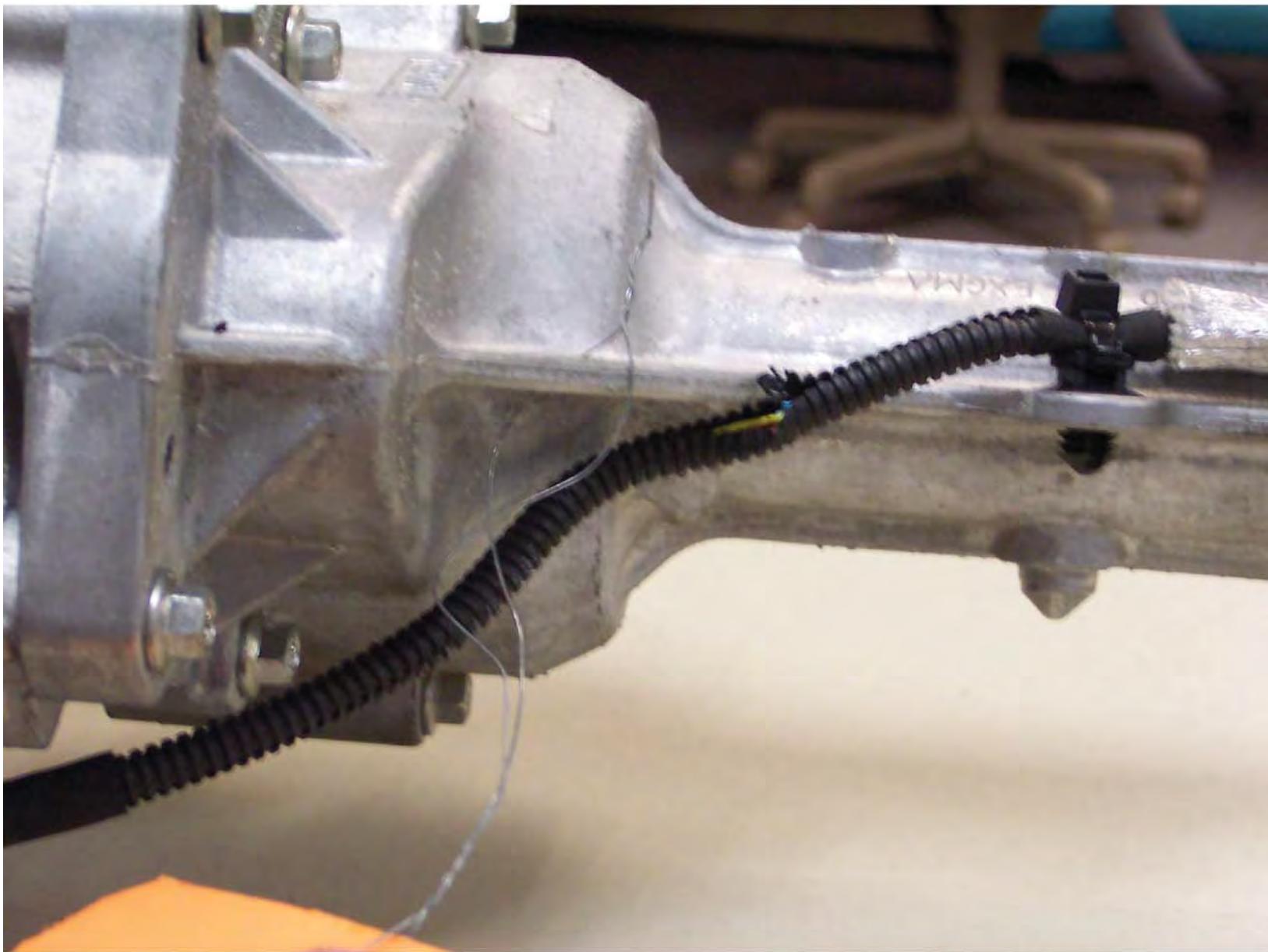
PE14-030 000154



E14-030 00155



PE14-030 000156



PE14-030 000157

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**From:** Chacon, Jose (A.)  
**Sent:** Friday, June 05, 2009 3:14 PM  
**To:** Estes, Eric (E.E.)  
**Cc:** Bouse, William (W.J.); Bahena, Miguel (Mike.); 'Costas Chrysochoidis'; 'Anthony Fleenor'; 'Greg Bendzinski'  
**Subject:** RE: #6 warranty gear U2011-49  
**Attachments:** Report Summary for the CQIS Report#9FBAK121 (9.71 KB)

Eric,  
Per phone conversation. Report attached.

Regards,

*José Chacon*

**Product Concern Engineer**  
**Fusion/Milan/Zephyr/MKZ**  
**Ford Customer Service Division**  
**(313) 317-7047**

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**From:** Estes, Eric (E.E.)  
**Sent:** Thursday, June 04, 2009 9:40 AM  
**To:** Chacon, Jose (A.)  
**Cc:** Bouse, William (W.J.); Bahena, Miguel (Mike.); 'Costas Chrysochoidis'; Anthony Fleenor; Greg Bendzinski  
**Subject:** #6 warranty gear U2011-49

Jose can you confirm that the code U2011 did not reset after the cold start. I don't know if the dealer ordered the gear because of the previous reports with the hotline or if the code came back after the cold start. The parts registry shows an EPAS gear being delivered to this dealer today.

Report# :	9FBAK121 NHL	Received:	06/02/2009
CCRG/EPRC:S	Reviewed Status:	Date:	06/03/2009
Vehicle:	2010,MILAN,PREMIER,SEDAN ,3MEHM0JA8AR [REDACTED]	Build Date:	02/17/2009
Odometer :	1,814 M	Engine:	2.5L DOHC
Transmission:	6SP 6F MID	Axle:	Calibration: ADE1F40A
Dealer:	USA 13123 Wall's Lincoln-Mercury, Inc.	A/C:	YES
City:	Methuen	State:	Phone#: (508) 687-3100
Originator:	SCOTT WALTON	Massachusetts	Country : USA

Symptom: 3 03 1 50 CHASS.,STRG/HANDLING ,FUNCTION,HIGH EFFORT  
Status:  
VFG: V87 STEERING  
Additional Symptom: HIGH STEERING EFFORTS U2011:49  
Fix: Causal Component :  
Condition Code:

Hotliner: DKNAPP7 Phone: 000 317-6316 Regn Cd: N2 Boston  
Engineering: Phone: TAR:  
Dlr Contact: SCOTT WALTON Phone: 978 687-3100 Title Cde: T

**KOEO:** U2011

**KOEC:**

**KOER:**

REPAIR 06/02/2009 03:16PM DAVID KNAPP MSS - FCSD - TECH SVC HOTLINE  
WEB FORM DATA - CONCERN: CUSTOMER LOST POWER STEERING DIAGNOSTICS:  
SELF TEST PSCM, U2011:49-08 - CONTINUOUS MEMORY. CLEARED DTC, AND  
RE-RAN SELF TEST, PASS. INSPECTED WIRING TO STEERING GEAR MOTOR,  
O.K. PARTS REPLACED:: NONE TECH QUESTION: ARE THERE ANY KNOWN  
CONCERNS? WERE YOU ABLE TO VERIFY THE CONCERN? YES IS THERE AN  
APPROPRIATE PINPOINT TEST IN THE WSM FOR THIS CONCERN? NO WAS THE  
PINPOINT TEST FOLLOWED? YES

RECOMM 06/02/2009 03:16PM DAVID KNAPP MSS - FCSD - TECH SVC HOTLINE  
SCOTT, AS LONG AS THE POWER AND THE GROUND ARE PROPER TO THE EPAS  
POWER STEERING MODULE WE WOULD SUGGEST REPLACING THE POWER STEERING  
MODULE COLUMN ASSEMBLY FOR THIS CONCERN.

REPAIR 06/02/2009 03:41PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
TECHNICIAN REPLY: DID YOU MEAN STEERING MODULE GEAR ASSY?????

RECOMM 06/02/2009 03:41PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
CORRECT SCOTT, THE STEERING MODULE GEAR ASSEMBLY WILL NEED TO BE  
REPLACE.

REPAIR 06/02/2009 04:20PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
CALL THE TECH BACK. HE REPORTED THAT HE TOOK THE VEHICLE FOR A TEST  
DRIVE AND THE CODE WOULD NOT COME BACK. HE DID ADD THAT THE THE  
CUSTOMER WAS COMPLAINING OF A INTERMITTENT HARD START CONCERN AS WELL.  
THERE WERE NO OTHER CODES AND NO AFTERMARKET COMPONENTS. THE BATTERY  
IS IN GOOD CONDITION

RECOMM 06/02/2009 04:20PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
THE RACK REPLACEMENT WILL NOT BE NECESSARY IF THE CODES IS NOT  
CURRENTLY FLAGGING.

*Eric J. Estes*

Warranty Analyst - TRW Automotive  
6-Sigma Center 15010 S. Commerce Dr.  
Dearborn, Michigan 48120  
Ph.#(313) 390-3843 Fax#(888) 502-9600

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**From:** JCHACON3@ford.com  
**Sent:** Friday, June 05, 2009 3:13 PM  
**To:** Chacon, Jose (A.)  
**Subject:** Report Summary for the CQIS Report#9FBAK121

**Attachments :** 0

<b>Report# :</b>	9FBAK121 NHL	<b>Received:</b>	06/02/2009
<b>CCRG/EPRC:</b>	S	<b>Reviewed Status:</b>	Date: 06/03/2009
<b>Vehicle:</b>	2010,MILAN,PREMIER,SEDAN ,3MEHM0JA8AR [REDACTED]	<b>Build Date:</b>	02/17/2009
<b>Odometer :</b>	1,814 M	<b>Engine:</b>	2.5L DOHC
<b>Transmission:</b>	6SP 6F MID	<b>Axle:</b>	<b>Calibration:</b> ADE1F40A
<b>Dealer:</b>	USA 13123 Wall's Lincoln-Mercury, Inc.	<b>A/C:</b>	YES
<b>City:</b>	Methuen	<b>State:</b>	<b>Phone#:</b> (508) 687-3100
<b>Originator:</b>	SCOTT WALTON	<b>Massachusett</b>	<b>Country :</b> USA
<b>Symptom:</b>	3 03 1 50 CHASS.,STRG/HANDLING ,FUNCTION,HIGH EFFORT		
<b>Status:</b>			
<b>VFG:</b>	V87 STEERING		
<b>Additional Symptom:</b>	HIGH STEERING EFFORTS U2011:49		
<b>Fix:</b>	<b>Causal Component :</b>		
<b>Condition Code:</b>			
<b>Hotliner:</b> DKNAPP7	<b>Phone:</b> 000 317-6316	<b>Regn Cd:</b>	N2 Boston
<b>Engineering:</b>	<b>Phone:</b>	<b>TAR:</b>	
<b>Dlr Contact:</b> SCOTT WALTON	<b>Phone:</b> 978 687-3100	<b>Title Cde:</b>	T

**DTCs:**

KOEO:U2011

KOEC:

KOER:

**Comments**

:

REPAIR 06/02/2009 03:16PM DAVID KNAPP MSS - FCSD - TECH SVC HOTLINE  
WEB FORM DATA - CONCERN: CUSTOMER LOST POWER STEERING DIAGNOSTICS  
SELF TEST PSCM, U2011:49-08 - CONTINUOUS MEMORY. CLEARED DTC, AND  
RE-RAN SELF TEST, PASS. INSPECTED WIRING TO STEERING GEAR MOTOR,

O.K. PARTS REPLACED:: NONE TECH QUESTION: ARE THERE ANY KNOWN CONCERNS? WERE YOU ABLE TO VERIFY THE CONCERN? YES IS THERE AN APPROPRIATE PINPOINT TEST IN THE WSM FOR THIS CONCERN? NO WAS THE PINPOINT TEST FOLLOWED? YES

- RECOMM** 06/02/2009 03:16PM DAVID KNAPP MSS - FCSD - TECH SVC HOTLINE  
SCOTT, AS LONG AS THE POWER AND THE GROUND ARE PROPER TO THE EPAS POWER STEERING MODULE WE WOULD SUGGEST REPLACING THE POWER STEERING MODULE COLUMN ASSEMBLY FOR THIS CONCERN.
- REPAIR** 06/02/2009 03:41PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
TECHNICIAN REPLY: DID YOU MEAN STEERING MODULE GEAR ASSY?????
- RECOMM** 06/02/2009 03:41PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
CORRECT SCOTT, THE STEERING MODULE GEAR ASSEMBLY WILL NEED TO BE REPLACE.
- REPAIR** 06/02/2009 04:20PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
CALL THE TECH BACK. HE REPORTED THAT HE TOOK THE VEHICLE FOR A TEST DRIVE AND THE CODE WOULD NOT COME BACK. HE DID ADD THAT THE THE CUSTOMER WAS COMPLAINING OF A INTERMITTENT HARD START CONCERN AS WELL.  
THERE WERE NO OTHER CODES AND NO AFTERMARKET COMPONENTS. THE BATTERY IS IN GOOD CONDITION
- RECOMM** 06/02/2009 04:20PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
THE RACK REPLACEMENT WILL NOT BE NECESSARY IF THE CODES IS NOT CURRENTLY FLAGGING.
- ADD-ON** 06/05/2009 11:10AM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG  
CALLED THE DEALER BACK AND THE TECHNICIAN STATES THE CONDITION IS INTERMITTENT. THE CODES GOT CLEARED AND ROAD TESTED FOR TWO DAYS. THE EPAS RACK WAS NOT REPLACED. END OF CALL.
- ADD-ON** 06/05/2009 11:10AM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG  
THERE ARE NO CODES IN EPAS. THE VEHICLE IS BACK WITH THE CUSTOMER. END OF CALL.

---

**From:** Guillermo Aguilar <Guillermo.Aguilar@TRW.COM>  
**Sent:** Tuesday, April 20, 2010 12:09 AM  
**To:** Snider, Tim (T.O.)  
**Subject:** RE: 150 EPAS on hold release / TRW

Haven't checked this out Tim; let me confirm and I'll answer to the complete team.

Thanks,

>>> "Snider, Tim (T.O.)" <[tsnider1@ford.com](mailto:tsnider1@ford.com)> 4/16/2010 7:55 AM >>>  
Guillermo,

Okay. Have you noticed any groupings in the B9A warranty returns regarding date of manufacture of the motor, or module? The vehicle builds with B9A's appear to be spread out between Feb 2009 and Sept 2009.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))  
CD3 Steering Engineering  
Ford Motor Company  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

-----Original Message-----

From: Guillermo Aguilar [mailto:[Guillermo.Aguilar@TRW.COM](mailto:Guillermo.Aguilar@TRW.COM)]  
Sent: Thursday, April 15, 2010 10:40 PM  
To: Ulloa, Fernando (F.F.); Snider, Tim (T.O.)  
Cc: Maldonado, Sonia (S.); [angelsaa@prodigy.net.mx](mailto:angelsaa@prodigy.net.mx)  
Subject: 150 EPAS on hold release / TRW

Tim,

As per the lack of any other possible containment to be performed as a gear level to the 150 pieces we have on hold at Benteler, we agreed this afternoon with Fernando, to start releasing the parts in lots of 10 pc./day, to closely track them down through the line, and perform a driving test that Fer suggested. As mentioned during the week, we feel very optimistic that parts will perform perfectly as per the rest of the Julian date lot, basing our selves in the Bully results we have for the material.

In relation to it, we agree to proceed with this activity. We'll be supporting as agreed to control every 10 pc. lot that is assembled at Benteler and then shipped into the assembly line; Angel will be coordinating this activity and informing Fernando about the VIN numbers for your follow up.

Thanks for your support.

Guillermo Aguilar,

---

**From:** Estes, Eric (E.E.)  
**Sent:** Wednesday, April 15, 2009 2:03 PM  
**To:** Bahena, Miguel (Mike.)  
**Subject:** RE: 2010 CD3 EPAS First Service Return - GCQIS # 9DIAI062

I overnighed the part but unsure if when the dealer is going to close the repair order so hopefully end of this week or early next week.

I'm trying to get a meeting number so once I get that I will set up the meeting.

*Eric J. Estes*

Warranty Analyst - TRW Automotive  
6-Sigma Center 15010 S. Commerce Dr.  
Dearborn, Michigan 48120  
Ph.#(313) 390-3843 Cell#(734)560-3493

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Wednesday, April 15, 2009 8:50 AM  
**To:** Estes, Eric (E.E.)  
**Cc:** Bouse, William (W.J.)  
**Subject:** RE: 2010 CD3 EPAS First Service Return - GCQIS # 9DIAI062

Eric,

Did you hear when this part will be back at the warranty parts return center? Also I did not see the meeting notice for the Monday afternoon meetings to review warranty claims. Did you send? Thanks.

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
mbahena1@ford.com  
Pager: [Click Here <<<<mailto:3138053680@messaging.sprintpcs.com>>>>](#)

---

**From:** Chacon, Jose (A.)  
**Sent:** Monday, April 13, 2009 11:46 AM  
**To:** Estes, Eric (E.E.)  
**Cc:** Bouse, William (W.J.); Chacon, Jose (A.); Moody, Tom (T.J.); Hillaker, Glen (G.E.); Christiansen, Jens (J.F.); Bahena, Miguel (Mike.)  
**Subject:** FW: 2010 CD3 EPAS First Service Return - GCQIS # 9DIAI062

Forward information to additional members.

Regards,

*José Chacón*

**Product Concern Engineer**  
**Fusion/Milan/Zephyr/MKZ**  
**Ford Customer Service Division**  
**(313) 317-7047**

---

**From:** Chacon, Jose (A.)  
**Sent:** Monday, April 13, 2009 11:44 AM  
**To:** Estes, Eric (E.E.)  
**Cc:** Moody, Tom (T.J.); Chacon, Jose (A.); Bouse, William (W.J.)  
**Subject:** RE: 2010 CD3 EPAS First Service Return - GCQIS # 9DIAI062

Eric,

Please use the latest information from the dealer. The dealer will proceed with the EPAS Rack replacement. Dealer provided PDF. critical information on their findings. Please initiate the WPRC for parts analysis. WPRC information in GCQIS Report.

[https://www.gcqis.dealerconnection.com/gcqis/asp/DIVViewAttachment\\_Mainx.asp?ReportNumber=9DIAI062](https://www.gcqis.dealerconnection.com/gcqis/asp/DIVViewAttachment_Mainx.asp?ReportNumber=9DIAI062)

<< File: GCQISREPORT #9DIAI062.pdf >> << Message: Report Summary for the CQIS Report#9DIAI062 >>

Regards,

*José Chacón*

**Product Concern Engineer**  
**Fusion/Milan/Zephyr/MKZ**  
**Ford Customer Service Division**  
**(313) 317-7047**

---

**From:** Chacon, Jose (A.)  
**Sent:** Monday, April 13, 2009 10:43 AM  
**To:** Bouse, William (W.J.)  
**Cc:** Estes, Eric (E.E.); Moody, Tom (T.J.)  
**Subject:** RE: 2010 CD3 EPAS First Service Return  
**Importance:** High

Good Morning Bill,

This morning we were reviewing the request regarding GCQIS Report # 9DIAI062. Please review the background of this program and/or new issues:

+ Report # 9DIAI062 in this E-mail is incomplete.

For the latest information and most current GCQIS data please refer to:

<http://www.seo.ford.com/gcqis/cqis/decider.htm>

[https://www.gcqis.dealerconnection.com/gcqis/asp/WBRES\\_RptSummaryUpdMain.asp?rptnbr=9DIAI062](https://www.gcqis.dealerconnection.com/gcqis/asp/WBRES_RptSummaryUpdMain.asp?rptnbr=9DIAI062)

- + Supplier requests to contact Dealers, (Service/Parts) Department for EPAS follow up:  
Currently, under current ford guidelines, no supplier can contact the Dealer for repairs, parts and/or follow-ups directly.

Supplier must work/follow through ford point of contact.

- + Current Point of Contact for Ford Dealers regarding EPAS is:  
Jose C.
- + Status of GCQIS Report # 9DIAI062 the dealer has not completed all the diagnosis.  
Jose C. to follow up with dealer on diagnosis and/or repairs once completed.
- + If a request for a part is needed. Requester (D&R) needs to follow WPRC guidelines:  
[http://www.quality.ford.com/6sigma\\_center/wpac/index.html](http://www.quality.ford.com/6sigma_center/wpac/index.html)

If you have any questions, please set up a meeting and we can discuss next steps.

Regards,



**Product Concern Engineer**  
**Fusion/Milan/Zephyr/MKZ**  
**Ford Customer Service Division**  
**(313) 317-7047**

---

**From:** Estes, Eric (E.E.)  
**Sent:** Monday, April 13, 2009 8:50 AM  
**To:** Bouse, William (W.J.); Chacon, Jose (A.)  
**Subject:** RE: 2010 CD3 EPAS First Service Return

Bill I don't see a phone number for your meeting this morning. The codes I put down was the PSCM codes Jose gave me when I talked to him Thursday. You need to talk to Jose about the other codes listed.

Eric

---

**From:** Bouse, William (W.J.)  
**Sent:** Thursday, April 09, 2009 5:54 PM  
**To:** Estes, Eric (E.E.); Chacon, Jose (A.)  
**Subject:** RE: 2010 CD3 EPAS First Service Return

Eric/José, can you two please clarify what the actual fault codes were in the vehicle for the PSCM? The DTCs in Eric's note does not match the text from the CQIS case. It also states the report at the bottom that the car was connected to the IDS tool and if that is the case we should know a lot about this car and it seems we do not. So between the two of you can you please get the information needed so that we can react accordingly.

Thanks

# Bill Bouse

CD3/4 Electric Steering System Engineer  
(cell) (313) 805-2289  
(email) [wbose@ford.com](mailto:wbose@ford.com)  
(page) [3138052289@messaging.sprintpcs.com](mailto:3138052289@messaging.sprintpcs.com)

---

**From:** Estes, Eric (E.E.)  
**Sent:** Thursday, April 09, 2009 3:27 PM  
**To:** Greg Bendzinski; Costas Chrysochoidis; [anthony.fleenor@trw.com](mailto:anthony.fleenor@trw.com); Dean Flower; Mark Karwowski; 'Andrew.Williams@TRW.COM'; 'simon.malsberry@trw.com'; 'robert.kinnear@trw.com'  
**Cc:** Bouse, William (W.J.); Christiansen, Jens (J.F.); Diez, Timothy (T.P.); Rossi, Roberto (R.A.); Bahena, Miguel (Mike.); Porter, Wesley (W.)  
**Subject:** 2010 CD3 EPAS First Service Return

I have some concerns with the lack of assistance FCSD is giving me to contact the dealers. All my information to the dealers need to go through Jose Chacon (product concern engineer) to get information. I contacted Jose this morning and advised that a gear was ordered from the dealer below but the dealer did not perform the new Interactive Online diagnosis to properly get detailed information like the diagnostic's, freeze-frame data and returning codes , so Jose wrote the CQIS case (see below).

This vehicle does not have any assist off the car hauler and from the report below not sure what codes are from other modules other than the EPAS U3000-49(0xF00049) & U3000-96(0xF00096) and what codes are current & history. I advised Jose that this dealer needs to hook up the IDS scan tool and follow the Interactive diagnosis so we can get the specific/one code that is causing the lack of assist.

Should get more detailed information on Monday so I can pull the TRW codes, also I will overnight the part back for fast analysis. I looked on the HSAP plant site and did not see any EPAS codes on this vehicle at the last "code check" stage.

Report# : 9DIAI062 ACR Received: 04/09/2009  
CCRG/EPRC: << OLE Object: Picture (Metafile) >> << OLE Object: Picture (Metafile) >> Reviewed  
Status: Date:  
Vehicle: 2010,FUSION,SEL ,SEDAN ,3FAHP0JA3AR [REDACTED] Build Date: 02/14/2009  
Odometer: 10 M Engine: 2.5L DOHC Calibration:  
Transmission: 6SP 6F MID Axle: A/C: YES  
Dealer: USA 01341 Fred Beans Ford Lincoln Mercur Phone#: (610) 696-4700  
City: West Chester State: Pennsylvania Country : USA  
Originator: JOHN STEWART  
Symptom: 3 03 1 55 CHASS.,STRG/HANDLING ,FUNCTION,LOSS OF STRG  
Status:  
VFG: V89 RIDE & HANDLING  
Additional Symptom: NO ASSIST AND MULTIPLE CODES  
Fix: Causal Component :  
Condition Code:

Region Code: N3 Region Name: Philadelphia

KOEO:

KOEC:

KOER:

WHY? 04/09/2009 12:30PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG

RECEIVED VEHICLE REQUEST THROUGH FAV/TRW REQUEST. THE INFORMATION ON THIS VEHICLE INDICATES, A NEW EPAS ASSEMBLY WAS REQUESTED BY THE DEALER ON 04/08/09. TEAM REQUEST FOLLOW UP ON THIS REPAIR.

CONCER 04/09/2009 12:30PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG

CALLED THE TECHNICIAN AND SPOKE WITH ED/JOHN STEWART AND SERVICE MANAGER PAUL HAY. TECH INDICATED HE RAN OASIS AND/OR DID NOT FIND ANY CONCERNs. TECH INDICATED THIS VEHICLE HAD COMPLETE NO ASSIST AT ALL. THE IDS WAS INSTALLED AND/OR CODES U3000:48, U3000:49, U3096:C8 WERE PRESENT. TECHNICIAN INDICATED HE CHECKED A FEW CONNECTIONS AND/OR DECIDED TO ORDER A EPAS ASSEMBLY. ASKED THE TECHNICIAN IF HE UTILIZED THE NEW EPAS WORKSHOP MANUAL DIAGNOSIS? TECH INDICATE NO, HE WAS NOT AWARE OF THIS DIAGNOSIS. ADVISED ED/JOHN HOW TO GET TO THE DIAGNOSIS AND/OR WHAT TO DO. I CALL THE TECHNICIAN AT A LATER TIME

*Eric J Estes*

TRW EPAS Steering Systems

Quality Specialist

Hotline ph# 313-317-9358

RTDA ph# 313-390-3493

Cell ph# 734-560-3493

---

**From:** Paul IRELAND <Paul.IRELAND@TRW.COM>  
**Sent:** Thursday, April 09, 2009 8:07 PM  
**To:** Estes, Eric (E.E.); Andrew Williams; Anthony Fleenor; Costas Chrysochoidis; Dean Flower; Greg Bendzinski; Mark Karwowski; Robert Kinnear; simon.malsberry@trw.com  
**Cc:** Christiansen, Jens (J.F.); Bahena, Miguel (Mike.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Bouse, William (W.J.); Porter, Wesley (W.)  
**Subject:** Re: 2010 CD3 EPAS First Service Return

Eric,

Please can you keep me on copy regarding this issue?

Thanks and regards

Paul.

---

Paul Ireland  
Quality & Product Support Engineering Manager  
TRW Electronic Engineering  
Steering & Powertrain

TRW Automotive Electronics  
Technical Centre  
Stratford Road  
Shirley  
Solihull  
Birmingham  
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Mob: +44 (0)7787 152278  
E-mail: <mailto:paul.ireland@trw.com>  
Web: <http://www.trw.com>

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>>> On 09 April 2009 at 20:26, "Estes, Eric (E.E.)" <[eestes@ford.com](mailto:eestes@ford.com)> wrote:

I have some concerns with the lack of assistance FCSD is giving me to contact the dealers. All my information to the dealers need to go through Jose Chacon (product concern engineer) to get information. I contacted Jose this morning and advised that a gear was ordered from the dealer below but the dealer did not perform the new Interactive Online diagnosis to properly get detailed information like the diagnostic's, freeze-frame data and returning codes , so Jose wrote the CQIS case (see below).

This vehicle does not have any assist off the car hauler and from the report below not sure what codes are from other modules other than the EPAS U3000-49(0xF00049) & U3000-96(0xF00096) and what codes are current & history. I advised Jose that this dealer needs to hook up the IDS scan tool and follow the Interactive diagnosis so we can get the specific/one code that is causing the lack of assist.

Should get more detailed information on Monday so I can pull the TRW codes, also I will overnight the part back for fast analysis. I looked on the HSAP plant site and did not see any EPAS codes on this vehicle at the last "code check" stage.

Report# : [REDACTED] Received: 04/09/2009  
CCRG/EPRC: Reviewed Status: Date:  
Vehicle: 2010,FUSION,SEL ,SEDAN ,3FAHP0JA3AR [REDACTED] Build Date: 02/14/2009  
Odometer : 10 M Engine: 2.5L DOHC Calibration:  
Transmission: 6SP 6F MID Axle: A/C: YES  
Dealer: USA 01341 Fred Beans Ford Lincoln Mercur Phone#: (610) 696-4700  
City: West Chester State: Pennsylvania Country : USA  
Originator: JOHN STEWART  
Symptom: 3 03 1 55 CHASS.,STRG/HANDLING ,FUNCTION,LOSS OF STRG  
Status:  
VFG: V89 RIDE & HANDLING  
Additional Symptom: NO ASSIST AND MULTIPLE CODES  
Fix: Causal Component :  
Condition Code:

Region Code: N3 Region Name: Philadelphia

**KOEO:**

**KOEC:**

**KOER:**

WHY? 04/09/2009 12:30PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG  
RECEIVED VEHICLE REQUEST THROUGH FAV/TRW REQUEST. THE INFORMATION ON THIS VEHICLE INDICATES, A NEW EPAS ASSEMBLY WAS REQUESTED BY THE DEALER ON 04/08/09. TEAM REQUEST FOLLOW UP ON THIS REPAIR.

CONCER 04/09/2009 12:30PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG  
CALLED THE TECHNICIAN AND SPOKE WITH ED/JOHN STEWART AND SERVICE MANAGER PAUL HAY. TECH INDICATED HE RAN OASIS AND/OR DID NOT FIND ANY CONCERNNS. TECH INDICATED THIS VEHICLE HAD COMPLETE NO ASSIST AT ALL. THE IDS WAS INSTALLED AND/OR CODES U3000:48, U3000:49, U3096:C8 WERE PRESENT. TECHNICIAN INDICATED HE CHECKED A FEW CONNECTIONS AND/OR DECIDED TO ORDER A EPAS ASSEMBLY. ASKED THE TECHNICIAN IF HE UTILIZED THE NEW EPAS WORKSHOP MANUAL DIAGNOSIS? TECH INDICATE NO, HE WAS NOT AWARE OF THIS DIAGNOSIS. ADVISED ED/JOHN HOW TO GET TO THE DIAGNOSIS AND/OR WHAT TO DO. I CALL THE TECHNICIAN AT A LATER TIME

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
RTDA ph# 313-390-3493  
Cell ph# 734-560-3493

TRW Limited

Registered in England, No. 872948

Registered Office Address: Stratford Road, Solihull B90 4AX

---

**From:** Paul IRELAND <Paul.IRELAND@TRW.COM>  
**Sent:** Friday, April 10, 2009 8:26 AM  
**To:** Bouse, William (W.J.); Anthony Fleenor; Costas Chrysochoidis; Craig Zeki; Geoff Jacks; Greg Bendzinski; Mark Karwowski; Andrew.Williams@TRW.COM; robert.kinnear@trw.com; simon.malsberry@trw.com  
**Cc:** Christiansen, Jens (J.F.); Bahena, Miguel (Mike.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Porter, Wesley (W.)  
**Subject:** RE: 2010 CD3 EPAS First Service Return

Bill,

This ECU\_ID doesn't map to reprocessing from my data.

See below the traceability I have:

EPP_ID	PSTG_ID	ECU_ID	MOTOR_ID	Relay Wk/Yr
083191177D20285	083091175E10QJR	083111173E10LGJ	AAA0B254110022	33/2008

Please let me know if you get more data.

Regards

Paul.

---

*Paul Ireland  
Quality & Product Support Engineering Manager  
TRW Electronic Engineering  
Steering & Powertrain*

*TRW Automotive Electronics  
Technical Centre  
Stratford Road  
Shirley  
Solihull  
Birmingham  
B90 4GW*

*Mob: +44 (0)7787 152278  
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Web: <http://www.trw.com>*

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*sender immediately and delete from your system. Any views or opinions expressed are solely those of the author and do not necessarily represent those of TRW Automotive Ltd unless otherwise specifically stated.*

>>> On 09 April 2009 at 22:22, in message

<47133697BE99E14AA51728457B5BD1CB066FAE84@na1fcm32.fmc1.ford.com>, "Bouse, William (W.J.)"

<wbouse@ford.com> wrote:

**Eric**, so we got the first warranty return and they did not follow the process. I will make some phone calls about the on-line diagnostics but it has been clear for several months that TRW does not directly contact a Ford dealership. Eric, also your DTCs do not match the CQIS text that was put out by Jose, can you please get with him can clarify what the real DTCs are since both of these map to several TRW faults. It also says in the text that the technician hooked up the IDS tool to retrieve the DTCs so have we confirmed that this car was or was not hooked up the system?

0xF00049 U3000-49 C Control Module Internal Electronic Failure

0xF00096 U3000-96 C Control Module Component Internal Failure

**Paul**, do you know if this EPP is on your re-processed EPPs:

RP\_SN\_PSCM=083111173E10LGJ , 730, PSCM, SERIAL NUMBER

Log file from HSAP.

<<First Warranty Claim 3FAHP0JA3AR [REDACTED] log>>

I will set up a meeting for Monday morning to discuss with all on this meeting notice. Eric, if you can schedule a weekly meeting to go through the current warranty status that would be most helpful.

Bill

**From:** Estes, Eric (E.E.)

**Sent:** Thursday, April 09, 2009 3:27 PM

**To:** Greg Bendzinski; Costas Chrysochoidis; anthony.fleenor@trw.com; Dean Flower; Mark Karwowski; 'Andrew.Williams@TRW.COM';

'simon.malsberry@trw.com'; 'robert.kinnear@trw.com'

**Cc:** Bouse, William (W.J.); Christiansen, Jens (J.F.); Diez, Timothy (T.P.); Rossi, Roberto (R.A.); Bahena, Miguel (Mike.); Porter, Wesley (W.)

**Subject:** 2010 CD3 EPAS First Service Return

I have some concerns with the lack of assistance FCSD is giving me to contact the dealers. All my information to the dealers need to go through Jose Chacon (product concern engineer) to get information. I contacted Jose this morning and advised that a gear was ordered from the dealer below but the dealer did not perform the new Interactive Online diagnosis to properly get detailed information like the diagnostic's, freeze-frame data and returning codes , so Jose wrote the CQIS case (see below).

This vehicle does not have any assist off the car hauler and from the report below not sure what codes are from other modules other than the EPAS U3000-49(0xF00049) & U3000-96(0xF00096) and what codes are current & history. I advised Jose that this dealer needs to hook up the IDS scan tool and follow the Interactive diagnosis so we can get the specific/one code that is causing the lack of assist.

Should get more detailed information on Monday so I can pull the TRW codes, also I will overnight the part back for fast analysis. I looked on the HSAP plant site and did not see any EPAS codes on this vehicle at the last "code check" stage.

Report# : 9DIAI062 ACR Received: 04/09/2009

CCRG/EPRC: << OLE Object: Picture (Metafile) >> << OLE Object: Picture (Metafile) >> Reviewed

Status: Date:

Vehicle: 2010,FUSION,SEL ,SEDAN ,3FAHP0JA3AR [REDACTED] Build Date: 02/14/2009

Odometer : 10 M Engine: 2.5L DOHC Calibration:

Transmission: 6SP 6F MID Axle: A/C: YES

Dealer: USA 01341 Fred Beans Ford Lincoln Mercur Phone#: (610) 696-4700

City: West Chester State: Pennsylvania Country : USA

Originator: JOHN STEWART

Symptom: 3 03 1 55 CHASS.,STRG/HANDLING ,FUNCTION,LOSS OF STRG

Status:

VFG: V89 RIDE & HANDLING

Additional Symptom: NO ASSIST AND MULTIPLE CODES

Fix: Causal Component :

Condition Code:

Region Code: N3 Region Name: Philadelphia

**KOEO:**

**KOEC:**

**KOER:**

WHY? 04/09/2009 12:30PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG RECEIVED VEHICLE REQUEST THROUGH FAV/TRW REQUEST. THE INFORMATION ON THIS VEHICLE INDICATES, A NEW EPAS ASSEMBLY WAS REQUESTED BY THE DEALER ON 04/08/09. TEAM REQUEST FOLLOW UP ON THIS REPAIR.

CONCER 04/09/2009 12:30PM JOSE CHACON(PCE) MSS - FCSD - VSP C/P SVC ENG CALLED THE TECHNICIAN AND SPOKE WITH ED/JOHN STEWART AND SERVICE MANAGER PAUL HAY. TECH INDICATED HE RAN OASIS AND/OR DID NOT FIND ANY CONCERNNS. TECH INDICATED THIS VEHICLE HAD COMPLETE NO ASSIST AT ALL. THE IDS WAS INSTALLED AND/OR CODES U3000:48, U3000:49, U3096:C8 WERE PRESENT. TECHNICIAN INDICATED HE CHECKED A FEW CONNECTIONS AND/OR DECIDED TO ORDER A EPAS ASSEMBLY. ASKED THE TECHNICIAN IF HE UTILIZED THE NEW EPAS WORKSHOP MANUAL DIAGNOSIS? TECH INDICATE NO, HE WAS NOT AWARE OF THIS DIAGNOSIS. ADVISED ED/JOHN HOW TO GET TO THE DIAGNOSIS AND/OR WHAT TO DO. I CALL THE TECHNICIAN AT A LATER TIME

*Eric J Estes*

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TRW Limited

Registered in England, No. 872948

Registered Office Address: Stratford Road, Solihull B90 4AX

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Monday, August 16, 2010 8:06 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Mrozek, Robert (R.M.)  
**Subject:** RE: 2010 CD3 TC lamp on C1278,c1277 & C1963 ABS CODES

Good catch. Is there a reason we raise the ABS codes? Can we NOT raise them for this scenario? Or raise a DTC that tells the tech to service the wiring?

*Rob Mrozek*

Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: rmrozek@ford.com

---

**From:** Snider, Tim (T.O.)  
**Sent:** Monday, August 16, 2010 3:28 PM  
**To:** Estes, Eric (E.E.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ (.); Kremer, Doug (D.); Hanna, Bashar (B.A.); Ulloa, Fernando (F.F.); Mrozek, Robert (R.M.); 'Anthony Fleenor'; 'Greg Bendzinski'; 'Mark Karwowski'; 'Robert Kostadina'; 'Simon Malsbury'; Dayringer, Brett (.); Shekleton, James (J.); Chacon, Jose (A.); McCormick, John (J.P.); Chacon, Jose (A.)  
**Subject:** RE: 2010 CD3 TC lamp on C1278,c1277 & C1963 ABS CODES

Eric,

Please advise the hotline to inspect connector C1010 for possible intermittent connection if a CD3 EPAS vehicle has C1963 or C1277 or C1278 DTC's.

Regards,  
Tim Snider (tsnider1@ford.com)  
**CD3 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** Estes, Eric (E.E.)  
**Sent:** Friday, June 25, 2010 12:52 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ (.); Kremer, Doug (D.); Hanna, Bashar (B.A.); Ulloa, Fernando (F.F.); Mrozek, Robert (R.M.); Anthony Fleenor; Greg Bendzinski; Mark Karwowski; 'Robert Kostadina'; 'Simon Malsbury'; Dayringer, Brett (.); Shekleton, James (J.); Chacon, Jose (A.)  
**Subject:** RE: 2010 CD3 TC lamp on C1278,c1277 & C1963 ABS CODES

I have seen many CQIS reports with this issue, make sure we write something up with connector number so I can sent out to the hotline here, this could turn into a SSM to prevent EPAS, ABS & RCM module replacements in the field. From my warranty pareto we have at 11 EPAS warranty claims, some of the other claims the tech states he has no assist with TC

lamp on c1278/C1277/c1263 but I did not find any b-codes and they did not mention problems with PSCM communication, so that number could be higher.

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

---

**From:** Snider, Tim (T.O.)  
**Sent:** Thursday, June 24, 2010 4:01 PM  
**To:** Estes, Eric (E.E.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ (.) ; Kremer, Doug (D.) ; Hanna, Bashar (B.A.) ; Ulloa, Fernando (F.F.) ; Mrozek, Robert (R.M.)  
**Subject:** RE: C1278 & C1963 ABS CODES

Eric,

Russ and I recreated the C1963 and C1277 codes last night in a Brakes development vehicle by unhooking the EPAS jumper CAN connector underneath the front bumper for about a half second. No codes were recorded in the PSCM or other modules and steering assist remained, but C1963 and C1277 were recorded in the brake module. If we left the connector disconnected longer, say 5 seconds, then the PSCM showed a low battery code, steering assist was lost, and the service advance trac light came on in the cluster in addition to the C1963 and C1277. Once Russ sends the codes we can discuss next steps. I don't think any further vehicle evaluation is needed on these gears.

Regards,  
Tim Snider (tsnider1@ford.com)  
**CD3 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** Estes, Eric (E.E.)  
**Sent:** Tuesday, June 01, 2010 2:25 PM  
**To:** Biyashev, Russ (.)  
**Cc:** Snider, Tim (T.O.); Bahena, Miguel (Mike.); Kremer, Doug (D.)  
**Subject:** RE:C1278 & C1963 ABS CODES

Russ I have three EPAS gears at WPAC all TC lamp on C1278/77 & C1963 with no EPAS codes or loss of PS assist. Not sure if they replaced the ABS module, but you can select next gear to install for on-vehicle test.

VIN# 3FAHP0HA8AR [REDACTED] (ABS C1963-20)- TRW# FR0194

VIN# 3FAHP0JA5AR [REDACTED] (ABS C1278)- FR0212

VIN# 3MEHM0HA3AR [REDACTED] (ABS C1278)- FR0215

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

**From:** Biyashev, Russ (.)  
**Sent:** Friday, May 07, 2010 9:46 AM  
**To:** Estes, Eric (E.E.)  
**Subject:** RE: Updated TRW Warranty Tracker

Okay. Sounds good.

Thank you,

**Russ Biyashev**  
**Ford Motor Company**  
**Chassis Brake Controls**  
Phone: 313.805.4793  
Text: 3138054793@vtext.com  
Email: rbiyashe@ford.com

---

**From:** Estes, Eric (E.E.)  
**Sent:** Thursday, May 06, 2010 3:44 PM  
**To:** Biyashev, Russ (.) ; Snider, Tim (T.O.)  
**Subject:** RE: Updated TRW Warranty Tracker

I have the gear at WPAC when you are ready. I know Tim is out till 5/17 so maybe at that time we can decide if we want to swap in a new gear.

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

---

**From:** Biyashev, Russ (.)  
**Sent:** Thursday, May 06, 2010 3:34 PM  
**To:** Estes, Eric (E.E.) ; Snider, Tim (T.O.)  
**Subject:** RE: Updated TRW Warranty Tracker

Eric

Previously provide gear from another return has been in my Milan for weeks now. No issues. If the team agrees to put a new rack in, we can do that next week.

Tim - I am unable to test on the Milan this week per our previous conversation. Hopefully we can do the connector terminal fault insertion next week.

Thank you,

**Russ Biyashev**  
**Ford Motor Company**  
**Chassis Brake Controls**  
Phone: 313.805.4793  
Text: 3138054793@vtext.com  
Email: rbiyashe@ford.com

---

**From:** Estes, Eric (E.E.)  
**Sent:** Thursday, May 06, 2010 10:13 AM  
**To:** Nunn, Aaron (A.L.) ; Snider, Tim (T.O.) ; Jakubik, Paul (P.C.) ; Boughan, Jerry (J.D.)

**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ (.) ; Mrozek, Robert (R.M.); Kremer, Doug (D.)  
**Subject:** RE: Updated TRW Warranty Tracker

I don't think we will find anything in our testing this would be a good on-vehicle test to see if the TC lamp comes on with ABS code C1963-20 because that was the only fault noted.

Russ let me know when your done with FR0124 road testing for C1277 and we can install this gear. thanks

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

---

**From:** Nunn, Aaron (A.L.)  
**Sent:** Thursday, May 06, 2010 8:08 AM  
**To:** Snider, Tim (T.O.); Estes, Eric (E.E.); Jakubik, Paul (P.C.); Boughan, Jerry (J.D.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ (.) ; Mrozek, Robert (R.M.)  
**Subject:** RE: Updated TRW Warranty Tracker

Before we get defensive--Have we properly tested the returned part? Any chance it is actually bad?

What was the prior history of repair for the vehicle? Is there any reason the steering angle sensor would have been out of calibration? Were there any other DTC's that would have pointed to a connection issue? If the ABS DTC was the only one and there was no prior repair on the vehicle where a dealer may have failed to properly connect a wire or calibrate the sensor then my vote goes to paying the dealer. The dealer was obviously trying to do the right thing. They took the time to call hotline. Nothing makes them do that and we do not pay the dealer extra to do it.

---

**From:** Snider, Tim (T.O.)  
**Sent:** Monday, May 03, 2010 3:21 PM  
**To:** Estes, Eric (E.E.); Jakubik, Paul (P.C.); Nunn, Aaron (A.L.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ (.) ; Mrozek, Robert (R.M.)  
**Subject:** RE: Updated TRW Warranty Tracker

Doesn't sound like the Hotline advised the dealer to replace the gear. Also, doesn't look like the pinpoint tests tell the technician to replace the gear. Seems like a legitimate dealer charge back.

Paul / Aaron,

Your thoughts?

Regards,  
Tim Snider (tsnider1@ford.com)

**CD3 Steering Engineering  
Ford Motor Company**

Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

**From:** Estes, Eric (E.E.)  
**Sent:** Monday, May 03, 2010 3:02 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ (.)  
**Subject:** RE: Updated TRW Warranty Tracker

With no PSCM codes listed in PPT "F" (tech did not use Interactive Diagnosis if there was an EPAS code) leads to PPT "G" which test the ABS & RCM module only.

Here is the CQIS(Hotline) Report- the only warranty claim on this vehicle., below that is the AWS claim.

Report# :	[REDACTED]	Received: 03/16/2010
CCRG/EPRC:	<< OLE Object: Picture (Metafile) >> << OLE Object: Picture (Metafile) >>	Reviewed Status: Date:
Vehicle:	2010,FUSION,SE, SEDAN 3FAHP0HA8AR [REDACTED]	Build Date: 08/12/2009
Odometer :	15,483 M	Engine: 2.5L DOHC Calibration: ADE1F40A
Transmission:	6SP 6F MID	Axle: 3.066RATIO A/C: YES
Dealer:	USA 00472 Jim Tidwell Ford	Phone#: (770) 427-5531
City:	Kennesaw	State: Georgia Country : USA
Originator:	CARL WHITE	
Symptom:	3 01 A 04 CHASS.,SERVICE BRAKE ,INDICATOR,T/C LIGHT	
Status:		
VFG:	V21 BRAKING	
Additional Symptom:	C1963	
Fix: N	Causal Component :	
Condition Code:		

Hotliner: JTAYL466	Phone: 000 000-0000	Regn Cd: S1 Atlanta
Engineering:	Phone:	TAR:
Dlr Contact: CARL WHITE	Phone: 770 427-5531	Title Cde: T

KOEO: C1963

KOEC:

KOER:

REPAIR 03/16/2010 01:14PM JASON TAYLOR MSS - FCSD - TECH SVC HOTLINE

WEB FORM DATA - CONCERN: TRACTION CONTROL LAMP ON/OFF  
DIAGNOSTICS:

PINPOINT TEST F FOR DTC 1963.20 PARTS REPLACED: NONE TECH

QUESTION: PINPOINT TEST FOR THIS DTC STATES TO CK STEERING  
WHEEL ANGLE

SENSOR, HAVE DONE SO AND VEHICLE DOES NOT HAVE ONE, HAS SPOT  
FOR SENSOR

BUT NO SENSOR OR CONNECTOR. HAVE VARIFIED LOCATION PER WSM  
AND EVTM

BOTH PAPER AND ONLINE. WHAT AM I MISSING? WERE YOU ABLE TO  
VERIFY

THE CONCERN? YES IS THERE AN APPROPRIATE PINPOINT TEST IN THE  
WSM

FOR THIS CONCERN? YES WAS THE PINPOINT TEST FOLLOWED? YES

RECOM M 03/16/2010 01:14PM JASON TAYLOR MSS - FCSD - TECH SVC HOTLINE

CARL, THIS VEHICLE IS EQUIPPED WITH EPAS, SO THE STEERING WHEEL  
ANGLE SENSOR IS LOCATED INTERNAL TO THE EPAS GEAR ASSEMBLY.  
ROTATION

SPEED AND ANGLE ARE SENT TO THE ABS MODULE FROM THE POWER  
STEERING

CONTROL MODULE (PSCM) ALONG THE HIGH SPEED CONTROLLER AREA  
NETWORK

(HS-CAN) BUS. IN THE PIN POINT TEST REFER TO STEP F2 IN WSM  
SECTION

206-09 SINCE THIS VEHICLE IS EQUIPPED WITH EPAS.

REPAIR 03/16/2010 02:15PM FRED SHEPHERD MSS - FCSD - TECH SVC HOTLINE

TECHNICIAN REPLY: THANKS, AFTER READING FARTHER, I FIGURED IT  
OUT. THANKS

FOR YOUR TIME,CARL

RECOM 03/16/2010 02:15PM FRED SHEPHERD MSS - FCSD - TECH SVC HOTLINE  
M

YOU'RE WELCOME. IF YOU REQUIRE FURTHER ASSISTANCE AFTER  
PERFORMING THE

POSTED RECOMMENDATIONS, PLEASE UPDATE YOUR FORM WITH ANY  
ADDITIONAL

INFORMATION. IF YOU RESOLVE THE CONCERN, PLEASE LET US KNOW  
WHAT

REPAIRED THE VEHICLE USING THE SURVEY. THANK YOU.

ADD-  
ON 03/19/2010 09:16AM MARK MCCLELLAND MSS - FCSD - TECH SVC HOTLINE

-RE-CONTACTED TECHNICIAN. REPLACING THE EPAS RACK RESOLVED  
THIS

CONCERN.

### AWS Claim

Cust. Concern Code: H39 - TRACTION CONTROL/ADV TRAC WARNING LIGHT TROUBLES Condition  
Code: 42 - DOES NOT OPERATE PROPERLY Technician Comment: CUSTOMER CONCERN TRACTION  
CONTROL LIGHT ON AND OFF PERFORMED TRACTION CONTROL ABS DIAG PULLED CODES  
C1963 20 FOLLOWED PINPOINT TEST F WHICH LED TO STEERING WHEEL ANGLE SENSORS  
SPOKE WITH HOTLINE CONFIRMED SENSORS ONLY AVAILABLE IN STEERING RACK TECH  
REPLACED STEERING RACK NECESSARY TO LOWER SUBFRAME TO ACCESS AND REPLACE  
RACK AFTER REPLACING RACK TECH CHECKED ALIGNMENT AND CORRECTED TO SPEC  
RETEST Customer Comment: CUST STATES TRACTION CONTROL LIGHT COMES ON AND OFF

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

---

**From:** Snider, Tim (T.O.)  
**Sent:** Monday, May 03, 2010 2:33 PM  
**To:** Estes, Eric (E.E.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ (.)

**Subject:** RE: Updated TRW Warranty Tracker

Eric,

Let me know what the Hotline advised.

Regards,

Tim Snider (tsnider1@ford.com)

**CD3 Steering Engineering**

**Ford Motor Company**

Cell 313-805-3201

2B-L18 Product Development Center

Dearborn, MI 48124 USA

---

**From:** Biyashev, Russ (.)  
**Sent:** Monday, May 03, 2010 1:44 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Bahena, Miguel (Mike.); Estes, Eric (E.E.)  
**Subject:** RE: Updated TRW Warranty Tracker

Tim

Checked on that VIN and basically there is not enough info to tell whether it was a good repair or not.

Looks like technician did call the hot line.

Thank you,

**Russ Biyashev**  
**Ford Motor Company**  
**Chassis Brake Controls**  
Phone: 313.805.4793  
Text: 3138054793@vtext.com  
Email: [rbiyashe@ford.com](mailto:rbiyashe@ford.com)

---

**From:** Snider, Tim (T.O.)  
**Sent:** Monday, May 03, 2010 1:40 PM  
**To:** Biyashev, Russ (.)  
**Cc:** Bahena, Miguel (Mike.); Estes, Eric (E.E.)  
**Subject:** FW: Updated TRW Warranty Tracker

Russ,

Please see FR-0194 in the attachment. Should the steering gear have been replaced? I'll come to your desk to discuss it.

Regards,

Tim Snider (tsnider1@ford.com)

**CD3 Steering Engineering**

**Ford Motor Company**

Cell 313-805-3201

2B-L18 Product Development Center

Dearborn, MI 48124 USA

**From:** Estes, Eric (E.E.)  
**Sent:** Friday, April 30, 2010 12:13 PM  
**To:** Bahena, Miguel (Mike.); Snider, Tim (T.O.); Diez, Timothy (T.P.); Mrozek, Robert (R.M.)  
**Subject:** Updated TRW Warranty Tracker

Here is today's update of the warranty tracker

<< File: 2010 CD3-D3 EPAS Warranty Apr\_30\_2010.xls >>

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Tuesday, October 27, 2009 6:10 PM  
**To:** Meier, Kenneth (K.W.); Gudino Mendoza, Martin (J.M.)  
**Cc:** Snider, Tim (T.O.); Quijada, Jorge (J.); Annadi, Hari (H.); Rogero, Antonio (A.); Chacon, Jose (A.)  
**Subject:** RE: 2010 EPAS CD3 Claim # [REDACTED] VIN#3FAHP0HA1AR [REDACTED]



[REDACTED] 3FAHP0HA1AR15...

Thank you Ken.

*Rob Mrozek*

Electric Power Steering Supervisor  
CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

---

**From:** Meier, Kenneth (K.W.)  
**Sent:** Tuesday, October 27, 2009 2:08 PM  
**To:** Gudino Mendoza, Martin (J.M.)  
**Cc:** Snider, Tim (T.O.); Quijada, Jorge (J.); Annadi, Hari (H.); Mrozek, Robert (R.M.); Rogero, Antonio (A.); Chacon, Jose (A.)  
**Subject:** RE: 2010 EPAS CD3 Claim # [REDACTED] VIN#3FAHP0HA1AR [REDACTED]

Robert,

Give me a copy of the claim and I can forward to our Fleet Zone Manager that calls on Dollar rental for a name and phone number.

*Ken Meier*

Commercial Vehicle Operations  
Commercial Service Manager  
Regent Court Building  
16800 Executive Pl. Dr.  
Dearborn, MI 48126-4207  
Phone: 313-317-1867 Fax: 313-248-3481

---

**From:** Gudino Mendoza, Martin (J.M.)  
**Sent:** Tuesday, October 27, 2009 10:55 AM  
**To:** Meier, Kenneth (K.W.)  
**Cc:** Snider, Tim (T.O.); Quijada, Jorge (J.); Annadi, Hari (H.); Mrozek, Robert (R.M.); Rogero, Antonio (A.); Chacon, Jose (A.)  
**Subject:** RE: 2010 EPAS CD3 Claim # [REDACTED] VIN#3FAHP0HA1AR [REDACTED]

Ken:  
Could you help Robert, to obtain information about EPAS concerns reported by Dollar/Thrifty fleet? If you are not the right contact, do you know who is in fleet department?

Regards

## Martin Gudino

FCSD-PVT Program Manager  
HSAP

**From:** Rogero, Antonio (A.)  
**Sent:** Tuesday, October 27, 2009 7:37 AM  
**To:** Gudino Mendoza, Martin (J.M.)  
**Cc:** Snider, Tim (T.O.); Quijada, Jorge (J.); Annadi, Hari (H.); Mrozek, Robert (R.M.)  
**Subject:** RE: 2010 EPAS CD3 Claim # [REDACTED] VIN#3FAHP0HA1AR [REDACTED]

Martin,  
See you in your office to review this item.

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Martes, 27 de Octubre de 2009 06:05 a.m.  
**To:** Quijada, Jorge (J.); Rogero, Antonio (A.); Annadi, Hari (H.)  
**Cc:** Snider, Tim (T.O.); Mrozek, Robert (R.M.)  
**Subject:** 2010 EPAS CD3 Claim # [REDACTED] VIN#3FAHP0HA1AR [REDACTED]

Jorge/Hari -

We have the attached CD3 EPAS claim with little useful description and no contact information. The dealer is a Dollar/Thrifty Rental company and I am not sure how to make contact with them w/o any information in the claim outside of making cold calls to them.

Who is the FCSD contact for HSAP and any suggestion on how we can follow up on this claim? Thank you.

<< OLE Object: Picture (Enhanced Metafile) >>  
<< OLE Object: Picture (Enhanced Metafile) >>

*Rob Mrozek*

Electric Power Steering Supervisor  
CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

Server: AWS Prod

Claims loaded through: 26-OCT-2009

# Claim Detail Report

*Note: All costs are in US dollars***Model Year = 2010; Claim Key = [REDACTED]****Vehicle Information**

Model Year: 2010

Market Derived: F - FORD

Body/Cab Type: C/FA - 4 DOOR SEDAN-4 LITE

Version/Series: \*-[N/A]

Drive Type: C/A-2 WHL L/H FRONT DRIVE

Vehicle Line: C/DE-FUSION/MILAN/MKZ (ZEPHYR)  
[06-10]

Warranty Start Date: 25-JUN-2009

Production Date: 10-JUN-2009

VIN: 3FAHP0HA1AR [REDACTED]

**Claim Information**

Document Number: [REDACTED]

Repair Date: 17-SEP-2009

Distance: 5216

TIS: 3

**Dealer Information:**

Dealer Name DTAG - HOUSTON

Dealer Code: 46569 - \*

Address: 8620 PANAIR

City: HOUSTON

State: TX Zip Code: 77061

Country: USA Region Code: NA

Phone: (\*)\*-\*

**Expense Information**

Customer Paid Amount:	.00
Deductible Amount:	.00
Dealer Paid Amount:	.00
Labor Cost:	85.00
Misc. Expense Amount:	.00
Part Markup Amount:	187.96
Material Cost:	1127.76
Total Cost Gross:	1212.76

Cust. Concern Code: H50 - STEERING GEAR/PUMP TROUBLES

Condition Code: 42 - DOES NOT OPERATE PROPERLY

Technician Comment: REPLACE RACK AND PINION

Customer Comment: NO POWER STEERING

<b><u>Labor Op Code</u></b>	<b><u>Labor Op Description</u></b>	<b><u>Labor Op Cost</u></b>
3504A	STEERING GEAR ASSEMBLY REMOVE AND INSTALL OR REPLACE	85.00

<b>Causal Full Part Number</b>	<b>Part Description</b>	<b>Part Extended CPSC Quantity</b>	<b>Extended Amount</b>
Flag PREF BASE SUFF			

Y AE5Z 3504 B GEAR ASY-STEERING 110201 I 1127.76

DTC Sections: Mil. Light On = \*

**Flag** **Test** **Type** **Malfunction Cd** **Malfunction Cd** **Description Monitor Cd** **Monitor Cd** **Description**

Any comments? You can contact

*webmaster*

2830

---

**From:** Frey, Martin (M.F.)  
**Sent:** Wednesday, December 02, 2009 7:15 PM  
**To:** Matthews, Steve (S.D.); Galindo, Sergio (S.N.)  
**Cc:** Patel, Bharat (B.J.); Jones, Rick (W.P.); Mrozek, Robert (R.M.)  
**Subject:** RE: 2010 Fusion Milan Alleged Lack of Assist - EPAS

Thanks, Steve.

Martin Frey  
Manager Electric Steering/Advanced Features/R&P Gear  
Chassis Engineering  
Cell # 313 805 6301

---

**From:** Matthews, Steve (S.D.)  
**Sent:** Wednesday, December 02, 2009 2:03 PM  
**To:** Frey, Martin (M.F.); Galindo, Sergio (S.N.)  
**Cc:** Patel, Bharat (B.J.); Jones, Rick (W.P.); Mrozek, Robert (R.M.)  
**Subject:** RE: 2010 Fusion Milan Alleged Lack of Assist - EPAS

As an analyst in ASO, I review approx 150-200 reports per day for various chassis component repairs/failures. The sources for these reports include GCQIS, AWS, MORS/CuDL and VOQ (from NHTSA). If we (as a department) come across a concern that has a potential to be safety related, we discuss these emerging concerns with the Critical Concern Managers (CCM) and members of the CCRG during a weekly teleconference. Based on the discussion regarding an individual concern, we receive direction to either forward the data to the appropriate product development personnel for their review and possible discussion with the CCM or develop a formal paper that may be used to escalate a concern to the CCRG. In this particular instance, the request was to forward the data to you and Sergio for your review. I am not requesting you do anything with the data specifically, instead this may be more of an awareness issue as the average cost of repair exceeds \$1500. There are some production months where the failure rate exceeds 1 R/1000 and since this vehicle/steering gear application is new for 2010 and the vehicles have relatively few miles/months in service on them, there are concerns that this issue could grow into something larger as the products mature in the field.

**Steve Matthews**  
Product Concern Analyst  
Automotive Safety Office  
313.24.83764

---

**From:** Frey, Martin (M.F.)  
**Sent:** Wednesday, December 02, 2009 1:27 PM  
**To:** Matthews, Steve (S.D.); Galindo, Sergio (S.N.)  
**Cc:** Patel, Bharat (B.J.); Jones, Rick (W.P.); Mrozek, Robert (R.M.)  
**Subject:** RE: 2010 Fusion Milan Alleged Lack of Assist - EPAS

All EPAS systems by design fail with lack of assist which is not a safety issue. CD3 failure rates are very low.... Approx 0.5Rs. We get every failed part back for root cause analysis and will continue to eliminate any/all failure modes.

Why was this discussed at ASO mtg?

Thx.

Martin Frey  
Manager Electric Steering/Advanced Features/R&P Gear  
Chassis Engineering  
Cell # 313 805 6301

---

**From:** Matthews, Steve (S.D.)  
**Sent:** Wednesday, December 02, 2009 1:08 PM  
**To:** Galindo, Sergio (S.N.); Frey, Martin (M.F.)  
**Cc:** Patel, Bharat (B.J.); Jones, Rick (W.P.)  
**Subject:** 2010 Fusion Milan Alleged Lack of Assist - EPAS

Sergio and Martin,

Attached to this email is an excel file containing AWS data regarding customers alleging lack of assist on 2010 Fusion/Milan vehicles equipped with EPAS.

This concern was discussed with Bharat Patel and members of ASO this morning (12/2) during a conference call with Bharat. At Bharat's request, I am forwarding this file to you for your review.

<< File: 2010 Fusion Milan Alleged lack of Assist EPAS AWS 11172009.xls >>

Call me if you have questions regarding the file.

**Steve Matthews**  
Product Concern Analyst  
Automotive Safety Office  
313.24.83764

**From:** McIntyre, Kathryn (K.L.)  
**Sent:** Tuesday, October 13, 2009 2:53 PM  
**To:** 'Martha Abundis'; Hochrein, Brad (B.G.); Harris, Jonathan (J.E.); Miralles, Juan (J.); Quijada, Jorge (J.); Bahena, Miguel (Mike.); Brandenburg, Manfred (M.); Frey, Martin (M.F.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Snider, Tim (T.O.); Hernandez, Victor (V.M.); Bouse, William (Bill.); Aaron Blancas; Alexander Kleist; BaoYuan Tian; Douglas Sherman; Frank Fan; Geoff Collins; Geoff Jacks; Greg Collier; Jacky Shi; Jeff Jiang; Jim Rau-nonTRW; Keith Dusina; Mark Karwowski; Mike Davies; Pavel Vetz; Phil Browne; Philip Warren-Green; Robert Kostadina; Romance Zhu; Rudy Shuryan; Salim Semssar; Sanjay Singh; Simon Malsbury; Filipe.Matos@tycoelectronics.com; hugo.gomes@tycoelectronics.com; Miralles, Juan (J.); Brandenburg, Manfred (M.)  
**Subject:** RE: 8D B3A - Plastic contamination

Hi - The problem investigation has not gone far enough for return #2805. Tyco needs to determine if their detection method for contamination needs to change or if they need to do more destructive testing to confirm that they will not have this type of contamination in the future. If you make a part similar to 2805 today, the Tyco process would not detect the contamination and it would pass it on into the value stream.

Please use the 3 x 5 why tool to assist you with your root cause analysis (TRW has that tool). Please provide an updated 8D as soon as it is ready to Mike Davies, Geoff Jacks and Juan Miralles.

Thanks you.

Kathryn McIntyre  
Cell 313 805-2408

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-----Original Message-----

**From:** Martha Abundis [mailto:[Martha.Abundis@TRW.COM](mailto:Martha.Abundis@TRW.COM)]  
**Sent:** Monday, October 12, 2009 3:17 PM  
**To:** Hochrein, Brad (B.G.); Harris, Jonathan (J.E.); Miralles, Juan (J.); Quijada, Jorge (J.); McIntyre, Kathryn (K.L.); Bahena, Miguel (Mike.); Brandenburg, Manfred (M.); Frey, Martin (M.F.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Snider, Tim (T.O.); Hernandez, Victor (V.M.); Bouse, William (Bill.); Aaron Blancas; Alexander Kleist; BaoYuan Tian; Douglas Sherman; Frank Fan; Geoff Collins; Geoff Jacks; Greg Collier; Jacky Shi; Jeff Jiang; Jim Rau-nonTRW; Keith Dusina; Mark Karwowski; Martha Abundis; Mike Davies; Pavel Vetz; Phil Browne; Philip Warren-Green; Robert Kostadina; Romance Zhu; Rudy Shuryan; Salim Semssar; Sanjay Singh; Simon Malsbury; [Filipe.Matos@tycoelectronics.com](mailto:Filipe.Matos@tycoelectronics.com); [hugo.gomes@tycoelectronics.com](mailto:hugo.gomes@tycoelectronics.com)  
**Subject:** 8D B3A - Plastic contamination

All -

Attached 8D for the CD3 gear that failed in Hermosillo on August 29, 2009

Any comment please let me know.

Martha

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Wednesday, August 18, 2010 2:41 PM  
**To:** 'Markus.Nowak@hella.com'  
**Cc:** anthony.fleenor@trw.com; JoseJ.Lopez@TRW.COM; Jim.Loria@TRW.com; Bahena, Miguel (Mike.); Snider, Tim (T.O.); Diez, Timothy (T.P.); jason.johnson@trw.com; Engelbert.Lu@TRW.COM; Angie.Caudill@TRW.COM; Thomas.Surmann@hella.com; Guillermo.Aguilar@TRW.COM; Geoff.Jacks@TRW.COM; Samuel.Arreola@TRW.COM; Michael.Fontana@TRW.COM; pavel.vetz@trw.com; Mattern, Don (D.); Surella, Matthew (M.M.); Salim.Semssar@TRW.COM; Estes, Eric (E.E.)  
**Subject:** RE: 8D Reports for the 2 Wr issues FR 113 and FR 257

Is there any explanation for the dirtiness and staining on FR113 and does it have any relationship to the ASIC failure?

*Rob Mrozek*

Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

---

**From:** [Markus.Nowak@hella.com](mailto:Markus.Nowak@hella.com) [mailto:[Markus.Nowak@hella.com](mailto:Markus.Nowak@hella.com)]  
**Sent:** Wednesday, August 18, 2010 9:49 AM  
**To:** anthony.fleenor@trw.com; JoseJ.Lopez@TRW.COM; Jim.Loria@TRW.com; Bahena, Miguel (Mike.); Mrozek, Robert (R.M.); Snider, Tim (T.O.); Diez, Timothy (T.P.); jason.johnson@trw.com; Engelbert.Lu@TRW.COM; Angie.Caudill@TRW.COM; Thomas.Surmann@hella.com; Guillermo.Aguilar@TRW.COM; Geoff.Jacks@TRW.COM; Samuel.Arreola@TRW.COM; Michael.Fontana@TRW.COM; pavel.vetz@trw.com; Mattern, Don (D.); Surella, Matthew (M.M.); Salim.Semssar@TRW.COM; Estes, Eric (E.E.)  
**Subject:** 8D Reports for the 2 Wr issues FR 113 and FR 257

Dear all,

here the 8Ds.

talk to you soon.

Markus

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Monday, March 01, 2010 11:25 PM  
**To:** Annadi, Hari (H.); Biyashev, Russ (.)  
**Cc:** Patel, Harendra (H.M.); Snider, Tim (T.O.); Bahena, Miguel (Mike.)  
**Subject:** RE: ABS lights on due to possible EPAS issue on CD3

I would like more time. I am not up to speed on the issue just coming back from vacation all last week and I am not too keen to be providing verbals in front of Ali. I would prefer to spend a week understanding the issue. My team is offsite all day tomorrow at TRW as well so that day is booked.

It really is too short a notice. Can we please move it a week?

*Rob Mrozek*

Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

---

**From:** Annadi, Hari (H.)  
**Sent:** Monday, March 01, 2010 12:45 PM  
**To:** Mrozek, Robert (R.M.); Bahena, Miguel (Mike.); Snider, Tim (T.O.)  
**Cc:** Patel, Harendra (H.M.); Biyashev, Russ (.)  
**Subject:** ABS lights on due to possible EPAS issue on CD3

Rob - The Brakes group is requesting a Steering rep to give them a verbal update on the subject issue on what the team is pursuing to reduce/eliminate the issue. Can you or Mike pl attend the Brakes FQR on 3/3/10 to talk to this item. Pl do let me know if you need more time. Thanks.

*Hari Annadi*

**Chassis Quality Supervisor**  
**Master Black Belt**  
Building # PDC 2B-A57  
Work Cell: 313 805 4746  
Ford Motor Company, Dearborn, Michigan  
email: [<mailto:hannadi@ford.com>](mailto:hannadi@ford.com)

---

**From:** Estes, Eric (E.E.)  
**Sent:** Tuesday, June 02, 2009 8:47 PM  
**To:** Bahena, Miguel (Mike.); Bouse, William (W.J.)  
**Cc:** Chacon, Jose (A.); Beattie, Mike (M.A.)  
**Subject:** RE: Another B3a just hit in IDS

I advised Earl to call the dealer back on this claim below because the code did not reset after clearing and the PPT leads to returning the vehicle to the customer. I advised to make sure the tech performed a parking lot road test and do a cold start if possible before returning the vehicle to the customer.

(Earl responded below)

He reported that he took the vehicle for a test drive and the code would not come back. He did add that the customer was complaining of a intermittent hard start concern as well. there were no other codes and no aftermarket components. The battery is in good condition. He did do the parking lot test and a longer road test. He was going to let it sit over night to test the steering and the starting concern in the morning.

I told him not to replace the rack. Report number 9FBAK121

**G. Earl Hillaker**  
**Fusion/Milan/MKZ, Focus, Fiesta SME**  
**Service Engineering Operations**

Report# :	9FBAK121 NHL	Received:	06/02/2009
CCRG/EPRC:	Reviewed Status:	Date:	
Vehicle:	2010,MILAN,PREMIER,SEDAN ,3MEHMOJA8AR [REDACTED]	Build Date:	02/17/2009
Odometer:	1,814 M	Engine:	2.5L DOHC
Transmission:	6SP 6F MID	Axle:	
Dealer:	USA 13123 Wall's Lincoln-Mercury, Inc.	Phone#:	(508) 687-3100
City:	Methuen	State:	Massachusetts
Originator:	SCOTT WALTON	Country:	USA
Symptom:	3 03 1 50 CHASS.,STRG/HANDLING ,FUNCTION,HIGH EFFORT		
Status:			
VFG:	V87 STEERING		

Additional Symptom: HIGH STEERING EFFORTS U2011:49

Fix: Causal Component:

Condition Code:

Hotliner: DKNAPP7

Phone: 000 317-6316

Regn Cd: N2 Boston

Engineering:

Phone:

TAR:

Dlr Contact: SCOTT WALTON

Phone: 978 687-3100

Title Cde: T

**KOEO:** U2011

**KOEC:**

**KOER:**

REPAIR 06/02/2009 03:16PM DAVID KNAPP MSS - FCSD - TECH SVC HOTLINE

WEB FORM DATA - CONCERN: CUSTOMER LOST POWER STEERING  
DIAGNOSTICS:

SELF TEST PSCM, U2011:49-08 - CONTINUOUS MEMORY. CLEARED DTC,  
AND

RE-RAN SELF TEST, PASS. INSPECTED WIRING TO STEERING GEAR  
MOTOR,

O.K. PARTS REPLACED: NONE TECH QUESTION: ARE THERE ANY KNOWN  
CONCERNS? WERE YOU ABLE TO VERIFY THE CONCERN? YES IS THERE  
AN

APPROPRIATE PINPOINT TEST IN THE WSM FOR THIS CONCERN? NO WAS  
THE

PINPOINT TEST FOLLOWED? YES

**RECOM** M 06/02/2009 03:16PM DAVID KNAPP MSS - FCSD - TECH SVC HOTLINE

SCOTT, AS LONG AS THE POWER AND THE GROUND ARE PROPER TO THE  
EPAS

POWER STEERING MODULE WE WOULD SUGGEST REPLACING THE  
POWER STEERING

MODULE COLUMN ASSEMBLY FOR THIS CONCERN

REPAIR 06/02/2009 03:41PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE

TECHNICIAN REPLY: DID YOU MEAN STEERING MODULE GEAR ASSY?????

RECOM 06/02/2009 03:41PM GLEN HILLAKER MSS - FCSD - TECH SVC HOTLINE  
M

CORRECT SCOTT, THE STEERING MODULE GEAR ASSEMBLY WILL NEED  
TO BE

REPLACE.

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Tuesday, June 02, 2009 2:39 PM  
**To:** Bouse, William (W.J.); Estes, Eric (E.E.)  
**Subject:** Another B3a just hit in IDS

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)  
Pager: Click Here <<<<mailto:3138053680@messaging.sprintpcs.com>>>>

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Sunday, April 18, 2010 2:55 PM  
**To:** Estes, Eric (E.E.); Snider, Tim (T.O.); Bahena, Miguel (Mike.); Diez, Timothy (T.P.)  
**Subject:** RE: Antwort: RE: Antwort: TS Meeting this Wednesday 2/14 at 6pm (CEST)

So we lost the rabbit on FR0152? Or is Hella proposing someone somehow shorted out the part?

Rob Mrozek  
Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs Ford Motor Company  
Phone: (313) 805-5947  
e-mail: rmrozek@ford.com

-----Original Message-----

**From:** Estes, Eric (E.E.)  
**Sent:** Thursday, April 15, 2010 1:49 PM  
**To:** Snider, Tim (T.O.); Bahena, Miguel (Mike.)  
**Cc:** Mrozek, Robert (R.M.); Diez, Timothy (T.P.)  
**Subject:** FW: Antwort: RE: Antwort: TS Meeting this Wednesday 2/14 at 6pm (CEST)

Here are the 8D reports from Hella on FR0138 & FR0152. looking to close FR0152 and FR0138 waiting on ASIC jitter report from OnSemi sometime next week.

Eric

-----Original Message-----

**From:** Thomas.Surmann@hella.com [mailto:Thomas.Surmann@hella.com]  
**Sent:** Wednesday, April 14, 2010 9:58 AM  
**To:** Estes, Eric (E.E.)  
**Cc:** Ian Ingram; Joerg.Schirmacher@hella.com; Markus.Nowak@hella.com  
**Subject:** Antwort: RE: Antwort: TS Meeting this Wednesday 2/14 at 6pm (CEST)

Hello Eric,

attached the updated Interim 8D-Reports for FR0152 and FR0138 for the telcon today.

(See attached file: Interim 8D-Report FR0152 QCCAR 372979 2010-04-14.pdf)

(See attached file: Interim 8D-Report BD-Sensor FR0138\_2010\_04-14.pdf)

For questions don't hesitate to contact me.

Best Regards

i. A. Thomas Surmann

W5-3QS, actuators & sensors

---

Hella KGaA Hueck & Co.  
Berghäuser Strasse 30 Phone: +49-(0)2361-307-35227  
45663 Recklinghausen Fax: +49-(0)2361-307-47-35227  
Germany E-mail: Thomas.Surmann@hella.com  
Internet: www.hella.com

---

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Hella KGaA Hueck & Co., Rixbecker Str. 75, 59552 Lippstadt, Handelsregister  
Amtsgericht Paderborn HRB 6857  
Komplementäre: Dr. Jürgen Behrend; Hella Geschäftsführungsgesellschaft mbH,  
Lippstadt, (Amtsgericht Paderborn HRB 5650) und Hella Beteiligungs GmbH &  
Co. KG (Amtsgericht Paderborn HRB 5418)  
Geschäftsführer der Hella Geschäftsführungsgesellschaft mbH: Dr. Rolf  
Breidenbach (Vorsitzender), Carsten Albrecht, Dr. Wolfgang Ollig, Stefan  
Osterhage, Bernd Spies  
Vorsitzender des Aufsichtsrates: Prof. Dr. Michael Hoffmann-Beckig

"Estes,  
Eric  
(E.E.)" An  
<eestes@for <Markus.Nowak@hella.com>  
d.com> Kopie  
"Ian Ingram" <ian.Ingram@TRW.COM>  
<Joerg.Schirmacher@hella.com>  
13.04.2010 <Thomas.Surmann@hella.com>  
18:26 Thema  
RE: Antwort: TS Meeting this  
Wednesday 2/14 at 6pm (CEST)

Thanks Markus

Eric

From: Markus.Nowak@hella.com [mailto:Markus.Nowak@hella.com]  
Sent: Tuesday, April 13, 2010 11:47 AM  
To: Estes, Eric (E.E.)  
Cc: Ian Ingram; Joerg.Schirmacher@hella.com; Thomas.Surmann@hella.com  
Subject: Antwort: TS Meeting this Wednesday 2/14 at 6pm (CEST)

Hello Eric,

one of us will be available.

I hope we can close both items tomorrow.

Regards

Markus

"Estes, Eric (E.E.)"  
<eestes@ford.com>

An  
13.04.2010 16:37 <Markus.Nowak@hella.com>  
<Thomas.Surmann@hella.com>  
Kopie  
"Ian Ingram"  
<Ian.Ingram@TRW.COM>  
Thema  
TS Meeting this Wednesday  
2/14 at 6pm (CEST)

Markus/Thomas want to make sure someone is on the webmeeting call with Ford this Wednesday to discuss the progress of FR0138 & FR0152. Thanks

Global Network Access Toll-Free

Germany# [REDACTED]

Hang-on the line until operator comes on then enter conf. code & follow directions

Conf. Code: [REDACTED]

If that global number does not work use

248-226-5571- Reservationless-Plus International dial-in

---

To start the online webmeeting

---

1. Go to <https://www.meetingcenter.net>
2. Join a meeting
3. click on "Attend a Meeting"
4. Enter meeting# 592 291 871

Eric J Estes  
TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

---

**From:** Napoli, Laura (L.)  
**Sent:** Wednesday, February 29, 2012 3:55 PM  
**To:** Collins, Ron (R.J.)  
**Subject:** RE: B3A 6 Panel presentation

Thank you! It's getting tough to hold my patience with TRW lately, but the 2 people working on Warranty are good guys. It's the rest of the team that's testing my patience!

---

**From:** Collins, Ron (R.J.)  
**Sent:** Tuesday, February 28, 2012 5:31 PM  
**To:** Napoli, Laura (L.)  
**Subject:** FW: B3A 6 Panel presentation  
**Importance:** High

Laura: You have the patience of Job. Fine job (again!).

Thanks for all your hard work.

Ron Collins  
Chief Engineer, North American Chassis Engineering  
Ford Motor Company  
email: [rcollin4@ford.com](mailto:rcollin4@ford.com)

---

**From:** Perri, Ron (R.J.)  
**Sent:** Tuesday, February 28, 2012 2:58 PM  
**To:** Collins, Ron (R.J.); Tetley, John (J.K.)  
**Cc:** Surella, Matthew (M.M.); Napoli, Laura (L.)  
**Subject:** RE: B3A 6 Panel presentation  
**Importance:** High

Latest 6 Panel for B3A and B43 Relay warranty.

<< File: B3A\_6panel\_v9.ppt >>

Ron Perri  
Manager, Chassis - EPAS and Upper Steering, Systems & Core  
2B-F77, Product Development Center  
cell 313-805-0680  
[rperri@ford.com](mailto:rperri@ford.com)

---

**From:** Napoli, Laura (L.)  
**Sent:** Tuesday, February 28, 2012 2:01 PM  
**To:** Surella, Matthew (M.M.); Perri, Ron (R.J.); Geoff Jacks; Salim Semssar; Estes, Eric (E.E.); Anthony Fleenor; Andy Partridge; Pienta, Alan (A.); Rossi, Roberto (R.A.)  
**Subject:** RE: B3A 6 Panel presentation

Thank you everyone for the hard work on this presentation today. We need to keep this presentation updated for next Tuesday's meeting with Ron Collins. Sorry the meeting for today was delayed a week. Here is the latest B3A 6-panel...  
<< File: B3A\_6panel\_v8.ppt >>

---

**From:** Surella, Matthew (M.M.)  
**Sent:** Tuesday, February 28, 2012 8:30 AM

**To:** Surella, Matthew (M.M.); Perri, Ron (R.J.); Napoli, Laura (L.); Geoff Jacks; Salim Semssar; Estes, Eric (E.E.)  
**Subject:** B3A 6 Panel presentation  
**When:** Tuesday, February 28, 2012 1:00 PM-1:30 PM (GMT-05:00) Eastern Time (US & Canada).  
**Where:** Ron's Office and conference call/webex

Note that Ron Collins is unavailable this afternoon so we will not be presenting to him but we would still like to have the meeting and present our 6 Panel to Ron Perri. Please use the call-in numbers and webex below instead of the original Chassis Quality Deep Dive meeting notice.

Call-in: [REDACTED]

Passcode: [REDACTED]

Matthew Surella invites you to an online meeting using WebEx.

=====

Online Meeting Summary

=====

Meeting Link: <https://ford.webex.com/ford/j.php?J=712528021>

WebEx Meeting ID: 712 528 021

Meeting Password: This meeting does not require a password.

Audio: None

=====

Complete Meeting Details

=====

Teleconference Information:

None

Dialing Instructions:

Ford Net: x13673

Non FordNet Access:

Toll (International): +1.313.621.3673

Toll-free: 1.888.621.3673

U.K.: +44.1277.25.2555

Germany: +49.221.90.22555

Sweden: +46.31.3253673

Belgium: +32.89.619700

Meeting Number: 712 528 021

Meeting Password: This meeting does not require a password.

-----

To join this meeting (Now from mobile devices!)

1. Go to <https://ford.webex.com/ford/j.php?J=712528021>
2. If requested, enter your name and email address.
3. If a password is required, enter the meeting password: This meeting does not require a password.
4. Click "Join".
5. Follow the instructions that appear on your screen.

<http://www.webex.com>

MC06

---

**From:** Geoff Jacks <Geoff.Jacks@TRW.COM>  
**Sent:** Thursday, December 10, 2009 9:33 AM  
**To:** Bahena, Miguel (Mike.); Mrozek, Robert (R.M.); Snider, Tim (T.O.); Diez, Timothy (T.P.)  
**Cc:** Anthony Fleenor; Estes, Eric (E.E.); Guillermo Aguilar; JoseJLopez; Pavel Vetz; SergioAlvarez  
**Subject:** RE: B3A at FORD, 2nd Dec 09  
**Attachments:** Geoff Jacks.vcf

Mike,

Puma testing was completed yesterday without fault or LIC. I am in contact with Sergio about next steps.

Regards

Geoff

**Geoff Jacks**

*Quality and Product Support  
European Steering Team Leader  
TRW Electronic Engineering (TEE)  
Technical Centre  
Stratford Road  
Shirley  
Solihull  
B90 4GW*

■ Tel: +44 (0)121 627 4602  
■ Fax: +44 (0)121 627 3773  
■ Mob: +44 (0)7740 915 904  
■ email: [geoff.jacks@trw.com](mailto:geoff.jacks@trw.com)

>>> "Bahena, Miguel (Mike.)" <[mbahena1@ford.com](mailto:mbahena1@ford.com)> 09/12/2009 20:19 >>  
Jeff,

Thanks for the update. Have you run ambient & heated activation testing? Is this part of the next steps as well? Thanks.

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)  
Pager: Click Here <<<<mailto:3138053680@vttext.com>>>>

---

**From:** Geoff Jacks [mailto:[Geoff.Jacks@TRW.COM](mailto:Geoff.Jacks@TRW.COM)]  
**Sent:** Wednesday, December 09, 2009 12:42 PM  
**To:** Bahena, Miguel (Mike.); Mrozek, Robert (R.M.); Snider, Tim (T.O.); Diez, Timothy (T.P.)

**Cc:** Anthony Fleenor; Estes, Eric (E.E.); Guillermo Aguilar; JoseJLopez; Pavel Vetz; SergioAlvarez  
**Subject:** B3A at FORD, 2nd Dec 09

All,

Please find attached a summary of the investigations to date on the HSAP failure from last week. Also included are next steps.

Regards

Geoff

***Geoff Jacks***

*Quality and Product Support  
European Steering Team Leader  
TRW Electronic Engineering (TEE)  
Technical Centre  
Stratford Road  
Shirley  
Solihull  
B90 4GW*

■ Tel: +44 (0)121 627 4602  
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■ email: [geoff.jacks@trw.com](mailto:geoff.jacks@trw.com)

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TRW Limited

Registered in England, No. 872948

Registered Office Address: Stratford Road, Solihull B90 4AX

---

**From:** Bouse, Bill (W.J.)  
**Sent:** Sunday, February 22, 2009 2:26 PM  
**To:** Adams, Renee (R.L.); Rossi, Roberto (R.A.); Bahena, Miguel (Mike.)  
**Subject:** RE: B3A Investigation Status - Action Plan

Renee, the U2011-49 is the code that would be set for the TRW B3a diagnostic on the motor relay. You can pull the code with the Ford diagnostic tool by pulling the snapshot data (service 19) and putting in the U201149 and reading the last value of the returned data. Or you could directly read DID FDAA.

Also thanks for the link to report logiq.

-----Original Message-----

From: Adams, Renee (R.L.)  
Sent: Saturday, February 21, 2009 6:07 PM  
To: Rossi, Roberto (R.A.); Bahena, Miguel (Mike.); Bouse, Bill (W.J.)  
Subject: RE: B3A Investigation Status - Action Plan

AR101831 failed Code Check for PSCM "DTC U2011-49 MTR" on Wed 2/18 at 12:11:57.

QLS system shows the vehicle was then penalized in PDI for "Steering Wheel Hard to Move" with a score of 70 (which is a major).

Is DTC U2011-49 the same as the B3A code? Is the B3A an internal code pulled by TRW? I did not see in the part 2 diag spec.

Hermosillo was just switched over from Qbay to Report Logiq, which is why Code Check does not show in in Qbay.  
[http://www.ecats.ford.com/FordHAP\\_Hermosillo/ReportLogiq.html](http://www.ecats.ford.com/FordHAP_Hermosillo/ReportLogiq.html)

Regards,  
Renee Adams  
CD3 Electrical PMT Leader  
phone: +1 (313) 805-3494  
e-mail: [RRAYMON1@ford.com](mailto:RRAYMON1@ford.com)

-----Original Message-----

From: Rossi, Roberto (R.A.)  
Sent: Saturday, February 21, 2009 1:32 PM  
To: Adams, Renee (R.L.)  
Subject: RE: B3A Investigation Status - Action Plan

Mike Bahena provided the following vehicle history.

Roberto Rossi  
Chassis Electronics Supervisor  
313-805-4157

-----Original Message-----

From: Adams, Renee (R.L.)  
Sent: Saturday, February 21, 2009 3:30 PM  
To: Rossi, Roberto (R.A.)  
Subject: RE: B3A Investigation Status - Action Plan

Do you have the VIN #?

Regards,

Renee Adams  
CD3 Electrical PMT Leader  
phone: +1 (313) 805-3494  
e-mail: [RRAYMON1@ford.com](mailto:RRAYMON1@ford.com)

-----Original Message-----

From: Rossi, Roberto (R.A.)  
Sent: Saturday, February 21, 2009 12:52 PM  
To: Adams, Renee (R.L.)  
Subject: FW: B3A Investigation Status - Action Plan

Renee,

Angel Salazar (662 156 0977) from TRW is the HSAP contact which supported this issue.

Thanks,

Roberto Rossi  
Chassis Electronics Supervisor  
313-805-4157

-----Original Message-----

From: Martha Abundis [<mailto:Martha.Abundis@TRW.COM>]  
Sent: Saturday, February 21, 2009 2:41 PM  
To: Rossi, Roberto (R.A.)  
Subject: RE: B3A Investigation Status - Action Plan

Angel Salazar cell phone 662 156 0977

>>> "Rossi, Roberto (R.A.)" <[rrossi1@ford.com](mailto:rrossi1@ford.com)> 2/21/2009 6:35 AM >>>

Martha,

Do you have the contact name at HSAP who pulled the DTCs from the vehicle and supporting this issue?

Thanks,

Roberto Rossi  
Chassis Electronics Supervisor

313-805-4157

-----Original Message-----

From: Martha Abundis [mailto:[Martha.A bundis@TRW.COM](mailto:Martha.A bundis@TRW.COM)]

Sent: Friday, February 20, 2009 5:03 PM

To: Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Bouse, Bill (W.J.); Abe Ghaphery; Andrew Williams; Angel Andres; Craig Zeki; David Leaver-NonTRW; Derek Lord; Geoff Jacks; Jon CHALMERS; JuanCarlos cano; Kevin Rushgrove; Mark Karwowski; Mark PHILLIPS; Mike APPLETON; Paul IRELAND; Robert Kostadina; Ron Caldwell; Simon Malsbury  
Subject: Re: B3A Investigation Status - Action Plan

Gear shipping date: January 30, 2009

>>> Mark Karwowski 2/20/2009 12:33 PM >>>

Team,

Attached is the latest action plan update from today's discussions.  
Please let me know if there are any further questions.

Regards,

Mark Karwowski  
Systems Engineering Manager  
TRWAutomotive  
EPS Engineering  
586.232.7792

---

**From:** Bouse, Bill (W.J.)  
**Sent:** Wednesday, March 04, 2009 5:44 AM  
**To:** 'Mark Karwowski'; Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Christian Helming; Craig Zeki; Geoff Jacks; Greg Bendzinski; Martha Abundis; Mike Davies; Paul IRELAND; Phil Browne; Simon Malsbury; Christian (Berlin) Mueller; tboyle@tycoelectronics.com  
**Cc:** Abe Ghaphery; Andrew Williams; Angel Andres; Derek Lord; Jim Duehring; Jon CHALMERS; JuanCarlos cano; Mark PHILLIPS; Mike APPLETON; Robert Kostadina; Ron Caldwell  
**Subject:** RE: B3A Investigation Status Update

Quick update on gear updates from 3/3.

1050 gears were at HSAP (rattle fixed - green dot) that needed to be updated with J2 software (rattle fix and software fix combined - blue dot). We have updated 532 gears currently. We have 518 left for Wednesday AM. Rattle updates started at ~7pm today using blue does and be have begun clearing both the rattle and software OSMs. Plan is to have all gears updated prior to Tim's arrival and the beginning of flashing cars.

I will be in the 11am meeting in the morning any questions that you have please call me @ +521 662 169 0667 or 313-805-2289

Bill

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**From:** Mark Karwowski [mailto:[Mark.Karwowski@TRW.COM](mailto:Mark.Karwowski@TRW.COM)]  
**Sent:** Tuesday, March 03, 2009 9:14 PM  
**To:** Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Bouse, Bill (W.J.); Christian Helming; Craig Zeki; Geoff Jacks; Greg Bendzinski; Mark Karwowski; Martha Abundis; Mike Davies; Paul IRELAND; Phil Browne; Simon Malsbury; Christian (Berlin) Mueller; [tboyle@tycoelectronics.com](mailto:tboyle@tycoelectronics.com)  
**Cc:** Abe Ghaphery; Andrew Williams; Angel Andres; Derek Lord; Jim Duehring; Jon CHALMERS; JuanCarlos cano; Mark PHILLIPS; Mike APPLETON; Robert Kostadina; Ron Caldwell  
**Subject:** B3A Investigation Status Update  
**When:** Wednesday, March 04, 2009 11:00 AM-12:00 PM (GMT-05:00) Eastern Time (US & Canada).  
**Where:** Conference Call (646-441-1003 p-code 810294)

- Review update on disposition of parts - Martha Abundis
- Review HSAP status - Bill Bouse/Greg Bendzinski
- Review update on visit to Dudocu - Geoff Collins

Updated Webex -  
<https://ford.webex.com> ( <https://ford.webex.com/> )  
713 333 325

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**From:** Diez, Timothy (T.P.)  
**Sent:** Friday, March 06, 2009 3:46 PM  
**To:** Bouse, Bill (W.J.); 'Simon Malsbury'; Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); 'Christian Helming'; 'Craig Zeki'; 'Geoff Jacks'; 'Greg Bendzinski'; 'Mark Karwowski'; 'Martha Abundis'; 'Mike Davies'; 'Paul IRELAND'; 'Phil Browne'; 'Christian (Berlin) Mueller'; 'filipe.matos@tycoelectronics.com'; 'tboyle@tycoelectronics.com'  
**Cc:** 'Abe Ghaphery'; 'Andrew Williams'; 'Angel Andres'; 'Derek Lord'; 'Jim Duehring'; 'Jon CHALMERS'; 'JuanCarlos cano'; 'Mark PHILLIPS'; 'Mike APPLETON'; 'Robert Kostadina'; 'Ron Caldwell'  
**Subject:** RE: B3A Investigation Status Update

Team,

Once the remaining 2000 cars on the lot and 107 cars on the line have been reflashed, we will be downloading all the data from the PUMA tools so we have a record of vehicles that have been successfully reflashed.

Thanks.

Sincerely,  
Tim Diez  
Ford Electric Power Steering, EESE  
313-805-1060; Fax: 313-317-4387  
e-mail: [tdiez@ford.com](mailto:tdiez@ford.com)  
cube 3C071, Building 5

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**From:** Bouse, Bill (W.J.)  
**Sent:** Friday, March 06, 2009 10:26 AM  
**To:** 'Simon Malsbury'; Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Christian Helming; Craig Zeki; Geoff Jacks; Greg Bendzinski; Mark Karwowski; Martha Abundis; Mike Davies; Paul IRELAND; Phil Browne; Christian (Berlin) Mueller; [filipe.matos@tycoelectronics.com](mailto:filipe.matos@tycoelectronics.com); [tboyle@tycoelectronics.com](mailto:tboyle@tycoelectronics.com)  
**Cc:** Abe Ghaphery; Andrew Williams; Angel Andres; Derek Lord; Jim Duehring; Jon CHALMERS; JuanCarlos cano; Mark PHILLIPS; Mike APPLETON; Robert Kostadina; Ron Caldwell  
**Subject:** RE: B3A Investigation Status Update

Folks, quick update on progress at HSAP. Over 3700 vehicles have been completed as of 6am this morning. Should finish the re-flash later tonight hopefully prior to midnight.

The remaining 107 cars now trapped in the system will be flashed "on-line" prior to prerolls Monday morning when the plant starts up. We have developed this plan with HSAP and will use the PUMA tools to complete this action.

---

**From:** Simon Malsbury [mailto:[Simon.Malsbury@TRW.COM](mailto:Simon.Malsbury@TRW.COM)]  
**Sent:** Friday, March 06, 2009 9:30 AM  
**To:** Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Diez, Timothy (T.P.); Bouse, Bill (W.J.); Christian Helming; Craig Zeki; Geoff Jacks; Greg Bendzinski; Mark Karwowski; Martha Abundis; Mike Davies; Paul IRELAND; Phil Browne; Simon Malsbury; Christian (Berlin) Mueller; [filipe.matos@tycoelectronics.com](mailto:filipe.matos@tycoelectronics.com); [tboyle@tycoelectronics.com](mailto:tboyle@tycoelectronics.com)  
**Cc:** Abe Ghaphery; Andrew Williams; Angel Andres; Derek Lord; Jim Duehring; Jon CHALMERS; JuanCarlos cano; Mark PHILLIPS; Mike APPLETON; Robert Kostadina; Ron Caldwell  
**Subject:** B3A Investigation Status Update  
**When:** Friday, March 06, 2009 3:00 PM-4:00 PM (GMT-05:00) Eastern Time (US & Canada).  
**Where:** Conference Call (646-441-1003 p-code 810294)

Review action item updates.

Updated Webex -

<https://ford.webex.com> ( <https://ford.webex.com/> )

713 333 325

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**From:** Diez, Timothy (T.P.)  
**Sent:** Tuesday, March 10, 2009 9:34 PM  
**To:** Mark Karwowski; Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Schondorf, Steven (S.); Bouse, Bill (W.J.); Christian Helming; Craig Zeki; Geoff Jacks; Greg Bendzinski; Martha Abundis; Mike Davies; Paul IRELAND; Phil Browne; Philip Warren-Green; Simon Malsbury; Christian (Berlin) Mueller; Filipe Matos; [tboyle@tycoelectronics.com](mailto:tboyle@tycoelectronics.com)  
**Cc:** Abe Ghaphery; Andrew Williams; Angel Andres; Derek Lord; Jim Duehring; Jon CHALMERS; JuanCarlos cano; Mark PHILLIPS; Mike APPLETON; Robert Kostadina; Ron Caldwell; Salim Semssar  
**Subject:** RE: B3A Investigation Status Update

Team,

I have downloaded all the data from the PUMA's and analyzed it. The conclusion is that 126 vehicles need to be checked to determine if the flash was sucessful. I will be meeting with plant personnel later today to show them the suspect list of VIN's. My position is that they put a hold on the 126 vehicles until they are checked for the right level of software. If a reflash is required, the TRW on-site representative and perhaps plant personnel can flash them.

Also, there is another issue with the data that needs to be resolved. There is a discrepancy between what VIN's are recorded in the QLS system and the VIN's stored in all the PUMA tools combined. I am comparing this data to see if perhaps the plant read a barcode into QLS without actually using the PUMA to reflash. I am working to understand and resolve the discrepancy in the data.

Please let me know if you have further questions...

Thanks.

- Tim Diez

---

**From:** Mark Karwowski [<mailto:Mark.Karwowski@TRW.COM>]  
**Sent:** Mon 3/9/2009 1:15 PM  
**To:** Hochrein, Brad (B.G.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Mince, Robert (R.W.); Mrozek, Robert (R.M.); Rossi, Roberto (R.A.); Schondorf, Steven (S.); Diez, Timothy (T.P.); Bouse, Bill (W.J.); Christian Helming; Craig Zeki; Geoff Jacks; Greg Bendzinski; Mark Karwowski; Martha Abundis; Mike Davies; Paul IRELAND; Phil Browne; Philip Warren-Green; Simon Malsbury; Christian (Berlin) Mueller; Filipe Matos; [tboyle@tycoelectronics.com](mailto:tboyle@tycoelectronics.com)  
**Cc:** Abe Ghaphery; Andrew Williams; Angel Andres; Derek Lord; Jim Duehring; Jon CHALMERS; JuanCarlos cano; Mark PHILLIPS; Mike APPLETON; Robert Kostadina; Ron Caldwell; Salim Semssar  
**Subject:** B3A Investigation Status Update

Engineering - Review action item updates

Quality - Review status of 8D

Updated Webex -

<https://ford.webex.com> ( <https://ford.webex.com/> )

713 333 325

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**From:** Diez, Timothy (T.P.)  
**Sent:** Wednesday, October 28, 2009 3:30 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Bahena, Miguel (Mike.); 'Simon Malsbury'  
**Subject:** RE: B3a's out of HSAP

The B3a is an internal TRW fault code that is associated with the motor link relay.

Sincerely,  
Tim Diez  
Ford Electric Power Steering, EESE  
313-805-1060; Fax: 313-317-4387  
e-mail: [tdiez@ford.com](mailto:tdiez@ford.com)  
cube 3C071, Building 5

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**From:** Snider, Tim (T.O.)  
**Sent:** Wednesday, October 28, 2009 11:26 AM  
**To:** Diez, Timothy (T.P.)  
**Cc:** Bahena, Miguel (Mike.); 'Simon Malsbury'  
**Subject:** RE: B3a's out of HSAP

Tim,

No, and what is a B3A? I don't see it on the diagnostic code list.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))  
***CD3 Steering Engineering***  
***Ford Motor Company***  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

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**From:** Diez, Timothy (T.P.)  
**Sent:** Wednesday, October 28, 2009 10:46 AM  
**To:** Bahena, Miguel (Mike.); Snider, Tim (T.O.); Simon Malsbury  
**Subject:** RE: B3a's out of HSAP

Tim,

Do you know of this new B3a?

Simon,

Who from Ford informed you of the latest B3a discovered this past weekend out HSAP?

Thanks.

Sincerely,  
Tim Diez

Ford Electric Power Steering, EESE  
313-805-1060; Fax: 313-317-4387  
e-mail: [tdiez@ford.com](mailto:tdiez@ford.com)  
cube 3C071, Building 5

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**From:** Bahena, Miguel (Mike.)  
**Sent:** Wednesday, October 28, 2009 10:44 AM  
**To:** Diez, Timothy (T.P.); Snider, Tim (T.O.)  
**Subject:** RE: B3a's out of HSAP

I don't know anything about this issue yet.

---

**From:** Diez, Timothy (T.P.)  
**Sent:** Wednesday, October 28, 2009 10:43 AM  
**To:** Snider, Tim (T.O.); Bahena, Miguel (Mike.)  
**Subject:** B3a's out of HSAP

Tim/Mike,

I learned from Simon Malsbury today that there was another B3a out HSAP over the weekend. Please inform me as soon as you hear about electronics related issues from the plant.

Thanks.

Sincerely,  
Tim Diez

Ford Electric Power Steering, EESE  
313-805-1060; Fax: 313-317-4387  
e-mail: [tdiez@ford.com](mailto:tdiez@ford.com)  
cube 3C071, Building 5

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**From:** Quijada, Jorge (J.)  
**Sent:** Thursday, August 06, 2009 5:43 PM  
**To:** 'Martha Abundis'; Vejar, Iris (I.V.); Hochrein, Brad (B.G.); Harris, Jonathan (J.E.); McIntyre, Kathryn (K.L.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Diez, Timothy (T.P.); Hernandez, Victor (V.M.); Bouse, William (Bill.); Porter, Wesley (W.); BaoYuan Tian; Frank Fan; Geoff Collins; Greg Collier; Jacky Shi; Jim Duehring; Mark Karwowski; Mike Davies; Paul IRELAND; Pavel Vetz; Phil Browne; Robert Kostadina; Romance Zhu; Salim Semssar; Sanjay Singh; Simon Malsbury; Steven qu; hugo.gomes@tycoelectronics.com  
**Subject:** RE: B43 / B3A - HSAP EPAS loss of assistance

Team,  
I was not able to stay connected today.

On regards to the 2 M10 units that failed, I spoke to the Drivers:

*June event: the driver was close to the Plant 3 Miles away ( on a Straight line coasting down to take a curve) no street bumps in this section of the Road which all M10 Units take due to proximity to the Plant*

*July Event: The Driver was about 7 miles away from the plant accelerating going Up in a curve when he noticed the High effort ( after that the cluster alarm displayed)*

*No bumps or special road condition is present in this section of the road.*

Thanks

**From:** Martha Abundis [mailto:[Martha.A bundis@TRW.COM](mailto:Martha.A bundis@TRW.COM)]  
**Sent:** Jueves, 06 de Agosto de 2009 08:27 a.m.  
**To:** Vejar, Iris (I.V.); Hochrein, Brad (B.G.); Harris, Jonathan (J.E.); Quijada, Jorge (J.); McIntyre, Kathryn (K.L.); Bahena, Miguel (Mike.); Frey, Martin (M.F.); Diez, Timothy (T.P.); Hernandez, Victor (V.M.); Bouse, William (Bill.); Porter, Wesley (W.); BaoYuan Tian; Frank Fan; Geoff Collins; Greg Collier; Jacky Shi; Jim Duehring; Mark Karwowski; Martha Abundis; Mike Davies; Paul IRELAND; Pavel Vetz; Phil Browne; Robert Kostadina; Romance Zhu; Salim Semssar; Sanjay Singh; Simon Malsbury; Steven qu; [hugo.gomes@tycoelectronics.com](mailto:hugo.gomes@tycoelectronics.com)  
**Subject:** B43 / B3A - HSAP EPAS loss of assistance  
**When:** Viernes, 07 de Agosto de 2009 07:00 a.m.-08:00 a.m. (GMT-07:00) Arizona.  
**Where:** conference call

Item Type: Appointment

Start Date: Friday, 7 Aug 2009, 09:00:00am (Central Daylight Time (Mexico))

Duration: 1 Hour

Place: conference call

EPAS Loss of assistance issue at HSAP

B43: Status review

B3A: Status review

Voice conference 5045881058

Participant code 398788

Web Meeting address

<https://www.webmeeting.att.com>

Meeting number 5045881058

Participant code 398788

Martha Abundis  
TRW Sistemas de Direcciones  
ph: 52 (442) 211 0854  
cell: 52 (442) 156 0154  
email: [martha.abundis@trw.com](mailto:martha.abundis@trw.com)

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Friday, May 28, 2010 6:33 PM  
**To:** 'Geoff Jacks'; Snider, Tim (T.O.); Diez, Timothy (T.P.)  
**Subject:** RE: B9A - FR0073 (Encoder IC)

Geoff,

Thanks, Can you clarify the ICA? I don't follow what is being 100 % checked. The 0.3 V criteria doesn't make sense to me. Thanks.

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)

---

**From:** Geoff Jacks [mailto:[Geoff.Jacks@TRW.COM](mailto:Geoff.Jacks@TRW.COM)]  
**Sent:** Thursday, May 27, 2010 6:01 AM  
**To:** Bahena, Miguel (Mike.); Snider, Tim (T.O.); Diez, Timothy (T.P.)  
**Subject:** B9A - FR0073 (Encoder IC)

Gents,

First cut of Nidec 8D attached for FR0073. They have confirmed an Encoder IC issue. IC is being investigated by manufacturer who should report back within 10 days.

Regards

Geoff

**Geoff Jacks**  
*Quality and Product Support Manager  
Steering and Powertrain Products  
TRW Electronic Engineering (TEE)  
Technical Centre  
Stratford Road  
Shirley  
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B90 4GW*

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email: [geoff.jacks@trw.com](mailto:geoff.jacks@trw.com)

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Registered Office Address: Stratford Road, Solihull B90 4AX

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**From:** Bahena, Miguel (Mike.)  
**Sent:** Monday, February 15, 2010 9:08 PM  
**To:** Snider, Tim (T.O.); Mrozek, Robert (R.M.); Diez, Timothy (T.P.)  
**Subject:** RE: B9A Epidemic: Updated 2010 CD3 R Warranty Tracker

We decided in our last meeting to meet every week on B9a. Next meeting is this Friday

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)  
Pager: [Click Here <<<<mailto:3138053680@vttext.com>>>>](#)

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**From:** Snider, Tim (T.O.)  
**Sent:** Monday, February 15, 2010 11:17 AM  
**To:** Mrozek, Robert (R.M.); Bahena, Miguel (Mike.); Diez, Timothy (T.P.)  
**Subject:** RE: B9A Epidemic: Updated 2010 CD3 R Warranty Tracker

Should we start a daily call-in for B9A, like we did for Cricket??

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))  
**CD3 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

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**From:** Mrozek, Robert (R.M.)  
**Sent:** Sunday, February 14, 2010 8:47 AM  
**To:** Estes, Eric (E.E.); Diez, Timothy (T.P.); Bahena, Miguel (Mike.); Snider, Tim (T.O.); Puleri, Michael (M.J.); 'anthony.fleenor@trw.com'; 'andrew.ellison@trw.com'; 'Mathew Alder'; 'Jim Loria'; 'Angie Caudill'; 'Andrew Williams'; Hochrein, Brad (B.G.); 'Ben Goellner'; 'Costas Chrysochoidis'; 'Dean Flower'; 'Danny Logsdon'; 'Engelbert Lu'; 'Geoff Jacks'; 'Guillermo Aguilar'; 'Greg Bendzinski'; 'Ian Ingram'; 'Jason Johnson-contr'; 'Jose Lopez'; 'Joel Rabideau'; 'jeri.rossiter@trw.com'; Chacon, Jose (A.); 'Jeffrey Wu'; 'Kelly Warren-Green'; 'Mike Davies'; 'Mark Karwowski'; 'Nick turovich'; 'Philip Warren-Green'; Quijada, Jorge (J.); 'Robert Kinnear'; 'Raymond Qiu'; 'Simon Malsbury'; 'Steve Zhou'; 'Theodor Brockmann'; 'Thiha Than'; 'Todd Williams'; Bouse, William (Bill.); 'William Olsen'  
**Cc:** Frey, Martin (M.F.); 'Alastair.McQueen@TRW.COM'; Sanjay Singh; Andrew Williams; 'Salim Semssar'  
**Subject:** B9A Epidemic: Updated 2010 CD3-I R Warranty Tracker

Eric -

These B9A's are starting to scare me. They keep popping up and we have been working on root cause for several months with lot of work but little success. Are there any other resources we have access to at TRW that can help in resolving this issue? Do you have some top technical specialist you can engage or do you have access to some university professors that can help? We need a crack investigative team working on this one.

# *Rob Mrozek*

Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmozek@ford.com](mailto:rmozek@ford.com)

---

**From:** Estes, Eric (E.E.)  
**Sent:** Friday, February 12, 2010 5:10 PM  
**To:** Mrozek, Robert (R.M.); Diez, Timothy (T.P.); Bahena, Miguel (Mike.); Snider, Tim (T.O.); Puleri, Michael (M.J.); anthony.fleenor@trw.com; andrew.ellison@trw.com; Mathew Alder; 'Jim Loria'; Angie Caudill; Andrew Williams; Hochrein, Brad (B.G.); Ben Goellner; Costas Chrysochoidis; Dean Flower; 'Danny Logsdon'; Engelbert Lu; Geoff Jacks; Guillermo Aguilar; 'Greg Bendzinski'; Ian Ingram; Jason Johnson-contr; 'JoseJ Lopez'; Joel Rabideau; 'jeri.rossiter@trw.com'; Chacon, Jose (A.); Jeffrey Wu; 'Kelly Warren-Green'; 'Mike Davies'; Mark Karwowski; Nick turovich; 'Philip Warren-Green'; Quijada, Jorge (J.); Robert Kinnear; Raymond Qiu; 'Simon Malsbury'; 'Salim Semssar'; 'Sanjay.Singh@TRW.COM'; Steve Zhou; Theodor Brockmann; Thiba Than; Todd Williams; Bouse, William (Bill.); William Olsen  
**Subject:** Updated 2010 CD3-D3 Warranty Tracker

Here is the updated warranty tracker sheet as of today 2/12.

## Top 5 CD3 Warranty Claims

B3A's- 29 claims (contamination, raised rivet, offset bridge, cold weld)

NVH- 19 claims (cricket noise, damaged housing)

TS- 17 claims (torque sensor, TS ASIC, damaged TS harness)

B9A's- 16 claims (one claim- ribbon cable assembly process, unknown root cause all others)

BB7/9- 12 claims (reverse capacitor)

Monday we will go over the B3A's on the 0km & warranty returns in Monday's 2/15 warranty review meeting with Ford at 11am.

<< File: 2010 CD3-R EPAS Warranty Feb\_12\_2010.xls >>

Let me know if you have any questions.

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

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**From:** Bahena, Miguel (Mike.)  
**Sent:** Friday, May 21, 2010 12:37 PM  
**To:** Mrozek, Robert (R.M.)  
**Cc:** Rossi, Roberto (R.A.); Diez, Timothy (T.P.)  
**Subject:** RE: B9A Faults - Getting Out of Hand

FYI, Geoff just told me that 2 of the recent 0Km failures have already been replicated in the UK. Good news....

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Friday, May 21, 2010 8:36 AM  
**To:** Bahena, Miguel (Mike.)  
**Cc:** Rossi, Roberto (R.A.); Diez, Timothy (T.P.)  
**Subject:** RE: B9A Faults - Getting Out of Hand

I will set something up for next week.

*Rob Mrozek*

Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Friday, May 21, 2010 8:32 AM  
**To:** Mrozek, Robert (R.M.)  
**Cc:** Rossi, Roberto (R.A.); Diez, Timothy (T.P.)  
**Subject:** RE: B9A Faults - Getting Out of Hand

I think its possible we may have an emerging issue. Its hard to say conclusively but it seems that we have had an uptick in B9a's especially at HSAP. We have seen 4 B9a's and 1 B92 at HSAP as a 0Km since the beginning of March.

The two recent root causes identified may be related - Encode IC failure, and Encoder Signal Open Circuit.

In terms of help I think the process we are using is working we may need more UK resources under Geoff to trouble shoot the recent rash heading to the UK.

Key Players:

Geoff Jacks  
Phil Browne  
Andrew Williams  
Alexander Kleist  
Bal Panaser (Owns all of the EPP, He is a director level I believe)

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)

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**From:** Mrozek, Robert (R.M.)  
**Sent:** Friday, May 21, 2010 7:48 AM  
**To:** Bahena, Miguel (Mike.)  
**Cc:** Rossi, Roberto (R.A.); Diez, Timothy (T.P.)  
**Subject:** B9A Faults - Getting Out of Hand

B9A's are getting out of control. I propose a meeting next week to take Marty thru it (basically I will ask for his help to stir up additional resources at TRW to resolve these issues) and we can invite Andrew, Phil, Alistair or Kleist. After Marty, we might take it into the FQR as help needed.

What do you think? If you agree, I can set it up. Just send me the names of the key players.

*Rob Mrozek*

Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

---

**From:** Guillermo Aguilar [<mailto:Guillermo.Aguilar@TRW.COM>]  
**Sent:** Thursday, May 20, 2010 5:50 PM  
**To:** Bahena, Miguel (Mike.); Mrozek, Robert (R.M.); Snider, Tim (T.O.); Hernandez, Victor (V.M.)  
**Subject:** Fwd: Ford Hermosillo Daily report for 05 / 19 / 2010

Guys,

HSAP Wednesday's report. We had a new B9A failure code that showed up without losing assistance, but decided to tear down the part for evaluation. Part it's being sent back to QAO for analysis this afternoon.

>>> "Angel Salazar" <[angelsaa@prodigy.net.mx](mailto:angelsaa@prodigy.net.mx)> 5/20/2010 7:42 AM >>>  
Good morning Glenn,

1.- Here is the information for the production of vehicles with EPAS for 05 / 19 / 2010

a).- production : 1,132 units

b).- The total quantity of vehicles built with EPAS from Job # 1 to date is : 308, 420 units ( to be updated ).

2.- Critical Issues :

a).- During the second shift, the VRT reported a vehicle rejected by the code checker audit. I met G. Izaguirre ( VRT analyst ) at the repair bay to review this case.

Vehicle rotation # 5484 /VIN : [REDACTED]

EPP # 100781177J30251 / Julian date : 132

With the Ford Diagnosis Tool I found the DTC : C200D-49 ( Motor Rotation Angle Sensor\_internal electronic failure )

The CANape displayed the code : B9Ah

The containment action at Benteler plant to segregate the suspect Julian date 132 is on going. By 21:00 hrs there have not been found Gears of this Julian date.

The Gear will be removed from the vehicle today and will be sent to the quarantine area. I will return it to TRW QOA as soon as the Gear gets available.

### 3.- Comments of the day :

- a).-The firsts 10 vehicles assembled with the Gears segregated at Benteler plant ( suspect Julian date 124 ) could not be segregated for the M10 evaluation at Ford plant . The second group of 10 vehicles will be ready for tomorrow. There are still 380 Gears to be returned to production.
- b).- Visit the Incoming Quality office and the quarantine crib. No issues found over here.
- c).- Antonio Rogero ( PVT Engr ) has postponed the evaluation of the fused inner tie rods sent by Mat Alder for this Thursday 20. The objective is to check if the pacman tool used for wheel alignment can fit on the new inner tie rods without issues.
- d).- We currently have one open QR at Ford Hermosillo ( J240482 ).
- e)- We have a containment action on going at Benteler plant to segregate the suspect Julian date 132..

Thanks & Best regards. Have a nice day.

A. Salazar

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**From:** Guillermo Aguilar <Guillermo.Aguilar@TRW.COM>  
**Sent:** Friday, December 17, 2010 7:01 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Mrozek, Robert (R.M.); angelsaa@prodigy.net.mx; JoseJ Lopez  
**Subject:** RE: B9A info detail request from HSAP

Thanks Tim.

Pepe.- Can you please give Fernando an explanation about this case?

>>> "Snider, Tim (T.O.)" <[tsnider1@ford.com](mailto:tsnider1@ford.com)> 12/17/2010 10:37 AM >>>  
Memo,

It's okay to send information to Hermosillo. Please include Ford Engineering on whatever you send.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))

**CD3/C489 Steering Engineering**  
**Ford Motor Company**

Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** Guillermo Aguilar [<mailto:Guillermo.Aguilar@TRW.COM>]  
**Sent:** Friday, December 17, 2010 11:34 AM  
**To:** Snider, Tim (T.O.)  
**Cc:** [angelsaa@prodigy.net.mx](mailto:angelsaa@prodigy.net.mx); JoseJ Lopez  
**Subject:** B9A info detail request from HSAP

Tim,

Fdo. Ulloa is asking us for a detailed explanation of the double start up B9A issue we have faced and how the new software is correcting it. In the past we had given information into the plant but you guys asked us to consult first the possibility to do this once again. Are you ok for us to send the required info. or would you prefer to send it yourself?

Thanks for your comment,

---

**From:** Napoli, Laura (L.)  
**Sent:** Wednesday, August 03, 2011 8:20 PM  
**To:** Estes, Eric (E.E.); Flanagan, Thomas (T.P.); Pienta, Alan (A.); Surella, Matthew (M.M.); Anderson, Eric (H.)  
**Cc:** Christopher Woodruff; 'Sergio Alvarez'; 'JoseJ Lopez'; 'Mike Molloy'; 'Andy Partridge'; 'Geoff Jacks'  
**Subject:** RE: B9A warranty returns all platforms

Thanks for the update Eric. Please send warranty tracker once updated.

---

**From:** Estes, Eric (E.E.)  
**Sent:** Wednesday, August 03, 2011 3:40 PM  
**To:** Napoli, Laura (L.); Flanagan, Thomas (T.P.); Pienta, Alan (A.); Surella, Matthew (M.M.)  
**Cc:** Christopher Woodruff; Sergio Alvarez; JoseJ Lopez; Mike Molloy; 'Andy Partridge'; Geoff Jacks  
**Subject:** B9A warranty returns all platforms

These are all the current B9A's that we recently just got back from the field.

I have not seen any B9A returns on 2012 C346 at this time.

MAO- Explorer

UR0030- Had extensive testing at both MAO & in UK all testing leads to NTF. Next Step- teardown analysis  
UR0045- ambient & hot testing in MAO lead to NTF. Next step cold testing if NTF to ship to UK for further tri-temp testing- PU/PD rig.  
UR0047- At WPAC(8/3) in process to ship out tomorrow hopefully, in process to 26mile for testing Chris Woodruff will lead the testing.  
UR0048- At WPAC(8/3) in process to ship out tomorrow hopefully to Marion plant for Sergio to perform testing.

QAO-CD3

FR0493- arrived in QAO(8/3) ready for leak testing, Pepe to perform testing  
FR0496- arrived in QAO(8/3) ready for leak testing, Pepe to perform testing

I still need to update the U502 warranty tracker with the new returns from yesterday(UR0047,48 then I will sent out the updated tracker)

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

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**From:** Estes, Eric (E.E.)  
**Sent:** Friday, February 19, 2010 5:55 PM  
**To:** Diez, Timothy (T.P.); Bahena, Miguel (Mike.); Snider, Tim (T.O.); Mrozek, Robert (R.M.); 'Simon Malsbury'; 'Mike Davies'; Geoff Jacks; 'Anthony Fleenor'; Salim Semssar; Sergio Alvarez; 'Guillermo Aguilar'; 'JoseJ Lopez'; Jason Johnson-contr; Andrew Williams; Thiha Than  
**Subject:** RE: B9a Workshop Action Items 2/19

### Action Items on B9A Workshop

**Simon-** Check early DV PV records on software changes related to B9A

FR0108- will put in tri-temp chamber early next week with data logging hooked up, report out any updates

**Eric -** Include Mike Davies on next B9A workshop.

Anting on Holiday this week will get there "B" code end of line failures next week, highlight any B9A failures.

**Geoff-** send out B9A presentation run chart

Email Ford out EMC BCI B9A testing results next week

FR0097- testing on going, forward any updates

QAO B9A line failures- forward any updates

**Sergio/Pepe-**

FR0129- update on bully test

New B9A gears arriving next week QAO- keep us updated with testing results

FR0134

FR0141

FR0146

**Next B9A Workshop 3/3/2010**

**Let me know if I'm missing any action items, Thanks**

*Eric J Estes*

TRW EPAS Steering Systems

Quality Specialist

Hotline ph# 313-317-9358

Cell ph# 734-560-3493

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**From:** Diez, Timothy (T.P.)  
**Sent:** Friday, February 19, 2010 10:53 AM  
**To:** Estes, Eric (E.E.)  
**Cc:** 'Geoff Jacks'  
**Subject:** B9a workshop

Eric, Geoff,

Would you please send out the presentation and spread sheet for B9a's covered today? Thanks.

Sincerely,

Tim Diez

Ford Electric Power Steering, EESE

313-805-1060; Fax: 313-317-4387

e-mail: [tdiez@ford.com](mailto:tdiez@ford.com)

cube 3C071, Building 5

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**From:** Rossi, Roberto (R.A.)  
**Sent:** Wednesday, February 24, 2010 7:28 PM  
**To:** Snider, Tim (T.O.); Biyashev, Russ (.)  
**Cc:** Diez, Timothy (T.P.); Bahena, Miguel (Mike.)  
**Subject:** RE: Brake DTC's C1277 / C1278 and Key Position

Tim,

I think Russ may know more than I do on this but we have seen contamination issues with the yaw sensor in the RCM that has caused some ABS and RCM DTCs.

Russ,

Based on your understanding of the issue, could the RCM problem cause the C1277?

Thanks,

Roberto Rossi  
Chassis Electronics Supervisor  
313-805-4157

*Lord Jesus Christ, Son of the Father, send now Your Spirit over the earth. Let the Holy Spirit live in the hearts of all nations that they may be preserved from degeneration, disaster and war. May The Lady of All Nations, the Blessed Virgin Mary, be our advocate. Amen*

---

**From:** Snider, Tim (T.O.)  
**Sent:** Wednesday, February 24, 2010 2:19 PM  
**To:** Rossi, Roberto (R.A.)  
**Cc:** Diez, Timothy (T.P.); Bahena, Miguel (Mike.)  
**Subject:** RE: Brake DTC's C1277 / C1278 and Key Position

Rob,

What was your RCM concern?

Regards,  
Tim Snider (tsnider1@ford.com)

**CD3 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

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**From:** Ulloa, Fernando (F.F.)  
**Sent:** Wednesday, February 24, 2010 12:44 PM  
**To:** Bahena, Miguel (Mike.)  
**Cc:** Biyashev, Russ ( ); Diez, Timothy (T.P.); Rossi, Roberto (R.A.); Snider, Tim (T.O.); Hanna, Bashar (B.A.); Lujan, Pablo (P.); Ruiz Izaguirre, Gildardo (G.)  
**Subject:** FW: Brake DTC's C1277 / C1278 and Key Position

Mike, We have a new car produced on Monday which has the C1277, we performed the procedure included in this email you sent yesterday and we could not replicate the DTC. I drove the car in the city until I reached 45 miles, all the time the VODU (diagnostic tool) was connected to the OBDII and we could not find anything.

What do you recommend to do next?

Thanks.

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Tuesday, February 23, 2010 11:08 AM  
**To:** Hanna, Bashar (B.A.); Lujan, Pablo (P.); Ulloa, Fernando (F.F.)  
**Cc:** Biyashev, Russ ( ); Diez, Timothy (T.P.); Rossi, Roberto (R.A.); Snider, Tim (T.O.)  
**Subject:** RE: Brake DTC's C1277 / C1278 and Key Position

Fernando, Pablo,

Please see the agreed directions below for investigating wiring on a vehicle with ABS code C1277/C1278. Please let us know if you find anything. Thanks for your help.

Tim Snider and I discussed with Bashar and agreed on the following procedure for reviewing one or two vehicles that exhibit a C1277/C1278 at HSAP with no loss of assist observed:

1. As discussed please inspect all the HS-CAN wiring & connectors between the PSCM and ABS for any damage, pinch points, cuts, pierced wire conditions and that all connectors are properly seated. Also inspect the PSCM & ABS ground. At this point do not disconnect connectors. Please be sure to inspect the in-line connection between the PSCM jumper and the 14290 harness (see attached picture below).
2. Then perform a **controlled light wiggle** test on all connectors and in several spots along the HS-CAN wiring circuits in between the ABS & EPAS modules while continuously checking DTCs to see if an intermittent issue exists (make sure the key is in run, but the engine does not need to be running). Another alternative would be to measure the HS-CAN circuit resistances between the appropriate EPAS CAN connector pins and the appropriate OBD2 pins while performing the wiggle test to see if the resistance ever exceeds 5 Ohm. Then repeat for the ABS module. Make sure you use the proper tools specified in workshop manual section 418-00. If the DTCs or a high resistance is ever observed then note where you were wiggling when the DTC/resistance was observed.
3. If no DTCs or high resistance are measured then please disconnect and inspect the PSCM, in-line, and ABS connector for any pushed out, loose, corroded or spread terminals or any signs of water intrusion.

Lastly we need to identify what powertrains we have seen these DTCs on at HSAP. Thanks.

Sincerely,

**Mike Bahena**  
D3 Electric Power Steering Systems  
Ford Motor Co.  
Ph: (313) 805-3680

---

**From:** Hanna, Bashar (B.A.)  
**Sent:** Tue 2/23/2010 12:49 PM  
**To:** Bahena, Miguel (Mike.)  
**Cc:** Biyashev, Russ (.) ; Diez, Timothy (T.P.) ; Rossi, Roberto (R.A.) ; Snider, Tim (T.O.)  
**Subject:** RE: Brake DTC's C1277 / C1278 and Key Position

I discussed this procedure with Mike and I agree with it.

Regards,  
Bashar Hanna  
CD3 Electrical Systems  
Phone/Pager : (313) 805-4085  
Fax: (313) 845-7416  
PDC, 1DB40  
Mail Drop 1220  
Email: [bhanna@ford.com](mailto:bhanna@ford.com)

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Monday, February 22, 2010 6:24 PM  
**To:** Hanna, Bashar (B.A.)  
**Cc:** Biyashev, Russ (.) ; Diez, Timothy (T.P.) ; Rossi, Roberto (R.A.) ; Snider, Tim (T.O.)  
**Subject:** RE: Brake DTC's C1277 / C1278 and Key Position

Bashar, (all)

Are you ok with the following directions being sent to Fernando & Pable (HSAP) PVT? Thanks for your help.

Tim Snider and I discussed with Bashar and agreed on the following procedure for reviewing one or two vehicles that exhibit a C1277/C1278 at HSAP with no loss of assist observed:

1. As discussed please inspect all the HS-CAN wiring & connectors between the PSCM and ABS for any damage, pinch points, cuts, pierced wire conditions and that all connectors are properly seated. Also inspect the PSCM & ABS ground. At this point do not disconnect connectors. Please be sure to inspect the in-line connection between the PSCM jumper and the 14290 harness (see attached picture below).
2. Then perform a **controlled light wiggle** test on all connectors and in several spots along the HS-CAN wiring circuits in between the ABS & EPAS modules while continuously checking DTCs to see if an intermittent issue exists (make sure the key is in run, but the engine does not need to be running). Another alternative would be to measure the HS-CAN circuit resistances between the appropriate EPAS CAN connector pins and the appropriate OBD2 pins while performing the wiggle test to see if the resistance ever exceeds 5 Ohm. Then repeat for the ABS module. Make sure you use the proper tools specified in workshop manual section 418-00. If the DTCs or a high resistance is ever observed then note where you were wiggling when the DTC/resistance was observed.
3. If no DTCs or high resistance are measured then please disconnect and inspect the PSCM, in-line, and ABS connector for any pushed out, loose, corroded or spread terminals or any signs of water intrusion.

Lastly we need to identify what powertrains we have seen the DTCs on at HSAP.

<< File: cd3.wiring1.gif>>

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
mbahena1@ford.com  
Pager: [Click Here <<<<mailto:3138053680@vtext.com>>>>](mailto:Click Here <<<<mailto:3138053680@vtext.com>>>>)

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**From:** Hanna, Bashar (B.A.)  
**Sent:** Monday, February 22, 2010 5:04 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ ( ); Ulloa, Fernando (F.F.); Lujan, Pablo (P.); Diez, Timothy (T.P.); Rossi, Roberto (R.A.)  
**Subject:** RE: Brake DTC's C1277 / C1278 and Key Position

The issue with wiggle test is that it is not a scientific test. How hard are you going to wiggle? Are you going to stress the harness to damage to the point of damaging it?

Before we start looking into wiggling the harness, please look at the following:

1. The system ground, loose, corroded, etc...
2. Water intrusion in the system at the connection for any corrosion inside the connector.

Regards,  
**Bashar Hanna**  
CD3 Electrical Systems  
Phone/Page : (313) 805-4085  
Fax: (313) 845-7416  
PDC, 1DB40  
Mail Drop 1220  
Email: bhanna@ford.com

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**From:** Snider, Tim (T.O.)  
**Sent:** Monday, February 22, 2010 3:43 PM  
**To:** Hanna, Bashar (B.A.)  
**Cc:** Bahena, Miguel (Mike.); Biyashev, Russ ( ); Ulloa, Fernando (F.F.); Lujan, Pablo (P.); Diez, Timothy (T.P.); Rossi, Roberto (R.A.)  
**Subject:** RE: Brake DTC's C1277 / C1278 and Key Position

Bashar,

Do you have any concerns with wiggle testing the PSCM and ABS wires on one vehicle, to trouble shoot if there is a wiring issue causing the C1277 / C1278 DTC's? There is a wiggle test in the shop manual for diagnosing ABS issues, but the Hermosillo Electrical PVT engineer, Pablo Lujan, is concerned the wiggle test may cause an issue, and apparently there has been direction in the past not to wiggle test.

Regards,  
Tim Snider (tsnider1@ford.com)  
**CD3 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201

2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** Snider, Tim (T.O.)  
**Sent:** Monday, February 22, 2010 2:20 PM  
**To:** Biyashev, Russ (.)  
**Cc:** Bahena, Miguel (Mike.)  
**Subject:** Brake DTC's C1277 / C1278 and Key Position

Russ,

Can the brake DTC's C1277 and/or C1278 be set with the key in the "on" position, but with the engine not running? We would like Hermosillo to do wiggle testing on the CD3 wires between the PSCM and ABS module, which requires the vehicle to be on a hoist, but they are concerned there may be a safety issue if the engine is running.

Regards,  
Tim Snider (tsnider1@ford.com)  
***CD3 Steering Engineering***  
***Ford Motor Company***  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** Ulloa, Fernando (F.F.)  
**Sent:** Tuesday, June 18, 2013 9:56 PM  
**To:** Galindo, Sergio (S.N.); Tallman, Ronald (R.M.); Larios, Karla (K.L.)  
**Subject:** RE: BSAQ#2013260820 Steering Gear Asymmetry concern.

There is no MKZ affected at all in the 624 Gears involved in this issue.

---

**From:** Galindo, Sergio (S.N.)  
**Sent:** Tuesday, June 18, 2013 2:15 PM  
**To:** Tallman, Ronald (R.M.); Larios, Karla (K.L.)  
**Cc:** Ulloa, Fernando (F.F.)  
**Subject:** RE: BSAQ#2013260820 Steering Gear Asymmetry concern.

Fernando, can you please let us know for this stop shipment how many are Fusion and MKZ please



Sergio Galindo  
HSAP PVT Manager  
T + 52 1 6621 420197  
Ford Net 456 8308  
sgalind1@ford.com

Este correo puede tener información confidencial. Si lo recibió por error, por favor bórrelo inmediatamente y notifique a la persona que lo envió.

This e-mail may contain privileged and confidential information. If you have received it by mistake, please delete it immediately and notify the sender.

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**From:** Tallman, Ronald (R.M.)  
**Sent:** Tuesday, June 18, 2013 1:14 PM  
**To:** Galindo, Sergio (S.N.); Larios, Karla (K.L.)  
**Subject:** RE: BSAQ#2013260820 Steering Gear Asymmetry concern.  
**Importance:** High

Sergio/Karla:

Can you tell me how many units being held are Fusions and how many MKZ? Sitting in AOCM...thank you

---

**From:** Galindo, Sergio (S.N.)  
**Sent:** Tuesday, June 18, 2013 11:06 AM  
**To:** Tallman, Ronald (R.M.); Larios, Karla (K.L.)  
**Subject:** RE: BSAQ#2013260820 Steering Gear Asymmetry concern.

Ronald,

There are meeting schedule already,

Karla, can you please share the followings meeting please.  
Do we need help to cover production and replacement parts of the vehicles?



Sergio Galindo  
HSAP PVT Manager  
T + 52 1 6621 420197  
Ford Nel 456 8308  
sgalind1@ford.com

Este correo puede tener información confidencial. Si lo recibio por error, por favor bómelo inmediatamente y notifique a la persona que lo envio.

This e-mail may contain privileged and confidential information. If you have received it by mistake, please delete it immediately and notify the sender.

**From:** Tallman, Ronald (R.M.)  
**Sent:** Monday, June 17, 2013 4:39 PM  
**To:** Galindo, Sergio (S.N.)  
**Subject:** Re: BSAQ#2013260820 Steering Gear Asymmetry concern.

Is there an audio to determine supply of replacement stock? What help do you require?

Ron Tallman sent from my blackberry

---

**From:** Galindo, Sergio (S.N.)  
**Sent:** Monday, June 17, 2013 07:32 PM  
**To:** Tetreault, James (J.P.); Fowler, Bennie (B.W.); Samardzich, Barb (B.J.); Reitz, Graydon (G.A.); Bakaj, Joe (J.); Pittel, Kimberly (K.L.); Kuehn, Dave (D.E.); Contreras, Alba (M.); Pardi, Joseph (J.); Hettle, Bruce (B.W.); Spencer, Jeff (J.); Cash, Linda (L.G.); Hettel, Daniel (D.F.); Torolski, Michael (M.A.); Winegarden, Marsha (M.E.); Vido, Adriano (A.); Opaleski, Steven (S.J.); Calhoun, Philip (P.T.); Khan, Mohammod (T.); Myers, Matthew (M.D.); Cadwell, Rhoda (R.A.); Huff, Bradford (B.D.); Ebbing, David (D.G.); Roth, John (J.C.); Nair, Raj (S.S.); Thai-Tang, Hau (H.N.); Mascarenas, Paul (P.); Visintainer, Randal (R.H.); Davis, Frank (F.V.); Collareno, Philip (P.A.); Fascetti, Robert (R.J.); Christensen, Kris (K.S.); Oswalt, Greg (G.G.); Belanger, Grant (G.E.); Stec, Pamela (P.); Davis-Smith, Kenyatta (K.T.); Sovoda, Richard (R.P.); Gaecke, Pete (P.A.); Miettinen, Kevin (K.J.); Perrin, Kathryn (K.M.); Brown, Tony (Thomas K.); Aselage, Jane (J.M.); Wickenheiser, Francis (F.J.); Jett, Pete (P.P.); Parlow, Katie (K.M.); House, Michael (M.T.); Stoddard, Jeff (J.W.); Contreras, Gonzalo (J.); Trepanier, Eric (E.L.); Auclair, Genevieve (J.); Roy, Paul (P.F.); Schofield, Denis (D.P.); Smith, Kim (K.E.); Piccirilli, Claudio (C.); Ahadi, Fritz (F.D.); Johnston, Dennis (D.T.); Herbert, Jonathan (G.); Jarvis, Ryan (R.C.) <[rjarvi18@ford.com](mailto:rjarvi18@ford.com)>; Biskelonis, Brian (B.A.); Watkins, Brad (B.J.); Wilyard, Dan (D.J.); Shashlo, Michael (M.L.); Jasser, Rima (R.G.); Lehmkuhl, David (D.B.); Madej, Jeanette (J.); Kainz, Laura (L.L.); Johnson, Greg (G.T.); Johnson, Risa (R.A.); Sparks, Douglas (D.S.); [kgniewek@ford.com](mailto:kgniewek@ford.com) <[kgniewek@ford.com](mailto:kgniewek@ford.com)>; Storves, Bill (W.K.); Velliky, David (D.A.) <[dvelliky@ford.com](mailto:dvelliky@ford.com)>; Grandstaff, Brian (B.D.); Leone, Sue (M.); Agosta, Dawn (D.M.); Nissen, Todd (T.); Thomas, David (D.G.); Frascaroli, Emily (E.E.); Roy, Brock (B.); [broy1@ford.com](mailto:broy1@ford.com); Mills, Walter (R.); Gourneau, Frank (F.B.); Clifford, Mark (M.B.); Gubing, William (Bill.); Reddy, BJ (B.); [breddy@ford.com](mailto:breddy@ford.com); Patel, Bharat (B.J.); Channell, Scott (S.G.); Hand, James (J.E.); Wong, Milton (M.D.); Turner, Steve (S.F.); Geist, Daniel (D.R.); Suthar, Rajesh (R.C.); Gryglak, Adam (A.J.); Wegrzyn, Michael (M.J.); [cmarti33@mazdausa.com](mailto:cmarti33@mazdausa.com) <[cmarti33@mazdausa.com](mailto:cmarti33@mazdausa.com)>; Navarro, Jose (J.N.) <[cnavarr9@ford.com](mailto:cnavarr9@ford.com)>; Morales, Juan (J.); Maldonado, Sonia (S.); Beltran, Victor (V.); Curran, Judith (J.M.); Whittle, Adrian (A.R.); Perez, Ricardo (HSAP.); Rosas, Alejandro (HSAP.); Ferguson, Rick (R.M.); Abdelrazzaq, Naser (N.A.); Sherwood, Karen (K.); Harrison, Michael (M.J.); Collins, Ron (R.J.); Jammouli, Ali (A.); Krawiec, David (J.D.); Kellerwessel, Christof (C.); Whitens, Mike (M.J.); Fusco, Frank (F.D.); Halow, George (G.F.); Brown, Jerry (J.R.); McLoughlin, Andy (A.); Morgan, James (M.) <[jmorqa22@ford.com](mailto:jmorqa22@ford.com)>; Barthelemy, Bruno (B.); D'Alessandro, Frank (F.J.); Trecapelli, Robert (R.M.); von Foerster, Steve (SvF.); Arbitter, Daniel (D.S.); Ufford, Donald (D.A.); Mikkelsen, William (W.J.); Walsh, Steve (S.); VanSlambrouck, James (J.M.); LaFaive, Rita (R.A.); Halabisky, Darren (D.H.); Shuttleworth, David (D.L.); Santos,

Reinaldo (R.Diniz.); Marquez, Eduardo (E.); Takayasu, Odair Kiho (O.K.); Wrobel, Susan (S.M.); Jahant, Jeanine (J.M.); Kinnie, Yvonne (Y.C.); Jovanovski, Ladica (.); Wilson, Marie (M.); Dare, Shannon (S.); Green, Ann (A.D.); Guillen, Felix (F.); Islas, Jose (J.J.); Perez, Marcos (M.); Chacon, Luis (L.); Davila, Roberto (R.); Diaz, Juan Manuel (J.M.); Flores, Fausto (F.); Johnson, Angelica (A.O.); Madrid, Juan (J.); Madrigal, Samuel (S.); Rodarte, Eduardo (E.); Tinoco, Alejandro (A.); Valenzuela, Jose (J.A.); Larios, Karla (K.L.); Manrique, Gerardo (G.G.); Lozano, Rafael (R.); Ramirez, Paola (P.R.); Alvarez, Mario (M.); Durand, Gerardo (G.D.); Gilabert, Julian (J.); Gudino Mendoza, Martin (J.M.); Ocana, Norma (N.); Quijada, Jorge (J.); Trizon Dyck, Javier (J.T.); Lugo, Aureliano (A.); Santillan, Juan (J.M.); Ortiz, Abel (A.); Torres de Unanue, Leo (L.A.); Hudson, Tom (T.M.); Fuher, Michael (M.J.); Cadagin, Ed (E.J.); Mendoza, Reyna (R.I.); Ozog, Thomas (T.J.); Rodriguez, Cynthia (C.R.); Molina, Roxana (R.P.); Behrendt, Birgit (B.A.); Jraiche, John (J.J.); Dugan, Mike (M.L.); Villalobos, Luisa (L.); Balzer, Stacy (S.L.); Manzo, Roberto (A.); Garant, Dan (DCG.); Brown, Lytrel (L.D.); Albertson, Derrick (D.S.); Rotellini, Joseph (J.); Malone, John (J.M.); Mann, Mickey (N.S.); Schnierle, Jesus (J.); Oroz, Miguel (M.); Rios, Marco (M.); Corral, Dimas (DC.); Hirata, Natsuo (N.); Duron, Ariel (A.); Ronayne, Kelly (K.W.); Tallman, Ronald (R.M.); Lovelace, Ronald (R.); Hirata, Natsuo (N.); Ozog, Thomas (T.J.); Brown, Lytrel (L.D.); Rosas, Alejandro (HSAP.); Mazur, Nicole (N.); Hajhassan, Ali (A.M.); Hallway, Fred (F.X.); Spencer, Beth (B.); Brown, Lytrel (L.D.); Hallway, Fred (F.X.); Hajhassan, Ali (A.M.); Albertson, Derrick (D.S.); Garant, Dan (DCG.); Villalobos, Luisa (L.); Balzer, Stacy (S.L.); Hudson, Tom (T.M.); Rotellini, Joseph (J.); Diaz, Juan Manuel (J.M.); Rios, Marco (M.); Quijada, Jorge (J.); Nematollahi, Sonya (A.S.); LaFaive, Rita (R.A.); Livernois, Stephen (S.M.); Schneider, John (J.H.); Reitz, Graydon (G.A.); Quijada, Jorge (J.); Ozog, Thomas (T.J.); Brown, Lytrel (L.D.); Larios, Karla (K.L.); Manrique, Gerardo (G.G.); Perri, Ron (R.J.); Brown, Todd (T.A.); Eschtruth, Kirt (.); White, Isiah (I.C.)

**Subject:** BSAQ#2013260820 Steering Gear Asymmetry concern.

**Stop Shipment Number:** SAQ201326082

**Vehicle(s) Affected:** Fusion & MKZ (411 vehicles only)

**Plant(s) Affected:** HSAP/FRAP

**Other Plants Potentially Affected:** None

**Part(s) Affected:** Steering Gears

**Supplier:** ZF

**Vehicles held:** 411

**WERS Alert Number(s):** A12701171

**Description:**

CD391 and CD533 have been placed in a Stop Ship due to a quality concern with the steering gear. An asymmetry issue was identified at HSAP EOL; the parts with the defect are from one of the supplier production lines (Line i) from production window of June 7<sup>th</sup> thru June 15<sup>th</sup>.

The supplier has two production lines (Line I and Line J).

This stop shipment is only for those 411 vehicles, the rest of the production can be shipped.

Initial binning of the concern is Supplier Quality.

The Vehicles affected by this Stop shipment will require a steering gear replacement.

**Root Cause:**

TBD

**ICA:**

6/17: To Build with Steering Gears from Line J only.

**PCA:**



Sergio Galindo  
HSAP PVT Manager  
T + 52 1 6621 420197  
Ford Nel 456 8308  
sgalind1@ford.com

Este correo puede tener información confidencial. Si lo recibió por error, por favor bómelo inmediatamente y notifique a la persona que lo envió.

This e-mail may contain privileged and confidential information. If you have received it by mistake, please delete it immediately and notify the sender.

---

**From:** Gabor, Daniel (D.A.)  
**Sent:** Wednesday, May 05, 2010 12:59 PM  
**To:** Biyashev, Russ (.) ; Snider, Tim (T.O.)  
**Cc:** Bahena, Miguel (Mike.) ; Bouse, William (Bill.)  
**Subject:** RE: C1B00 on 3FADP0L37AR [REDACTED]

### CB100-28

DESCRIPTION: calculated steering wheel angle offset is out of the specified range  
A failure is detected if the absolute value of the calculated steering wheel angle offset is greater than 15.0deg.

Note: Steering Angle Data is sent from EPAS to brake module via CAN Bus.

MINIMUM FAULT DURATION FOR DETECTION: 10ms

FAULT TRIGGERS:

External:

- wrong mounting position of the EPAS module
- loose EPAS module
- misalignment of the steering system
- high frequency interferences
- faulty sensors in EPAS module
- insecurely mounted inner sensors in EPAS module
- excessive wear in steering system

Internal: None

FAILSAFE FAULTS:

45h.0 Swa\_sensor\_offset

Extended

### CB100-29

DESCRIPTION: SteeringMessageNumber is not updated for 3 continuous loops

Note: Steering Angle Data is sent from EPAS to brake module via CAN Bus.

MINIMUM FAULT DURATION FOR DETECTION:

Signal Invalid Timeout (Message is coming in, but signal is invalid) (when velocity > 3 km/h):

30ms

FAULT TRIGGERS:

External:

-SWA sensor working not properly

Internal: None

FAILSAFE FAULT:

44h.7 Swa\_rolling\_count\_invalid

Extended

---

**From:** Biyashev, Russ (.)  
**Sent:** Tuesday, May 04, 2010 4:37 PM  
**To:** Snider, Tim (T.O.) ; Gabor, Daniel (D.A.)  
**Cc:** Bahena, Miguel (Mike.) ; Bouse, William (Bill.)  
**Subject:** RE: C1B00 on 3FADP0L37AR [REDACTED]

Dan - can you respond.

Thank you,

**Russ Biyashev**  
**Ford Motor Company**  
**Chassis Brake Controls**  
**Phone: 313.805.4793**  
**Text: 3138054793@vttext.com**  
**Email: rbiyashe@ford.com**

---

**From:** Snider, Tim (T.O.)  
**Sent:** Tuesday, May 04, 2010 4:08 PM  
**To:** Biyashev, Russ (.)

**Cc:** Bahena, Miguel (Mike.); Bouse, William (Bill.); Gabor, Daniel (D.A.)  
**Subject:** RE: C1B00 on 3FADP0L37AR [REDACTED]

Russ,

What does C1B00-28 and C1B00-29 mean for CD3 Brakes?

Regards,  
Tim Snider (tsnider1@ford.com)

***CD3 Steering Engineering***  
***Ford Motor Company***

Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** Bouse, William (Bill.)  
**Sent:** Tuesday, May 04, 2010 12:42 PM  
**To:** Gabor, Daniel (D.A.)  
**Cc:** Bahena, Miguel (Mike.); Snider, Tim (T.O.)  
**Subject:** FW: C1B00 on 3FADP0L37AR [REDACTED]  
**Importance:** High

What exactly does the brake system look at for these codes, C1B00:28, AND C1B00:29 ?

---

**From:** Trizon Dyck, Javier (J.T.)  
**Sent:** Tuesday, May 04, 2010 12:25 PM  
**To:** Bouse, William (Bill.)  
**Subject:** C1B00 on 3FADP0L37AR [REDACTED]  
**Importance:** High

Hello Bill,

Please take a look at the field issue below. If you think this requires more engineering input, please follow up.  
Otherwise, please confirm if the published recommendation is OK.  
Thanks

Javier

**Attachments :** 0

<b>Report# :</b>	AECCH013 NHL	<b>Received:</b>	05/03/2010		
<b>CCRG/EPRC:</b>	<b>Reviewed Status:</b>	<b>Date:</b>			
<b>Vehicle:</b>	2010,FUSION,HYBRID ,SEDAN ,3FADP0L37AR [REDACTED]	<b>Build Date:</b>	10/27/2009		
<b>Odometer :</b>	2,769 M	<b>Engine:</b>	2.5 ATKINS	<b>Calibration:</b>	ADE1HV0A
<b>Transmission:</b>	CVT AUTO	<b>Axle:</b>	2.57 RATIO	<b>A/C:</b>	YES
<b>Dealer:</b>	USA 09331 Superior/Brookdale Ford	<b>Phone#:</b>	(763) 585-8390		
<b>City:</b>	Plymouth	<b>State:</b>	Minnesota	<b>Country :</b>	USA

**Originator:** KYLE LEJONVARN  
**Symptom:** 3 03 1 99 CHASS.,STRG/HANDLING ,FUNCTION,NOT LISTED  
**Status:**  
**VFG:** V89 RIDE & HANDLING  
**Additional Symptom:** C1B00  
**Fix:** **Causal Component :** --

**Condition Code:**

**Hotliner:** KHENDR13      **Phone:** 313 317-4279      **Regn Cd:** G5 Twin Cities

**Engineering:**                  **Phone:**                  **TAR:**

**Dlr Contact:** KYLE LEJONVARN      **Phone:** 000 000-0000      **Title Cde:** T

**DTCs:**

KOEO:C1B00

KOEC:

KOER:

**Comments :**

REPAIR    05/03/2010 12:54PM KIRK HENDRICKSON MSS - FCSD - TECH SVC  
HOTLINE

WEB FORM DATA - CONCERN: ADVANCED LIGHT COMES ON AT TIME  
AND WILL GO

OUT DIAGNOSTICS: NONE LAST TIME IN REFLASHED FOR U CODE  
PARTS

REPLACED:: NONE TECH QUESTION: HAVE YOU SEE THIS CODE ON  
OTHER

FUSION WERE YOU ABLE TO VERIFY THE CONCERN? NO IS THERE AN  
APPROPRIATE PINPOINT TEST IN THE WSM FOR THIS CONCERN? NO  
WAS THE

PINPOINT TEST FOLLOWED? NO

**RECOMM 05/03/2010 12:54PM KIRK HENDRICKSON MSS - FCSD - TECH SVC  
HOTLINE**

KYLE, THE TECHNICAL HOTLINE HAS NOT SEEN ANY REPORTS RELATED TO

C1B00, PLEASE CONTINUE TO ATTEMPT TO DUPLICATE THIS CONCERN. CODE

C1B00:28, AND C1B00:29 BOTH RELATE TO THE STEERING ANGLE SENSOR THAT

IS INTERNAL TO THE EPAS. NO REPAIR ATTEMPTS ARE RECOMMENDED UNTIL THE

CONCERN CAN BE DUPLICATED. IF THE CONCERN CAN BE DUPLICATED THE

RECOMMEND PROCEEDING WITH EPAS INTERACTIVE DIAGNOSTICS ON PTS WEBSITE

SECTION 211-00A:

*Javier Trizon Dyck*

HSAP HEV PVT

Cell Phone: 011 521 (662)142-0474

Fax: 011-52(662)259-8310

Email: [jtrizon@ford.com](mailto:jtrizon@ford.com)

To love God and not worship in HIS SABBATH is like not loving him. Isa 58:13-14

Amar a Dios y no adorarlo en SU SÁBADO es como no amarlo. Isa 58:13-14

Aimer le Dieu et ne pas l'adorer dans SON SAMEDI est de ne pas l'aimer comme. Isa 58:13-14

---

**From:** Estes, Eric (E.E.)  
**Sent:** Friday, April 09, 2010 2:30 PM  
**To:** Snider, Tim (T.O.)  
**Subject:** RE: CD3 EPAS Feb 2010 Warranty Cutoff

Those are all rent-a-car dealers Hertz, Thrifty, Dollar, etc.

Eric

---

**From:** Snider, Tim (T.O.)  
**Sent:** Friday, April 09, 2010 9:03 AM  
**To:** Estes, Eric (E.E.)  
**Subject:** RE: CD3 EPAS Feb 2010 Warranty Cutoff

Eric,

Thanks. What does "RAC dealer" mean?

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))  
**CD3 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** Estes, Eric (E.E.)  
**Sent:** Thursday, April 08, 2010 5:28 PM  
**To:** Snider, Tim (T.O.); Mrozek, Robert (R.M.); Bahena, Miguel (Mike.)  
**Cc:** Annadi, Hari (H.)  
**Subject:** RE: CD3 EPAS Feb 2010 Warranty Cutoff

Tim here is your list I found a couple but in late in Jan. 2010 we went over the 50 gears allowed in a six month span and the request expired and I had to put in another request so we lost a few weeks of EPAS gears in Feb. 2010. Now I have unlimited amount so we should not have a problem with getting almost all the gears back.

Canadian gears are only when needed, very hard to get those gears back very time consuming and hard to get a response from the person shipping the gears back to the WPAC.

<< File: Fusion Verbatims EPAS 4 12 2010.xls >>

Eric

---

**From:** Snider, Tim (T.O.)  
**Sent:** Thursday, April 08, 2010 3:49 PM  
**To:** Estes, Eric (E.E.); Mrozek, Robert (R.M.); Bahena, Miguel (Mike.)  
**Cc:** Annadi, Hari (H.)  
**Subject:** CD3 EPAS Feb 2010 Warranty Cutoff

Eric,

Do you have information on any of the warranty replaced gears shown in the attachment not returned to TRW? I could not find the VINs on your April 7 tracker sheet. There are 12 out of 30. Also, have you heard anything on the process to receive Canadian gears? There is a pie chart on the last tab summarizing the claims.

<< File: Fusion Verbatims EPAS 4.12.2010.xls >> << File: 2010 CD3-D3 EPAS Warranty Apr\_7\_2010.xls >>

Rob / Mike,

Notice there is one pushed out pin for the PSCM battery connector.

Regards,

Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))

***CD3 Steering Engineering***

***Ford Motor Company***

Cell 313-805-3201

2B-L18 Product Development Center

Dearborn, MI 48124 USA

---

**From:** Estes, Eric (E.E.)  
**Sent:** Tuesday, October 05, 2010 1:13 PM  
**To:** Mrozek, Robert (R.M.); Rogero, Antonio (A.); Snider, Tim (T.O.); Bahena, Miguel (Mike.); 'Guillermo Aguilar'  
**Cc:** Ulloa, Fernando (F.F.)  
**Subject:** RE: CD3 EPAS-Steering gears from warranty returns.

All the parts request are in for all 2010 & 2011 CD3/Dcar vehicles in the US with the 6months TIS & high mileage vehicles(except fleet dealers)

I would need to put in special request for any warranty returns from Mexico or Canada.

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Monday, October 04, 2010 8:24 PM  
**To:** Estes, Eric (E.E.); Rogero, Antonio (A.); Snider, Tim (T.O.); Bahena, Miguel (Mike.); 'Guillermo Aguilar'  
**Cc:** Ulloa, Fernando (F.F.)  
**Subject:** RE: CD3 EPAS-Steering gears from warranty returns.

We already get most gears back, right, Eric? PVT should know this.

*Rob Mrozek*

Electric Power Steering Supervisor  
C346N/CD3/D3/D4/U502/Police/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

---

**From:** Estes, Eric (E.E.)  
**Sent:** Monday, October 04, 2010 4:04 PM  
**To:** Rogero, Antonio (A.); Snider, Tim (T.O.); Mrozek, Robert (R.M.); Bahena, Miguel (Mike.); 'Guillermo Aguilar'  
**Cc:** Ulloa, Fernando (F.F.)  
**Subject:** RE: CD3 EPAS-Steering gears from warranty returns.

These will get a 700 tag per my parts request, so they will come back to WPAC. You don't need to put a parts request for them.

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

**From:** Rogero, Antonio (A.)  
**Sent:** Monday, October 04, 2010 3:52 PM  
**To:** Estes, Eric (E.E.); Snider, Tim (T.O.); Mrozek, Robert (R.M.); Bahena, Miguel (Mike.); 'Guillermo Aguilar'  
**Cc:** Ulloa, Fernando (F.F.)  
**Subject:** CD3 EPAS-Steering gears from warranty returns.

Every day, the chassis PVT engineers are receiving an excel file (from Mike Morton) which contains a list of parts which can be requested from dealerships for analysis.  
Attached is the list of parts for today. You will see 2 EPAS-steering gears replaced due to lost assistance.  
I can do the request of those EPAS-steering geras immediately. The replaced parts will be shipped to WPAC (to your attention) or to other location that you prefer.  
The request is immediately approved and will arrive at final destination in 3 or 5 days via UPS.  
Please let me know if want these gears for analysis.

Thanks.

<< File: Parts from WPAC Oct 4th 2010.xls >>

Antonio Rogero  
Hermosillo Assembly Plant  
Fusion / Milan / MKZ - PVT Chassis Engineer  
+52 662 259 8317

---

**From:** Surella, Matthew (M.M.)  
**Sent:** Monday, September 19, 2011 2:22 AM  
**To:** Annadi, Hari (H.); Perri, Ron (R.J.); Flanagan, Thomas (T.P.)  
**Subject:** RE: CD3 F/u items : PDQR Assignment Follow Up - Response Requested

Hari,  
Yes, same issue is hitting CD3. For tomorrow's quality meeting, I know CD3 is on the agenda but Tom has to reflash VP C344 vehicles at the pilot plant and I have my stick slip meeting at the same time. Would you like Laura there to give an update on C200D?

Matthew (Matt) Surella  
Steering EPAS Supervisor / MBB  
313-805-3997

---

**From:** Annadi, Hari (H.)  
**Sent:** Friday, September 16, 2011 11:00 AM  
**To:** Perri, Ron (R.J.); Surella, Matthew (M.M.); Flanagan, Thomas (T.P.)  
**Subject:** FW: CD3 F/u items : PDQR Assignment Follow Up - Response Requested

Is it the same issue we are seeing with U502 C200D or is it mixed in with the Control arm issue?

---

**From:** Moody, Sandra (S.L.)  
**Sent:** Friday, September 16, 2011 10:41 AM  
**To:** Annadi, Hari (H.)  
**Subject:** CD3 F/u items : PDQR Assignment Follow Up - Response Requested

<< File: ECB\_WARRANTY Claims Summary Report \_MYTD Sort\_\_MY-2011\_TopN-100\_16Sep2011.xls >>

Hari ,

Can we add to the FQR agenda :

Update on CD3 EPAS : summary of the claims and ICA/PCA as a request from the PDQR.

Sandy Moody  
Chassis Quality Manager  
Americas PD Quality  
313-805-3236  
[SMoody1@Ford.com](mailto:SMoody1@Ford.com)

---

**From:** Simons, Brenda (J.)  
**Sent:** Thursday, September 15, 2011 12:52 PM  
**To:** Moody, Sandra (S.L.)  
**Subject:** RE: PDQR Assignment Follow Up - Response Requested

<< File: UNTITLED.PPT >>

Here is the relative slide. Items 5 and 8 were in question. KP wanted updates on both, relative to Fusion.  
Make better sense?

S. Moody

Fusion ECB YTD Sort Issues - Bring back updates for issues. Including but not limited to: Item 5- Wheels, etc...

---

**From:** Simons, Brenda (J.)  
**Sent:** Thursday, September 15, 2011 11:10 AM  
**To:** Moody, Sandra (S.L.)  
**Subject:** RE: PDQR Assignment Follow Up - Response Requested

I will get more detail on the 1st item. I will let you know shortly.

B

---

**From:** Moody, Sandra (S.L.)  
**Sent:** Thursday, September 15, 2011 11:08 AM  
**To:** Simons, Brenda (J.)  
**Subject:** RE: PDQR Assignment Follow Up - Response Requested

Boy ! I don't know what is needed for the first item ??? It is not clear ? But yes on item 957 for Oct PDQR discussion item but only if Raj is in attendance.

Sandy Moody  
Chassis Quality Manager  
Americas PD Quality  
313-805-3236  
[SMoody1@Ford.com](mailto:SMoody1@Ford.com)

---

**From:** Simons, Brenda (J.)  
**Sent:** Thursday, September 15, 2011 8:38 AM  
**To:** Moody, Sandra (S.L.)  
**Subject:** PDQR Assignment Follow Up - Response Requested

<< OLE Object: Picture (Metafile) >>

Hi Sandy,

Just looking for an updated status on the assignments? I expect that 957 will be included in the 10/13 PDQR review but I did not want to make assumptions, let me know, thanks!

**Brenda J. Simons**  
Tactical and Interface Quality Analyst  
Six Sigma Black Belt  
Telephone - 313-621-2838

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Wednesday, May 26, 2010 3:49 PM  
**To:** Snider, Tim (T.O.); Mrozek, Robert (R.M.)  
**Subject:** RE: CD3 Paynter Chart

We have root cause for many of the B3as but Erics tracking sheet is out of date.

---

**From:** Snider, Tim (T.O.)  
**Sent:** Wednesday, May 26, 2010 11:22 AM  
**To:** Mrozek, Robert (R.M.)  
**Cc:** Bahena, Miguel (Mike.)  
**Subject:** CD3 Paynter Chart

Rob,

There are not many non-cricket NVH warranty claims. There are quite a few B3A's that are still being investigated. There are 12 B3A's under investigation, and 6 were added since the last Paynter chart update on April 29.

<< File: CD3 EPAS Warranty May 22, 2010 Paynter.xls >> << File: 2010 CD3-D3 EPAS Warranty May\_18\_2010.xls >>

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))

***CD3 Steering Engineering***

***Ford Motor Company***

Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

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**From:** Bouse, William (Bill.)  
**Sent:** Tuesday, September 29, 2009 6:02 PM  
**To:** Frey, Martin (M.F.)  
**Cc:** Snider, Tim (T.O.); Mrozek, Robert (R.M.); Bahena, Miguel (Mike.); Puleri, Michael (M.J.)  
**Subject:** RE: CD3 warranty paynter chart

I was going to actually put them on a separate chart.

---

**From:** Frey, Martin (M.F.)  
**Sent:** Tuesday, September 29, 2009 11:38 AM  
**To:** Bouse, William (Bill.); Snider, Tim (T.O.); Mrozek, Robert (R.M.); Bahena, Miguel (Mike.); Puleri, Michael (M.J.)  
**Subject:** RE: CD3 warranty paynter chart

Nice .... Does this capture field and plant failures? I propose we should include plant failures but may want to distinguish some way .... Perhaps could be #plant/# field shown in the box or literally type Plant: x  
..... Whatever

Field: y

Please add our latest and new favorite with the Tyco weld issue..... Two HSAP failures

Will we have a separate chart for I **Re** ?

Thanks

Martin Frey  
Manager Electric Steering/Advanced Features/R&P Gear  
Chassis Engineering  
Cell # 313 805 6301

---

**From:** Bouse, William (Bill.)  
**Sent:** Thursday, September 24, 2009 12:25 PM  
**To:** Frey, Martin (M.F.); Hochrein, Brad (B.G.)  
**Cc:** Snider, Tim (T.O.); Mrozek, Robert (R.M.)  
**Subject:** CD3 warranty paynter chart

Here is the data that was to be reviewed today in the design review. I will present to JD later this afternoon in hard rocks.

<< File: CD3 warranty Sept\_15 Paynter.xls >>

**Bill Bouse**  
CD Platform EPS System Engineer  
**(cell)** (313) 805-2289  
**(email)** [wbouse@ford.com](mailto:wbouse@ford.com)  
**(text)** [3138052289@vtext.com](mailto:3138052289@vtext.com)

---

**From:** Bouse, William (Bill.)  
**Sent:** Sunday, September 27, 2009 7:10 PM  
**To:** Mrozek, Robert (R.M.); Snider, Tim (T.O.)  
**Subject:** RE: CD3 warranty paynter chart

Rob, I can re-do the chart since most of the open items have changed and sit down with you and Tim next week?

---

**From:** Mrozek, Robert (R.M.)  
**Sent:** Thursday, September 24, 2009 3:49 PM  
**To:** Bouse, William (Bill.); Snider, Tim (T.O.)  
**Cc:** Mrozek, Robert (R.M.)  
**Subject:** RE: CD3 warranty paynter chart

Notes from today:

- 1) Add a monitor category to take one-offs off the list
- 2) break down and separate the tbd's when they appear to have a common bin or failure type. For instance, if we have 3 "no comms" then separate them into a bin/group on the chart.
- 3) interested in a long term projection to 3MIS. Can we make some type of intelligent projection? I think hari can help us with this one...I doubt we have to invent something here.
- 4) bring in 0km claims somewhere

These were requests from JD. I take them as "suggestions" since we can't modify the sheet to meet everyone's needs. But, let's talk and decide how we want to incorporate these suggestions.

*Rob Mrozek*

Electric Power Steering Supervisor  
D3/D4/U502/Limo Programs  
Ford Motor Company  
Phone: (313) 805-5947  
e-mail: [rmrozek@ford.com](mailto:rmrozek@ford.com)

---

**From:** Bouse, William (Bill.)  
**Sent:** Thursday, September 24, 2009 12:25 PM  
**To:** Frey, Martin (M.F.); Hochrein, Brad (B.G.)  
**Cc:** Snider, Tim (T.O.); Mrozek, Robert (R.M.)  
**Subject:** CD3 warranty paynter chart

Here is the data that was to be reviewed today in the design review. I will present to JD later this afternoon in hard rocks.

<< File: CD3 warranty Sept\_15 Paynter.xls >>

**Bill Bouse**  
CD Platform EPS System Engineer  
**(cell)** (313) 805-2289  
**(email)** [wbouse@ford.com](mailto:wbouse@ford.com)  
**(text)** [3138052289@vtext.com](mailto:3138052289@vtext.com)

---

**From:** Bahena, Miguel (Mike.)  
**Sent:** Wednesday, February 02, 2011 10:13 PM  
**To:** Snider, Tim (T.O.); 'Robert Kostadina'  
**Cc:** 'Michael Fontana'; Napoli, Laura (L.); Diez, Timothy (T.P.); Mrozek, Robert (R.M.); Estes, Eric (E.E.)  
**Subject:** RE: CD3 Woodpecker Strategy

Tim,

I believe Laura is referring to the higher current relay closure test which is not in the CD3 SW.

Sincerely,

**Mike Bahena**  
**D3 Electric Power Steering Systems**  
**Ford Motor Co.**  
Ph: (313) 805-3680  
[mbahena1@ford.com](mailto:mbahena1@ford.com)

---

**From:** Snider, Tim (T.O.)  
**Sent:** Wednesday, February 02, 2011 4:54 PM  
**To:** 'Robert Kostadina'  
**Cc:** 'Michael Fontana'; Napoli, Laura (L.); Diez, Timothy (T.P.); Bahena, Miguel (Mike.); Mrozek, Robert (R.M.); Estes, Eric (E.E.)  
**Subject:** CD3 Woodpecker Strategy

Rob K,

Have there been any changes to the CD3 woodpecker strategy for production vehicles? Laura tells me U502 has temporarily changed their strategy. I don't remember hearing of any CD3 software change having a woodpecker change in it. Let me know, thanks.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))  
**CD3/C489 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** Robert Kostadina <Robert.Kostadina@TRW.COM>  
**Sent:** Thursday, February 03, 2011 12:21 AM  
**To:** Snider, Tim (T.O.)  
**Cc:** Estes, Eric (E.E); Napoli, Laura (L); Bahena, Miguel (Mike.); Mrozek, Robert (R.M.); Diez, Timothy (T.P.); Michael Fontana  
**Subject:** Re: CD3 Woodpecker Strategy

It is high current relay closure test.

>>> "Snider, Tim (T.O.)" 02/02/11 4:54 PM >>>

Rob K,

Have there been any changes to the CD3 woodpecker strategy for production vehicles? Laura tells me U502 has temporarily changed their strategy. I don't remember hearing of any CD3 software change having a woodpecker change in it. Let me know, thanks.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))

**CD3/C489 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

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**From:** Napoli, Laura (L.)  
**Sent:** Monday, February 07, 2011 3:16 PM  
**To:** Snider, Tim (T.O.)  
**Subject:** RE: CD3 Woodpecker Strategy

Not sure if you sent me this email before or after I sent you the presentation. Did you check out the presentation? Simon can explain more, but it's a more effective way to run the woodpecker to break through ice and contamination. Running at a higher current in the part of the flow chart that was a lower current is more effective. Instead of removing the lower current portion and replacing it with higher current, they split the total time up into two portions. First the lower current, then the higher current.

---

**From:** Snider, Tim (T.O.)  
**Sent:** Thursday, February 03, 2011 9:41 AM  
**To:** Napoli, Laura (L.)  
**Subject:** RE: CD3 Woodpecker Strategy

Laura,

What is the benefit of the higher current relay closure test? Doesn't sound like CD3 has it.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))  
**CD3/C489 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

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**From:** Napoli, Laura (L.)  
**Sent:** Wednesday, February 02, 2011 4:59 PM  
**To:** Snider, Tim (T.O.)  
**Subject:** RE: CD3 Woodpecker Strategy

Info from TRW for your reference on woodpecker sequence and addition of higher current contact relay closure test...  
<< File: Retry strategy\_flow chart\_Tune Parameter Confirmation\_V4.pdf >>

---

**From:** Snider, Tim (T.O.)  
**Sent:** Wednesday, February 02, 2011 4:54 PM  
**To:** 'Robert Kostadina'  
**Cc:** 'Michael Fontana'; Napoli, Laura (L.); Diez, Timothy (T.P.); Bahena, Miguel (Mike.); Mrozek, Robert (R.M.); Estes, Eric (E.E.)  
**Subject:** CD3 Woodpecker Strategy

Rob K,

Have there been any changes to the CD3 woodpecker strategy for production vehicles? Laura tells me U502 has temporarily changed their strategy. I don't remember hearing of any CD3 software change having a woodpecker change in it. Let me know, thanks.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))

***CD3/C489 Steering Engineering***

***Ford Motor Company***

Cell 313-805-3201

2B-L18 Product Development Center

Dearborn, MI 48124 USA

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**From:** Napoli, Laura (L.)  
**Sent:** Thursday, September 29, 2011 7:51 PM  
**To:** Snider, Tim (T.O.)  
**Subject:** RE: CD3 xx B9A SW Implementation Date at QAO

Ok. then I'll put the change 6 weeks prior to your Dec 10 date.

---

**From:** Snider, Tim (T.O.)  
**Sent:** Thursday, September 29, 2011 3:44 PM  
**To:** Napoli, Laura (L.)  
**Subject:** RE: CD3 xx B9A SW Implementation Date at QAO

I think we updated at Anting and waited for the parts to arrive.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))

**C346N Steering Engineering**  
**Ford Motor Company**

Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

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**From:** Napoli, Laura (L.)  
**Sent:** Thursday, September 29, 2011 11:09 AM  
**To:** Snider, Tim (T.O.)  
**Subject:** RE: CD3 xx B9A SW Implementation Date at QAO

Were you updating SW at QAO or did you start it at Anting and wait for it to hit QAO?

---

**From:** Snider, Tim (T.O.)  
**Sent:** Thursday, September 29, 2011 10:41 AM  
**To:** Napoli, Laura (L.)  
**Cc:** Flanagan, Thomas (T.P.)  
**Subject:** FW: CD3 xx B9A SW Implementation Date at QAO

Laura,

Use Dec 10, 2010 as CD3 B9A voltage regulator software fix implementation date at Hermosillo.

Regards,  
Tim Snider ([tsnider1@ford.com](mailto:tsnider1@ford.com))

**C346N Steering Engineering**

**Ford Motor Company**

Cell 313-805-3201

2B-L18 Product Development Center

Dearborn, MI 48124 USA

---

**From:** JuanCarlos cano [mailto:[JuanCarlos.cano@TRW.COM](mailto:JuanCarlos.cano@TRW.COM)]

**Sent:** Tuesday, December 07, 2010 6:21 PM

**To:** Snider, Tim (T.O.)

**Cc:** Samuel Arreola

**Subject:** CD3 xx B9A SW Implementation Date at QAO

Tim,

Samuel and the team at QAO conducted a very precise cycle count on the motors we have on hand at QAO before we implement the B9A SW change and based on this quantity (~3, 620) we estimated our implementation date to be this Friday 12/10 once we deplete all the existing material.

If implemented on Friday we also wanted to confirm that is OK to have CG level SW (TDT +B9A) used on the CD level gear, since the releases for the CG level gear are not shown until ~Week 4 of next year.

We will keep you posted with the production serial number of the first batch produced with B9A SW for our records and warranty clean point. We will identify parts shipped to HSAP with the Alert number: A12403278

Thank you!

JC & Samuel

---

**From:** Chacon, Jose (A.)  
**Sent:** Tuesday, November 30, 2010 11:34 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Gudino Mendoza, Martin (J.M.); Ulloa, Fernando (F.F.); Durand, Gerardo (G.D.)  
**Subject:** RE: CD3XX- 2011 > Report Summary for the CQIS Report#AKWBA013  
**Attachments:** EPAS - CD3XX- U3000XX.xls

Tim,

Thanks for the feedback. Lets work together on determining where we at, what needs improvement and/or move forward in reducing costs on these components. Your team may already have a chart with the contention data we are looking for; however, can you fill some of the boxes in the attached excel file? We believe we can start there, and look for opportunities for improvement. If you need me to run a meeting and/or review each action step by step, let us know.

Thank You!

Regards,

*Jose Chacon*

**Product Concern Engineer**  
**Fusion/Milan/Zephyr/MKZ**  
**Ford Customer Service Division**  
**(91-313)322-7062)**

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**From:** Snider, Tim (T.O.)  
**Sent:** Tuesday, November 30, 2010 4:21 PM  
**To:** Chacon, Jose (A.)  
**Cc:** Gudino Mendoza, Martin (J.M.); Ulloa, Fernando (F.F.); Durand, Gerardo (G.D.); Quijada, Jorge (J.); Estes, Eric (E.E.)  
**Subject:** RE: CD3XX- 2011 > Report Summary for the CQIS Report#AKWBA013

Jose,

U3000-XX can have many root causes. U3000 indicates an issue with the PSCM. To date, we have found 10 root causes for PSCM U3000-XX. Steering motor and torque sensor faults can also cause U3000-XX.

Regards,  
Tim Snider (tsnider1@ford.com)  
**CD3/C489 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

**From:** Chacon, Jose (A.)  
**Sent:** Tuesday, November 30, 2010 10:05 AM  
**To:** Estes, Eric (E.E.); Snider, Tim (T.O.)  
**Cc:** Gudino Mendoza, Martin (J.M.); Ulloa, Fernando (F.F.); Durand, Gerardo (G.D.); Quijada, Jorge (J.)  
**Subject:** RE: CD3XX- 2011 > Report Summary for the CQIS Report#AKWBA013

Agree. Heat shield and code are different.

The concern we have, is we keep seeing improvements for EPAS gear assemblies on CD3XX, month after month, and still do not see a true clean point for permanent code U3000:XX. For service, of course we can replace the rack and the vehicle is fixed (No repeat repairs, win-win for dealer/customer). We continue to have hotline contacts on this system (GAS/HEV CD3XX Units)

For Ford/TRW warranty, we are in the high levels with this issue, and we continue to see code U3000:XX showing up on 2010-2011 units. Yes, we do understand there are internal components, external factors, or unforeseen situations.

+What has the returned racks show and/or does the data indicate a trend? i.e.: Sensor loose, grease on sensor, chip contamination, relays sticking, process contamination, poor weld application, etc.

+ What improvement had been incorporated to scientifically reduce the replacement of the rack, when permanent DTC code is set?

We are basically, want to make sure all the necessary Production contentions are in place and look forward for a true clean date(s). We can formulate this question differently: What is the expected R/1000 for this particular code for 2010-2011 MY units – Built prior to the Production Clean date XXXX/XX/XX?

Regards,

*José Chacon*

*Product Concern Engineer  
Fusion/Milan/Zephyr/MKZ  
Ford Customer Service Division  
(91-313)322-7062*

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**From:** Estes, Eric (E.E.)  
**Sent:** Tuesday, November 30, 2010 9:47 AM  
**To:** Chacon, Jose (A.); Snider, Tim (T.O.)  
**Cc:** Gudino Mendoza, Martin (J.M.); Ulloa, Fernando (F.F.); Durand, Gerardo (G.D.); Quijada, Jorge (J.)  
**Subject:** RE: CD3XX- 2011 > Report Summary for the CQIS Report#AKWBA013

U3000-96 is a generic lock out code that will set when the same code sets 3 times within 3 ignition cycles. This code has nothing to do with the heat shield.

*Eric J Estes*

TRW EPAS Steering Systems  
Quality Specialist  
Hotline ph# 313-317-9358  
Cell ph# 734-560-3493

**From:** Chacon, Jose (A.)  
**Sent:** Monday, November 29, 2010 4:17 PM  
**To:** Snider, Tim (T.O.)  
**Cc:** Gudino Mendoza, Martin (J.M.); Ulloa, Fernando (F.F.); Durand, Gerardo (G.D.); Quijada, Jorge (J.); Estes, Eric (E.E.)  
**Subject:** RE: CD3XX- 2011 > Report Summary for the CQIS Report# [REDACTED]

Thanks! I'll create an ISM to inform Hotline the shield was deleted on CD3XX vehicles.

On U3000-96 is there a clean date in effect?

Regards,

*José Chacon*

*Product Concern Engineer  
Fusion/Milan/Zephyr/MKZ  
Ford Customer Service Division  
(91-313)322-7062*

---

**From:** Snider, Tim (T.O.)  
**Sent:** Monday, November 29, 2010 4:16 PM  
**To:** Chacon, Jose (A.)  
**Cc:** Chacon, Jose (A.); Gudino Mendoza, Martin (J.M.); Ulloa, Fernando (F.F.); Durand, Gerardo (G.D.); Quijada, Jorge (J.); Estes, Eric (E.E.)  
**Subject:** RE: CD3XX- 2011 > Report Summary for the CQIS Report#AKWBA013

Yes, the EPAS heat shield was deleted. Clean date is April 12, 2010. U3000-96 indicates a fault with the PSCM. Since this vehicle has 255 miles, the gear will automatically be requested back by TRW for analysis.

Regards,  
Tim Snider (tsnider1@ford.com)  
**CD3/C489 Steering Engineering**  
**Ford Motor Company**  
Cell 313-805-3201  
2B-L18 Product Development Center  
Dearborn, MI 48124 USA

---

**From:** JCHACON3@ford.com [mailto:JCHACON3@ford.com]  
**Sent:** Monday, November 29, 2010 3:55 PM  
**To:** Snider, Tim (T.O.); Ulloa, Fernando (F.F.); Durand, Gerardo (G.D.); Quijada, Jorge (J.)  
**Cc:** Chacon, Jose (A.); Gudino Mendoza, Martin (J.M.)  
**Subject:** CD3XX- 2011 > Report Summary for the CQIS Report#AKWBA013

Did a heat shield get deleted for production on EPAS racks? Clean point date? Clean Point date for U:3000:00 fault code?

**Attachments :** 0