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**From:** McElmeel, Edward (E.F.)  
**Sent:** Tuesday, November 28, 2017 12:49 PM  
**To:** Surella, Matthew (M.M.)  
**Cc:** Matti, Alvin (.); Singh, Hardeep (H.); Lawless, Gabriel (G.J.)  
**Subject:** FW: Once Again Feds Investigate Ford Models For Dangerous Power Steering Loss - Forbes

This was before my time with TRW also.

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**From:** Lawless, Gabriel (G.J.)  
**Sent:** Tuesday, November 28, 2017 11:40 AM  
**To:** Matti, Alvin (.) <amatti@ford.com>; McElmeel, Edward (E.F.) <emcelmee@ford.com>; Singh, Hardeep (H.) <HSINGH97@ford.com>  
**Subject:** RE: Once Again Feds Investigate Ford Models For Dangerous Power Steering Loss - Forbes

+ Matt Surella

Alvin,

I never worked on this program so I can't answer your question. Maybe Matt can shed some light on this.

Regards,

**Gabriel J. Lawless**  
Product Engineer  
Email: [glawles6@ford.com](mailto:glawles6@ford.com)  
Cell Phone: (313) 316-2542  
Location: FN3 HM011

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**From:** Matti, Alvin (.)  
**Sent:** Tuesday, November 28, 2017 11:36 AM  
**To:** McElmeel, Edward (E.F.); Singh, Hardeep (H.); Lawless, Gabriel (G.J.)  
**Subject:** FW: Once Again Feds Investigate Ford Models For Dangerous Power Steering Loss - Forbes

Hi Ed, Gabe

Please see below. What was the root cause and the fix for high friction detection DTC P07AE:09 in 2010 Fusion?  
This is very hot.

Regards  
**Alvin Matti**  
EPAS TE  
Steering Campaign Prevention Supv  
FN3 GS008 / 313 805-3152

---

**From:** Perri, Ron (R.J.)  
**Sent:** Monday, November 27, 2017 9:21 AM  
**To:** Castellano, James (.) <[jcastel2@ford.com](mailto:jcastel2@ford.com)>; Sickert, Dirk (D.) <[dsickert@ford.com](mailto:dsickert@ford.com)>; Smith, Garry (G.R.) <[gsmith3@ford.com](mailto:gsmith3@ford.com)>; Puleri, Michael (M.J.) <[mpuleri@ford.com](mailto:mpuleri@ford.com)>; Schymczyk, Armin (G.) <[aschymcz@ford.com](mailto:aschymcz@ford.com)>; Eschtruth, Kirt (.) <[keschtru@ford.com](mailto:keschtru@ford.com)>; Petermann, Volker (V.) <[vpeterm3@ford.com](mailto:vpeterm3@ford.com)>; Bouse, William (Bill.) <[wbose@ford.com](mailto:wbose@ford.com)>; Matti, Alvin (.) <[amatti@ford.com](mailto:amatti@ford.com)>  
**Subject:** FW: Once Again Feds Investigate Ford Models For Dangerous Power Steering Loss - Forbes

# Once Again Feds Investigate Ford Models For Dangerous Power Steering Loss

By Christopher Jensen

Federal regulators have intensified an investigation into the sudden loss of power steering on the 2010 Ford Fusion, according to a report on the website of the National Highway Traffic Safety Administration.

In the report the agency said it began investigating the issue in September 2016 after receiving 547 complaints from owners. They complained that “significantly increased driver effort is required to maintain directional control of the vehicle.”

Since then NHTSA says it found about 2,200 complaints to either the agency or Ford. There were also reports of 13 accidents resulting in seven injuries, the extent of which was not noted.

One of those complaining was a Florida owner who wrote the agency in 2013. “Very dangerous issue!! I have been letting my daughter, who is a new driver, use this car. I am not rethinking it. Might have to sell the car and buy a safer car for her.”

The agency said those findings merit advancing its inquiry from a “preliminary evaluation” to an “engineering analysis.” The engineering analysis is more likely – but not certain – to lead to a recall.

In 2015 Ford recalled about 393,000 models for a sudden failure of the power steering. That followed an investigation by the agency triggered by owner complaints. The automaker blamed “an intermittent electrical connection caused by quality issues.”

That action covered 2011-2012 Ford Fusion vehicles without a 3.5L engine and Lincoln MKZ hybrid electric vehicles, 2011 Mercury Milan vehicles, 2011-2012 Ford Taurus, Ford Flex, Lincoln MKS, and Lincoln MKT vehicles equipped with a 3.5L GTDI engine and 2013 Ford Taurus, Ford Flex, Lincoln MKS, and Lincoln MKT “with any available engine.”

In the 2015 recall Ford admitted to NHTSA that it first knew of a possible problem in 2011 and the same year the supplier “implemented quality implemented corrective action for quality issues.” But Ford didn’t recall the vehicles until after the agency began asking about owner complaints.

Ron Perri  
Global Chassis Steering Core and Application Manager  
Fairlane North, Building 3, GT-004  
cell 313-805-0680  
[rperri@ford.com](mailto:rperri@ford.com)

---

**From:** Flack, David (L.)  
**Sent:** Monday, November 27, 2017 7:10 AM  
**To:** Jurecki, Raymond (R.) <[rjurecki@ford.com](mailto:rjurecki@ford.com)>; Perri, Ron (R.J.) <[rperri@ford.com](mailto:rperri@ford.com)>; Pappalardo, Marisa (M.A.) <[mpappal1@ford.com](mailto:mpappal1@ford.com)>; Nuar, John (J.) <[jnuar@ford.com](mailto:jnuar@ford.com)>; Proch, Mary (M.) <[mproch1@ford.com](mailto:mproch1@ford.com)>  
**Subject:** Once Again Feds Investigate Ford Models For Dangerous Power Steering Loss - Forbes

Hi,

I thought you'd like this:

<https://www.forbes.com/sites/jensen/2017/11/25/once-again-feds-investigate-ford-models-for-dangerous-power-steering-loss/#7560830e3e90>

Once Again Feds Investigate Ford Models For Dangerous Power Steering Loss - Forbes

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**From:** Frey, Martin (M.F.)  
**Sent:** Friday, July 15, 2011 8:57 AM  
**To:** Surella, Matthew (M.M.); Holmes, Alison (A.M.)  
**Subject:** Hot ..... FW: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

FYI

Martin Frey  
Manager Car/CUV Suspension and Subframe  
Chassis Engineering  
Cell # 313 805 6301

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**From:** Frey, Martin (M.F.)  
**Sent:** Friday, July 15, 2011 8:23 AM  
**To:** Collins, Ron (R.J.); Perri, Ron (R.J.)  
**Cc:** Annadi, Hari (H.)  
**Subject:** RE: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Ron .....

The Maine car is a 2010 vehicle built back in April 2009. May not be the vehicle to chase for emerging issue. We need to talk to the dealer and learn more about that vehicle.

Need to find out what we can get our hands on in Vegas that may better line up better with emerging issue. We will find out and discuss possibilities later today.

Martin Frey  
Manager Car/CUV Suspension and Subframe  
Chassis Engineering  
Cell # 313 805 6301

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**From:** Collins, Ron (R.J.)  
**Sent:** Friday, July 15, 2011 7:31 AM  
**To:** Perri, Ron (R.J.); Frey, Martin (M.F.)  
**Subject:** RE: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Send an engineer from both steering and sus[pension to this dealer asap! And to LV as well if necessary. Jump on this!!!

Ron Collins  
Chief Engineer, North American Chassis Engineering  
Ford Motor Company  
email: rcollin4@ford.com

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**From:** Perri, Ron (R.J.)  
**Sent:** Friday, July 15, 2011 7:23 AM  
**To:** Collins, Ron (R.J.)  
**Subject:** FW: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

may have to go to Maine 1st.....2010 Fusion Hybrid getting repeat codes, owner traded car in, dealer owns it now.

Ron Perri  
Manager, Chassis - EPAS and Upper Steering, Systems & Core  
2B-F77, Product Development Center  
cell 313-805-0680  
rperri@ford.com

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**From:** Surella, Matthew (M.M.)  
**Sent:** Thursday, July 14, 2011 11:40 PM  
**To:** Perri, Ron (R.J.)  
**Subject:** FW: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Ron,  
I think it would be good to send Tom and TRW to Maine to look at this vehicle. It has the U0415:00-48 (PSCM), AND P07AE:09-C8 codes which we're starting to see more and more. This one doesn't have the C1277 and C1963 ABS codes in combination with the U0415 and P07AE but since it has the P07AE, I think it's worth investigating - it could give us a clue on why we're seeing these. Let me know your thoughts.

Matthew (Matt) Surella  
Steering EPAS Supervisor / MBB  
313-805-3997

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**From:** Avery, Kevin (K.)  
**Sent:** Thursday, July 14, 2011 11:30 PM  
**To:** Surella, Matthew (M.M.); Bradcoski, Brian (B.P.); Mrozek, Robert (R.M.)  
**Subject:** Re: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

The dealer now owns it and they are eager to fix it so they can sell it.

Kevin Avery  
Field Service Engineer

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**From:** Surella, Matthew (M.M.)  
**Sent:** Thursday, July 14, 2011 11:28 PM  
**To:** Avery, Kevin (K.); Bradcoski, Brian (B.P.); Mrozek, Robert (R.M.)  
**Subject:** RE: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Is the vehicle still in Maine and available? It looked like the customer no longer owns it.

Matthew (Matt) Surella  
Steering EPAS Supervisor / MBB  
313-805-3997

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**From:** Avery, Kevin (K.)  
**Sent:** Thursday, July 14, 2011 11:23 PM  
**To:** Surella, Matthew (M.M.); Bradcoski, Brian (B.P.); Mrozek, Robert (R.M.)  
**Subject:** Re: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Yes, tied rods removed and mechanical function was tested on two different occasions that I was personally involved with and found nothing. Wheels turned as they should, same with rotating (simulated steering maneuvers) of the spindles.

Hence why I'm a bit confused.

Kevin Avery  
Field Service Engineer

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**From:** Surella, Matthew (M.M.)  
**Sent:** Thursday, July 14, 2011 11:18 PM  
**To:** Bradcoski, Brian (B.P.); Mrozek, Robert (R.M.)  
**Cc:** Avery, Kevin (K.)  
**Subject:** RE: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Brian,  
P07AE is our friction detection code so something is causing the gear to see higher friction. The fact that the same code came back after replacing the gear would indicate to me that something else in the vehicle is causing the gear to see higher friction. I know they said below that they did check for binding but were tie rods disconnected and wheel ends rotated to see if there was anything abnormal in terms of the torque to turn the wheel ends without tie rods connected?

Matthew (Matt) Surella  
Steering EPAS Supervisor / MBB  
313-805-3997

---

**From:** Bradcoski, Brian (B.P.)  
**Sent:** Wednesday, July 13, 2011 11:39 AM  
**To:** Surella, Matthew (M.M.); Mrozek, Robert (R.M.)  
**Cc:** Avery, Kevin (K.)  
**Subject:** FW: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Matt, Robert,

Do you have any thoughts or suggestions regarding this issue to share with Kevin Avery, the FSE involved in this vehicle?

I ran AWS and also performed a word search in CQIS for "P07AE" but really couldn't find much at all on other vehicles experiencing this same DTC.

Brian Bradcoski  
FCSD Commodity Concern Engineer - **Hybrid and Battery Electric Vehicles**

Ford Diagnostic Service Center I, Room 205  
1700 Fairlane Drive  
Allen Park, MI 48101  
Phone (313) 32-23344

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**From:** Frey, Martin (M.F.)  
**Sent:** Tuesday, July 12, 2011 5:29 PM  
**To:** Daleiden, Steve (S.A.); Surella, Matthew (M.M.); Mrozek, Robert (R.M.)  
**Cc:** Frank, Charles (C.R.); Bradcoski, Brian (B.P.)  
**Subject:** RE: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Matt or Rob will be able to point you in the right direction.

Martin Frey  
Manager Car/CUV Suspension and Subframe  
Chassis Engineering  
Cell # 313 805 6301

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**From:** Daleiden, Steve (S.A.)  
**Sent:** Monday, July 11, 2011 1:14 PM  
**To:** Frey, Martin (M.F.)  
**Cc:** Frank, Charles (C.R.); Bradcoski, Brian (B.P.); Daleiden, Steve (S.A.)  
**Subject:** FW: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Hi Martin -- can you tell us who is the supervisor for CD EPAS? We have an issue on a 2010 Fusion Hybrid that we could use some help with.

Thanks.

" ... life is neither fair nor unfair - it is random and probabilistic ..."  
*Steve Daleiden/ HEV/ PHEV/ BEV Systems/ Quality Engineering Supervisor  
Global Hybrid/ Electric Propulsion System Applications  
Sustainable Mobility Technologies/ Ford Motor Company  
sdaleide@ford.com  
(313)805-4231/ AEC / 3506*

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**From:** Bradcoski, Brian (B.P.)  
**Sent:** Monday, July 11, 2011 12:12 PM

**To:** Frank, Charles (C.R.); Daleiden, Steve (S.A.)  
**Cc:** Avery, Kevin (K.); Hinderer, Michael (M.); Trizon Dyck, Javier (J.T.)  
**Subject:** FW: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Chuck, Steve,

Who would be the best person to assist our FSE with a recurring P07AE in the EPAS system?

Please note that the majority of the comments in the CQIS report are based on the understanding that another dealership (Quirk Ford) had previously replaced the gear. However the gear does not appear to have been replaced by them, and the present dealer (Darling's Bangor Ford) did not replace it until the end of June or early July. The present dealer indicates the concern has recurred two times for them after they replaced the gear.

Thanks!

Brian Bradcoski  
FCSD Commodity Concern Engineer - **Hybrid and Battery Electric Vehicles**

Ford Diagnostic Service Center I, Room 205  
1700 Fairlane Drive  
Allen Park, MI 48101  
Phone (313) 32-23344

---

**From:** Avery, Kevin (K.)  
**Sent:** Monday, July 11, 2011 11:24 AM  
**To:** Bradcoski, Brian (B.P.)  
**Subject:** RE: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Yes, the repair order at Darlings is still open.

**Kevin Avery**  
Field Service Engineer, Boston Region  
(774) 285-9143  
Fax: 866-736-6011

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**From:** Bradcoski, Brian (B.P.)  
**Sent:** Monday, July 11, 2011 11:22 AM  
**To:** Avery, Kevin (K.)  
**Subject:** FW: P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

Kevin,

I was just about to forward this report to engineering for assistance, however before I do we need to be ready to answer one obvious question.

The CQIS report makes numerous references to the steering gear having been replaced in February/March, yet AWS has no record of this. In fact the CQIS report seems to indicate the gear has been replaced twice:

THIS DEALERSHIP (DARLINGS BANGOR FORD) REPLACED THE STEERING RACK, PREVIOUS DEALERSHIP (QUIRK FORD OF BELFAST) REPLACED THE RACK, 14290 HARNESS, AND 3F720 HARNESS.

Is it safe to assume that Darlings Bangor Ford simply hasn't submitted their warranty claim yet?

Brian Bradcoski  
FCSD Commodity Concern Engineer - **Hybrid and Battery Electric Vehicles**

Ford Diagnostic Service Center I, Room 205  
1700 Fairlane Drive  
Allen Park, MI 48101  
Phone (313) 32-23344

---

**From:** BBRADCOS@ford.com [mailto:BBRADCOS@ford.com]  
**Sent:** Monday, July 11, 2011 10:43 AM  
**To:** Bradcoski, Brian (B.P.)  
**Subject:** P07AE: FSE Request For Assistance - CQIS Report BBNBJ002

**Attachments :** 0

<b>Report# :</b>	BBNBJ002 NHL	<b>Received:</b>	02/14/2011		
<b>CCRG/EPRC:</b>	S	<b>Reviewed Status:</b>	<b>Date:</b> 03/28/2011		
<b>Vehicle:</b>	2010,FUSION,HYBRID ,SEDAN ,3FADP0L35AR135999	<b>Build Date:</b>	04/24/2009		
<b>Odometer :</b>	38,469 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 09044 Darling's Bangor Ford	<b>Phone#:</b>	(207) 941-1330		
<b>City:</b>	Bangor	<b>State:</b>	Maine	<b>Country :</b>	USA
<b>Originator:</b>	ARTHUR STENTIFORD				
<b>Symptom:</b>	6 62 4 28 SP/ST/RD,STEER/STER WHL,PERFORMANCE,EXCESS EFFORT				
<b>Status:</b>					
<b>VFG:</b>	V87 STEERING				

**Additional Symptom:** P07AE:09 REPEAT WITH NEW GEAR

**Fix:** **Causal Component :** NO PROBLEM FOUND (NRTH AMER) -- NOA

**Condition Code:**

**Hotliner:** DKNAPP7 **Phone:** 000 317-6316 **Regn Cd:** N2 Boston

**Engineering:** **Phone:** **TAR:** 0-30

**Dlr Contact:** ARTHUR STENTIFORD **Phone:** 000 000-0000 **Title Cde:** T

**DTCs:**

KOEO:

KOEC:P07AE:09 C1B00 U0415

KOER:

**Comments**

:

**REPAIR** 02/14/2011 09:32AM DAVID KNAPP MSS - FCSD - TECH SVC HOTLINE  
WEB FORM DATA - CONCERN: POWER STERRING INOP AND SERVICE TRACTION CONTROL DISPLAYED ON DASH DIAGNOSTICS: FOLLOWED PINPOINT TEST FOR CODE P07AE AND INSTALLED NEW EPAS STERRING RACK CLEARED CODES ROAD TESTED AND RETESTED, OK. CUSTOMER TOOK CAR AND DROVE 100 MILES AND NOW HAS SAME CONCERN AS BEFORE. CHECKED CONNECTIONS AT RACK AND ABS MODULE  
NO CONCERNS FOUND AT THIS TIME. HAS CODES C1B00:86-28 (ABS), U0100:00-2B (APIM), U0415:00-48 (PSCM), AND P07AE:09-C8 (PSCM) PARTS REPLACED:: EPAS RACK TECH QUESTION: LOOKING FOR ANY KNOWN CONCERNS, OR ISSUES

**RECOMM** 02/14/2011 09:32AM DAVID KNAPP MSS - FCSD - TECH SVC HOTLINE  
ARTHUR, THE DTC P07AE:09 INDICATES THAT THE STEERING WAS TRYING TO TURN BUT BINDING IS CAUSING IT TO SLIP. AFTERMARKET WHEELS OR TIRES OR BINDING STEERING COMPONENTS HAS BEEN KNOWN TO CAUSE THIS. INSPECT FOR ANY AFTERMARKET COMPONENTS SUCH AS WHEELS AND TIRES. INSPECT FOR ANY BINDING BALL JOINTS AND VERIFY THAT THE ALIGNMENT IS PROPER AS WELL. ALL OF THESE ITEMS CAN CAUSE A REPEAT P07AE:09.

**REPAIR** 02/14/2011 10:33AM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE  
TECH'S QUESTION: ANY KNOWN CONCERNS OR ISSUES. DESCRIPTION OF VEHICLE CONCERN: POWER STERRING INOP AND SERVICE TRACTION CONTROL DISPLAYED ON IC. DIAGNOSTICS ALREADY COMPLETED: PERFORMED INTERACTIVE DIAG FOR CODE P07AE:09-C8 AND **REPLACED RACK** PER PINPOINT TEST RESULTS. CLEARED CODES ROAD TESTED AND RETESTED NO CODES PRESENT. CUSTOMER TOOK CAR DROVE 100 MI AND RETURNED WITH THE SAME ISSUE. CHECKED FOR DTCS AND FOUND SAME CODES AS LAST VISIT. C1B00:86-28

(ABS), U0100:00-2B (APIM), U0415:00-48 (PSCM), AND P07AE:09-C8 (PSCM).  
CHECKED CONNECTIONS AT RACK AND ABS NO CONCERNS FOUND AT THIS TIME.  
PARTS REPLACED: RACK DTC: P07AE

**RECOMM 02/14/2011 10:33AM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE**  
ARTHUR, RECOMMEND TO LOAD TEST AND VOLTAGE DROP POWER AND GROUND TO  
THE PSCM (POWER STEERING CONTROL MODULE). VERIFY THE BATTERY CABLES  
ARE CORRECTLY TORQUED AT THE DC/DC CONVERTER AND THERE ARE NO SIGNS OF  
ARCING OR HEAT DAMAGE. THE NUTS FOR THE CABLES SHOULD BE TORQUED TO  
160 LB-IN (17 NM). REFERENCE PINPOINT TEST F IN SECTION 211-00A OF THE  
ON LINE WORKSHOP MANUAL. IF POWER, GROUND, AND CABLE CONNECTIONS ARE  
OK, RECOMMEND STEERING GEAR REPLACEMENT.

**REPAIR 02/14/2011 12:15PM WILLIAM LEIBENGOOD MSS - FCSD - TECH SVC HOTLINE**  
WEB FORM DATA - CONCERN: POWER STERRING INOP AND SERVICE TRACTION  
CONTROL DISPLAYED ON IC. DIAGNOSTICS: PERFORMED INTERACTIVE DIAG  
FOR CODE P07AE:09-C8 AND REPLACED RACK PER PINPOINT TEST RESULTS.  
CLEARED CODES ROAD TESTED AND RETESTED NO CODES PRESENT. CUSTOMER TOOK  
CAR DROVE 100 MI AND RETURNED WITH THE SAME ISSUE. CHECKED FOR DTCS  
AND FOUND SAME CODES AS LAST VISIT. C1B00:86-28 (ABS), U0100:00-2B  
(APIM), U0415:00-48 (PSCM), AND P07AE:09-C8 (PSCM). CHECKED  
CONNECTIONS AT RACK AND ABS ALSO CHECKED NETWORK WIRING FROM RACK TO  
ABS MODULE NO CONCERNS FOUND AT THIS TIME. PARTS REPLACED::  
REPLACED RACK TECH QUESTION: LOOKING FOR KNOWN CONCERNS OR  
ISSUES 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

**RECOMM 02/14/2011 12:15PM WILLIAM LEIBENGOOD MSS - FCSD - TECH SVC HOTLINE**  
HI ARTHUR, SIMILAR HOTLINE REPORTS OF INTERMITTENT LACK OF STEERING  
ASSIST HAVE BEEN DUE TO STEERING GEAR CONCERN. ENSURE A KNOWN GOOD  
STEERING GEAR HAS BEEN RECEIVED & INSTALLED. ENSURE THERE ARE GOOD  
TERMINAL PIN FITS AT CONNECTORS C1467A & C1467B. REPAIR AS NEEDED.  
IF NEEDED, OBTAIN & INSTALL ANOTHER STEERING GEAR AS NEEDED. CLEAR  
DTC'S & EVALUATE. PLEASE REFER TO WIRING DIAGRAM, SECTION 43-1 TO  
ASSIST DIAGNOSING THIS CONDITION. FEEL FREE TO RECONTACT HOTLINE IF  
ADDITIONAL ASSISTANCE IS NEEDED.

**REPAIR 02/14/2011 12:16PM DANIEL UFIMZEFF MSS - FCSD - TECH SVC HOTLINE**  
TECHNICIAN REPLY: I HAVE CHECKED THE SUSPENSION NO BINDIG COMPONETS,  
HAS FACTORY TIRES AND WHEELS, TIRE PRESSURES ARE GOOD. AND **RACK HAS  
BEEN REPLACED.**

**RECOMM 02/14/2011 12:16PM DANIEL UFIMZEFF MSS - FCSD - TECH SVC HOTLINE**  
ARTHUR, VERIFY THE POWERS AND GROUNDS TO THE POWER STEERING SYSTEM  
ARE OK, AS IT IS POSSIBLE IT MAY BE LOSING WATTAGE TO THE MODULE AND

CAUSING STEERING EFFORT TO BE HIGH AND POSSIBLY SET COMMUNICATION CODES. CHECK C1010, FUSE CONNECTIONS, GROUNDS, CHECK UJOINT IN COLUMN FOR UNEVEN EFFORT AT TIMES.

**REPAIR 02/14/2011 01:31PM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE**  
TECH'S QUESTION: LOOKING FOR KNOWN CONCERNS DESCRIPTION OF VEHICLE CONCERN: POWER STERRING INOP AND SERVICE TRACTION CONTROL DISPLAYED ON IC. DIAGNOSTICS ALREADY COMPLETED: PERFORMED INTERACTIVE DIAG FOR CODE P07AE:09-C8 AND REPLACED RACK PER PINPOINT TEST RESULTS. CLEARED CODES ROAD TESTED AND RETESTED NO CODES PRESENT. CUSTOMER TOOK CAR DROVE 100 MI AND RETURNED WITH THE SAME ISSUE. CHECKED FOR DTCS AND FOUND SAME CODES AS LAST VISIT. C1B00:86-28 (ABS), U0100:00-2B (APIM), U0415:00-48 (PSCM), AND P07AE:09-C8 (PSCM). CHECKED CONNECTIONS AT RACK AND ABS NO CONCERNS FOUND AT THIS TIME. **PARTS REPLACED: RACK** DTC: P07AE

**RECOMM 02/14/2011 01:31PM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE**  
ARTHUR, IF BATTERY CABLE CONNECTION AT THE DC/DC CONVERTER HAS BEEN VERIFIED AND POWER/GROUND LOAD TESTED AND VOLTAGE DROPPED, RECOMMEND TO REPLACE THE 14290 HARNESS AND RETEST. VERIFY PIN FIT AND CONNECTION AT C1010.

**REPAIR 03/08/2011 11:50AM JONATHAN SAVOY MSS - FCSD - TECH SVC HOTLINE**  
TECHNICIAN REPLY: I VERIFIED POWER AND GROUND TO RACK WITH HEADLIGHT BULB, CHECKED NETWORK WIRING AND CONNECTIONS, INSPECTED COLUMN AND UJOINT. ALL TESTED OK. THE CAR WAS DRIVEN 200 MI AND THEN RETURNED TO CUSTOMER. THE CAR RETURNED WITH SAME ISSUE AGAIN ON 03/04

**RECOMM 03/08/2011 11:50AM JONATHAN SAVOY MSS - FCSD - TECH SVC HOTLINE**  
ARTHUR, **SINCE THE RACK HAS ALREADY BEEN REPLACED** FOR THIS CONCERN, THIS IS MOST LIKELY CAUSED BY LOOSE PIN FIT OR CONNECTION CONCERNS TO THE EPAS STEERING GEAR. PLEASE USE FLEX PROBES TO TEST THE NETWORK CIRCUITS AS WELL AS THE POWER AND GROUND CIRCUITS FOR LOOSE PIN FITS. IN ADDITION, TRY WIGGLE TESTING THE CONNECTIONS IN ORDER TO INDUCE THIS CONCERN. IF ADDITIONAL ASSISTANCE IS NEEDED, PLEASE UPDATE YOUR FORM WITH ANY ADDITIONAL DETAILS OF THIS CONCERN.

**REPAIR 03/28/2011 05:18PM BWELLIN2**  
WEB FORM DATA - CONCERN: POWER STERRING INOP, THIS IS THE 3RD TIME BACK FOR THE SAME CONCERN THE FIRST TIME **THE RACK WAS REPLACED** AFTER PERFORMING INTERACTIVE DIAG FOR CODE P07AE:09. THE CAR WAS RETURNED TO CUSTOMER, THE CUSTOMER DROVE THE CAR 100 MI BEFORE THE CONDITION REOCCURRED. THE SAME CODE P07AE:09 WAS PRESENT. THE 2ND VISIT NO REPAIRS WERE MADE TO THE CAR. WE DROVE THE CAR 277MI AND COULD NOT DUPLICATE CONCERN. THE 3RD VISIT WE REPLACE HARNESS 14290 AND 3F720 PER HOTLINE RECOMMENDATION, DROVE THE CAR 634 MI WITH NO ISSUES.

RETURNED THE CAR TO CUSTOMER THIS MORNING 03/28/11 THE CUSTOMER DROVE THE 40MI AND THE CONDITION REOCCURRED. HOTLINE WAS CONTACTED SEVERAL TIMES ABOUT THIS CONCERN. DIAGNOSTICS: INTERACTIVE DIAG FOR P07AE:09, LOAD TESTED POWER AND GROUND, TESTED NETWORK WIRING, TESTED PIN FIT, CHECKED CONNECTIONS **PARTS REPLACED:: EPAS RACK, HARNESS 14290 AND HARNESS 3F720** TECH QUESTION: NOT SURE WHAT TO DO OR WHERE TO GO NEXT WITH THIS. 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

**RECOMM 03/28/2011 05:18PM BWELLIN2**

ARTHUR, CHECK FOR MISMATCHED TIRES, ONE EXCESSIVELY WORN TIRE, AND LOW TIRE PRESSURE. CHECK FOR BINDING TIE RODS AND BALL JOINTS BY GRABBING THE LF TIRE AND ROTATING IT BY HAND WITH THE WHEELS OFF THE GROUND AND THE STEERING COLUMN UNLOCKED. HAVE THE RIGHT TIE ROD DISCONNECTED AT THIS MOMENT. PROCEED WITH THE SAME PROCEDURE FOR THE RF TIRE WITH THE RIGHT TIE ROD ATTACHED AND THE LEFT ROD DISCONNECTED. COMPARE SIDES AND CORRECT ANY CONCERNS FOUND. REFER TO PINPOINT TEST F IN THE INTERACTIVE DIAGNOSTICS FOR DTC P07AE. IF FURTHER ASSISTANCE IS DESIRED, PLEASE CONTACT THE HOTLINE BY TELEPHONE AND HAVE THE FOLLOWING INFORMATION AVAILABLE: DAYS THIS VEHICLE HAS BEEN OUT OF SERVICE, NUMBER OF REPAIR ATTEMPTS, RESULTS FROM TESTING, ETC.

**ADD-ON 03/28/2011 05:18PM BWELLIN2**

CONSULTED CHAD GLENNIE

**REPAIR 03/28/2011 06:14PM WILLIAM LEIBENGOOD MSS - FCSD - TECH SVC HOTLINE**

INTERMITTENTLY WHILE DRIVING THERE IS A SERVICE STEERING SYSTEM MESSAGE. INTERMITTENTLY THERE IS A LACK OF STEERING ASSIST. FOLLOWED INTERACTIVE DIAGNOSTICS FOR THE DTC P07AE:09. REPLACE STEERING GEAR. THE 14290 & 3F720 WIRE HARNESSSES HAVE ALSO BEEN REPLACED. CONDITION IS STILL PRESENT. REPLACED **STEERING GEAR ON LAST VISIT**. DROVE VEHICLE FOR 634 MILES WITH NO PROBLEM. CUSTOMER PICKED UP VEHICLE AND DROVE HOME. THE SERVICE STEERING MESSAGE RETURNED ALONG WITH DTC P07AE:09 CODE. REQUESTING FSE ASSISTANCE

**TAR 03/28/2011 06:14PM WILLIAM LEIBENGOOD MSS - FCSD - TECH SVC HOTLINE**

NOTE TO FSE: I AM REQUESTING TECHNICAL ASSISTANCE ON THIS VEHICLE DUE TO AMOUNT OF TIME IN SHOP & RECURRING DTC. INTERMITTENTLY WHILE DRIVING THERE IS A SERVICE STEERING SYSTEM MESSAGE WITH AN INTERMITTENT LACK OF STEERING ASSIST. FOLLOWED INTERACTIVE DIAGNOSTICS FOR THE DTC P07AE:09. REPLACE STEERING GEAR. DURING PREVIOUS VISITS THE 14290 & 3F720 WIRE HARNESSSES HAVE ALSO BEEN REPLACED. SERVICE STEERING SYSTEM MESSAGE IS RECURRING. STEERING GEAR WAS REPLACED ON LAST VISIT. DROVE VEHICLE FOR 634 MILES WITH NO

PROBLEM. CUSTOMER PICKED UP VEHICLE AND DROVE HOME. THE SERVICE STEERING MESSAGE RETURNED ALONG WITH DTC P07AE:09 CODE WHEN CUSTOMER WAS EN ROUTE HOME. HOTLINE IS SUSPECTING POSSIBLE STEERING GEAR AND/OR CONCERN MAY BE CUSTOMER INDUCED. VEHICLE IS CURRENTLY AT DEALER. ESTIMATED DAYS OUT OF SERVICE: 35+ DAYS. ESTIMATED REPAIR ATTEMPTS: 4.

- RECOMM** 03/28/2011 06:14PM WILLIAM LEIBENGOOD MSS - FCSD - TECH SVC HOTLINE  
HI ART, WE'VE REFERRED THIS CONCERN TO THE FIELD SERVICE ENGINEER (FSE) IN YOUR MARKET AREA. THE FSE SHOULD CONTACT YOU OR DEALERSHIP MANAGEMENT (SERVICE MANAGER OR SERVICE DIRECTOR) WITHIN ONE (1) BUSINESS DAY. IF THE FSE DOES NOT CONTACT YOU DIRECTLY, PLEASE CONSULT WITH DEALERSHIP MANAGEMENT TO DISCUSS FURTHER RECOMMENDATIONS AND STEPS TO ASSIST IN THE RESOLUTION OF THIS VEHICLE CONCERN.
- ADD-ON** 03/29/2011 06:25AM DINO POULOS MSS - FCSD - TECH SVC HOTLINE  
TAR APPROVED - CERTIFIED
- REPAIR** 03/29/2011 01:58PM IONET PUSTA MSS - FCSD - TECH SVC HOTLINE  
FSE KEVIN AVERY CONTACTED THE HOTLINE FOR ADDITIONAL INFORMATION REGARDING THE DTC P07AE:09 SETTING IN THE PSCM. **THIS SAME DTC WAS SET IN THE PSCM WITH THE FIRST STEERING RACK AND THE NEW ONE.** INFORMED THE FSE THAT THIS DTC IS SET BY NOISE IN THE STEERING RACK FOR A PROLONGED PERIOD OF TIME OR BY RESISTANCE AGAINST THE FRONT WHEELS WHILE TURNING FOR ABOUT 30 SECONDS. RECOMMENDED TO HAVE THE CUSTOMER DUPLICATE THE CONCERN FOR THE FSE ON A ROAD TEST AS THE CUSTOMER MAY BE INDUCING THE CONCERN.
- ADD-ON** 03/30/2011 12:07PM KEVIN AVERY(FSE) MSS - FCSD - REG - BOSTON  
INSPECTED VEHICLE YESTERDAY, VERIFIED IT HAD A P07AE STORED, CLEARED CODES AND CODES DID NOT RETURN. CONSULTED WITH HOTLINE, ADVISED SM AND TECH THAT CUSTOMER NEEDS TO DEMONSTRATE THE CONCERN IN ORDER TO PROPERLY DIAGNOSE, ESPECIALLY SINCE THERE MAY BE A CORRELATION TO A SPECIFIC STRETCH OF A SPECIFIC ROAD, EVEN THOUGH THAT SPOT DOESN'T HAVE SUBSTANTIAL CURVES.
- ADD-ON** 03/30/2011 05:52PM KEVIN AVERY(FSE) MSS - FCSD - REG - BOSTON  
SM LEFT ME A VOICE MAIL THAT HE ROAD TESTED WITH THE CUSTOMER AND THE CONCERN DID NOT HAPPEN.
- ADD-ON** 05/24/2011 02:59PM KEVIN AVERY(FSE) MSS - FCSD - REG - BOSTON  
SPOKE WITH SM WHO STATES THE CUSTOMER HAS NOT DRIVE THE VEHICLE SINCE SM DELIVERED IT TO THEIR HOUSE, SM STATES THE CUSTOMER MAY SEEK LEGAL ACTION. CLOSING TAR.
- AUDIT** 05/24/2011 02:59PM KEVIN AVERY(FSE) MSS - FCSD - REG - BOSTON  
TECH ASSIST REFERRAL HAS BEEN CLOSED
- REPAIR** 06/27/2011 08:22AM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE

TECH'S QUESTION: **ONLY HAPPENED ONCE AFTER REPLACING RACK**, POSSIBLE NEEDED MORE TIME TO ADAPT TO VEHICLE? OR SUGGESTED DIAG FOR SYMPTOM OR CODES? DESCRIPTION OF VEHICLE CONCERN: DASH DISPLAY SAYS CHECK STEERING, AND TRACTION LIGHT FLASHES, IF CYCLE KEY THEN HAVE NO POWER ASSIST, IF CLEAR CODES , POWER ASSIST RETURNS DIAGNOSTICS ALREADY COMPLETED: **REPLACED ELECTRIC STEERING RACK** FOR CODE P07AE, AFTER FOLLOWING PPT FOR THIS CODEE.AFTER REPLACEMENT, DROVE APROX 60 MILES, SAME SYMPTOMS RETURNED AND LOSS OF POWER ASSIST, CLEARED SAME 3 CODES, DROVE 140 MILES NO CODES RETURNED PARTS REPLACED: REPLACED ELECTRIC RACK DTC: P07AE DTC: C1B00 DTC: U0415

**TAR 06/27/2011 08:22AM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE**  
NOTE TO FSE: WE ARE REQUESTING TECHNICAL ASSISTANCE ON THIS VEHICLE DUE TO THE NUMBER OF REPAIR ATTEMPTS AND THE DAYS OUT OF SERVICE. THIS VEHICLE EXHIBITS A CONCERN OF AN INTERMITTENT LACK OF STEERING ASSIST. **THE STEERING GEAR HAS PREVIOUSLY BEEN REPLACED.** THE TECHNICAL HOTLINE SUSPECTS A CONCERN WITH THE 12V POWER SUPPLY TO THE PSCM OR A CONNECTION CONCERN AT THE PSCM. THE VEHICLE IS AT THE DEALER. ESTIMATED DAYS OUT OF SERVICE: 22. ESTIMATED REPAIR ATTEMPTS: 6.

**RECOMM 06/27/2011 08:22AM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE**  
RICHARD, VERIFY THE AIR PRESSURE IN THE TIRES IS SET TO THE PRESSURE SPECIFICATION ON THE TIRE PLACARD. CLOSELY INSPECT ALL CONNECTIONS AT TE PSCM AND VERIFY THE BATTERY CABLES AT THE DC/DC CONVERTER ARE TORQUED TO SPECIFICATION. A CONNECTION CONCERN OR A LOSS OF 12V BATTERY POWER COULD ALSO CAUSE THIS IF THE DTC'S ARE RETURNING FOLLOWING STEERING GEAR REPLACEMENT. DUE TO THE FACT THAT THIS HAS BEEN AN ON GOING CONCERN, WE'VE REFERRED THIS CONCERN TO THE FIELD SERVICE ENGINEER (FSE) IN YOUR MARKET AREA. THE FSE SHOULD CONTACT YOU OR DEALERSHIP MANAGEMENT (SERVICE MANAGER OR SERVICE DIRECTOR) WITHIN ONE (1) BUSINESS DAY. IF THE FSE DOES NOT CONTACT YOU DIRECTLY, PLEASE CONSULT WITH DEALERSHIP MANAGEMENT TO DISCUSS FURTHER RECOMMENDATIONS AND STEPS TO ASSIST IN THE RESOLUTION OF THIS VEHICLE CONCERN.

**ADD-ON 06/27/2011 08:23AM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE**  
RE-OPENING TAR.

**AUDIT 06/27/2011 08:23AM MICHAEL HINDERER MSS - FCSD - TECH SVC HOTLINE**  
TECH ASSIST REFERRAL HAS BEEN REOPENED

**ADD-ON 06/27/2011 12:17PM KEVIN AVERY(FSE) MSS - FCSD - REG - BOSTON**  
SPOKE WITH SM SELDON WHEELER WHO STATES THE CUSTOMER TRADED THE VEHICLE SO NOW THEIR DEALERSHIP OWNS IT, I ADVISED OF MY PREVIOUS INVOLVEMENT WITH THE VEHICLE. SM STATES TECHS FINDINGS POINT TOWARDS A RACK, I ADVISED THAT **THE CODES WERE PRESENT BEFORE A RACK WAS INSTALLED.** I WAS ALREADY SCHEDULED TO VISIT ANOTHER VEHICLE ON

6-29-2011 SO I SHOULD INSPECT THIS ONE ON THE SAME DATE.

**ADD-ON 06/28/2011 07:56AM MATT ABELA MSS - FCSD - TECH SVC HOTLINE**  
TAR APPROVED - CERTIFIED

**ADD-ON 06/30/2011 10:22AM KEVIN AVERY(FSE) MSS - FCSD - REG - BOSTON**  
INSPECTED VEHICLE YESTERDAY, SA STATES THE CONCERN HAPPENED TO HIM ONCE, TECH STATES IT HAPPENED TO HIM TWICE, NONE OF THE THREE EVENTS WERE ON CURVY ROADS AND NOT SUBJECT TO 30 CONSECUTIVE SECONDS OF TURNING. I DROVE THE VEHICLE IN THE PARKING LOT FOR WELL OVER 30 SECONDS IN A CONTINUOUS TURN AND IT NEVER FAILED. WE ELEVATED THE VEHICLE AND REMOVED THE TIE RODS, FOUND NO EXCESSIVE EFFORT OR BINDING. **THIS DEALERSHIP (DARLINGS BANGOR FORD) REPLACED THE STEERING RACK, PREVIOUS DEALERSHIP (QUIRK FORD OF BELFAST) REPLACED THE RACK, 14290 HARNESS, AND 3F720 HARNESS. THIS DEALER (DARLINGS) IS SUSPICIOUS THAT THE RACK WAS NOT PREVIOUSLY REPLACED SINCE THE EAR FOR THE HEAT SHIELD OVER THE MODULE WAS PRESENT AND REPLACEMENT RACK DO NOT HAVE THE EAR STICKING OUT FOR THE LOWER HOLD DOWN BOLT.**

**ADD-ON 06/30/2011 12:35PM KEVIN AVERY(FSE) MSS - FCSD - REG - BOSTON**  
REQUESTING ESCILLATED HANDLING DUE TO REPEAT CONCERN THAT KNOWN POSSIBLE ROOT CAUSES HAVE NOT RESOLVED.

**AUDIT 07/02/2011 11:03AM**  
SYMPTOM 3 03 1 50 CHANGED TO 6 62 4 28 BY CS012093

**ADD-ON 07/08/2011 08:47AM KEVIN AVERY(FSE) MSS - FCSD - REG - BOSTON**  
ESCILLATED HANDLING STATES THAT THE PD IS DOWN AND WILL SEEK INFORMATION NEXT WEEK.

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**From:** Singh, Hardeep (H.)  
**Sent:** Wednesday, September 6, 2017 2:45 PM  
**To:** Lawless, Gabriel (G.J.)  
**Cc:** Matti, Alvin (.)  
**Subject:** RE: 2010 Fusion EPAS NHTSA Review - updated file

Hello Gabe,

Can you also send me the previous VIN excel sheet that you were showing me today.

Thank you

Sincere Regards

**HARDEEP SINGH**

Steering Campaign Prevent Engineer  
Work Cell: 313-670-6355  
Email: [hsingh97@ford.com](mailto:hsingh97@ford.com)

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**From:** Lawless, Gabriel (G.J.)  
**Sent:** Tuesday, September 05, 2017 3:23 PM  
**To:** Singh, Hardeep (H.) <HSINGH97@ford.com>  
**Cc:** Matti, Alvin (.) <amatti@ford.com>  
**Subject:** FW: 2010 Fusion EPAS NHTSA Review - updated file

Here are the attachments you asked for. See the email attachment for whom to contact for OWS access.

Regards,

**Gabriel J. Lawless**

Product Engineer  
Email: [glawles6@ford.com](mailto:glawles6@ford.com)  
Cell Phone: (313) 316-2542  
Location: FN3 HM011

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**From:** Kwiatkowski, Michael (M.P.)  
**Sent:** Friday, September 01, 2017 8:50 AM  
**To:** Lawless, Gabriel (G.J.)  
**Subject:** 2010 Fusion EPAS NHTSA Review - updated file

Gabe,  
Attached is a better version of the new VINs from NHTSA. It has the Customer text and additional report details. It's the same 159 VOQs, just more info on each one.



**Regards,**  
**Michael P. Kwiatkowski**

**Automotive Safety Office - FPS 5005**  
**Phone: (313) 32-24519**

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**From:** Matti, Alvin (.)  
**Sent:** Monday, November 27, 2017 9:48 AM  
**To:** Lawless, Gabriel (G.J.)  
**Cc:** Singh, Hardeep (H.)  
**Subject:** RE: 2010 Fusion EPAS NHTSA Review

**Importance:** High

Hi Gabe

Do you have any information on DTC P07AE:09 (High friction detection)? What are the internal gear failures that can cause this DTC? Do you have the Part II spec for 2010 Fusion?

Regards  
**Alvin Matti**  
EPAS TE  
Steering Campaign Prevention Supv  
FN3 GS008 / 313 805-3152

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**From:** Brimmer, Matthew (M.)  
**Sent:** Friday, September 29, 2017 2:29 PM  
**To:** Kwiatkowski, Michael (M.P.) <mkwiatko@ford.com>; Matti, Alvin (.) <amatti@ford.com>; Lawless, Gabriel (G.J.) <GLAWLES6@ford.com>; McElmeel, Edward (E.F.) <emcelmee@ford.com>; Singh, Hardeep (H.) <HSINGH97@ford.com>  
**Subject:** RE: 2010 Fusion EPAS NHTSA Review

Hi Michael,

I have added onto Gabe's earlier analysis and presentation with the 159 extra VINs you supplied. It shows a similar result to Gabe's analysis. I have attached an updated presentation Gabe gave you (content is the same, just updated numbers and graphs). Please let me know if there is any other information you need.

Best,  
Matthew Brimmer

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**From:** Kwiatkowski, Michael (M.P.)  
**Sent:** Tuesday, September 26, 2017 2:50 PM  
**To:** Matti, Alvin (.) <amatti@ford.com>  
**Cc:** Brimmer, Matthew (M.) <MBRIMMER@ford.com>  
**Subject:** RE: 2010 Fusion EPAS NHTSA Review

OK. Thanks for the update.



**Regards,**  
**Michael P. Kwiatkowski**  
Automotive Safety Office - FPS 5005  
Phone: (313) 32-24519

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**From:** Matti, Alvin (.)  
**Sent:** Tuesday, September 26, 2017 2:22 PM  
**To:** Kwiatkowski, Michael (M.P.) <mkwiatko@ford.com>

Cc: Brimmer, Matthew (M.) <[MBRIMMER@ford.com](mailto:MBRIMMER@ford.com)>

Subject: RE: 2010 Fusion EPAS NHTSA Review

Mike  
Matt will send out the analysis at the end of the week. Thanks for your patience.

Regards  
**Alvin Matti**  
EPAS TE  
Steering Campaign Prevention Supv  
FN3 GS008 / 313 805-3152

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**From:** Kwiatkowski, Michael (M.P.)  
**Sent:** Tuesday, September 26, 2017 10:09 AM  
**To:** Matti, Alvin (.) <[amatti@ford.com](mailto:amatti@ford.com)>  
**Subject:** RE: 2010 Fusion EPAS NHTSA Review

Alvin,  
Could please let me know a rough timing estimate for this analysis so we can update NHTSA.  
Thank you.



Regards,  
**Michael P. Kwiatkowski**  
Automotive Safety Office - FPS 5005  
Phone: (313) 32-24519

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**From:** Kwiatkowski, Michael (M.P.)  
**Sent:** Friday, September 22, 2017 1:43 PM  
**To:** Matti, Alvin (.) <[amatti@ford.com](mailto:amatti@ford.com)>  
**Subject:** FW: 2010 Fusion EPAS NHTSA Review

Alvin,  
Please let me know a rough timing estimate for this analysis so we can update NHTSA.  
Thanks.



Regards,  
**Michael P. Kwiatkowski**  
Automotive Safety Office - FPS 5005  
Phone: (313) 32-24519

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**From:** Lawless, Gabriel (G.J.)  
**Sent:** Tuesday, September 19, 2017 3:34 PM  
**To:** Kwiatkowski, Michael (M.P.) <[mkwiatko@ford.com](mailto:mkwiatko@ford.com)>  
**Subject:** RE: 2010 Fusion EPAS NHTSA Review

Hardeep Singh is the engineer working on this item. He may be out of office right now.

Regards,

**Gabriel J. Lawless**

Product Engineer  
Email: [glawles6@ford.com](mailto:glawles6@ford.com)  
Cell Phone: (313) 316-2542  
Location: FN3 HM011

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**From:** Kwiatkowski, Michael (M.P.)  
**Sent:** Tuesday, September 19, 2017 3:18 PM  
**To:** Lawless, Gabriel (G.J.)  
**Subject:** RE: 2010 Fusion EPAS NHTSA Review

Gabe,  
Do you have a timing estimate on completing this analysis?  
Please let me know.



**Regards,**  
**Michael P. Kwiatkowski**  
**Automotive Safety Office - FPS 5005**  
**Phone: (313) 32-24519**

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**From:** Kwiatkowski, Michael (M.P.)  
**Sent:** Thursday, August 31, 2017 12:07 PM  
**To:** Lawless, Gabriel (G.J.) <[glawles6@ford.com](mailto:glawles6@ford.com)>  
**Cc:** Surella, Matthew (M.M.) <[msurella@ford.com](mailto:msurella@ford.com)>; Castellano, James (.) <[jcastel2@ford.com](mailto:jcastel2@ford.com)>; Tuneff, Mark (M.S.) <[mtuneff@ford.com](mailto:mtuneff@ford.com)>  
**Subject:** 2010 Fusion EPAS NHTSA Review

Gabe,  
You did the attached analysis in support of the NHTSA investigation late last year. (VOQ As – Lawless Edit.xlsx)  
NHTSA continues to get complaints (VOQs) and has asked us to take a look at the new ones. (New valid vins.xlsx)  
Could you perform a similar analysis on the 159 new VINs we received from NHTSA?  
I realize this is not a trivial task, so please let me know about how much time this may take, especially if it is greater than a couple weeks.  
Thanks for your help.



**Regards,**  
**Michael P. Kwiatkowski**  
**Automotive Safety Office - FPS 5005**  
**Phone: (313) 32-24519**

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**From:** Holmes, Alison (A.M.)  
**Sent:** Tuesday, August 23, 2011 8:54 AM  
**To:** Gudino Mendoza, Martin (J.M.); Surella, Matthew (M.M.)  
**Cc:** Nagaitis, Paul (P.); Humphries, Glenn (G.L.); Frey, Martin (M.F.); Boullin, Stephanie (S.)  
**Subject:** RE: CD3 Traction Light / Steering Message Emerging Issue

Martin.

I set up a meeting today for us to discuss this issue and come to an agreement on next steps.

For the specific emerging issue of steering gear friction detection (P07AE), which is a primary fault code, we have a robust solution with the aft front control arm ball joints. When the friction detection code (P07AE) is set, it removes signals from other systems and sets the other 2 codes you mention. (RSC/C1963, Steering Wheel Angle/C1277).

There are no vehicles that have the P07AE code that have been fixed by only replacing the fore front lower control arm. Some cars have changed both fore and aft. Any of the other claims that Jose brought to our attention that were fixed by changing only the fore front lower control arm were not a P07AE issue vehicle. Throughout the life of Fusion, there has been a low level of warranty on the front lower control arms, both fore and aft. Getting the control arms back to specification will help reduce this warranty.

To my knowledge, none of the cars that had new aft rear lower control arms put on have returned for repeat issues.

Paul had agreed to take the already released ISM and convert it to an SSM. He thought we would have the draft completed last week.

For the control arms. The specification is 2.5Nm max. The supplier was mistakenly checking the arms to a higher number used for another functional attribute. We have been shipping certified stock to service to the specification level since 8/8/11. We are also using 100% certified stock in production at Hermosillo. We authorized a permanent corrective action for the aft control arm yesterday under Alert.

*Alison McBroom Holmes*

CD3/CD4 Suspension Supervisor  
Phone: 313-805-3120  
[aholmes2@ford.com](mailto:aholmes2@ford.com)

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**From:** Gudino Mendoza, Martin (J.M.)  
**Sent:** Monday, August 22, 2011 9:02 PM  
**To:** Holmes, Alison (A.M.)  
**Cc:** Nagaitis, Paul (P.); Humphries, Glenn (G.L.)  
**Subject:** RE: CD3 Traction Light / Steering Message Emerging Issue

Alison:

Sorry but I can not close this issue, before we need to review the actions and understand how many units are affected, the preliminary 8D only mentions out of torque specification but what is the specification? Other doubts is the front arms, and why some units no return after de EPAS replacement, we have another codes C1277 and C1963 that we need to review because the P07AE is not a major DTC is secondary. Whats is the status of the current units reported are already fixed and close the concern?.

Also I did not receive your SSM draft yet.

Paul is new in the program and is taking the responsibility of CD3 issues, if you need support please send the information to me and include in all the notifications.

## Martin Gudiño

FCSD-PVT Program Manager  
HSAP

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**From:** Humphries, Glenn (G.L.)  
**Sent:** Monday, August 22, 2011 1:13 PM  
**To:** Gudino Mendoza, Martin (J.M.); Nagaitis, Paul (P.)  
**Subject:** FW: CD3 Traction Light / Steering Message Emerging Issue  
**Importance:** High

Can you please work with Alison? Assume you both are up to speed with this issue.

Thanks.

Sincerely,  
Glenn Humphries  
Concern Identification & Reporting Supervisor  
FCSD - Customer Service Engineering  
[ghumphri@ford.com](mailto:ghumphri@ford.com)  
313-39-07715

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**From:** Holmes, Alison (A.M.)  
**Sent:** Monday, August 22, 2011 4:11 PM  
**To:** Humphries, Glenn (G.L.)  
**Subject:** FW: CD3 Traction Light / Steering Message Emerging Issue  
**Importance:** High

Glenn...Will you be attending the FQR tomorrow? Ron Collins wanted this issue to be closed before it goes to a QSF. As far as I understand, all the actions are in place to close from the PD side. We are awaiting FCSD to issue the SSM. This will be discussed tomorrow with Ron in the FQR. I would appreciate your support to help answer Ron's questions.

*Alison McBroom Holmes*

CD3/CD4 Suspension Supervisor  
Phone: 313-805-3120  
[aholmes2@ford.com](mailto:aholmes2@ford.com)

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**From:** Boullin, Stephanie (S.)  
**Sent:** Monday, August 22, 2011 9:41 AM  
**To:** Nagaitis, Paul (P.)  
**Cc:** Flanagan, Thomas (T.P.); Holmes, Alison (A.M.); Rinke, Timothy (T.); Surella, Matthew (M.M.)  
**Subject:** CD3 Traction Light / Steering Message Emerging Issue  
**Importance:** High

Hi Paul,

I noted that the subject concern is still without forecast closure dates in the AEQ system and we are still awaiting the draft SSM. Please let me know if additional information is needed or if things are proceeding as discussed last Wednesday. Thanks!

Regards,

*Stephanie Boullin*

313.805.5969

[ssherer@ford.com](mailto:ssherer@ford.com)

ASO_Comments	CountOfODINO
moving	239
moving - returns after key cycled	66
start up-after prior warning msg	35
start up	30
	30
moving - repeat repair	17
start up - returns after key cycled	17
returns after key cycled	17
moving - returns after clearing codes	14
moving-low tire	12
start up - after flat tire	6
moving - after flat tire	6
repeat repair	4
STARTED PULLING HARD TO THE RIGHT	4
returns after clearing codes	2
start up - repeat repair	2
start up - returns after key cycled-low tire	1
after flat tire-start up-repeat repair	1
moving - fuse loose, control arms, gear	1
DEPRESSED THE BRAKE PEDAL AND THE STEERING RETURNED-moving	1
start up-low tire	1
steering brakes airbags-driving	1
moving - THE PRESSURE ON TIRE WAS GOOD BUT STILL SHOWING LOW TIRE PRESSURE	1

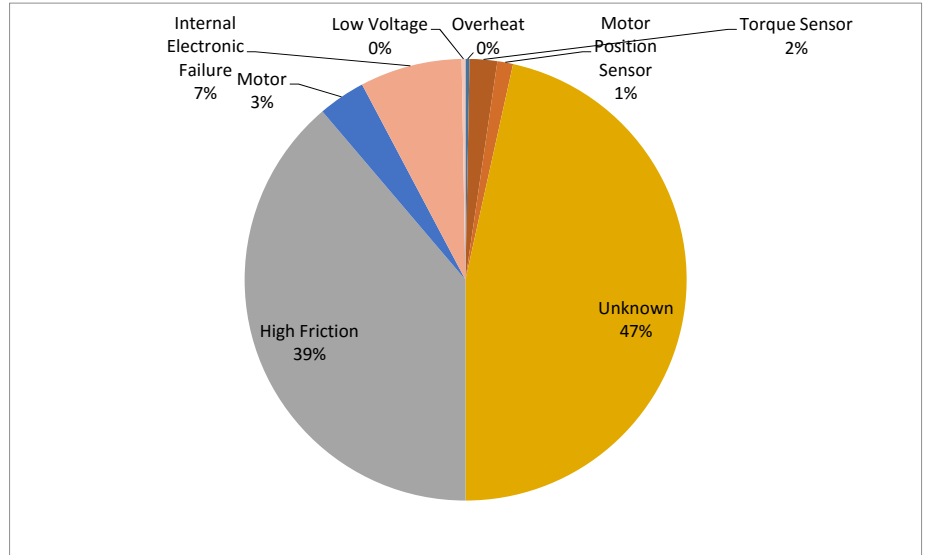
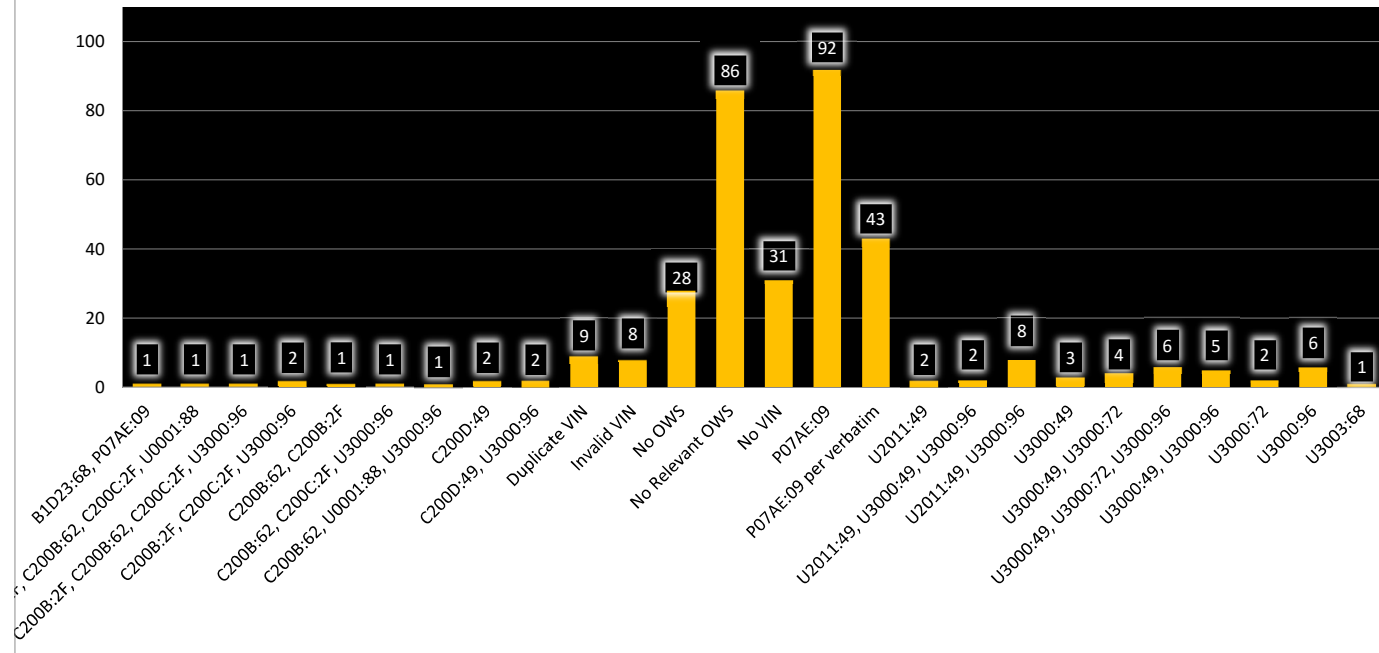
47%  
13%  
7%  
6%  
6%  
3%  
3%  
3%  
3%  
2%  
1%  
1%  
1%  
1%  
0%  
0%  
0%  
0%  
0%  
0%  
0%  
0%

Moving	Start-up	Unknown
362	93	53
71%	18%	10%

508

Count of ODINO Row Labels	Column Labels		Grand Total
	N	Y	
moving	73	166	239
moving - returns after key cycled	25	41	66
start up-after prior warning msg	12	23	35
start up	8	22	30
	9	21	30
moving - repeat repair	8	9	17
start up - returns after key cycled	3	14	17
returns after key cycled	3	14	17
moving - returns after clearing codes	9	5	14
moving-low tire	2	10	12
moving - after flat tire	3	3	6
start up - after flat tire	2	4	6
repeat repair	1	3	4
STARTED PULLING HARD TO THE RIGHT		4	4
returns after clearing codes		2	2
start up - repeat repair	1	1	2
moving - THE PRESSURE ON TIRE WAS GOOD BUT STILL SHOWING LOW TIRE PRESSURE		1	1
start up-low tire	1		1
DEPRESSED THE BRAKE PEDAL AND THE STEERING RETURNED-moving		1	1
moving - fuse loose, control arms, gear		1	1
steering brakes airbags-driving		1	1
after flat tire-start up-repeat repair		1	1
start up - returns after key cycled-low tire		1	1
<b>Grand Total</b>	<b>160</b>	<b>348</b>	<b>508</b>

**Count of Claims with Identical DTCs**



Linear interpolated Values

	Speed (kph)												
	0	8	16	26	36	46	56	70	90	100	110	140	190
P0	0.38	0.5	0.54	0.56	0.58	0.6	0.62	0.64	0.66	0.67	0.68	0.7	0.55
P1	0.75	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
P2	3.9	3.7	3.55	3.35	3.25	3.15	3.05	2.95	2.85	2.83	2.8	2.75	2.7
P3	1.33	1.65	1.69	1.71	1.73	1.75	1.77	1.79	1.81	1.82	1.83	1.85	1.87
P4	1.4	1.65	1.8	1.95	2.05	2.1	2.15	2.2	2.25	2.28	2.3	2.35	2.4
P5	43.8	28.8	24.4	21.6	20	18.8	17.8	16.8	15.4	14.90	14.4	13.6	13
PD	0.64	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.32	0.3

Section 1	<	0.00	8.00	16.00	26.00	36.00	46.00	56.00	70.00	90.00	100.00	110.00	140.00	190.00
Section 2	<	0.38	8.50	16.54	26.56	36.58	46.60	56.62	70.64	90.66	100.67	110.68	140.70	190.55
Section 3	<	3.90	3.70	3.55	3.35	3.25	3.15	3.05	2.95	2.85	2.83	2.80	2.75	2.70
Section 4	<	5.23	5.35	5.24	5.06	4.98	4.90	4.82	4.74	4.66	4.65	4.63	4.60	4.57
Section 5	>	5.23	5.35	5.24	5.06	4.98	4.90	4.82	4.74	4.66	4.65	4.63	4.60	4.57

	Speed (kph)												
	0	8	16	26	36	46	56	70	90	100	110	130	190
P0	0.3	0.3	0.3	0.3	0.25	0.2	0.15	0.1	0.05	0.05	0.05	0.05	0.05
P1	0.9	0.9	1.5	1.5	1.5	1.5	1.55	1.6	1.65	1.675	1.7	1.95	1.95
P2	1.7	1.7	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
P3	1.35	1.7	2	2	2.1	2.3	2.3	2.5	2.6	2.625	2.65	2.9	3
P4	1.9	1.9	1.85	1.8	1.75	1.7	1.65	1.6	1.6	1.6	1.6	1.55	1.55
P5	42.6	37.4	34.4	31.8	30.6	30	30	30	28.8	28.4	28	26.8	25.6
PD	0.64	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.32	0.3

Section 1	<	0.30	0.30	0.30	0.30	0.25	0.20	0.15	0.10	0.05	0.05	0.05	0.05	0.05
Section 2	<	1.20	1.20	1.80	1.80	1.75	1.70	1.70	1.70	1.70	1.73	1.75	2.00	2.00
Section 3	<	1.35	1.70	2.00	2.00	2.10	2.30	2.30	2.50	2.60	2.63	2.65	2.90	3.00
Section 4	<	3.25	3.60	3.85	3.80	3.85	4.00	3.95	4.10	4.20	4.23	4.25	4.45	4.55
Section 5	>	3.25	3.60	3.85	3.80	3.85	4.00	3.95	4.10	4.20	4.23	4.25	4.45	4.55

TD	Ta	0	100	Input Torque			
				0	0.30	3.25	5.00
0.30	0	0	0	0.2	43.6	118.1	
1.20	1.668	1.296		0.1	27.1	92.5	
1.35	1.923	2.146		0	0.1	16.5	25.6
3.25	43.585	27.06836		0	48%	38%	22%
5.00	118.135	92.51836					

