PE03-044
FORD
5/13/2005
APPENDIX I
BOOK 19 OF 28
PART 1 OF 4

From:	Mango, Jack - Troy [JMango@tfxauto.com]
Sent:	Thursday, July 12, 2001 3:11 PM
To:	Evangelista, Elio - Troy; 'tmusselm@ford.com'; 'ipetraus@ford.com'; 'tskwirsk@ford.com'
Cc:	Foreman, Mike - Kendallville; Mundroff, Robert - Kendallville; Braniff, Greg - Troy; 'mgharib@ford.com'
Subject:	Wear out test U152 in P131/U137 vehicles

Hyperpulse testing for rattle of the following vehicles numbers.

"Vin # 145 Wear out bushings---Good----No rattle-------# 12"
"Vin # 216 Wear out bushings---Good----No rattle-------# 17
"Vin # 192 Wear out bushings---Marginal-Slight rattle----# 13
"Vin # 143 Wear out bushings---Good----No rattle-------# 15
"Vin # 124 Wear out bushings---Good----No rattle-------# 5
"Vin # 144 Wear out bushings---Good----No rattle-------# 19
"Vin # 153 Reworked pivot & forming-----No rattle-Best--# 3

All vehicles were tested in parking lot area, and Hyperpulse (4-Poster)

Regards, Jack.....

[redacted]

From: Franklin , Ben - Kendallville [BFranklin@TFXAuto.com]
Sent: Tuesday, February 05, 2002 8:42 AM
To: Lisa Petrauskas (E-mail)
Subject: FW: U137 tube bulge concern - update 02/01/02

[redacted]

RE: Adj pedal testing

> -----Original Message-----
> From: Foreman, Mike - Kendallville
> Sent: Friday, February 01, 2002 7:39 PM
> To: Boscarino, Ed - Kendallville; Carr, Mike - Kendallville; Franklin , Ben - Kendallville; Morris, Donald - Kendallville; Tejkl, William - Kendallvile; Braniff, Greg - Troy
> Cc: Hadley, Sandra - Kendallville; Meier, Charlie - Troy; Teller, Bill - Troy
> Subject: U137 tube bulge concern - update 02/01/02
>
> 02/01/02
> 5:45 pm
>
> End of day update concerning the U137 tube bulge issue.
>
> 1. Vehicles at KTP being held until testing on suspect parts complete.
>
> 2. [redacted] could verify lots up to 11/21/01. Lots received from [redacted] 11/21 were built into assemblies and shipped 12/06/01. Packing slip #8064 and bill of lading #275340. This info given to Tej Patel (KTP PVT Eng.) at 2:00 pm.
>
> 3. Tej Patel emailed a description (see attached) and a faxed sketch of life cycle test to be preformed on suspect parts. This info passed-on to Greg Braniff in Troy. Greg later contacted Tej to answer questions specific to our life cycle test.
>
> 4. Six assemblies sent to Greg Braniff, due 5:30 pm. Two assemblies will start life cycle test upon arrival. Test to take 25 hours. Results to be sent to Tej Patel asap.
>
> 5. Five suspect parts tested in Kv for pushout loads. Min pushout load was 2840 lbs. Data emailed to Tej Patel 4:30 pm. (See attached for data & pictures).
>
> 6. Official concern received in Kv, Ben Franklin to start 8D.
>
> <<RE: Adj pedal testing>>
>
> Thanks,
> Michael Foreman
> Sr. Manufacturing Engineer
> Teleflex Automotive
> 301 W. Ohio Street
> Kendallville, IN 46755

PE03-044 22957

[redacted]

> ph: 260-349-1985 x3334 <<< note new area code
> fax: 260-349-1983 <<< note new area code
> mforeman@tfxauto.com
>
>

[redacted]

[redacted]

From: Franklin , Ben - Kendallville [BFranklin@TFXAuto.com]
Sent: Tuesday, February 05, 2002 8:43 AM
To: Lisa Petrauskas (E-mail)
Subject: FW: U137 tube bulge concern - update 02/01/02

FYI

> -----Original Message-----
> From: Braniff, Greg - Troy
> Sent: Monday, February 04, 2002 9:52 AM
> To: Foreman, Mike - Kendallville; Boscarino, Ed -
> Kendallville; Carr, Mike - Kendallville; Franklin , Ben -
> Kendallville; Norris, Donald - Kendallville; Tejkl, William -
> Kendallvile
> Cc: Hadley, Sandra - Kendallville; Meier, Charlie - Troy;
> Teller, Bill - Troy
> Subject: RE: U137 tube bulge concern - update 02/01/02
>
> Life cycle testing is underway in Troy with 2 samples at room
> temperature. They have completed all of the 200 lb, 150 lb,
> and 100 lb load cycles without incident.
> We are running the test at approximately 1 cycle per second
> so the 50 lb load cycles will take about 28 Hrs to finish.
>
> Due to time constraints we can only run 2 samples at a time.
> The 2 samples on test were the smallest Tube Diameter of the
> 6, they are 18.48 and 18.42mm.
>

> -----Original Message-----
> From: Foreman, Mike - Kendallville
> Sent: Friday, February 01, 2002 7:39 PM
> To: Boscarino, Ed - Kendallville; Carr, Mike -
> Kendallville; Franklin , Ben - Kendallville; Norris, Donald -
> Kendallville; Tejkl, William - Kendallvile; Braniff, Greg - Troy
> Cc: Hadley, Sandra - Kendallville; Meier, Charlie - Troy;
> Teller, Bill - Troy
> Subject: U137 tube bulge concern - update 02/01/02
>
> 02/01/02
> 5:45 pm
>
> End of day update concerning the U137 tube bulge issue.
>
> 1. Vehicles at RTP being held until testing on suspect parts
> complete.
>
> 2. [redacted] could verify lots up to 11/21/01. Lots
> received from [redacted] 11/21 were built into assemblies and
> shipped 12/06/01. Packing slip #8064 and bill of lading
> #275340. This info given to Tej Patel (RTP PVT Eng.) at 2:00 pm.
>
> 3. Tej Patel emailed a description (see attached) and a
> faxed sketch of life cycle test to be preformed on suspect
> parts. This info passed-on to Greg Braniff in Troy. Greg
> later contacted Tej to answer questions specific to our life
> cycle test.
>

[redacted]

> 4. Six assemblies sent to Greg Braniff, due 5:30 pm. Two
> assemblies will start life cycle test upon arrival. Test to
> take 25 hours. Results to be sent to Tej Patel asap.
>
> 5. Five suspect parts tested in Kv for pushout loads. Min
> pushout load was 2840 lbs. Data emailed to Tej Patel 4:30
> pm. (See attached for data & pictures).
>
> 6. Official concern received in Kv, Ben Franklin to start 8D.
>
> << Message: RE: Adj pedal testing >>
>
> Thanks,
> Michael Foreman
> Sr. Manufacturing Engineer
> Teleflex Automotive
> 301 W. Ohio Street
> Kendallville, IN 46755
> ph: 260-349-1985 x3334 <<< note new area code
> fax: 260-349-1983 <<< note new area
code
> mforeman@tfxauto.com
>
>

[redacted]

[redacted]

From: Franklin , Ben - Kendallville [BFranklin@TFXAuto.com]
Sent: Tuesday, February 05, 2002 12:21 PM
To: Lisa Petrauskas (E-mail)
Subject: FW: Update needed for tube bulge issue

FYI

> -----Original Message-----
> From: Foreman, Mike - Kendallville
> Sent: Tuesday, February 05, 2002 10:46 AM
> To: Franklin , Ben - Kendallville; Braniff, Greg - Troy
> Cc: Tejkl, William - Kendallville; Norris, Donald - Kendallville; Carr,
> Mike - Kendallville; Boscarino, Ed - Kendallville
> Subject: FW: Update needed for tube bulge issue
>
>
> All,
> Here are answers to general questions asked of [redacted]
> regarding the incomplete tube bulge.
>
> -----Original Message-----
> From: George Wilson [mailto:gwilson@meyerstamping.com]
> Sent: Tuesday, February 05, 2002 8:54 AM
> To: 'Foreman, Mike - Kendallville'
> Subject: RE: Update needed for tube bulge issue
>
>
> Mike:
>
> In answer to your questions regarding our corrective action
> on part number
> 016T-G4216:
>
> 1. Putting an exact date is difficult in that this was not an issue
> that can be pinpointed
> such as broken tooling. We are fairly confident that
> the issue is
> probably contained
> within the last lot of parts which were shipped to Teleflex on
> January 15. However a review
> of operator notes indicated that there may have been a
> problem in
> the lot previous to this
> one. We felt that it was better to err on the side of
> caution, given
> the seriousness of
> the issue.
> 2. At the time of the call we had 521 pieces in house
> which were 100%
> sorted. Eight non-
> conforming pieces were found for a percentage of 1.5%.
> We also sent
> personnel to Teleflex,
> and found another 55 pieces. I am not sure how many
> parts were at
> your facility, but you
> be able to get that number from your materials group. As a

> precaution we also sorted part
> number 016T-G4221 both here and at Teleflex. No non-conforming
> pieces were found at either
> facility.
> 3. All certified stock was identified by marking the parts and
> identifying the containers.
> No further parts will be produced until the preventive
> action has
> been implemented. (Note:
> In order to meet production requirements, we produced
> an additional
> 1,500 pieces before
> removing the tool to perform preventive action on it.
> Those parts
> were 100% checked after
> production and identified in the same manner.) In
> accordance with
> our 8-D response, we will also certify the first two
> shipments after
> preventive action has been implemented.
> 4. As per our 8-D the completion date for the installation of the
> sensors on the die is 2/15/02. (Note: As per the 8-D,
> the pocket which
> holds the tube on the underside of the die
> will be coated to reduce the risk of galling as part of the
> preventive action. Completion date is also 2/15/02)
> 5. We will have a revised control plan available by
> Friday, 2/8/02. If
> you would like a copy of the control plan and the
> revised FMEA, let me
> know and I can fax them to you by no later than Friday 2/8/02.
> 6. We re-created the non-conformance by purposefully
> placing a tube in
> the die and not seating all the way down in the pocket.
> It produced
> the same non-conformance. Placing a sensor in the die to detect if a
> tube is too high will ensure that the tube has to be seated.
> Furthermore,
> the sensor will be wired to the tooling and will not allow the die
> to cycle if it detects that a tube is not seated properly.
> Furthermore, the sensor will
> be verified at start-up and shift change by
> deliberately not seating
> a tube all the way
> down in the pocket.
> 7. The torque test is set up as a pass/fail with the
> torque wrench set
> at minimum (25 ft. lbs), and therefore ongoing variable data is not
> available. We did, however perform an
> initial capability study on 52 pieces. The values for that study
> were:
> Maximum value = 59.9 ft lbs.
> Mean value = 43.587 ft. lbs.
> Minimum value = 31.9 ft. lbs
> Cpk value = 1.70
> If you world like a copy of the data and the histogram,
> let me know
> and I can fax them to you.
>
> I trust this information will be helpful. If I can be of

> further assistance,
> feel free to contact me.
>
> Also, please let me know the results of the testing done on
> the assembly.
> Yesterday you told me on the phone that the test had completed 100,000
> cycles with little or no movement. Could you also let me know
> if Troy is
> testing more than one part at a time? As we discussed
> yesterday, the feeling
> that Bill and I got when we went to KTP, was that if the
> parts passed the
> test, Ford would allow parts already installed to remain and would not
> initiate a recall. Also, on behalf of [redacted] we are committed
> to ensuring
> that this problem never recurs in the future.
>
> Sincerely,
>
> George S. Wilson
> Quality Assurance Manager
>
>
> -----Original Message-----
> From: Foreman, Mike - Kendallville [mailto:mforeman@tfxauto.com]
> Sent: Monday, February 04, 2002 5:37 PM
> To: George Wilson (E-mail)
> Cc: Franklin , Ben - Kendallville; Tejkl, William - Kendallvile;
> Braniff, Greg - Troy
> Subject: Update needed for tube bulge issue
>
>
> George,
> In order for Teleflex to provide an 8D on this issue, we need
> an update from
> [redacted] as to where we stand. I'm thinking your 8D to Teleflex
> would be a
> good start. Please provide your updated 8D by 10:00 a.m.
> Tuesday so we have
> time to react. Below is a list of questions that need answered.
>
> 1. Can your containment be re-evaluated closer than 11/26/01?
> 2. What percentage of parts were found bad?
> 3. What is your plan for certifying stock to TFX?
> 4. When will the bulge sensor(s) be complete?
> 5. When will your updated control plan be available?
> 6. How will you prove your verification method? In other words,
> what makes a tube bulge bad and how will you catch it?
> 7. You providad torque data on the suspect parts, what
> torque data
> are you seeing on "normal" parts?
>
> Thanks,
> Michael Foreman
> Sr. Manufacturing Engineer
> Teleflex Automotive
> 301 W. Ohio Street
> Kendallville, IN 46755
> ph: 260-349-1985 x3334 <<< note new area code
> fax: 260-349-1983 <<< note new area code

[redacted]

> mforeman@tfxauto.com
>

[redacted]

[redacted]

From: Braniff, Greg - Troy [gbraniff@TFXAuto.com]
Sent: Friday, June 07, 2002 8:21 AM
To: Lisa Petrauskas (E-mail)
Cc: Mausolf, Greg - Troy
Subject: FW: DURIS Incident - 309W410-1 (R318C1): Adjustable pedals INOP. (#375530)

-----Original Message-----
From: Grueter , Cathy -Kendallville
Sent: Friday, June 07, 2002 8:07 AM
To: Braniff, Greg - Troy
Subject: RE: DURIS Incident - 309W410-1 (R318C1): Adjustable pedals INOP. (#375530)

Greg, here is UPS tracking# for motor 1z 1a2 r39 01 4241 1650, Cathy

-----Original Message-----
From: Braniff, Greg - Troy
Sent: Friday, June 07, 2002 6:34 AM
To: Grueter , Cathy -Kendallville
Subject: FW: DURIS Incident - 309W410-1 (R318C1): Adjustable pedals INOP. (#375530)

Cathy, can I have the shipping information for the motor. thanks

-----Original Message-----
From: Petrauskas, Lisa (L.E.) [mailto:lpetraus@ford.com]
Sent: Thursday, June 06, 2002 5:36 PM
To: Greg Mausolf (E-mail); Gregory Braniff (E-mail); William Teller (E-mail)
Cc: MacLean, Martin (M.K.)
Subject: FW: DURIS Incident - 309W410-1 (R318C1): Adjustable pedals INOP. (#375530)

Grgg - please provide shipping information
to Marty Maclean at APG. He still have not received
any parts yet.
1-520-7537253
MMACLEAN@ford.com

> -----Original Message-----
> From: MacLean, Martin (M.K.)
> Sent: Wednesday, June 05, 2002 9:15 AM
> To: Petrauskas, Lisa (L.E.)
> Subject: RE: DURIS Incident - 309W410-1 (R318C1): Adjustable pedals
> INOP. (#375530)
>
> Many thanks.
>
> -----Original Message-----
> From: Petrauskas, Lisa (L.E.)
> Sent: Wednesday, June 05, 2002 5:09 AM

[redacted]

> To: MacLean, Martin (M.K.)
> Subject: RE: DURIS Incident - 309W410-1 (R318C1): Adjustable pedals
> INOP. (#375530)
>
> I just spoke to the supplier. There should be a motor being shipped down
> today.
> And a wiring harness being shipped today.
> If you don't receive anything by tomorrow afternoon, Let me know.
> thanks
>
> -----Original Message-----
> From: MacLean, Martin (M.K.)
> Sent: Tuesday, June 04, 2002 2:48 PM
> To: Petrauskas, Lisa (L.E.)
> Subject: DURIS Incident - 309W410-1 (R318C1): Adjustable
> pedals INOP. (#375530)
>
> Lisa -
>
> I just spoke with Eric Stalnaker - the Tech that follows this
> vehicle. He said the adjustable pedals have died. Did you get us any parts
> headed this way? I think I need to write a CR unless you have another
> course of action. Please advise.
>
> DURIS Incident 375530 is documented in the attached .htm file:
>
> << File: incident.htm >>

[redacted]

[redacted]

From:	Weems, Joe (I.J.)
Sent:	Monday, September 16, 2002 2:32 PM
To:	Jacobson, Alan (A.L.); Petrauskas, Lisa (L.E.); Branik, David (D.P.)
Cc:	Kueber, Paul (P.C.); Schemanske, Jennifer (J.H.); MacLean, Martin (M.K.); Arnold, Greg (G.W.); Tegarden, Charlie (C.B.)
Subject:	RE: U137 MCR Adjustable Pedals & WERS CR C11401721

Alan, after reading the DURIS Incident report, I can ensure you that any planned MRC that caused the power Adjustable to perform in this describe manner would not be released. So, a deviation or incorporation would not be needed.

I called Lisa and David, to better understand the specific MRC action to the power adjustable. However, neither was in today.

The practice we have adhered to in MCR program is when a part fails durability, we request an 8D, the production parts goes back on until a new design is provided.

I will follow-up with David and Lisa, for current status of 8D and outcome of report from the supplier on failed part.

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

From:	Jacobson, Alan (A.L.)
Sent:	Saturday, September 14, 2002 5:25 PM
To:	Weems, Joe (I.J.)
Cc:	Kueber, Paul (P.C.); Schemanske, Jennifer (J.H.); MacLean, Martin (M.K.); Arnold, Greg (G.W.); Tegarden, Charlie (C.B.)
Subject:	RE: U137 MCR Adjustable Pedals & WERS CR C11401721

Joe,

What is the status on this? Do we have a Deviation? What is the timed incorporation?

--Alan

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

From:	Tegarden, Charlie (C.B.)
Sent:	Wednesday, August 28, 2002 7:16 PM
To:	Weems, Joe (I.J.)
Cc:	Kueber, Paul (P.C.); Schemanske, Jennifer (J.H.); Jacobson, Alan (A.L.); MacLean, Martin (M.K.); Arnold, Greg (G.W.)
Subject:	FW: U137 MCR Adjustable Pedals & WERS CR C11401721

Joe,

Please review the referenced concern and incident (links below) on a P131 MCR action related to power adjustable pedals. Durability does not support releasing this action as is - this will create high TGWS. A deviation to the corporate standard for NVH durability (ID: 08-0220) is required in order to release this to production.

DURIS Incident:	http://pvsapp1.ecc.ford.com/pls/duris/duris_summary_incident?incidentcode=375530
Concern:	http://www.wers.ford.com/cgi-bin/RCDescription.pl?concern_number=C11401721

PE03-044 23899

[redacted]

[redacted]

Charlie Tegarden, Supervisor, APG Truck Durability
928-753-7329, ctegarde@ford.com

-----Original Message-----
From: MacLean, Martin (M.K.)
Sent: Wednesday, August 28, 2002 12:42 PM
To: Tegarden, Charlie (C.B.)
Cc: Stalnaker, Eric (E.K.); Arnold, Greg (G.W.); MacLean, Martin (M.K.)
Subject: U137 MCR Adjustable Pedals & WBRS CR CL1401721

I need to draw your attention to the above described CR and linkedclearquest IR 375530. The information therein is fairly self-explanatory.

Martin MacLean
Ford AZ Proving Ground
Electronic Brake Systems
Tel: 928-753-7253

From: Kramer, Michael (M.T.)
Sent: Friday, July 26, 2002 12:25 PM
To: West, Gregory (G.S.)
Cc: Smith, Ryan (R.E.); Williams Jr., James (J.P.); McDonagh, Scot (S.M.)
Subject: RE: ETC Pedals

Please continue to keep priority on investigating these pedal concerns. I am getting more concerned.

The company that builds and delivers the best products wins!

Mike Kramer
Supervisor, Super Duty/Excursion/E-Series PTGRT
Six Sigma Black Belt
Phone/fax: (313) 594-2003
Page: (313) 201-9852 (beep); <http://vp04.dearborn.ford.com/cgi/tsdpage?> (internal text); http://mywirnail.com/ (external text)
Email: mkramer1 (internal); mkramer1@ford.com (external)

---Original Message---
From: McDonagh, Scot (S.M.)
Sent: Friday, July 26, 2002 12:16 PM
To: West, Gregory (G.S.)
Cc: Kramer, Michael (M.T.); Smith, Ryan (R.E.); Williams Jr., James (J.P.)
Subject: ETC Pedals

FYI- Can you retrieve this pedal assembly for analysis ??

V44 MECHANICAL MALFUNCTION INDICATION PEDAL & SENSOR ASY 6/28/02 7/18/02 3 TEXAN FORD, INC. SUPER SINGLE CAB (SUPER CAB) KATY TX 281-5799100 4617 368222A KENTUCKY TRUCK PLANT BUILD 1FTNX20F82[redacted] $342.79 CCC Decs OTHER ENGINE TROUBLES Cust.Comments: ACCEL PEDAL DOES NOT WORK, IE WHEN YOU PRESS ON THE PEDAL W YOUR FOOT THE ENGINE DOES NOT IN Mech.Comments: 3 UNSOLD UNIT CC:42 FP:TP PERFORMED DIESEL DIAG. STEPS 1 5 RETRIVED CODES P0122 AND P0123 PERFORMED PIN POINT TEST STEPS 1 6 FOUND THROTTLE PEDAL TO BE BE FAULTY. REPLACED THROTTLE PEDAL. ROAD TESTED OK.

Scot G. McDonagh
Super-Duty/Excursion
Powertrain Quality Leader
Phone-(313)337-8091
Pager-(734)670-5742
Fax-(313)621-8083
E-Mail:smcdonag@ford.com

[redacted]

[redacted]

From: Kramer, Michael (M.T.)
Sent: Thursday, August 01, 2002 9:21 AM
To: West, Gregory (G.S.)
Cc: Smith, Ryan (R.E.); Williams Jr., James (J.P.); McDonagh, Scot (S.M.); Williams, Brent (B.A.); Flynn, Pat (J.P.); Kromberg, Arnold (A.W.)
Subject: RE: ETC Pedal Warranty Claims

A P0221 code is not expected to occur with the wiring short issue. A P0221 code being generated in conjunction with a wiring short suggests that the potentiometer is failing in range.

Please provide more specifics relative to the melted down sensors. Is your reference to "sensor" pertaining to the potentiometer or the idle validation switch? What is the voltage output of the returned pedal sensors? Good discussion material for this afternoon.

The company that builds and delivers the best products wins!

Mike Kramer
Supervisor, Super Duty/Excursion/E-Series PTQRT
Six Sigma Black Belt
Phone/fax: (313) 594-2003
Page: (313) 201-9852 (beep); <http://vm4.dearborn.ford.com/cgi/tpstpage?> (internal text); http://mypimail.com/ (external text)
Email: mkramer1 (internal); mkramer1@ford.com (external)

-----Original Message-----
From: West, Gregory (G.S.)
Sent: Thursday, August 01, 2002 9:04 AM
To: McDonagh, Scot (S.M.); Williams, Brent (B.A.); Flynn, Pat (J.P.)
Cc: Kramer, Michael (M.T.); Smith, Ryan (R.E.); Williams Jr., James (J.P.)
Subject: RE: ETC Pedal Warranty Claims

I have a couple question I need some help with. Williams claims the majority of pedals returned with P0221 codes (142) failed due to the wiring shorts which melts the sensor down. Teleflex has 420 failures due to P0221, has the wiring warranty due to the shorts been more prevalent on Excursion?

-----Original Message-----
From: McDonagh, Scot (S.M.)
Sent: Wednesday, July 31, 2002 7:59 AM
To: West, Gregory (G.S.)
Cc: Kramer, Michael (M.T.); Smith, Ryan (R.E.); Williams Jr., James (J.P.)
Subject: ETC Pedal Warranty Claims

ETC Warranty/FYI

V41 SMOOTH RESPONSE PEDAL & SENSOR ASY 5/6/02 7/5/02 6125 TEXAS MOTORS FORD SUPER SINGLE CAB (SUPER CAB) FORT WORTH TX 817-2464921 2584 20824101 KENTUCKY TRUCK PLANT BUILD 1FTNX20F62[redacted] $364.52 CCC Decs: POOR PERFORMANCE/LACKS POWER Cust.Comments: CUST REPORTS TRUCK WILL NOT ACCELERATE WHEN PEDAL IS DEPRESSED. Mech.Comments: KOEO PASS,KOER PASS,KOEC P0123,INJ EL PASS,CCT PASS,PINPOINT TEST DD, ADDITIONAL PINPOINT TEST CIRCUIT 20,355,357 POR+ SHORT TO POWER IN HARNESS FROM AP TO PCM, REPLACED ACCEL PEDAL, CLEARED, ROAD TESTED, RETESTED

V44 MECHANICAL MALFUNCTION INDICATION CABLE-ADJ PETAL 6/14/02 7/24/02 13 LAVONIA FORD, INC. DOUBLE CAB (CREW CAB) LAVONIA GA 706-3561933 4101 1476701 KENTUCKY TRUCK PLANT BUILD 1FTNW20F42E[redacted] $90.46 CCC Decs: OTHER ENGINE TROUBLES Cust.Comments: CUSTOMER STATES ADJUSTASBLE PEDAL INOP. DSO Mech.Comments: OPEN IN MOTOR REPLACE PEDAL ADJ MOTOR

Scot G. McDonagh
Super-Duty/Escursion
Powertrain Quality Leader
Phone-(313)337-8091
Pager-(734)670-5742
Fax-(313)621-8083
E-Mail:smcdonag@ford.com

From: Smith, Ryan (R.E.)
Sent: Thursday, August 01, 2002 9:22 AM
To: West, Gregory (G.S.); McDonagh, Scot (S.M.); Williams, Brent (B.A.); Flynn, Pat (J.P.)
Cc: Kramer, Michael (M.T.); Williams Jr., James (J.P.)
Subject: RE: ETC Pedal Warranty Claims

This may be true on vehicles before th 1/02 clean date. We are looking at failures that have occured after the clean date.

Ryan Smith (ramit291@ford.com)
PVT & Field Support, Product Concern Engineer:
F250-550, F650-750, Excursion
(313)32-21785 Fax 33-78337
Mail Drop: Diagnostic Service Center II, 26

-----Original Message-----
From: West, Gregory (G.S.)
Sent: Thursday, August 01, 2002 9:04 AM
To: McDonagh, Scot (S.M.); Williams, Brent (B.A.); Flynn, Pat (J.P.)
Cc: Kramer, Michael (M.T.); Smith, Ryan (R.E.); Williams Jr., James (J.P.)
Subject: RE: ETC Pedal Warranty Claims

I have a couple question t need some help with. Williams claims the majority of pedals returned with P0221 codes (142) failed due to the wiring shorts which melts the sensor down. Teleflex has 420 failures due to P0221, has the wiring warranty due to the shorts been more prevalent on Excursion?

-----Original Message-----
From: McDonagh, Scot (S.M.)
Sent: Wednesday, July 31, 2002 7:59 AM
To: West, Gregory (G.S.)
Cc: Kramer, Michael (M.T.); Smith, Ryan (R.E.); Williams Jr., James (J.P.)
Subject: ETC Pedal Warranty Claims

ETC Warranty/FYI

V41 SMOOTH RESPONSE PEDAL & SENSOR ASY 5/6/02 7/5/02 6125 TEXAS MOTORS FORD SUPER SINGLE CAB (SUPER CAB) FORT WORTH TX 817-2464921 2584 20824101 KENTUCKY TRUCK PLANT BUILD 1FTNX20F62[redacted] $364.52 CCC Desc: POOR PERFORMANCE/LACKS POWER Cust.Comments: CUST REPORTS TRUCK WILL NOT ACCELERATE WHEN PEDAL IS DEPRESSED. Mech.Comments: KOEO PASS,KOER PASS,KOEC P0123,INJ BL PASS,CCT PASS,PINPOINT TEST DD, ADDITIONAL PINPOINT TEST CIRCUIT 20,355,357 FOR+ SHORT TO POWER IN HARNESS FROM AP TO PCM, REPLACED ACCEL PEDAL, CLEARED, ROAD TESTED, RETESTED

V44 MECHANICAL MALFUNCTION INDICATION CABLE-ADJ PETAL 6/14/02 7/24/02 13 LAVONIA FORD, INC. DOUBLE CAB (CREW CAB) LAVONIA GA 706-3561933 4101 1476701 KENTUCKY TRUCK PLANT BUILD 1FTNW20F42[redacted] $90.46 CCC Desc: OTHER ENGINE TROUBLES Cust.Comments: CUSTOMER STATE'S ADJUSTASBLE PEDAL INOP. DS0 Mech.Comments: OPEN IN MOTOR REPLACE PEDAL ADJ MOTOR

Scot G. McDonagh
Super-Duty/Excursion
Powertrain Quality Leader
Phone-(313)337-8091
Pager-(734)670-5742
Fax-(313)621-8083

[redacted]

E-Mail:smcdonag@ford.com

[redacted]

From: Hudson, Lou - Troy [lhudson@TFXAuto.com]
Sent: Tuesday, October 24, 2000 8:49 AM
To: 'Petrauskas, Lisa (L.E.)'
Subject: RE: Adjustable Pedal Trials

Lisa,

Something I should've mentioned yesterday (if I hadn't choked big-time while sitting in my chair...<g>).

Remember when we were talking to Linda and she said actual carpet / insulation "data" doesn't exist? She told us she usually represents it by offsetting the floor panel. Well, our interference is in an area that's shown on the screen dumps as a sharp corner. That corner is actually rounded. So...

We probably *aren't* into the carpet 8.5mm. I'm sure it's closer to 3 or 4 nominally. Am I rationalizing a major TFX screw-up? No – not at all. But that's the reason I wanted to do the LT-26 in spite of what the "data" shows, and I completely failed to communicate that to the team yesterday – we really need "real world" data. I haven't seen the curves from the last test, but if the effort spike is 1° from WOT, and we *know* the bracket interferes with the arm before WOT, just how much could we be seeing from carpet interference? 1° rotation is roughly 3mm pedal travel. IOW, if we're 8mm into the carpet, why didn't we see a spike at, say, 16° or even 15°? Can you forward the latest curves?

Bottom line? The pedal should *never* touch the carpet, not even with a 50lb. operating load. That's standard. TFX butchered the package. Is it as bad as we communicated yesterday? No.

Two options so far:

1) Can we chop the bottom of the arm to clear carpet, meet 12/1 timing and survive structural tests? Don't know, but I hope to have an answer today. Manufacturing says thinning that area might create a twist in the arm when the offset is created – not enough material left to grab and hold the high-strength steel.

2) Can we change the ETC rotation and meet 12/1 timing? Yes. As above, 1° rotation is 3mm pedal travel. 2° less rotation is 6mm pedal travel. Gets the lever away from the carpet and comes closer to matching gas accel rotation, which I would *think* is a good thing, despite what Don said yesterday.

Bill, Elio, Avtar, Andy and I will be brainstorming today in hopes of coming up with other solutions.

From: Hudson, Lou - Troy [lhudson@TFXAuto.com]
Sent: Tuesday, October 24, 2000 9:53 AM
To: Lisa Petrauskas (E-mail)
Subject: FW: Dean Campbell
Sensitivity: Private

Pollak contact. Campbell's a salesman. There are two other people listed within. I got my info and a sample of the 6-way from Shad Jafry. Let me know if you need support for a meeting.

<<Dean Campbell>>

From: Hudson, Lou - Troy [lhudson@TFXAuto.com]
Sent: Monday, May 08, 2000 10:55 AM
Subject: Dean Campbell
Sensitivity: Private

Boo-cruise switch supplier.

Also Joe Heller, Systems Engineering Manager, 248-324-3877, joe.heller@....
Shad Jafry, Sales Engineer, 248-324-3867, shad.jafry@....

From: Hudson, Lou - Troy [lhudson@TFXAuto.com]
Sent: Tuesday, October 24, 2000 3:04 PM
To: 'Petrauskas, Lisa (L.E.)'
Subject: RE: adj pedals pmt

See you there. I'd suggest the Atrium if you can't find anyplace else.

BTW, Andy found what we think is carpet data in the ETC package Linda provided us Friday, and we've done a clearance study with that data. Results are quite interesting, to say the least. I'm writing up results now. Stay tuned.

-----Original Message-----
From: Petrauskas, Lisa (L.E.) [mailto:lpetraus@ford.com]
Sent: Tuesday, October 24, 2000 2:22 PM
To: Avtar Kalsi (E-mail); Elio G. Evangelista (E-mail); Janience Mays (E-mail); Kaufmann, Calvin (C.D.); Lou F. Hudson (E-mail); Slachta, Joseph (J.F.); Veit, Douglas (D.W.); William Telker (E-mail)
Subject: adj pedals pmt

When: Wednesday, October 25, 2000 9:30 AM-10:30 AM (GMT-05:00) Eastern Time (US & Canada).
Where: tbd

~~*~*~*~*~*~*~*~*

[redacted]

From: West, Gregory (G.S.)
Sent: Thursday, August 15, 2002 2:20 PM
To: West, Gregory (G.S.)
Subject: FW: Electronic Throttle Control

---Original Message---
From: West, Gregory (G.S.)
Sent: Thursday, August 15, 2002 2:20 PM
To: Heaton, Christopher (C.E.); Carter, Roscoe (R.O.); Nicastri, Paul (P.R.); Simko, Steven (S.J.); Gaw, Ron (R.N.); Gilkey, James (J.K.); Schmitz, Pete (P.J.)
Subject: RE: Electronic Throttle Control

FYI

RTV is GE Product RTV128, RTV paste, adhesive/sealant
The rub bar lube is NYE 774.
The switch track lube is Nye 706D.
The properties of each lube can be obtained at:
http://www.nyelubricants.com/datasheets.php

I am getting samples of each one.
Also, I am trying to obtain the makeup of the inks from Wabash.

---Original Message---
From: Heaton, Christopher (C.E.)
Sent: Thursday, August 15, 2002 12:53 PM
To: Carter, Roscoe (R.O.); Nicastri, Paul (P.R.); Simko, Steven (S.J.); Gaw, Ron (R.N.); Gilkey, James (J.K.); Schmitz, Pete (P.J.); West, Gregory (G.S.)
Cc: Heaton, Christopher (C.E.)
Subject: Electronic Throttle Control

Team,

I have taken a few pictures of the electronic throttle control and saved them on the FRL (W) drive under the allshare folder. I'm not sure if everyone on the team has access to that drive so we may have to find another way to share the pictures. The file size of each picture might make it hard to e-mail them to all of you.

Initial observations show a couple of things: 1. There is evidence of contact heating seen in the discoloration of the rider contacts. This is evident on both sets of riders. 2. The plastic around the contact riders is melted--this may be from contact heating or it may be due to the process of attaching the contactors to the plastic pivot arm. 3. The failing track seems to have a much more gritty appearance than the passing track--this may be acting like sandpaper and wearing away the contacts on the failed riders. 4. On the failed rider contact there is a pair of contacts that each have four fingers. One has the contact points completely worn away and the other has three of four fingers worn down. The fourth finger has considerably less wear than the others. This may be due to the finger being bent or it may have had a large chunk of debris that protected it from the usual pattern of wear.

Again, it would be helpful at this point to get some information about materials used for the riders, greases, silicone, and the two different contact traces. There is definitely grease on both tracks. The failed track has a lot more debris plowed at the end of the track but this may be a combination of grit from the track and metal from the rider with only minor amounts of grease holding the clumps together and on the track.

Christopher E. Heaton
cheaton@ford.com
Research Engineer
Vehicle Electronics and Systems Dept.

Ford Research Laboratory
Phone: (313)845-4214 Fax: (313)323-8239

[redacted]L

From:	Killgoar Jr., Paul (P.C.)
Sent:	Tuesday, September 10, 2002 10:43 AM
To:	Liposky, Lawrence (L.J.)
Cc:	Helms, Jeffrey (J.H.); Tamor, Michael (M.A.); Simko, Steven (S.J.); Schmitz, Pete (P.J.); Heaton, Christopher (C.E.); Nicastri, Paul (P.R.); Gilkey, James (J.K.); Sherard, Gail (G.); West, Gregory (G.S.); Gaw, Ron (R.M.); Carter, Roscoe (R.O.); Hass, Kenneth (K.C.); Guys, Philip (P.R.); Schmidt, Gerhard (G.)
Subject:	RE: Report on the analysis and root cause related to the pedal sensor for electronic Throttle Control for P131/U137

Larry:

Thank you for the note. It is always nice to hear from our customers that the work has been valuable. I think we have a very talented team here and your note reinforces my opinion.

Thanks.

Paul

Paul C. Killgoar Jr., Director
Physical Sciences and Systems Research Laboratory
Ford Motor Company
2101 Village Road
P. O. Box 2053, MD 2074 SRL
Dearborn, MI 48121
Phone: 313-323-1413
Fax: 313-323-8992
e-mail: pkillgoa@ford.com

—Original Message—

From:	Liposky, Lawrence (L.J.)
Sent:	Tuesday, September 10, 2002 10:39 AM
To:	Killgoar Jr., Paul (P.C.)
Cc:	Helms, Jeffrey (J.H.); Tamor, Michael (M.A.); Simko, Steven (S.J.); Schmitz, Pete (P.J.); Heaton, Christopher (C.E.); Nicastri, Paul (P.R.); Gilkey, James (J.K.); Sherard, Gail (G.); West, Gregory (G.S.); Gaw, Ron (R.M.); Carter, Roscoe (R.O.); Hass, Kenneth (K.C.); Guys, Philip (P.R.)
Subject:	RE: Report on the analysis and root cause related to the pedal sensor for electronic Throttle Control for P131/U137

Outstanding job from the folks at FRL. The expertise and information provided was key in determining root cause and resolution of this issue. We appreciate the focus and dedication . Great Job !! Thanks again.

Larry Liposky
Supervisor - Tough Truck
Accelerator/VMV Components
Phone 24-61726
Pager 796-0949

—Original Message—

From:	Carter, Roscoe (R.O.)
Sent:	Tuesday, September 10, 2002 9:08 AM
To:	Sherard, Gail (G.); Liposky, Lawrence (L.J.); West, Gregory (G.S.); Gaw, Ron (R.M.)
Cc:	Hass, Kenneth (K.C.); Helms, Jeffrey (J.H.); Tamor, Michael (M.A.); Simko, Steven (S.J.); Schmitz, Pete (P.J.); Heaton, Christopher (C.E.); Nicastri, Paul (P.R.); Gilkey, James (J.K.)
Subject:	Report on the analysis and root cause related to the pedal sensor for electronic Throttle Control for P131/U137

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[redacted]

[redacted]

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Phone 24-81726
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Cc: Hass, Kenneth (K.C.); Helms, Jeffrey (J.H.); Tamor, Michael (M.A.); Simko, Steven (S.J.); Schmitz, Pete (P.J.); Heaton, Christopher (C.E.); Nicastri, Paul (P.R.); Gilkey, James (J.K.)
Subject: Report on the analysis and root cause related to the pedal sensor for electronic Throttle Control for P131/U137

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http://www.srl.ford.com/pes/Trans_Fluid/ElectronicThrottleFaikure.doc.

By clicking on this URL you can view and print the document if you wish.

It was interesting to find out that commercial labs had been employed to find the lubricant on the worm potentiometer tracks and that they had reported no lube when we were able to fined it on all suspect parts. One of the labs has contacted me and I have shared our findings and techniques with them. Perhaps in the future that lab will be of more assistance in solving these types of problems.

We hope this effort assist in solving the failure issue in the very near term.

On behalf of Steve Simko, Chris Heaton, Paul Nicastri, and Pete Schmitz

Roscoe "ROC" Carter
Ford Research Lab
Physical and Environmental Sciences Department
Lubricant Science and ATF Analysis Group Leader

[redacted]

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Roscoe "ROC" Carter
Ford Research Lab
Physical and Environmental Sciences Department
Lubricant Science and ATF Analysis Group Leader

[redacted]

[redacted]

From: Gaw, Ron (R.M.)
Sent: Thursday, October 17, 2002 8:43 AM
To: Schmitz, Pete (P.J.); Simko, Steven (S.J.); Heaton, Christopher (C.E.); Carter, Roscoe (R.O.)
Cc: Gilkey, James (J.K.); West, Gregory (G.S.); Liposky, Lawrence (L.J.); Chesney, Craig (C.D.)
Subject: Request for help on DEW and P221 validation of electronic pedals

Pete, Steve, Christopher and Roscoe,

Greetings again from the Tough Truck organization. Let me re-introduce myself*: my name is Ron Gaw, and I am the ETC Systems D&R over the P221 (F-series) program. Greg West is my counterpart on the P131 Diesel program. Your report for the P131/U137 program was invaluable in defining the root cause and aided the speed of Ford's response to the issue immensily.

The purpose of this note is to request a pre-meeting with your team of four, myself, and optionally including Jim Gilkey (our sensor specialist), Jim Conrad (our ETC pedal RVT), Craig Chesney (DEW pedal D&R), and Greg West. The goal of the pre-meeting is to discuss the steps necessary to initiating P131 equivalent technical investigations into advanced prototype fleet test failures of the electronic pedals on P221 and DEW. Craig Chesney has provided a failed DEW pedal (electronic signals out of agreement, no apparent circuit shorts or opens) with unusual wear. Though the supplier has identified mechanical issues with the pedals that can cause unusual wear, I would like to get confirmation from our labs that the greases/oils were not of equal or greater significance.

If you are able to support, then I will set up the meeting. Please let me know if there is anyone else I should include in the discussion.

Regards,

Ron Gaw
PTSE D&R
Electronic Throttle Controls Design & Release
Ph. #: 313 390-5756 *Fax. #: 313 248-2558*
Pager # 313 795-3909

*We first met when I set up the initial meeting with Greg West and your team to review the P131's issues.

---Original Message---
From: Liposky, Lawrence (L.J.)
Sent: Tuesday, September 10, 2002 10:39 AM
To: Kilgoar Jr., Paul (P.C.)
Cc: Helms, Jeffrey (J.H.); Tamor, Michael (M.A.); Simko, Steven (S.J.); Schmitz, Pete (P.J.); Heaton, Christopher (C.E.); Nicastri, Paul (P.R.); Gilkey, James (J.K.); Sherard, Gail (G.); West, Gregory (G.S.); Gaw, Ron (R.M.); Carter, Roscoe (R.O.); Hass, Kenneth (K.C.); Gays, Philip (P.R.)
Subject: RE: Report on the analysis and root cause related to the pedal sensor for electronic Throttle Control for PL31/U137

Outstanding job from the folks at FRL. The expertise and information provided was key in determining root cause and resolution of this issue. We appreciate the focus and dedication . Great Job !! Thanks again.

Larry Liposky
Supervisor - Tough Truck
Accelerator/VMV Components
Phone 24-81726
Pager 796-0949

PE03-044 25301

---Original Message---
From: Carter, Roscoe (R.O.)
Sent: Tuesday, September 10, 2002 9:08 AM
To: Sherard, Gail (G.); Liposky, Lawrence (L.J.); West, Gregory (G.S.); Gaw, Ron (R.M.)
Cc: Hass, Kenneth (K.C.); Helms, Jeffrey (J.H.); Tamor, Michael (M.A.); Simko, Steven (S.J.); Schmitz, Pete (P.J.); Heaton, Christopher

[redacted]

(C.E.); Nicastri, Paul (P.R.); Gilkey, James (J.K.)
Subject: Report on the analysis and root cause related to the pedal sensor for electronic Throttle Control for PE3I/UI37

The team at FRL has finished its examination of the ETC pedal position sensors as requested. After sharing our findings with the platform folks on August 28th, we have written a report to document our findings and conclusions. Due to the size of the file, I have taken the liberty of listing the report on the Physical and Environmental Sciences web site on the Lubrication Science resent report page. It can be called up using the URL given below:

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On behalf of Steve Simko, Chris Heaton, Paul Nicastri, and Pete Schmitz

Ramon "ROC" Carter
Ford Research Lab
Physical and Environmental Sciences Department
Lubricant Science and ATF Analysis Group Leader

[redacted]

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Sent:	Tuesday, September 10, 2002 9:08 AM
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Subject:	Report on the analysis and root cause related to the pedal sensor for electronic Throttle Control for P131/U137

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On behalf of Steve Simko, Chris Heaton, Paul Nicastri, and Pete Schmitz

Roscoe "ROC" Carter
Ford Research Lab
Physical and Environmental Sciences Department
Lubricant Science and ATF Analysis Group Leader

[redacted]

From: Pietrzak, Bob [bpietrzak@wabashtech.com]
Sent: Wednesday, August 21, 2002 3:12 PM
To: akalal@tbauto.com
Subject: FW: Ink Testing

> -----Original Message-----
> From: Pietrzak, Bob
> Sent: Wednesday, August 21, 2002 11:59 AM
> To: 'gbraniff@tfxauto.com'
> Subject: FW: Ink Testing
>
>
>
> -----Original Message-----
> From: Pietrzak, Bob
> Sent: Wednesday, August 21, 2002 11:58 AM
> To: 'gbaniff@tfxauto.com'
> Cc: Brown, Todd
> Subject: Ink Testing
>
> Scope:
>
> Elements to be tested:
>
> 1 from your "no lube" testing that failed after 1 million cycles.
>
> 1 from Teleflex Morse that passed 10 million cycles.
>
> 1 current production with all process parameters verified.
>
> 1 field failure
>
> All elements have the same ink system i.e. "English Ink".
>
> Tests to be performed:
>
> 1. Micro finish of ink surface. To be performed in-house - 1/2 day for testing. Compared to a capability study of surface finish to be performed.
>
> 2. Micro hardness testing of precious metal tips on contacts from field failure. To be performed at contact supplier. 2 days. This can be done concurrently with number 3
>
> 3. SEMS/EDX spectro of ink composition. To be performed locally - testing scheduled for Friday, can not be done sooner.
>
> 4. Micro hardness/scratch force testing. To be performed in California Laboratory - 4 days for testing.
>
> "No bar lube" sample received on 8-21-02. As of 8-21-02 we have not received the Marine pedal.
>
>

C

[redacted]

From: Miers, Jerry [jmiers@WMCO.com]
Sent: Thursday, July 26, 2001 9:50 AM
To: 'gwest2@ford.com'
Subject: FW: Robustness Changes (Ultrasonic Welding Timing)

> -----Original Message-----
> From: Miers, Jerry
> Sent: Tuesday, July 24, 2001 3:00 PM
> To: 'jchrist8@ford.com'
> Subject: Robustness Changes (Ultrasonic Welding Timing)
>
> Jeff,
> I believe there may have been some confusion
> in the direction and communication of the cost and timing
> of the above change, we are going to attempt to tie this
> to another running change of pedal efforts and pad. This
> was communicated to Greg West via our sales office.
>
> The timing is available but the cost has not been determined specifically
> related to this change at this time.
> I will report on the as soon as it is available.
>
> Overall Timing is 20 weeks
> Details:
> Design Completion 1wk
> Tooling 9 wks
> Prototype Sensor Build 1 wk
> Prototype Pedal Assy Build 1wk
> Full DV/PV Testing 8 wks
> Ppap 1wk
>
> If there are any question please call 941-727-5596 ext 16
>

Over Size OD Diesel
Color Code Yellow
Special Parts for Lash Test

	Accelorator		Brake	
	OD (mm)	Slot (mm)	OD (mm)	Slot (mm)
1	27.744	4.52	27.741	4.52
2	27.742	4.5	27.742	4.54
3	27.743	4.53	27.75	4.51
4	27.743	4.51	27.731	4.55
5	27.74	4.55	27.739	4.52
6	27.73	4.48	27.739	4.53
7	27.757	4.51	27.743	4.53
8	27.739	4.51	27.742	4.51
9	27.736	4.49	27.743	4.52
10	27.74	4.52	27.74	4.51
11	27.747	4.49	27.742	4.52
12	27.752	4.48	27.74	4.52
13	27.747	4.51	27.742	4.52
14	27.738	4.52	27.739	4.51
15			27.741	4.51
16			27.738	4.52

Over Size OD Gas
Color Code Yellow
Special Parts for Lash Test

	Accelorator		Brake	
	OD (mm)	Slot (mm)	OD (mm)	Slot (mm)
1	[illegible]	4.48	27.737	4.52
2	[illegible]	4.51	27.736	4.52
3	[illegible]	4.5	27.737	4.5
4	[illegible]	4.51	27.748	4.52
5	[illegible]	4.51	27.739	4.51
6	[illegible]	4.5	27.738	4.51
7	[illegible]	4.51	27.74	4.52
8	[illegible]	4.51	27.74	4.51
9	[illegible]	4.49	27.74	4.51
10	[illegible]	4.51	27.74	4.51
11	[illegible]	4.52	27.734	4.51
12	[illegible]	4.51	27.744	4.51
13	[illegible]	4.51	27.738	4.53
14	[illegible]	4.5	27.72	4.52
15	[illegible]	4.51	27.736	4.5

Brake Measurements for reduced lash/Improved rattle samples

	SERIAL #	SAMPLE #	OD Accel ROD (mm)	OD Brake ROD (mm)	OD ROD & NEW BUSHING (mm)	LASH WITH STD BUSHING (mm)	LASH WITH NEW BUSHING (mm)	Delta Lash	% Chg Accel	% Chg Brake
GAS BRAKE	A00	10		27.74	31.739	6.26	7.06	-0.8		-12.78%
	A30	8		27.74	31.772	5.99	5.71	0.28		4.67%
	B02	6		27.738	31.699	6.66	4.98	1.8		27.62%
	A29	11		27.734	31.711	6.25	4.94	1.31		20.96%
	A97	9		27.74	31.703	7.25	5.59	1.66		22.90%
	A96	12		27.744	31.715	7.19	6.26	0.93		12.93%
	B00	5		27.739	31.695	7.97	4.58	3.39		42.53%
	A92	13		27.738	31.696	5.84	4.3	1.54		26.37%
	A94	3		27.737	31.706	6.47	5.18	1.29		19.94%
	B01	4		27.746	31.716	7.85	6.46	1.39		17.71%
	A96	7		27.74	31.722	7.28	5.13	2.15		29.53%
	Avg.			27.7378	31.720	6.686	5.365	1.50		21.18%
	Max			27.746	31.772	7.970	7.06	3.39		42.53%
	Min			27.72	31.695	5.840	4.3	-0.8		-12.78%
	Range			0.026	0.077	2.13	2.76	4.19		
DIESEL BRAKE	A17	13		27.742	31.722	5.2	5.19	0.01		0.19%
	A13	11		27.742	31.692	5.38	4.86	0.52		9.67%
	A32	1		27.741	31.686	5.82	3.48	2.34		40.21%
	A14	4		27.731	31.695	5.16	3.31	1.85		35.85%
	A12	5		27.736	31.71	6.55	3.85	2.7		41.22%
	A25	7		27.743	31.719	6.59	2.33	4.26		64.64%
	A24	14		27.739	31.704	4.96	3.52	1.44		29.03%
	A21	8		27.742	31.707	6.09	3.45	2.64		43.35%
	A22	15		27.741	31.693	5.83	3.86	1.97		33.79%
	A23	10		27.74	31.699	7.95	4.48	3.47		43.65%

A19	12		27.74	31.702	7.66	4.18	3.37		[illegible]
A18	9		27.743	31.707	4.66	3.05	1.5		[illegible]
Avg.			27.7408	31.711	5.888	3.89	2.00		32.47%
Max			27.75	31.759	7.960	5.19	4.26		64.64%
Min			27.731	31.668	4.660	2.33	0.01		0.19%
Range			0.019	0.073	3.4	2.86	4.25		

Accelerator Measurements for reduced lash/improved rattle samples

	V	SAMPLE #	OD Accel ROD (mm)	OD Brake ROD (mm)	OD ROD & NEW BUSHING (mm)	LASH WITH STD BUSHING (mm)	LASH WITH NEW BUSHING (mm)	Delta Lash	% Chg Accel	% Chg Brake
	A66	3	27.743		31.7	7.42	4.46	2.96	39.89%	
	[redacted]									
	A61	11	27.747		31.704	8.71	5.48	3.23	37.08%	
	A57	12	27.752		31.708	7.44	5.07	2.37	31.85%	
	A59	6	27.73		31.71	8.22	6.62	1.6	19.46%	
	A55	15			31.705	7.05	5.75	1.3	18.44%	
	A58	10	27.74		31.698	8.62	6.67	1.95	22.62%	
DIESEL ACCEL	A65	14	27.738		31.7	7.74	6.79	0.95	12.27%	
	A54	8	27.739		31.7	8.11	5.62	2.49	30.70%	
	A60	1	27.744		31.689	5.67	5.13	0.54	9.52%	
	A67	5	27.74		31.736	8.18	5.59	2.59	31.66%	
	A63	7	27.737		31.696	7.75	5.66	2.09	26.97%	
	A64	13	27.747		31.717	7.67	6.09	1.58	20.60%	
	A56	9	27.736		31.7	8.34	6.24	2.1	25.16%	
	Avg.		27.7426		31.711	7.906	5.68	2.13	26.81%	
	Max		27.757		31.750	8.710	6.79	4.51	57.45%	

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	Min		27.73		31.683	5.670	3.34	0.54	9.52%	
	Range		0.027		0.097	3.04	3.45	3.97		
	A49	4	27.74		31.782	12.26	7.78	4.48	36.54%	
	A40	10	27.74		31.708	12.03	7.42	4.61	38.32%	
	A39	1	27.745			7.71	5.2	2.51	32.68%	
	A37	14	27.739		31.73	9.14	6.81	2.33	34.21%	
	A38	8	27.738			11.62	6.78	4.74	69.91%	
	A50	3	27.742		31.683	8.4	6.42	1.98	30.84%	
	A35	2	27.742		31.737	11.15	5.16	5.99	116.09%	
GAS ACCEL.	A30	4	27.74			9.16	5.97	3.18	53.27%	
	A48	7	27.738		31.742	10.38	6	4.38	73.00%	
	A41	13	27.733		31.721	7.25	5.64	1.61	28.55%	
	A46	11	27.739		31.726	11.43	8.56	2.87	33.53%	
	Avg.		27.7369		31.730	9.834	6.24	3.40	58.44%	
	Max		27.745		31.782	12.260	8.78	5.99	144.10%	
	Min		27.731		31.683	7.260	3.24	-0.65	-7.99%	
	Range		0.014		0.078	5.01	5.55	6.64		

WALL THICKNESS OF NEW BUSHING (mm)
1.9896
2.016
1.9806
1.9865
1.9815
1.9855
1.978
1.979
1.9845
1.985
1.981
1.9909
2.0160
1.979
0.039
1.99
1.975
1.9725
1.982
1.9855
1.988
1.9825
1.9825
1.978
1.9795

	SERIAL #
DIESEL BRAKE STANDARD TO NEW BUSHING	A56
	A26
	A85
	A76
	A18
	A26
	A84
	B03
	A10
	A19
	A24
	A38
	A47
	A46
	A47
	A21
	A27
	A28
	A03
	A22
	Avg.
	A77
	A71
	A74
	A75
	A67

[redacted]

[redacted]

1.981
1.982
1.9850
2.0000
1.9725
0.037

WALL THICKNESS OF NEW BUSHING (mm)
1.9765
1.9765
1.978
1.99
1.9845
2.0035

DIESEL ACCEL STANDARD TO NEW BUSHING	
	A66
	A56
	A56
	A67
	A70

1.9695
0.034
2.011
[redacted]
1.963
1.9955
1.9705
1.9975
[redacted]
2.002
1.984
1.9945
1.9958
2.0120
1.9706
0.0415

[redacted]

LASH CHANGE FROM STANDARD PARTS TO NEW BUSHING

SAMPLE #	OD Accel ROD AND BUSHING STANDARD (mm)	OD Brake ROD AND BUSHING STANDARD (mm)	OD ROD & NEW BUSHING (mm)	LASH STANDARD ONLY (mm)	LASH FOR NEW BUSHING ONLY (mm)	Delta Lash	% Chg Accel	% Chg Brake	DIFF. IN WALL THICKNESS OF BUSHING (mm)
1		1	31.882		4.77	2.91			
2			31.696		4.58	3.04			
3			31.716		4.78	4.29			
4			31.727		4.28	3.29			
5			31.707		5.79	2.82			
6			31.698		5.03	3.97			
7			31.731		4.5	4.67			
8			31.723		4.33	4.62			
9			31.69		4.53	4.06			
10			31.724		4.88	3.74			
11			31.709		4.29	0.48			
12			31.654		6.06	1.21			
13			31.666		3.29	2.35			
14			31.666		3.98	2.45			
15		1	31.685		4.18	2.1			
							2.35	39.02%	
16		3	31.701				1.36	19.74%	
17		31	31.697				1.83	27.11%	
18		31	31.786				1.94	27.48%	
19		3	31.7				2.49	40.98%	
20		31	31.667				2.80	36.79%	0.3583
		31.681	31.718	30	4.56				

1	31.569	3	2
2	31.607	3	8
3	31.612		3
4	31.691	3	38
5	31.673	3	21

	5
	5
	9
	5
	4

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6	31.576		31.703	6.87	5.16	1.72	25.04%		0.0635
7	31.587		31.7	6.62	5.7	0.92	13.90%		0.0665
8	31.543		31.687	6.61	4.84	1.77	26.76%		0.072
9	31.539		31.62	8.82	6.76	2.06	23.36%		0.0405
10	31.574		31.719	6.69	5.07	1.62	24.22%		0.0725

AVERAGE CHANGE FOR ACCEL 22.52%

AVERAGE CHANGE FOR BRAKE 36.79%

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Standard Parts For Lash

[redacted]

Pedal	Idle Volt	WOT Volt	Asc Transition	Transition Idle Volt	Transition Idle Volt (mm)	Ang Travel	Travel (mm)
000166	12.57%	74.37%	16.62%	3.22%	4.0	17.8	77.252
	x 5	x 6		x 6	Thrust		

Jack, please explain this data for me LISA

Copy for record

Vehicle	Type	Pedal Sample No.	Results	Rod C...		Rod & Bushing O.D.	Lash
2EA00125	4x2 Diesel	1D	Good	27	35	31.747	3.82
2EA00130	4x2 Diesel	3D	Good	2...	38	31.742	3.64
2EA00147	4x4 Diesel	2D	Good	27	31	31.738	4.27
2EA00124	4x4 Gas	2G	Good	27	-8	31.743	6.02
2EA00144	4x2 Gas	1G	Good	27	-4	31.712	5.41
2EA00144	4x2 Gas	3G	Bad	27	-1	31.735	6.54

Samples ma... with new bushings, track rod with reduced slot width and lar... O.D.

Next step - V... measure the affect of lash at pivot joint on sample #3. Then ...move pin and add new pin with ...ised orbital form operation. Record lash again and ship to V... for vehicle evaluation.

[redacted]

[redacted]

Teleflex Issues 5/23/01

Rattle:

- Accel/Brake new drive nut — Did not receive accel pedal
- Accel/Brake lash — Timing? Need improvement

Throttle not returning to idle:

Team: Greg West, Greg Thomas, Jeff Christensen, Lisa Petrauskas, Larry Liposky, Bill Teller, Jason Lee

2 Options:

1. Add spring to adj. Accel pedal — 5.00
2. Change throttle body spring

Yellow Label:

- Need trial data — close — 3 DOA's

Noise: Kendallville

- Noisy Pedals: FCPA audit vehicles A00192, A00152 written up with C 20 call. Need Rob Mundroff to take noise level measurements.
- Need noise data from last week.

Grease: Tom LaVie Norm Otto — NVH experts: Vipon Sharma

- Data on the robustness of the grease added to the accel/brake pedal. — more than 1 life cycle

Damage:

- Did Greg follow up with information requested by Grant Brumfry (Tech Spec).

Excessive pull on throttle cam due to weight of adj. Pedal.

Pedal shaft pivot rod – lash issue

- 80 typ
- measurable data on vehicles

Dave Card

Need data – Thursday

From: Braniff, Greg - Troy [gbraniff@TFXAuto.com]
Sent: Saturday, April 07, 2001 10:38 AM
To: Lisa Petrauskas (E-mail); 'pwill73@ford.com'
Cc: Teller, Bill - Troy; Evangelista, Elio - Troy; Kalsi, Avtar - Troy
Subject: Pedal efforts - full forward vs full rearward (2003)

Lisa and Pete, we ran 10 pedals on Saturday morning in full forward and full rearward. The data is attached. The loads jump up about 2 lbs when cycled in Full Forward position. Looks like the springs were designed to meet the spec. in the rearward position. I'm pretty sure that these parts were made from the same batch of springs as the 2002 1PP parts.

<<Pedal effort FWD vs RWD test data.xls>>

Greg Braniff
Teleflex Automotive
248-618-3107
gbraniff@tfxauto.com

Sample #	Full FWD (95%tile)		Full RWD (5%tile)	
	Idle (lb)	WOT (lb)	Idle (lb)	WOT (lb)
1	8.2	14.5	6.7	13.4
2	8.4	14.8	6.2	13.3
3	7.7	14.7	6	13.5
4	8.6	14.8	6.5	13.4
5	8.3	15	6.2	13.3
6	8	14.1	6.2	12.7
7	8.2	15.9	5.7	14.1
8	8.3	15.7	6.4	13.5
9	8.5	15.1	6.4	13.5
10	8.2	15.3	6.3	13
Avg	8.26	15	6.26	13.37