

**PE03-044**

**FORD**

**5/13/2005**

**APPENDIX I**

**BOOK 24 OF 28**

**PART 1 OF 4**

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**From:** Zulkarnain Khan [zkhan1@thcauto.com]  
**Sent:** Tuesday, October 01, 2002 4:37 PM  
**To:** gwest2@ford.com; liposky@ford.com; kczolan@thcauto.com; gbranis@thcauto.com;  
bpierzek@ambashitech.com  
**Subject:** Fwd: U-137 Adj ETC with Phenolic after 2M cycles.



U-137 Adj ETC with  
Phenolic

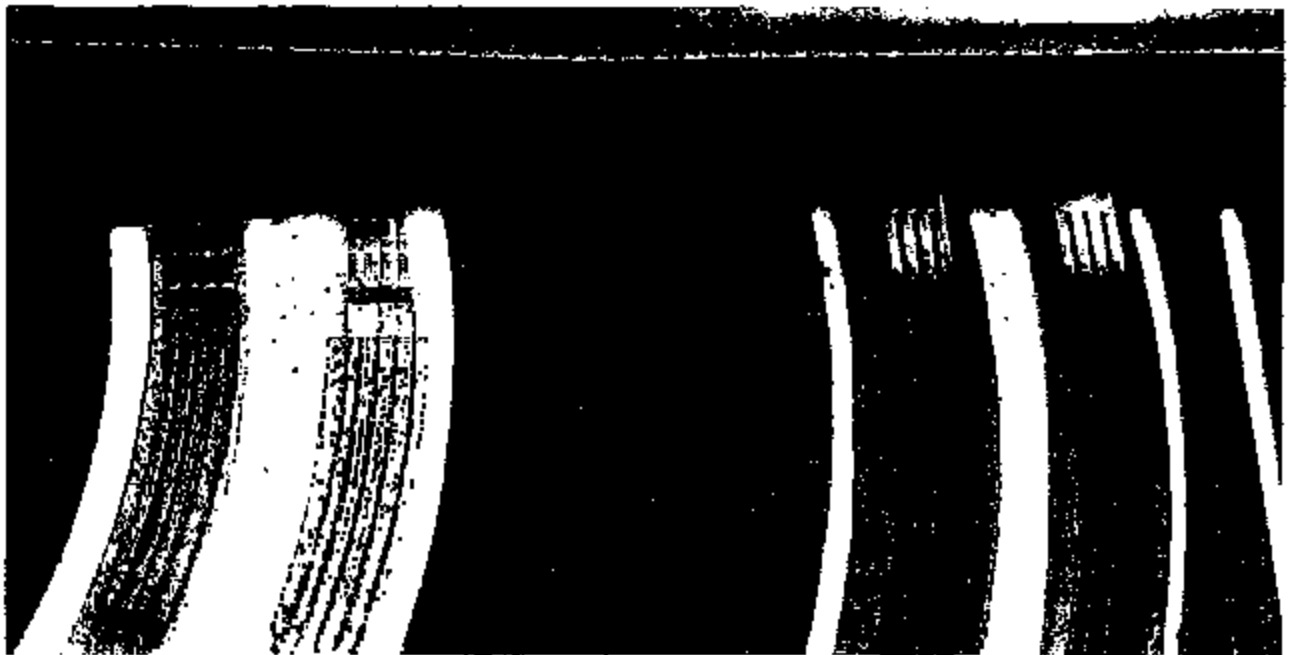
Attached, are the digital pictures of six pedals with phenolic after 2M  
cycles.

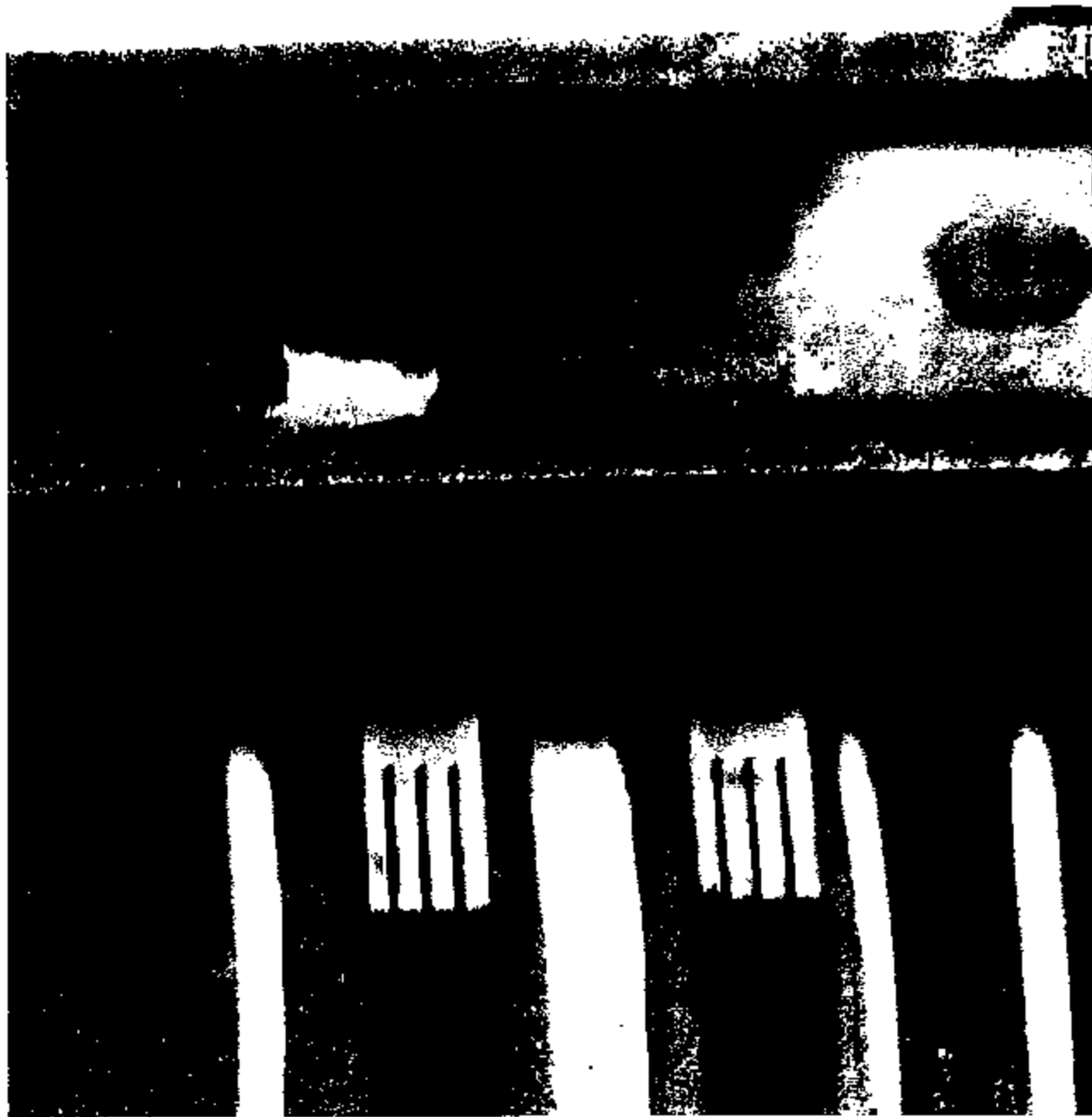
Khan

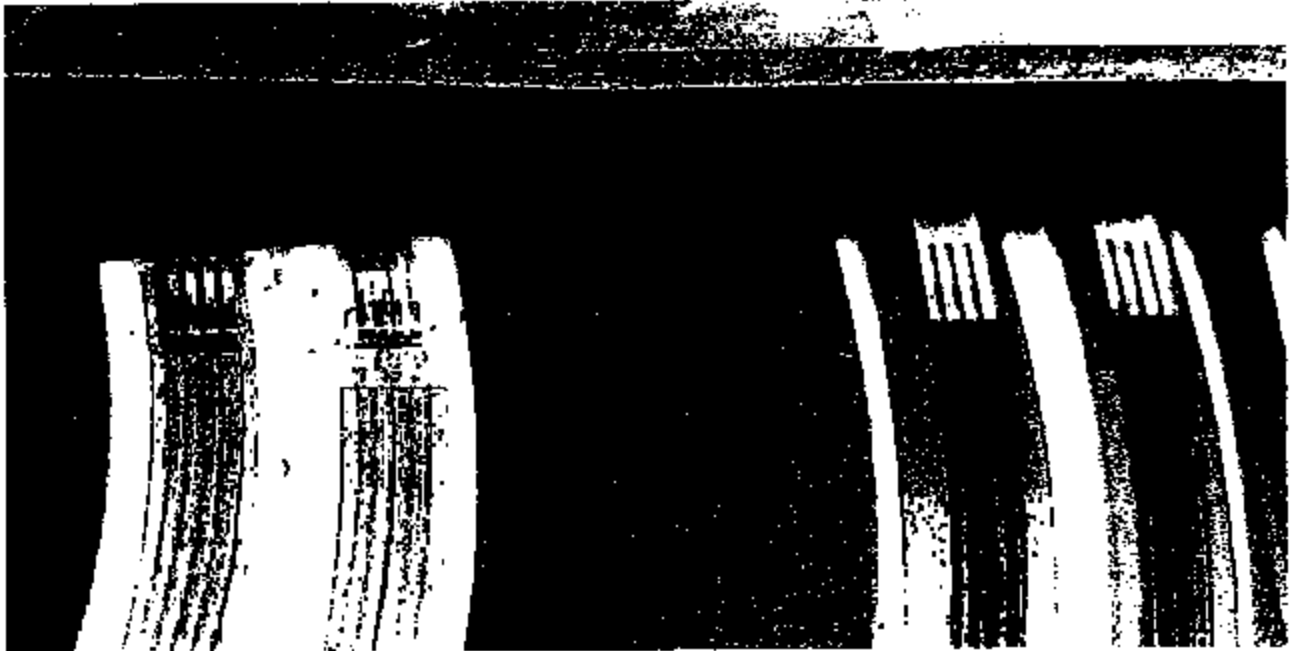
From:  
Sent:  
To:  
Subject:

Zulqarnain Khan (zkhan1@ibcaulo.com)  
Tuesday, October 01, 2002 4:28 PM  
zkhan1@ibcaulo.com  
U-137 Adj ETC with Phenolic

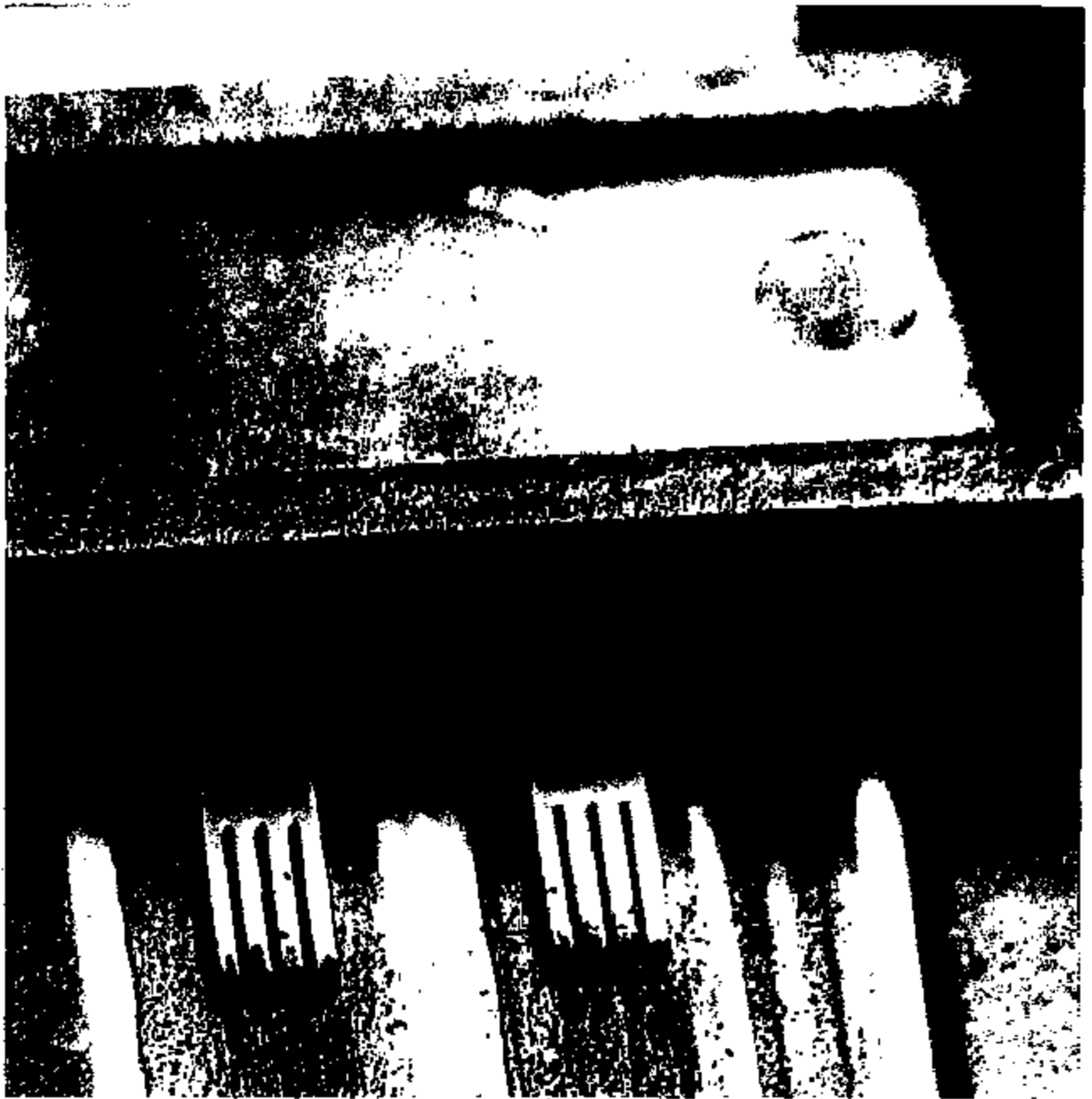
-  774901a.jpg
-  774901b.jpg
-  774902a.jpg
-  774902b.jpg
-  774903a.jpg
-  774903b.jpg
-  774904a.jpg
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-  774905a.jpg
-  774905b.jpg
-  774906a.jpg
-  774906b.jpg



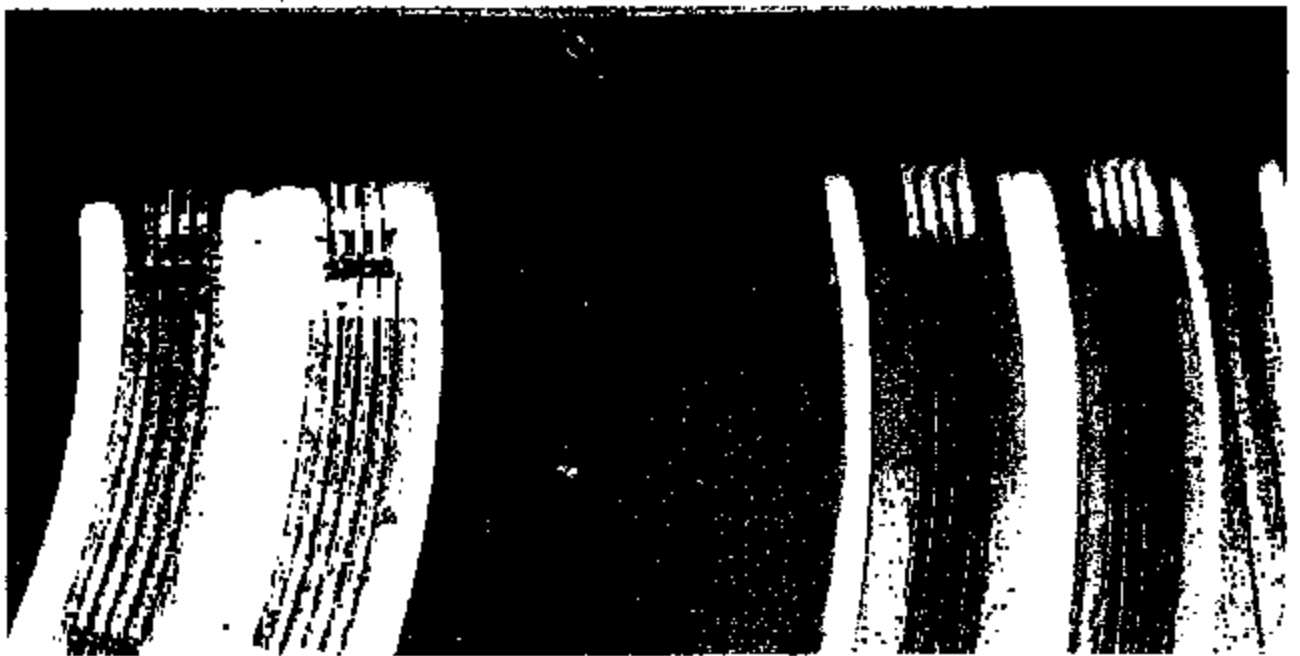




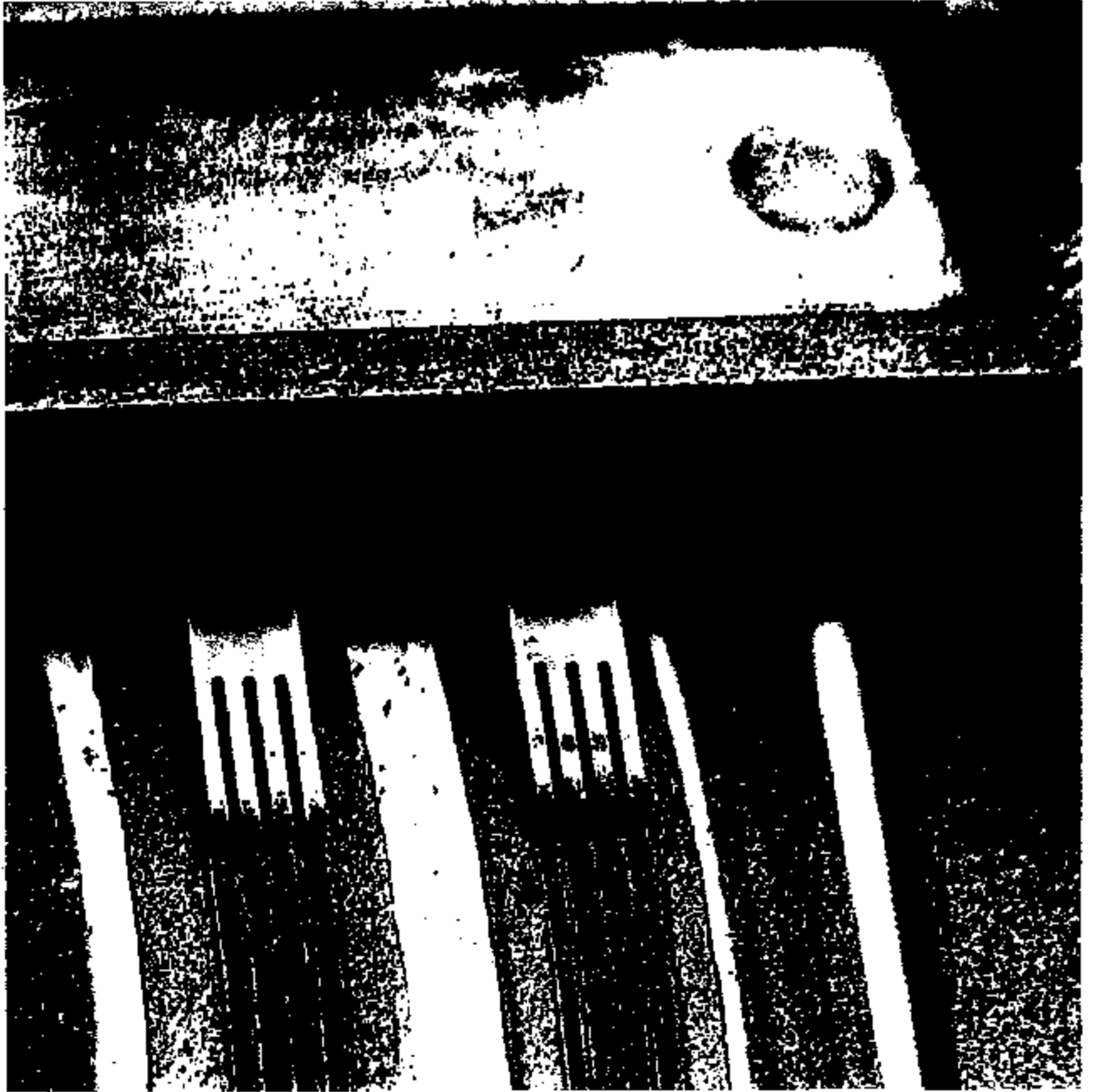
FE83-844 8781



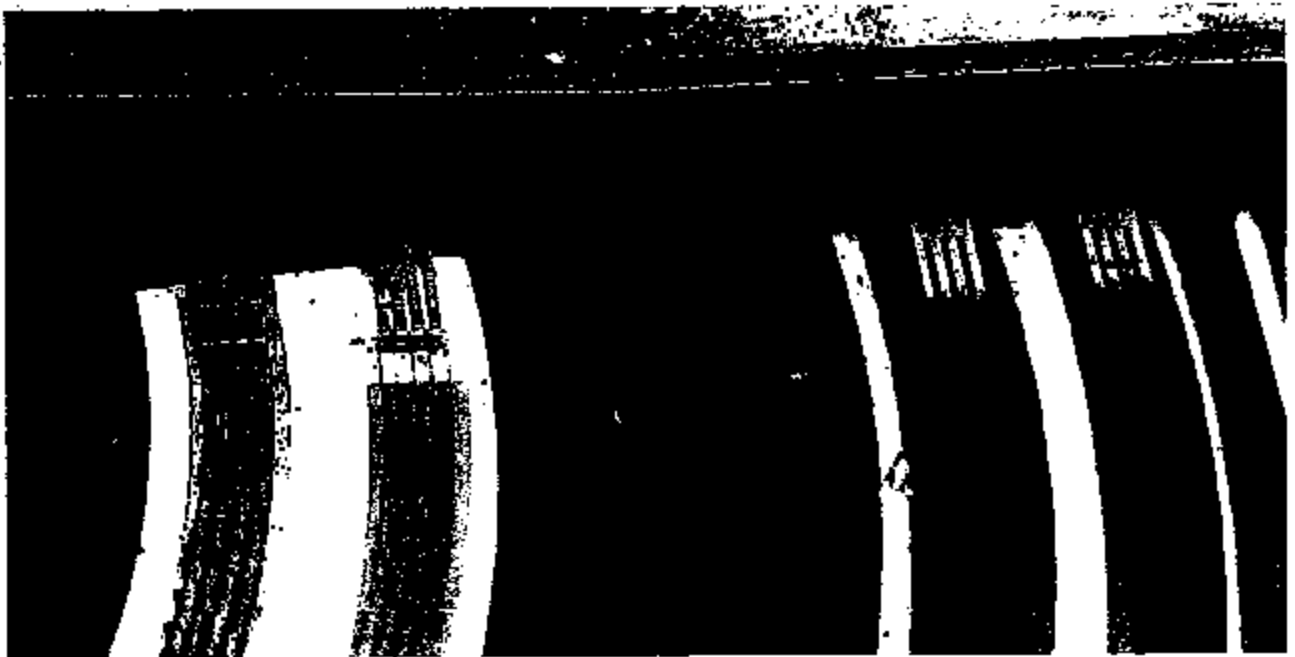
PE83-044 5792



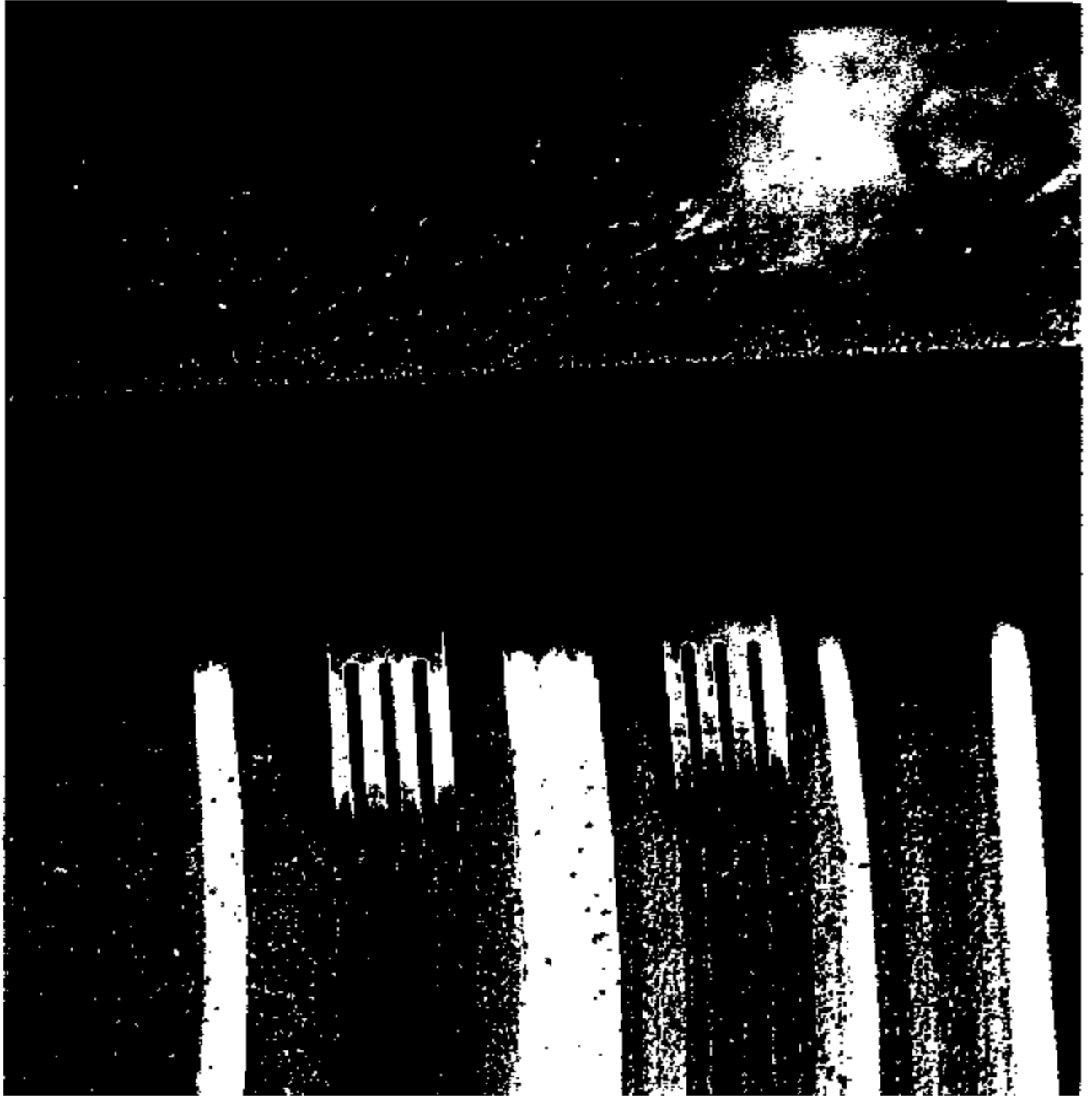




PE83-844 8784



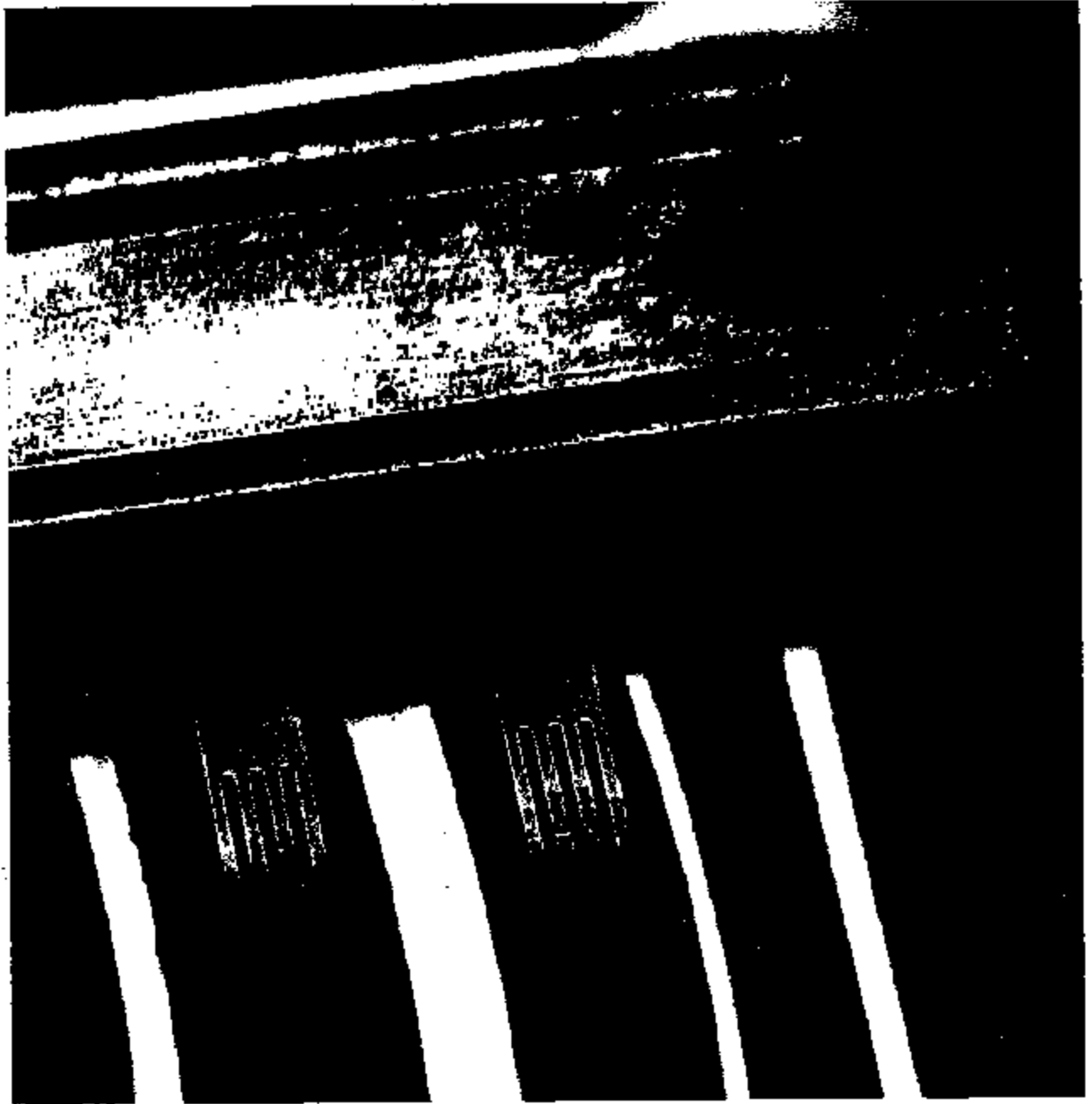
PE83-844 8793



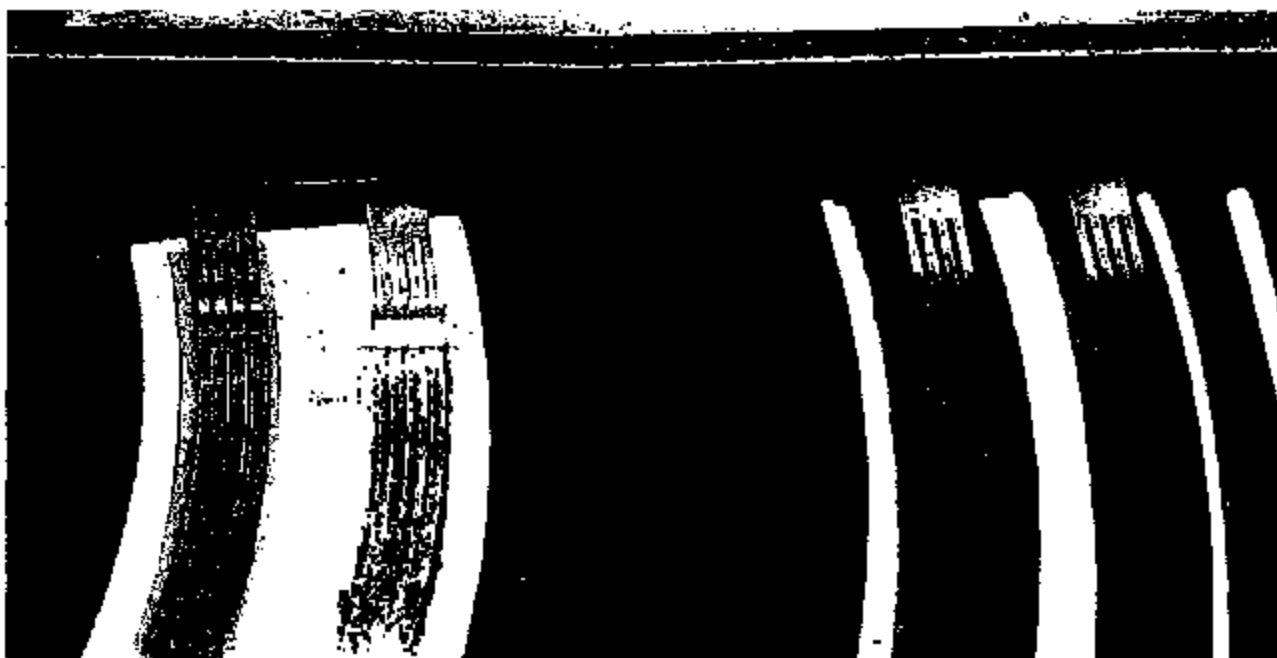
PER3-844 8786



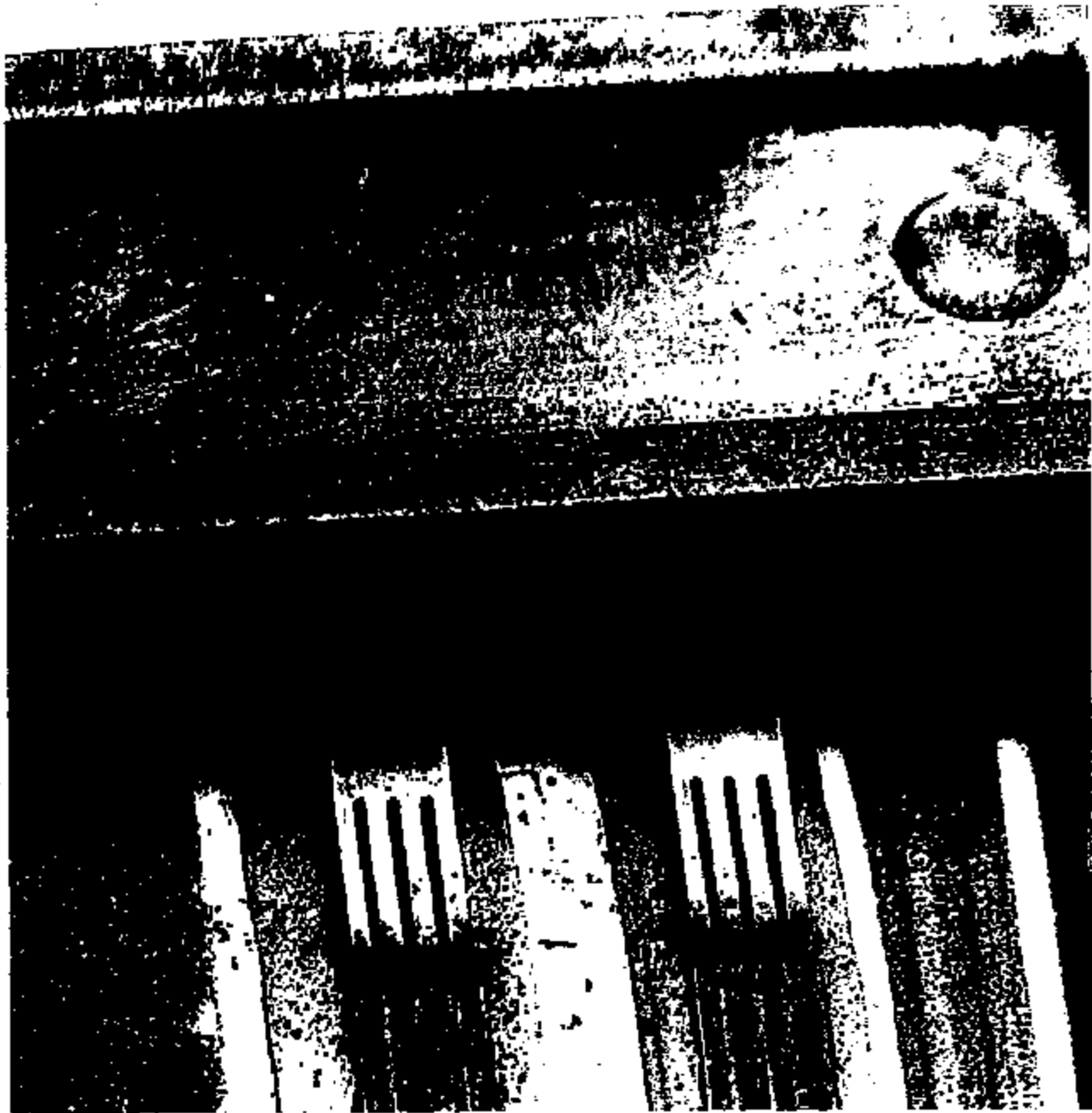
FEB3-844 8787



FE83-044 8735



PE83-844 8798



FE03-014 8888

**From:** Liposky, Lawrence (L.J.)  
**Sent:** Wednesday, September 24, 2003 5:31 PM  
**To:** Love, Keith (K.A.)  
**Cc:** Liposky, Lawrence (L.J.)  
**Subject:** RE: VOQ VINs

Keith three things I owe you from today's discussion:

1.) Question on Five pin vs. Eight/Ten pin output. Five Pin hard-shell is specific to Two track design / Three pins for sensor signal and Two for Idle Validation Switch (IVS). Ten + Eight pin is specific to Three track design. We utilize Seven pins on Ten or Eight pin hard-shell. Redundancy as stated for Accel Pedal Position Signal (APPS). Break-down as follows:

5-pin-Single Track w/IVS	10/8 pin - Three Track
1 @ supply voltage	1 @ output voltage pedal position 1
1 @ ground	1 @ output voltage pedal position 2
1 @ output voltage	1 @ output voltage pedal position 3
1 @ input @ IVS	1 @ common ground pedal position 1 + 2
1 @ output @ IVS	1 @ ground pedal position 3
	1 @ supply voltage pedal position 1 + 2
	1 @ supply voltage pedal position 3

2.) Single track w/IVS usage was eliminated with introduction of 6.0L Diesel which incorporated Three track design.

3.) Minimum pedal effort breakaway requirement is lbs.. Efforts are more attribute driven, however must maintain returnability for FMVSS124 acceptability. Target for Super Duty is 4.5lb breakaway to 10lbs at wide open throttle.

Larry Liposky  
Supervisor - Accelerator Controls  
Tough Truck / Outfitters  
Phone 24-81726  
Pager 796-0949

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

**From:** Love, Keith (K.A.)  
**Sent:** Wednesday, September 24, 2003 2:57 PM  
**To:** 'Yon, Scott'  
**Cc:** Souchock, Peter (P.D.); Nevi, Ray (R.A.); Tokarsky, Michael (M.);  
Liposky, Lawrence (L.J.)  
**Subject:** RE: VOQ VINs

Scott, I have researched the requested 2002MY F Super Duty/Excursion VINs and report the following:

VIN	MY	Series	Engine	Pedal
1FMSU43F22	2002	Excursion	7.3L Diesel	Adjustable
1FMSU43F22	2002	Excursion	7.3L Diesel	Adjustable
1FTNW20P02	2002	F250 4x2 Crew Cab	7.3L Diesel	Adjustable
1FTNW21F72	2002	F250 4x4 Crew Cab	7.3L Diesel	Adjustable
1FTSN31F32	2002	F350 4x4 Crew Cab	7.3L Diesel	Adjustable

All these vehicles do indeed have adjustable pedals. Per our previous discussion, I added a "U" in the 5th position of the first VIN to create a valid number ("M" in the 3rd position requires "U" in the 5th).



Should have an answer to your other q's shortly.

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

From: Yon, Scott [mailto:Scott.Yon@nhtsa.dot.gov]  
Sent: Wednesday, September 24, 2003 11:59 AM  
To: Love, Keith (K.A.)  
Subject: RE: VOQ VINS

The VOQ only has 16 digits for the VIN field entry (I copied the data off our database electronically) but it shows the vehicle model as a 2002 Excursion, so I agree that the VIN should be as you guessed.

Thanks,  
Scott

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

From: Love, Keith (K.A.) [mailto:klove@ford.com]  
Sent: Wednesday, September 24, 2003 11:19 AM  
To: Yon, Scott  
Subject: RE: VOQ VINS

Reviewing your VINS now. The first one is shy of a digit. I believe it should be as follows: 1EMSU43F22[REDACTED] (I added a U to the 5th position and found an Excursion). Please verify that this is correct.

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

From: Yon, Scott [mailto:Scott.Yon@nhtsa.dot.gov]  
Sent: Wednesday, September 24, 2003 10:40 AM  
To: Keith Love (E-mail)  
Subject: VOQ VINS

Keith,

Thanks for your help on this. There are only 5 VINS because two of the complaints reference the same vehicle which suffered two failures. The attached SS has the numbers.

Two other questions came up after we hung-up. Can you let me know if you can get answers to these? No hurry on number 2.

- 1) Was there a version of the 6.0L engine built with second generation (single track) ETC or was it only built with the third generation (triple track) system?
- 2) Is there a design intent throttle force that Ford uses on ETC based systems to get customer acceptable throttle feedback?

Can you advise your phone number? My details are below, feel free to contact me anytime.

Regards,  
Scott

Scott Yon  
U. S. Department of Transportation  
National Highway Traffic Safety Administration  
Office of Defects Investigations  
Rm 5326  
400 7th Street SW  
Washington, DC 20590  
202-366-8761  
Fax-202-366-1767

<<IE03048\_VOQ\_VINS.xls>>

**From:** Williams, Brent (B.A.)  
**Sent:** Wednesday, March 12, 2003 7:00 AM  
**To:** Williams, James (J.P.); West, Gregory (G.S.)  
**Cc:** Carr, Richard (R.T.); Lipoosky, Lawrence (L.J.); Figurski, Patrick (P.M.); Reed Jr., Bill (W.P.); Abar, Robert (R.B.)  
**Subject:** RE: Emerging Issue 328534 - Help needed from Electrical and KTP PVT team

Attached is the unit info on pedal type in (). This shows that there is significant indicator pointing toward the Williams pedal connector issue.....each VIN which noted connector not seated or loose was a fixed pedal.

1FMSU45P43	Loose pedal (Adjustable)
1FDAW57P73	connector not seated (Fixed)
1FTNX21P73	connector not seated (Fixed)
1FTWW33P1	connector not seated (Fixed)
1FTNX21P43	track 3 high (Adjustable)
1FTSX31P73	track 3 low (Fixed)
1FTNW21P03	Noted "pedal circuit failure" (Adjustable)
1FDAW56P03	Correlation codes (potentially loose connector) (Adjustable)
1FTNW21P33	Track 1,2,3 low plus correlation codes, definitely loose connector (Fixed)

**Brent A. Williams,**  
P131/U137 Plant Vehicle Team - Electrical  
Kentucky Truck Plant, 502-429-2979  
Pager: 502-336-7285  
Text Page: bwillia8, E-mail: bwillia8@ford.com

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

**From:** Williams, James (J.P.)  
**Sent:** Tuesday, March 11, 2003 5:04 PM  
**To:** West, Gregory (G.S.)  
**Cc:** Carr, Richard (R.T.); Lipoosky, Lawrence (L.J.); Figurski, Patrick (P.M.); Reed Jr., Bill (W.P.); Williams, Brent (B.A.); Abar, Robert (R.B.)  
**Subject:** RE: Emerging Issue 328534 - Help needed from Electrical and KTP PVT team

Which have Teleflex and which have Williams? Also, the Williams secondary locking feature was corrected on and in plant Feb 21, 2003.

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

**From:** West, Gregory (G.S.)  
**Sent:** Tuesday, March 11, 2003 5:00 PM  
**To:** Williams, James (J.P.)  
**Cc:** Carr, Richard (R.T.); Lipoosky, Lawrence (L.J.); Figurski, Patrick (P.M.); Reed Jr., Bill (W.P.); Williams, Brent (B.A.); Abar, Robert (R.B.)  
**Subject:** RE: Emerging Issue 328534 - Help needed from Electrical and KTP PVT team

Jim, per your request these are specific vins associated with connector issues.

1FMSU45P43	Loose pedal
1FDAW57P73	connector not seated
1FTNX21P73E	connector not seated
1FTWW33P13	connector not seated
1FTNX21P43E	track 3 high
1FTSX31P73E	track 3 low
1FTNW21P03	Noted "pedal circuit failure"
1FDAW56P03	Correlation codes (potentially loose connector)
1FTNW21P33	Track 1,2,3 low plus correlation codes, definitely loose connector

These are both fixed and adj pedals.

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

**From:** Abar, Robert (R.B.)  
**Sent:** Tuesday, March 11, 2003 3:00 PM  
**To:** Williams, Brent (B.A.); West, Gregory (G.S.)  
**Cc:** Carr, Richard (R.T.); Lipsky, Lawrence (L.L.); Figurski, Patrick (P.M.); Williams, James (J.P.); Reed Jr., Bill (W.P.); Abar, Robert (R.B.)  
**Subject:** RE: Emerging Issue 328534 - Help needed from Electrical and KTP PVT team

Brent,  
Dealer did not list a pedal assy part number in AWS claims that I looked at.

Here are the VIN's that I saw if there is a way to determine how it was built:  
1FTWW33P13E [REDACTED]  
1FTNX21P73E [REDACTED]

Accelerator pedal assy looser:  
1FMSU45P43 [REDACTED]

Loose pedal adjust motor connector on:  
1FMNU44P53 [REDACTED]

Greg,  
I may have missed some when I went thru the verbatims.

**Robert B. Abar**  
Manager, Powertrain

(313) 84-64247 FAX:(313) 24-88073 rbar@ford.com  
Room: 1CP20/Rotunda CI #4 Mail Drop: LM410

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

**From:** Williams, Brent (B.A.)  
**Sent:** Tuesday, March 11, 2003 2:03 PM  
**To:** Abar, Robert (R.B.); Getley Sr., Jeffrey (J.B.); Williams, James (J.P.); Reed Jr., Bill (W.P.)  
**Cc:** Carr, Richard (R.T.); Lipsky, Lawrence (L.L.); West, Gregory (G.S.); Figurski, Patrick (P.M.); Gleeghen, Tom (T.A.)  
**Subject:** RE: Emerging Issue 328534 - Help needed from Electrical and KTP PVT team

One question of the 6 electrical binned to hard shell not fully seated, were they Fixed or Adjustable?

**Brent A. Williams,**  
P131/U137 Plant Vehicle Team - Electrical  
Kentucky Truck Plant, 502-428-2978  
Pager: 502-338-7285  
Text Page: bwf1a8, E-mail: bwf1a8@ford.com

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

**From:** Abar, Robert (R.B.)  
**Sent:** Tuesday, March 11, 2003 8:11 AM  
**To:** Getley Sr., Jeffrey (J.B.); Williams, James (J.P.); Williams, Brent (B.A.); Reed Jr., Bill (W.P.)  
**Cc:** Abar, Robert (R.B.); Carr, Richard (R.T.); Lipsky, Lawrence (L.L.); West, Gregory (G.S.); Figurski, Patrick (P.M.); Gleeghen, Tom (T.A.)  
**Subject:** Emerging Issue 328534 - Help needed from Electrical and KTP PVT team  
**Importance:** High

**Background:**  
Emerging Issue 328534 is listed for F250HD/F350/450/550 VRT=S11-Powertrain VFG=V41-Smooth

PE83-844 1487

response CCC=D36-Engine Hesitates / surges when accelerating

The issue has initially been binned against accelerator pedal by the warranty analyst based on their review of the claims and the parts being replaced.

Greg West's analysis of the current AWS claims includes the following:

28 Teleflex (adjustable pedal assy's) - with 6 reporting legitimate codes  
15 Williams (fixed pedal assy's) - with 3 reporting legitimate codes  
16 unknown due to poor dealer coding

Breakdown from the the verbalisms of 58 total 6.0L Pedals an AWS

10% (6) Electrical - hard shell not fully seated  
16% (9) Mis-binned - listed as 7.3L pedal  
29% (17) Non related hardware (ICP) and/or calibration  
10% (6) non pedal related - glow plugs not plugged in, black smoke on accel  
35% (20) Unexplained - 4 pedals verified through dealership used pin point, no codes, changed anyway

Returned Pedal - 5 total three track to date

Williams - 3 of 3 NTF at supplier and further verified on calibration truck as functionally acceptable

Teleflex - 2 of 2 NTF at supplier and further verified on calibration truck as functionally acceptable. One of these had a DTC specific to pedal, even though it was verified as acceptable at supplier and in vehicle.

Additional pedal assy's are being returned for analysis by supplier and the powertrain accel group.

Powertrain team would like a deeper understanding of the electrical connector and the interface to the pedal assy to make sure the connector is always seated and that proper contact is achieved if it is seated. We are looking for system interactions that may explain the codes that are not evident on the existing returned parts the NTF.

#### REQUESTED ACTIONS FROM ELECTRICAL AND PT PVT TO SUPPORT POWERTRAIN INVESTIGATION:

Review installation process of electrical connector at KTP to both the adjustable and fixed pedal assy and provide process to powertrain team in Dearborn. It was note when we were trying to install a connector on to the pedal assy that if you were pushing on the red locking tab (while starting to push on the connector) that you could hear a click but hadn't even started to seat the connector. Is this a blind operation or can the operator see the connection while they are doing it? Does the operator push on the connector and then go back and move the red tab or do they try to do it simultaneously? Do they pull on the connector to confirm its seated before seating the locking tab or even after seating the locking tab? Some other process?

Jim Williams indicated that there were occasionally issues with getting the red button set on the fixed pedals, but not on the adjustable pedals. Are there physical differences between the pedals in the connector area or assy process that would account for this? Have parts that have had the issue been removed for inspection/analysis?

Jeff, Would also like to understand the design of the wiring connector relative to the mating part on the pedal assy:

- Given reports of loose connectors, is it possible to partially seat the connectors and make electrical contact?

When do the pins make contact during the assembly process of the connector (as the shells first come together, only after the locking tab starts up the tab ramp, etc)?

- What are the tolerance stacks of the pins and mating slots?
- Can someone in Dearborn take us thru the design in the next day or two?

Thanks in advance for your assistance in helping us get to root cause of this issue.

**Robert B. Abar**

Manager, Powertrain

(313) 84-54247      FAX: (313) 24-89073      rabar@ford.com  
Room: 1CP28/Rokunda Ct #4      Mail Drop: LHM10

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**From:** Wallace, Anna (A.)  
**Sent:** Tuesday, May 13, 2003 4:36 PM  
**To:** West, Gregory (G.S.)  
**Subject:** Receipt for submitted lab request



31079.pdf

All shaded areas must be filled in to process your request.



**Request for Central Laboratory Service**  
 15000 Century Dr., Dearborn, MI 48120-1267 FAX (313) 32-21614

Laboratory Number	Date
31079	5/12/03

Secretary Contact	Telephone	CDS ID	FAX
LARRY UPOSKY	313 (24-8172)	LLIPOSKY	

Material	Sample Provided	Source	TORCAS #
	<input checked="" type="checkbox"/> Before after test <input type="checkbox"/> Dispose after test		Supplier
ELECTRONIC AGEZ PERK	ASZ930, ASZ912	2C34-9FT3-0A	TRIFLEX
NYOGEL 774		N/A	Provided N/A
NYE INFLUENCE COARSE P10		N/A	" " N/A

Requester Info. Box (Requester Use)
Do you intend upon follow? <input type="checkbox"/> No <input type="checkbox"/> Yes

Specific Testing Requirements/Additional Sample Information

- 1) FTIR testing to verify if NYE 706D has migrated from switch tracks (light brown) to pot track (dark blue)
- 2) Determine the quantity of NYE 706D that was applied during manufacturing process
- 3) Photos of sensors, matched with pedal serial #s.

Do you want this report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Do you want this report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Report (A signed hard copy final report will be needed) (Which may reflect that apply.) <input checked="" type="checkbox"/> Transmit ordinary results <input checked="" type="checkbox"/> Print preliminary results	FAX final report No typed report (write/data)	Send photographs only
---	---	--	--	-----------------------

<input checked="" type="checkbox"/> Chemistry (313) 32-2877	<input type="checkbox"/> Metallurgy & Mechanical (313) 32-2163	<input type="checkbox"/> Polymers, Coatings & Corrosion (313) 32-4688
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For information about services or solutions in completing this form, refer to the Central Laboratory Web page: [www.detroitmi.gov/central-lab](http://www.detroitmi.gov/central-lab)  
 Laboratory number and date cannot be assigned without receipt of samples.  
 Samples will be disposed of 30 days after report completion, unless otherwise requested.  
 CL-Form #CLF02\_02

**From:** Shipp, Terri (T.L.)  
**Sent:** Monday, March 10, 2003 12:51 PM  
**To:** Liposky, Lawrence (L.J.); West, Gregory (G.S.)  
**Cc:** Reed Jr., Bill (W.P.); Williams, James (J.P.); Gleegham, Tom (T.A.); Abar, Robert (R.B.); Figurski, Patrick (P.M.); Goldin, Gary (M.)  
**Subject:** RE: ETC / 6.0L Diesel

Larry & Greg,

I talked to Gary Goldin, Warranty Analyst who created E-Tracker issue 328534. The data in E-Tracker includes both 7.3L and 6.0L pedals. The data was sorted on the base part number 9F836 and it does not separate the data by prefix or suffix. This makes it difficult to determine which pedals are being tracked.

Gary posted an attachment on the E-Tracker site that lists the number of 9F836 claims against engine families. I have extracted some of the information below:

	7.3L	6.0L
7/02	16	0
8/02	20	0
9/02	9	0
10/02	2	0
11/02	0	4
12/02	0	6
1/03	0	2
2/03	0	1

From this data, you cannot tell if the 7.3L issues were with the Teleflex Adjustable Pedal or the Williams Fixed Pedal since there is no prefix or suffix information. However, we know that the 2002-03 Teleflex Adjustable Pedal were campaigned earlier this year (03B03). The earlier data may be a reflection of Teleflex Adjustable Pedal issue since the data was collected prior to the Field Service Action.

I know you are currently in the process of testing the 6.0L pedals and thus far have found no issues and are planning to issue a SSM before the pedals can be replaced.

Will you add two comments under "Containment Action" into E-Tracker:

- add a comment in E-Tracker on the 7.3L Teleflex Adjustable Pedal being addressed by FSA 03B03
- add comment about Special Service Message for the 6.0L before Pedals can be replaced in the field.

Thanks,

**Terri Shipp**

Ford Motor Company  
P/T Attributes and Standards Department  
NAE P/T Campaign Prevention Specialist  
(Phone) 313-33-73831 / (Fax) 313-62-18020  
(Pager) 313-795-1878  
Cube 1AF12, MD #3, FPC-A  
[tshipp@ford.com](mailto:tshipp@ford.com) <<mailto:tshipp@ford.com>>  
[www.ford.com](http://www.ford.com) <<http://www.ford.com>>

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

**From:** Shipp, Terri (T.L.)  
**Sent:** Monday, March 10, 2003 9:21 AM  
**To:** Liposky, Lawrence (L.J.)  
**Cc:** West, Gregory (G.S.); Reed Jr., Bill (W.P.); Williams, James (J.P.); Gleegham, Tom (T.A.); Abar, Robert (R.B.); Figurski, Patrick (P.M.); Reed Jr., Bill (W.P.)



Subject: RE: ETC / 6.0L Diesel

Larry,

I have a call out to Mary Lynn Seroka to get more information on 328534. Mary Lynn is a Warranty Supervisor in the Emerging Issues Department.

I did find on the same website the definition of Red/Green (see website [http://www.quality.ford.com/wpo/html/Warranty\\_Emerging\\_Issues.htm](http://www.quality.ford.com/wpo/html/Warranty_Emerging_Issues.htm) for more info).

Extraction from "Emerging Issues Process Summary":

Issue Owners are responsible for documenting resolution action(s) / timing in SAQ and providing data to PVT Mgr for closure of their issues. Issues can be closed once an effective 17-day Plant Controllable Process Change or 90-day Design Change is in (Vehicle) production and Service needs addressed. WPO will monitor closed issues and reopen them if there is evidence of on-going claims beyond the change date. Issues open beyond the 17-day or 90-day "clocks" will be designated Red. Issues will also be designated Red, if required containment timing is not met, within the 17-day or 90-day windows. Definition of Containment is: No additional vehicles are being produced after the specified containment date, that are at risk for incurring warranty costs due to the causal factor being addressed. Containment is required after 3 days for 17-day issues and 9 days for 90-day issues.

Your issue is assigned as a "Plant - Controllable Issue" which has a Total Resolution Time of 17 days. You are over the 17 days and therefore your health is noted as Red.

I think your issue should be binned as a "Design/System Issue" and should have a Total Resolution Time of 90 days. The PVT manager is responsible to selecting the ownership and would have to change the classification. I am cc'ing Bill Reed and Jim Williams. If they agree, they can make the modifications to the Issue Type.

Please let me know if you have any questions.

Terri Shipp

Ford Motor Company  
P/T Attributes and Standards Department  
NAE P/T Campaign Prevention Specialist  
(Phone) 313-33-73831 / (Fax) 313-62-16020  
(Pager) 313-795-1878  
Cube 1AF12, MD #3, FPC-A  
[tshipp@ford.com](mailto:tshipp@ford.com) <<mailto:tshipp@ford.com>>  
[www.ford.com](http://www.ford.com) <<http://www.ford.com>>

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

From: Shipp, Terri (T.L.)  
Sent: Monday, March 10, 2003 8:25 AM  
To: Lipsky, Lawrence (L.J.)  
Cc: West, Gregory (G.S.); Figurski, Patrick (P.M.); Aber, Robert (R.B.)  
Subject: RE: ETC / 6.0L Diesel

Larry,

FYI - The latest 20 Warranty Emerging Issue Deck Lists 328534 as RED. I am attaching the website location if your info: [http://www.quality.ford.com/wpo/html/Warranty\\_Emerging\\_Issues.htm](http://www.quality.ford.com/wpo/html/Warranty_Emerging_Issues.htm).

I don't fully understand how the health is assigned for each issue, as soon as I find out, I will let you know in a follow up note. I did find out that the only person who was the authority to close an issue is the PVT Manager assigned to it.

Please let me know if you have any questions.

Terri Shipp

Ford Motor Company

**From:** Fleming, Roger (R.W.)  
**Sent:** Wednesday, February 12, 2003 8:00 AM  
**To:** Hawkins, Fred (F.W.)  
**Cc:** Taylor, Michael (M.J.); Page, Michael (M.A.); Patel, Mona (M.S.); Binger, Charlie (C.F.); West, Gregory (G.S.); Lipoaky, Lawrence (L.J.); Shever, Michael (P.M.); Slachta, Joseph (J.F.); Gilbert, Timothy (T.)  
**Subject:** RE: KTP trip summary for EOL issues

Fred, thanks for the update on Williams...problem appears to be an assignable event with their supply chain. I like the idea of them adding a second shift as this should expand their output. Thanks again, Roger

## **Roger W. Fleming**

NAT STA P131 Program Manager  
PDC - 2nd Floor ~ Cube 2AC05  
rflem1@ford.com  
(313) 322-5208 Phone  
(313) 337-8396 Fax  
(888) 869-5781 (Text Pager)

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

**From:** Hawkins, Fred (F.W.)  
**Sent:** Tuesday, February 11, 2003 5:08 PM  
**To:** Fleming, Roger (R.W.)  
**Cc:** Taylor, Michael (M.J.); Page, Michael (M.A.); Patel, Mona (M.S.); Binger, Charlie (C.F.); West, Gregory (G.S.); Lipoaky, Lawrence (L.J.); Shever, Michael (P.M.); Slachta, Joseph (J.F.); Gilbert, Timothy (T.)  
**Subject:** RE: KTP trip summary for EOL issues

Roger, the issue at Williams that led to the current tight supply situation was caused by a lack of parts from one of their Tier 2's, resulting in their inability to run production this past weekend, 2/8 & 2/9 as planned. Williams says that a miscommunication between their sensor brush supplier, Hareaus in Frankfurt Germany, caused the stock outage over the weekend. However, they have received expedited shipments and are now back on track with that supplier. They have assured me that they have communicated properly with their remaining sub-suppliers. Williams is still committed to shipping 720 a day vs. KTP's avg. daily usage of 660 and shipped 1080 yesterday, 2/10.

I've instructed Williams to reinstitute sending the Daily Product Position sheet we were using to monitor their status in late January so that we can monitor the situation closely. They will be sending it to myself, Tim Gilbert in Supply Chain Mgmt, and Joe Slachta. Based on their performance we will reintroduce daily conference calls if necessary. At current build rate of 720/day it will take until end of next week until they are back up to desired float level.

I confirmed with Williams and Ford PD that this latest issue was not caused by a decrease in yield as a result of the tightened guard band that engineering imposed in mid January. Williams is currently achieving 70 - 75% yield at their EOL tester. They plan to bring on a 2nd shift in their clean room next week which will allow them to re-implement their in-process 'element' test and should improve their EOL yield.

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

**From:** Fleming, Roger (R.W.)  
**Sent:** Tuesday, February 11, 2003 8:00 AM  
**To:** Taylor, Michael (M.J.); Hawkins, Fred (F.W.); Page, Michael (M.A.)  
**Subject:** RE: KTP trip summary for EOL issues

Mike, yesterday morning I was in conversation with Fred Hawkins (STA Commodity Manager - Chassis)...on this issue. I have not forgotten your request and have been working with the site STA Engineer to get recent status. Fred Hawkins assured me yesterday...that he would get back into this with Williams for most current status. Fred, looks like they are needing some additional assistance. Thanks, Roger

Mike, heads up...looks like Williams is starting to fall back on their supply commitments.

**Roger W. Fleming**

NAT STA P131 Program Manager  
PDC - 2nd Floor ~ Cube 2AC05  
rflemin1@ford.com  
(313) 322-5208 Phone  
(313) 337-8396 Fax  
(888) 868-5761 (Text Pager)

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

From: Taylor, Michael (M.J.)  
Sent: Monday, February 10, 2003 1:09 PM  
To: Fleming, Roger (R.W.)  
Subject: FW: KTP trip summary for EXL issues

Roger.....not good news.

Mike Taylor  
Purchasing Director - Tough Trucks  
(313)-594-7448 -- mtaylor4@ford.com

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

From: Shaver, Michael (P.M.)  
Sent: Monday, February 10, 2003 12:01 PM  
To: Singer, Charlie (C.F.)  
Cc: Patel, Mansi (M.S.); Taylor, Michael (M.J.); Durlivy, Brian (B.L.)  
Subject: FW: KTP trip summary for EXL issues

Hi Charlie- a heads-up for you- appears that the situation at Williams is deteriorating again... see the notes below. May get critical supply/ managed constraint visibilty- yield and t-2 quality issues. Mike.

*Mike Shaver*

Purchasing Manager  
North American Operations  
x-33-73084 mshavm@ford.com  
Admin. Asst. Sheri Digan x-33-31439 sdigan@ford.com

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

From: McCullough, Marcella (M.M.)  
Sent: Monday, February 10, 2003 10:50 AM

To: Broady, Linda (L.L.); Shaver, Michael (P.M.); Taylor, Michael (M.); McCarty, Bill (W.D.)  
Cc: Reed Jr., Bill (W.P.); Dunlavy, Brian (B.L.); Slachta, Joseph (J.F.)  
Subject: FW: KTP trip summary for EOL issues

FYI on Williams pedal at KTP. This issue is still there and you should be aware of the situation. In the event this should be place on the constraint management report, Joe Slachta is the CBG buyer. I wanted to follow up as committed to Bill Reed. Now that you have the latest, Brian Dunlavy will assume the lead.

Joe, please keep Mike Shaver and Brian Dunlavy updated on the progress with this situation. Linda Broady is Constraint Manager for KTP and she should also be kept in the loop. Brian has assumed my responsibilities. Thank you for your feedback and support.

Marcella McCullough  
x04373

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

From: Slachta, Joseph (J.F.)  
Sent: Monday, February 18, 2003 10:09 AM  
To: McCullough, Marcella (M.M.)  
Cc: Freitag, Rich (R.A.); Liposky, Lawrence (L.L.); West, Gregory (G.S.); Witek, John (J.G.); Sheffield, Drew (D.L.); Gilbert, Timothy (T.); Slachta, Joseph (J.F.)  
Subject: RE: KTP trip summary for EOL issues

The situation at Williams is deteriorating in regards to their daily shipments and we are back into premium transportation. I spoke with Tim Gilbert this morning and he advised me that KTP currently has 1.9 DOH and the he was in the process of contacting Williams to determine what their shipment were over this weekend. Williams was shipping 720/day week of 1/27/03 and KTP was up to 5.0 DOH but over the weekend of 2/1 & 2/2 Williams encountered a quality problem with one of their purchased parts and did not make any shipments over that weekend. When I spoke to Drew Homocac, Williams Director of Sales on 2/3/03 he told me that that issue was resolved and shipment of 720/day would resume that week. I spoke with Williams VP Ron Velet late on Friday 2/7/03 and he advised me that their yield has gone down again as a result of the tightened guard band that engineering has imposed on the electronic sensor. Ron also advised me that they were meeting with our engineering to get the guard band tolerance loosened because based on their own test data the drift that they have seen after 2 millions cycles does not warrant the more restrictive guard band. I've placed a call to Larry Liposky, our engineering supervisor to determine our engineering's position on the loosened guard band.

In the short run it looks that we will continue to have supply issues with Williams unless they are able to stabilize their process and increase their yield. Engineering is currently testing ETC pedals from two other suppliers but production from these suppliers would be 6 to 8 months away if the results of our testing is ok.

JOSEPH F. SLACHTA  
BUYER, BRAKE SYSTEMS  
GLOBAL CHASSIS COMMODITY MANAGEMENT  
VPO MD440  
PHONE 313 594-1200 FAX SAME AS PHONE

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

From: Freitag, Rich (R.A.)  
Sent: Friday, February 07, 2003 1:04 PM  
To: McCullough, Marcella (M.M.); Slachta, Joseph (J.F.)  
Subject: RE: KTP trip summary for EOL issues

JOE—PLEASE REVIEW BELOW AND REPLY APPROPRIATELY.

—Original Message—

From: McCullough, Marcella (N.M.)  
Sent: Tuesday, February 04, 2003 9:56 AM  
To: Reed Jr., Bill (W.P.); Freitag, Rich (R.A.)  
Cc: Dunlavy, Brian (B.L.)  
Subject: RE: KTP trip summary for EOL issues

Bill, I have not received any more feedback from the buyer. You can see that I sent a message to him asking for feedback and I have yet to receive any replies. Rich, since you are Core Superior can you assist Bill with these answers on the pedal? I sent an email to Joe Slachta and we have not heard anything back.

Brian, will have to follow up on this issue since he now has lead on all open issues. I have given him the one pager that you provided from Phil. I also suggest that you speak with your PVT Supervisor because he can also provide more feedback on the status of this issue. Thanks.

—Original Message—

From: Reed Jr., Bill (W.P.)  
Sent: Monday, February 03, 2003 8:11 PM  
To: McCullough, Marcella (N.M.)  
Subject: RE: KTP trip summary for EOL issues

This is an accelerator pedal, not a brake pedal.

So what happened? What's the conclusion? Phil Guys wants to de-source these guys... is everything suddenly ok? Any feedback on why they had a problem?

Regards,

*Bill Reed* (breed1@ford.com)

PVT Manager, Kentucky Truck Plant  
Phone (502) 429-2586 Fax (502) 429-2111 Page (502) 336-7586  
Text page at: 5023367586@airtouchpaging.com

—Original Message—

From: McCullough, Marcella (N.M.)  
Sent: Monday, February 03, 2003 6:13 PM  
To: Reed Jr., Bill (W.P.)  
Subject: FW: KTP trip summary for EOL issues

FYI

—Original Message—

From: Martin, Eddie (E.L.)  
Sent: Monday, February 03, 2003 6:01 PM  
To: McCullough, Marcella (N.M.); Page, Michael (M.A.); Williams Jr., James (J.P.)  
Cc: Dunlavy, Brian (B.L.)  
Subject: RE: KTP trip summary for EOL issues

the supplier is maintaining production levels to support KTP and we have had no additional quality issues

—Original Message—

From: McCullough, Marcella (N.M.)  
Sent: Monday, February 03, 2003 3:32 PM  
To: Page, Michael (M.A.); Martin, Eddie (E.L.); Williams Jr., James (J.P.)  
Cc: Dunlavy, Brian (B.L.)  
Subject: RE: KTP trip summary for EOL issues

AK: Please provide any feedback on the status of this brake pedal. Bill Reed needs an update. Thanks

Best Regards,  
Marcella McCullough  
Purchasing Project Manager-8500 Team  
313-84-57402  
<mmccull8@ford.com>

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

From: Page, Michael (M.A.)  
Sent: Thursday, January 23, 2003 9:37 AM  
To: Martin, Eddie (E.L.); Williams Jr., James (J.P.)  
Cc: McCullough, Marcella (M.A.); Dunlavy, Brian (B.L.)  
Subject: FW: KTP trip summary for EOL issues

FYI...Fred is our STA site engineer, on-site at Williams assessing situation.

Sincerely,

**Michael A. Page**

STA Resident Mgr., KTP

mpage@ford.com

Phone: 502-429-2779; Fax: 2941;

Pager: 313-795-0792

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

From: Polman, James (J.J.)  
Sent: Wednesday, January 22, 2003 9:10 PM  
To: Hawkins, Fred (F.W.)  
Cc: Turner, Steve (S.F.); Patel, Mona (M.S.); Page, Michael (M.A.); Gehl, Laxman (L.D.)  
Subject: RE: KTP trip summary for EOL issues

Fred, I would like to recommend to Williams to build a bank of parts before they continue tweaking their chip. They have never been able to tweak the chip within a 7 day window. They need to build a minimum of 4 weeks of bank before continuing with design actions. The team needs to decide on the exact bank quantity.  
Thanks

**James Polman**

STA Manager NAT Residents

Pager 888 405 1868

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

From: Hawkins, Fred (F.W.)  
Sent: Wednesday, January 22, 2003 5:11 PM  
To: Turner, Steve (S.F.); Patel, Mona (M.S.)  
Cc: Page, Michael (M.A.); Gehl, Laxman (L.D.); Polman, James (J.J.); Hawkins, Fred (F.W.)  
Subject: RE: KTP trip summary for EOL issues

If Williams Controls continues at their current build rate, they will be able to support KTP. They met their committed daily ship number of 720 yesterday and today will surpass their mark, as they just put last shipment on dock for daily total of 900 parts. At current yield of approx. 70 % at their EOL tester, they're projecting to

be out of daily expedited ground shipments by 1/27, and caught up with their release backlog by 2/1. Additionally they are planning on bringing a second shift on in their clean room next week for training, with additional production from that shift beginning 1st week of February. They worked last Saturday and Sunday and plan to work future Saturdays and Sundays until they are caught back up with their backlog. They plan to cautiously make improvements to improve their yield as they gain on their backlog and stabilize their production flow.

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

From: Polman, James (J.J.)  
Sent: Wednesday, January 22, 2003 8:11 AM  
To: Turner, Steve (S.F.)  
Cc: Polman, James (J.J.); Page, Michael (M.A.); Hawkins, Fred (F.W.); Patel, Mona (M.S.); Gehl, Lawson (L.D.)  
Subject: RE: KIP trip summary for EDL issues

Engineering allowed the supplier to make a tweak to their chip. With the problems we had in the past with the supplier tweaking their chip, engineering didn't have the supplier run a bank of parts before making the change. There has been conference call concerning the issue involving Mike Page and the Site Engineer.

## James Polman

STA Manager NAT Residents  
Pager 888 405 1888

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

From: Turner, Steve (S.F.)  
Sent: Wednesday, January 22, 2003 7:47 AM  
To: Polman, James (J.J.); Page, Michael (M.A.)  
Cc: Hawkins, Fred (F.W.); Patel, Mona (M.S.); Gehl, Lawson (L.D.)  
Subject: FW: KIP trip summary for EDL issues

Jim & Mike — we need to be certain our Site STA activity is engaged on this. Got a page last night that raised a shortage concern for this part. I recommend a joint STA assessment be prepared on where we are today in terms of the quality concerns as well as the near term supply status.

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

From: Stover, Michael (P.M.)  
Sent: Tuesday, January 21, 2003 5:38 PM  
To: Binger, Charles (C.F.); Turner, Steve (S.F.); Hawkins, Fred (F.W.); Conrad, Eric (E.E.)  
Subject: FW: KIP trip summary for EDL issues

guys— you need to be aware of the communications below re: williams controls

*Mike Shaver*

Purchasing Manager  
North American Operations  
x-33-73984 mshaver@ford.com  
Admin. Asst. Sheri Digue x-32-31838 sdigue@ford.com

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

From: McCullough, Marcella (M.M.)  
Sent: Tuesday, January 21, 2003 4:43 PM  
To: Shaver, Michael (P.M.); McCarty, Bill (W.D.); Taylor, Michael (M.J.); Prebag, Rich (R.A.); Stachra, Joseph (J.F.)  
Cc: Sheffield, Drew (D.L.); Page, Michael (M.A.); Reed Jr., Bill (W.P.); West, Gregory (G.S.); Williams Jr., James (J.P.)  
Subject: FW: KIP trip summary for EDL issues

Critical Supply shortage for Supplier Code 0638E—Williams Control.

As a reminder, this email was sent last week to key Buyers and STA Managers to get involved in the issues per the request of the plant PVT Manager, Bill Reed and CE, Phil Guys. Therefore, I am resending this information as an awareness for this group because of the manufacturing and testing issues that surround Williams for the EOL.

For further information on non-performance contact James Williams, KTP PVT Supervisor. Thank you.

Best Regards,  
Marcella McCullough  
Purchasing Project Manager>8500 Team  
313-84-57402  
<mmccul8@ford.com>

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

From: McCullough, Marcella (M.L.)  
Sent: Tuesday, January 14, 2003 12:27 PM  
To: Stahla, Joseph (J.F.)  
Cc: Cobbs, Jared (J.C.); Dunlavy, Brian (B.L.); Page, Michael (M.A.); Reed Jr., Bill (W.P.); Freitag, Rich (R.A.); Taylor, Michael (M.J.)  
Subject: FW: KTP trip summary for EOL issues

Joe, FYI. Your supplier (Williams Control) is in the hot seat again. This time the Phil Guys—Chief Engineer wants to resource them. Please be engaged in the discussions and contact Mike Page, Resident STA for further details.

Best Regards,  
Marcella McCullough  
Purchasing Project Manager>8500 Team  
313-84-57402  
<mmccul8@ford.com>

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

From: Page, Michael (M.A.)  
Sent: Tuesday, January 14, 2003 11:37 AM  
To: McCullough, Marcella (M.L.)  
Subject: FW: KTP trip summary for EOL issues

Sorry Marcella...you were supposed to be in the distribution.

Sincerely,

**Michael A. Page**

STA Resident Mgr., KTP

mpage@ford.com

Phone: 502-429-2779; Fax: 2941;

Pager: 313-795-0792

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

From: Page, Michael (M.A.)  
Sent: Tuesday, January 14, 2003 11:34 AM  
To: Galt, Laxman (L.D.)  
Cc: Reed Jr., Bill (W.P.); Williams Jr., James (J.P.); Hawkins, Fred (F.W.)  
Subject: FW: KTP trip summary for EOL issues

Laxman... Just received this note from Marcella regarding a serious opportunity to immediately address some blatantly obvious manufacturing shortfalls for the fixed accel pedal at Williams Controls. As you can see, Phil Guys is recommending resourcing of this part immediately, due to the absence of adequate manual controls



end poor PD disciplines. Pls get involved at Williams, if you aren't already, to understand, contain and resolve the current manufacturing issues. I might suggest you contact Greg West for any further detail required, surrounding this concern. I will be asked the status, nature of process enhancements at Williams as a result of your efforts, so please advise as to recovery plan status, ASAP. Please include me as team member if daily call-in meetings are determined to be needed. Thanks for your help, in advance.

ps. It is my belief that there will be a sizeable chargeback attached to the QR for this issue.

Sincerely,

**Michael A. Page**

STA Resident Mgr., KTP

mpage@ford.com

Phone: 502-429-2779; Fax: 2941;

Pager: 313-785-0792

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

From: McCullough, Marcella (M.M.)  
Sent: Thursday, January 14, 2003 9:30 AM  
To: Page, Michael (M.A.)  
Subject: RE: KTP trip summary for EDL issues

FYI. This will probably hit us. thanks.

Best Regards,  
Marcella McCullough  
Purchasing Project Manager>8500 Team  
313-84-57402  
<mmccu84@ford.com>

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

From: Reed Jr., Bill (W.P.)  
Sent: Monday, January 13, 2003 6:10 AM  
To: McCullough, Marcella (M.M.)  
Cc: Williams Jr., James (J.P.)  
Subject: RE: KTP trip summary for EDL issues

Info. if you are not involved in this yet, you will need to be. Please get in touch with Jim Williams. Thanks.

Regards,

**Bill Reed** (breed1@ford.com)

FVT Manager, Kentucky Truck Plant  
Phone (502) 429-2586 Fax (502) 429-2111 Page (502) 336-7586  
Text page at: 5023367586@airtouchpaging.com

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

From: Guis, Philo (P.R.)  
Sent: Friday, January 10, 2003 9:50 AM  
To: West, Gregory (G.S.); Liposky, Lawrence (L.J.); Thompson, Greg (G.J.); Brennan, Patrick (P.M.); Williams Jr., James (J.P.); Reed Jr., Bill (W.P.)  
Subject: RE: KTP trip summary for EDL issues

we need to have plan to desource Williams. Brennan - what do we have?

Phil Guys  
Chief Engineer  
Tough Truck Powertrain  
(313) 594-9908

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

From: West, Gregory (G.S.)  
Sent: Thursday, January 09, 2003 6:57 PM  
To: Lipsky, Lawrence (L.L.); Thompson, Greg (G.J.); Guys, Phil (P.R.); Brannan, Patrick (P.M.); Williams Jr., James (J.P.); Reed Jr., Bill (W.B.)  
Cc: West, Gregory (G.S.)  
Subject: KTP trip summary for EQL issues

<< File: KTPeolISSUES.doc >>

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**From:** Kronenberg, Audrey (A.R.)  
**Sent:** Monday, November 25, 2002 8:37 AM  
**To:** Hawkins, Fred (F.W.); Wood, Mary (M.A.); Lipsky, Lawrence (L.J.); West, Gregory (G.S.);  
West, Gregory (G.S.)  
**Cc:** Compton, James (J.D.)  
**Subject:** Williams Controls PPAP

I did not approve Williams Controls PPAP on Friday 11/22/02 because they did not pass all of their testing.  
An alert is in the system.

*Audrey Kronenberg*

Chassis Site STA  
(313) 390 5788

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**From:** West, Gregory (G.S.)  
**Sent:** Friday, November 08, 2002 7:25 AM  
**To:** Thompson, Greg (G.J.); Ickes, Bill (B.K.); Brennan, Patrick (P.M.); Stoltz, Jeffery (J.A.)  
**Cc:** Guys, Philip (P.R.); Christensen, Jeff (J.S.); Lipoosky, Lawrence (L.J.); Major Jr., John (JSM.); Slachta, Joseph (J.F.)  
**Subject:** FW: Williams Controls PPAP for P131

Williams PPAP is set for 11/22 per the note below assuming no new issues arise. As I stated yesterday they could be prepared to ship as early as 11/18, I would need to write an alert for that to happen and they would need releases. Please advise.

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

**From:** Compton, James (J.D.)  
**Sent:** Thursday, November 07, 2002 2:42 PM  
**To:** Polnan, James (J.J.)  
**Cc:** Hawkins, Fred (F.W.); Patel, Mona (M.S.); Wood, Mary (M.A.); Lipoosky, Lawrence (L.J.); West, Gregory (G.S.); Kronenberg, Audrey (A.K.)  
**Subject:** Williams Controls PPAP for P131

We now think that Williams is close to PPAP, assuming the Key Life test continues to perform without issue to completion. Audrey is now sched to go to Williams on 11/22 to wrap it up (assuming there are no further issues). Williams has stopped tweaking the design of the electronic chip and they have made 3 successful runs of approx 80% yield on each run. They have no plans at this time for further changes to the chip design artwork and they feel any additional yield improvements for the chips will come from minor process improvements over time. We are satisfied with this for the purpose of PPAP.

I have asked Audrey to complete the PPAP and I see no reason for me to return to Williams, at this time. Of course, if something goes wrong, I will change my plans and go back to see them, as necessary. I will also make myself available here in Dearborn on 11/22, during the detailed PPAP review.

If there are any questions/concerns, please contact Audrey Kronenberg or me.

Trx,  
Jim Compton  
STA Chassis Manager  
313-337-5157  
588-817-1954 (cell)  
888-890-5358 (pager)

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**From:** West, Gregory (G.S.)  
**Sent:** Friday, November 01, 2002 9:14 AM  
**To:** Liposky, Lawrence (L.L.); Christensen, Jeff (J.S.); Wagner, John (J.D.); Brennan, Patrick (P.M.); Guys, Philip (P.R.); Thompson, Greg (G.L.)  
**Cc:** Wood, Mary (M.A.); Major Jr., John (J.M.); Scheffler, Daniel (D.A.); Kronenberg, Audrey (A.R.); Horne, Heather (H.); Compton, James (J.D.); Stoltz, Jeffery (J.A.); West, Gregory (G.S.)  
**Subject:** Williams Controls update

Key life testing is at approximately 1.1 million cycles, all electrical outputs look good. Completion expected 11/20.

Rev. level M elements are producing assembly yields near 80%. This is including known out of spec elements but running these elements is required for the correlation of elements to sensors and sensors to assemblies. There are NO more elements changes planned at this time.

A 200 piece run will be completed today and another 200 pieces will be run early next week. Both of these runs will eliminate out of spec elements which is anticipated to improve yield well above 80%.

Expected PSW is 11/22.

---

**From:** Kronenberg, Audrey (A.R.)  
**Sent:** Tuesday, October 15, 2002 10:34 AM  
**To:** Uposky, Lawrence (L.J.)  
**Subject:** FW: Updated yield improvement with history timeline

**Audrey Kronenberg**

Chassis Site STA  
(313) 390 5755

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—Original Message—

**From:** Miers, Jerry [mailto:jmiers@wmc.com]  
**Sent:** Tuesday, October 15, 2002 9:13 AM  
**To:** 'akronanb@ford.com'; 'mwood22@ford.com'; 'jpolman@ford.com'; 'lposky@ford.com'; 'gwest2@ford.com'; 'tiches1@ford.com'  
**Cc:** Velat, Ron; Silanpaa, Don; Pyle, Ken  
**Subject:** Updated yield improvement with history timeline

Attached you will find the latest update of the yield improvement plan. The additions are noted in bold and the last page in a yield history.

If you have question please let us know at the 10:30 meeting.

10/3/2003

PE83-D44 2553

## WILLIAMS CONTROLS

### FORD SUPERDUTY FIXED ETC Yield Improvement and Ship Plan

October 10, 2002 Revised 10/14/02

#### YIELD IMPROVEMENT PLAN

- Shipped 123 ETC's for KTP IB Build - **COMPLETE**
  - Remaining 120 IB ETC's will be built and shipped on 10/11 and 10/12 - **COMPLETE 10/11**
    - Utilize same element process as shipped IB parts
    - 20% guard band
      - WOT guard band equals impact of overload shift.
      - Idle guard band equals impact of key life test shift.
    - Estimated 40% yield - **YIELD =46%**
  - Center process and build new elements on 10/12 - **COMPLETE THROUGH ETC - YIELD=58%**
- 
- Build 500 Production ETC's the week of 10/14
    - Use process centered elements
    - Maintain 20% guard band
      - WOT guard band equals impact of overload shift.
      - Idle guard band equals impact of key life test shift.
    - Estimated 55% to 60% yield
  - Complete Element EOL tester by 10/21
    - Computer and I/O - Complete
    - Program EOL Tester - Complete
    - Base Element fixture - Complete
    - Profile and Build Probe Fixture - Due 10/16
    - Qualify tester and perform GR&R - Due 10/18
    - Correlate element, sensor and assembly EOL testers - Due 10/21
  - Build 2000 Production ETC's the week of 10/21
    - Use process centered elements
    - 100% element EOL testing
    - Maintain 20% guard band
    - Estimated yield at 80% to 85%

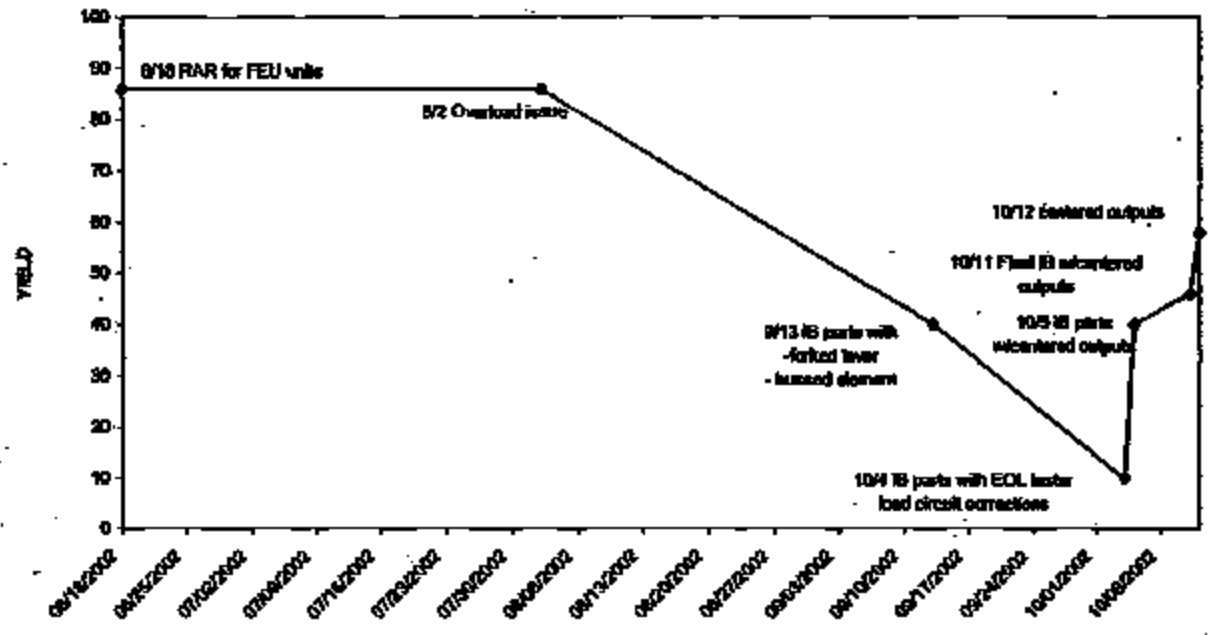
- Capable of producing 4250 ETC's weekly by 11/4
  - One shift, 5-day operations
  - Element capacity - 2000/shift
  - Sensor capacity - 1200/shift
  - ETC assembly capacity - 1200/shift
- Begin Key Life verification with opportunity for mid-December PSW
- Concurrently,
  - Reevaluate all mechanical stack-ups,
  - Evaluate the need for laser trimming to improve element yield,
  - Program existing laser trimmer to meet element specifications,
  - Evaluate adjustable idle pin for 3-track application,
  - Revisit PFMEA.

#### SHIPPING PLAN

10/14	500	0
10/21	2000	195
10/28	2000	1440
11/04	4250	1545
11/11	4250	1890
11/18	4250	1500
11/25	4250	3525



WILLIAMS CONTROLS  
 FORD SUPERDUTY 2003.25  
 ETC YIELD HISTORY



**From:** Liposky, Lawrence (L.J.)  
**Sent:** Monday, October 14, 2002 5:44 PM  
**To:** Liposky, Lawrence (L.J.); Sharard, Gail (G.); Guys, Philip (P.R.); Thompson, Greg (G.J.); Frossa, Charlie (C.E.); Stoltz, Jeffrey (J.A.); Christensen, Jeff (J.S.); McLaughlin, Pat (P.L.); Major Jr., John (JSM.); Brennan, Patrick (P.M.); Wagner, John (J.D.); Ickes, Bill (B.K.)  
**Cc:** Gaw, Ron (R.M.); Fulton, Brian (B.L.); Hazargian, Michael (M.L.); Kronberg, Arnold (A.W.); Wood, Mary (M.A.); Kronberg, Audrey (A.R.); Compton, James (J.D.); West, Gregory (G.S.); 'dellarpaa@wmco.com'; 'kpyda@wmco.com'; Williams Jr., James (J.P.); Ramfos, Gregory (G.W.); Morgan, Nick (N.); Pacht, Brian (B.); Home, Heather (H.)  
**Subject:** RE: 03.25 6.0L Diesel Pedal

Status Monday 10-14-02

Williams supplied 120 parts to KTP Monday am per Jeff Christensen's request.

Results of sensor development this past weekend has shown an improvement of thru - put represented by a 58% yield. This was based on a 100 piece sample size using a centering process of the current sensor tracks and artwork. STA requested a minimum thru-put of 85% before considering a full PPAP and PSW submission.

Williams will attempt to make one more revision to accomplish requested yield. A 100 piece run is scheduled complete with results for Wednesday am. Based on these results, Williams will submit a PSW date to STA. This will be containable with the incorporation of a third check point inspection. Williams has developed an Element E.O.L test which will insure high yield of E.O.L pedal assemblies. The new element tester is ahead of schedule and is expected to be calibrated and in place by the end of this week.

Current direction for production support still maintains 100% use the adj pedal (3C34-9F838-BD) in place of the fixed (3C44-9F838-AB) until Williams is capable of production support. Timing will be firmed up this Wednesday based on PSW submission.

Bill Ickes has requested a timing vs yield thru-put summary from Williams to clarify any confusion. This will be discussed in tomorrow's call in.

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

-----Original Message-----  
**From:** Liposky, Lawrence (L.J.)  
**Sent:** Friday, October 11, 2002 12:08 PM  
**To:** Liposky, Lawrence (L.J.); Sharard, Gail (G.); Guys, Philip (P.R.); Thompson, Greg (G.J.); Frossa, Charlie (C.E.); Stoltz, Jeffrey (J.A.); Christensen, Jeff (J.S.); McLaughlin, Pat (P.L.); Major Jr., John (JSM.); Brennan, Patrick (P.M.); Wagner, John (J.D.)  
**Cc:** Gaw, Ron (R.M.); Fulton, Brian (B.L.); Hazargian, Michael (M.L.); Kronberg, Arnold (A.W.); Wood, Mary (M.A.); Kronberg, Audrey (A.R.); Compton, James (J.D.); West, Gregory (G.S.); 'dellarpaa@wmco.com'; 'kpyda@wmco.com'; Williams Jr., James (J.P.); Ramfos, Gregory (G.W.); Morgan, Nick (N.); Pacht, Brian (B.); Home, Heather (H.)  
**Subject:** RE: 03.25 6.0L Diesel Pedal

Status Friday 10-11-02

Attached is the one pager to be reviewed at the 1:00pm KTP management review. Also, one pager Williams

has submitted. We are continuing the 10:30am daily calls with Williams. Would like to keep all communication with Williams in this time slot.

Today's meeting was spent reviewing attached plan with the remainder of the team not present last night. I will continue to capture meeting notes and distribute on a daily basis. Next formal meeting scheduled for Monday. Williams needs the weekend to continue the development of their component. I will keep in close contact with them this weekend.

<< File: FORD-Yield Improvement.doc >> << File: Williams Fixed ETC Accel Pedal.doc >>

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

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

**From:** Liposky, Lawrence (L.J.)  
**Sent:** Wednesday, October 02, 2002 12:53 PM  
**To:** Liposky, Lawrence (L.J.); Sherard, Gail (G.); Gays, Philip (P.R.); Thompson, Greg (G.J.); Fresse, Charlie (C.E.); Stoltz, Jeffrey (J.A.); Christensen, Jeff (J.S.); McLaughlin, Pat (P.L.); Major Jr., John (J.M.); Brennan, Patrick (P.M.); Wagner, John (J.D.)  
**Cc:** Gaw, Ron (R.M.); Fulton, Brian (B.L.); Hazzogian, Michael (M.L.); Kronberg, Arnold (A.W.); Wood, Mary (M.A.); Kronenberg, Audrey (A.R.); Compton, James (J.D.); West, Gregory (G.S.); 'lsliposky@vmco.com'; 'lpyle@vmco.com'; Williams Jr., James (J.P.); Ramfco, Gregory (G.W.); Morgan, Nick (N.); Padell, Brian (B.); Hixon, Heather (H.)  
**Subject:** RE: 6L25 6.0L Diesel Pedal

Status Wednesday 10-02-02.

Williams has screened 4 new versions of Artwork. 20 samples of each will be made into pedals this afternoon. Will have results tonight at 5:00pm per Ken Pyle. I will forward info to learn when available. Results of yesterday's run was good. Changes dialed in voltage on track 1 idle but was out high 1/2% at WOT.

Per John Wagner's request, I will be prepared to discuss at 8:00pm program review tonight.

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

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

**From:** Liposky, Lawrence (L.J.)  
**Sent:** Monday, September 30, 2002 5:37 PM  
**To:** Liposky, Lawrence (L.J.); Sherard, Gail (G.); Gays, Philip (P.R.); Thompson, Greg (G.J.); Fresse, Charlie (C.E.); Stoltz, Jeffrey (J.A.); Christensen, Jeff (J.S.); McLaughlin, Pat (P.L.); Major Jr., John (J.M.); Brennan, Patrick (P.M.)  
**Cc:** Gaw, Ron (R.M.); Fulton, Brian (B.L.); Hazzogian, Michael (M.L.); Kronberg, Arnold (A.W.); Wood, Mary (M.A.); Kronenberg, Audrey (A.R.); Compton, James (J.D.); West, Gregory (G.S.); 'lsliposky@vmco.com'; 'lpyle@vmco.com'; Williams Jr., James (J.P.); Ramfco, Gregory (G.W.); Morgan, Nick (N.); Padell, Brian (B.)  
**Subject:** RE: 6L25 6.0L Diesel Pedal

Status Monday 9-30-02

Williams was unsuccessful in their first attempt at a revised sensor artwork change. A second redesign was complete today. Unfortunately time was lost today due to a die issue. One of the sensor guide pin punch's was out of tolerance causing assembly issues. The blank die was sent out for repair. Die is expected back tonight. Sensor design with the 2nd level revised art work is complete and will be ready to be built into sensors/pedals by tomorrow night. Don Sillanpaa is 90% confident with the latest change. Williams will air freight 30 parts in tomorrow night and truck in the remaining 210 pedals next day delivery when pedals are validated.

Also, Phil Guye has sent Greg Ramfos and two of his guys to assist Williams in problem resolution. Greg to meet Ken Pyle and Ron Velet 9:00pm tonight for debrief.

Call in scheduled for 9:00am tomorrow morning to discuss status.

Larry Liposky  
Supervisor - Tough Truck  
Accelerator/VMV Components  
Phone 24-81726  
Pager 798-0949

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

From: Liposky, Lawrence (L.L.)  
Sent: Sunday, September 29, 2002 9:38 AM  
To: Liposky, Lawrence (L.L.); Sherard, Gail (G.); Guye, Philip (P.R.); Thompson, Greg (G.L.); Freeze, Charlie (C.E.); Stoltz, Jeffrey (J.A.); Christensen, Jeff (J.S.); McLaughlin, Pat (P.L.)  
Cc: Gaw, Ron (R.M.); Fulton, Brian (B.L.); Hoziergan, Michael (M.L.); Kronberg, Arnold (A.W.); Wood, Mary (M.A.); Kronenberg, Audrey (A.R.); Compton, James (J.D.); West, Gregory (G.S.); 'dellarpao@vmvco.com'; 'tpyle@vmvco.com'; Williams Jr., James (J.P.)  
Subject: RE: 03.25 6.0L Diesel Pedal

Status Sunday 9-29-02

Williams successfully completed correlation and calibration of E.O.L. test equipment on lab and production units.

Williams has completed a revised sensor artwork based on the new voltage requirements. Elements have been screened and currently being made into sensors. 2 versions of 25 samples each will be made into complete pedal assemblies by late this afternoon. Williams will work tonight to validate the optimum sensor design. Based on the success of this exercise, 600 production pedals are scheduled to be produced tomorrow a.m.

All plans at this point are hinged on Williams being successful tonight. We will plan a 9:00am conference call tomorrow a.m. to discuss status.

Larry Liposky  
Supervisor - Tough Truck  
Accelerator/VMV Components  
Phone 24-81726  
Pager 798-0949

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

From: Liposky, Lawrence (L.L.)  
Sent: Saturday, September 28, 2002 11:18 AM  
To: Sherard, Gail (G.); Guye, Philip (P.R.); Thompson, Greg (G.L.); Freeze, Charlie (C.E.); Stoltz, Jeffrey (J.A.); Christensen, Jeff (J.S.); McLaughlin, Pat (P.L.)  
Cc: Liposky, Lawrence (L.L.); Gaw, Ron (R.M.); Fulton, Brian (B.L.); Hoziergan, Michael (M.L.); Kronberg, Arnold (A.W.); Wood, Mary (M.A.); Kronenberg, Audrey (A.R.); Compton, James (J.D.); West, Gregory (G.S.); 'dellarpao@vmvco.com'; 'tpyle@vmvco.com'; Williams Jr., James (J.P.)  
Subject: 03.25 6.0L Diesel Pedal

Investigation at KTP confirmed a voltage out of range on sensor track 1 which set a P 2139/2140 code (sensor slope correlation out of range). This resulted in an E.O.L. failure associated with the Williams fixed ETC accelerator pedal. This condition does not affect the driveability of the vehicles. It is assumed that all FEU and IB level pedals exhibit this condition. We did not see this condition at FEU due to limited operation of the ETC Monitor.

Summary of the 9-28-02 9:00 am call in :

Williams confirmed the offset in track 1 voltage was due to a calibration error in the E.O.L. tester. This was verified with samples measured at KTP and evaluated in the Williams lab last night 9-27-02. The original design assumption of the new Williams 3 track E.O.L. tester was based on the current 2 track pedal design. Investigation clearly shows the load circuitry was not acceptable for the new sensor. Williams has made the calibration adjustment and is confident this issue is resolved. Williams will confirm calibration with "master samples" before each production run.

Also, current 2 track sensor production was evaluated and confirmed as not affected by this action.

**Williams Recovery Plan:**

Williams will incorporate changes in a new art work change scheduled to be complete by C.O.B. today. 50 sensors will be screened and built into pedals tonight. After confirmation of acceptable pedals, Williams is prepared to build and confirm 600 pedals Sunday 9-29-02 and have available by Monday am. Confirmation will include 100% inspection and verification of overload testing.

**Next Steps: 600 pedals**

240 pedals required to support IB level builds. We will work through Jeff Christensen to support KTP in retrofit of current FEU and IB level vehicles.

300 pedals required to PPAP and PSW.

Key Life to commence Monday 9-30-02 with no excuse level pedals.

Call in tomorrow 9:00am to confirm status and work - plan.

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

**From:** Christensen, Jeff (J.S.)  
**Sent:** Wednesday, September 25, 2002 10:30 AM  
**To:** West, Gregory (G.S.); Liposky, Lawrence (L.J.); Kromberg, Arnold (A.W.)  
**Cc:** Farmer, Jay (K.); Karrol Sr., Ron (.); Wagner, John (J.D.); Thompson, Greg (G.J.)  
**Subject:** Fixed Pedal Data

In an effort to contribute to the solution (but not really sure if this will help or not) I spent a few minutes this AM gathering the following data with the NGS+ tool on the trucks described below.

3EA57652 Failed EOL w/ 2139 & 2140 Codes - Tested w/Fixed Pedal as Installed

Throttle Pos	0%	7%	8.5%	12%
APPS3	.84	1.37	1.42	1.49
APPS2	1.53	1.97	1.99	2.06
APPS1	4.31	3.71	3.68	3.55
RPM	628	628	670	2600

3EA57647 Failed EOL w/2139 Code - Tested w/Fixed Pedal as Installed

Throttle Pos	0%	6%	9%	12%
APPS3	.88	1.33	1.40	1.45
APPS2	1.80	1.93	2.02	2.05
APPS1	4.24	3.72	3.66	3.57
RPM	622	725	1592	4050

3EA57155 Failed EOL w/2139 Code - Tested w/Fixed Pedal (but replaced after test listed below)

Throttle Pos	0%	7%	8.5%	12%	14%
APPS3	.89	1.32	1.36	1.45	1.50
APPS2	1.59	1.99	2.03	2.10	2.18
APPS1	4.27	3.70	3.66	3.57	3.47
RPM	640	640	635	994	2828

3EA57647 Equipped w/adjustable pedal that was installed after fixed pedal failed EOL. Unit passed EOL w/adjustable pedal.

Throttle Pos	0%	6.5%	8.5%	11%
APPS3	1.00	1.28	1.30	1.37
APPS2	1.54	1.79	1.88	1.92
APPS1	4.05	3.75	3.68	3.59
RPM	627	680	825	3650

All testing done as neutral engine runups.

Needless to say this will require immediate response and containment action. I have a page in to Greg West and will suggest he get on the next avail co plane flight and may want to call his supplier in here ASAP to start the deep dive / containment action.

Just in case anybody is wondering we are using the pedals with the 9/21/02 ship date - not the 9/20/02 ship date.

Anxiously awaiting the Ford/WTC engineering teams' analysis. Pls page me with information.

Thx.

Jeffrey S. Christensen  
2003 Launch - PTSE

PE83-044 2582

P131/AH37 Truck  
Ph: 502-339-3811 Pager 1-800-570-8738 Fax 502-428-2111

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**From:** West, Gregory (G.S.)  
**Sent:** Friday, September 13, 2002 10:29 AM  
**To:** Fink, Brian (B.); Christiansen, Jeff (J.S.); Wagner, John (J.D.)  
**Cc:** Liposky, Lawrence (L.J.); Thompeon, Greg (G.J.); Sherard, Gail (G.)  
**Subject:** Williams issues

Just a heads up that I just wrote an alert for Williams to ship for IB, it states:

WILLIAMS CONTROLS 6.0L DIESEL ACCEL PEDAL WILL NOT BE PSW'D AT IB DUE TO THE FOLLOWING REASONS: SENSOR FAILS WATER INTRUSION TESTING, KEY LIFE VOLTAGE OUT OF RANGE AND NEW LEVER ARM WITH "FORKED" OVERTRAVEL FIX NOT PPAPED. THE WATER INTRUSION FAILURE IS C/O TO CURRENT PRODUCT. THE KEY LIFE OUTPUT VOLTAGE FAILURE IS DUE TO NOT USING "GUARD BAND" PARTS, ALL PRODUCTION PARTS WILL BE GUARD BANDED. THE LACK OF PPAP FOR THE REVISED LEVER ARM IS DUE TO A LATE CHANGE. EXPECTED PSW IS POST JOB #1 DUE TO THE NEED OF REPEATING KEY LIFE TESTING WITH PPAPED, GUARD BANDED PARTS. ALL PARTS SHIPPED TO KTP FOR IB AND BEYOND ARE GOOD SALEABLE PARTS.

Please call if you would like further explanation.



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**From:** Kromberg, Arnold (A.W.)  
**Sent:** Monday, August 12, 2002 12:14 PM  
**To:** Liposky, Lawrence (L.J.)  
**Cc:** Hazegian, Michael (M.J.); West, Gregory (G.S.)  
**Subject:** 6.0L ETC reverse load test

Larry,

The reverse load test on the 6.0L fixed ETC pedal (Williams) was completed this weekend. There was apparent concern related to how the reverse load may affect the ratch learning on the diesel. The vehicle test shows that when reverse load is applied the APP sensors fail out of range. Out of three tests, two failed for multiple track failures. When more than one failure is detected, the system is defaulted to idle. Ratch is not updated in this event. Data files were captured and can be made available. The vehicle used was a IPP unit.

In speaking with Greg on Friday, he wanted the test results passed on to you as soon as possible in his absence. Please let me know if there is any additional assistance you may need.

Regards,

**Arnold Kromberg**  
Diesel Powertrain Calibration  
Phone: 313-248-0260 Fax: 313-337-1712 Pager: 888-442-0255  
E-Mail: akromberg@ford.com  
Text page: [mailto:8884420255@airtouchpaging.com]



To: Ford Motor Company

Attn: Mr. John Wruck

Re: 2C34-9F836-DC Superduty/ Excursion Adjustable Pedal Sensor

Date: May 12, 2003

As a follow up to our meeting of May 2, 2003 and our verbal requests the week of May 5, 2003, we would like to request the following information in writing. With the exception of the last two items these were all discussed during the meeting. The first four items were specific to the 14D.

- Warranty Plot
- Hazard Plot
- CQIS
- AWS/ Parser
- ECN defining the exact nature of the wire harness change and vehicles involved
- Specific explanations of the failure codes including P0221, P0123, P0122 as well as any other applicable code identifying a pedal failure
- Calculation worksheet of the projected 80% failure in 5 years
- Failure rate of the fixed ETC used on the equivalent vehicle and issue time period
- Voltage tolerance of the switch in the fixed pedal
- Item 14 letter dated 4/15 referenced a disc of the "Davis Dam" report. We did not receive a disc in the communication from you and request a copy
- System FMEA. As the wire harness represents a system failure mode there may be others that affect our pedal and we would like to be able to determine if these, too, may be an underlying cause

We trust, as these are all items referenced in previous discussions and/or documents that they are readily available. Should there be questions we would also ask that you identify the author of each item, a contact number and your authorization to discuss this with them. In this way, if there are any questions regarding the data we can get them answered in a more timely manner.

Thank you for your assistance,

Kevin McMahon  
Vice President

700 Stephenson Hwy.  
Troy, MI 48063-1122  
(248) 816-3800  
FAX (248) 816-3810  
FAX (248) 816-3820

A Division of Teleflex Incorporated (USA)

PE83-044 28853

### U137/P131 Launch Concern Matrix

1		IVG failure	Certified Block/bolt up testing to dash	TBD	End of line for correlation test	
2		Roll pin missing	Check on line KYLE	TBD	line check @ KYLE	
3		Motor mounting holes	Sharpen tools to prevent excessive burr	TBD	Sample test for new, and old birds to be run this week.	TBD
4		Grease on Brake pedal	Clean parts in yard, clean @ KYLE on line, clean incoming stock.	TBD		
5		Noisy motors (4)	Replace under Alert number A11256787 order written, job complete.	TBD		
6		Pedals not cycling (B) last night on Barrow	Locate vehicles, investigate fix if possible or pull pedals.	TBD		
7		Knocking drive cables	Alert written to make process a date item on both lines A11254544	Process change/Plant		
8		Tip in Clutch pedal	data forwarded to Petraszkun's spec.			
9		Screw missing from one motorform motor with wrong screw (1)	Line check @ KYLE			
10		Small white chip on memory motor was broken on one part. Removed from line.	Line check @ KYLE			
		- <i>Recall pedal</i> <i>James</i>				

- *Just*

Start Time: 8:00 AM

I. Introductions (M. Foreman)

II. Key Issues Review

a. Part Change over control (M. Carr)

b. TPM & Autonomous Maintenance & 5S (M. Carr)

c. Process Control Verification (M. Carr / B. Franklin)  
*- PLANT MAINTENANCE FUNCTION*

d. Lash Tests (B. Franklin)

e. Sound Tests (B. Franklin)

III. Plant Tour & Line Review (M. Foreman / B. Franklin)

IV. Control Plan Review (B. Franklin)

V. Packaging (E. Boscarino / B. Hammond)

a) \*How To ASSURE THAT THE PART AT END OF LINE IS IDENTIFIED AND SHIPPED CORRECTLY

• How To PRESENT ASSEMBLIES MADE WITH CORRECT COMPONENTS

1) BRAKE PEDAL RATIO-3

2) ACCESS BRACKET - (DISEL HAS STOP) - WITH STOP - <sup>GAS</sup> EASIER

b) ACCESS CABLE ROTATOR (REQUIRED FOR GAS)

**Beuckelaere, Phillip (P.R.)**

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**From:** Rossman, Barbara (B.M.)  
**Sent:** Friday, January 19, 2001 7:36 PM  
**To:** Foster, Rachelle; Waling, Jim; Sablatzky, Neil; Fiontek, Ronald; Frenette, Gordon (G.R.);  
Roo, John (J.C.); West, Gregory (G.S.); Petrauskas, Lisa (L.E.); Kalsi, Avtar; Braniff, Greg  
**Cc:** Bingham, Elaine; Khodor, Abdul; Sherrill, Kevin; Beuckelaere, Phillip (P.R.); Gertley Sr.,  
Jeffrey (J.B.); Weinert, Bart (M.L.); Chazari, Douglas (D.); Bzymek, Raymond (R.)  
**Subject:** CP Electrical Review - ETC (Fixed & Adjustable Pedal)



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.doc

**Meeting Minutes**  
**Electrical Review - P131 / U137 / H215 ETC (Fixed & Adjustable)**  
**January 19, 2001 PDC-2J-L9**

**ETC - Fixed Pedal**

Greg West is replacing Don Sillanpaa as fixed accelerator pedal engineer. The most recent ETC design transmittal, applicable to fixed and adjustable pedal, specifically states AP3 build only.

An AP2 P131 at ATO experienced rapid engine RPM without any accelerator pedal input. Cass Perkins, of Livonia Transmission, reported the symptom. Representatives from Power train, AFI, Chassis (ETC), and calibration reviewed the vehicle. J. Rio collected 3-track ETC data from the vehicle as received by the PCM. The Track 2 pedal data (APP2) was a mirror image of design intent. Wiring circuit APP2 was disconnected from the PCM and symptom disappeared. There has been no update or report out on cause of symptom. (B. Roszman)

- Follow-up:
- G. West - Update ETC design transmittal:
    - Signal Name column with applicable SAE acronyms per 6.0L power train wiring transmittal provided by J. Rio.
    - To reflect appropriate build...CP or CP-Job 1
  - G. West - Provide electronic file of fixed pedal internal electrical schematic
  - J. Rio - Provide 3-track data from AP2 vehicle: UPDATE: PROVIDED 1/19/01.
  - G. West - Is there an issue with the accelerator pedal?

**ETC - Adjustable Pedal**

Avtar Kahi and Greg Braniff represented Teleflex for adjustable pedals.

Teleflex has the understanding 3-track pedal will be used for all '03 P131/U137 gas and diesel programs. The electrical team's understanding is 3-track pedal will be introduced for diesel in '03 and gas in '04.

- Follow-up:
- L. Petruskas - Advise which model year 3-track pedal will be incorporated for P131/U137 gas and diesel engines.
  - A. Kahi - Provide electronic file of adjustable pedal internal electrical schematic
  - A. Kahi - Review ETC design transmittal provided by G. West and confirm whether adjustable pedal ETC is common with fixed.

**Electrical Distribution Subsystem SDS, Version 8:**

Neil Sablatzky (AFI) stated the '02 P131/U137 program is designed to comply with EDS SDS version 7. The '02 adjustable pedal, which is available on P131/U137 with automatic transmission only and can be adjusted at any time, independent of ignition key presence or vehicle speed.

EDS SDS version 8, has been amended to require adjustable pedal to be disabled when vehicle speed exceeds 5 KM/H.

Below is an extraction from EDS SDS version 8.

ADJUSTABLE PEDAL ASSEMBLY - OPERATION RESTRICTION

Requirement Description: Adjustable pedal assemblies (clutch/brake/accelerator) shall not be capable of powered movement at vehicle speeds exceeding 5 km/h.

Requirement Type: FEATU, FUNC, SAFE  
Requirement Number: BR-0934  
Required By: BRAKE  
Required of: CLCNL CORP EDS THRCOM  
Owner: BRAKE  
Requirement Version: 17-Nov-99 - Ver. 1 Copy # 0  
Requirement Priority: SPECIFICATION  
Verification Method(s): DVM-0003-BR v3  
Requirement Source(s): BRAKE-SDS  
(UNRECONCILED)

The group discussed design opportunities for both gas and diesel. R. Piontec drafted a preliminary design with two relays and a dedicated PARK output from the PCM when the transmission is in Park.

A. Kaksi informed the group, when the adjustable pedal is replaced, the pedal must be positioned fully rearward before removal.

Follow-up: A. Kaksi - Provide electronic copy of adjustable pedal motor design transmittal

G. Frenese - Investigate cost and timing to add dedicated low-side driver output pin when 5R1 10W transmission is in PARK.

N. Sablatzky - Investigate cost and timing to support adjustable pedal operation, assuming PCM can support



B. Roszman - Review the following questions with Brake SDS author:

- What does power movement imply?
- Is transmission gear positions Park or Park/Neutral acceptable for disabling adjustable pedal motor?

D. Cuzzesi - Investigate cost and timing to add dedicated low-side driver output pin when vehicle speed is less-than 5 KM/h

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**From:** West, Gregory (G.S.)  
**Sent:** Friday, July 11, 2003 4:21 PM  
**To:** Bill Teller  
**Cc:** Charlie Meier; Bob Belanger; Liposky, Lawrence (L.J.)  
**Subject:** RE: P code information

   
7.31.pdf 2002 7.3. PCED  
OBD II-Dieseld...

I included some files below with code data and the pinpoint test. PCM, logic and software data are proprietary to Ford/Visteon. Wiring schematics will take more time to get, it may be faster for you to purchase this from a dealer.

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

**From:** Bill Teller [mailto:bteller@tfxauto.com]  
**Sent:** Friday, July 11, 2003 12:34 PM  
**To:** Greg West  
**Cc:** Charlie Meier; Bob Belanger  
**Subject:** Fwd: P-code information

Greg - See below for our requested information on the P-Codes. Thanks in advance.





**POWERTRAIN CONTROL SYSTEM  
ELECTRONICS DIAGNOSTIC GUIDE  
2002 F-Series (Excursion and Econoline)**

Fault Code	Circuit Index	Condition Description	Probable Causes
8112	* IAT	Intake air temp sensor circuit low input	Grounded circuit, IAT sensor, PCM
8113	* IAT	Intake air temp sensor circuit high input	Open/circuit to power circuit, IAT sensor, PCM
8206	TIMF	Throttle switch B circuit malfunction	MS switch not detected during self-test, short, switch
8228	FP	Fuel Pump relay driver failure	Open FP relay, blown fuse, open/grounded circuit
8231	* FP	Fuel Pump circuit failure	Fuse, relay, throttle switch, fuel pump, open/circuit circuit
8232	FP	Fuel Pump circuit failure	Relay failure, short circuit, pump failure
8238	* MAP	Delta boost sensor A circuit performance	MAP sensor, BP sensor or circuit failure
8242	INJ	Injector circuit High - Cylinder 1	Miswired connector or harness
8262	INJ	Cylinder 1 contribution/balance fault	Power cylinder, valve train or injector problem, circuit
8266	INJ	Injector circuit High - Cylinder 2	Miswired connector or harness
8286	INJ	Cylinder 2 contribution/balance fault	Power cylinder, valve train or injector problem, circuit
8290	INJ	Injector circuit High - Cylinder 3	Miswired connector or harness
8296	INJ	Cylinder 3 contribution/balance fault	Power cylinder, valve train or injector problem, circuit
8274	INJ	Injector circuit High - Cylinder 4	Miswired connector or harness
8272	INJ	Cylinder 4 contribution/balance fault	Power cylinder, valve train or injector problem, circuit
8274	INJ	Injector circuit High - Cylinder 5	Miswired connector or harness
8276	INJ	Cylinder 5 contribution/balance fault	Power cylinder, valve train or injector problem, circuit
8277	INJ	Injector circuit High - Cylinder 6	Miswired connector or harness
8278	INJ	Cylinder 6 contribution/balance fault	Power cylinder, valve train or injector problem, circuit
8279	INJ	Injector circuit High - Cylinder 7	Miswired connector or harness
8281	INJ	Cylinder 7 contribution/balance fault	Power cylinder, valve train or injector problem, circuit
8282	INJ	Injector circuit High - Cylinder 8	Miswired connector or harness
8284	INJ	Cylinder 8 contribution/balance fault	Power cylinder, valve train or injector problem, circuit
8281-8288	* INJ	Bank cylinders 1-8 - Airflow Detected	No air circulation, unbalanced engine failure
8348	CRP	Control position sensor (C) malfunction	Open/circuit circuit, CRP sensor
8486	* CPC	Clear plug circuit malfunction	Open/circuit CK, CRPCMCP relay, PCM
8481	* CPL	Clear plug indicator circuit malfunction	Open/circuit circuit, lamp, fuse, PCM
8489	FLI	Fuel Level Sensor Circuit Malfunction	Open/circuit circuit, cluster, tank will, open cable GND
8479	* EBP	Exhaust press sensor circuit malfunction	EBP sensor, open signal valve CK
8471	* EBP	Exhaust press sensor circuit performance	Plugged, stuck, speed or leaking hose/pipe
8472	* EBP	Exhaust press sensor circuit low input	Open/circuit GND circuit, EBP sensor, PCM
8473	* EBP	Exhaust press sensor circuit high input	Circuit shorted to power, EBP sensor, PCM
8475	* EPR	Exhaust press control valve malfunction	Open/circuit circuit, EBP/sensor, PCM
8476	TEST	Exhaust press control valve performance	Exhaust/EPR, EBP test, EPR circuit
8478	* EPR	Exhaust press control valve high input	Plugged sensor line, speed hose/pipe, restricted exhaust
8480	* VSS	Vehicle speed sensor malfunction	Sensor, circuit, PCM, PSOM, low trans fluid
8483	VSS	Vehicle speed sensor relay	Relay fuse, wiring, sensor

DD: Accelerator Pedal (AP) Sensor

**DD1 DIAGNOSTIC TROUBLE CODE (DTC) P0123**

- DTC P0123 indicates AP sensor circuit high input.
- Possible causes are:
  - damaged accelerator pedal assembly
  - AP sensor may not be seated correctly (tightened down)
  - damaged AP sensor.
  - short to power in harness
  - damaged PCM
- Key on, engine off.
- Access AP PID.
- Slowly depress accelerator pedal while observing voltage reading on scan tool.

Does reading go above 4.5 V?

Yes	No
GO to <b>DD2</b> .	CLEAR DTCs and RETEST.

**DD2 INDUCE OPPOSITE FAILURE**

- Disconnect AP sensor harness connector.

Does AP voltage read 0 V?

Yes	No
Circuit OK. INSTALL a new accelerator pedal assembly. RESTORE vehicle. CLEAR DTCs and RETEST.	GO to <b>DD3</b> .

**DD3 CHECK AP SENSOR SIGNAL WIRE**

- AP sensor disconnected.
- Key on, engine off.
- Measure voltage between AP signal wire at harness connector and ground.
- Key off.

Was voltage above 4.5 V?

Yes	No

GO to <b>DD4</b> .	INSTALL a new PCM. RESTORE vehicle. CLEAR DTCs and RETEST.
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#### DD4 CHECK AP CIRCUIT FOR SHORTS TO POWER

- Install breakout box; leave PCM disconnected.
- Key on, engine off.
- Measure voltage between PCM test pin 89 and ground.

Is the voltage present?

Yes	No
REPAIR short to power in circuit 355 (GY/WH). RESTORE vehicle. CLEAR DTCs and RETEST.	INSTALL a new PCM. RESTORE vehicle. CLEAR DTCs and RETEST.

#### DD5 DIAGNOSTIC TROUBLE CODE (DTC) P0122

- DTC P0122 indicates the AP sensor circuit low input.
- Possible causes:
  - AP sensor may not be seated correctly (tightened down)
  - damaged AP sensor
  - open harness
  - grounded harness
  - damaged PCM
- Key on, engine off.
- Access AP PID.
- Depress accelerator pedal while observing voltage reading on scan tool.
- Key off.

Did voltage drop below 0.37 V?

Yes	No
GO to <b>DD6</b> .	Unable to duplicate and/or identify concern at this time. RESTORE vehicle. CLEAR DTCs and RETEST.

#### DD6 INDUCE OPPOSITE FAILURE

- Disconnect AP sensor harness connector.
- Jumper VREF pin to AP signal wire.
- Key on, engine off.

Does scan tool display stay on and read over 4.5 V?

Yes	No
INSTALL a new accelerator pedal assembly. RESTORE vehicle. CLEAR DTCs and RETEST.	GO to <b>DD7</b> .

### DD7 CHECK VREF CIRCUIT VOLTAGE

- Measure voltage between VREF circuit and ground.
- Key off.

Was voltage  $5\text{ V} \pm 0.5\text{V}$ ?

Yes	No
GO to <u>DD8</u> .	REPAIR open in VREF circuit 351 (BR/WH). RESTORE vehicle. CLEAR DTCs and RETEST.

### DD8 CHECK AP GROUND CIRCUIT

- Measure resistance between AP ground circuit and ground.

Is the resistance less than 5 ohms?

Yes	No
GO to <u>DD9</u> .	REPAIR open in AP ground circuit 837 (YE/BK). RESTORE vehicle. CLEAR DTCs and RETEST.

### DD9 CHECK AP CIRCUIT CONTINUITY

- Install breakout box; leave PCM disconnected.
- Measure resistance between AP circuit at the harness connector and PCM test pin 89.

Is the resistance less than 5 ohms?

Yes	No
GO to <u>DD10</u> .	REPAIR open in AP signal circuit 355 (GY/WH). RESTORE vehicle. CLEAR DTCs and RETEST.

### DD10 CHECK AP CIRCUIT FOR SHORTS TO GROUND

- Measure resistance between PCM test pin 89 and PCM test pins 51, 77, 91 and 103.

Is each resistance greater than 10,000 ohms?

Yes	No
GO to <u>DD11</u> .	REPAIR short to ground in AP sensor signal circuit 355 (GY/WH). RESTORE vehicle. CLEAR DTCs and RETEST.

### DD11 VREF CIRCUIT CONTINUITY CHECK

- Measure resistance between VREF circuit at harness connector and PCM test pin 90.

Is the resistance less than 5 ohms?

Yes	No
GO to DD12.	REPAIR open in VREF circuit 351 (BR/WH). RESTORE vehicle. CLEAR DTCs and RETEST.

### DD12 SIGNAL RETURN CIRCUIT CONTINUITY CHECK

Measure resistance between AP ground circuit at harness connector and PCM test pin 24.

Is the resistance less than 5 ohms?

Yes	No
INSTALL a new PCM. RESTORE vehicle. CLEAR DTCs and RETEST.	REPAIR open in AP ground circuit 837 (YE/BK). CLEAR DTCs and RETEST.

**From:** McDonagh, Scot (S.M.)  
**Sent:** Friday, September 27, 2002 7:20 AM  
**To:** Kramer, Michael (M.T.); Lposky, Lawrence (L.J.); Williams Jr., James (J.P.)  
**Subject:** FW: 7.3L Adjustable Accelerator pedal - Extract Request

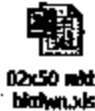
FYI on CCRG 14D. Thanks

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

----- Original Message -----  
**From:** Westenberg, Joanne (J.L.)  
**Sent:** Thursday, September 26, 2002 3:39 PM  
**To:** Hillig, Robert (R.J.)  
**Cc:** West, Gregory (G.S.); Mender, Julie (J.A.); McDonagh, Scot (S.M.)  
**Subject:** RE: 7.3L Adjustable Accelerator pedal - Extract Request

Bob,

Below are volumes, build dates and search criteria on the above issue. Also below is a market breakdown report which should be attached to the 14D and referenced in Sect. 1.D. It is the 14D author's responsibility to insure that the criteria in the 14D is such that accurate vehicle counts can be obtained from NAVIS, and that I am informed of any changes to the vehicle population criteria. Please review the search criteria and volumes below, and let me know if any changes need to be made to the search criteria.



**Criteria: Note: V062=M is for Adj Pedal & 89=F is for 7.3 engine**

<b>CRITERIA GROUPING(S):</b>	
<b>VIN GROUP AA</b>	2002-2003 Excursion 7.3L w/Adjustable Pedal
<b>LAST MODIFIED:</b>	26-Sep-2002 1:29 PM (JWESTENB)
<b>MODEL YEAR:</b>	2002, 2003
<b>VEHICLE LINE:</b>	EXCURSION
<b>SELECTION CRITERIA:</b>	ASSEMBLY PLANT = ALL
	VEHICLE ORDER CODE: 62-62 = M
	: 89-89 = F
<b>VIN GROUP BB</b>	2002-2003 F250 thru F550 7.3L w/Adjustable Pedal
<b>LAST MODIFIED:</b>	26-Sep-2002 1:16 PM (JWESTENB)
<b>MODEL YEAR:</b>	2002, 2003
<b>VEHICLE LINE:</b>	F-SERIES OVER 8600 GVW
<b>SELECTION CRITERIA:</b>	ASSEMBLY PLANT = ALL
	VEHICLE ORDER CODE: 82-82 = M
	: 89-89 = F

**Build Dates:**

DATE	2002 MODEL YEAR	
	EARLIEST PRODUCTION DATE	LATEST PRODUCTION

FEB3-844 23391

CAMPAIGN	FOR A VIN IN THE CAMPAIGN	FOR A VIN IN THE
KENTUCKY TRUCK PLANT BUILD	20-MAR-2001	30-JUN-2002
QUAUTITLAN PLANT BUILD	31-JUL-2001	24-DEC-2001
	2003 MODEL YEAR EARLIEST PRODUCTION DATE	2003 MODEL YEAR LATEST PRODUCTION
CAMPAIGN	FOR A VIN IN THE CAMPAIGN	FOR A VIN IN THE
KENTUCKY TRUCK PLANT BUILD	25-MAR-2002	24-SEP-2002

**Volumes by Model & MY:**

VEHICLE LINE TOTALS	2002	2003	Total
Ford			
F-SERIES OVER 8500 GVW	63,870	17,721	81,591
EXCURSION	12,500	3,153	15,653
<b>GRAND TOTAL</b>	<b>76,370</b>	<b>20,874</b>	<b>97,244</b>

**Joanne L. Westenberg**

PSA Coordinator  
 FCSO Recall & Service Programs Department  
 DSCII - Cde 776  
 Tel: 313-39-02787 Fax: 313-84-51024  
 jwestenb@ford.com

---Original Message---

From: Merder, Julie (J.A.)  
 Sent: Monday, September 23, 2002 1:28 PM  
 To: Westenberg, Joanne (J.L.)  
 Cc: West, Gregory (G.S.); Hilding, Robert (R.L.)  
 Subject: RE: 7.3L Adjustable Accelerator pedal - Extract Request

Joanne, Can you handle this request?

*Best Regards*

*Julie Mercier*

FSA Coordinator  
 FCSO/Recall & Service Programs  
 DSCII #775  
 (313) 317-9266 Fax: 845-1024  
 jmercier@ford.com

---Original Message---

From: Hilding, Robert (R.L.)  
 Sent: Monday, September 23, 2002 1:25 PM  
 To: Merder, Julie (J.A.)  
 Cc: West, Gregory (G.S.)  
 Subject: FW: 7.3L Adjustable Accelerator pedal

Dear Julie,

We need a NAVIS extract for 2002 and 2003 F-250 thru F-550 and Excursion, with adjustable accelerator pedals. This is for the Tech Review for October 10.

---Original Message---

**From:** Kramer, Michael (M.T.)  
**Sent:** Monday, September 23, 2002 1:23 PM  
**To:** Hiding, Robert (R.J.)  
**Cc:** West, Gregory (G.S.); McDonagh, Scott (S.M.)  
**Subject:** 7.3L Adjustable Accelerator pedal

Per the order guide on the web, the option code for adjustable pedals is 62M (WE WANT ONLY 2002 MY and 2003 MY 7.3L APPLICATIONS WITH ADJUSTABLE PEDALS!). I am making this distinction because there are also adjustable pedals available for gas applications which are completely different and not applicable to this 14D.

Super Duty - adjustable pedals are an option.

Excursion - adjustable pedals are standard on Limited and Eddie Bauer and optional on other packages.

Please have Julie double check this info. The above is my understanding by looking at the order guides and some related discussions with Pre-Prod.

***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) 894-2008

**Pager:** (313) 201-8862 (beep); <http://m4.dearborn.ford.com/call/message?> (internal text); <http://msa1mail.com/> (external text)

**Email:** [mikramer1](mailto:mikramer1) (internal); [mikramer1@ford.com](mailto:mikramer1@ford.com) (external)



GLOBAL CAMPAIGN TARGETING - FORD CONFIDENTIAL			
REPORT TITLE : VEHICLE LINE BY COUNTRY/ROI BY MODEL YEAR			
GLOBAL REFERENCE NUMBER : 1881			
LOCAL CAMPAIGN NUMBER : 02X50			
CAMPAIGN DESCRIPTION : 02X50 02-03 F250 thru F550 and Excursion			
	2002	2003	TOTAL
Europe - Part of Affiliates			
NORWAY			
Ford			
F-SERIES OVER 8500 GVW	78	0	78
EXCURSION	173	0	173
SUBTOTAL NORWAY	252	0	252
SUBTOTAL Europe - Part of Affiliates	252	0	252
Canada			
CANADA			
Ford			
F-SERIES OVER 8500 GVW	6,570	1,655	8,225
EXCURSION	321	78	399
SUBTOTAL CANADA	6,891	1,733	8,624
SUBTOTAL Canada	6,891	1,733	8,624
Federalized Territories			
PUERTO RICO			
Ford			
F-SERIES OVER 8500 GVW	73	13	86
EXCURSION	16	2	18
SUBTOTAL PUERTO RICO	89	15	104
SUBTOTAL Federalized Territories	89	15	104
Non-Federalized Territories			
UNKNOWN COUNTRY			
Ford			
F-SERIES OVER 8500 GVW	1	0	1
SUBTOTAL UNKNOWN COUNTRY	1	0	1
SUBTOTAL Non-Federalized Territories	1	0	1
United States of America			
UNITED STATES			
Ford			
F-SERIES OVER 8500 GVW	56,047	16,053	72,100
EXCURSION	11,780	3,073	14,853

SUBTOTAL UNITED STATES	88,737	18,126	87,883
SUBTOTAL United States of America	88,737	18,126	87,883
<b>VEHICLE LINE TOTALS</b>			
Ford			
F-SERIES OVER 6600 GVW	63,670	17,721	81,391
EXCURSION	12,300	3,153	16,453
GRAND TOTAL	76,970	20,874	98,844
*** END OF REPORT - VEHICLE LINE BY COUNTRY ***			