

**PE03-044**  
**FORD**  
**5/13/2005**  
**APPENDIX I**  
**BOOK 16 OF 28**  
**PART 1 OF 4**

[REDACTED]

### Teleflex Adjustable 7.3L Diesel Pedal Warranty Review

As of July 30, 2002 the AWS system has the following TOTALS for Warranty for the 7.3L Diesel ETC Pedal:

TOTAL Warranty claims for 2002 Diesel Pedal:	944		
WOT out of Range (P0123):	191	≡	20%
IDLE out of Range (P0122):	228	≡	24%
Voltage Correlation out of Range (P0221):	420	≡	44%
- Failures due to Chaffing of Wires Internal to Harness	10	≡	2%
Total Code Recorded Failures		≡	88%
Unknown Causes or Incomplete Information	105	≡	12%

120 back total  
high 75% low idle voltage 25% NTF  
240 over last month  
mostly wear on track

P0122

Vehicle

I V S lube

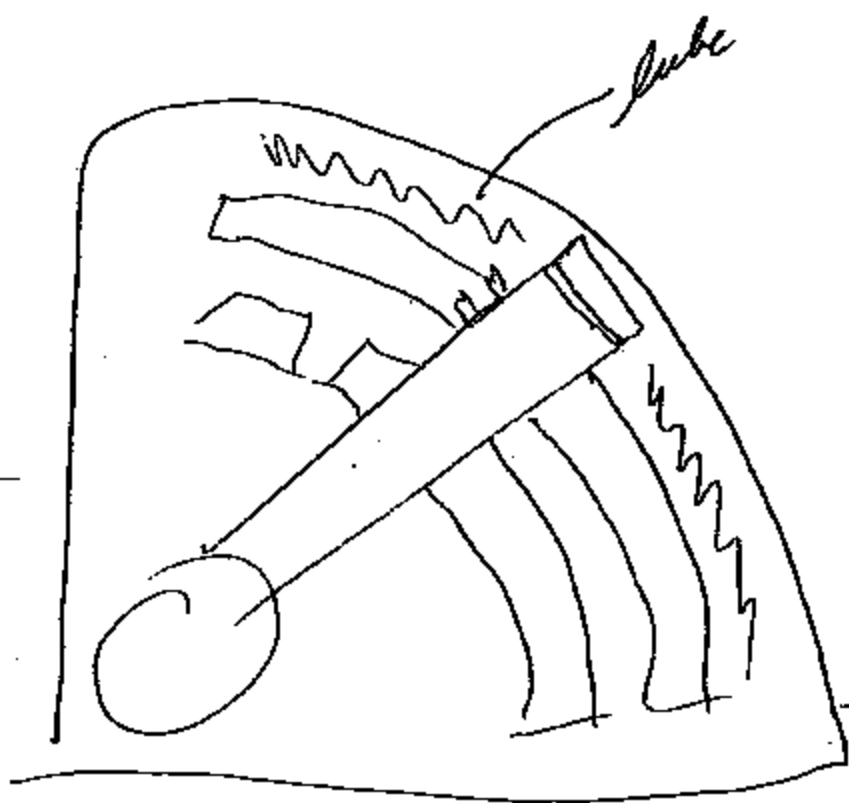
track - no lube

Rotor lube - 95% probability this lube has issues with ink on track

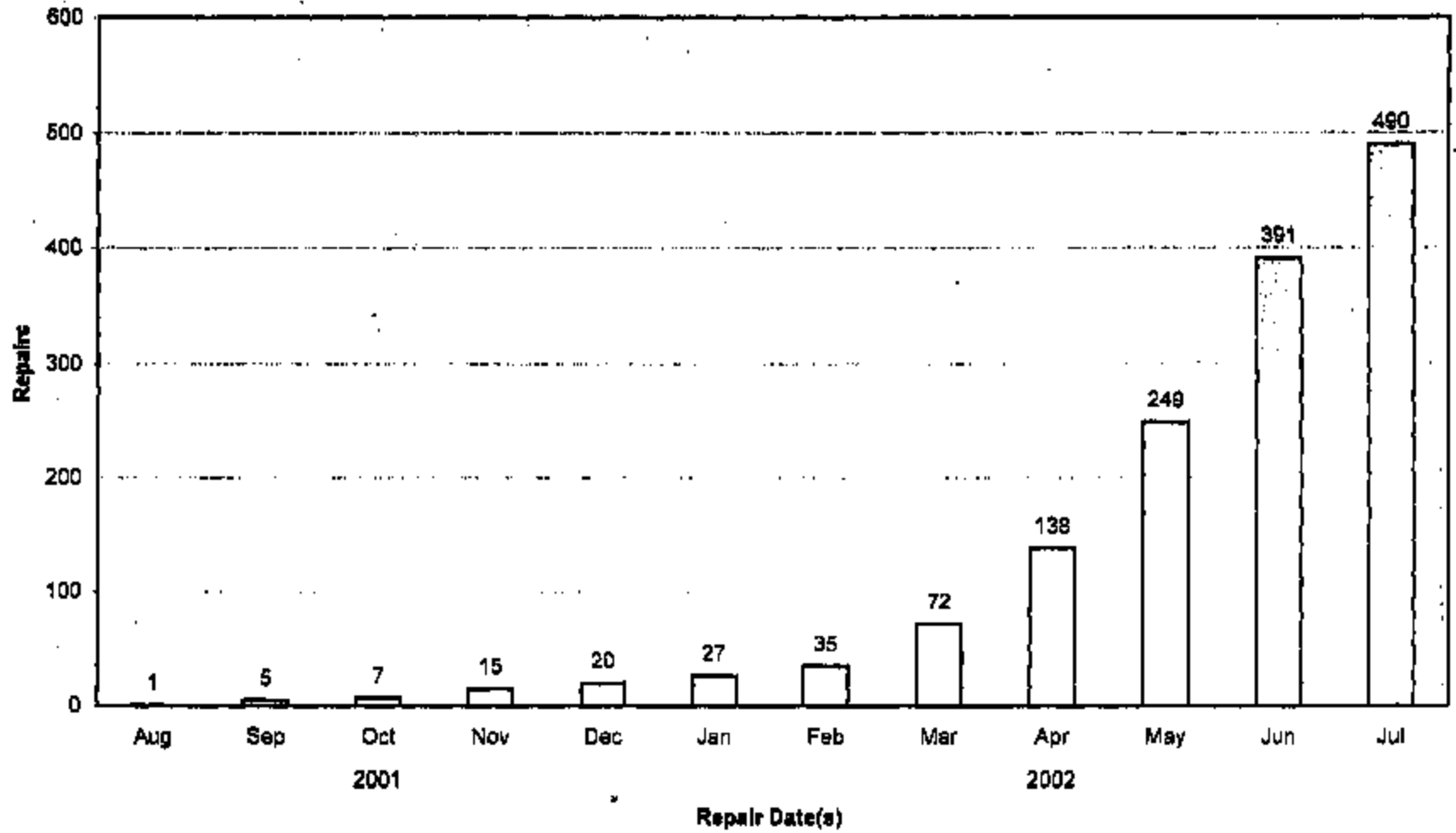
6 Pedals w/o lube

6 Pedals w/teflontape

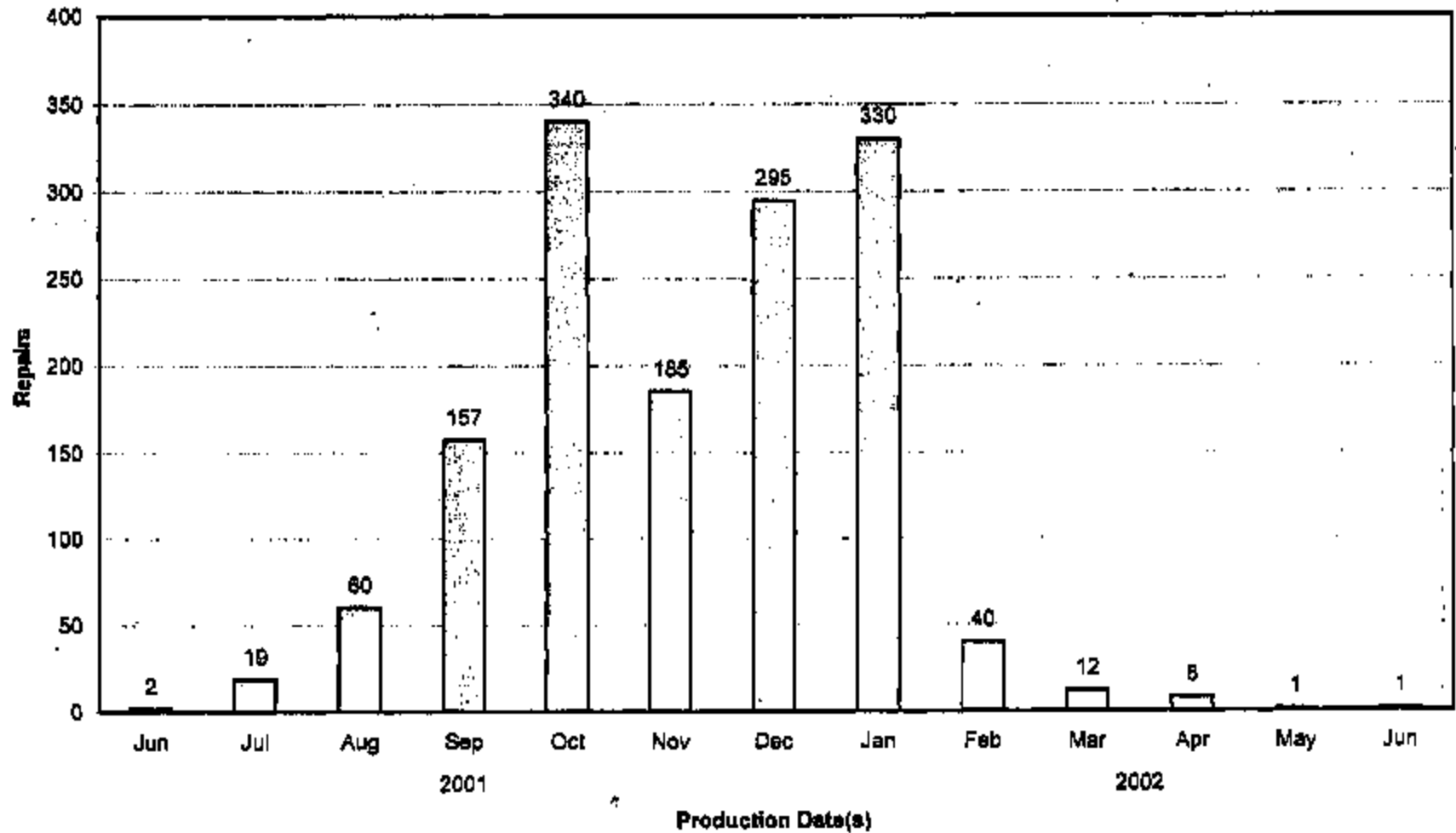
75K/day \* 10 750  
20 1500  
25 days to get  
2 million cycles



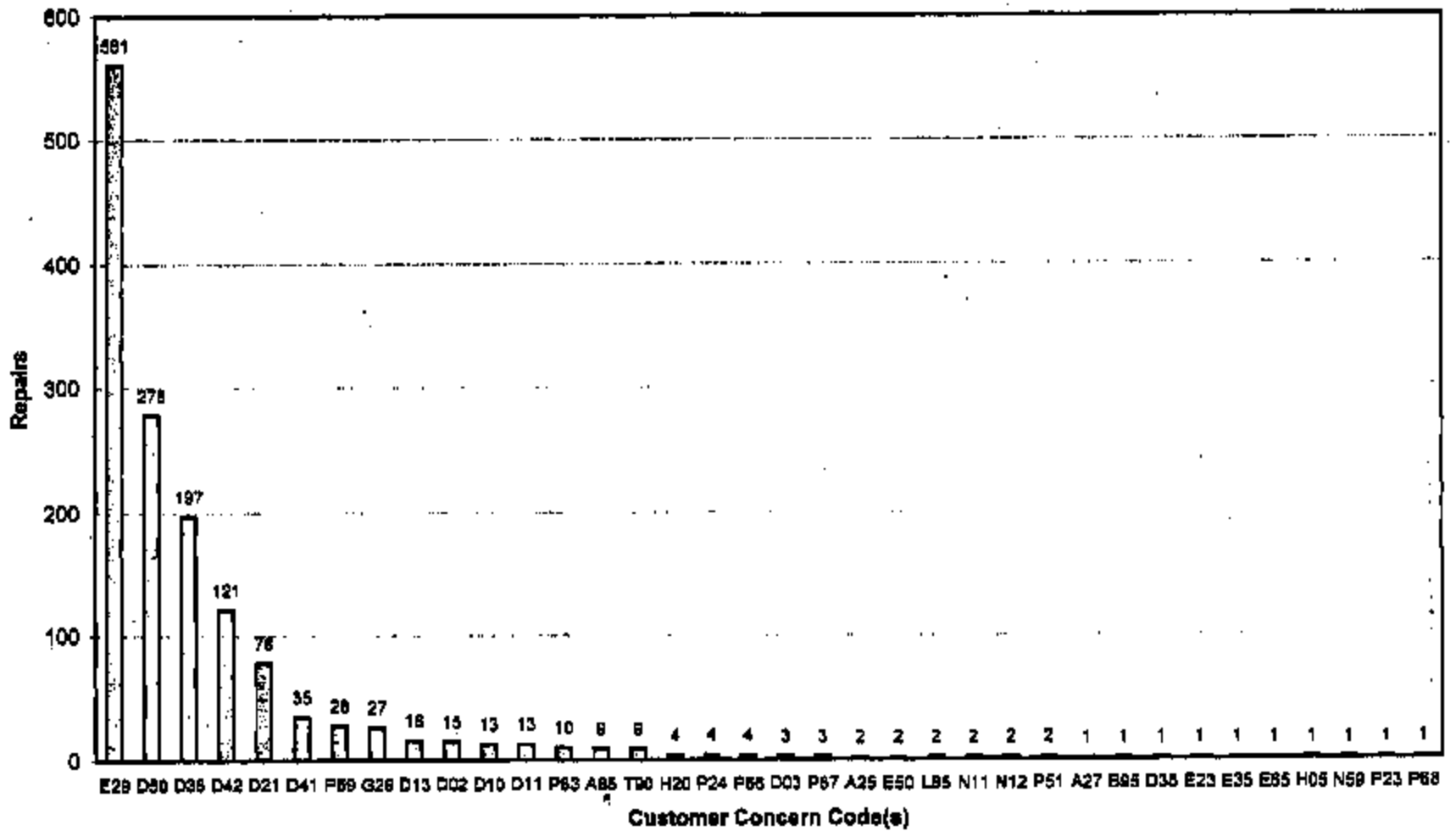
2002 MY Super Duty/Excursion  
- 23CZ 9F836 - TELEFLEX PEDAL



2002 MY Super Duty/Excursion  
- 23CZ 9F836 - TELEFLEX PEDAL

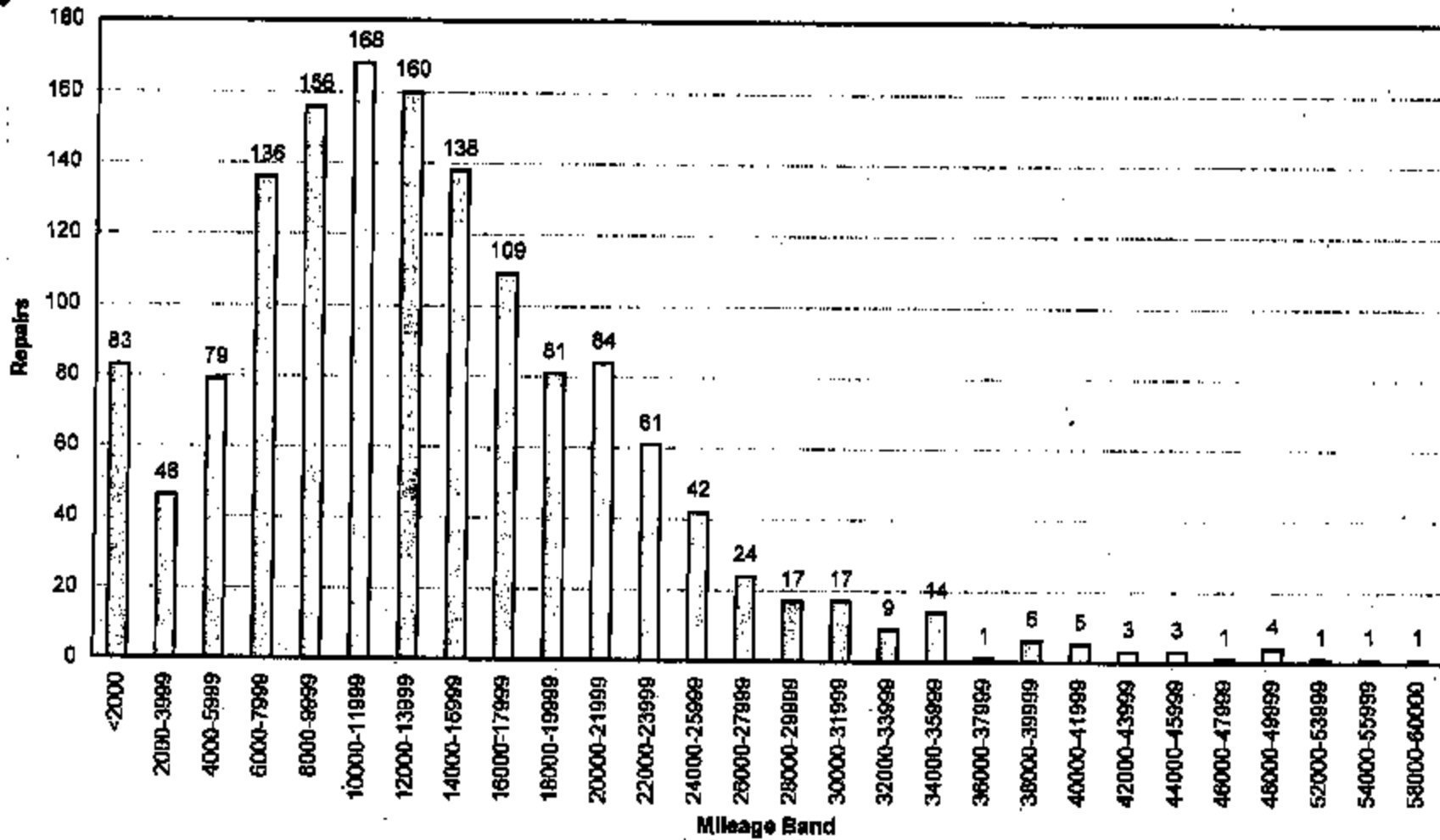


2002 MY Super Duty/Excursion  
 - 23CZ 9F836 - TELEFLEX PEDAL



PER3-044 11528

2002 MY Super Duty/Excursion  
 - 23CZ 9F83B - TELEFLEX PEDAL



# AWS

## TIS Matrix

Cutoff Date: Sep 30, 2002  
Last Load Date: Oct 3, 2002

Request Name: adjustable pedals - TIS MATRIX  
Description: adjustable pedals

Date/Time Run: Oct 7, 2002 / 8:38  
Date/Time Printed: Oct 7, 2002 / 9:05

Result ID: 15060172  
Generated By: RJAINAPU

### Data Selection Criteria:

Assembly Plant (AAG)	=	KENTUCKY TRUCK PLANT BUILD(A1)
Cost Category	=	All Vehicle Coverages / Contractual(1, %, %)
Country Sold / Repaired (type)	=	(USA, USA)
Engine (EN)	=	NAVSTAR 7.3L OHV DI TC V8 DSL (T/D8)
Model Year	=	MY_U3(2003), MY_U2(2002)
Part Num Full (Causal) (type)	=	(ZC3Z, 9F636, %)
Region Sold	=	North America(NA)
VOC / EOC (type)	=	(S2P=(M, %))
Vehicle Line AWS	=	EXCURSION(L1), F250HD/350/450/550(F7)

### Report Selection Criteria:

Model Year(s)	=	2003, 2002
Logic	=	Corp
Order By	=	Grand Total
TIS Rows Selected	=	All
YTD Column Only	=	No
Minimum Divisor	=	1
Cost Type	=	Total Cost Gross
Use Group	=	No
Descriptions	=	Yes

### Globalization Information:

Distance Reported	=	Miles
Distance Requested	=	Miles
Currency Reported	=	US DOLLAR
Currency Requested	=	US DOLLAR
Currency Exchange Version	=	v5



# AWS R/1000 TIS Matrix

adjustable pedals

Cutoff Date: Sep 30, 2002  
 Result ID: 15080172  
 Min Divisor: 100

Page No: 2  
 Print Date: Oct 7, 2002  
 Matrix No: 1

R/1000 TIS Matrix

Model Year 2002

Logic: Corporate

MIS	YTD	Jul-2001	Aug-2001	Sep-2001	Oct-2001	Nov-2001	Dec-2001	Jan-2002	Feb-2002	Mar-2002	Apr-2002	May-2002	Jun-2002
0	0.52	0.38	0.85	0.80	0.34	0.31	0.22	1.37	0.37	0.36	0.66	0.35	0.59
1	1.43	0.35	1.82	1.54	1.27	0.94	1.09	2.91	0.92	1.23	1.74	1.24	0.76
2	2.91	1.40	2.55	3.43	2.78	1.93	2.85	6.72	1.91	1.84	3.20	3.93	2.51
3	6.72	3.19	2.94	6.48	6.39	4.87	9.31	21.19	3.99	2.92	6.20	8.30	
4	14.56	4.27	2.98	9.81	11.00	8.31	29.04	46.88	8.94	3.71	7.76		
5	25.00	6.00	4.54	11.38	17.49	17.21	53.84	87.31	15.13	4.76			
6	38.86	5.38	6.22	18.22	31.55	31.55	85.01	130.27	21.79				
7	58.08	6.76	8.22	24.80	46.01	47.89	123.24	177.46					
8	78.08	6.65	8.87	33.10	67.77	66.90	163.83						
9	82.88	7.37	10.00	44.37	82.38	89.74							
10	83.56	7.81	13.28	60.48	117.36								
11	100.86	9.24	17.58	78.76									
12	103.34	12.06	29.40										
13	107.51	16.54											
Repairs	2,836	25	68	226	544	324	856	701	61	21	26	90	8
Cost	\$10,598	\$,108	\$5,884	\$4,343	\$17,520	\$3,376	\$108,370	\$39,876	\$5,314	\$,813	\$,666	\$,693	\$,701
Divisors	38,578	2,988	5,492	3,520	5,856	4,734	4,898	5,982	5,451	5,590	4,998	5,708	5,083

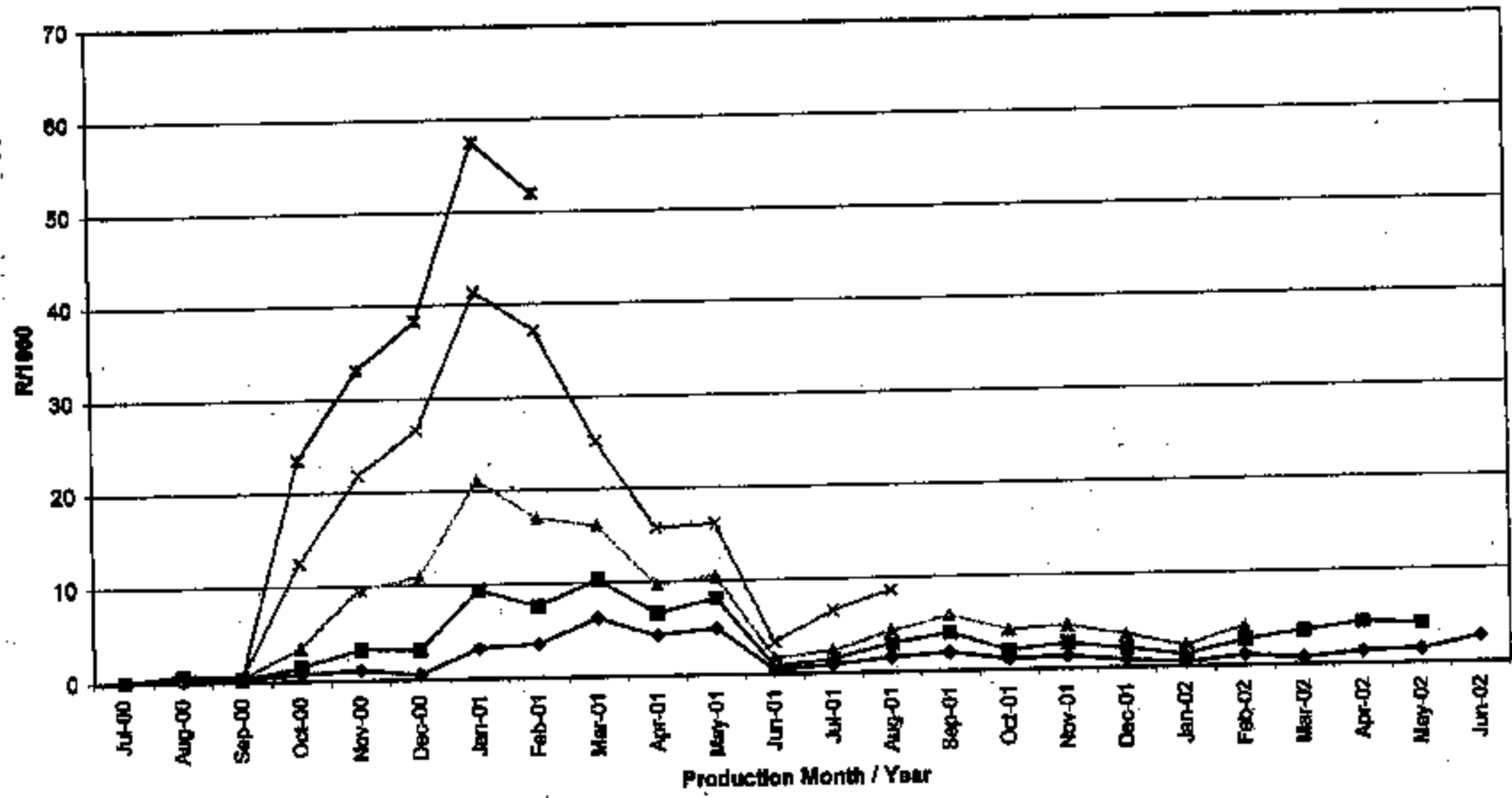
Average Cost per Repair: 199.69

Currency Reported: US DOLLAR

Currency Requested: US DOLLAR

Currency Exchange Version: v5

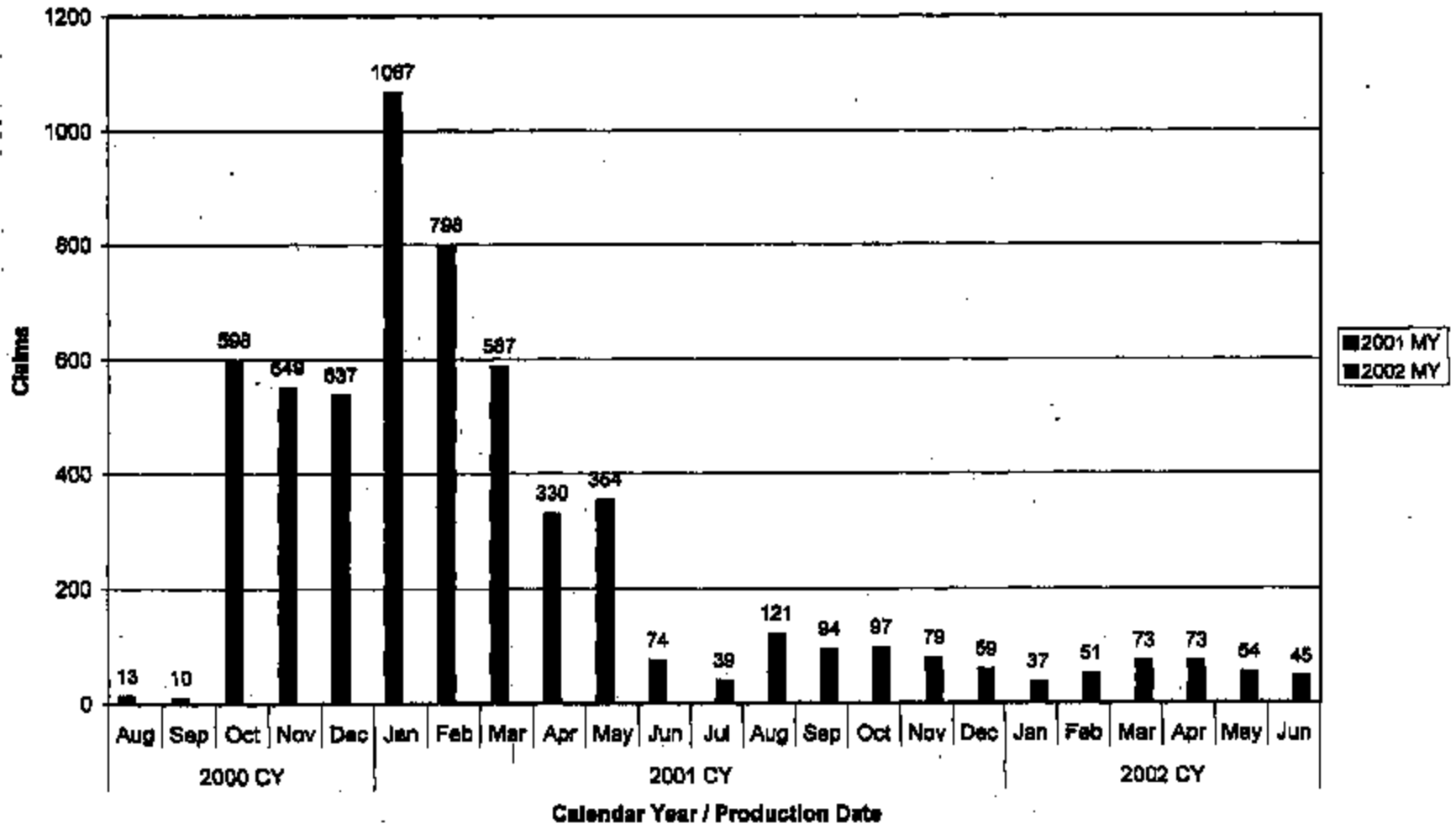
2001 - 2002 MYTD 7.3L SUPER DUTY - 9F836 - Stack Chart  
 Part Num Full (causal) [typed] = {1C3Z,9F836,%}



◆ TIS = 1   ■ TIS = 3   ▲ TIS = 6   × TIS = 12   ▴ TIS = 18   ◆ TIS = 24

AWS Claims List (Cutoff Date: Sept 30, 2002)  
 Assembly Plant [seg] = KENTUCKY TRUCK PLANT BUILD[A1]  
 Country Sold / Repaired [typed] = [USA,USA]  
 Region Sold = North America[NA]  
 Vcc / Eoc [typed] = [82# => |M,%]

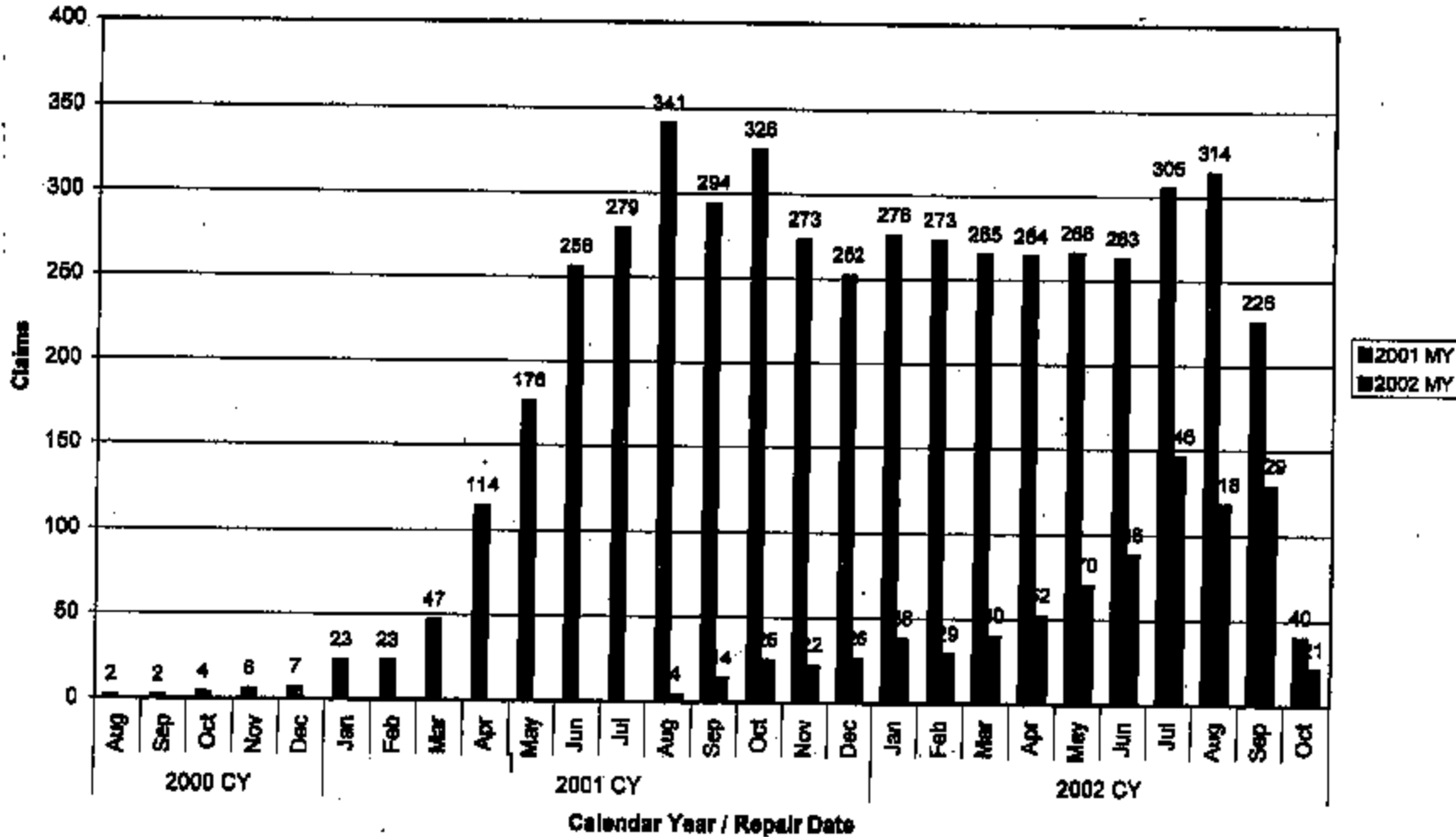
2001-2002 MY 7.3L DSL Super Duty F-Series - 9F836 - Williams Pedal  
 Part Num Full (causal) [typed] = [1C3Z,9F836,%]



AWS Claims List [Cutoff Date: Sept 30, 2002]  
 Assembly Plant [aag] = KENTUCKY TRUCK PLANT BUILD(A1)  
 Country Sold / Repaired [typed] = [USA,USA]  
 Region Sold = North America[NA]

Prepared by P131 / U137 / VN127 PTQRT  
 Contact: VMTCHEL

2001-2002 MY 7.3L DSL Super Duty F-Series - 9F836 - Williams Pedal  
 Part Num Full (causal) [typed] = [1C3Z,9F836,%]



AWS Claims List [Cutoff Date: Sept 30, 2002]  
 Assembly Plant [tag] = KENTUCKY TRUCK PLANT BUILD(A1)  
 Country Sold / Repaired [typed] = [USA,USA]  
 Region Sold = North America(NA)

Prepared by P131 / U137 / VN127 PTQRT  
 Contact: VMITCHEL

**From:** Kainowski, Teresa (T.A.)  
**Sent:** Tuesday, September 16, 2003 12:30 PM  
**To:** West, Gregory (G.S.)  
**Subject:** Pedal claim data review

Greg, I did a word search on the claims. It was a fairly quick search due to the time limitations but I tried to look at any claim comments with words like Idle, Hard (hard accel), Heavy (heavy accel), Mash (mashed the gas pedal), Cut (cuts out), Pass. 572 of the 10102 claims seem to be related to the symptoms you are looking for.

The attached Zip file are the claims you sent over, I added a column called Sorted after the customer comments, and put a word or two in there to describe what I read. The words and symptoms can overlap, these are not exact descriptions.

The other smaller file is a summary of the 572 claims with the CCC (customer concern code) and the description that I put in. Hopefully I have flagged all the claims that apply. If I do have a few in there that are not applicable, that's probably OK since I may have missed others that do apply.

There is a Ford software program I am supposed to order that helps sort through claims like these. I guess this assignment shows that it would be a worthwhile thing for me to get! My co-worker has a copy but he's out of town until Thursday. If you'd like us to try the software on the claims later in the week, let me know.



PEDALCORG\_SUMM  
ARY.xls

TOTAL CLAIMS		10102																	
CLAIMS RELATED TO SYMPTOMS		572																	
PERCENT RELATED		5.7%																	
CLAIMS RELATED TO WENT TO IDLE/CUTS OUT/LOST POWER ON HARD ACCEL/PUSHED GAS PEDAL HARD																			
CCC	WENT TO IDLE	HARD ACCEL	NO ACCEL	PASSING	STALLS	CUTS OUT	LACKS POWER	MASHER	CHECK ENG LIGHT ON HARD ACCEL	CHECK ENG ON HARD ACCEL	CHECK ENGINE LIGHT WHILE PASSING	E2B & IDLE	HARD	HARD PEDAL PUSH	IDLE	IDLES ROUGH	TBD	TRIES TO STALL	TOTAL
D90	87	35	13	10	2	1	5	4											139
D36	47	48	14	9	4		1	2		1					1			1	133
E29	50	16	14	1	1	4	7	2	1		1	1							100
D21	13	32	1	6	11	3		3											69
D42	20	24	2	4		1	2	4											57
D13	14	3																	18
D41	5	5	2	3	1		1												17
D10	10	2	1																13
DD2	4	1	2		1														8
D11	3																		3
D38	1	2																	3
D03	1	1																	2
T90			1																1
A85	1																		1
G29	1																		1
P66														1					1
P24		1																	1
P87		1																	1
P51	1																		1
P83	1																		1
H05			1																1
N18		1																	1
TOTAL	239	172	51	33	20	16	18	15	1	1	1	1	1	1	1	1	1	1	672

PED3-019 2827

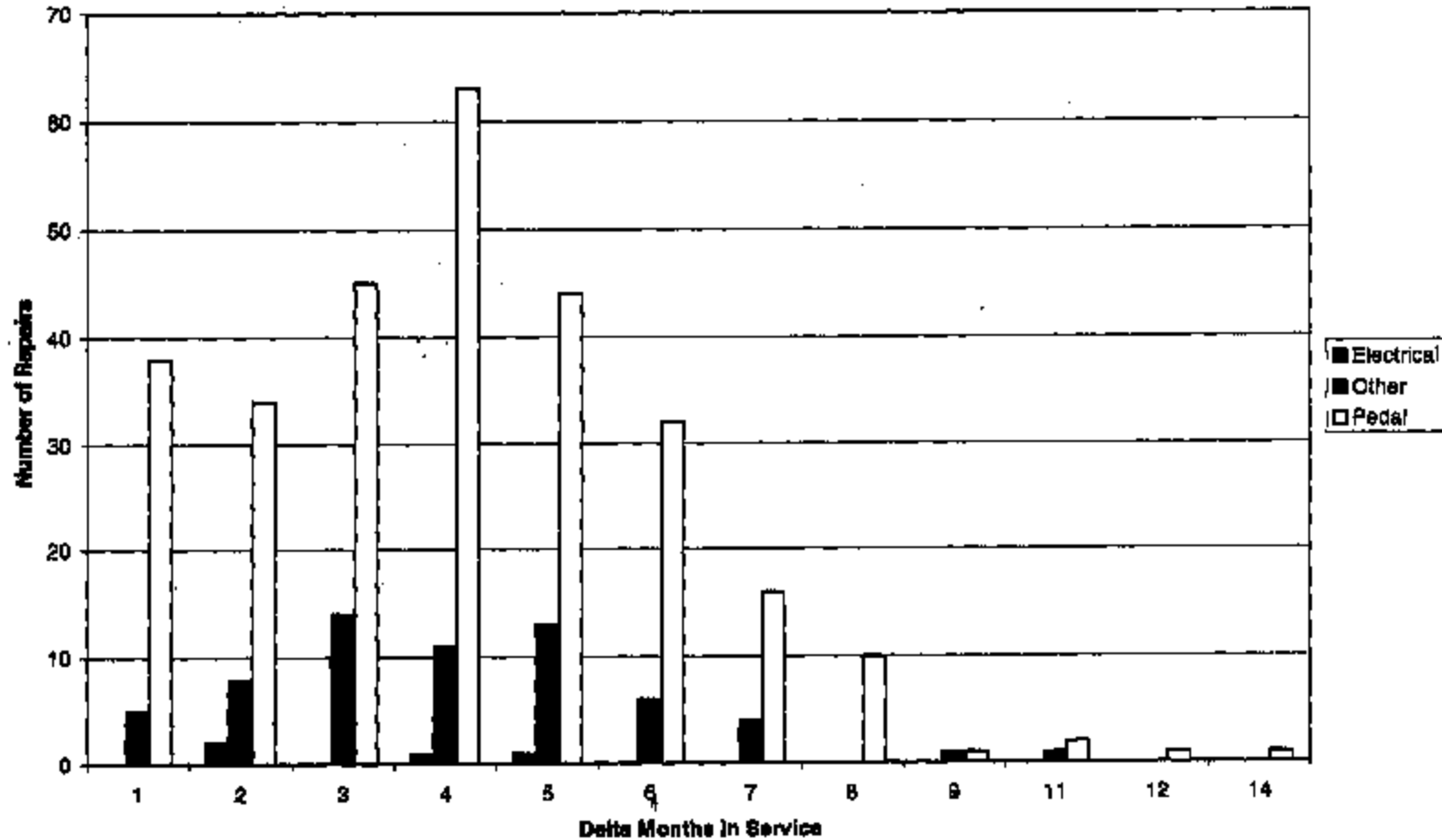






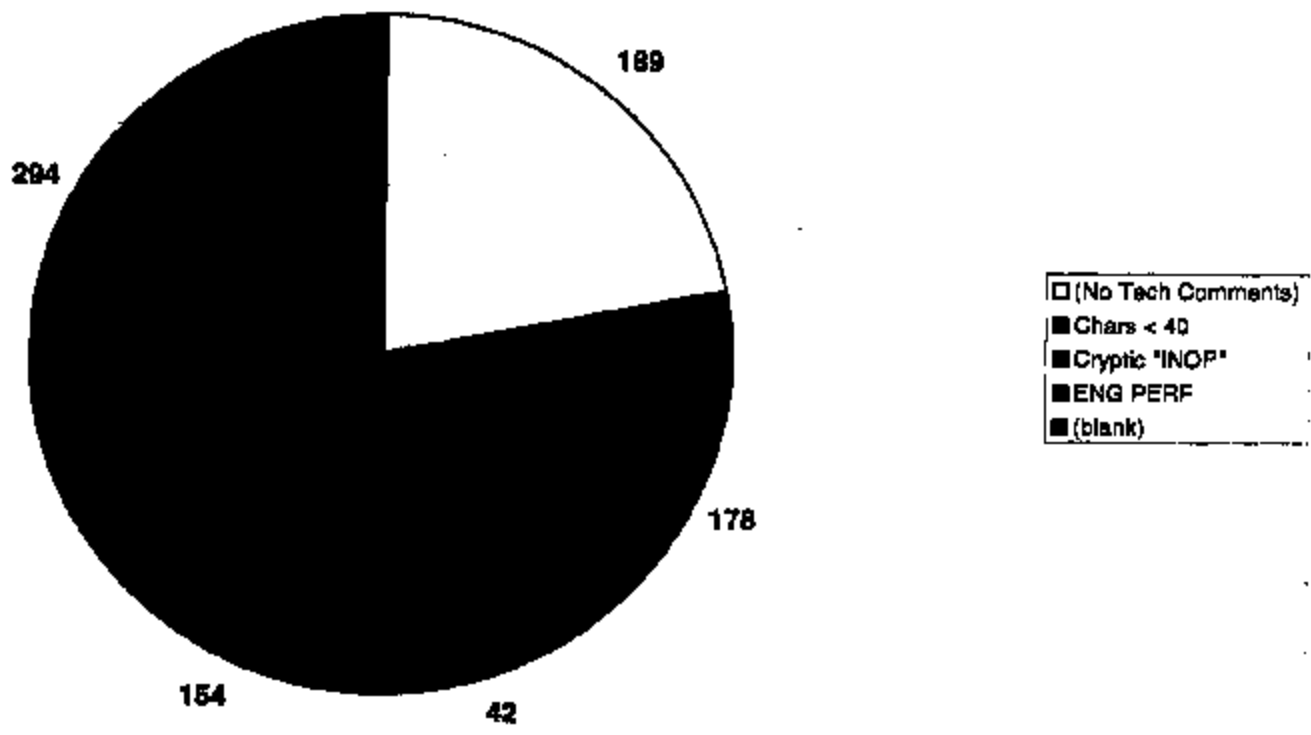


2C3Z 9F836 - Distribution of Times to "Repeat Repair"



PERM-014 5772

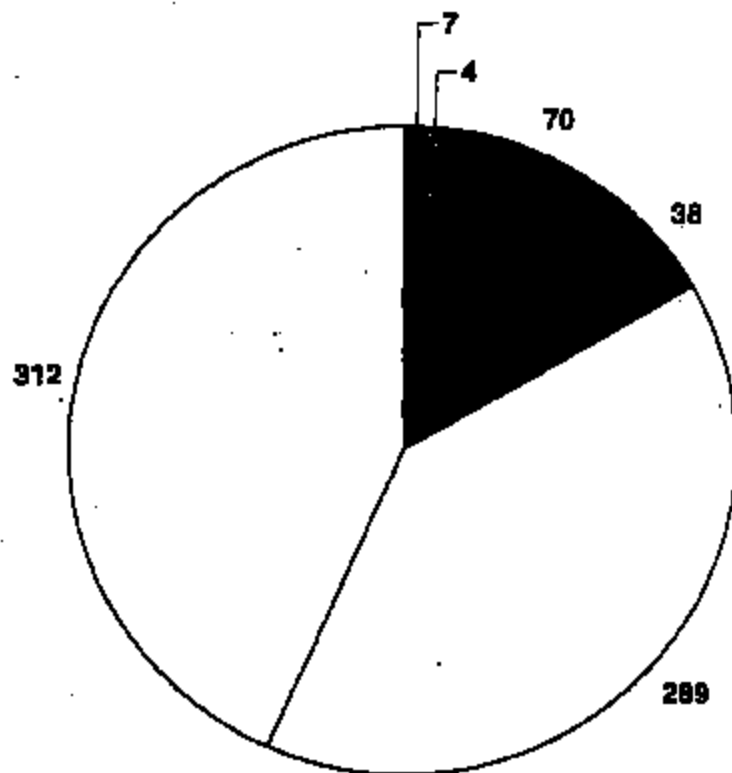
**Breakdown of All "Other" (857) Verbatims by Category**



PERG-044 5173



**2002 and 2003 MY 2C3Z 9F836 Claims Repeat Analysis  
Multiple-Claim VINs by Cause**

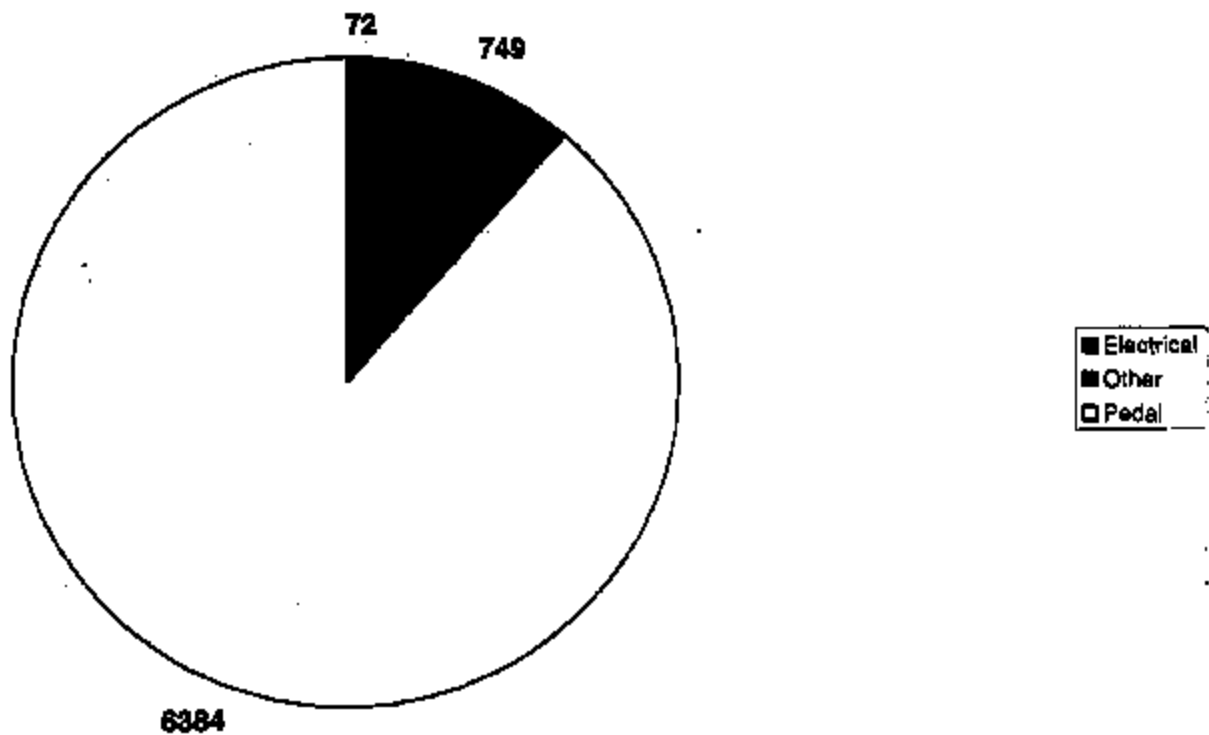


- Electrical - Original Claims
- Electrical - Repeat Claims
- Other - Original Claims
- Other - Repeat Claims
- Pedal - Original Claims
- Pedal - Repeat Claims

PHOTO-944 5774



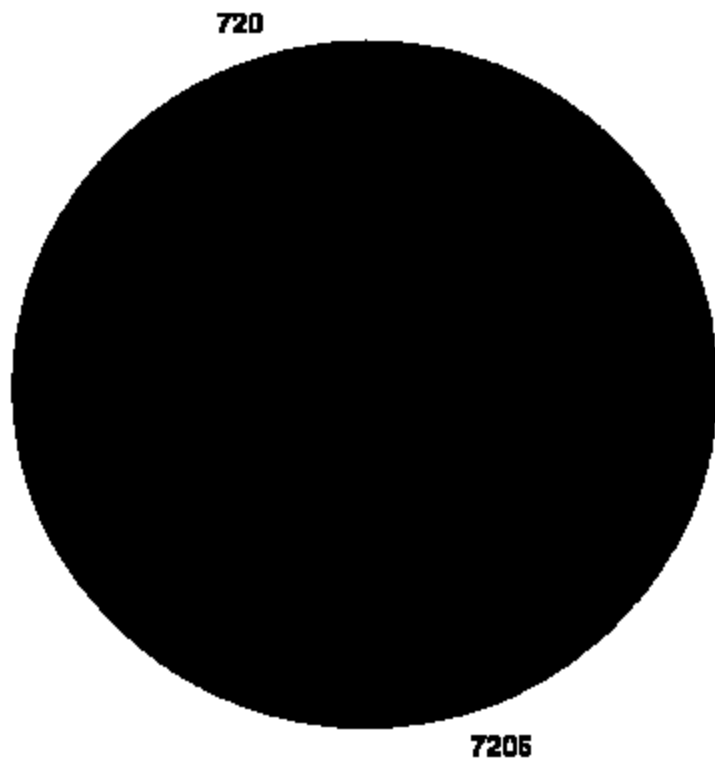
**2002 and 2003 MY 2C3Z 9F836 Claims Repeat Analysis  
Single-Claim VINs by Cause**



PHB-044 5770



2002 and 2003 MY 2C3Z 9F836 Claims Repeat Analysis

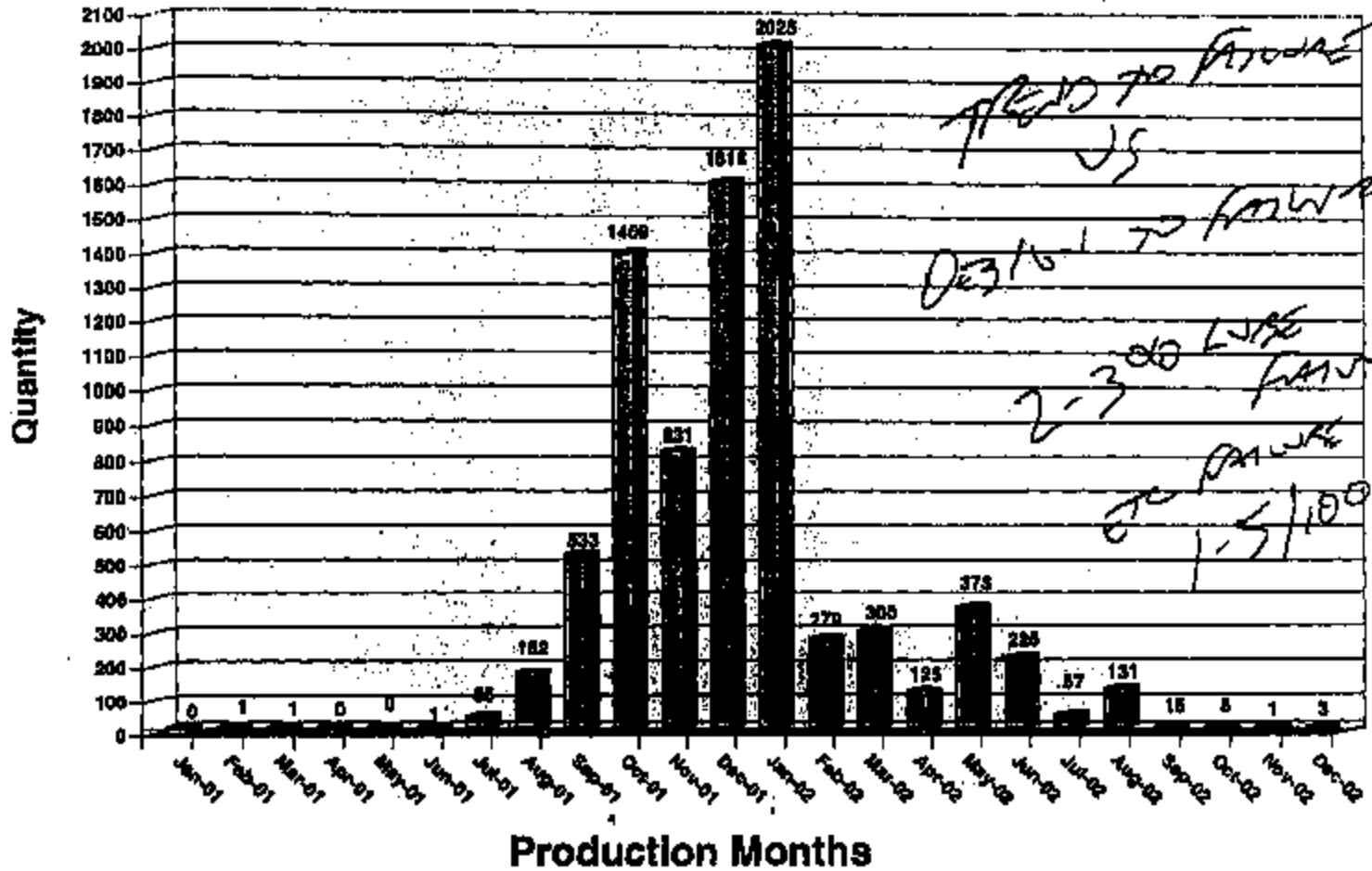


■ 7.3L 2C3Z 9F836 single-claim VINs  
▣ Repeat Claims

PER-044 5716

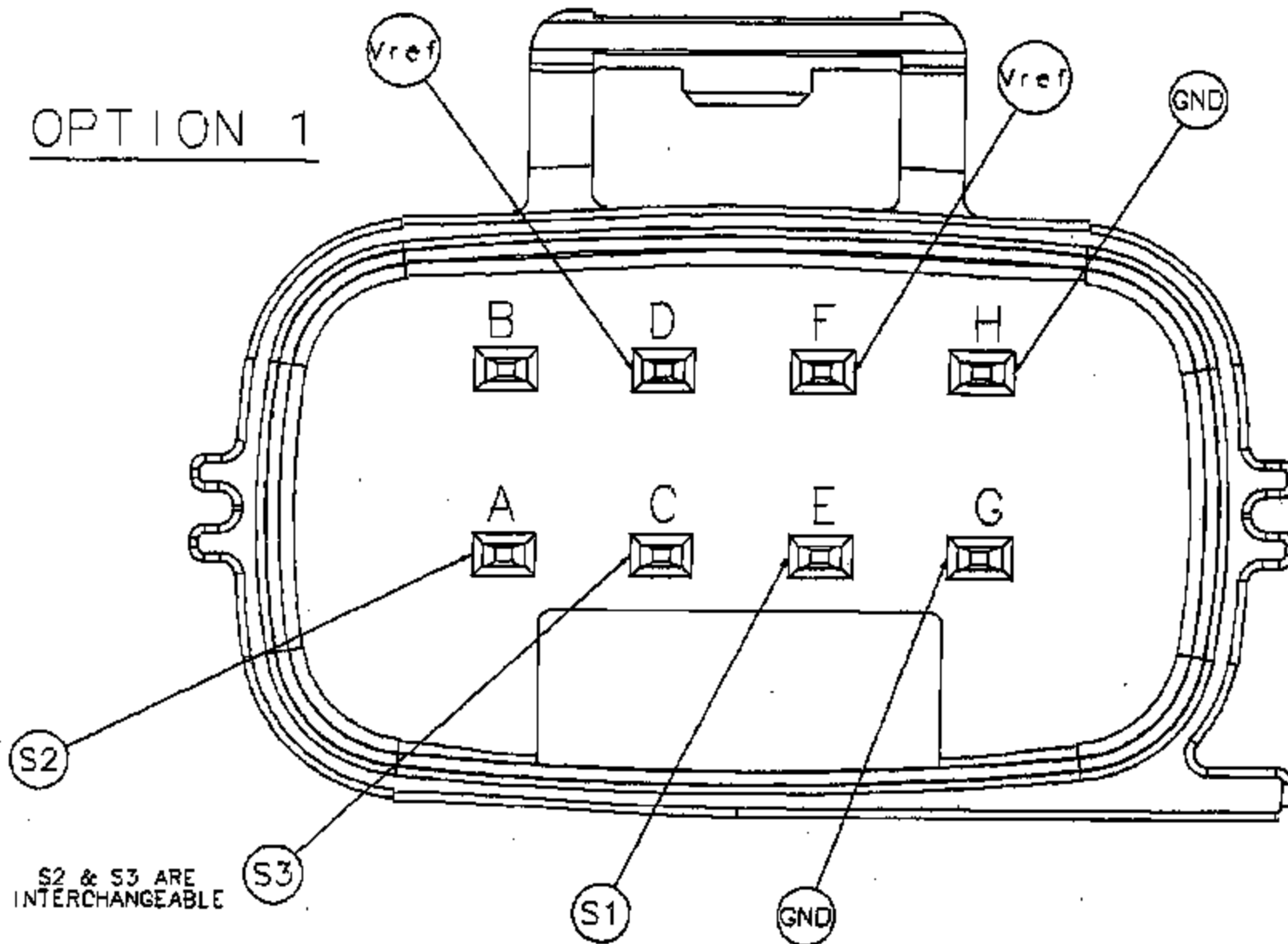


**Warranty Data Per Month**



PERC-044 27258

OPTION 1

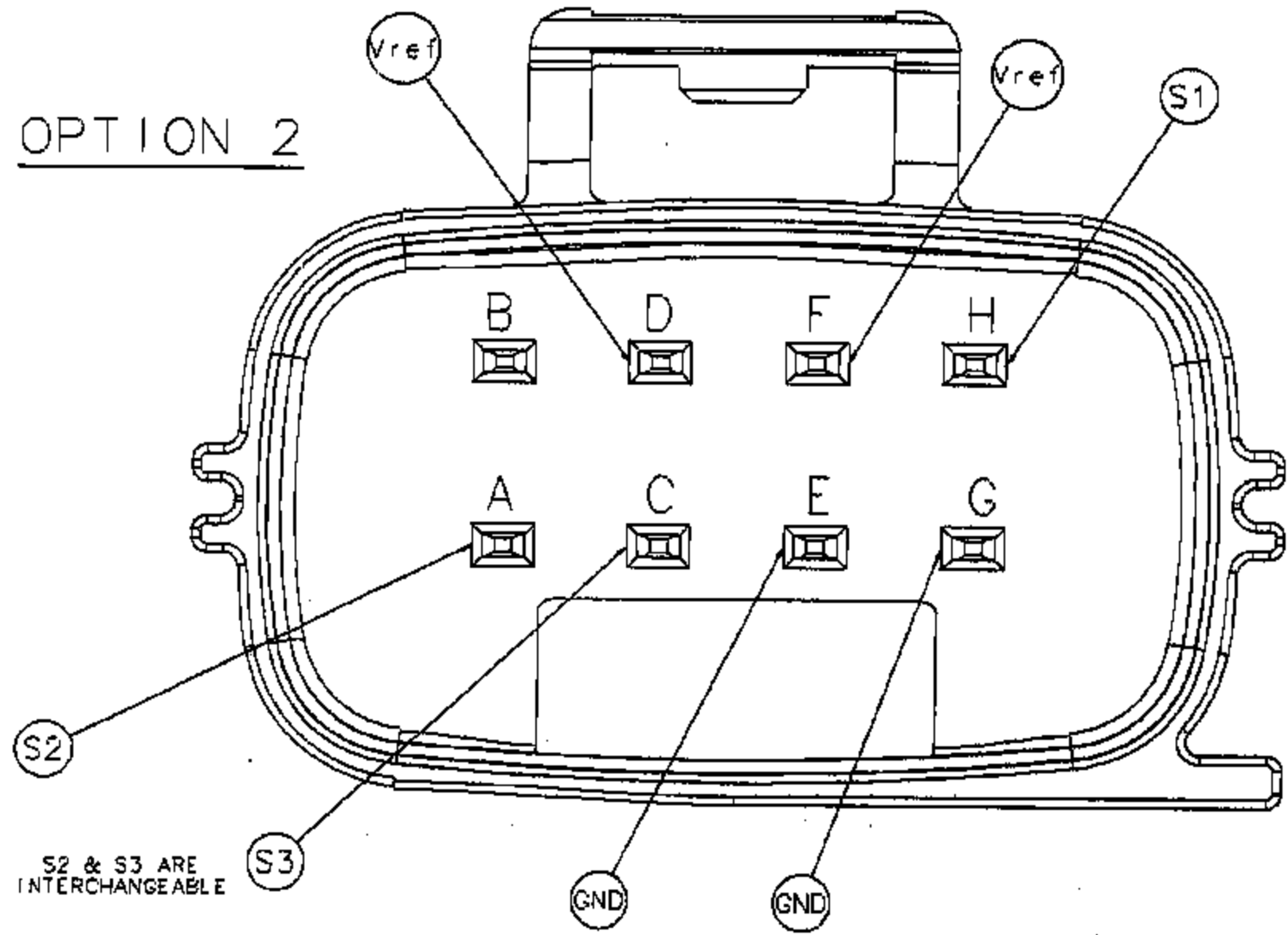


PERO-044 23085

S2 & S3 ARE INTERCHANGEABLE



OPTION 2



PERC-844 23300

S2 & S3 ARE INTERCHANGEABLE

**2003 AP3 POWERTRAIN CALIBRATION VEHICLE SPEC BREAK-DOWN  
MRD 8/26/2000**

Unit Member	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10
AP Level	AP3	AP3	AP3	AP3	AP3	AP3	AP3	AP3	AP3	AP3
Vehicle Model	P131	P131	P131	P131	P131	P131	P131	P131	U137	U137
Vehicle Series	F350 ext	F350	F350	F350	F350	F350	F350	F350	EXCLUSION	EXCLUSION
Body Style	PICK UP	PICK UP	PICK UP	PICK UP	PICK UP	PICK UP	CHASSIS CAB	CHASSIS CAB	WAGON	WAGON
Color	GREY	R	GREY	SLVER	GREY	GREY	GREY	GREY	BLU	BLU
Engine	5.0L		5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L	5.0L
Transmission	5R110W	M	5R110W	5R00D	5R110W	5R00D	5R110W	5R110W	5R110W	5R110W
Drive	4X4		4X2	4X2	4X4	4X4	4X4	4X4	4X2	4X2
Rear Axle Ratio	3.73	3.73	4.1	3.73	4.1	4.1	4.88	4.88	3.73	3.73
Tires	LARIAT	LARIAT	LARIAT	LARIAT	LARIAT	LARIAT	XLT	XLT	LIMITED	LARIAT
Color	Op Woodgrain Blue	Dr Highland Green		Vander Red		Deep Woodgrain Blue Harvest Gold	Tornado Red		Dr Green Blue	
Wt (lb.)	191	194	172	158	172	172	185	178		
Rear Wheels				DRW		DRW				
GVW	4,800	4,800	11,200	6,000	11,000	11,000	15,000	17,500	8,800	9,200
Options	a) Options listed below	b) Options listed below		b) Options listed below, Full Electrical Control, LT388/38R16 DAT Tires		b) Options listed below, Full Electrical Control, Fog Lamps, EBCF	a) Options listed below		a) Options listed below	

a) Trailer Tow Mirrors, Full Electrical Control, Power Windows, Power Door Locks, Power Mirrors, Speed Control, ABS, Power Seats, Heated Seats, Captain Chairs, Front Tow Hooks, Spare Tire, Privacy Glass, Sliding Rear Window, Roof Mount Lights, Overhead Console, Message Center, Remote Keyless Entry, Trailer Tow Package, Aluminum Wheels, Limited Slip Rear Axle, Cab Steps, Running Boards, AM/FM Stereo Cassette, WCD Player, Engine Block Heater

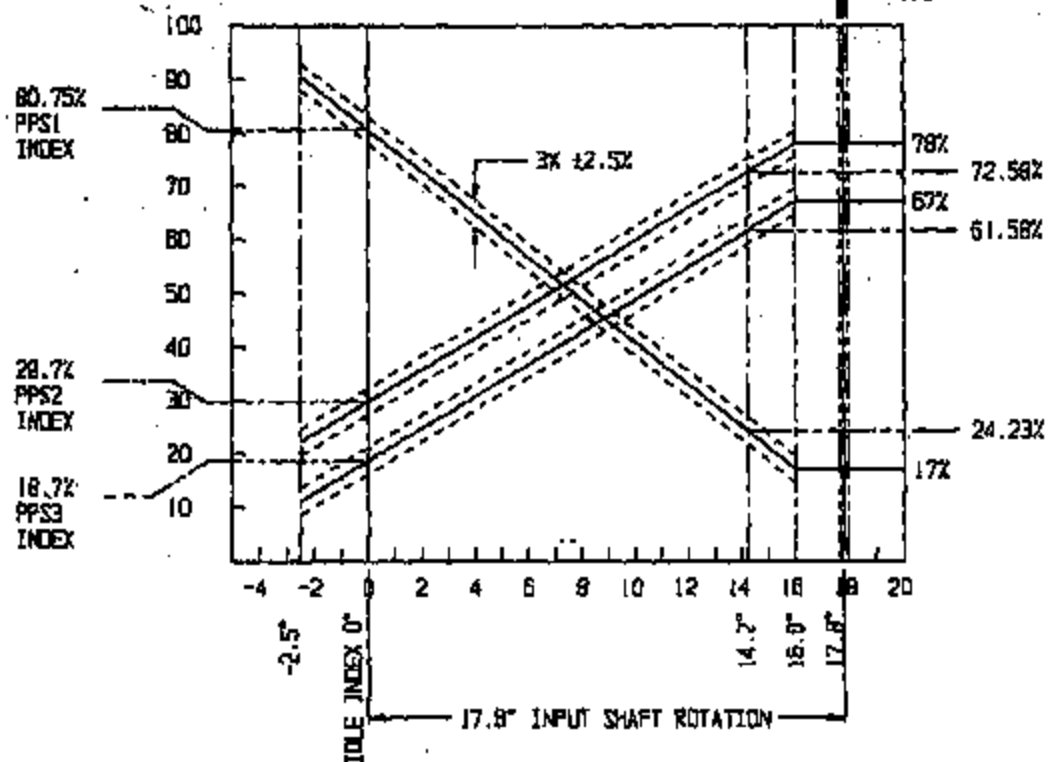
b) Power Windows, Power Door Locks, Power Mirrors, Speed Control, 5-Speed Power Seats, Heated Seats, Captain Chairs, Trailer Tow Mirrors, Front Tow Hooks, Trailer Tow Package, Spare Tire, Privacy Glass, Sliding Rear Window, Roof Mount Lights, Overhead Console, Remote Keyless Entry, Aluminum Wheels, Limited Slip Rear Axle, Cab Steps, AM/FM Stereo Cassette, WCD Player, Message Center, Engine Block Heater

PE33-644 23488

© Shelby/DK/SLB  
10/01/97

October 21, 1999  
Modified: 6/26/00  
2003 AP3.PT with special

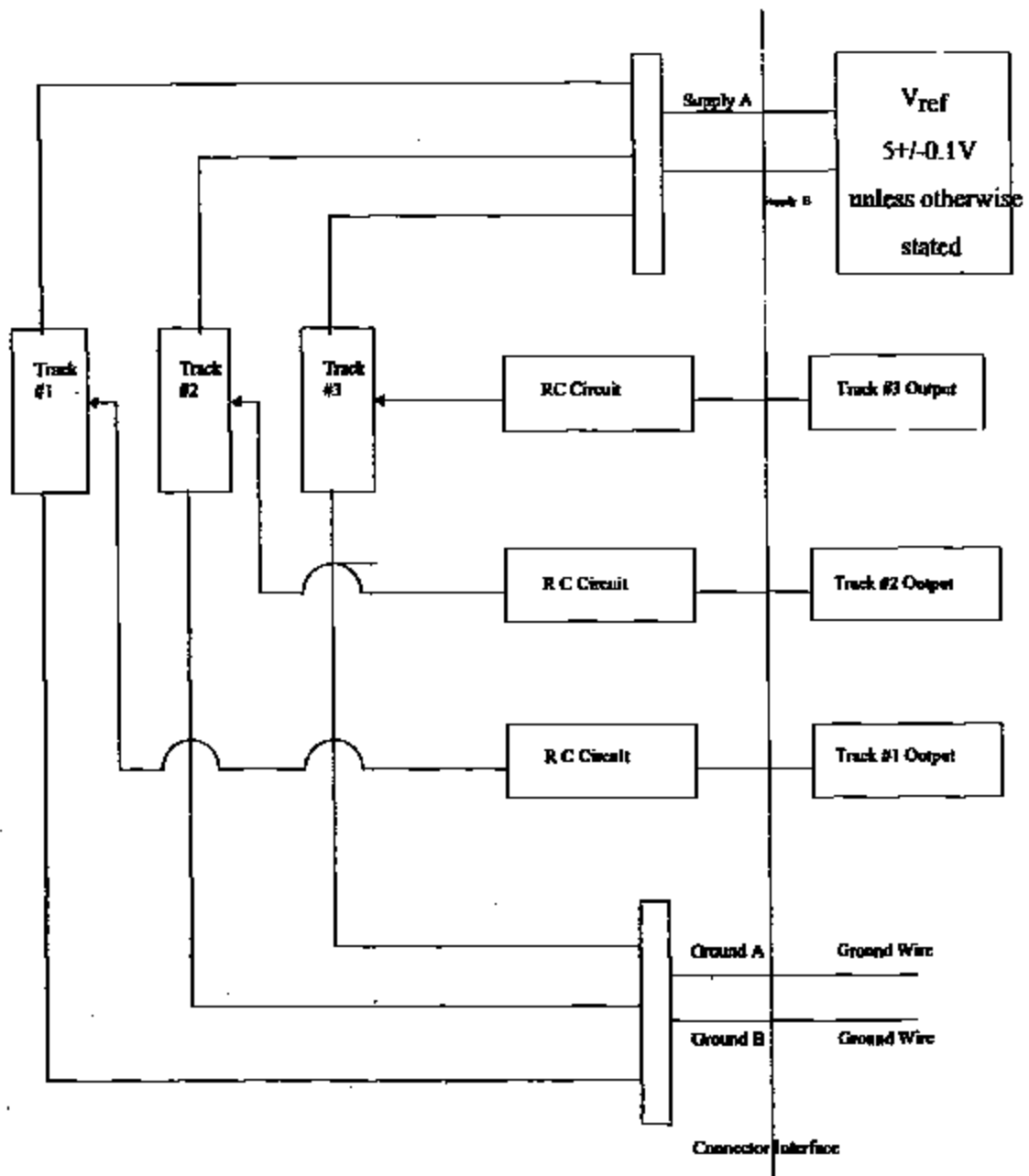
PEDAL ASSEMBLY COORDINATES .75

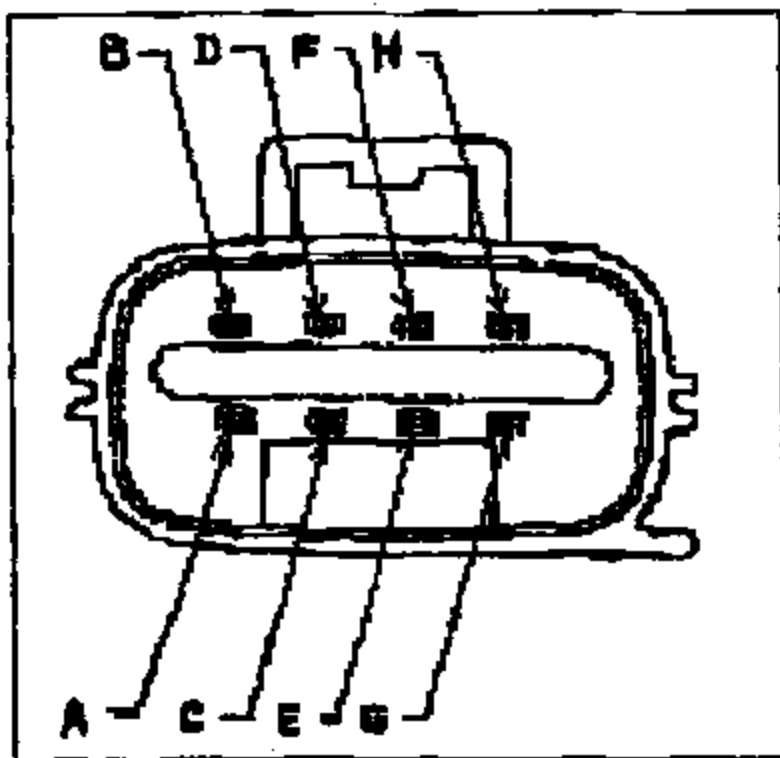


F-150 (FORD GEN II)

A. KJ  
6/11

PERS-044 23401





Note: Connector drawing (above) is not to scale

## Engineering Specifications

### ▶ Actions/Resources

#### 1. Complete the Engineering Specification (ES) Document

*What information should be included?*

- Initial Proveout Test
- On-going Production Test
- Static/Dynamic Specifications/Testing (ex. bushings)
- Rate curves in each direction (axial, radial, torsional, etc.) for typical preloads (Static and Dynamic)
- Rate curves with various available diameters within durability range
- Access ES Document

#### 2. Obtain copy of similar or generic benchmark ES

### ■ Documentation

- Engineering Specification (ES)
- Similar or generic benchmark ES

ES

## Engineering Specifications

### ES Tests

The Engineering Specification (ES) Document indicates tests that should be performed to verify that a design is ready for production. Two forms of ES tests are typically used: an On-Going Production Test and an Initial Proveout Test.

The On-Going Production Tests are used to verify that the design will still meet all of the functional requirements after time. This helps assure that material changes, environmental conditions, tooling wear, and other factors do not cause the parts performance to deteriorate.

The Initial Proveout Tests assure that as design changes are made, the part will still meet performance requirements. Major design changes may still require partial or full proveout using the DVP&R.

Tests should include frequencies and quantities that allow for statistical proveout and should test those properties that are most critical to the customer.



### Actions/Resources

1. Create/maintain APQP Focus Element Scoring Sheets with current score

2. Create/maintain Prototype Control Plan

*What information should be included?*

- Comparison of Prototype Process vs. Production Process
- Reference FMEA items controlled by plan

3. Create/maintain PIST/PPC (Percentage of Inspection points Satisfying Tolerances/Percentage of Insizes with Process Capability) Documents; complete the documents prior to tooling for prototype parts

*What information should be included?*

- List of all dimensions (including functional) to be measured
- Frequency of Measurement (all parts, x per batch, 20 parts, etc.)
- Testing to be performed on prototype parts with frequency

4. Create/maintain Production Control Plan

*What information should be included?*

- Plant Layout and Flow
- Plant Process Overview /Detail
- Plant Process Sheets
- Capability Sign-Off



### Documentation

- APQP Focus Element Scoring Sheets with current scores (Prototype and Production)
- Prototype Control Plan
- PIST/PPC Documents
- Production Control Plan



## Control Plans

Control Plans identify checks placed into the manufacturing process to ensure that the product meets all requirements when it is placed into the vehicle.

### Efficient Control Plans

The most efficient Control Plans use upstream checks to ensure quality production. Downstream checks are effective and at times necessary; however, when an error is caught later in the process, corrections are delayed...and expensive! The delay in correction means that many operations may have taken place unnecessarily on a bad part. Furthermore, the delay may mean that many other parts were also produced with the error before the problem was corrected. This again may cause more money and time to be lost.

### Review of Control Plans

Experts on the team from Supplier Technical Assistance (STA) are key to reviewing the Control Plan. APQP also contains a Focus Element Scoring Sheet that should be kept with the Control Plan to show its current state.

**▶ Actions/Resources**

**1. Develop Installation Drawings (Part, System-to-System, Vehicle)**

*What information should be included?*

- Orientation of Installation
- Placement and Torques of Fasteners
- Any special handling instructions (recall prevention), marked with an inverted triangle

**2. Obtain installation instructions (Process Sheets) from Vehicle Office Representative (MPPS System); review for accuracy**

*What information should be included?*

- Assembly instructions and labor times
- Carryover part installation (optional)

**3. Develop assembly of PIA Components (optional)**

**4. Develop Prototype Build Assembly Instructions**

- List Tooling and Fixturing Requirements

**5. Develop Service Requirements Document**

*What information should be included?*

- Service Parts List
- Servicing Instructions
- Service Costs
- Service Times
- Special Service Tools
- Owner's Manual Pages
- Service Intervals including maintenance and inspection
- Access Design for Serviceability

Contact a Ford Customer Service Division (FCSD) representative for assistance

**■ Documentation**

- Installation Drawings (Part, System-to-System, Vehicle)
- Installation Instructions (Process Sheets, labor times)
- Assembly of PIA Components
- Prototype Build Assembly Instructions
- Service Requirements Document

## Assembly Service

### Success Factors

There are two important factors in the successful design of a component or system: (1) an understanding of how a part will be placed onto the vehicle at a vehicle assembly plant; and (2) how it will be serviced after purchase.

### Assembly Drawing

Drawings of the assembly contain the part numbers of each of the components in the design and/or system as well as the mating components, fasteners and torques that hold the design together.

### Installation Drawing

The Installation Drawing is also used by each engineer to understand the interfaces that are critical to the system. Each of the mating components will potentially affect package constraints (dimensions and tolerances), loading in and out of the component, and potential failure modes.

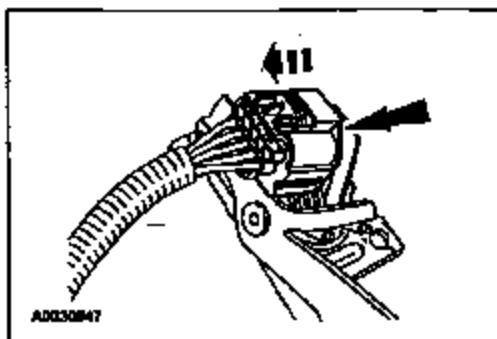
### Levels of Drawings

Typically drawings are done by CPSC level; however, drawings may be done at higher or lower levels and should include other CPSC items that interface with the design.

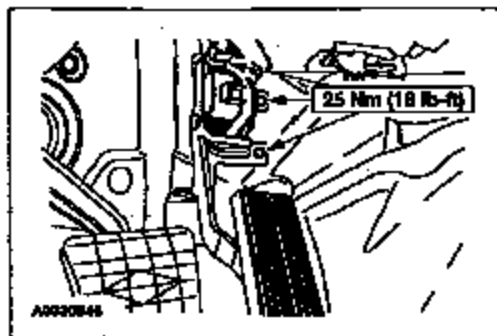
**REMOVAL AND INSTALLATION (Continued)***Superseded by: SGML id="n31973"**Effect: From: "N" "2002", "FSUPERDUTY", "18", "020", "reinst name="r" ""***Accelerator Pedal — Fixed, Diesel Engines(id=n301674)****Removal and Installation**

**⚠ CAUTION:** The accelerator pedal and sensor assembly is a non-adjustable, calibrated unit and must be handled with care.

1. Disconnect the electrical connector.



2. Remove the bolts and remove the accelerator pedal and sensor assembly.



3. To install, reverse the removal procedure.

### ▶ Actions/Resources

1. **Perform Craftsmanship Reviews by Global Craftsmanship Group**
  - ☐ Access Global Craftsmanship Group
2. **Perform Key Life Testing**
  - List of failures that will be reproduced
  - Current production parts tested with Key Life Test (correlated to field) and Results
  - New Designs tested and results
  - ☐ Access Key Life Testing Program
3. **Develop Robustness Studies**
  - Design of Experiment (DOE) to reduce effects of noise factors; p-diagrams/Robustness Assessments/Full Robustness Studies
  - Previous studies on similar part
  - ☐ Access Robustness Studies in the Enterprise Knowledge Base

Note: See Quality Representative on Program Team to set up Robustness Study

4. **Obtain Drive Team Evaluations**
  - NVH, Dynamics, Customer Correlated Drive Team evaluations
5. **Perform Women's Marketing & Product Office Review**
  - Will set up reviews by small and large groups of women to give feedback
  - ☐ Access Women's Marketing & Product Office
6. **Collect Test Fleet Data**
  - Test fleets may be used to test new designs
  - Contact Fleet Representative on (typically CPD) program team
  - ☐ Access Test Fleet Data
7. **Use Global 8D Process**
  - Root Cause Identification – Keep Asking Why/How it Happened?
  - Typically requires corrections down to PMEA level
  - ☐ Access Global 8D
8. **Review R&VT Quality Information**
  - ☐ Access R&VT Quality Planning

### ■ Documentation

Resources that are used will generate documents that should be included in this tab. It may also be necessary to save documents on-line in the appropriate database.

## Quality

Several resources exist to help deliver higher quality products. Examples of a few of these are shown below:

### **Global Craftmanship**

Craftmanship is an FFDS process. It covers the consumer's vehicle perception in terms of what the consumer sees, touches, uses and hears.

The Global Craftmanship team perform competitive benchmarking, vehicle ratings and reviews on all Ford vehicles. They are available globally to provide training to program teams as requested and to demonstrate craftmanship principles. Furthermore, their expertise may be used to review design concepts throughout the product's design.

The benefits of incorporating craftmanship into vehicle design early in the program include: reduced product development time and costs, improved overall perception of quality and high customer satisfaction.

### **Robustness Studies**

The Robustness method provides a process that helps produce designs that are less sensitive to the environment they must live within. The Quality Representative on the program team can help both assess the current design and set up a study to improve it.

### **Women's Marketing Group**

The Women's Marketing Group is able to provide both expertise to review designs as well as groups of women to test designs. Again, the expertise may be used throughout the design process.



Huang, Peter (P.J.)

From: Huang, Peter (P.J.)  
Sent: Tuesday, October 26, 1999 3:13 PM  
To: Athar Sakar; Beuckelaere, Phillip; D'Arrigo, Nino; Dennis Warner; engelgau; Farah; Hess, Jerry; Huang, Peter (P.J.); Hunter, Christina; Hks, Isaac; Mohler, William (W.E.); Rahman, Nayeema; Skothorp, Dan; Silvarosa, Don (D.C.); Sorin Stancu; Vittone, Todd  
Subject: Adjustable Pedal PMT Bi-Weekly meeting

Just a reminder for tomorrow's Adjustable Pedal PMT meeting  
Room: PDC 2B-F13  
Time: 10:30 AM

Agenda:

- 1) Update on motor transmission interfering with steering column intermediate shaft (Teleflex)
- 2) New hush panel attachment (Collins & Aikman, Teleflex), *All set, if possible, include in the prototype*
- 3) ETC connector (Nayeema Rahman, EESE)
- 4) Current brake mounting bracket dimension and tolerance (Teleflex)
- 5) Parts

Regards  
Peter Huang  
F-Super Duty Truck, Brake Design  
Ph. 313-594-1877, Fax 313-317-2349

Teleflex said they could use 5 pins connector for production

- 1) production Timely  
CAD
- 2) Nov. 1, 11/8, 11/14

Own. email Nayeema



**Huang, Peter (P.J.)**

**From:** Huang, Peter (P.J.)  
**Sent:** Tuesday, October 26, 1999 3:13 PM  
**To:** Alhear Salem; Bauckelaers, Phillip; D'Arrigo, Niho; Dennis Warner; engelgauz, Farrah; Hess, Jerry; Huang, Peter (P.J.); Hunter, Christina; Ibia, Isack; Mohler, William (W.E.); Rahman, Nayeema; Sibthorp, Dan; Sillanpaa, Don (D.C.); Sorin Blancu; Vitone, Todd  
**Subject:** Adjustable Pedal PMT Bi-Weekly meeting

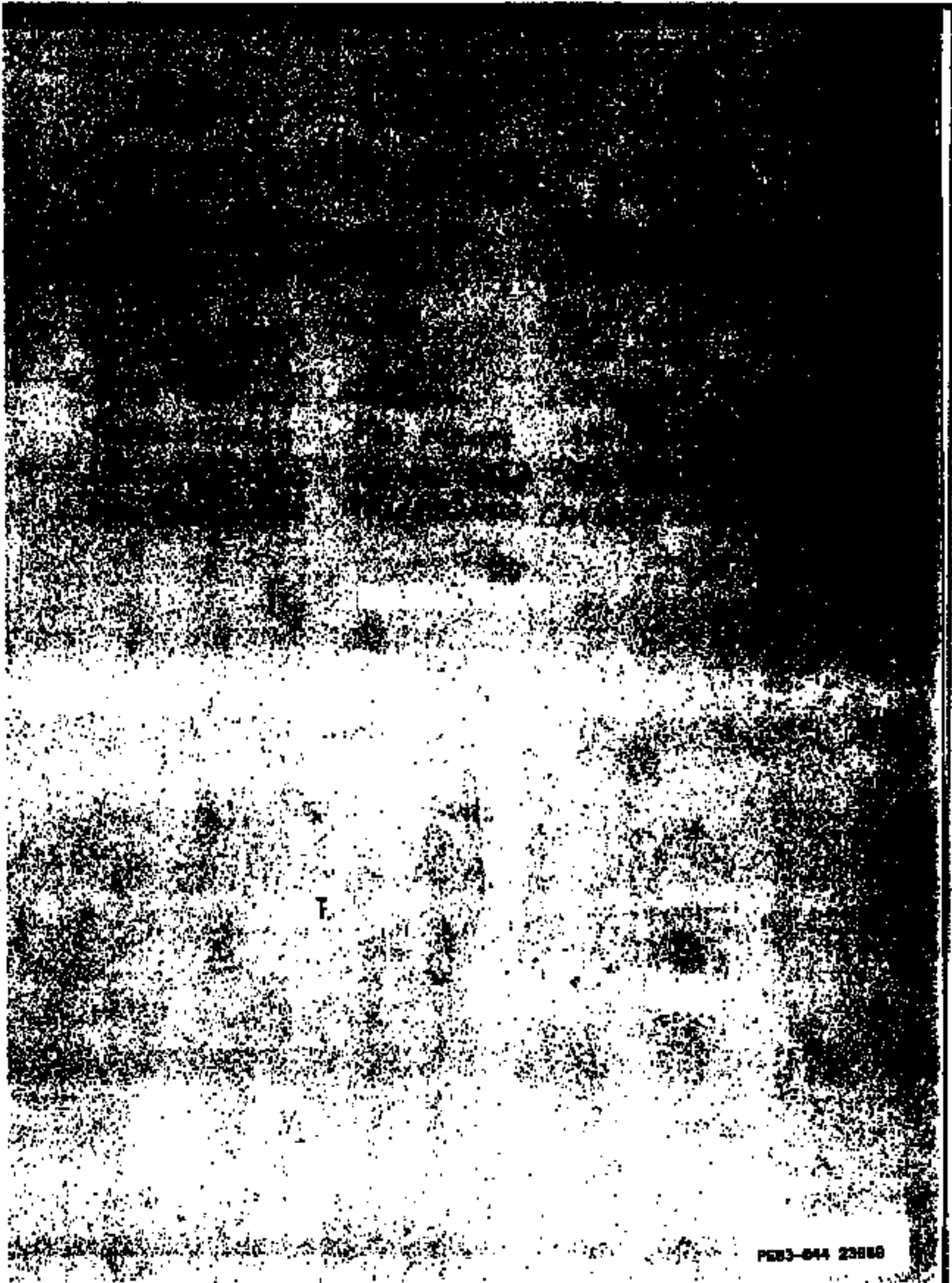
Just a reminder for tomorrow's Adjustable Pedal PMT meeting  
Room: PDC 2B-F13  
Time: 10:30 AM

- Agenda:
- 1) Update on motor transmission interfering with steering column intermediate shaft (Teleflex)
  - 2) New hub panel attachment (Collins & Aikman, Teleflex)
  - 3) ETC connector (Nayeema Rahman, EESE)
  - 4) Current brake mounting bracket dimension and tolerance (Teleflex)
  - 5) Parts

Regards  
Peter Huang  
F-Super Duty Truck, Brake Design  
Ph. 313-694-1877, Fax 313-317-2349

*Memory model.*





FEB-64 2388

## APPLICATION INFORMATION FOR NEW OR EXISTING CONNECTORS

*Note: Identification of connector systems must be secured from AVT EDS Subsystems and Components - Connector Section prior to program approval. SELECTED DESIGN MUST MEET SDS STANDARDS.*

①	<b>Requester Information</b>
	Requester: Peter Hwang Phone: (313) 594-1877 Date Submitted: 9-30-1999 Requesting Division/Department: _____
②	<b>Program/Budget Information</b>
	Program Name: Adjustable pedal Concern Number: e10947275 Program Authority: Approved Contact: Syed Shahab Phone: 390-9195 Vehicle Line/Year: F131/II137 2001 MY Total Budget: 2.2m Development: _____ Production: _____ Volume 19 : _____ 19 : _____ 2000: 190,000 2001: 190,000 2002: 190,000 2003: 190,000 Concept Drawing Due Date: 9/21/1999 Release Drawing Due Date: 10/10/1999 Pre-production Parts Due Date: 9/30/1999 Production(MRP) Due Date: 8/10/2000
③	<b>Connector Information</b>
	Connector Location: Under IP Water Zone (I-VIII): _____ Special Package Restrictions: _____ Connector Form: In-Line Direct-Connect ( Header Lead Frame Electro-mechanical ) Fuse Panel Junction Block Power Distribution Box: _____ Number of Circuits: _____ Max.'m/Min.'m Wire Size: _____ / _____ Min.'m Open Circuit Voltage: _____ Min.'m Current (Inrush current): _____ Steady State: _____ Min.'m Current (Worst Case Operating Current): _____ Circuit Fuse Rating: _____ Next Assembly Part Number (ex: W/A Part No., Device Part No.): _____ Temperature (Low: _____ High: _____) Sealing Requirements: Water Impact _____ Pressure/Vacuum _____ Vibration (Peak): G's and Frequency (Power Spectral Density Graph) _____ PBD Product Specific Requirements: (Please use attachments if required) _____
<b>FOR CONNECTOR SECTION USE ONLY</b>	
Recommended Connector System/Family Name (ex: Car 1, sealed) _____	
Application No. _____	
<b>Recommendations</b>	
New Connector Required: Yes _____ No _____	
Existing Connector Number/Description: _____	
Connector Mating Part Number: _____	
Terminal Type (Design Name): _____	
Plating: Gold _____ Tin _____ Other _____	
Comments: _____	
Connector Application Engineer: _____ Date: _____	
Connector Design Engineer: _____ Date: _____	
Design Engineer Supervisor: _____ Date: _____	
Selected Supplier: _____ Phone: ( ) _____	

Form Format Approved By: Vasilios Dionysopoulos  
[signed Vasilios Dionysopoulos 4/1/98]

Page 1 of 1

Form Format Prepared By: Michael Nikifurk  
rev [04]: 01-Apr-98  
c:\wcom-grp\app4.doc

PE83-844 23670

**Huang, Peter (P.J.)**

**From:** Huang, Peter (P.J.)  
**Sent:** Tuesday, October 12, 1999 4:11 PM  
**To:** 'Sandra.Nedzdek@nicca.com'; Farrah; Roseman, Barbara (B.M.); Alhear Salem; Bauckhaere, Philip; Campbell, Steve; D'Amico, Nino; Dennis Warner; engelgau; Hess, Jerry; Huang, Peter (P.J.); Ikkia, Isak; Liederman, Keith (KE); Mohler, William (W.E.); Rahman, Nayeema; Sibthorp, Dan (D.); Sitarapas, Don (D.C.); Sorin Stancu; Susalla, Leon; tigre  
**Subject:** Adjustable Pedal

Just a reminder for tomorrow's Adjustable Pedal PMT meeting (Wed. 10:30 am at PDC 2B-F18),  
the agenda will focus on electrical parts

- 1) ETC connector and pin out information (Can Teleflex change the tool to fit the connector?) *Sub 1*
- 2) Electrical motor connector (need pin out information and connector part #, is it the same as 99 Navigator part?)
- 3) Fill the transmittal information for electrical PMT

Teleflex, please have your electrical engineer attend the meeting so he can provide the information, answer electrical folk's question.

Regards  
Peter Huang  
F-Super Duty Truck, Brakes Design  
Ph. 313-594-1877, Fax 313-317-2349

*motor curve*

*2002 memory modal*

*Design Review*

**Huang, Peter (P.J.)**

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**From:** Huang, Peter (P.J.)  
**Sent:** Tuesday, October 12, 1999 4:11 PM  
**To:** 'Sandra.Nedziak@kelcoa.com'; Farrell; Roosenen, Barbara (B.M.); Alhear Salem; Bouckelaers, Phil; Campbell, Steve; D'Amico, Nino; Dennis Warner; engelgauz Hess, Jerry; Huang, Peter (P.J.); Kds, Isak; Lladonnan, Keith (K.E.); Mohler, William (W.E.); Rahman, Nayeem; Sibthorp, Dan (D.); Silfverpa, Don (D.C.); Sorin Stancu; Susella, Leon; Iqbal  
**Subject:** Adjustable Pedal

Just a reminder for tomorrow's Adjustable Pedal PMT meeting (Wed. 10:30 am at PDC 2B-F13);  
the agenda will focus on electrical parts

- 1) ETC connector and pin out information (Can Teleflex change the tool to fit the connector?)
- 2) Electrical motor connector (need pin out information and connector part #, is it the same as 99 Navigator part?)
- 3) Fill the transmittal information for electrical PMT

Teleflex, please have your electrical engineer attend the meeting so he can provide the information, answer electrical folk's question.

Regards  
Peter Huang  
F-Super Duty Truck, Brake Design  
Ph. 313-584-1877, Fax 313-317-2349

**Huang, Peter (P.J.)**

---

**From:** Huang, Peter (P.J.)  
**Sent:** Tuesday, October 12, 1999 4:11 PM  
**To:** 'Sandra.Nedziela@alcoa.com'; Farrah; Roseman, Barbara (B.M.); Athor Salent; Bueckelers, Philip; Campbell, Steve; D'Amico, Nino; Dennis Warner; engelma; Hess, Jerry; Huang, Peter (P.J.); Hild, Isaac; Linderman, Keith (K.E.); Mohler, William (W.E.); Rahman, Nayana; Stohorp, Don (D.); Sillanpaa, Don (D.C.); Sorin Stancu; Susala, Leon; Tghe  
**Subject:** Adjustable Pedal

Just a reminder for tomorrow's Adjustable Pedal PMT meeting (Wed. 10:30 am at PDC 29-F13), the agenda will focus on electrical parts

- 1) ETC connector and pin out information (Can Teleflex change the tool to fit the connector ?)
- 2) Electrical motor connector (need pin out information and connector part #, is it the same as 99 Navigator part ?)
- 3) Fill the transmittal information for electrical PMT

Teleflex, please have your electrical engineer attend the meeting so he can provide the information, answer electrical folk's question.

Regards  
Peter Huang  
F-Super Duty Truck, Brake Design  
Ph. 313-584-1877, Fax 313-317-2349

MY2001 P131/U137 Adjustable Pedal Design Review

Agenda:

- 1) Introduction
- 2) CAD data review
- 3) Current Issues
  - Brake pedal may have interference with carpet and floormat
  - Current U137 finished panel has interference with pedal
  - Current instrument panel heat duct has interference with pedal
  - The adjustable pedal with BTC package requires a perforated hole on floor insulation, this means KTF need to punch the hole during assembly
  - Potential issue caused by vehicle crash test

ENTIRE PAGE  
CONFIDENTIAL

MY2001 F13L/U137 Adjustable Pedal Design Review

Agenda:

- 1) Introduction
- 2) CAD data review
- 3) Current Issues
  - Brake pedal may have interference with carpet and floor mat
  - Current U137 hushed panel has interference with pedal
  - Current instrument panel heat duct has interference with pedal
  - The adjustable pedal with ETC package requires a perforated hole on floor insulation, this means KTP need to punch the hole during assembly
  - Potential issue caused by vehicle crash test

step over high compared w/ fix pedal at  
different point

pedal travel difference between vacu / hydro

FCSD

Follow up - Carpet

hushed panel around the head duct



## FORD APQP OPEN ISSUES

Program: U137/P131

Description: Brake, Accel & ETC Adjustable Pedals

Program Manager: Elio Evangelista

P/N: 2C34 2450 EB (026T-G0128); 2C34 2450FB (026T-G0129); 2C34 9F836 CA (026T-G0133); 2C34 9726 CA (026T-G0132);  
2C34 9G662 AA (026T-G0142); 2C34 9G662 BA (026T-G0143)

Ford Engineer: Lisa Petrauskas

TFX Engineer: Greg Braniff

Account Manger: Conrad Niester

Issue #	Description	Date Opened	Responsible	Update / Status	Date Due	Date Closed
X 1	1PP Builds - need Alert written	1/23/01	G. Braniff L. Petrauskas	Need to write an Alert for 1PP builds. <i>Waiting for final Ford approvals (2/16/01)</i>	1/31/01	
2	FEU Build - PV testing - Need SRA & Alert	1/23/01	G. Braniff	Need to get SRA issued to cover prototype components on PV test parts	2/19/01	
3	Production Packaging	1/23/01	B. Escarino D. Nation T. Chems	Finalize packaging to new level and confirm packaging plan with KTP & Dearborn <i>Finalize packaging plans with Todd Chevna (315) 323-9800 &amp; Dave Nation (502) 339-3995</i> <i>Proposals submitted to Ford. Initial plans call for cardboard until final returnable complete and tested. Trials not scheduled until after FEU build.</i> <i>Packaging design sent out for review 2/7/01...</i>	TBD	
4	Run @Rate - FEU build	1/23/01	E. Evangelista	Propose plan for supporting 300 pc <i>Plan proposed to support this request</i> <i>Phil requesting that additional parts then proposed plan be run. Need to determine acceptable plan.</i>	2/2/01	
5	Lateral Lash test	1/23/01	B. Franklin M. Foreman	Verify that parts meet specification <i>Must perform and have ... build</i>	3/5/01	
6	APS motor - shipping	1/23/01	V.O. / ETP L. Petrauskas	Final up plans to cover ... by separate from APS unit <i>Motors will be shipped ... Containment C11157559</i>	1/31/01	1/31/01
7	Run @Rate-Full	1/23/01	M. Foreman	Need to firm exact date between ... 01 - 5/9/01 <i>Timeline revised - Date ...</i>	2/16/01	2/1/01
8	CC/SC list - ETC	1/23/01	G. Braniff B. Franklin	Provide CC/SC list on ETC program <i>List complete and submitted, need Ford engineering sign-off</i>	2/9/01	
9	Material Flow between Gas & Diesel parts	1/23/01	M. Foreman	Provide information of how Teleflex will keep separate the material flow between different components on Gas & Diesel parts	4/13/01	
10	Visual aids on line	1/23/01	M. Foreman	Ensure visual aids & "rabbit" present before line run.	4/13/01	
12	Control Plan - Finalize	1/23/01	B. Franklin	Finalize control plans prior to builds (need signatures by Ford Eng. & STA)	4/13/01	
13	ETC fixturing	1/23/01	M. Foreman	Complete fixturing for Etc assembly ... - going assembly next	1/24/01	1/24/01
14	APQP Status Form	1/23/01	E. Evangelista	Update status based on 1/23/01 ...	2/9/01	2/13/01
15	Accel bracket assy	1/31/01	G. Braniff	Provide (0 bracket assemblies (w/ ... metal inserts) for Ford torque testing		

REVISED BY: EEP

Author: Elio Evangelista  
Filename: U137\_2002\_APQP\_Open\_Issue.doc

Last printed: 02/27/01  
Last Updated: 02/27/01

Created on: 1/24/01  
Page 1 of 3

## FORD APQP OPEN ISSUES

**Program:** U137/P131  
**Description:** Brake, Accel & ETC Adjustable Pedals  
**Program Manager:** Elio Evangelista  
**P/N:** 2C34 2450 EB (026T-G0128); 2C34 2450FB (026T-G0129); 2C34 9F836 CA (026T-G0133); 2C34 9726 CA (026T-G0132);  
 2C34 9G662 AA (026T-G0142); 2C34 9G662 BA (026T-G0143)

**Ford Engineer:** Lisa Petrauskas  
**TPX Engineer:** Greg Braniff  
**Account Manger:** Conrad Niester

Issue #	Description	Date Opened	Responsible	Update / Status	Date Due	Date Closed
16	Motorassy	1/31/01	G. Braniff	Provide 10 motor assemblies (with fastening screws attached) and 10 motor brackets for Ford torque test. Parts & assembly instructions required, will supply by 2/26/01	2/9/01	2/27/01
17	DVP&R update	1/31/01	G. Braniff	Update the DVP&R with structural load testing	2/9/01	2/9/01
18	Noise testing w/o motor	1/31/01	G. Braniff B. Franklin	Provide plan on how noise test parts if motor assemblies are not part of brake assemblies Parts for 1PP will be noise tested and used as base line. Formal plan will be issued for production intent	4/13/01	
19	1PP support	1/31/01	E. Evangelista	Lisa is asking for 1PP support at KIP for following time period 3/19/01 thru 3/26/01 build support at KIP - Greg to support 3/19 - 3/20. Elio to support balance. 4/2/01 thru 4/6/01 Nova Audit - Will be available as needed 4/12/01 Management review - Elio to support		
20	Noise Testing - Status of 6 sigma	2/6/01	Rob Mundroff	Provide update to U137 team on status of the 6 Sigma efforts going on at Teleflex and how/what is/will be incorporated on this program Rob Mundroff will provide update on 3/6/01	3/6/01	
21	Noise testing of U137 program	2/6/01	B. Franklin M. Foreman	What is the plan on testing pedals for noise now that motor is shipped separate from pedals? Determine plan and present to Ford prior to 1PP build Parts for 1PP will be noise tested and used as base line. Formal plan will be issued for production intent	3/5/01	
	8D's on brake pivot, accel pivot binding	2/6/01	G. Braniff M. Foreman B. Franklin	Ensure that checks mentioned in 8D's are in place and working for 1PP build. These areas also must be covered in control plan used to support 1PP build	3/5/01	
	Update	2/6/01	G.	Send copy of DVP&R to Rich Stanton	2/9/01	2/9/01
	Verify torque per Ford req	2/6/01	G. M. Foreman	Verify that the motor design torque will meet the Ford specification of 3.2 +/- 0.5 Nm vs what Teleflex reported (3-5 Nm) Torque specified and confirmed by Greg will be 4.1 +/- .7 Nm	2/16/01	2/20/01
25	8D - missing grease on accel pivot	2/20/01	G. Braniff R. Carias B. Franklin	Provide 8D on how grease was missing on AP3 parts (2003 ETC) Investigate O.S. # shipped under and build instructions (prints, control plan) to determine how missed.	3/3/01	

P131-04 2449

Author: Elio Evangelista  
 Filename: U137\_2002\_APQP\_Open\_Issues.doc

Last printed: 02/27/01  
 Last Updated: 02/27/01

Created on: 1/24/01  
 Page 2 of 3

## FORD APQP OPEN ISSUES

Program: U137/P131

Description: Brake, Accel & ETC Adjustable Pedals

Program Manager: Elio Evangelista

P/N: 2C34 2450 EB (026T-G0128); 2C34 2450FB (026T-G0129); 2C34 9FB36 CA (026T-G0133); 2C34 9726 CA (026T-G0132);  
2C34 9G662 AA (026T-G0142); 2C34 9G662 BA (026T-G0143)

Ford Engineer: Lisa Petrauskas

TRX Engineer: Greg Braniff

Account Manger: Conrad Niester

Issue #	Description	Date Opened	Responsible	Update / Status	Date Due	Date Closed
26	Pedal effort curve	2/20/01	G. Braniff R. Curtis	Verify parts for 1PP in both 5° & 95° position that we meet curve.	3/10/01	
27	Screw - motor assembly	2/20/01	G. Braniff E. Evangelista	Investigate using Ford approved screw on motor assembly instead of current released one.	3/20/01	

FORD-044 25400

Author: Elio Evangelista  
Filename: U137\_2002\_APQP\_Open\_Issues.doc

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Created on: 1/24/01  
Page 3 of 3

## FORD APQP OPEN ISSUES

Program: U137/P131

Description: Brake, Accel & ETC Adjustable Pedals

Program Manager: Elio Evangelista

P/N: 2C34 2450 CB (026T-G0128); 2C34 2450DB (026T-G0129); 2C34 9F836 BB (026T-G0133); 2C34 9726 AB (026T-G0132);  
2C34 9G664 AA (026T-G0142); 2C34 9G66 AB (026T-G0143)

Ford Engineer: Lisa Petruskas

TFX Engineer: Greg Braniff

Account Manger: Conrad Niaster

Issue #	Description	Date Opened	Responsible	Update / Status	Date Due	Date Closed
1	1PP Builds - need Alert written	1/23/01	G. Braniff L. Petruskas	Need to write an Alert for 1PP builds.	1/31/01	
2	PV testing - Need SREA & Alert	1/23/01	G. Braniff	Need to get SREA issued to cover prototype components on PV test parts	2/19/01	
3	Production Packaging	1/23/01	E. Boscarino L. Petruskas	Finalize packaging to new level and confirm packaging plan with KTP & Dearborn	2/9/01	
4	Run @Rate - FEU build	1/23/01	E. Evangelista	Propose plan for supporting 300 pc build/Run@Rate for FEU build	2/2/01	
5	Lateral Lash test method	1/23/01	B. Franklin M. Foreman		2/26/01	
6	APS motor - shipping plan	1/23/01	V.O. /KTP L. Petruskas	Final up plans to cover shipping motor separate from APS unit Motors will be shipped separate - Ref Commitment C1137559	1/31/01	1/31/01
7	Rhinoplast Pull	1/23/01	M. Foreman	Need to firm exact date between 5/2/01 - 5/9/01 Timeline revised - Date is 5/9/01	2/16/01	2/1/01
8	CCSC list - ETC	1/23/01	G. Braniff B. Franklin	Provide CCSC list on ETC program	2/26/01	
9	Material Flow between Gas & Diesel parts	1/23/01	M. Foreman	Provide information of how Teledex will keep separate the material flow between diff. parts on Gas & Diesel parts	4/13/01	
10	Visual aids on line	1/23/01	M. Foreman	Ensure visual aids are present before line run.	4/13/01	
12	Control Plan - Finalize	1/23/01	B. Franklin	Control Plan to be finalized for builds (need signatures by Ford Eng. & STA)	2/12/01	
13	ETC factoring	1/23/01	M. Foreman	ETC factoring assembly - spring assembly next	2/12/01	
14	APQP Status Forum	1/23/01	E. Evangelista	APQP Status Forum - 1/24/01 meeting	1/24/01	1/24/01
15	Accel bracket assy	1/31/01	G. Braniff	Accel bracket assembly (with metal inserts) for Ford torque testing	2/9/01	
16	Motor assy	1/31/01	G. Braniff	Motor assembly (with fastening screws attached) and 10 motor brackets for Ford torque testing	2/9/01	
17	DVP&R update	1/31/01	G. Braniff	Update the DVP&R - drop testing & structural load testing	2/6/01	

F03-044 28191

Author: Elio Evangelista  
Filename: Customer\_APQP\_Open\_Issue.doc

Last printed: 02/02/01  
Last Updated: 02/02/01

Created on: 1/24/01  
Page 1 of 2

## FORD APQP OPEN ISSUES

**Program:** U137/P131

**Description:** Brake, Accel & ETC Adjustable Pedals

**Program Manager:** Elio Evangelista

**P/N:** 2C34 2450 CB (026T-G0128); 2C34 2450DB (026T-G0129); 2C34 9F836 BB (026T-G0133); 2C34 9726 AB (026T-G0132);  
2C34 9G664 AA (026T-G0142); 2C34 9G66 AB (026T-G0143)

**Ford Engineer:** Lisa Petrauskas

**TFX Engineer:** Greg Braniff

**Account Manger:** Conrad Niester

Issue #	Description	Date Opened	Responsible	Update / Status	Date Due	Date Closed
18	Noise testing w/o motor	1/31/01	G. Braniff B. Franklin	Provide a plan on how Teleflex will noise test parts if motor assemblies are not part of brake assemblies	2/16/01	
19	1PP support	1/31/01	E. Evangelista	Lisa is asking for 1PP support at KIP for following time period 3/19/01 thru 3/26/01 build support at KIP 4/2/01 thru 4/6/01 Nova Audit 4/12/01 Management review		

PBR-044 25492

Author: Elio Evangelista  
Filename: Customer\_APQP\_Open\_Issue.doc

Last printed: 02/02/01  
Last Updated: 02/02/01

Created on: 1/24/01  
Page 2 of 2

## Advanced Product Quality Planning Status Report

Date: 01/16/01  
 Review No.: 8  
 Diamond Point:

Supplier	Telstar Automotive Inc.		
Location	Kendalville, IN		
Supplier Code	TD710		
Risk Assessment	New:    Site <input checked="" type="checkbox"/> Technology <input checked="" type="checkbox"/> Process <input type="checkbox"/>		
Other Risks			

Program	U137 - Emission
Model Year	2002
Lead Part No.	2C34-2480-AE/RE & 2C34-2480-CA/DA
Part Name	Adjustable Pedal - Brake Gas / Diesel
Notice Level	
User Plan(s)	Kentucky Truck

Team Members	Company/Title	Phone/Fax
Elio Evangelista	Telstar - Program Manager	(248) 616-5104 / (248) 616-5810
Bill Teller	Telstar - Product Engineer (APB)	(248) 616-3843 / (248) 616-5810
Rick Carles	Telstar - Prototype Coordinator	(219) 349-1858 / (219) 349-1853
Bill Teller	Telstar - Engineering Manager	(248) 616-3843 / (248) 616-5810
Conrad Nester	Telstar - Account Manager	(248) 616-3135 / (248) 616-5810
Ben Franklin	Telstar - Quality Engineer	(219) 349-1888 / (219) 349-1883
Mike Foreman	Telstar - Manufacturing Engineer (APB)	(219) 349-1856 / (219) 349-1853
Dave Bistrout	Telstar - Manufacturing Engineering Manager	(219) 349-1858 / (219) 349-1853
Bill Kirkland	Telstar - Quality Manager	(219) 349-1888 / (219) 349-1843
Ed Scorsino	Telstar - Materials Manager	(219) 349-1883 / (219) 349-1883
Lisa Polonsky	Ford - Release Engineer	(313) 390-8070 / (313) 317-4876
Phil Burkhardt	Ford - Engineering Supervisor	(313) 317-2349 / (313) 317-2349
Doug Vail	Ford - Supplier Quality	(313) 248-3278 / (313) 337-5383

Build Level	Material Required Date	Quantity	Concurred		P.I.S.Y %	P.I.P.C. %
			No. SCs	No. CCs		
CP	07/28/00	20	3	0		
PPAP	08/04/01	500	3	0		
Job #1	07/16/01	885	3	0		

PQB-044 2002

APQP Elements	GYR Status	Focus Element Rating	Program Need Date	Supplier Timing Date	Closed Date	Champion Initials	Remarks or Assistance Required
1) Sourcing Decision	G					CN / JS	
2) Customer Input Requirements	G					LH / LP	
3) Design FMEA	G	3	05/15/00	05/15/00	05/15/00	LH / LP	
4) Design Review(s)	Y		On Going	On Going		LH / LP	
5) Design Verification Plan	Y	3	05/16/00	03/15/01		BT / LP	Per new design level
6) Subcontractor APQP Status	G		On Going	On Going	10/10/00	EE	
7) Facilities, Tools, and Gages	Y		12/09/00	04/12/01		MF / DB	New tooling due to new design level
8) Prototype Build Control Plan	G	0	03/21/00	05/16/00	09/01/00	RCLP	
9) Prototype Build - CP MRD	G		03/21/00	07/26/00	05/01/00	RC	
10) Drawings and Specifications	Y		11/09/00	10/30/00	01/24/01	BT / LP	
11) Terms Feasibility Commitment	G					CFT	
12) Manufacturing Process Flow Chart	-Y	3	11/21/00	02/28/01		MF / DB	Per new design level
13) Process FMEA	Y	2	11/21/00	03/29/01		MF / DB	Per new design level
14) Measurement Systems Evaluation	Y		12/14/00	04/05/01		MF / DB	Per new design level
15) Pre-Launch Control Plan	-G	0	N/A	N/A		RC / RM	
16) Operator Process Instructions	Y	0	12/19/00	04/05/01		RM / MF	Per new design level
17) Packaging Specifications	Y		11/21/00	02/28/01		MF / MF	Need to review with KTP-6 p/n will be at production line
18) Production Trial Run	Y	0	01/16/01	05/09/01		MF / BK	
19) Production Control Plan	Y	0	12/19/00	04/06/01		BK	Will review after Ford on 11/29/00
20) Preliminary Process Capability Study	Y		12/19/00	04/12/01		MF / BK	Per new design level
21) Production Validation Testing	Y		02/06/01	05/03/01		MF / LH	
22) Production Part Approval (PPAP) - Full	R *		02/12/01	04/04/01		BK	
23) PPAP Part Delivery at MRPD (Full)	R *		03/06/01	05/04/01		BK / BF	

COMMENTS:

PENG-944 28494



UL17

ADJUSTABLE PEDAL SYSTEM  
 CUSTOMER ASSEMBLY DRAWING CONTROL CHARACTERISTICS  
 REF: Accelerator Pedal Assembly IC35-9726-AC

Item	Description	Category
1	Roll Pin Retention Force	Critical
2	E.S. Specification ES-YL14-2450-AA	Critical
3	Noise Cap Presence	Critical
4	Pedal Actuation	Significant
5	Pedal Pad Position	Significant
6	Throttle Cable Hole Position	Significant
7	Pedal Pad Position Lateral	Significant
8	Pedal Pad Lateral Free Play	Significant

REF: Accelerator Pedal Assembly IC35-9FB36-AC

Item	Description	Category
1	Roll Pin Retention Force	Critical
2	E.S. Specification ES-YL14-2450-AA	Critical
3	Noise Cap Presence	Critical
4	Voltage Output	Critical
5	Pedal Pad Position	Significant
6	Throttle Cable Hole Position	Significant
7	Pedal Pad Position Lateral	Significant
8	Pedal Pad Lateral Free Play	Significant
9	Pedal Actuation	Significant
10	Pedal Effort	Significant

REF: Brake Pedal Assembly IC35-2450-AC & IC35-2450-BC

Item	Description	Category
1	Roll Pin Retention Force	Critical
2	E.S. Specification ES-YL14-2450-AA	Critical
3	Noise Cap Presence	Critical
4	Extension Pin	Critical
5	Guide Rod Weldment	Critical
6	Lever Arm Weldment	Critical
7	Booster Pin Weld Strength	Critical
8	Lever Arm Weld Strength	Critical
9	Guide Rod Weld Strength	Critical
10	Pedal Pad Position Lateral	Significant
11	Pedal Pad Position Fore And Aft	Significant
12	Pedal Pad Lateral Free Play	Significant

Lisa Petruskas - Ford Release Engineer



ENTIRE PAGE  
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APQP Elements	GYR Status	Focus Element Rating	Program Need Date	Supplier Training Date	Closed Date	Champion Initials	Remarks or Assistance Required
1) Sourcing Decision	G					CM / JS	
2) Customer Input Requirements	G					LH / LP	
3) Design FMEA	G	3	05/15/00	05/15/00	08/16/00	LH / LP	
4) Design Review(s)	Y		On Going	05/15/00		LH / LP	
5) Design Verification Plan	Y	3	05/15/00	05/16/01		BT / LP	Per new design level
6) Subcontractor APQP Status	G		On Going	On Going	10/10/00	EE	
7) Facilities, Tools, and Gages	Y		12/09/00	04/12/01		MF / DB	New tooling due to new design
8) Prototype Build Control Plan	G	0	03/31/00	05/15/00	08/01/00	RCA/P	Need review and sign-off
9) Prototype Build - CP MRD	G		03/31/00	07/28/00	08/01/00	RC	
10) Drawings and Specifications	Y		11/09/00	10/30/00	01/24/01	LH / LP	
11) Team Feasibility Commitment	G					CFT	
12) Manufacturing Process Flow Chart	Y	3	11/21/00	11/21/00	02/26/01	MF / DB	Per new design level
13) Process FMEA	Y	2	11/21/00	11/21/00	02/26/01	MF / DB	Per new design level
14) Measurement Systems Evaluation	Y		12/14/00	12/14/00	04/05/01	MF / DB	Per new design level
15) Pre-Launch Control Plan	G	0	N/A	N/A		RC / RM	
16) Operator Process Instructions	Y	0	12/19/00	12/19/00	04/05/01	RM / MF	Per new design level
17) Packaging Specifications	Y		11/21/00	11/21/00	02/26/01	MF / BF	Need to review with KYP - 8 p/m will be production line
18) Production Trial Run	Y	0	01/16/01	01/16/01	05/09/01	MF / BK	
19) Production Control Plan	Y	0	12/19/00	12/19/00	04/06/01	BK	Per new design level
20) Preliminary Process Capability Study	Y		12/19/00	12/19/00	04/12/01	MF / BF	
21) Production Validation Testing	Y		02/05/01	02/05/01	05/03/01	MF / LH	
22) Production Part Approval (PPAP) - Full	Y		02/12/01	02/12/01	05/04/01	BK	
23) PPAP Part Delivery at MRD (Full)	Y		03/06/01	03/06/01	05/04/01	BK / BF	

COMMENTS:

PERI-044 28495