

EA02-025

FORD

10/27/03

BOOK 28 OF 61

PART 3 OF 5

BOX 23 OF 28

* Note printed by SREIMERS on 20 Sep 1999 at 11:29:24 *

From: PKLAAS --FORDNA1 Date and time 09/17/99 15:22:34
To: SREIMERS--DRBN007 Reimers, Steve (
Cc: CLJ2 --FORDNA1 Li, Chi (C.)" RKOWALC3--FORDNA1 Kowalczyk, Richa
ATERJIMA--FORDNA1 Terjimanian, Ars

FROM: Klaas, Pete (P.P.) WZ4(UTC -0400)
Subject: Brake switch analysis

I've reviewed the SOW you sent with Rick and Arsen (polymers and chemistry supervisors), and we believe we can handle the Part I (6-30 pieces for 'differences between early and late production-returns and current (new) production), except for the dimensional analysis. Bob Burt has reviewed with HMDO and the Whittaker building shop for their layout/dimensional capability. They're not equipped either, particularly the measurements under hydraulic pressure.

The Part II schedule for the 432 field returns is beyond our resources and probably not the best use of our personnel when we have other priorities to deal with. Estimate is probably 5-6 people for the month of October to do all the inspection and data recording.

We haven't done much outsourcing recently, so our external experience is limited, but you might discuss this with Climax Research in Farmington Hills or Bodykote/MatChen in Dearborn.
Call me if you have any questions.

Detroit Test Lab

P. F. Klaas
Ford Motor Co.
Room 220, Central Laboratory
313-322-1613, fax 313-322-1614
Internet: mailto:pklaas@ford.com

Send file

Quantify differences between groups.

Chemical composition of all components.

Physical properties

Electrical resistance between moving and stationary connector terminals

Leakage current from terminals to hexport (with and without brake fluid)

Fluid leakage — spec range met? Yes No.

Dissimilar metal voltage potential. (Useful?)

Flammability of plastic parts (hot wire ignition) — U.L. # ? 94

Actuation pressure

Reset pressure

Spring constant of spring arm — at bump

Spring constant of snap disk

Hysteresis of snap disk — Δ ACTUATION, STAY FOR

Elasticity of Kapton

Non-symmetric deformation of Kapton — delamination

Forces applied to

stationary terminal at contact

moving terminal at bump

ceramic pin at snap disk

snap disk at converter

converter at Kapton

terminal retaining forces

Dimensions

assembly height (0, 200, and 1400 psi)

base height

base crimp flange o.d., thickness

curviro seal flange o.d., thickness

crimp ring o.d. and height (0, 200, and 1400 psi)

sensor cup crimp o.d. and height (0, 200, and 1400 psi)

① spring arm to cup clearance (0, 200, and 1400 psi)

stationary contact to cup clearance (0, 200, and 1400 psi) *

converter button profile

converter button outside diameter

converter button clearance from top of washer (0, 200, 1400 psi)

washer hole profile

washer hole inside diameter (bottom of taper)

washer hole taper outside diameter

washer thickness

washer outside diameter

hex-port gasket groove i.d., o.d., depth

hex-port i.d. at Kapton interface

hex-port o.d., thickness at crimp flange

stationary terminal minimum cross-section

moving terminal minimum cross-section

Kapton profile (0, 200, and 1400 psi)

Transfer pin height above opening (0, 200, and 1400 psi)

Transfer pin length, o.d.

Sensor cup transfer pin opening i.d.

Delamination quantified

Notes From Mtg

w/Pete 9/17/99 ER

* estimate w/fluorescence

① affected by wear.
May be poor comparator.

3713 8203

Preliminary Examination

Record Tag number: Date: Ford Part # Sw Date Code:

Visual Inspection

General condition of Switch: Good Bad
Signs of leakage No Yes

Resistance :

Terminal to Terminal? Ohms
Terminal to Hexport? Ohms

Bin parts by date code in 2 week groups.

CAN THIS B2

Detailed Examination by tester

Record Tag number: Date

1 Visual Inspection

General condition of Switch: Good Bad
Signs of leakage into connector? No Yes
Mating connector seal? Foam Silicone
compression? Yes No
Kapton tear drop Yes No (record with fiber optic camera or equivalent)

What is compression?

2 Resistance :

Terminal to Terminal? Ohms (closed) Ohms (open)
Terminal to Hexport? Ohms (closed) Ohms (open)

3 Measure assembly height (0, 200, and 1400 psi) crimp ring o.d and height (0, 200, and 1400 psi)

4 Actuation pressure psi
Reset pressure psi
Leakage rate psi/minute

Document Moisture on KAPTON

Delam + Low Moisture

5 Open Crimp Ring (preserving date code and part number)

LOGIC DECISION ON WHICH TO OPEN?

6 Visual Inspection

Connector Leak? No Yes
Component wear? None Light Medium Heavy
BF leak? No Yes
Environment seal condition? Good Bad
If seal bad, Why?
Corrosion? Yes No
Pictures

7 Leak Test Sensor Asm. Pass Fail

- 8 Measure
base height
base crimp flange o.d., thickness
enviro seal flange i.d., o.d., height
sensor cup crimp o.d. and height (0, 200, and 1400 psi)
Force (at bump) to deflect spring arm to contact stationary terminal.
Transfer Pin stroke from 0 to 200 pis and from 200 to 1400 psi.
Transfer pin height above cup (0, 200, and 1400 psi)

- 9 Determine chemistry of corrosion if present.

- 10 Open Cup Crimp.

- 11 Diaphragm Inspection

	Nearest Fluid		Middle		Nearest Converter	
	Fluid #1	Converter	Fluid #2	Converter	Fluid #3	Converter
	Teflon	Kapton	Teflon	Kapton	Teflon	Kapton
Teflon stretch						
Teflon cracks						
Teflon delamination						
Kapton cracks						
Strain pattern						
Wear particals/discoloration						

- 12 Gasket Inspection

Present	Yes	No
Nibbles/missing material	Yes	No
Gasket thickness	inches	
	inches	
	inches	

- 13 Terminal Inspection

✓ Spring arm attached to moving terminal
 Spring arm contact attached to spring arm
 Spring arm appearance cracks discolored other? (explain)
 look for cracks at spring arm bend and at rivet attachment.
 Moving & Stationary terminal appearance cracks discolored other? (explain)
 look for cracks at the narrow cross-section on left and right of thru hole.
 ✓ Terminals held firmly
 Material loss/ transfer

- 14 Transfer pin Inspection O.D., length, irregular wear.

- 15 Package and Store

Sampling Plan
total sample parts count 432

Sample groups distribution

144	Vehicle-	Town Car
48	High Mileage VINs (> 100K)	
12	Manual Crimp parts date coded 1xxx.	
6	Southern Coastal states	
6	build date < Feb 1 1992	
6	Other states	
6	build date < Feb 1 1992	
36	Auto-crimp parts	
12	Hi-rate population date coded 2001 thru 2184 (Jan 1 1992 - June 30 1992)	
6	Southern Coastal states	
2	build date < Feb 1 1992	
2	Feb 1 1992 < build date < Nov 30 1992	
2	build date > Nov 30 1992	
6	Other states	
2	build date < Feb 1 1992	
2	Feb 1 1992 < build date < Nov 30 1992	
2	build date > Nov 30 1992	
12	Lo-rate population date coded 2185 thru 2304 (July 1 1992 - Oct 31 1992)	
6	Southern Coastal states	
3	Feb 1 1992 < build date < Nov 30 1992	
3	build date > Nov 30 1992	
6	Other states	
3	Feb 1 1992 < build date < Nov 30 1992	
3	build date > Nov 30 1992	
12	Outside population date coded 2305 thru xxxx (Nov 1 1992 - xxxx)	
6	Southern Coastal states	
3	Feb 1 1992 < build date < Nov 30 1992	
3	build date > Nov 30 1992	
6	Other states	
3	Feb 1 1992 < build date < Nov 30 1992	
3	build date > Nov 30 1992	
48	Median Mileage	(40K to 100K)
	same criteria as above	
48	Low Mileage	(< 40K)
	same criteria as above	
144	Crown Victoria	same criteria as above
144	Grand Marquis	same criteria as above

Number of samples in each criteria.

144 build date < Feb 1 1992
144 Feb 1 1992 < build date < Nov 30 1992
144 build date > Nov 30 1992
216 Southern Coastal states
216 Other states
108 Outside population date coded 2305 thru xxxx (Nov 1 1992 - xxxx)
108 Lo-rate population date coded 2185 thru 2304 (July 1 1992 - Oct 31 1992
108 Hi-rate population date coded 2001 thru 2184 (Jan 1 1992 - June 30 1992)
108 Manual Crimp parts date coded 1xxx.
144 High Mileage VINs (> 100K)
144 Median Mileage (40K to 100K)
144 Low Mileage (< 40K)
144 Town Car
144 Crown Victoria
144 Grand Marquis

Return part testing:

Purpose:

Establish remaining life of returned parts as prerequisite to changing the number of cycles required.

Procedure:

Impulse test Manual Crimp parts and Auto-Crimp parts and New parts to failure.

Test items:

New unused parts and recall parts with no evidence of leaking from a variety of mileage, TIS, and date codes shall be tested.

Purpose:

Establish leak paths

Procedure:

tbd... Dye penetrant tracing of leak paths???

Test items:

Recall parts that leak and failed new parts from above impulse tests.

Purpose:

Establish environmental contaminants by Region.

Procedure:

Perform chemical analysis of external and internal surface contaminants.

Test items:

Recall parts from each region of varying cleanliness.

Purpose:

Establish correlation of crimp height to leakage.

Procedure:

Document crimp height and diameter.

Test items:

All leakers and non-leakers and failed new parts from impulse test above.

Purpose:

Establish effect of impulse pressure cycle variation on life.

Procedure:

Perform impulse test at different impulse maximum and minimum pressure values and application rates.

Test items:

New unused parts and recall parts with no evidence of leaking from a variety of mileage, TIS, and date codes shall be tested.

Purpose:

Establish effect of low pressure cycling on durability.

Procedure:

Apply sine wave pressure with offset pressure above and below trip and reset pressure.

Test items:

New unused parts and recall parts with no evidence of leaking from a variety of mileage, TIS, and date codes shall be tested.

Purpose: Determine Root Cause of Fire Incident Peak

Work plan	Target completion
Receive parts, prelim exam, sort and store.	9/30/99
Draft analysis scope of work .	9/15/99
Distribute draft for adds/deletes.	9/15/99
Review and update draft.	9/17/99
Meet with Central Lab to discuss sow	9/20/99
Finalize analysis scope of work	9/21/99
Select samples for analysis.	10/1/99
Contract with outside agency if necessary	10/1/99
Deliver samples to tester	10/1/99
Monitor test analysis progress	10/25/99
Receive final test report	10/27/99
Review and publish conclusion	10/31/99

ENGINEERING ANALYSIS ASSOCIATES, INC.

30700 Telegraph Road, Suite 4568
 Bingham Farms, Michigan 48025-4528
 Tel: (248) 642-3232
 Fax: (248) 642-4558

INVOICE

TO: Ms. Martha Thomas Ford Motor Company Mail Drop #3NE-A 16800 Executive Plaza Dr. Dearborn, MI 48126-4207 Supplier No. K5FRA	INVOICE NO.
	F002A7
	DATE
	09-29-99
	DUE DATE
	10-29-99

CONSUMER AFFAIRS
 SECTION

'99 OCT -5 AM 1:49

RE: Purchase Order No: F02 P099 857191
 Requisition No.: RQ99020R01
 Bill To Location: 1718
 Ship To Location: Box 43858
 Period: 09/30/99

	<u>Hours</u>	<u>Total</u>
LINE NO. 001; ITEM NO. PLANT PART NO.-MISC. 900104 Service Associate time to conduct special underhood vehicle inspections at the request of Litigation Prevention. Rate of \$43.00 per hour.	25.00	1,075.00
TOTAL PROFESSIONAL SERVICES	25.00	\$1,075.00
ADDITIONAL CHARGES:		
Service Associate expenses (see attached detail)		1,534.56
EAA misc. office expenses (fax, phone, postage, etc.)		84.40
TOTAL EXPENSES		\$1,618.96
TOTAL AMOUNT OF THIS INVOICE	PLEASE PAY	\$2,693.96

Federal ID# 38-2795534
 F002A7-TMM

Handwritten initials

Handwritten: OK 8/5 10/21/99

3713 8210

Ford Customer Service Division
Customer Support Center
Fax: 313-845-5444

Regent Court
Mail Drop JNE-A 200
Dearborn, MI 48126

FACSIMILE TRANSMISSION FROM: MARTHA THOMAS
PHONE: 313-845-6164
4 PAGES (including cover sheet)

TO: Steve Reimers

FAX: 04145

SUBJECT: Inspection Backup

Please advise me of receipt and
if you have questions.

Consumer Affairs
has paid this but
wants to be reimbursed
from T402
Needs

Martha

X 56164

Journal entry

* General Ledger
Oper'n Loc'n
SA #
Acct Suffix

3713 8211

18/10/99 TUE 10:18 FAX 248242488
301-201-8790

EA ASSOCIATES

PAGE 01

EAA CIVILTY & EXPENSE REPORT (See Reverse Side For Instructions)

LOCATE CIVILTY NAME	IDS 248	ZONE/REGION
PROJECT NAME: FORD LINCOLN FIVE		CASEFILE NO.
PROJECT NO. + EXT: F002 A		OWNER

ACTIVITY	INVESTIGATION PERFORMED: ☐ AIRBAG ☐ ACCIDENT ☐ UNINTENDED ACCELERATION
	☐ REPEAT ☐ ASE ☐ FIRE ☐ OTHER
EXPLANATION: INSPECTION OF 1994 FORD FIVE PICK-UP	
Made Kansas. Inspect underfoot fire. Photographed, recorded vehicle. Write report.	

HOURS	DAY & DATE →	20.5.99	21.5.99					TIME AVAILABLE
	TRAVEL FROM (CITY)	Manly	Dandenong					☐ GREEN
	TO	Manda K. Manly						☐ YELLOW
	TO	Dandenong						☐ RED
EXPENSES	TO							TOTALS
	TRAVEL HOURS	10	12					22
	TOTAL HOURS	12	13					25
	AUTO MILES	24	24					48
	MILEAGE \$	6.72	6.72					13.44
	FUEL		18.00					8.00
	RENTAL CAR		32.22					32.22
	AIR FARE	652.35	652.32					1304.67
	LODGING	57.84						57.84
	MEALS	32.10	35.25					67.35
	AIR BAGGAGE TEST							
	PHONE & FAX							19.28
	FLM & DEVELOPING	4.25	12.25	14.53				12.77
	POSTAGE		26.00					26.00
	OTHER		16.00					16.00
	TOTAL EXPENSES	745.62	782.23	788.94				1534.56

STATE: LAO. Parking Manly Airport

Page # For Note	7071	Date	10/10/99
To	FACETS	From	Alan Halls
On	Ford	On	EAA
Phone	615-245-5627	Phone	615-245-5627
Fax	615-245-5627	Fax	615-245-5627

SEP 24 1999

09/24/99 FRI 14:18 [TEL/EX NO 1234] 0001

OCT 27 '99 12:29

313 845 5444

PAGE 02

3713 0213

F002A7 Invoice Worksheet**Invoice Period: 9/30/99***Ford Litigation Prevention Inspections*

Rec'd Date	SA Name	Begin Date	FEES		EXPENSES				
			Hours	Total	Mileage	Meals	Phone/Fax	Misc.	Total
09/30/99	Mullins, D.	09/30/99	25	\$1,075.00	\$21.10	\$47.85	\$0.00	\$1,425.65	\$1,534.55
Total Hours:			25						

Total Professional Fees (\$43.00/hr.): \$1,075.00

Service Associate Expenses: \$1,534.55

EAA Misc. Office Expense (fax, phone, postage, etc.): \$24.00

Total Invoice: \$2,633.55

9/28/99

Page 1 of 1

OCT - 27 '99 (WED) 12:29 CSC REGENT CT JSE

TEL: 313 845 5444

P. 002

LOGGING AND BOXING task.

Collect parts (RAC code FED S1) from Ford Warranty Return Parts Center.

Important....DO NOT SEPARATE YELLOW TAG FROM PARTS!!!

If yellow tag is missing, then add a tag with VIN, ODOM, and State from worksheet packaged with parts.

For each brake pressure switch record the following in an Excel spreadsheet file

(Part, *R.O. #*

1. 16 digit Yellow Tag number (or enter VIN and Odom miles and State)
2. 11 digit Part Number stamped on brake pressure switch.
3. 4 digit Date Code stamped on brake pressure switch following after part number
4. YES or NO, Resistance between terminals is less than 1 ohm.

Box parts in the following Date Code groups:

1. less than 1200.
2. 1281 to 1228.
3. 1229 to 1257.
4. 1258 to 1285.
5. 1286 to 1313.
6. 1314 to 1341.
7. 1342 to 2000.
8. 2001 to 2028.
9. 2029 to 2057.
10. 2058 to 2085.
11. 2086 to 2113.
12. 2114 to 2141.
13. 2142 to 2169.
14. 2170 to 2197.
15. 2198 to 2225.
16. 2226 to 2253.
17. 2254 to 2281.
18. 2282 to 2309.
19. 2310 to 2337.
20. 2338 to 3000.
21. 3001 to 4000.
22. 4001 to 9000.
23. 9001 to 9365.
24. unreadable.

5. ZIP CODE of
Repair location

6. Res. Stationary
to Hex part

7. Res. Move
to Hex part

8. HEAT DAMAGE

SAMPLE SELECTION task

Select a sample group of 432 parts with the following criteria from the above boxed parts:

1. All samples must have part number F2VC-9F924- AB or BB.
2. Vehicle line, odometer mileage, date code, region, and vehicle build date as shown below.

Town Car

High Mileage VINs (> 100K)

parts date coded < 2000

6 Southern Coastal states build date < Feb 1 1992

6 Other states build date < Feb 1 1992

parts date coded 2001 thru 2184 (Jan 1 1992 - June 30 1992)

Southern Coastal states

2 build date < Feb 1 1992

2 Feb 1 1992 < build date < Nov 30 1992

2 build date > Nov 30 1992

Other states

2 build date < Feb 1 1992

2 Feb 1 1992 < build date < Nov 30 1992

2 build date > Nov 30 1992

parts date coded 2185 thru 2304 (July 1 1992 - Oct 31 1992)

Southern Coastal states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Other states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

parts date coded 2305 thru xxxx (Nov 1 1992 - xxxx)

Southern Coastal states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Other states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Median Mileage (40K to 100K)

48 same criteria as High Mileage

Low Mileage (< 40K)

48 same criteria as High Mileage

Crown Victoria

144 same criteria as Town Car above

Grand Marquis

144 same criteria as Town Car above

total = 432 parts

ANALYSIS task

For 432 brake pressure switches record the following in an excel spreadsheet file.

External

1. 10 digit Yellow Tag number (if none, then enter VIN)
2. YES or NO, Condition of plastic base shows heat damage or melting.
3. YES or NO, Condition of electrical connector shows leakage.
4. YES or NO or missing, Mating connector shows signs of fluid leakage.
5. Foam or Silicone or missing, Mating connector seal.
6. YES or NO or missing, Mating seal shows compression mark.
7. YES or NO, Kapton shows delamination bubbles.
8. YES or NO, Kapton shows non-symmetric deformation.
9. Brake pressure switch height inches +/- 0.01
10. Crimp ring o.d. inches +/- 0.01
11. Crimp ring height inches +/- 0.01
12. Actuation pressure psi +/- 2
13. Reset pressure psi +/- 2
14. Leakage rate psi / minute (<62 psi / 30 seconds at 3000 psi)
15. Resistance between terminals ohms +/-0.1 ohm, @ 0 psi.
16. Resistance between terminals ohms +/-0.1 ohm, @ 200 psi.
17. YES or NO, Resistance from terminals to hex-port less than 10,000 ohm @ 0 psi
18. YES or NO, Resistance from terminals to hex-port less than 10,000 ohm @ 200 psi

Fluoroscopic examination (photograph items logged "Yes")

18. Yes or No, loose metal parts are present in base assembly
19. Yes or No, Spring arm is touching sensor cup
20. Yes or No, Spring arm shows cracks or material loss
21. Yes or No, Moveable terminal shows cracks or material loss
22. Yes or No, Stationary terminal shows cracks or material loss

ANALYSIS task (continued)

Internal

Carefully separate the base from the sensor by removing crimp ring, preserving the part number and date code. Bag each loose part individually and keep with Yellow Tag.

23. Connector Leak? No Yes
24. Component wear? None Light Medium Heavy
25. Brake Fluid leak? No Yes
26. Environment seal condition? Good Bad
27. If seal bad, describe condition.
28. Sensor Cup Corrosion? Yes No (if YES, provide photo and chemical composition)
29. Sensor cup crimp o.d.
30. Sensor cup crimp height
31. Force (apply at bump) to deflect spring arm to close contacts.
32. Transfer Pin stroke from 0 to 200 psi and from 200 to 1400 psi.
33. Transfer pin height above cup (0, 200, and 1400 psi)
34. Stationary/ Moveable terminal retention Loose Firm
35. Stationary/ Moveable terminal condition OK Discolored Corroded (if corroded, provide photo and chemical composition)

Carefully separate the hex-port from the sensor cup by opening the sensor cup crimp. Bag each loose part individually and keep with Yellow Tag.

36. Diaphragm Inspection - indicate presence of listed conditions for each side of each layer of Kapton.

	Nearest Fluid Fluid #1 Converter	Middle Fluid #2 Converter	Nearest Converter Fluid #3 Converter
	Teflon KaptonTeflon	Teflon KaptonTeflon	Teflon KaptonTeflon
Condition			
Teflon stretch			
Teflon cracks			
Teflon delamination			
Kapton cracks			
Strain pattern			
Wear particles/discoloration			
37. Gasket Inspection			
	Present	Yes	No
	Nibbles/missing material	Yes	No

Comparative Analysis task

Quantify differences between three groups: 1. 10 Parts from peak of claims reports population; 2. 10 Parts from end of recall population; 3. 10 New/ unused current production parts.

Forces applied (insitu) to

- stationary terminal at contact
- moving terminal at spring arm bump (0, 200, and 1400 psi)
- ceramic pin at snap disk
- snap disk at converter
- converter at Kapton
- terminal retaining forces

Dimensional Analysis

- assembly height (0, 200, and 1400 psi)
- spring arm to cup clearance (0, 200, and 1400 psi)
- crimp ring o.d and height (0, 200, and 1400 psi)
- stationary contact to cup clearance (0, 200, and 1400 psi)
- Transfer pin height above opening (0, 200, and 1400 psi)
- base height
- base crimp flange o.d., thickness
- enviro seal flange o.d., thickness
- sensor cup crimp o.d. and height (0, 200, and 1400 psi)
- converter button profile
- converter button outside diameter
- converter button clearance from top of washer (0, 200, 1400 psi)
- washer hole profile
- washer hole inside diameter (bottom of taper)
- washer hole taper outside diameter
- washer thickness
- washer outside diameter
- hex-port gasket groove i.d., o.d., depth
- hex-port i.d. at Kapton interface
- hex-port o.d., thickness at crimp flange
- stationary terminal minimum cross-section
- moving terminal minimum cross-section
- Kapton profile (0, 200, and 1400 psi)
- Transfer pin length, o.d.
- Sensor cup transfer pin opening i.d.

Purpose: Determine Root Cause of Town Underhood Fire Allegations

Work plan	Target completion
Receive parts, prelim exam, sort and store.	9/30/99
Draft analysis scope of work .	9/15/99
Distribute draft for adds/deletes.	9/15/99
Review and update draft.	9/17/99
Meet with Central Lab to discuss sow	9/20/99
Finalize analysis scope of work	9/21/99
Select samples for analysis.	10/1/99
Contract with outside agency if necessary	10/1/99
Deliver samples to tester	10/1/99
Monitor test analysis progress	10/25/99
Receive final test report	10/27/99
Review and publish conclusion	10/31/99

10/19/99

Observe

Before opening cup

- Pre-crimp marks & position (12:00?)
- Contamination settling points (low point)

Make index mark at ~~start of threads~~
or index mark relative to hex edge

NOTCHED HEX AT START OF THREAD

CAP HEX POST CUT CUP AT START OF

CUT CUP AT FLATS OF HEX WITH HACKSAW.

#5 • PRE CRIMP MARKS @ START OF THREAD

• New kit part no settling marks (low point)

#1 • Low point is 9:00 from thread start
viewed from connector end

• Pre-crimp marks @ start of thread

R3 # 86928-51

10/10/99

SELECTED A DRY SAMPLE

• No Low point

• ~~Pre-crimp~~ Pre-crimp @ 11 o'clock from START OF THREAD

- Found fluid outside gasket (drops of clear)

- GASKET @ KAPTON SURFACE WET

10/18/99

#2 • Pre-crimp @ 1:00

• low point @ 4:00

3713 8224



22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS

Sensor Cup opening

Notch Threads @ Start

Notch ~~at~~ @ Start of Threads near PIN opening

CAP ~~Notch~~

Cut Cap using Flats as guide

Band out cup at position 1, 4, 2, 5

Hold cup to Hex to prevent movement

Cut off part of 3 & 6 ^(use Drill) ~~to disengage hex from cup~~

Mark hex, washer & cup alignment

Remove Hex part from above cup - do not dislodge Kapton

Mark Washer @



Brake Switch Testing Checklist:

9903244

Sample ID		1	2	3	4	5	6	7	8	9	10	11
Field Information	01 Log Field Info into Swt. Log.xls	■	■	■	■	■	■	■	■	■	■	■
	Prefix # (on part)	F2AC	F2AC	F2VC	F2VC	F2VC	F2VC	F2VC	F3TA	F2VC	F3TA	F2VC
	Suffix # (on part)	AA	AA	AB	BB	AB	AB	AB	AA	BB	CA	AB
	Date Code:	02263	02262	2052	12758	9133C	02036	2008	2030	1280A	3298	2104
	BO Number	375417-A	083334-01	080805-51	108857-01	058191-02	080805-51	097205-01	090512-51	023582-52	KA05363	23237-01
Spring Term	02 Photograph Switch	■	■	■	■	■	■	■	■	■	■	■
	03 Unusual external visuals?	Melted	Melted	No Base	Melted	Ex. Melt	Melted	None	Base Cracks	None	Melted	Melted
	Thread Start position	12:00	7:00	NA	8:00	9:00	5:00	4:30	1:00	7:00	5:00	4:00
	04 Check: Connection engagement? X-ray, if appropriate	■	■	■	■	■	■	■	■	■	■	■
Switch + Connector Assembly	05 Full connector Engagement?											
	06 Check: wire gray seals											
	07 Install Test Switch on Stand											
Switch External Unpressurized	08 Spring to Stationary Terminal, Ω	16 ?	(open)	NA	(open)	(open)	(open)	175K	NA	50K	(open)	~100K
	09 Stationary Terminal to Hexport, Ω	2.5 ?	100	NA	91	(open)	(open)	3K	NA	80K	(open)	~15-20
Switch External Pressurized	10 Base to Hexport, Ω	10 ?	(open)	NA	(open)	(open)	(open)	440K	NA	50K	4	~100K
	11 Switch Closing Pressure, psig											
	12 Leakage, Proof Test @ 500psi	Leaks	No Leak	No Leak	No Leak	No Leak	No Leak	No Leak	No Leak	No Leak	No Leak	Leaks
	13 Repeat Steps 17 - 20 @ 180 psig											
	14 Spring to Stationary Terminal, Ω											
	15 Spring Terminal to Hexport, Ω											
Switch	16 Stationary Terminal to Hexport, Ω											
	17 Base to Hexport, Ω											
	18 Remove aluminum crimp ring											
Techniques	19 Examine/Photo revealed surfaces											
	20 Remove Cup											
	21 Examine/Photo revealed surfaces											
Positions	22 base, contacts, terminals											
	23 cup, hexport, seals, etc.											
	24 Metallographic analysis, contacts Corrosion or arcing evidence?											
	Pre-crimp position	12:00	1:00	11:00	11:00	12:00	11:30	11:00	? Corr.	11:00	1:30	11:00
	Low point position	9:00	4:00	8:00	none	none	10:30	9:00	11:00	6:00	? Trk	?

Positions relative to start of thread @ 12:00 viewed from connector end.

3713 8226

Brake Switch Testing Checklist:

9903244

Sample ID		1	2	3	4	5	6	7	8	9	10	11
Field Information	01 Log Field Info into Swt. Log.xls	■	■	■	■	■	■	■	■	■	■	■
	Prefix # (on part)	F2AC	F2AC	F2VC	F2VC	F2VC	F2VC	F2VC	F3TA	F2VC	F3TA	F2VC
	Suffix # (on part)	AA	AA	AB	BB	AB	AB	AB	AA	BB	CA	AB
	Date Code	02263	02262	2052	1275B	9133C	02036	2008	2030	1280A	02298	2104
	ECI Number	375417-A	093338-01	060865-51	108457-01	058191-02	068853-51	097205-01	096512-51	023582-52	KA85383	23257-01
Relative to base end	02 Photograph Switch	■	■	■	■	■	■	■	■	■	■	■
	03 Unusual external visuals?											
	Thread Start position	12:00	7:00	NA	8:00	8:00	5:00	4:30	1:00	7:00	5:00	4:00
	04 Check Connection engagement? X-ray, if appropriate	■	■	■	■	■	■	■	■	■	■	■
Switch + Connector Assembly	05 Full connector Engagement?											
	06 Check wire girth seals											
	07 Install Test Switch on Stand											
Switch External Unpressurized	08 Spring to rod Terminal, Ω	18 ?		NA				175K	NA	50K		~100K
	09 Stationary Terminal to Hexport, Ω	2.5 ?	100	NA	91			3K	NA	80K		~15-20
	10 Switch Opening Pressure, psig	10 ?		NA				440K	NA	50K	4	~100K
Switch External Pressurized	11 Switch Closing Pressure, psig											
	12 Leakage, Proof Test @ 500psi	Leaks	No Leak	No Leak	No Leak	No Leak	No Leak	No Leak	No Leak	No Leak	No Leak	Leaks
	13 Repeat Steps 17 - 20 @ 180 psig											
	14 Spring to Stationary Terminal, Ω											
	15 Spring Terminal to Hexport, Ω											
	16 Stationary Terminal to Hexport, Ω											
	17 Base to Hexport, Ω											
Switch	18 Remove aluminum crimp ring											
	19 Examine/Photo revealed surfaces											
	20 Remove Cup											
	21 Examine/Photo revealed surfaces											
Techniques	22 base, contacts, terminals											
	23 cup, hexport, seals, etc.											
	24 Metallographic analysis, contacts Corrosion or arcing evidence?											



Request for Central Laboratory Service

15000 Century Dr., Dearborn MI 48120-1267 Phone: (313) 32-21676 FAX: (313) 32-21614

All shaded areas must be filled in to process your request

Administrative Use Only

Laboratory Number: 9903244 Date: 10/1/99

Your Name (Send report to)	Telephone	PROFS ID	FAX
Steve Reimers	39 03286	SREIMERS	35 04145
Secondary Contact	Telephone	PROFS ID	FAX
FRED PORTER		FPORTER	11

Room No./Mail Drop/PO Box	Department/Activity	Building	Location Code	Dept. #	Work Task # (For 5100 Loc. Only)
BE008/5011	ENG/Power & Controls	AVTS	5100	7402	JPOAP

Total # of Samples	Sample Handling	Disposition after test	Disposition after 30 days	TOR/CASE	Source	Supplier Code
10	☒ Return after test					
Part/Material Name	Sample Identification (Continue below if needed)	Part Number (If any)	Material Specification (If any)	CPSC Code	Supplier	
Brake Pressure Switch	(See below)	9F924	N/A	06.06.06	TI	

Nature of Investigation/Specific Tests Requested (Check all that apply)		Requester Info. Box (For requester use)
☐ Production/Plant problem ☐ Failure Analysis ☐ Legal ☐ Specification Compliance	☐ Perform Tests as in Lab No. ☐ Photograph (Describe below) ☐ Use Specification as a guide ☒ Other (Describe below)	
Stop testing upon failure?	Does this support CAE testing? (If "Yes", what is the expected outcome?)	Do you need to know your CL contact and timing?
☒ No ☐ Yes	☒ No ☐ Yes	☒ Yes

Additional Sample Information/Testing Requirements

EVALUATE PER ATTACHED EVALUATION PROCESS

ANALYST ID

RO#

- 1 375417-A
- 2 093338-01
- 3 060865-51
- 4 108857-01
- 5 056191-02
- 6 088653-51
- 7 097205-01
- 8 086512-51
- 9 023582-52
- 10 VIN# ~ KA [REDACTED]

Report	
Date you would like report: 10/22/99 Date you want how report: 10/22/99	Format (Check all that apply): ☐ FAX preliminary results ☐ FAX hard written ☐ Mail typed report ☐ FAX typed report ☐ Mail hard written ☐ Electronically transfer report ☐ Please preliminary results

For information about services or assistance in completing this form please refer to the Central Laboratory WEB page. www.gte.ford.com/central/index.htm
 Laboratory Number and date cannot be assigned without receipt of samples.
 Samples will be disposed of after 30 days unless otherwise indicated above.

ng activities to retain Copy #3 in permanent file; attach copies #1
2 to material and hand to guard at plant gate or building exit.

CSC 24

Non-Chargeable Material
or Personal Property Pass

DATE 10/1/99

NAME:

BASE FIRM

DEPT. & NO.

FROM

Steve Reimers
T402

WITH THE FOLLOWING:



Company Property



Personal Property

DESCRIPTION:

10 - Brake Pressure Switches
- 9F924-

Authorized
Releasing
Signature

TO:

FROM:

LOCATION

Receiving
Signature

Pete Klaas
Central Lab

24249

DESIGN 2530
REV TO

Copy 1 - ADDRESSEE'S COPY

3713 8229

Ford

Request for Central Laboratory Service

13000 Century Dr., Dearborn MI 48120-1267 Phone (313) 32-2166 FAX (313) 32-21614

All shaded areas must be filled in by customer (not required)

LABORATORY REPORT

Your Name (Send report to)	Telephone	PROFS ID	FAX
Steve Reimers	39 03286	SREIMERS	39 04145
Secondary Contact	Telephone	PROFS ID	FAX
FRED PORTER		FPORTER	11

Send Report To		Mail To	
Room No./Mail Drop/PO Box	Department/Activity	Building	Location Code Dept. # Work Task # (For 5100 Loc. Only)
3E008/5011	ENG/Power & Chassis	AUTS	5100 T402 J00AP

Total # of Samples	Sample Handling	TOX/CASE	Source	Supplier Code
10	☒ Return after test ☐ Dispose after test ☐ Dispose after 30 days			

Part/Material Name	Sample Identification (Choose below if needed)	Part Number (If any)	Material Specification (If any)	CPSC Code	Supplier
Brake Pressure Switch	(See below)	9F924	N/A	06.06.06	TI

Nature of Investigation/Specific Tests Required (Check all that apply)			Requester Info. Box (For requester use)
☐ Production/Plant problem	☐ Perform Tests as in Lab No.		
☐ Failure Analysis	☐ Photograph (Describe below)		
☐ Legal	☐ Use Specification as a guide		
☐ Specification Compliance	☒ Other (Describe below)		
Stop testing upon failure?	Does this support CAB testing? (If "Yes", what is the expected outcome?)	Do you need to know your CL contact and timing?	
☒ No ☐ Yes	☒ No ☐ Yes	☒ Yes	

Additional Sample Information/Testing Requirements

EVALUATE PER ATTACHED EVALUATION PROCESS

SAMPLE ID.

RO#

1	375417-A	2.25	
2	093338-01	2.25	
3	060865-51	2.05	10.2.5
4	108857-01	12.5	
5	056191-02	11.5	JIM Lengyel 47487
6	088653-51	2.25	
7	097205-01	2.25	
8	096512-51	2.25	
9	023582-52	2.25	
10	VIN# ~ KA [REDACTED]	2.25	
11	232571-01	2.25	

INITIAL ROUTING

Metallurgy/Mechanical (313) 32-21613

Chemistry (313) 33-78277

Polymers, Coatings & Corrosion (313) 39-46698

Date you would like report	10/22/99	Format (Check all that apply)	
Date you must have report	10/22/99	☐ FAX preliminary results	☐ FAX hard written
		☐ FAX typed report	☐ Mail hard written
			☐ Mail typed report
			☐ Electronically transfer report
			☐ Phone preliminary results

For information about services or assistance in completing this form please refer to the Central Laboratory WEB page. [www.go.ford.com/central/home.htm]
 Laboratory number and date cannot be assigned without receipt of samples.
 Samples will be disposed of after 30 days unless otherwise indicated above.

VEHICLE DATA

VIN # 1LJLH01100P
 YEH. 1993 - TOWN CAR
 Assy Plant NIXON
 Eng. N 4.6L ROM 8
 Eng. Plant PFM.8V5FD2
 Detail Buick JTY
 Eng. Plant -
 Calt. alt. N
 Trans. P AOD-E
 Axle 1 Lock-H
 BLD11/24/92 wop12/08/92

TAG # 000904423 - 9



WARRANTY DATA

Warranty 002918-A
 Pwr # 1993 - 00000000
 KIT - BUREAU REPAIR INC
 To -
 CCO -
 Tr/Acc 11.15 Alt 25.00
 L/Wht 48.27 Lr 24.34
 Wht 4.00 Cms 0.00
 TOWN CAR
 BUREAU REPAIR INC

DIA. 00293-88 NO # 062918-A
 PART # 56052 AA QTY. 001
 TAG # 9



DIA. 00293-88 NO # 062918-A
 PART # 56052 AA QTY. 001
 TAG # 9

VEHICLE DATA

DEALER DATA

P.A. 80200-
 Dealer
 Phone
 912-855-4087

Branson Ford, Inc.
 230 Highway 49 North
 Byron GA 30609

Shipping

Branson Ford, Inc.
 230 Highway 49 North
 Byron GA 310080729

WPPC USE ONLY

FROM 000012969 RAC-FEB-51

FORD MOTOR COMPANY
 AL LEESE
 15090 COMMERCE DRIVE
 DEARBORN, MI 48120
 (0) BOLD FOR PICKUP X08877

QUALITY REVIEW: LEVEL 1

Part# XN72 96652 AA Qty 001

Emp.# XN7390652AA

Supp: 09XYA

DEARBORN, MI
 TAG # 005



DEALERS INSTRUCTIONS

DO NOT DETACH

Ship By 10/06/99

Part# XN72 96652 AA Qty 001

RO # 062918-A Date 09/16/99

ATTACH COMPLETE TAG TO PART AND SHIP
 TO: (PREPAID FREIGHT NO AIR FREIGHT)
 FORD CUSTOMER SERVICE DIVISION
 WARRANTY PARTS RETURN CENTER
 15090 COMMERCE DRIVE NORTH
 DEARBORN MI 48120

3713 8233

VEHICLE DATA

VIN # 1LNLMB1MPT
 VEH. 1993 - TOWN CAR
 Assy Plant WIXOM
 Eng - M 4.6L 200 S
 Eng Family PFM4.6V5FD2
 Decal Bldg JJY
 Eng. Plant -
 Cntr. MIL - M
 Trans. - P AOD-E
 Axle 1 Lock-B
 BLD09/25/92 WBD 10/10/92

TAG # 006560106 - 9

WARRANTY DATA

RO# 051062-50 Control # J17WF9301
 RO Date 05/15/99 PD Date 09/17/99
 Odorn 106330 M TCode 99515
 Part # XM7Z 96552 AA Qty 001
 KIT - BRAKE REPAIR WCC

CC -

OCC -

TR Price 11.19 Allow 290.00 0.00
 L/Rate 61.20 Lbr 30.60 TR 47.91
 Min. 6.12 Core 0.00
 TECH ID #008057
 RECALL

WCCALL



DLR 12828- RO # 051062-50
 PART # 96552 AA QTY. 001
 TAG # 9

DLR 12828- RO # 051062-50
 PART # 96552 AA QTY. 001
 TAG # 9



Service Parts

Ford

YELLOW TAG



DEALER DATA

P.A. 12826-

Inv. Mgr.

Pts. Mgr.

515-243-5200

Mailing

Shipping

ivers Lincoln Mercury, Inc.
17 Ingersoll Road
Moines IA 50309

WPPC USE ONLY

Recd 000012963 MAC FEB -51

FORD MOTOR COMPANY
AL LEESE
15090 COMMERCE DRIVE
DEARBORN, MI 48120
(D) HOLD FOR PICKUP X08877

QUALITY REVIEW: LEVEL 1

Part# XV7Z 96652 AA Qy 001

Eng. # XV7390652AA

Supp: USXYA

DEARBORN, MI 4

TAG #



DEALERS INSTRUCTIONS

DO NOT DETACH

Ship by 09/30/99

Part #

XV7Z 96652 AA

Qty 001

NO 2

DATE - 09/15/99

ATTACH COMPLETE TAG TO PART AND SHIP
TO: (PREPAID FREIGHT NO AIR FREIGHT)
FORD CUSTOMER SERVICE DIVISION
WARRANTY PARTS RETURN CENTER
15090 COMMERCE DRIVE NORTH
DEARBORN, MI 48120
CALL 1-800-4-A-FORD WITH QUESTIONS

3713 6235

VEHICLE DATA

VIN # 1LNLN82W1NY
 VEH. 1992 - TOWN CAR
 Assy Plant NIXON
 Eng. # 4.6L RON 8
 Eng Family MFN4.6V5FDFC
 Decal Bulbs HFM
 Eng. Plant -
 Cyls. MIL. M
 Trans. P AOD-E
 Axle 1 Lock-M
 BLD 06/02/92 WBD 08/27/92

TAG # - 5

WARRANTY DATA

RCM 033691-02 Controls SJ7RE9J01
 RO Date 09/09/99 PD Date 09/15/99
 Odom 108086 M TCode 99S15
 Part # XM72 96652 AA Qty 001
 KIT - BRAKE REPAIR MCC

CC -

CCC -

2276
 TR Pts 10.78 Allow 249.0% 0.00
 L/Pts 50.87 Lbr 25.44 TR 41.31
 Misc. 5.09 Case 0.00
 TECH ID #007336
 PERFORMED RECALL 98S16 REPL DEACT SWITCH

DLR
 PART # 10196- NO # 033691-02
 TAG # 96652 AA QTY. 001

DLR
 PART # NO # 033691-02
 TAG # 006949295 - 5 96652 AA QTY. 001

OCT18 PCS 708 (Y)

YELLOW TAG



DEALER DATA

P & A 10195-
Spec Mgr
Pria Mgr
205-758-9015
Shipping

Bill DeLoach Linc-Marc Inc
1017 Greensboro Avenue
Tuscaloosa AL 35401

Shipping

Bill DeLoach Linc-Marc Inc
1017 Greensboro Avenue
Tuscaloosa AL 35401

WPRC USE ONLY

FROM 000012969 MAC- FED -S1
FORD MOTOR COMPANY
AL LEESE
15090 COMMERCE DRIVE
DEARBORN, MI 48120
(D) HOLD FOR PICKUP X08877

QUALITY REVIEW: LEVEL 1

Part# XN7Z 9C652 AA Qty 001

Eng. # XN739C652AA

Supp: Q8XYA

WILL INSURE LOGISTICS MANAGE

DEARBORN, MI

TAG #



DEALERS INSTRUCTIONS

DO NOT DETACH

Ship By 09/26/99

Part #

XN7Z 9C652 AA Qty 001

ILL - BUFILE REPAIR

NO #

813891-02 Date 09/09/99

ATTACH COMPLETE TAG TO PART AND SHIP
TO: PREPAID FREIGHT NO AIR FREIGHT

FORD CUSTOMER SERVICE DIVISION

WARRANTY PARTS RETURN CENTER

15090 COMMERCE DRIVE NORTH

DEARBORN, MI 48120

CALL 1-800-418-3772 WITH QUESTIONS

3713 8937

VEHICLE DATA

VEHICLE DATA

VIN # 2NECH75M9K710285
 VEH. 1992 - GRAND MARQUIS
 Assy Plant STTHON
 Eng - M 4.6L BOM B
 Eng Family NFH4.6V5FDF0
 Decal Bulb: HAA
 Eng. Plant -
 Cals. M. N
 Trans. - T AOD
 Axle 3 Lock-H
 BLD02/13/92 Wsg 08/12/92

TAG #



WARRANTY DATA

PO# 058808-01 Contol # 000103001
 RO Date 09/03/99 PD Date 09/03/99
 Odom 103560 M TCode 99515
 Part # XM72 SC652 AA Qty 001
 KIT - BRAKE REPAIR MCC

CC-

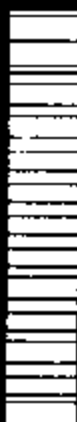
CCC-

TU Pts 10.78 Allow 249.02 0.00
 L/Pts 71.77 Lbr 35.89 Th 53.84
 Misc 7.17 Core 0.00

TECH ID #001045

SUPPLEMENT #1 8-88 INSPECTION OPERATION A
 REPLACE SPEED CONTROL DEACTIVATION SWITCH
 HARD SHELL CONNECTOR

DIA 20672- NO # 058808-01
 PART # 96552 AA QTY 001
 TAG # 2



DIA 20672- NO # 058808-01
 PART # XM72 96552 AA QTY 001
 TAG # 2



20672-

2000

the

09-597-8083

Causeway Ford & Mercury

75 Route 72

Amtrak in NJ 08050

Supplies

Cautionary Ford & Mercury

375 Route 72

Neunhant in NJ 08050

REC'D 000012559 PAC FED -51

FORD MOTOR COMPANY

AL LEASE

15090 COMMERCE DRIVE

DEARBORN, MI 48120

(D) HELD FOR PICKUP XDN977

QUALITY REVIEW: LEVEL 1

Part#	XN72	96552 AA	Qty	001
-------	------	----------	-----	-----

Eng. #

Summary

11

[illegible]

DEARBORN, Mich.

TAG #



DEALING WITH THE

Hydroxyl

日期: 2022/09/22

11

二卷

44-38861-10

WILL-BLANKET-IT

Date 66/30/60 **To** 809857

02

ATTACH COMPLETE TAG TO PART AND SHIP
TO: PREPAID FREIGHT NO AIR FREIGHT

FORD CUSTOMER SERVICE DIVISION

WARRANTY PARTS RETURN CENTER

115000 COMMERCIAL DRIVE NORTH

DEARBORN, MI 48120

CALL 1-800-418-9772 WITH QUESTIONS

3713-6239

WPRC USE ONLY

VEHICLE DATA

VIN # 1LNLH01K0NY
 VEH. 1992 - TOWN CAR
 Assy Plant VIXON
 Eng - II 4.6L RON B
 Eng Family NFM.6V5FOFO
 Diesel Builc BFI
 Eng. Plant -
 Cals. 2180005 ML- N
 Trans. P AOB-E
 Axle 1 Lock- N
 BLD 06/22/92 WED 07/08/92

TAG # 4

WARRANTY DATA

ROW 080759-51 Controlr LM6QCSJ01
 RO Date 09/07/99 PD Date 09/09/99
 Odom 109428 M TCode 99S15
 Part # XW72 96652 AA Qty 001
 KIT - BRAKE REPAIR WCC

CC -

OCC -

2294

Ts Price 10.78 Allow 249.00 0.00
 Lf Price 61.79 Lbr 30.90 TI 47.86
 Misc. 6.18 Corp 0.00
 TECH ID #004008
 RECALL

DIA. 06630- RO # 080759-51
 PART # 96652 AA QTY. 001
 TAG # 4

DIA. 06630- RO # 080759-51
 PART # 96652 AA QTY. 001
 TAG # 4

FBI 06630-

Dye Migration

Part 1: How

757-488-8311

Building

Don Comer Ford, Inc.
2525 Airline Blvd
Portsmouth VA 23701

Shipping

Don Comer Ford, Inc.
2525 Airline Blvd
Portsmouth VA 23701

WPAC USE ONLY

REC'D 000012559 RAC- FED -S1

FORD MOTOR COMPANY

AL LEASE

15090 COMMERCE DRIVE

DEARBORN, MI 48120

(D) HOLD FOR PICKUP X00877

QUALITY REVIEW: LEVEL 1

Part# XM72 9652 AA Qty 001

Eng. # XM7396652AA

Сторона: 09XVA

Discussion

TAG 8



THE 11 BEST HOSTEL SLEEPERS

Editorial

656/22/161 1m 4m

2

2.1.16.5

言者

THE UNIVERSITY OF CHICAGO

15-00000

102

65/10/50-0

ATTACH COMPLETE TAG TO PART AND SHOP

TO: OVERPAID FREIGHT NO AIR FREIGHT

NOTES AND REFERENCES

WAGGLING PATRIS PATIENT COUNTRY

180000 COMMUNIQUE DAILY TWENTY

THE **PROGRESSIVE**

CALL 1-800-498-9772 WITH QUESTIONS.

VEHICLE DATA

VEH 1992 - CROWN VICTORIA
 Assy Plant 5THOM
 Eng - N 4.6L BOM B
 Eng Family MFMA.6V5FD0
 Desat Suffix HLY
 Eng Plant -
 Cnfg. MLL - N
 Trans. - P A40-E
 Axle 1 Look-N
 MLD08/05/92 WSD08/21/92

Tag #

WARRANTY DATA

RO# 105004-01 Control# HC5HJ91
 RO Date 09/28/99 PO Date 09/29/99
 Odom 106782 N TCode 99SLS
 Part # XW72 96852 AA City
 KIT - BRAKE REPAIR MCC

CC -

CCC -

Ta Pts 10.78 Allow 249.05
 L/Rate 50.34 Lbr 30.17
 Misc 6.03 Core 0.00

TECH ID #005973
 PERFORMED SEE IN RECALL, REPLACES
 SWITCH & CONNECTOR

CL# 00276- RO # 105004-01
 PART # 96852 AA QTY. 001
 TAG # 6

CL# 00276- RO # 105004-01
 PART # 96852 AA QTY. 001
 TAG # 6

DLR 12211- NO # 097295-01
PART # 96552 AA QTY. 001
TAG # - 8



DLR 12211- NO # 097295-01
PART # 96552 AA QTY. 001
TAG # - 8



VEHICLE DATA

VIN # 11NLM81K3M
VEH. 1993 - TOWN CAR
Body Plant WIDON
Eng. # 4.9L ROM B
Eng. Family BFM. 055F02
Ducat. Suffix JJY
Eng. Plant -
Culb. ML- H
Trans. - P AOD-E
Axle 1 Lock-H
BLD 09/16/92 WED 10/02/92

TAG # 006903816 - 8



WARRANTY DATA

PO# 097295-01 Connctd NBER9301
PO Date 09/01/99 PD Date 09/03/99
Order# 107259 H TCode 99S15
Part # XW72 96552 AA Qty 001
KIT - BRAKE REPAIR WCC

CC-

CCC-

2008

TN Pnt 11.19 Allow 290.06 0.00
L/Rnt 57.46 Lbr 28.73 Td 45.67
Misc 5.75 Core 0.00
TECH-# 006445
RECALL 99S15

3713 8245

YELLOW TAG

**Gen. Mgr.****Private Equity**

601-956-6060

Tom Winderley Auto World Inc
6060 1-55 North
Jackson MS 39211

संक्षेपः

Tom Wimberley Auto World Inc
6060 I-55 North
Jackson MS 39211

WPRC USE ONLY

REC'D 000012969 RAC- FED -SI

FORD MOTOR COMPANY

ALBERT

15090 COMMERCE DRIVE

DEARBORN, MI 48120

(D) HOLD FOR PICKUP X09877

QUALITY REVIEW: LEVEL 1

Page# XN7Z 9652 AA C4 001

Eq. # XM739652A

Sample: OETA

HOLLINGSWORTH LOGISTICS MANAGE

14225 W WARREN

DEARBORN, MI 48126

TAG # 005905016-B



OUTLET ALLERGY INSTRUCTIONS

Appendix

66/11/08
66/11/08

ATTACH COMPLETE TAB TO PART AND SEND
TO: PREPAID FREIGHT NO AIR FREIGHT
POW, CUSTOMER SERVICE DIVISION
WARRANTY PARTS RETURN CENTER
15000 COMMENCE DRIVE NORTH
DEARBORN, MI 48120
CALL 1-800-418-9772 WITH QUESTION

VEHICLE DATA

VIN # 2FAC774M0K
 VEH 1992 - CROWN VICTORIA
 Assy Plant STTHON
 Eng - II 4.6L RON B
 Eng Family NFM4.6V5FDF0
 Decal Suffix HLY
 Eng. Plant -
 Cnfr. MIL - H
 Trans. - P ADD-E
 Axle 1 Lock - H
 BLD05/14/92 WSD 10/30/92

TAG #

WARRANTY DATA

RCM 153943-01 Control# WY9AE9J01
 RO Date 09/02/99 PD Date 09/14/99
 Odom 104872 M TCode 99515
 Part # XM72 96652 AA Qty 001
 KIT - BRAKE REPAIR MCP

CC -

CCC -

Ttl Prg 13.46 Allow 311.00 0.00
 L/Pths 63.00 Ltr 31.50 Ttl 51.26
 Min. 6.30 Core 0.00
 TECH ID #005785

CIA. 01492- NO # 153943-01
 PART # 96652 AA QTY 001
 TAG # 7

CIA. 01492- NO # 153943-01
 PART # 96652 AA QTY 001
 TAG # 7

YELLOW TAG



DEALER DATA

P.S.A. 01492-

Qty. Bldg

Price Bldg

610-489-9366

Modeling

Keyser & Miller Ford Inc
8 East Main Street
Collegeville PA 19426

Shipping

Keyser & Miller Ford Inc
8 East Main Street
Collegeville PA 19426

WPRC USE ONLY

Recd 000012969 MAC FEB -31

FORD MOTOR COMPANY

AL LEESE

15090 COMMERCE DRIVE

DEARBORN, MI 48120

(D) HOLD FOR PICKUP X00877

QUALITY REVIEW: LEVEL 1

Part# XM7Z 9G85Z AA cty 001

Eng. # XM7396G52AA

Super: DRXVA

DEARBORN, MI 48120

TAG # 0000000000



DEALER INSTRUCTIONS

001001001001

Ship By 09/27/99

Part #

PO #

ATTACH COMPLETION TO

TO INLAND

Full Charge

Working Order

NAME CHANGE

REWORK

CALL TIME

3713 6247

VEHICLE DATA

VIN # 1LMLW0247WY110969
 VEH. 1992 PONTIAC
 Assy Plant RICHMOND
 Eng. N 4.6L RDM B
 Eng. Family NFMA-6V5FDF0
 Decal Bull NFI
 Eng. Plant
 Colls. ML- N
 Trans. - P AOD-E
 Axle 1 Lock-N
 BLD 04/01/92 WED 08/26/92

TAG #

WARRANTY DATA

RDW 209054-A Control M08MD9K01
 RO Date 10/11/99 PD Date 10/12/99
 Odom 106986 M TC Code 99S15
 Part # XM72 96652 AA Qty 001
 KIT - BRAKE REPAIR MCC

CC - 2014
 CCC-

Tx Pts 10.78 Allow 249.01 0.00
 L/Rate 54.77 Ltr 27.39 Tr 43.65
 Misc 5.48 Core 0.00
 TECH ID #008853
 REPAIR AS PER RECALL

DLR
 PART #
 TAG #
 RDW 209054-A
 96652 AA QTY 001

DLR
 PART #
 TAG #
 RDW 209054-A
 96652 AA QTY 001

YELLOW TAG



DEALER DATA

P & A 06155-

Over Mgr

Parts Mgr

6M-993-2161

Headng

Marion Ford-Mercury Inc
1910 West Coolidge Avenue
Marion IL 62959

Shipping

Marion Ford-Mercury Inc
1910 West Coolidge Avenue
Marion IL 62959

WPRC USE ONLY

REC# 000012969 PAC-FED -51

FORD MOTOR COMPANY

AL LEESE

15090 COMMERCE DRIVE

DEARBORN, MI 48120

(C) HOLD FOR PICKUP X06877

QUALITY REVIEW: LEVEL 1

Part# XW7Z 96652 AA Qty 001

Eng. # XW7396652AA

Supp: Q9XTA

DEARBORN, MI 48120

TAG #



DEALERS INSTRUCTIONS

DO NOT DETACH

Ship By 10/25/99

Part #

XW7Z 96652 AA Qty 001

NO #

200004-1 Date 10/11/99

ATTACH COMPLETE TAG TO PART AND SHIP

TO PREPAID FREIGHT NO AIR-FREIGHT

FORD CUSTOMER SERVICE DIVISION

MANUFACTURER'S RETURN CENTER

15090 COMMERCE DRIVE NORTH

DEARBORN, MI 48120

CALL 1-800-416-8772 WITH QUESTIONS

VEHICLE DATA

VIN # 1LMLJ8248NY
VEH. 1992 - TOWN CAR
Asy Plant NIXON
Eng - N 4.6L RDM B
Eng Family NFM4.6V5FDFO
Decal BuBc HFH
Eng. Plant -
Cals. ML- N
Trans. - P ACD-E
Ade 1 Lock-H
Bld03/13/92 Wdp08/28/92

TAG # 006924910 - 6

WARRANTY DATA

Rcm 010285-01 Control # T07CD9J01
RO Date 08/16/99 PD Date 09/10/99
Odom 106662 N TCode 99S15
Part # XW72 96652 AA Qty 001
KIT - BRAKE REPAIR WCC

CC -

CCC -

Ttl Pts 10.78 Allow 249.0% 0.00
L/Pnts 57.30 Lbr 28.65 Tk 45.16
Mileo. 5.73 Core 0.00
TECH ID #000198
RECALL 98S15 PERFORMED RECALL 98S15

2008

DLR 11425- NO # 010285-01
PART # 96652 AA QTY 001
TAG # 006924910 - 6

DLR 11425- NO # 010285-01
PART # 96652 AA QTY 001
TAG # 006924910 - 6

YELLOW TAG



DEALER DATA

P&A 11425-

Srv Mgr

Prin Mgr

956-350-4488

Mailing

Payne Lincoln-Mercury
4017 N Expressway
Brownsville TX 78520

Shipping

Payne Lincoln-Mercury
4017 N Expressway
Brownsville TX 78520

WPRO USE ONLY.

REQ# 000012559 FAC- FED -51

FORD MOTOR COMPANY

AL LEESE

15090 COMMERCE DRIVE

DEARBORN, MI 48120

(D) HOLD FOR PICKUP X08877

QUALITY REVIEW: LEVEL 1

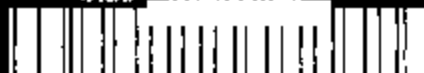
Part# XM7Z 96652 AA Qty 001

Eng # XM7396652AA

Supp: Q9X1A

DEARBORN, MI 48120

TAG # 00502A910-6



DEALER'S INSTRUCTIONS

DO NOT DETACH

Ship By 09/23/99

Part# XM7Z 96652 AA Qty 001

NO # 010255-01 Date Del 10/16/99

4 ATTACH COMPLETE TAG TO PART AND SHIP
TO: INSPAD FREIGHT NO AIR FREIGHT
FORD CUSTOMER SERVICE DIVISION
WARRANTY PARTS RETURN CENTER
18000 COMMERCE DRIVE NORTH
DEARBORN, MI 48120
CALL 1-800-452-4525

COPY FOR 7/28/99

VEHICLE DATA

VIN # 1LMJ82KXP
 Year: 1993 - TOWN CAR
 Assy Plant: MIAMI
 Eng. # 4.6L 20M B
 Eng Family PFM.6V5FDF2
 Decal Build: JJY
 Eng. Plant -
 Chassis 3183810 MIL- H
 Trans. - P AOD-E
 Axle 1 Lock-
 BLD10/23/92 WED11/30/92

TAG # 006925472 - 2

WARRANTY DATA

RO# 059120-A Control # YN1809H01
 RO Date 08/24/99 PD Date 09/10/99
 Odem 104099 M TCode 99S15
 Part # XV7Z 98652 AA Qty 001
 KIT - BRAKE REPAIR MCC

CC -

CCC -

2015
 TM Pts 13.97 Allow 362.0% 0.00
 L/Pnts 60.97 Lbr 30.49 Ty 50.56
 Misc 6.10 Cons 0.00
 TECH ID #013388
 E PERFORM RECALL

CL# 13759-
 PART # 98652 AA QTY 001

TAG # 006925472 - 2

CL# 13759-
 PART # 98652 AA QTY 001

TAG # 006925472 - 2

YELLOW TAG



DEALER DATA

P & A 13759-

Inv Mgr

Prov Mgr

508-336-8170

Shipping

Tasca Lincoln-Mercury Inc

200 Fall River Avenue

Seekonk MA 02771

Shipping

Tasca Lincoln-Mercury Inc

200 Fall River Avenue

Seekonk MA 02771

WPRC USE ONLY

REC# 000012969 RAC- FED -51

FORD MOTOR COMPANY

AL LEASE

15090 COMMERCE DRIVE

DEARBORN, MI 48120

(D) HOLD FOR PICKUP X08877

QUALITY REVIEW: LEVEL 1

Part# XV7Z 9G652 AA Qty 001

Eng. # XM739G652AA

Supp: Q9XYA

DEARBORN, MI 48120

TAG #



DEALERS INSTRUCTIONS

DO NOT DETACH

Ship By 09/23/99

Part #

XV7Z

9G652 AA

Qty 001

PO #

111-BALE

059120-A

08/24/99

ATTACH COMPLETE TAG TO PART AND SHIP

TO PREPARE FREIGHT NO AIR FREIGHT

FORD CUSTOMER SERVICE DIVISION

MANUFACTURER RETURN CENTER

18000 COMMERCE DRIVE NORTH

DEARBORN, MI 48120

CALL 1-800-410-2772 WITH QUESTIONS

Reimers, Steve (S.J.)

From: Roller, Larry (L.W.)
Sent: Friday, January 14, 2000 11:59 AM
To: Porter, Fred (F.J.); Reimers, Steve (S.J.)
Subject: FW: Information on ES-E7SC-2C283 "SWITCH ASSY-BRAKE PRESSURE SHOCK ABSORBER CONTROL"

Additional information on switch.

Larry W. Roller

E-mail:roller@ford.com Phone:(313) 390-3255

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

From: Moosh, Michael (M.V.)
Sent: Friday, January 14, 2000 10:14 AM
To: Roller, Larry (L.W.)
Subject: RE: Information on ES-E7SC-2C283 "SWITCH ASSY-BRAKE PRESSURE SHOCK ABSORBER CONTROL"

Larry, The intent was to use the switch as a replacement for the plastic switch used in the proportioning valve. The plastic switch was getting broken off. I don't think it was ever used in that application. Other engineering activities did use the switch within the brake system. You will need to search through history on that one, sorry. The 500,000 cycles requirement came from the requirements on the plastic switch for actuation's within the brake system. Every component had to meet this for actuation's.

Michael V. Moosh mmoosh@ford.com
Chassis Systems Engineering
Michigan Proving Grounds
810-752-8509 Bay #4

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

From: Roller, Larry (L.W.)
Sent: Friday, January 14, 2000 9:27 AM
To: Moosh, Michael (M.V.)
Cc: Porter, Fred (F.J.)
Subject: RE: Information on ES-E7SC-2C283 "SWITCH ASSY-BRAKE PRESSURE SHOCK ABSORBER CONTROL"

Can you supply any of this information on the switch?

- 1) Vehicle usage
- 2) Model year application
- 3) Component supplier
- 4) Where is this component used?
- 5) Specification mentions 500,000 cycles for tests, what was basis for this number?

Thanks.

Larry W. Roller

E-mail:roller@ford.com Phone:(313) 390-3255

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

From: Moosh, Michael (M.V.)
Sent: Friday, January 14, 2000 9:24 AM
To: Roller, Larry (L.W.)
Cc: Porter, Fred (F.J.)
Subject: RE: Information on ES-E7SC-2C283 "SWITCH ASSY-BRAKE PRESSURE SHOCK ABSORBER CONTROL"

Larry, Looking into Doc Man the 3N824 is a power steering switch which is the same as used in the brake system as a speed control deactivation switch and low brake pressure switch. Try base -2C320- which is a switch and adapter used in brakes. I found the part number of the switch to be F2AC-9F824-AA supplied by Texas Instrument. I think Windstar uses this switch in the master cylinder. I would not recommend it for new applications based on my experience. It is not reliable. Tends to develop internal leaks.

Michael V. Moosh mmoosh@ford.com
Chassis System Engineering
Michigan Proving Grounds

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

From: Roller, Larry (L.W.)
Sent: Friday, January 14, 2000 8:10 AM
To: Moosh, Michael (M.V.)
Subject: RE: Information on ES-E78C-2C283 "SWITCH ASSY-BRAKE PRESSURE SHOCK ABSORBER CONTROL"

We are interest in information on ES E78C-2C283-AA specification.

Specification ES E53C-3N824-AA is on the cover sheet as a reference item for ES E78C-2C283-AA.

Larry W. Roller

E-mail:roller@ford.com Phone:(313) 390-3288

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

From: Moosh, Michael (M.V.)
Sent: Friday, January 14, 2000 9:01 AM
To: Roller, Larry (L.W.)
Subject: RE: Information on ES-E78C-2C283 "SWITCH ASSY-BRAKE PRESSURE SHOCK ABSORBER CONTROL"

Larry, In your phone message you referred to ES E78C-2C283-AA, your note it's ES E53C-3N824-AA which is it?

Michael V. Moosh mmooosh@ford.com

Chassis System Engineering

Michigan Proving Grounds

810-752-8509 Bay #4

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

From: Roller, Larry (L.W.)
Sent: Friday, January 14, 2000 7:52 AM
To: Moosh, Michael (M.V.)
Cc: Porter, Fred (F.J.)
Subject: Information on ES-E78C-2C283 "SWITCH ASSY-BRAKE PRESSURE SHOCK ABSORBER CONTROL"

As I mentioned in my phone message, Fred is looking for information on subject specification and part.

Your name is on the engineering specification as the preparer. A reference item on the spec is ES-E53C-3N824-AA.

Fred is looking for:

- 1) Vehicle usage
- 2) Model year application
- 3) Component supplier
- 4) Where is this component used?
- 5) Specification mentions 500,000 cycles for tests, what was basis for this number?

We realize this is a few years back, but it is IMPORTANT that Fred obtain this information as early as possible.

Thanks.

Larry W. Roller

E-mail:roller@ford.com Phone:(313) 390-3288

Reimers, Steve (S.J.)

From: Paul J Kane [Paul.J.Kane@USA.dupont.com]
Sent: Wednesday, December 08, 1999 12:58 PM
To: Reimers, Steve (S.J.)
Cc: Alice Slotter
Subject: Re: Kapton Question from customer -need technical assistance

Steve, I have forwarded this note to Alice Slotter (800-356-6714),
DuPont
Kapton group to help you.
Paul

Reimers, Steve (S.J.)

From: Robert Panek [rpanek@exponent.com]
Sent: Friday, January 14, 2000 10:17 AM
To: Reimers, Steve (S.J.)
Subject: RE: Photos of Kapton

Steve,
I have the Olympus sales guy coming this afternoon (1:00 pm). I told
him
our predicament and he is suppose to be bringing some possible
solutions.
I'll know more after he's been here.

If you're still around after he's been by I'll give you a call.

Rob

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

From: Reimers, Steve (S.J.) [mailto:sreimers@ford.com]
Sent: Friday, January 14, 2000 9:27 AM
To: Robert Panek (E-mail)
Subject: FW: Photos of Kapton

Rob,
Did you get you 45 degree lens?
Is there a fisheye lens available?

> -----Original Message-----

> **From:** Reimers, Steve (S.J.)
> **Sent:** Monday, December 20, 1999 8:15 AM
> **To:** Robert Panek (E-mail)
> **Subject:** Photos of Kapton

>

> Rob,

> In our first meeting we discussed a scope of work that included taking
> photos of the Kapton through the hexport opening.

> We are interested in pursuing that task. We are looking for a
deformation

> that has a teardrop shape. The photo process needs to be
non-destructive

> as we intend to do a remaining life comparison between those with and
> those without the deformation. This, possibly, could be done with a
fiber

> optic camera. Let me know what you can do.

>

> Steve Reimers
> KVS/T KESSE Chassis E/R Systems
> 313 39 03286, fax 313 39 04145
>

Reimers, Steve (S.J.)

From: Robert Panak [panak@exponent.com]
Sent: Thursday, December 16, 1999 5:46 PM
To: Reimers, Steve (S.J.)
Subject: RE: Pre-Crimp Inspection



Steve,

In response to your request, I found the following:

12/1/91	Light Pre-Crimp
2/1/92	Light Pre-Crimp
5/1/92	Substantial Pre-Crimp
8/1/92	Substantial Pre-Crimp
1993	{no parts to review}
1994	Moderate Pre-Crimp
1995	Light Pre-Crimp (only 1 part available)
1996	Substantial Pre-Crimp
1997	Substantial Pre-Crimp
1998	Substantial Pre-Crimp

When I narrowed down the exact date for the early change in the pre-crimp, I found that things changed on date code 2113 (4/22/92) I have actually found 2 parts with this date code and noticeably different pre-crims. I took a quick digital picture - what do you think?

1994 and 1995 parts appeared to be more lightly pre-crimped than the parts immediately preceding or following them. In general however, they did not appear to be as light as the first 2 groups.

If you would like to look for yourself I could grab some examples and bring them over.

I also wanted to add that my evaluation of the pre-crims was subjective and that the level of corrosion on the parts made it somewhat difficult to make an easy assessment. If it was too bad I didn't consider that specific part.

That's all for now, if you'd like something more formal please let me know.

I can take pictures and possibly measurements of the widths of the pre-crims if you want. Without removing the Al ring it may be difficult though.

Thanks and best regards,

Rob

Exponent-
Failure Analysis Associates
39100 Country Club Drive
Farmington Hills, MI 48331
Ph. 248 324-9112
Fax. 248 324-9199
rpanak@exponent.com
www.exponent.com

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

From: Reimers, Steve (S.J.) [mailto:greimers@ford.com]
Sent: Tuesday, December 14, 1999 12:01 PM
To: Robert Panak (E-mail)
Subject: Pre-Crimp Inspection

Rob,

I would like Exponent to do a non-destructive examination of the pre-crimp witness marks on one Brake Pressure switch from each of the following dates (as close as possible):
12/1/91
2/1/92
5/1/92
8/1/92
1993
1994
1995
1996
1997
1998.

As you may recall when we were disassembling parts we noticed a difference in the pre-crimp witness marks. We would like to find out when these marks appear or disappear. The pre-crimp marks are visible from the hexport end just inside the aluminum cup edge.
thanks,

Steve Reimers
EV&T ESES Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Porter, Fred (F.J.)
Sent: Tuesday, December 14, 1999 8:53 AM
To: Reimers, Steve (S.J.)
Subject: RE: Remaining life test update

We should have Exponent take 1 sensor per quarter in 1992 and do a review the crimp to identify potential process changes. If we find some changes, then I would like to zero in by month or week so that we could get to some more pointed questions.

It would also be good to compare to parts built after 1992, maybe 1 per year if they are available.

Regards,

Fred Porter
Supervisor, Chassis E/E Systems Applications Engineering
Phone: (313)84-53722 Fax: (313)39-04145
E-mail: fporter@ford.com

—Original Message—

From: Reimers, Steve (S.J.)
Sent: Tuesday, December 14, 1999 9:47 AM
To: Porter, Fred (F.J.)
Subject: Remaining life test update

Fred,
Steve Beringhouse phoned in the following info this AM.
date code tails after XX,000 cycles

2015	56.6
2008	78
2014	254
2013	280
2281	294
2013	345
2008	350

currently at 380,000 cycles with remaining 4 units.

Note that 2281 unit date code is after the vehicle prod'n date.
It's mileage is probably no more than 75,000 and may be less.

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Thursday, December 16, 1999 5:34 PM
To: Reimers, Steve (S.J.)
Subject: Restricted Yellow tag For Recall 99815 (RAC code FEDS1)

I only need tags issued for the dates and states shown below.
Please segregate these with a separate RAC code.
It would be extremely helpful if the dealers could enter the 4 digit date code for the parts they are returning.

MY92 & 93 Build dates Needed
States 11/91 thru 1/92 11/91 thru 11/92

AK	X	
AL	X	
AR		X
AZ	X	
CA	X	
CO		X
CT	X	
DC	X	
DE		X
FL	X	
GA	X	
HI	X	
IA	X	
ID	X	
IL	X	
IN	X	
KS	X	
KY	X	
LA	X	
MA	X	
MD	X	
ME		X
MI	X	
MN		X
MO	X	
MS		X
MT		X
NC	X	
ND		X
NE		X
NH		X
NJ	X	
NM		X
NV		X
NY	X	
OH	X	
OK	X	
OR		X
PA	X	
RI	X	
SC	X	
SD		X
TN	X	
TX	X	

UT		X
VA	X	
VT		X
WA		X
WI		X
WV		X
WY		X

Reimers, Steve (S.J.)

From: Klosek, Walter (W.)
Sent: Friday, December 10, 1999 5:28 PM
To: Reimers, Steve (S.J.); Salanta, Michael (M.)
Cc: Alvey, Ray (R.S.)
Subject: RE: Speed Control Dec Switch Cycle Plan

The long-term plans are to use this type of switch for Redundant S/C shut off. The switch is not without issues mainly with the design of the bracket but with these can be managed with proper design and validation. Additionally, I seem to have heard that the Brake Pressure type switch is incompatible with IVD so this plunger type switch will spread to all vehicles with IVD. I'm not certain about this.

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

From: Reimers, Steve (S.J.)
Sent: Friday, December 10, 1999 1:26 PM
To: Klosek, Walter (W.); Alvey, Ray (R.S.)
Subject: Speed Control Dec Switch Cycle Plan
Importance: High

Ray & Walt,

The town car underhood fire "prevent recurrence actions" is considering recommending using the brake pedal actuated switch in place of the brake pressure actuated (9F924) switch. What are the plans for use of this switch in future launches? Is there a quality issue preventing its incorporation? I need a quick turn-around on this info because of a planned tech review meeting on Monday. Need by 2pm to brief Tim Donovan.

Steve Reimers
 RV&T EESE Chassis E/E Systems
 313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Vegh, Paul (P.F.)
Sent: Friday, December 10, 1999 7:53 AM
To: Reimers, Steve (S.J.)
Subject: RE: TDR Template Question

In this case the word 'attachments' means the eyelet or other connection point.

Thank You,
 Paul Vegh
 (313) 59- 42805
 Cube 2G007 Bldg 5

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

From: Reimers, Steve (S.J.)
Sent: Thursday, December 09, 1999 4:26 PM
To: Vegh, Paul (P.F.)
Cc: Porter, Fred (F.J.)
Subject: TDR Template Question

What does "attachments" refer to in item k below???

Example of what will be done at the EDS Fresh Eyes reviews or design reviews:

We will review the Battery B+ cable, starter cables and alternator PDB cables for:

- a) Proper routing and fixing of the cables to avoid all chafing and interference
- b) Cable retention at least every 300 mm, when not in a trough.
- c) Bracket (with anti-rotation) retention on the engine and frame or body to provide strain relief.
- d) Strain relief of all cables, where relative motion is involved, and enough slack for engine roll and vibration.
- e) An acid-resistant waterproof bushing must protect Cable routing through any metal component.
- f) Cable routing in relation to high heat emitting components.
- g) Cable routing in relation to all moving components, i.e. belts, pulleys, gears, steering linkage, etc.
- h) Cable routing near fuel and brake lines.
- i) Proximity to the crankshaft position sensor and distributor (must be at least 180 mm away at all points for EMC).
- j) Wire routing clearance around the battery must be at least 19 mm.
- k) **Clearance of 15 mm for all B+ cable attachments --to any grounded component.**
 - l) Clearance of the battery terminal or post (whichever is higher) to the hood must be 32 mm without an insulator and 15 mm with an insulator.
 - m) Assembly process to ensure that no cable can be trapped during decking of the engine or body.
 - n) Tool clearance for making attachments.
 - o) Protection devices used, if any, and their location (Alternator FuseLink should be close to battery) located 150 to 300 mm from the battery, and away from all items that might ignite.
 - p) Eyelet connections must have anti-rotation, or FMEA of all possible assembly positions.

Reimers, Steve (S.J.)

From: Narayanan, Srividhya (S.)
Sent: Tuesday, January 11, 2000 4:16 PM
To: Preston, Bart (B.); Elayyan, Hazim (H.I.); 'WALTVAN'; Reimers, Steve (S.J.); 'Cox Roger (E-mail)'; Lynn Cullon (E-mail)
Subject: Weekly Tag file...

There was no data in last week's Tag Issued File for your Specifications.

Thank You.

Sri Narayanan

Quality Center

Ph: 313-322 4534

Reimers, Steve (S.J.)

From: PKLAAS
Sent: Friday, September 17, 1999 3:22 PM
To: SREIMERS
Cc: CL12; ATERJMA
Subject: Brake switch analysis

MSG:FROM: PKLAAS --FORDNA1 TO: SREIMERS--DRBN007 09/17/99
15:22:34
To: SREIMERS--DRBN007 Reimers, Steve (
Cc: CL12 --FORDNA1 Li, Chi (C.)" RKOWALC3--FORDNA1 Kowalczyk,
Richa
ATERJMA--FORDNA1 Terjmanian, Ars

FROM: Klaas, Pete (P.F.) WE4(UTC -0400)
Subject: Brake switch analysis

I've reviewed the SOW you sent with Rick and Arsen (polymers and chemistry supervisors), and we believe we can handle the Part I (6-30 pieces for differences between early and late production-returns and current (new) production), except for the dimensional analysis. Bob Burt has reviewed with EMDO and the Whittaker building shop for their layout/dimensional capability. They're not equipped either, particularly the measurements under hydraulic pressure.

The Part II schedule for the 432 field returns is beyond our resources and probably not the best use of our personnel when we have other priorities to deal with. Estimate is probably 5-6 people for the month of October to do all the inspection and data recording.

We haven't done much outsourcing recently, so our external experience is limited, but you might discuss this with Climax Research in Farmington Hills or Bodykote/MetChem in Dearborn. Call me if you have any questions.

P. F. Klaas
Ford Motor Co.
Room 220, Central Laboratory
313-322-1613, fax 313-322-1614
Internet: mailto:pklaas@ford.com

Reimers, Steve (S.J.)

From: SREIMERS
Sent: Tuesday, September 21, 1999 10:55 AM
To: FPORTER; TDONOVAN; TMASTERS
Cc: SREIMERS
Subject: Recall parts analysis

MSG FROM: SREIMERS--DRBN007 TO: SREIMERS--DRBN007 09/21/99
10:55:57
To: FPORTER --DRBN007 Porter, F.J. TDONOVAN--DRBN005
TMASTERS--DRBN005
cc: SREIMERS--DRBN007 Reimers, S. J.

FROM: Steve Reimers DBAET(UTC -04:00)
Subject: Recall parts analysis
I met with Pete Klass of Central lab last week to discuss SOW for analysis.
Central lab can handle the comparative analysis of the early recall, late recall and new/unused parts with the exception of the dimensional analysis.
They checked with two Ford activities regarding the dimensional analysis and found they were not capable either. I will select samples for Central lab comparative analysis by COB Thursday. The analysis of the 432 samples is beyond the resources of Central lab and not the best use of their personnel. I will send Jay Logel the SOW for an outside source (two were suggest by Pete).
We are still logging the 115 parts and have more parts waiting at WPRC. The logging task should be given to an outside source as well so that we do not become a bottleneck for getting samples to analysis.

Steve Reimers	building 5 3E008
RVT Chassis E/E System Applications	mail drop 5011
39-03286 SREIMERS sreimers@ford.com	fax 39-04145 ;>

Reimers, Steve (S.J.)

From: JLENGYEL
Sent: Tuesday, October 12, 1999 8:57 AM
To: SREIMERS
Cc: PKLAAS
Subject: Brake Pressure Switch testing at Central Laboratory...

MSG:FROM: JLENGYEL--FORDNA1 TO: SREIMERS--DRBN007 10/12/99
08:57:20
To: SREIMERS--DRBN007 Reimers, Steve (
Cc: PKLAAS --FORDNA1 Klaas, Pete (P.F

FROM: lengyel, Jim (J.J.) WK4(UTC -0400)
Subject: Brake Pressure Switch testing at Central Laboratory...

Hello Steve,

Just touching base to update you on your two switch jobs that we have here in our testing lab. Work-to-date:

- Set-up log/work sheets similar to past job but these include basic receivables, ID / Dealer Code / EO # / Tag #
- Each sample has been digitally/photographed and also X-rayed (w/photos) for the as-received condition

After looking at some of the X-rays, I can say ahead that in some cases nothing else can be done - some switches for LN 9903244 have melted connectors & some also are so bad that the inner elements are just... gone]

I'll make notes in the appropriate observation field of the data matrix.

Anyway, I plan to run the continuity/resistance & pressure tests sometimes this week. If you'd like to review anything at all, please send a note or give me a call.

Regards, Jim J. Lengyel

Metallurgy & Mechanical Testing Unit
Room M-536 / 313-59-47487

Internet:mailto:jlengyel@ford.com

Materials Engineering & Testing,
<http://www.dearborn3.ford.com/met>

Central Laboratory information,
<http://www.dearborn3.ford.com/met/central.htm>

Reimers, Steve (S.J.)

From: PKLAAS
Sent: Tuesday, October 12, 1999 9:30 AM
To: SREIMERS
Cc: JLENGYEL
Subject: FW: Brake Pressure Switch testing at Central Laboratory...

MSG:FROM: PKLAAS --FORNIA1 TO: SREIMERS--DRBN007 10/12/99
09:30:09
To: SREIMERS--DRBN007 Reimers, Steve (
Cc: JLENGYEL--FORNIA1 Lengyel, Jim (J.

FROM: Klaas, Pete (P.F.) WZ4(UTC -0400)
Subject: FW: Brake Pressure Switch testing at Central Laboratory...

I reviewed the LN 9903244 status with Jim (as attached) and Wed AM is OK for TI to be here to do/witness some switch teardown. I won't be in on Wed. but Jim will handle the meeting.
Thanks.

P. F. Klaas
Ford Motor Co.
Room 220, Central Laboratory
313-322-1613, fax 313-322-1614
Internet: mailto:pklaas@ford.com
Central Lab web page: <http://www.detroit3.ford.com/met/north.htm>

> -----Original Message-----
> From: Lengyel, Jim (J.J.)
> Sent: Tuesday, October 12, 1999 8:57 AM
> To: Reimers, Steve (S.J.)
> Cc: Klaas, Pete (P.F.)
> Subject: Brake Pressure Switch testing at Central Laboratory...
>
> Hello Steve,
>
> Just touching base to update you on your two switch jobs that we have here
> in our testing lab. Work-to-date:
>
> - Set-up log/work sheets similar to past job but these include basic
> receivables, ID / Dealer Code / RO # / Tag #
> - Each sample has been digitally/photographed and also X-rayed
> (w/photos) for the as-received condition
>
> After looking at some of the X-rays, I can say ahead that in some cases
> nothing else can be done - some switches for LN 9903244 have melted
> connectors & some also are so bad that the inner elements are just...
> gone] I'll make notes in the appropriate observation field of the data
> matrix. Anyway, I plan to run the continuity/resistance & pressure tests
> sometimes this week. If you'd like to review anything at all, please send
> a note or give me a call.
>

>
 > Regards, Jim J. Lengyel
 >
 > Metallurgy & Mechanical Testing Unit
 > Room N-536 / 313-59-47487
 >
 > Internet:mailto:jlengyel@ford.com
 >
 > Materials Engineering & Testing,
 > http://www.dearborn3.ford.com/met
 >
 > Central Laboratory information,
 > http://www.dearborn3.ford.com/met/central.htm
 >
 >
 >
 >

Reimers, Steve (S.J.)

From: SLAROUCH
 Sent: Tuesday, October 26, 1999 10:40 AM
 To: SREIMERS
 Cc: Reimers, S. J.
 Subject: RE: Welcome back and HELP]

MSG:FROM: SLAROUCH--FORDNA1 TO: SREIMERS--DRBN007 10/26/99
 10:40:33
 To: SREIMERS--DRBN007 Reimers, Steve (

FROM: LaRoucha, Steve (S.) WZ4(UTC -0400)
 Subject: RE: Welcome back and HELP]

Steve: I am finally back. The analysis is complete on PY614995 and the pieces are ready to be picked up. NK714559 has not been disassembled. This switch is burned to the extent that the aluminum crimp ring has been almost melted away. If you would like me to pursue the analysis of this switch, I can have it disassembled, photos shot, SEM samples collected, and the pieces ready for pickup by the end of this week. Let me know when you want to pick up PY614995 and if you want me to pursue analysis of NK714559 (I don't think analysis will show much due to the condition of this switch).

Steve LaRoucha (SLAROUCH)
 Metallurgy Section, Central Laboratory, Room H410
 (313) 845-4876 (313) 322-1614 FAX

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

From: Steve Reimers -mailto:sreimers@drbn007.dearborn.ford.com|
 Sent: Friday, October 22, 1999 3:41 PM
 To: slarouch@mail.ford.com
 Cc: Reimers, S. J.

Subject: Welcome back and HELP]

It was good to hear you were returning. I hope it is good news for you too]

OGC is bugging me to return the following two switches. PY614995 and NX714559.

Is the analysis completed on these and can you find the pieces?

Steve Reimers	building 5	3E008
RVT Chassis E/E System Applications	mail drop	5011
39-03286 SREIMERS	sreimers@ford.com	fax 39-04145 ;>

Reimers, Steve (S.J.)

From: JLENGYEL
Sent: Tuesday, October 26, 1999 7:11 PM
To: SREIMERS
Cc: PKLAAS; PNAILOS
Subject: Brake Switch testing status...

MSG:FROM: JLENGYEL--FORDNA1 TO: SREIMERS--DRBN007 10/26/99
19:11:05
To: SREIMERS--DRBN007 Reimers, Steve (
Cc: PKLAAS --FORDNA1 Klaas, Pete (P.F. MHAGA --FORDNA1 Haga, Mary
(M.C.
PNAILOS --FORDNA1 Nailos, Patrick

FROM: Lengyel, Jim (J.J.) WZ4(UTC -0400)
Subject: Brake Switch testing status...

Hello Steve, Here's the update status you requested for the two present project jobs I'm coordinating for you.

Your Eleven-Sample Job is presently in Chemistry. The metal ring elements will have to be analyzed in a serial order by our Metallurgical Section because the layer-to-layer fluid transfer (and typing) review must be conducted first. I've a prior plant job that will requires my immediate time - then I can return to the Seven-Sample Job. Extra time has been spent to get this far & I will be repeating that effort to move your work here at our Laboratory.

Switch Test 9903244, Eleven Samples Total

Completed:

In process spread sheet set-up & filled in for part/testing information

- As-received per sample photos & X-rays
- Pressure & electrical continuity checks
- Switch disassembly & sub-element identification
- Fluid/element collection & part mapping for organic analysis

In-Process:

Material analysis of fluids & tramp deposit build-ups

(...projected
at 2 wk.)

Remaining:

Diaphragm support ring element & cladding analysis (MET/SEM)
Issue laboratory report (Draft format prepped in Microsoft Word

&
Excel)

Switch Test 9903183, Seven Samples Total

Completed:

The in-process spread sheet set-up & started with part/testing
information

As-received per sample photos & X-rays

In-Process:

Remaining:

Pressure & electrical continuity checks
Switch disassembly & sub-element identification
Fluid/element collection & part mapping for organic analysis of

Swt
parts

Material analysis of fluids & tramp deposit build-ups
Diaphragm support ring element & cladding analysis (MET/SEM)
Issue laboratory report (Draft format prepped in Microsoft Word

&
Excel)

Regards, Jim J. Lengyel

Metallurgy & Mechanical Testing Unit
Room M-536 / 313-59-47487

<mailto:jlengyel@ford.com>

Materials Engineering & Testing,
<http://www.dearborn3.ford.com/met>

Central Laboratory information,
<http://www.dearborn3.ford.com/met/central.htm>

Reimers, Steve (S.J.)

From: LaRouche, Steve (S.)
Sent: Wednesday, November 10, 1999 3:45 PM
To: Reimers, Steve (S.J.)
Cc: Lengyel, Jim (J.J.); LaRouche, Steve (S.)
Subject: RE: Kapton Crack Analysis

Steve: I have completed examination of the Kapton seals. We are starting to photograph them this afternoon. All the switches show similar patterns of damage to the seals:

1. The Kapton has been permanently deformed to the contour of the washer and converter. The Teflon has delaminated in these areas and is stretched across the depressions almost like a drum.
2. The Kapton has been buckled in a radial direction where it has been deformed into the doughnut shaped cavity formed by the washer and converter. All of the seals exhibit cracks in the Kapton which occur along the buckle. Some of the seals also exhibit cracks in the Kapton which extend around the tips of the buckles. The Kapton has been discolored (dark) at the cracks. The source of the discoloration is not known.
3. All the seals show tears in the Teflon usually which in some instances coincide with the cracks in the Kapton, and in other instances occur where the Teflon has been stretched across the depressions in the Kapton.
4. The seals show evidence of abrasion as well as a buildup of deposits in the areas where they contacted the converters and washers. The mechanical damage and cracking seems most severe in the seals which contacted the converters and washers. This suggests that the damage may have started in those seals and progressed to the other seals.

I also examined the washers and converters under a bench microscope and found no burrs or other surface or plating imperfections that could have caused damage to the seals. This will be confirmed by examining some of these parts with the scanning electron microscope. I did see a lot of deposits which may have caused abrasion. Some of the deposits are copper colored which may suggest metal transfer like we found in earlier investigations.

Steve LaRouche (SLAROUCH)
Metallurgy Section, Central Laboratory, Room N410
(313) 846-4876 (313) 322-1814 FAX

—Original Message—

From: Reimers, Steve (S.J.)
Sent: Wednesday, November 10, 1999 2:27 PM
To: LaRouche, Steve (S.)
Subject: Kapton Crack Analysis

Steve, Have you completed the examination of the Kapton layers for cracking in the 11 samples of test number 8903244?

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Monday, December 06, 1999 4:05 PM
To: Lengyel, Jim (J.J.)
Subject: Report Clarifications

Thanks for the prelim copy. Of course you expected some feedback which we are most happy to provide.

On page 1 ..Chemical Analysis:

If possible please clarify if the water was separate or combined with the brake fluid or both or neither. If it was combined with the brake fluid, please clarify, if possible, the relative concentration compared with typical "used brake fluid".

On page 2 ..Metallographic Analysis:

The first bullet begins "The seals...", please clarify which of the 3 seals and which side of the seals.

thanks,
Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Friday, December 10, 1999 12:53 PM
To: Lengyel, Jim (J.J.)
Subject: RE: Field Tag Numbers from Brake Switch Samples

Do you still have the tags?

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

From: Lengyel, Jim (J.J.)
Sent: Thursday, December 09, 1999 1:36 PM
To: Reimers, Steve (S.J.)
Subject: Field Tag Numbers from Brake Switch Samples

Hi, I recall these numbers Steve - we took them out of the original data table...

Regards, Jim

Metalurgy & Mechanical Testing Unit
Room N-536 / 313-59-47487

Internet: <mailto:jilengyel@ford.com>

Materials Engineering & Testing,
<http://www.detroit3.ford.com/met>

Central Laboratory Information,
<http://www.detroit3.ford.com/met/central.htm>

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Friday, December 10, 1999 12:58 PM
To: Lengyel, Jim (J.J.)
Subject: Clarifications preview???

Can I get an advance look at the clarification for the water content in the report for test 99032444? We are presenting status to Tech review committee on Monday afternoon and are have a pre-meeting a 2pm Monday.

thanks,

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Lengyel, Jim (J.J.)
Sent: Monday, December 13, 1999 11:21 AM
To: Reimers, Steve (S.J.)
Subject: RE: Clarifications preview???

Analysis Notes:

Each Sludge sample was rinsed with propanol. The soluble & insoluble portions were the analyzed separately.

Switches #04, 10 & 11 appeared to contain less fluid than the other samples. The presence of material pieces, what appear to be from a switch contact element, were noted in Samples #01, 02, 07, 10 and 11.

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

From: Reimers, Steve (S.J.)
Sent: Friday, December 10, 1999 12:58 PM
To: Lengyel, Jim (J.J.)
Subject: Clarifications preview???

Can I get an advance look at the clarification for the water content in the report for test 99032444? We are presenting status to Tech review committee on Monday afternoon and are have a pre-meeting a 2pm Monday.

thanks,

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Tuesday, January 04, 2000 9:17 AM
To: LaRouche, Steve (S.)
Cc: Porter, Fred (F.J.); Stevens, Gregory (G.A.)
Subject: Brake Pressure Switch Contaminants

Steve,

One of the results of CSL analysis found oxalic acid or oxalates.
Could triethanolamine have produced them?

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: LaRouche, Steve (S.)
Sent: Tuesday, January 04, 2000 9:45 AM
To: Reimers, Steve (S.J.)
Subject: RE: Brake Pressure Switch Contaminants

Steve: I talked to Gayle Gullen about this. She said these materials have totally different IR spectra and that it is highly unlikely that triethanolamine could form oxalic acid or oxalates.

Steve LaRouche
North American Materials Engineering and Testing
Metallurgy Section, Central Laboratory, Room N410
Phone: (313) 846-4878 FAX: (313) 322-1614
Internet: mailto:slarouch@ford.com
Central Lab Web Page: <http://www.dcmform3.ford.com/met/north.htm>

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

From: Reimers, Steve (S.J.)
Sent: Tuesday, January 04, 2000 9:17 AM
To: LaRouche, Steve (S.)
Cc: Porter, Fred (F.J.); Stevens, Gregory (G.A.)
Subject: Brake Pressure Switch Contaminants

Steve,

One of the results of CSL analysis found oxalic acid or oxalates.
Could triethanolamine have produced them?

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Friday, December 03, 1999 3:53 PM
To: 'rpanek@exponent.com'
Cc: Porter, Fred (F.J.)
Subject: Suspend Logging & Binning

Follow Up Flag: Follow up
Due By: Monday, December 06, 1999 5:00 PM
Flag Status: Flagged

Contacts: Robert Panek

Rob,

Suspend logging and binning until I have reviewed the distribution data for the 1000+ parts you have completed.
I need distribution of Zip codes (or PA codes), date codes, veh build dates, vehicle type, resistance measurements, and heat damage.

Give me a SWAG estimate of cost to this point in time.

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: LGEE3
Sent: Wednesday, October 13, 1999 5:26 PM
To: SREIMERS; LGEE3; KZUBIETA; SREIMERS; KZUBIETA
Cc: LGEE3; JNEME; LGEE3; SREIMERS
Subject: FW: 92/93 Weekly Prod'n volumes

MSG:FROM: LGEE3 --DRBN006 TO: SREIMERS--DRBN007 10/13/99
17:26:21
To: SREIMERS--DRBN007
cc: LGEE3 --DRBN006

FROM: Larry Gee USAET(UTC -04:00)
Subject: FW: 92/93 Weekly Prod'n volumes

Your request for volumes during the period 11/1/91 through 12/1/92
produced
the following results:

	Total	1992	1993
Town Car	124,026	81,333	42,693
Crown Vic	77,349	49,438	27,911
Gr. Marq.	110,041	75,200	34,841

	311,416		

Regards,
Larry Gee

*** Forwarding note from KZUBIETA--DRBN006 10/11/99 10:03 ***
To: LGEE3 --DRBN006

FROM: Kelly Zubieta USAET(UTC -04:00)
Subject: FW: 92/93 Weekly Prod'n volumes

Larry - pls. look up the extract for 99815 - see if it's for the same
date
range that Steve has listed below. If not, run a special extract for
him for
the dates that he's requesting. (Be sure to check the 99815 extract
for any
special VO parameters.) Follow-up with Steve.

Regards,
Kelly Zubieta

PCSD, Recall/Service Programs, Recall/OMP Coordinator
313-248-8817 Fax: 313-845-1024 Internet: KZUBIETA@Ford.com
*** Forwarding note from SREIMERS--DRBN007 10/11/99 09:38 ***
To: KZUBIETA--DRBN006

FROM: Steve Reimers USAET(UTC -04:00)
Subject: FW: 92/93 Weekly Prod'n volumes
Approved campaign, 99815.

Steve Reimers building 5 3E008
RVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>
*** Forwarding note from KZUBIETA--DRBN006 10/11/99 09:34 ***
To: SREIMERS--DRBN007
cc: JNEME --FORDNA1 LGEE3 --DRBN006

FROM: Kelly Zubieta USAET(UTC -04:00)

Subject: FW: 92/93 Weekly Prod'n volumes

Steve - we can give you a total volume for this date range, but not by week.

You will need to go to the plant to try to request that. Is this for a potential or approved campaign?

Regards,

Kelly Zubieta

FCSD, Recall/Service Programs, Recall/QNP Coordinator

313-248-8817 Fax: 313-845-1024 Internet: KEUBIETA@Ford.com

*** Forwarding note from JNAME --FORDNA1 10/08/99 16:20 ***

To: KEUBIETA--DRBN006 Zubieta, Kelly (

Cc: SREIMERS--DRBN007 Reimers, Steve (

FROM: Name, Joseph (J.S.)

WZ4(UTC -0400)

Subject: FW: 92/93 Weekly Prod'n volumes

Kelly,

Can you please provide steve the requested build info???

Joe Name

LVC - Safety/Recalls

Phone: 39-08133 Fax: 62-18147

Location: Bldg #2, Cube 22M37, MD1255

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

From: Steve Reimers sreimers@drbn007.dearborn.ford.com

Sent: Thursday, October 07, 1999 12:02 PM

To: jname@mail.ford.com

Cc: Reimers, S. J.; Porter, F.J.

Subject: 92/93 Weekly Prod'n volumes

Joe, My recall parts data is showing a gap in production volume. Can you

give

me the weekly production volumes for each vehicle line (town car,

crown

vic,

grand marquis) between 11/1/91 and 12/1/92?

Steve Reimers

RVT Chassis E/E System Applications

39-03286 SREIMERS sreimers@ford.com

building 5 3E008

mail drop 5011

fax 39-04145 ;>

Reimers, Steve (S.J.)

From: GBHUGRA
Sent: Tuesday, October 19, 1999 10:10 AM
To: SREIMERS; SREIMERS; GBHUGRA; GFOMIN1; GFOMIN1; GFOMIN1; SSCHULTS;
JPRYDE; JCOVENY; PDRAGICH; SBETKE; DSTOLLAR; JGHISLA; GFOMIN1; JPRYDE;
JCOVENY; PDRAGICH; SBETKE; DSTOLLAR; JGHISLA; GFOMIN1; SREIMERS;
KZUBIETA
Cc: JNEME; SBETKE; DSTOLLAR; JCOVENY; MOSAER; JNEME; SREIMERS; JNEME;
MOSAER; JNEME; SREIMERS; LGEE3; KZUBIETA; SREIMERS; JNEME; LGEE3;
SREIMERS
Subject: RE: 92/93 Weekly Prod'n volumes

MSG:FROM: GBHUGRA --FORDNA1 TO: SREIMERS--DRBN007 10/19/99
10:10:05
To: SREIMERS--DRBN007 Reimers, Steve (

FROM: Bhugra, Gurjeet (G.) WZ4(UTC -0400)
Subject: RE: 92/93 Weekly Prod'n volumes

I sent the fax, please check your fax machine...

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

From: Steve Reimers sreimers@drbn007.dearborn.ford.com
Sent: Tuesday, October 19, 1999 8:19 AM
To: gbhugra@mail.ford.com
Subject: RE: 92/93 Weekly Prod'n volumes

FAX to 313 39 03286.
thanks,

Steve Reimers building 5 3E008
EVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>
*** Forwarding note from GFOMIN1 --DRBN004 10/18/99 16:12 ***
To: SREIMERS--DRBN007 GBHUGRA --FORDNA1
cc: JNEME --FORDNA1

FROM: George Fomin USAET(UTC -04:00)
Subject: RE: 92/93 Weekly Prod'n volumes

Steve - Please Profs Gurjeet your FAX number so he can send you the volumes.

Regards,
George Fomin
(313)390-2458
Global Core Final Assembly Engineering, V.O.
*** Forwarding note from GBHUGRA --FORDNA1 10/18/99 11:16 ***
To: GFOMIN1 --DRBN004 Fomin Sr, George

FROM: Bhugra, Gurjeet (G.) WZ4(UTC -0400)
Subject: RE: 92/93 Weekly Prod'n volumes

can you give me a fax number.. thanks..

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

From: George Fomin gfomin1@drbn004.dearborn.ford.com
Sent: Monday, October 18, 1999 11:15 AM
To: gbhugra@mail.ford.com
Cc: jneme@mail.ford.com; sreimers@drbn007.dearborn.ford.com

Subject: RE: 92/93 Weekly Prod'n volumes

Gurjeet - Yes, Please provide the monthly production volumes (since you do not

have weekly volumes) to (SREIMERS).

- Thank you for your help.

Regards,

George Fomin

(313)390-2458

Global Core Final Assembly Engineering, V.O.

*** Forwarding note from GBHUGRA --FORDNA1 10/14/99 08:24 ***

To: GFOMIN1 --DRBN004 Fomin Sr, George

FROM: Bhugra, Gurjeet (G.)

WZ4(UTC -0400)

Subject: RE: 92/93 Weekly Prod'n volumes

We have monthly but not weekly. Would like that info sir..

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

From: George Fomin fmailto:gfomin1@drbn004.dearborn.ford.com

Sent: Wednesday, October 13, 1999 3:47 PM

To: gbhugra@mail.ford.com; sschultz3@drbn004.dearborn.ford.com

Co: jneme@mail.ford.com; sreimers@drbn007.dearborn.ford.com

Subject: FW: 92/93 Weekly Prod'n volumes

Sheldon - Thank you for your help to contact Gurjeet Bhugra.

Gurjeet - Would you please provide 92/93 Model Year weekly production volumes:

- 1) Town Car
- 2) Crown Vic (Separate from Grand Marquis, if possible)
- 3) Grand Marquis (Separate from Crown Vic, if possible)

To: J.Neme (JNEME) LVC - Safety/Recalls

S.Reimers (SREIMERS) RVT Chassis E/E Systems Applications

Thank you.

Regards,

George Fomin

(313)390-2458

Global Core Final Assembly Engineering, V.O.

*** Forwarding note from SSCHULT3--DRBN004 10/13/99 15:20 ***

To: GFOMIN1 --DRBN004

cc: SBETKE --DRBN004

DETOLLAR--DRBN004

JCOVENY --DRBN004

FROM: Sheldon Schultz

CANET(UTC -04:00)

Subject: FW: 92/93 Weekly Prod'n volumes

Regarding your request for weekly build volumes on attached note:

There is an individual by the name of Gurjeet Bhugra (GBHUGRA) who is the

keeper of historical 9270 documentation which records all vehicle usage which

should be available to who ever requests it through him.

Regards,
Sheldon Schultz
782-5347

*** Forwarding note from DSTOLLAR--DRBN004 10/13/99 08:57 ***
To: SSCHULT3--DRBN004 Sheldon Schultz

FROM: Dave M. Stollar CANET(UTC -04:00)
Subject: FW: 92/93 Weekly Prod'n volumes
see attached and advise.

Regards, Ford Net 782-5355
Dave Stollar, dstollar@ford.com (519) 637-5355
Supply Chain Mgr. St. Thomas Assembly Plant FAX 637-5539
*** Forwarding note from GFOMIN1 --DRBN004 10/13/99 08:05 ***
To: JPKYDE --DRBN004 JCOVENY --DRBN004
PDRAGICH--DRBN004 SBETKE --DRBN004
DSTOLLAR--DRBN004 JGHISLAI--DRBN005
cc: MOSAER --FORDNA1 JNEME --FORDNA1
SREIMERS--DRBN007

FROM: George Fomin USAET(UTC -04:00)
Subject: FW: 92/93 Weekly Prod'n volumes

This is to clarify the 10/12 Prof request:

Please Profs (GFOMIN1) and (JNEME) whether 92/93 Model Year weekly
production
volumes can be obtained for:

- 1) Town Car
- 2) Crown Vic (Separate from Grand Marquis, if possible)
- 3) Grand Marquis (Separate from Crown Vic, if possible)

Regards,
George Fomin
(313)390-2458
Global Core Final Assembly Engineering, V.O.
*** Forwarding note from SREIMERS--DRBN007 10/13/99 07:47 ***
To: GFOMIN1 --DRBN004
cc: JNEME --FORDNA1

FROM: Steve Reimers USAET(UTC -04:00)
Subject: FW: 92/93 Weekly Prod'n volumes
Separate Grand Marquis weekly prod'n volume from Crown Vic if possible.
thanks,

Steve Reimers building 5 3E008
RVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>
*** Forwarding note from GFOMIN1 --DRBN004 10/12/99 18:14 ***
To: JPKYDE --DRBN004 JCOVENY --DRBN004
PDRAGICH--DRBN004 SBETKE --DRBN004
DSTOLLAR--DRBN004 JGHISLAI--DRBN005
cc: MOSAER --FORDNA1 JNEME --FORDNA1
SREIMERS--DRBN007 LGEE3 --DRBN006
KEUBIETA--DRBN006

FROM: George Fomin USAET(UTC -04:00)
Subject: FW: 92/93 Weekly Prod'n volumes

Please Profs (GFOMIN1) and (JNEME) whether 92/93 Model Year weekly
production
volumes can be obtained for Town Car and Crown Vic/Gd Marq vehicles.

Joe - Please confirm if you want Gd Marq included with Crown Vic.

Regards,
George Fomin
(313)390-2458

Global Core Final Assembly Engineering, V.O.

*** Forwarding note from JNEME --FORDNA1 10/12/99 14:03 ***

To: GFOMIN1 --DREN004 Fomin Sr, George

Cc: SREIMERS--DREN007 Reimers, Steve (

FROM: Name, Joseph (J.S.)

WZ4(UTC -0400)

Subject: FW: 92/93 Weekly Prod'n volumes

George... do you know of anyone at B&A who can provide weekly production

volumes on 1992/3 town car or crown vic vehicles?

Joe Name

LVC - Safety/Recalls

Phone: 39-08133 Fax: 62-18147

Location: Bldg #2, Cube 22M37, MD1255

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

From: Steve Reimers fmailto:sreimers@drbn007.dearborn.ford.com"

Sent: Tuesday, October 12, 1999 8:28 AM

To: jname@mail.ford.com

Subject: FW: 92/93 Weekly Prod'n volumes

Joe, Who at the plants can provide this info?

Steve Reimers

building 5 3H008

KVT Chassis M/N System Applications

mail drop 5011

39-03286 SREIMERS sreimers@ford.com

fax 39-04145 ;>

*** Forwarding note from KEUBIETA--DREN006 10/11/99 09:34 ***

To: SREIMERS--DREN007

cc: JNEME --FORDNA1

LGEE3 --DREN006

FROM: Kelly Zubieta

USAET(UTC -04:00)

Subject: FW: 92/93 Weekly Prod'n volumes

Steve - we can give you a total volume for this date range, but not by week.

You will need to go to the plant to try to request that. Is this for a potential or approved campaign?

Regards,

Kelly Zubieta

PCED, Recall/Service Programs, Recall/ONP Coordinator

313-248-8817 Fax: 313-845-1024 Internet: KEUBIETA@Ford.com

*** Forwarding note from JNEME --FORDNA1 10/08/99 16:20 ***

To: KEUBIETA--DREN006 Zubieta, Kelly (

Cc: SREIMERS--DREN007 Reimers, Steve (

FROM: Name, Joseph (J.S.)

WZ4(UTC -0400)

Subject: FW: 92/93 Weekly Prod'n volumes

Kelly,

Can you please provide steve the requested build info???

Joe Name

LVC - Safety/Recalls
Phone: 39-08133 Fax: 62-18147
Location: Bldg #2, Cuba 22M37, MD1255

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

From: Steve Reimers [mailto:sreimers@drbn007.dearborn.ford.com]
Sent: Thursday, October 07, 1999 12:02 PM
To: jname@mail.ford.com
Cc: Reimers, S. J.; Porter, F.J.
Subject: 92/93 Weekly Prod'n volumes

Joe, My recall parts data is showing a gap in production volume. Can you give me the weekly production volumes for each vehicle line (town car, crown vic, grand marquis) between 11/1/91 and 12/1/92?

Steve Reimers	building 5 3H008
RVT Chassis H/E System Applications	mail drop 5011
39-03286 SREIMERS sreimers@ford.com	fax 39-04145 >

Reimers, Steve (S.J.)

From: Pease, Bruce (B.)
Sent: Friday, January 07, 2000 10:24 AM
To: Reimers, Steve (S.J.)
Subject: FW: Brake Fluid Process

Steve, read below for "description" of brake fluid (ref your question).

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

From: Kitt, Michael (MB) [mailto:mkitt@edow.com]
Sent: Friday, January 07, 2000 9:53 AM
To: 'Pease, Bruce (B.)'; Urbiha, Scott (SA)
Cc: Stevens, Gregory (G.A.)
Subject: RE: Brake Fluid Process

Inhibitors are added to control corrosion, pH and oxidation. Other additives included in the package are there to improve lubricity. The best chemical description of brake fluids is "a mixture of glycol ethers and polyethylene glycols".
Mike Kitt

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

From: Pease, Bruce (B.) [mailto:bpease@ford.com]
Sent: Thursday, January 06, 2000 5:09 PM
To: 'Kitt, Michael (MB)'; Pease, Bruce (B.)
Cc: Stevens, Gregory (G.A.)
Subject: RE: Brake Fluid Process

Mike,
good! thanks
Oh by the way how do I say the chemical name of brake fluid? Is it Ethylene

Glycol, Glycol ether, Glycol ethers, Glycol, or ?
The inhibitors are they anti corrosion inhibitors? and if so, can you give me just a sentence about them, name function, etc. Sorry, don't mean to hold you up on this brake fluid thing, but trying to anticipate questions I will be asked.
Thanks Again.

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

From: Kitt, Michael (MB) [mailto:mkitt@dow.com]
Sent: Thursday, January 06, 2000 4:25 PM
To: 'Pease, Bruce (B.)'; Kitt, Michael (MB)
Cc: Stevens, Gregory (G.A.)
Subject: RE: Brake Fluid Process

Bruce,
Your modification look great. One change that should be made is to show inhibitors being added to DOT 3 fluid as well as DOT 4 fluid production block.
Let me know if I can do anything to help,
Mike Kitt

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

From: Pease, Bruce (B.) [mailto:bpease@ford.com]
Sent: Tuesday, January 04, 2000 1:44 PM
To: 'Kitt, Michael (MB)'; Pease, Bruce (B.)
Cc: Stevens, Gregory (G.A.)
Subject: RE: Brake Fluid Process

Mike,
I have attempted to modify the graphic to your words. Could you please review the attached file and comment. Thank You.

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

From: Kitt, Michael (MB) [mailto:mkitt@dow.com]
Sent: Monday, January 03, 2000 11:02 AM
To: 'Pease, Bruce (B.)'
Cc: Stevens, Gregory (G.A.)
Subject: RE: Brake Fluid Process

The highers from the Glycol Ethers Production Unit are the major raw material used to make DOT 3 and DOT 4 brake fluids. These highers are shipped to the Brake fluid production unit. Within the Brake Fluid unit, highers and other chemicals are blended together to form DOT 3 brake fluid.
Highers are reacted with MO & PO to form materials used to make Heavy Duty DOT 3 brake fluid. Highers are reacted with boric acid to form borate esters. The esters are then blended with others highers to form DOT 4 brake Fluid.
The reaction of highers and boric acid forms borate ester and water. Water is removed during the reaction to drive it towards the ester formation. If water is added to the ester it can be driven back to boric acid and highers.
Hope this helps.

Mike Kitt

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

From: Pease, Bruce (B.) [mailto:bpease@ford.com]
Sent: Monday, January 03, 2000 8:53 AM
To: 'Kitt, Michael (MB)'
Cc: Stevens, Gregory (G.A.)
Subject: RE: Brake Fluid Process

Hi Mike and Happy New Year,

Thanks for the brake fluid steps. I do have several questions:

1. Could you clarify the point in the graphic at which DOT 3 exists? Is this the box called "Glycol Ether Production Unit" or is the DOT3 actually the "highers" that flow from the "Glycol Ether Production Unit" box?
2. Does the graphic show any DOT 4? I believe it is the box labeled "Brake Fluid Production Unit"? Where is the point at which the "heavy duty fluids" exist?
3. I recall that esters were borated and placed into DOT 3 to result in DOT
4. When water entered the DOT 4, it combined with the borated ester to change into boric acid and ??? Can you clarify this step?

Perhaps it would be better if I called you to discuss briefly? Thanks

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

From: Kitt, Michael (MB) [mailto:mkitt@ford.com]
Sent: Tuesday, December 21, 1999 10:35 AM
To: 'gsteven1@ford.com'; 'bpease@ford.com'
Cc: Urbina, Scott (SA)
Subject: Brake Fluid Process

<<Doc1.doc>>

Bruce,

Sorry for the delay in getting this to you. Let me know if you have any questions.

Mike Kitt

> fact that they'll become valuable testifying witness if they get this
 gig
 > and that therefore they should give us a good deal.
 >
 > With the attached deadlines, we should probably move quickly.
 >
 >
 > -----Original Message-----
 > From: Logel, Jay (J.D.)
 > Sent: Wednesday, September 22, 1999 2:04 PM
 > To: Lampe, Douglass (D.B.)
 > Subject: FW: File JL_SOW DOC_PC from SREIMERS@DRBN007
 >
 > Here's the test plan for the switches that I called you about.
 > -----Original Message-----
 > From: sreimers@drbn007.dearborn.ford.com
 > <mailto:sreimers@drbn007.dearborn.ford.com>
 > Sent: Wednesday, September 22, 1999 11:45 AM
 > To: jlogel@mail.ford.com
 > Subject: File JL_SOW DOC_PC from SREIMERS@DRBN007
 >
 > << File: JL_SOW.DOC >>

Reimers, Steve (S.J.)

From: NGRABOWS
 Sent: Thursday, October 21, 1999 10:01 AM
 To: SREIMERS
 Subject: Parts - Riddell; Sheila

MSG:FROM: NGRABOWS--FORNHAL TO: SREIMERS--DRBN007 10/21/99
 10:01:48
 To: SREIMERS--DRBN007 Reimers, Steve (

FROM: Grabowski, Nadine (N.) WZ4 (UTC -0400)
 Subject: Parts [REDACTED]

We have been presented with a claim by State Farm, who is [REDACTED]
 insurance carrier. The vehicle involved is a 1993 Lincoln Town Car,
 VIN
 1LNLM82W6P [REDACTED] Can you tell me what stage the tests are in? If
 you are
 through with the parts, I would like to have them sent to our parts
 analysis
 engineer (Norm LaPointe) for review so that we can respond to State
 Farm's
 claim. Thanks.

Steve Reimers building 5 3E008
RVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>
*** Forwarding note from AROBINS6--FORDNA1 10/22/99 10:38 ***
To: SREIMERS--DRBN007 Reimers, Steve (

FROM: Robinson, Allen (A.) WZ4(UTC -0400)
Subject: RE: Parts/Taaffe

VIN# 2NHCN74W5N0 1992 GRAND MARQUIS

Regards,
Allen Robinson
Legal Assistant, Office of the General Counsel
Three Parklane Boulevard
Suite 300 West
Dearborn, Michigan 48126
PH: (313) 24-87731
FAX: (313) 24-87727
E-Mail: arobins6@ford.com

-----Original Message-----
From: Steve Reimers <mailto:sreimers@drbn007.dearborn.ford.com>
Sent: Friday, October 22, 1999 9:38 AM
To: arobins6@mail.ford.com
Cc: Porter, F.J.
Subject: Parts/Taaffe

Need to know the VIN to track the part at Central lab.

Steve Reimers building 5 3E008
RVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>
*** Forwarding note from AROBINS6--FORDNA1 10/22/99 09:24 ***
To: SREIMERS--DRBN007 Reimers, Steve (FPORTER --DRBN007 Porter,
Fred (F.
Cc: TMILOCH --FORDNA1 Miloch, Ted (T.)

FROM: Robinson, Allen (A.) WZ4(UTC -0400)
Subject: Parts/Taaffe

Steve and Fred, sometime back in March or April we had DAVID
Burnett
of K&A inspect the Brake Pressure Switch on a 1992 Grand Marquis and
forward
the parts to Central Testing Lab. Plaintiff's have requested the return
of
these parts. Please advise as to whom would be able to assist me in
obtaining these parts. Any help would be highly appreciated.

Regards,
Allen Robinson
Legal Assistant, Office of the General Counsel
Three Parklane Boulevard
Suite 300 West
Dearborn, Michigan 48126
PH: (313) 24-87731
FAX: (313) 24-87727
E-Mail: arobins6@ford.com

Reimers, Steve (S.J.)

From: Hoffman, Mark (M.E.)
Sent: Monday, January 24, 2000 9:26 AM
To: Reimers, Steve (S.J.)
Cc: Hoffman, Mark (M.E.)
Subject: Part Info you Requested

Attached EXCEL spreadsheet has the data you need on the parts I borrowed from you last month (I hope these tags are



reimadparts.xls

hard to read). See you soon.....

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Monday, December 20, 1999 7:58 AM
To: Porter, Fred (F.J.)
Subject: FW: Pre-Crimp Inspection



FOO00001.WPD

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

From: Robert Panek [mailto:rpanek@exponent.com]
Sent: Thursday, December 16, 1999 5:46 PM
To: 'Reimers, Steve (S.J.)'
Subject: RE: Pre-Crimp Inspection

Steve,

In response to your request, I found the following:

12/1/91	Light Pre-Crimp
2/1/92	Light Pre-Crimp
5/1/92	Substantial Pre-Crimp
8/1/92	Substantial Pre-Crimp
1993	(no parts to review)
1994	Moderate Pre-Crimp
1995	Light Pre-Crimp (only 1 part available)
1996	Substantial Pre-Crimp
1997	Substantial Pre-Crimp
1998	Substantial Pre-Crimp

When I narrowed down the exact date for the early change in the pre-crimp, I found that things changed on date code 2113 (4/22/92) I have actually found 2 parts with this date code and noticeably different pre-crims. I took a quick digital picture - what do you think?

1994 and 1995 parts appeared to be more lightly pre-crimped than the parts immediately preceding or following them. In general however, they did not appear to be as light as the first 2 groups.

Sheet1

Condition	Part Info	Batch	Repair Location	Full Tag Number	PA Code	Claim Number	RR Number	Repair Number	Tag Issue Date	VIN	MY	Vehicle Description	Tag Due Date	Vehicle Production Date	Arrival/Repair Date	Mileage	Registration Color
Visually OK	P2AC-SP234-AA	2112	Yecola City, Tx	88800000-4	10644	C000000001	000000-01		000000	1LNLMSTWTHV	1992	Town Car	08/18/98	84/15/92	08/28/98	112878	M
Visually OK	P2VC-SP234-BB	1512A	Jacksonville, Fla	000000004-3	11830	P-80000001	000000-01		88/15/98	1LNLMSTWTHV	1992	Town Car	08/07/98	88/10/98	08/10/98	113903	M
Visually OK	P2VC-SP234-AB & Coad	2071	Spide Okalo, Fla	00010000	4879	TL8LD0001	011807-02		88/10/98	1LNLMSTWTHV	1992	Town Car		90/11/92	08/00/98	138886	M
Visually OK	P2AC-SP234-AB	2128	Punta Gorda, Fla	000011007-0	10007	0000000001	000000-01		000000	1LNLMSTWTHV	1992	Town Car		87/01/92	08/20/98	120000	M
Visually OK	P2VC-SP234-AB & Coad	2000A	Odessa, Tx	000000004-3	2000	C000000001	010000-01		000000	2LNLMSTWTHV	1992	Grand Marquis		85/00/92	08/10/98	131707	M

3718 B291



3. 1. 1.

• •

$\frac{1}{2} \times 10^{-2}$
 $\frac{1}{2} \times 10^{-2}$
 $\frac{1}{2} \times 10^{-2}$

7. 10. 1991

• • • • •



If you would like to look for yourself I could grab some examples and bring them over.

I also wanted to add that my evaluation of the pre-crimps was subjective and that the level of corrosion on the parts made it somewhat difficult to make an easy assessment. If it was too bad I didn't consider that specific part.

That's all for now, if you'd like something more formal please let me know.

I can take pictures and possibly measurements of the widths of the pre-crimps if you want. Without removing the A1 ring it may be difficult though.

Thanks and best regards,

Rob

Exponent-
Failure Analysis Associates
39100 Country Club Drive
Farmington Hills, MI 48331
Ph. 248 324-9112
Fax. 248 324-9199
rpanak@exponent.com
www.exponent.com

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

From: Reimers, Steve (S.J.) [mailto:sreimers@ford.com]
Sent: Tuesday, December 14, 1999 12:01 PM
To: Robert Panak (E-mail)
Subject: Pre-Crimp Inspecton

Rob,

I would like Exponent to do a non-destructive examination of the pre-crimp witness marks on one Brake Pressure switch from each of the following dates (as close as possible):

12/1/91
2/1/92
5/1/92
8/1/92
1993
1994
1995
1996
1997
1998.

As you may recall when we were disassembling parts we noticed a difference in the pre-crimp witness marks. We would like to find out when these marks appear or disappear. The pre-crimp marks are visible from the hexport end just inside the aluminum cup edge.

thanks,

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Monday, January 03, 2000 11:32 AM
To: Porter, Fred (F.J.)
Subject: Remaining Life Test Results

Fred,
Steve Beringhouse phoned in the following info on 1/3/2000 at 10:48 AM.

date code	XX,000 cycles	R.O. number
2015	57	59120
2008	78	97295
2014	254	209054
2013	280	105004
2281	294	51082
2013	345	153943
2008	351	10285
2287	625	62918
2276*	694	33891
2281*	703	58808
2294*	829	80759

* Date code is after build date of vehicle

The cycles are those accumulated when the tester stops due to loss of volume.

All units have now leaked as determined by visual inspection.

He agreed to box and hold the parts and wait for us to tell him what to do with them.

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Tuesday, December 14, 1999 9:47 AM
To: Porter, Fred (F.J.)
Subject: Remaining life test update

Fred,
Steve Beringhauser phoned in the following info this AM.
date code falls after XX,000 cycles

2015	56.6
2008	78
2014	254
2013	260
2281	294
2013	346
2008	350

currently at 380,000 cycles with remaining 4 units.

Note that 2281 unit date code is after the vehicle prod'n data.
It's mileage is probably no more than 75,000 and may be less.

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Thursday, December 08, 1999 4:28 PM
To: Vegh, Paul (P.F.)
Cc: Porter, Fred (F.J.)
Subject: TDR Template Question

What does "attachments" refer to in item k below???

Example of what will be done at the EDS Fresh Eyes reviews or design reviews:

We will review the Battery B+ cable, starter cables and alternator/ PDB cables for:

- a) Proper routing and fixing of the cables to avoid all chafing and interference
- b) Cable retention at least every 300 mm, when not in a trough.
- c) Bracket (with anti-rotation) retention on the engine and frame or body to provide strain relief.
- d) Strain relief of all cables, where relative motion is involved, and enough slack for engine roll and vibration.
- e) An acid-resistant waterproof bushing must protect Cable routing through any metal component.
- f) Cable routing in relation to high heat emitting components.
- g) Cable routing in relation to all moving components, i.e. belts, pulleys, gears, steering linkage, etc.
- h) Cable routing near fuel and brake lines.
- i) Proximity to the crankshaft position sensor and distributor (must be at least 180 mm away at all points for EMC).
- j) Wire routing clearance around the battery must be at least 19 mm.
- k) **Clearance of 15 mm for all B+ cable attachments --to any grounded component.**
- l) Clearance of the battery terminal or post (whichever is higher) to the hood must be 32 mm without an insulator and 15 mm with an insulator.
- m) Assembly process to ensure that no cable can be trapped during decking of the engine or body.
- n) Tool clearance for making attachments.
- o) Protection devices used, if any, and their location (Alternator FuseLink should be close to battery) located 150 to 300 mm from the battery, and away from all items that might ignite.
- p) Eyelet connections must have anti-rotation, or FMEA of all possible assembly positions.

Tracking:

Recipient

Vegh, Paul (P.F.)

Porter, Fred (F.J.)

Read

Read: 12/10/99 7:51 AM

Read: 12/08/99 5:28 PM

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Friday, December 10, 1999 12:52 PM
To: Budzynski, Dan (D.J.)
Cc: Porter, Fred (F.J.)
Subject: Speed control Secondary Deca wiring

Dan,
Just a follow-up to my voice message. What are your plans for eliminating the hot-all-times circuit from the brake pressure switch? Is there a plan to evaluate? Is there a target vehicle or MY for introduction? What is status of the effort?

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03288, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Monday, December 13, 1999 8:28 AM
To: Kosek, Walter (W.)
Subject: RE: Speed Control Deca Switch Cycle Plan

Do you have any specifics on program and model year for incorporating this switch?

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

From: Kosek, Walter (W.)
Sent: Friday, December 10, 1999 5:28 PM
To: Reimers, Steve (S.J.); Salanta, Michael (M.)
Cc: Alvey, Ray (R.S.)
Subject: RE: Speed Control Deca Switch Cycle Plan

The long-term plans are to use this type of switch for Redundant S/C shut off. The switch is not without issues mainly with the design of the bracket but with these can be managed with proper design and validation. Additionally, I seem to have heard that the Brake Pressure type switch is incompatible with IVD so this plunger type switch will spread to all vehicles with IVD. I'm not certain about this.

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

From: Reimers, Steve (S.J.)
Sent: Friday, December 10, 1999 1:26 PM
To: Kosek, Walter (W.); Alvey, Ray (R.S.)
Subject: Speed Control Deca Switch Cycle Plan
Importance: High

Ray & Walt,

The town car underhood fire "prevent recurrence actions" is considering recommending using the brake pedal actuated switch in place of the brake pressure actuated (9F924) switch. What are the plans for use of this switch in future launches? Is there a quality issue preventing its incorporation? I need a quick turn-around on this info because of a planned tech review meeting on Monday. Need by 2pm to brief Tim Donovan.

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03288, fax 313 39 04145

Reimers, Steve (S.J.)

From: SREIMERS
Sent: Thursday, September 30, 1999 10:03 AM
To: FPORTER; TMASTERS; TDONOVAN; DGOEL
Cc: SREIMERS
Subject: 99S15 Recall Parts Analysis Update

MSG FROM: SREIMERS--DRBN007 TO: SREIMERS--DRBN007 09/30/99
10:03:31
To: FPORTER --DRBN007 Porter, F.J. TMASTERS--DRBN005
TDONOVAN--FORDNA1 DGOEL --DRBN005
cc: SREIMERS--DRBN007 Reimers, S. J.

FROM: Steve Reimers USAFT(UTC -04:00)
Subject: 99S15 Recall Parts Analysis Update
Received 700 parts Tuesday. Total parts now 1100. 7 samples given to Central lab for comparative analysis (1 -BB part, 2 -AB parts from Feb-April 92 build vehicles, 2 -AB parts from Aug-Nov 92 build vehicles, 2 -AB 1999 date code).
Results requested NLT 10/27/99 (desired 10/18/99). Jay Logel offered Exponent as a possible external company to do analysis of 432 samples. No response from Jay as to when Exponent could begin. Logging and binning continues on the first 390 parts. This task will be part of the SOW for Exponent to perform. Requested FCSD to remind dealers of the importance of matching the removed parts with the correct vehicle Yellow tag. This is key to correlating results to mileage, location, vehicle line, etc.

Steve Reimers building 5 3E008
RVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>

Reimers, Steve (S.J.)

From: SREIMERS
Sent: Monday, October 18, 1999 8:53 AM
To: TMASTERS; FPORTER; DGOEL; TDONOVAN; FPORTER; TDONOVAN; TMASTERS; DGOEL
Cc: SREIMERS; SREIMERS
Subject: FW:Recall 99S15 Root Cause Update

MSG FROM: SREIMERS--DRBN007 TO: SREIMERS--DRBN007 10/18/99
08:53:35
To: TMASTERS--FORDNA1 FPORTER --DRBN007 Porter,
F.J.
DGOEL --FORDNA1 TDONOVAN--FORDNA1
cc: SREIMERS--DRBN007 Reimers, S. J.

FROM: Steve Reimers USAFT(UTC -04:00)
Subject: Recall 99S15 Root Cause Update
Last week I met with Exponent to discuss there involvement. Rob Panek of Exponent and Steve Beringhouse of TI and I met at Central lab and

disassembled 11 mel
ted switched from the recall. We completed removing the base from the
sensor as
sembly and took photos. No significant findings. Thursday I continued
disassemb
ly of the sensor assembly with Rob Panek. One completed and photos
taken. No si
gnificant findings. We will continue disassembly this week.

Steve Reimers building 5 3E008
EVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>
*** Forwarding note from SREIMERS--DRBN007 10/07/99 13:18 ***
To: FPORTER --DRBN007 Porter, F.J. TDONOVAN--FORDNA1
TMASTERS--FORDNA1 DGOEL --FORDNA1
cc: SREIMERS--DRBN007 Reimers, S. J.

FROM: Steve Reimers USAET(UTC -04:00)
Subject: Recall 98S15 Root Cause Update
Exponent Failure Analysis has seen our SOW and will reply with a quote
for
services. They feel the 10/27/99 report date is IFFY for all 432 parts.
10 melted parts from recall are awaiting analysis at Central lab. 26
defective
parts from Kits were given to Texas Instrument for failure analysis.
Texas
Instrument plans to visit on 10/13/99 to present results. 8700 yellow
tags
have been issued thru 10/1/99. We have received approximately 3000
parts. 1500
have been examined for signs of heat damage (10 found). 560 have been
logged
and correlated to a VIN and mileage.

Steve Reimers building 5 3E008
EVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>

Reimers, Steve (S.J.)

From: SREIMERS
Sent: Thursday, October 07, 1999 1:18 PM
To: FPORTER; TDONOVAN; TMASTERS; DGOEL
Cc: SREIMERS
Subject: Recall 98S15 Root Cause Update

MSG FROM: SREIMERS--DRBN007 TO: SREIMERS--DRBN007 10/07/99
13:18:38
To: FPORTER --DRBN007 Porter, F.J. TDONOVAN--FORDNA1
TMASTERS--FORDNA1 DGOEL --FORDNA1
cc: SREIMERS--DRBN007 Reimers, S. J.

FROM: Steve Reimers USAET(UTC -04:00)
Subject: Recall 98S15 Root Cause Update
Exponent Failure Analysis has seen our SOW and will reply with a quote
for
services. They feel the 10/27/99 report date is IFFY for all 432 parts.
10 melted parts from recall are awaiting analysis at Central lab. 26
defective
parts from Kits were given to Texas Instrument for failure analysis.
Texas

Instrument plans to visit on 10/13/99 to present results. 8700 yellow tags have been issued thru 10/1/99. We have received approximately 3000 parts. 1500 have been examined for signs of heat damage (10 found). 560 have been logged and correlated to a VIN and mileage.

Steve Reimers	building 5 3E008
EVT Chassis E/E System Applications	mail drop 5011
39-03286 SREIMERS sreimers@ford.com	fax 39-04145 ;>

Reimers, Steve (S.J.)

From: Dean Pichette (dpichett@drbn005.dearbom.ford.com)
Sent: Tuesday, November 02, 1999 7:06 PM
To: fporter@mail.ford.com
Cc: dgoel@mail.ford.com; sreimers@mail.ford.com
Subject: RE: Jack's Staff Meeting This Week

Fred,

Thank you. This provides enough information for me for tomorrow's Jack Paskus Staff Meeting (presume the part(s) changed for the campaign were based on 'most probable cause?').

Regards,

Dean Pichette, Acting Manager, Systems & EDS Applications - LVC
Phone Number: (313) 32-21959 FAX: (313) 32-05564
Address: Room 22J31, Mail Drop 1220, Building #2
*** Forwarding note from FPORTER --FORDNA1 11/02/99 18:10 ***
To: DPICHETT--DRBN005 Dean Pichette
Cc: DGOEL --FORDNA1 Goel, Deepak (D. SREIMERS--FORDNA1 Reimers, Steve (

FROM: Porter, Fred (F.J.) WZ5(UTC -0500)
Subject: RE: Jack's Staff Meeting This Week

Dean,

To bring you up to speed....

The root cause on the Speed Control Deactivation Switch is TBD because we have not been able to identify the change that occurred that made the issue decline at the end of 1992. We are presently reviewing switches from the campaign. We have 12 that had the exterior plastic deformed. Those parts have been X-rayed and are being dissected at Central Labs to compare them with the hypothesis presented in the 14D. This will either strengthen the theory or cause us to modify the theory.

In addition, we are taking a sample of parts with 70,000-90,000 miles on them and asking Texas Instruments to run the impulse test to failure to see if there is a pattern based on build date, production date or geography. We are also looking for parts that appear to be undamaged on the outside but with an electrical anomaly (higher resistance when contacts are closed, some resistance to the case of the switch). These parts will also be X-rayed and dissected.

Steve Reimers is working with Joe Neme to set up a time to review our status

with Jack and Ann O'Neill. To complete the 14D, I would like to be able to say that we understand what changed. We may have to settle for a conclusion that all of the information and test results we have indicate that something changed.

It is not clear where D&R for the switch resides. The switch screws into the brake lines but it does not provide an input to any of the chassis functions. This could change in the future if speed control (adaptive speed control in particular) is included in chassis.

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

From: Dean Pichette [mailto:dpichett@drbn005.dearborn.ford.com]
Sent: Tuesday, November 02, 1999 5:17 PM
To: fporter@mail.ford.com
Cc: dgoel@mail.ford.com
Subject: Jack's Staff Meeting This Week

Fred,

Does your section have D&R responsibility for the Brake Pressure Switch?

Why is root cause TBD?

When will the 14D be complete?

Regards,

Dean Pichette, Acting Manager, Systems & EDS Applications - LVC

Phone Number: (313) 32-21959 FAX: (313) 32-05564

Address: Room 22J31, Mail Drop 1220, Building #2

*** Forwarding note from JHENE --FORDNA1 11/01/99 18:15 ***

To: RRANKIN --FORDNA1 Rankin, Robert (JBAKIOKA--FORDNA1 Sakioaka,
John (J

RHARNER1--FORDNA1 Harner, Robert (MRNUCCI--FORDNA1 Renucci,
Mike (M

Cc: DPICHETT--DRBN005 Pichette, Dean (

FROM: Neme, Joseph (J.S.)

WE5(UTC -0500)

Subject: Jack's Staff Meeting This Week

It looks like Jack's staff meeting this week will be going over campaign prevention topics.

The first topic is Campaign Event Specialist (CES) use within LVC.

This

references a letter that Jack sent back in August requesting for you to identify lead and backup CES's for the your campaign prevent areas and to

bring the list to his next staff meeting (agenda topic has been delayed for a few months). I attached the original note for your reference.

REQUEST: if you can, please provide me with a listing of your lead and backup CES's prior to the meeting... I'll prepare a summary for the VC that

will be much easier to talk to. FYI... TVC is doing the same.

(Dean...

EVT covers electrical for our VC)

The second topic is incorporating CES's into the design reviews (reference Chris Magee note to you on 9/30/99). Bob Himes has been working on formalizing this and was rolling this out to the functional chiefs. If you need a copy of the letter, let me know and I'll bring one up to you.

The discussion may turn to "what do we do now?". I recommend having a formalized "report out" after each detailed FMT/CES/RVT campaign prevention document review to highlight potential concerns to share the info with the functional chiefs for coaching/counseling and share concerns with other programs. We may want to identify specific trigger points that will automatically be reviewed at the design reviews (i.e. SDS deviations). I also recommend a quarterly "report out" from the fresh eye reviews.

The final topic of 60 day recall prevention is based on Dave Boerger's task to get prevention closure down to 60 days by the end of this year. His people will be offered up to help our engineers get to closure faster. We have 6 open items for the VC to close by year end...

Dean Pichette... SW95 wiring contacting EGR tube, MN12 headlamp switch, Towncar brake pressure switch (root cause TBD)
Bob Harmer... LS DRL output, Taurus ALR retractor (supplier quality... STA leading)
Bob Rankin... Taurus service calibration

Just making sure that you guys know everything that I do... later

<<lvc ces plan.doc>>

Joe Neme
LVC - Safety/Recalls
Phone: 39-08133 Fax: 62-18147
Location: Bldg #2, Cube 22M37, MD1255

An attachment named LVC CES PLAN.DOC was detached and sent to you separately as LVC_CES_DOC_PC.

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Thursday, December 09, 1999 1:56 PM
To: Porter, Fred (F.J.)
Subject: TechRevu_12_99

Deactivation Switch Tech Review Info for Meeting 12/13/99

The latest 14D is dated 9/14/99. There have been no updates since the last tech review on 9/14/99.

278,645 vehicles involved in recall.

167,229 total completed units as of 12/9/99

Issued 25325 Yellow tags (through 12/3/99) for parts to be returned

Received 12,845 as of 12/7/99.

Visually examined 1500 parts Found 10 heat damaged (6 -AB, 1-BB, 2-AA, 1 F3TA -AA)
Electrical measured 300 parts Found 3 with resistance anomalies (2 -AB, 1 -BB)

11000 parts sent to outside agency for visual inspection and electrical measurement.

1100 parts completed and further activity suspended.

Looking for electrical anomalies without heat damage or leakage that would be indicating a developing failure.

Looking for candidates to complete DOE samples.

Summary of results for analysis of 8 heat damaged parts (2 - AB not analyzed)

- metal switch components corroded, if present, in all switches
- the spring arm was not intact in any switch.
- All Kapton shows delamination, tears, cracks, ridges and buckling.

-Several of the washers had a heavy build up of copper material in the bevel region. The zinc plating is missing in the bevel as well, exposing the base steel, and initiating rust formation.

- Heat damage includes bulging, bubbled, and missing plastic switch base
- Chemicals found in switch cavity are predominantly brake fluid and water

-1 part had no parts in the switch cavity

-1 part built 1999 was melted by external heat source.

10 Units at TI for Impulse testing to compare remaining life of early vs late date coded parts.

2 units failed at < 100K cycles (date codes 2008 and 2015)

Testing is in progress at 100K + cycles , target completion is 1/15/2000.

All units are from cars with approx 105,000 miles

6 units have date codes compatible with original build date of cars (4 are service parts)

5 units are from January 1992 TI production

5 units are from October 1992 TI production

25 Units returned to TI for failure analysis

Summary of results: No trouble found.

parts were all built in 1999 for the recall kits.

All switches were within specification;

No current path to ground was detected;

No leaks were discovered;

2 switches were mis-handled during the install/removal cycle.

The yellow tags had the following reasons for returning the parts:

5-no description;
6-brake fluid leak;
4-admin. parts return;
2-engagement trouble;
2-disengagement trouble;
1-other electrical trouble.

7 Units given to Central Lab for comparative analysis.

2-AB built in 1999, 2-AB built Sept 92, 1-AB built in Dec 91,
1-AB built in Jan 92, 1-BB built in Oct 91.

Analysis to begin in Jan 2000.

Collecting 18 Samples for a DOE (5 factors with mileage neutralized at 80K)

Determine factors effects on remaining life.

9 samples were found in first 1500 parts.

Reimers, Steve (S.J.)

From: SREIMERS
Sent: Monday, October 18, 1999 10:58 AM
To: FPORTER; TMASTERS; ALEESE
Subject: 99815 Texas Instrument Failure Analysis

MSG FROM: SREIMERS--DRBN007 TO: FPORTER --DRBN007 10/18/99
10:58:47
To: FPORTER --DRBN007 Porter, F.J. TMASTERS--FORDNA1
ALEESE --DRBN006

FROM: Steve Reimers USAET(UTC -04:00)
Subject: 99815 Texas Instrument Failure Analysis
I have received a hardcopy report from TI. Result is NO TROUBLE FOUND.
TI did
failure analysis of 25 deac switches. These parts were all built in
1999 for
the recall kits. Summary of results: 1. All switches were within
specification; 2. No current path to ground was detected; 3. No leaks
were
discovered; 4. 2 switches were mis-handled during the install/removal
cycle.
The yellow tags had the following reasons for returning the parts: 3-no
description; 6-brake fluid leak; 4-admin. parts return; 2-engagement
trouble;
2-disengagement trouble; 1-other electrical trouble.

Steve Reimers	building 5 3E008
RV&T Chassis E/E System Applications	mail drop 5011
39-03286 SREIMERS sreimers@ford.com	fax 39-04145 ; >

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Friday, November 19, 1999 8:08 PM
To: STEVEN (E-mail)
Subject: Drawings

What is the status of the drawings you were getting for me from micro-fiche records?

thanks,
Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: SNARAYA9
Sent: Tuesday, September 21, 1999 1:56 PM
To: SREIMERS; SREIMERS
Cc: Reimers, S. J.
Subject: RE: 99S15 Parts

MSG:FROM: SNARAYA9--FORDNA1 TO: SREIMERS--DRBN007 09/21/99
13:56:39
To: SREIMERS--DRBN007 Reimers, Steve (

FROM: Narayanan, Srividhya (S.) WZ4(UTC -0400)
Subject: RE: 99S15 Parts

I ran the weekly tag file report for "FED S1" and the number of tags since
april 1999 till 09/18/99 is 5014.
Are you looking for any specific service base part number. If so please
let
me know then I can send you the file.

Thanks,
Sri Narayanan
Quality Center
Ph: 313-322 4534

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

From: Steve Reimers <mailto:sreimers@drbn007.dearborn.ford.com>
Sent: Wednesday, September 15, 1999 9:22 AM
To: snaraya9@mail.ford.com
Cc: Reimers, S. J.
Subject: FW: 99S15 Parts

Please send file for all tags issued for RAC code "FED S1" since april
1999.

This will likely be about 200 tags or less.

Steve Reimers building 5 3E008
RVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>
*** Forwarding note from SNARAYA9--FORDNA1 09/14/99 14:03 ***
To: SREIMERS--DRBN007 Reimers, Steve (

FROM: Narayanan, Srividhya (S.) WZ4(UTC -0400)
Subject: FW: 99S15 Parts

Attached is the weekly tag file for tags issued in last week (9/5/99
through
9/11/99) for RAC Code "FED S1". Please contact me if you have any
issues.

Thanks,
Sri Narayanan
Quality Center
Ph: 313-322 4534

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

From: Mulcahy, Matthew (M.T.)
Sent: Wednesday, September 08, 1999 1:23 PM
To: Narayanan, Srividhya (S.); Wash, Chris (C.J.)
Cc: Reimers, Steve (S.J.)
Subject: FW: 99S15 Parts

Sri and Chris,

Please get together and give Sri the RAC CODES for the two requirements that are pulling parts so she can send a weekly file to Steve Reimers.

See me if any questions.

Steve, Sri will be able to send you a weekly file of tags issued. You can write a program based upon receipt/testing of the parts.

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

From: Steve Reimers [mailto:sreimers@drbm007.dearborn.ford.com]
Sent: Wednesday, September 08, 1999 10:39 AM
To: mmulcahy@mail.ford.com
Cc: Reimers, S. J.
Subject: 99S15 Parts

*** Reply to note of 09/08/99 09:11

Part of the data base we are developing from the returned parts is the mileage, VIN, location, and TIS for each part. The yellow tags appear to have a
ll this information but we can save some labor if we can pull the info out of the system that generates the tag. Can you suggest how we can access this data electronically?

Steve Reimers	building 5	38008
RVT Chassis E/E System Applications	mail drop	5011
39-03286 SREIMERS sreimers@ford.com	fax	39-04145 ;>

An attachment named FES1.XLS was detached and sent to you separately as FES1 XLS_PC.

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Wednesday, November 03, 1999 10:50 AM
To: Mulcahy, Matthew (M.T.)
Subject: 99S15 Recall Tags

Matt, I am trying to discover if there is a bias in the location for returned parts. Do all recall vehicles repair locations have an equal chance to return the Brake Pressure switch? Is there a chance that the return system chooses the first 200 (or ???) starting from the top of a list and stops once it has reached the daily quota? Can you think of anything else that might cause a bias?
thanks,
Steve

Reimers, Steve (S.J.)

From: Mahl, Fred (F.)
Sent: Wednesday, November 24, 1999 10:35 AM
To: Reimers, Steve (S.J.)
Subject: RE: FEDS1 files

Yes I can send you files each week if you like. The file I send you 9181474 is the latest file I have.

-----Original Message-----
From: Reimers, Steve (S.J.)
Sent: Wednesday, November 24, 1999 10:28 AM
To: Mahl, Fred (F.)
Cc: Mulcahy, Matthew (M.T.)
Subject: FEDS1 files

Fred,
Thanks for the rapid response.
Will it be possible to get these files on a regular basis as parts are received?

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Thursday, January 13, 2000 2:32 PM
To: Robert Panek (E-mail)
Subject: New RAC codes

Rob,
RAC codes FED S4, FED S5, FED S6, and FED S7.
Parts should start coming in soon for these new codes.
FED S4 is Town cars built 11/1/91 thru 1/31/92 from all states,
FED S5 is Crown Vic/ Gran Marquis built 2/5/92 thru 2/28/92 from all states,
FED S6 is tc cv and gm from selected states for same build dates as FED S1,
and FED S7 is tc cv and gm 11/1/91 thru 1/31/92 from other selected states.

You should ask for FED S1 parts and all these 4 new RAC code parts when you make a pick up.

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: Amy B. Cheff [acheff@drbn006.dearborn.ford.com]
Sent: Wednesday, November 03, 1999 8:04 PM
To: sreimers@mail.ford.com
Subject: RE: Recall 99S15 % complete

This information is up to date through last night. Any completion rate questions really should go through Dawn Rossetti I89107.

Amy Cheff 734/266-9911 FAX 734/266-1166
Recall Specialist-QSF/Recall Process Support Team
PROPS ID ACHEFF acheff@ford.com
*** Reply to note of 11/03/99 14:25
To: ACHEFF --DRBN006 Cheff, Amy (A.B.)

FROM: Reimers, Steve (S.J.) WZ5(UTC -0500)
Subject: RE: Recall 99S15 % complete

Through what date?

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

From: Amy B. Cheff [mailto:acheff@drbn006.dearborn.ford.com]
Sent: Wednesday, November 03, 1999 11:07 AM
To: sreimers@mail.ford.com
Subject: Recall 99S15 % complete

57% complete - 150,465 vehicles completed

Amy Cheff 734/266-9911 FAX 734/266-1166
Recall Specialist-QSF/Recall Process Support Team
PROPS ID ACHEFF acheff@ford.com
*** Forwarding note from SREIMERS--FORDNA1 11/03/99 10:55 ***
To: ACHEFF --DRBN006 Cheff, Amy (A.B.)

FROM: Reimers, Steve (S.J.) WZ5(UTC -0500)
Subject: Recall 99S15 % complete

Amy, What is the status of this recall? I need number of vehicles completed and % complete for program.
Thanks,
Steve

Reimers, Steve (S.J.)

From: MMULCAHY
Sent: Thursday, October 07, 1999 9:57 AM
To: GBALINT; GBALINT
Cc: SREIMERS; ALEESE; ALEESE; FPORTER; SREIMERS
Subject: RE: Recall 99S15 Parts Matching

MSG:FROM: MMULCAHY--FORDNA1 TO: SREIMERS--DRBN007 10/07/99
09:57:53
To: GBALINT --DRBN006 Balint, Gary (G. MMULCAHY--FORDNA1 Mulcahy,
Matthew
Cc: SREIMERS--DRBN007 Reimers, Steve (FPORTER --DRBN007 Porter,
Fred (F.
ALEESE --DRBN006 Leese, Alvin (A.

FROM: Mulcahy, Matthew (M.T.) WZ4(UTC -0400)
Subject: RE: Recall 99S15 Parts Matching

Our experience would put the percent at about 80%-90%
-----Original Message-----
From: Gary Balint <mailto:gbalint@drbn006.dearborn.ford.com>
Sent: Wednesday, October 06, 1999 10:45 AM
To: mmulcahy@mail.ford.com
Cc: sreimers@drbn007.dearborn.ford.com;
fporter@drbn007.dearborn.ford.com; Leese, A. .; Gary Balint
Subject: Recall 99S15 Parts Matching

Matt - See note below. Do you have any historical data - or even a "gut
feel"?
I have no info that would answer Steve's question.

Gary S. Balint PROPS-GBALINT or INTERNET-gbalint@ford.com
33-72790 (FAX 84-51024)
Room 802, DSC II
*** Forwarding note from SREIMERS--DRBN007 10/06/99 09:42 ***
To: GBALINT --DRBN006 Balint, Gary
cc: ALEESE --DRBN006 FPORTER --DRBN007 Porter,
F.J.
SREIMERS--DRBN007 Reimers, S. J.

FROM: Steve Reimers UBAET(UTC -04:00)
Subject: Recall 99S15 Parts Matching
I am concerned about how conscientious dealers are about matching a
part
they
have removed with the correct Yellow tag (VIN). This is important to me
when
trying to correlate failures to mileage, region, etc. Approximately
what
percent of the returned parts are properly matched?

Steve Reimers building 5 3E008
RVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 j>

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Monday, January 03, 2000 11:05 AM
To: Wash, Chris (C.J.)
Subject: FW: Restricted Yellow tag For Recall 99S15 (RAC code FEDS1)

Chris,

Stop issuing tags for FED S1 to allow segregating them from parts received with new filtering parameters as follows.

Issue tags with a new RAC CODE using the same parameters as FED S1 except change the included states to those in the right-hand column below.

Issue tags with a second new RAC CODE with same parameters as FED S1 with following build date changes:

Town cars built 11-4-91 thru 1-31-92

Crown Vic and Grand Maquis built 2-5-92 thru 2-28-92.

—Original Message—

From: Reimers, Steve (S.J.)
Sent: Thursday, December 16, 1999 5:39 PM
To: Wash, Chris (C.J.)
Cc: Mulcahy, Matthew (M.T.); Mahl, Fred (F.)
Subject: FW: Restricted Yellow tag For Recall 99S15 (RAC code FEDS1)

Chris,

I am finally reaching the point where I only need a few more samples from some specific times and places.

See the table below for the details.

thanks,

—Original Message—

From: Reimers, Steve (S.J.)
Sent: Thursday, December 16, 1999 5:34 PM
To: Reimers, Steve (S.J.)
Subject: Restricted Yellow tag For Recall 99S15 (RAC code FEDS1)

I only need tags issued for the dates and states shown below.

Please segregate these with a separate RAC code.

It would be extremely helpful if the dealers could enter the 4 digit date code for the parts they are returning.

MY92 & 93 Build dates Needed

States 11/91 thru 1/92 11/91 thru 11/92

AK	X	
AL	X	
AR		X
AZ	X	
CA	X	
CO		X
CT	X	
DC	X	

DE		X
FL	X	
GA	X	
HI	X	
IA	X	
ID	X	
IL	X	
IN	X	
KS	X	
KY	X	
LA	X	
MA	X	
MD	X	
ME		X
MI	X	
MN		X
MO	X	
MS		X
MT		X
NC	X	
ND		X
NE		X
NH		X
NJ	X	
NM		X
NV		X
NY	X	
OH	X	
OK	X	
OR		X
PA	X	
RI	X	
SC	X	
SD		X
TN	X	
TX	X	
UT		X
VA	X	
VT		X
WA		X
WI		X
WV		X
WY		X

Reimers, Steve (S.J.)

From: SREIMERS
Sent: Friday, September 24, 1999 11:11 AM
To: ALEESE
Cc: FPORTER; SREIMERS
Subject: Return Parts Accuracy

MSG FROM: SREIMERS--DRBN007 TO: SREIMERS--DRBN007 09/24/99
11:11:45
To: ALEESE --DRBN006
cc: FPORTER --DRBN007 Porter, F.J. SREIMERS--DRBN007 Reimers,
S. J.

FROM: Steve Reimers USAET(UTC -04:00)
Subject: Return Parts Accuracy
Many of the parts I am receiving for 99815 recall appear to have been
put with
the wrong tag. It is very important that the parts from a specific VIN
be
attached to the tag for that VIN and that the mileage be accurate. This
information is key to identifying root cause and correlating to
mileage,
vehicle line, etc. This is important for all returned parts, and not
just
99815 parts. Can you issue an reminder to the service technicians
regarding
the importance of putting the correct part with the correct tag?
thanks,

Steve Reimers building 5 3ED08
RVT Chassis E/E System Applications mail drop 5011
39-03286 SREIMERS sreimers@ford.com fax 39-04145 ;>

Reimers, Steve (S.J.)

From: Narayanan, Srividhya (S.)
Sent: Tuesday, November 23, 1999 10:21 AM
To: Reimers, Steve (S.J.)
Subject: RE: Tag File Question

Hi,

All issued tags have 10 digits. The tag file has 2 fields "TagNumber" and "TagCheckDigit". The "TagNumber" field contains the first 9 digits and the "TagCheckDigit" has the 10th digit. You can uniquely identify all the tags with the first 9 digits.

I can combine them together and make a single field like "FullTagNumber" if you want to compare with all the 10 digits. Please let me know if you want me to combine them to a single field.

Sri Narayanan

Quality Center
Ph: 313-322 4534

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

From: Reimers, Steve (S.J.)
Sent: Friday, November 19, 1999 2:02 PM
To: Narayanan, Srividhya (S.)
Subject: Tag File Question

In the weekly tag files you send me I notice that sometime the TAG number field has 9 digits and other times 10 digits.
The actual tags with 10 digits have a dash between the 9th and 10th digit. I am trying to uniquely identify each part by its tag number. Will the first 9 digits uniquely identify all issued tags? Do all issued tags have 10 digits?

Steve Reimers
RV&T EESE Chassis E/E Systems
313 39 03286, fax 313 39 04145

Reimers, Steve (S.J.)

From: SREIMERS
Sent: Wednesday, October 06, 1999 9:18 AM
To: ALEESE
Subject: Unmatched 99815 Recall return parts

MSG FROM: SREIMERS--DEBN007 TO: ALEESE --DEBN006 10/06/99
09:18:18
To: ALEESE --DEBN006

FROM: Steve Reimers USAET(UTC -04:00)
Subject: Unmatched 99815 Recall return parts
Al, I recently received two bags of parts from the recall that had the tags stapled together and stapled to the outside of the bag. The P&A for the two dealerships involved are 13354 and 12098. Please remind the dealerships that it is very important to match the parts to the VINs and thank them for bagging the parts that they could not match. I am not sure what use I can make of unmatched parts but it is good to know that they aren't erroneously matched to a VIN and wont become part of the selected analysis sample.
thanks,

Steve Reimers	building 5 3E008
RV&T Chassis E/E System Applications	mail drop 5011
39-03286 SREIMERS sreimers@ford.com	fax 39-04145 />

Reimers, Steve (S.J.)

From: Reimers, Steve (S.J.)
Sent: Thursday, January 13, 2000 2:33 PM
To: Narayanan, Srividhya (S.)
Subject: RE: Weekly Tag file...

Please start sending me tag issued files for these RAC codes FED S4, FED S5, FED S6, and FED S7.

thanks

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

From: Narayanan, Srividhya (S.)
Sent: Tuesday, January 11, 2000 4:15 PM
To: Preston, Bart (B.); Elayyan, Hazim (H.I.); 'WALTVAN'; Reimers, Steve (S.J.); 'Cox Roger (E-mail)'; 'Lynn Cullon (E-mail)'
Subject: Weekly Tag file...

There was no data in last week's Tag Issued File for your Specifications.

Thank You.

Sri Narayanan

Quality Center

Ph: 313-322 4534

June 1999

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2 T ATL TRIP	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
	20 Rain	21	22	23	24	25
26 Father's Day	27	28	29	30		

McGuirk, Andy

ADW
Fred
Porter
390 4145

From: McGuirk, Andy
Sent: Tuesday, June 01, 1999 3:45 PM
To: 'Steve Reimers'; 'Frederick J. Porter'
Subject: FW: Ford visit draft agenda for June 2nd visit
Importance: High

AUTOMOTIVE SENSORS AND CONTROLS QA MANAGER
34 FOREST ST N/A 21-05
ATTLEBORO, MA 02103
TEL : (508) 236-3080
FAX : (508) 236-3745
MOBILE: (508) 288-6119
PAGE: (508) 487-3760 EXT 804-2044

From: McGuirk, Andy
Sent: Tuesday, June 01, 1999 12:41 PM
To: 'Frederick J. Porter'; 'Steve Reimers'
Cc: Sharpe, Robert; Berlinghouse, Steven; Proia, Stephen
Subject: Ford visit draft agenda for June 2nd visit

Fred and Steve, I'd like to propose the following agenda for tomorrow's visit by Steve:

The flight should place Steve into our conference room (care of Rob S) between 9:15 and 9:30... with a "formal" start at 9:30. I see us accomplishing the transition of core team focus from product to process, having an update on corrosion status, and reviewing process controls from '92 with discussion about differences and changes to '99. lets review this "DRAFT" and talk about finalizing same this afternoon...

ARRIVE TI BLDG 12-1A CONF ROOM AND INTRODUCTIONS/COFFEE		9:15 - 9:30
FINALIZE OBJECTIVES OF THE DAY	ANDY M	9:30 - 9:40
FORD ISSUE OVERVIEW AND DIALOGUE	STEVE R AND ANDY M	9:40 - 9:50
TI BRAKE SWITCH/CORROSION REVIEW - UPDATE	STEVE B	9:50 - 10:15
BRAKE SWITCH ASSEMBLY PROCESS OVERVIEW	STEVE P	10:15-10:45
TIME-LINE DISCUSSION....MANUAL VS AUTO CRIMP	STEVE P	10:45 -11:15
(OW - LINE) CRIMP PROCESS CONTROLS...C&E, CONTROLS	STEVE P	11:15-11:30
(OW - LINE) LINE TOUR - LINE DISCUSSIONS	STEVE P	11:30- 12:30
WORKING LUNCH	ALL	12:30 -1:00
DISCUSSIONS, MORE LINE TOUR, NEXT STEPS	ALL	1:00 - 2:00
FORD CORE TEAM CONFERENCE CALL....WRAP-UP	ALL	2:00 - 2:30
DEPART FOR AIRPORT	STEVE R & ROB S	2:30

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



June - 1977

2 T ... = K ... for ... pressure ...
... ..

2 K per lot } A
20K per lot }

KAPTON CONT-OVERSIZE DETECTION ?

CRIMPER LOAD FORCE CONTROL ?
DIAMETER & HEIGHT

PMC schedules

~~Down~~ Sensor Control Calibration
Controller program changes ?

40421-2 } 2/19/99 Depth change
140422-2T } on 45° & 90° Die
4 MTL WAS F35-01

- HT WAS 9-30 3 3/24 Hole 24 to
REV A dta 11/4/86 800 Wt. 0.75

when will this get installed ?

SFC Process for out-of-control issues

Summarize Crimp tool changes

Final Review ?

APR 15 1967

22-141 50 SHEETS
22-142 100 SHEETS
22-143 200 SHEETS



So far as the human mind can shake off selfishness and act from a sacred regard to truth, justice, and duty, so far will men not only be virtuous, but fearless in virtue.

— Sarah Josepha Hale

- Commitments
- Journal Entry
- Thoughts & Ideas
- Agenda
- Conferences

6
Tuesday
July 1999

Daily Record of Events

187th Day 17th Sept Week 27

- * Stan Hysko TRMC help determine incorp data of switch in other programs.
- * 14 D Statement regarding - one page Follow-on investigation into other applications.
- * Fred Kuhl - Re-locate to Ignition Run slot?



Request for Central Laboratory Service

15000 Century Dr., Dearborn MI 48120-1267 Phone (313) 32-21676 FAX (313) 32-21614

All shaded areas must be filled in to process your request

Administrative Use Only

Your Name (Send report to)		Telephone	PROPS ID	Date
Steve Reimers		39 03286	SREIMERS	8-26-99
Secondary Contact		Telephone	PROPS ID	FAX
Fred Porter		84 53722	FPORTER	39 04145
Room No./Mail Drop/PO Box	Send Report To	Building	Location Code	Dept. #
4D 5011	4402 EMC	AUTS	(5100)	7402
Mail # of Sample	Sample Handling	Material	Source	Supplier Grade
1	Electronics	FOXCASE		
Return after test		Dispose after test	Dispose after 30 days	
Material Name		Sample Identification (Contents below if needed)	Part Number (If any)	Material Specification (If any)
BRAKE PRESSURE SWITCH		NY	F2VK-9F924	26-0601
			- AB	N/A
Investigation				
Nature of Investigation/Specific Tests Requested (Check all that apply)				
☐ Production/Plant problem ☐ Product Test in Lab. Use ☐ Failure Analysis ☐ Research (Describe below) ☐ Legal ☐ Use Specification as a guide ☐ Specification Compliance ☒ Other (Describe below)				
Stop testing upon failure?		Does this require CAL testing?		Do you need to know your CL contact and timing?
No Yes		No Yes		Yes

INITIAL ROUTING

Metallurgy/Mechanical (313) 32-21613

Chemistry (313) 33-78277

Polymers, Coatings & Corrosion (313) 39-46698

Additional Sample Information/Testing Requirements

ANALYZE CHEMICAL CONTAMINANTS

AND PROPERTIES PER PROCEDURE for Brake Pressure Switch

Developed by Steve LaRouch, Pete Klat

Greg Ulewicz

(Hayden Miller 27322)

Date you would like report		Format (Check all that apply)		Mail typed report	
10-1-99		FAX preliminary results		☒ Electronically transfer report	
Date you must have report		FAX hard written		Phone preliminary results	
10-1-99		FAX typed report		Mail hard written	

For information about services or assistance in completing this form please refer to the Central Laboratory WEB page.

(www.gm.ford.com/central/home.htm)

Laboratory number and date cannot be assigned without receipt of samples.
Samples will be disposed of after 30 days unless otherwise indicated above.

Name / Project Steve Beringhaus / Andy McGuirkCompany / Department TI Attleboro, Ma

Address

Telecon w/ F. Porter & S. Reimer @ Ford

Phones

DATE
TIME

SRL

MY PLAN / I SAID
NEEDS EXPRESSED / FEEDBACK SOUGHTTHEY SAID / FOLLOW-UP
NEEDS EXPRESSED / FEEDBACK GIVENWHEN
DATE

8/26/99

10:XX AM

Steve B. reported the following info:

- Results of examining 25 parts tested for ~~life~~ Impulse life in Feb & March 1999

- Test stopped @ approx 1.3 Mcycle

- 16 parts not failed

- 14 part show no Kapton bubble

- 11 " " bubble

- 9 " " leaked

- 9/9 leak due to failed KAPTON

- 4 of 9 have bubble

(KAPTON fails delaminates and cracks)

- 40 parts collected by TI from dealers performing recall repair.

- Approx 1/2 show bubbles

- None show water in connector

- Still analyzing parts

- 2 of 9 are manual crimp

- 1/2 of manual crimped have bubbles

TI to continue analysis & report total of manual crimp parts in 40 parts.

BUBBLES
///
TEXT PROP
SHAPE
DEFORMATION



• Comments
• Journal Entry
• Thoughts & Ideas
• Agenda
• Conversations

It is not well to see everything, to hear everything; let
many causes of offense pass by us unnoticed.
— Lucius Annaeus Seneca

31

Tuesday
August 1989

- CNFN APZ RAS SW VALIDATION
REPORT REVIEW.

Daily Record of Events

24th Day 122 Left Week 35

w/ D Pachar Stachowski

Proposes - MAKING ALL VDMs 100% Semi-Active
w/ Driver Selectable

ISSUE - ROM change VDM

RAM change Cluster/ODM?
to lock-out Selectable features

What setting to use for RIDE

called MATT Mulcahy re: Recall parts prob
88303

called Chris Wash " "
88281

AMY CHEEF 69911 update 99815 45% done
Number repaired 126,164
" kits sold 188,121
Number car destroyed 738

estimates 19,000 KITS STILL ON SHELF
at dealers.

TOM - recommends begin EA on the few
parts we have.

Must review with Fred.

per Fred: Requested TZ - Steve Baringhouse
to provide pre-lim report of 40
parts they gathered from dealership.

✓ Also request Vins for 40 parts.
✓ NO VINs were recorded
by TI.

**Thursday
September 1999**

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

- ✓ Task Completed
- Planned Forward
- ✗ Task Deleted
- BSB Delegated Task
- In Progress

August 1990							October 1990						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	30					1	2
8	9	10	11	12	13	14	31	1	2	3	4	5	6
15	16	17	18	19	20	21		7	8	9	10	11	12
22	23	24	25	26	27	28		13	14	15	16	17	18
29	30	31						19	20	21	22	23	24
								25	26	27	28	29	30

↓ ABC Prioritized Daily Task List

- * Prep list of items for outside tester to analyze differences of Recalled parts VS new.
- ✓ - GET PREMIUM PI report
- ✓ - Check WARRANTY CLAIMS FOR 1993 TC w/ RB Part recall part.

Daily Expenses

[illegible]

Appointment Schedule

7	
8	
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1	
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7	
8	

COMMUNICATIONS

Name / Project

Steve E.

Company / Department

T2

Address

ATTN

Phones

DATE
TIME

SEQ

MY PLAN / I SAID
NEEDS EXPRESSED / FEEDBACK SOLICITTHEY SAID / FOLLOW-UP
NEEDS EXPRESSED / FEEDBACK GIVENWHEN
DATE

9/3/99

3:50

DIL I RECEIVE

PRCLAL KCIJET

FILES?

YES & ALL WERE

OPEN-ABLE & PRINTABLE.

Photo of bubble is

delamination... NOT

"Teardrop"

DATA THAT WAS NOT

INCLUDED IS:

DATE CODES

TOTAL

W/TEARDROP

OCT 91 - JAN 92

14

9

64%

MANUAL CRIMP

FEB 92

11

10

70%

MANUAL/AUTO MIX UNRESOLVED

MARCH 92 - DEC 92

17

5

29%

Believes the above data confirms manual versus Auto CRIMP does not influence occurrence of teardrops



• Commitments
• Journal Entry
• Thoughts & Ideas
• Agendas
• Conversations

Fear not those who argue but those who dodge.
— Marie von Ebner Eschenbach

3

Friday

September 1999

24th Day 118 Left Week 35

Daily Record of Events

- Picked up 2 BP5W from WPRC
these have no yellow tags
- Section Mfr & discuss ISC 8000 ind. &
Leo gave assignment



• Commitments
• Journal Entry
• Thoughts & Ideas
• Agendas
• Conversations

Expenditure always rises to meet income.
— Cyril Northcote Parkinson

14

Tuesday

September 1998

25th Day 108 Left Week 37

Daily Record of Events

- A ✓ FIX 14D Draft table pg 6-
- A ✓ JAY LOGEL addition under ~~start~~
table on pg 6
- A ✓ REVISE 7B quantity shipped vs usage
--- exhausted
from inventory.
- A ✓ Send usage chart to Jay Logel
for claims ~~on~~ other VL&MY.
data to Joe Kafati (MONTHLY)
- ✓ Send 14D-7 to Doug Lamp
- ✓ Faxed new pg 6 & 7 for 14D-7 to
Chris Blackerby



- Compliments
- Journal Entry
- Thoughts & Ideas
- Agenda
- Conversations

*Life is the art of drawing sufficient conclusions
from insufficient premises.*
— Samuel Butler

15

Wednesday
September 1999

25th Day 107 Left Week 37

Daily Record of Events

- Prepared Draft BPS analysis SOW
- Dist to Donovan & Masters for comment.
- Reviewed with Fred.
- Mary Hays (sp?) told to take pictures.

**Thursday
September 1999**

**Thursday
September 1999**

- ✓ Task Completed
- Planned Forward
- ✗ Task Deleted
- 👤 Delegated Task
- ⚙ In Progress

S M T W T F S

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

August 1990

October 1999

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

↓ ABC Prioritized Daily Task List

Daily Expenditures

Appointment Schedule

7

B

9

10

11

12

1

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7

8



- Commitments
- Journal Entry
- Thoughts & Ideas
- Agendas
- Conversations

If you keep your mind sufficiently open, people
will throw a lot of rubbish into it.
— William A. Orton

17

Friday
September 1999

250th Day 186 Left Week 37

Daily Record of Events

- Dwg pkg to Pat

Brk pressure components

- 439 parts maybe by end of year if SOB as is

* - Pat to discuss with Central Lab to determine
capability, out-source, management of source.

prefer early do
this

✓ - Email clear copy



One cannot collect all the beautiful shells on the beach.
— Anne Morrow Lindbergh

19

Sunday

September 1989

332nd Day 103 Left Week 37

Daily Record of Events

[illegible]

20

Monday

September 1999

Yom Kippur

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

August 1988							October 1988						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
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8	9	10	11	12	13	14	3	4	5	6	7	8	9
15	16	17	18	19	20	21	10	11	12	13	14	15	16
22	23	24	25	26	27	28	17	18	19	20	21	22	23
29	30	31					24	25	26	27	28	29	30

- ✓ Task Completed
- Planned Forward
- ✗ Task Deleted
- 👤 Delegated Task
- 🔄 In Progress

↓ ABC Prioritized Daily Task List

- SOW - Logic for extended exam selection
- Segment exam before for routine & detail
- 1st pre-takedown tests.

Daily Expenses

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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Appointment Schedule

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COMMUNICATIONS

Name / Project Steve BoringhouseCompany / Department TI ATTLB

Address _____

Phones 508 236 3378DATE
TIME

800

MY PLAN / SAID
NEEDS EXPRESSED / FEEDBACK SOUGHTTHEY SAID / FOLLOW-UP
NEEDS EXPRESSED / FEEDBACK GIVENWHEN
DATE

2/22/77

9PM

ANY -BB parts in
40 parts tested?

NINE

DID YOU GET ANY -BBs?

NONE

DID YOU ANALYZE -BBs?

No

Any more testing of 40?

DONE
TESTING.OF THE 25 LIFE TEST
PARTS DO ANY SHOW
CRACKING OR FATIGUE
AT STATIONARY TERMINAL
I.D. MIN CROSS SECTION?IN 40 PARTS -
6 part sample
had no cracksWill take
a look.

Any Further testing of 25? No

Bubble occurrence info
shows radical drop
after Feb 92.
Explain?Not sure drop
is statistically
significant.
No explanation,
if it is.XRAY of -BB shows
radically different switch.A 57PS type
part.

September 1999

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

August 1959

November 1988

- ✓ Task Completed
- Planned Forward
- ✗ Task Deleted
- ⏸ Delegated Task
- In Progress

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

日	一	二	三	四	五	六	日
30						1	2
31	4	11	18	25	31	8	15
32	11	18	25	31	8	15	22
33	18	25	31	8	15	22	29
34	25	31	8	15	22	29	36

Prioritized Daily Task List

UPDATE SKILLS Matrix

OASIS MSG

9444 PARTS TO TII
See FA.

Daily Expenses

INDEPENDENT TRIPS SW 4/22/28

Appointment Schedule

3

4

4

10

11

12

1

2

8

4

1

8

3

1



- Commitments
- Journal Entry
- Thoughts & Ideas
- Agendas
- Conversations

There is no dishonor in rethinking a problem.
— The Royal Bank of Canada Monthly Letter

27

Monday

September 1999

270th Day 95 Left Week 39

Daily Record of Events

- Delivered 2 BP SW to CSL for
Comparison ANALYSIS

- Took MELTED -BB part RO# 108857-1
to CSL & got x-ray photo's.

COMMUNICATIONS

Name / Project

Steve Boringhouse

Company / Department

TZ 471 Ecorse MA

Address

Phones

DATE
TIME

ASQ

MY PLAN / I SAID
NEEDS EXPRESSED / FEEDBACK SOUGHTTHEY SAID / FOLLOW-UP
NEEDS EXPRESSED / FEEDBACK GIVENWHEN
DATE

3:40P 9/28/99

10 of 25 Impulse Life
test parts were
available to examine
for cracks in the
terminals. The other
15 ~~more~~ bases were
discarded sometime
ago because we only
were interested in
KAPTON.

10 parts showed
No Cracks.

The 40 recall parts
showed No cracks
in terminals.

Will do F.A.

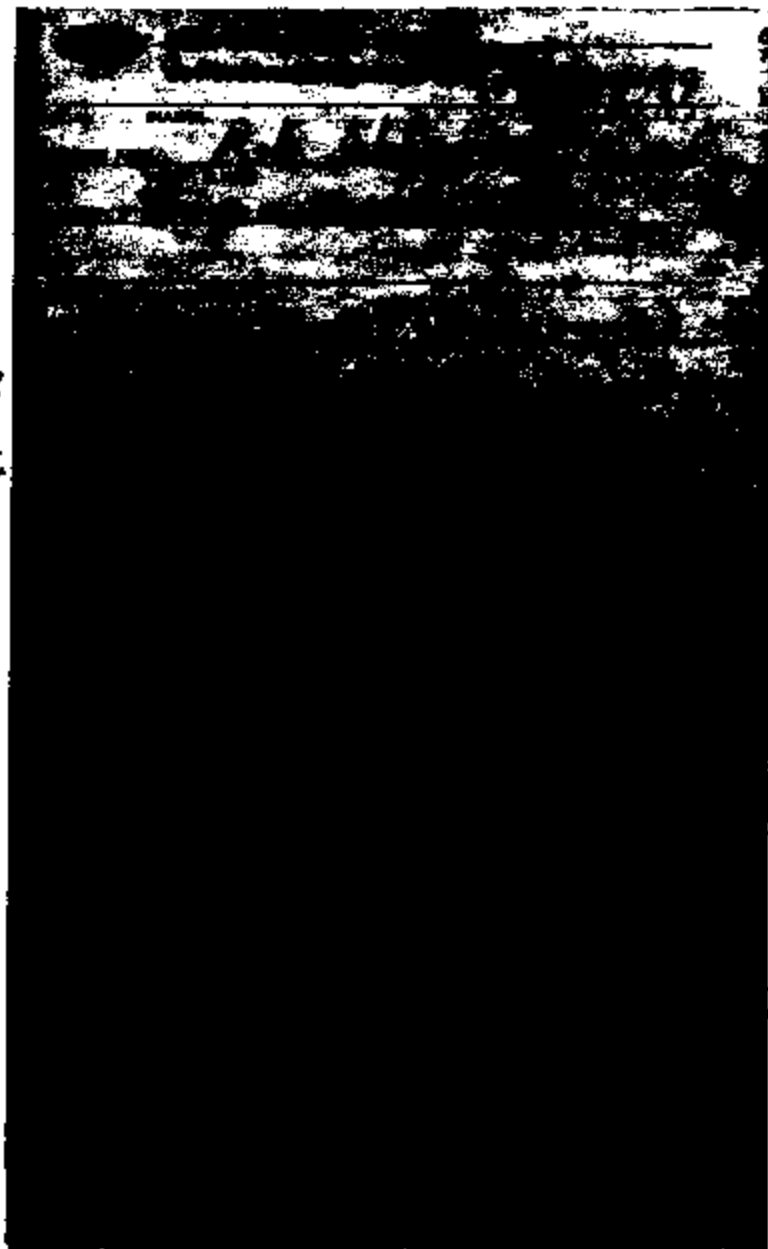
I will send 25 parts
(9XXX) for F.A.,
I will send EXCEL
file of 30 parts
logged so far.

Plan to meet at
Ford 10/13/99 to
review recall data
and F.A. results

10/13/99 is OK.

END

Rob to forward
to TI Attleboro
Steve Beringhouse
for failure analysis.



These parts were received from
WPRC (RAC Code Fed S1) as part
of 99S15 Recall. All were built
after 5/1/99. Believe these to be
part of Kit lot.

SR



7

**Thursday
October 1989**

Daily Record of Events

2004 Nov 05 Sat 10:00 AM

FROM (Company) FORD MOTOR BLDG 3/5 PU2053 REC 3 CUBE# 20000 ROTUNDA DR MD DEARBORN MI 48123		Progeny Account No. 68505256		Origin APRIL Number DTN 8342489234	
Method of Payment ☒ Bill to Order 3137953 Address Order account no. ☐ On Account Address Order account no. ☐ Bill 3rd Party Address Customer account no. ☐ Pay to Address Address		Service Type ☐ Standard ☒ Express ☐ Next Business Day ☐ Next Business Day ☐ Next Business Day ☐ Next Business Day		Red Arrow ☐ Red Arrow ☒ Red Arrow ☐ Red Arrow	
Shipping Reference will appear on invoice		1 of 1 1 of 1 1 of 1		Special Instructions ☐ Subsidiary Delivery ☐ Subsidiary Delivery ☐ Subsidiary Delivery ☐ Subsidiary Delivery	
Sender's Signature Rob Panek		Date 12/7/99		Signature Rob Panek	
Product BP SWITCH SAMPLE		Weight 1.00		Volume 1.00	
THANK YOU FOR SHIPPING WITH AIRBORNE EXPRESS		Signature Rob Panek		Signature Rob Panek	
www.airborne.com		Signature Rob Panek		Signature Rob Panek	

3713 8343



11

Monday

October 1989

Daily Record of Events

25th Day - 11 Left Ventricle 41

[illegible]

**Tuesday
October 1999**

S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

- ✓ Task Completed
- Planned Forward
- ✗ Task Deleted
- ⌘ Deleted Task
- ⌘ In Progress

September 1954

November 1999

9	10	11	12	13	14	15	16	17	18	19	20
			7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27
28	29	30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49	50	51
52	53	54	55	56	57	58	59	60	61	62	63
64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87
88	89	90	91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108	109	110	111
112	113	114	115	116	117	118	119	120	121	122	123
124	125	126	127	128	129	130	131	132	133	134	135
136	137	138	139	140	141	142	143	144	145	146	147
148	149	150	151	152	153	154	155	156	157	158	159
160	161	162	163	164	165	166	167	168	169	170	171
172	173	174	175	176	177	178	179	180	181	182	183
184	185	186	187	188	189	190	191	192	193	194	195
196	197	198	199	200	201	202	203	204	205	206	207
208	209	210	211	212	213	214	215	216	217	218	219
220	221	222	223	224	225	226	227	228	229	230	231
232	233	234	235	236	237	238	239	240	241	242	243
244	245	246	247	248	249	250	251	252	253	254	255
256	257	258	259	260	261	262	263	264	265	266	267
268	269	270	271	272	273	274	275	276	277	278	279
280	281	282	283	284	285	286	287	288	289	290	291
292	293	294	295	296	297	298	299	300	301	302	303
304	305	306	307	308	309	310	311	312	313	314	315
316	317	318	319	320	321	322	323	324	325	326	327
328	329	330	331	332	333	334	335	336	337	338	339
340	341	342	343	344	345	346	347	348	349	350	351
352	353	354	355	356	357	358	359	360	361	362	363
364	365	366	367	368	369	370	371	372	373	374	375
376	377	378	379	380	381	382	383	384	385	386	387
388	389	390	391	392	393	394	395	396	397	398	399
400	401	402	403	404	405	406	407	408	409	410	411
412	413	414	415	416	417	418	419	420	421	422	423
424	425	426	427	428	429	430	431	432	433	434	435
436	437	438	439	440	441	442	443	444	445	446	447
448	449	450	451	452	453	454	455	456	457	458	459
460	461	462	463	464	465	466	467	468	469	470	471
472	473	474	475	476	477	478	479	480	481	482	483
484	485	486	487	488	489	490	491	492	493	494	495
496	497	498	499	500	501	502	503	504	505	506	507
508	509	510	511	512	513	514	515	516	517	518	519
520	521	522	523	524	525	526	527	528	529	530	531
532	533	534	535	536	537	538	539	540	541	542	543
544	545	546	547	548	549	550	551	552	553	554	555
556	557	558	559	560	561	562	563	564	565	566	567
568	569	570	571	572	573	574	575	576	577	578	579
580	581	582	583	584	585	586	587	588	589	590	591
592	593	594	595	596	597	598	599	600	601	602	603
604	605	606	607	608	609	610	611	612	613	614	615
616	617	618	619	620	621	622	623	624	625	626	627
628	629	630	631	632	633	634	635	636	637	638	639
640	641	642	643	644	645	646	647	648	649	650	651
652	653	654	655	656	657	658	659	660	661	662	663
664	665	666	667	668	669	670	671	672	673	674	675
676	677	678	679	680	681	682	683	684	685	686	687
688	689	690	691	692	693	694	695	696	697	698	699
700	701	702	703	704	705	706	707	708	709	710	711
712	713	714	715	716	717	718	719	720	721	722	723
724	725	726	727	728	729	730	731	732	733	734	735
736	737	738	739	740	741	742	743	744	745	746	747
748	749	750	751	752	753	754	755	756	757	758	759
760	761	762	763	764	765	766	767	768	769	770	771
772	773	774	775	776	777	778	779	780	781	782	783
784	785	786	787	788	789	790	791	792	793	794	795
796	797	798	799	800	801	802	803	804	805	806	807
808	809	810	811	812	813	814	815	816	817	818	819
820	821	822	823	824	825	826	827	828	829	830	831
832	833	834	835	836	837	838	839	840	841	842	843
844	845	846	847	848	849	850	851	852	853	854	855
856	857	858	859	860	861	862	863	864	865	866	867
868	869	870	871	872	873	874	875	876	877	878	879
880	881	882	883	884	885	886	887	888	889	890	891
892	893	894	895	896	897	898	899	900	901	902	903
904	905	906	907	908	909	910	911	912	913	914	915
916	917	918	919	920	921	922	923	924	925	926	927
928	929	930	931	932	933	934	935	936	937	938	939
940	941	942	943	944	945	946	947	948	949	950	951
952	953	954	955	956	957	958	959	960	961	962	963
964	965	966	967	968	969	970	971	972	973	974	975
976	977	978	979	980	981	982	983	984	985	986	987
988	989	990	991	992	993	994	995	996	997	998	999
1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011
1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023
1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035
1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047
1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059
1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071
1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083
1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095
1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107
1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119
1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131
1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143
1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155
1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167
1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179
1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191
1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203
1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215
1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227
1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239
1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251
1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263
1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275
1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287
1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299
1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311
1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323
1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335
1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347
1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359
1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371
1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383
1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395
1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407
1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419
1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431
1432	1433	1434	1435	1436	1437	1438	1439				

↓ ABC

Prioritized Daily Task List

[illegible]

Daily Expenses



*The road to ruin is always in good repair;
the travellers pay the expense of it.*
— W. G. Benham

12

Tuesday

October 1999

256th Day @ Left Wing 41

Daily Record of Events

CALL
RAY NEVI = Production by month

**Wednesday
October 1999**

S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

September 1999							November 1999						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
-	-	-	1	2	3	4	-	-	-	1	2	3	4
5	6	7	8	9	10	11	5	6	7	8	9	10	11
12	13	14	15	16	17	18	12	13	14	15	16	17	18
19	20	21	22	23	24	25	19	20	21	22	23	24	25
26	27	28	29	30			26	27	28	29	30		

- ✓ Task Completed
- Planned Forward
- ✗ Task Deleted
- ⌘ ⌘ Deleted Task
- In Progress

↓ ABC Prioritized Daily Task List

CALL New:

T2 - What is the
history of computers
from 1/41 → 11/92?

Steve B.

Plot Fire data codes

Daily Expenses



- Commitments
- Journal Entry
- Thoughts & Ideas
- Agendas
- Conversations

Passion is a sort of fever in the mind, which
ever leaves us weaker than it found us.
— William Penn

13

Wednesday
October 1999

Daily Record of Events

28th Day 78 Left West 41

232571-01 SAMPLE ADDER TO #11
790.3244
H204 2104 2-5
-AB

F11 SIM ~50K 2K
M: Hex 15-30 JL

Crime ring on 11 units @ CSL
W/TI & EXPONENT

Measured JL, Link tested, Photo's, mat'l samples

**Thursday
October 1999**

S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

- ✓ Task Completed
- Planned Forward
- ✗ Task Deleted
- Ⓢ Delegation Task
- In Progress

September 1990							November 1999						
M	T	W	T	F	S	S	M	T	W	T	F	S	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30						29	30					

↓ ABC Prioritized Daily Task List

INTERVIEW QUESTIONS
OF MECHANICAL PARTS

Veh. build date, miles / cc.
and date code of
frame / chassis. E-Mail
to Steve B

Send EMAIL to

Daily Expenses



- Conventions
- Journal Entry
- Thoughts & Ideas
- Agendas
- Conversations

Let every man sing his own song in life.
— John A. Widtsoe

14

Thursday
October 1999

Daily Record of Events

287th Day 78 Left Week 41

Observed 3 ~~parts~~ parts

DATE CODE ~~#8280~~ New Part
8280

Shows no marks from pre-crimp.

**Friday
October 1999**

S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

- ✓ Task Completed
- Planned Forward
- X Task Deleted
- G ✓ Delegated Task
- ← In Progress

September 1988							November 1988						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3			1	2	3	4	5
9	6	7	8	9	10	11	7	8	9	10	11	12	13
12	13	14	15	16	17	18	14	15	16	17	18	19	20
19	20	21	22	23	24	25	21	22	23	24	25	26	27
26	27	28	29	30			28	29	30				

↓ ABC Prioritized Daily Task List

[illegible]

Daily Expenses

[illegible]

Appointment Schedule

7	
8	
9	
10	
11	
12	
1	
2	
3	
4	
5	
6	
7	
8	



- Comments
- Journal Entry
- Thoughts & Ideas
- Agenda
- Conversations

He who stops being better stops being good.
— Oliver Cromwell

19

Tuesday
October 1999

Daily Record of Events

29th Day 73 Left Week 52

ROB OPENED REMAINING
SWITCHES & STORZD IN
SPECIMEN BOTTLES W/O
SEPARATING.

**Wednesday
October 1999**

S	M	T	W	T	F	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

September 1979

November 1999

H	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

- ✓ Task Completed
- Planned Forward
- X Task Deleted
- ⊗ Delegated Task
- In Progress

↓ ABC Prioritized Daily Task List

[illegible]

Daily Expenses

[illegible]

Appointment Schedule

7	
8	
9	
10	
11	
12	
1	
2	
3	
4	
5	
6	
7	
8	

Monday
November 1999

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

- ✓ Task Completed
- Planned Forward
- ✗ Task Deleted
- GG Delegated Task
- ← In Progress

October 1999							December 1999						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
30						1	1	3	5	7	9	11	13
3	4	5	6	7	8	2	5	6	7	8	9	10	11
10	11	12	13	14	15	9	12	13	14	15	16	17	18
17	18	19	20	21	22	16	19	20	21	22	23	24	25
24	25	26	27	28	29	23	26	27	28	29	30	31	

↓ ABC Prioritized Daily Task List

✓CALL Chris WASH
88281
✓CALL AMY Chelf
2 complete
✓EMAIL LOG Spread
TAG Spread
Zipped

Daily Expenses

[illegible]

Appointment Schedule

7	
8	
9	
10	
11	
12	
1	
2	
3	
4	
5	
6	
7	
8	



- Commitments
- Journal Entry
- Thoughts & Notes
- Agendas
- Conversations

*The thirst after happiness is never
extinguished in the heart of a man.
— Jean-Jacques Rousseau*

1

**Monday
November 1999**

Daily Record of Events

30th Day 80 Left Week 44

~~Chris~~ - Tag issue protocol
MATT Mulcray random or list driven?



• Commitments
• Journal Entry
• Thoughts & Ideas
• Agenda
• Conversations

We never do anything well till we cease to
think about the manner of doing it.
— William Hazlitt

10

Friday

December 1999

34th Day 21 Left Week 4

Daily Record of Events

PART Shortage possible? CRAIG
NO

* Related Part changes - where any parts ~~changes~~ replaced
that would have caused
BP SW to BZ change?

✓ Correlate Fires to Replacements
No AWS claims for replacement prior to fires

* What are date codes of fire?

→ TSB for leaks

— DATE CODE errors @ TI?

— Is ESP in the Claims data? HARDIE

— Louis / Air Susp'n System R/1000

✓ CALL DAN BORE

✓ CALL B. Pedal Surge

NON OE	✓ Rec'd	Kit
(FILTER OUT KIT PART DATE 000)		
✓ Rec'd	✓	Issued Dist
✓ Rec'd	✓	SALES
✓ ISSUED	✓	SALES DIST
✓ Logged	✓	SALES
CLAIMS	✓	Mileage
"	✓	State
"	✓	BUILD DATE



- Commitments
- Journal Entry
- Thoughts & Ideas
- Agenda
- Conversations

A good heart is better than all the heads in the world.
— Edward Bulwer-Lytton

13

Monday

December 1999

Daily Record of Events

347th Day 18 Left Week 50

Cold Cycling in Impulse Test

Duplicate light crimp and run Impulse Test.

Exponent - examine parts for sample.

In-spec. Crimp Ht ~ Not sufficient

FMEA of Plunger & Pressure switch.

* Over-crimp in FMEA?

COMMUNICATIONS

Name / Project Deac Switch Remaining Life Test
 Company / Department Steve Eorichanise / TI
 Address ATTLEBORO, NJ

Phones

DATE TIME	SEQ.	MY PLAN / I SAID NEEDS EXPRESSED / FEEDBACK SOUGHT	THEY SAID / FOLLOW-UP NEEDS EXPRESSED / FEEDBACK GIVEN	WHEN DATE
--------------	------	---	---	--------------

9 AM	12/14/99		REMAINING LIFE FAILURES	
			2015 @ 56.6 K	
			2008 @ 78 K	
			2014 @ 254 K	
			2013 @ 260 K	
			2281 @ 294 K	
			2013 @ 345 K	
			2008 @ 350 K	
			Currently @ 380 K	
			Will call you when	
			remaining 4 have failed.	
		Do NOT TEARDOWN parts in		
		this test until we		
		decide what should		
		be done with them.		
			OK. We will hold	
			them until directed	
			to do something	
			with them.	



- Commitments
- Journal Entry
- Thoughts & Ideas
- Agenda
- Conversations

Common sense is, in medicine, the master workman.
— Peter Mere Latham

14

Tuesday

December 1999

Daily Record of Events

365th Day 17 Left Week 50

BRIAN Deane told me a few
days ago that 3-4 cc of
volume loss was required
to detect leakage.

COMMUNICATIONS

Name / Project Steve Baringhouse / TI

Company / Department _____

Address _____

Phones

DATE TIME	SEQ	MY PLAN / I SAID NEEDS EXPRESSED / FEEDBACK SOUGHT	THEY SAID / FOLLOW-UP NEEDS EXPRESSED / FEEDBACK GIVEN	WHEN DATE
--------------	-----	---	---	--------------

1/3/2000		Steve Reimers	Update of Parts in Test - ALL FAILED Now!	
----------	--	---------------	--	--

DATE FAILED Re

2015 57K 059120-A

I will call back in
15 minutes10:55 Left voice mail msg
requesting call-back.

10:46 2015 57K 059120-A

2008 78K 097295-01

2014 254K 209054-A

2013 260K 105008-01

2281 294K 051062-50

2013 345K 153743-01

2008 351K 0101285-1
10285

2287 625K 062918-A

2276 694K 033691-02

2281 703K 058808-01

2294 829K 080759-51

DISPOSITION OF PART IS

Box & HOLD FOR NOW

OK

3713 8360

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— END ALL LEAKED AT FAILURE



Each man's task is his life preserver.
— George B. Emerson

3

Monthly Focus: Roles—
Key relationships and
responsibilities within
the unit and beyond
our time, energy, and
resources.

Monday
January 2000

Daily Record of Events

3rd Day 321 Left Week 1

10:30 CALL FROM Steve Beringhouse

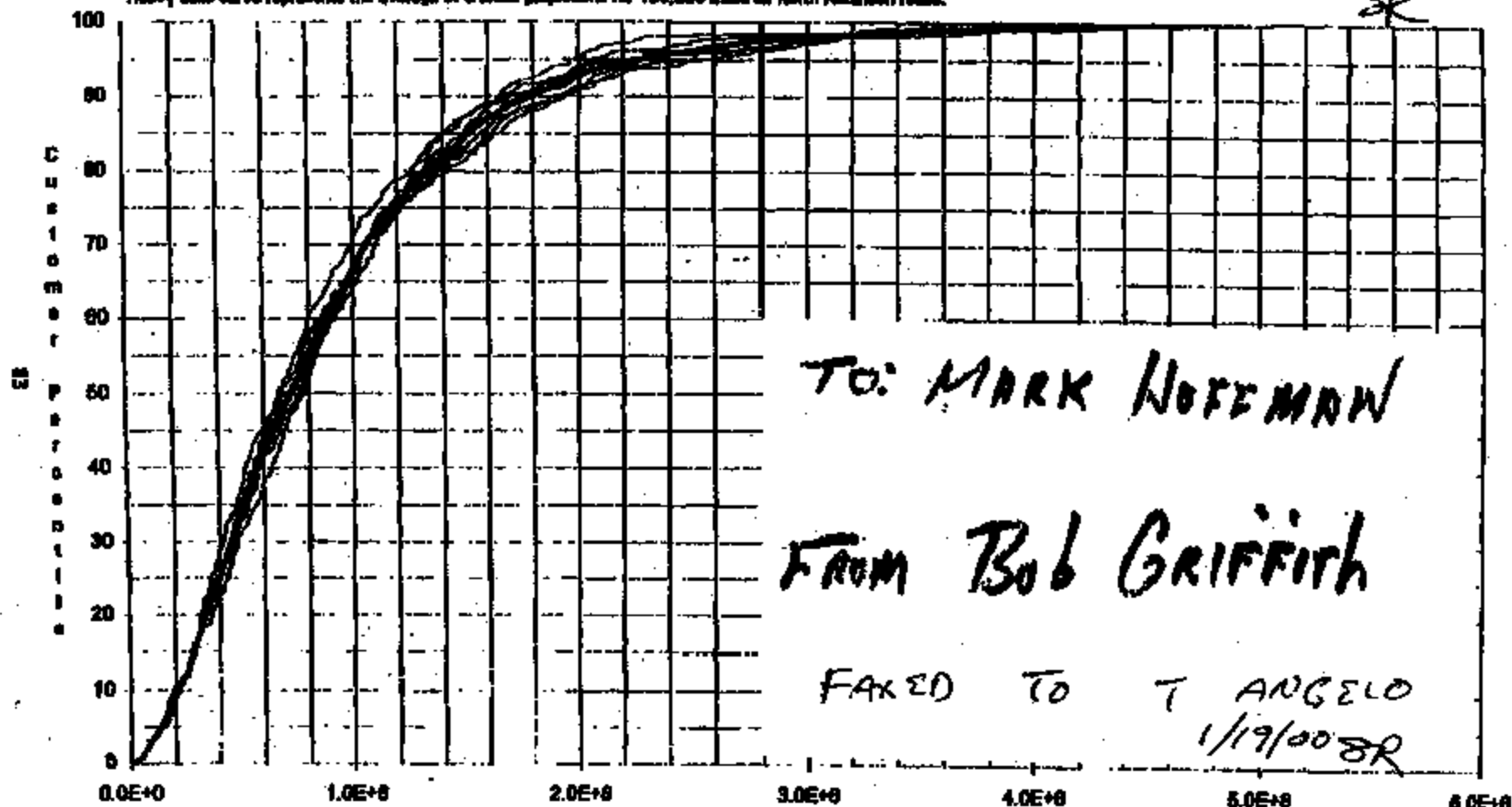
11:30 CALL FROM CHRIS WASH

WILL STOP FED S1 per Email
and start new PAC CODES.

1992 CROWN VICTORIA (4.6L, AODE) NORTH AMERICAN POWERTRAIN CUSTOMER USAGE SPECTRUM

Rec'd
1/19/00
SR

Heavy solid curve represents the average of 9 linear projections for 150,000 miles of North American roads.



TO: MARK NOFFMAN

FROM BOB GRIFFITH

FAKED TO T ANGELO
1/19/00 SR

Bandwidth represents variability of 9
linear projections of 402 Crown Victoria/Great Marquis owners.

Number of brake applications

Customer usage spectra are subject to limitations of
road data collection and customer survey responses.