

**EA02-025**

**TEXAS INSTRUMENTS, INC.'S**

**09/10/03**

**LETTER TO ODI**

**REQUEST # 5**

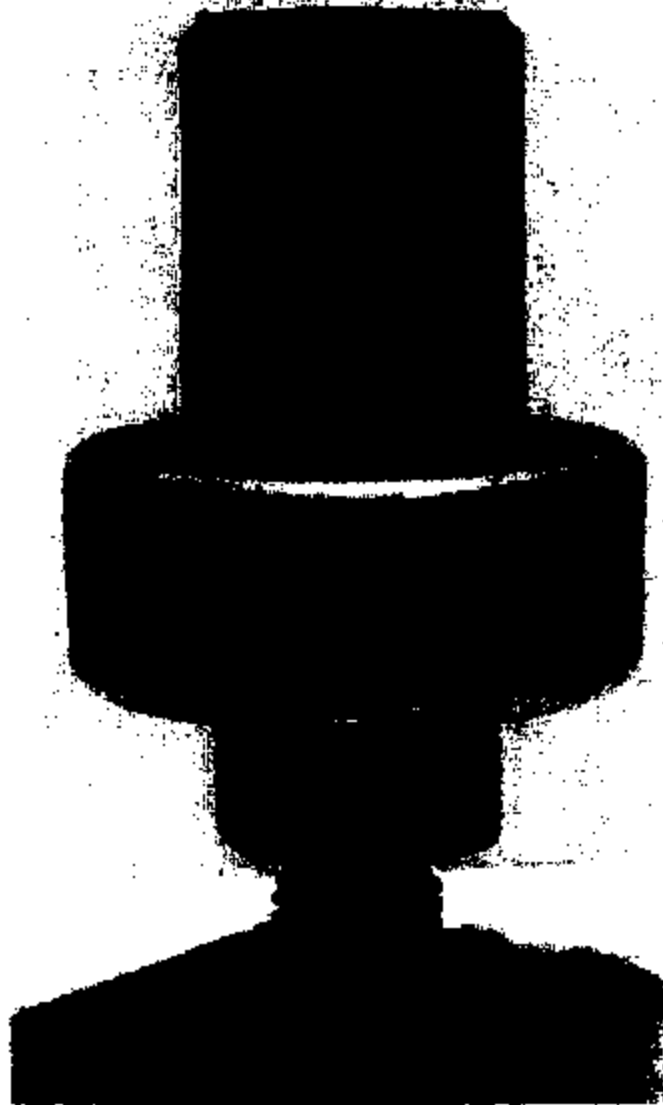
**BOX 6**

**PART A-M**

**PART K**

# 77PS Return Analysis

Original batch (a-a)



Engineer:  
Bryan Dague (unless otherwise noted)

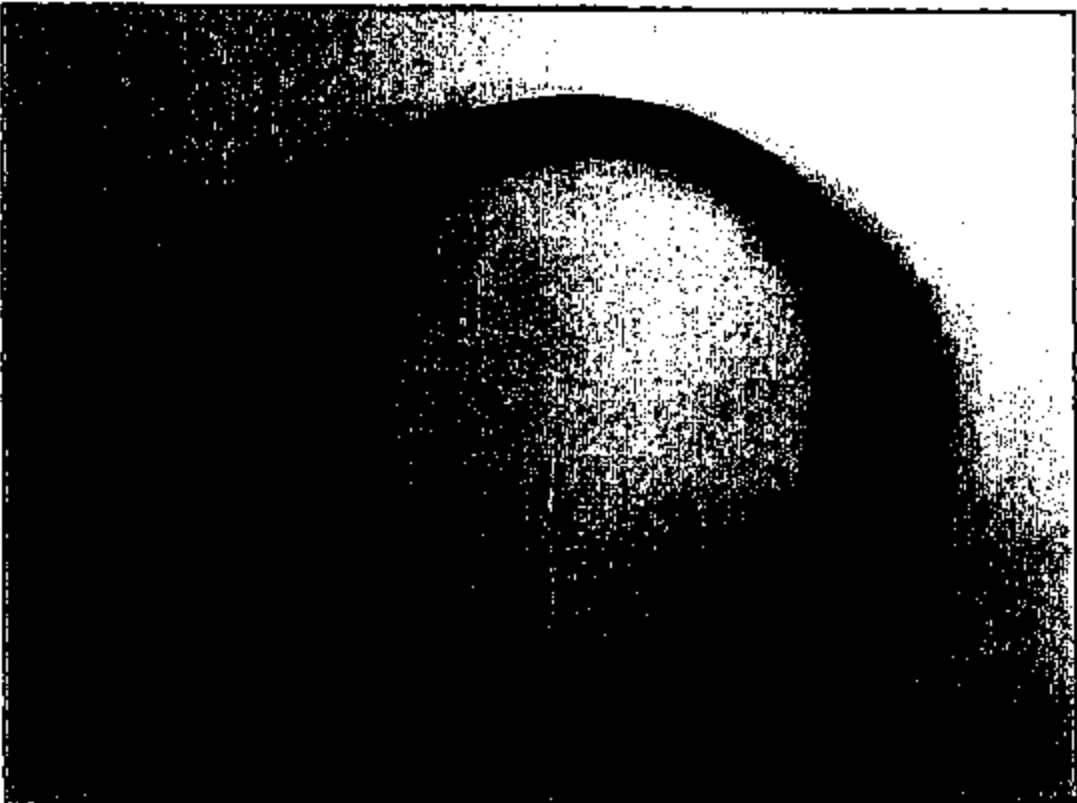
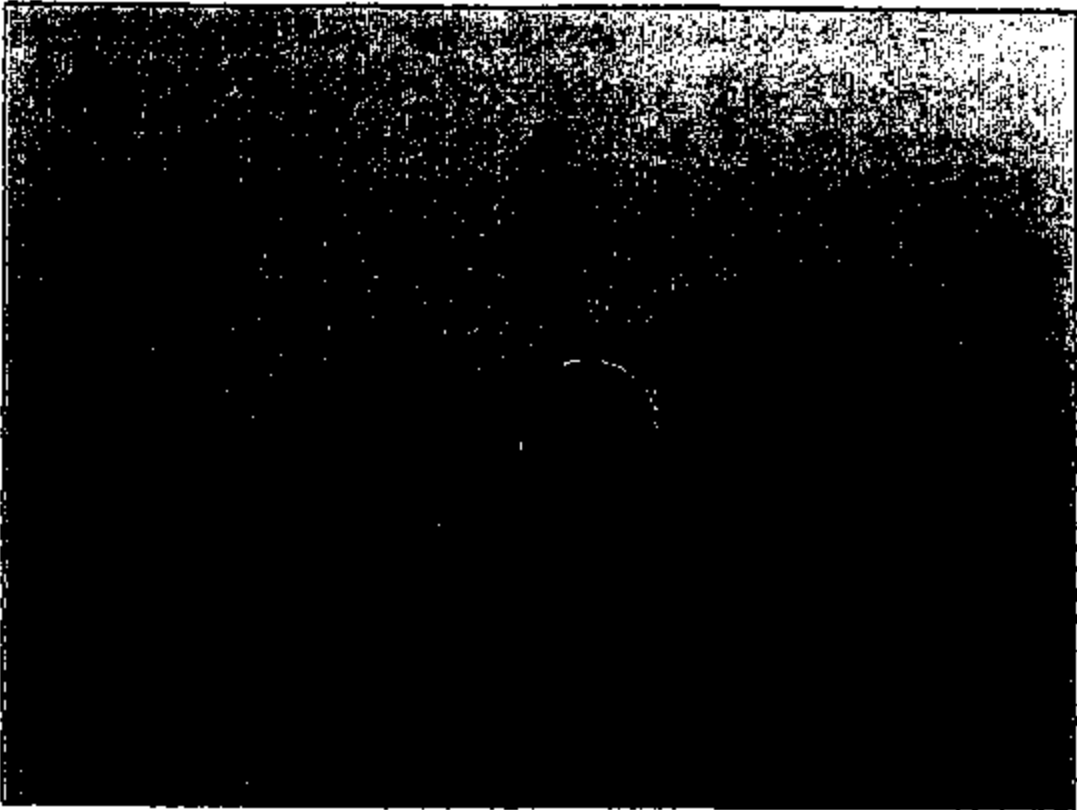
Technician:  
Patrick Miranda (unless otherwise noted)

TI-NHTSA 9350

Diak 4 - Slides 1 & 2

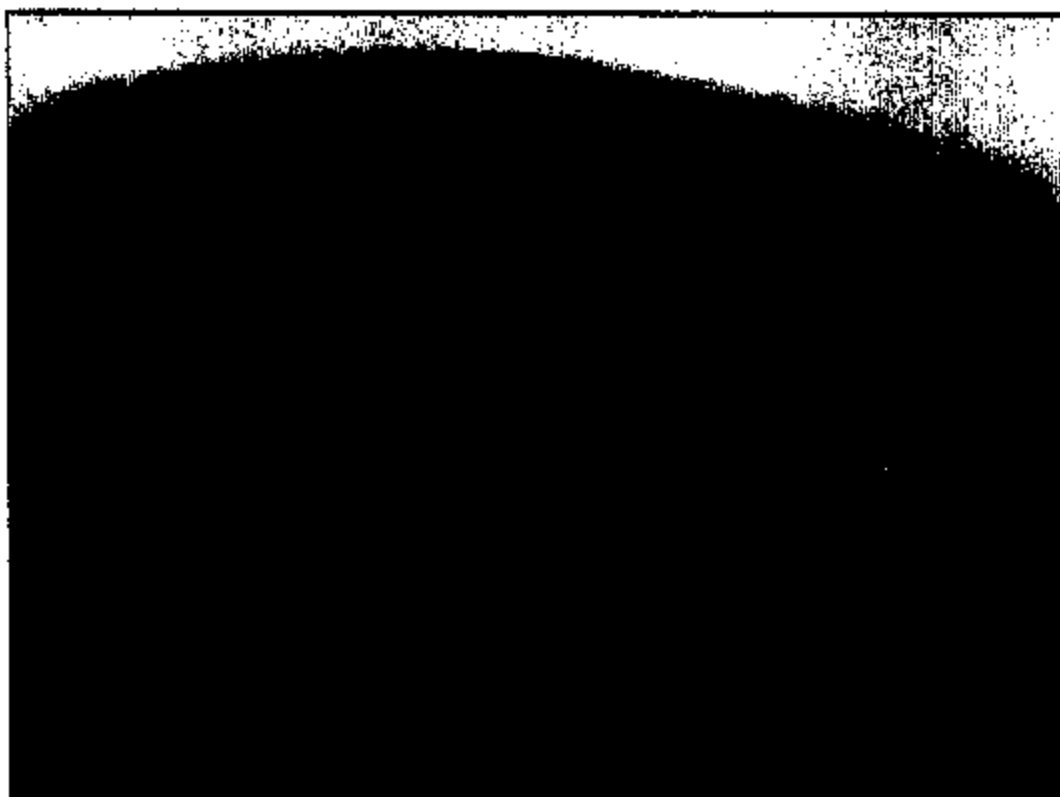
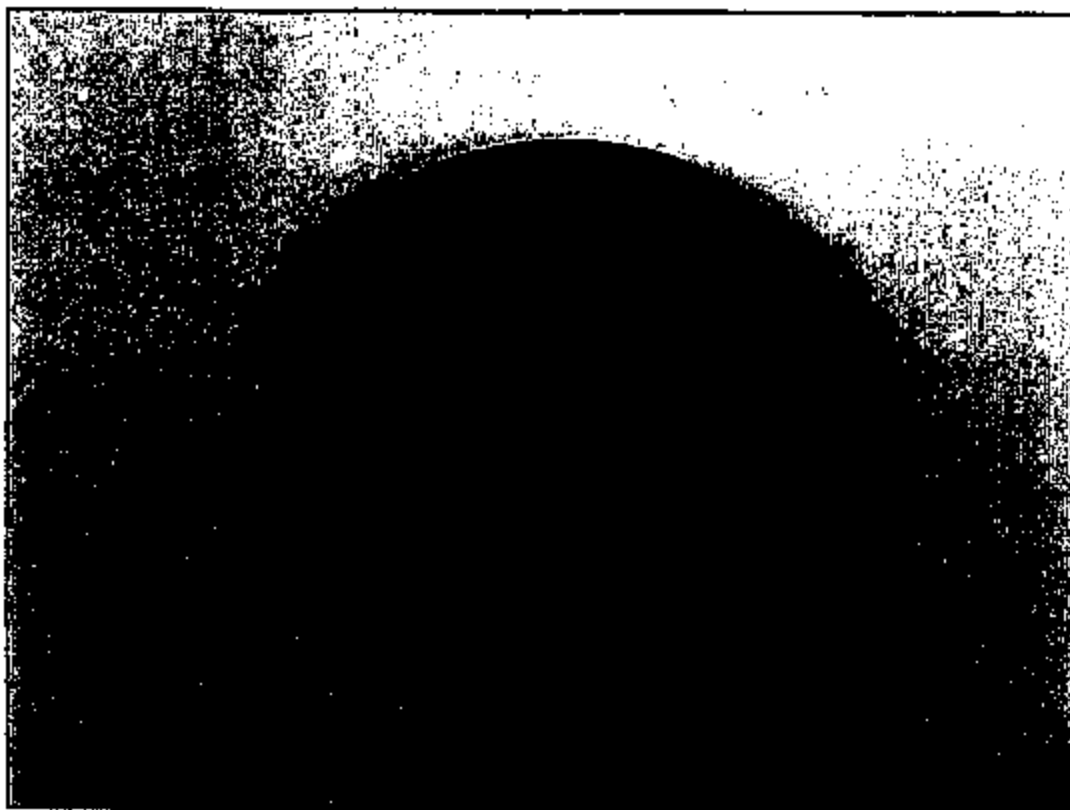


Disk 4 - Slides 3 & 4

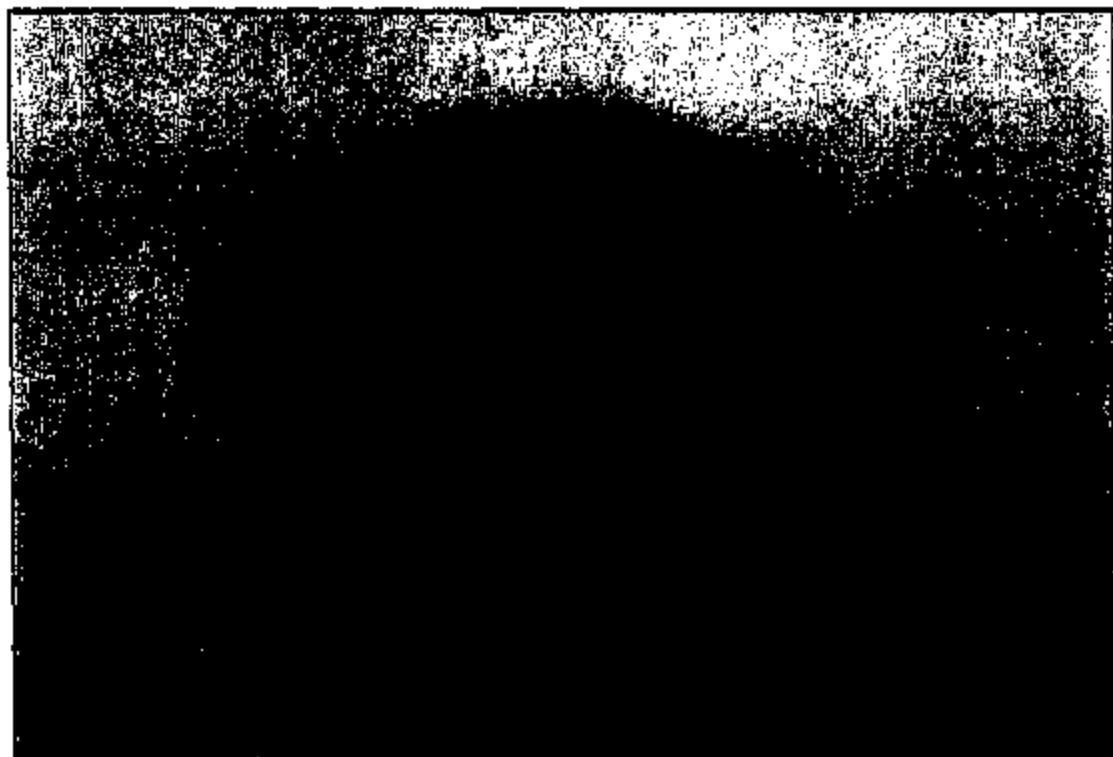
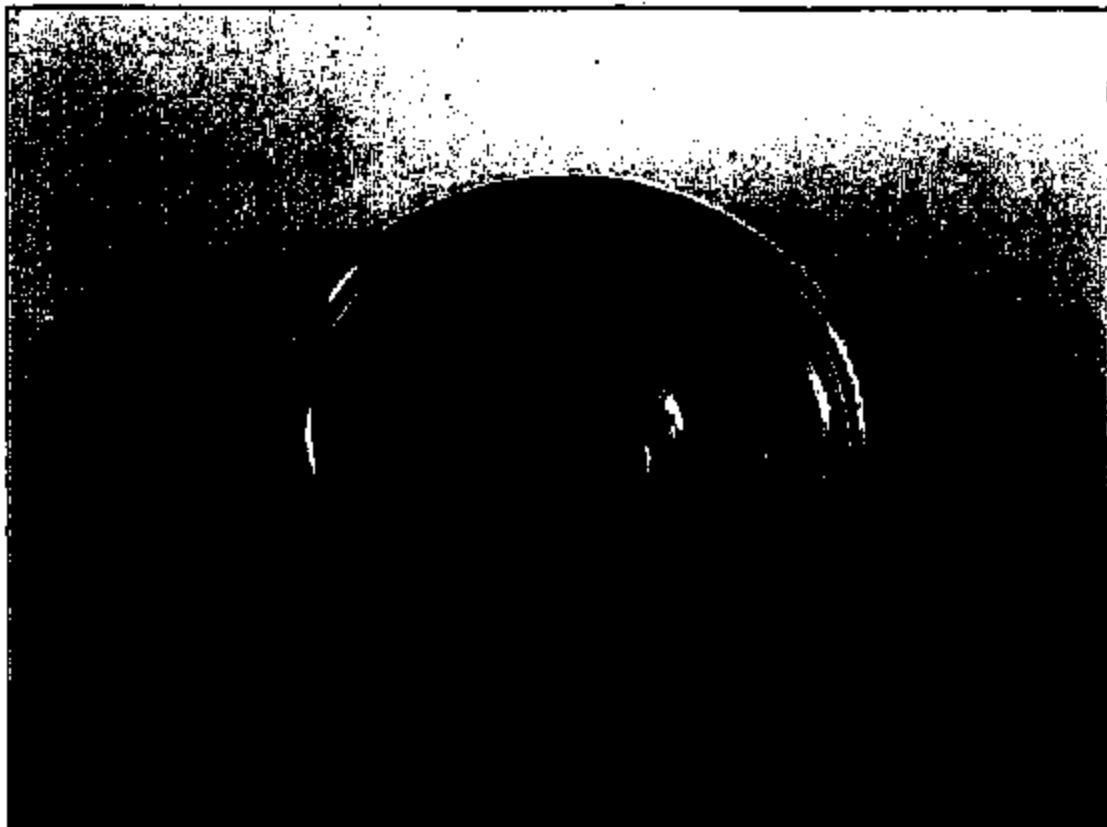


TI-NHTSA 9352

Disk 4 - Slides 5 & 6

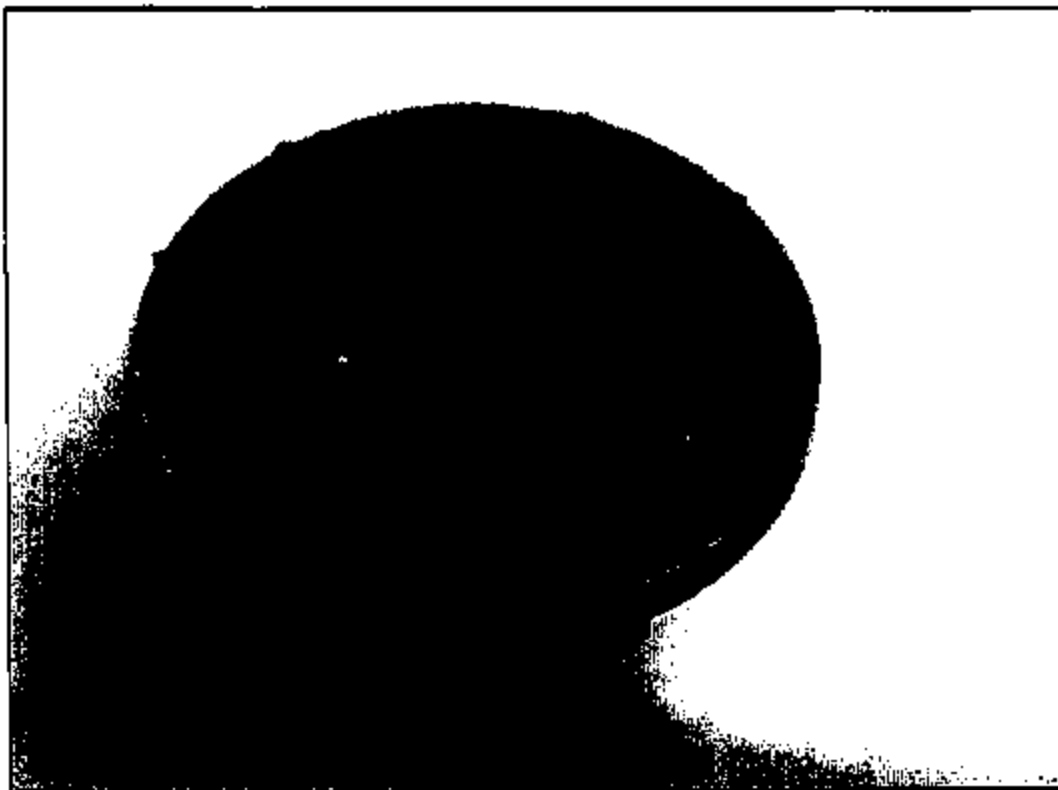
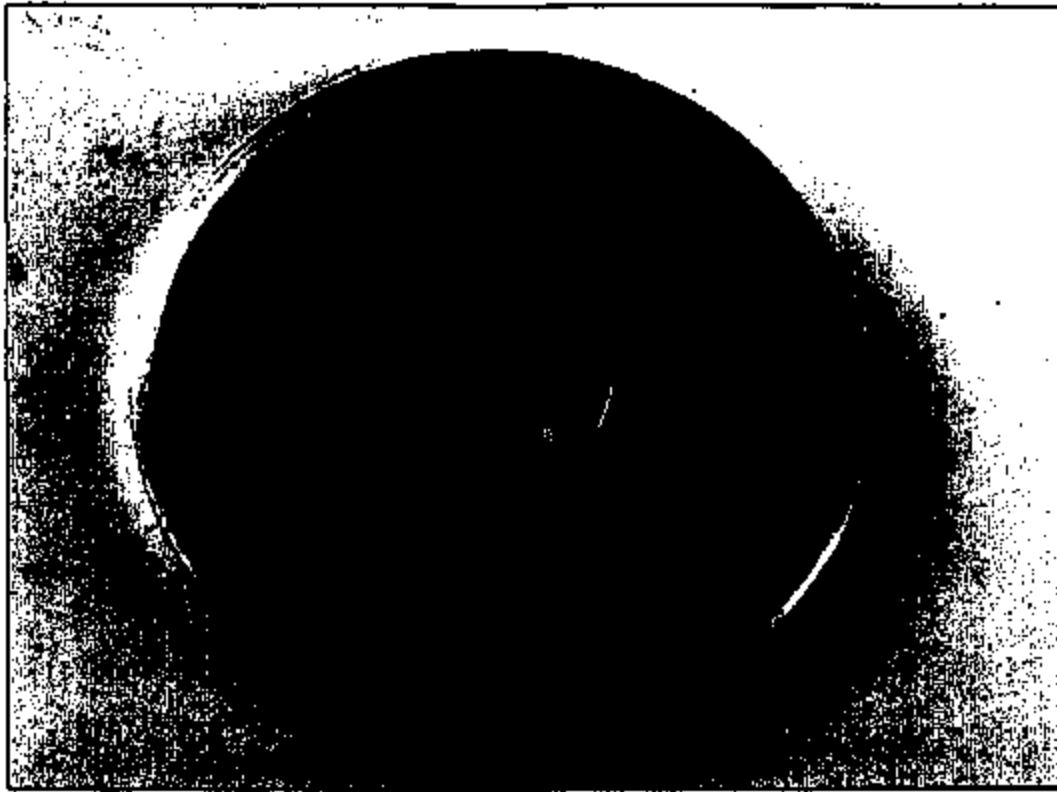


Disk 4 - Slides 7 & 8



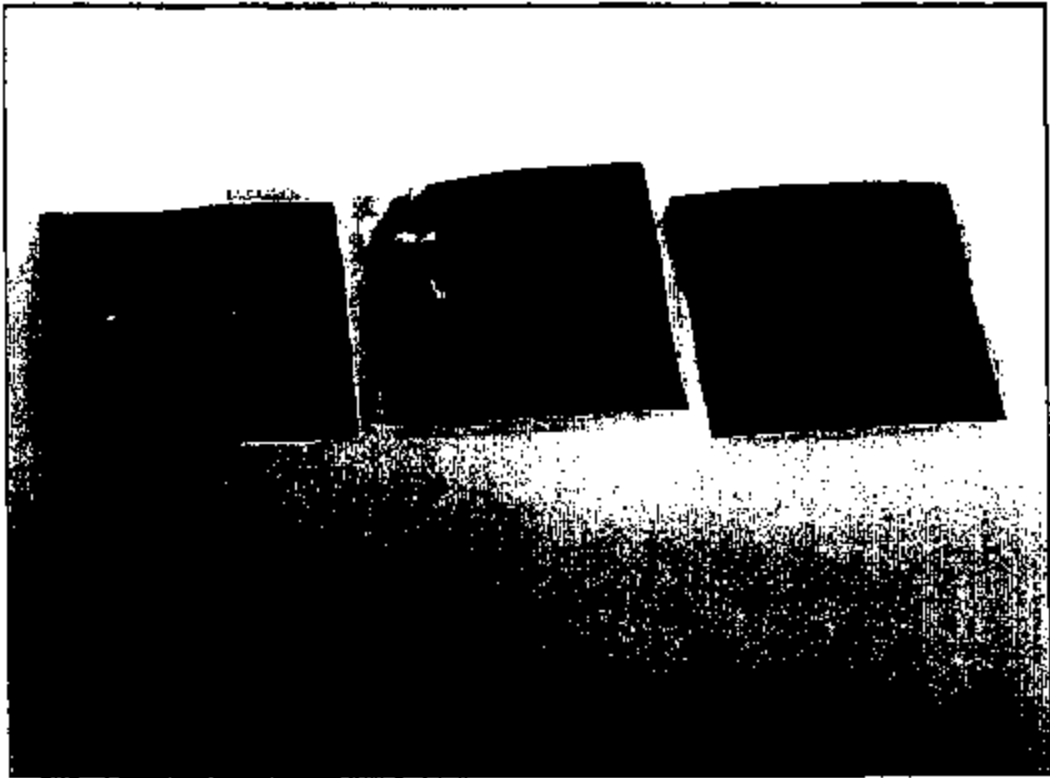
TI-NHTSA 9354

Disk 4 - Slides 9 & 10



TI-NHTSA 8355

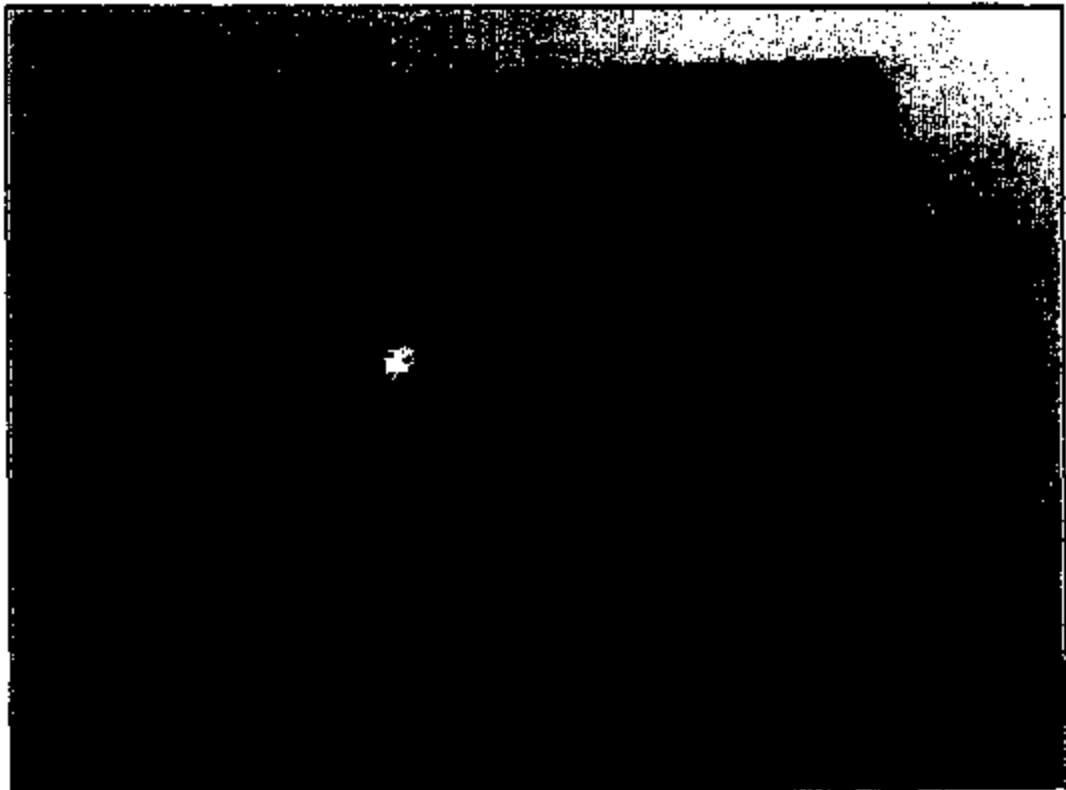
Disk 4 - Slides 11 & 12



TI-NHTSA 9358

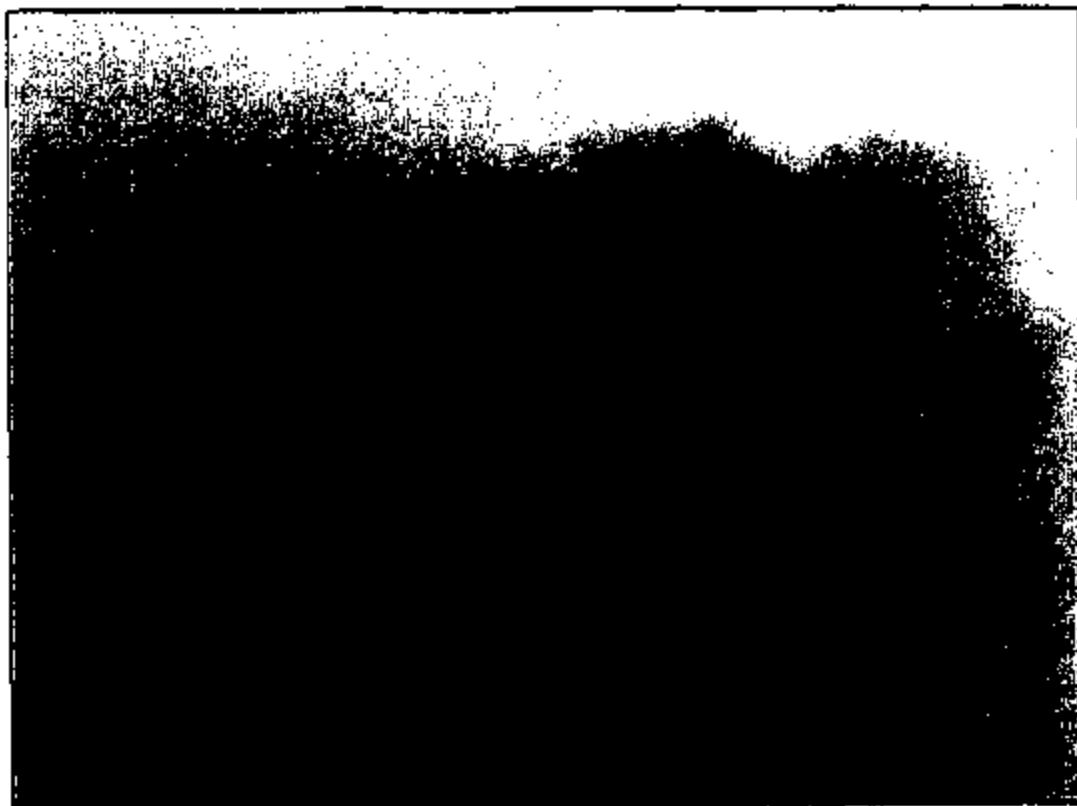


Disk 4 - Slides 13 & 14



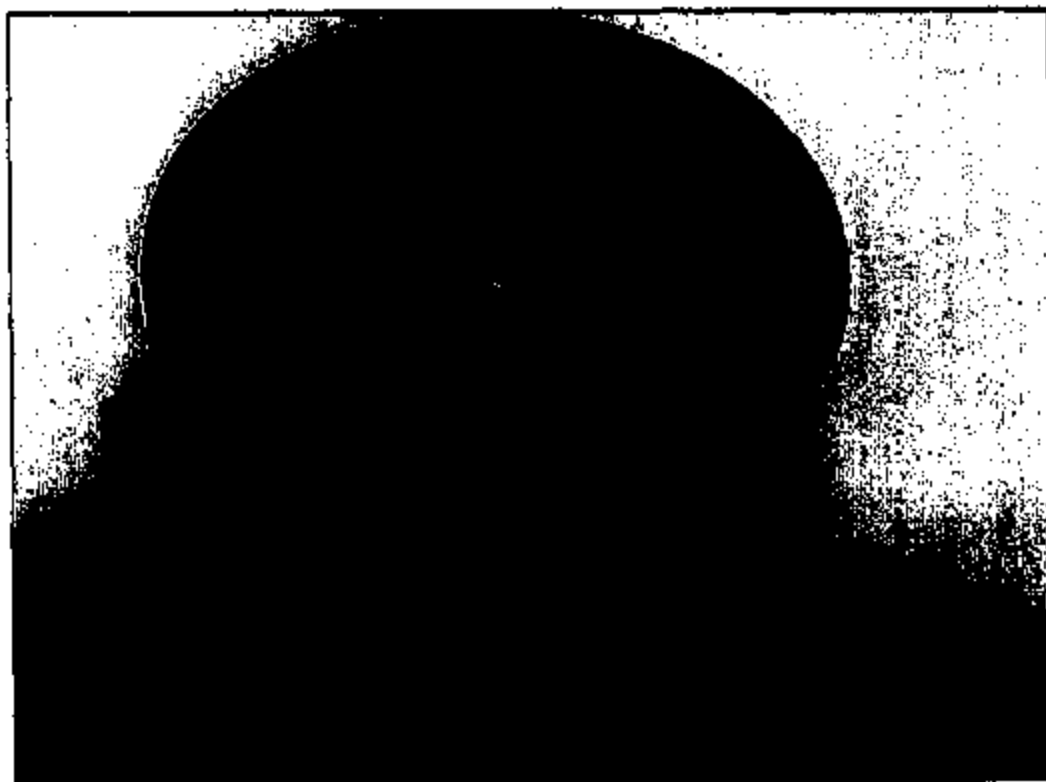
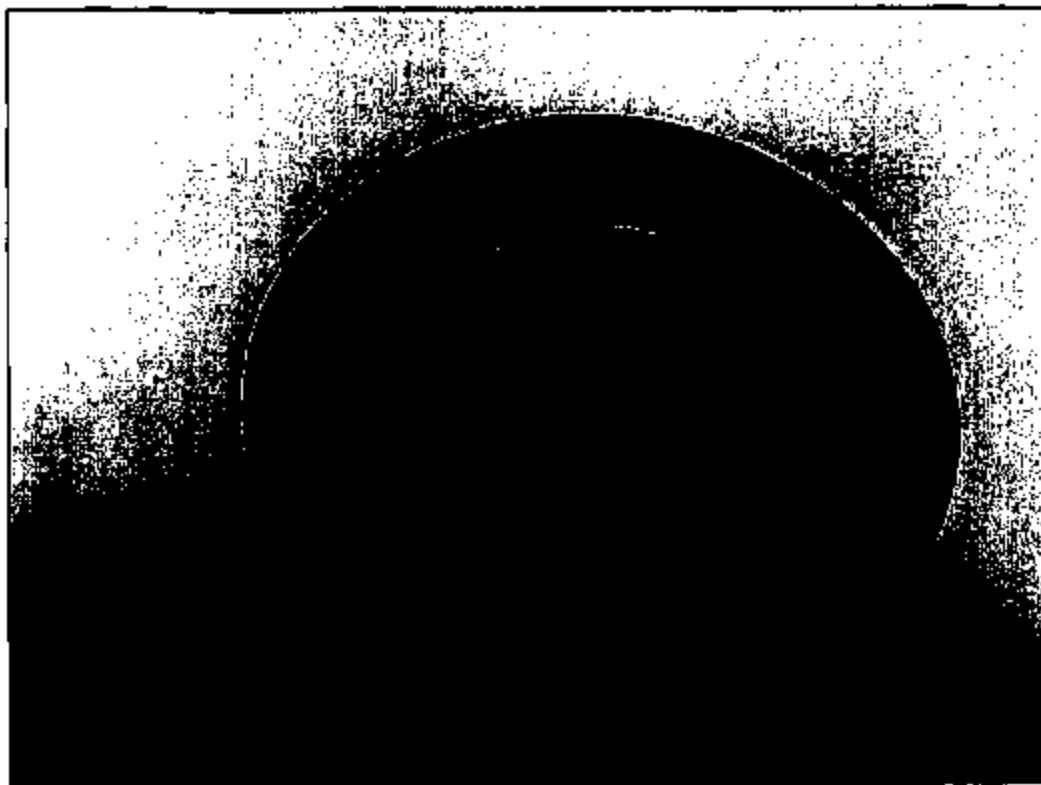
TI-NHTSA 9357

Diak 4 - Slides 15 & 16



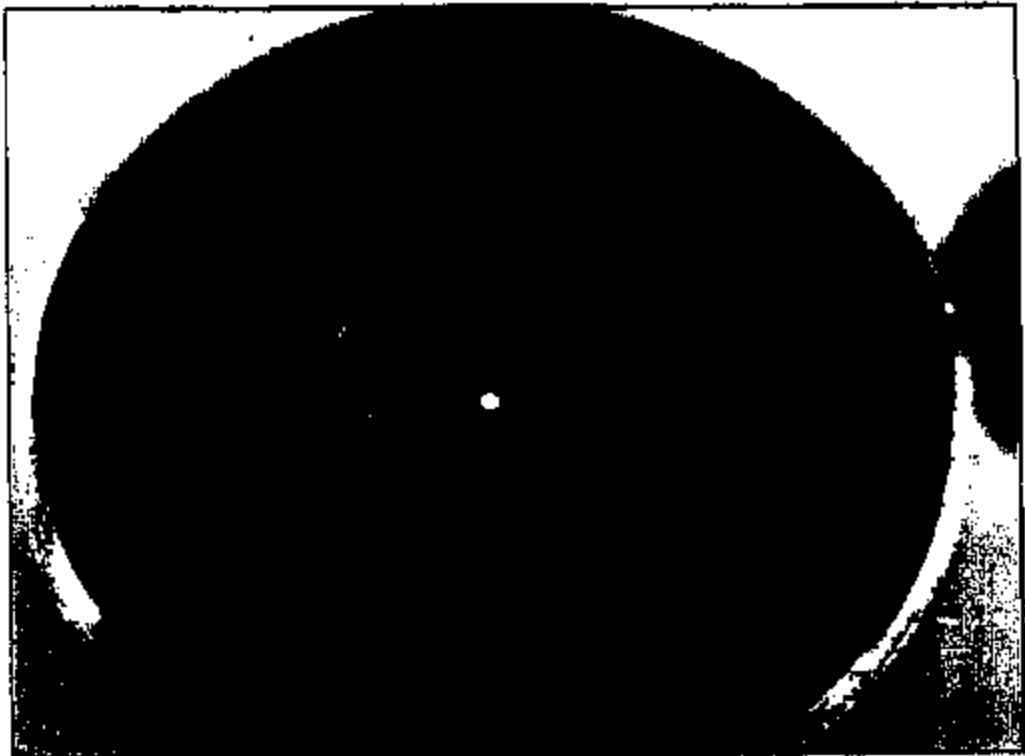
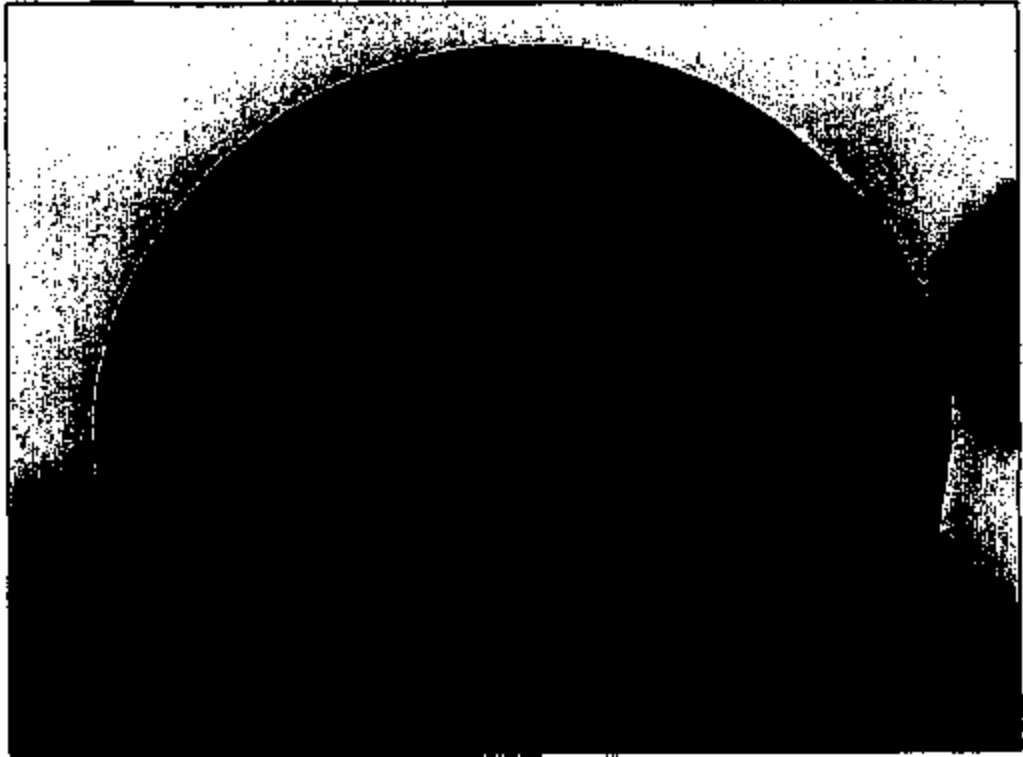
TI-NHTSA 9358

Disk 4 - Slides 17 & 18

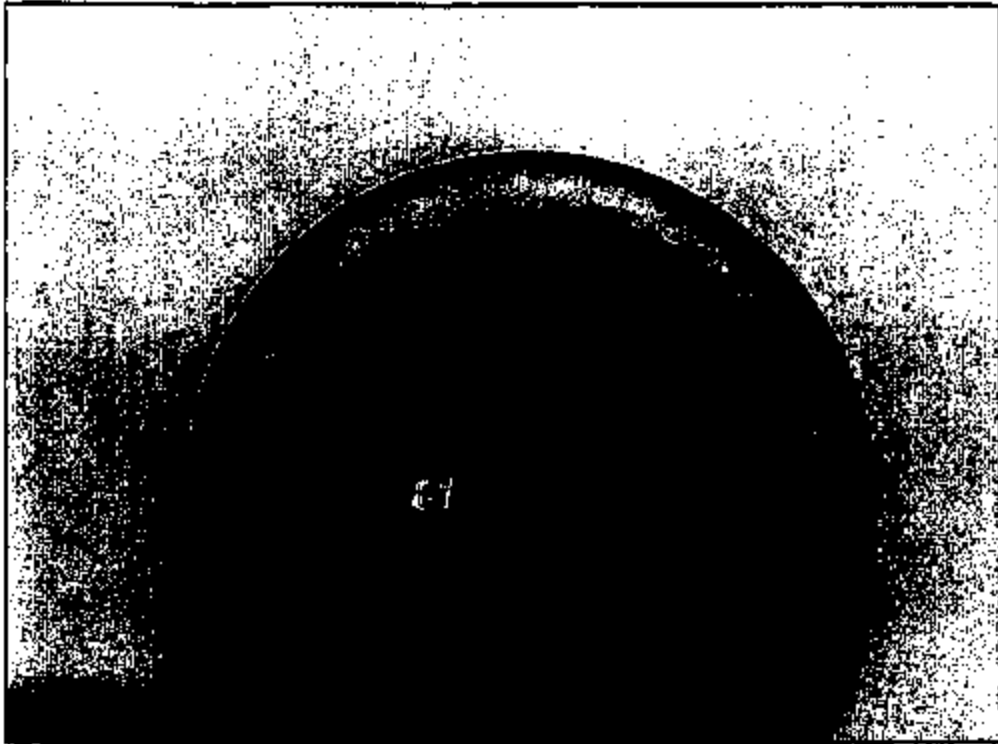


TI-NHTSA 9359

Disk 4 - Slides 19 & 20



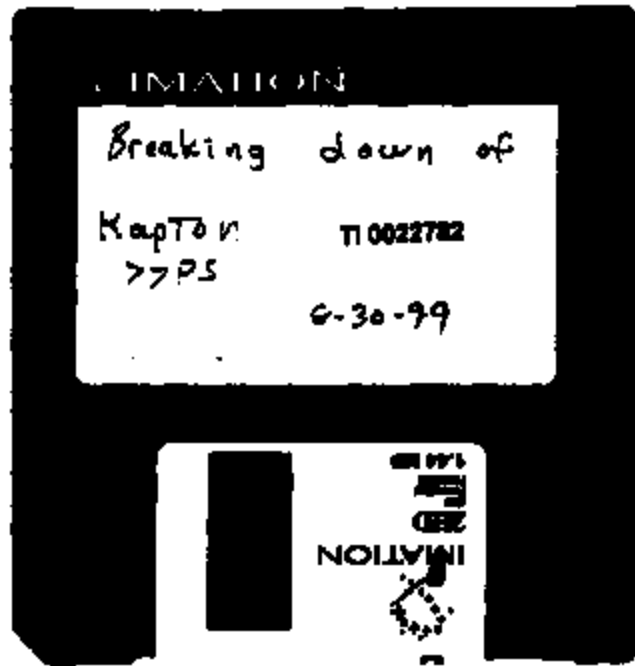
Diak 4 - Slides 21 & 22

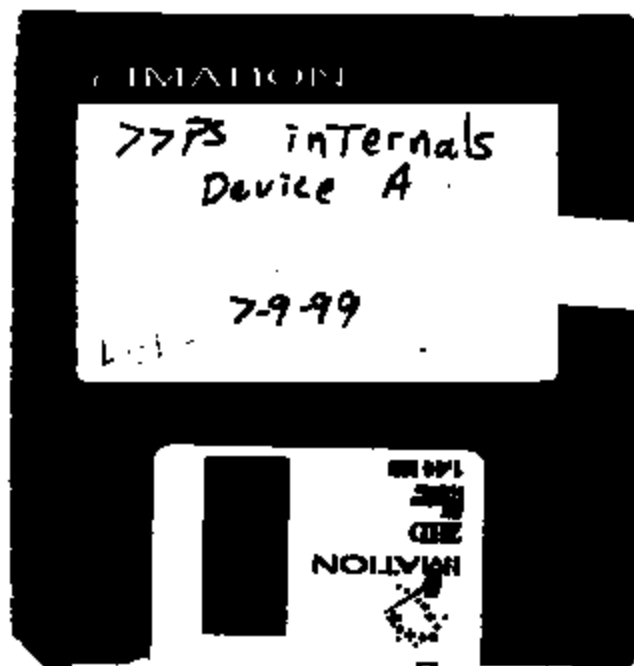


Disk 4 - Slides 23



TI-NHTSA 9362







# 77PSL2-1 Return Analysis Sheet

Device ID: Box A Date: 07052008 Part # AB

Operator's Name: \_\_\_\_\_ Sw Date Code: 2276 Technician Pat

### 1 Visual Inspection

General condition of Switch:  
 Signs of leakage into connector?  
 Missing connector seal?  
 compression?  
 Wire Harness returned?  
 Wire insulation compression?

Good  
No  
Good  
 Yes Silicone  
 Yes No

Bad  
 Yes

### 2 Current draw:

Terminal to Terminal? 0.0 - 0.0 Ohms  
 Terminal to Housing? 0.0 Ohms

14 Vdc supply Current limited to 10 amps.

### 3 Open Crimp Ring

### 4 Visual Inspection

Connector Leak?  
 Component wear?  
 BF leak?  
 Environment seal condition?  
 If seal bad, Why?  
 Corrosion?  
 Pictures

No  
 None  
No  
Good  
Yes

Yes  
Light Medium Heavy  
 Yes  
 Bad  
 No

### 5 Leak Test Sensor Asst.

Pass Fail

### 6 Open Cup Crimp.

### 7 Diaphragm Inspection

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon stretch	N		Y	Y		Y	Y		N
Teflon cracks	Y		N	N		N	N		N
Teflon delamination	Y		N	N		N	N		N
Kapton cracks		N			N			N	
Strain pattern		N			N			N	
Wear circular delamination	N	N	N	N	N	N	N	N	Y

### 8 Gasket Inspection

Present?  
 No bleeder/sealing material  
 Gaslet thickness

Yes No  
 Yes No  
0.0303 inches  
0.0305 inches  
0.0307 inches

### 9 Package and Stars

### 10 Analysis Summary:

NTP Issue Discovered

TI-NHTSA 9365

# 77PSL2-1 Return Analysis Sheet

Device ID: 200 A

Date: 070577 Ford Part # X497Z-7/5656-AA

Operator's Name: \_\_\_\_\_

Sw Date Code: 2776 Technician Pat

**1 Visual Inspection**

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes

**2 Current draw:**

Terminal to Terminal? 0.2-0.3 Ohms  
 Terminal to Heappor? 0.0 mA 14V supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**

Connector Leak? No Light Heavy  
 Component wear? None Yes  
 BF leak? No Yes  
 Environment seal condition? Good Bad  
 If seal bad, Why?  
 Corrosion? Yes No *North of A general*  
 Pictures

**5 Leak Test Sensor Arm.**

Pass Fail

**6 Open Gap Crimp.**

**7 Kaptan Inspection**

Condition of Kaptan good bad  
 Delamination of Kaptan  
 Cracks of Kaptan  
 Leaking Kaptan

*side only #1*  
 connects:  
 1 2 3  
 1 2 3

**8 Gasket Inspection**

Present Yes No  
 Nibbles/missing material  
 Gasket thickness 0.0303 inches *1.2 of M. 1740 M.C.*

**9 Package and Store**

**10 Analysis Summary:**

NTF Issue Discovered

*side*

*Pat*

TI-NHTSA 9366

# 77PS1 2-1 Return Analysis Sheet

Device ID: A Date: \_\_\_\_\_ Ford Part # \_\_\_\_\_

Operator's Name: \_\_\_\_\_ Sw Date Code: \_\_\_\_\_ Technician \_\_\_\_\_

**1 Visual Inspection**

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes

**2 Current draw :**

Terminal to Terminal? \_\_\_\_\_ Ohms  
 Terminal to Harness? \_\_\_\_\_ mA  
 14 V supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**

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

**5 Leak Test Sensor Arm.**

Pass Fail

**6 Open Cup Crimp.**

**7 Diaphragm Inspection**

	Fluid #1	Connector	Fluid #2	Connector	Fluid #3	Connector
Teflon stretch		✓	✓	✓		
Teflon cracks	A					
Teflon delamination						
Kevlar cracks						
Strain pattern						
Cracks on strain pattern						
Wear particles/delamination						NT
	H=high		M=medium			L=low

**8 Gasket Inspection**

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

**9 Package and Store**

**10 Analysis Summary:** NTF Issue Discovered

TI-NHTSA 9367

INFORMATION

Device B  
77P5

7-9-99

INFORMATION  
77P5  
7-9-99

# 77PSL2-1 Return Analysis Sheet

Device ID: Conv 3 Date: 07/07/22 Ford Part # A13  
 Operator's Name: \_\_\_\_\_ Sw Date Code: 2021 Technician: mt

## 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? Foamy Silicone  
 compression?  
 Wire Harness returned? Yes No  
 Wire insulation compression?

## 2 Current draw :

Terminal to Terminal: 0.5 / 2 Ohms  
 Terminal to Heapport? 0.0 mA 14 Vdc supply Current limited to 10 amps.

## 3 Open Crimp Filing

## 4 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 is 100%  
 Pictures

## 5 Leak Test Sensor Aem.

Pass Fail

## 6 Open Cap Crimp.

## 7 Diaphragm Inspection

	Nearest Fluid #1			Middle			Nearest Converter		
	Fluid Teflon	Kapton	Converter Teflon	Fluid Teflon	Kapton	Converter Teflon	Fluid Teflon	Kapton	Converter Teflon
Teflon stretch	✓		✓	✓		✓	✓		✓
Teflon cracks	✓		✓	✓		✓	✓		✓
Teflon delamination	✓		✓	✓		✓	✓		✓
Kapton cracks		✓			✓			✓	
Strain pattern		✓			✓			✓	
Wear particles/discoloration		✓	✓	✓	✓	✓	✓	✓	✓

## 8 Gasket Inspection

Present: Yes No  
 Nibbles/missing material: Yes No  
 Gasket thickness: 0.0267 inches  
0.0267 inches  
0.0267 inches

## 9 Package and Store

10 Analysis Summary: NTP Issue Discovered

TI-NHTSA 9369

Device ID: 62x E  
 Operator's Name: \_\_\_\_\_

### 77PSL2-1 Return Analysis Sheet

Date: 07/27/77 Fort Part # XW72-3641-0AF  
 Sw Date Code: 712 Technician Pi-

*[Faint handwritten notes and diagrams on the left side of the page, including an arrow pointing to the right.]*

**1 Visual Inspection**  
 General condition of Switch: Good      Bad  
 Signs of leakage into connector? No      Yes  
*Threads: case 2.1*

**2 Current draw:**  
 Terminal to Terminal? 0.2 0.2 Ohms      Fluctuating III  
 Terminal to Support? 0.0 mA      14 V supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**  
 Connector Leak? No      Light      Heavy  
 Component wear? None      Yes      Bad  
 BF leak? No      Yes      Bad  
 Environment seal condition? Good      Bad  
 If seal bad, Why?      No - Not  
 Compression? Yes      No  
 Pictures

**5 Leak Test Sensor Asm.**      Pass      Fail

**6 Open Cup Crimp.**

**7 Kapton Inspection**  
 Condition of Kapton good      bad  
 Delamination of Kapton 0      0  
 Cracks of Kapton 0      0  
 Leaking Kapton

**8 Gasket Inspection**  
 Present Yes      No  
 Nibbles/miseng material Yes      No  
 Gasket thickness 0.0267      inches  
0.0267  
0.0267  
0.0267      AT&T Mic

**9 Package and Store**

**10 Analysis Summary:**      NTF      Issue Observed

*[Handwritten notes on the right side of the page, including a table and additional text.]*

1	2	3
2	2	3
1	2	3

*we Aspected points on...*

TI-NHTSA 9370

### 77PBI 2-1 Return Analysis Sheet

Device ID: B Date: \_\_\_\_\_ Ford Part # \_\_\_\_\_

Operator's Name: \_\_\_\_\_ Sw Date Code: \_\_\_\_\_ Technician \_\_\_\_\_

**1 Visual Inspection**

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes

**2 Current draw :**

Terminal to Terminal? \_\_\_\_\_ Ohms  
 Terminal to Heapport? \_\_\_\_\_ mA 14 V supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**

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

**5 Leak Test Buzzer Alarm** Pass Fail

**6 Open Crimp Crimp**

**7 Diaphragm Inspection**

	Fluid	at	Converter	Fluid	at	Converter	Fluid	at	Converter
Teflon stroke	<u>✓</u>			<u>✓</u>			<u>✓</u>		
Teflon cones	<u>H</u>								
Teflon deterioration									
Kapton cracks									
Strain pattern				<u>✓</u>					<u>✓</u>
Cracks on strain pattern	<u>✓</u>								
Wear particles/contamination									<u>NA</u>

No High M-medium Low

**8 Gasket Inspection**

Present Yes No  
 Nuts/missing material Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

**9 Package and Store**

**10 Analysis Summary:** NTF Issue Discovered

TI-NHTSA 9371

INFORMATION

7775

Device C

internals

7-9-99

INFORMATION  
7-9-99



**77PSL2-1 Return Analysis Sheet**

Device ID: Back Date: 070897 Ford Part #: A13  
 Operator's Name: \_\_\_\_\_ Sw Date Code: 2.077 Technician: Pat

**1 Visual Inspection**

General condition of Switch: Good  
 Signs of leakage into connector? No  
 Mating connector seal? Good Silicone  
 compression? Yes  
 Wire Harness returned? Yes No  
 Wire insulation compression? No

Bad Test results? \_\_\_\_\_  
 Yes \_\_\_\_\_

**2 Current draw:**

Terminal to Terminal? 0.203 Ohms  
 Terminal to Heepport? 0.0 mA 14 Vdc supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 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 A. \_\_\_\_\_ No  
 Pictures \_\_\_\_\_

**5 Leak Test Sensor Asm.**

Pass Fail

**6 Open Cup Crimp.**

**7 Diaphragm Inspection**

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon stretch	N	Kapton	Y	Y	Kapton	Y	Y	Kapton	N
Teflon cracks	Y		N	N		N	N		N
Teflon delamination	Y		N	N		N	N		N
Kapton cracks		N			N			N	
Strain pattern		N			N			N	
Wear marks/damage/location	N	N	N	N	N	N	N	N	Y

**8 Gasket Inspection**

Present? Yes No  
 Nipples/creasing material? Yes No  
 Gasket thickness: 0.0283 inches  
0.0289 inches  
0.0281 inches

**9 Package and Bore**

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9373

# 77PSL2-1 Return Analysis Sheet

Device ID: box C

Date: 07/27/77 Ford Part # XUWZ-95655-AA

Operator's Name: \_\_\_\_\_

Sw Date Code: 2079 Technician FAT

*connector looks ok  
no corrosion*

**1 Visual Inspection**

General condition of Switch: Good  
Signs of leakage into connector? No

Bad To 1 amp 40 ohms  
Yes Low resistance

**2 Current draw:**

Terminal to Terminal?  
Terminal to Heapport?

0.2 - 0.3 Ohms  
0.0 mA

Fluke 2.5 II  
14 V supply Current limited to 10 amps.  
dc

**3 Open Crimp Ring**

**4 Visual Inspection**

Connector Leak? No  
Component wet? None  
BF leak? No  
Environment seal condition? Good  
If seal bad, Why?  
Corrosion? Yes  
Picture

Light Heavy  
Yes  
Bad

No

**5 Leak Test Sensor Arm.**

Pass

Fail

**6 Open Cup Crimp.**

**7 Kapton Inspection**

Condition of Kapton good  
Delamination of Kaptons  
Cracks of Kaptons  
Leaking Kaptons

bad  
comments:  
0 2  
0 2  
0 2

*Tefton cracks  
? pins*

**8 Gasket Inspection**

Present Yes  
Nibbles/missing material  
Gasket thickness

0.0287  
0.0278  
0.0288 inches  
MILITARY M-C

No

**9 Package and Store**

**10 Analysis Summary:**

NTF

Issue Discovered

TI-NHTSA 9374

## 77PSL 2-1 Return Analysis Sheet

Device ID: C Date: \_\_\_\_\_ Ford Part # \_\_\_\_\_

Operator's Name: \_\_\_\_\_ SW Date Code: \_\_\_\_\_ Technician \_\_\_\_\_

### 1 Visual Inspection

General condition of Switch: Good Bad  
Signs of leakage into connector? No Yes

### 2 Current draw:

Terminal to Terminal? Ohms  
Terminal to Heapsort? mA 14 V supply Current limited to 10 amps.

### 3 Open Crimp Ring

### 4 Visual Inspection

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

### 5 Leak Test Swivel Arm.

Pass Fail

### 6 Open Cup Crimp.

### 7 Diaphragm Inspection

	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon stretch			✓			✓			✓
Teflon cracks	L								
Teflon delamination	H								
Karlson cracks									
Strain pattern									
Cracks on strain pattern									
Wear particles/dissolution									✓

H= high

Medium

Low

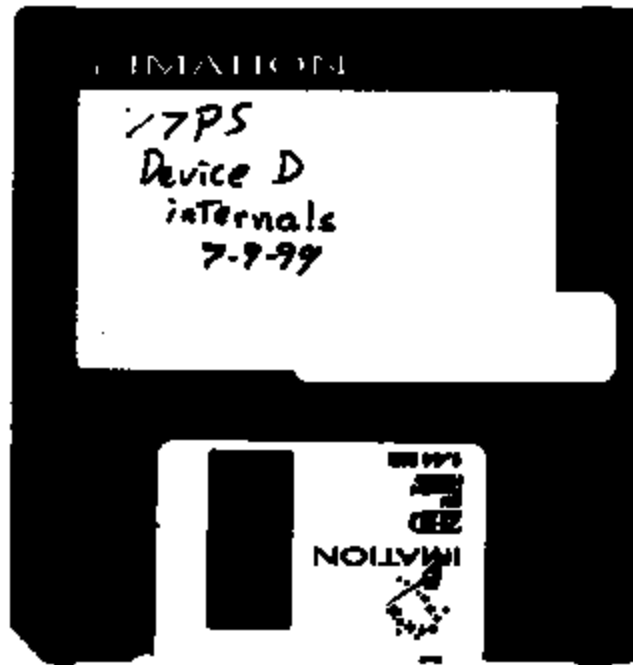
### 8 Gaslet Inspection

Present Yes No  
Nipples/missing material Yes No  
Gaslet thickness \_\_\_\_\_ inches  
\_\_\_\_\_ inches  
\_\_\_\_\_ inches

### 9 Package and Store

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9375



TI-NHTSA 9376

# 77PSL2-1 Return Analysis Sheet

Device ID:

b21D Date:

070027 Part Part #

AB

Operator's Name:

Sw Date Code:

225A

Technician BJ

## 1 Visual Inspection

- General condition of Switch:
- Signs of leakage into connector?
- Mating connector seal? compression?
- Wire Harness returned?
- Wire insulation compression?

Good  
No  
Partial  
Yes  
Yes  
No

Bad  
Yes

Silicone

## 2 Current draw :

- Terminal to Terminal?
- Terminal to Housing?

0.7 0.3 Ohms  
0.6 mA

14 Vdc supply Current limited to 10 amps.

## 3 Open Crimp Ring

## 4 Visual Inspection

- Connector Leak?
- Component wear?
- RF leak?
- Environment seal condition?
- If seal bad, Why?
- Corrosion?
- Pictures

No  
None  
No  
Good  
Yes but seal is OK  
Yes but seal is OK  
Pass

Yes  
Light Medium Heavy  
Yes  
Bad

No

Fail

## 5 Open Cup Crimp

## 7 Discharge Inspection

	Nearest Fluid			Middle			Nearest Converter		
	Fluid #1	Converter #1	Fluid #2	Fluid #3	Converter #3	Fluid #4	Converter #4	Fluid #5	
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon stretch	N		Y	Y		Y	Y		Y
Teflon cracks	Y		N	N		N	N		N
Teflon delamination	Y		N	N		N	N		N
Kapton cracks		N			N			N	
Seal condition		L			L			L	
Waxer particles/deposition	N	N	N	N	N	N	N	N	Y

## 8 Gasket Inspection

- Present
- Noncompressing material
- Gasket thickness

Yes  
Yes  
0.0293 inches  
0.0296 inches  
0.0299 inches

No  
No

## 9 Package and Store

## 10 Analysis Summary:

NTF

Issue Discovered

TI-NHTSA 9377

# 77PSL2-1 Return Analysis Sheet

Device ID: bar 2

Date: 070899 Ford Part # (W7Z-74417-A)

Operator's Name: \_\_\_\_\_

Sw Date Code: 161A Technician PT

*Handwritten notes:*  
 connector - good  
 signs

**1 Visual Inspection**

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes

**2 Current draw:**

Terminal to Terminal? 0.23 Ohms - Fluke 87-III  
 Terminal to Heapport? 0.0 mA 14V supply Current limited to 10 am

**3 Open Crimp Ring**

**4 Visual Inspection**

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

**5 Leak Test Sensor Asm.**

Pass Fail

**6 Open Cup Crimp.**

**7 Kapton Inspection**

Condition of Kapton good  
 Delamination of Kapton  
 Cracks of Kapton  
 Leaking Kapton

Analysis Table

bad	comments:
1	2 3
1	2 3
1	2 3

*Handwritten notes:*  
 Technician  
 MITUTOYO

**8 Gasket Inspection**

Present Yes No  
 Nibbles/missing material Yes No  
 Gasket thickness 0.0293 0.0296 0.0299 inches  
 MITUTOYO MIC

**9 Package and Store**

**10 Analysis Summary:**

NTF Issue Discovered

TI-NHTSA 9376

# 77PS12-1 Return Analysis Sheet

Device ID: D Date: \_\_\_\_\_ Ford Part # \_\_\_\_\_

Operator's Name: \_\_\_\_\_ Ser Date Code: \_\_\_\_\_ Technician: \_\_\_\_\_

### 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes

### 2 Current draw:

Terminal to Terminal? Ohms  
 Terminal to Ground? mA 14 V supply Current limited to 10 amps.

### 3 Open Drive Ring

### 4 Visual inspection

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

### 5 Leak Test Sensor Asm.

Pass Fail

### 6 Open Cup Drive

### 7 Diaphragm Inspection

	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon cracks			✓	✓		✓	✓		
Teflon cracks	✓								
Teflon delamination	✓								
Kapton cracks									
Strain pattern		✓		✓				✓	
Cracks on strain pattern									✓
Wavy pattern/delamination									
		Hi-high		M-medium				L-low	

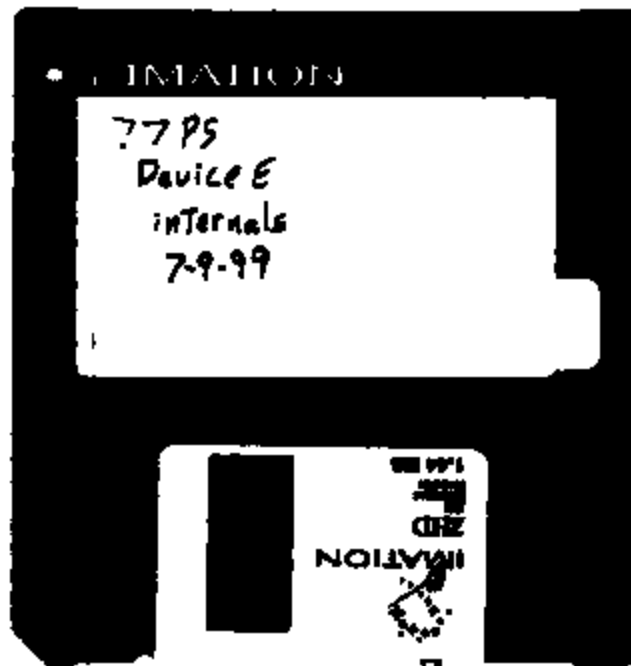
### 8 Gasket Inspection

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

### 9 Package and Store

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9379





# 77PSL2-1 Return Analysis Sheet

Device ID: Box 6 Date: 07/07/99 Ford Part # AB

Operator's Name: \_\_\_\_\_ Sw Date Code: 2062 Technician PJT

## 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? Failed Silicone  
 compression? Yes No  
 Wire Harness returned? Yes No  
 Wire insulation compression?

## 2 Current draw :

Terminal to Terminal? 0.2 0.20amps  
 Terminal to Harness? mA 14 Vdc supply Current limited to 10 amps.

## 3 Open Crimp Ring

## 4 Visual Inspection

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

## 5 Leak Test Sensor Asm.

Pass Fail

## 6 Open Cup Crimp.

## 7 Diaphragm Inspection

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon stretch	N		Y	Y		Y	Y		Y
Teflon cracks	Y		N	N		N	N		N
Teflon delamination	Y		N	N		N	N		N
Kapton cracks		N			N			N	
Stain pattern		N			N			N	
Wear particles/discoloration	N	N	N	N	N	N	N	N	Y

## 8 Gasket Inspection

Present Yes No  
 Nibbles/mating material Yes No  
 Gasket thickness 0.0333 inches  
0.0274 inches  
0.0275 inches

## 9 Package and Store

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9381

# 77PSL2-1 Return Analysis Sheet

Device ID: box E

Date: 222833 Ford Part # X472-96652-AA

Operator's Name: \_\_\_\_\_

Sw Date Code: 3002 Technician Pat

**1 Visual Inspection**

General condition of Switch: Good Bad

Signs of leakage into connector? No Yes

**2 Current draw :**

Terminal to Terminal? 0.2-0.3 Ohms

Terminal to Heaptop? 0.0 mA

14 V supply Current limited to 10 amp

**3 Open Crimp Ring**

**4 Visual Inspection**

Connector Leak? No

Component wear? None Light Heavy

BF leak? No Yes

Environment seal condition? Good Bad

If seal bad, Why?

Corrosion? Yes No

Pictures

**5 Leak Test Sensor Asst.**

Pass Fail

**6 Open Cup Crimp.**

**7 Kapton Inspection**

Condition of Kapton good bad

Delamination of Kaptons

Cracks of Kaptons

Leaking Kaptons

comments:

0	1	2	3
0	1	2	3
0	1	2	3

**8 Gasket Inspection**

Present Yes No

Nibbles/missing material Yes No

Gasket thickness 0.0293 0.0294 0.0292 inches

**9 Package and Store**

M.T.T. m.c.

**10 Analysis Summary:**

NTF

Issue Discovered

TI-NHTSA 9382

# 77PSL2-1 Return Analysis Sheet

Device ID: E Date: \_\_\_\_\_ Ford Part # \_\_\_\_\_  
 Operator's Name: \_\_\_\_\_ Sw Date Code: \_\_\_\_\_ Technician: \_\_\_\_\_

- 1 Visual Inspection**  
 General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes
- 2 Current draw :**  
 Terminal to Terminal? Ohms  
 Terminal to Hezport? mA 14 V supply Current limited to 10 amps.
- 3 Open Crimp Ring**
- 4 Visual Inspection**  
 Connector Leak? No  
 Component wear? None Light Heavy  
 BF leak? No Yes  
 Environment seal condition? Good Bad  
 If seal bad, Why?  
 Corrosion? Yes No  
 Pictures
- 5 Leak Test Sensor Assn.** Pass Fail
- 6 Open Cup Crimp.**
- 7 Diaphragm Inspection**

	Flse	#1	Converter	Flud	#2	Converter	Flud	#3	Converter
Teflon stretch			✓	✓		✓	✓		✓
Teflon cracks	L								
Teflon delamination	M								
Kapton cracks									
Stain pattern									
Cracks on stain pattern									
Wear patterns/discoloration									✓

- H= high Medium Low
- 8 Gasket Inspection**  
 Present Yes No  
 Nibbles/missing material Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches
- 9 Package and Store**
- 10 Analysis Summary:** NTF Issue Discovered

TLNHTSA 9383

# 77PS Return Analysis

batch number 0013

Engineer: Bryan Oague  
Technician: Patrick Miranda

TI-NHTSA 9384

**77P912-1 Return Analysis Sheet**

Device ID: 2913-01 Date: 9-13-99 Ford Part # A13  
 Operator's Name: \_\_\_\_\_ Sw Data Code: 6577 Technician Pat

**1 Visual Inspection**  
 General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? Yes Foam Silicone  
 Wire Harness returned? Yes No  
 Wire insulation compression?

**2 Current draw :**  
 Terminal to Terminal? 0.2 Ohms  
 Terminal to Harness? 3.0 mA 14 Vdc supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**  
 Connector Leak? No Yes  
 Components wear? None Light Medium Heavy  
 BF leak? No Yes  
 Environment seal condition? Good Bad  
 If seal bad, Why?  
 Condition? Yes No  
 Pictures

**5 Leak Test Sensor Asst.** Pass Fail

**6 Open Cap Crimp**

**7 Diaphragm Inspection**

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	RT	Converter	Fluid	RT	Converter	Fluid	RT	Converter
Teflon grease	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon grease									
Teflon decontaminant									
Kapton solvent									
Strain relief									
Wire particle contamination									

**8 Gasket Inspection**  
 Present? Yes No  
 Nibbles/wearing material? Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

**9 Package and Stern**

**10 Analysis Summary:** NTF Issue Discovered

TI-NHTSA 9385

# 77PS1 2-1 Return Analysis Sheet

Device ID: 0913-22 Date: 7/27/77 Ford Part # A3  
 Operator's Name: \_\_\_\_\_ Ser Date Code: 3-24 Technician: Pjt

## 1 Visual Inspection

General condition of Swtch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? IP Foam Silicone  
 compressed? \_\_\_\_\_  
 Wire harness returned? Yes No  
 Wire insulation compression? \_\_\_\_\_

## 2 Current draw :

Terminal to Terminal? 2.7 Ohms  
 Terminal to Harness? 0.0 mA 14 Vdc supply Current limited to 10 amps.

## 3 Open Crimp Ring

## 4 Visual Inspection

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

## 5 Leak Test Swtch Arm.

Pass Fail

## 6 Open Cup Crimp.

## 7 Discharge Inspection

	Nearest Fluid #1			Middle #2			Nearest Connector		
	Fluid	PT	Connector	Fluid	PT	Connector	Fluid	PT	Connector
Teflon search	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon finish									
Teflon determination									
Kapton grade									
Seal return									
View particles/microcracks									

## 8 Gasket Inspection

Present? Yes No  
 Nibbles/miseng material? Yes No  
 Gasket thickness \_\_\_\_\_  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

## 9 Package and Store

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9386

# 77P212-1 Return Analysis Sheet

Device ID: 0711 Date: 7-13-28 Ford Part # A 13

Operator's Name: \_\_\_\_\_ Sw Date Code: 2026 Technician P37

### 1 Visual Inspection

General condition of Switch: Good  
 Signs of leakage into connector? No  
 Mating connector seal? Pass  
 compressor?  
 Wire Harness returned? Yes  
 Wire insulation compression? No

Bad Yes *... 2027 d ...*

### 2 Current draw:

Terminal to Terminal? 0.2 Ohms  
 Terminal to Harness? 2.66 mA 14 Volt supply Current limited to 10 amps.

### 3 Open Crimp Ring

### 4 Visual Inspection

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

### 5 Leak Test Sensor Assm.

Pass Fail

### 6 Open Cup Crimp.

### 7 Discharge Inspection

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon switch	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon switch									
Teflon disconnection									
Kapton grade									
Signs corrosion									
Wear particulate/contamination									

### 8 Gasket Inspection

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

### 9 Package and Store

10 Analysis Summary: NTP Issue Discovered

TI-NHTSA 9387

**77PSL2-1 Return Analysis Sheet**

Device ID: 0-15 23 Date: 7 13 79 Ford Part # AB  
 Operator's Name: \_\_\_\_\_ Svc Date Code: 2045 Technician RJ

1 Visual Inspection  
 General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Missing connector seal? Yes Silicone  
 Wire harness returned? Yes No  
 Wire insulation compression? \_\_\_\_\_

2 Current draw :  
 Terminal to Terminal? 0.2 Ohms  
 Terminal to Harness? 2.9 mA  
 14 Vdc supply Current limited to 10 amps.

3 Open Crimp Ring

4 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? \_\_\_\_\_  
 Completion? Yes No  
 Remarks \_\_\_\_\_

5 Leak Test Sensor Assy. Pass Fail

6 Open Cup Crimp.

7 Diaphragm Inspection

	Nearest Fluid			Middle			Nearest Connector		
	Fluid	#1	Connector	Fluid	#2	Connector	Fluid	#3	Connector
Teflon sleeve	Teflon	Kaolon	Teflon	Teflon	Kaolon	Teflon	Teflon	Kaolon	Teflon
Teflon orifice									
Teflon diaphragm									
Kaolon gasket									
Styro padding									
Wear particles/deterioration									

8 Gasket Inspection  
 Present? Yes No  
 Notice/missing material? Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

9 Packings and O-rings

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9368



# 77PBL 2-1 Return Analysis Sheet

Device ID: 0718-92 Date: 1-1-77 Ford Part # AB  
 Operator's Name: \_\_\_\_\_ Sw Date Code: 255 Technician: BJT

### 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? Pass Sealed  
 compression? Yes No  
 Wire Harness routed?  
 Wire insulation compression?

### 2 Current draw:

Terminal to Terminal? 0.3 Ohms  
 Terminal to Heptom? 0.0 mA 14 Vdc supply Current limited to 10 amps.

### 3 Open Crimp Ring

### 4 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

### 5 Leak Test Sensor Asm.

Pass Fail

### 6 Open Cup Crimp.

### 7 Diaphragm Inspection

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	g1	Converter	Fluid	g2	Converter	Fluid	g3	Converter
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon crack									
Teflon wrinkle									
Teflon delamination									
Kapton cracks									
Scuff bottom									
Wear marks/discoloration									

### 8 Gasket Inspection

Pressure Yes No  
 Nibbles/missing material Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

### 9 Package and Base

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9369

# 77PSL2-1 Return Analysis Sheet

Device ID: Q913-01 Date: 7-11-77 Ford Part # A 3

Operator's Name: \_\_\_\_\_ Sw Date Code: 31:2 Technician: Pat

- 1 Visual Inspection**  
 General condition of Sealair:  
 Signs of leakage into connector?  
 Mating connector seal?  
 compression?  
 Wire Harness returns?  
 Wire insulation compression?

Good  
No  
Good  
Yes  
No

Bad  
 Yes

- 2 Current draw :**  
 Terminal to Terminal?  
 Terminal to Heapter?

0.3 Ohms  
0.3 mA

14 Vdc supply Current limited to 10 amps.

**3 Open Grip Ring**

- 4 Visual Inspection**  
 Connector Leak?  
 Component wear?  
 EP leak?  
 Environment seal condition?  
 If seal bad, Why?  
 Corrosion?  
 Pictures

No  
 None  
 No  
 Good  
 Yes

Yes  
 Light Medium Heavy  
 Yes  
 Bad  
 No

**5 Leak Test Sensor Asm.**

Pass

Fail

**6 Open Cup Grip.**

**7 Discharge Inspection**

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon scratch	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon scuffs									
Teflon degradation									
Kapton marks									
Strain pattern									
Wear particles (discoloration)									

- 8 Gasket Inspection**  
 Present  
 Nibbles/missing material  
 Gasket thickness

Yes  
 Yes  
1.0mm  
1.0mm  
1.0mm

No  
 No

**9 Packings and Slits**

**10 Analysis Summary:**

NTP

Issues Discovered

TI-NHTSA 9390

# 77P81 2-1 Return Analysis Sheet

Device ID: 0912 Date: 7/23 Ford Part # A11

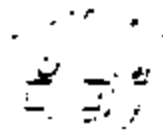
Operator's Name: \_\_\_\_\_ Sw Date Code: \_\_\_\_\_ Technician: 205

**1 Visual Inspection**

General condition of Swirl:  
 Signs of leakage into connector?  
 Missing connector seal?  
 Compression?  
 Wire Harness returned?  
 Wire insulation compression?

Good  
Yes  
Good  
 Silicone  
Yes  
No

Bad  
 Yes



**2 Current draw :**

Terminal to Terminal?  
 Terminal to Harness?

Ohms  
 20 mA

14 Vdc supply Current limited to 10 amper.

**3 Open Crimp Ring**

**4 Visual Inspection**

Connector Leak?  
 Component wear?  
 BF leak?  
 Environment seal condition?  
 If seal bad, Why?  
 Corrosion?  
 Pictures

No  
 None  
 No  
 Good  
 Yes

Yes  
 Light Medium Heavy  
 Yes  
 Bad  
 No

**5 Leak Test Sensor Asm.**

Pass

Fail

**6 Open Cup Crimp.**

**7 Diaphragm Inspection**

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon stretch	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon stretch									
Teflon stretch									
Kapton stretch									
Stylin stretch									
Wire particulate/contamination									

**8 Gasket Inspection**

Present  
 Missing/sealing material  
 Gasket thickness

Yes  
 Yes  
 inches  
 inches

No  
 No

**9 Package and Store**

**10 Analysis Summary:**

NTF

Issue Discovered

TI-NHTSA 9301

# 77PS1 2-1 Return Analysis Sheet

Device ID: 4113 Date: 7-13-79 Ford Part # A3  
 Operator's Name: \_\_\_\_\_ Sw Date Code: 3760 Technician: 308

1 Visual Inspection  
 General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? Force Silicone  
 compression? ✓  
 Wire harness returned? Yes No  
 Wire insulation compression?

2 Current draw :  
 Terminal to Terminal? 3.2 Ohms  
 Terminal to Harness? 20 mA 14 Vdc supply Current limited to 10 amps.

3 Open Drive Ring

4 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

5 Leak Test Sensor Ass. Pass Fail

6 Open Gap Crimp.

7 Diaphragm Inspection

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

8 Gasket Inspection  
 Present Yes No  
 Hissing/leaking material Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

9 Package and Store

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9382

# 77PBL2-1 Return Analysis Sheet

Device ID: 0913 27 Date: 2-1-79 Ford Part # AE  
 Operator's Name: \_\_\_\_\_ Sw Date Code: 2133 Technician: CT

- 1 Visual Inspection**  
 General condition of Switch: Good  
 Signs of leakage into connector? No  
 Missing connector seal? OK  
 compression?  
 Wire Harness returned? Yes  
 Wire insulation compression? No

Good  
No  
OK  
 Score  
Yes No

- 2 Current draw :**  
 Terminal to Terminal?  
 Terminal to Harness?

Ohms  
 mA

14 Vdc supply Current limited to 10 amps.

- 3 Open Crimp Ring**

- 4 Visual Inspection**  
 Connector Leak? No  
 Component wear? None  
 BF leak? No  
 Environment seal condition? Good  
 If seal bad, Why?  
 Corrosion? Yes  
 Pictures

Yes  
 Light Medium Heavy  
 Yes  
 Bad  
 No

- 5 Leak Test Sensor Asm.**

Pass Fail

- 6 Open Cup Crimp.**

- 7 Diaphragm Inspection**

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	seal	Converter	Fluid	seal	Converter	Fluid	seal	Converter
Teflon stretch	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon cracks									
Teflon administration									
Kapton cracks									
Single sealant									
Wear particles/dissolution									

- 8 Gasket Inspection**  
 Present? Yes  
 Nibbling/missing material? Yes  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

No  
 No

- 9 Package and Status**

- 10 Analysis Summary:**

NTP None Discovered

TI-NHTSA 9393

# 77PSL2-1 Return Analysis Sheet

Device ID: 2913 18 Date: 7-13-79 Ford Part # A2  
 Operator's Name: \_\_\_\_\_ Sw Date Code: 7A Technician BT

## 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Missing connector seal? Partial Silicone  
 Missing compression? Yes No  
 Wire Harness returned? Yes  
 Wire insulation compression? No

## 2 Current draw :

Terminal to Terminal: 0.3 Ohms  
 Terminal to Massport: 2.0 mA 14 Vdc supply Current limited to 10 amps.

## 3 Open Crimp Ring

## 4 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 \_\_\_\_\_

## 5 Leak Test Sensor Asm.

Pass Fail

## 6 Open Cup Crimp.

## 7 Dielectric Inspection

	Nearest Field			Middle			Nearest Connector		
	Fluid	#1	Connector	Fluid	#2	Connector	Fluid	#3	Connector
Teflon sleeve	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon cracks									
Teflon delamination									
Kapton cracks									
Strain pattern									
Wear particles/debris									

## 8 Gasket Inspection

Present Yes No  
 Miscompressing material Yes No  
 Gasket thickness \_\_\_\_\_  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

## 9 Package and Store

12 Analysis Summary: NTF Issues Discovered

TI-NHTSA 9394

# 77912-1 Return Analysis Sheet

Device ID: 913-H Date: 7-10-07 Ford Part # A7

Operator's Name: \_\_\_\_\_ Ser Code Code: 9012 Technician 31

**1 Visual Inspection**

General condition of device: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? Fail Silicone  
 compression?  
 Wire Harness returned? Yes No  
 Wire insulation compression?

**2 Current draw :**

Terminal to Terminal? 2.8 Ohms  
 Terminal to Harness? 2.9 mA 14 Vdc supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**

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

**5 Leak Test Sensor Asm.**

Pass Fail

**6 Open Cup Crimp.**

**7 Diaphragm Inspection**

	Neutral Fluid			Middle			Neutral Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon screen									
Teflon screen									
Teflon diaphragm									
Kapton screen									
Strap screen									
Wear pattern/condition									

**8 Contact Inspection**

Present? Yes No  
 Nibbling/wear material? Yes No  
 Contact thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

**9 Package and Store**

**10 Analysis Summary:** NTF Issue Discovered

TI-NHTSA 9395

# 77PBL-1 Return Analysis Sheet

Device ID: 6913-12 Date: 7/1/99 Ford Part # A17

Operator's Name: \_\_\_\_\_ S# Date Code: 2111 Technician: But

## 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? Excess Silicone  
 completion?  
 Wire Harness returned? Yes Ng  
 Wire insulation compression?

## 2 Current Draw :

Terminal to Terminal? 0 - Ohms  
 Terminal to Harness? 2.0 mA 14 Vdc supply Current limited to 10 amps

## 3 Open Crimp Ring

## 4 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

## 5 Leak Test Sensor Ass.

Pass Fail

## 6 Open Cup Crimp.

## 7 Discharge Inspection

	Nearest Fluid			Middle			Nearest Converter		
	Fluid #1	Converter	Fluid #2	Converter	Fluid #3	Converter			
Teflon mesh	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon crimp									
Teflon discrimination									
Kapton crimp									
Shield gaskets									
Wear particles/dissolution									

## 8 Gasket Inspection

Present? Yes No  
 Nibbling/rotting material? Yes No  
 Gasket thickness inches  
inches  
inches

## 9 Package and State

10 Analysis Summary: NTP Issues Discussed

TI-NHTSA 9396



# 77PSL2-1 Return Analysis Sheet

Device ID: 0913-13 Date: 1/29 Ford Part # AB

Operator's Name: \_\_\_\_\_ Sw Code Code: 266 Technician Pat

### 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? Yes Yes  
 Missing connector seal? Yes Foam Silicone  
 compression?  
 Wire Harness repaired? Yes No  
 Wire insulation compression?

### 2 Current draw :

Terminal to Terminal? 2.2 Ohms  
 Terminal to Harness? 0.0 mA 14 Vdc supply Current limited to 10 amps.

### 3 Open Crimp Ring

### 4 Visual Inspection

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

### 5 Leak Test Sensor Assy.

Pass Fail

### 6 Open Cap Crimp.

### 7 Discharge Inspection

	Nearest Fluid #1			Middle #2			Nearest Converter #3		
	Fluid	Converter	Seal	Fluid	Converter	Seal	Fluid	Converter	Seal
Teflon seal	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon seal									
Teflon seal									
Kapton seal									
Seal return									
Wear particle cooperation									

### 8 Gasket Inspection

Present Yes No  
 Nibbling/missing material Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

### 9 Package and Store

10 Analysis Summary: NTP Issue Discovered

TI-NHTSA 0397

**TPSL-1 Return Analysis Sheet**

Device ID: 3913/4 Date: \_\_\_\_\_

Part # AB

Operator's Name: \_\_\_\_\_ Sw Data Code: \_\_\_\_\_

Technician But

**1 Visual Inspection**

General condition of Switch:  
Signs of leakage into connector?  
Mating connector used?  
compression?  
Wire Harness returned?  
Wire insulation compression?

Good  
No  
Foam Silicone  
Yes No

Bad  
Yes

**2 Current draw :**

Terminal to Terminal?  
Terminal to Harness?

0.2 Ohms  
1.0 mA

14 Vdc supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**

Connector Leak?  
Component wear?  
BF leak?  
Environment seal condition?  
If seal bad, Why?  
Corrosion?  
Picturas

No  
None  
No  
Good  
Yes  
No  
Yes  
No  
Light Medium Heavy

Yes  
Light Medium Heavy  
Yes  
Bad  
No

**5 Leak Test Sensor Assy.**

Pass Fail

**6 Open Cup Crimp.**

**7 Disphragm Inspection**

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon clutch	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon orifice									
Teflon diaphragm									
Kapton orifice									
Strain pattern									
Wear pattern/abnormalities									

**8 Gasket Inspection**

Present  
Nibbles/missing material  
Gasket thickness

Yes  
Yes  
\_\_\_\_ inches  
\_\_\_\_ inches  
\_\_\_\_ inches

No  
No

**9 Package and Store**

**10 Analysis Summary:**

NTF Issue Discovered

**TI-NHTSA 9396**

# 77PBL2-1 Return Analysis Sheet

Device ID: 0473-13 Date: 1-15-99 Ford Part # AB

Operator's Name: \_\_\_\_\_ Ser Code Code: 1382 Technician Pat

## 1 Visual Inspection

General condition of Switch:  
 Signs of leakage into connector?  
 Mating connector seal?  
 compression?  
 Wire harness returned?  
 Wire insulation compression?

Good  
No  
Foam  
 Silicone  
Yes No

Bad Yes

## 2 Current draw:

Terminal to Terminal? 0.2 Ohms  
 Terminal to Harness? 2.0 mA 14 Vdc supply Current limited to 10 amps.

## 3 Open Crimp Ring

## 4 Visual Inspection

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

## 5 Leak Test Sensor Asm.

Pass Fail

## 6 Open Cup Crimp.

## 7 Diaphragm Inspection

	Nearest Fluid			Middle			Nearest Converter		
	Plug	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon sealant	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon coating									
Teflon contamination									
Kapton cracks									
Silver pattern									
Wear particulate/contamination									

## 8 Gasket Inspection

Present Yes No  
 Nipple/ministring retained Yes No  
 Gasket thickness  
inches  
inches  
inches

## 9 Package and Blank

10 Analysis Summary: NTP Issue Discovered

TI-NHTBA 9399

# 77PS12-1 Return Analysis Sheet

Device ID: C91178 Date: 7-1-82 Ford Part # AB

Operator's Name: \_\_\_\_\_ Sw Data Code: \_\_\_\_\_ Technician: ST

1 Visual Inspection  
 General condition of Switch: Good Bad  
 Signs of leakage r/o connector? No Yes  
 Mating connector seal? Pass Silicone  
 compression?  
 Wire Harness returned? Yes No  
 Wire insulation compression?

2 Current draw:  
 Terminal to Terminal? 0.3 Ohms  
 Terminal to Harness? 7.7 mA 14 Vdc supply Current limited to 10 amps.

3 Open Crimp Ring

4 Visual Inspection  
 Connector Leak? No Yes  
 Component wear? None Light Medium Heavy  
 BF leak? No Yes  
 E/W seal condition? Good Bad  
 If seal bad, Why?  
 Corrosion? Yes No  
 Pictorial

5 Leak Test Sensor Arm. Pass Fail

6 Open Cup Crimp.

7 Diaphragm Inspection

	Nearest Fluid #1			Middle #2			Nearest Converter		
	Fluid	Leak	Converter	Fluid	Leak	Converter	Fluid	Leak	Converter
Tether clutch									
Tether straps									
Tether diaphragm									
Hydro clutch									
Strap system									
Wear on diaphragm									

8 Gasket Inspection  
 Present Yes No  
 Missing material Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

9 Package and Store

10 Analysis Summary: NTP Issue Discovered

TI-NHTSA 0400

# 77PSL2-1 Return Analysis Sheet

Device ID: 291317 Date: 7-17-78 Ford Part # AE

Operator's Name: \_\_\_\_\_ Sw Date Code: 522 Technician JA

### 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? ~A Foam Silicone  
 Wire Harness returned? Yes No  
 Wire insulation compression?

### 2 Current draw:

Terminal to Terminal? 5.2 Ohms  
 Terminal to Heapp? 0.9 mA 14 Volt supply Current limited to 10 amps.

### 3 Open Crimp Ring

### 4 Visual Inspection

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

### 5 Leak Test Sensor Asm.

Pass Fail

### 6 Open Cup Crimp.

### 7 Diaphragm Inspection

	Nearest Fluid			Middle			Nearest Converter		
	Fluid	#1	Converter	Fluid	#2	Converter	Fluid	#3	Converter
Teflon streak	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon cracks									
Teflon delamination									
Kapton cracks									
Stain pattern									
Wear particles/dissolution									

### 8 Gasket Inspection

Present Yes No  
 Nonbleeding material Yes No  
 Gasket thickness \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

### 9 Package and Store

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 9401

# 77PBL 2-1 Return Analysis Sheet

Device ID: 0911-8 Date: 7-13-79 Ford Part # AD

Operator's Name: \_\_\_\_\_ Ser. Code: 228 Technician: Pat

**1 Visual Inspection**

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? Pass Slippery  
 Compression? Yes No  
 Wire Harness returned? Yes  
 Wire insulation compression? Yes

**2 Current draw:**

Terminal to Terminal? 0.3 Ohms  
 Terminal to Ground? 1.1 mA 14 Vdc supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**

Connector Leg(s) No Yes  
 Component wear? None Light Medium Heavy  
 BF leak? No Yes  
 Environment seal condition? Good Bad  
 If seal bad, Why?  
 Corrosion? Yes No  
 Pictorial

**5 Leak Test Sensor Asst.**

Pass Fail

**6 Open Cup Crimp.**

**7 Diaphragm Inspection**

	Nearest Fluid			Middle			Nearest Connector		
	Fluid	#1	Connector	Fluid	#2	Connector	Fluid	#3	Connector
	Teflon	Kaeson	Teflon	Teflon	Kaeson	Teflon	Teflon	Kaeson	Teflon
Teflon seal									
Teflon seal									
Teflon seal									
Kaeson seal									
Strain pattern									
Wear particles/contamination									

**8 Gasket Inspection**

Present? Yes No  
 Mobilizing material? Yes No  
 Gasket thickness 1.7000  
1.7000  
1.7000

**9 Package and Store**

**10 Analysis Summary:** MTF Issues Discovered

TI-NHTSA 9402

# 77P81 2-1 Return Analysis Sheet

Device ID: 0913-9 Date: 7-13-99 Ford Part # A13  
 Operator's Name: \_\_\_\_\_ The Date Code: 9907 Technician: Pat

**1 Visual Inspection**

General condition of Switch:  Good  Bad  
 Signs of leakage into connector?  No  Yes  
 Mating connector seal?  Failed  Sealed  
 compression?  Yes  No  
 Wire Harness returned?  Yes  No  
 Wire insulation compression?  Yes  No

**2 Current draw :**

Terminal to Terminal? 1.2 Ohms  
 Terminal to Harness? 0.1 mA  
 14 Volt supply Current limited to 10 amps.

**3 Open Crimp Ring**

**4 Visual Inspection**

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

**5 Leak Test Sensor Area.**

Pass Fail

**6 Open Cup Check.**

**7 Diaphragm Inspection**

	Normal Fluid			Middle			Normal Converter		
	Fluid	or	Converter	Fluid	or	Converter	Fluid	or	Converter
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon sealant									
Teflon sealant									
Teflon degreasing									
Kapton sealant									
Strain pattern									
Wear particles/contamination									

**8 Gasket Inspection**

Present  Yes  No  
 Misblowmolding material  Yes  No  
 Gasket Undersize \_\_\_\_\_ inches  
 \_\_\_\_\_ inches  
 \_\_\_\_\_ inches

**9 Package and Signs**

10 Analysis Summary: NTF Issue Discovered

TI-NHTSA 8403

# 77P912-1 Return Analysis Sheet

Device ID: 091212 Date: 7-13-99 Ford Part # A3  
 Operator's Name: \_\_\_\_\_ Ser Data Code: 3058 Technician BT

## 1 Visual Inspection

General condition of Switch: Good Bad  
 Signs of leakage into connector? No Yes  
 Mating connector seal? 1/1A Foam Silicone  
 compression? Yes No  
 Wire Harness routed? Yes No  
 Wire insulation compression? Yes No

## 2 Current draw :

Terminal to Terminal? 0.3 Ohms  
 Terminal to Harness? 0.8 mA  
 14 Vdc supply Current limited to 10 amps.

## 3 Open Crimp Ring

## 4 Visual Inspection

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

## 5 Leak Test Sensor Asst.

Pass Fail

## 6 Open Cap Crimp.

## 7 Discharge Inspection

	Nose/Front Fluid			Middle			Rear/Back Converter		
	Fluid	at	Connector	Fluid	at	Connector	Fluid	at	Connector
Teflon grease	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Teflon grease									
Teflon dielectric									
Kapton grease									
Slush grease									
Wax dielectric									

## 8 Gasket Inspection

Fracture Yes No  
 Nonconforming material Yes No  
 Gasket thickness \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## 9 Package and Store

## 10 Analysis Summary:

NTF Issue Discovered

TI-NHTSA 9404



# 77PS Return Analysis

batch number 0813

**TI-NHTSA 9405**

**Engineer: Bryan Dague**

**Technician: Patrick Miranda**

Ford 77Ps Recovered Parts Analysis

Make Lincoln

Model Town Car

Year 1992

Date Recovered 1-20-1989

Recovery Location Goyette's New Bedford

Mileage TMU

TI Test # F77-1 Device # F2VCQF924 AB 2128

Technician LEC

Date Tested 1-21-99

Device Photograph

ATTACHED  
BACK  
PAGE

Kapton Photograph

ATTACHED  
BACK  
PAGE

### Ford 77PS Issue Recovered Parts Analysis

External switch condition Fair - Corrosion on hex AND  
Partially down threads - Seal area clean -  
Slight amount of Debris on fluid inlet

#### Remove Connector

Terminal Condition good - Clean with NO CORROSION

Switch Pocket good - Clean - with NO Fluid or  
Dust

#### Remove Crimp Ring

Contact Assembly Clean - NO CONTAMINATION  
NO ARCING of contacts - NO HEAT DISCOLORATION of  
Contact ARM

Sensor Assembly SOME CORROSION APPROACHING  
BASE/SENSOR GASKET AND COMPLETELY AROUND BOTTOM  
OF SENSOR NEAR HEX

Transfer Pin Shows Normal Wear

Environmental Seal good condition

#### Disassemble Sensor

Kapton Condition good - Some dust from cycling TOP LAYER  
Bottom - CRACKING SEEN - with Fluid Seepage to 2nd layer  
Center - MINOR SCUFFING FROM RUBBING with Bottom Kapton

Snap Disc good - Shows Evidence of cycling

Washer good - Clean

Converter good - Clean

Hex port Internal Some Corrosion

577-1





F77-1



F77-1

TI-NHTSA 9409

Ford 77Ps Recovered Parts Analysis

Make FORD

Model CROWN VICTORIA

Year 1992

Date Recovered 1-20-99

Recovery Location HANK ZION'S

Mileage TMU

TI Test # F77-3 F2VC9F924 MS 1330

Technician SEC

Date Tested 1-22-99

Device Photograph

ATTACHED  
TO  
BACK

Kapton Photograph

ATTACHED  
TO  
BACK

TI-NHTSA 9410

ACTUATION  
121.6

Release  
61.8

M.V.D.  
.13mv @ 12mA LOAD  
0 PSI

## Ford 77PS Issue Recovered Parts Analysis

External switch condition Fair - Red Rust Showing on hex port -  
Typical dust + oil buildup - Light corrosion on threads  
Seal surface good - Bulge on crimp ring near hex port - Side

### Remove Connector

Terminal Condition Good - No corrosion - good alignment

Switch Pocket Clean / DRY

### Remove Crimp Ring

Contact Assembly Good - No Debris or Fluids - Contacts  
Show Normal wear - no discoloration - NO PITS  
OR CONTACT AREA

Sensor Assembly External corrosion - Heavy deposits between  
sensor + base - internal area clean + dry

Transfer Pin Normal wear -

Environmental Seal good condition, slight ingress of corrosion

### Disassemble Sensor

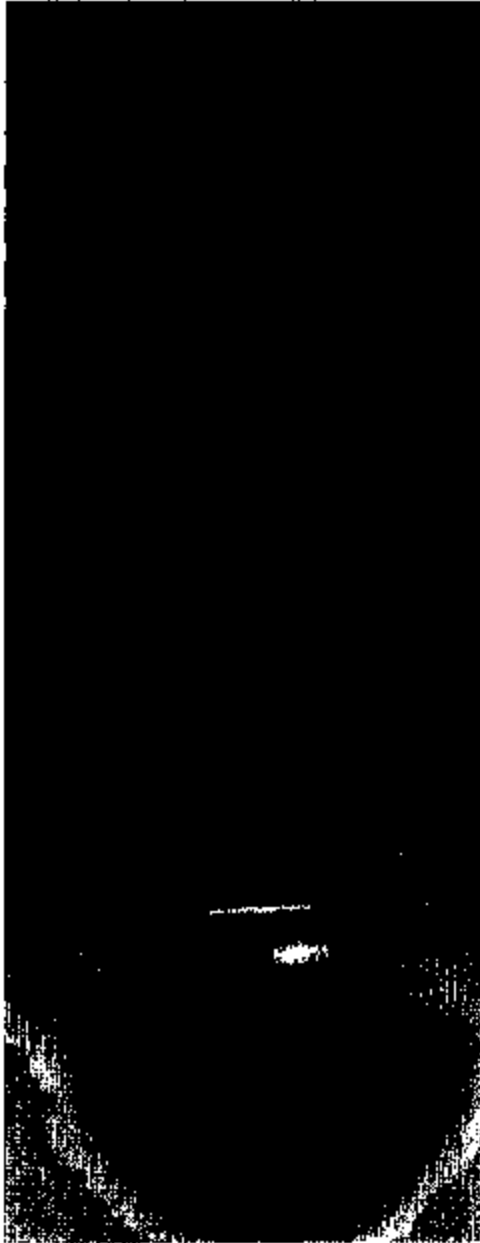
Kapton Condition Layer 1 - Delaminated Kapton Fluid Permeation  
Layer 2 - Starting to delaminate -  
Layer 3 - Normal wear - NO delamination

Snap Disc Good - Normal wear

Washer Good - Normal wear

Converter Good - Normal wear

Hex port Internal gasket good - some internal corrosion



TI-NHTSA 9412

F77-3





F77-2



F77-3



F77-3

Ford 77Ps Recovered Parts Analysis

Make MERCURY

Model GRAND MARQUIS

Year ~~1991~~ 1992

Date Recovered 1-20-99

Recovery Location HANK ZION'S

Mileage 102,241

TI Test # F77-2 DEVICE# F2VC9F92A AB 3167

Technician LCC

Date Tested 1-22-99

Device Photograph

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BACK  
PAGE

Kapton Photograph

ATTACHED  
BACK  
PAGE

ACTUATION

141.7

Release

67.0

M.V.D.

.57 mv @ 12ma Load  
0-PSI

TI-NHTSA 9414

### Ford 77PS Issue Recovered Parts Analysis

External switch condition Fair - Corrosion on hex and partially down threads and crimp ring - Seal area good no contamination seen on inlet of device

#### Remove Connector

Terminal Condition Clean no corrosion - Good Alignment

Switch Pocket Clean - no fluid or dust

#### Remove Crimp Ring

Contact Assembly good condition - NO SIGN OF ARcing OR Short - NO heat discoloration.

Sensor Assembly corrosion to seal - NO RED RUST

Transfer Pin good Shows normal wear

Environmental Seal good

#### Disassemble Sensor

Kapton Condition 1. Fluid side - Shows delamination of Kapton - cracks  
2. middle - normal wear - DRY shows no seepage  
3. washer side - good - normal wear -

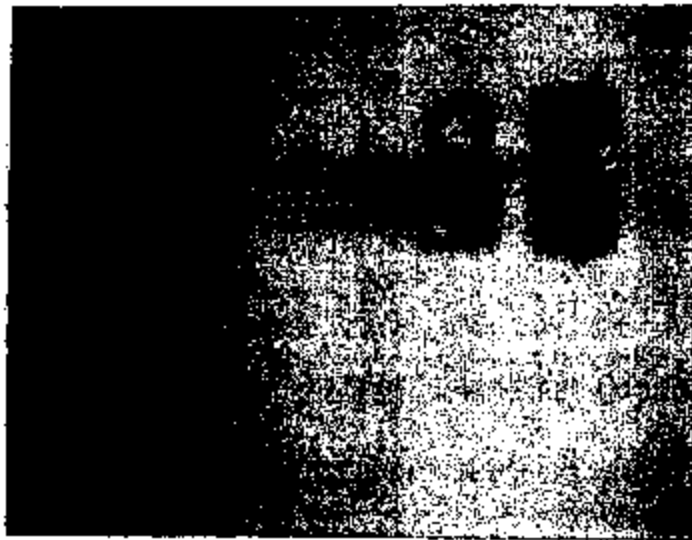
Snap Disc good - Shows EVIDENCE of cycling - DUST

Washer good - Shows EVIDENCE of cycling - DUST

Converter good - Kapton SPACER good

Hex port Internal Light amounts of DEBRIS - gasket good





TI-NHTSA 9417

Ford 77Ps Recovered Parts Analysis

Make LINCOLN

Model TOWN CAR

Year 1992

Date Recovered 1-20-99

Recovery Location Goyette's Auto Parts STX# 4271

Mileage T.M.U.

TI Test # E77-4 F2VCSF924 AB 2079

Technician LCC

Date Tested 1-25-99

Device Photograph  
ATTACHED

Kapton Photograph  
ATTACHED

TI-NHTSA 9418

ACTUATION  
149.6

RELEASE  
77.8

M.V.D.  
4.23 mk. @ 12mm  
0-PSI

**Ford 77PS Issue Recovered Parts Analysis**

External switch condition Red Rust on hex part - Slight amount  
on crimp ring - Seal area good some debris on inlet  
Partial corrosion down threads

**Remove Connector**

Terminal Condition good - NO CORROSION - GOOD ALIGNMENT

Switch Pocket CLEAN - NO FLUID OR DEBRIS

**Remove Crimp Ring**

Contact Assembly GOOD - NO DISCOLORATION - NORMAL WEAR  
NO SIGN OF ARCING

Sensor Assembly CORROSION UP SIDE AND ONTO TOP WEAR  
PIN AREA

Transfer Pin Good - Normal wear

Environmental Seal Slight lift from sensor to gasket from rust  
Distorted shape

**Disassemble Sensor**

Kapton Condition Paint from gasket mark on Kapton

1- Delamination seen      2- Normal wear DRY  
3- Normal wear - DRY

Snap Disc Normal wear Shows sign of cycling

Washer Normal wear

Converter Normal wear

Hex port Internal Slight contamination + Debris







F77-4



F77-4



Ford 77Ps Recovered Parts Analysis

Make LINCOLN

Model TOWN CAR

Year 1992

Date Recovered 1-20-99

Recovery Location GOVETTE'S AUTO PARTS STK# 4072

Mileage T.M.U.

TI Test # F77-5 F2VC9F924 AB 1341

Technician LAGY

Date Tested 1-25-99

Device Photograph  
ATTACHED

Kapton Photograph  
ATTACHED

ACTUATION  
157.2

Release  
79.6

M.V.D.  
3.1 MV @ 12MA  
0-PSI

TI-NHTSA 9422

### Ford 77PS Issue Recovered Parts Analysis

External switch condition Fair - Red Rust on Hex Port  
NO CORROSION ON CRIMP RING - Partial corrosion  
DOWN THREADS

#### Remove Connector

Terminal Condition Good - Clean NO Fluids or Debris  
NO CORROSION - Good alignment

Switch Pocket CLEAN - NO Fluids or Contamination

#### Remove Crimp Ring

Contact Assembly Good - NO DISCOLORATION - NO Pitting  
NORMAL WEAR

Sensor Assembly Slight corrosion up side - overall  
Good condition

Transfer Pin Normal wear

Environmental Seal Good

#### Disassemble Sensor

Kapton Condition 1- De-laminated with Fluid - not all the way through  
2- Normal  
3- Normal

Snap Disc Good - Normal wear

Washer Deformation in Button Area - CAUSING MISHAPE IN Kapton

Converter Good - Normal wear

Hex port Internal mild corrosion and Buildup of Gasket good

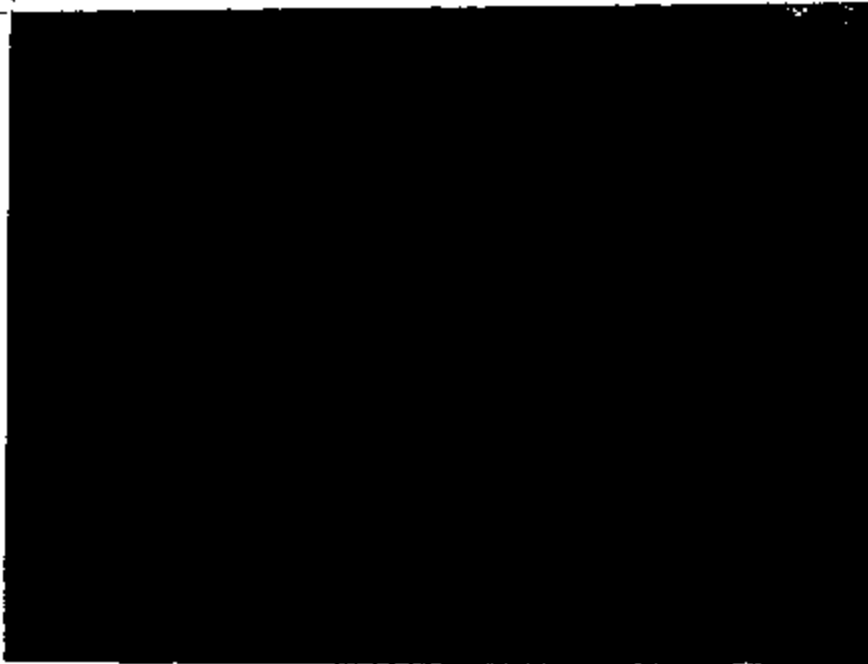


TI-NHTSA 9424

E77-9



F77-5



F77-5



F77-5

Full Test stopped Due to water Damage  
Kapton ONLY

Ford 77Ps Recovered Parts Analysis

Make MERCURY

Model GRAND MARQUIS

Year 1992

Date Recovered 1-20-99

Recovery Location Sylvia's Auto Parts

Mileage T.M.U.

TI Test # F77-7 V E2VC9F924 AB 2052

Technician LEC

Date Tested 1-25-99

Device Photograph  
ATTACHED

Kapton Photograph  
ATTACHED

TI-NHTSA 9426

Device OPEN to Elements - DOES NOT WORK  
Tested with connector from P77-5 Device

Actuation

/

Release

/

M.V.D.

.30 @ 12mA  
0-PSI

Ford 77PS Issue Recovered Parts Analysis

External switch condition good - Little red rust - most plating  
visible - Partial corrosion on mating REARS.  
Surface of seal clean

Remove Connector — NO CONNECTOR  
WIRES Remove from CAR

Terminal Condition CORROSION SHOWN ON TERMINALS  
DUE TO EXPOSURE FROM NO CONNECTOR

Switch Pocket Clean

Remove Crimp Ring

Contact Assembly Water Damage

Sensor Assembly Water Damage

Transfer Pin Shows Normal Wear

Environmental Seal Intact

Disassemble Sensor

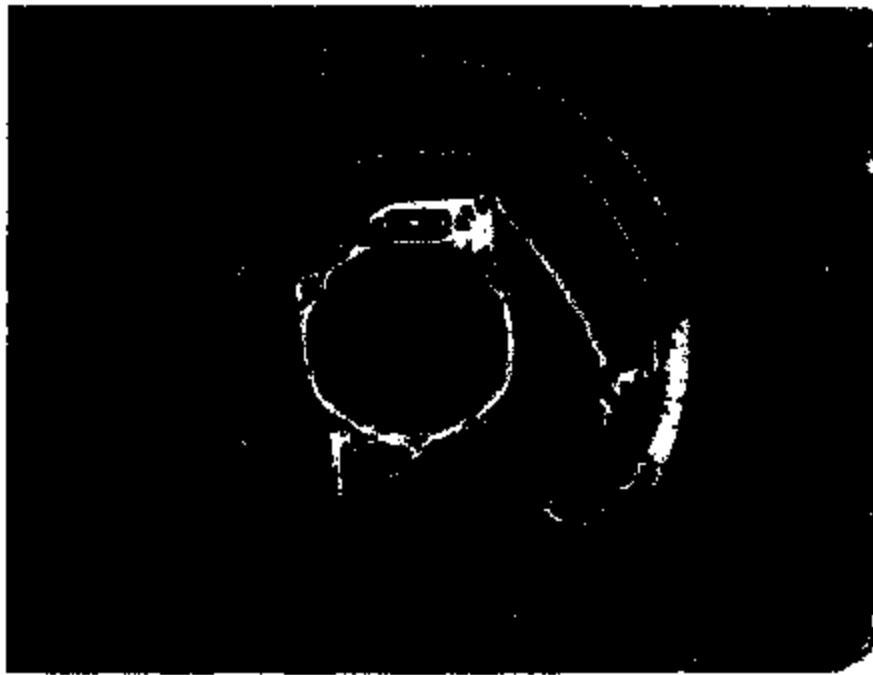
Kapton Condition Starting to show initial signs of  
DE-LAMINATION

Snap Disc Water Damage

Washer Water Damage

Converter Water Damage

Hex port Internal Slight Corrosion



F77-7

TI-NHTSA 9428



Ford 77Ps Recovered Parts Analysis

Make MERCURY

Model GRAND MARQUIS

Year 1992

Date Recovered 1-20-99

Recovery Location Sylvia's Auto Parts

Mileage 51,691

TI Test # F77-6 FZVC9F929 AB 1317

Technician LFC

Date Tested 1-26-99

Device Photograph  
ATTACHED

Kapton Photograph  
ATTACHED

TI-NHTSA 9429

ACTUATION  
112.5

Release  
61.7

M.U.D.  
.25 mv @ 12 mA  
D-P53

### Ford 77PS Issue Recovered Parts Analysis

External switch condition good - RED Rust on hex and PARTIALLY DOWN THREADS - Connector clean - mating surface good

#### Remove Connector

Terminal Condition CLEAN - NO CORROSION - Slight mis-alignment of terminals

Switch Pocket CLEAN -

#### Remove Crimp Ring

Contact Assembly good - NO ARCING OR DISCOLORATION Shows normal wear

Sensor Assembly CORROSION UP SIDE UNDER CRIMP RING

Transfer Pin good - Shows normal wear

Environmental Seal good

#### Disassemble Sensor

Kapton Condition CRACKS AND/OR DELAMINATION ON 1<sup>ST</sup> LAYER  
2 - NORMAL WEAR  
3 - NORMAL WEAR

Snap Disc NORMAL WEAR

Washer NORMAL WEAR

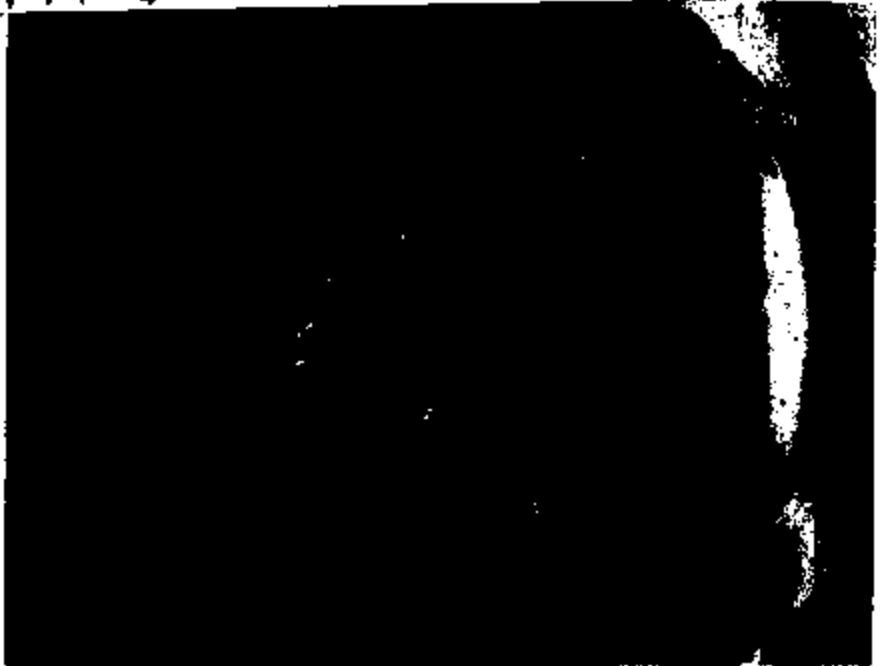
Converter good - NORMAL WEAR

Hex port Internal SOME SLUDGE AND CORROSION





F77-6



F77-6

