

EA02-025

TEXAS INSTRUMENTS, INC.'S

09/10/03

LETTER TO ODI

REQUEST # 5

BOX 6

PART A-M

PART L

Mead

DEPOSITION
EXHIBIT

NEAT SHEET
Entitled Page

80 SHEETS
COLLEGE RULED
 $11 \times 8\frac{1}{2}$ in / 27.9 x 21.5 cm
1 SUBJECT
NEATBOOK® NOTEBOOK

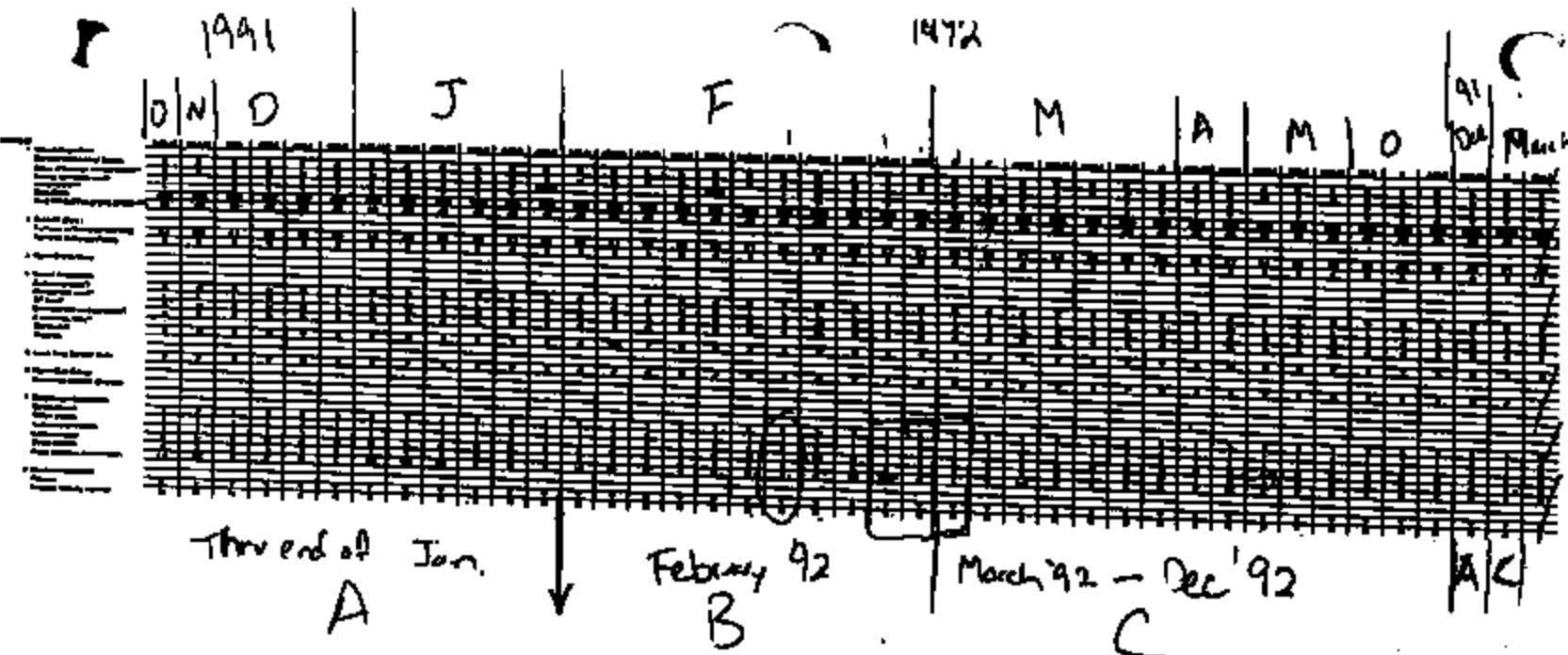
T1-NHTSA 8433



0 43100 06506 7

Steve Fimers

313-3903286



Stem 9/13 = 69%

10/11 = 91%

5/16 = 31%

Total = 24/40 = 60

TI 0001112C

Sheet1

Date/Code	Bld date	Veh line	miles	location	prefix	suffix
1269	2/13/92	tc	96055	elk, eureka		bb
2052	8/21/92	gm	43474	eritz, mass		ab
1312	11/30/92	tc	34239	a, anaheim		bb
2137	7/21/92	tc	58236	, springfiel	f2ac	aa
2261,	4/2/92	cv	90546	l,woodriver		ab
2060	8/19/92	gm	146859	a, spokane		ab
2062	6/6/92	gm	91396	mt, billings		ab
2155	8/21/92	gm	81252	y, kenmore	f2ac	aa
2069	10/2/92	gm	71553	l, port richie		ab
2042	8/30/92	tc	116403	, annandale		ab
2063	8/10/92	tc	74000	, morgan city		ab
1275	11/21/91	tc	88000	, morgan city		bb
2147	8/26/92	cv	75255	, morgan ci	f2ac	aa
2035	11/3/92	tc	101200	, morgan city		ab
2062	8/26/92	tc	77500	, morgan city		ab
2065	9/17/92	tc	69392	, morgan city		ab
2071	8/31/92	gm	85228	, morgan city		ab

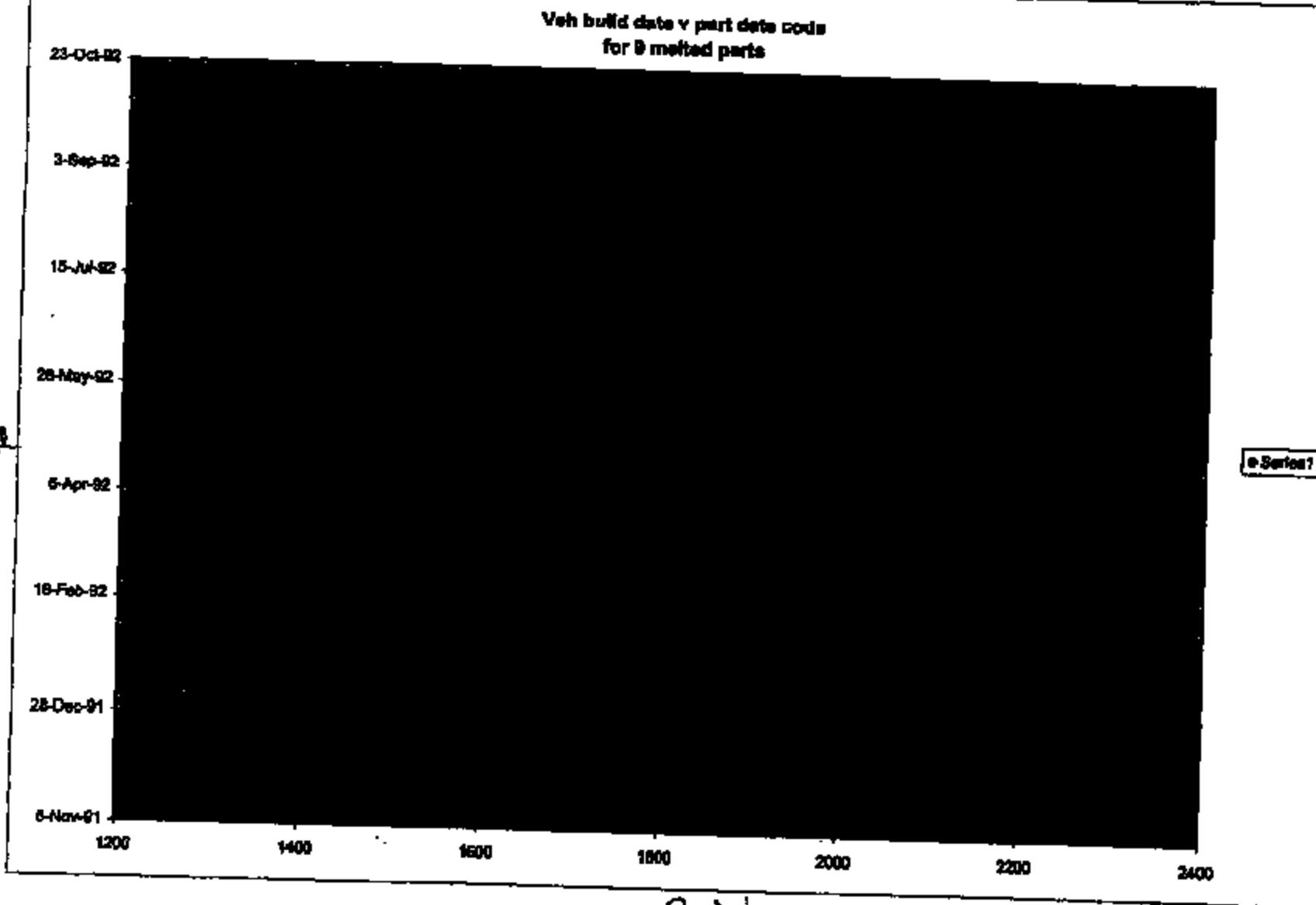
From Steve Peters at Farc

9/23/99

She... part 1

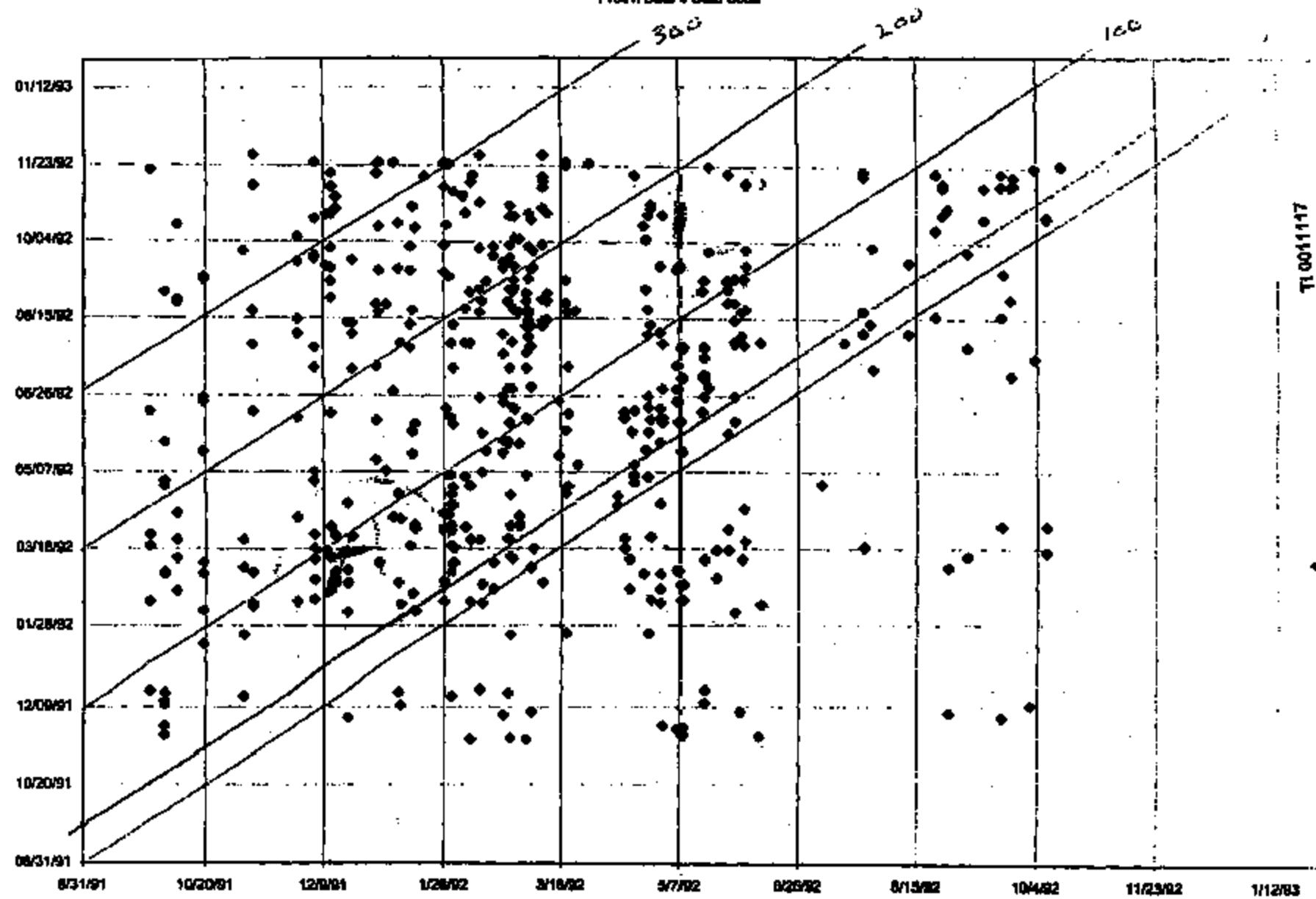
From Ford plot

TI 0011116



From Steve Powers
10/13/49

Prod'n Data v Data Code



Beringhouse, Steven

From: Steve Reimers[SMTP:sreimers@ford.com]
Sent: Friday, September 17, 1999 10:38 AM
To: beringhouse@mail
Subject: Please forward to Beringhouse

This is the same email I sent to Andy to forward to you.

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 SREIMERS--DRBN007 09/17/99 08:18 ***
To: PIR43P4A--EXTERNAL A.McGuirk, a-mcgui
cc: SREIMERS--DRBN007 Reimers, S. J. PORTER --DRBN007 Porter, P.J.

PROM: Steve Reimers USAET(UTC -04:00)

Subject: Please forward to Beringhouse

Steve, This is a follow-up to my voice message of 9/17/99 AM. Did you get any -BB suffix parts from dealers? Analysis results on -BB parts? Were there any -BB parts in the 40 parts you gave me a preliminary report on? Have you completed any more testing on the 40? *** Of the 25 life tested parts...Do any show cracks in the terminal structure (fatigue, stress/%,etc) in particular the stationary terminal minimum cross-section at the thru hole? Any more testing done on the 25 parts? Your tear down occurrence numbers show a radical drop after Feb 1992... why? Info...we have x-rayed a -BB part and are amazed by the radical design differences compared to -AB. have a good weekend, thanks.

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

(cracks on two parts - terminals)
one recall part - crack -

3 BB parts off two car
Vehicle number 11/91 2/92
11/91 12/92

Recall parts - 25 parts only
Build date vs. date code

Speed by 102 days

more less than 56 days

4 between 100 + 50 days

120 days or to 150 days

→ see RTR -
- Did they bring calibration station back?

Based on this data the correlation to the switch change may be falling by the way side.

Phone call with Steve Flowers + Ford TI
Steve Brugman
9/28/99

~1500 parts received from field campaign

200+ in spreadsheet - no correlation between switch date code
+ vehicle build date

200+ measured for terminal-terminal continuity + terminal to
- 2 open circuit terminal to terminal
- 1 w/ 27Ω resistance terminal to bezel post

125 parts to be sent to TI for F/A

1999 vehicles - Ford dealers say leak or do
not work right

- Tentative meeting set up for 10/13 to review results

Conversation with Steve Peters 10/7/99
by Steve Bergman

- Believes data on switch date codes + vehicle build dates in 80-90% correct.
- Agrees that there is no correlation between switch date codes + vehicle build dates
- Switches from ^{older} fires date codes do not correlate to vehicle build date codes
- (1) parts with melted bases found to date.
 - Some have crud in the ~~batteries~~, some do not.
 - one part has the base fully consumed
- Up to 3000 parts in house to date.

TI-NHTSA 9441

248-305-5722

Rib

248-613-2722

metroy at Ford. 10/13/91
Steve Peters
Bob Park (Export)
Steve Beighouse

complaint drugs - BB + AB suffz

Requested by Steve late '91 - 92 drawing

each revision thru '93

→ 16 melted out of 1700 parts (visually inspected by Ford from recall)

#8 - AA suffz - track part ^(car back w/ car rear) 2030 F3TA - AA

No terminals in base -

12/16/91 vehicle build date

- Trackpart connector keyed differently - why was this made
- could result in poor connection

#4 - 1075B BB - suffz - lots of crud around Bay
Many connectors present & melted.

3/2/92 U# 1LNLM81
W# NY69926

#5 - 9133C Lugs melted - dropped on safety lot
3/13/92 (when cut open - inside) clear

#1 - 2263 F2AC - AA 93 am - vic melted
9/14/92 veh. build date

#2 - 2262 F2AC - AA 12/2/91 ~~12/2/91~~ - build date melted

#3 - 2052 F2L - AB moldable plastic covered 5/20/92 VBD

#7 - F2L-AB 2008 Not melted 4/23/92 - vehicle

#6 F2L(203b) - AB 4/1/92 Bl'd date . melted

#9 - BB (57B) - Not melted 1280A - wet, no seal on connector 2/20/92 VBD

#10 - F2L F15D F3TA ^{CA} 3298 Dealer saw snote →
Melted base - some stuff in bay

148,000 miles on the vehicle 1994 Arkansas

vin# KA 65363

#11 ^{2nd} melted box 2104 Bl'D 3/18/92 - 1LNLM81WJNY69934

TI-NHTSA 9442

<u>Box Date code</u>	<u>Vehicle build date</u>	<u>Test Notes</u>
2263	9/11/92	Melted
2262	12/2/91	Melted Didn't leak 8JL
2052	5/20/92	Melted
1275	3/2/92	Melted
9133	3/13/92	Melted - different? 91JL
2036	4/1/92	Melted
2008	4/23/92	conductivity ground?
2032	12/16/91	Melted
1280	2/20/92	conductivity + ground? 90JL
3298	1/9/94	Melted - F150 4L or a!
2104	3/18/92	Melted 20JL

7/17/00 ^{bent}, melted with intent corrosion received from recall campaign.

Stainless steel

- Spring arm always pointed away from test per Ford

1. melted w/ corrosion from F150
2. Not melted w/ high conductivity for ground

~~#1 - 4.52" shear = 2.4" stem~~

#2 - split in four seal.

- held pressure 500 psi for 1 minute

#10 - Didn't leak.

- All parts had fluid in the switch cavity except for #5 (looks like it was dropped on something hot).

- Found liquid expandant to help w/ analysis (Rob Park)

Phone call with
Steel Reiners 10/27/99 8:15 AM.

- finished opening melted parts
 - chemical analysis not done yet
 - opened parts to top/btm layers
 - all seem to have fluid between layers
- Did see on 4 or several washers
 - Top of chapter - on flat facing support
 - discontinuity on edge aligned with crack
 - will scan - protrusion or pit?
- Single straight line in washer as identifier
 - one had two
- Sample from high mileage vehicle
 - No leakage - no moisture - good electrical function
- Will send spreadsheet from melted parts
- Wish Datecodes from fires:
2056, 2281, 2114, 2003, 2045, 2089,
2080,
- Seven parts for analysis from an array of datecodes
 - Feb 92, 2 - Nov 92, 2 - 1999+
 - 1 - BB suffix
- About 6000 in house
 - 1100 logged. - will send spreadsheet
 - one more melted part - hole in base - from 1900 / 2064 -

TI-NHTSA 9444

FMLA 8/8/98

92 Tuncar.

98,972+

Phone call with Steve Rivers 9:15 AM
11/24/99

- control lab not yet completed chemical analysis
- Kaplan cracked on all parts with melted bases
- outside company - logging + binning parts
- initial lot about 8000 parts back
- working to make sure first 1700 received is a representative population
- ~~- planning to run cycle life test~~
- 100k miles - cycle life left
 Comparing early to late deteriorates
 will TI run test?
- Five from each group

Phone call with
Steve Rens 12/14/03 9 AM

Pressure Cycling of Used Switches
Started 12/6/03

Results

Received data

Switch ID	Date Code	# of Cycles	
3	2015	58598	56.6K
11	2008	77837	76K
7	2014	254000	254K
8	2013	280000	260K
4	X2281	294000	294K
10	2013	345000	345K
9	2008	350683	350K

380K - still going - 4 oct/nov.

Steve R's thoughts:

I don't know -

Big disparity on 2008,

Tech review meeting • Director of Quality

Present actions

- Do not have test case yet

- get snapshot
of car

- Asking about other platforms

- replacement switch
on brake
pedal

- Still Taurus car shows up

- replace on two
Vehicles - getting
ridge

→ Considered to be an accident

per crash. No evidence ~~that~~
exists that shows that
switches do not meet spec.
Only evidence is what TI
provided that all switches
meet spec.

111A100

Attorney Client Privilege

RO #	Date Code	Part #	Kaption 1 Fluid	Kaption 2 Middle	Kaption 3 Copy	Internal Fluid	Pictures	Comments
70231473 12,7,049 mi	2059	F24C	Radial cracks - Double -	Radial cracks - Double - circumferential after heat	- circumferential cracks	yes, black		- small cracks inside chapter
7111995-9 141,834 mi	1364	F24C	Radial fractures - radial to	Radial fractures - radial to	Circumferential cracks	yes, black		Sprung arm partially missing ✓
7110329-6 138,550 mi	2043	F24C	Arc-fractures - arc	Double radial cracks ✓	Double radial cracks ✓	yes black slight side		✓ green jobs in base red post black - one longitudinal - two longitudinal cracks of base - green fracture underneath in base - looks like water inside black cream
71311312 143,296 mi	1347	F24C	German - radial	Radial cracks - circumferential - top	Circumferential cracks	yes, brown		
711 946-7 142,824 mi	2048	F24C	Fracture track	Radial cracks	Double cracks	yes black		
70693195 61,447 mi	2114	F24C	German track	German track	German cracks	yes, small red, black		Black stuff in sprung arm - very faint, faint orange - cracked back of sprung arm
69094524 85,780 mi	3280	F24C	Tellurite - red streaky - no right cracks	Abnormal cracks	Abnormal cracks	yes, looks like water		Brownish streaks in sprung - German cracks on bottom (right front) - looks like water erosion - lighter erosion in middle front - darker - brown erosion / rust on the top of the cup - NO TD
69624471 82,020 mi	2050	F24C	2 in. cracks	2 in. cracks	2 in. cracks	yes black		most of the sprung arm green

LHMSSA 947

1/13/00

Attala Co. 11 3

BQ#	Date/Code	Part #	Kaption 1 Field	Kaption 2 Middle	Kaption 3 Conv	Internal Fluid	Pictures	Comments
70376444-0 60,031m	4138A	FNC	1-crown 1-radial	1-crown small	1-crown possible	tan brown on cap		-green corrosion in base -red, green erosion on spur arm -concrete filled w/green roses -light tan/white on surface NOID
70384617 91,621m	2050A	FNC	1-crown 1-radial	1-crown	1-crown 1-radial	yes, black		-gray, tan - concrete off sliding on back
70417905-9 56,937m	1364	FNC	1-radial	1-radial	1-crown	yes, black	blue taken positive prints	-spring on concrete off sliding on base
70445385 100,264m	2042	FNC	2-radial	2-radial	1-radial	yes, black		wet on base, no erosion jet
70604976 53,216m	1347	FNC	radial, crown	1-crown	1-crown	yes, black	blue taken some air gaps NOID	-gray on gray
70684200 48,323m	2065	FNC	1-crown	1-crown	possible 1-crown small	yes, clear liquid		NOID
70709221 179,700m	2027	FNC	1-crown	1-crown	1-crown	yes, black		-gray on gray NOID
70775317 47,919m	2030	FNC	1-crown	1-crown	1-crown	AS, small black Cup face		Corrosion or Spring on black + green

11/11/03

Hot to cold

Row #	Date/Code	Part #	Kapton 1 Fluid	Kapton 2 Middle	Kapton 3 Grom	Internal Fluid	Pictures	Comments
70790656 91,999 mi	2054	F24C	1-radial crack	1-crusty 1-crumbly	1-crumb —	yes, black on cup.		Spring arm gone, back off, back of black stuff
71001852 92,399 mi	2014	F24C	Teflon cracks no kapton cracks	No Kapton (cracks)	No Kapton cracks white column greenish green water	yes, cup off, white green red yellowish	-no water leak Corrosion white & red corrosion	Spring arm - leak water at least corrosion, probably leak away - tan red band - green & brown
71019078 94,249 mi	1364	F24C	1-radial crack	1-radial cracks	1-crumb cracks	yes, black on cup back		- black fluid on back front part of spring arm consider off
71057870 129,711 mi	1364	F24C	1-crumb crack	1-crumb-crack	1-crumb crack	yes, black on cup.		- spring arm corroded off (out of line) brown & green corrosion
710680211 54,481 mi	2204	F24C	telluric cracks	No kapton cracks	No kapton cracks	No - all clean		- terminals outside S232 green corrosion
71121673 19,997 mi	2031	F24C	1-telluric 1-crumb	1-crumb	1-crumb	yes (off line) wt black		- Spring arm complete, covered with brown stuff
71134606 55,045 mi	1341	F24C	telluric cracks first layer No kapton cracks			No - corrod clean		- green corrosion on external terminals - black/green at corners & sides (top) turned - Spring arm - clean

Atticay - C16 - 1967 - Jan 20

RO #	Date Code	Part #	Kenton 1 Fluid	Kenton 2 Middle	Kenton 3 Copy	Internal Fluid	Pictures	Comments
70663440 213,200 m ³	2052	F24C	Circumferent large NATO	I-fatorial large	circumferent large	yell, some black on tip		NOTE Fluid on spray arm, return to tank - Coated oil carb & spray arm - Black/green - Green erosion & damage (original) - no boil traps
70854441 60,063 m ³	2030	F24C	I-circumferent No boil traps -	I-circumferent -	I-circumferent -	yell, black at tip top Magnet on bottom cap		Spray arm coated oil Silt in base - black & green stuff
71183280 56,476 m ³	2062A	F24C	I-circumferent	I-fatorial cracks	I-large cracks	yell, small concretion cap		Brown on spray arm bands, band, green erosion on segments
71197661 62,915 m ³	2036	F24C	I-fatorial cracks	I-fatorial cracks	No boil cracks	No - all parts clean		
71188240 38,575 m ³	2115	F24C	I-fatorial cracks	No boil cracks	No boil cracks	No - all parts clean		

TINHTBA 9460

110/0

117 -

RD #	Date Code	Part #	Kantos 1 Fluid	Kantos 2 Middle	Kantos 3 Cone	Internal Fluid	Pictures	Comments
71226366 414,757 mi	2043	F24C	1-red/cracks 1-green	1-red/cracks 1-green	1-green/cracks	yes, black, some green		Spring arm green
71226706 41,928 mi	2127	F24C	1-yellow Dark tan black/Red	No cracks	1-yellow	No,		T1-T2 elec anomaly.
712346672 61,121 mi	2045	F24C	1-red/cracks 1-green/cracks	1-red/cracks 1-green/cracks	1-red/cracks	Yes, black		Spring arm turned 10° at 10' in base
71428537 47,633 mi	2128	F24C	1-red/cracks	1-red/cracks	1-red/cracks	Yes, small black cap		Black sludge on spring arm and control arm, turning at the base area. - Some green
7156647-98 45,200 mi	2114	F24C	1-red/cracks	1-green/cracks	1-red/cracks	Yes, small black cap		Black & green sludge on spring arm - not control arm. Magenta after sludge area
71622417 70,156 mi	2043	F24C	1-yellow/cracks 1-green &	1-red/cracks 1-green &	1-red/cracks	no, black		Spring arm fractured off around the top/bot side
71755573 161,159 mi	2398	F24C	Yellow cracks only	No cracks		No, red/black		Black clean - small center green
704661194 110,449	2045	F24C	1-yellow 1-green	1-red/cracks	1-c green	No, black black		Spring arm - black stuff inside - some green - from control back
70507663 71,949 mi	2013	F24C	1-yellow	1-green	1-green yellow	yes, some black		Spring arm - black & green on the control back

not - 1st

Attorney Client
Privileged Information

①

69494964*

DC 2107

see Bulid - ring only left
env. seal clean

1992 GM

5/21/92

Disk 1

Base picture 2 + 3

1123+299 - on 1st

DC 2013

env. seal clean

Base charred, open
one terminal missing

1992 CV 4/22/92

Disk 1 - Base
Picture 1

207557504 - 6 * ? Relocated 2/10/00

DC 2008

Vehicle Build 2/24/92

env. seal clean

Holding connector - linked self ground wires

Base Picture #4

MA - 2 - all 3 layers - covers this w/ 3 layers - topseals - pictures 5, 6, 7
1 layer also small circumferential cracks

- 4 pieces of topfin in longer - cover which does not include

o 7556996.5* ? DC 2031

20 Date 2/9/00

- env. seal clean

Picture #8
top fins
picture #9 - back
picture #10 - camera
picture #11 - wires
(2) ne
Picture #12 - seal

1992 - CV 4/15/92

Picture #13 - Base

#14 - Box

topfin, #15, 16, 17

Can M E fluid

Welds

Crush,

704917.57

DC 2030

92TC

3/26/92

R0 & 104/99

1 MA - all three layers

Picture #13 - Base

Box - out 50 - near fluid

#14 - Box

Box relined

topfin, #15, 16, 17

Can M E fluid

Welds

Crush,

Attorney-Client
Privileged Information

(2)

• 0814934 ? F2V G/AB DC 1338A 62 TC Ro date 10/12/99
Bch 7/17/92

- corrosion white crimping
- one side of end. seal has dark tint on it
- no base present - per Spec R - burned away
all Kaplan cracks. circum - near fuel
10° off axis circum/axial - middle
circum - near center

Picture 18 - rupture

picture 1 - before
near base

Disk 2 - picture 1 middle
Kapton

Picture 2 after
near center

• 70 756090 DC 2052 1993 GM. Bl date 10/2/92
Ro date 10/11/99 Next Picture #3 - back

tear in rear - ~~circumferential~~ circumferential
~~middle~~ ~~at 1/4?~~ 1 MM = rad. crack
~~back~~ picture #5 } removed & replaced - only
order assumed 2 layers

• 6909452-4* F2AC/AA 1992 TC Ro date 9/1/99
DC 3280 Bch - 3/6/92

- green discoloration in yellow terminals - both
- lots of green varnish (material in cavity)
- correct socket location
- residual compound still around O-ring seal (noted to back)
- good Seal compression

About 30 mil ^{out} T to base
T1 → T2 - ~1-2

Pictures 6+7 - many cracks

Does not look like BF leakage
- no leakage around the base
- collagen closed TD of Both

- Picture 8 - Inside back
- Picture 9 - whole back

TI-NHTSA 9452

Attorney Client
Privileged Information

(2a)

0693145 ± 1992 TownC. RD 10/6/99 DC 2114
X AB Blk 2/17/92 - Looks like BF Seapage circuit terminals
 $T_1 - T_2 = .07 \mu\text{L}$
in T to case about 6.5MΩ - No green corrosion on terminals
Picture #10 - Both terminals
Picture #11 - Full Switch

70231423 GM 3/31/92 RD 9/27/99 BD 3/31/92
- looks like LF乐华 Seapage by term's
- One terminal was green corrosion at top half
- Switch covered heavily with dirt.
DC 2057
Picture #12 - Full Switch
#13 - Terminal (RHS) w/ green

71389672 1992 GM Blk 2/26/92
RD 10/21/99 - terminal away from PCB reading 5.5Ω's
- No back welding
- looks like BF Seapage circuit terminals
DC 2015
Picture #14 - Centre switch

71428537 1993 TC DC 11/18/92 RD 10/25/99
T1-T2 263MΩ - DC 2128
T→Vex ~10MΩ - Green corrosion on terminal tips but 1/2
- possible LF Seapage by terminals
- light & off ground outside

71139606 DC 1347 93CV Puch 10/11/99 BD 9/1/98
T1-T2 ~3.5Ω - Green corrosion tips of both terminals
T→Vex ~7MΩ - Inside of box filled w/ dust - Black

Attorney - Client
Privileged Information

(3)

1057870 DC 1364 1992 GM BD 6/21/92
RD date 10/16/99

- very little corrosion on terminals
- good green deposit around threads
- limited outside dirt

100KHZ T1-T2
500KHZ T->HHR
Picnic 15 - whole switch

70709221 DC 2027 TC '92 RD Date 10/12/99
BD Date 2/18/92

No green corrosion on terminals
Base inside and base (alot)
Plastic outside nice

Rechner #16 - Inside base
T1-T2 3.5MHz
T->HHR 150KHZ

71119954 DC 1364 92TC BD 3/15/92 RD 10/11/99

Small anti-corrosion on BL & HHR
- no green or brown on terminals
- dirt inside base - moderate
- plastic is heavy outside

NPC

T1-T2 = 6MHz
T->HHR = 1.5MHz
Picnic #17 - Full disk

70854841 DC 2032 92TC Blk 4/32/92 FO 1/14/99

- No green corrosion on terminals
- no green or brown on terminals
- base has black stuff inside
- light dirt on outside
- Black stuff around terminals & inside "NFC"
- Black stuff around terminals & inside "NFC"

T1-T2 - 180KHZ
T->HHR = 1.1MHz

70604476 DC 1347 3/4/92 92TC RD date 0/4/99

- abs green corrosion on body
- dark stuff in base - around threads

T1-T2 = 750KHZ
T->HHR = 500KHZ TI-NHTSA 9454

71184661 DC 2036 93TC BD 10/2/92 RD 10/18/99
- Inside base clean
- No corrosion on body
- light dirt on outside

Picture 18 - Full disk - LCA
Picture 19 - Inside the base

Attorney's Client
Privileged Information

(4)

RO Date 10/10/99

● 37684-O DC 4138A

926H

Bd 5/7/92

- Terminals + inside of base w/ green corrosion
- No seepage up from terminals
- outside very clean
- Bottom of Base Dry
- NFE
- Machined corner filled w/ green corrosion
- Was seal tight / pressed?
- light green stain outside,

T1-T2 = 0 hrs open
T-Hea = 17MZR

- Rust/dust corrosion around original wire seal connector hole - Terminal side
- corrosion around seal

Picture 20 - wire seal

Picture 21 - wire side of
sealing connector

Picture 22 - rusty corrosion
from seal side/side

DBK3 Picture 1, 2
- Inside Base - sides

Picture 3

Switch & Nut Connection

● 624471* 1993 CV Bd 11/12/92 RO Date 10/10/99
DC 2030

- very slight green corrosion
- seepage around terminals
- light black sludge in base

- Moderate green sludge - bottom base
- light green + black residue in nut connection
T1-T2 = 90 MZR
T-Hea = ~2 MZR

70694200 DC 2065 93 CV BD 10/15/92 RO - 10/9/99

- slight green corrosion on terminals
- black sludge in base, seepage around terminals
- light + oil outside

T1-T2 = 137MZR
T-Hea = 150MZR

71311312 DC 1347 92 TC 10/20/99 RO Date 3/5/92 B Dug

- Almost no green corrosion on terminals
- green/black sludge in bottom of base around terminals
- Moderate sludge around the outside

T1-T2 = 35MZR
T-Hea = 3MZR

71566478 DC 2114 92 GM 1/26/92 RO 10/27/99

- No green corrosion on terminals
- Inside Base mostly clean

T1-T2 = 10L away + 150MZR
T-Hea = 5MZR

Delaware Client
Privileged Information

(3)

712531T DC 2030

936M

Bird Date

10/16/92

RD - 10/12/99

T₁-T₂ = 280SR

T-Hex = 6MR

- No green corrosion on threads
- Slight green/black at base bottom
- light dirt outside

71228366 DC 2043

937C

9/21/92 10/4/99

- very slight green corrosion on threads
- not in base, black on bottom
- moderate dirt outside esp around hex

T₁-T₂ = 150SR

T-Hex = 3MR

71699417 DC 2043

92CV

6/8/92

10/16/99

- Base wet w/ black stuff inside
- no green corrosion on threads

T₁-T₂ = 2MR

T-Hex = 4MR

70863490T DC 2052

92TC

7/28/92

10/17/99

- Green corrosion on threads
- looks like water washed down threads
- in base corner (green)
- base bottom clean
- outside very dirty

T₁-T₂ = 150R

T-Hex = 1.7MR

Picture #5 - into base

#6 - Thread corrosion

#7 - Dirty outside switch

#8 - Report Dirt

71188290 F2AC/AD DC 2115

1992 GM

6/4/92, 10/20/99

- Slight base threads
- no green corrosion on threads
- light dirt outside

T₁-T₂ = 280SR

T-Hex = OL

Picture 9 - Into base

71755573 DC 2339

926M

5/8/92

10/19/99

- really clean base
- one clear spot on corrosion on threads
- light dirt outside

T₁-T₂ = 250SR

T-Hex = OL

TI-NHTSA 9456

Attaching - Check
DCN regd Information

(6)

71019078 92TC DC 1364 2/20/92 10/13/99

- No green corrosion on terminals
- Greenish black sludge in base / wet
- Inside P.I.D. light

T1-T2 = 1.7MR
T-Hex = 5MR, 15MR
Picture #10
Inside of box

711183280 DC 2062A 926M 4/27/92 10/19/99

- green corrosion on terminals
- wet at base bottom - light
- light dirt outside

T1-T2 = 0.5R
T-Hex = 700KSR

Picture 11 - Inside Box

71103296 DC 2043 92CV 3/17/92 10/13/99

- terminal cover from crn. tab B
- stripped off - - cleaned area is isolated
- no green corrosion
- black sludge in base

T1-T2 = 1.3MR
T-Hex = 400KSR
Picture #12 - inside box
Picture #13 - full scale

71080021* DC 2294 93CV 11/26/92 10/12/99

- Both terminals bent to back wall
- Base cavity clean

0.5R = T1-T2
0L = T-Hex

Terminals probably bent at repeat when taking measurements
Picture #14 - Bent terminals

71121973 DC 2031 926M 5/4/92 10/18/99

- No green corrosion, black sludge in base
- outside dirty

T1-T2 = 1.2R
T-Hex = 2.5MR

710479057 DC 1364 92CV 10/6/99 3/16/92

- light green corrosion on terminals
- Black / wet in base cavity
- possibly fully outside

T1-T2 = 80K
T-Hex = 1MR

TI-NHTSA 9457

Attorney's Client Information
Confidential Information

(7)

70790656 92TC 212192 7/22/99 DC 2054

- No green corrosion on terminals
- Black stuff in base cavity
- Pads or something (plastic?) near terminal away from tabs

T1-T2 = 130K
T-term = 150K, BOK

70495385 DC 2042 92GM 1015199 3127192

- No green corrosion on terminals
- black stuff in base cavity - moderate
- very little which
- Metal connecting - Both seals present
 - white fibrous stuff on wire seal
 - clean where sockets go C.R. 0-0.0 (over)
 - wet under wire seal - Orth/water got passed seal - OD:

T1-T2 =
T-term =

- P1-P2 15 - wire seal
- 16 - wire seal socket
- 17 - loose seal / noisy connector

20 - C.R. switch
(8, 19 - Base cavity)

71194617 DC 2048 92TC 5/22/92 10/20/99

- No green corrosion on terminals
- black stuff in base cavity
- maybe some burned? - 130 psi in retainer -
 - see note in diff → Near 2.3J2 terminal

T1-T2 = 130KJR
T-term = 130KJR
Terminal array = 2.3J2
from tabs

Dots w/ 21, 22 - in base cavity
23 - C.R. switch

- No paternal retainer

TI-NHTSA 845B

Attorney Client
Privileged Information

#8

6425747 93TC 9/21/92 9/13/99

Melted Base DC 1331

- No green corrosion on housing
- Base filed with black glass

Paperwork says 1652 here to
terminal away from key,

Directed - top of cap

Inside spring pretty clean.

25 - inside switch cavity,

26 - Base - outside

27 - Inside Base cavity - switch

69526539 DC 2064 92TC 6/19/92, 9/13/99

Melted Base

On card written 22 → 2002 Her is short term
(near key)

D254 Pictures 1, 2, 3 & Base

- 5 - Seal + Harpst - Seal looks good.
- 6 - top of cap - Black powder

Pictures 7, 89 - Teflon
BF → Conv

Comments (Electro)
- red - not layer

~~short. thin
PVC jacket~~ Per Ford - All looked clean, no blues
- Dissected.

(9)

6898741 93TC
8/28/92 DC226 all - 38-mm Pictures - 10, 11, 12
- variety teflon - counter - cut

6 8999088 92GM 4/1/92 DC 1345
- 1 layer by BF - radial cracks }
- mid lay - teflon delam } all had MM
- outer layer fine }

Pictures 13, 14, 15
inner → BF

6 8956149 92TC 11/16/92 DC 1291
BB - with - 1 Preg teflon delam
No MM at all

6 897427 11/17/92 8/23/93 93TC
8267 Small MM, on all three - teflon delam & cracking
on teflon near BF

6 9005175 92TC 3/12/92 DC 2052
Partial MM - 2 layer near BF
1st layer near BF - teflon delam. Pictures 16, 17, 18
teflon
counter → BF

APT Tag# 70633927
1907389
C 919043B

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(10)

• Vehicles that came back

S

FSTA-9F924-CA 80888
- Base cavity filled with corrosion & green wire terminals
#70886039 92GM 4/6/92 B1604

T1-T2 = .1R
T-Hex - Open
Picture #19 - Base cavity

69986925 - May switch 92TC 12/17/91

70823856 92 TC 2/17/92 DC 8211A

T1-T2 = .1R
T-Hex - Open

0014142 FSTA DC 6237 92CV 6/22/92
Dirt in Base cavity same as exterior T1-T2 = .1R
T-Hex = open

70616127 93TC 10/12/92 10/7/93 DC 3298
Base cavity filled with black sludge
some green corrosion on terminals T1-T2 = .1R
T-Hex = open
Picture 20 - inside base cavity FSTA
Picture 21 - Full switch

75424538 92GM 2/29/92 2/7/00 DC 6324
F58A-9F924-AP - Middle base tab
T1-T2 = .125L T-Hex = open

20356204 93GM 10/21/92 9/21/94 DC 7134
- lower corrosion Ground octagon base - middle tab
- some redox cleaner? STP9 Base
T1-T2 - open T-Hex - open Picture 22 - Full part F53C 3N824

TI-NHTSA 9461

Attorneys
Privileged Information

70388817

71228706

71001852

~~70800000~~

~~70800000~~

70907663

These were wired in with
good switches - Not in
electrical box.

~~71331244~~

~~70811434~~

~~70400000~~

~~70400000~~

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(11)

● 03469437 - 92TC 1/16/92 9/8/99 S7P3 style
E57A3N827AA DC 3048A
Base cavity clean TI-T2=.15L, T-Hex=0L center base tab

No Tag F58A 3N824-AA 3/29/91 S7P3 style
(center tab)
with base TI-T2=.1, T-Hex=0L center base tab

92GM 5/25/92 10/7/99 DC 9140
705939468 TI-T2=.80ML, T-Hex.0L
F58A-9F924-AA - Marks at had been installed Base cavity clean
center tab

757-1350 92GM 2/10/92 2/14/02 Picture 23 - ^{new}
● F58A-9F924-AA DC 63407 Picture 1 - ^{old}
Many connector has center tabs - Room seal DateS
TI-T2=.15L, T-Hex=0L

Electrical Issues 92CV DC 2013
70907663 6/15/92 10/12/99 TI-T2=.15L
Base cavity mostly clean - some black around terminals.
T-Hex=2.5ML

70386661 → 92TC 4/14/92 9/27/99 DC 2030A
Black studded terminals TI-T2=.4ML, T-Hex=.2ML

71224706 92CV 10/20/99 2/17/92 DC 207
Side Box cavity clean - surface part very dirty
TI-T2=.10ML, T-Hex=.2ML

7100195-2 9/11/92 10/18/99 Box cavity filled w/ solder
Picture 1 - inside cavity - some on outside of part
TI-T2=.15L, T-Hex=.2ML

TI-NHTSA 9463

Patent Pending Information

(12)

Wrong Parts

- Hundreds of switches found immediately
multiple in a bag, no tag etc

70522342 92GM 6/19/92 10/6/99

F3TA9F 924 CA DC 4109A

Base cavity filled w/ overheat black sludge

T1-T2 = .250 IN. LR Facing center tab - RHS

T-Hex = 1.42 Base up

T-Hex = 1.30 IN. picture 4, 5 = back base cavity
6 = full device

69141241 92TC DC = 9000VA 12/9/91

F3TA9F934 CA

Inside base cavity clean

T1-T2 = .152, T-Hex = CL

69152706 92CV 6/23/92 9/3/99 6305

F3TA 9F934-CA

Inside base cavity clean

T1-T2 = .152

T-Hex = CL

No TAB - rear 58696
XW 7296, 652 AA Base cavity clean, slight
distortion

T1-T2 = .152
T-Hex = CL

F3TA - CA DC 5102

68960918 92GM 8/20/92 9/1/99 Prim 7
Distortion walls of base cavity - notes distorted part Full scale

F3TA 3N824AA DC 4298B

T1-T2 = .1
T-Hex = CL

TI-NHTSA 9454

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(13)

● 910116-4 92GM 6/8/92 8/27/99
DC 5247A F37A-3N824-AA Base cavity clean
 $T_1-T_2 = .15\Omega$, $T-Hex = 0\Omega$ center tabs

6954862-6 3/1/92 92GM 4/1/99
F37A-3N824-AA DC 6116 Dirt just starting to get
 $T_1-T_2 = .15\Omega$, $T-Hex = 0\Omega$ in base center tabs

● 69205851 92CV 3/13/92 9/1/99
E57A3N824AA S7PS style DC 8228C Base cavity
center tabs clear
 $T_1-T_2 = .15\Omega$ $T-Hex = 0\Omega$ pressure - full switch

● 6899104-6 92TC 9/2/99 11/24/92
E57A3N824AA DC 3151A center tabs S7PS style
 $T_1-T_2 = .12\Omega$, $T-Hex = 0\Omega$

● 6901368-8 92TC 11/15/92 9/3/99
center tabs E57A3N824AA DC = 7111A
S7PS style $T_1-T_2 = .13\Omega$ $T-Hex = 0\Omega$
base cavity wet outside part, saw wet

● b tag
E57A3N824AA DC 8228B Base Cavity clean
center tabs, S7PS style $T_1-T_2 = .15\Omega$ $T-Hex = 0\Omega$ TI-NHTSA 9465

Attorney Client
Privileged Information

(14)

1999 Date Codes

96 - 1999 Date Code Returns

+ it analyzed by TI before

96 said there was ~~sixty~~ wrong date code series

6850460 - Does not operate - Brake fluid leak 9166A
Inside base cavity clean - outside covered with dust
Brake fluid?

Picture 9 - Inside base $T_1 - T_2 = .12$
10 - Outside base $T - H_{ex} = 0 L$

69065019 "Does not operate properly," 9130

Inside base cavity clean $T_1 - T_2 = .15$
Outside part dirty $T - H_{ex} = 0 L$

71+17576 "Poros." "

Inside base cavity clean $T_1 - T_2 = .12$
Outside base slightly dirty $T - H_{ex} = 0 L$

69276067 "Does not operate properly."

DC 914404 $T_1 - T_2 = .12$
Base cavity clean $T - H_{ex} = 0 L$
Outside switch slightly dirty

68956290 9126 A Elco resistance
Switch clean Normal

TI-NHTSA 9488

Attorney - Client
Privileged Information

(15)

1999 Date coding.

2000-09-09

1000 Food
4 N 5th Street
Waco, TX 76701
72-22-2900

3-371-4200
PBox 31566
Houston, TX 77234

2000 Food
77 Tenth Ave
Providence, RI 02914
01-436-7900

2000-09-09
1000 Food
2000-09-09

2000-09-09
" "

2000-09-09
1000 Food Inc
400 Sidney Baker
Kosciusko, TX 78028
432-257-5558

Gateway No Plaza
4991 So Alamo
Denton, TX 76205
940-494-4499

Dollar Mart Co Inc
500 Austin
Waco, TX 76726
512-933-3673

<u>Reg #</u>	<u>Year</u>	<u>Elec</u>	<u>DL</u>
70908199	OK	OK	9136A
936M			
2NELM75W2PKL38195			
69258399	OK	OK	9140B
926V			
2FDP92W7NA213609			
70492086	OK	OK	9141
2FALP94W4PX105447			
936V			
7013016	OK	OK	9144
1LNLM81W9PY603233			
938			
705514K7			9141
2NELM74W5NK72131	OK	OK	
926M			
74583919			9140A
1LNLM91W2W680576	OK	OK	
927C			
7438937			9136A
1LNLM91WYH730157	OK	OK	
927C			
71040985			9144D
1LNLM82W8NY674581	OK	OK	
927C			

TINHTSA 9487

(16)

~~Attorney Client
Privileged Information~~

<u>VIN#</u>	<u>Ex. #</u>	<u>VISUAL</u>	<u>Elec.</u>	<u>Dates</u>
<u>153-2</u> Winn Motor Co 5 Main St South, MA 02370 7-438-6490	<u>70467456</u> 92CV 2FALP94W7NK220847		OK	OK
A Suddeth Inc 1628 Canterbury Hwy Abraham, MA 02571 38-295-3643	69166262 92TC 1LNLM81W9NY706942		OK	OK
Star Lincolner Inc 4350 W 12 Mile Southfield, MI 48034 248-354-4900	74501604 1LNLM81W7M9750082 92TC		OK	OK
Bradley Motors Inc 600 Camper Dr. Dallas, TX 75109 605-354-2986	69190100 92TC 1LNLM83W5NY711195		OK	T1-T2-2S2 9140
Deeger Mtr & Inc 500 Austin Georgetown, TX 78626 512-937-3673	69171646 2M ECM75W4NK728052 926M		OK	OK
Mgt. Assoc. Contractors 1666 Old Kat Rd Houston, TX 77043 713-529-2611	70339296 92TC 1LNLM82W4NY742442		OK	9138B

(17)

Attorney's Client
Privileged Information

1328 - 1334

Bad Curr.

curr	Dirt/Black/Orn	Dirt/Green	Dirt/white/Orn
AT 449	1		
IT 111			1

6896783-4 4138A

Green corrosion on terminals

Active II - termly

2044 - 2046

curr	Dirt/Black/Orn	Dirt/Green	Dirt/white/Orn	Wk consumption
AT 449	1		111	112
IT 111				

3159 - contact / wire
to heat

6897424-3 936M 8/28/92 8/25/92

T1-T2 = 200K
T-Hex = 140K, 5.5J2
- hex - base cavity - thermal
contact

DC 2045

Bad elec readings - not pulled out by Ford Expert

Picture 12 in Box

13 - 14 contacts

14 - noisy contacts

Blackened inside base cavity - Drilled?

Green corrosion inside noisy connector

Bad elec readings - not pulled out by " " Expert

9/28/92

DC 2045

Blknted ins. base cavity - was

70089304

T1-T2 = 650K

93TC 10/21/92

T-Hex = 230K52, 500K2

Above 15 - noisy cap

7098119-4

2/18/92 92TC

10/13/92

2045

T1-T2 = .12

base black inside base, around terminals

T-Hex = 25 K52

Not pulled + 2174
Ford Expert

TI-NHTSA 8489

Attorney Client
Privileged Information

(15)

17-2120

Year

1991
1991
1991
1991
1991
1991

Dir. Back (1-1)

Dir. Green

Dir. + w/ Dr.

1991

3/79 - ~~is~~ continuity terminal to here.

→ 1092729 - C.I. per by R. Ruth & SMC R to look at car.

69139003 92GM 6/19/92 9/9/91 DC 2119
Noticed by Fadl / Esp.
Black (Burnt?) in Base T1-T2 = 130Km
T-Hex = 9.8 m/s² from table
150000 km

Picture 16
into base car. x

74131916 93TC 11/30/92 1/8/00 DC 2115
T1-T2 = .15L Black Dots in Base - Signature?
T-Hex = 20Mm/s²
Noticed by Fadl / Esp

↓
Bag says 2118

picture 17 - into bag
car?

69403715 8/31/92 93CV 9/4/93
T1-T2 = .15L noticed by Fadl / Esp
T-Hex = 200-250+52 Black Dots in Base DC 2120
X2AC Picture #18 - into bag
TI-NHTSA 0470

Attorney-Client
Privileged Information

2226 - 2239

(19)

~~DR~~

Daryl Blackford D.C. Green

TICK

THUR

FRI

Daryl Blackford

11

0/53

14-

Daryl Blackford D.C. Green

15

16

Daryl Blackford

0/24

TI-NHTSA 8471

Attorney Client Information
Printed

36 - not disassembled
electrical non-type 1
reading

8/22/00
(2)

- 70614934 ✓
- 7558996-5 ✓ not fully disassembled 69425747 - not fully disassembled
- 71231299 ✓ ~~not fully disassembled~~
- 70491707 ✓
- 6952653-9 ✓
- 7557504-8 ✓
- 69494964 ✓ ~~not fully disassembled~~
- 70756090 ✓

9 - pre disassembled.

TI-NHTSA 8472

Attorney Client
Privileged Information

8/23/00 (21)

71234299 - continued from page 1

Two radial cracks - at 3 layers

Pictures 1, 2, ~~3~~ Layer 1

45 ~~20~~ - Layer 2

6, 7 ~~56~~ - Layer 3

D3KL

Layer 3 → concave

7558996-5 - continued from page 1

- Layer 1 - radial cracks / small circumferential

2 radial cracks

3 circumferential cracks

Pictures 8, 9

10, 11

12, 13

6949496-4 - Continued from page 1

Layer 1 circumferential - radial cracks

Pictures 14, 15

2 circumferential cracks

16, 17

3 radial circumferential

18, 19

DEALER DATA

P & A 11265-
Svr Mgr
Prts Mgr
716-272-0220
Marketing

Cortese Lincoln-Mercury Inc
2440 West Henrietta Road
Rochester NY 14623

Shipping

Cortese Lincoln-Mercury Inc
2440 West Henrietta Road
Rochester NY 14623

REC# 000012969 PAC-FED-S1
FORD MOTOR COMPANY
AL LEES
15090 COMMERCE DRIVE
DEARBORN, MI 48120
(C) HOLD FOR PICKUP X08877

QUALITY REVIEW: LEVEL 1

Part# XV7Z 9G652 AA Qty 001
Eng. # XV7396852AA
Suppl. Q9XTA
HOLLINGSWORTH LOGISTICS MANAGE
14225 W WARREN
DEARBORN, MI 48126
TAG# 007023147-3

DEALERS INSTRUCTIONS

DO NOT DETACH

8/23/00

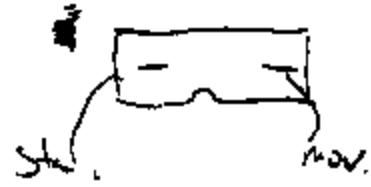
Ship By 10/13/99
Part# XV7Z 9G652 AA Qty 001
RO# 055532-01 Date 09/27/99

ATTACH COMPLETE TAG TO PART AND SHIP
TO: PREPAD FREIGHT NO AIR FREIGHT
FORD CUSTOMER SERVICE DIVISION
MATERIALS PARTS RETURN CENTER
15090 COMMERCE DRIVE NORTH
DEARBORN, MI 48120

F-211 1-800-4-AIR-9173 400TH QUESTIONS

Attorney Client
Privileged
F2VC - AB
DC2059

T1-T2 = 2.9 MR
Std. Hex - 2.1 MR
Nov. - Hex 12.8 N
Black/Brown Corrosion Rust



VEHICLE DATA

VIN# 2NEDCN75WXHX727337
Veh. 1992 - GRAND MARQUIS
Assembly Plant STTHON
Eng. V 4.6L ION 8
Eng Family NFV4.6V5FDFO
Dash Grille HLY
Eng. Plant -
Color MIL-N
Trans. P ADD-E
Add'l Lock-H
BLD 03/31/92 w/o 07/30/92

WARRANTY DATA

POW 055532-01 Control U67BK9J01
PO Date 09/27/99 PD Date 09/30/99
Odom 327049 M TCode 99515
Part# XV7Z 9G652 AA Qty 001
KIT - BRAKE REPAIR KIT

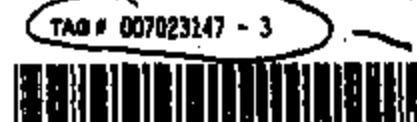
CO -

CCC -

T1 Pmt 10.78 Abv 269.05 0.00
L/Rate 55.69 Lr 27.85 Tr 44.20
Rate 5.57 Dore 0.00

TECH ID #003027
PERFORMED RECALL

Continued from page 2a



2 Radial cracks - All 3 layers

- Metal components have covered with Rust (corrosion) (Disc, washer)
- Face of washer truly friction - clean

TINHTSA 9474

Heavy Chassis
damaged Intake

(2)

8/23/00

Method Base

8/25/94-7 ← continued from pg 8
9/21/92 Bloddeh

VIN 1JNRM43WLPY629118

DC 1331

93 TC Lexington, N.C.

FJVC 9E92M AB

Previously disassembled to separate switch & sensor halves

Day 6

Picture 20 - top of all 3 layers of tape in cup -

.450 MSL - Terminal to terminal - base alone

top layer

1 - pic# 21, 22

Near BE

at 90° apart (

2 23, 24

- bonded ends - 2 mm center

3 25, 26, 27

center

1 radial crack

1 radial crack

111995-1

1992 TC

RO Date 10/11/99

Denton, CT

But date 3/5/92

VIN # 1JNRM43WLPY629118

Extracted from FJVC 9E92M AB DC 1364 Base not melted
pg 3

Picture 28, 29. Into Base.

$$T_1 - T_2 = 1.75 \text{ KSL}$$

30 - 2x2 mm

$$T_{MSL} - T_{BSL} = 6.40 \text{ MSL}$$

$$T_{BSL} - T_{BSL} = 6.60 \text{ MSL}$$

Crimping clean

Pictures 31, 32 - top of cup
33, 34 - ~~top~~ Switch contacts.

end of Spray arm gone
- Blackened, some green.

3

Test # 9903183 - C# 107 #

TINHTSA 9475

11/11/00

Attorney Chest Plankgeet Lessor

(1)

PO#	Date Code	Part #	Kaption 1 Field	Kaption 2 Middle	Kaption 3 Corp	Internal Fluid	Pictures	Comments
70231473 127,049 mi	2059	F2AC	Radial track - Double	Radial track - Double - reinforced outer ring	- single radial track	yes, black		- small cracks in the region
7111995-4 141,839 mi	1364	F2AC	Radial/circum track Jr	Radial/circum track Jr	Circum track	yes, black		Spring arm partially missing <u>no cage and top</u>
7110329-6 137,550 mi	2043	F2AC	Arc-track outer	Double radial track Jr	Double radial track Jr	yes, black slight white		- green glass in base - not just black - one terminal edge (part of base)
71311312 143,246 mi	1347	F2AC	Circum 3 radial	3 radial track - circum track - no ring	Circum track	yes, brown		- green erosion on terminal edge - looks like water + oil leaked down
711 946-7 142,824 mi	2048	F2AC	Single track	1 radial track	1 radial track	yes, black		
70693145 61,449 mi	2114	F2AC	Single track	1 circum	1 circum track	yes, small end, black		Black stuff on spring arm - very early first leakage - cracked end of spring arm
69094524 85,760 mi	3280	F2AC	Radial track - not straight - no gap between	No gap between	Moving parts	yes, looks like water		Brown on center of spring arm - green erosion on bottom (inside + out) - looks like water erosion - green erosion in moving areas - Soldered - green erosion / rust on the top of the cup. - no TD
69624471 82,020 mi	13030	F2AC	2 radial tracks Jewel	2 radial tracks	2 radial tracks	yes, black		- most of the spring arm green.

119/00

Attorney-client Privileged Communication

RO#	Date Code	Part #	Kaption 1 Fluid	Kaption 2 Middle	Kaption 3 Conn	Internal Fluid	Pictures	Comments
7037684-0 60,034m	4138A	F24C	1-removable 1-radial	1-crown grill	1-cross possible	yes brown on cap		-green corrosion in base -red, green corrosion on Spring arm -connector filled w/green case -light brown/white on cap NOTD
70388817 91,622m	203A	F24C	1-crown, 1-radial	1-crown	1-crown 1-radial	yes, black		-Spring arm coated off filling in base.
70479057 56,837m	1364	F24C	1-radial	1-radial	1-crown	yes, black	Not taken looks like process	-Spring arm coated off filling in base
70495385 100,264m	2042	F24C	2-radial	2-radial	1-radial	yes, black		wet in base, no corrosion pt
70604976 53,246m	1347	F24C	radial, crown I	1-crown	1-crown	yes, black	Not taken Same as previous ones	Sprg arm gone
70684200 94,262m	2045	F24C	1-crown -	1-crown	1-cross 1-crown small	yes, clear liquid		NOTD
70704221 77374m	2027	F24C	1-crown	1-crown	1-crown	yes, black		Sprg arm gone NOTD
70725347 47,914m	2030	F24C	1-crown	1-crown	1-crown	yes, small black on cap fine		Cross over sprg w/ black+green

11/11/02

Attachment - Client Material (3)

RO#	Date Code	Part #	Kenton 1 Fluid	Kenton 2 Middle	Kenton 3 Gom	Internal Fluid	Pictures	Comments
70740656 95994m:	2054	F24	1-radial cracks	1-radial 1-crown ↓	1-crown —	yes, black on cup.		Spring orange, base early black w/ black stuff
71001852 92139m:	2014	F24	Teflon cracks no teflon cracks	No Teflon cracks	No Teflon cracks -white residue polymer wring washer	yes, c-p (black, white, green, red) corrosion		Spring arm - heavy water attack corrosion, partially eaten away - top 2/3 bent -green & brown
71019078 94,249-1	1364	F24	1-radial cracks	1-radial cracks	1-crown cracks	yes, black on cup/bent		-black fluid on base .first part of spring arm corroded off
71057870 109,711m:	1364	F24	1-crown crack	1-crown cracks	1-crown cracks	yes, black on cup.		-spring arm corroded off (rest ok.) brown & green corrosion
71080211 54,481m:	2204	F24	teflon cracks	No Teflon cracks	No Teflon cracks	No - oil clean		-terminal outside seen loss green corrosion
71121673 83,997m:	2031	F24	1-radial 1-crown ↓	1-crown	1-crown	yes - reddish w/ black		-spring arm - complete Corroded with brown stuff
71134606 55015-2	1347	F24	teflon cracked fragile No Teflon cracks			No - complete clean		-green corrosion on external terminals - black/green at corners fragile (loss) threads -spring arm - clean

11/12/03

Attorney - Client Privileged Information

(4)

RO#	Date Code	Part #	Konten 1 Fluid	Konten 2 Middle	Konten 3 Conv	Internal Fluid	Plates	Comments
70863490 213,200m ³	2052	F242	Creamy white - large NFTD	1-creamy white - large	Creamy white large	yes, some black on film		NFTD Fluid on spray arm, return to tank - Coated at center of spray arm - Black & green - green coating internally (inside) & - no rust layer
70863441 80,063m ³	2032	F242	Yellow cracks (radial cracks) ↓	1-yellow 1-radial ↓	1-yellow 1-radial ↓	yes, black or grey top green bottom up		Spray arm covered all bottom in base - black & green stuff
71193280 56,476m ³	2062A	F242	1-yellow cracks	1-radial cracks	1-large crack top	yes, black green bottom up		Brown on spray arm bands, band green corrosion on bottom
71194661 62,915m ³	2036	F242	1-radial cracks	1-radial cracks	No rust cracks	No - all parts clean		
71198290 38,575m ³	2115	F242	Yellow cracks only	No rust cracks	No rust cracks	No - all parts clean		

TAKHTSA 8478

1/10/02

Attorney Clerk Received January 10, 2002

(6)

ROI	Date Code	Part #	Kaption 1 Field	Kaption 2 Middle	Kaption 3 Color	Internal Field	Pictures	Comments
7122836 44,757 mi	2043	F24C	1-radial crack 1-crack	1-radial crack 1-crack	1-crack	yes, black, some green		Spring arm gone
71228706 41,928 mi	2127	F24C	1-elliptical 1-crack 1-crack	No cracks	1-crack?	No,		T1-T2 etc. anomaly.
71349672 61,121 mi	2015	F24C	1-radial crack 1-crack	1-radial crack 1-crack	1-crack	Yes, black		Spring arm cracked Part of it, in base
71429537 47,633 mi	2128	F24C	1-crack	1-crack	1-crack	yes, small black on top		Black stuff on spring arm - not conduct even towards attachment area. - some green
7156647-6 45,280 mi	2114	F24C	1-radial crack	1-crack	1-crack	Yes, small black on top		Black & green stuff on spring arm - not conduct even towards attachment area
71694417 70,156 mi	2043	F24C	1-radial crack 1-crack 1	1-radial crack 1-crack 2	1-radial crack	Yes, black		Spring arm fractured at the Kerned in contact side
71755573 161,159 mi	2338	F24C	1-elliptic cracks only	No cracks		No, top clean		Base clean - small conduct wear
708611944 110,449	2015	F24C	1-elliptic 1-crack 1	1-crack	1-crack	yes, some black		Spring arm - black stuff on it - some green - some conduct black
70907663 74,945 mi	2013	F24C	1-crack	1-crack	1-crack?	yes, some black		Spring arm - black & green. no conduct back

*Attorney-Client
Privileged Information*

Damaged Items

Vehicle	Vehicle Build DT	Switch Datacode	Prod. Month	Comments	Inv.#
92GM	8/20/82	2107	Apr-82		69494954
92CV	4/22/82	2013	Jan-82		71234298
92GM	2/24/82	2008	Jan-82		75575048
92CV	4/15/82	2031	Jan-82		75589968
92TC	3/26/82	2030	Jan-82		70491707
92TC	7/17/82	1338	Dec-81		70814834
93GM	10/2/82	2052	Feb-82		70756090
93TC	9/21/82	1331	Dec-81		69425747
92TC	8/18/82	2064	Mar-82		69528638
92CV	4/1/82	2036	Feb-82	CRL	69043604
93CV	9/14/82	2263	Sep-82	CRL - AA	69952788
92TC	12/2/81	2262	Sep-82	CRL - AA	69992245
92TC	3/18/82	2104	Apr-82	CRL	69124322
92GM	5/20/82	2052	Feb-82	CRL	69053923
92TC	3/2/82	1275	Oct-81	CRL	69018691

*(from 1984
WHS audit)*

92TC	(2/16/81)	2030	CRL → F3TA - AA ? part #
94F150		3248	CRL → Dealer saw same

*Antilock - Chassis
Deployed Information*

Conductivity Terminal To Hazard

Vehicle	Vehicle Build DT	Switch Date/Code	Prod. Month	Comments	Ins. #
92TC	3/6/92	3280	Oct-92		69094524 -
92TC	2/17/92	2114	Apr-92		70893186 -
92GM	3/31/92	2057	Feb-92		70231473 -
92GM	2/26/92	2015	Jan-92		71389672 -
93TC	11/18/92	2128	May-92		71428537 -
93CV	9/9/92	1347	Dec-91		71138806 -
92GM	6/11/92	1384	Dec-91		71057870 -
92TC	2/18/92	2027	Jan-92		70709221 -
92TC	3/5/92	1384	Dec-91		71118854 -
92TC	4/30/92	2030	Jan-92		70854841 -
92TC	3/4/92	1347	Dec-91		70804978 -
92GM	5/7/92	4138	May-92		70376840 -
93CV	11/12/92	2030	Jan-92		69624471 -
93CV	10/15/92	2085	Mar-92		70884200 -
92TC	3/5/92	1347	Dec-91		71311312 -
92GM	6/26/92	2114	Apr-92		71588478 -
93GM	10/16/92	2030	Jan-92		70725317 -
93TC	9/24/92	2043	Feb-92		71228388 -
92CV	6/9/92	2043	Feb-92		71888417 -
92TC	7/28/92	2062	Feb-92		70883480 -
92TC	2/20/92	1384	Dec-91		71018078 -
92GM	4/27/92	2062	Mar-92		71183280 -
92CV	3/17/92	2043	Feb-92		71103298 -
92GM	5/4/92	2031	Jan-92		71121973 -
92CV	3/18/92	1384	Dec-91		70478057 -
92TC	2/21/92	2054	Feb-92		70780858 -
92GM	3/27/92	2042	Feb-92		70495385 -
92TC	5/22/92	2048	Feb-92		71194817 -
92TC	4/14/92	2030	Jan-92		70888817 -
93GM	6/11/92	2014	Jan-92		71001887 -
92GM	4/3/92	2008	Jan-92	CRL	69027134
92CV	2/20/92	1280	Oct-91	CRL	69018041
92CV	6/15/92	2013	Jan-92		70807863 -
93GM	5/26/92	2045	Feb-92	TI Found	69974243
93TC	10/21/92	2045	Feb-92	TI Found	70088309
92TC	2/18/92	2045	Feb-92	TI Found	70881184 -
92GM	6/18/92	2118	Apr-92	TI Found	69138003
93TC	11/30/92	2113	Apr-92	TI Found	74131816
93CV	8/31/92	2120	Apr-92	TI Found	69403715

*Attorney Client
Privileged Information*

Conductivity Terminal To Export For FTIA Switch

Vehicle	Vehicle Build ID	Switch Datecode	Prod. Month	Comments	Inv #
93TC	10/12/92	3298			70616127
92GM	6/19/92	4109A			70522042

*Attorney-Client
Privileged Information*

Damaged Parts

Vehicle	Vehicle Build DT	Switch Datecode	Prod. Month	Comments	Inv #
92GM	3/20/92	2107	Apr-92		69484984
92CV	4/22/92	2013	Jan-92		71234288
92GM	2/24/92	2008	Jan-92		75575048
92CV	4/15/92	2031	Jan-92		76688965
92TC	3/26/92	2030	Jan-92		70481707
92TC	7/17/92	1338	Dec-91		70814934
93GM	10/2/92	2052	Feb-92		70786080
93TC	9/21/92	1331	Dec-91		69425747
92TC	6/19/92	2084	Mar-92		69526539
92CV	4/1/92	2036	Feb-92	CRL	69043504
92CV	9/14/92	2289	Sep-92	CRL - AA	68962788
92TC	12/2/91	2282	Sep-92	CRL - AA	68992245
92TC	3/18/92	2104	Apr-92	CRL	69124322
92GM	5/20/92	2082	Feb-92	CRL	69053923
92TC	3/2/92	1276	Oct-91	CRL	69019681

*Attorney-Client
Privileged Information*

Conductivity Terminal To Hostort

Vehicle	Vehicle Build DT	Switch Datecode	Prod. Month	Comments	Tool #
92TC	3/8/92	3280	Oct-92		69094524
92TC	2/17/92	2114	Apr-92		70693195
92GM	3/31/92	2057	Feb-92		70231473
92GM	2/26/92	2015	Jan-92		71388672
93TC	11/18/92	2128	May-92		71428537
93CV	9/8/92	1347	Dec-91		71138608
92GM	6/11/92	1384	Dec-91		71067870
92TC	2/18/92	2027	Jan-92		70709221
92TC	3/6/92	1384	Dec-91		71118854
92TC	4/30/92	2030	Jan-92		70654841
92TC	3/4/92	1347	Dec-91		70604978
92GM	5/7/92	4138	May-94		70376840
93CV	11/12/92	2030	Jan-92		69024471
93CV	10/15/92	2085	Mar-92		70684200
92TC	3/6/92	1347	Dec-91		71311312
92GM	6/28/92	2114	Apr-92		71588478
93GM	10/16/92	2030	Jan-92		70726317
93TC	9/24/92	2043	Feb-92		71226366
92CV	6/8/92	2043	Feb-92		71699417
92TC	7/28/92	2052	Feb-92		70663490
92TC	2/20/92	1384	Dec-91		71019078
92GM	4/27/92	2052	Mar-92		71183280
92CV	3/17/92	2043	Feb-92		71103298
92GM	5/4/92	2031	Jan-92		71121973
92CV	3/16/92	1384	Dec-91		70479057
92TC	2/21/92	2054	Feb-92		70790858
92GM	3/27/92	2042	Feb-92		70495385
92TC	5/22/92	2048	Feb-92		71184817
92TC	4/14/92	2030	Jan-92		70388817
93GM	8/11/92	2014	Jan-92		7100198
92GM	4/3/92	2008	Jan-92	CRL	69027134
92CV	2/20/92	1280	Oct-91	CRL	69015041
92CV	8/18/92	2013	Jan-92		70907663
93GM	8/28/92	2046	Feb-92	TI Found	69074243
93TC	10/21/92	2048	Feb-92	TI Found	70089309
92TC	2/18/92	2048	Feb-92	TI Found	70681194
92GM	6/18/92	2119	Apr-92	TI Found	69139003
93TC	11/30/92	2113	Apr-92	TI Found	74131916
93CV	8/31/92	2120	Apr-92	TI Found	69403715

*Attorney - Client
Privileged Information*

Conductivity Terminal To Report For PSTA Switch

Vehicle	Vehicle Build DT	Switch Datecode	Prod. Month	Comments	Unit
93TC	10/12/92	3298			70616127
92GM	6/18/92	4109A			70622042

TI-NHTSA 9486

Attaching Client Privileged Information

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	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	10010	10011	10012	10013	10014	10015	10016	10017	10018	10019	10020	10021	10022	10023	10024	10025	10026	10027	10028	10029	10030	10031	10032	10033	10034	10035	10036	10037	10038	10039	10040	10041	10042	10043	10044	10045	10046	10047	10048	10049	10050	10051	10052	10053	10054	10055	10056	10057	10058	10059	10060	10061	10062	10063	10064	10065	10066	10067	10068	10069	10070	10071	10072	10073	10074	10075	10076	10077	10078	10079	10080	10081	10082	10083	10084	10085	10086	10087	10088	10089	10090	10091	10092	10093	10094	10095	10096	10097	10098	10099	100100	100101	100102	100103	100104	100105	100106	100107	100108	100109	100110	100111	100112	100113	100114	100115	100116	100117	100118	100119	100120	100121	100122	100123	100124	100125	100126	100127	100128	100129	100130	100131	100132	100133	100134	100135	100136	100137	100138	100139	100140	100141	100142	100143	100144	100145	100146	100147	100148	100149	100150	100151	100152	100153	100154	100155	100156	100157	100158	100159	100160	100161	100162	100163	100164	100165	100166	100167	100168	100169	100170	100171	100172	100173	1001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Attorney-Client Privileged Information

CBM-2030 -L F3TA Park

TL-NHTSA 9488

HeatDamage_data
LoggedAnalysis

Page 16 of 67

02/18/2023

3716 0302

PRODUCED BY FOX

EXONENT PRESSURE SWITCH ANALYSIS

Box 1

- 1) 0069425747
- 2) 0069494964
- 3) 007558886-5
- 4) 0071234299
- 5) 0070758080
- 6) 0070491707
- 7) 006952653-9
- 8) 007557504-6
- 9) 0070814934
- 10) 0070231473 - Labeled as '3 vital parts'
- 11) 0071118854
- 12) 0071103298
- 13) 0071311312
- 14) 0071194817
- 15) 0070693198

10/18/00

Box 2

- 1) 0069094524
- 2) 0069824471
- 3) 0070376840
- 4) 0070386617
- 5) 0070479057
- 6) 0070495385
- 7) 0070804876
- 8) 0070584200
- 9) 0070709221
- 10) 0070728317
- 11) 0070790656

Box 3

- 1) 0071001852
- 2) 0071019078
- 3) 0071067870
- 4) 0071080211 *Defect Number 45*
- 5) 0071121873
- 6) 0071139808
- 7) 0071183280
- 8) 0071184861 *Defect Number 45*
- 9) 0071188290 *Defect Number 45*
- 10) 0071226368
- 11) 0071228706 *Defect Number 45*
- 12) 0071389672
- 13) 0071428537
- 14) 0071568478
- 15) 0071699417
- 16) 0071755873 *Defect Number 45*
- 17) 0070881194
- 18) 0070907863
- 19) 0070883490
- 20) 0070854841

Beringhause, Steven

From: Leonard, Kevin
Sent: Monday, September 11, 2000 5:05 PM
To: Beringhause, Steven
Subject: Exponent update

Steve,

I went into Exponent on Friday to and they had 14 parts analyzed and one in progress. The tag numbers are:

Box 1

- 1) 00069425747 -
- 2) 0069494964 -
- 3) 007588996-5 -
- 4) 0071234299 -
- 5) 0070756090 -
- 6) 0070491707 -
- 7) 000942653-8 -
- 8) 007567604-8 -
- 9) 0070614834 -

Box 2

- 10) 0070231473 - Labeled as '3 vital parts' -
- 11) 0071119954 -
- 12) 0071103296
- 13) 0071311312
- 14) 0071194617
- 15) 0070693195 - In progress.

Matt and everyone at Exponent were very accommodating and have no issues with me being there. I will try to get back in by Thursday and provide another update.

Kind Regards,

Kevin Leonard

Texas Instruments - Novl
PH (248) 305-5724
FX (248) 305-5734
CL (248) 613-6487



DEALER DATA

P & A 11265-
Svc Mgr
Prtv Mgr
716-272-0220
McHugh

Cortese Lincoln-Mercury Inc
2440 West Henrietta Road
Rochester NY 14623

Shipping

Cortese Lincoln-Mercury Inc
2440 West Henrietta Road
Rochester NY 14623

REF# 000012969 PAC-FED-SI

FORD MOTOR COMPANY
AL LEES
15090 COMMERCE DRIVE
DEARBORN, MI 48120
(C) HOLD FOR PICKUP XDB877

QUALITY REVIEW: LEVEL 1

Part# XW77Z 96652 AA Qy 001

Eng. # XW739G552AA

Supp: Q9XVA

HOLLINGSWORTH LOGISTICS MANAGE
14225 W MARKEN
DEARBORN, MI 48126

TAG# 007023147-3

DEALER'S INSTRUCTIONS
DO NOT DETACH

Part# XW77Z 96652 AA Qy 001
Eng. # XW739G552AA
Supp: Q9XVA
TAG# 007023147-3

ATTACH COMPLETE TAG TO PART AND SHIP
TO: FREIGHT OR AIR FRESH
15090 COMMERCE DRIVE NORTH
DEARBORN, MI 48120
FORD CUSTOMER PARTS SERVICE CENTER
WARRANTY SERVICE DIVISION
1-800-419-9772 WITH DIASTEM

ITC 1-800-419-9772 WITH DIASTEM

VEHICLE DATA

VIN# 2NEDK75WXHX727337
VEH. 1992 - GRAND MARQUIS
Amy Plant STTHON
Eng. V 4.6L RWD
Eng Family NFNA,6V5FDFO
Odom Suffix HLY
Eng. Plant -
Cabs. MIL - H
Trans. P ADD-E
Aude 1 Lock-H
BD 03/31/92 WSD 07/30/92

TAG# 007023147 - 3

WARRANTY DATA

RO# 055532-01 Control# UG7BK9J01
RO Date 09/27/99 PD Date 09/30/99
Odom 127049 H TCode 99515
Part# XW77Z 96652 AA Qy 001
KIT - BRAKE REPAIR MCC

CC -

CCC -

TG Pts 10.78 Alot 2/9.05 0.00
LRate 55.69 Lhr 27.00 To 44.20
Mile 5.57 Sore 0.00
TECH ID #003027
PERFORMED RECALL

DLR 11265- RO# 055532-01 ©
PART# XW77Z 96652 AA Qy. 001
TAG# 007023147 - 3

PART# 11265-
TAG# 007023147 - 3

T1-NHTSA 9491

Exponent

*Brake switch
and/or TSD*

Brake Pressure Switch Disassembly Protocol

1. Prior to disassembly, still photographs will be taken of the switch to document its condition.
2. Electrical resistance measurements will be taken from terminal to terminal and each terminal to the hex-port and recorded. *We note break, polarity diff.* 4. Any resistance change?
3. Visual inspection will be made of the Base and the Connector. Any contamination will be noted and specifically photographed. *It appears
seconds, both sides, into the base*
4. The crimp ring that secures the connector to the base will be removed using a Dremel tool and an abrasive disk. Marking each part prior to disassembly using an indelible marker will preserve the relative orientation of the crimp ring, base and connector. *The condition of the inside of
connector contacts and the base will be documented photographically.* Picture of crimping
top of cap
top of cup
5. Take sample of fluid, if any, clean up. Analyze for: 1) water content and 2) ionic residue. *Part of TSD*
6. A lathe will be used to carefully remove the outer retaining ring to permit access to the diaphragm and the Kapton layers.
7. The two parts of the switch will be carefully separated with little or no disturbance. Picture -
See attached
8. Remove the seal. - Kapton
Chlorine
Oil
9. Remove the pressure disk from the hex port assembly.
10. Prior to removal, mark the same successive corner of each layer of Kapton with a unique mark. This will preserve the relative orientation of the Kapton layers and the diaphragm. *- 3 sets - all 3 layers
both sides*
Photographs will be taken of the diaphragm and the Kapton layers after marking and prior to removal.
11. The three Kapton layers will be removed and photographed individually using a clean dry photographic background and a close-up lens. *Close up
Clean water / etc.
Picture both sides*
12. All disassembled parts will be packaged individually, marked with proper identification, and retained for storage using appropriate evidence storage procedures.
13. View [Kapton] under microscope *[Layers]*

Brake Pressure Switch Disassembly Protocol

1. Prior to disassembly, still photographs will be taken of the switch to document its condition.
2. Electrical resistance measurements will be taken from terminal to terminal and each terminal to the hex-port and recorded.
3. Visual inspection will be made of the Base and the Connector. Any contamination will be noted and specifically photographed.
4. The crimp ring that secures the connector to the base will be removed using a Dremmel tool and an abrasive disk. Marking each part prior to disassembly using an indelible marker will preserve the relative orientation of the crimp ring, base and connector. The condition of the connector contacts and the base will be documented photographically.
5. Take sample of fluid, if any, on cap. Analyze for: 1) water content and 2) ionic residue.
6. A lathe will be used to carefully remove the outer retaining ring to permit access to the diaphragm and the Kapton layers.
7. The two part of the switch will be carefully separated with little or no disturbance.
8. Remove the seal.
9. Remove the pressure disk from the hex port assembly.
10. Prior to removal, mark the same successive corner of each layer of Kapton with a unique mark. This will preserve the relative orientation of the Kapton layers and the diaphragm. Photographs will be taken of the diaphragm and the Kapton layers after marking and prior to removal.
11. The three Kapton layers will be removed and photographed individually using a clean dry photographic background and a close-up lens.
12. All disassembled parts will be packaged individually, marked with proper identification, and retained for storage using appropriate evidence storage procedures.

Exponent
Date of Inspection: _____

Inspected by: _____

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: _____

Base Physical Condition Notes: _____

VIN: _____ Build Date: _____

Vehicle Location - City: _____

Vehicle Location - State: _____

Vehicle Model: _____

Vehicle Model - Year: _____

Part Prefix Number: _____

Part Base Number: _____

Part Suffix Number: _____

Date Code: _____

Resistance: Terminal-to-Terminal: _____

Resistance: Stationary Terminal to Hex Port: _____

Resistance: Movable Terminal to Hex Port: _____

CONNECTOR INFORMATION

Connector Present (y/n): _____

Res: Terminal-to-Terminal w/ Connector: _____

Res: Stationary Term to Hex Port w/ Connector: _____

Res: Movable Term to Hex Port w/ Connector: _____

Connector/Seal Start Photo No: _____

Connector/Seal End Photo No: _____

Connector Seal Notes: _____

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base:

Aluminum Crimp Ring Condition Notes: _____

Interior of Base Condition Notes: _____

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: _____

Cup-Washer-Kapton Condition Notes: _____

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: _____

Kapton Layer 1 Brake Fluid Side Start Photo #: _____
Kapton Layer 1 Brake Fluid Side end Photo #: _____

Hexport-Cup Condition Notes: _____

Al Crimp-Base-Hex Port Start Photo No: _____
Al Crimp-Base-Hex Port End Photo No: _____

Interior Hexport Photo Start No: _____
Interior Hexport Photo End No: _____

Cup-Washer-Kapton Photo Start No: _____
Cup-Washer-Kapton Photo End No: _____

Kapton Layer 1 Switch Side Condition: _____

Kapton Layer 1 Switch Side Start Photo #: _____
Kapton Layer 1 Switch Side end Photo #: _____

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: _____

Kapton Layer 2 Brake Fluid Side Start Photo #: _____

Kapton Layer 2 Brake Fluid Side end Photo #: _____

Kapton Layer 2 Switch Side Condition: _____

Kapton Layer 2 Switch Side Start Photo #: _____

Kapton Layer 2 Switch Side end Photo #: _____

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: _____

Kapton Layer 3 Brake Fluid Side Start Photo #: _____

Kapton Layer 3 Brake Fluid Side end Photo #: _____

Kapton Layer 3 Switch Side Condition: _____

Kapton Layer 3 Switch Side Start Photo #: _____

Kapton Layer 3 Switch Side end Photo #: _____

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: _____

Washer-Cup-Button Photo Start Number: _____

Washer-Cup-Button Photo End Number: _____

Brake Pressure Switch Disassembly Protocol

- Prior to disassembly, still photographs will be taken of the switch to document its condition.

Photographs will include:

- a. the date code
- b. longitudinal, front
- c. longitudinal, back
- d. the port
- e. the base

- Visual inspection will be made of the base and the connector, if any. The terminals in the base (both sides) and the connector receptacles and seals, if any, will be photographed. Any contamination will be noted and specifically photographed.
- Electrical resistance measurements will be taken from terminal to terminal and each terminal to the hex-port in a vertical orientation, base up, and recorded. For terminal to terminal measurement, the positive lead is attached to moveable terminal and the negative lead is attached to stationary terminal. For terminal to hex-port measurements, the positive lead is attached to terminal and the negative lead is attached to the hex-port. The readings will be taken approximately 10-15 seconds after contact. The connection to multimeter will be made by alligator clips directly to the base terminal.
- Prior to disassembly mark the crimp ring, base and connector by scribing a mark that will preserve the relative orientation of those parts; and the component re-photographed. The crimp ring that secures the connector to the base will be removed using a Dremmel tool and an abrasive disk. One cut will be made at a point on the crimp ring that does not disturb any markings on the ring, and the crimp ring unrolled. Photographs will include:

- a. internal switch contacts
- b. inside of crimp ring
- c. top of cup
- d. base

An opportunity to inspect the internal switch contacts under a microscope will be given to all parties present.

5. Take a sample of fluid or other material found, if any, and preserve for analysis. The protocol for analysis to be determined.
6. A lathe will be used to carefully remove the outer retaining ring to permit access to the diaphragm and the Kapton layers.
7. The two parts of the switch will be carefully separated with little or no disturbance.

Photographs will include:

- a. Face of hex-port
- b. Top of Kapton piece, whole frame view (still in the cup)
8. Remove the environmental seal.
9. Prior to Kapton removal, mark the same successive corner of each layer of Kapton with a unique mark. This will preserve the relative orientation of the Kapton layers and the diaphragm. Photographs will be taken of the diaphragm and the Kapton layers after marking and prior to removal.
10. The three Kapton layers will be removed and photographed individually using a clean dry photographic background and a close-up lens. Photographs will include:
 - a. whole frame views of each piece of Kapton, one on each sideAfter all layers of Kapton have been photographed, each layer will be placed under the microscope and made available for examination by all parties present. No specific probing or alteration of the Kapton pieces, other than specified in this protocol, shall be made.
11. Take washer, converter, disk assembly and Kapton layer out of cup. Separate into individual components and photograph each side of each component, as well as the inside of the cup.

T1-NHTSA 9498

12. All disassembled parts will be packaged individually, marked with proper identification, and retained for storage using appropriate evidence storage procedures.

Brake Pressure Switch Disassembly Protocol

1. Prior to disassembly, still photographs will be taken of the switch to document its condition.

Photographs will include:

- a. the date code
- b. longitudinal, front
- c. longitudinal, back
- d. the port
- e. the base

2. Visual inspection will be made of the base and the connector, if any. The terminals in the base (both sides) and the connector receptacles and seals, if any, will be photographed. Any contamination will be noted and specifically photographed.
3. Electrical resistance measurements will be taken from terminal to terminal and each terminal to the hex-port in a vertical orientation, base up, and recorded. For terminal to terminal measurement, the positive lead is attached to moveable terminal and the negative lead is attached to stationary terminal. For terminal to hex-port measurements, the positive lead is attached to terminal and the negative lead is attached to the hex-port. The readings will be taken approximately 10-15 seconds after contact. The connection to multimeter will be made by alligator clips directly to the base terminal.
4. Prior to disassembly mark the crimp ring, base and connector by scribing a mark that will preserve the relative orientation of those parts, and the component re-photographed. The crimp ring that secures the connector to the base will be removed using a Dremel tool and an abrasive disk. One cut will be made at a point on the crimp ring that does not disturb any markings on the ring, and the crimp ring unrolled. Photographs will include:

- a. internal switch contacts
- b. inside of crimp ring
- c. top of cup
- d. base

An opportunity to inspect the internal switch contacts under a microscope will be given to all parties present.

5. Take a sample of fluid or other material found, if any, and preserve for analysis. The protocol for analysis to be determined.
6. A lathe will be used to carefully remove the outer retaining ring to permit access to the diaphragm and the Kapton layers.
7. The two parts of the switch will be carefully separated with little or no disturbance.

Photographs will include:

- a. Face of hex-post
- b. Top of Kapton piece, whole frame view (still in the cup)
8. Remove the environmental seal.
9. Prior to Kapton diaphragm removal, mark the same successive corner of each layer of Kapton diaphragm with a unique mark. This will preserve the relative orientation of the Kapton diaphragm layers and the diaphragm. Photographs will be taken of the diaphragm and the Kapton diaphragm layers after marking and prior to removal.
10. The fluid seal and the three Kapton diaphragm layers will be removed and photographed individually using a clean dry photographic background and a close-up lens. Photographs will include:
 - a. whole frame views of each piece of Kapton, one on each side
 - b. the fluid seal (each side)

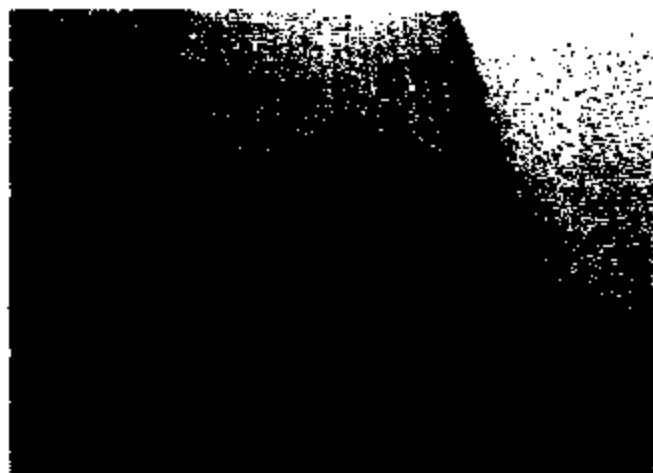
After all layers of Kapton have been photographed, each layer will be placed under the microscope and made available for examination by all parties present. No specific probing or alteration of the Kapton diaphragm pieces, other than specified in this protocol, shall be made.

11. Take washer, converter, disk assembly and Kapton spacer layer out of cup. Separate into individual components and photograph each side of each component, as well as the inside of the cup. An opportunity to inspect the components under a microscope will be given to all parties present.
12. All disassembled parts will be packaged individually, marked with proper identification, and retained for storage using appropriate evidence storage procedures.

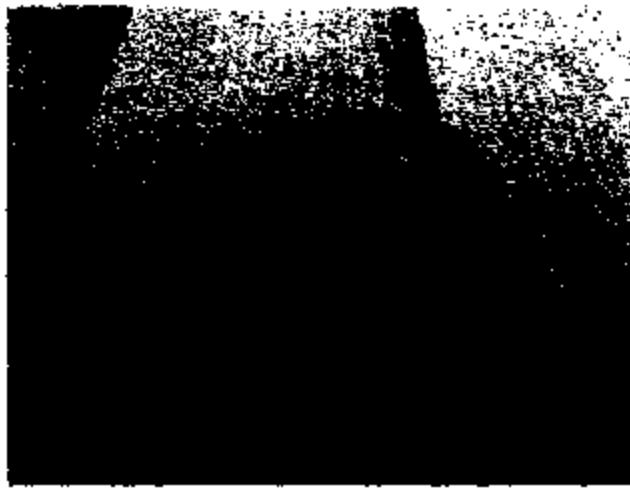
TI-NHTSA 8503



71234299 - Base Disk 1 - Picture 1



0069494964 - Base Disk 1 - Picture 2

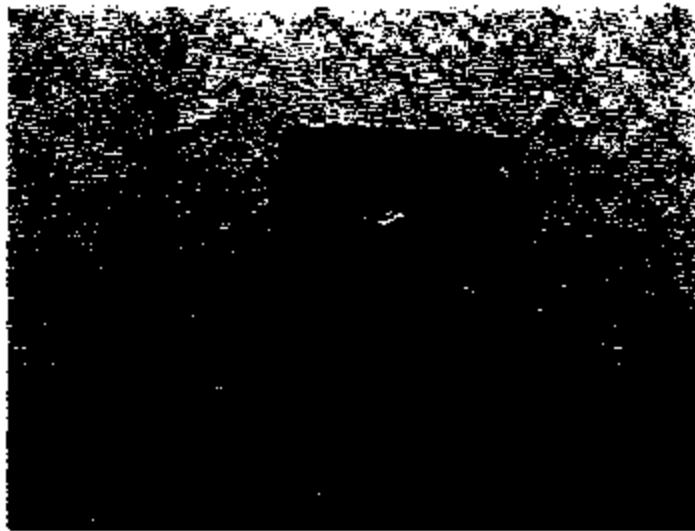


0069494964 - Base Disk 1 - Picture 3



007557504 -8 - Base Disk 1 - Picture 4

Attorney-Client Privileged Information



007557504-8 - Kapton Seals Disk 1 - Picture 5



007557504-8 - Kapton Seals Disk 1 - Picture 6



007557504-8 - Kapton Seals Disk 1 - Picture 7



007558996-5 - Cup Face Disk 1 - Picture 8

TI-NHTSA 8504

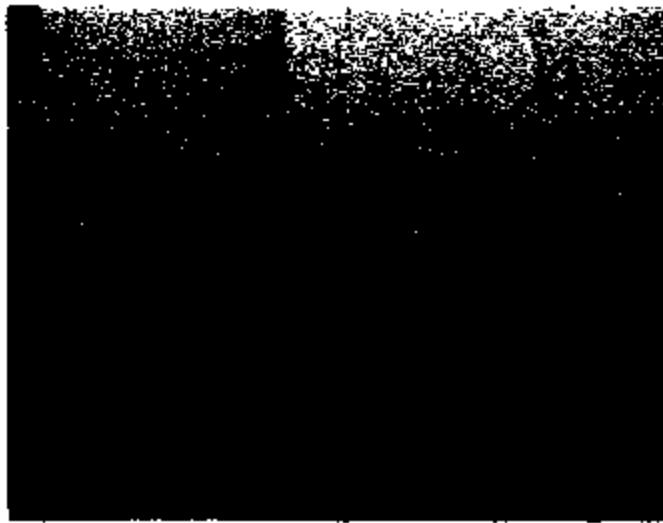
Attorney-Client Privileged Information



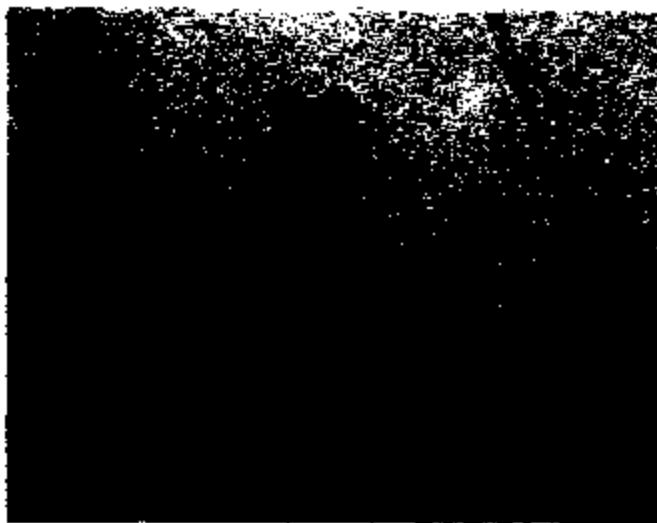
007558996-5 - Base Disk 1 - Picture 9



007558996-5 - Connector Disk 1 - Picture10



007558996-5 - Wires Disk 1 - Picture 11

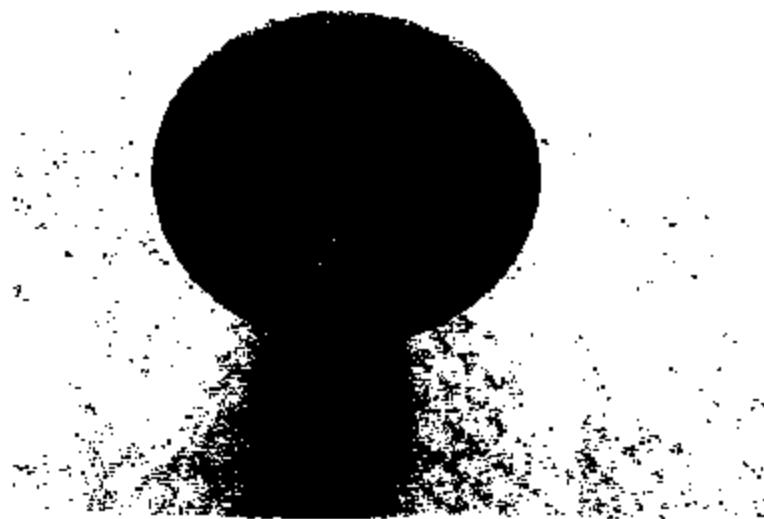


007558996-5 - Seal Disk 1 - Picture 12

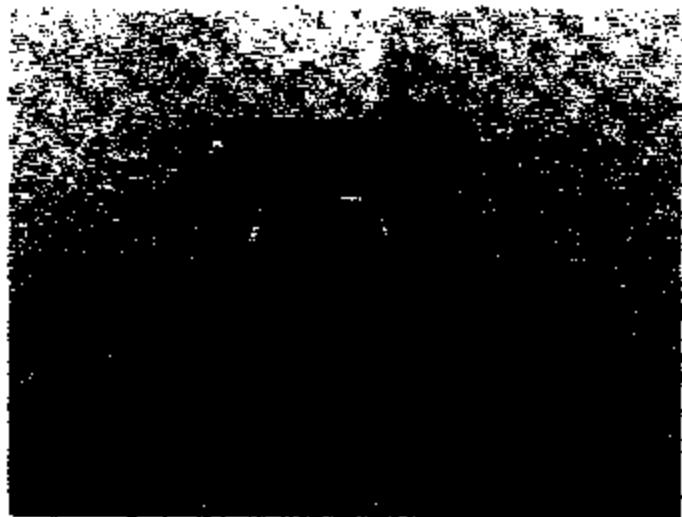
Attorney-Client Privileged Information



70491707 - Base Disk 1 - Picture 13



70491707 - Base Disk 1 - Picture 14



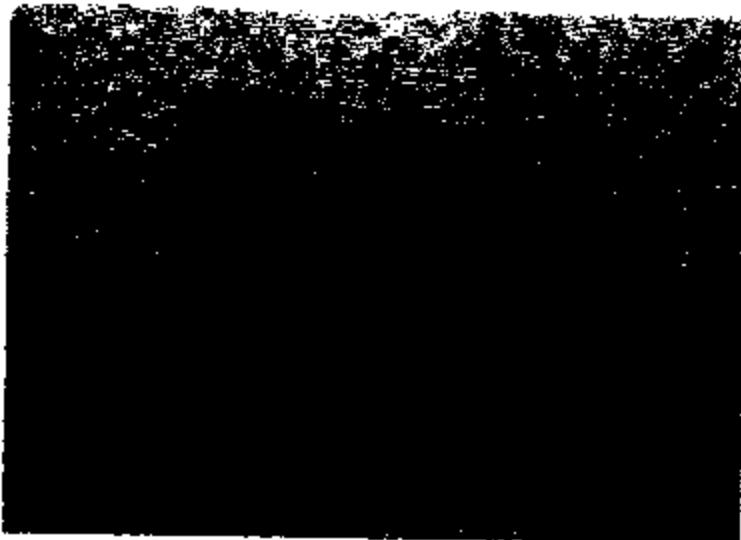
70491707 - Kapton/Converter Disk 1 - Picture 15



70491707 - Kapton/Middle Disk 1 - Picture 16

Attorney-Client Privileged Information

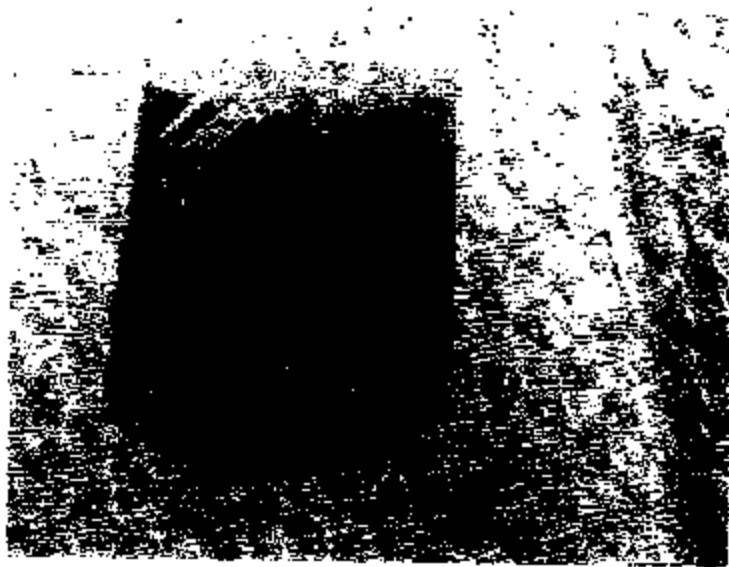
TI-NHTSA 8807



70491707 - Kapton/Fluid Disk 1 - Picture 17



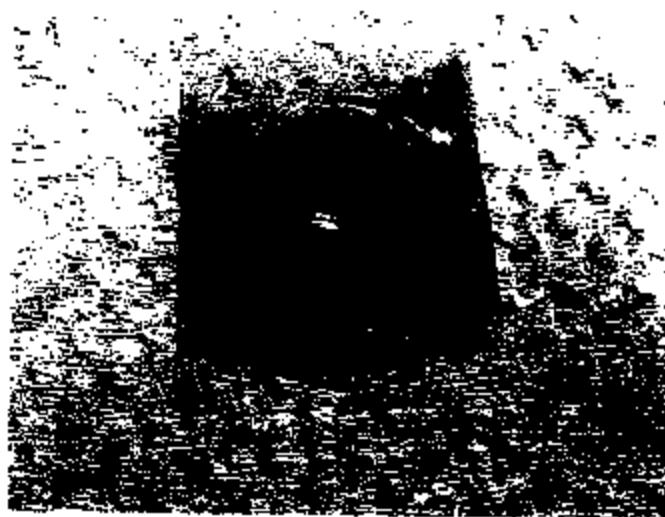
70814934 - Cup Face Disk 1 - Picture 18



70814934 - Kapton/Brake Fluid Disk 1 - Picture 19

Attorney Client Privileged Information

TI-NHTSA 9508



70814934 - Middle Kapton Disk 2 - Picture 1

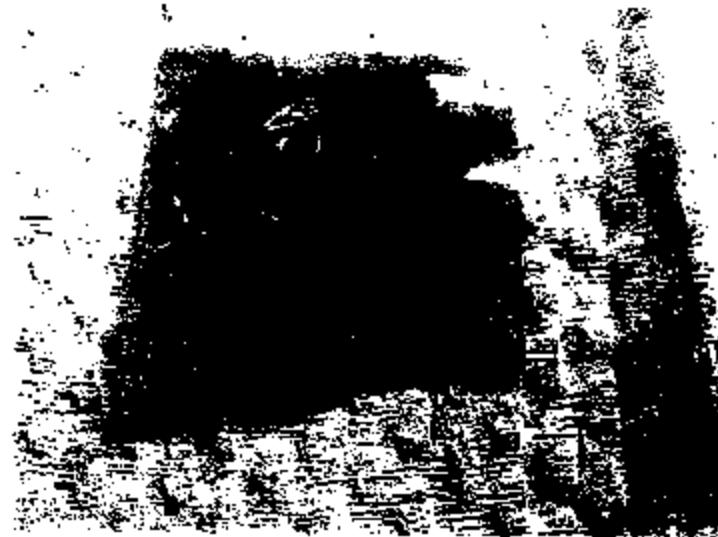


70756090 - Base Disk 2 - Picture 3

Attorney-Client Privileged Information



**70814934 - Kapton/Converter
Disk 2 - Picture 2**



70756090 - Kapton/Fluid Disk 2 - Picture 4



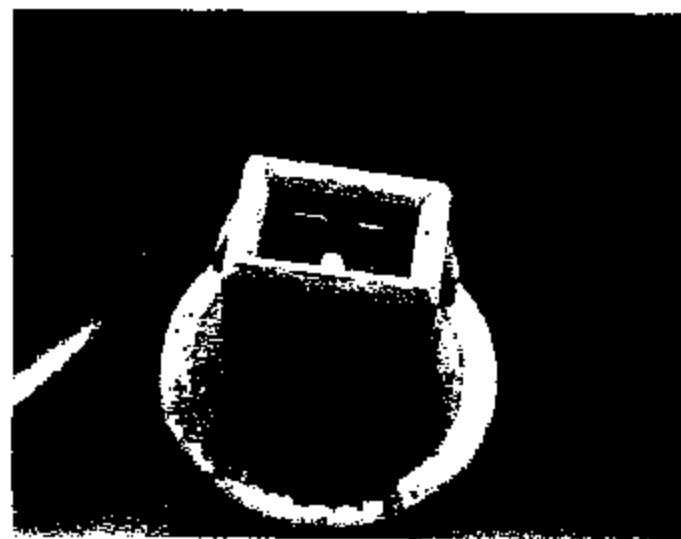
70756090 - Kapton/Middle Disk 2 - Picture 5



6909452-4 - Connector Disk 2 - Picture 6



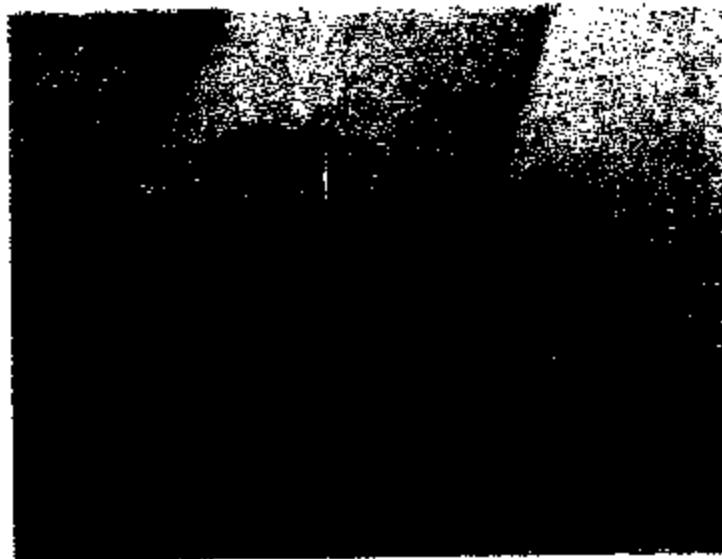
6909452-4 - Connector Disk 2 - Picture 7



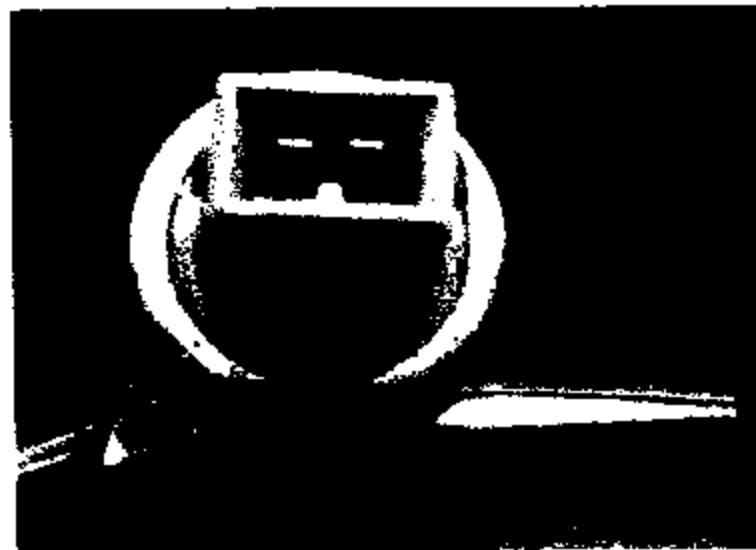
6909452-4 - Inside Base Disk 2 - Picture 8



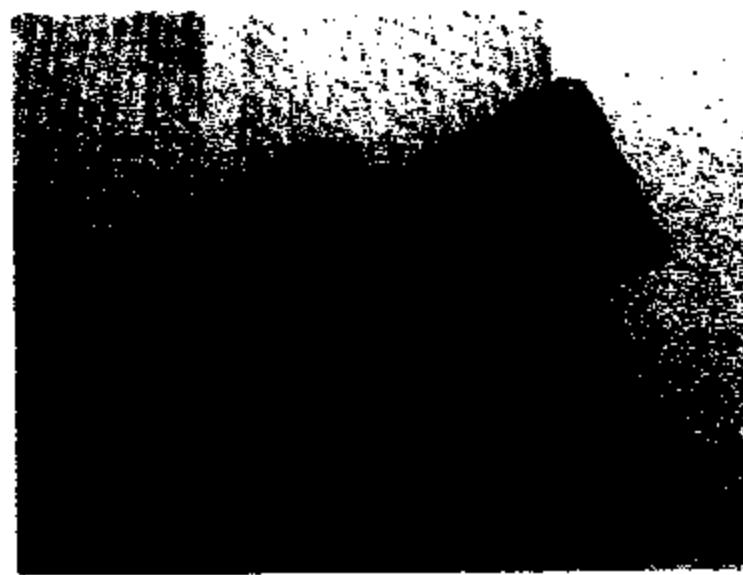
6909452-4 - Full Switch Disk 2 - Picture 9



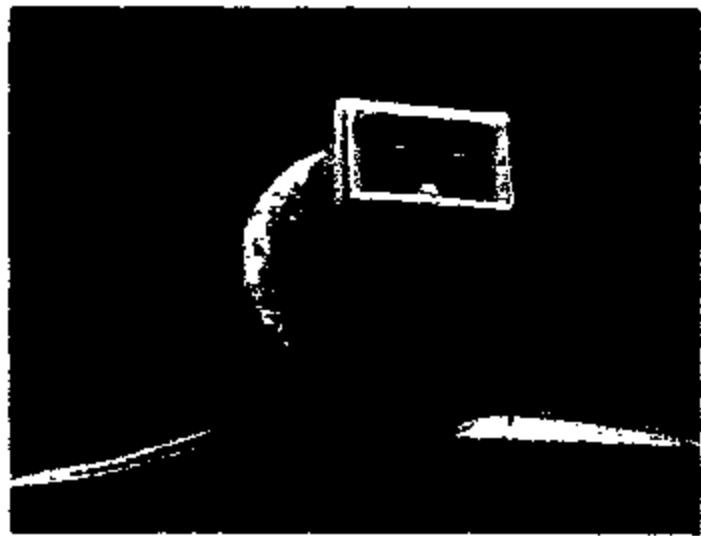
70693195 - Full Switch Disk 2 - Picture 11



70693195 - Base Terminals Disk 2 - Picture 10



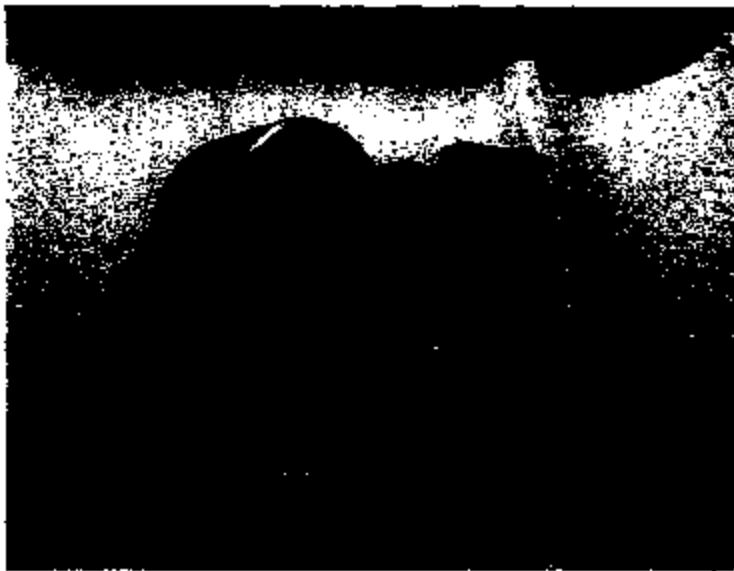
70231473 - Full Switch Disk 2 - Picture 12



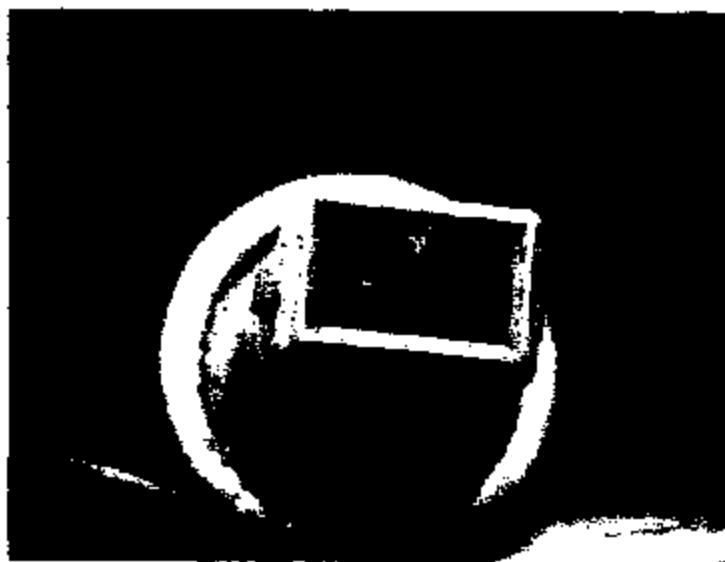
70231473 - Terminal Corrosion Disk 2 - Picture 13



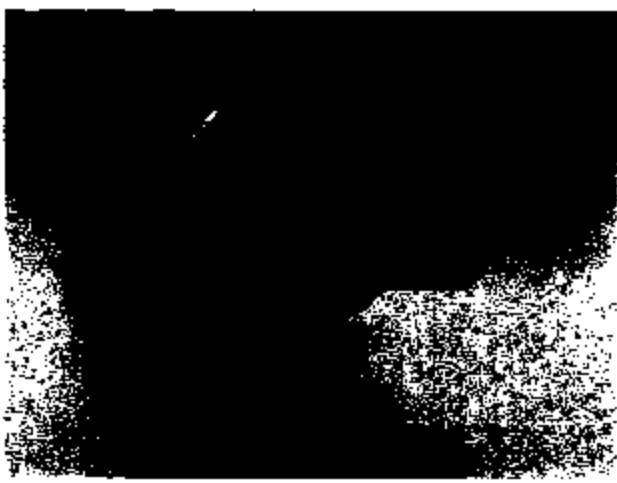
71389672 - Full Switch Disk 2 - Picture 14



71057870 - Full Switch Disk 2 - Picture 15



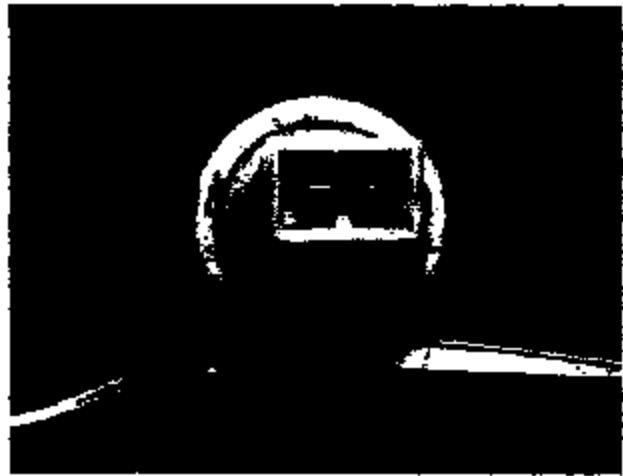
70709221 - Inside Base Disk 2 - Picture 16



71119954 - Full Disk Disk 2 - Picture 17



71184661 - Full Switch Disk 2 - Picture 18



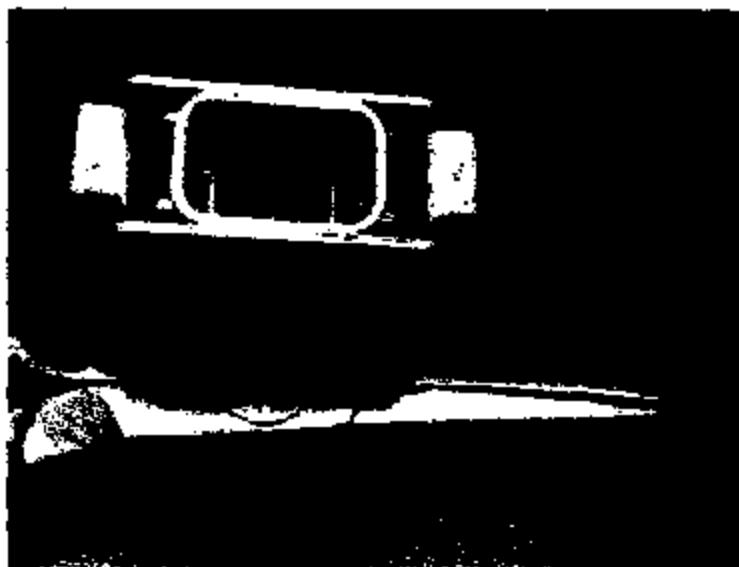
71184661 - Inside Base Disk 2 - Picture 19



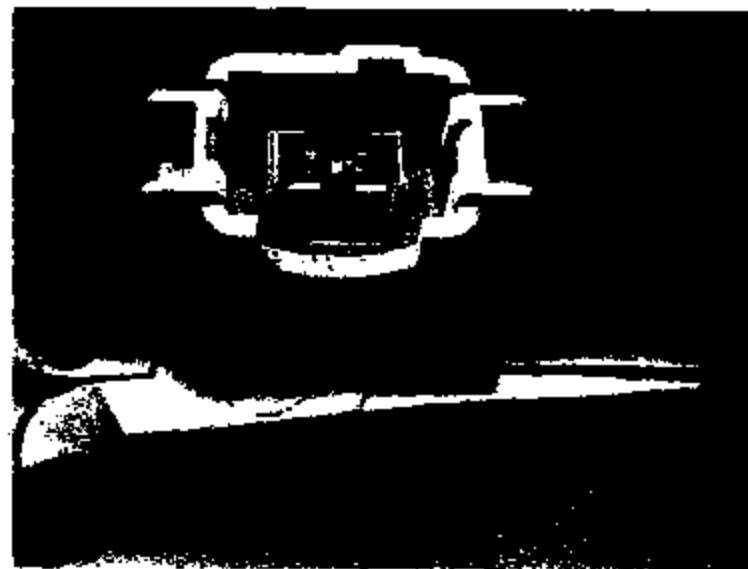
7037684-0 - Wire Seal Disk 2 - Picture 20

TI-NHTSA 8512

Attorney - Client Privileged Information



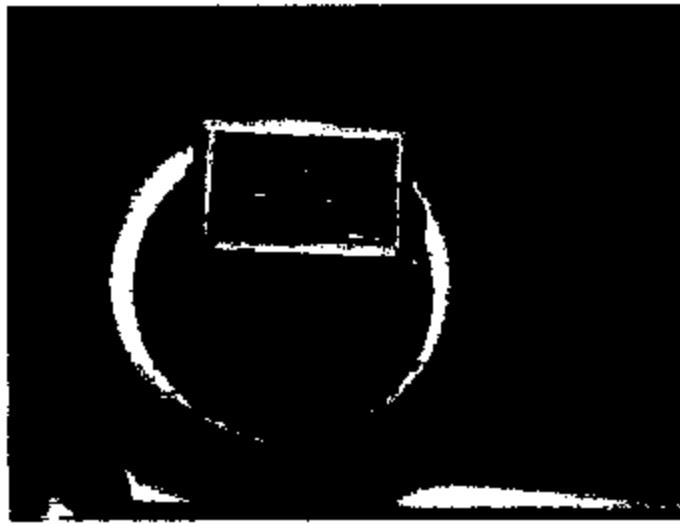
7037684-0 - Wire/Connector Disk 2 - Picture 21



7037684-0 - Connector Disk 2 - Picture 22

TI-NHTSA 8513

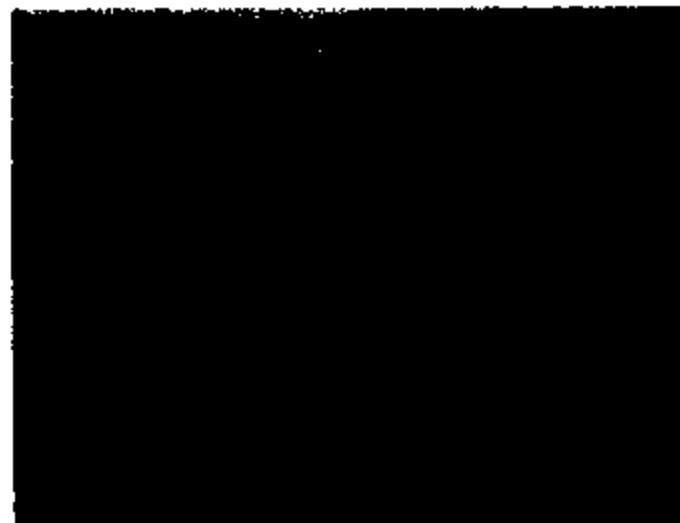
Drawing - Client Privileged Information



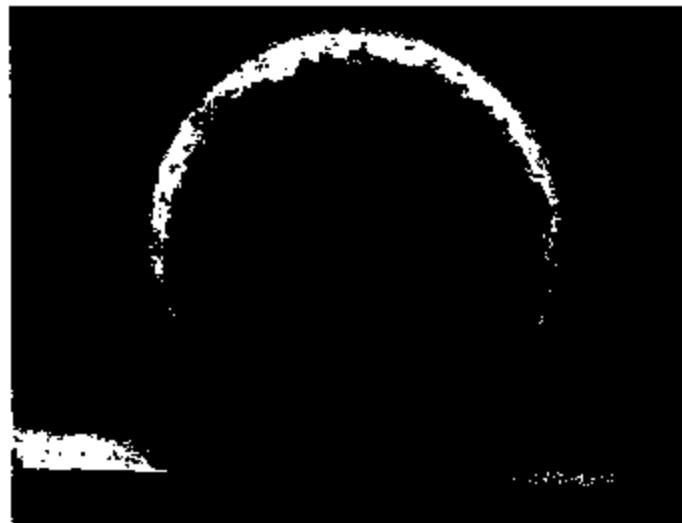
7037684-0 - Base/Switch Disk 3 - Picture 1



7037684-0 - Base/Switch Disk 3 - Picture 2



7037684-0 - Switch/Connector Disk 3 - Picture 3



71566478 - Base Disk 3 - Picture 4

TI-NHTSA 8514

Attorney Client Privileged Information



70863490 - Base Disk 3 - Picture 5



70863490 - Terminal Corrosion Disk 3 - Picture 6



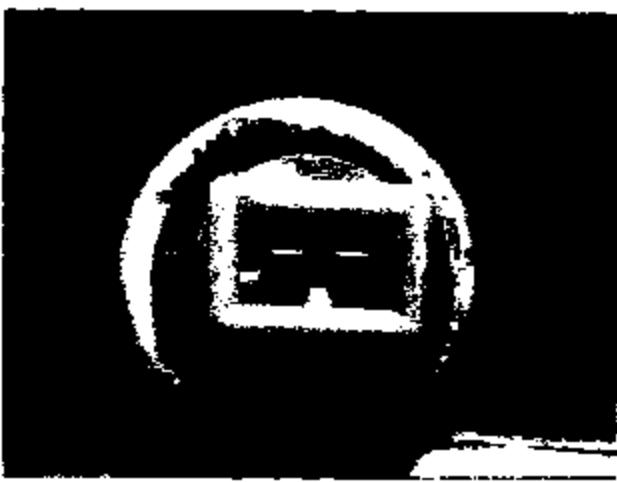
70863490
T-NHTSA 8515

70863490 - Dirty Outside Switches Disk 3 - Picture 7



70863490 - Hexport Dirt Disk 3 - Picture 8

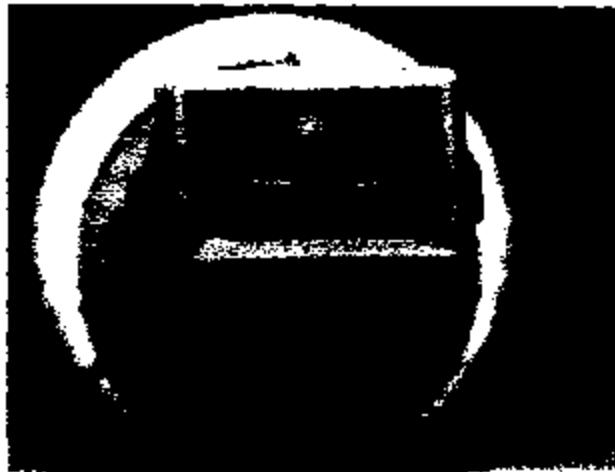
Attorney-Client Privileged Information



71188290 - Base Disk 3 - Picture 9



71019078 - Base Disk 3 - Picture 10



71183280 - Base Disk 3 - Picture 11



71103296 - Base Disk 3 - Picture 12



71103296 - Full Switch Disk 3 - Picture 13



71080211 - Bent Terminals Disk 3 - Picture 14



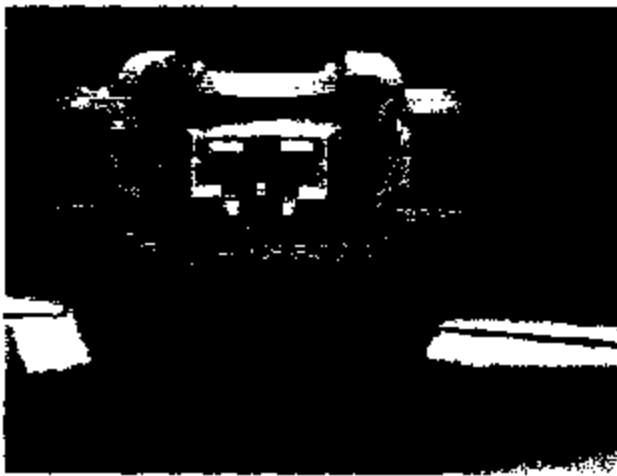
70495385 - Wire Seal Disk 3 - Picture 15



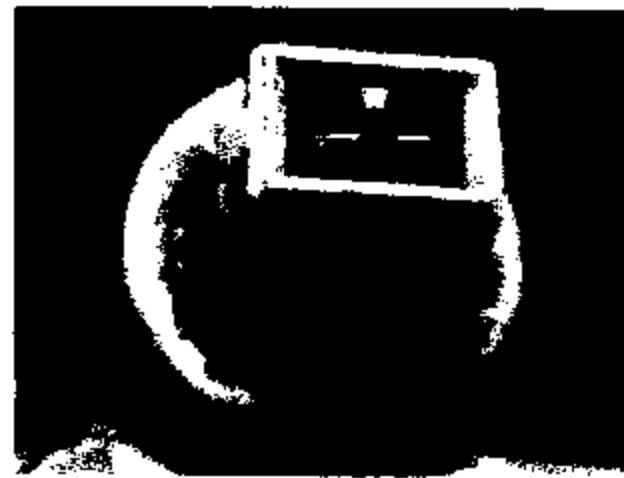
70495385 - Wire Seal Socket Disk 3 - Picture 16

TINHTSA 9517

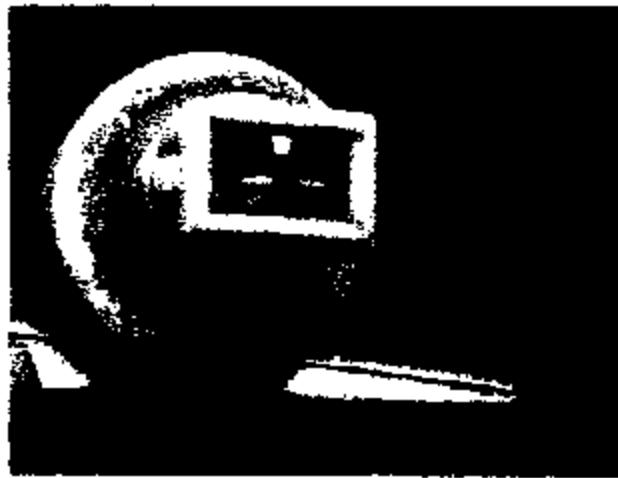
Attorney Client Privileged Information



70495385 - Seal/Connector Disk 3 - Picture 17



70495385 - Base Cavity Disk 3 - Picture 18

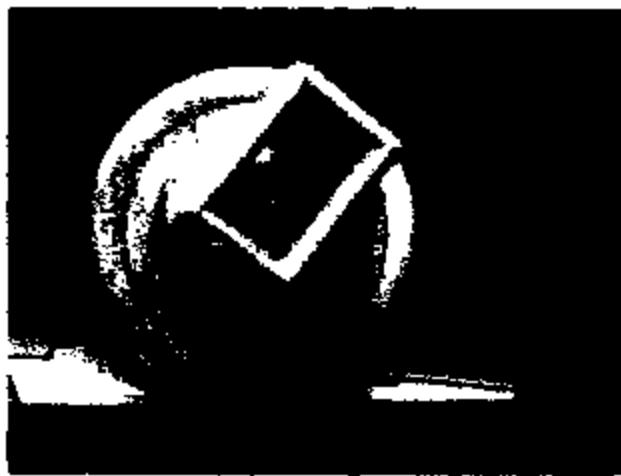


70495385 - Base Cavity Disk 3 - Picture 19

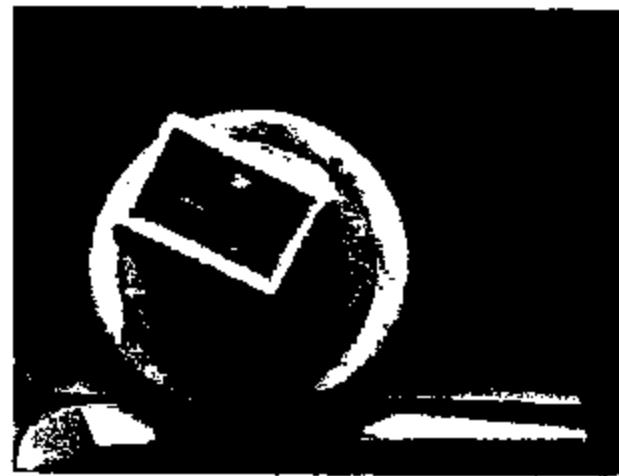
Attorney Client Privileged Information



70495385 - Full Switch Disk 3 - Picture 20



71194617 - Base Cavity Disk 3 - Picture 21



71194617 - Base Cavity Disk 3 - Picture 22



71194617 - Full Switch Disk 3 - Picture 23



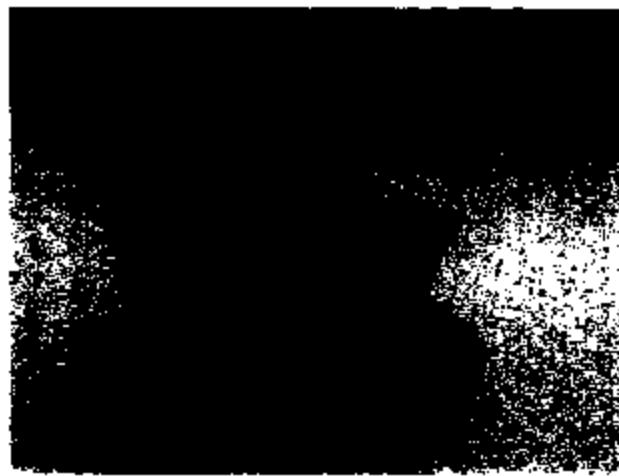
69425747 - Top of Cup Disk 3 - Picture 24

TI-NHTSA 9510

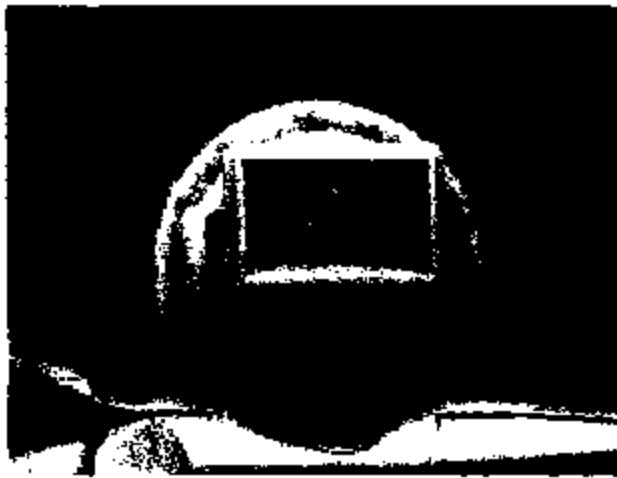
Attorney-Client Privileged Information



69425747 - Switch Cavity Disk 3 - Picture 25



69425747 - Base Disk 3 - Picture 26



69425747 - Cavity Disk 3 - Picture 27

1-NHTSA 8520

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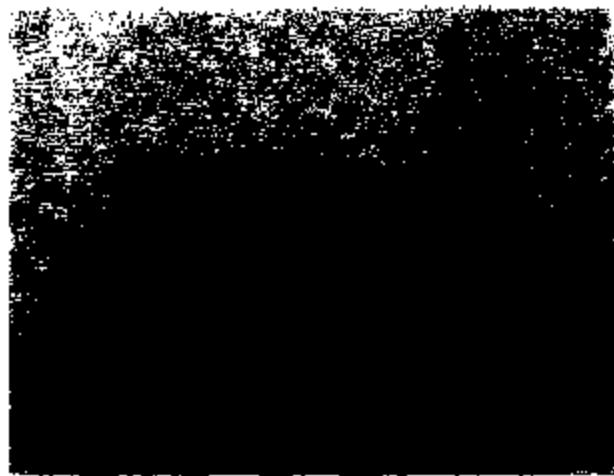
TI-NHTSA 8521



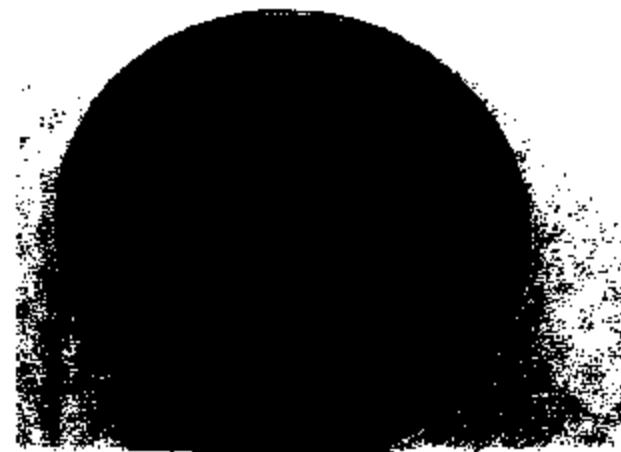
69526539 - Base Disk 4 - Picture 1



69526539 - Base Disk 4 - Picture 2

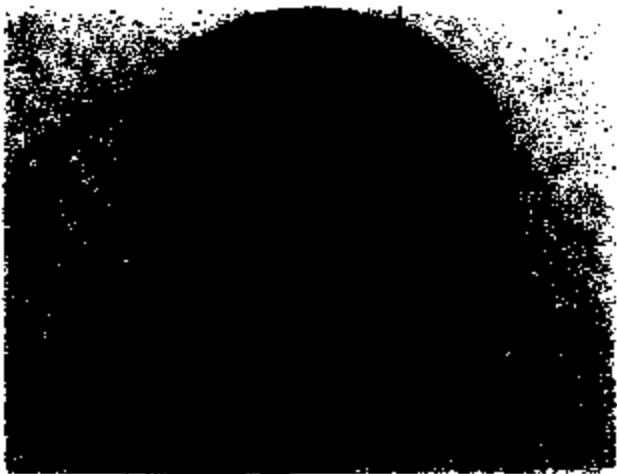


69526539 - Base Disk 4 - Picture 3



69526539 - Base Disk 4 - Picture 4

Attaching (Not Privileged) Information



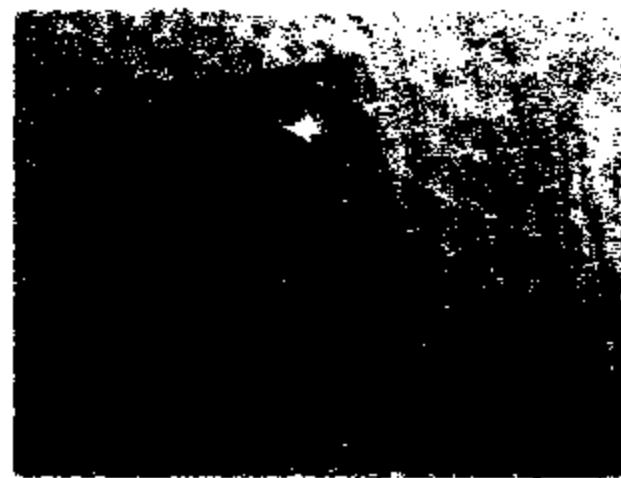
69526539 - Hexport Disk 4 - Picture 5



69526539 - Black Corrosion Disk 4 - Picture 6



69526539 - Kapton Fluid Disk 4 - Picture 7



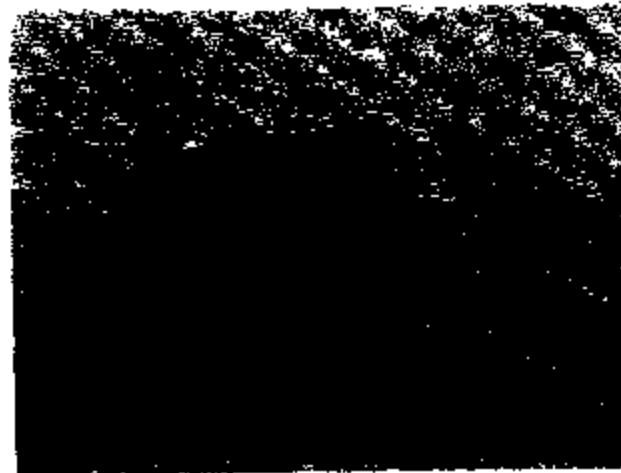
69526539 - Kapton Middle Disk 4 - Picture 8

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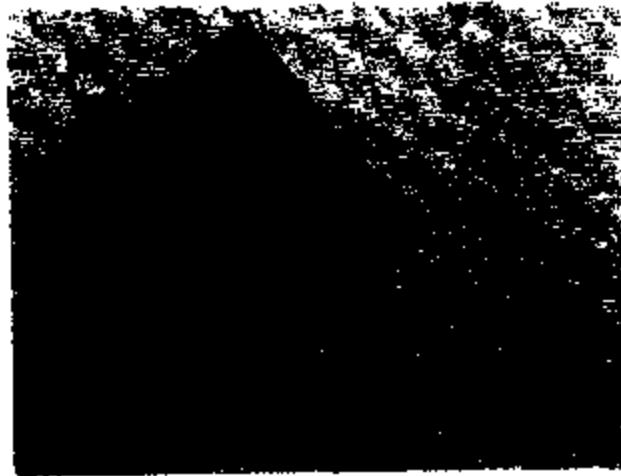
69526539 - Kapton Converter Disk 4 - Picture 9



6898741 - Kapton Converter Out Disk 4 - Picture 10



6898741 - Kapton Middle Disk 4 - Picture 11



6898741 - Kapton Fluid Disk 4 - Picture 12

TI-NHTSA 9523

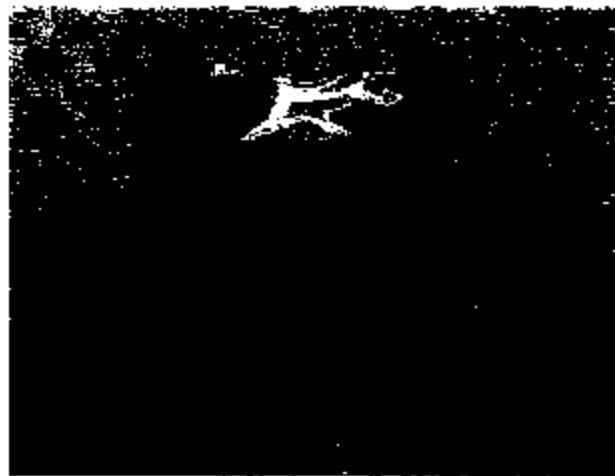
Attorney - Client Privileged Information



68989088 - Kapton Converter Disk 4 - Picture 13



68989088 - Kapton Middle 4 - Picture 14



68989088 - Kapton Fluid Disk 4 - Picture 15



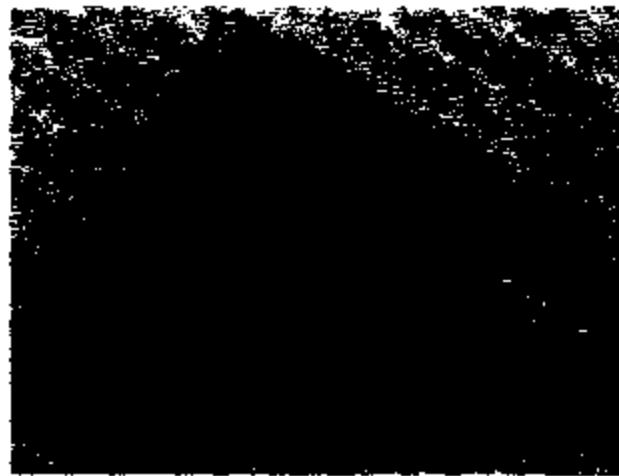
69005175 - Kapton Converter Disk 4 - Picture 16

TI-NHTSA 8524

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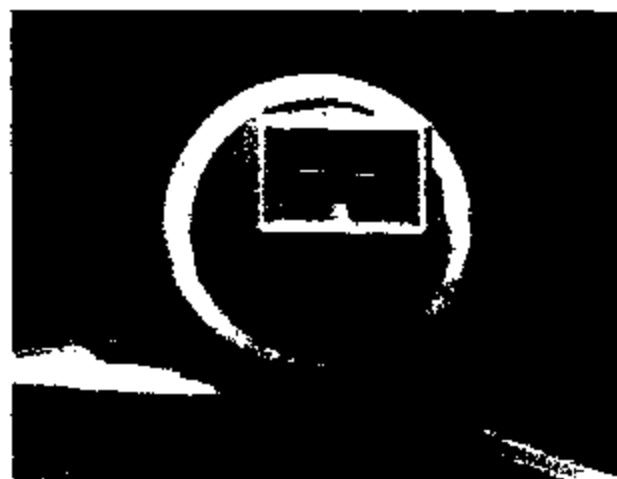
69005175 - Kapton Middle Disk 4 - Picture 17



69005175 - Kapton Fluid Disk 4 - Picture 18



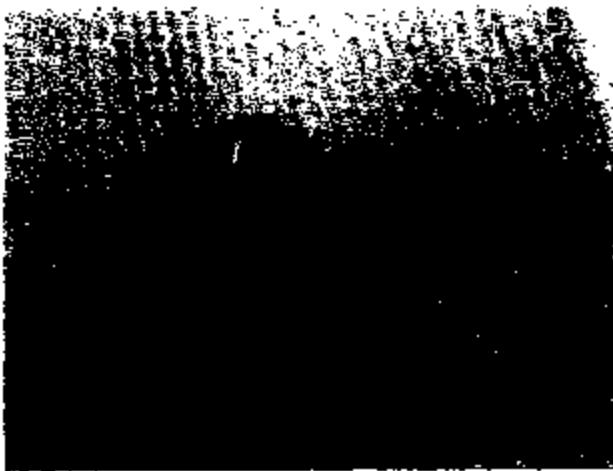
70886039 - Base Cavity Disk 4 - Picture 19



70616127 - Base Cavity Disk 4 - Picture 20

TI-NHTSA 9525

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70616127 - Full Switch Disk 4 - Picture 21



70356208 - Full Switch Disk 4 - Picture 22



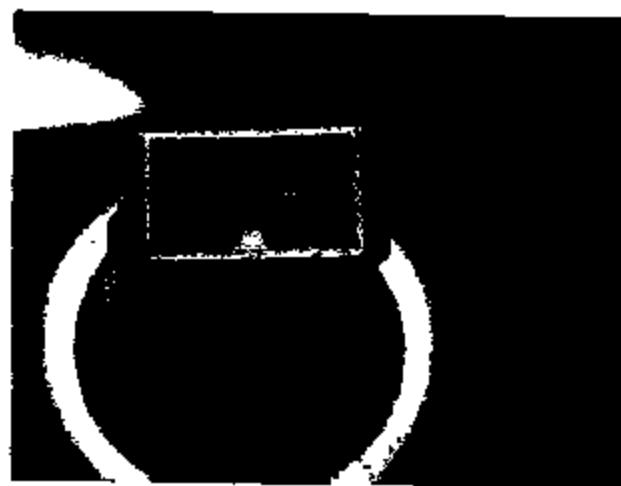
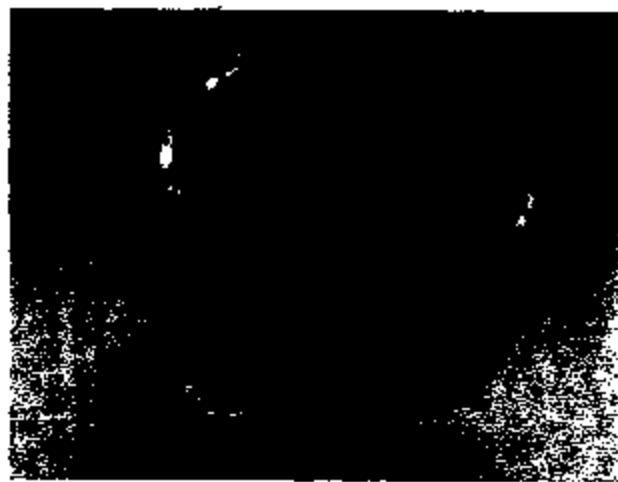
75741350 - Connector Disk 4 - Picture 23

TMHTSA 9528

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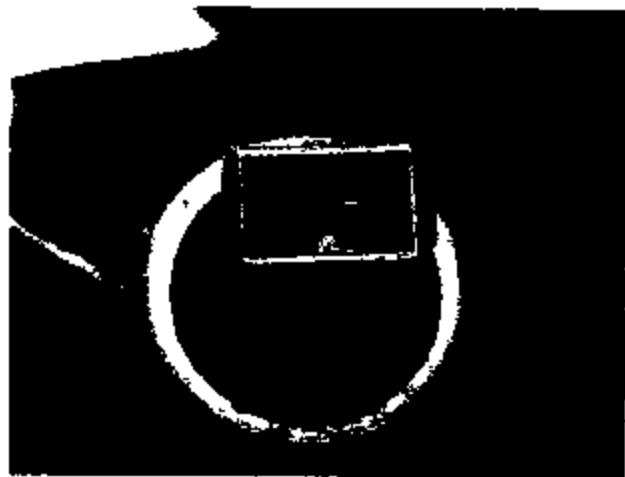
75741350 - Switch Connector Disk 5 Picture 1 7100185-2 - Base Cavity Disk 5 Picture 2



7100185-2 - Outside of Switch Disk 5 Picture 3 70522042 - Base Cavity Disk 5 Picture 4

TI-NHTSA 8527

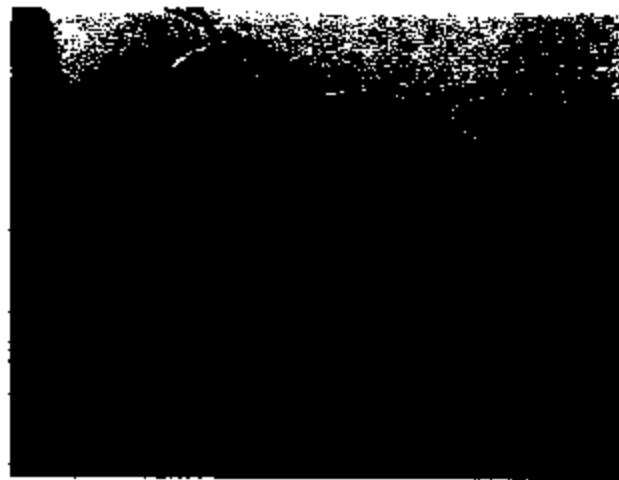
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70522042 - Base Cavity Disk 5 Picture 5



70522042 - Full Switch Disk 5 Picture 6



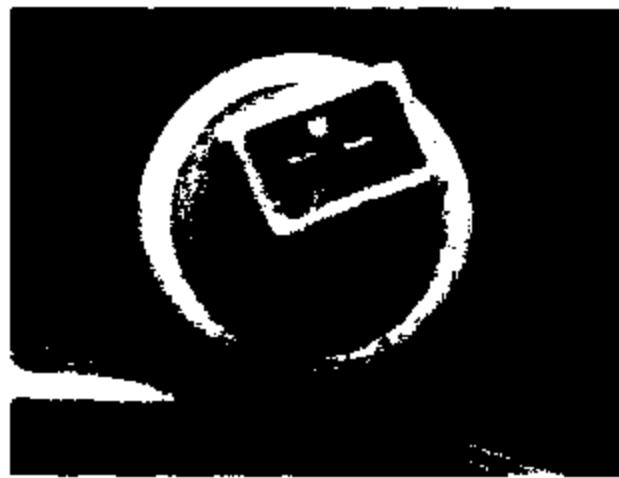
68960918 - Full Switch Disk 5 Picture 7



69205851 - Full Switch Disk 5 Picture 8

TI-NHTSA 8528

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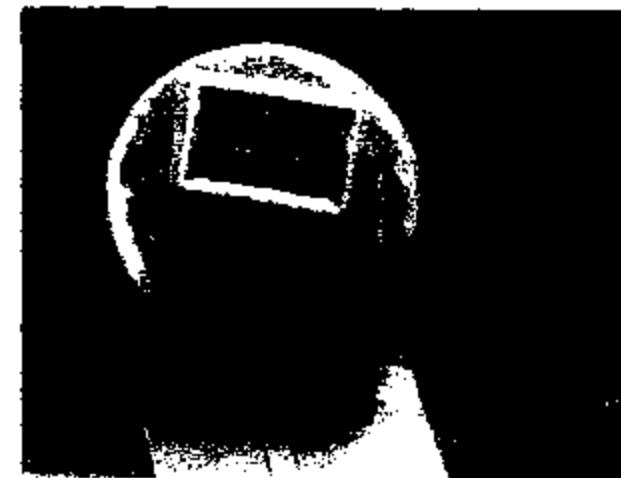
6850660 - Inside Base Disk 5 Picture 9



6850660 - Exterior Base Disk 5 Picture 10

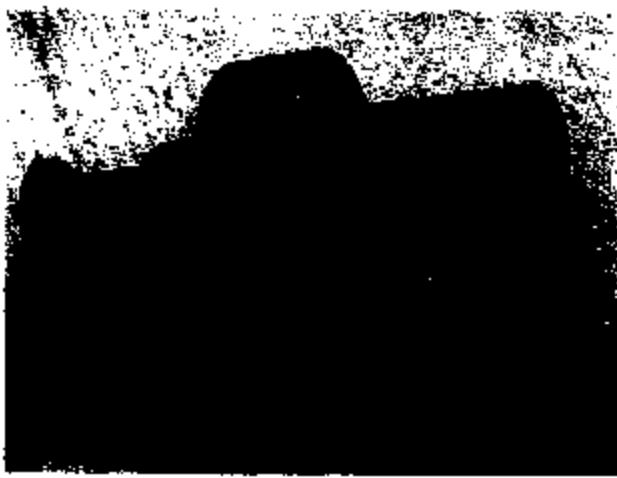


TI-NHTSA 8526

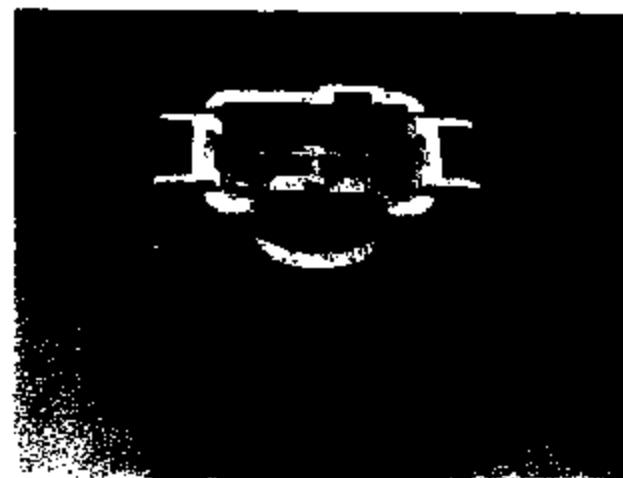


6896783-4 - Green Corrosion, Terminals Disk 5 Picture 11 6897424-3 - Base Disk 5 Picture 12

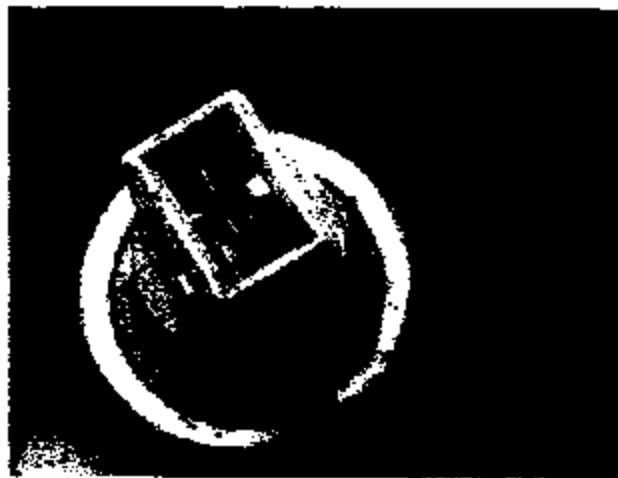
Attorney Client Privileged Information



6897424-3 - Full Switch Disk 5 Picture 13



6897424-3 - Connector Disk 5 Picture 14



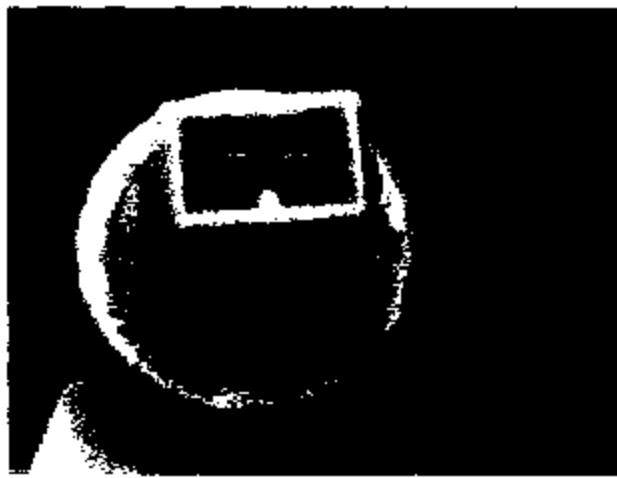
70069309 - Base Cavity Disk 5 Picture 15



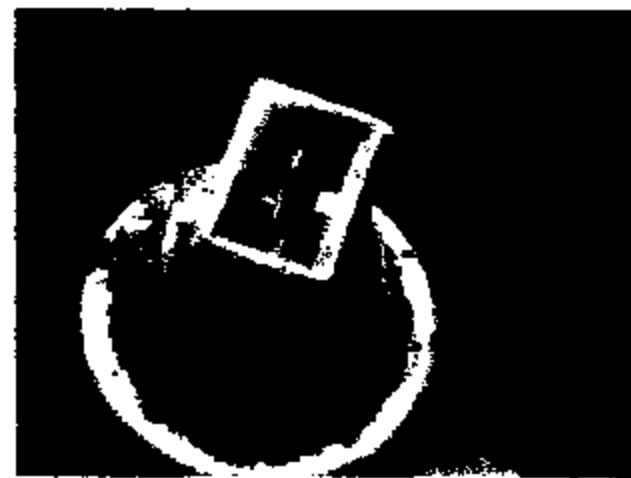
69139003 - Base Cavity Disk 5 Picture 16

TIAHHTSA 9530

Honeywell Privileged Information



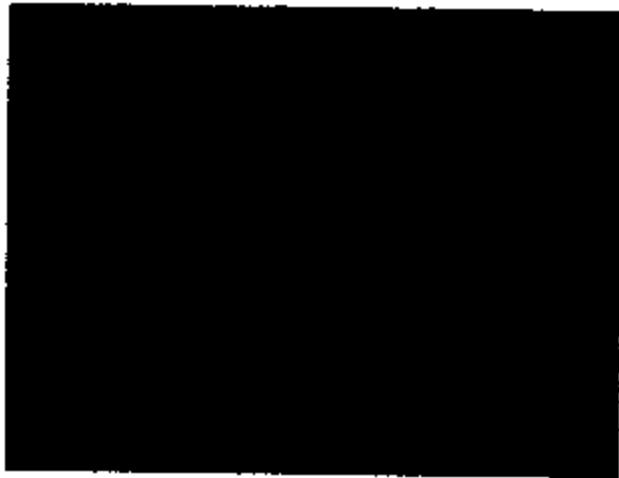
74131916 - Base Cavity Disk 5 Picture 17



69403715 - Base Cavity Disk 5 Picture 18

11-NHTRSA 8531

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71234299 Kapton/Fluid Disk 6 Picture 1



71234299 Kapton/Fluid Disk 6 Picture 2



71234299 Kapton/Fluid Disk 6 Picture 3

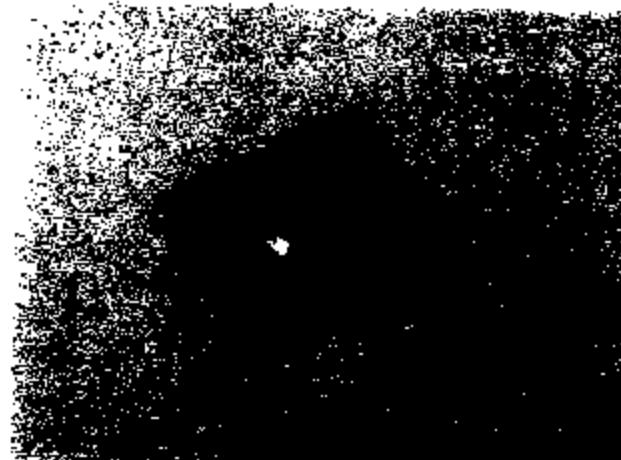


71234299 Kapton/Middle Disk 6 Picture 4

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71234299 Kapton/Middle Disk 6 Picture 5



71234299 Kapton/Converter Disk 6 Picture 6

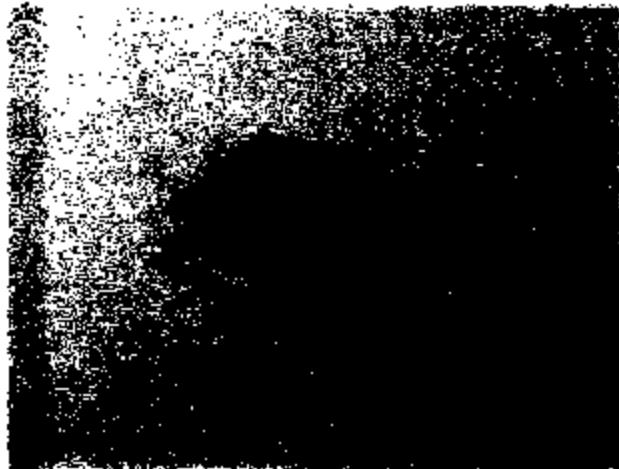


71234299 Kapton/Converter Disk 6 Picture 7 75589965 Kapton/Fluid Disk 6 Picture 8

TI-NHTSA 8583



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75589965 Kapton/Fluid Disk 6 Picture 9



75589965 Kapton/Middle Disk 6 Picture 10



75589965 Kapton/Middle Disk 6 Picture 11



75589965 Kapton/Converter Disk 6 Picture 12

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Privileged Information



75589965 Kapton/Converter Disk 6 Picture 13 69494964 Kapton/Fluid Disk 6 Picture 14



69494964 Kapton/Fluid Disk 6 Picture 15



69494964 Kapton/Middle Disk 6 Picture 16

T1-NHT8A 9635

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69494964 Kapton/Middle Disk 6 Picture 17



69494964 Kapton/Converter Disk 6 Picture 18



69494964 Kapton/Converter Disk 6 Picture 19



69425747 Kapton in Cup Disk 6 Picture 20

TI-NHTSA 8536

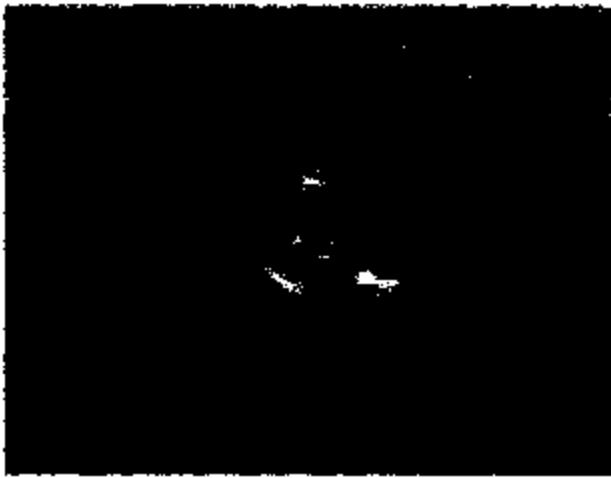
Attorney Client
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69425747 Kapton/ Fluid Disk 6 Picture 21



69425747 Kapton/Fluid Disk 6 Picture 22



69425747 Kapton/Middle Disk 6 Picture 23



69425747 Kapton/Middle Disk 6 Picture 24

TI-NHHTSA 8537

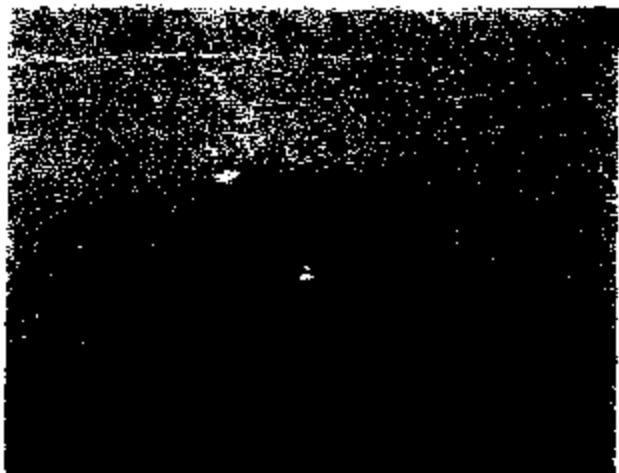
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69425747 Kapton/Converter Disk 6 Picture 25



69425747 Kapton/Converter Disk 6 Picture 26



69425747 Kapton/Converter Disk 6 Picture 27



71119954 Base Disk 6 Picture 28



71119954 Base Disk 6 Picture 29



71119954 Scribe Mark Disk 6 Picture 30



71119954 Top of Cup Disk 6 Picture 31



71119954 Top of Cup Disk 6 Picture 32

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71119954 Inside Base Disk 6 Picture 33



71119954 Inside Base Disk 6 Picture 34

TI-NHTSA 9540

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	TOTAL	BB	AB	AA
Apr-91	3	3	0	0
May-91	26	26	0	0
Jun-91	0	0	0	0
Jul-91	0	0	0	0
Aug-91	0	0	0	0
Sep-91	47	47	0	0
Oct-91	168	168	0	0
Nov-91	121	97	24	0
Dec-91	293	0	293	0
Jan-92	385	0	385	0
Feb-92	554	0	554	0
Mar-92	373	0	373	0
Apr-92	340	0	111	228
May-92	330	0	84	246
Jun-92	79	0	0	79
Jul-92	60	0	0	60
Aug-92	61	0	0	61
Sep-92	108	0	44	64
Oct-92	88	0	74	14
Nov-92	1	0	1	0
Dec-92	1	0	1	0
1993	8	0	8	0
1994	20	0	13	7
1995	4	0	0	4
1996	22	0	16	6
1997	24	0	20	4
1998	4	0	4	0
1999	97	0	97	0
	3215	341	2100	774
	10.60%	66.30%	24.10%	