EA02025

TEXAS INSTRUMENTS, INC.'S

9/10/03 ATTACHMENT TO ODI

BOX 4, PARTS A - N

PART H

TEXAS INSTRUMENTS

ATTLEBORO, MASSACHUSETTS 02703

SAMPLE REPORT

(77PSL3-1)

REASON FOR REPORT		VENDOR	P.O.	PART NO.
NEW PART				77PSL2-1
REPLACEMENT TOOL.		REPORT REQ. BY: E. Rose	DATE: 4/02/92	INSPECTED BY
CORRECTED TOOL.				
REPAIRED TOOL.				
REVIEW				
OTHER				

THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARD[ING] ACTUAL VALUES FOR ALL CHARACTERISTICS MEASURED. IN CASES WHERE ACTUAL VALUES [DIFFER] FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTI[ON FOR] EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.

	(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)	A	B	C	D	DISPOSITION	
23	Load on surface					TM	
25A 22A	1.80-2.212 2X 1	1.651	1.651	1.651	1.651		
	2	1.651	1.778	1.651	1.651		
23 24	8.30-8.72 2X 1	8.535	8.653	8.484	8.578		
	2	8.786	8.672	8.570	8.519		
24 25	2.15-2.42 2X 1	2.162	2.171	2.272			
	2	2.212	2.236	2.257	2.271		
25 26	25°±2° 2X 1	24°25'	24°[illegible]'	24°47'	24°06'		
	2	24°18'	24°14'	24°06'	24°43'		
26 27	45°±2° 3 plcs 1	[illegible]	[illegible]	[illegible]	45°03'		
	2	44°25'	43°47'	44°47'	45°01'		
	3	44°08'	43°33'	[illegible]	43°50'		
27 28	(71.5°) 2X 1	72°	71°31'	71°20'	72°01'		
	2	71°07'	72°	72°10'	71°12'		
28 29	1.43-1.63 2X 1	1.538	1.538	1.592	1.603		
	2	1.539	1.612	1.602	1.576		
29 30	0.35-0.66 4X 1	0.546	0.570	0.578	0.581		
	2	0.547	0.570	0.520	0.556		
	3	0.592	0.581	0.576	0.558		
	4	0.614	0.574	0.603	0.575		
30 31	0.35-0.66 4X 1	[illegible]	[illegible]	[illegible]	[illegible]		
	2	[illegible]	[illegible]	[illegible]	[illegible]		
	3	[illegible]	[illegible]	[illegible]	[illegible]		
	4	[illegible]	[illegible]	[illegible]	[illegible]		
31 32	0.86-1.17 4X 1	1.023	1.012	1.086	1.021		
	2	0.975	0.994	0.987	1.041		
	3	1.023	0.992	1.032	1.014		
	4	0.976	1.477	0.981	0.984		
32 33	Term. housing Brown	black	OK per Elaine Rose.	Trying		New Material	

REMARKS AND/OR INSTRUCTIONS:

DISPOSITION: TOOL APPROVED FOR PROD.		RESUBMISSION REQ'D
MFG. ENG.:		QRA ENG.:
		PURCH. AGENT:

FORM NO. [illegible]

TI-NHTSA 005885

[illegible]
[illegible]

[illegible]

[illegible]	[illegible] CAPELLA	[illegible]
	[illegible]	WS[illegible]
	[illegible]	MUDD
	[illegible]	[illegible]
	[illegible]	[illegible]
	[illegible]	TFLN
	[illegible]	ETB
	[illegible] DEMATTIA	MD3
	[illegible] FREDA	[illegible]
	RUSTY [illegible]	RC32
	CHARLIE [illegible]	CMP1
[illegible]	[illegible] CHARBONNEAU	TC[illegible]
	RAY TOURANGEAU	RGT2
	ANDY McQUIRK	FCSA
	BILL CONGDON	MTPC
	JOHN KOUFTESIS	MDEG
	JIM KERN	MLDD
	STEVE WALTERS	MLDD
	JEFF DIDOMENICO	ELB[illegible]
	GARY SNYDER	DPPC
	STEVE MAJOR	SMFH
	DICK MULHERN	FCTL
[illegible]	DAVE CZARN	ZARN

3. COPS QUIET SWITCH -

****
NEXT MEETING:
****

DATE: MONDAY 4/20
TIME: 9:30
PLACE: CAFETERIA CUBE

TI P/N	FORD P/N	DESCRIPTION
77PSL3-1	F2AC-9F924-AA	ULTRA-LOW DIFF'L EN53 (CROWN V./GR. MARQ.) ~150K/YR
77PSL5-2	F3DC-9F924-AA	ULTRA-LOW DIFF'L W/SNUBBER DN5 (SHO TAURUS) ~20K/YR

DISCUSSION:
[illegible] 77P8L3-1'S SHIPPED THROUGH 4/17. HYPOT FREQUENCY REDUCED TO 80 PCS/250. DALE WILL DETERMINE THROUGH CORRELATION TESTING IF HYPOT TEST IS BEST METHOD TO DETERMINE LONG PINS.

[illegible] NEEDED BY DANA TO REPLACE THEIR [illegible] INVENTORY; FORD WILL COORDINATE SHIPMENT OF [illegible] FROM DANA TO [illegible] WHO WILL CONTINUE TO SUPPLY [illegible] ASSEMBLED TO THE [illegible]

--------- → ENG 3 ABS ??

[illegible]

TI-NHTSA 005986

EST PROD'N FAILURES — DODGE

PROD'N INTENT SNUB. HEXF. BY ... — ... → M/S MAKING FINALS FROM ELCO BLANKS FL 10-00

MKTING/FIELD SALES

... LT ON ... TIME ... — PFEDAY

... SWITCH — DOUGLAS

DSGN ENG.

... NTS:

... BASE (ADD -3 AS NAT'L NORYL/OFFSET) — CZARN

... DISC (NEW SET-UP) — DODGE

- ENVELOPE DRAWINGS (WHEN REQUESTED) — CZARN

PARTS LISTS (UPDATE) — CZARN
(START W/ HAND MARKED COPY)

WEIBULL TESTING FOR M. SPEARS — OFFILER ← ...

CHECK L/T QUIET DISCS — DODGE

... & ...LOW DIFF'L WITH AND — OFFILER ← CANCEL
... W/OUT SNUBBERS TO BENDIX BY 4/24

L/T QUIET SWITCHES TO BENDIX, ... — OFFILER ← EUST- STYLE; LITE TRIC... QUIET TRIC DISC w/ NORMAL HEX 100 IN MAY ; 100 IN JUNE
100 SWITCHES BY 5/31; BLACK NORYL
BASE (NEED TO REASSESS DATE, DEPENDING
ON BENDIX EVAL'N OF SWITCHES WITH AND
WITHOUT SNUBBERS)

MANUFACTURING ENG./MECHANIZATION

PROCESS SPECS	SELLERS
SET-UP SPC FILES	SELLERS
REVIEW PFMEA	SELLERS
PRIORITIZE MECH. WORK - SOFTWARE CHANGES TO G.A.M.	KOURTESIS
ADD HYPOT TO P-TESTER ?	KOURTESIS
MODIFY TRAPPED DISC PROBE FOR EACH LOT OF SENSORS ?	SELLERS
CHK FOR SOUND ON P-TESTER ?	SELLERS
0 PSIG CONTINUITY CHECK	SELLERS

SC MFG. ENG.

CHK L/T QUIET DISCS	DODGE

MANUFACTURING

QUALITY

PURCHASING

HAVE ELCO QUOTE SNUBBER W/2nd OPS	KOTCH

DRAFTING

PRIORITIZE DWG AND P/L CHANGES AS THEY COME THROUGH	...

TI-NHTSA 005987

REGARDS,
DAVE CZARN
...

CRITICAL ITEMS:

TEST PROD N FAIL [illegible] ACGOS
PROD N INTENT [illegible] FROM: [illegible] O-MSG #: [illegible] FR=ZARN [illegible]
[illegible] 04:12 PM
[illegible] DIV=0050 CD=[illegible] SY=ZARN AT=04/20/92 04:12 PM

APRIL 20, 1992

TO:	STEVE [illegible]	3BO1
	BILL SWEET	WS4
	MATT SELLERS	MJO2
	JIM WATT	PCQA
	[illegible]	[illegible]
	DALE [illegible]	[illegible]
	TED [illegible]	ET3
	MIKE DEMATTIA	[illegible]
	NORM FREDA	WHLZ
	RUSTY STRUBLE	RCS2
	CHARLIE DOUGLAS	CMF1
	CLAIRE BALTHAZAR	PCME
CC:	TOM CHARBONEAU	TC
	RAY TOURANGEAU	RGT2
	ANDY McGUIRK	PCQA
	BILL CONGDON	MFPC
	JOHN KOURTESIS	MDES
	JIM KERN	MLDG
	STEVE WALTERS	MLDG
	JEFF DIDOMENICO	ELB
	GARY SNYDER	CPPC
	STEVE MAJOR	SMFH
	DICK MULHERN	PCTL
FR:	DAVE CZARN	ZARN

RE: CCPS QUIET SWITCH - 4/20 MTG. MINUTES

****
NEXT MEETING:
****

DATE: TUESDAY 4/21
TIME: 3:30
PLACE: CAFETERIA CUBE

TI P/N	FORD P/N	DESCRIPTION
77PSL3-1	F2AC-9F924-AA	ULTRA-LOW DIFF'L EN53 (CROWN V./GR. MARQ.) ~150K/YR
77PSL5-2	F30C-9F924-AA	ULTRA-LOW DIFF'L W/SNUBBER DN5 (SHO TAURUS) ~20K/YR

DISCUSSION:
5206 77PSL3-1'S SHIPPED THROUGH 4/17. (LAST MSG. WAS INCORRECT.)

PROD'N P-TESTER LIMITS TIGHTENED FOR A FEW DAY TRIAL PERIOD TO DETERMINE IF PIN EXTREMES CAN BE FOUND THROUGH PRESSURE READINGS RATHER THAN HYPOT. WILL REVIEW AGAIN WEDNESDAY.

TI-NHTSA 005986

****
[illegible]

TICAL ITEMS

TEST PROD'N FAILURES — SOGGE
PROD'N INTENT BNDS. REXP. BY 4/27 — KOTCH

ARKETING/FIELD SALES

CLOSE WITH L/T ON HIGH TEMP ISSUE — FREDA/
AND USER NEEDS FOR QUIET SWITCH — DOUGLAS

ISION ENG.

PRINTS:
P BASE (ADD -3 AS NAT'L NORYL/OFFSET) — CZARN
P DISC (NEW SET-UP) — SOGGE
- ENVELOPE DRAWINGS (WHEN REQUESTED) — CZARN
PARTS LISTS (UPDATE) — CZARN
WEIBULL TESTING FOR M. SPEARS — OFFILER
CHECK L/T QUIET DISCS — SOGGE
100 L/T QUIET SW'S (L3-0'S) TO BENDIX
- BUILD/CAL BLK NORYL GAGES BY 4/27 — BALTHAZAR
- DETERMINE PIN TARGET BY 4/24 — SOGGE
- BUILD SWITCHES AND SHIP BY 4/30 — BALTHAZAR

ANUFACTURING ENG./MECHANIZATION

PROCESS SPECS — BALTHAZAR
SET-UP SPC FILES — BALTHAZAR
REVIEW PFMEA — SELLERS
COORDINATE MECHANIZATION WORK FOR QUIET SWITCH — SELLERS
0 PSIG CONTINUITY CHECK — SELLERS

ISC MFG. ENG.

ANUFACTURING

JALITY

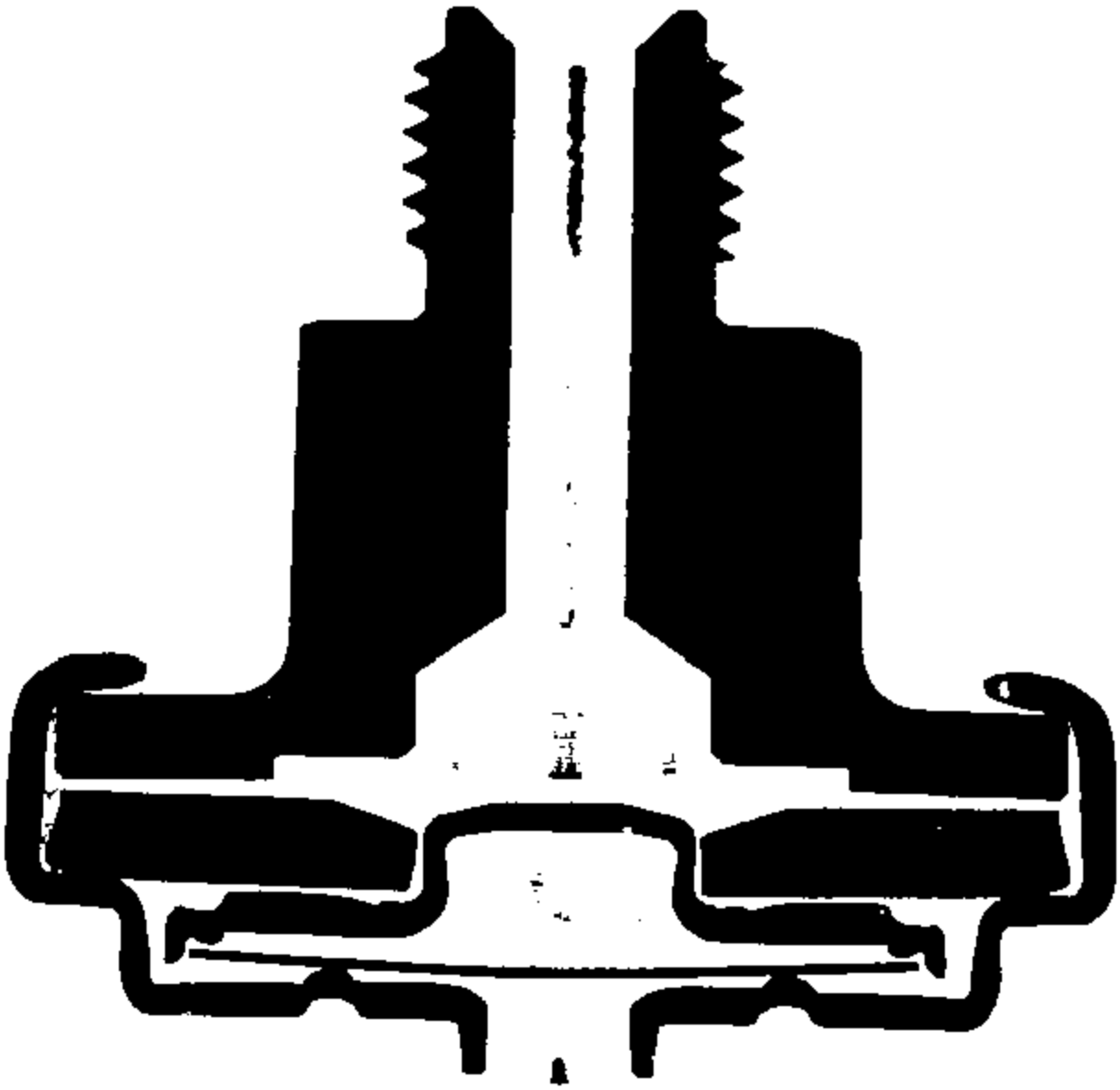
URCHASING

HAVE ELCO QUOTE SNUBBER W/2nd OPS — KOTCH

RAFTING

PRIORITIZE DWG AND P/L CHANGES AS THEY COME THROUGH — MULHERN

EGARDS,
AVE CZARN
S-QUIET


4.5 MIL
INCREASED
PRE LOAD

TEXAS INSTRUMENTS, INC. ISIR SUBMISSION
TO DANA CORPORATION
FOR PART NUMBER F2AC-9F924-AA (77PSL3-1)

4-21-92

Per Conversasion / Matt Sellers:
Rework & Remeasure
2 3 4 6

4-21-92

Reworked + Remeasured
Dim. # 3

#2 ~~0.228"~~ 0.310 mm
~~0.418~~ 0.452 mm

#3 0.641 mm
0.425 mm

#4 0.531 mm
0.591 mm

#6 0.635 mm
0.475 mm

Term. Pos. 0.75 / 0.25 mm

TEXAS INSTRUMENTS

ATTLEBORO, MASSACHUSETTS 02703

PAGE 1 OF

SAMPLE REPORT

REASON FOR REPORT		VENDOR	P.O.	PART NO.	REV.
NEW PART		-		77PSL3-1	A
REPLACEMENT TOOL		REPORT REQ. BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL		Elaine Rose	4/14/92	Sandy Gilbert	4/
REPAIRED TOOL					
REVIEW					
OTHER Dim analysis	X				

THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING ACTUAL VALUES FOR ALL CHARACTERICS MEASURED. IN CASES WHERE ACTUAL VALUES DEV FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.

	(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)					DISPOSITION		
	Dimension	1	2	3	4	5	6	Method of Inspection
1	1.85 - 2.06	1.933	1.933	1.942	1.956	1.900	1.927	Tmic
2	Ø 8.05 max	13.687 / 13.756	13.693 / 13.211	13.683 / 13.724	13.799 / 13.691	13.783 / 13.676	13.665 / 13.675	"
3	.25 - .75	0.593	0.561	0.552	0.522	0.558	0.545	"
		0.748	0.804	0.762	0.805	0.684	0.707	" remt
4	2.79 - 3.10 2 pks	2.90	2.90	2.91	2.92	2.91	2.91	Cal
		2.91	2.92	2.93	2.94	2.92	2.94	"
5	19.45 - 19.81	19.65	19.70	19.71	19.73	19.75	19.73	"
6	11.40 - 11.90	11.794	11.797	11.791	11.790	11.784	11.783	Tmic
7	16.56 - 16.76	16.623	16.652	16.636	16.654	16.626	16.646	"
8	2.84 - 3.05	2.936	2.948	2.927	2.924	2.910	2.919	"
	Ø 0.1 Ⓜ A	0.035	0.017	0.018	0.006	0.043	0.030	"
9	1.24 - 1.45	1.241	1.242	1.249	1.260	1.270	1.258	"
10	11.60 - 11.92	11.864	11.719	11.725	11.681	11.682	11.736	"
11	1.24 - 1.55	1.384	1.397	1.393	1.397	1.425	1.388	"
12	55.15 max	55.64	55.65	55.69	55.75	55.75	55.71	Cal
13	12.59 - 13.11	12.824	12.862	12.914	12.933	12.850	12.906	I NO
14	11.65 - 12.17	12.023	12.025	12.146	12.126	12.068	12.134	"
		11.963	11.923	12.056	12.081	12.011	12.055	"
15	6.60 - 6.81	6.702	6.696	6.690	6.690	6.708	6.711	Tmic
16	NO Flash or Burrs on this Surface	OK	OK	OK	OK	OK	OK	visual
17	2.79 - 3.41	3.053	3.164	3.162	3.205	3.187	3.225	COMP
18	0.68 - 1.30	1.137	1.066	1.153	1.165	1.071	1.117	"
19	Stamp Date code & Ford P/N.	OK	OK	OK	OK	OK	OK	visual

REMARKS AND/OR INSTRUCTIONS:

DISPOSITION: TOOL APPROVED FOR PROD.		RESUBMISSION REQ'D
MFG. ENG.:		QRA ENG.:
		PURCH. AGENT:

FORM NO. 28798

TI-NHTSA 005993

TEXAS INSTRUMENTS

ATTLEBORO, MASSACHUSETTS 02703

PAGE 2 OF

SAMPLE REPORT

F2AC-9E924-AA

REASON FOR REPORT		VENDOR		P.O.	PART NO.	REV.
NEW PART					77PS23-1	A
REPLACEMENT TOOL.		REPORT REQ. BY	DATE	INSPECTED BY		DATE
CORRECTED TOOL.		Elaine Rose	4/14/92	Sandy Gilbert		4/1
REPAIRED TOOL.						
REVIEW						
OTHER Dim analysis	X					

THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING ACTUAL VALUES FOR ALL CHARACTERICS MEASURED. IN CASES WHERE ACTUAL VALUES DEV FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.

(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)

	Dimension	1	2	3	4	DISPOSITION 5	6	Method of Inspection
20	3/8-24 unF 2A	OK	OK	OK	OK	OK	OK	Thread
	.3667 - .3739 Pitch Diameter	.3715	.3725	.3710	.3715	.3705	.3710	Cal
21	1.10 - 1.40	1.224			section			Tmic
22	2.56	OK	.48		section			Surface meter
23	↗ 0.16 D Dim-by-com							
24	41° - 43°							Tmic
25	40° - 50° cham						46°9'	comp
26	Ø 7.82 - 8.03						7.910	"
27	1.52 - 2.04	Dim. #23 ↗ 0.16 D					1.783	"
28	9.39 - 9.66						9.448	x ND
29	8.12 min						8.384	"
30	14.23 max	#1 .0005" = .0127 mm					13.56	Cal
31	Ø 32.51 max						31.45	"
32	Ø 5.58 - 5.85						5.712	Tmic
33	Ø 7.23 - 7.37						7.317	"
34	Ø 3.30 - 3.60	#2 .0001 = .00254					3.444	"
35	Ø 14.02 - 14.53 Ht						14.14	Cal
36	0.58 - 0.68 2p						0.669	Tmic
		#3 .001 = .0254					0.615	"
37	2.59 - 2.80 a pl						2.668	"
							2.638	"
	⊕ .025 Ⓜ A B	#4 .0004 = .010					0.014	"
							0.182	"
38	8.30 - 8.72 2p						8.345	comp
							8.308	"
39	25°24' 2 plcs	#5 .0005 = .0127					25°4'	"

REMARKS AND/OR INSTRUCTIO

#6 .0006 = .01524

DISPOSITION: Tool Approv

MFG. ENG.:

FORM NO. P1728

TI-NHTSA 005994

TEXAS INSTRUMENTS

ATTLEBORO, MASSACHUSETTS 02703

SAMPLE REPORT

REASON FOR REPORT		VENDOR	P.O.	PART NO.	REV.
NEW PART				77PSL3-1	6
REPLACEMENT TOOL.		REPORT REQ. BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL.		Elaine Rose	4/14/92	Sandy Gilbert	4/2
REPAIRED TOOL.					
REVIEW					
OTHER Dim analysis	X				

THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING ACTUAL VALUES FOR ALL CHARACTERICS MEASURED. IN CASES WHERE ACTUAL VALUES DEVI FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.

	(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)						DISPOSITION		
	Dimension	1	2	3	4	5	6		METHOD OF INSPECTION
39	cont	24° 21'	23° 36'	23° 42'	22° 47'	24° 28'	23° 46'	comp	
40	Housing to be	OK	OK	OK	OK	OK	OK	visual	
	natural in color								
41	(71.5°) 2 plcs	71° 49'	71° 25'	72° 21'	71° 45'	71° 43'	71° 44'	comp	
		72° 37'	72° 21'	72° 14'	72° 30'	72° 5'	72° 3'	"	

REMARKS AND/OR INSTRUCTIONS:

DISPOSITION: TOOL APPROVED FOR PROD.		RESUBMISSION REQ'D
MFG. ENG.:		QRA ENG.:
		PURCH. AGENT:

FORM NO. 30788

DRAWINGS AVAILABLE UPON REQUEST

TEXAS INSTRUMENTS INCORPORATED
CONTROL PRODUCTS DIVISION
ATTLEBORO, MASSACHUSETTS 02703

QUALITY ASSURANCE WORK ORDER

* INDICATE TYPE OF SERVICE REQUESTED:
- ✓ FIRST ARTICLE INSPECTION
- __ PARTIAL "FAI"
- __ TOOLPROOF
- __ DIMENSIONAL ANALYSIS
- __ MACHINE CAPABILITY
- __ PROCESS CAPABILITY

NOTICE: TWO COPIES OF THE DRAWING MUST BE INCLUDED WITH YOUR REQUEST.

IMPORTANT: SUPPLIER F.A.I. INCLUDED WITH THIS REQUEST: YES/NO ? _____

* INDICATE ONE OF THE FOLLOWING REASONS: ✓ NEW PART / NEW TOOL / MOLD
(▽ F3AC-9F924-AA)
- __ CORRECTED TOOL / MOLD
- __ OTHER_____

* PART NUMBER: 77PSL3-1 DRAWING REVISION: A

NUMBER OF CAVITIES / STATIONS 6 TOOL ID: _____

TYPE OF MATERIAL: Noryl PART DESCRIPTION: Pressure Switch

SUPPLIER: _____ SAMPLE / MOLD DATE: _____

---

* DATE SUBMITTED: 4-14-92 DATE REQUIRED: 4/24/92

REQUESTED BY: Elaine Rose M/S: 12-27

COST CENTER: 149 PRODUCT CODE: 88 EXT: 1907

PRIORTY (INDICATE ONE): ✓ URGENT * __ AS DATED

** "URGENT" PRIORTY REQUIRES MANAGERS APPROVAL

APPROVED BY (IF REQUIRED): M Dilkella

ENGINEERING SPECIAL INSTRUCTIONS

NOTES

1.) A "FIRST ARTICLE INSPECTION", "PARTIAL F.A.I.", OR A "TOOLPROOF", ALL REQUIRE A "DISPOSITION" FROM THE MATERIALS REVIEW BOARD, INCLUDING ALL APPROPRIATE SIGNATURES. ALSO, THE DISPOSITIONED COPY MUST BE RETURNED TO RECEIVING INSPECTION CC:146 FOR PROPER RECORDING.

2.) RECORDS: A) COPIES OF ALL "FIRST ARTICLE INSPECTIONS" (INCLUDING PARTIALS) WILL BE RETAINED BY RECEIVING INSPECTION FOR SEVEN YEARS.
B) RECORDS OF ALL OTHER ANALYSIS WILL NOT BE RETAINED BY RECEIVING INSPECTION.

3.) "DIMENSIONAL ANALYSIS": ANY REQUEST FOR A DIMENSIONAL ANALYSIS THAT INCLUDES ALL DIMENSIONS, OR ALL "CRITICAL" & "MAJOR" DIMENSIONS, WILL BE CONSIDERED A "FIRST ARTICLE INSPECTION" OR A "TOOLPROOF", AND WILL REQUIRE DISPOSITION BY THE MATERIALS REVIEW BOARD. THE APPROVED COPY MUST BE RETURNED TO RECEIVING INSPECTION CC:146.

QUALITY ASSURANCE

DATE REC.: _____

EST. HRS.: _____

COMPLETED: _____

BY: _____

RECEIVING INSPECTION

77PSL3-1 Act. 90-160psi 6-29-92

Data obtained Apr. 16 '92 pg. 1 of 2

1	129.2		125.9		130.4	*	178.0	127.6	141.4
2	139.4		107.2		132.6		139.8		140.5
3	129.7		123.3		138.2		129.4		130.8
4	134.0		131.2		125.9		131.6		138.7
5	140.5		122.5		140.4		132.5		133.4
6	134.7		133.5		133.8		136.1		131.7
7	130.7		138.9		132.4		130.4		134.6
8	123.3		138.0		139.1		134.1		129.9
9	139.4		120.8		127.6		125.0		128.4
10	124.9		122.5		137.5		130.4		126.5
11	130.4		128.1		131.3		133.2		132.9
12	127.8		135.3		129.0		131.0		126.0
13	133.6		137.1		125.3		127.2		129.8
14	129.1		135.8		133.2		133.2		133.3
15	134.7		136.4		130.4		137.2		136.9
16	137.3		129.3		124.3		129.3		127.2
17	121.0		140.6		132.4		126.7		133.4
18	136.8		135.5		123.1		125.3		125.0
19	136.8		131.3		119.8		128.3		139.7
20	138.3		132.8		132.4		126.5		125.3
21	139.0		134.0		135.2		127.1		134.7
22	128.8		127.4		130.6		123.6		127.5
23	131.6		130.4		128.2		134.0		126.6
24	141.3		122.0	*	(177.8)	143.6	140.9		133.8
25	120.7		122.7		128.5		135.9		132.5
26	133.6		125.9		125.4		134.5		129.9
27	131.7		127.0		125.4		132.2		133.5
28	127.5		126.0		131.2		128.0		126.6
29	132.1		129.3		134.4		131.7		124.9
30	128.3		138.6		131.3		126.3		127.2
31	126.9		127.3		129.5		131.7		126.3
32	132.6		121.7		128.2		128.5		130.8
33	134.5		129.2		137.2		133.1		119.2
34	130.5		131.6		128.9		131.7		128.9
35	128.3		131.6		129.1		123.3		129.3
36	126.7		117.2		127.3		135.3		128.7
37	135.6		130.4		128.1		129.9		126.6
38	131.7		119.8		130.7		132.6		132.4
39	139.6		128.0		132.8		135.8		132.4
40	133.5		133.9		129.9		125.0		126.9
41	124.9		126.7		127.9		128.9		135.2
42	128.4		126.1		118.7		132.4		131.0
43	125.9		132.5		124.4		136.0		126.5
44	131.9		129.3		131.7		133.3		136.0
45	129.9		138.2		138.3		130.6		138.9
46	126.3		125.6		126.6		122.1		130.4
47	129.2		132.4		131.5		138.4		126.4
48	134.0		132.9		128.0		129.8		139.3
49	131.8		123.6		132.2		133.1		126.4
50	133.2		124.6		131.0		132.7		137.5

77PSL3-1 Oct.

Data obtained Apr. 16 '92

Pg. 242

1	131.7
2	128.2
3	131.7
4	134.4
5	137.1
6	120.5
7	130.3
8	133.4
9	124.2
10	133.9
11	133.7
12	130.6
13	128.1
14	128.9
15	130.8
16	133.3
17	127.2
18	130.8
19	129.5
20	130.3
21	142.8
22	126.1
23	127.1
24	130.7
25	134.7
26	127.6
27	127.2
28	123.1
29	129.9
30	125.8
31	130.5
32	123.6
33	131.3
34	134.2
35	131.5
36	137.6
37	125.6
38	129.1
39	133.1
40	136.6
41	129.4
42	137.5
43	129.9
44	125.2
45	134.0
46	122.9
47	131.0
48	123.8
49	123.8
50	126.9

77PSL3-1 Rel. 20-120 psi 6-27-92

Data obtained Apr. 16 '92 pg. 1 of

1	100.0		87.1		95.9	*	140.7	89.5	111.0
2	104.0		95.2		90.2		97.1		111.0
3	88.1		92.4		103.8		95.8		100.3
4	98.6		93.5		91.4		99.9		104.0
5	111.6		85.6		113.1		99.9		98.3
6	102.0		98.4		100.6		102.3		102.2
7	98.1		103.9		94.4		96.6		102.2
8	84.2		107.9		105.9		97.8		100.9
9	105.3		87.1		100.8		91.8		97.6
10	90.2		88.1		104.9		96.6		95.1
11	97.1		94.5		100.8		92.4		96.3
12	99.8		101.8		97.0		97.0		94.2
13	100.0		104.8		92.2		93.3		97.4
14	92.6		103.3		102.1		95.7		97.4
15	106.4		104.6		98.2		102.3		104.6
16	105.3		90.9		93.6		98.3		93.7
17	95.9		104.6		104.7		93.2		102.5
18	106.1		104.6		89.9		86.7		92.7
19	107.7		93.6		88.7		98.1		108.2
20	98.2		94.5		98.2		90.9		90.3
21	108.9		102.1		107.8		94.4		103.5
22	98.4		92.4		93.8		96.7		94.6
23	93.6		100.1	*	96.0	112.8	100.3		94.6
24	106.5		94.1		92.6		112.3		101.1
25	85.3		89.4		96.1		105.3		98.0
26	98.1		89.4		89.6		100.3		90.3
27	97.0		91.8		94.1		101.0		105.4
28	97.0		91.8		94.1		98.4		89.3
29	99.6		100.7		107.6		97.2		92.3
30	100.9		107.5		108.8		92.2		93.5
31	91.0		93.3		97.1		97.7		90.0
32	95.8		89.8		94.6		96.4		97.1
33	103.7		94.5		106.1		101.5		82.4
34	99.5		99.6		96.9		101.1		95.0
35	99.5		96.7		99.5		90.4		95.0
36	88.6		83.0		91.8		104.0		96.3
37	104.5		99.4		103.5		97.6		93.8
38	98.1		90.8		97.1		102.6		98.7
39	105.9		96.4		103.5		106.3		99.9
40	101.9		99.9		93.5		90.4		92.6
41	94.7		93.8		96.6		95.2		103.3
42	103.4		92.6		87.2		100.0		99.3
43	93.4		97.4		88.5		102.9		93.9
44	100.9		94.9		104.6		98.0		103.0
45	97.2		103.8		108.9		100.4		104.2
46	93.8		90.2		95.8		90.6		109.2
47	96.3		96.9		97.3		102.9		96.4
48	100.1		102.2		92.4		95.5		108.1
49	101.4		87.2		102.1		104.1		92.3
50	98.8		89.7		98.3		101.6		109.2

77PSL3-1 Rel.

Data obtained Apr. 16 '92

pg. 24

1	102.4
2	92.3
3	100.8
4	99.5
5	100.8
6	87.5
7	95.2
8	100.1
9	98.8
10	101.2
11	101.4
12	102.8
13	92.7
14	101.4
15	95.9
16	101.0
17	92.5
18	95.9
19	93.7
20	98.5
21	107.8
22	94.9
23	91.1
24	97.2
25	104.8
26	97.2
27	93.6
28	89.0
29	96.1
30	88.0
31	100.6
32	93.2
33	96.8
34	100.6
35	99.6
36	103.6
37	89.8
38	99.6
39	98.5
40	101.0
41	99.6
42	103.6
43	95.5
44	93.0
45	104.4
46	97.3
47	99.1
48	90.6
49	97.5
50	91.9

17-APR-1992 09:43:52.33 OPER DOOR DID NOT CLOSE 1

17-APR-1992 09:44:12.33 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 09:44:29.55 TOOL CYCLE TIMEOUT 1

77PS PRESSURE TESTER LOT REPORT

RATING:77PSL2-1
LOT ID:MASTERS
LOT STARTED:17-APR-1992 09:43:29.56
LOT FINISHED:17-APR-1992 10:11:04.07

SETUP DATA:
DISC LOT ID: 0.00
DISC MEAN ACT: 23.4 MEAN REL: 12.7
LIMIT (NC)
ACTUATION: 90.0 TO 160.0 PSI
RELEASE: 20.0 TO 120.0 PSI
DIFFERENTIAL: 0.0 TO 160.0 PSI
MAX MILLIVOLT: 500.0 PSI
ACT CREEP TIME: 25.0 PSI
REL CREEP TIME: 150.0 PSI
PRECYCLE PRESS: 800.0 PSI
PRECYCLE COUNT: 2

NOT ENOUGH PARTS FOR REPORT ON FIXTURE 0

SER 1; FIX 1; C= 0000000; BIN=6000 ; MRRU=43.7; MRRD=47.4; LEAK RATE= 2.0
ACT= 129.2; REL= 100.0; DIF= 29.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 2; FIX 2; C= 0000000; BIN=6000 ; MRRU=43.7; MRRD=47.4; LEAK RATE= 2.0
ACT= 139.4; REL= 104.0; DIF= 35.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 3; FIX 3; C= 0000000; BIN=6000 ; MRRU=43.7; MRRD=47.4; LEAK RATE= 2.0
ACT= 129.7; REL= 88.1; DIF= 41.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 4; FIX 4; C= 0000000; BIN=6000 ; MRRU=43.7; MRRD=47.4; LEAK RATE= 2.0
ACT= 134.0; REL= 98.6; DIF= 35.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:11:26.79 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:11:46.79 OPER DOOR STILL DID NOT CLOSE 1

SER 5; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=48.2; LEAK RATE= 2.0
ACT= 140.5; REL= 111.6; DIF= 28.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 6; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=48.2; LEAK RATE= 2.0
ACT= 134.7; REL= 102.0; DIF= 32.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 7; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=48.2; LEAK RATE= 2.0
ACT= 130.7; REL= 98.1; DIF= 32.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 8; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=48.2; LEAK RATE= 2.0
ACT= 103.3; REL= 64.2; DIF= 39.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:12:34.38 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:12:54.38 OPER DOOR STILL DID NOT CLOSE 1

SER 9; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=48.1; LEAK RATE= 2.0
ACT= 139.4; REL= 105.3; DIF= 34.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 10; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=48.1; LEAK RATE= 2.0
10 ACT= 124.9; REL= 90.2; DIF= 34.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 11; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=48.1; LEAK RATE= 2.0

ACT= 137.8; REL= [illegible]; DIF= 28.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:22:25.46 OPER DOOR DID NOT CLOSE 1

SER 13; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.3; LEAK RATE= 1.9
ACT= 133.6; REL= 100.0; DIF= 33.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 14; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.3; LEAK RATE= 1.9
ACT= 129.1; REL= 92.6; DIF= 36.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 15; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.3; LEAK RATE= 1.9
ACT= 134.7; REL= 106.4; DIF= 28.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 16; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.3; LEAK RATE= 1.9
ACT= 137.3; REL= 105.3; DIF= 32.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:23:09.05 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:23:29.05 OPER DOOR STILL DID NOT CLOSE 1

SER 17; FIX 1; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=48.1; LEAK RATE= 1.7
ACT= 131.0; REL= 95.9; DIF= 35.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 18; FIX 2; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=48.1; LEAK RATE= 1.7
ACT= 136.8; REL= 106.1; DIF= 30.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 19; FIX 3; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=48.1; LEAK RATE= 1.7
ACT= 136.8; REL= 107.7; DIF= 29.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

20 SER 20; FIX 4; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=48.1; LEAK RATE= 1.7
ACT= 133.3; REL= 98.2; DIF= 35.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 21; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.2; LEAK RATE= 1.9
ACT= 139.0; REL= 108.9; DIF= 30.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 22; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.2; LEAK RATE= 1.9
ACT= 128.8; REL= 98.4; DIF= 30.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 24; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.2; LEAK RATE= 1.9
ACT= 141.3; REL= 106.5; DIF= 34.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 25; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=48.5; LEAK RATE= 2.2
ACT= 120.7; REL= 85.3; DIF= 35.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 26; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=48.5; LEAK RATE= 2.2
ACT= 133.0; REL= 98.1; DIF= 35.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 27; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=48.5; LEAK RATE= 2.2
ACT= 131.7; REL= 97.0; DIF= 34.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 28; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=48.5; LEAK RATE= 2.2
ACT= 127.5; REL= 97.0; DIF= 30.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 29; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.9; LEAK RATE= 2.2
ACT= 132.1; REL= 99.6; DIF= 32.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

30 SER 30; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.9; LEAK RATE= 2.2
ACT= 128.3; REL= 100.9; DIF= 27.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 31; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.9; LEAK RATE= 2.2
ACT= 126.9; REL= 91.0; DIF= 35.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 32; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.9; LEAK RATE= 2.2
ACT= 132.6; REL= 95.8; DIF= 36.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:25:28.45 OPER DOOR DID NOT CLOSE 1

SER 33; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=48.6; LEAK RATE= 1.9
ACT= 134.5; REL= 103.7; DIF= 30.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 34; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=48.6; LEAK RATE= 1.9
ACT= 130.5; REL= 99.5; DIF= 31.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 36; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=46.6; LEAK RATE= 1.9
ACT= 123.7; REL= 88.6; DIF= 35.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 37; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=48.4; LEAK RATE= 2.0
ACT= 135.6; REL= 104.5; DIF= 31.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 38; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=48.4; LEAK RATE= 2.0
ACT= 131.7; REL= 98.1; DIF= 33.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 39; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=48.4; LEAK RATE= 2.0
ACT= 139.6; REL= 105.9; DIF= 33.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

40 SER 40; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=48.4; LEAK RATE= 2.0
ACT= 133.5; REL= 101.9; DIF= 31.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:26:35.20 OPER DOOR DID NOT CLOSE 1

SER 41; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 124.9; REL= 94.7; DIF= 30.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 42; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 128.4; REL= 103.4; DIF= 24.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 43; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 125.5; REL= 93.4; DIF= 32.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 44; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 131.9; REL= 100.9; DIF= 31.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:27:06.17 OPER DOOR DID NOT CLOSE 1

SER 45; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.5; LEAK RATE= 2.0

SER [illegible] FIX 2; C= 0000000; BIN=0000 ; MRRU=44.2; MRRD=47.5; LEAK RATE= 2.0
ACT= 126.3; REL= 93.8; DIF= 32.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 47; FIX 3; C= 0000000; BIN=0000 ; MRRU=44.2; MRRD=47.5; LEAK RATE= 2.0
ACT= 129.2; REL= 96.3; DIF= 32.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 48; FIX 4; C= 0000000; BIN=0000 ; MRRU=44.2; MRRD=47.5; LEAK RATE= 2.0
ACT= 134.0; REL= 100.1; DIF= 33.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:27:52.52 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:28:12.52 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 10:28:26.19 TOOL CYCLE TIMEOUT 1

SER 49; FIX 1; C= 0000000; BIN=0000 ; MRRU=44.3; MRRD=48.1; LEAK RATE= 1.9
ACT= 131.6; REL= 101.4; DIF= 30.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 50; FIX 2; C= 0000000; BIN=0000 ; MRRU=44.3; MRRD=48.1; LEAK RATE= 1.9
ACT= 133.2; REL= 98.8; DIF= 34.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 51; FIX 3; C= 0000000; BIN=0000 ; MRRU=44.3; MRRD=48.1; LEAK RATE= 1.9
ACT= 125.9; REL= 87.1; DIF= 38.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 52; FIX 4; C= 0000000; BIN=0000 ; MRRU=44.3; MRRD=48.1; LEAK RATE= 1.9
ACT= 127.2; REL= 95.2; DIF= 32.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:31:52.41 OPER DOOR DID NOT CLOSE 1

SER 53; FIX 1; C= 0000000; BIN=0000 ; MRRU=44.0; MRRD=47.7; LEAK RATE= 1.9
ACT= 123.3; REL= 92.4; DIF= 30.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 54; FIX 2; C= 0000000; BIN=0000 ; MRRU=44.0; MRRD=47.7; LEAK RATE= 1.9
ACT= 131.2; REL= 93.5; DIF= 37.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 55; FIX 3; C= 0000000; BIN=0000 ; MRRU=44.0; MRRD=47.7; LEAK RATE= 1.9
ACT= 122.5; REL= 85.6; DIF= 36.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 56; FIX 4; C= 0000000; BIN=0000 ; MRRU=44.0; MRRD=47.7; LEAK RATE= 1.9
ACT= 133.5; REL= 98.4; DIF= 35.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

ACT= [illegible]; REL= [illegible]; DIF= [illegible] PSI; ACTCR= [illegible]; RELCR= [illegible]

SER 58; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.5; LEAK RATE= 1.9
ACT= 138.0; REL= 107.4; DIF= 30.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 59; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.5; LEAK RATE= 1.9
ACT= 120.8; REL= 87.1; DIF= 33.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

60 SER 60; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.5; LEAK RATE= 1.9
ACT= 122.5; REL= 88.1; DIF= 34.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:32:33.71 OPER DOOR DID NOT CLOSE 1

SER 61; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=48.0; LEAK RATE= 2.1
ACT= 128.1; REL= 94.5; DIF= 33.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 62; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=48.0; LEAK RATE= 2.1
ACT= 135.3; REL= 101.8; DIF= 33.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 63; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=48.0; LEAK RATE= 2.1
ACT= 137.1; REL= 104.8; DIF= 32.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 64; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=48.0; LEAK RATE= 2.1
ACT= 135.8; REL= 103.3; DIF= 32.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:33:00.40 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:33:20.40 OPER DOOR STILL DID NOT CLOSE 1

SER 65; FIX 1; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=47.2; LEAK RATE= 1.7
ACT= 136.9; REL= 104.6; DIF= 32.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 66; FIX 2; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=47.2; LEAK RATE= 1.7
ACT= 129.3; REL= 90.9; DIF= 38.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 67; FIX 3; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=47.2; LEAK RATE= 1.7
ACT= 140.6; REL= 104.6; DIF= 36.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 68; FIX 4; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=47.2; LEAK RATE= 1.7
ACT= 135.5; REL= 104.6; DIF= 30.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 69; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.8; LEAK RATE= 1.9
ACT= 131.3; REL= 93.6; DIF= 37.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

70 SER 70; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.8; LEAK RATE= 1.9
ACT= 132.8; REL= 94.5; DIF= 38.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 71; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.8; LEAK RATE= 1.9
ACT= 134.0; REL= 102.1; DIF= 32.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 72; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.8; LEAK RATE= 1.9
ACT= 127.4; REL= 92.4; DIF= 35.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:34:29.53 OPER DOOR DID NOT CLOSE 1

SER 73; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.5; LEAK RATE= 2.0
ACT= 130.4; REL= 100.1; DIF= 30.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 74; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.5; LEAK RATE= 2.0
ACT= 122.0; REL= 94.1; DIF= 27.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 75; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.5; LEAK RATE= 2.0
ACT= 122.7; REL= 89.4; DIF= 33.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 76; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.5; LEAK RATE= 2.0
ACT= 125.9; REL= 89.4; DIF= 36.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 77; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.8; MRRD=47.3; LEAK RATE= 2.0
ACT= 127.0; REL= 91.8; DIF= 35.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 78; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.8; MRRD=47.3; LEAK RATE= 2.0
ACT= 126.0; REL= 91.8; DIF= 34.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 79; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.8; MRRD=47.3; LEAK RATE= 2.0
ACT= 129.3; REL= 100.7; DIF= 28.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

80 SER 80; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.8; MRRD=47.3; LEAK RATE= 2.0
ACT= 138.6; REL= 107.5; DIF= 31.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 81; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=46.8; LEAK RATE= 2.0
ACT= 127.3; REL= 93.3; DIF= 34.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 82; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=46.8; LEAK RATE= 2.0
ACT= 121.7; REL= 89.8; DIF= 31.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 83; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=46.8; LEAK RATE= 2.0
ACT= 129.2; REL= 94.5; DIF= 34.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 84; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=46.8; LEAK RATE= 2.0
ACT= 131.6; REL= 99.6; DIF= 32.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:35:46.00 OPEN DOOR DID NOT CLOSE 1

17-APR-1992 10:36:06.00 OPEN DOOR STILL DID NOT CLOSE 1

17-APR-1992 10:36:22.20 TOOL CYCLE TIMEOUT 1

SER 85; FIX 1; C= 0000000; BIN=GOOD ; MRRU=43.9; MRRD=47.8; LEAK RATE= 2.1
ACT= 131.6; REL= 96.7; DIF= 34.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 86; FIX 2; C= 0000000; BIN=GOOD ; MRRU=43.9; MRRD=47.8; LEAK RATE= 2.1
ACT= 117.2; REL= 83.0; DIF= 34.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 87; FIX 3; C= 0000000; BIN=GOOD ; MRRU=43.9; MRRD=47.8; LEAK RATE= 2.1
ACT= 130.4; REL= 99.4; DIF= 31.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 88; FIX 4; C= 0000000; BIN=GOOD ; MRRU=43.9; MRRD=47.8; LEAK RATE= 2.1
ACT= 119.8; REL= 90.8; DIF= 28.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:39:56.83 OPEN DOOR DID NOT CLOSE 1

SER 89; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.8; LEAK RATE= 1.9
ACT= 128.0; REL= 96.4; DIF= 31.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

90 SER 90; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.8; LEAK RATE= 1.9
ACT= 133.9; REL= 99.9; DIF= 34.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 91; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.8; LEAK RATE= 1.9
ACT= 126.1; REL= 93.8; DIF= 32.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

ACT= 126.1; REL= 92.0; DIF= 33.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:40:40.32 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:41:00.32 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 10:41:17.81 TOOL CYCLE TIMEOUT 1

SER 93; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.8; LEAK RATE= 2.0
ACT= 132.5; REL= 97.4; DIF= 35.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 94; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.8; LEAK RATE= 2.0
ACT= 129.3; REL= 94.9; DIF= 34.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 95; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.8; LEAK RATE= 2.0
ACT= 138.2; REL= 103.8; DIF= 34.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 96; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.8; LEAK RATE= 2.0
ACT= 125.6; REL= 90.2; DIF= 35.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:44:39.52 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:44:59.52 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 10:45:17.91 TOOL CYCLE TIMEOUT 1

SER 97; FIX 1; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.4; LEAK RATE= 1.9
ACT= 132.4; REL= 96.9; DIF= 35.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 98; FIX 2; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.4; LEAK RATE= 1.9
ACT= 132.9; REL= 102.2; DIF= 30.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 99; FIX 3; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.4; LEAK RATE= 1.9
ACT= 123.6; REL= 87.2; DIF= 36.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 100; FIX 4; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.4; LEAK RATE= 1.9
ACT= 124.6; REL= 89.7; DIF= 35.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

ACT= 130.4; REL= 95.9; DIF= 34.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 102; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.8; LEAK RATE= 1.9
ACT= 132.6; REL= 90.2; DIF= 42.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 103; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.8; LEAK RATE= 1.9
ACT= 138.2; REL= 103.8; DIF= 34.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 104; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.8; LEAK RATE= 1.9
ACT= 125.9; REL= 91.4; DIF= 34.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 105; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.2; LEAK RATE= 1.8
ACT= 140.4; REL= 113.1; DIF= 27.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 106; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.2; LEAK RATE= 1.8
ACT= 133.8; REL= 100.6; DIF= 33.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 107; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.2; LEAK RATE= 1.8
ACT= 132.4; REL= 94.4; DIF= 38.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 108; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.2; LEAK RATE= 1.8
ACT= 139.1; REL= 105.9; DIF= 33.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:49:40.16 OPER DOOR DID NOT CLOSE 1

SER 109; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.4; MRRD=47.9; LEAK RATE= 2.0
ACT= 127.6; REL= 100.8; DIF= 26.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

110 SER 110; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.4; MRRD=47.9; LEAK RATE= 2.0
ACT= 137.5; REL= 104.9; DIF= 32.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 111; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.4; MRRD=47.9; LEAK RATE= 2.0
ACT= 131.3; REL= 100.8; DIF= 30.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 112; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.4; MRRD=47.9; LEAK RATE= 2.0
ACT= 129.0; REL= 97.0; DIF= 32.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 113; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.2; LEAK RATE= 2.0
ACT= 125.3; REL= 92.2; DIF= 33.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 114; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.2; LEAK RATE= 2.0
ACT= 133.2; REL= 102.1; DIF= 31.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

ACT= 130.4; REL= 96.2; DIF= 32.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 116; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.2; LEAK RATE= 2.0
ACT= 124.3; REL= 93.6; DIF= 30.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 117; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.9; LEAK RATE= 2.1
ACT= 132.4; REL= 104.7; DIF= 27.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 118; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.9; LEAK RATE= 2.1
ACT= 123.1; REL= 89.9; DIF= 33.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 119; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.9; LEAK RATE= 2.1
ACT= 119.8; REL= 88.7; DIF= 31.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

120 SER 120; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.9; LEAK RATE= 2.1
ACT= 132.4; REL= 98.2; DIF= 34.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 121; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.8; LEAK RATE= 2.0
ACT= 135.2; REL= 107.8; DIF= 27.4 PSI; ACTCR= 200.0ms; RELCR= 122.3

SER 122; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.8; LEAK RATE= 2.0
ACT= 130.6; REL= 93.8; DIF= 36.7 PSI; ACTCR= 200.0ms; RELCR= 15.0

SER 123; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.8; LEAK RATE= 2.0
ACT= 128.2; REL= 96.0; DIF= 32.2 PSI; ACTCR= 200.0ms; RELCR= 38.4

24 SER 124; FIX 4; C= 0020002; BIN=CONT ; MRRU=44.1; MRRD=47.8; LEAK RATE= 2.0
ACT= 177.8; REL= 92.5; DIF= 85.2 PSI; ACTCR= 200.0ms; RELCR= 0.6

17-APR-1992 10:51:29.38 OPER DOOR DID NOT CLOSE 1

SER 125; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.3; LEAK RATE= 2.4
ACT= 128.6; REL= 96.1; DIF= 32.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 126; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.3; LEAK RATE= 2.4
ACT= 123.4; REL= 89.6; DIF= 33.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 127; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.3; LEAK RATE= 2.4
ACT= 125.4; REL= 94.1; DIF= 31.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 128; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.3; LEAK RATE= 2.4
ACT= 131.1; REL= 94.1; DIF= 37.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:52:28.66 OPER DOOR STILL DID NOT CLOSE 1

SER 129; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.6; LEAK RATE= 2.2
ACT= 134.4; REL= 107.6; DIF= 26.8 PSI; ACTOR= 200.0ms; RELOR= 200.0

130 SER 130; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.6; LEAK RATE= 2.2
ACT= 131.3; REL= 100.8; DIF= 30.4 PSI; ACTOR= 200.0ms; RELOR= 200.0

SER 131; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.6; LEAK RATE= 2.2
ACT= 129.5; REL= 97.1; DIF= 32.4 PSI; ACTOR= 200.0ms; RELOR= 200.0

SER 132; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.6; LEAK RATE= 2.2
ACT= 128.2; REL= 94.6; DIF= 33.6 PSI; ACTOR= 200.0ms; RELOR= 200.0

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17-APR-1992 10:53:00.20 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:53:20.20 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 10:53:37.62 TOOL CYCLE TIMEOUT 1

SER 133; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.1; LEAK RATE= 1.8
ACT= 137.2; REL= 106.1; DIF= 31.1 PSI; ACTOR= 200.0ms; RELOR= 200.0

SER 134; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.1; LEAK RATE= 1.8
ACT= 128.7; REL= 96.9; DIF= 31.7 PSI; ACTOR= 200.0ms; RELOR= 200.0

SER 135; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.1; LEAK RATE= 1.8
ACT= 129.1; REL= 99.5; DIF= 29.6 PSI; ACTOR= 200.0ms; RELOR= 200.0

SER 136; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.1; LEAK RATE= 1.8
ACT= 127.3; REL= 91.8; DIF= 35.5 PSI; ACTOR= 200.0ms; RELOR= 200.0

17-APR-1992 10:54:52.26 OPER DOOR DID NOT CLOSE 1

ACT= 120.1; REL= 103.2; DIF= 17.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 138; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.2; LEAK RATE= 2.0
ACT= 130.7; REL= 97.1; DIF= 33.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 139; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.2; LEAK RATE= 2.0
ACT= 132.8; REL= 103.5; DIF= 29.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

140 SER 140; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.2; LEAK RATE= 2.0
ACT= 129.9; REL= 93.6; DIF= 36.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 141; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.5; LEAK RATE= 2.0
ACT= 127.7; REL= 96.6; DIF= 31.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 142; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.5; LEAK RATE= 2.0
ACT= 118.7; REL= 87.2; DIF= 31.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 143; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.5; LEAK RATE= 2.0
ACT= 124.4; REL= 88.5; DIF= 35.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 144; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.5; LEAK RATE= 2.0
ACT= 131.7; REL= 104.6; DIF= 27.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 145; FIX 1; C= 0000000; BIN=GOOD ; MRRU=43.6; MRRD=47.1; LEAK RATE= 2.2
ACT= 138.3; REL= 108.9; DIF= 29.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 146; FIX 2; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.1; LEAK RATE= 2.2
ACT= 126.6; REL= 95.8; DIF= 30.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 147; FIX 3; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.1; LEAK RATE= 2.2
ACT= 131.5; REL= 97.3; DIF= 34.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 148; FIX 4; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.1; LEAK RATE= 2.2
ACT= 128.0; REL= 92.4; DIF= 35.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 149; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.1; LEAK RATE= 2.2
ACT= 132.2; REL= 102.1; DIF= 30.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

150 SER 150; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.1; LEAK RATE= 2.2
ACT= 131.0; REL= 98.3; DIF= 32.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 151; FIX 3; C= 0020012; BIN=CONT ; MRRU=44.2; MRRD=47.1; LEAK RATE= 2.2
ACT= 176.0; REL= 140.7; DIF= 37.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 152; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.1; LEAK RATE= 2.2
ACT= 139.2; REL= 97.1; DIF= 42.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 153; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.5; LEAK RATE= 1.9
ACT= 129.4; REL= 95.8; DIF= 33.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 154; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.5; LEAK RATE= 1.9
ACT= 131.6; REL= 99.9; DIF= 31.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 155; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.5; LEAK RATE= 1.9
ACT= 132.5; REL= 99.9; DIF= 32.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 156; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.5; LEAK RATE= 1.9
ACT= 136.1; REL= 102.9; DIF= 33.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 157; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.6; LEAK RATE= 1.9
ACT= 130.4; REL= 96.6; DIF= 33.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 158; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.6; LEAK RATE= 1.9
ACT= 134.1; REL= 97.8; DIF= 36.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 159; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.6; LEAK RATE= 1.9
ACT= 125.0; REL= 91.8; DIF= 33.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

160 SER 160; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.6; LEAK RATE= 1.9
ACT= 130.4; REL= 96.6; DIF= 33.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:57:25.69 OPER DOOR DID NOT CLOSE 1

SER 161; FIX 1; C= 0000000; BIN=GOOD ; MRRU=43.9; MRRD=47.8; LEAK RATE= 1.9
ACT= 133.2; REL= 99.4; DIF= 33.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 162; FIX 2; C= 0000000; BIN=GOOD ; MRRU=43.9; MRRD=47.8; LEAK RATE= 1.9
ACT= 131.0; REL= 97.0; DIF= 34.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 163; FIX 3; C= 0000000; BIN=GOOD ; MRRU=43.9; MRRD=47.8; LEAK RATE= 1.9

ACT= 133.2; REL= 95.7; DIF= 37.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 165; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.7; LEAK RATE= 2.0
ACT= 137.2; REL= 102.3; DIF= 34.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 166; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.7; LEAK RATE= 2.0
ACT= 129.3; REL= 98.3; DIF= 31.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 167; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.7; LEAK RATE= 2.0
ACT= 126.7; REL= 93.2; DIF= 33.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 168; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.7; LEAK RATE= 2.0
ACT= 125.3; REL= 86.7; DIF= 38.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 10:58:22.59 OPER DOOR DID NOT CLOSE 1

17-APR-1992 10:58:42.59 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 10:59:00.61 TOOL CYCLE TIMEOUT 1

SER 169; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.7; LEAK RATE= 2.1
ACT= 128.3; REL= 96.1; DIF= 30.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

170 SER 170; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.7; LEAK RATE= 2.1
ACT= 126.5; REL= 90.9; DIF= 35.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 171; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.7; LEAK RATE= 2.1
ACT= 127.1; REL= 94.4; DIF= 32.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 172; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.7; LEAK RATE= 2.1
ACT= 123.6; REL= 96.7; DIF= 26.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:00:53.08 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:01:13.08 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 11:01:29.18 TOOL CYCLE TIMEOUT 1

SER 173; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.0; MRRD=47.0; LEAK RATE= 2.2
ACT= 134.0; REL= 100.3; DIF= 33.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 174; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.0; MRRD=47.0; LEAK RATE= 2.2
ACT= 142.9; REL= 112.3; DIF= 30.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 175; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.0; MRRD=47.0; LEAK RATE= 2.2

ACT= 134.5; REL= 100.3; DIF= 34.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:03:27.36 OPER DOOR DID NOT CLOSE 1

SER 177; FIX 1; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=47.4; LEAK RATE= 1.9
ACT= 132.2; REL= 101.0; DIF= 31.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 178; FIX 2; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=47.4; LEAK RATE= 1.9
ACT= 128.0; REL= 98.4; DIF= 29.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 179; FIX 3; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=47.4; LEAK RATE= 1.9
ACT= 131.7; REL= 97.2; DIF= 34.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

180 SER 180; FIX 4; C= 0000000; BIN=GOOD ; MRRU=43.7; MRRD=47.4; LEAK RATE= 1.9
ACT= 126.3; REL= 92.3; DIF= 33.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:03:52.53 OPER DOOR DID NOT CLOSE 1

SER 181; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.5; LEAK RATE= 2.0
ACT= 131.7; REL= 97.7; DIF= 34.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 182; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.5; LEAK RATE= 2.0
ACT= 128.5; REL= 96.4; DIF= 32.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 183; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.5; LEAK RATE= 2.0
ACT= 133.1; REL= 101.5; DIF= 31.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 184; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.5; LEAK RATE= 2.0
ACT= 131.7; REL= 101.1; DIF= 30.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:04:18.31 OPER DOOR DID NOT CLOSE 1

ACT= 122.3; REL= 99.4; DIF= 22.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 186; FIX 2; C= 0000000; BIN=8000 ; MRRU=44.2; MRRD=47.6; LEAK RATE= 2.0
ACT= 135.3; REL= 104.0; DIF= 31.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 187; FIX 3; C= 0000000; BIN=8000 ; MRRU=44.2; MRRD=47.6; LEAK RATE= 2.0
ACT= 129.9; REL= 97.6; DIF= 32.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 188; FIX 4; C= 0000000; BIN=8000 ; MRRU=44.2; MRRD=47.6; LEAK RATE= 2.0
ACT= 132.6; REL= 102.6; DIF= 30.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:04:44.23 OPER DOOR DID NOT CLOSE 1

SER 189; FIX 1; C= 0000000; BIN=8000 ; MRRU=44.5; MRRD=48.5; LEAK RATE= 1.8
ACT= 135.8; REL= 106.3; DIF= 29.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

190 SER 190; FIX 2; C= 0000000; BIN=8000 ; MRRU=44.5; MRRD=48.5; LEAK RATE= 1.8
ACT= 125.0; REL= 90.4; DIF= 34.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 191; FIX 3; C= 0000000; BIN=8000 ; MRRU=44.5; MRRD=48.5; LEAK RATE= 1.8
ACT= 128.7; REL= 95.2; DIF= 33.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 192; FIX 4; C= 0000000; BIN=8000 ; MRRU=44.5; MRRD=48.5; LEAK RATE= 1.8
ACT= 132.4; REL= 100.0; DIF= 32.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 193; FIX 1; C= 0000000; BIN=8000 ; MRRU=44.3; MRRD=47.7; LEAK RATE= 2.0
ACT= 136.0; REL= 102.5; DIF= 33.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 194; FIX 2; C= 0000000; BIN=8000 ; MRRU=44.3; MRRD=47.7; LEAK RATE= 2.0
ACT= 133.3; REL= 98.0; DIF= 35.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 195; FIX 3; C= 0000000; BIN=8000 ; MRRU=44.3; MRRD=47.7; LEAK RATE= 2.0
ACT= 130.6; REL= 100.4; DIF= 30.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 196; FIX 4; C= 0000000; BIN=8000 ; MRRU=44.3; MRRD=47.7; LEAK RATE= 2.0
ACT= 122.1; REL= 90.6; DIF= 31.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

ACT= 128.4; REL= 102.9; DIF= 25.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 198; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.5; LEAK RATE= 2.2
ACT= 129.8; REL= 95.5; DIF= 34.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 199; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.5; LEAK RATE= 2.2
ACT= 133.1; REL= 104.1; DIF= 28.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

200 SER 200; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.5; LEAK RATE= 2.2
ACT= 132.7; REL= 101.6; DIF= 31.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 201; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=46.2; LEAK RATE= 2.3
ACT= 141.4; REL= 111.0; DIF= 30.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 202; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=46.2; LEAK RATE= 2.3
ACT= 140.5; REL= 111.0; DIF= 29.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 203; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=46.2; LEAK RATE= 2.3
ACT= 130.8; REL= 100.3; DIF= 30.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 204; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=46.2; LEAK RATE= 2.3
ACT= 138.7; REL= 104.0; DIF= 34.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:06:27.81 OPER DOOR DID NOT CLOSE 1

SER 205; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=48.0; LEAK RATE= 2.1
ACT= 133.4; REL= 98.3; DIF= 35.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 206; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=48.0; LEAK RATE= 2.1
ACT= 131.7; REL= 102.2; DIF= 29.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 207; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=48.0; LEAK RATE= 2.1
ACT= 134.6; REL= 102.2; DIF= 32.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 208; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=48.0; LEAK RATE= 2.1
ACT= 129.9; REL= 100.9; DIF= 29.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:07:09.87 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:07:29.87 OPER DOOR STILL DID NOT CLOSE 1

SER 209; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.4; LEAK RATE= 1.9
ACT= 128.4; REL= 97.6; DIF= 30.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 210; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.4; LEAK RATE= 1.9
ACT= 126.5; REL= 95.1; DIF= 31.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 211; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.4; LEAK RATE= 1.9
ACT= 132.9; REL= 96.3; DIF= 36.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 212; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.2; MRRD=47.4; LEAK RATE= 1.9
ACT= 126.0; REL= 94.2; DIF= 31.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 213; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.5; MRRD=47.5; LEAK RATE= 2.1
ACT= 129.8; REL= 97.4; DIF= 32.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 214; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.5; MRRD=47.5; LEAK RATE= 2.1
ACT= 133.3; REL= 97.4; DIF= 35.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 215; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.5; MRRD=47.5; LEAK RATE= 2.1
ACT= 136.9; REL= 104.0; DIF= 32.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 216; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.5; MRRD=47.5; LEAK RATE= 2.1
ACT= 127.2; REL= 93.7; DIF= 33.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:15:06.03 SPEN DOOR DID NOT CLOSE 1

SER 217; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.3; MRRD=47.6; LEAK RATE= 2.0
ACT= 133.4; REL= 102.5; DIF= 30.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 218; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.3; MRRD=47.6; LEAK RATE= 2.0
ACT= 125.0; REL= 92.7; DIF= 32.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 219; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.3; MRRD=47.6; LEAK RATE= 2.0
ACT= 139.7; REL= 108.2; DIF= 31.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 220; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.3; MRRD=47.6; LEAK RATE= 2.0
ACT= 125.3; REL= 90.3; DIF= 35.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:16:31.42 OPER DOOR DID NOT CLOSE 1

SER 221; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 134.1; REL= 133.5; DIF= 31.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 222; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 127.5; REL= 94.6; DIF= 32.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 223; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 126.6; REL= 94.6; DIF= 32.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 224; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 133.8; REL= 101.1; DIF= 32.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:16:56.88 OPER DOOR DID NOT CLOSE 1

SER 225; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=46.7; LEAK RATE= 1.9
ACT= 132.5; REL= 98.0; DIF= 34.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 226; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=46.7; LEAK RATE= 1.9
ACT= 129.9; REL= 90.3; DIF= 39.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 227; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=46.7; LEAK RATE= 1.9
ACT= 133.5; REL= 105.4; DIF= 28.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 228; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=46.7; LEAK RATE= 1.9
ACT= 126.6; REL= 89.3; DIF= 37.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:17:28.27 OPER DOOR DID NOT CLOSE 1

SER 229; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.5; LEAK RATE= 1.6
ACT= 124.9; REL= 92.3; DIF= 32.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

230 SER 230; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.5; LEAK RATE= 1.6
ACT= 127.2; REL= 93.5; DIF= 33.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

ACT= 126.3; REL= 90.0; DIF= 36.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 232; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.5; LEAK RATE= 1.6
ACT= 130.8; REL= 97.1; DIF= 33.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:17:52.80 OPER DOOR DID NOT CLOSE 1

SER 233; FIX 1; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.6; LEAK RATE= 1.9
ACT= 117.2; REL= 82.4; DIF= 34.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 234; FIX 2; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.6; LEAK RATE= 1.9
ACT= 128.9; REL= 95.0; DIF= 33.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 235; FIX 3; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.6; LEAK RATE= 1.9
ACT= 129.3; REL= 95.0; DIF= 34.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 236; FIX 4; C= 0000000; BIN=GOOD ; MRRU=43.8; MRRD=47.6; LEAK RATE= 1.9
ACT= 128.7; REL= 96.3; DIF= 32.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 237; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.9; LEAK RATE= 1.7
ACT= 126.6; REL= 93.8; DIF= 32.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 238; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.9; LEAK RATE= 1.7
ACT= 132.4; REL= 98.7; DIF= 33.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 239; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.9; LEAK RATE= 1.7
ACT= 132.4; REL= 99.9; DIF= 32.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 240; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=47.9; LEAK RATE= 1.7
240 ACT= 126.9; REL= 92.6; DIF= 34.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 241; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.5; LEAK RATE= 1.8
ACT= 135.2; REL= 102.3; DIF= 26.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

[illegible]

SER 243; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.5; LEAK RATE= 1.8
ACT= 126.5; REL= 93.9; DIF= 32.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 244; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.5; MRRD=47.5; LEAK RATE= 1.8
ACT= 136.0; REL= 103.0; DIF= 33.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:19:07.88 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:19:27.88 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 11:19:46.19 TOOL CYCLE TIMEOUT 1

SER 245; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.4; LEAK RATE= 1.8
ACT= 138.9; REL= 104.2; DIF= 34.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 246; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.4; LEAK RATE= 1.8
ACT= 130.4; REL= 100.2; DIF= 30.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 247; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.4; LEAK RATE= 1.8
ACT= 126.4; REL= 96.4; DIF= 30.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 248; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.4; LEAK RATE= 1.8
ACT= 139.3; REL= 108.1; DIF= 31.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 249; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.6; LEAK RATE= 2.1
ACT= 126.4; REL= 92.3; DIF= 34.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

250 SER 250; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.6; LEAK RATE= 2.1
ACT= 137.6; REL= 109.2; DIF= 28.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 251; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.6; LEAK RATE= 2.1
ACT= 131.7; REL= 102.4; DIF= 29.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 252; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.6; LEAK RATE= 2.1
ACT= 128.2; REL= 92.3; DIF= 35.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:22:27.92 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:22:47.92 OPER DOOR STILL DID NOT CLOSE 1

SER 253; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.0; LEAK RATE= 2.0
ACT= 131.7; REL= 100.8; DIF= 30.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 254; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.0; LEAK RATE= 2.0
ACT= 134.4; REL= 99.5; DIF= 34.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

ACT= 121.1; REL= 100.8; DIF= 20.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 256; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.0; LEAK RATE= 2.0
ACT= 120.5; REL= 87.5; DIF= 33.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:23:22.47 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:23:42.47 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 11:23:59.21 TOOL CYCLE TIMEOUT 1

SER 257; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.6; MRRD=47.8; LEAK RATE= 1.8
ACT= 130.3; REL= 95.2; DIF= 35.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 258; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.6; MRRD=47.8; LEAK RATE= 1.8
ACT= 133.4; REL= 100.1; DIF= 33.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 259; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.6; MRRD=47.8; LEAK RATE= 1.8
ACT= 124.2; REL= 98.8; DIF= 25.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

260 SER 260; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.6; MRRD=47.8; LEAK RATE= 1.8
ACT= 133.9; REL= 101.2; DIF= 32.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:30:18.24 OPER DOOR DID NOT CLOSE 1

SER 261; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=48.1; LEAK RATE= 2.1
ACT= 133.7; REL= 101.4; DIF= 32.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 262; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=48.1; LEAK RATE= 2.1
ACT= 130.6; REL= 102.8; DIF= 27.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 263; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=48.1; LEAK RATE= 2.1
ACT= 128.1; REL= 92.7; DIF= 35.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 264; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=48.1; LEAK RATE= 2.1
ACT= 128.9; REL= 101.4; DIF= 27.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 265; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.7; LEAK RATE= 2.3
ACT= 130.8; REL= 95.9; DIF= 35.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 266; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.7; LEAK RATE= 2.3
ACT= 133.3; REL= 101.0; DIF= 32.3 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 267; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.7; LEAK RATE= 2.3
ACT= 127.2; REL= 92.5; DIF= 34.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 268; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.4; MRRD=47.7; LEAK RATE= 2.3
ACT= 130.8; REL= 95.9; DIF= 35.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 269; FIX 1; C= 0000000; BIN=8000 ; MRRU=44.0; MRRD=47.3; LEAK RATE= 2.0
ACT= 129.5; REL= 93.7; DIF= 35.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 270; FIX 2; C= 0000000; BIN=8000 ; MRRU=44.0; MRRD=47.3; LEAK RATE= 2.0
ACT= 130.3; REL= 98.5; DIF= 31.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 271; FIX 3; C= 0000000; BIN=8000 ; MRRU=44.0; MRRD=47.3; LEAK RATE= 2.0
ACT= 142.8; REL= 107.8; DIF= 34.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 272; FIX 4; C= 0000000; BIN=8000 ; MRRU=44.0; MRRD=47.3; LEAK RATE= 2.0
ACT= 126.1; REL= 94.9; DIF= 31.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 273; FIX 1; C= 0000000; BIN=8000 ; MRRU=44.2; MRRD=47.7; LEAK RATE= 1.5
ACT= 127.1; REL= 91.1; DIF= 36.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 274; FIX 2; C= 0000000; BIN=8000 ; MRRU=44.2; MRRD=47.7; LEAK RATE= 1.5
ACT= 130.7; REL= 97.2; DIF= 33.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 275; FIX 3; C= 0000000; BIN=8000 ; MRRU=44.2; MRRD=47.7; LEAK RATE= 1.5
ACT= 134.7; REL= 104.8; DIF= 29.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 276; FIX 4; C= 0000000; BIN=8000 ; MRRU=44.2; MRRD=47.7; LEAK RATE= 1.5
ACT= 127.6; REL= 97.2; DIF= 30.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:32:08.07 OPER DOOR DID NOT CLOSE 1

SER 277; FIX 1; C= 0000000; BIN=8000 ; MRRU=44.4; MRRD=48.0; LEAK RATE= 1.8
ACT= 127.2; REL= 93.6; DIF= 33.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 278; FIX 2; C= 0000000; BIN=8000 ; MRRU=44.4; MRRD=48.0; LEAK RATE= 1.8
ACT= 123.1; REL= 89.0; DIF= 34.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 279; FIX 3; C= 0000000; BIN=8000 ; MRRU=44.4; MRRD=48.0; LEAK RATE= 1.8
ACT= 129.9; REL= 96.1; DIF= 33.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 280; FIX 4; C= 0000000; BIN=8000 ; MRRU=44.4; MRRD=48.0; LEAK RATE= 1.8

17-APR-1992 11:32:53.64 OPER DOOR DID NOT CLOSE 1

SER 281; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 130.5; REL= 100.6; DIF= 29.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 282; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 125.6; REL= 93.2; DIF= 30.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 283; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 131.3; REL= 96.8; DIF= 34.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 284; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=47.7; LEAK RATE= 1.9
ACT= 134.2; REL= 100.6; DIF= 33.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:33:01.25 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:33:21.28 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 11:33:37.15 TOOL CYCLE TIMEOUT 1

SER 285; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.3; MRRD=48.7; LEAK RATE= 2.1
ACT= 131.5; REL= 99.6; DIF= 32.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 286; FIX 2; C= 0000000; BIN=6000 ; MRRU=44.3; MRRD=48.7; LEAK RATE= 2.1
ACT= 137.6; REL= 103.6; DIF= 34.0 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 287; FIX 3; C= 0000000; BIN=6000 ; MRRU=44.3; MRRD=48.7; LEAK RATE= 2.1
ACT= 125.6; REL= 89.8; DIF= 35.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 288; FIX 4; C= 0000000; BIN=6000 ; MRRU=44.3; MRRD=48.7; LEAK RATE= 2.1
ACT= 129.1; REL= 99.6; DIF= 29.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:42:46.51 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:43:06.51 OPER DOOR STILL DID NOT CLOSE 1

SER 289; FIX 1; C= 0000000; BIN=6000 ; MRRU=44.1; MRRD=48.0; LEAK RATE= 2.0
ACT= 133.1; REL= 98.5; DIF= 34.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 291; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=48.0; LEAK RATE= 2.0
ACT= 129.4; REL= 99.6; DIF= 29.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 292; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.1; MRRD=48.0; LEAK RATE= 2.0
ACT= 137.5; REL= 103.6; DIF= 33.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:43:52.41 OPER DOOR DID NOT CLOSE 1

SER 293; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.6; LEAK RATE= 2.0
ACT= 129.9; REL= 95.5; DIF= 34.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 294; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.6; LEAK RATE= 2.0
ACT= 125.2; REL= 93.0; DIF= 32.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 295; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.6; LEAK RATE= 2.0
ACT= 134.0; REL= 104.4; DIF= 29.5 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 296; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.6; LEAK RATE= 2.0
ACT= 122.9; REL= 87.3; DIF= 35.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:44:31.03 OPEN DOOR DID NOT CLOSE 1

SER 297; FIX 1; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.2; LEAK RATE= 1.9
ACT= 131.0; REL= 99.1; DIF= 31.9 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 298; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.2; LEAK RATE= 1.9
ACT= 123.8; REL= 90.6; DIF= 33.2 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 299; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.2; LEAK RATE= 1.9
ACT= 123.8; REL= 97.5; DIF= 26.4 PSI; ACTCR= 200.0ms; RELCR= 200.0

300 SER 300; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.2; MRRD=47.2; LEAK RATE= 1.9
ACT= 126.9; REL= 91.6; DIF= 35.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:45:11.54 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:45:31.54 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 11:45:46.25 TOOL CYCLE TIMEOUT 1

124 ACT= 143.6; REL= 112.6; DIF= 30.8 PSI; ACTCR= 200.0ms; RELCR= 200.0

151 SER 302; FIX 2; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.7; LEAK RATE= 1.9
ACT= 127.6; REL= 89.5; DIF= 38.1 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 303; FIX 3; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.7; LEAK RATE= 1.9
ACT= 129.8; REL= 103.2; DIF= 26.7 PSI; ACTCR= 200.0ms; RELCR= 200.0

SER 304; FIX 4; C= 0000000; BIN=GOOD ; MRRU=44.3; MRRD=47.7; LEAK RATE= 1.9
ACT= 133.4; REL= 101.8; DIF= 31.6 PSI; ACTCR= 200.0ms; RELCR= 200.0

17-APR-1992 11:46:16.12 OPEN DOOR DID NOT CLOSE 1

7798 PRESSURE TESTER LOT REPORT

PARTNO:7798L2-1
LOT ID:1-A-2107
LOT STARTED:17-APR-1992 10:11:04.06
TIME PRINTED:17-APR-1992 11:46:42.95

SETUP DATA:
DISC LOT ID: 0.00
DISC MEAN ACT: 23.4 MEAN REL: 12.7
LIMIT (NC)
ACTUATION: 90.0 TO 160.0 PSI
RELEASE: 20.0 TO 120.0 PSI
DIFFERENTIAL: 0.0 TO 160.0 PSI
MAX MILLIVOLT: 500.0 PSI
ACT CREEP TIME: 25.0 PSI
REL CREEP TIME: 150.0 PSI
PRECYCLE PRESS: 900.0 PSI
PRECYCLE COUNT: 2

NUMBER OF PIECES TESTED: 304
[illegible]

[illegible]	COUNT	% OF RELEASE
LEAK	0	0.00 %
CONT	2	100.00 %
ACCR	0	0.00 %
ACLO	0	0.00 %
ACHI	0	0.00 %
RLHI	0	0.00 %
RLLO	0	0.00 %
DFLO	0	0.00 %
RLCK	0	0.00 %
DFHI	0	0.00 %

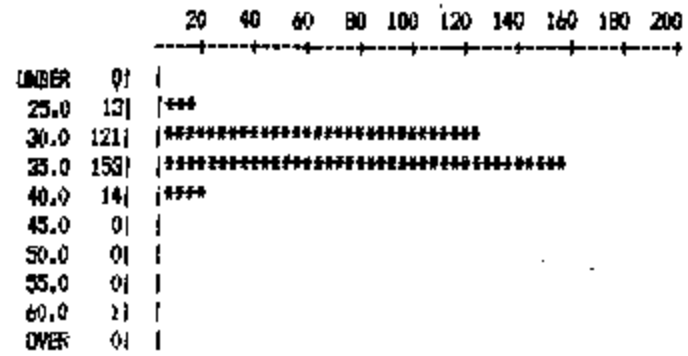
STATISTICS	MEAN	SIGMA	CPK
ACTUATION:	130.6	4.89	2.00
RELEASE:	97.7	5.96	1.25
MILLIVOLT:	0.0	0.00	0.00
DIFFERENTIAL:	32.9	3.19	3.44

HISTOGRAM OF ACTUATION PRESSURE

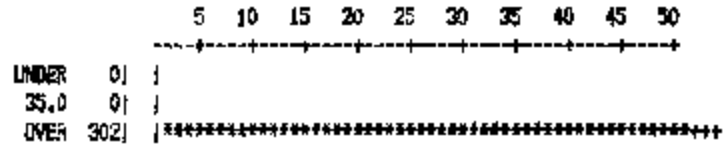
```
          10   20   30   40   50   60   70   80   90  100
         ----+----+----+----+----+----+----+----+----+----+
 UNDER    0| |
 117.5    3| |**
 120.0    5| |***
 122.5   17| |*********
 125.0   29| |***************
 127.5   54| |****************************
 130.0   58| |******************************
 132.5   64| |********************************
 135.0   32| |*****************
 137.5   21| |***********
 140.0   14| |*******
 142.5    5| |***
  OVER    0| |
```

HISTOGRAM OF RELEASE PRESSURE

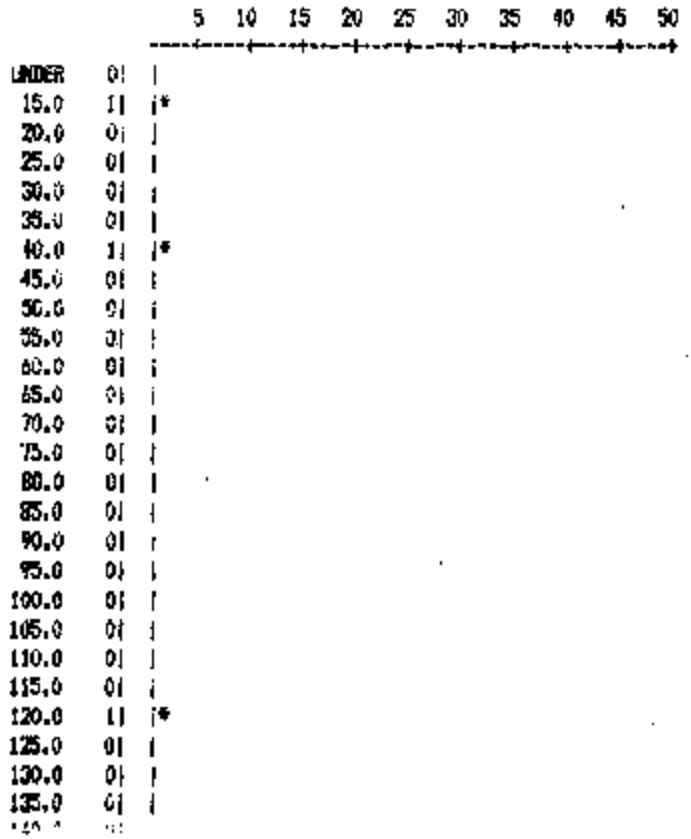
```
          10   20   30   40   50   60   70   80   90  100
         ----+----+----+----+----+----+----+----+----+----+
 UNDER    0| |
  75.0    1| |*
  80.0    1| |*
  85.0   10| |*****
  90.0   46| |************************
  95.0   91| |************************************************
 100.0   91| |************************************************
 105.0   45| |************************
 110.0   15| |********
 115.0    2| |*
  OVER    0| |
```



HISTOGRAM OF ACTUATION CREEP



HISTOGRAM OF RELEASE CREEP



```
155.0     0|
160.0     0|
165.0     0|
170.0     0|
175.0     0|
180.0     0|
185.0     0|
 OVER  2991|*****************************************************
```

17-APR-1992 11:46:54.31 OPER DOOR DID NOT CLOSE 1

17-APR-1992 11:47:14.31 OPER DOOR STILL DID NOT CLOSE 1

17-APR-1992 11:47:30.04 TOOL CYCLE TIMEOUT 1

Plans for Noise Control in Volume Production

(Please note that these plans are still under development and subject to change, pending receipt of the necessary transducer hardware, actual construction of test equipment, and performance of various comparative tests of switch designs previously confirmed by in-car tests to be "quiet" or "noisy".)

Bruce Maeroff, Supv. of Pass. Car Brake Systems Eng. Dept., has instructed TI to develop a method of testing pressure switch devices which will allow comparative measurement of the audible noise and tactile pedal feel phenomenon.

The system under development is composed of a Kistler high-resolution hydraulic pressure transducer with range 0-300 psi and resolution to .005 psi; a manifold to mount this transducer in close proximity to the device under test; a means of evacuating and filling the setup; and a means of applying a carefully controlled and reasonably noise-free pressure signal, using an air-over-oil intensifier unit fed by a feedback controlled air pressure regulator. Suitable isolation from the environment, possibly including shock mounting and/or acoustic protection, is to-be-determined.

Once suitable test equipment exists, the next phase is to characterize "known" devices including: normal snap-action; reduced snap devices found to be quiet in air but noisy in the actual application; and devices found suitable by Ford. This will allow establishment of control parameters. These parameters will be included in an addition to the ES, which will include PV, IP-1, and IP-2 tests.

Once the update to the ES is mutually agreed upon by Ford and TI, a partial ISR test will be conducted of this specific parameter; or, alternately, this will be included in the full ISR if time permits.

For the purpose of switch manufacturing process control, above studies will be correlated with disc (pressure-sensing element) characteristics which are controlled in the disc manufacturing process. The IP-2 testing for the noise parameter will be conducted on a quarterly basis per inputs from Bruce Maeroff.

9/24/92

Interim Containment Actions

Pressure and force vs. deflection characteristic curves are routinely plotted as a development tool for the pressure sensing elements. Generally speaking, these curves are indispensable for the information they provide, yet they are somewhat time- and labor-intensive, not easily automatable, and require interpretation.

The nature of the curves describing the parts which have been deemed acceptable for DN5 are well-known from testing during development.

In order to control the manufacturing process in the short-term, the above curves are re-run *on every lot*, under the direction of a TI Member of Technical Staff, and compared with the curves for the parts which are known to be acceptable.

To date, seven separate lots have been produced and tested as above with very good correlation and repeatability, indicating the disc manufacturing process is presently under control.

This interim process control strategy will remain in effect until such time as a more suitable strategy, using hydraulic-disturbance equipment which is under development, can be implemented; in conjuction with development and correlation of a simple static pressure-deflection check, which will obtain a few of the key points on the characteristic curve and can be used for manufacturing process control.

92422

FINAL INSPECTION 77P8L[illegible]

DATE: 4-23-92

CUSTOMER P/N F2V[illegible]-9F[illegible]-AB

[illegible] LOT A-10
REEL #1
LOT # 2
WASHER LOT 140 1-CUT

MAT. [illegible]
CUP LOT # 11
CONV. LOT 15[illegible]
QTY. 2000

[illegible] LOT
REEL #
LOT #
WASHER LOT

MAT. [illegible]
CUP LOT #
CONV. LOT
QTY.

TEST	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
1A ACTUATION	146	137	139	134	132	140	137	142	135									
RELEASE	67	62	69	62	67	60	67	65	62									
2 VISUAL	OK	OK	OK	OK	OK	OK	OK	OK	OK									
3 DIMENSION	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				
4B VOLT DROP	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				
5C CUR. LEAK	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				
6D PROOF	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				
7 IMPULSE	OK	OK	OK	OK	OK	—	—	—	—						—	—	—	—
A ACTUATION	140	130	140	140	140	140	140	145	135									
RELEASE	60	60	60	65	60	70	70	65	60									
B VOLT DROP	OK	OK	OK	OK	OK	—	—	—	—						—	—	—	—
C CUR. LEAK	OK	OK	OK	OK	OK	—	—	—	—						—	—	—	—
D PROOF	OK	OK	OK	OK	OK	—	—	—	—						—	—	—	—
8J TERM. STR	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				
A ACTUATION	—	—	—	—	—	145	145	150	140	—	—	—	—	—				
RELEASE	—	—	—	—	—	70	70	65	65	—	—	—	—	—				
B VOLT DROP	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				
C CUR. LEAK	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				
D PROOF	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				
9 BURST	—	—	—	—	—	OK	OK	OK	OK	—	—	—	—	—				

FINISHED PRODUCTION

WHITE CANARY } Route to Finished Stores
PINK } Route to Dept. Supervisor

[redacted] 17PSL-2-1

SPECIAL REQUIREMENT 2nd

TOTAL QUANTITY 9

MAKE ORDER NUMBER NO SUBTOTALS

Lot 4-10

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		REJECT AT ACCEPT

APR 24 1992

Form 1[redacted]

DATE [redacted]-92 DEPARTMENT 294

PRESSURE SWITCH DATA Form 21605 TEST NO. 438 - 01 - 60

DEVICE	DATE REQUESTED	REQUESTED BY	REQUESTED COMPL. DATE
77A5L3-1			
PERFORMED BY	DATE STARTED	DATE COMPLETED	APPROVED BY
Curtis	4-26-94		

PROJECT TITLE:

E199424

CUSTOMER:

PURPOSE OF TEST:

PROCEDURE:

ACT : 90-200 PSIG

REL : 20 PSIG MIN

SWITCH #	ACT	REL	DIF	ACT CR	REL CR	MVD
438-01-01	129.2	105.3	23.9	3234.2	1103.5	.54
02	131.9	93.4	38.5	3009.5	661.2	.42
03	129.6	85.8	43.8	3176.5	355.0	.44
04	129.1	82.3	46.8	3207.0	206.8	.44
05	125.5	78.8	46.7	3321.5	211.0	.45
06	128.2	86.3	41.9	3131.8	487.5	.39
07	132.3	89.9	42.4	2829.8	483.5	.48
08	123.9	80.7	43.2	3433.5	296.0	.46
09	135.7	90.8	44.9	2749.8	592.0	.49
10	128.9	88.8	40.1	3010.8	518.0	.57
11	134.6	89.4	35.2	3333.3	578.0	.47
12	125.6	81.5	44.1	3285.3	204.8	.48
13	127.4	86.6	40.8	3090.5	728.3	.40
14	127.2	84.2	43.0	3097.5	627.5	.44
15	119.4	75.0	44.4	3638.0	201.8	.41
16	124.1	78.2	45.9	3327.8	351.5	.42
17	114.4	76.4	38.0	3970.5	208.8	.41
18	122.5	78.6	44.0	3475.3	306.5	.40
19	124.6	80.4	46.8	3278.0	728.5	.44
20	128.3	81.5	46.8	3036.0	446.8	.42
21	126.5	80.7	45.8	3170.5	810.5	.42
22	125.9	81.6	44.3	3247.0	465.5	.41
23	130.0	85.1	44.9	2914.3	396.0	.42
24	125.0	81.8	43.2	3271.0	854.5	.46
25	132.6	91.8	40.8	2829.3	852.0	.46
26	121.0	82.4	38.6	3539.0	496.8	.40
27	126.5	77.2	49.3	3148.5	201.8	.43
28	117.2	81.4	35.8	3796.0	402.0	.42

TI-NHTSA 006039

SWITCH #	ACT	REL	DIF	ACT CR	REL CR	MVD
29	122.4	77.3	45.1	3278.0	208.3	.47
30	135.0	89.7	45.3	2772.0	748.8	.48
31	123.1	78.7	44.4	3342.8	875.5	.42
32	125.1	83.7	41.3	3174.0	500.8	.43
33	129.4	83.9	45.6	3125.8	218.3	.47
34	134.9	85.8	49.1	2708.3	1749.5	.48
35	125.2	77.9	47.3	3220.5	1407.3	.49
36	128.7	93.8	34.9	2976.8	2073.5	.45
37	124.9	81.9	43.1	3237.0	273.3	.45
38	124.6	80.3	44.3	3272.0	287.0	.39
39	133.4	94.7	38.7	2840.8	811.0	.42
40	133.0	92.7	40.3	2800.8	320.8	.45
41	123.0	84.9	38.1	3401.0	375.5	.54
42	133.0	90.9	42.1	2813.8	619.8	.42
43	134.4	89.4	45.1	2778.5	558.5	.42
44	124.8	81.2	43.6	3286.8	202.8	.42
45	118.3	84.5	33.8	3747.0	554.3	.47
46	125.3	81.1	44.2	3260.5	409.0	.43
47	121.2	79.9	41.3	3557.3	359.3	.46
48	116.6	76.6	40.0	3875.8	203.0	.52
49	127.7	88.8	38.8	3122.5	492.8	.49
50	126.2	85.4	40.8	3234.0	449.5	.47
51	128.9	82.0	46.9	3019.0	207.3	.47
52	132.1	96.7	35.3	2838.3	809.5	.40
53	122.5	75.9	46.8	3425.0	208.8	.46
54	132.8	93.3	39.5	2822.0	944.3	.44
55	124.3	83.0	41.4	3279.8	530.8	.50
56	124.5	86.4	38.1	3304.3	661.8	.48
57	123.2	83.5	39.7	3403.3	810.0	.51
58	129.6	84.4	45.2	2918.5	549.3	.46
59	131.2	87.5	43.7	2860.5	377.3	.44
60	128.8	88.2	40.6	2985.0	404.0	.39

-MSG M#= 115981 FR=QCBJ TO=PCQA SENT=04/27/92 09:33 AM
R#=217 ST=C DIV=0050 CC=00666 BY=QCBJ AT=04/27/92 09:33 AM

To:	Jim Watt	PCQA	Elaine Rose	PCQA
Copy:	Norm Roy	MLDG	Bill Sweat	PCME
	Bill Archibald	APCQ	Matt Sellers	PCME
	Jim Kern	KERN	Steve Offiler	SBO1

From: James Frericha JPF

Subj: 46412 Dimensions MSG #32290.

Date: 04-27-92.

The two dimensions referenced in your message were measured on two different historical samples of the 46412-2.

1. Dimension 0.461/0.465

Historical data taken 1-4-89 to Rev R.

Cav P	Cav U	Cav V	Cav X
.4665	.4688	.4683	.4681

From production runs on 3-6-92 and 3-26-92 on the 46412-2.

Cav P	Cav Z	Cav O	Cav Blank
.4682	.4683	.4682	.4678
.4682	.4684	.4672	.4685

(Tool makers microscope looking down into part)

This dimension is controlled by the stack up of the terminal slots and their separation. The spec. for the T/S is 0.180/0.184 2x and web 0.096/0.103. Adding these up the tolerance would be 0.456/0.471. Changing the steel for 0.461/0.465 would also change the T/S and web.

2. Dimension 0.531/0.543

Historical data taken 1-4-89 to Rev R.

Cav P	Cav U	Cav V	Cav X
.5276	.5302	.5282	.5258

From production runs on 3-6-92 and 3-26-92 on the 46412-2.

Cav P	Cav Z	Cav O	Cav Blank
.5294	.5272	.5255	.5331
.5329	.5259	.5270	.5271

(Tool makers microscope to the ends of the radii)

Steel could be modified to increase this.

Regards,

James x-3078

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R#=218 ST=C DIV=0050 CC=00666 BY=QCBJ AT=04/27/92 09:33 AM

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Copy:	Norm Roy	MLDG	Bill Sweet	PCME
	Bill Archibald	AFCQ	Matt Sellers	PCME
	Jim Kern	KERN	Steve Offiler	SBO1

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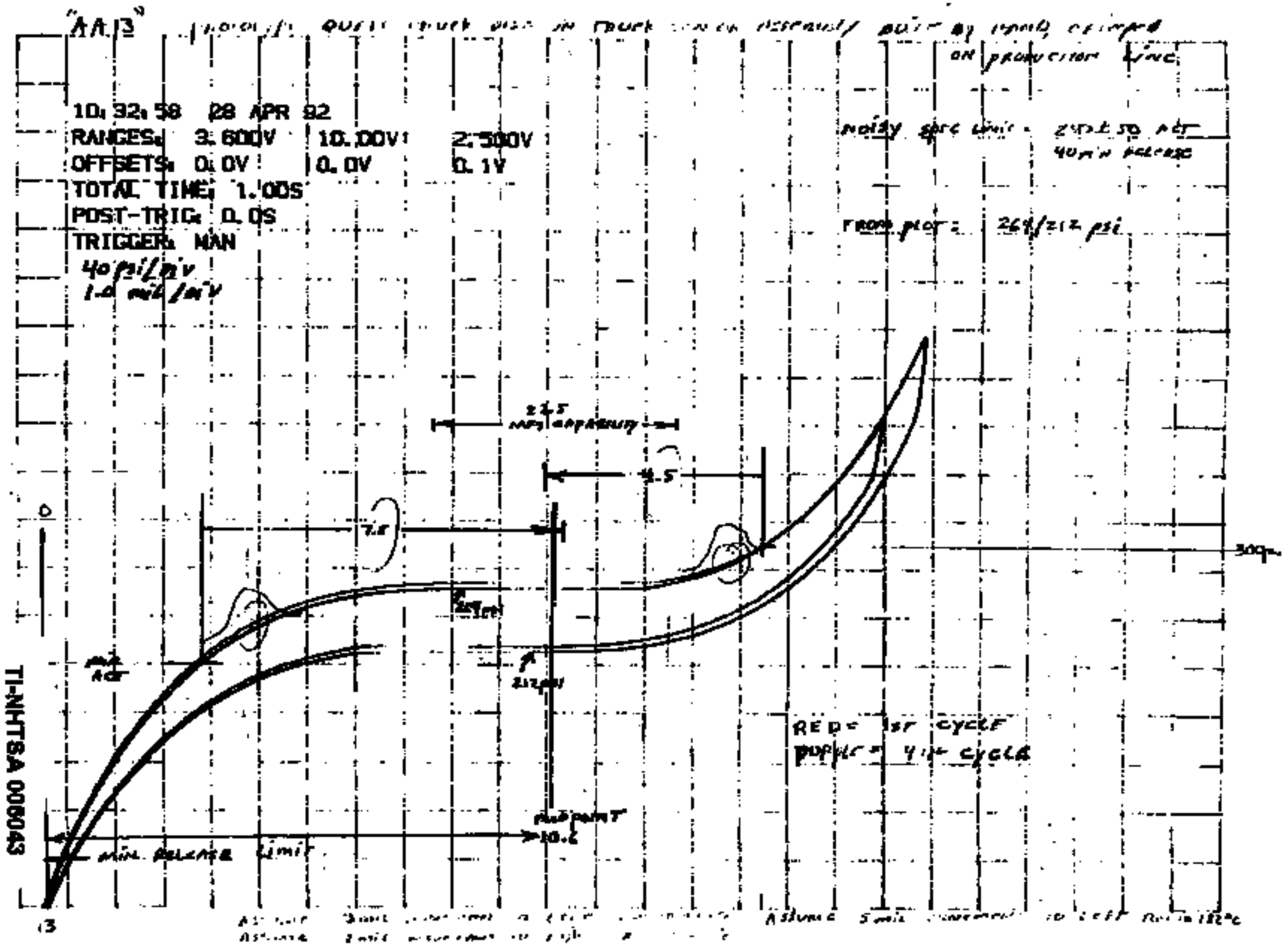
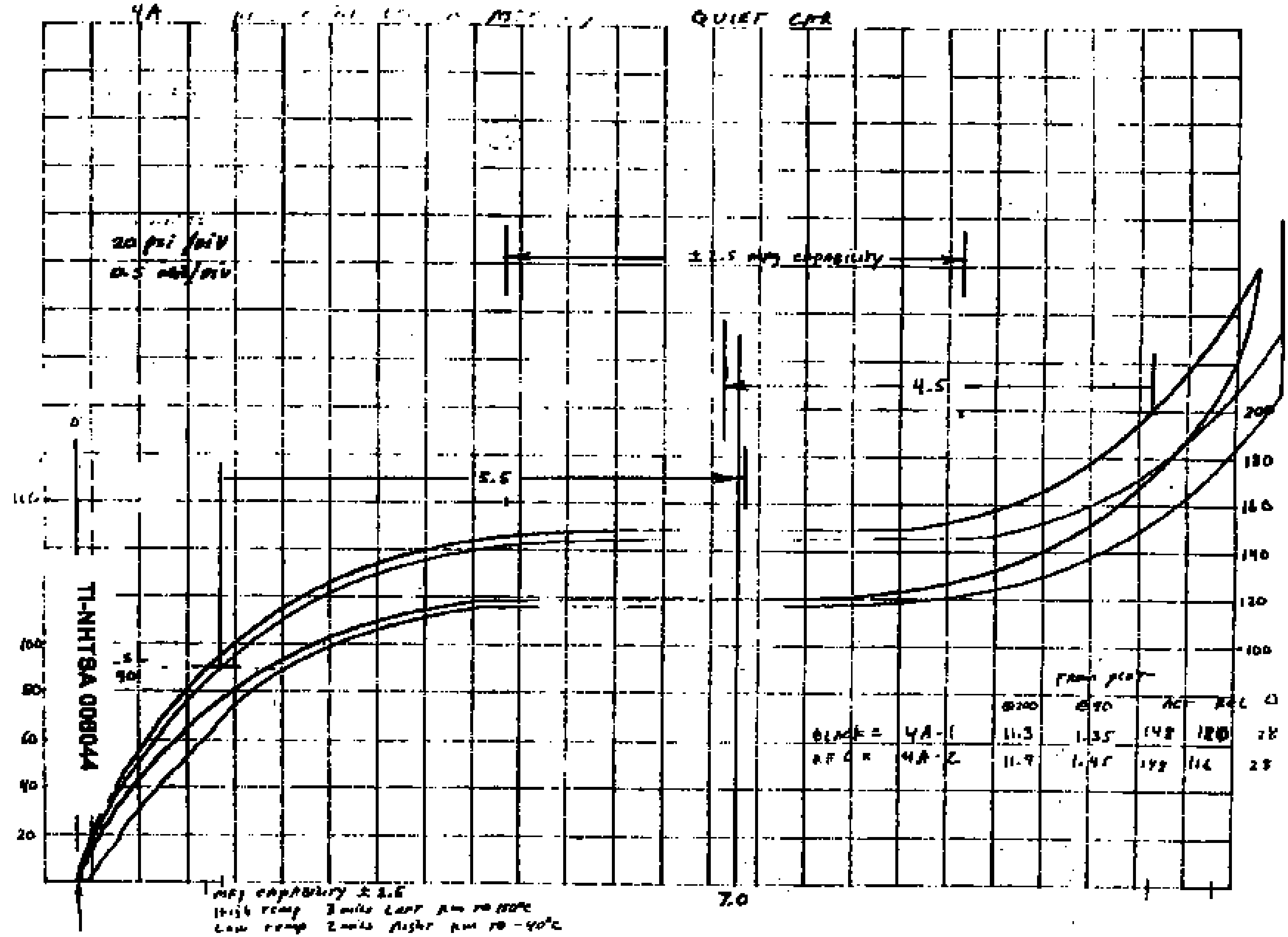

"AA 3"
10:32:58 28 APR 92
RANGES: 3.600V 10.00V 2.500V
OFFSETS: 0.0V 0.0V 0.1V
TOTAL TIME: 1.00S
POST-TRIG: 0.0S
TRIGGER: MAN
40 psi/div
1.0 mil/div
on production line
noisy spec limit - 2500 ± 50 psi
40 min release
from plot: 2641/2112 psi
245 msec approach
4.5
7.5
500
RED = 1st cycle
purple = 4th cycle
min release limit
10.2
TI-NHTSA 000043


4A
QUIET
20 psi/div
5.5
4.5
7.0
200
180
160
140
120
100
80
60
40
20
TI-NHTBA 008044

-MSG M#= 212787 FR=ZARN TO=GAMY SENT=04/29/92 04:22 PM
R#=180 ST=C DIV=0050 CC=00101 BY=ZARN AT=04/29/92 04:22 PM

TO:	RUSTY STRUBLE	RCS2	CC:	TOM CHARBONEAU	TC
	MIKE DeMATTIA	MD3		JOHN KOURTESIS	MDES
	CHARLIE DOUGLAS	CMP1		STEVE MAJOR	SMFH
	DICK GARIEPY	MFPC		ANDY McGUIRK	PCQA
	PAUL KOTCH	PRK1		ED O'NEILL	EJON
	JOE LAZARZ	JML8		NORM FREDA	WHLZ
	STEVE OFFILER	SBO1		GARY SNYDER	CPPC
	MATT SELLERS	PCME		MARTHA SULLIVAN	CPPC
	BILL SWEET	PCME		RAY TOURANGEAU	PCME
	JIM WATT	PCQA		BILL CONGDON	MFPC
				STEVE MCCOOEY	MDES
				ELAINE ROSE	GAMY

FR: DAVE CZARN ZARN

SJ: FORD CRUISE CONTROL PRESSURE SWITCH START-UP MEETING
MINUTES OF 3/26/92 MEETING

THE FOLLOWING IS A RESEND OF THE LAST MEETING MINUTES - PRIOR TO THE DAILY CCPS QUIET SWITCH MEETINGS. I WOULD LIKE THE TEAM TO REVIEW THESE AFTER/DURING THE QUIET SWITCH MEETING ON 4/30. I WILL BE UNABLE TO ATTEND THE MEETING AND WILL ASK CHARLIE - BY WAY OF THIS MESSAGE - TO RUN THE MEETING. THANK YOU.

MEETING

THE NEXT MEETING IS SCHEDULED FOR:

DATE: 04/30/92 (THURSDAY)
TIME: 3:30 PM
PLACE: CAFET. CUBE

77PS

Hexport:

Elco is still 100% sorting hexports for slivers/stringers. Elco c/a indicates that Elco and TI will evaluate a modification to the length and diameter of the bore closest to the internal gland side of the hexport. We don't know what Elco is doing at the moment; Paul, please champion the effort to get this resolved.

* REPORT ON ELCO'S PROGRESS IN RESOLVING SLIVER/STRINGER ISSUE	KOTCH	ONGOING	
. HAVE ELCO RTRN J512 GAGE FOR STUDY	KOTCH	T-B-D	
. ELCO J512 GAGE R&R STUDY	SELLERS	T-B-D	
* ADD SLIVER/STRINGER INSPECTION TO IQP FOR P/N 36900	ROSE	03/19	COMP.

Production/Quality Issues:

DIAPHRAGM LIFE

HIGH TEMP LOSS OF CONTINUITY
(Separate mtgs are being held daily)

* LOCK OUT "CREEP CHK DISABLE" FUNCTION FROM P-TESTER?	SELLERS	03/26	ORIG.
		04/02	REV.

RMR's
4 L/T switches returned; system reportedly inoperable - "no continuity" is probable cause. It's possible (...and maybe even probable) that the switches were not at fault. However, I still believe this is not an issue that we should let drop, as it may indicate a switch, system, or Ford assembly problem | Jim agreed to pursue further.

* F/U WITH THE APPROPRIATE INDIVIDUAL TO DETERMINE IF THESE SWITCHES FUNCTION CORRECTLY IN THE SYSTEM.	FREDA	03/26 no conclusions	

EASTERN AUTOMATION RIVETING OPERATION
(Mid-May targeted for changeover to new rivet operation)

. PROVIDE D. CZARN W/NEW RIVETS	SELLERS	03/19	COMP.
. SEND TO FORD/GET SREA APPROVAL	OFFILER	03/26	COMP.
* F/U WITH PEASE AND PELKEY RE: RIVET SREA SIGN-OFF	FREDA	04/02	

FLAKING/CLEANLINESS
Jim proposed an alternate approach to maintaining tote cleanlinesswhereby a recyclable liner is used in the totes for a T-B-D period of time and parts are transferred between totes by hand (rather than "dumping" from one tote to another). Pilot run will be conducted next week.

Matt's received a proposal for vacuuming sensors and final switches after crimping, to remove metal flakes and other particulate. Cost is $5k/station x 2 stations.

. LONG TERM C/A	SELLERS/ WATT	ONGOING	
. ADD PM'S TO QC INSPECTION - ALL 77PS OP'S PLUS 52PS SENSOR ASM.	WATT/ SMITH	03/19	COMP.

DANA PRESSURE TEST CORRELATION

* CALL DANA TO REQUEST THAT CAL'N DATA BE PROVIDED FOR 42 SWITCHES; DISCUSS SPECIFICS OF TEST PROCEDURE	WATT	03/13	COMP.
* PROVIDE TEST PLAN TO BRUCE PEASE	OFFILER	03/13	COMP.
* COMPLETE TESTING AND REPORT TO BRUCE	OFFILER/ WATT	04/16	

Sensor Assembly Machine:

. PRIORITIZE REMAINING UPGRADE ITEMS	SELLERS	ONGOING

Base Assembly Machine:

Ultrasonic welder is in-house until 4/03. Evaluation plan needs to be defined ASAP.

* DEFINE PLAN FOR EVALUATING U-S WELDER	SELLERS/ OFFILER/ McCOOEY	03/27
* BUILD PARTS	SELLERS	04/03

Final Assembly Machine:

ISR:

Issues: Taves pkg. not approved because SPC data is needed onthread Pd and J5\

2 chamfer OD (SC's on print). The latter is not measure directly; rather, the J512 gage procedure is used which measures a dimension that defines the angle and chamfer depth. Jim will propose to Teves that this not be defined as a Significant Characteristic.

* GET HEXPORT CONTROL PLAN FROM MATT AND REVW TO SEE IF SPC DATA IS COLLECTED	WATT	03/16	COMP.
* UNDERSTAND REASON FOR TEVES' REQUEST AND RESPOND	WATT	03/20	COMP.
* PROPOSE ELIMINATION OF CHAMFER OD AS A SIGNIF. CHARACTERISTIC (TEVES)	WATT	04/02	
. PROVIDE QUARTERLY CpK REPORT	WATT start	03/31	
* SUBMIT DANA/PITTS PKGS	WATT	01/23	ORIG.
		04/02	REV.

Ultra-Low Differential Switch MY93

Dale Sogge will champion ultra-low differential switch efforts; items will be covered at separate meetings.

Miscellaneous:

* BUILD 35 L/T SWITCHES WITH 3A GAGED 10B21 HEXPORTS TO BE SUPPLIED BY ELAINE	ROSE/ RODRIGUEZ	03/19	COMP.
* DISCUSS IDEA OF POSTING PFMEA's AT PROD'N OPERATIONS W/ TEVES; GET SAMPLE	WATT	03/26 04/02	ORIG. REV.
(discussed; will send sample)			
* HOW DO WE PREPARE FOR A CLEANLINESS AUDIT FROM TEVES?	WATT	03/26	
(Audit would look at cleanliness of switch only; i.e., not audit of production line cleanliness. No audit planned.)			
* TEVES CRITERIA FOR CONTAMINATION	WATT	04/09	
* RE-USABLE PACKAGING FROM TEVES?	WATT		

Production Plan:

. MAINTAIN RUNNING TOTAL OF L/T (L2-3) SWITCHES LEADING TO 100K FOR AMORTIZATION	STRUBLE	ONGOING
Status Date Total Shipped		
Rusty, need update.....		
. UPDATE PRODUCTION PLANS	STRUBLE	ONGOING

	P/C 77PSL2-1	L/T 77PSL2-3
MAR	64.7	22.6

REGARDS,
DAVE CZARN \55-FORD

#27639

R

TOLLWAY STEEL CORPORATION
25th Ave. & Main St.
Melrose Park, IL 60160
Phone (708) 681-9190

Customer DIEMASTERS MFG.

ANALYSIS REPORT

ITEM #	ORDER #	PART #	SIZE	GRADE	TEMPER
1.	033632	CR09RAD 1375C	.0985 x 1.375 x cl	C1050	ANNLD
2.			QUALITY CONTROL		
3.			APR 3 0 1992		

ITEM #	ID#	C	Mn	P	S	Si	Ni	Cr	Al
1.	664332	.51	.69	.013	.002	.27			
2.									
3.									

ITEM #	ROCKWELL	TENSILE	YIELD	ELONGATION	OTHER
1.	RB 78				
2.					
3.					

CERTIFIED BY: Thomas E. Bulman
THOMAS BULMAN

TEXAS INSTR
27639-1
8/96

TI-NHTSA 006048

QUIET [redacted]

~~36656-35~~

DATE LOGGED 4-30-92

/proposed spec for quiet disc 36656-35

VALUES ARE FOR DISC AFTER FINAL HEAT TREATMENT

MATERIAL PART # 75525-2
BLANK STRIP # 7437-2

A ACTUATION MEAN : AS REQUIRED BY MFG ENGINEERING (NOMINAL TARGET : 22 psi)

B ACT MEAN TOLERANCE: ±1.0psi

C ACT SIGMA MAX: 1.0 psi

D MAXIMUM MEAN DIFFERENTIAL : 5.5psi

E DIFFERENTIAL SIGMA MAX : 1.0 psi

[redacted]

F MINIMUM MEAN TRAVEL TO 14psi ON ACTUATION : 0.0035 inches

G MAX SIGMA, TRAVEL TO 14psi ON ACTUATION : TO BE DETERMINED

H MINIMUM MEAN TRAVEL TO 32 psi ON ACTUATION : 0.0240 inches

I MAXIMUM SIGMA, TRAVEL TO 32psi ON ACTUATION : TO BE DETERMINED

minimum Δ H-F = 0.0185 inches

PRESSURE CALIBRATION

1) METHOD

MEASUREMENT TO BE TAKEN IN A STANDARD FIXTURE PRINT # XXX, USING THE FOLLOWING MEASUREMENT PROCEDURE;

A. CYCLE DISC THREE TIMES ACTUATION TO RELEASE

B. FROM RELEASE INCREASE PRESSURE TO 14psi ± 0.5 psi AND RECORD DISC TRAVEL.

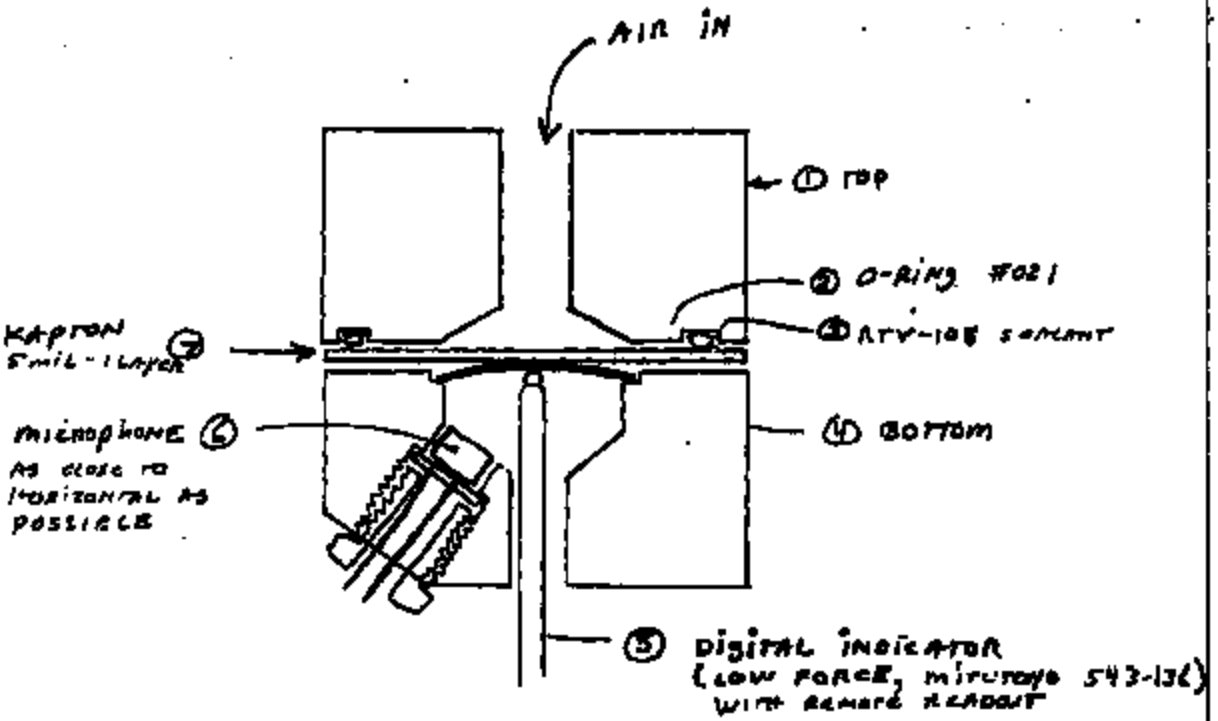
C. CONTINUE PRESSURE INCREASE UNTIL ACTUATION. RECORD ACTUATION PRESSURE.

D. INCREASE PRESSURE TO 32 psi ± 0.5psi AND RECORD DISC TRAVEL.

E. DECREASE PRESSURE TO RELEASE AND RECORD RELEASE PRESSURE

ALL RAMP RATES SHALL BE LESS THAN 0.5 psi/SEC.

DISC FIXTURE | DATE SCALE 4-30-92



TOP DALE SOUDE 4-30-92