

**TEXAS
INSTRUMENTS**



ISIR SUBMISSION

**TO KELSEY HAYES
FOR PART NUMBER F2VC-9F924-AB
NEXT GENERATION SPEED CONTROL**

NOVEMBER 15, 1991

**TEXAS INSTRUMENTS**

INCORPORATED

MATERIALS AND CONTROLS GROUP

- ☐ ATTLEBORO, MA 01901 ☐ VERMILION, NY 14080
☐ JOHNSON CITY, TN 37601 ☐ CENTRAL LAKE, MI 49826

Shipping Order

DATE: 1/1 S.O. # **214070**REF. # _____ DATE SHIPPED 8/15/71SHIPPED VIA: UP 71-01

SHIP TO:

**KELSY-HAYES COMPANY
9475 Center Road
Fenton, Michigan 48430****Attn: Mr. Rita Gonia
Purchasing Dept.***Texas Instruments Inc.*

CHARGE TO:

USE (CHECK ONE)

- ☐ SCRAP SALES
☐ SALE OF ASSETS
☐ OUTSIDE PROCESSING
☐ TRANSFERS BETWEEN TI LOCATIONS
☐ EXPENSE MATERIAL
☒ OTHER, EXPLAIN: Sample

DIV/ACCT. # 050 00 209

QUANTITY	DESCRIPTION/PART #/PG	UNIT PRICE	TOTAL
	One complete package One partial package 6 Samples	N/C	
GROSS WEIGHT <u>8.2</u>	NO. OF CONTAINERS <u>1 air</u>	ORIGINATOR'S NAME (TYPED) Elaine Rose MS 12-27	ORIGINATOR'S SIGNATURE <i>Elaine Rose</i>

*Rita
108
11/15/71*

1-011146 564

ORIGINATOR COPY

TI-NHTSA 003791

[Faint background text from other documents]

MN12 Program

**KELSEY-HAYES™ GROUP
INITIAL SAMPLE READINESS CHECKLIST**

[Signature]

Supplier Texas Tool Supplier Contact Charles Douglas
 Supplier Address 34 Forest St.
 City, State, Zip Attleboro, MA Phone (508) 699-3012 Fax 699-3014
 Part or Process Pressure Switch Date 9-9-91
 Kelsey-Hayes Group Pln 12604301 Kelsey-Hayes Contact Released version 8/10 dated 4-9-91

The following items have been prepared and/or approved. Items marked with an asterisk (*) are to be completed prior to ISIR date.

<u>K-H</u> <u>Required</u>	<u>Item</u>	<u>Available</u> <u>by Supplier</u> (Note: initial and date each item)	<u>K-H</u> <u>Disposition</u>
<u> </u>	*Manufacturing feasibility signoff	<u> </u>	<u> </u>
<u> </u>	*Design FMEA	<u> </u>	<u> </u>
<u>X</u>	*Process flow diagram	<u> </u>	<u> </u>
<u>X</u>	*Process FMEA	<u> </u>	<u> </u>
<u>X</u>	*Designated characteristics list	<u> </u>	<u> </u>
<u> </u>	*Pre-launch control plan	<u> </u>	<u> </u>
<u>X</u>	Gage R&R studies	<u> </u>	<u> </u>
<u>X</u>	Short term process capability studies	<u> </u>	<u> </u>
<u>X</u>	*Process control plan	<u> </u>	<u> </u>
<u> </u>	Inspection instructions	<u> </u>	<u> </u>
<u> </u>	Set-up instructions	<u> </u>	<u> </u>
<u> </u>	Operations instructions	<u> </u>	<u> </u>
<u>X</u>	ES testing requirements	<u> </u>	<u> </u>
<u> </u>	Packaging and identification approval	<u> </u>	<u> </u>
<u>X</u>	Functional testing	<u> </u>	<u> </u>

CL = *Garner*
FyD
Common
Thru
September 27, 1991 *Ji*

Kelsey-Hayes Company
6475 Center Road
Fenton, Michigan 48430

Attn: Mr. Steve Moffett
Subject: Initial IGR Submission
Re: Ford Part Number F2VC-9F924-AB
Pass Car Series

Dear Steve,

Enclosed, please find our initial IGR submission for the NISC deactivation switch, Ford part number F2VC-9F924-AB. The submission includes complete product validation testing which is enclosed with the documentation.

We noted one discrepancy during the dimensional analysis. Dimension 1.85 - 2.04 was inadvertently transferred in error from the envelope drawing to the component drawing, resulting in the one out of dimension measurement (2.699). Sample bases with the corrected dimension will be forwarded to you within three weeks.

We noted that the pass car print does not indicate any significant characteristics, and therefore, no PIST/PIPC data is required. However, we intend to provide PIST/PIPC data on actuation, release, and thread specifications, and forward the data to you.

Please let me know if you have any questions or if I may be of any further assistance.

Regards,

Jim Watt
GRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-33
Andy McGuirk, MS 12-27
Joe Schuck, TI Farmington Hills, Michigan

encl: IGR Submission

TI-NHTSA 003793

TEXAS INSTRUMENTS

ATLANTIC MASSACHUSETTS 02703

PAGE 1 OF 1

SAMPLE REPORT

REASON FOR REPORT	VENDOR	P.O.	PART NO.	REV.
NEW PART ☒			77P512-1	C2
REPLACEMENT TOOL.	REPORT REQ. BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL.	Z. Rose	10/11/91	ELAINE CRANGL	10/29/91
REPAIRED TOOL.				
REVIEW				
OTHER <u>DIM. ANALYSIS</u> ☒	THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING THE ACTUAL VALUES FOR ALL CHARACTERISTICS MEASURED. IN CASES WHERE ACTUAL VALUES DEVIATE FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION FOR EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.			

		(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)						DISPOSITION	
		1B	2C	3C	4D	5D	6D	DISP	
1	19.45-19.81	19.55	19.61	19.57	19.56	19.57	19.57	CAL	
2	16.56-16.76	16.57	16.57	16.57	16.57	16.57	16.57	CAL	
3	12.80-13.21	12.974	12.651	13.625	13.043	13.072	12.944	TM	
4	11.40-11.90	11.788	11.788	11.775	11.773	11.752	11.755	TM	
5	2.84-3.05	2.93	2.92	2.92	2.92	2.93	2.93	CAL	
6	0.10-0.15	0.104	0.104	0.104	0.104	0.104	0.104	TM	
7	11.60-11.92	11.71	11.71	11.67	11.63	11.67	11.65	CAL	
8	1.24-1.45	1.252	1.252	1.280	1.280	1.280	1.265	TM	
9	1.24-1.55	1.402	1.397	1.400	1.329	1.397	1.397	TM	
10	1.25-2.06	2.004	1.974	1.996	1.984	1.994	1.984	TM	
11	13.43-13.88	13.772	13.493	13.700	13.681	13.626	13.554	TM	
12	31° 22'	30° 34'	29° 53'	31°	29° 04'	29° 03'	30° 07'	TM	
13	2.79-3.10 2X	2.95	2.95	2.95	2.95	2.95	2.95	CAL	
14	0.25-0.75	0.254	0.254	0.254	0.254	0.254	0.254	TM	
15	0.05-0.26 2X	0.051	0.051	0.051	0.051	0.051	0.051	TM	
16	19.05 MAX.	18.64	18.57	18.57	18.57	18.57	18.57	CAL	
17	57.15 MAX.	55.65	55.70	55.71	55.70	55.69	55.67	CAL	
18	12.59-13.11	12.736	12.736	12.736	12.736	12.736	12.736	END	
19	11.65-12.17	11.677	11.677	11.677	11.677	11.677	11.677	END	
20	14.23 MAX.	13.61	13.65	13.63	13.61	13.61	13.61	CAL	
21	9.39-9.66	9.57	9.60	9.57	9.57	9.57	9.57	END	
22	7.12 MIN.	7.293	7.293	7.293	7.293	7.293	7.293	END	
23	1.52-2.04	2.040	1.732	1.783	1.727	1.721	1.796	TM	
24	7.42-8.03	7.94	7.94	7.97	7.97	7.97	7.96	CAL	
25	6.60-6.81	6.640	6.692	6.692	6.647	6.665	6.642	TM	

REMARKS AND/OR INSTRUCTIONS:

DISPOSITION: TOOL APPROVED FOR PROD.

RESUBMISSION REQ'D

MFG. ENG.:

ORA ENG.:

PURCH. AGENT:

TI-NHTBA 003794

SAMPLE REPORT

REASON FOR REPORT	VENDOR	P.O.	PART NO.	REV.
NEW PART			772542-1	C7
REPLACEMENT TOOL.	REPORT REQ. BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL.				10/29/
REPAIRED TOOL.	THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING THE ACTUAL VALUES FOR ALL CHARACTERISTICS MEASURED. IN CASES WHERE ACTUAL VALUES DEVIATE FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION FOR EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.			
REVIEW				
OTHER				

(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)						DISPOSITION			
		1B	2C	3C	4D	5D	6D		
24A	29 ^{±2} 4X	29 ^{±5}							TM
		36 ^{±5}							
		36 ^{±24}							
		41 ^{±46}							
25	1.80-2.21R 2X	1.842	1.842	1.842	1.842	1.842	1.842	OK	Round
26	7.23-7.75	7.739	7.521	7.539	7.539	7.534	7.531	TM	
26A	NO FLASH OR BURRS ALLOWED ON SURFACE	OK	OK	Flash	OK	OK	Flash		
27	2.79-3.41	3.145	3.093	3.160	3.150	3.119	3.107	TM	
27	0.68-1.30	1.115	1.162	1.179	1.142	1.161	1.159		
28A	STAMP DATE CODE AND TORD UN ON SURFACE	D HAS BEEN OMITTED.							
29	0.25 MIN. X 40°-50° CHAMFER	Threads have been added							
30	3/8-24 UNF-2A 1/4	OK							SP 24 gauge
31	1.10-1.40	1.316							TM
32	0.16 D	0.051	0.048	0.042	0.002	0.030	0.056		SP 24 gauge
33	2.5	OK							SP 24 gauge
34	41-43	41 ^{±21}							SP 24 gauge
35	40°-50° CHAMFER	Threads have been added							
36	0.32-0.51 MAX.	0.182	0.182	0.145	0.150	0.146	0.152		2nd
37	0.1402-0.1453 MAX	0.1411	0.1411	0.1411	0.1411	0.1411	0.1411		2nd
38	0.330-0.360	0.345	0.345	0.345	0.345	0.345	0.345		TM
39	0.723-0.737	0.727	0.732	0.732	0.732	0.732	0.732		TM
40	0.552-0.525	0.543	0.543	0.543	0.543	0.543	0.543		TM
41	(7.15±2) 2X	7.250	7.250	7.250	7.250	7.250	7.250		TM

REMARKS AND/OR INSTRUCTIONS: #32 MAX plug accepted on 40-50 1.35 MAX plug accepted on 1B, 2C 24-6D 1.24. #33 Separate sample of hexaport OK, other damaged when doing circular runout.

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

TI-NHTSA 003795

SAMPLE REPORT

REASON FOR REPORT	VENDOR	P.O.	PART NO.	REV.
NEW PART			77P5L2-1	
REPLACEMENT TOOL	REPORT REQ. BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL				10/29/4
REPAIRED TOOL	THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING THE ACTUAL VALUES FOR ALL CHARACTERISTICS MEASURED. IN CASES WHERE ACTUAL VALUES DEVIATE FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION FOR EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.			
REVIEW				
OTHER				

		(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)					DISPOSITION		
		1B	2C	3C	4D	5D	6D		
42	1.42-1.63 2X	1.623	1.633	1.582	1.632	1.603	1.578	TM	Roundd
		1.623	1.633	1.628	1.585	1.578	1.578		"
43	0.35-0.66 4X	0.660	0.572	0.574	0.572	0.574	0.574	TM	
		0.645	0.577	0.603	0.577	0.572	0.577		
		0.574	0.592	0.579	0.577	0.584	0.549		
		0.572	0.577	0.574	0.578	0.574	0.577		"
44	2.30-2.72 2X	2.430	2.508	2.408	2.415	2.530	2.480	TM	
45	2.15-2.42 2X	2.125	2.177	2.304	2.195	2.164	2.227	TM	
		2.114	2.115	2.146	2.162	2.182	2.161		
46	25±2° 2X	24° 30'	24° 41'	23° 31'	23° 15'	23° 04'	23° 54'	TM	
		23° 06'	23° 45'	24° 31'	23° 53'	23° 57'	24° 24'		
47	TRON-HALS. BROWN	60044							V.S
48	45±2° 4X	44° 16'	45° 15'	46° 30'	45° 04'	44° 07'	44° 05'	TM	
		44° 45'	45° 46'	46° 26'	45° 16'	44° 07'	44° 01'		
		45° 12'	45° 38'	46° 38'	44° 42'	45° 36'	44° 01'		
49	0.26-1.17 4X	0.962	0.983	0.973	0.974	0.981	0.984	TM	Roundd
		0.955	1.031	1.019	1.018	1.032	1.034		
		0.957	0.978	1.001	1.002	0.973	0.982		
		0.950	0.949	0.957	0.955	0.952	0.958		
50	0.35-0.66 4X	0.591	0.582	0.570	0.587	0.581	0.588	TM	
		0.477	0.475	0.544	0.518	0.536	0.575		
		0.601	0.516	0.531	0.518	0.536	0.483		
51	2.59-2.80 2X	2.725	2.710	2.703	2.713	2.710	2.733		
	⊕ 0.20 AC	2.399	2.499	2.572	2.442	2.457	2.575		
	⊕	0.072	0.034	0.113	0.017	0.002	0.050		
	2.59-2.80	2.695	2.703	2.715	2.703	2.695	2.710		
	⊕ 0.20 AC	2.499	2.522	2.320	2.977	2.427	2.443		
	⊕	0.034	0.057	0.025	0.022	0.032	0.022		
52	13°-19° 2X	18° 23'	18° 45'						
53	0.66-0.87	0.785	0.715						
54	0.16-0.31	0.262	0.274						
55	0.37-0.67	0.682	0.630						

REMARKS AND/OR INSTRUCTIONS:

DISPOSITION: TOOL APPROVED FOR PROD.	RESUBMISSION REQ'D
MFG. ENG.:	ORA ENG.:
	PURCH. AGENT:
	TI-NHTSA 003706

TEXAS INSTRUMENTS INC. ! MATERIALS & CONTROLS GROUP ! SITE

PARTS LIST ! PROJECT ! PART NUMBER! 77PSL2-3 ! REV LTR: A CLST 450
EXPLOSION ! NUM: 3423 ! DWG PFX: NUM 77PSL2-3 ! ECN INC.DT: 91/11/05

TITLE: PRESSURE SWITCH

LV	CNT	QTY/UM	BITH	PART/DRAWING NUMBER	RV	NOMENCLATURE/PART
01	1	REF		36952-1		FINAL ASSEMBLY
				36952-1		
01	2	1	27	27759-1		BASE ASSEMBLY
				27759SH1		
02	3	1	2	46515-1		BASE (BLACK)
				46515		
02	4	1	3	36888-1		STATIONARY TERMINAL
				36888		
02	5	1	4	36897-1		MOVABLE TERMINAL ASM
				36897SH1		
03	6	1	2	74408-1		MOVABLE CONTACT
				74408		
03	7	1	3	74171-1		RIVET
				74171		
03	8	1	4	36887-1		MOVABLE TERMINAL
				36887		
03	9	1	5	36889-1		SPRING ARM
				36889		
01	10	1	24	27293-14		SENSOR ASSEMBLY
				27293SH2		
02	11	1	2	36900-1		MOD SAE J512 HEXPORT
				36900		
02	12	1	3	74353-1		GASKET
				74353		
02	13	1	4	27288-1		CUP
				27288		
02	14	3	5	74176-1		SEAL
				74176		
02	15	OR	5	27225-1		KAPTON STRIP SPEC (.175 LBS/K)
				27225		
02	16	1	6	27639-1		WASHER
				27639		
02	17	1	7	27406-1		CONVERTER
				27406		
02	18	1	8	74224-1		KAPTON TAPE (.100 LBS/K)
				74224		
02	19	OR	8	73958-2		SPACER
				73958		
02	20	OR	8	73958-3		SPACER
				73958		
02	21	1	9	36656-28		3/4" FORMED DISC
				36656SH1		
01	22	1	14	74797-1		CRIMP RING
				74797		
01	23	1	18	74078-146		TRANSFER PIN
				74078		

TI-NHTSA 003797

01	25	1	22	74179-2	THREAD CAP
				74179	
01	26	AR		27318-1	CARTON ASM.
				27318	
02	27	1	2	74219-1	CARTON
				74219	
02	28	5	3	74218-1	ROW SEPARATOR
				74218	
02	29	4	4	27317-1	DEVICE SEPARATOR
				27317	

! NOTES, REV.DATA,DISTRIBUTION,OPERATING CHARACTERISTICS,SPECIAL REQUIRE

REV DESC: SET UP CCB APPROVAL DATE: 91/08/14

DFTO WORK GROUP: PRECISION CONTROLS EGN ORIGINATOR: STEPHEN B

NOTES:

- 1 - ACTUATION PRESSURE ----- 200-300 PSIG
- 2 - RELEASE PRESSURE ----- 40 PSIG MIN.
- 99 - CR M06083,ADDED P/L TO EIS,NEW DRAWING IN SYSTEM

11-5-91

62-1

62-2

✓ ~~Green~~ 252-1

✓ ~~Green~~ 759-2

✓ ~~Green~~

✓ ~~Sta. Term~~

✓ ~~Term "A"~~

✓ ~~Term. Cont.~~ 1112-1

✓ ~~Print~~ 74171-1

✓ ~~Term. Term~~ 3087-1

✓ ~~Spring Bros~~ 2689-1

✓ ~~Senior Bros~~ 27292-13

✓ ~~TS12 Newport~~ 3600-1

✓ ~~Maskit~~ 27453-1

✓ ~~Cup~~ 27713-1

✓ ~~Seal~~ 74176-1

✓ ~~Kapton strip~~ 27225-1

✓ ~~Luminescent~~ 27639-1

✓ ~~Con. viter~~ 27406-1

✓ ~~Kapton tape~~ 27224-1

✓ ~~Specimen~~ 27224-1

✓ ~~disc~~

✓ ~~Crimp Ring~~

✓ ~~Transfer pin~~ 24078-14

✓ ~~Envid seal~~ 74247-2

✓ ~~Thread cap~~ 74179-2

57F3-3

Partial PKg. ^{OR} 11-15-91

① PIPC

② GAGE R+R

③ Mat. Anal.

K-H PKG 57F3-3

Included :

① PIRP

② R-K

③ Material Acc.

? may have
more PIRP
from L/T ?

11-15-91

TEXAS INSTRUMENTS



cc: 6/UN:1
F-15

November 15, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Rita Gunia
Purchasing Department

Subj: Part Number 12604301 Switch (E7SC-3N824-AA)
Part Number 12590701 Switch (F2VC-9F924-AB)
ISIR Submissions

57-11F3-3
712-12-1

Dear Rita,

Enclosed, please find the ISIR for the 12604301 and 12590701 switches. Both ISIR submissions were accomplished on Ford forms as we are in the process of transferring data to Kelsey-Hayes forms.

The 12590701 submission has several dimensional issues on the layout that are being addressed.

The 12604301 submission needs dimensional layout, control plan, manufacturing flow diagram, PIST, PIPC, and PV testing that are being addressed.

Please let me know if you have any questions or if I may be of any further assistance.

Regards,

Jim Watt
CRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29, Gary Snyder, MS 12-33
Charlie Douglas, MS 12-33
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR submissions

TEXAS INSTRUMENTS



November 15, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Rita Gunia
Purchasing Department

Subj: Part Number 12604301 Switch (E78C-3N824-AA)
Part Number 12590701 Switch (F2VC-9F924-AB)
ISIR Submissions

Dear Rita,

Enclosed, please find the ISIR for the 12604301 and 12590701 switches. Both ISIR submissions were accomplished on Ford forms as we are in the process of transferring data to Kelsey-Hayes forms.

The 12590701 submission has several dimensional issues on the layout that are being addressed.

The 12604301 submission needs dimensional layout, control plan, manufacturing flow diagram, PIST, PIPC, and PV testing that are being addressed.

Please let me know if you have any questions or if I may be of any further assistance.

Regards,

J. Watt
J. Watt
SRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29, Gary Snyder, MS 12-33
Charlie Douglas, MS 12-33
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR submissions

November 15, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Rita Gunia
Purchasing Department

Subj: Part Number 12604301 Switch (E78C-3N824-AA) ← 57PCF3-3
Part Number 12590701 Switch (F2VC-9F924-AB) ← 77PCF2-1
ISIR Submissions

Dear Rita,

Enclosed, please find the ISIR for the 12604301 and 12590701 switches. Both ISIR submissions were accomplished on Ford forms as we are in the process of transferring data to Kelsey-Hayes forms.

The 12590701 submission has several dimensional issues on the layout that are being addressed.

The 12604301 submission needs dimensional layout, control plan, manufacturing flow diagram, PIST, PIPC, and PV testing that are being addressed.

Please let me know if you have any questions or if I may be of any further assistance.

Regards,

Jim Watt
GRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MB 12-29
Charlie Douglas, MB 12-33
Andy McGuirk, MB 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR submissions

(Rev 0, 11/15/91)

cc = Elaine R.

FYE

Please have

(2) binders
made for K-4

to send
today -

Thx.

Jim

4/15/

TI-NHTSA 003804



KELSEY-HAYES™ GROUP
INITIAL SAMPLE READINESS CHECKLIST

Supplier TEXAS Instruments Supplier Contact Jim Watt
Supplier Address 34 Forest Street
City, state, Zip Attleboro, MA 01903 Phone _____ Fax _____
Part or Product ABS-44 Date Nov. 15, 1991
Kelsey-Hayes Group ABS Kelsey-Hayes Contact Rick G...

The following items have been prepared and/or approved. Items marked with an asterisk (*) are to be completed prior to ISIR data.

X-E Required	Item	Available by Supplier (Note: initial and date each item)	X-E Disposition
_____	*Manufacturing feasibility signoff	<u>RM 11/15/91</u>	_____
_____	*Design FMEA	<u>RM 11/15/91</u>	_____
☒	*Process flow diagram	<u>ER 11-15-91</u>	_____
_____	*Process FMEA	<u>RM 11/15/91</u>	_____
_____	*Designated characteristics list	<u>RM 11/15/91</u>	_____
☒	*Pre-launch control plan	<u>ER 11-15-91</u>	_____
☒	Gage R&R studies	<u>ER 11-15-91</u>	_____
_____	Short term process capability studies	_____	_____
☒	*Process control plan	<u>ER 11-15-91</u>	_____
_____	Inspection instructions	_____	_____
_____	Set-up instructions	_____	_____
_____	Operations instructions	_____	_____
_____	ES testing requirements	_____	_____
_____	Packaging and identification approval	_____	_____
_____	Functional testing	_____	_____

11-21-91

11-15-91

11-15-91

Jim -

77 P/C out of
spec. issued
that need
to be
addressed!

Clair

old

DIMENSIONAL ANALYSIS ON PART NUMBER

F24C-9F924-00

DIMENSIONAL PEST

558 *chcks*

NOTE: DIMENSIONAL ANALYSIS ON CAVITY 0 - 10

	BLUEPRINT	CAVITY 0 10	CAVITY 0 10	CAVITY 0 10	CAVITY 0 10	CAVITY 0 10	CAVITY 0 10	CAVITY 0 10
		ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
1	19.45 - 19.81	19.81	19.50	19.56	19.57	19.57		
2	16.56 - 16.76	16.62/16.64	16.62/16.63	16.58/16.59	16.54/16.56	16.59/16.59		
3	11.90 - 12.21	12.051	12.035	12.043	12.078	12.946		
4	11.40 - 11.90	11.808	11.775	11.773	11.788	11.755		
5	2.84 - 3.05	2.92	2.92	2.92	2.93	2.93		
6	0.101	0.120/0.020	0.133/0.033	0.169/0.031	0.183/0.015	0.187/0.013		
7	11.60 - 11.92	11.67/11.71	11.72/11.68	11.60/11.63	11.63/11.67	11.65/11.65		
8	1.24 - 1.45	1.250	1.280	1.280	1.290	1.265		
9	1.24 - 1.35	1.397	1.400	1.389	1.397	1.397		
10	1.85 - 2.06	1.974	1.986	1.984	1.994	1.986		
11	13.42 - 13.85	13.695	13.606	13.686	13.686	13.556		
12	13.10 +/- 20DEG	29DEG 33MIN	31DEG	29DEG 04MIN	29DEG 03MIN	30DEG 08MIN		
13	2.79 - 3.10	2.90/2.90	2.90/2.90	2.90/2.90	2.89/2.89	2.90/2.90		
14	0.25 - 0.75	0.402	0.442/0.672	0.498/0.671	0.490/0.744	0.440/0.757	OUT OF SPEC.	
15	0.05 - 0.26	0.074/0.127	0.140/0.076	0.127/0.185	0.153/0.163	0.0711/0.0361		
		0.092/0.089	0.086/0.114	0.048/0.081	0.088/0.813	0.137/0.165		
16	19.05 MAX	18.97	18.66/18.54	18.66/18.60	18.77/18.63	18.71/18.61	18.67	

TI-NHTSA 003807

DIMENSIONAL ANALYSIS ON PART NUMBER

F24C-9F924-26

	BLUEPRINT SPEC	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4C ACTUAL	CAVITY # 5B ACTUAL	CAVITY # 6C ACTUAL	COMMENTS
16	57.15 MAX	55.70	55.71	55.70	55.69	55.68	
17	12.59 - 13.11	12.72/12.84	12.77/12.76	12.76/12.77	12.75/12.81	12.73/12.80	
18	11.65 - 12.17	11.85/11.64	11.73/11.79	11.88/11.84	11.78/11.86	11.73/11.88	
19	14.23 MAX	13.65	13.67	13.65	13.65	13.66	
20	9.39 - 9.66	9.61/9.66	9.57/9.64	9.49/9.62	9.58/9.74	9.35/9.67	OUT OF SPEC.
21	8.12 MIN	9.13/9.54	9.12/9.16	8.96/9.36	9.14/9.22	9.11/9.14	
22	1.52 - 3.04	1.732	1.783	1.727	1.781	1.796	
22	7.82-8.03	7.94	7.97/7.99	7.97	7.98	7.96	
24	6.90 - 6.81	6.698	6.692	6.647	6.665	6.642	
24A	2-DEG-1-20S 4X ON CROSS	SECTIONED	PART ON	PRINT			
25	1.80-2.21R 2X	1.84-1.84	1.84-1.84	1.84-1.84	1.84-1.84	1.84-1.84	
26	7.23-7.75	7.52	7.85	7.84	7.55	7.53	
26A	NO FLASH OR	OK	FLASH	OK	OK	FLASH	
	BURR ALLOWED						
	FOR SURFACE						
27	2.79-3.41	3.088	3.160	3.150	3.119	3.107	
28	0.60-1.30	1.168	1.179	1.148	1.161	1.153	

TI-NHTSA 003808

DIMENSIONAL ANALYSIS ON PART NUMBER

P2VC-7F924-AB

BLUEPRINT SPEC	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4B ACTUAL	CAVITY # 5D ACTUAL	CAVITY # 6D ACTUAL	COMMENTS
28A STAMP DATE	INVERTED	BELTA	CRISTED.	HAS SINCE	BEEN	
CODE & PART#	INCLUDED	IN COMING	OPERATION.			
29 0.25MIN X 40 -	N/A THREADS	HAVE BEEN	ADDED			
50DEE CHAMFER						
30 3/8-24UNF-2A	OK	OK	OK	OK	OK	
31 1.10-1.40	ON CROSS	SECTIONED	PART ON	PRINT		
32 0.14 D	0.048	0.046	0.008	0.030	0.056	
33 2.5 VE	ON CROSS	SECTIONED	PART ON	PRINT		
34 41DEG - 43DEG	ON CROSS	SECTIONED	PART ON	PRINT		
35 40-50DEE CHAMF	N/A THREADS	HAVE BEEN	ADDED			
36 32.51 MAX	31.46-31.48	31.45-31.46	31.50-31.47	31.46-31.48	31.58-31.58	
37 14.02-14.53MAX	14.11	14.11/14.12	14.11/14.13	14.12/14.13	14.11/14.12	
38 3.30-3.60	3.45 - 3.49	3.49 - 3.42	3.45 - 3.46	3.44 - 3.47	3.45 - 3.45	
39 7.23-7.37	7.34-7.32	7.33-7.33	7.31-7.37	7.32-7.30	7.37-7.38	OUT OF SPEC.
40 5.58-5.83	5.72-5.68	5.64-5.66	5.67-5.70	5.60-5.66	5.61-5.63	
41 71.5DEG +/-	72DEG 14MIN	72DEG 12MIN	72DEG 24MIN	71DEG 54MIN	72DEG 10MIN	
2DEG 2X	72DEG 14MIN	72DEG 50MIN	72DEG 37MIN	72DEG 11MIN	72DEG 36MIN	

TI-NHTSA 003809

DIMENSIONAL ANALYSIS ON PART NUMBER

F2NC-9F924-AB

	BLUEPRINT SPEC	CNVITY # 25 ACTUAL	CNVITY # 35 ACTUAL	CNVITY # 40 ACTUAL	CNVITY # 50 ACTUAL	CNVITY # 60 ACTUAL	COMMENTS
42	1.0-1.63 21	1.0-1.63	1.0-1.63	1.0-1.63	1.0-1.63	1.0-1.63	out of Spec.
43	0.35-0.66 41	0.35-0.57	0.37-0.60	0.38-0.58	0.38-0.57	0.37-0.59	
		0.39-0.55	0.38-0.57	0.39-0.56	0.38-0.55	0.35-0.56	
44	8.20-8.72 21	8.51-8.44	8.41-8.44	8.42-8.42	8.59-8.43	8.42-8.56	
45	2.15-2.42 21	2.18-2.22	2.30-2.15	2.20-2.16	2.16-2.18	2.23-2.16	NOT/SPEC ON MARKED PRINT
46	25DEG +/-2 21	24DEG 41MIN	23DEG 14MIN	23DEG 39MIN	23DEG 09MIN	23DEG 34MIN	
		23DEG 43MIN	24DEG 31MIN	23DEG 53MIN	23DEG 56MIN	24DEG 24MIN	
47	HOUNING/BROWN	BROWN	BROWN	BROWN	BROWN	BROWN	
48	45DEG +/-2 41	46DEG 47MIN	46DEG 09MIN	45DEG 08MIN	45DEG 37MIN	43DEG	
		45DEG 15MIN	43DEG 20MIN	45DEG 04MIN	44DEG 11MIN	44DEG 05MIN	
		45DEG 46MIN	46DEG 46MIN	45DEG 16MIN	44DEG 07MIN	44DEG 01MIN	
		45DEG 23MIN	45DEG 39MIN	44DEG 48MIN	45DEG 34MIN	44DEG 34MIN	
49	0.56-1.17 41	0.98-1.03	0.97-1.02	0.98-1.02	0.99-1.03	0.99-1.03	
		0.96-0.97	0.96-1.00	0.93-1.00	0.97-0.97	0.95-0.96	
50	0.35-0.66 41	0.45-0.44	0.44-0.48	0.46-0.50	0.45-0.54	0.51-0.49	
		0.49-0.52	0.54-0.53	0.52-0.52	0.50-0.54	0.51-0.44	

TI-NHTSA 003810

FAC-7924-64

TI-NHTSA 003811

**TEXAS INSTRUMENTS**

INCORPORATED

MATERIALS AND CONTROLS GROUP

- ☐ ATTLEBORO, MA 02703 ☐ VERSAILLES, KY 40383
☐ JOHNSON CITY, TN 37601 ☐ CENTRAL LAKE, MI 48823

Shipping Order

DATE: / / S.O. # **214070**REF. # DATE SHIPPED / / SHIPPED VIA: SHIP
TO:

KELSEY-HAYES COMPANY
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Rita Gunia
Purchasing Dept.

CHARGE
TO:

Texas Instruments Inc

USE (CHECK ONE)

- ☐ SCRAP SALES
☐ SALE OF ASSETS
☐ OUTSIDE PROCESSING
☐ TRANSFERS BETWEEN TI LOCATIONS
☐ EXPENSE MATERIAL
☒ OTHER, EXPLAIN: *Sample*

DIV/ACCT. # 010 CC: 149

QUANTITY	DESCRIPTION/PART #/PC	UNIT PRICE	TOTAL
	One complete package One partial package 6 Samples	N/C	
GROSS WEIGHT	NO. OF CONTAINERS	ORIGINATOR'S NAME (TYPED) Elaine Rose MS 12-27	ORIGINATOR'S SIGNATURE <i>Elaine Rose</i>

asm. dwg. prints

Burst 7K for
Both 4/T & P/C

Proof ^{for} REV. A

P/C = 3K

4/T = 4K

Project 4A1
10

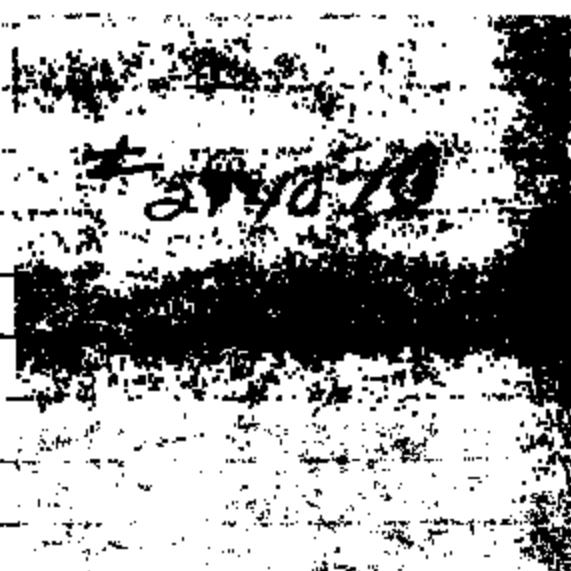
UPS

delivered to K-H

on 11-20-91

signed for by -

P. Drington



P/C				L/T		
F ₁₀₀	K-4			F ₁₀₀		

17-2-11 249

77 P/c

==

**DRAWINGS AVAILABLE UPON
REQUEST**

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-9F924-AB

NOTE: MARKED PRINT DENOTES CAVITY # 1A

	BLUEPRINT SPEC	CAVITY # 2A ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4C ACTUAL	CAVITY # 5B ACTUAL	CAVITY # 6C ACTUAL	COMMENTS
1	11.92 - 11.60	11.68	11.69	11.69	11.70	11.69	
2	1.45 - 1.24	1.42	1.29	1.38	1.26	1.31	
3	19.81 - 19.45	19.62	19.64	19.64	19.60	19.66	
4	16.76 - 16.56	16.62	16.64	16.64	16.64	16.65	
5	2.05 - 2.84	2.91	2.91	2.91	2.91	2.90	
6	11.90 - 11.40	11.78	11.79	11.78	11.77	11.78	
7	3.10 - 2.79	2.84 2.85	2.83 2.84	2.84 2.85	2.86 2.84	2.89 2.85	
8	8.30 - 8.72	8.43 8.36	8.54 8.57	8.45 8.31	8.31 8.35	8.30 8.34	
9	COLOR: BROWN	OK	OK	OK	OK	OK	
10	2.00 - 1.85	2.695	2.685	2.660	2.705	2.685	TOOL TO BE CORRECTED

THE PAGE CIR (F2VC-9F924-AB) AND LIGHT TRUCK (FT3A-9F24-AA) SWITCHES ARE PRODUCED OFF OF THE SAME PRODUCTION TOOLING.

THE (FT3A-9F24-AA) FULL DIMENSIONAL ANALYSIS FOLLOWS. DIMENSIONS # 1-10 LISTED ABOVE PERTAIN TO THE POLARITY KEY FEATURE WHICH IS DIFFERENT ON THE (F2VC-9F924-AB) SWITCH.

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS IN PART NUMBER

8070-0001-00

NOTE: PARTIAL POINT SCALED CAVITY * A1

PLACEMENT SPEC	CAVITY * A1 ACTUAL	CAVITY * B1 ACTUAL	CAVITY * C1 ACTUAL	CAVITY * D1 ACTUAL	CAVITY * E1 ACTUAL	CAVITY * F1 ACTUAL	COMMENTS
1 13.40-13.52	13.491	13.491	13.491	13.491	13.491	13.491	
2 13.52-13.64	13.591	13.591	13.591	13.591	13.591	13.591	
3 13.64-13.76	13.691	13.691	13.691	13.691	13.691	13.691	
4 13.76-13.88	13.791	13.791	13.791	13.791	13.791	13.791	
5 13.88-14.00	13.891	13.891	13.891	13.891	13.891	13.891	
6 14.00-14.12	14.091	14.091	14.091	14.091	14.091	14.091	
7 14.12-14.24	14.191	14.191	14.191	14.191	14.191	14.191	
8 14.24-14.36	14.291	14.291	14.291	14.291	14.291	14.291	
9 14.36-14.48	14.391	14.391	14.391	14.391	14.391	14.391	
10 14.48-14.60	14.491	14.491	14.491	14.491	14.491	14.491	
11 14.60-14.72	14.591	14.591	14.591	14.591	14.591	14.591	
12 14.72-14.84	14.691	14.691	14.691	14.691	14.691	14.691	
13 14.84-14.96	14.791	14.791	14.791	14.791	14.791	14.791	
14 14.96-15.08	14.891	14.891	14.891	14.891	14.891	14.891	
15 15.08-15.20	15.091	15.091	15.091	15.091	15.091	15.091	
16 15.20-15.32	15.191	15.191	15.191	15.191	15.191	15.191	
17 15.32-15.44	15.291	15.291	15.291	15.291	15.291	15.291	
18 15.44-15.56	15.391	15.391	15.391	15.391	15.391	15.391	
19 15.56-15.68	15.491	15.491	15.491	15.491	15.491	15.491	
20 15.68-15.80	15.591	15.591	15.591	15.591	15.591	15.591	
21 15.80-15.92	15.691	15.691	15.691	15.691	15.691	15.691	
22 15.92-16.04	15.791	15.791	15.791	15.791	15.791	15.791	
23 16.04-16.16	15.891	15.891	15.891	15.891	15.891	15.891	
24 16.16-16.28	15.991	15.991	15.991	15.991	15.991	15.991	
25 16.28-16.40	16.091	16.091	16.091	16.091	16.091	16.091	
26 16.40-16.52	16.191	16.191	16.191	16.191	16.191	16.191	
27 16.52-16.64	16.291	16.291	16.291	16.291	16.291	16.291	
28 16.64-16.76	16.391	16.391	16.391	16.391	16.391	16.391	
29 16.76-16.88	16.491	16.491	16.491	16.491	16.491	16.491	
30 16.88-17.00	16.591	16.591	16.591	16.591	16.591	16.591	
31 17.00-17.12	16.691	16.691	16.691	16.691	16.691	16.691	
32 17.12-17.24	16.791	16.791	16.791	16.791	16.791	16.791	
33 17.24-17.36	16.891	16.891	16.891	16.891	16.891	16.891	
34 17.36-17.48	16.991	16.991	16.991	16.991	16.991	16.991	
35 17.48-17.60	17.091	17.091	17.091	17.091	17.091	17.091	
36 17.60-17.72	17.191	17.191	17.191	17.191	17.191	17.191	
37 17.72-17.84	17.291	17.291	17.291	17.291	17.291	17.291	
38 17.84-17.96	17.391	17.391	17.391	17.391	17.391	17.391	
39 17.96-18.08	17.491	17.491	17.491	17.491	17.491	17.491	
40 18.08-18.20	17.591	17.591	17.591	17.591	17.591	17.591	
41 18.20-18.32	17.691	17.691	17.691	17.691	17.691	17.691	
42 18.32-18.44	17.791	17.791	17.791	17.791	17.791	17.791	
43 18.44-18.56	17.891	17.891	17.891	17.891	17.891	17.891	
44 18.56-18.68	17.991	17.991	17.991	17.991	17.991	17.991	
45 18.68-18.80	18.091	18.091	18.091	18.091	18.091	18.091	
46 18.80-18.92	18.191	18.191	18.191	18.191	18.191	18.191	
47 18.92-19.04	18.291	18.291	18.291	18.291	18.291	18.291	
48 19.04-19.16	18.391	18.391	18.391	18.391	18.391	18.391	
49 19.16-19.28	18.491	18.491	18.491	18.491	18.491	18.491	
50 19.28-19.40	18.591	18.591	18.591	18.591	18.591	18.591	
51 19.40-19.52	18.691	18.691	18.691	18.691	18.691	18.691	
52 19.52-19.64	18.791	18.791	18.791	18.791	18.791	18.791	
53 19.64-19.76	18.891	18.891	18.891	18.891	18.891	18.891	
54 19.76-19.88	18.991	18.991	18.991	18.991	18.991	18.991	
55 19.88-20.00	19.091	19.091	19.091	19.091	19.091	19.091	

TI-NHTSA 003818

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

5174-0031A-04

REFERENCE SPEC	CAVITY # 01 ACTUAL	CAVITY # 02 ACTUAL	CAVITY # 04 ACTUAL	CAVITY # 05 ACTUAL	CAVITY # 06 ACTUAL	COMMENTS
15 1.24 - 1.27	1.249	1.254	1.257	1.254	1.253	
16 1.61 - 1.64	1.617	1.618	1.610	1.605	1.607	
17 NO FLAG - PLATE	OK	OK	OK	OK	OK	
18 7.21 - 7.27	7.249	7.246	7.253	7.254	7.225	
19 1.79 - 1.81	1.810	1.810	1.810	1.807	1.807	
20 1.127 - 1.130	1.129	1.129	1.122	1.112	1.141	
21 NOTE 1 1.479	OK	OK	OK	OK	OK	
22 1.125 - 1.130	UNABLE TO MEASURE	UNABLE TO MEASURE	BECAUSE	1.125 ARE	ALREADY IN	
SEE 5-0-0-0-0						
23 3/8-24-7-12	OK	OK	OK	OK	OK	
24 1.10 - 1.40	1.220	1.213	1.230	1.234	1.320	
25 12.5 C	.20	.20	.20	.20	.20	
26 6.15 D	.020	.034	.008	.023	.025	
27 41DEG - 43DEG	MEASURED ON CROSS SECTIONED PIECE					
28 40DEG - 50DEG	MEASURED ON CROSS SECTIONED PIECE					
29 7.82 - 8.02	7.90	7.91	7.90	7.89	7.88	7.86 7.90
30 1.50 - 1.64	1.754	1.857	1.891	1.807	1.607	

TI-NHTSA 003819

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F3TA-9F934-4A

	DIFFERENTIAL SPEC	CAVITY # 42 ACTUAL	CAVITY # 43 ACTUAL	CAVITY # 44 ACTUAL	CAVITY # 45 ACTUAL	CAVITY # 46 ACTUAL	COMMENTS
1	9.55 - 9.58	9.55	9.59	9.50	9.50	9.58	
2	9.12 - 9.14	9.12	9.14	9.19	9.22	9.14	
3	13.62 - 13.64	13.64	13.62	13.58	13.67	13.68	
4	35.55 - 35.58	35.60	35.60	35.55	35.55	35.52	
5	12.85 - 12.88	12.85	12.85	12.83	12.80	12.83	
6	11.87 - 11.91	11.75	11.84	11.89	11.84	11.89	11.89
7	1.80 - 1.82	1.82	1.82	1.82	1.80	1.80	MEAS. SIDE W/O KEY
8	MEASURED ON SEPARATE BASE - CROSS SECTIONED:						
9	31.65 - 31.68	31.65	31.65	31.72	31.68	31.65	31.64
10	14.22 - 14.25	14.22	14.22	14.22	14.22	14.22	
11	3.42 - 3.43	3.42	3.43	3.43	3.43	3.43	3.42
12	7.37 - 7.39	7.39	7.39	7.35	7.34	7.39	7.40
13	5.55 - 5.57	5.60	5.55	5.62	5.59	5.59	5.58
14	72.05 - 72.08	72.05	72.05	72.05	72.05	72.05	72.05
15	72.05 - 72.08	72.05	72.05	72.05	72.05	72.05	72.05
16	1.59 - 1.62	1.59	1.61	1.56	1.54	1.59	1.59
17	0.55 - 0.58	0.57	0.55	0.55	0.53	0.58	0.52
18	0.56 - 0.58	0.56	0.55	0.56	0.54	0.56	0.57

TI-NHTSA 003820

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

P3TA-9F924-AA

	BLUEPRINT SPEC	CAVITY # A2 ACTUAL	CAVITY # C3 ACTUAL	CAVITY # C4 ACTUAL	CAVITY # D5 ACTUAL	CAVITY # D6 ACTUAL	COMMENTS
47	2.59 - 2.90	L 2.681	L 2.705	L 2.697	L 2.697	L 2.709	
	(2 PL)	R 2.702	R 2.696	R 2.705	R 2.721	R 2.684	
	1.1 - 1.2	L.021 R.015	L.000 R.075	L.076 R.081	L.081 R.030	L.011 R.154	
	2.465	2.444 2.450	2.465 2.590	2.389 2.384	2.384 2.495	2.476 2.311	
48	0.35 - 0.65	.453 .458	.555 .530	.571 .492	.508 .453	.476 .504	
	(4 PL)	.494 .538	.474 .505	.449 .514	.511 .509	.491 .509	
49	0.56 - 1.17	.983 .995	.959 .962	.968 .989	.990 .953	.987 .955	
	(4 PL)	.953 .952	.994 .959	.975 .923	.955 .954	.980 .974	
50	45DEG +/- 3DEG	44DEG 45MIN	43DEG 50MIN	45DEG 39MIN	45DEG 26MIN	43DEG 58MIN	
	(4 PL)	44DEG 47MIN	44DEG 45MIN	44DEG 05MIN	44DEG 39MIN	45DEG 56MIN	
		45DEG 13MIN	44DEG 37MIN	44DEG 11MIN	45DEG 12MIN	45DEG 54MIN	
		45DEG 04MIN	43DEG 20MIN	44DEG 44MIN	44DEG 23MIN	44DEG 20MIN	
51	9.30-9.72 2PL	9.362 9.332	9.423 9.364	9.499 9.365	9.429 9.309	9.392	
52	2.15-2.42 2PL	2.180 2.220	2.198 2.133	2.169 2.219	2.161 2.170	2.149 2.194	
53	23DEG +/- 2DEG	24DEG 22MIN	24DEG 10MIN	24DEG 47MIN	24DEG 17MIN	23DEG 37MIN	
	(2 PL)	23DEG 32MIN	22DEG 41MIN	23DEG 50MIN	23DEG 04MIN	23DEG 39MIN	
54	COLOR: BLACK	OK	OK	OK	OK	OK	
55	13-17DEG 2PL	ON CROSS	SECTIONED	PART ON	PRINT		
56	0.86 - 0.87	ON CROSS	SECTIONED	PART ON	PRINT		
57	0.10 - 0.31	.252 .278	.287 .251	.276 .260	.287 .260	.280 .257	
58	0.58 - 0.68	.625 .646	.646 .621	.648 .622	.656 .622	.644 .626	

TI-NHTSA 003821

TEXAS INSTRUMENTS, INC. 11000 TI DRIVE, DALLAS, TEXAS 75243

800-541-2222 • TELEX 22-7788 TIX • 714-244-0000 • CABLE TEXINS

77LIST

A1 ... 658

NAME: [REDACTED] INC. MATERIAL: [REDACTED] SITE:
 PARTS LIST PROJECT: PART NUMBER: 77PSL2-1 REV LTR: A CLS: 350
 EXPLOSION NUM: 3423 DWG REV: NUM: 77PSL2-1 ECN INC DT: 91/11/05

TITLE: PRESSURE SWITCH

LVICNT	QTY/UM	BITH	PART/DRAWING NUMBER	RV	NOMENCLATURE/PARM DATA
01	1	REF	36952-1		FINAL ASSEMBLY
			36952-1		
01	2	1	27759-2		BASE ASSEMBLY
			27759SH1		
02	3	1	46515-2		✓ BASE (BROWN)
			46515		
02	4	1	36888-1		✓ STATIONARY TERMINAL
			36888		
02	5	1	36897-1		MOVABLE TERMINAL ASSEMBLY
			36897SH1		
03	6	1	74408-1		✓ MOVABLE CONTACT
			74408		
03	7	1	74171-1		✓ RIVET
			74171		
03	8	1	36887-1		✓ MOVABLE TERMINAL
			36887		
03	9	1	36889-1		✓ SPRING ARM
			36889		
04	10	1	27293-1		COVER ASSEMBLY
			27293		
04	11	1	27293-1		✓ HOOD LATE LATE EXPORT
			27293		
04	12	1	27293-1		✓ GASKET
			27293		
04	13	1	27293-1		✓ OUP
			27293		
04	14	1	27293-1		✓ SEAL
			27293		
02	15	1	27293-1		✓ KAPTON STRIP SPEC 1.175 LBS/IN
			27293		
02	16	1	27432-1		✓ WASHER
			27432		
02	17	1	27405-1		✓ CONVERTER
			27405		
02	18	1	74224-1		✓ KAPTON TAPE 1.175 LBS/IN
			74224		
02	19	1	70958-2		✓ SPACER
			70958		
02	20	1	70958-2		✓ SPACER
			70958		
02	21	1	26653-07		3/4" FORMED DISC
			26653SH1		
02	22	1	74797-1		✓ CRIMP RING
			74797		
02	23	1	74079-146		✓ TRANSFER PIN
			74079		

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11	15		02	74179-2	✓ THREAD CAP
				74179	
11	03	OR		27318-1	CARTON ASM.
				27318	
12	27			74219-1	CARTON
				74219	
02	02			74218-1	ROW SEPARATOR
				74218	
02	02			27317-1	DEVICE SEPARATOR
				27317	

NOTES, REV. DATA, DISTRIBUTION, OPERATING CHARACTERISTICS, SPECIAL REQUIREMENTS

REV DESC: SET UP

CCB APPROVAL DATE: 91/08/14

DFTO WORK GROUP: PRECISION CONTROLS

ECN ORIGINATOR: STEPHEN B OFFILER

NOTES:

- 1 - ACTUATION PRESSURE ----- 90-160 PSIG
- 2 - RELEASE PRESSURE ----- 20 PSIG MIN.
- 02 - CR 101000, ADDED P/L TO FIG. NEW DRAWING IN SYSTEM

#5, #15, #23
 Add CHAR.
 #32, #33, #51
 #33, #34, #42, #51

Give - I clabdown it
 on a follow up -
 Is open -
 want to write
 PIST and see
 on the F3.3?
 E -

F2WC-9F924-AB

MATERIAL ANALYSIS

PARTS LIST

	PART NAME	PART #	CERTIFIED
1	BASE	46515-2	YES
2	STA. TERM.	33888-1	YES
3	MOVE. CONTACT	74408-1	YES
4	PIVET	74171-1	YES
5	MOVE. TERM.	36887-1	YES
6	SPRING ARM	36889-1	YES
7	US12 HEXPORT	36900-1	YES
8	BASKET	74353-1	YES
9	CUP	77710-1	YES
10	SEAL	74176-1	YES
11	KAPTON STRIP	27225-1	YES
12	WASHER	27639-1	YES
13	CONVERTER	27406-1	YES
14	KAPTON TAPE	74224-1	YES
15	SPACER	73958-2/-3	YES
16	CRIMP RING	74797-1	YES
17	TRANSFER PIN	74078-BEL	YES
18	ENVIO. SEAL	74247-2	YES
19	THREAD CAP	74179-2	YES

TI-NHTSA 003825



KELSEY-HAYES ENGINEERING CHANGE NOTICE

PROD. AREA: VALVES	SUBJECT: FM-10 PRESSURE SWITCH	PROGRAM: DUAL PROP	MODEL YEAR: 93	CUSTOMER(S): FORD	ECN NO.: 25136 PAGE 1 OF 1			
NATURE OF CHANGE: REVISE THE T.I. PRESSURE SWITCH - NEW AUTOMATED VERSION IS AVAILABLE. NOTE: THIS IS A CHANGE TO CUSTOMER DRAWING.				EPA NO.: 48011-B REF. DOCUMENTS: CUST. CHG.: K-H DEV./MCR: K-H EST.: K-H NTR: ATTACHMENTS: DISTRIBUTION CODE:	CLASSIFICATION: REGULAR ☒ RECORD MANDATORY EXPEDITED VEHICLE APPLICATION: PASSENGER ☒ TRUCK TRAILER SERVICE			
REASON: CUSTOMER REQUEST: ☒ PLANT REQUEST: ☐ VENDOR/PURCHASING REQUEST: ☐ T.I. NOW HAS THEIR AUTOMATED ASSY GOING. - NEED TO UPDATE PRINTS SO TSTR WILL REFLECT PRODUCTION LEVEL SWITCH. ES TEST WILL BE PERFORMED ON ENTIRE VALVE FOR TSTR TO FORD.								
IS TEST REQUIRED? YES ☒ NO ☐ CONCURRENT ☐ TEST DURATION, DAYS: 30				INITIATED BY: J. COSSINS 8-2 DATE: 9-5-91				
APPROVED BY:								
PRODUCT ENGINEERING		DATE	DATE	DATE				
DESIGN ENGINEER	J.M. COSSINS	8-2-91	D.A. T. PRYOR/LV	8-20-91	ESTIMATING K.R. HAWKINS 8-20-91			
MATERIALS	HR		SALES D. CLINE/CD	8-8-91	PURCHASING R. IVES 8-13-91			
MANAGER	G.A. WILLI	8-2-91	CUST. AUTHORIZATION YES ☐ NO ☒		MANUFACTURING R. BELLAR 8-20-91			
CHIEF ENGINEER	C. DOWDING	8-2-91	COST RECOVERABLE? YES ☐ NO ☒	ENGINEERING SERV. GAW				
(SEE ENGINEERING MANUAL SECTION 2.81)			SERVICE MANUAL REVIEWED? NO					
AFFECTED DESIGN DATA BANK: REVIEWED? YES REVISED? NO			FMEA REVIEWED? YES FMEA REVISED? NO					
DELETE	REPLACE	RELEASE	CHANGE	CHG. LEVEL	PART NAME / REVISION	CO-OR. CHG.	PURCH. PART X	STOCK DISPOSITION
			D-12590701	A5	ASSY - PRESSURE SWITCH - REVISE TO T.I. PRINT 77PSL2-1 WAS TO 57PSL5-3. NOTE THE ONLY VISIBLE CHANGE IS THE OVERALL LENGTH ON SWITCH. 30 SPECIFIC CHANGES ARE: 1) CHANGE TO "57.15 MAX" WAS "62.23 MAX" 2) CHANGE TO "7F2VC-9F926-AA" WAS "F2VC-9F926-AA" 3) CHANGE T.I. P/N TO "77PSL2-1" WAS "57PSL5-3" 4) REMOVE "FOR FINAL ASSY SEE DWG. 12575501"	1	X	NO STK.
			D-12603101	B	ASSY 'S' - FM-10 DUAL PROP	1		NO STK.
			D-12603101	B	- REFLECT ABOVE CHANGES ON THESE DRAWINGS AND PARTS LIST			
			D-12603401	B				
			P-12607601	B				
			P-12607601	B				
APPROVED								
PLANT(S):		LVED: AUG 21 1991		MILFORD		ECN NO.		25136

TI-NHTSA 003826

old

PROCESS POTENTIAL AND QUALITY INDEXES SUMMARY DATA SHEET

PART #: E37A-9E924-AA
 SUPPLIER: TRW Components
 CODE: T 0000
 ADDRESS: 34 FINE ST.
Billerica, Mass. 01823
 VEHICLE BUILD (CIRCLE ONE): EP VP ☒ OTHER (DEFINE)

SUPPLIER CONTACT: Jim Wolf
 CONTACT PHONE: 608-699-1719
 PART DESCRIPTION: Next Generation
Speed Control Deactivate Pressure Switch
 BQA CODE:

CHARACTERISTIC TYPE

V - FORD OR SUPPLIER SIGNIFICANT

SC - FORD OR SUPPLIER SIGNIFICANT

NUMBER OF CHARACTERISTICS	TYPE	Cp	Cpk
1: <u>Release Pressure</u>	TYPE: <u>SC</u>	Cp = <u>1.2</u>	Cpk = <u>1.0</u>
2: <u>3/8-24UNF-20 Thread</u>	TYPE: <u>SC</u>	Cp = <u>1.0</u>	Cpk = <u>0.8</u>
3:	TYPE:	Cp =	Cpk =
4:	TYPE:	Cp =	Cpk =
5:	TYPE:	Cp =	Cpk =
6:	TYPE:	Cp =	Cpk =
7:	TYPE:	Cp =	Cpk =
8:	TYPE:	Cp =	Cpk =
9:	TYPE:	Cp =	Cpk =
10:	TYPE:	Cp =	Cpk =
11:	TYPE:	Cp =	Cpk =
12:	TYPE:	Cp =	Cpk =
13:	TYPE:	Cp =	Cpk =
14:	TYPE:	Cp =	Cpk =
15:	TYPE:	Cp =	Cpk =

PIST = $\frac{534.536}{534.536} \times 100 = 98.8\%$

PIPC_{Cp} = $\frac{1.1}{1.1} \times 100 = 100\%$ PIPC_{Cpk} = $\frac{2.2}{2.2} \times 100 = 100\%$

COMMENTS:

* Cp Index Not calculatable on unilateral tolerance

PREPARED BY:

Cherie Rose

DATE: 9-20-91

AVERAGE AND RANGE (R-R) CHART

Part Name PRESSURE SWITCH Part No. 77PSL2-3
 Description No. _____
 Qty. 300 In. 200 Weight _____

Activation

USE THESE INSTRUCTIONS AND CONSIDERATIONS

Pg. 1 of 2

NEXT GENERATION SPEED CONTROL
LIGHT TRUCK

Sample	Individual Readings	Range	Average	Range
1				
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*Manual Logging of Data
 See Computer Generated Charts*

AVERAGE AND RANGE (A-R) CHART

USE CHANGE 11, 17 & 19 OF THE 1965 CHARTING SYSTEM

PG. 2 of 2

Pressure Switch 77PS42-3
 400 500
 Actuation

LIGHT TRUCK

Individual Readings																					
Average																					
Range																					

TI-NHTSA 003830

AVERAGE AND RANGE (X-R) CHART

Pressure Switch 77PSL2-3
300 psi 40
Release

보통 양배추와 고구마, 양파를 함께 섭취하면 암 예방에 효과적

Pg. 1 of 2

NEXT GENERATION SPEED CONTROL

WIGHT TRUCK

Individual Readings	
Sample size	Sample frequency
Manual Logging of Data Sat. Computer Generated Charts	
Averages	
Range	

AVERAGE AND RANGE (R-R) CHART

Part Name Pressure Switch 77PSLA-3
 Quantity 1
 Qty. 500 46
Release

USE PREVIOUS EDITIONS FOR INFORMATION

PG. 2 of 2

LIGHT TRUCK

Individual Readings																				
Subpart																				
Weight/Length																				
Average																				
Range																				

TI-NHTSA 003833

cale. [redacted] overlay [redacted]

TI-NHTSA 003834

cale

lot overlay

very

TI-NIT8A 003636

uit ivle est l p per

TI-NHTSA 003836

Quit Division East li p operator

CC- 214070

TEXAS INSTRUMENTS



December 05, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Mary Cooney
Shipping Department

Subj: Part Number 12604301 Pressure Switch (E76C-3N824-AA)
Part Number 1260702 Pressure Switch (E76C-3N824-AA)
ISIR Submissions

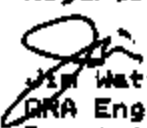
Dear Mary,

A package containing pressure switches and test documents was sent via UPS to Ms. Rita Gunia of your purchasing department on November 20, 1991. The package was signed for by " P. Ovington " at the Kelsey-Hayes receiving location.

Could you please let me know if the package was inadvertently routed to someone other than Ms. Rita Gunia, or if you know of the individual " P. Ovington " ? A copy of the shipping document is attached.

I can be reached at: (508) 699-1719. Thank you in advance for your help.

Regards,


Jim Watt
ORA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-33
Rita Gunia, Kelsey-Hayes Purchasing Dept., Fenton, MI.
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

enc1: UPS Shipping Document # 214070

INCORPORATED
☐ DOMESTIC, INCORPORATED
☐ FOREIGN, INCORPORATED
☐ DOMESTIC, NOT INCORPORATED
☐ FOREIGN, NOT INCORPORATED

DATE: 12/27/82
 TIME: 1:00 PM
 CARRIER: 6-15
 CARRIER VIA: 6-15

SHIP
 TO:

WILSON-HAYES COMPANY
 9475 Center Road
 Burton, Michigan 48434

Attn: Ms. Rita Gonia
 Purchasing Dept.

Take Envelope

USE CHECK ONE
☐ CASH SALES
☐ SALE OF ASSETS
☐ TRANSFER OF INTERESTS
☐ TRANSFER OF ASSETS
☐ TRANSFER OF LIABILITIES

GROSS WEIGHT	NO. OF CONTAINERS	ORIGINATOR'S NAME (TYPED)	ORIGINATOR'S SIGNATURE
8.42	1 CIV	Elaine Rose MS 12-27	<i>Elaine Rose</i>

4-6750-100-100

ORIGINATOR COPY

TI-NHTSA 003838

TEXAS INSTRUMENTS



December 10, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Mr. Thomas G. Dan
Supplier Quality Assurance

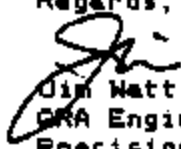
Subj: Part Number 12604301 Pressure Switch (E78C-3N824-AA)
Part Number 12604301 Pressure Switch (E78C-3N824-AA)
ISIR Submissions

Dear Tom,

Just a short note to thank you for your efforts in locating the ISIR submission packages for the two pressure switches that were sent to Kelsey-Hayes on November 20, 1991 and signed for by " P. Ovington " at the Kelsey-Hayes receiving location.

After reviewing the submissions, please let me know if you have any questions or if I can be of any further assistance.

Regards,


Jim Watt
CRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-33
Rita Gunia, Kelsey-Hayes Purchasing Dept., Fenton, Mi.
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

C. Elaine R.

TEXAS INSTRUMENTS



December 13, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Mr. Thomas G. Dan
Supplier Quality Assurance

Subj: Part Number 12604301 Pressure Switch (E790-BAS04-AA)
Part Number 12590701 Pressure Switch (F2V0-BF004-AB)
ISIR Submissions

Re: your 12/11/91 Telephone Conversation

Dear Tom,

Confirming your agreement that the ISIR submission documents that Texas Instruments uses need not be Kelsey-Hayes specific documents. We currently utilize Ford formatted documents for our ISIR submissions. In the event that Kelsey-Hayes has content specific requirements that are different from our current ISIR submission, we will provide those specific requirements on Kelsey-Hayes' documents.

After reviewing the ISIR submissions, please let me know if you have any questions or if I can be of any further assistance.

Regards,


Jim Watt
SQA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czern, MS 12-29; Charlie Douglas, MS 12-33
Rita Gunia, Kelsey-Hayes Purchasing Dept., Fenton, Mi.
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan



KELSEY-HAYES

SUPPLIER MANUFACTURING CHANGE REQUEST

RT NAME: Pressure Switch	REQUEST NUMBER:	BUYER: Rita Gunia	DATE: 12/18
PART NUMBER: 12590701	PRODUCT LINE:	P.O.C.R. NUMBER:	E/P LEVEL: A
SUPPLIER: Texas Instruments Inc	K-H USING PLANT: Milford	SUPPORTING DATA ATTACHED? YES ☐ NO ☐	

REASON FOR CHANGE/PURPOSE: 1.) Update and correct Kelsey-Hayes drawing to reflect correct Ford part number and Ford ES specification number.

2.) Kelsey-Hayes ECN No. 25136 (9/5/91) created error.
ECN No. 25136 copy is attached.

ORIGINATOR: Jim Watt *WVAT* TITLE: OPA Engr. CONCURRENCE: Charlie Douglas TITLE: Prod. Specia

DESCRIPTION: Kelsey-Hayes drawing no. 12590701-A should be changed to reflect:

- 1.) Ford Motor Co. Part No. V F2VC-9F924-AB
- 2.) Ford Motor Co. Specification No. V ES-F2VC-9F924-AA

PLAN FOR VERIFICATION & TESTING: Validation of these changes made with Ford Motor Co.

DISPOSITION - BY KELSEY-HAYES

APPROVE	REJECT	DISTRIBUTION	INSTRUCTIONS, QUALIFICATIONS AND/OR REASON FOR REJECTION:
		K-H PURCHASING	
		PLANT MANUFACTURING ENGINEERING	
		PLANT QUALITY CONTROL	
		K-H PRODUCT ENGINEERING	
		K-H SALES	
		PROCUREMENT or DIVISIONAL QUALITY ASSURANCE	

TI-NHTSA 003841

ESR LEVEL REQUIRED-

☐ NONE ☐ 1 ☐ 2 ☐ 3

12/28/91 PRA L-11-PC

SECRET

TEXAS INSTRUMENTS



December 19, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Mr. Thomas G. Dan
Supplier Quality Assurance

Subj: Part Number 12590701 Pressure Switch (F2VC-9F924-AB)
Supplier Manufacturing Change Request (SMCR)

Refr: Your 12/17/91 Telephone Call

Dear Tom,

Enclosed, please find the SMCR describing the proposed change for the Kelsey-Hayes part number 12590701. We believe that the errors were inadvertently created from the recent ECM No. 25136.

After reviewing the SMCR, please let me know if you have any questions or if I can be of any further assistance.

Regards,


Jim Watt

SQA Engineer

Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-33
Rita Gunia, Kelsey-Hayes Purchasing Dept., Fenton, Mi.
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: SMCR, ECM no. 25136

TI-NHTSA 003642



KELSEY-HAYES

SUPPLIER MANUFACTURING CHANGE REQUEST

PART NAME: <u>PAINTS - 12590751</u>	REQUEST NUMBER:	BUYER: <u>RITA GONIA</u>	DATE: <u>12/18/05</u>
PART NUMBER: <u>12590751</u>	PRODUCT LINE:	P.O.C.N. NUMBER:	R/P LEVEL: <u>1</u>
SUPPLIER: <u>TORONTO TIRE/AVIANT</u>	K-H USING PLANT: <u>MILFORD</u>	SUPPORTING DATA ATTACHED? ☒ YES ☐ NO	

REASON FOR CHANGE/PURPOSE: UPDATE AND CORRECT K-H DEPT. OF
TO RE-LECT CORRECT FOR PART NO. AND FOR
ES
IN K-H DEPT. NO. 12590751, 12590751, 12590751

ORIGINATOR: 12590751 TITLE: 12590751 CONCURRENCE: 12590751 TITLE: 12590751

DESCRIPTION: 12590751 DEPT. NO. 12590751
12590751 DEPT. NO. 12590751
12590751 DEPT. NO. 12590751
12590751 DEPT. NO. 12590751

PLAN FOR VERIFICATION & TESTING: 12590751 DEPT. NO. 12590751

DISPOSITION - BY KELSEY-HAYES

APPROVE	REJECT	DISTRIBUTION	INSTRUCTIONS, QUALIFICATIONS AND/OR REASON FOR REJECTION:
		K-H PURCHASING	
		PLANT MANUFACTURING ENGINEERING	
		PLANT QUALITY CONTROL	
		K-H PRODUCT ENGINEERING	
		K-H SALES	
		PROCUREMENT or DIVISIONAL QUALITY ASSURANCE	

R/P LEVEL REQUIRED:

☐ 1 ☐ 2 ☐ 3 ☐ 4

10/20/01 PDA-1-1-001

TI-NHTSA 003843

1-9-90

RESUBMITTED TO K-H:

- ① FBI DATA REWRITTEN
TO K-H PRINT & MARKED
PRINT
- ② Copy of Ford PIS/POL
PPQI Summary DATA
SHEET with significant
CHARACTERISTICS IDENTIFIED
- ③ DENISA & PFINER
- ④ New CERT for -4
ENTIRE SENT

link -
to, and it
this separately.

TEXAS INSTRUMENTS



Kelley-Hayes Company
9475 Center Road
Fenton, Michigan 48430

January 09, 1992

Attn: Mr. Thomas G. Dan
Supplier Quality Assurance

Subj: Part Number 12590701 Pressure Switch (F2VC-9F924-AB)
ISIR Addendum

Ref: Your 12/20/91 Letter

Dear Tom,

Enclosed, please find the dimensional layout for the pressure switch, Kelley-Hayes part number 12590701. Please refer to the SMCR that was submitted on 12/19/91 to correct the 12590701 release drawing.

We have also included copies of the design FMEA, process FMEA, and designated key characteristics list. We believe this completes the ISIR submission requirements for part number 12590701.

After reviewing the ISIR addendum, please let me know if you have any questions or if I can be of any further assistance.

Regards,


Jim Watt
QRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-33
Rita Gunia, Kelley-Hayes Purchasing Dept., Fenton, MI.
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR Addendum For 12590701

2. 1/15/92

TEXAS INSTRUMENTS



Kelsey-Hayes Company
101 Oak Street
Milford, Michigan 48381

January 15, 1992

Attn: Mr. John Shorkey
Quality Engineer

Subj: Part Number E7SC-3N824-AA Pressure Switch
Part Number F3TA-9F924-AA Pressure Switch

Ref: Your 01/14/92 Telephone Call

Dear John,

We have confirmed the actuation pressures for
Kelsey-Hayes part number numbers as follows:

Part number	Actuation Pressure
-----	-----
E7SC-3N824-AA	350-450 psi
F3TA-9F924-AA	200-300 psi

I have also enclosed a copy of Mr. Thomas Dan's 12/20/91
letter as you requested.

Please let me know if you have any questions or if I
can be of any further assistance.

Regards,


Jim Watt
QRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-39
Thomas Dan, Kelsey-Hayes Supplier Quality, Fenton, Mi.
Rita Gunia, Kelsey-Hayes Purchasing Dept., Fenton, Mi.
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

TEXAS
INSTRUMENTS



Kelsey-Hayes Company
101 Oak Street
Milford, Michigan 48381

January 20, 1992

Attn: Mr. Clay Bailey
Manufacturing Engineer

Subj: Part Number E78C-3N824-AA Pressure Switch
Part Number F3TA-9F924-AA Pressure Switch

Ref: Your 01/20/92 Telephone Call

Dear Clay,

The purpose of this letter is to substantiate our discussion concerning the above referenced pressure switches. The switches are to be assembled with the threaded metal hexport onto the application. Installation torque is to be applied only to the metal hexport part of the switch.

There is to be no torque applied to the plastic connector part of the switch. Any torque applied to the plastic connector may cause abnormal operation, damage, or destruction of the switch function.

Please let me know if you have any questions or if I can be of any further assistance.

Regards,


Jim Watt

PRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-33
Thomas Dan, Kelsey-Hayes Supplier Quality, Fenton, MI.
Rita Gunie, Kelsey-Hayes Purchasing Dept., Fenton, MI.
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

**TEXAS
INSTRUMENTS**



March 16, 1992

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Mr. Thomas G. Dan.
Supplier Quality Assurance

Subj: Part Number 12590701 Pressure Switch (F2VC-9F924-AB)
ISIR Approval

Ref: Your 03/09/91 Telephone Call

Dear Tom,

Enclosed, please find the approved ISIR signed by Ford 92A
for the Kelsey-Hayes part number 12590701.

After reviewing the ISIR, please let me know if you
have any questions or if I can be of any further assistance.

Regards,


Jim Watt
SQA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-33
Rita Gunia, Kelsey-Hayes Purchasing Dept., Fenton, MI.
Andy McGuirk, MS 12-27
Norm Frede, TI Farmington Hills, Michigan

encl: ISIR No. 112384

TI-NHTSA 003848



INITIAL SAMPLE WARRANT

No. 112384

PART INFORMATION

Part Name NEXT GENERATION SPEED CONTROL Part Number F2VC-9F924-AB
 Control Item ☒ Yes ☐ No Engineering Change Level G Date 4-11-91
 Engineering Change Authorization BRUCE PRASE Date _____
 Shown on Drawing No. F2VC-9F924-AB Part Weight 062 kg

Reason for Initial Sample:

- | | | |
|--|--|--|
| ☐ Initial Submission | ☐ Change in Optional Construction or Material | ☐ Process Change |
| ☐ Engineering Change(s) | ☐ Additional, Replacement, or Refurbished Tooling | ☐ Change in Subcontractor or Source |
| ☐ Tooling Transfer | ☒ Correction of Discrepancy (Resubmission No. _____) | ☐ Parts Produced at Additional Location |
| ☐ Other - Please Specify <u>SEE BELOW</u> | | |

SUPPLIER INFORMATION (Manufacturing Location)

Supplier Name TEXAS INSTRUMENTS Street Address 34 FOREST STREET
 City ATTLEBORO State MA Postal Code 02703 Country USA
 Supplier Mfg. Location Code - DUNS T097K Customer Assigned FORD MOTOR CO - EED

CUSTOMER INFORMATION

Customer Name FORD MOTOR CO - EED Buyer FRED HENDERSHOT Buyer Code 165
 Purchase Order Number _____ Sample Acceptance Level 2

Application NEXT GENERATION SPEED CONTROL

RESULTS

The results for dimensional measurements ☒, material tests ☒, and functional (ES) tests ☒ meet all drawing and specification requirements ☒ Yes ☐ No

Submission Checklist

- | | | |
|---|--|---|
| ☐ Checksheet Print | ☐ Material Test Results | ☐ Control Plan |
| ☐ Auxiliary Drawings/Sketches | ☐ Certifications | ☐ Process Capability Results |
| ☐ Correct Number of Samples | ☒ Functional (ES) Test Results | ☐ Process Flow Diagram |
| ☒ Dimensional Results | ☐ Product Engineering Approval | ☐ Gage (Measurement) Studies |

Supporting data for all requirements are available upon request.

COMMENTS:

ISR SUPPLEMENT WITH ADDITIONAL TESTING TO CLOSE OUT ALERT NO. A10166193;

ALSO, CORRECTED BASE MOLD DIMENSIONS. PART PREVIOUSLY APPROVED ON

13W 112384, DATED 4/17/91

DECLARATION

I affirm that the samples represented by this warrant are representative of our parts and have been made to the applicable customer drawings and specifications from specified materials, on regular production testing with no operations other than the regular production process.

Authorized Signature JIM WITT Date 12/20/91
 Print Name JIM WITT Title QA ENGINEER Phone No. 508-699-1719

APPROVAL (when required by customer process) ☒ Approved ☐ Rejected

Signature [Signature] Date 1/14/92

Form 2020

Vehicle Operations SQA

TI-NHTBA 003840

**DRAWINGS AVAILABLE UPON
REQUEST**

TEXAS INSTRUMENTS



November 15, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Rita Gunia
Purchasing Department

Subj: Part Number 12604301 Switch (E7SC-3N924-AA) 57Fs.3
Part Number 12590701 Switch (F2VC-9F924-AB)
ISIR Submissions

Dear Rita,

Enclosed, please find the ISIR for the 12604301 and 12590701 switches. Both ISIR submissions were accomplished on Ford forms as we are in the process of transferring data to Kelsey-Hayes forms.

The 12590701 submission has several dimensional issues on the layout that are being addressed.

The 12604301 submission needs dimensional layout, control plan, manufacturing flow diagram, PIST, PIPC, and PV testing that are being addressed.

Please let me know if you have any questions or if I may be of any further assistance.

Regards,

Jim Watt
Jim Watt
QRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Gary Snyder, MS 12-33
Charlie Douglas, MS 12-33
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR submissions

Claiming Donor A
Please following up on this - shx, Jim W.

my copies
of K-H PKg.

57F3.3

Partial PKg. ⁸² 11-15-91

① PIPC

② GAGE R+R

③ Mat. Arch

TI-NHTSA 003854

TEXAS INSTRUMENTS



November 15, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Rita Gunia
Purchasing Department

Subj: Part Number 12604301 Switch (E78C-3N624-AA)
Part Number 12590701 Switch (F2VC-9F924-AB)
ISIR Submissions

Dear Rita,

Enclosed, please find the ISIR for the 12604301 and 12590701 switches. Both ISIR submissions were accomplished on Ford forms as we are in the process of transferring data to Kelsey-Hayes forms.

The 12590701 submission has several dimensional issues on the layout that are being addressed.

The 12604301 submission needs dimensional layout, control plan, manufacturing flow diagram, PIST, PIPC, and PV testing that are being addressed.

Please let me know if you have any questions or if I may be of any further assistance.

Regards,


Jim Watt
QRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Gary Snyder, MS 12-33
Charlie Douglas, MS 12-33
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR submissions.

TEXAS INSTRUMENTS INC. MATERIALS & CONTROLS GROUP SITE

PARTS LIST PROJECT PART NUMBER: 77PSL2-3 REV LTR: A CLS: 650
EXPLOSION NUM: 3423 DWG PFX: NUM: 77PSL2-3 ECN INC.DT: 91/11/05

QTY: PRESSURE SWITCH

UNIONT	QTY/UM	BITM	PART/DRAWING NUMBER	RV	NOMENCLATURE/PARM DATA
01	1	REF	36952-1	?	FINAL ASSEMBLY
			36952-1		
01	2	1	27759-1		BASE ASSEMBLY
			27759SH1		
02	3	1	46515-1		BASE (BLACK)
			46515		
02	4	1	36888-1		STATIONARY TERMINAL
			36888		
02	5	1	36897-1		MOVABLE TERMINAL ASM
			36897SH1		
02	6	1	74408-1		MOVABLE CONTACT
			74408		
02	7	1	74171-1		RIVET
			74171		
02	8	1	36887-1		MOVABLE TERMINAL
			36887		
02	9	1	36889-1		SPRING ARM
			36889		
02	10	1	27293-14		SENSOR ASSEMBLY
			27293SH2		
02	11	1	36900-1		MOD SAE J512 HEXPORT
			36900		
02	12	1	74353-1		GASKET
			74353		
02	13	1	27288-1	✓	CUP
			27288		
02	14	3	74176-1		SEAL
			74176		
02	15	OR	27225-1		KAPTON STRIP SPEC (.175 LBS/K)
			27225		
02	16	1	27639-1		WASHER
			27639		
02	17	1	27406-1		CONVERTER
			27406		
02	18	1	74224-1		KAPTON TAPE (.100 LBS/K)
			74224		
02	19	OR	73958-2		SPACER
			73958		
02	20	OR	73958-3		SPACER
			73958		
02	21	1	36656-28		3/4" FORMED DISC
			36656SH1		
02	22	1	74797-1		CRIMP RING
			74797		
02	23	1	7-076-136		TRANSFER PIV.
			74076		

TI-NHT&A 003650

01	25	1	22	74179-2	THREAD CAP
				74179	
01	26	AR		27318-1	CARTON ASM.
				27318	
02	27	1	2	74219-1	CARTON
				74219	
02	28	5	3	74218-1	ROW SEPARATOR
				74218	
02	29	4	4	27317-1	DEVICE SEPARATOR
				27317	

NOTES, REV. DATA, DISTRIBUTION, OPERATING CHARACTERISTICS, SPECIAL REQUIREMENTS :

REV DESC: SET UP CCB APPROVAL DATE: 91/08/14

DTG WORK GROUP: PRECISION CONTROLS EGN ORIGINATOR: STEPHEN B OFFILER

NOTES:

- 1 - ACTUATION PRESSURE ----- 200-300 PSIG
- 2 - RELEASE PRESSURE ----- 40 PSIG MIN.
- 02 - CR M06080, ADDED P/L TO EIS, NEW DRAWING IN SYSTEM

11-5-91

	<u>62-1</u>	<u>62-3</u>
SA final asm.	36952-1	
Base asm.	27759-2	-1
✓ Base	46515-2	-1
SA ✓ Ste. Term "D"	36888-1	
✓ Move "Base"	36897-1	
✓ Move Contact	74408-1	
✓ Rivet	74171-1	
SA ✓ Move Term "D"	36887-1	
✓ Spring Arm	36889-1	
✓ Sensor Arm	27293-13	-14
✓ 7512 Helipot	36900-1	
✓ Bracket	74353-1	
✓ Cup	27713-1	✓ 27288-1
✓ Seal	74176-1	
✓ Kapton strip	27285-1	
✓ Washers	27639-1	
✓ Con. Verts	27406-1	
✓ Kapton tape	74224-1	
✓ Spacer	73958-2/-3	
✓ disc	36656-27	-28
✓ O-ring Ring	74797-1	
✓ Transfer pen	74078-146	
Envis seal	74247-2	
✓ thread caps	74179-2	

(need)

TI-NHTSA 003858

CL = [Signature]
FYI/Comment
Thp
Ji

Kelsey-Hayes Company
6475 Center Road
Fenton, Michigan 48430

September 27, 1991 *Ji*

Attn: Mr. Steve Moffatt

Subj: Initial IBR Submission
Ford Part Number F2VC-9F924-AB
Pass Car Series

Dear Steve,

Enclosed, please find our initial IBR submission for the NGSC deactivation switch, Ford part number F2VC-9F924-AB. The submission includes complete product validation testing which is enclosed with the documentation.

We noted one discrepancy during the dimensional analysis. Dimension 1.85 - 2.06 was inadvertently transferred in error from the envelope drawing to the component drawing, resulting in the one out of dimension measurement (2.699). Sample bases with the corrected dimension will be forwarded to you within three weeks.

We noted that the pass car print does not indicate any significant characteristics, and therefore, no PIST/PIPC data is required. However, we intend to provide PIST/PIPC data on actuation, release, and thread specifications, and forward the data to you.

Please let me know if you have any questions or if I may be of any further assistance.

Regards,

Jim Watt
GRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Charlie Douglas, MS 12-33
Andy McGuirk, MS 12-27
Joe Schuck, TI Farmington Hills, Michigan

encl: IBIR Submission

TI-NHTSA 003859

Instructions: This form is to be completed by the supplier and submitted to the customer. It is a checklist of items that are required for the supplier to be considered for the Kelsey-Hayes program. The customer will review the form and determine if the supplier is qualified to supply the parts required for the program. The customer will then either approve the supplier or reject the supplier. If the supplier is approved, the customer will provide the supplier with the necessary information to begin production. If the supplier is rejected, the customer will provide the supplier with the reasons for rejection and the supplier will be required to correct the deficiencies before being considered for the program again.

**KELSEY-HAYES™ GROUP
INITIAL SAMPLE READINESS CHECKLIST**

MW12 Program

Jan cam

Charlie Douglas
Superintendent

Supplier Texas Inst. Supplier Contact Superintendent
 Supplier Address 34 Forest St.
 City, State, Zip Attleboro, MA Phone (508) 699-3012 Fax (508) 699-1578
 Part or Product pressure switch Date 9-9-91
 Kelsey-Hayes Group _____ Kelsey-Hayes Contact _____
PLN 12604301 Released version 8/9 dated 4-9-91

The following items have been prepared and/or approved. Items marked with an asterisk (*) are to be completed prior to ISIR date.

<u>R-H</u>		<u>Available</u>	<u>K-H</u>
<u>Required</u>	<u>Item</u>	<u>by Supplier</u>	<u>Disposition</u>
		(Note: initial and date each item)	
☐	*Manufacturing feasibility signoff	_____	_____
☐	*Design FMEA	_____	_____
☒	*Process flow diagram	_____	_____
☒	*Process FMEA	_____	_____
☒	*Designated characteristics list	_____	_____
☐	*Pre-launch control plan	_____	_____
☒	Gage R&R studies	_____	_____
☒	Short term process capability studies	_____	_____
☒	*Process control plan	_____	_____
☐	Inspection instructions	_____	_____
☐	Set-up instructions	_____	_____
☐	Operations instructions	_____	_____
☒	ES testing requirements	_____	_____
☐	Packaging and identification approval	_____	_____
☒	Functional testing	_____	_____

$3/c$			$4/r$		
F_{HD}	$K-H$		F_{HD}		

amm. dig. prints

Burst 7K for
K-1. 4/T & P/C

Proof for K-1. K

P/C = 3K

4/T = 4K

Traced 10.4.91

UPS

delivered to K-1.

on 11-20-91

signed for by -

P. Drington

214070

TEXAS INSTRUMENTS

Shipping Order

DATE

214070

MATERIALS AND CONTROLS GROUP

- ☐ ATLANTA, GA 30301 ☐ VERMILION, NY 4000
☐ JOHNSON CITY, TN 37601 ☐ CENTRAL LAND, NY 4000

REF. #

DATE SHIPPED

8/1/79

SHIPPED VIA

UPS

71-01

SHIP TO:

KELSHY-HAYES COMPANY
 9475 Center Road
 Ponton, Michigan 48410

Attn: Mr. Rita Omin
 Purchasing Dept.

CHARGE TO:

Texas Instruments Inc.

USE (CHECK ONE)

- ☐ SCRAP SALES
☐ SALE OF ASSETS
☐ OUTSIDE PROCESSING
☐ TRANSFERS BETWEEN TI LOCATIONS
☐ EXPENSE MATERIAL
☒ OTHER, EXPLAIN: *Sample*

INVOICE #

050

CO.

149

QUANTITY	DESCRIPTION/PART #/PC	UNIT PRICE	TOTAL
	One complete package One partial package 6 Samples	N/C	
GROSS WEIGHT <i>8.2</i>	NO. OF CONTAINERS <i>1 air</i>	ORIGINATOR'S NAME (TYPED) Elaine Rose MS 12-27	ORIGINATOR'S SIGNATURE <i>Elaine Rose</i>

Rita
10/8
11/15/79

6-015148 5-84

ORIGINATOR COPY

TI-NHT8A 003863

TEXAS INSTRUMENTS

ATTENDING, MASSACHUSETTS CITY

PAGE 1 OF 3

SAMPLE REPORT

REASON FOR REPORT	VENDOR		P.O.	PART NO.	REV.
NEW PART				77P5L2-1	C2
REPLACEMENT TOOL.	REPORT REQ. BY	DATE	INSPECTED BY	DATE	
CORRECTED TOOL.	Z. Rose	10/1/91	ELAINE CRAIG	10/29/91	
REPAIRED TOOL.					
REVIEW					
OTHER <u>DIM. ANALYSIS</u>	THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING THE ACTUAL VALUES FOR ALL CHARACTERISTICS MEASURED. IN CASES WHERE ACTUAL VALUES DEVIATE FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION FOR EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.				

(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)						DISPOSITION		
		1B	2C	3C	4D	5D	6D	DISP
1	19.45-19.81	19.55	19.61	19.57	19.56	19.57	19.57	CAL
2	16.36-16.76	16.55	16.64	16.53	16.54	16.54	16.54	CAL
3	12.80-13.21	12.924	12.951	12.935	12.943	12.972	12.946	TM
4	11.40-11.90	11.788	11.808	11.775	11.773	11.757	11.765	TM
5	2.84-3.05	2.93	2.92	2.92	2.92	2.93	2.93	CAL
6	0.15 A	0.241	0.240	0.243	0.241	0.243	0.243	TM
7	11.60-11.92	11.57	11.57	11.62	11.62	11.62	11.62	CAL
8	1.24-1.45	1.252	1.250	1.280	1.280	1.280	1.265	TM
9	1.24-1.55	1.402	1.397	1.400	1.399	1.397	1.397	TM
10	1.85-2.06	2.004	1.974	1.996	1.984	1.994	1.986	TM
11	13.43-13.85	13.772	13.693	13.800	13.806	13.626	13.592	TM
12	31.5A	30.34	29.53	31.1	29.04	29.63	30.62	TM
13	2.79-3.10 2X	2.89	2.80	2.80	2.80	2.80	2.80	CAL
14	0.25-0.75	0.291	0.280	0.273	0.273	0.274	0.277	TM
15	0.05-0.36 2X	0.051	0.072	0.074	0.075	0.073	0.073	TM
16	19.05 MAX.	18.64	18.57	18.54	18.65	18.63	18.67	CAL
17	57.15 MAX.	55.65	55.70	55.71	55.70	55.69	55.68	CAL
18	12.59-13.11	12.736	12.719	12.763	12.762	12.712	12.714	END
19	11.65-12.17	11.780	11.644	11.729	11.740	11.725	11.732	END
20	14.23 MAX.	13.61	13.65	13.63	13.61	13.63	13.63	CAL
21	9.34-9.66	9.52	9.457	9.454	9.453	9.456	9.457	END
22	8.12 MIN.	8.283	8.28	8.28	8.28	8.28	8.28	END
23	1.52-2.04	2.040	1.732	1.793	1.727	1.721	1.731	TM
24	7.42-8.03	7.775	7.84	7.972	7.97	7.92	7.96	CAL
25	6.60-6.81	6.640	6.682	6.693	6.647	6.665	6.642	TM

REMARKS AND/OR INSTRUCTIONS:

DISPOSITION: TOOL APPROVED FOR PROD.

RESUBMISSION REQ'D

MFG. ENG.:

DRA ENG.:

PURCH. AGENT:

SAMPLE REPORT

REASON FOR REPORT	VENDOR	P.O.	PART NO.	REV.
NEW PART			772542-1	C9
REPLACEMENT TOOL.	REPORT REC. BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL.				10/29/61
REPAIRED TOOL.	THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING THE ACTUAL VALUES FOR ALL CHARACTERISTICS MEASURED. IN CASES WHERE ACTUAL VALUES DEVIATE FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION FOR EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.			
REVIEW				
OTHER				

		(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)						DISPOSITION	
		1B	2C	3C	4D	5D	6D		
24A	29° ± 2° 4X	29° 52'							TM
		30° 57'							
		30° 24'							
		30° 44'							
25	1.80-2.21R 2X	1.842	1.842	1.842	1.842	1.842	1.842	1.842	TM ROUNDED
26	7.23-7.75	7.739	7.521	7.589	7.539	7.539	7.531	7.531	TM
26A	NO FLASH OR BURNS ALLOWED ON SURFACE	OK	OK	FLASH	OK	OK	OK	FLASH	
27	2.79-3.41	3.145	3.093	3.160	3.150	3.119	3.107	3.107	TM
28	0.68-1.30	1.115	1.162	1.179	1.142	1.161	1.159	1.159	
28A	STAMP DATE AND TOOL PLN ON SURFACE	V has been omitted.							
29	0.25 MIN. X 40°-50° CHAMFER	Threads have been added							
30	3/8 B.HUNT-2.8 TH.	OK							50% gone galling
31	1.10-1.40	1.316							TM
32	7 0.16 D	0.057	0.048	0.048	0.002	0.030	0.056	0.056	TM 100% buff
33	2.5 50	OK							100% buff
34	41-43°	41° 21'							100% buff
35	40°-50° CHAMFER	Threads have been added							
36	3.32-5.7 MAX.	3.124	3.124	3.145	3.150	3.146	3.159	3.159	TM
37	14.02-14.53 MAX.	14.11	14.11	14.11	14.11	14.11	14.11	14.11	TM
38	3.30-3.60	3.454	3.454	3.454	3.454	3.454	3.454	3.454	TM ROUNDED
39	7.23-7.37	7.327	7.327	7.327	7.327	7.327	7.327	7.327	TM
40	5.57-5.25	5.613	5.613	5.613	5.613	5.613	5.613	5.613	TM
41	(7.45 ± 2°) 2X	7.45	7.45	7.45	7.45	7.45	7.45	7.45	TM

REMARKS AND/OR INSTRUCTIONS: #38 MAX plug accepted on 40-50 135 MAX plug accepted on 13.2C 12-60 134. #33 Separate sample of hexport OK, other damaged when doing air - pull on RUNCIT.

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

TEXAS INSTRUMENTS

ATTLEBORO, MASSACHUSETTS 01708



PAGE 3 OF 3

SAMPLE REPORT

REASON FOR REPORT	VENDOR	P.O.	PART NO.	REV.
NEW PART			77PSL2-1	
REPLACEMENT TOOL.	REPORT REC. BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL.				10/29/94
REPAIRED TOOL.	THE DIMENSIONS INDICATED BELOW REPRESENT TEXAS INSTRUMENTS' FINDINGS REGARDING THE ACTUAL VALUES FOR ALL CHARACTERISTICS MEASURED. IN CASES WHERE ACTUAL VALUES DEVIATE FROM THE SPECIFIED DIMENSIONS, THE DISPOSITION MUST INDICATE THE REQUIRED ACTION FOR EACH NON-CONFORMANCE IN THE APPROPRIATE COLUMN.			
REVIEW				
OTHER				

		(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)				DISPOSITION			
		1B	2C	3C	4D	5D	6D		
42	1.42-1.63 2X	1.623	1.633	1.582	1.633	1.603	1.579	TM	Round to
		1.623	1.633	1.627	1.585	1.589	1.578		"
43	0.35-0.66 4X	0.660	0.572	0.574	0.572	0.574	0.574	TM	
		0.645	0.577	0.602	0.577	0.572	0.577		
		0.574	0.592	0.579	0.577	0.584	0.549		
		0.578	0.557	0.574	0.559	0.554	0.554		
44	2.30-2.72 2X	2.430	2.509	2.489	2.489	2.593	2.420	TM	
		2.460	2.460	2.438	2.420	2.430	2.580		
45	2.15-2.42 2X	2.175	2.177	2.304	2.195	2.164	2.227	Comp	
		2.214	2.215	2.146	2.162	2.182	2.161		
46	2.5 ^{±2°} 2X	2.536	2.541	2.519	2.515	2.509	2.534	TM	
		2.506	2.545	2.541	2.553	2.557	2.524		
47	TRAILING EDGE	2.000							1.5
48	45 ^{±2°} 4X	45.36	45.41	45.46	45.46	45.46	45.46	TM	
		45.43	45.41	45.46	45.46	45.46	45.46		
		45.43	45.41	45.46	45.46	45.46	45.46		
49	0.86-1.17 4X	0.962	0.983	0.973	0.982	0.981	0.984	TM	Round to
		0.985	0.981	0.985	0.982	0.981	0.981		
		0.957	0.978	0.981	0.981	0.981	0.981		
		0.980	0.981	0.981	0.981	0.981	0.981		
50	0.35-0.66 4X	0.660	0.572	0.574	0.572	0.574	0.574	TM	
		0.645	0.577	0.602	0.577	0.572	0.577		
		0.574	0.592	0.579	0.577	0.584	0.549		
51	2.59-2.80 2X	2.725	2.710	2.703	2.713	2.710	2.733		
	0.20 AC	2.393	2.499	2.572	2.442	2.457	2.525		
		0.672	0.034	0.113	0.017	0.002	0.050		
	2.59-2.80	2.695	2.703	2.715	2.709	2.695	2.710		
	0.26 AC	2.499	2.522	2.320	2.577	2.427	2.442		
		0.034	0.057	0.085	0.020	0.022	0.022		
52	1.3-1.9 4X	1.710	1.710	1.710	1.710	1.710	1.710		
		1.710	1.710	1.710	1.710	1.710	1.710		
53	0.66-0.87	0.775	0.815						
54	0.10-0.31	0.262	0.274						
	0.10-0.31	0.262	0.274						
REMARKS AND/OR INSTRUCTIONS:									

REMARKS AND/OR INSTRUCTIONS:

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

pla

PROCESS POTENTIAL AND QUALITY INDEXES SUMMARY DATA SHEET

PART #: E3TA-9F924-AA
 SUPPLIER: TEXAS Instruments
 CODE: T097K
 ADDRESS: 34 Forest ST.
Arlington, Mass. 02133
 VEHICLE BUILD (CIRCLE ONE): EP VP ☒ OTHER (DEFINE)

SUPPLIER CONTACT: Jim Watt
 CONTACT PHONE: 508-699-1719
 PART DESCRIPTION: Best Generation
Speed Control Deactivate Pressure Switch
 SOA CODE: _____

CHARACTERISTIC TYPE

▽ = FORD-CRITICAL
 CHARACTERISTICS

S.C. = FORD OR SUPPLIER SIGNIFICANT
 CHARACTERISTICS

NUMBER OF CRITICAL AND/OR SIGNIFICANT CHARACTERISTICS:

1: <u>Activation Pressure</u>	TYPE: <u>SC 3</u>	Cp = <u>1.2</u>	Cpk = <u>1.2</u>
2: <u>Release Pressure</u>	TYPE: <u>SC</u>	Cp = <u>* 5.2</u>	Cpk = <u>1.2</u>
3: <u>3/8-24UNF-2A Thread</u>	TYPE: <u>SC</u>	Cp = _____	Cpk = <u>needs Go</u>
4: _____	TYPE: _____	Cp = _____	Cpk = <u>Needs Go</u>
5: _____	TYPE: _____	Cp = _____	Cpk = _____
6: _____	TYPE: _____	Cp = _____	Cpk = _____
7: _____	TYPE: _____	Cp = _____	Cpk = _____
8: _____	TYPE: _____	Cp = _____	Cpk = _____
9: _____	TYPE: _____	Cp = _____	Cpk = _____
10: _____	TYPE: _____	Cp = _____	Cpk = _____
11: _____	TYPE: _____	Cp = _____	Cpk = _____
12: _____	TYPE: _____	Cp = _____	Cpk = _____
13: _____	TYPE: _____	Cp = _____	Cpk = _____
14: _____	TYPE: _____	Cp = _____	Cpk = _____
15: _____	TYPE: _____	Cp = _____	Cpk = _____

PIST = $\frac{534536}{544000} \times 100 = 98.2\%$

PIPC_{Cp} = $\frac{1/1}{1} \times 100 = 100\%$ PIPC_{Cpk} = $\frac{2/2}{2} \times 100 = 100\%$

COMMENTS:

* Cp Index not calculatable on unilateral tolerances.

PREPARED BY: _____

Elaine Poon

DATE: 9-20-91

Type: Pressure Switch Part No: 77PS42-3
 Manufacturer: Working Pressure and P.S.I.
 Size: 400 Actuation 300

[illegible]

PG. 1 of 2

LIGHT TRUCK

Bridge		Date		Time		Wind		Temp		Bar		Rain		Clouds		Moon		Sun		Notes	
No.		Month		Day		Dir		F		In		In		In		Phase		Time		Remarks	
1		Jan		1		S		32		30.0		0.0		0.0		Clear		6:00		Clear	
2		Jan		2		S		31		29.8		0.0		0.0		Clear		6:00		Clear	
3		Jan		3		S		30		29.6		0.0		0.0		Clear		6:00		Clear	
4		Jan		4		S		29		29.4		0.0		0.0		Clear		6:00		Clear	
5		Jan		5		S		28		29.2		0.0		0.0		Clear		6:00		Clear	
6		Jan		6		S		27		29.0		0.0		0.0		Clear		6:00		Clear	
7		Jan		7		S		26		28.8		0.0		0.0		Clear		6:00		Clear	
8		Jan		8		S		25		28.6		0.0		0.0		Clear		6:00		Clear	
9		Jan		9		S		24		28.4		0.0		0.0		Clear		6:00		Clear	
10		Jan		10		S		23		28.2		0.0		0.0		Clear		6:00		Clear	
11		Jan		11		S		22		28.0		0.0		0.0		Clear		6:00		Clear	
12		Jan		12		S		21		27.8		0.0		0.0		Clear		6:00		Clear	
13		Jan		13		S		20		27.6		0.0		0.0		Clear		6:00		Clear	
14		Jan		14		S		19		27.4		0.0		0.0		Clear		6:00		Clear	
15		Jan		15		S		18		27.2		0.0		0.0		Clear		6:00		Clear	
16		Jan		16		S		17		27.0		0.0		0.0		Clear		6:00		Clear	
17		Jan		17		S		16		26.8		0.0		0.0		Clear		6:00		Clear	
18		Jan		18		S		15		26.6		0.0		0.0		Clear		6:00		Clear	
19		Jan		19		S		14		26.4		0.0		0.0		Clear		6:00		Clear	
20		Jan		20		S		13		26.2		0.0		0.0		Clear		6:00		Clear	
21		Jan		21		S		12		26.0		0.0		0.0		Clear		6:00		Clear	
22		Jan		22		S		11		25.8		0.0		0.0		Clear		6:00		Clear	
23		Jan		23		S		10		25.6		0.0		0.0		Clear		6:00		Clear	
24		Jan		24		S		9		25.4		0.0		0.0		Clear		6:00		Clear	
25		Jan		25		S		8		25.2		0.0		0.0		Clear		6:00		Clear	
26		Jan		26		S		7		25.0		0.0		0.0		Clear		6:00		Clear	
27		Jan		27		S		6		24.8		0.0		0.0		Clear		6:00		Clear	
28		Jan		28		S		5		24.6		0.0		0.0		Clear		6:00		Clear	
29		Jan		29		S		4		24.4		0.0		0.0		Clear		6:00		Clear	
30		Jan		30		S		3		24.2		0.0		0.0		Clear		6:00		Clear	

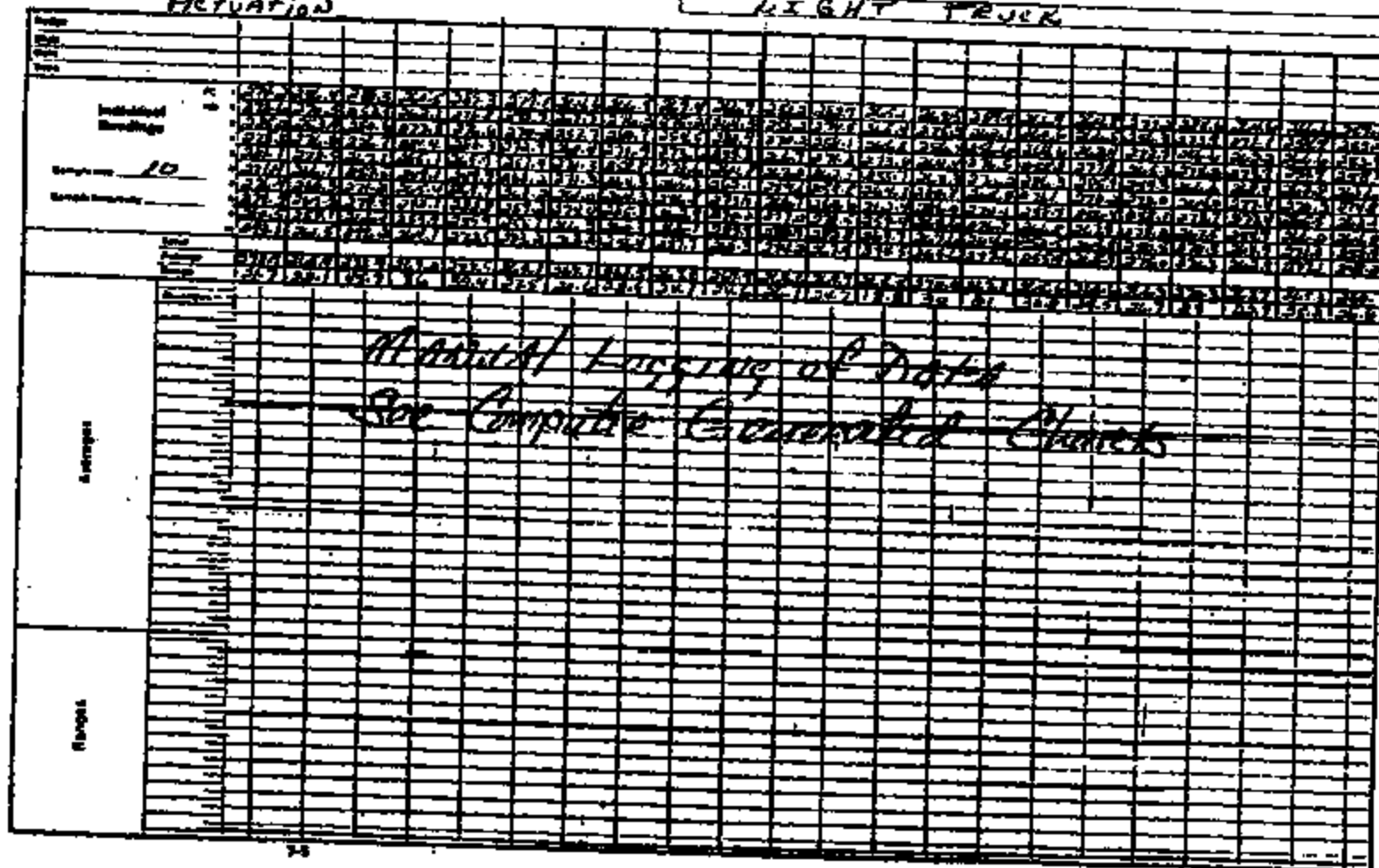
AVERAGE AND RANGE (R-R) CHART

Part Name PRESSURE SWITCH Part No. 77PSL2-3
 Sample Size 300 Sample Range and No. 200
 Actuation

USE FORMS 11-21, 11-22 AND 11-23 FOR ACTION

PG. 1 of 2

NEXT SEQUENCE: SPEED CONTROL
LIGHT TRUCK



TI-NHTSA 003872

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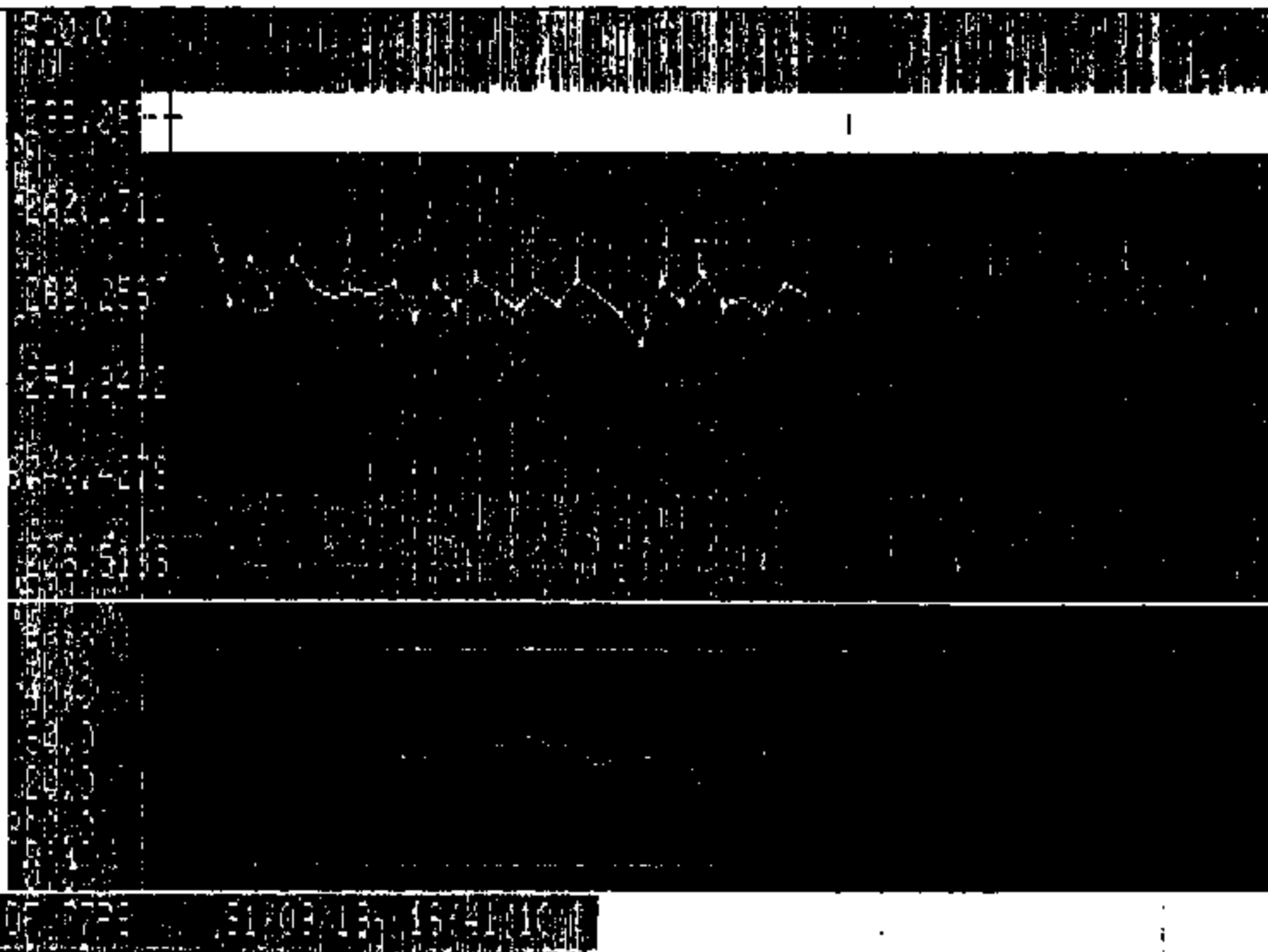
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RELEASE TYPE

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TI-NHTSA 003873



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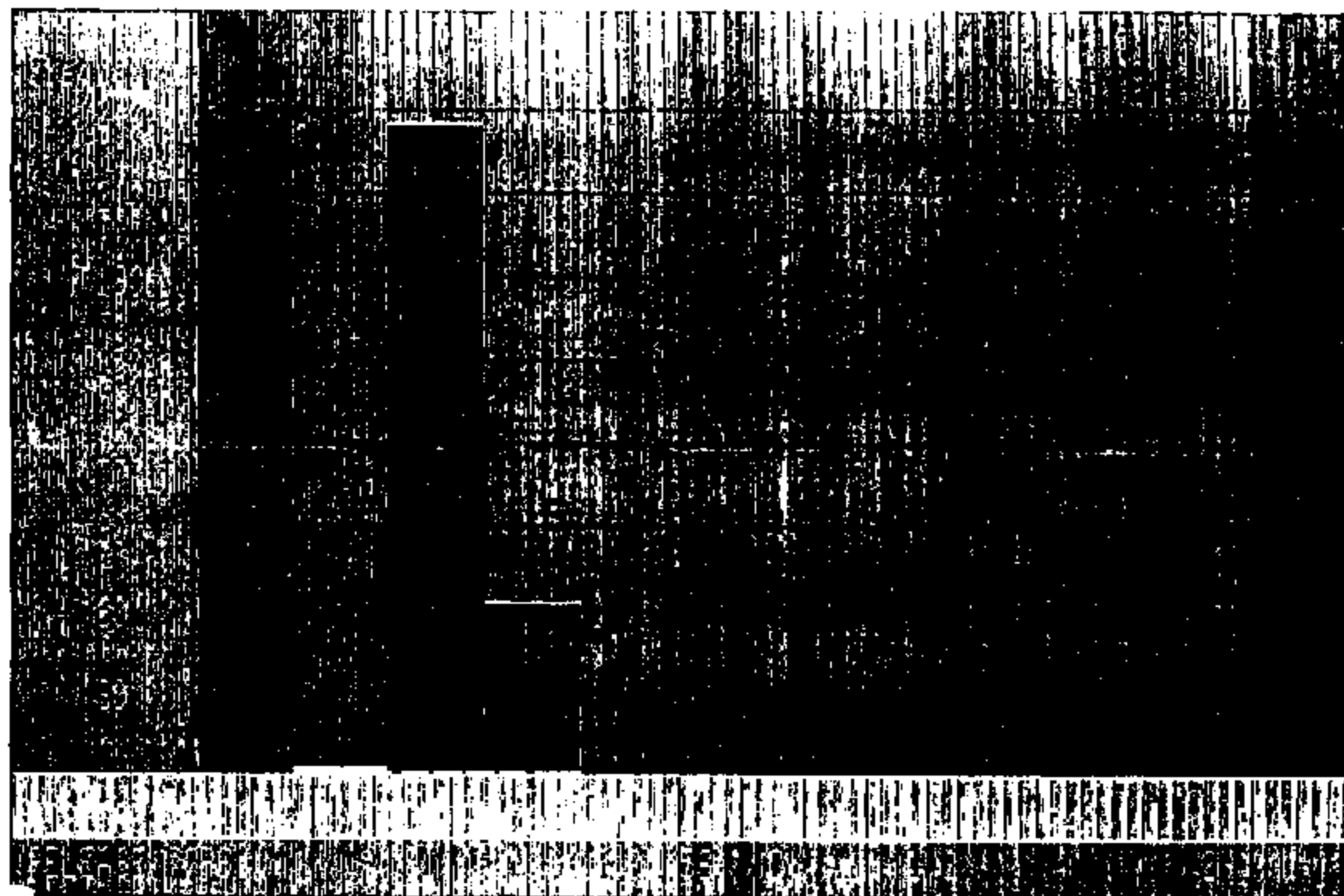
UNITED STATES DEPARTMENT OF JUSTICE

FEDERAL BUREAU OF INVESTIGATION

WASHINGTON, D.C. 20535

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TI-NHTSA 003875

sd

TEXAS INSTRUMENTS



THE FOLLOWING IS A SUMMARY OF THE RESULTS OF THE TESTS

CONDUCTED ON

THE FOLLOWING SAMPLES

TEST NO.	TEST NAME	TEST DATE	TEST TIME	TEST LOCATION	TEST RESULTS
1	100-100	10/10/77	10:00	100-100	100-100
2	100-100	10/10/77	10:00	100-100	100-100
3	100-100	10/10/77	10:00	100-100	100-100
4	100-100	10/10/77	10:00	100-100	100-100
5	100-100	10/10/77	10:00	100-100	100-100
6	100-100	10/10/77	10:00	100-100	100-100
7	100-100	10/10/77	10:00	100-100	100-100
8	100-100	10/10/77	10:00	100-100	100-100
9	100-100	10/10/77	10:00	100-100	100-100
10	100-100	10/10/77	10:00	100-100	100-100
11	100-100	10/10/77	10:00	100-100	100-100
12	100-100	10/10/77	10:00	100-100	100-100
13	100-100	10/10/77	10:00	100-100	100-100
14	100-100	10/10/77	10:00	100-100	100-100
15	100-100	10/10/77	10:00	100-100	100-100
16	100-100	10/10/77	10:00	100-100	100-100
17	100-100	10/10/77	10:00	100-100	100-100
18	100-100	10/10/77	10:00	100-100	100-100
19	100-100	10/10/77	10:00	100-100	100-100
20	100-100	10/10/77	10:00	100-100	100-100

THE RESULTS OF THE TESTS CONDUCTED ON THE FOLLOWING SAMPLES ARE AS FOLLOWS:

THE RESULTS OF THE TESTS CONDUCTED ON THE FOLLOWING SAMPLES ARE AS FOLLOWS:

TEXAS INSTRUMENTS INCORPORATED - 54 FOREST STREET - ATTLEBORO, MA 01903
608-488-3800 - TELEX 98-7705 TWX 710-944-0848 - CABLE TEXINS

TI-NHTSA 003877

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F3TA-9F924-AA

	BLUEPRINT SPEC	CAVITY # 02 ACTUAL	CAVITY # 03 ACTUAL	CAVITY # 04 ACTUAL	CAVITY # 05 ACTUAL	CAVITY # 06 ACTUAL	COMMENTS
21	9.35 - 9.55	9.55	9.59	9.50	9.50	9.59	
22	9.12 - 9.24	9.22	9.14	9.19	9.22	9.14	
23	14.20 - 14.40	13.64	13.62	13.58	13.67	13.68	
24	55.35 - 55.7	55.60	55.60	55.55	55.55	55.52	
25	12.55 - 12.81	12.83	12.83	12.83	12.80	12.83	
26	11.65 - 11.97	11.79	11.84	11.89	11.84	11.89	11.91
27	1.80 - 2.01R 2PL	1.83	2.02	1.82	1.80	1.80	MEAS. SIDE W/O KEY
28	(1.900 - 2.000) (1.401) MEASURED ON SEPARATE PAGE - CROSS SECTIONED						
29	31.50 - 31.7	31.61	31.68	31.57	31.72	31.68	31.73
30	14.00 - 14.35	14.231	14.221	14.225	14.222	14.221	
31	3.30 - 3.60	3.420	3.413	3.441	3.429	3.435	3.430
32	7.23 - 7.37	7.299	7.281	7.340	7.352	7.294	7.284
33	5.50 - 5.85	5.604	5.585	5.641	5.662	5.594	5.589
34	171.500 ± .200 (2 PL)	172.00	172.00	172.00	172.00	172.00	172.00
35	11.42 - 1.63 2PL	1.595	1.572	1.610	1.561	1.541	1.544
36	0.55 - 0.66	.571	.557	.545	.575	.550	.573
37	(4 PL)	.582	.568	.589	.553	.562	.564

TEXAS INSTRUMENTS INCORPORATED • 54 POWER STREET • AUSTIN, TEXAS 78701
202-878-8800 • TELETYPE 25-7788 TWX 710-445-8800 • CABLE TEXINS

TI-NHTSA 003878

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

PSTA-9F524-06

NOTES: DIMENSIONAL PRINT DENOTES CAVITY # A1

	DRAWING SPEC	CAVITY # 02 ACTUAL	CAVITY # 03 ACTUAL	CAVITY # 04 ACTUAL	CAVITY # 05 ACTUAL	CAVITY # 06 ACTUAL	COMMENTS
1	13.43-13.85	13.692	13.626	13.602	13.719	13.646	
2	13.125 ± .005 26MIN	13.125 ± .005 26MIN	13.125 ± .005 26MIN	13.125 ± .005 26MIN	13.125 ± .005 26MIN	13.125 ± .005 26MIN	
3	1.65 - 2.06	2.690	2.669	2.667	2.695	2.692	TOOL TO BE CORRECTED
4	15.07 MAX	15.682	15.661	15.691	15.677	15.636	
5	15.05-15.15 2PL	15.05 ± .01 2PL	15.05 ± .01 2PL	15.05 ± .01 2PL	15.05 ± .01 2PL	15.05 ± .01 2PL	
6	0.30 ± 0.05	.353	.310	.315	.473	.414	.347
7	12.75-13.10 2PL	12.900 2.896	12.899 2.892	12.892 2.890	12.902 2.891	12.867 2.899	
8	19.45-19.81	19.60	19.59	19.61	19.57	19.61	
9	16.54-16.76	16.566	16.608	16.585	16.585	16.625	
10	12.80-13.21	12.040	13.036	13.033	12.978	12.936	
11	11.46-11.90	11.770	11.810	11.788	11.790	11.777	
12	2.84 - 3.05	2.925	2.917	2.923	2.920	2.923	
	0.1 A	.094	.013	.019	.004	.032	
13	1.24 - 1.45	1.397	1.294	1.292	1.328	1.326	
14	11.60-11.92	11.742	11.672	11.745	11.688	11.737	

TEXAS INSTRUMENTS INCORPORATED • 34 FOREST STREET • ATTLEBORO, MA 01908

MAKING • TYPING • TYPING • TYPING • TYPING • TYPING • TYPING • TYPING

TI-NHTSA 003679

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F37A-3F524-AA

BLUEPRINT SPEC	CAVITY # 42 ACTUAL	CAVITY # 43 ACTUAL	CAVITY # 44 ACTUAL	CAVITY # 45 ACTUAL	CAVITY # 46 ACTUAL	COMMENTS
15 - 1.24 - 1.35	1.348	1.324	1.337	1.334	1.333	
16 - 6.60 - 6.81	6.673	6.675	6.660	6.665	6.667	
17 - NO FLAS-FLARE	OK	OK	OK	OK	OK	
18 - 7.22 - 7.75	7.548	7.646	7.639	7.454	7.425	
19 - 3.79 - 3.81	3.10	3.10	3.10	3.07	3.07	
20 - 0.87 - 1.30	1.068	1.054	1.102	1.112	1.141	
21 - DATE & PARTS	OK	OK	OK	OK	OK	
22 - 0.250" 41-51	UNABLE TO	MEASURE	BECAUSE	THREADS ARE	ALREADY IN	
23 - SEE CHANGE						
23 - 13/8-24UNF-24	OK	OK	OK	OK	OK	
24 - 1.10 - 1.40	1.220	1.213	1.230	1.234	1.320	
25 - 12.5 C	.20	.20	.20	.20	.20	
26 - 0.11 D	.020	.036	.008	.023	.025	
27 - 41DEG - 43DEG	MEASURED ON	CROSS SECTIONED PIECE				
28 - 40DEG - 50DEG	MEASURED ON	CROSS SECTIONED PIECE				
29 - 7.82 - 8.03	7.90 7.91	7.90 7.89	7.89 7.93	7.89 7.88	7.86 7.90	
30 - 1.50 - 1.04	1.754	1.857	1.831	1.807	1.807	

TEXAS INSTRUMENTS INCORPORATED • 34 FOREST STREET • ATLEBORO, MA 01501
 603-355-5000 • TELEEX 92-7705 TWX 714-345-0500 • CABLE TIDONR

TI-NHTSA 003880

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F3TA-9F924-AA

	BLUEPRINT SPEC	CAVITY # A2 ACTUAL	CAVITY # C3 ACTUAL	CAVITY # C4 ACTUAL	CAVITY # D5 ACTUAL	CAVITY # D6 ACTUAL	COMMENTS
47	2.99 - 2.80	L 2.681	L 2.705	L 2.687	L 2.697	L 2.709	
	(2 PL)	R 2.702	R 2.696	R 2.705	R 2.721	R 2.684	
	0.2 ± .04	L.03: R.015	L.000 R.075	L.076 R.081	L.061 R.030	L.011 R.154	
	2.465	2.444 2.450	2.465 2.390	2.389 2.384	2.384 2.495	2.476 2.311	
48	0.35 - 0.66	.463 .458	.509 .536	.571 .492	.506 .463	.476 .504	
	(4 PL)	.494 .538	.474 .505	.449 .514	.511 .509	.491 .509	
49	0.84 - 1.17	.985 .995	.959 .962	.968 .989	.990 .983	.987 .955	
	(4 PL)	.943 .952	.994 .959	.975 .923	.955 .954	.960 .974	
50	45DEG +/- 20DEG	44DEG 45MIN	43DEG 50MIN	45DEG 39MIN	45DEG 25MIN	43DEG 58MIN	
	(4 PL)	44DEG 47MIN	44DEG 45MIN	44DEG 05MIN	44DEG 39MIN	43DEG 54MIN	
		45DEG 19MIN	44DEG 37MIN	44DEG 13MIN	45DEG 12MIN	43DEG 54MIN	
		45DEG 06MIN	45DEG 20MIN	44DEG 48MIN	44DEG 23MIN	44DEG 20MIN	
51	9.30-8.72 2PL	8.342 8.430	8.352 8.423	8.364 8.419	8.365 8.429	8.389 8.392	
52	12.15-2.42 2PL	12.180 2.220	12.198 2.153	12.169 2.219	12.161 2.170	12.149 2.194	
53	25DEG +/- 20DEG	24DEG 22MIN	24DEG 10MIN	24DEG 47MIN	24DEG 17MIN	23DEG 37MIN	
	(2 PL)	23DEG 32MIN	23DEG 41MIN	23DEG 50MIN	23DEG 04MIN	23DEG 39MIN	
54	COLOR: BLACK	OK	OK	OK	OK	OK	
55	13-19DEG 2PL	ON CROSS	SECTIONED	PART ON	PRINT		
56	0.66 - 0.87	ON CROSS	SECTIONED	PART ON	PRINT		
57	0.10 - 0.31	.252 .278	.287 .251	.276 .260	.287 .260	.289 .257	
58	0.36 - 0.48	.625 .646	.646 .621	.648 .622	.656 .622	.644 .626	

100% INSPECTION BY MICROSCOPE * 34 POINTS BY GAUGE * ATTENTION TO DETAIL

805-485-8808 • TELETYPE 88-7708 TWX 710-646-0988 • CABLE TEXINS

TI-NHT8A 003881

#5, #15, #23
add CHAR.

#32, #33, #37,
#38, #39, #40, #51

Jim - I'll add them
on a following
Do you
want to omit
PIST reference
on the F3-3?
E -

77LIST

AI ... G58

TEAS INSTRUMENTS INC. MATERIALS & CONTROLS GROUP SITE
 PARTS LIST - PROJECT PART NUMBER: 77PSL2-1 REV LTR: A CLS: 350
 EXPLOSION NUM: 3423 TNG PRY: NUM: 77PSL2-1 ECON INC. DT: 9/11/05

TITLE: PRESSURE SWITCH

QTY	QTY/UM	BITM	PART/DRAWING NUMBER	PRV	NOMENCLATURE/PART DATA
01	1	REF	36952-1		FINAL ASSEMBLY
			36952-1		
01	2	1	27759-2		BASE ASSEMBLY
			27759SH1		
01	3	1	46515-2		✓ BASE (BROWN)
			46515		
01	4	1	36888-1		✓ STATIONARY TERMINAL
			36888		
01	5	1	36897-1		MOVABLE TERMINAL ASM
			36897SH1		
01	6	1	74408-1		✓ MOVABLE CONTACT
			74408		
01	7	1	74171-1		✓ RIVET
			74171		
01	8	1	36887-1		✓ MOVABLE TERMINAL
			36887		
01	9	1	36887-1		✓ SPRING ASM
			36887		
01	10	1	27292-12		SENSOR ASSEMBLY
			27292-12		
01	11	1	36900-1		✓ MOD 3AE 1012 HENPORT
			36900		
01	12	1	74253-1		✓ GASKET
			74253		
01	13	1	27712-1		✓ OIL
			27712		
01	14	2	74172-1		✓ SEAL
			74172		
01	15	12	27225-1		✓ MOTOR STOP SPED 1.175 LBS/10
			27225		
01	16	1	27429-1		✓ WASHER
			27429		
01	17	1	27403-1		✓ CONVERTER
			27403		
01	18	1	74224-1		✓ MOUNTING TAPE (1.100 LBS/10)
			74224		
01	19	02	70052-2		✓ SPACER
			70052		
01	20	02	70052-3		✓ SPACER
			70052		
01	21	1	36853-07		3/4" FORMED DISC
			36853-07		
01	22	1	74797-1		✓ CRIMP RING
			74797		
01	23	1	74073-146		✓ TRANSFER PIN
			74073		

TI-NHT8A 003883

25	1	22	74179-1	✓ THREAD CAP
			74179	
26	AR		27318-1	CARTON ASM.
			27318	
27	1	2	74219-1	CARTON
			74219	
28	5	3	74218-1	ROW SEPARATOR
			74218	
29	6	4	27317-1	DEVICE SEPARATOR
			27317	

NOTES: REV. DATA, DISTRIBUTION, OPERATING CHARACTERISTICS, SPECIAL REQUIREMENTS

REV DESGN SET UP

CCB APPROVAL DATE: 91/08/14

DETO WORK GROUP: PRECISION CONTROLS

ECN ORIGINATOR: STEPHEN B OFFILER

NOTES:

1 - ACTIVATION PRESSURE ----- 90-160 PSIG

2 - RELEASE PRESSURE ----- 20 PSIG MIN.

02 - CR M06083, ADDED P/L TO EIS, NEW DRAWING IN SYSTEM

TI-NHTSA 003884

F2V0-9F924-AB

MATERIAL ANALYSIS

PARTS LIST

	PART NAME	PART #	CERTIFIED
1	BASE	46515-2	YES
2	STA. TERM.	36888-1	YES
3	MOVE. CONTACT	74408-1	YES
4	RIVET	74171-1	YES
5	MOVE. TERM.	36887-1	YES
6	SPRING ARM	36889-1	YES
7	J512 HEXPORT	36900-1	YES
8	BASKET	74353-1	YES
9	CUP	27713-1	YES
10	SEAL	74176-1	YES
11	KAPTON STRIP	27225-1	YES
12	WASHER	27639-1	YES
13	CONVERTER	27406-1	YES
14	KAPTON TAPE	74224-1	YES
15	SPACER	73958-2/-3	YES
16	CRIMP RING	74797-1	YES
17	TRANSFER PIN	74078-SEL	YES
18	ENVIO. SEAL	74247-2	YES
19	THREAD CAP	74179-2	YES

TI-NHTSA 003885

November 15, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Rita Gunia
Purchasing Department

Subj: Part Number 12604301 Switch (E75D-3N824-AA) ← 57PFC2-3
Part Number 12590701 Switch (F2VC-9F924-AB) ← 77PFC2-1
ISIR Submissions

Dear Rita,

Enclosed, please find the ISIR for the 12604301 and 12590701 switches. Both ISIR submissions were accomplished on Ford forms as we are in the process of transferring data to Kelsey-Hayes forms.

The 12590701 submission has several dimensional issues on the layout that are being addressed.

The 12604301 submission needs dimensional layout, control plan, manufacturing flow diagram, PIST, PIPC, and PV testing that are being addressed.

Please let me know if you have any questions or if I may be of any further assistance.

Regards,

Jim Watt
GRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MB 12-29
Charlie Douglas, MB 12-33
Andy McGuirk, MB 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR submissions

(Rev 0, 11/15/91)

cc = Elaine R.

Kye

Please review

(2) folders
made for K-4

to send
today -

Thx.

Jim

11/15

TI-NHTSA 003586

**KELSEY-HAYES™ GROUP
INITIAL SAMPLE READINESS CHECKLIST**

Supplier TEXAS Instruments Supplier Contact Jim Watt
 Supplier Address 34 Forest Street
 City, State, Zip Attleboro, MA 01703 Phone _____ Fax _____
 Part or Product F2VC-9F924-AB Date Nov. 15, 1991
 Kelsey-Hayes Group ABS Kelsey-Hayes Contact Rita Gwiazda

The following items have been prepared and/or approved. Items marked with an asterisk (*) are to be completed prior to ISIR date.

K-H Required	Item	Available by Supplier	K-H Disposition (Note: initial and date each item)
_____	*Manufacturing feasibility signoff	<u>20 11/15/91</u>	_____
_____	*Design FMEA	<u>20 11/15/91</u>	_____
☒	*Process flow diagram	<u>ER 11-15-91</u>	_____
_____	*Process FMEA	<u>20 11/15/91</u>	_____
_____	*Designated characteristics list	<u>20 11/15/91</u>	_____
☒	*Pre-launch control plan	<u>ER 11-15-91</u>	_____
☒	Gage R&R studies	<u>ER 11-15-91</u>	_____
_____	Short term process capability studies	_____	_____
☒	*Process control plan	<u>ER 11-15-91</u>	_____
_____	Inspection instructions	_____	_____
_____	Set-up instructions	_____	_____
_____	Operations instructions	_____	_____
_____	ES testing requirements	_____	_____
_____	Packaging and identification approval	_____	_____
_____	Functional testing	_____	_____

ed

— — — — —

558 CHERRY

TI-NHTSA 003588

TRANSFORMER ANALYSIS OF FACT LOADS

7/10/74-42

ALPHABETIC SERIAL	DATE - TIME ACTUAL	DATE - TIME ACTUAL	DATE - TIME ACTUAL	DATE - TIME ACTUAL	DATE - TIME ACTUAL	REMARKS
10	START DATE	10/1/74	10/1/74	10/1/74	10/1/74	END
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
11	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
12	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
13	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
14	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
15	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
16	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
17	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
18	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
19	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
20	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
21	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
22	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
23	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
24	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
25	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
26	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
27	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
28	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
29	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
30	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	
	TIME - DATE	10/1/74	10/1/74	10/1/74	10/1/74	

2025年4月15日

TI-NHTSA 003891

K-H
PKG.
11-15-91

11-15-91

up to -

77 P/C out of
spec. issued
that said
to be
advised?

issue

K-H
PKG.
11-15-91

11-15-91

up to -

77 P/C out of
spec. issues
that need
to be
addressed!

Final

HIGHLIGHTS

Stephen B. Offler
Week Ending 91-11-15



FORD MY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS

PASS-CAR REVALIDATION:

Twelve parts from each lot (AMI crimp and HL crimp) successfully passed the Impulse test. Twelve more of each will undergo this test when they complete the Fluid Resistance test in December. They have been characterized post-test, and are now running to failure for information. They are at 950K cycles with no significant number of failures to report yet. As previously reported, the pre-test characterization showed significant differences in release pressure between the two lots. This difference disappeared during cycling; it is possible that it is attributable to a Kapton-wetting phenomenon. We're looking into linking this with observed differences in the crimp techniques which are suspected to lead to diaphragm life problems. Also, Jeff has noticed crimp dimension differences between the two lots, even though the same crimp dies were used for both. We're looking into this with Mfg. Eng. help.

HEXPORT:

We have completed an initial evaluation of the mechanical strength of the 10B21 hexports. Two tests were used: burst, and torque-to-breakage. Results of both tests indicate that the 10B21 hexports have better strength. The average burst strength of 10B21 was 7983 psi versus 7650 psi for 10L10. The average torque of 10B21 was 51.8 ft-lb versus 41.3 for 10L10. Also, we previously cross-sectioned samples of each material and measured the hardness in the thread area. Results of 8 measurements at the crests of the threads show the 10B21 averaging 244 DPH (200 gram Diamond Pyramid Hardness), with the 10L10 averaging 194 DPH. If no cost differences exist (as Elco has led us to believe) then we should seriously consider a move to 10B21 material. Final decision on this is pending environmental analysis of the reduced plating thickness (to reduce thread damage in plating barrel) as well as final decision on the ANSI-specified gaging technique, using 2A LO and 3A GO gages. I'm confident that the combination of the above will finally eliminate the chronic thread problems we've been experiencing on this and all other Elco hexports.

SAMPLES / CUSTOMER ISSUES:

We've begun to receive sample requests for silent devices from Ford for WIN88 (Truck style centered connector with Pass Car style pressure) and from Bendix for Truck. We're establishing new part numbers, envelope drawings, and parts lists for these products. Samples are due in early December, which doesn't seem to be a problem since we already have small quantities of silent discs. Base colors have not been firmly established, hence for samples we'll use standard black for truck and brown for car.

The Ford Australia samples with metric M10 x 1.0 o-ring hexports shipped last week. We received a fax from Brent Franks, the F of A engineer on this program, which indicates he's experiencing audible noise difficulties. I have responded to this, indicating that this is an established concern and we are working to minimize it. Brent also alluded to a possible change in pressure spec's, downward. I am trying to steer him away from this, since the Pass Car disc already has reduced throw (relative to Truck and other 57PS's) and making it silent will only worsen this; compounded with even lower pressure spec's may reduce throw to an unacceptable level.

TI-NHTSA 003896

November 15, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Rita Gunia
Purchasing Department

Subj: Part Number 12604301 Switch (E7SC-3NS24-AA) ← E 7P1F2-3
Part Number 12590701 Switch (F2VC-9F924-AB) ← 77P1L2-1
ISIR Submissions

Dear Rita,

Enclosed, please find the ISIR for the 12604301 and 12590701 switches. Both ISIR submissions were accomplished on Ford forms as we are in the process of transferring data to Kelsey-Hayes forms.

The 12590701 submission has several dimensional issues on the layout that are being addressed.

The 12604301 submission needs dimensional layout, control plan, manufacturing flow diagram, PIST, PIPC, and PV testing that are being addressed.

Please let us know if you have any questions or if I may be of any further assistance.

Regards,

Jim Watt
QRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MB 12-29
Charlie Douglas, MB 12-33
Andy McGuirk, MB 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR submissions

(Rev 0, 11/15/91)

cc = Elmer R.
FYE/
Plescher
(2) fides
made for k...

to pen
today
the
JL
11/15

TI-NHTSA 003897



KELSEY-HAYES™ GROUP
INITIAL SAMPLE READINESS CHECKLIST

Supplier TEXAS Instruments Supplier Contact Jim Woot
Supplier Address 34 Forest Street
City, State, Zip Atlanta, GA. 30303 Phone _____ Fax _____
Part or Product F2VC-9F924-AB Date Nov. 15, 1991
Kelsey-Hayes Group ABJ Kelsey-Hayes Contact Rita Gunia

The following items have been prepared and/or approved. Items marked with an asterisk (*) are to be completed prior to ISIR data.

R-H Required	ISIR	Available by Supplier (Note: initial and date each item)	R-H Disposition
_____	*Manufacturing feasibility signoff	<u>Jim 11/15/91</u>	_____
_____	*Design FMEA	<u>Jim 11/15/91</u>	_____
☒	*Process flow diagram	<u>ER 11/15/91</u>	_____
_____	*Process FMEA	<u>Jim 11/15/91</u>	_____
_____	*Designated characteristics list	<u>Jim 11/15/91</u>	_____
☒	*Pre-launch control plan	<u>ER 11/15/91</u>	_____
☒	Gage R&R studies	<u>ER 11/15/91</u>	_____
_____	Short term process capability studies	_____	_____
☒	*Process control plan	<u>ER 11/15/91</u>	_____
_____	Inspection instructions	_____	_____
_____	Set-up instructions	_____	_____
_____	Operations instructions	_____	_____
_____	ES testing requirements	_____	_____
_____	Packaging and identification approval	_____	_____
_____	Functional testing	_____	_____

old

[illegible][illegible]

— *Journal of the American Medical Association*, 1937, 109, 1031.

554 24804

$\frac{1}{n}$	$\frac{1}{m}$	$\frac{1}{k}$	$\frac{1}{l}$	$\frac{1}{p}$	$\frac{1}{q}$	$\frac{1}{r}$
$n = \infty$	$m = \infty$	$k = \infty$	$l = \infty$	$p = \infty$	$q = \infty$	$r = \infty$

[illegible]

TABLE 1. SUMMARY OF DATA FOR THE 1970-1971 SEASON

Continued

STATION	DATE	TIME	WIND DIRECTION	WIND SPEED	WAVE HEIGHT	WAVE PERIOD
1	10/10/70	10:00	100	10	10	10
2	10/10/70	10:00	100	10	10	10
3	10/10/70	10:00	100	10	10	10
4	10/10/70	10:00	100	10	10	10
5	10/10/70	10:00	100	10	10	10
6	10/10/70	10:00	100	10	10	10
7	10/10/70	10:00	100	10	10	10
8	10/10/70	10:00	100	10	10	10
9	10/10/70	10:00	100	10	10	10
10	10/10/70	10:00	100	10	10	10
11	10/10/70	10:00	100	10	10	10
12	10/10/70	10:00	100	10	10	10
13	10/10/70	10:00	100	10	10	10
14	10/10/70	10:00	100	10	10	10
15	10/10/70	10:00	100	10	10	10
16	10/10/70	10:00	100	10	10	10
17	10/10/70	10:00	100	10	10	10
18	10/10/70	10:00	100	10	10	10
19	10/10/70	10:00	100	10	10	10
20	10/10/70	10:00	100	10	10	10
21	10/10/70	10:00	100	10	10	10
22	10/10/70	10:00	100	10	10	10
23	10/10/70	10:00	100	10	10	10
24	10/10/70	10:00	100	10	10	10
25	10/10/70	10:00	100	10	10	10
26	10/10/70	10:00	100	10	10	10
27	10/10/70	10:00	100	10	10	10
28	10/10/70	10:00	100	10	10	10
29	10/10/70	10:00	100	10	10	10
30	10/10/70	10:00	100	10	10	10
31	10/10/70	10:00	100	10	10	10
32	10/10/70	10:00	100	10	10	10
33	10/10/70	10:00	100	10	10	10
34	10/10/70	10:00	100	10	10	10
35	10/10/70	10:00	100	10	10	10
36	10/10/70	10:00	100	10	10	10
37	10/10/70	10:00	100	10	10	10
38	10/10/70	10:00	100	10	10	10
39	10/10/70	10:00	100	10	10	10
40	10/10/70	10:00	100	10	10	10
41	10/10/70	10:00	100	10	10	10
42	10/10/70	10:00	100	10	10	10
43	10/10/70	10:00	100	10	10	10
44	10/10/70	10:00	100	10	10	10
45	10/10/70	10:00	100	10	10	10
46	10/10/70	10:00	100	10	10	10
47	10/10/70	10:00	100	10	10	10
48	10/10/70	10:00	100	10	10	10
49	10/10/70	10:00	100	10	10	10
50	10/10/70	10:00	100	10	10	10
51	10/10/70	10:00	100	10	10	10
52	10/10/70	10:00	100	10	10	10
53	10/10/70	10:00	100	10	10	10
54	10/10/70	10:00	100	10	10	10
55	10/10/70	10:00	100	10	10	10
56	10/10/70	10:00	100	10	10	10
57	10/10/70	10:00	100	10	10	10
58	10/10/70	10:00	100	10	10	10
59	10/10/70	10:00	100	10	10	10
60	10/10/70	10:00	100	10	10	10
61	10/10/70	10:00	100	10	10	10
62	10/10/70	10:00	100	10	10	10
63	10/10/70	10:00	100	10	10	10
64	10/10/70	10:00	100	10	10	10
65	10/10/70	10:00	100	10	10	10
66	10/10/70	10:00	100	10	10	10
67	10/10/70	10:00	100	10	10	10
68	10/10/70	10:00	100	10	10	10
69	10/10/70	10:00	100	10	10	10
70	10/10/70	10:00	100	10	10	10
71	10/10/70	10:00	100	10	10	10
72	10/10/70	10:00	100	10	10	10
73	10/10/70	10:00	100	10	10	10
74	10/10/70	10:00	100	10	10	10
75	10/10/70	10:00	100	10	10	10
76	10/10/70	10:00	100	10	10	10
77	10/10/70	10:00	100	10	10	10
78	10/10/70	10:00	100	10	10	10
79	10/10/70	10:00	100	10	10	10
80	10/10/70	10:00	100	10	10	10
81	10/10/70	10:00	100	10	10	10
82	10/10/70	10:00	100	10	10	10
83	10/10/70	10:00	100	10	10	10
84	10/10/70	10:00	100	10	10	10
85	10/10/70	10:00	100	10	10	10
86	10/10/70	10:00	100	10	10	10
87	10/10/70	10:00	100	10	10	10
88	10/10/70	10:00	100	10	10	10
89	10/10/70	10:00	100	10	10	10
90	10/10/70	10:00	100	10	10	10
91	10/10/70	10:00	100	10	10	10
92	10/10/70	10:00	100	10	10	10
93	10/10/70	10:00	100	10	10	10
94	10/10/70	10:00	100	10	10	10
95	10/10/70	10:00	100	10	10	10
96	10/10/70	10:00	100	10	10	10
97	10/10/70	10:00	100	10	10	10
98	10/10/70	10:00	100	10	10	10
99	10/10/70	10:00	100	10	10	10
100	10/10/70	10:00	100	10	10	10

$$\frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \right) = \frac{1}{2}$$

2.13

— *Journal of the American Medical Association*, 1991

TI-NHTSA 003003

TEXAS INSTRUMENTS



November 13, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Rita Dunia
Purchasing Department

Subj: Part Number 12604301 Switch (E7SC-3NB24-AA)
Part Number 12590701 Switch (F2VC-9F924-AB)
ISIR Submissions

Dear Rita,

Enclosed, please find the ISIR for the 12604301 and 12590701 switches. Both ISIR submissions were accomplished on Ford forms as we are in the process of transferring data to Kelsey-Hayes forms.

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Regards,


Jim Watt
SRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29; Gary Snyder, MS 12-33
Charlie Douglas, MS 12-33
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: ISIR submissions

TEXAS INSTRUMENTS INC. | MATERIALS & CONTROLS GROUP | SITE

PARTS LIST | PROJECT | PART NUMBER: 77PSL2-3 | REV LTR: A CLS: 650
EXPLOSION | NUM: 3423 | DWG PFX: NUM: 77PSL2-3 | ECN INC.DT: 91/11/05

TITLE: PRESSURE SWITCH

LV/CNT	QTY/UM	BITM	PART/DRAWING NUMBER	RV	NOMENCLATURE/PARM DATA
01	1	REF	36932-1	?	FINAL ASSEMBLY
			36932-1		
01	2	1	27739-1		BASE ASSEMBLY
			27739SH1		
02	3	1	46515-1		BASE (BLACK)
			46515		
02	4	1	36888-1		STATIONARY TERMINAL
			36888		
02	5	1	36897-1		MOVABLE TERMINAL ASM
			36897SH1		
03	6	1	74408-1		MOVABLE CONTACT
			74408		
03	7	1	74171-1		RIVET
			74171		
03	8	1	36887-1		MOVABLE TERMINAL
			36887		
03	9	1	36889-1		SPRING ARM
			36889		
01	10	1	27293-14		SENSOR ASSEMBLY
			27293SH2		
02	11	1	36900-1		MOD SAE J512 HEXPORT
			36900		
02	12	1	74353-1		GASKET
			74353		
02	13	1	27288-1	✓	CUP
			27288		
02	14	3	74176-1		SEAL
			74176		
02	15	OR	27225-1		KAPTON STRIP SPEC (.175 LBS/K)
			27225		
02	16	1	27639-1		WASHER
			27639		
02	17	1	27406-1		CONVERTER
			27406		
02	18	1	74224-1		KAPTON TAPE (.100 LBS/K)
			74224		
02	19	OR	73958-2		SPACER
			73958		
02	20	OR	73958-3		SPACER
			73958		
02	21	1	36656-28		3/4" FORMED DISC
			36656SH1		
01	22	1	74797-1		CRIMP RING
			74797		
01	23	1	74078-146		TRANSFER PIN

TI-NHTSA 003908

11-5-91

	62-1	62-3
✓ final arm.	36952-1	
Base arm	27759-2	-1
✓ Base	46515-2	-1
✓ Sta. Term. "D"	36888-1	
✓ Move. "Base"	36897-1	
✓ Move. Contact	74408-1	
✓ Rivet	74171-1	
✓ Move. Term "D"	36887-1	
✓ Spring Arm	36889-1	
✓ Sensor Arm	27293-13	-14
✓ IS12 Helipart	36600-1	
✓ Hasket	74353-1	
✓ Cup	27713-1	✓ 27282-1
✓ seal	74176-1	
✓ Krypton strip	27225-1	
✓ Washers	27639-1	-1
✓ Converter	27406-1	
✓ Krypton tape	74224-1	
✓ Spacer	73958-2/-3	
✓ disc	36656-27	-28
✓ Crimp Ring	74797-1	
✓ Transfer pin	74078-146	
Exhaust seal	74247-2	(need)
✓ thread cap	74179-2	

-MSG N#- 254298 FR-PCQA TO-PCQA SENT-11/15/91 08:46 AM
R#-150 ST-C DIV-0050 CC-00149 BY-SBO1 AT-11/15/91 08:17 AM

TO: Tom Burke MFPC Steve Major NRELX
Jeff DiDomenico ELB Matt Sellers PCME
Charlie Douglas CPFC Rusty STEPHEN RCSZ
Paul Kotch PRK1 Jim Watt PCQA

CC: Tom Charboneau (delivered separately)
Dave Charn

FR: Steve Offilar SBO1

SJ: Weekly Highlights

Handwritten: a. Steve R.
Eng/E/R
11/18/91

FORD ELECTRONIC SPEED CONTROL DEACTIVATE PS (CCPS)

PASS-CAR REVALIDATION:

Twelve parts from each lot (AMI crimp and HL crimp) successfully passed the impulse test. Twelve more of each will undergo this test when they complete the FIDIC Resistance test in December. They have been characterized post-test, and are now running to failure for information. They are at 950K cycles with no significant number of failures to report yet. As previously reported, the pre-test characterization showed significant differences in release pressure between the two lots. This difference disappeared during cycling; it is possible that it is attributable to a Kapton-wetting phenomenon. We're looking into linking this with observed differences in the crimp techniques which are suspected to lead to diaphragm life problems. Also, Jeff has noticed crimp dimension differences between the two lots, even though the same crimp dies were used for both. We're looking into this with Mfg. Eng. help.

HEXPORT:

We have completed an initial evaluation of the mechanical strength of the 10B21 hexports. Two tests were used: burst, and torque-to-breakage. Results of both tests indicate that the 10B21 hexports have better strength. The average burst strength of 10B21 was 7983 psi versus 7650 psi for 10L10. The average torque of 10B21 was 51.8 ft-lb versus 41.3 for 10L10. Also, we previously cross-sectioned samples of each material and measured the hardness in the thread area. Results of 8 measurements at the crests of the threads show the 10B21 averaging 244 DPH (200 gram Diamond Pyramid Hardness), with the 10L10 averaging 194 DPH. If no cost differences exist (as Elco has led us to believe) then we should seriously consider a move to 10B21 material. Final decision on this is pending environmental analysis of the reduced plating thickness (to reduce thread damage in plating barrel) as well as final decision on the ANSI-specified gaging technique, using 2A LO and 3A GO gages. I'm confident that the combination of the above will finally eliminate the chronic thread problems we've been experiencing on this and all other Elco hexports.

SAMPLES / CUSTOMER ISSUES:

We've begun to receive sample requests for silent devices from Ford for WINS8 (Truck style centered connector with Pass Car style pressure) and from Bendix for Truck. We're establishing new part numbers, envelope drawings, and parts lists for these products. Samples are due in early December, which doesn't seem to be a problem since we already have small quantities of silent discs. Base colors have not been firmly established, hence for samples we'll use standard black for truck and brown for car.

The Ford Australia samples with metric M10 x 1.0 o-ring hexports

shipped last week. We received a fax from Brent Franks, the ^{lead} of
an engineer on this program, which indicates he's experiencing
audible noise difficulties. I have responded to this, indicating
that this is an established concern and we are working to minimise
it. Brent also alluded to a possible change in pressure spec's,
downward. I am trying to steer him away from this, since the Pass
Car disc already has reduced throw (relative to Truck and other
57PS's) and making it silent will only worsen this; compounded with
even lower pressure spec's may reduce throw to an unacceptable
level.

Regards,
Steve O.

-MSG M#- 254298 FR-SBO1 TO=CPPC SENT=11/15/91 08:17 AM
R#-337 ST=C DIV=0050 CC=00101 BY-SBO1 AT=11/15/91 08:17 AM

TO:	Tom Burke	MFPC	Steve Major	WHLZ
	Jeff DiDomenico	ELB	Matt Sellers	PCME
	Charlie Douglas	CPPC	Rusty Struble	RCS2
	Paul Kotch	PRK1	Jim Watt	PCQA

CC: Tom Charboneau (delivered separately)
Dave Czern

FR: Steve Offiler SBO1

SJ: Weekly Highlights

FORD ELECTRONIC SPEED CONTROL DEACTIVATE PS (CCPS)

PASS-CAR REVALIDATION:

Twelve parts from each lot (AMI crimp and HL crimp) successfully passed the Impulse test. Twelve more of each will undergo this test when they complete the Fluid Resistance test in December. They have been characterized post-test, and are now running to failure for information. They are at 950K cycles with no significant number of failures to report yet. As previously reported, the pre-test characterization showed significant differences in release pressure between the two lots. This difference disappeared during cycling; it is possible that it is attributable to a Kapton-wetting phenomenon. We're looking into linking this with observed differences in the crimp techniques which are suspected to lead to diaphragm life problems. Also, Jeff has noticed crimp dimension differences between the two lots, even though the same crimp dies were used for both. We're looking into this with Mfg. Eng. help.

HEXPORT:

We have completed an initial evaluation of the mechanical strength of the 10B21 hexports. Two tests were used: burst, and torque-to-breakage. Results of both tests indicate that the 10B21 hexports have better strength. The average burst strength of 10B21 was 7983 psi versus 7650 psi for 10L10. The average torque of 10B21 was 51.8 ft-lb versus 41.3 for 10L10. Also, we previously cross-sectioned samples of each material and measured the hardness in the thread area. Results of 8 measurements at the crests of the threads show the 10B21 averaging 244 DPH (200 gram Diamond Pyramid Hardness), with the 10L10 averaging 194 DPH. If no cost differences exist (as Elco has led us to believe) then we should seriously consider a move to 10B21 material. Final decision on this is pending environmental analysis of the reduced plating thickness (to reduce thread damage in plating barrel) as well as final decision on the ANSI-specified gaging technique, using 2A LO and 3A GO gages. I'm confident that the combination of the above will finally eliminate the chronic thread problems we've been experiencing on this and all other Elco hexports.

SAMPLES / CUSTOMER ISSUES:

We've begun to receive sample requests for silent devices from Ford for WIN88 (Truck style centered connector with Pass Car style pressure) and from Bandix for Truck. We're establishing new part numbers, envelope drawings, and parts lists for these products.

-MSG N#- 311520 FR=ELB TO=PCQA SENT=11/18/91 01:01 PM
R#-008 ST=C DIV=0050 CC=00101 BY=ELB AT=11/18/91 01:01 PM

NOVEMBER 18, 1991

TO: PAUL KOTCH

CC: CHARLIE DOUGLAS
STAN HOMOL
ANDY MCGUIRK
STEVE OFFILER
ED O'NEILL
MATT BELLERS
JIM WATT

FR: DAVE CZARN

SJ: HEXPORT THREADS - ELCO

*cc- Elaine R.
FyR/GR 11/18/91
C2 P2*

PAUL,

PRELIMINARY TESTING OF THE 10B21 MATERIAL HAS BEEN POSITIVE; IN FACT, THE PARTS HAVE SHOWN GREATER STRENGTH THAN THE 10L10 PARTS, AS EXPECTED.

THE HARDER MATERIAL, COMBINED WITH A THINNER PLATE (.00015" MIN.) AND 3A GO GAGE, MAY ELIMINATE RE-ROLL ON THE 36900 HEXPORT.

STEVE WILL BE WORKING WITH YOU AND ELCO TO DEFINE THE REQUIREMENTS OF THE NEXT SAMPLE LOT. I'D SUGGEST A CONFERENCE CALL WITH RON WILLIAMS AND STEVE FULTON WHEN YOU'RE READY TO DISCUSS THE DETAILS.

REGARDS,
DAVE CZARN
/dt

TI-NHTSA 003913

CRIMP TOOL SWAP

TEST 171-03²⁴

JAD 11/18/91

DEVICE #	CRIMP DIE	CRIMP PRESS	BUILD DATE	CYC. TO FAILURE	CYC. TO SUSPEND
171-03-01	HAND LINE	AMI	911025	615K	
171-03-02	HAND LINE	AMI	911025	597K	
171-03-03	HAND LINE	AMI	911025		950K
171-03-04	HAND LINE	AMI	911025	621K	
171-03-05	HAND LINE	AMI	911025	733K	
171-03-06	HAND LINE	AMI	911025	743K	
171-03-07	AMI	AMI	911025		950K
171-03-08	AMI	AMI	911025	500K	
171-03-09	AMI	AMI	911025	597K	
171-03-10	AMI	AMI	911025	551K	
171-03-11	AMI	AMI	911025	775K	
171-03-12	AMI	AMI	911025	610K	
171-03-13	AMI	HAND LINE	911025	512K	
171-03-14	AMI	HAND LINE	911025		
171-03-15	AMI	HAND LINE	911025	469K	
171-03-16	AMI	HAND LINE	911025	412K	
171-03-17	AMI	HAND LINE	911025	574K	
171-03-18	AMI	HAND LINE	911025	500K	
171-03-19	HAND LINE	HAND LINE	911025	511K	
171-03-20	HAND LINE	HAND LINE	911025	621K	
171-03-21	HAND LINE	HAND LINE	911025	454K	
171-03-22	HAND LINE	HAND LINE	911025	710K	
171-03-23	HAND LINE	HAND LINE	911025	646K	
171-03-24	HAND LINE	HAND LINE	911025		

TI-NHTSA 003914

-MSG #= 390725 FR=EARN TO=PCQA SENT=11/20/91 03:02 PM
R#071 ST=C DIV=0050 CC=00101 BY=EARN AT=11/20/91 03:02 PM

NOVEMBER 20, 1991

TO:	RUSTY STRUBLE	RCS2	CC:	TOM CHARBONEAU	TC
	MIKE DeMATTIA	PCQA		JOHN KOURTESIS	NDES
	CHARLIE DOUGLAS	CPFC		STEVE MAJOR	WHL
	DICK GRIEPEY	MFPC		ANDY McGUIRE	PCQA
	PAUL KOTCH	PRK1		ED O'NEILL	EJON
	JOE LASARE	JNL8		JOE SCHUCK	WHL
	STEVE OFFILER	SBO1		GARY SNYDER	CPFC
	MATT SELLERS	PCME		MARTHA SULLIVAN	CPFC
	BILL SWEET	PCME		RAY TOURANGEAU	PCME
	JIM WATT	PCQA		BILL CONGDON	MFPC
	TOM BURKE	MFPC		STEVE McGOOKY	NDES
	CLAIRE BALTHASAR	PWNT		BLAINE ROSE	PCQA
	TERRY RODRIGUEZ	MFPC		PAUL WESTERLIND	B511

FR: DAVE EARN EARN

SJ: FORD CRUISE CONTROL PRESSURE SWITCH START-UP MEETING:
11/14/91 MEETING MINUTES

MEETING

THE NEXT MEETING IS SCHEDULED FOR:

DATE: 11/21 (THURSDAY) Fri. 11:30 AM
TIME: 10:00 - 11:30 AM
PLACE: MARKETING CONFERENCE ROOM

77PS

Export:

. REPORT ON ELCO ISSUES FROM 7/22 VISIT KOTCH ONGOING
- 10B21 STEEL/.00015" MIN. PLATE/J512 \$
. COMPLETE STRIP-OUT/BURST ON 10B21 MAT'L OFFILER 10/24
Testing partially complete; 10B21 provides additional torque-to-breakage and burst strength.

Environmental Seal

Blue seal material has been approved by Ford; seals are included in P/C validation testing.

. RECEIVE 5K LOT OF BLUE P/C SEALS	SELLERS	10/25	COMP.
* SUBMIT SREA FOR OPTIONAL BLUE SEAL	OFFILER	COMP.	
* INCLUDE GASKETS IN P/C RE-VALIDATION	OFFILER	ONGOING	

Production Issues:

* MAINTAIN RUNNING TOTAL OF L/T (L2-3)	STRUBLE	ONGOING
SWITCHES LEADING TO 100K FOR AMORTIZATION		
. UPDATE PRODUCTION PLANS FOR ALL SWITCHES	DOUGLAS	ONGOING
. DEVELOP ASSEMBLY PRINT PACKAGE	SELLERS/	11/28
	OFFILER	
* PUT CONTROLS IN PLACE TO ENSURE CORRECT	SELLERS	COMP.

7-8K to date
TI-NHTSA 003915

POLARITY KEY LOC'N ON BLK/BRN BASES

Sensor Assembly Machine:

Mechanization has been released to make modifications to pick & place.

* CORRECTIVE ACTION FOR KAPTON MISFEED	SELLERS/	COMP.	
	KOURTESIS		
* CALL MTG. TO REVIEW ANI#2 UPGRADE PLANS	KADISEV./	10/24	ORIG.
	KOURTESIS	12/19	REV.

Base Assembly Machine:

* PRIORITIZE WORK ON THE BEND STATION TO ADDRESS THE COMPRESSED THICKNESS	KOURTESIS	10/21	ORIG.
		12/12	REV.
* PUT PERMANENT CORRECTIONS IN PLACE FOR THE BA EQUIPMENT (e.g., ELIMINATE THE TEMPORARY SHIMS BY FIXING TOOLING MODS., ETC.)	KOURTESIS	ONGOING	

Final Assembly Machine:

Misc. Manufacturing/QC Equipment:

* MAKE QC P-TESTER COMPAT. W/77'S	KOURTESIS	COMP.
-----------------------------------	-----------	-------

PV Testing/ISR:

* BUILD 300 L2-1'S FOR PITTS FOR THEIR ISR (W/CORRECTED BASES)	BURKE/	COMP.	
	SELLERS		
* RECORD PIPC DATA FROM 300 SWITCH LOT	RODRIGUES/	10/11	ORIG.
	ROSE	11/21	REV. comp.
* SUBMIT ADDENDUM TO ISR'S W/CORRECTED BASE DIMENSION - L/T AND P/C (INCLUDE PIST/PIPC DATA FOR P/C)	WATT	10/18	ORIG.
		12/15	REV.
* COMPLETE FAI ON P/C SWITCHES	ROSE	COMP.	
* BEGIN RE-VALIDATION OF P/C SWITCH	OFFILER	11/01	ORIG.
		11/01	COMP.
* COMPLETE PV TESTING & REPORT	OFFILER	12/20	

Diaphragm Life:

* REPORT ON TESTING OF WASHER LOTS	OFFILER	COMP.
* SWAP ANI AND H-L CRIMP DIES AND GIVE SENSORS TO DESIGN FOR EVALUATION	SELLERS/	COMP.
	RODRIGUES	
* IMPLEMENT SOLUTION TO DIAPHRAGM LIFE	OFFILER/	ONGOING
	SELLERS	

Miscellaneous:

* IDENTIFY SWITCH MOUNTING LOCATIONS & SIZE REQMTS FOR FUTURE PLATFORMS	SCHUCK	COMP.	
* 57 TO 77 CONVERSION: PHASE 1 TESTING	OFFILER/	12/19	
	SELLERS		
* COMPLETE DESIGN FMSA	OFFILER	04/18	ORIG.
		10/31	REV.

TI-NHTSA 003916

. COMPLETE PROCESS FMEA

* DETERMINE APPROACH FOR 2A/3A THREAD
GAGING ISSUE

* SREA TO PELKEY - 3A GO GAUGING

SELLERS 07/01
10/31
CEARN/ 10/03
MCGUIRK 11/21
OFFILER 12/05

ORIG.
REV.
ORIG.
REV.

PRODUCTION PLAN BY MONTH (THOUSANDS)

	P/C 57PSL5-3	L/T 57PSL5-2	P/C 77PSL2-1	L/T 77PSL2-3
AUG	0	.5	0	0
SEP	2.1	11.2	0	0
OCT	15.2	13.1	.3	1
NOV	10	0	6.4	13.6
DEC	0	0	35	10

MILESTONES

PLANNED

ACTUAL

57 L/T ISIR

11/21/90

11/21/90

57 P/C ISIR

01/15/91

01/15/91

77PS ISIR

09/01/91 ORIG.

09/20/91 REV.

12/20/91

09/27 - INITIAL
FINAL

77PS SOP (TI)

10/91

10/91

REGARDS,

DAVE CEARN

\43-FORD

TI-NHTSA 003917

11-21-91

Math -

WERE you able
to obtain Cert's
from TAB for
the blue Enviro.
SEAL?

PCV id. al
12-5

CLAUDE

This is All I

received. IF not

Enough let me

of PAUL westerlund
know matt

PRESSURE SWITCH DATA

Form 21605

TEST NO. 179-15-28

DEVICE 77 P5	DATE REQUESTED 11/10/91	REQUESTED BY Steve Offley	REQUESTED COMPL. DATE
PERFORMED BY Jeffrey B. Donarico	DATE STARTED 11/21/91	DATE COMPLETED	APPROVED BY
PROJECT TITLE: Ford MY '92 Electronic Speed Control Deactivate P5			

CUSTOMER:

PURPOSE OF TEST:

Asymmetric Creep Study

PROCEDURE:

Device #	Inst	air test							
179-15-01		Yes							
-01 Pressure	1								
-02 Negative	1								
-03 Paper	1								
-04	1								
-05	1								
-06	1								
-07	1								
-08	1								
-09	1								
-10	1								
-11	1								
-12	1								
-13	1								
-14	1								
-15	1								
-16	1								
179-15-02		Yes							
-17 Trans. dist.	1								
-18 rotation	1								
-19 Pa	1								
-20 rotation	1								
-21 rotation	1								
-22 rotation	1								
-23 Inst	1								
-24	1								
179-15-20		Yes							
-25 Trans. dist.	1								
-26 Trans. dist.	1								
-27 rotation	1								

TI-NHTSA 003919

ASYMMETRIC CRIMP STUDY

PURPOSE: To attempt to correlate teardrop formation with asymmetry in the crimp procedure, which possibly arises from deflections of the table / "C" frame, and possibly manifests itself as measurable differences in sensor height and/or diameter around the circumference.

SCOPE: Four areas of information will be explored: presence of teardrop, height and diameter of crimp, and pressure sensitive paper readings, all correlated with position; and crimp without air-blast to examine the Kapton before it is wetted.

PROCEDURE:

- Place an indelible mark on the outer circumference of 28 Pass Car cups, which will be used to align the uncrimped sensor assemblies in the crimper dial (mark pointing towards center of dial).
- Cut 16 sets of pressure-sensitive paper by tracing a washer with an X-acto knife. Place small marks on the outer surface for alignment with hexports and cups.
- Place alignment marks on the outer edge of 16 hexports, and kit sensors with pressure paper between Kapton and washer. Align marks on hexport, paper, and cup.
- Kit another 12 sensors normally, with the marked cups.
- Crimp all 16 pressure paper parts on AMI. Record which nest was used for each (the nests are numbered on the dial 1 thru 8 with a marker). We will use these to look for nest-to-nest variations.
- Crimp 8 of the 12 normal sensors, recording which nest was used.
- Disable air blast and crimp the 4 remaining sensors (or, remove them from dial before the air blast station). Nest info not important.
- Decrimp the pressure paper parts. Examine the pressure paper for evidence of asymmetric crimp relative to the mark, as well as for nest-specific variations.

ASYMMETRIC CRIMP STUDY

- Lathe cut the hexports on the other 12 devices.
- Look for teardrop on the 8 air-blast parts and location relative to the mark. Also, look for nest-related correlations between these and the pressure paper results. If no teardrops show up, we'll need to rebuild this portion of the test.
- On 8 air-blast parts, place small marks around the outer circumference at 45 degree intervals beginning with original cup mark. Measure the crimp height at each of these points with a dial indicator, and take four diameter readings across 1-5, 2-6, 3-7, and 4-8.
- Examine the parts with no air blast to get an idea of the shape/condition of the Kapton before it ever sees any pressure. Look for any evidence of the beginnings of teardrop, as a function of the precrimp or crimp processes.



Page 1



Nest 2



NP 513



ms. 5. 4



1000



444



Page 7



Ms. 7.5



Center of Dial

Test 179-15-28
Asymmetric Trip Study

11-22-91

PLS -

- * 30 Mags issued - Ford open to it
Need to address with K-H; Pitts;
Dana; ~~COOPER~~
- * T.S.R. PKG's for Pitts & DANA
- * ^{3-MIB} Beryllium Spring ^{STRIPROH} not on ^{PLC} parts list
- * 52 vs. 57 water leak / burst on sensors
- * PIST data wait for completion
of PV testing - end of Dec.
- * Emoticons

12-5-91

TI-NHTSA 003923

HIGHLIGHTS
Stephen B. Offiler
Week Ending 91-11-22

Handwritten: 11/11/92



FORD MY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS

PASS-CAR REVALIDATION:

Eight of ten parts crimped on the hand line, cycling to failure for information, have died between 853K and 1336K. The remaining two have been removed from test for diaphragm analysis. In contrast, only one of the eight parts crimped on AMI (using HL crimp dies) has failed thus far, at 1361K cycles. Two of these have also been removed for analysis. The remaining five will continue to run to failure. This lot is of particular interest, because this is the first time since we began diaphragm life testing in August that the AMI has produced parts superior to the hand line.

DIAPHRAGM LIFE:

The planned analysis of the four long-life parts from the above validation consists of F/d characterization, to observe if differences in converter travel (pre-deflection caused by crimp differences?) account for the drastic life differences, plus opening for observation of diaphragm condition/teardrop. F/d curves have been obtained on virgin sensors from this test to explore the observed differences in release pressures between AMI crimp and HL crimp. It was learned that the effective area on actuation is comparable for all, whereas the effective area on release is much larger for the HL crimp parts, which accounts for their much lower release values. No good hypothesis has been generated to explain this large shift, however.

The model shop has built a set of test hexports which have a step to clamp the Kapton at the outer circumference. This was tried previously, however this time we're using three different step heights, and full-round Kapton. We're using this to explore teardrop formation/wetting, to understand whether the Kapton primarily stretches (deforms plastically) to wet, or whether it primarily pulls out from under the clamped area. We've opened two samples from each of the test lots for diaphragm observation. The control lot (square Kapton, no step) has one textbook teardrop, and one which is wetted ideally. The round Kapton test lots show generally poor wetting with no actual teardrop but some looseness and upward bulging. The fact that we're observing poor wetting in the test lots seems to suggest that the square Kapton promotes some pulling out from the clamp area in order to wet, and the teardrops form if the Kapton pulls out asymmetrically. We are also characterizing samples from these lots, which should show the differences in wetting as smaller effective area hence higher actuation and release values relative to the control group. Finally, these parts will be cycled to failure.

Another extensive test of the theory of teardrop formation is getting underway now. We're marking all cups, so that orientation in the nest during crimp can be controlled. Thus, if the flexing of the "C" frames of the crimp tools (radially outward) is a factor, there should be some correlation between teardrop and position. Some parts are being run with Fuji pressure-sensitive paper, while others are "normal" construction. We'll be performing extensive measurements of the crimp height/diameter of these parts (relative to position), as well as opening them for observation of teardrop. A few will be removed from the table before the air-blast station, to help determine if the teardrop forms before or during wetting.

TI-NHTSA 003924

MECHANIZATION/MANUFACTURING:

A problem with staking the stationary terminal on the base arm machine has been observed. Various efforts to correct this, including comparison with staking on the 57PS-style stakers, has led to the conclusion that a small amount of lubrication is required in order to fold the stake tab correctly. In fact, simply touching the stake tool with a finger has been shown to produce good stakes for several parts. A short-term lubrication procedure, swabbing the tool with Vanishing Oil, has been implemented. Longer term, Mechanization is working on staking tools with various surface treatments (chrome, nitriding) which do not require lubrication. It is generally assumed that the movable terminal does not exhibit this problem due to trace amounts of lubricant picked up from the exhaust of the air cylinders in the movable terminal assembly machine, and the 57PS does not exhibit this problem because all terminals are handled by operators during assembly.

A meeting was held with Stapla, a manufacturer of ultrasonic welding equipment, to explore the possibility of replacing the troublesome spring arm rivet with a weld. They showed extensive literature and examples of ultrasonic welds of copper to brass, as well as many other material combinations. They claim to have excellent acceptance with the US automotive companies and their electrical suppliers. Mechanization has contracted them to produce prototypes for us, which we will initially evaluate with various cycling and pull/pool tests.

-MSG M#- 25298 FR=EARN TO=PCQA SENT=11/22/91 04:39 PM
R#-190 ST=C DIV=0050 CC=00101 BY=EARN AT=11/22/91 04:39 PM

NOVEMBER 22, 1991

TO: RUSTY STRUBLE	RCS2	CC: TON CHARBONEAU	TC
MIKE DeMATTIA	PCQA	JOHN KOURTESIS	NDES
CHARLIE DOUGLAS	CPPC	STEVE MAJOR	WHL3
DICK GARIEPY	MFPC	ANDY MCGUIRK	PCQA
PAUL KOTCH	PRK1	ED O'NEILL	EJON
JOE LAZARE	JNL8		
STEVE OFFILER	SB01	GARY SNYDER	CPPC
MATT SELLERS	PCME	MARTHA SULLIVAN	CPPC
BILL SWEET	PCME	RAY TOURANGEAU	PCME
JIM WATT	PCQA	BILL CONGDON	MFPC
CLAIRE BALTHAZAR	PSWT	STEVE MCCOONEY	NDES
TERRY RODRIGUES	MFPC	ELAINE ROSE	PCQA

FR: DAVE CEARN EARN

SJ: FORD CRUISE CONTROL PRESSURE SWITCH START-UP MEETING:
11/22/91 MEETING MINUTES

MEETING

THE NEXT MEETING IS SCHEDULED FOR:

DATE: 11/28 (THURSDAY) 12-5-91
TIME: 10:00 - 11:30 AM
PLACE: MARKETING CONFERENCE ROOM

77PS

Hexport:

. REPORT ON ELCO ISSUES FROM 7/22 VISIT KOTCH ONGOING
- 10B21 STEEL/.00015" MIN. PLATE/J512 &

Environmental Seal:

Blue seal material has been approved by Ford; seals are included in P/C validation testing.

. INCLUDE GASKETS IN P/C RE-VALIDATION	OFFILER	ONGOING
. SUBMIT CHANGE NOTICES TO TIER 1'S	DOUGLAS	12/12
* ENSURE THAT P/N 74247-4 IS ORDERED FOR 77PSL2-1 WHEN NEXT ORDER IS PLACED	LAZARE	TBD
* REMOVE -3 AS ALTERNATE FROM P/L WHEN PRESENT INVENTORY IS DEPLETED	OFFILER	TBD

Production Issues:

. MAINTAIN RUNNING TOTAL OF L/T (L2-3) SWITCHES LEADING TO 100K FOR AMORTISATION	STRUBLE	ONGOING
Status Date	Total Shipped	
Nov. 22	- 7000	
. UPDATE PRODUCTION PLANS FOR ALL SWITCHES	DOUGLAS	ONGOING
. DEVELOP ASSEMBLY PRINT PACKAGE	SELLERS/	11/28

TI-NHTSA 003926

OFFILER

Sensor Assembly Machine:

Mechanization has been released to make modifications to pick & place.

. CALL MTG. TO REVIEW AMI#2 UPGRADE PLANS KADISEV./ 10/24 ORIG.
KOURTESIS 12/19 REV.

Base Assembly Machine:

* PRIORITIZE WORK ON THE BEND STATION KOURTESIS 10/21 ORIG.
TO ADDRESS THE COMPRESSED THICKNESS 12/12 REV.
* PUT PERMANENT CORRECTIONS IN PLACE FOR KOURTESIS ONGOING
THE EA EQUIPMENT (e.g., ELIMINATE THE
TEMPORARY SHIMS BY FIXING TOOLING MODS., ETC.)
:O ADDRESS TERRY'S CONCERNS ABOUT B.A.M. SELLERS ONGOING

Final Assembly Machine:Misc. Manufacturing/QC Equipment:

* MAKE QC P-TESTER COMPAT. W/77'S WATT/ 12/05
ROCHA
* MAKE QC CURR. LKG. TESTER COMPAT. W/77'S WATT/ 12/12
ROCHA

PV Testing/ISR:

:) RECORD PIPC DATA FROM 300 SWITCH LOT RODRIGUEZ/10/11 ORIG.
ROSE 11/21 REV.
11/21 COMP.
* SUBMIT ADDENDUM TO FC ISR W/CORRECTED WATT 10/18 ORIG.
BASE DIMENSION & PIST/PIPC DATA 12/15 REV.
* STATUS OF L/T APPROVAL INC. DOUGLAS 11/28
. COMPLETE PV TESTING & REPORT OFFILER 12/20

Diaphragm Life:

. IMPLEMENT SOLUTION TO DIAPHRAGM LIFE OFFILER/ ONGOING
SELLERS

Miscellaneous:

. 57 TO 77 CONVERSION: PHASE 1 TESTING OFFILER/ 12/19
SELLERS
:(COMPLETE DESIGN FMEA OFFILER 04/18 ORIG.
10/31 REV.
:) COMPLETE PROCESS FMEA SELLERS 07/01 ORIG.
10/31 COMP.
:P DETERMINE APPROACH FOR 2A/3A THREAD CEARN/ 10/03 ORIG.
GAGING ISSUE MCGUIRK 11/21 REV.
:) SREA TO PELKEY - 3A GO GAUGING OFFILER 12/05 ORIG.
11/22 COMP.
* PUT SYSTEM IN PLACE TO REPORT CPK TO WATT 12/12
FORD QUARTERLY; DETERMINE WHAT TO REPORT

PRODUCTION PLAN BY MONTH (THOUSANDS)

TI-NHTSA 003927

	<u>P/C</u> <u>57PSL5-3</u>	<u>L/T</u> <u>57PSL5-2</u>	<u>P/C</u> <u>77PSL2-1</u>	<u>L/T</u> <u>77PSL2-3</u>
AUG	0	.5	0	0
SEP	2.1	11.2	0	0
OCT	15.2	13.1	.3	1
NOV	10	0	6.4	13.6
DEC	0	0	35	10

<u>MILESTONES</u>	<u>PLANNED</u>	<u>ACTUAL</u>
57 L/T ISIR	11/21/90	11/21/90
57 P/C ISIR	01/15/91	01/15/91
77PS ISIR	09/01/91 ORIG.	
	09/20/91 REV.	09/27 - INITIAL
	12/20/91	FINAL
77PS SOP (TI)	10/91	10/91

REGARDS,
DAVE CEARN \44-FORD

-MSG NUM 9908 TO=JARN SENT=11/22/91 10:50 AM
R#128 ET=C CC=00561 BY=PAKI AT=11/22/91 10:36 AM

1 DAVID CLARK JARN

FROM: PAUL ROTCH PREL

SUBJ: UPDATE FOR COPE MEETING

I HAVE A CONFLICT AND WILL NOT BE ABLE TO ATTEND THIS AFTERNOON'S MEETING.

1. A BOX OF PARTS WITH .00015" ZINC/OLIVE GRAB WILL BE SHIPPED THIS WEEK
TO MY ATTENTION FOR OUR EVALUATION.

2. 10821 PARTS WITH .00015" ZN/YELLOW ARE SCHEDULED TO BE FINISHED BY NEXT
TUESDAY.

3. 10110 THIN PLATE PARTS WITH .00015" ZN/YELLOW ARE SCHEDULED TO BE

FINISHED NEXT WEDNESDAY. THESE PARTS WILL BE DIFFERENT FROM THE PREVIOUS
THIN PLATE PARTS IN THAT THE PITCH DIAMETER WILL HAVE BEEN CUT AT THE
CRUCKER TO ASSURE NO REROLL.

I WILL BE ON VACATION NEXT WEEK. IF YOU HAVE ANY QUESTIONS, VINNEY BARROS
WILL BE COVERING FOR ME.

REGARDS,
PAUL ROTCH

STEW.

FYI

(RTN)
DAVE

OKAY
PO

TI-NHTSA 003929

-MSG N#- 3153 FR-SBO1 TO-PCQA SENT-11/22/91 08:33 AM
R#-148 ST-C DIV-0050 CC-00101 BY-SBO1 AT-11/22/91 08:33 AM

TO: Tom Burke MFPC Steve Major WHLE
Jeff DiDomenico ELB Matt Sellers PCME
Charlie Douglas CPPC Rusty Struble RCS2
Paul Kotch PRK1 Jim Watt PCQA

CC: Tom Charboneau (delivered separately)
Dave Czarn

FR: Steve Offiler SBO1

SJ: Weekly Highlights

cc = DONNA M.
FYE/RSB
11/25/91

FORD NY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS

PASS-CAR REVALIDATION:

Eight of ten parts crimped on the hand line, cycling to failure for information, have died between 853K and 1336K. The remaining two have been removed from test for diaphragm analysis. In contrast, only one of the eight parts crimped on AMI (using HL crimp dies) has failed thus far, at 1361K cycles. Two of these have also been removed for analysis. The remaining five will continue to run to failure. This lot is of particular interest, because this is the first time since we began diaphragm life testing in August that the AMI has produced parts superior to the hand line.

DIAPHRAGM LIFE:

The planned analysis of the four long-life parts from the above validation consists of F/d characterization, to observe if differences in converter travel (pre-deflection caused by crimp differences?) account for the drastic life differences, plus opening for observation of diaphragm condition/teardrop. F/d curves have been obtained on virgin sensors from this test to explore the observed differences in release pressures between AMI crimp and HL crimp. It was learned that the effective area on actuation is comparable for all, whereas the effective area on release is much larger for the HL crimp parts, which accounts for their much lower release values. No good hypothesis has been generated to explain this large shift, however.

The model shop has built a set of test hexports which have a step to clamp the Kapton at the outer circumference. This was tried previously, however this time we're using three different step heights, and full-round Kapton. We're using this to explore teardrop formation/wetting, to understand whether the Kapton primarily stretches (deforms plastically) to wet, or whether it primarily pulls out from under the clamped area. We've opened two samples from each of the test lots for diaphragm observation. The control lot (square Kapton, no step) has one textbook teardrop, and one which is wetted ideally. The round Kapton test lots show generally poor wetting with no actual teardrop but some looseness and upward bulging. The fact that we're observing poor wetting in the test lots seems to suggest that the square Kapton promotes some pulling out from the clamp area in order to wet, and the teardrops form if the Kapton pulls out asymmetrically. We are also characterizing samples from these lots, which should show the differences in wetting as smaller effective area hence higher actuation and release values relative to the control group. Finally, these parts will be cycled to failure.

TI-NHTSA 003930

Another extensive test of the theory of teardrop formation is getting underway now. We're marking all cups, so that orientation in the nest during crimp can be controlled. Thus, if the flexing

of the "C" frames of the crimp tools (radially outward) is a factor, there should be some correlation between teardrop and position. Some parts are being run with Fuji pressure-sensitive paper, while others are "normal" construction. We'll be performing extensive measurements of the crimp height/diameter of these parts (relative to position), as well as opening them for observation of teardrop. A few will be removed from the table before the air-blast station, to help determine if the teardrop forms before or during wetting.

MECHANIZATION/MANUFACTURING:

A problem with staking the stationary terminal on the base asm machine has been observed. Various efforts to correct this, including comparison with staking on the 57PS-style stakers, has led to the conclusion that a small amount of lubrication is required in order to fold the stake tab correctly. In fact, simply touching the stake tool with a finger has been shown to produce good stakes for several parts. A short-term lubrication procedure, swabbing the tool with Vanishing Oil, has been implemented. Longer term, Mechanization is working on staking tools with various surface treatments (chrome, nitriding) which do not require lubrication. It is generally assumed that the movable terminal does not exhibit this problem due to trace amounts of lubricant picked up from the exhaust of the air cylinders in the movable terminal assembly machine, and the 57PS does not exhibit this problem because all terminals are handled by operators during assembly.

A meeting was held with Stapla, a manufacturer of ultrasonic welding equipment, to explore the possibility of replacing the troublesome spring arm rivet with a weld. They showed extensive literature and examples of ultrasonic welds of copper to brass, as well as many other material combinations. They claim to have excellent acceptance with the US automotive companies and their electrical suppliers. Mechanization has contracted them to produce prototypes for us, which we will initially evaluate with various cycling and pull/peel tests.

Regards,
Steve O.

TEXAS INSTRUMENTS



Ford Motor Company
17000 Oakwood Blvd.
P.O. Box 1586-D-2015
Dearborn, Michigan 48121

November 25, 1991

Attn: Mr. Mark Scholler

Subj: Initial ISR Submission NOSC Deactivation Switch
Ford Part Number F3TA-9F924-AA Light Truck Series
1.85 - 2.06 Dimensional Discrepancy

Ref: My September 25, 1991 Letter

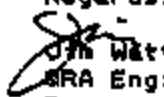
Dear Mark,

My initial September 25, 1991 letter noted a discrepancy on the 1.85 - 2.06 dimension due to an error in transferring that dimension from the envelope drawing to the component drawing.

Enclosed, please find our subsequent measurements for the 1.85 - 2.06 dimension and some sample bases from each of the four corrected base mold cavities.

We believe this completes the ISR submission requirements for the F3TA-9F924-AA switch. Please let me know if you have any questions or if there is anything else that we can do for you.

Regards,


Jim Watt
SRA Engineer
Precision Controls Department
Control Products Division

cc: Dave Czarn, MS 12-29, Charlie Douglas, MS 12-33
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: 1.85 - 2.06 Measurements
Sample bases

Ford Part Number NGSC Deactivation Switch

Base Measurements (Dimension Specification) 1.85 - 2.06

Part Number F3TA-9F924-AA

<u>Cavity</u>	<u>Sample #1</u>	<u>Sample #2</u>
A	1.92	1.95
B	1.99	1.97
C	2.00	1.98
D	1.97	1.97

TI-NHTSA 003933

FINAL INSPECTION 77P8L2-1

DATE: 11-26-91
 DISC LOT 11-8
 REL #1
 LOT #3
 WASHER LOT 108 1-CUT

CUSTOMER P/N F282-95724-AB
 MAT. I.D. 74868-AA4-1
 CUP LOT #6
 CONV. LOT 149
 STN. 2000

DISC LOT 11-11
 REL #1
 LOT #4
 WASHER LOT 108 1-CUT
 STN. 2000

TEST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 ACTUATION	130	118	119	119	125	117	118	123	118	117	121	126	120	127	124	116	125	121	121
2 RELEASE	45	40	43	48	52	43	47	44	47	55	56	54	50	56	47	51	57	54	54
3 DIFF.	85	78	76	71	76	74	71	79	69	82	64	72	71	69	77	68	72	67	67
4 VOLT DROP	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
5 CUR. LEAK	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
6 PROOF	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
7 IMPULSE	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
8 ACTUATION	115	105	110	113	125	---	---	---	---	115	115	120	118	120	---	---	---	---	---
9 RELEASE	45	46	50	44	50	---	---	---	---	55	55	50	55	45	---	---	---	---	---
10 VOLT DROP	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
11 CUR. LEAK	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
12 PROOF	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
13 CREEP	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
14 BURST	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---
15 DIMENSIONAL	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
16 VISUAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17 CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
18 TERM. STR.	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
19 ACTUATION	---	---	---	---	---	---	---	120	125	---	---	---	---	---	---	---	120	120	120
20 RELEASE	---	---	---	---	---	---	---	40	55	---	---	---	---	---	---	---	50	50	50
21 VOLT DROP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
22 CUR. LEAK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
23 PROOF	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
24 CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK

TI-NHT8A 003934

FINISHED PRODUCTION- ROUTING

WHITE } Route to Finished Store
CANARY }
PINK → Route to Dept. Supervisor

DEVICE NUMBER

7-262-1

SPECIAL REQUIREMENT

TOTAL QUANTITY

MANU. ORDER NUMBER

NO SUBTOTALS

- 1.
- 2.
- 3.
- 4.

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 18282

DATE 11/25/91

DEPARTMENT 294

FINISHED PRODUCTION ROUTING

WHITE } Route to Finished Store
CANARY }
PINK → Route to Dept. Supervisor

DEVICE NUMBER

SPECIAL REQUIREMENT

TOTAL QUANTITY

MANU. ORDER NUMBER

NO SUBTOTALS

- 1.
- 2.
- 3.
- 4.

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 18282

DATE

DEPARTMENT

TI-NHTSA 003835

FINAL INSPECTION: 77PSL2-1

DATE: 11-26-91

DISC LOT 11-9

REEL # 1

LOT # 1

WASHER LOT 108 1-CUT

CUSTOMER P/N: F2M0-5572A-AB

MAT. D.L. 74968-004-9

CUP LOT # 1

CONV. LOT # 149

QTY. 2000

DISC LOT 11-9

REEL # 1

LOT # 1

WASHER LOT 108 1-CUT

MAT. D.L. 74968-004-9

CUP LOT # 6

CONV. LOT # 149

QTY. 2000

TEST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 ACTUATION	127	120	115	110	110	117	112	118	116	128	121	112	113	118	125	118	119	116	116
RELEASE	50	55	55	50	53	54	55	51	48	50	54	55	50	50	50	45	51	48	48
DIFF.	77	65	60	60	57	57	57	67	48	75	67	57	60	68	75	72	68	56	56
2 VOLT DROP	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
3 CUR. LEAK	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
4 PROOF	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
5 IMPULSE	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
ACTUATION	114	112	105	106	105	---	---	---	---	110	112	111	113	104	---	---	---	---	---
RELEASE	49	50	55	50	48	---	---	---	---	52	50	50	50	48	---	---	---	---	---
VOLT DROP	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
CUR. LEAK	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
PROOF	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
CREEP	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
7 BURST	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---
8 DIMPSONAL	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
VISUAL	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
9 CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
10 TERM. STR	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
ACTUATION	---	---	---	---	---	---	---	115	90	---	---	---	---	---	---	---	110	115	115
RELEASE	---	---	---	---	---	---	---	48	40	---	---	---	---	---	---	---	45	45	45
VOLT DROP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
CUR. LEAK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
PROOF	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK
CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	OK

TI-NHTSA 003936

DEVICE NUMBER 77	
SPECIAL REQUIREMENT	TOTAL QUANTITY 9
MANU. ORDER NUMBER	
NO SUBTOTALS	
1. 2. 3. 11-9 4.	
QUALITY CONTROL APPROVAL	
IN PROCESS	FINAL  NOV 27 1991
Form 1928	
DATE 11-2	DEPARTMENT 294

DEVICE NUMBER 77-PSL 2-1	
SPECIAL REQUIREMENT	TOTAL QUANTITY 9
MANU. ORDER NUMBER	
NO SUBTOTALS	
1. 2. 11-10 3. 4.	
QUALITY CONTROL APPROVAL	
IN PROCESS	FINAL  NOV 27 1991
Form 1928	
DATE 11-26-91	DEPARTMENT 294

TI-NHT8A 003937

180-01-16

SAMPLE ORDER

ORDER NO: CD91-54

REQUEST DATE: 11/26/91

CREDIT ACCOUNT: 5902

COST CENTER: 101

PRODUCT CODE: 060 88

CUSTOMER: FORD MOTOR COMPANY

CUSTOMER P.O. NO: 47-X-U64845

TI PART NO: 77PSL2-1

CUSTOMER PART NO: F2VC-9F924-AB

QUANTITY: 16

PRICE: \$10.00 EACH

DELIVERY PROMISED: 12/08/91

Shipped 11/29/91

SPECIAL INSTRUCTIONS:

BILL TO:
FORD MOTOR COMPANY
P.O. BOX 1704
DEARBORN, MI 48121

SHIP TO:
FORD MOTOR COMPANY
1800 BAILEY STREET
DEARBORN, MI 48124
ATT'N: RICK GALLI

XX PRODUCTION SAMPLES

ENGINEERING DEVELOPMENT SAMPLES

CC: ENGINEERING: STEVE OFFILER

PRODUCTION CONTROL: VAL'LORE EGGERT

SALES ENGINEER: STEVE MAJOR

TI-NHTSA 003939

Form 21605

TEST NO. 191-15-10

DEVICE 77PS	DATE REQUESTED 11/21/91	REQUESTED BY Steve Offley	REQUESTED COMPL. DATE
PERFORMED BY Matt and Dave	DATE STARTED	DATE COMPLETED	APPROVED BY
PROJECT TITLE: Ford MY '92 Electronic Speed Control Deactivate PS			

CUSTOMER:

PURPOSE OF TEST: 57 PS to 77 PS Conversion. Inplace test to see if 77PS base assemblies can survive seasons with higher actuation and bigger differential.

PROCEDURE: Acquire high-energy SPS sensors. Establish pin window (outlined on next page). Pin on high side for worst-case spring stressing. Characterize sensors and devices. Cycle on production equipment: check switching every 50 k cycles.

5795 L 9-1

Device #	sensor gas/Rel	Device in Act	temp Rel					
181-15-01	558/279	562 (1.9)	266 (2.0)					
-02	559/279	576 (1.9)	272 (2.6)					
-03	571/271	530 (1.9)	265 (4.1)					
-04	549/267	505 (1.9)	252 (1.6)					
-05	540/266	502 (1.8)	258 (1.7)					
-06	547/289	517 (1.8)	264 (4.1)					
-07	579/272	509 (1.9)	259 (2.7)					
-08	559/267	517 (1.9)	272 (1.9)					
-09	545/271	509 (1.9)	263 (2.4)					
-10	548/235	510 (1.9)	269 (5.2)					

(OVER)

TI-NHTBA 003940

9/11/26

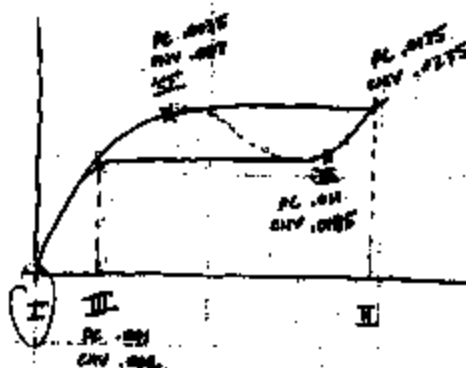


	I	II	III	IV	V
PC 1 12A/42	.0475	.061	.0485	.0585	.0510
	0	.0135	.0010	.011	.0035
PC 2 13B/39	.0485	.0615	.0490	.0590	.0520
	0	.0130	.0085	.0185	.0035
4 53A/260	.0445	.0680	.0465	.0630	.0515
	0	.0285	.0020	.0185	.007
7 54A/267	.0445	.0680	.0465	.0630	.0515
	0	.0235	.0020	.0185	.007

I: DISC PAGE POSITION (REL. TO RMR SURF)

II: DISC ACTIVATED POSITION

III: DISC RELEASE POSITION



$$PC \text{ CYR WIN: } .007 + .040 = .047$$

$$CIV \text{ LTR WIN: } .0125 + .0445 = .057$$

$$CIV \text{ MAX WIN: } .0185 + .0445 = .063$$

$$PIN \text{ THROUGH CTR + H1 @ .060}$$

$$.0485 + .009$$

$$.149$$

III TRY ACT, REL, THEN ACT AND BACK DOWN TO (REL + 5 PSI)

IV TRY (ACT - 5 PSI)

TI P/N: 77PSL2-1
 Ford P/N: F2VC-9F924-AB

<u>Date</u>	<u>Lot</u> <u>Size</u>	<u>Qty</u> <u>Impulse</u> <u>Tested</u>	<u>Qty</u> <u>Pass</u>	<u>Qty</u> <u>Leak</u>	<u>Comments</u>
26-Nov-91	4,000	10	10	-	
26-Nov-91	4,000	10	10	-	
5-Dec-91	4,000	10	10	-	
5-Dec-91	4,000	10	10	-	
9-Dec-91	4,000	10	10	-	
9-Dec-91	2,000	5	5	-	
11-Dec-91	4,000	10	10	-	
11-Dec-91	4,000	10	10	-	
13-Dec-91	4,000	10	10	-	
14-Dec-91	4,000	10	10	-	
16-Dec-91	4,000	10	10	-	
16-Dec-91	4,000	10	10	-	
2-Jan-92	4,000	10	10	-	
6-Jan-92	4,000	10	10	-	
7-Jan-92	2,000	5	5	-	
8-Jan-92	4,000	10	10	-	
8-Jan-92	4,000	10	10	-	
14-Jan-92	4,000	10	10	-	
14-Jan-92	4,000	10	10	-	
15-Jan-92	4,000	10	10	-	
28-Jan-92	2,000	5	5	-	
31-Jan-92	4,000	10	10	-	
2-Feb-92	1,650	5	4	-	Broken spring
4-Feb-92	4,000	10	10	-	
5-Feb-92	4,000	10	10	-	
6-Feb-92	4,000	10	10	-	
10-Feb-92	4,000	10	10	-	
11-Feb-92	4,000	10	10	-	
12-Feb-92	4,000	10	10	-	
12-Feb-92	4,000	10	10	-	
14-Feb-92	4,000	10	10	-	
14-Feb-92	4,000	10	10	-	
14-Feb-92	4,000	10	10	-	
15-Feb-92	4,000	10	10	-	
24-Feb-92	4,000	10	10	-	
26-Feb-92	4,000	10	10	-	
26-Feb-92	4,000	10	10	-	
28-Feb-92	4,000	10	10	-	
28-Feb-92	4,000	10	10	-	
28-Feb-92	4,000	10	9	-	Continuity failure, terminal inside of base is not staked, Date code 2057. Sorted lot 100%.

TI-NHTSA 003942

6-Mar-92	4,000	10	10	-
10-Mar-92	4,000	10	10	-
11-Mar-92	4,000	10	10	-
12-Mar-92	4,000	10	10	-
18-Mar-92	4,000	10	10	-
23-Apr-92	2,000	5	5	-
2-May-92	2,000	5	5	-
5-May-92	2,000	5	5	-
6-May-92	2,000	5	5	-
14-Sep-92	2,000	5	5	-
22-Sep-92	4,000	10	10	-
30-Sep-92	4,000	10	10	-
7-Oct-92	4,000	10	10	-
7-Oct-92	4,000	10	10	-
16-Oct-92	4,000	10	10	-
21-Oct-92	2,000	5	5	-
20-Oct-92	4,000	10	10	-
29-Oct-92	4,000	10	10	-
29-Oct-92	4,000	10	10	-
30-Oct-92	4,000	10	10	-
4-Nov-92	4,000	10	10	-
10-Nov-92	4,000	10	10	-
10-Nov-92	4,000	10	10	-
11-Nov-92	4,000	10	10	-
17-Nov-92	2,000	5	5	-
20-Nov-92	4,000	10	10	-
4-Dec-92	2,000	5	5	-
9-Dec-92	2,000	5	5	-
14-Dec-92	2,000	5	5	-
16-Dec-92	4,000	10	10	-
16-Dec-92	4,000	10	10	-
16-Dec-92	4,000	10	10	-
21-Dec-92	2,000	5	5	-
21-Dec-92	4,000	10	10	-

Totals	265,458	665	663	-
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T1-NHT&A 003943

HIGHLIGHTS

Stephen B. Offler
Week Ending 91-11-27

Handwritten signature
11/27



FORD MY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS DIAPHRAGM LIFE:

All of the Pass Car Revalidation parts have been cycled to failure. The AMI-crimped parts (hand-line crimp tools) exhibited by far the best diaphragm performance to date, with a Beta of 15.3 and a Theta of 1579; versus the hand-line crimped parts with 7.2 and 1207 respectively. We have held aside several sensors from each lot for analysis of this large difference, including virgins, 500K cycles, and long-life parts which hadn't failed at 1350K cycles.

*SA KAPTON FAILING at 100K - HIGH
AS KAPTON ONLY*

We are now cycling the experimental lots with full-round Kapton, built with stepped hexports in order to concentrate the clamping force at the outer circumference. Control lots with round Kapton/no step, and normal square Kapton are also included. Initial characterization showed the full-round lots actuated and released at higher values than the square control lot, which was expected because the Kapton is not wetted very well hence a smaller effective area and larger pressures needed to develop equivalent disc force. A quick interim characterization of a few of the parts at 450K cycles shows that the pressures have dropped, again as expected, since cycling has completed the wetting. The only failures have been in the lots with the largest step (.007" nom.) and based on the very slow progression of the leakage I expect we'll find extruded gaskets, not diaphragm problems.

We have completed the build of all test parts for the analysis of the asymmetric-clamp study, to help determine if crimp tool "C" frame flexing contributes to teardrop formation. We're checking two parts from each nest with Fuji pressure-sensitive paper, to look for nest-to-nest variations, as well as analyzing crimp height and diameter and teardrop formation relative to the nest and the direction of the "C" frame flex. This test is delayed slightly by the fact that the decrimper is down for repairs, as well as lack of tech support while Jeff is attending Hydraulic Training.

FIG 2-12 2 120-4000 1-17 1000 70T

57PS TO 77PS CONVERSION:

The initial phase of this testing program has gotten underway. 57PS sensors with the highest actuation and the widest release (L8-1) were chosen as representative of the largest pin travel and the highest snap energy. Sensors were pre-characterized and the pin window analyzed, then built onto 77PS switches using a pin length skewed long (towards creep-release) to obtain the largest spring deflections. Devices were given an initial characterization and returned to Matt to be cycled on production cycling equipment. They will be checked for continuity every 50K cycles, and failures will be opened for analysis as they occur. Weibull techniques will be employed as well after all have failed.

MISCELLANEOUS:

We have received word from Ford SQA Mark Scholler that the revamped partial DFMEA has been corrected consistent with Ford philosophy. We must now continue to revamp the rest of the document in the same fashion.

It has come to my attention that the on-line 57PS inspection equipment for current leakage has not been upgraded yet to comprehend the 77PS. They are therefore relying on us to supply lab equipment for this test, which is unacceptable for several reasons: equipment availability; setup time; and especially safety concerns, since our 500VAC sources are not protected and guarded appropriately for use by non-technically-astute production personnel.

TI-NHTSA 003844

-MSG MF= 113452 FR=SB01 TO=CPFC SENT=11/27/91 07:11 AM
RF=248 ST=C DIV=0050 CC=00101 BY=SB01 AT=11/27/91 07:11 AM

TO:	Tom Burke	MFPC	Steve Major	WHLZ
	Jeff DiDomenico	ELB	Matt Sellers	PCME
	Charlie Douglas	CPFC	Rusty Struble	RCS2
	Paul Katch	PRK1	Jim Watt	PCQA

CC: Tom Charboneau (delivered separately)
Dave Czarn

FR: Steve Offiler SB01

SJ: Weekly Highlights

FORD MY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS

DIAPHRAGM LIFE:

All of the Pass Car Revalidation parts have been cycled to failure. The AMI-crimped parts (hand-line crimp tools) exhibited by far the best diaphragm performance to date, with a Beta of 15.3 and a Theta of 1579; versus the hand-line crimped parts with 7.2 and 1207 respectively. We have held aside several sensors from each lot for analysis of this large difference, including virgins, 500K cycles, and long-life parts which hadn't failed at 1350K cycles.

We are now cycling the experimental lots with full-round Kapton, built with stepped hexports in order to concentrate the clamping force at the outer circumference. Control lots with round Kapton/no step, and normal square Kapton are also included. Initial characterization showed the full-round lots actuated and released at higher values than the square control lot, which was expected because the Kapton is not wetted very well hence a smaller effective area and larger pressures needed to develop equivalent disc force. A quick interim characterization of a few of the parts at 450K cycles shows that the pressures have dropped, again as expected, since cycling has completed the wetting. The only failures have been in the lots with the largest step (.007" nom.) and based on the very slow progression of the leakage I expect we'll find extruded gaskets, not diaphragm problems.

We have completed the build of all test parts for the analysis of the asymmetric-clamp study, to help determine if crimp tool "C" frame flexing contributes to teardrop formation. We're checking two parts from each nest with Fuji pressure-sensitive paper, to look for nest-to-nest variations, as well as analyzing crimp height and diameter and teardrop formation relative to the nest and the direction of the "C" frame flex. This test is delayed slightly by the fact that the decrimper is down for repairs, as well as lack of tech support while Jeff is attending Hydraulic Training.

57PS TO 77PS CONVERSION:

The initial phase of this testing program has gotten underway. 57PS sensors with the highest actuation and the widest release (LS-1) were chosen as representative of the largest pin travel and the highest snap energy. Sensors were pre-characterized and the pin window analyzed, then built onto 77PS switches using a pin length skewed long (towards creep-release) to obtain the largest spring deflections. Devices were given an initial characterization and

TI-NHTSA 003945

returned to Matt to be cycled on production cycling equipment. They will be checked for continuity every 50K cycles, and failures will be opened for analysis as they occur. Weibull techniques will be employed as well after all have failed.

MISCELLANEOUS:

We have received word from Ford SQA Mark Scholler that the revamped partial DFMEA has been corrected consistent with Ford philosophy. We must now continue to revamp the rest of the document in the same fashion.

It has come to my attention that the on-line 57PS inspection equipment for current leakage has not been upgraded yet to comprehend the 77PS. They are therefore relying on us to supply lab equipment for this test, which is unacceptable for several reasons: equipment availability; setup time; and especially safety concerns, since our 500VAC sources are not protected and guarded appropriately for use by non-technically-astute production personnel.

Regards,
Steve O.

PART NO		QRO. ISSUE NO.		INSPECTION METHOD		INSPECTION		LIT ADIT		INSPEC							
77PS		A2-1															
PART NAME																	
PRESSURE SWITCH																	
SUPPLIER																	
INSPECTION PLAN		U.A.B.		SIGNED		DATE											
S D M		N T H															
S D M		N T H															
S D M		N T H															
S D M		N T H															
APPRO. BY		DATE															
K. Gurdale		6/20/87															
LOT NO.	DATE	DESC.	SIZE	QTY.	REJ. NO.	INSP. NO.	Calib. Creep Volt. Drop	Terminal Location	Dimensional	THREAINS Workmanship & Coding	Calib. Creep Volt. Drop	Volt. Drop	Current Leakage	Proof Test	Impulse Test	Burst Test	Terminal Strength
1	11-26-87	2-1	11-8	9			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	11-26-87	2-1	11-8	9			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	11-26-87	2-1	11-10	9			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	11-26-87	2-1	11-9	9			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

TI-NHTSA 003947

PART NO		DWD. ISSUE NO.	
7745		42-1	
PART NAME			
PRESSURE SWITCH			
SUPPLIER			
INSPECTION PLAN		S.A.E.	SIGNED
S D N	M T R		
S D N	M T R		
S D N	M T R		
S D N	M T R		
APPRO. BY		DATE	
E. Gundak		6/20/79	

[illegible]

TI-NHTSA 003948

[illegible]

PART NO		Dwg. ISSUE NO.		PART NAME		SUPPLIER		INSPECTION METHOD		FIN		INSPECTION		LOT		ADDITIONAL		INSPECTION									
7113		20-1		PRESSURE SWITCH																							
INSPECTION PLAN		S.A.S.		STANDARD		DATE		CHARACTERISTIC		Calib., Creep Volt. Drop		Dimensional		Workmanship & Coding		Calib., Creep Volt. Drop		Current Leakage		Proof Test		Impulse Test		Burst Test		Terminal Strength	
APPROV. BY		DATE																									
LOT NO.	DATE	LOT	SIZE	DEPT.	REL. NO.	DEPT.	REL. NO.	APPROV.	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
1	12-5	12-1	12-1	9				OK																			
2	12-5	12-1	12-2					OK																			
3	12-6	12-1	12-3					OK																			
4	12-6	12-1	12-4					OK																			
5	12-9	11	12-6					OK																			
6	12-9	11	12-8					OK																			
7	12-9	4	12-5					OK																			
8	12-10	11	12-10					OK																			
9	12-10		12-11					OK																			
10	12-11		12-7					OK																			
11	12-11		12-9					OK																			
12	12-12		12-12					OK																			
13	12-12		12-13					OK																			
14	12-13		12-14					OK																			
15	12-13		12-15					OK																			
16	12-14		12-16					OK																			
17	12-14		12-17					OK																			

TI-NHTSA 003950

PART NO		DWD. ISSUE NO.	
77PS		L2-1	
PART NAME			
PRESSURE SWITCH			
SUPPLIER			
INSPECTION PLAN		Q.A.S.	SIGNED
S D M		N T R	
S D M		N T R	
S D M		N T R	
S D M		N T R	
APPRO. BY		DATE	
K. Gundak		6/20/87	
LOT NO.	1991 DATE	QTS C	SAMPLE SIZE
1	12/16	12-18	9
2	12/16	12-19	9
3	1-2	12-16	9
4	1-2	12-17	9
5	1-2	1-1	9
6	1-2	1-2	9
7	1-4	1-5	9
8	1-4	1-6	9
9	1-4	1-3	9
10	1-8	1-7	9
11	1-8	1-8	9
12	1-8	1-9	9
13	1-8	1-10	9
14	1-11	1-11	9
15	1-11	1-12	9
16	1-11	1-15	9
17	1-14	1-16	9

LOT	NO.	1991 DATE	QTS C	SAMPLE SIZE	BIMP. AC. RE.	RES. NO.	INSP. NO.	INSPECTION METHOD	CHARACTERISTIC	Calib., Creep Volt. Drop	Terminal Location	Dimensional	THREADS	Workmanship & Coding	Calib., Creep Volt. Drop	Volt. Drop	Current Leakage	Proof Test	Impulse Test	Burst Test	Terminal Strength	LOT	AUDIT	INSPEC		
1	12/16	12-18	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	12/16	12-19	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	1-2	12-16	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	1-2	12-17	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	1-2	1-1	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	1-2	1-2	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	1-4	1-5	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	1-4	1-6	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	1-4	1-3	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	1-8	1-7	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	1-8	1-8	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	1-8	1-9	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	1-8	1-10	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	1-11	1-11	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	1-11	1-12	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	1-11	1-15	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	1-14	1-16	9	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

TI-NHTSA 003851

PART NO.		DWG. ISSUE NO.		PART NAME		SUPPLIER		INSPECTION PLAN		Q.A.S.		REMARKS		DATE		INSPECTION METHOD		HUI		INSPECTION		LOT		ADDIT		INSPEC	
LOT NO.	DATE	SUB NO.	LOT	SAMPLE SIZE	DISP. NO.	REJ. NO.	TRIP. NO.	AC.	NC.	OK.	NG.	OK.	NG.	OK.	NG.	OK.	NG.	OK.	NG.	OK.	NG.	OK.	NG.	OK.	NG.	OK.	NG.
1	1-15	2-1	1-17	9	✓																						
2	1-15		1-18		✓																						
3	1-28		1-14		✓																						
4	1-30		1-22																								
5	1-30		1-23																								
6	1-30		1-21		✓																						
7	2-14		1-24		✓																						
8	2-14		1-25		✓																						
9	2-14		1-26		✓																						
10	2-14		1-27		✓																						
11	2-15		1-28		✓																						
12	2-15		1-29		✓																						
13	2-16		2-3		✓																						
14	2-16		2-4		✓																						
15	2-16		2-5		✓																						
16	2-16		2-6		✓																						

TI-NHTSA 003953

THIS INFORMATION SHALL NOT BE CONSIDERED AS PART OF BUYER'S SPECIFICATION
 IT IS THE BUYER'S RESPONSIBILITY TO VERIFY THE INFORMATION IS CORRECT

NO INFORMATION FROM HEREIN DOES NOT RELIEVE BUYER FROM ITS OBLIGATION
 TO OBTAIN THE NECESSARY INFORMATION TO PROTECT ITS OWN INTERESTS

PART NO. **77PS** DWG. ISSUE NO. **L2-1**

PART NAME
PRESSURE SWITCH

SUPPLIER

INSPECTION PLAN		D.A.S.	SIGNER	DATE
SUN	WTR			
SUN	WTR			
SUN	WTR			
SUN	WTR			

APPRO. BY *E. Gurdale* DATE *6/20/87*

LOT NO.	DATE	77PS MAKE	LOT SIZE	SAMPLE SIZE	DIST. AC. NO.	REL. NO.	WSP. NO.
1	1/27	"	7	5	✓		<i>Reid</i>
2	1/27	"	2502	50	✓		
3	1/27	"	2451	50	✓		
4	1/27	"	815	50	✓		
5	1/27	"	18	13	✓		
6	1/27	"	1686	50	✓		
7	1/27	"	1666	50	✓		
8	1/30	"	238	50	✓		
9	1/30	"	57	50	✓		
10	1/30	"	2799	50	✓		
11	1/31	"	99	50	✓		<i>Hand</i>
12	1/31	"	1123	50	✓		
13	1/31	"	2845	50	✓		
14	1/31	"	1407	50	✓		
15	2/5	"	224	50	✓		<i>WTR</i>
16	2/5	"	954	50	✓		
17	2/6	"	2125	50	✓		

INSPECTION METHOD		JIN		INSPECTION		LIT		AUDIT		INSPEC															
CHARACTERISTIC		Calib., Creep Volt. Drop		Terminal Location		Dimensional		THREADS		Workmanship & Coding		Calib., Creep Volt. Drop		Volt. Drop		Current Leakage		Proof Test		Impulse Test		Burst Test		Terminal Strength	
ASL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	13 3.5
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 15
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 14
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 14
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 23
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 27
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 27
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 15
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 27
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 28
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 27
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 28
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 29
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 30
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 28
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 29
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 30

TI-NHTSA 003964

PART NO. 77PS
 PART NAME PRESSURE SWITCH
 SUPPLIER

INSPECTION PLAN
 Q.A.S. SIGNED DATE
 APPD. BY *E. Gurdak* DATE 6/20/84

LOT NO.	DATE	LOT SIZE	SAMPLE SIZE	DISP. AC. NO.	DEL. NO.	INSP. NO.
1	2/5	121	1832	50	✓	8-722
2	2/5	121	199	50	✓	"
3	2/6	121	124	50	✓	"
4	2/6	121	101	50	✓	"
5	2/6	121	3199	50	✓	"
6	2/6	121	384	50	✓	"
7	2/7	121	15	10	✓	"
8	2/7	121	82	18	✓	"
9	2/7	121	2819	50	✓	"
10	2/4	121	17	12	✓	"
11	2/4	121	93	50	✓	"
12	2/4	121	668	50	✓	"
13	2/5	121	3704	50	✓	"
14	2/11	121	15	10	✓	"
15	2/11	121	3409	50	✓	"
16	2/11	121	380	50	✓	"
17	2/13	121	158	50	✓	"

CHARACTERISTIC	Calib., Creep Volt. Drop	Terminal Location	Dimensional	THREADS	Workmanship & Coding	Calib., Creep Volt. Drop	Volt. Drop	Current Leakage	Proof Test	Impulse Test	Burst Test	Terminal Strength
100%	10t	10t	10t	10t	10t	10t	10t	10t	10t	10t	10t	10t
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 30 A
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 31
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 27
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 30 A
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 31
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 36
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 15
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 30 A
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 36
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 31
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 39
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 36
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 38
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 14
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 39
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 42
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 39

TI-NHTSA 003955

PART NO.		Dwg. 1350E NO.		INSPECTION METHOD		HIA		INSPECTION		LOT		ADDITIONAL		INSPEC	
77PS		12-1													
PART NAME				PRESSURE SWITCH											
SUPPLIER															
INSPECTION PLAN		S.A.S.		SIGNED		DATE									
S M N		M T W													
S M N		M T W													
S M N		M T W													
S M N		M T W													
APPD. BY		DATE													
1992		6/20/84													
LOT NO.	DATE	LOT SIZE	SAMPLE SIZE	DISP. NO.	REL. NO.	INSP. NO.	CHARACTERISTIC	Calib., Creep	Calib., Creep	Calib., Creep	Calib., Creep	Calib., Creep	Calib., Creep	Calib., Creep	Calib., Creep
1	2/13	12-1	3381	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
2	2/13	12-1	507	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
3	2/14	12-1	82	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
4	2/14	12-1	1346	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
5	2/12	12-1	86	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
6	2/12	12-1	810	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
7	2/13	12-1	1093	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
8	2/14	12-1	153	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
9	2/14	12-1	1190	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
10	2/24	12-1	1607	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
11	2/24	12-1	3629	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
12	2/24	12-1	238	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
13	2/24	10-1	238	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
14	2/26	12-1	42	35			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
15	2/26	12-1	748	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
16	2/26	12-1	1618	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓
17	2/26	12-1	1414	50			THREAS	✓	✓	✓	✓	✓	✓	✓	✓

TI-NHTSA 003956

PART NO		Dwg. ISSUE NO.		INSPECTION METHOD		INSPECTION		LIT		ADDIT		INSPEC								
77 PS		L2-1																		
PART NAME				SUPPLIER																
Pressure Switch																				
INSPECTION PLAN				S.A.S.				STANDARD				DATE								
S.M.				N.T.R.																
S.M.				N.T.R.																
S.M.				N.T.R.																
S.M.				N.T.R.																
APPR. BY				DATE																
K. Gurdak				6/20/84																
LOT NO.	DATE	SER. NO.	LOT SIZE	SAMPLE SIZE	DISP.	REJ. NO.	INSP. NO.	CHARACTERISTIC	Calib., Creep Volt. Drop	THREADS	Dimensional	TERM. ACC.	Workmanship & Coding	Calib., Creep Volt. Drop	Volt. Drop	Current Leakage	Proof Test	Impulse Test	Burst Test	Terminal Strength
1	3/26	L2-1	3056	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 55
2	3/27	L2-1	1734	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 55
3	3/27	L2-1	1360	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 56
4	3/28	L2-1	81	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 55
5	3/28	L2-1	2107	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 56
6	3/28	L2-1	1858	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 57
7	3/28	L2-1	1650	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 57
8	3/28	L2-1	35	30	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 56
9	3/28	L2-1	29	23	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 48
10	3/29	L2-1	46	41	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 58
11	3/29	L2-1	345	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 57
12	3/29	L2-1	3417	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 58
13	3/3	L2-1	907	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 57
14	3/3	L2-1	721	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 59
15	3/3	L2-1	1704	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 62
16	3/3	L2-1	238	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 64
17	3/4	L2-1	2	2	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20 15

TI-NHTSA 003057

THIS DOCUMENT SHALL NOT BE CONSIDERED AS PART OF SUPPLIER'S SPECIFICATION
 TO DELIVER GOODS WHICH MEET SUPPLIER'S SPECIFICATIONS, UNLESS SO STATED.

NO INFORMATION GIVEN HEREIN DOES NOT RELIEVE BUYER FROM ITS OBLIGATION
 TO OBTAIN THE NECESSARY INFORMATION IN ADVANCE OF ANY PURCHASE.

PART NO		ORG. ISSUE NO.		INSPECTION METHOD		INSPECTION		LOT ADIT		INSPEC		T-NHTSA 003958							
77 1'S		12-1																	
PART NAME		Q.A.D.		SIGNED		DATE													
Pumpkin																			
SUPPLIER																			
APPRO. BY		DATE																	
6/20/87		6/20/87																	
LOT NO.	DATE	Q.A.D.	LOT SIZE	SAMPLE SIZE	DISP.	REJ. NO.	INSP. NO.	Calib., Creep Volt. Drop	THREADS	Dimensional	TERM. LOC.	Workmanship & Coding	Calib., Creep Volt. Drop	Volt. Drop	Current Leakage	Proof Test	Impulse Test	Burst Test	Terminal Strength
1	3/4	12-1	125	50	L		52/113	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	3/4	12-1	125	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	3/4	12-1	1277	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	3/4	12-1	1955	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	3/4	12-1	23	18	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	3/4	12-1	1967	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	3/5	12-1	21	16	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	3/5	12-1	11	6	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	3/5	12-1	2152	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	3/5	12-1	1397	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	3/5	12-1	1655	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	3/6	12-1	293	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	3/6	12-1	421	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	3/9	12-1	37	32	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	3/9	12-1	1647	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	3/9	12-1	1172	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	3/10	12-1	12499	50	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

THIS DOCUMENT SHALL NOT BE CONSIDERED AS PART OF BUYER'S SPECIFICATION
 TO DELIVER WHEN BUYER'S SPECIFICATIONS, GIVEN UNDER NO OTHER

THE INFORMATION GIVEN HEREIN DOES NOT RELIEVE SELLER FROM THE
 OF THAT THIS INFORMATION IS PROVIDED FOR THE USE OF THE BUYER.

[illegible]

TI-NHTSA 00395B

PART NO		Dwg. Issue No.		INSPECTION METHOD		FINAL INSPECTION		LOT AUDIT INSPECTION											
7TPS		82-11																	
PART NAME		PRESSURE SWITCH																	
SUPPLIER																			
INSPECTION PLAN		S.A.S.		SIGNED		DATE													
S.D.M.		W.T.R.																	
S.D.M.		W.T.R.																	
S.D.M.		W.T.R.																	
S.D.M.		W.T.R.																	
REV. BY		DATE		6/20/82															
LOT NO.	DATE	LOT NO.	SIZE	Q.C. NO.	Q.C. NO.	REJ. NO.	INSPECTION NO.	Calib., Creep Volt. Drop	Term. Location	Dimensional	Threads	Workmanship & Coding	Calib., Creep Volt. Drop	Volt. Drop	Current Leakage	Proof Test	Impulse Test	Burst Test	Terminal Strength
1	2/26	2-27	2-27	9	L		Rich	L	L	L	L	L	L	L	L	L	L	L	L
2	2-26	2-28	2-28	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
3	2/27	2-28	2-28	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
4	2/27	2-29	2-29	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
5	2/28	2-42	2-42	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
6	2/28	2-32	2-32	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
7	2/28	2-33	2-33	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
8	2/28	2-34	2-34	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
9	3/6	2-37	2-37	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
10	3/6	2-38	2-38	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
11	3/10	2-35	2-35	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
12	3/10	2-36	2-36	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
13	3/11	3-4	3-4	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
14	3/11	3-5	3-5	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
15	3/12	3-6	3-6	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
16	3/12	3-7	3-7	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	
17	2-18	3-8	3-8	"	L		Rich	L	L	L	L	L	L	L	L	L	L	L	

TI-NHTSA 003980

PART NO.		PRO. ISSUE NO.		INSPECTION METHOD		CHARACTERISTIC		CALIB., Creep Volt. Drop		THREA DS		Dimensional		TERM. LOC		Workmanship & Coding		Calib., Creep Volt. Drop		Volt. Drop		Current Leakage		Proof Test		Impulse Test		Burst Test		Terminal Strength	
PART NAME		O.A.S.		SIGNED		DATE		LOT		ADDIT		INSPEC																			
71		12																													
Furnace Switch																															
SUPPLIER																															
APPRO. BY		DATE																													
6/20/84		6/20/84																													
LOT	DATE	SER.	LOT SIZE	SAMPLE	DISP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.	REL.	IMP.		
1	3/11	L2-1	257	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
2	3/11	L2-1	66	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
3	3/11	L2-1	592	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
4	3/12	L2-1	535	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
5	3/12	L2-1	714	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
6	3/13	L2-1	21	26	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
7	3/13	L2-1	18	13	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
8	3/13	L2-1	13	8	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
9	3/13	L2-1	1632	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
10	3/13	L2-1	1172	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
11	3/13	L2-1	1734	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
12	3/13	L2-1	15	10	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
13	3/13	L2-1	1	1	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
14	3/13	L2-1	18	18	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
15	3/13	L2-1	141	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
16	3/14	L2-1	476	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
17	3/14	L2-1	603	50	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

TI-NHTSA 003961

PART NO. **77PS 42-1** DWG. ISSUE NO. **1**

PART NAME
PRESSURE SWITCH

SUPPLIER

INSPECTION PLAN		S.A.S.	SIGNED	DATE
200	100			
200	100			
200	100			
200	100			

APPROVED BY *E. Burdick* DATE **6/20/89**

LOT NO.	DATE	QUANTITY	Amount Shipped	SAMPLE SIZE	DISP.		REJ. NO.	INSP. NO.	CALIB. VOL. DROPT					CALIB. VOL. DROPT					Tot	T6e			
					AC.	RE.			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%					
1	3/18	12-1	111	50	✓			22228	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	71		
2	3/23	12-1	42	42	✓			30384	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	71		
3	3/23	12-1	476	50	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	76		
4	3/23	12-1	1627	50	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	79		
5	3/24	12-1	101	50	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	77		
6	3/24	12-1	137	50	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	80		
7	3/25	12-1	1428	50	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	82		
8	3/26	12-1	681	50	✓			22384	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	79		
9	3/26	12-1	33	33	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	80		
10	3/31	12-1	1418	50	✓			22722	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	80		
11	4/10	12-1	46	41	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	80		
12	4/10	12-1	192	50	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	20	86		
13	4/16	12-1	1190	50	✓			22722	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	21	04		
14	4/20	12-1	2062	50	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	21	04		
15	4/20	12-1	1746	50	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	21	07		
16	4/27	12-1	60	30	✓			"	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	21	07		

TI-NHTSA 003962

INSPECTION TEST SUMMARY

TEXAS INSTRUMENTS

34 FOREST STREET, ATTLEBORO, MA 01703

PART NO. REV.

7175 121

PART NAME
Cruise Control Pressure Switch

CLASS NO. REV. SK

208

TI ORDER NO./DATE CODE

CUSTOMER

Ford

CUSTOMER P.O. NO.

CUSTOMER PART NO.

VARIOUS

APPROVED BY

DATE

Michael H. Hutton

4/12/92

LOT NO.	1992 DATE	SUB NO.	LOT SIZE	SAMPLE SIZE	DISP.		REL. NO.	INSP. NO.	AQL	FINAL				INSPECTION				LOT				ADMIT									
					AC	RE				00Z	5/	5/	5/	9	4	5	4	4	4	4	4	4									
1	4/27	12-1	3792	5	✓			302213		✓	✓	✓	✓	21 14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	4/27	12-1	432	5	✓			H		✓	✓	✓	✓	21 15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3																															
4	5/05	12-1	14	5	✓					✓	✓	✓	✓	21 14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	5/05	"	512	5	✓					✓	✓	✓	✓	21 15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	5/05	"	1140	5	✓					✓	✓	✓	✓	21 26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	5/07	"	12	5	✓					✓	✓	✓	✓	21 07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	5/07	"	1654	5	✓					✓	✓	✓	✓	21 26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	5/08	"	734	5	✓					✓	✓	✓	✓	21 26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	5/08	"	1404	5	✓					✓	✓	✓	✓	21 28	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	5/11	12-1	1666	5	✓			48700		✓	✓	✓	✓	21 28	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	5/11	12-1																													
13	5/20	12-1	2856	5	✓			302213		✓	✓	✓	✓	MIXED O/C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	5/21	"	3332	5	✓					✓	✓	✓	✓	MIXED O/C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	5/26	"	952	5	✓					✓	✓	✓	✓	MIXED O/C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	5/27	"	8142	5	✓					✓	✓	✓	✓	MIXED O/C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	5/28	"	714	5	✓					✓	✓	✓	✓	MIXED O/C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

TI-NHTSA 003963

INSPECTION TEST SUMMARY										INSPECTION METHOD		FINAL		INSPECTION		LOT		AUDIT		INSPECTION															
TEXAS INSTRUMENTS 34 FOREST STREET, ATTLEBORO, MA 02703										A.P.T.		Connector		Go/NoGo		Visual																			
PART NO. REV.										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
PART NAME										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
Cruise Control Pressure Switch										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
QAS NO. REV. SN										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
208										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
CUSTOMER										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
Ford										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
CUSTOMER PART NO.										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
Various										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
APPROVED BY										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
4/15/92										Calibration		Voltage Drop		Terminal Location		Threads		Workmanship/Coding		Calibration		Voltage Drop		Impulse Test		Current Leakage		Proof Test		Burst Test		Terminal Strength		Dimensional	
LOT NO.	DATE	SUB NO.	LOT SIZE	SAMPLE SIZE	DISP.	REL. NO.	INSP. NO.	AOL	002	51	51	51																							
1	5/29	12-1	3570	5	✓		37737		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
2	6/05	12-1	31896	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
3	6/08	12-1	3094	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
4	6/10	12-1	952	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
5	6/11	12-1	714	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
6	6/16	12-1	2618	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
7	6/17	12-1	95	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
8	7/7	12-1	4522	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
9	7/20	12-1	238	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
10	7/19	12-1	476	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
11	7/28	12-1	714	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
12	7/31	12-1	4522	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
13	8/6	12-1	1704	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
14	8/24	12-1	172	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
15									✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
16	9/64	12-1	304	5	✓		"		✓	✓	✓	✓	MIXED	DATE	CODES	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
17																																			

TI-NHTSA 003964

PART NO.		ISSUE NO.	
77PS		12-1	
PART NAME			
PRESSURE SWITCH			
SUPPLIER			
INSPECTION PLAN		S.A.S.	SIGNED
CEN	MTN		
SDN	MTN		
SDN	MTN		
SDN	MTN		
APPRO. BY		DATE	
K. Burdick		6/20/87	

LOT NO.	DATE	DISC. LOTS	SAMPLE SIZE	DISP.		RES. NO.	INSP. NO.	TESTS															
				AC.	RE.			Ca	Vo	Te	Di	Th	Na	Co	Ca	Vo	Vo	Pr	In	Bu	Te	Sc	
1	3-18	3-9	9	✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	3-23																						
3	3-23																						
4	4-10	4-10		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	5-1	5-24		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	5-5	5-1		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7		5-2		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	9-14	169		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	9-14	170				LINE SA	Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	9-14	169		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	9-14	170		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	9-14	213		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	9-14	214		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	10-6	227		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	10-6	228		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	10-7	221		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	10-7	229		✓			Recess	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

TI-NHTSA 003985

SECTION TEST SUMMARY



TEXAS INSTRUMENTS

34 FOREST STREET, ATTLEBORO, MA 02103

PART NO. REV.

TTPS 2.2-1

PART NAME

Cruise Control Pressure Switch

QAS NO. REV. SN

208

TI ORDER NO./DATE CODE

CUSTOMER

Ford

CUSTOMER P.O. NO.

CUSTOMER PART NO.

Various

APPROVED BY

Michael K. Mott

DATE

4/13/92

LOT NO.	1992 DATE	SUB NO.	LOT SIZE	SAMPLE SIZE	DEF.		REJ. NO.	INSP. NO.	ADL	Cal Vol Test	Thru	Work			Cal Vol	Lap	Curt	Proof	Tare	Tare	Diam
					AC	RE															
1	9/24	2-1	981	5	✓			26221		✓	✓	✓	✓	22 55	✓	✓	✓	✓	✓	✓	✓
2	9/24	"	209	5	✓			"		✓	✓	✓	✓	22 66	✓	✓	✓	✓	✓	✓	✓
3	9/25	"	156	5	✓			"		✓	✓	✓	✓	22 55	✓	✓	✓	✓	✓	✓	✓
4	9/25	"	91	5	✓			"		✓	✓	✓	✓	22 61	✓	✓	✓	✓	✓	✓	✓
5	9/25	"	238	5	✓			"		✓	✓	✓	✓	N/O K's	✓	✓	✓	✓	✓	✓	✓
6	9/25	"	1396	5	✓			"		✓	✓	✓	✓	22 66	✓	✓	✓	✓	✓	✓	✓
7	10/2	"	2257	5	✓			"		✓	✓	✓	✓	22 76	✓	✓	✓	✓	✓	✓	✓
8	10/2	"	183	5	✓			"		✓	✓	✓	✓	22 67	✓	✓	✓	✓	✓	✓	✓
9	10/2	"	178	5	✓			"		✓	✓	✓	✓	22 66	✓	✓	✓	✓	✓	✓	✓
10	10/2	"	238	5	✓			"		✓	✓	✓	✓	22 76	✓	✓	✓	✓	✓	✓	✓
11	10-18	"	476	5	✓			204712		✓	✓	✓	✓	22 81	✓	✓	✓	✓	✓	✓	✓
12	10-23	"	1436	5	✓			207722		✓	✓	✓	✓	22 87	✓	✓	✓	✓	✓	✓	✓
13	10-23	"	2860	5	✓			"		✓	✓	✓	✓	22 81	✓	✓	✓	✓	✓	✓	✓
14	10-23	"	226	5	✓			"		✓	✓	✓	✓	22 76	✓	✓	✓	✓	✓	✓	✓
15	10/25	"	104	5	✓			"		✓	✓	✓	✓	22 87	✓	✓	✓	✓	✓	✓	✓
16	10/25	"	179	5	✓			"		✓	✓	✓	✓	22 88	✓	✓	✓	✓	✓	✓	✓
17	10/25	"	193	5	✓			"		✓	✓	✓	✓	22 90	✓	✓	✓	✓	✓	✓	✓

TI-NHTSA 003868

INSPECTION TEST SUMMARY
TEXAS INSTRUMENTS
 34 FOREST STREET, ATTLEBORO, MA 02703

PART NO.		REV.	
TIPS 22-1			
PART NAME			
Cruise Control Pressure Switch			
QAS NO.		REV.	SN
208			
CUSTOMER		TI ORDER NO./DATE CODE	
Ford			
CUSTOMER PART NO.		CUSTOMER P.O. NO.	
APPROVED BY			
Michael W. Huth			
DATE			
4/13/92			

LOT NO.	1992 DATE	SUB NO.	LOT SIZE	SAMPLE SIZE	DISP.		REL. NO.	INSP. NO.	ACQ.	Cal	Vol	Ter	Thr	Mot			Cal	Vol	Ter	Thr	Mot			Cal	Vol	Ter	Thr	Mot			Cal	Vol	Ter	Thr	Mot																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
					AC.	RE.																																9	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

TI-NHTSA 003968

SECTION TEST SUMMARY

TEXAS INSTRUMENTS
34 FOREST STREET, ATTLEBORO, MA 01793

PART NO. REV.
77PS 2-1

PART NAME
Cruise Control Pressure Switch

QAS NO. REV. SN TI ORDER NO./DATE CODE
208

CUSTOMER CUSTOMER P.O. NO.
Ford

CUSTOMER PART NO.

APPROVED BY DATE
Michael V. Muthie **4/15/92**

LOT NO.	1992 DATE	SUB NO.	LOT SIZE	SAMPLE SIZE	COMP.		REL. NO.	INSP. NO.	AQL	INSPECTION METHOD				CHARACTERISTIC												
					AC.	RE.				Call	Vol	Temp	Dist	9	4	5	4	4	4	4	4	4				
1	4/10/92	12-1	11	5	✓			407213		✓	✓	✓	✓	23	81	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	"	"	703	5	✓			"		✓	✓	✓	✓	23	03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	4/10/92	"	406	5	✓			"		✓	✓	✓	✓	23	03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	4/10/92	"	4	5	✓			"		✓	✓	✓	✓	23	01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	4/10/92	"	3150	5	✓			"		✓	✓	✓	✓	23	09	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	4/10/92	"	311	5	✓			"		✓	✓	✓	✓	23	09	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	4/10/92	"	105.5	5	✓			"		✓	✓	✓	✓	23	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	4/10/92	"	2527	5	✓			"		✓	✓	✓	✓	23	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	4/10/92	"	88	5	✓			"		✓	✓	✓	✓	23	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	4/10/92	"	66	5	✓			"		✓	✓	✓	✓	23	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	4/10/92	"	1600	5	✓			"		✓	✓	✓	✓	23	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	4/10/92	"	1904	5	✓			"		✓	✓	✓	✓	23	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	4/10/92	"	59.5	5	✓			"		✓	✓	✓	✓	23	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	4/10/92	"	119	5	✓			"		✓	✓	✓	✓	23	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	4/10/92	"	1104	5	✓			"		✓	✓	✓	✓	23	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	4/10/92	"	41	5	✓			"		✓	✓	✓	✓	23	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	4/10/92	"	45	5	✓			"		✓	✓	✓	✓	23	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

FORM 2242H

TI-NHT8A 003968

SECTION TEST SUMMARY TEXAS INSTRUMENTS 34 FOREST STREET, ATTLEBORO, MA 02703

ART NO. 77PS *82-1* REV.
ART NAME
Cruise Control Pressure Switch
IAS NO. 208 REV. 2R TI ORDER NO./DATE CODE
CUSTOMER Ford CUSTOMER P.O. NO.
CUSTOMER PART NO.

APPROVED BY *Michael K. Walters* DATE *4/10/92*

DATE	DISC LOT	9 SAMPLE SER	DISP. AC. REL.	REL. NO.	INSP. NO.	INSPECTION METHOD		FINAL		INSPECTION		LOT		ADDITION		INSPECTION	
						CHARACTERISTICS		A.P.T.	Connector	Co/NoGo	Visual						
						Calibration						Calibration					
						Voltage Drop						Voltage Drop					
						Terminal Location						Impulse Test					
						Threads						Current Leakage					
						Workmanship/Coding						Proof Test					
												Burst Test					
												Terminal Strength					
												Dimensional					
11/11	275	9	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11/11	276		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11/17	276A		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11/19	177					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11/19	286		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11/19	289		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12-07	307		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12-08	310		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	318		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	319		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	323		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	320		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	321		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	322		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	324		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	325		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	326		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12/11	336		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

FORM 23425

TI-NHTSA 003970

SECTION TEST SUMMARY
TEXAS INSTRUMENTS
 34 FOREST STREET, ATTLEBORO, MA 01703

PART NO. REV. 77PS 12-1

PART NAME Cruise Control Pressure Switch

QAS NO. REV. SA 228 TI ORDER NO./DATE CODE

CUSTOMER Ford CUSTOMER P.O. NO.

CUSTOMER PART NO.

APPROVED BY *Michael W. Hutter* DATE 4/15/92

LOT NO.	1992 DATE	SUB NO.	LOT SIZE	SAMPLE SIZE	DISP.		REL. NO.	INSP. NO.	AQL	CHARACTERISTICS				LOT									
					AC.	RE.				Cal	Vol	To	Th	Wo	Ca	Vo	Im	Ch	Fr	Bo	To	Di	
1	11/24	12-1	1703	5	✓			207723		✓	✓	✓	✓	23 25	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	"	"	3652	5	✓			"		✓	✓	✓	✓	23 24	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	"	"	1945	5	✓			"		✓	✓	✓	✓	23 17	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	"	"	48	5	✓			"		✓	✓	✓	✓	23 15	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	11-25	12-1	1131	5	✓			14700		✓	✓	✓	✓	23 25	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	11-25	12-1	297	2	✓			"		✓	✓	✓	✓	23 24	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	12/6/92	12-1	21	5	✓			207723		✓	✓	✓	✓	23 25	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	12/7/92	12-1	455	5	✓			"		✓	✓	✓	✓	23 35	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	12/7/92	12-1	238	5	✓			"		✓	✓	✓	✓	23 32	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	12/15/92	12-1	1190	5	✓			"		✓	✓	✓	✓	23 32	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	12/15	12-1	885	5	✓					✓	✓	✓	✓	23 49	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	12/15	12-1	1692	5	✓					✓	✓	✓	✓	23 44	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	12/15	12-1	35	5	✓			"		✓	✓	✓	✓	23 44	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	12-17	12-1	13	5	✓			"		✓	✓	✓	✓	23 44	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	12-17	12-1	225	5	✓			"		✓	✓	✓	✓	23 49	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	12/19		541	5	✓			207723		✓	✓	✓	✓	23 49	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	12/19		1862	5	✓			"		✓	✓	✓	✓	23 51	✓	✓	✓	✓	✓	✓	✓	✓	✓

FORM 2242B

TI-NHT8A 003971

SECTION TEST SUMMARY									
TEXAS INSTRUMENTS									
34 FOREST STREET, ATTLEBORO, MA 02703									
PART NO.		REV.							
7775		L2-1							
PART NAME									
Cruise Control Pressure Switch									
QAS NO.		REV.		SN		TI ORDER NO./DATE CODE			
208									
CUSTOMER				CUSTOMER P.O. NO.					
Ford									
CUSTOMER PART NO.									
Various									
APPROVED BY						DATE			
Michael W. Mott						4/15/92			
LOT NO.	DATE	SUB NO.	LOT SIZE	SAMPLE SIZE	DISP. AC.	REL. NO.	REP. NO.		
1	12/19	L2-1	21	5	✓			✓	✓
2	12/19	L2-1	22	5	✓			✓	✓
3	12/19	L2-1	1921	5	✓			✓	✓
4	12/19	L2-1	1347	5	✓			✓	✓
5	12/22	L2-1	1	1	✓			✓	✓
6	12/22	L2-1	5	5	✓			✓	✓
7	12/22	L2-1	1663	5	✓			✓	✓
8	12/22	L2-1	8125	5	✓			✓	✓
9	12/22	L2-1	966	5	✓			✓	✓
10									
11									
12									
13									
14									
15									
16									
17									

INSPECTION METHOD		FINAL		INSPECTION		LOT		ADDT		INSPECTION	
		A.P.T.	Connector	Go/NoGo	Case	Visual					
CHARACTERISTIC		Calibration	Voltage Drop	Terminal Location	Threads	Workmanship/Coding					
		Calibration	Voltage Drop	Impulse Test	Current Leakage	Proof Test	Burst Test	Terminal Strength	Dimensional		
AOA	002	51	51	51							
9	4	5	4	4	4	4	4	4	4		
✓	✓	✓	✓	✓	23	46	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	23	25	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	23	52	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	23	52	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	23	49	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	23	51	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	23	52	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	23	52	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	23	53	✓	✓	✓	✓	✓

TI-NHTSA 003972

INSPECTION TEST SUMMARY										INSPECTION METHOD		FINAL		INSPECTION		LOT		AUDIT		INSPECTION	
TEXAS INSTRUMENTS 34 FOREST STREET, ATTLEBORO, MA 02703										CHARACTERISTIC		A.P.T. Connector		Co/BoCo Cables Visual							
PART NO. REV. 77PS X2-1										Calibration		Threads									
PART NAME Cruise Control Pressure Switch										Voltage Drop		Workmanship/Coding									
QAS NO. REV. SN TI ORDER NO./DATE CODE										Terminal Location											
CUSTOMER Ford																					
CUSTOMER PART NO. Various																					
APPROVED BY Michael K. Mather DATE 4/15/92																					
LOT NO.	DATE	SUB NO.	LOT SIZE	SAMPLE SIZE	DISP. AC	REL. NO.	REF. NO.	REP. NO.	QOL	QOX	3/	5/	5/	3	4	5	4	4	4	4	4
1	4/2/92		337	9	✓			Run in		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2																					
3																					
4																					
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TT-NHTSA 003973