

57PS Sensor → 77PS Base

12/2/91

Cycles ↓	1	2	3	4	5	6	7	8	9	10								
50K	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.								
100K	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓								
150K																		
200K																		
250K																		
300K																		
350K																		
400K																		
450K																		
500K																		
550K											O.K.							
600K	↓	↓	↓	↓	↓	↓	↓	↓	↓									
650K																		
700K																		
*750K										O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	
800K										↓	↓	↓	↓	↓	↓	↓	↓	↓
850K																		
900K																		
950K																		
1000K																		
1050K																		
1100K																		
1150K																		
1200K																		
1250K	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.	O.K.										
1300K	↓	↓	↓	↓	↓	↓	↓	↓	↓									
1350K																		
1400K																		
1450K																		
1500K																		
1550K																		
1600K																		

O.K.

Faded NC
BANDS
SPRING

TI-NHTSA 003974

NR ©
1750/100

O.K. ~~O.K.~~
NR SK

$$\begin{array}{r} \#1 - 2.1 \\ \underline{850} \\ 2.950 \text{ KK} \\ - 200 \text{ ??? } \checkmark \text{ cycle} \\ \hline 2.750 \end{array}$$

$$\begin{array}{r} \#5 2.1 \\ \underline{900} \\ 3.000 \text{ KK} \end{array}$$

$$\begin{array}{r} \#3 2.1 \\ \underline{550} \\ 2.650 \text{ KK} \end{array}$$

$$\begin{array}{r} \#10 2.1 \\ \underline{500} \\ 2.600 \text{ KK} \end{array}$$

10-12-91 AM
left
2.6.8

PRESSURE SWITCH DATA

Form 21605

TEST NO.

DEVICE 5705 Sensor #77 Case	DATE REQUESTED	REQUESTED BY	REQUESTED COMPL. DATE
PERFORMED BY	DATE STARTED	DATE COMPLETED	APPROVED BY

PROJECT TITLE:

CUSTOMER:

PURPOSE OF TEST:

PROCEDURE: Cycle to 50K - Check Continuity & Start test again

Run test to 50K cycles, check continuity & continuity to air. If there is a failure take that device off & continue to run with the other devices. Mark the device for the failures on this sheet.

D. Mayhew

Continuity Meter is where Johnson Gage is!

	50K	100K	150K	200K	250K	300K	350K	400K	450K
	OK	OK	OK	OK	OK	OK	OK	OK	OK
149 Pin	500K	550K	600K	650K	650K	700K	750K	800K	850K
	OK	OK	1	OK	OK	OK			

- SPECIAL -

+ 750K

Mfg. ENG.

SAMPLES

THESE ARE TO BE
RUN ON POWER STEERING
IMPULSE TESTER ONLY

1 750
250

TI-NHTSA 003978

57PS SENSOR — 77PS BASE

13-3-91

	CHECK Continuity EVERY 50K cycles:									
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
50K	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
100K	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
150K	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
200K	✓	✓	✓	N/C	✓	✓	✓	✓	✓	✓
250K	✓	✓	✓		✓	✓	✓	✓	✓	✓
300K	✓	✓	✓		✓	✓	✓	✓	✓	✓
350K	✓	✓	✓		✓	✓	✓	✓	✓	✓
400K	✓	✓	✓		✓	✓	✓	✓	✓	✓
450K	✓	✓	✓		✓	✓	✓	✓	✓	✓
500K	✓	✓	✓		✓	✓	✓	✓	✓	✓
550K	✓	✓	✓		✓	✓	✓	✓	✓	✓
600K	✓	✓	✓		✓	✓	✓	✓	N/C	✓
650K	✓	✓	✓		✓	✓	✓	✓		✓
700K	✓	✓	✓		✓	✓	✓	✓		✓
750K	✓	✓	✓		✓	✓	✓	✓		✓
800K	✓	✓	✓		✓	✓	✓	✓		✓
850K	✓	✓	✓		✓	✓	✓	✓		✓
900K	✓	✓	✓		✓	✓	✓	✓		✓
950K	✓	✓	✓		✓	✓	✓	✓		✓
1K	✓	✓	✓		✓	✓	✓	✓		✓
1100K	✓	✓	✓		✓	✓	✓	✓		✓
1180K	✓	✓	✓		✓	✓	N/C	✓		✓
150	✓	✓	✓		✓	✓		✓		✓
200	✓	✓	✓		✓	✓		✓		✓
250	✓	✓	✓		✓	✓		✓		✓
300	✓	✓	✓		✓	✓		✓		✓
350	✓	✓	✓		✓	✓		✓		✓

accm. ding. prints

Burst 7K for
Rtd. 4/T & P/C

Proof for Rtd. P/C

P/C = 3K

4/T = 4K

Trace 12-4-91

UPS

Delivered to L.H.

on 11-20-91

signed for by

P. Orrington

214070

Enclosed QA
manual with
Pitts Pkg.

12-4-91

Jim,

Please review &
complete forms -
also for Pitts,
we'll need an
FMEA.

Sample pcs. for both
Pitts + Dana? They
won't match
the FAI

Ernie

cc: ERIK R.

TEXAS INSTRUMENTS



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

December 04, 1991

Attn: Mr. Mark Scheller

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

Ref: My December 04, 1991 Telephone Call

Dear Mark,

Enclosed, please find our subsequent initial sample warrant for NQSC deactivation switch, Ford part number F2VC-9F924-AB. The warrant includes reference to the alert no. A10166193 providing conditional approval of switches utilizing manually crimped parts.

A copy of the referenced alert is also enclosed for your information.

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
Steve Majors, TI Farmington Hills, Michigan

encl: Alert no. A10166193
Initial Sample Warrant

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 _____ Date _____
 Engineering Change Authorization Bruce Pease Date _____
 Shown on Drawing No. F2VC-9F924-AB Part Weight .062 kg

Reason for Initial Sample:

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

SUPPLIER INFORMATION (Manufacturing Location)

Supplier Name Texas Instruments Inc. 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 Mandershot Buyer Code 165
 Purchase Order Number _____ Sample Acceptance Level _____
 Application Next Generation Speed Control

RESULTS

The results for dimensional measurements , material tests , and functional (EE) tests meet all drawing and specifier requirements Yes No

Submission Checklist

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> Checked Print | <input checked="" type="checkbox"/> Material Test Results | <input type="checkbox"/> Control Plan |
| <input type="checkbox"/> Auxiliary Drawings/Sketches | <input checked="" type="checkbox"/> Certifications | <input type="checkbox"/> Process Capability Results |
| <input checked="" type="checkbox"/> Correct Number of Samples | <input checked="" type="checkbox"/> Functional (EE) Test Results | <input type="checkbox"/> Process Flow Diagram |
| <input checked="" type="checkbox"/> Dimensional Results | <input type="checkbox"/> Product Engineering Approval | <input type="checkbox"/> Gage (Measurement) Studies |

Supporting data for all requirements are available upon request.

COMMENTS:

Conditional approval utilizing manually crimped parts as detailed in
AISET No. AI0166193 (attachment) Initial IOP Submitted 9/26/01

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 tooling with no operations other than the regular production process.

Authorized Signature *Jim Watt* Date 12/4/91
 Print Name Jim Watt Title QA Engineer Phone No. 508-699-1719

APPROVAL (when required by customer procedure) Approved Rejected

Signature _____ Date _____ **TI-NHTSA 003984**
 Quality Score **292c**

THE CLERK
 CHARLES BUSH
 FR: D SINK
 SJ: JGN PERSOM ALERT

ALERT DETAIL

PRINT DATE/TIME: 91/10/11 09:29
 PAGE: 1

ALERT NUMBER
 A10144192

ORIGIN ACTIVITY: NC00 CHASSIS PED (LCCG)
 ORIGINATOR: PEASE, B. F.
 CPAC: 040605

TYPE: (U) USE PPH
 DATE: 91/10/02
 PHONE: 32-37955
 NOTICE NO:

STATUS: A
 LOCATION: RM 3001, BLDG95, D
 RESOLVERS NOTICE:

ALERT DESC: PERMIT TEXAS INSTRUMENTS TO SKIP SPEED CONTROL REDUNDANT
 DEACTIVATION SWITCH, F2VC-91924-AB, WITH EXCEPTION TO THE
 PRODUCTS AFFECTED: INTENDED MANUFACTURING/ASSEMBLY PROCESS CONSISTING OF
 1992 LINCOLN TOWN CAR, CROWN VICTORIA, GRAND
 MARQUIS WITH NEW GENERATION SPEED CONTROL.

MODEL CODES: CVFA CVFM CVVB MODEL YEAR: 92
 PARTS AFFECTED: RA17

ENG CONCERN CTRL: INVALID;
 EFFECTIVE IN: OUT;
 EMISSION CODE: 000 DISP: U
 EST INCRM LBB COST: 0.00
 EST INCRM FAC COST: 0 UT EFFECT: 0.0000
 TIME: 900
 EST INCRM TOOL COST: 0
 EST INCRM FAC COST: 0
 APPEARANCE:

***** AFFECTED PARTS *****

PF PART NO:	PF PART DESC:	REL ING: N
PAC: 040605	INTER:	
CT:	SUPPLY/LOCAL:	FUNC REQ:
	SUPPLIER:	

***** FURTHER DESCRIPTION/ALERT RESOLUTION/REASON FOR REJECTION ETC. *****

SERID: 8772409 ACTIVITY: NC00 ENTRY DATE: 91/10/02
 ALERT DESC: SIBO A MANUALLY LOADING SENSOR CRIMPING MACHINE VERSUS THE
 AUTOMATIC IN LINE LOADED CRIMPER. THE AUTOMATIC CRIMPER WAS
 DETERMINED TO HAVE A YET TO BE DEFINED DEFICIENCY THAT
 RESULTS IN PART FAILURE TO MEET THE REQUIRED NUMBER OF CYCLE
 (THE IMPULSE TEST. THE SUPPLIER IS GIVEN A 90 DAY PERIOD
 TO RESOLVE THE ISSUE. THE MANUALLY CRIMPED PARTS PASS THE
 TEST. THIS DEVIATION PERMITS INCORPORATION OF THE -AB
 SWEL SWITCH AND DELETION OF THE INTERIM -06 SWITCH FOR A
 COST REDUCTION OF 8.92. THE -AB SWITCH IS PIA TO END ITEM

SERID: 8772409 ACTIVITY: NC00 ENTRY DATE: 91/10/02
 ALERT DESC: PORTIONING VALVES F2AC-28091-BA, F2VC-28091-CC, AND
 ACTION BLOCK F2AC-2C320-CB.

SERID: LA20686 ACTIVITY: NC00 ENTRY DATE: 91/10/04
 ALERT DESC: SUPVR. APPROVAL REQ'D. IF FVRES IN AFFECTED. LAZ

SERID: BJRS368 ACTIVITY: NC00 ENTRY DATE: 91/10/04

-MORE-

TL-NHTSA 003985

TEXAS INSTRUMENTS



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

December 04, 1991

Attn: Mr. Mark Scholler

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

Ref: My December 04, 1991 Telephone Call

Dear Mark,

Enclosed, please find our subsequent initial sample warrant for NOSC deactivation switch, Ford part number F2VC-9F924-AB. The warrant includes reference to the alert no. A10166193 providing conditional approval of switches utilizing manually crimped parts.

A copy of the referenced alert is also enclosed for your information.

Please let me know if you have any questions or if I may 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
Andy McGuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

enc: Alert no. A10166193
Initial Sample Warrant

TI-NHTSA 003986

IN THE OFFICE
 THE GENERAL
 COUNSEL
 FR: J. SINK
 SJ: SIGN PERSONAL ALERT

ALERT DETAIL

PRINT DATE/TIME: 01/10/11 09:39
PAGE: 1

ALERT NUMBER
A10166193

ORIGIN ACTIVITY: 8000 CHASSIS PED (LNCR)
 ORIGINATOR: PEASE, B. F.
 CPSC: 000005

TYPE: (U) USE PPM
 DATE: 01/10/02
 PHONE: 32-37955
 NOTICE NO:

STATUS: A
 LOCATION: RM 3001, BLDG09, D
 RESOLVING NOTICE:

ALERT DESC: PERMIT TEXAS INSTRUMENTS TO REIP SPEED CONTROL REDUNDANT
 DEACTIVATION SWITCH, F2VC-9F024-AN, WITH EXCEPTION TO THE
 PRODUCTS AFFECTED: INTERCON MANUFACTURING/ASSEMBLY PROCESS CONSISTING OF
 1992 LINCOLN TOWN CAR, CROWN VICTORIA, BRAND
 HANOVIS WITH NEW GENERATION SPEED CONTROL.
 MODEL CODES: CVFA CVFM CVVR MODEL YEAR: 92
 PLANTS AFFECTED: HAITI
 MFG CONCERN CTRL:

EST INCRM VAR COST: -0.92
 EST INCRM VND COST:
 UNIT MEASURE:
 SUPP SOCS:

TIME: PPM
 EST INCRM TOOL COST: 0
 EST INCRM FAC COST: 0
 APPEARANCE:

INVALID:
 DMT:
 DISP: U
 EST INCRM LAR COST: 0.00
 MT EFFECT: 0.0000

***** AFFECTED PARTS *****

APP PART NO:	800605	APP PART DESC:	REL IND: N
CPSC:		NOTICE:	
ACT:	INTER:	SUPPLY/LOCAL:	AVAIL:
		SUPPLIER:	FUNC RECD:

***** FURTHER DESCRIPTION/ALERT RESOLUTION/REASON FOR REJECTION ETC. *****

USERID: 0FP2409 ACTIVITY: NC00 ENTRY DATE: 01/10/02
 ALERT DESC:
 USING A MANUALLY LOADING SENSO CRIMPING MACHINE VERSUS THE
 AUTOMATIC IN LINE LOADED CRIMPER. THE AUTOMATIC CRIMPER HAS
 BEEN DETERMINED TO HAVE A VET TO BE DEFINED DEFICIENCY THAT
 RESULTS IN PART FAILURE TO MEET THE REQUIRED NUMBER OF CYCLE
 IN THE IMPULSE TEST. THE SUPPLIER IS GIVEN A 90 DAY PERIOD
 TO RESOLVE THE ISSUE. THE MANUALLY CRIMPED PARTS PASS THE
 EB TEST. THIS DEVIATION PERMITS INCORPORATION OF THE -40
 LEVEL SWITCH AND DELETION OF THE INTERIM -00 SWITCH FOR A
 COST REDUCTION OF 0.92. THE -AN SWITCH IS PIA TO END ITEM

USERID: 0FP2409 ACTIVITY: NC00 ENTRY DATE: 01/10/03
 ALERT DESC:
 PROPORTIONING VALVES F2AC-280V1-BA, F2VC-280V1-CC, AND
 JUNCTION BLOCK F2AC-2C320-CU.

USERID: LAZ0006 ACTIVITY: NC00 ENTRY DATE: 01/10/04
 ALERT DESC:
 OK. SUPPL. APPROVAL REQ'D. IF FNVS IS AFFECTED. LAZ

USERID: DJMS360 ACTIVITY: NC00 ENTRY DATE: 01/10/04
 ALERT DESC:

-MORE-

TI-NHTSA 003987



INITIAL SAMPLE WARRANT

no. 112384

PART INFORMATION

Part Name NEXT GENERATION SPEED CONTROL Part Number F27C-97924-AB

Control Item Yes No Engineering Change Level _____ Date _____

Engineering Change Authorization BRUCE PARRIS Date _____

Shown on Drawing No. F27C-97924-AB Part Weight .062 kg

Reason for Initial Sample:

- Initial Submission
- Engineering Change(s)
- Tooling Transfer
- Other - Please Specify _____
- Change in Optional Construction or Material
- Additional, Replacement, or Refurbished Tooling
- Correction of Discrepancy (Discrepancy No. _____)
- Process Change
- Change in Subcontractor or Source
- Parts Produced at Additional Location

SUPPLIER INFORMATION (Manufacturing Location)

Supplier Name TEXAS Instruments Inc. Street Address 34 Forest Street

City Attleboro State MA Postal Code 01703 Country USA

Supplier Mfg. Location Code - DUNS 1097K Customer Assigned Ford Motor Co. XED

CUSTOMER INFORMATION

Customer Name Ford Motor Co. XED Buyer Fred Heiderich Buyer Code 169

Purchase Order Number _____ Sample Acceptance Level _____

Application Next Generation Speed Control

RESULTS

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

Submission Checklist

- Checked Print
- Auxiliary Drawings/Calculations
- Correct Number of Samples
- Dimensional Results
- Material Test Results
- Certifications
- Functional (FE) Test Results
- Product Engineering Approval
- Control Plan
- Process Capability Results
- Process Flow Diagram
- Gage (Measurement) Studies

Supporting data for all requirements are available upon request.

COMMENTS:

Conditional approval utilizing manually crimped parts as detailed in
STATE NO. A1019193 (attached) Serial XED Submitted 9/26/91

DECLARATION

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

Authorized Signatures *Jim Watt* Date 12/4/91

Print Name Jim Watt Title QA Engineer Phone No. 508-699-1719

APPROVAL (when required by customer procedure) Approved Rejected

Signature _____ Date _____

TI-NHTSA 003869

-HSC #= 112259 FD-248W TO-GANT SENT-02/26/92 03:08 PM
 26-079 ST-C DIV-0050 CC-00101 BT-248W LT-02/26/92 03:08 PM

FEBRUARY 26, 1992

TO: NOSTY STRUBLE RSGG CC: TOM CHAMBERLAIN TC
 MIKE DONATIA HD3 JOHN HOUTENSIS MDS
 CHARLIE DOUGLAS CRP1 STEVE NELSON SHVP
 DICK GARIBDY HPFC ANDY MCGUIRK PCQA
 PAUL HUTCH PSM1 ED O'NEILL ETON
 JOE LASARE JHLB NORM FRENCH WMLA
 STEVE OFFILER SSO1 GARY SWIDER CPFC
 MATT SELLERS PCME MARTHA SULLIVAN CPFC
 BILL SHEET PCME RAY TOORANSEN PCME
 JIM WATT PCQA BILL CONROON HPFC
 TERRY RODRIGUEZ HPFC STEVE MCCOY MDS
 KLAIRE ROSE GANT

FR: DAVE CRASH ZAMB

RE: FORD CRUISE CONTROL PRESSURE SWITCH START-UP MEETING

MEETING

THE NEXT MEETING IS SCHEDULED FOR:

DATE: 2/27/92 (THURSDAY)
 TIME: 10:00 - 11:30 AM
 PLACE: MARKETING CONFERENCE ROOM

CHARLIE WILL HOLD THE MEETING THURSDAY IN MY ABSENCE. I APOLOGIZE THAT THE LIST BELOW HAS NOT BEEN UPDATED TO INCLUDE ITEMS FROM OUR LAST MEETING.

TTFS

Report:

3612 CASE REB STUDY SELLERS 01/23 ORIG.
 02/07
 NOTIFY FORD OF CHANGE TO 10821 DOUGLAS on hold
 ELCO EXPLANATION OF 10821 COST HUTCH 01/23 ORIG.
 02/13 REV.

Production Issues:

PLAN FOR ADDRESSING FLAKE ISSUE SELLERS/ 02/13
 WATT
 PLAN FOR DETERMINING IF CALIBRATING AT SELLERS 02/05
 THE EXTREMES IS A Y.I.D. OR LIFE PROB.
 UPDATE PRODUCTION COMPONENT AND GEN. OFFILER 02/13
 DRAWINGS TO CORRECT DESIGN LEVEL

Sensor Assembly Machine:

PRIORITIZE REMAINING UPGRADE ITEMS SELLERS ONGOING

Base Assembly Machine:

UPDATE PROGRESS OF ULTRASONICALLY WELDED SPRING ARM/TERMINAL ASSEMBLY

SELLERS/ ONGOING
 OFFILER

Final Assembly Machine:

ISR:

- PROVIDE QUARTERLY REPORTING OF ABOVE
- CORRECT TERMINAL POSITION
- RE-RUN F/C SAMPLES SO TERM'L POS'N DATA CAN BE COLLECTED
- MEASURE SAMPLES
- SUBMIT DATA/PITTS PEGS

WATT start 01/31
 SELLERS 01/16 ORIG.
 02/13 REV.
 SELLERS 01/14 ORIG.
 02/13 REV.
 SELLERS/ 01/17 ORIG.
 ROSE 02/15 REV.
 WATT 01/23 ORIG.
 02/15 REV.

Diaphragm Life:

TARGET RATE FOR BUILDING P/C WITH FULL AMI CRIMP 02/24

- UPDATE TEAM ON IMPLEMENTING FULL AMI CRIMP AND TESTING OF MODIFIED DESIGNS

OFFILER/ ONGOING
 SELLERS

Ultra-low Differential Switch REV3

- ESTABLISH LIST OF ACTIONS REQ'D TO START-UP ULTRA LOW DIFF'L SWITCH
- FIND QUOTE FOR ULTRA-LOW DIFF'L SWITCH
- REPORT RESULTS TO FORD/TYVES

SELLERS 02/14
 SELLERS 02/17 changed
 OFFILER TSC

Miscellaneous:

- SEND LETTERS TO FORD/CH AND TIER 1'S/ 1A TURNED IN

WATT/ 1/30 ORIG.
 CRASH 2/14 REV.

Production Plan:

MAINTAIN RUNNING TOTAL OF L/T (L2-3) SWITCHES LEADING TO LOOK FOR AMBINATION
 Status Date Total Shipped
 Feb 06 17,860

STRUBLE ONGOING

UPDATE PRODUCTION PLANS

STRUBLE ONGOING

	F/C 7794L2-1	L/T 7794L2-3
NOV	6.4	13.6
DEC	35	9
JAN	73	7
FEB	76.4	13.4
MAR	47.1	12.6

REGARDS,
 DAVE CRASH \538-FORD

TI-NHTSA 003991

CONFIDENTIAL

02-Jun-84

CCPS BOMB 1982

CUSTOMER	DEVICE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
FORD	CCPS L2-3													
	NUD	9.0	7.9	13.0	9.7	10.4	6.3	6.3	7.4	7.4	7.4	9.0	8.0	102
LIGHT TRUCK	ASP	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	
VNSB	NSB	22	17	30	31	33	14	14	16	16	16	10	10	225
	NSE	30	21	23	14	14	16	16	16	10	10	10	10	221
FORD	CCPS L3-3													
	NUD	0.0	0.0	0.0	0.0	0.0	26.2	26.2	30.0	30.0	30.0	40.3	40.3	325
LIGHT TRUCK	ASP	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	2.26	
F-SERIES/ BRONCO	NSB	0	0	0	0	0	59	59	70	70	70	91	91	509
	NSE	0	0	0	59	59	70	70	70	91	91	91	91	691
FORD	CCPS L2-1													
PASS CAR	ASP	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	297
ENS3/FN10/ FN36	NSB	04	122	70	59	37	25	25	20	20	20	30	30	567
	NSE	70	59	17	25	25	20	20	20	30	30	30	30	421
FORD	CCPS L3-1													
PASS CAR	ASP	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	100
ENS3	NSB	0	0	0	31	44	30	30	36	36	36	36	36	315
	NSE	0	31	44	30	30	36	36	36	36	36	36	36	308
FORD	CCPS L5-2													
PASS CAR	ASP	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	12
IND	NSB	0	0	0	0	0	0	0	0	0	0	0	0	35
	NSE	0	0	0	0	0	0	0	0	0	0	0	0	46
<hr/>														
TOTAL	CCPS													
	NUD	47.9	63.1	49.6	49.3	45.0	56.5	50.5	60.2	60.2	60.2	79.2	79.2	729.0
FORD	NSB	106	139	101	111	104	120	134	100	100	100	101	101	1652
	NSE	101	111	104	120	134	156	156	156	101	101	101	101	1760

FN10 = Mark V41
 ENS3 = Crown Vic / Grand Marquis
 FN10 = Town Car
 VNSB = Econoline / Club Wagon



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 _____ Date _____

Engineering Change Authorization Bruce Pease Date _____

Shown on Drawing No. F2VC-9F924-AB Part Weight .062 kg

Reason for Initial Sample:

- Initial Submission
- Engineering Change(s)
- Tooling Transfer
- Other - Please Specify _____
- Change in Optional Construction or Material
- Additional Replacement, or Rebuilt Tooling
- Correction of Discrepancy (Reauthorization No. _____)
- Process Change
- Change in Subcontractor or Source
- Parts Produced at Additional Location

SUPPLIER INFORMATION (Manufacturing Location)

Supplier Name Texas Instruments Inc. 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. EKD

CUSTOMER INFORMATION

Customer Name Ford Motor Co. EKD Buyer Fred Handjarbot Buyer Code 163

Purchase Order Number _____ Sample Acceptance Level _____

Application Next Generation Speed Control

RESULTS

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

Submission Checklist

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

Supporting data for all requirements are available upon request.

COMMENTS:

Conditional approval utilizing manually crimped parts as detailed in
ALDPC NO. ALD160193 (attached) Initial ISW Submitted 9/16/91

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 tooling with no operations other than the regular production process.

Authorized Signature *Jim Watt* Date 12/4/91

Print Name Jim Watt Title QA Engineer Phone No. 308-699-1719

APPROVAL (when required by customer procedure) Approved Rejected

Signature _____ Date _____

Form 292c

TJ-NHTSA 003995

WITH SERIAL
 CONTROL NUMBER
 FR: 17 SHARK
 SN: SIGN PERSON FILES

ALERT DETAIL

PRINT DATE/TIME: 91/10/11 09:39
PAGE: 1

ALERT NUMBER: 1
A10146193

ORIGIN ACTIVITY: HCOB CASSIS PED (LNEG) TYPE: (U) USE PPM
 ORIGINATOR: PEASE, G. F. DATE: 91/10/02
 CPSC: 040003 PNUM: 32-37055
 NOTICE NO.:
 STATUS: A
 LOCATION: RM 3001, BLDG 03, D
 RESOLVING OFFICE:

ALERT DESC: PERMIT TEXAS INTRUMENTS TO SSIP SPEED CONTROL REDUNDANT
 DEACTIVATION SWITCH, F2VE-9924-AB, WITH EXCEPTION TO THE
 INTERED MANUFACTURING/ASSEMBLY PROCESS CONSISTING OF
 PRODUCTS AFFECTED: 1992 LINCOLN TOWN CAR, CROWN VICTORIA, BRAND
 MARONIS WITH NEW GENERATION SPEED CONTROL.
 MODEL CODES: CVFA CVFM EUVO MODEL YEAR: 92
 PLANTS AFFECTED: EMB CONCERN CNTRL:
 WFO CONCERN ESTBL: EFFECTIVE IN:
 PROGRAM: DISP: U
 QTY: MISSING CODE: 000
 EST INCRM VAR COST: 0.92 TIME: 900
 EST INCRM TOOL COST: 0
 EST INCRM PAC COST: 0
 UNIT MEASURE: APPEARANCE:
 SUPP DECS:

(INVALID)
 QNT: 1
 EST INCRM LBN COST: 0.00
 UT EFFECT: 0.0000

***** AFFECTED PARTS *****

AFF PART NO:	AFF PART DESC:	REL IND:
CPSC: 040605	INFR:	
ACT:	SUPPLY/LOCAL:	FUNC REAS:
	SUPPLIER:	

***** FURTHER DESCRIPTION/ALERT RESOLUTION/REASON FOR REJECTION ETC. *****

USERID: HPP2409 ACTIVITY: HCOB ENTRY DATE: 91/10/02
 ALERT DESC: BEING A MANUALLY LOADING SENSOR CRIMPING MACHINE VERSUS THE
 AUTOMATIC IN LINE LOADED CRIMPER. THE AUTOMATIC CRIMPER HAS
 BEEN DETERMINED TO HAVE A YET TO BE DEFINED DEFICIENCY THAT
 RESULTS IN PART FAILURE TO MEET THE REQUIRED NUMBER OF CYCLE
 IN THE IMPACT TEST. THE SUPPLIER IS GIVEN A 90 DAY PERIOD
 TO RESOLVE THE ISSUE. THE MANUALLY CRIMPED PARTS PASS THE
 IS TEST. THIS DEVIATION PERMITS INCORPORATION OF THE -AB
 LEVEL SWITCH AND DELETION OF THE INTERIN -BB SWITCH FOR A
 COST REDUCTION OF 0.92. THE -AB SWITCH IS P1A TO THE ITEM

USERID: HPP2409 ACTIVITY: HCOB ENTRY DATE: 91/10/03
 ALERT DESC: PROPORTIONING VALVES F2AC-20091-AA, F2VC-20091-CC, AND
 JUNCTION BLOCK F2AC-2C320-CC.

USERID: LA10600 ACTIVITY: HCOB ENTRY DATE: 91/10/04
 ALERT DESC: ON. SUPVR. APPROVAL REQ'D. IF PHYS IS AFFECTED. LAZ

USERID: BJMS360 ACTIVITY: HCOB ENTRY DATE: 91/10/04

-MORE-

71-NHTSA 003896

TEXAS
INSTRUMENTS



cc = Elainer.

December 05, 1991

Kelsey-Hayes Company
9475 Center Road
Fenton, Michigan 48430

Attn: Ms. Mary Cooney
Shipping Department

Subj: Part Number 12604301 Pressure Switch (E75C-3N924-AA)
Part Number 12590701 Pressure Switch (F1VQ-9F924-m.B)
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 Matt
PNA 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 McQuirk, MS 12-27
Steve Majors, TI Farmington Hills, Michigan

encl: UPS Shipping Document # 214070

195-01-13

SAMPLE ORDER

ORDER NO: CD91-53
REQUEST DATE: 12/05/91
CREDIT ACCOUNT: 5902
COST CENTER: 101
PRODUCT CODE: 465 22

CUSTOMER: FORD MOTOR COMPANY
CUSTOMER P.O. NO: N/A
TI PART NO: 17PSL3-1
CUSTOMER PART NO: N/A
QUANTITY: 13
PRICE: N/C

DELIVERY PROMISED: 12/11/91

SPECIAL INSTRUCTIONS: *5. lot etc*
stamped on report: Test number

BILL TO: SHIP TO:
FORD MOTOR COMPANY
15050 N. COMMERCE PARK DRIVE
SIMULTANEOUS ENGINEERING CTR ANNEX
DEARBORN, MI 48120
ATT'N: TED COMMONS

XX PRODUCTION SAMPLES
ENGINEERING DEVELOPMENT SAMPLES
CC: ENGINEERING: STEVE OFFILER
PRODUCTION CONTROL: VAL' LORIE EGGERT
SALES ENGINEER: STEVE MAJOR

TI-NHTSA 003998

FINAL INSPECTION 97782-1

DATE: 12-5-91
 DTSC LOT 12-1
 REEL #
 LOT #
 WASHER LOT 108 1-CUT

CUSTOMER P/N
 MAT. I.D.
 CUP LOT #6
 CONV. LOT 149
 QTY.

CAVC-95974 AB
 DISC LOT
 REEL #
 LOT #
 WASHER LOT

MAT. I.D.
 CUP LOT #
 CONV. LOT
 QTY.

TEST	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
ACTUATION	115	115	105	105	110	105	115	105	120	110	115	110	125	115	115	105	120	120
RELEASE	45	40	30	35	45	50	50	35	40	45	45	45	45	45	40	45	35	35
DIFF.	70	75	75	70	65	55	65	70	80	65	70	65	80	70	75	60	85	85
VOLT DROP	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK	—	—
CUR. LEAK	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK	—	—
PROOF	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK	—	—
PULSE	OK	OK	OK	OK	OK	—	—	—	—	OK	OK	OK	OK	OK	—	—	—	—
ACTUATION	110	110	110	110	105	—	—	—	—	100	100	100	105	100	—	—	—	—
RELEASE	40	45	45	30	40	—	—	—	—	35	45	40	45	45	—	—	—	—
VOLT DROP	✓	✓	✓	✓	✓	—	—	—	—	✓	✓	✓	✓	✓	—	—	—	—
CUR. LEAK	✓	✓	✓	✓	✓	—	—	—	—	✓	✓	✓	✓	✓	—	—	—	—
PROOF	✓	✓	✓	✓	✓	—	—	—	—	✓	✓	✓	✓	✓	—	—	—	—
CREP	✓	✓	✓	✓	✓	—	—	—	—	✓	✓	✓	✓	✓	—	—	—	—
WASH	OK	OK	—	—	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—
DISCONAL	—	—	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK
VIBRAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CREP	—	—	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK
ITERM. SYN	—	—	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK
ACTUATION	—	—	—	—	—	—	—	105	120	—	—	—	—	—	—	—	120	120
RELEASE	—	—	—	—	—	—	—	40	35	—	—	—	—	—	—	—	35	35
VOLT DROP	—	—	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK
CUR. LEAK	—	—	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK
PROOF	—	—	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK
CREP	—	—	—	—	—	—	—	OK	OK	—	—	—	—	—	—	—	OK	OK

FINISHED PRODUCTION ROUTING	
DEVICE NUMBER 77P5L3-1	
SPECIAL REQUIREMENT	TOTAL QUANTITY 9
MANU. ORDER NUMBER	NO SUBTOTALS
1. 13-2	
2.	
3.	
4.	
QUALITY CONTROL APPROVAL	
IN PROCESS	FINAL DEC 6 1996
Form 1000	
DATE 12/4/96	DEPARTMENT 294

FINISHED PRODUCTION ROUTING	
DEVICE NUMBER 77P5L3-1	
SPECIAL REQUIREMENT	TOTAL QUANTITY 9
MANU. ORDER NUMBER	NO SUBTOTALS
1. 13-1	
2.	
3.	
4.	
QUALITY CONTROL APPROVAL	
IN PROCESS	FINAL DEC 6 1996
Form 1000	
DATE 12/4/96	DEPARTMENT 294

FINAL INSPECTION 7798.2-1

DATE: 12-5-91
 DISC LOT 12-3
 REEL # 1
 LOT # 3
 WASHER LOT 115 1-CUT

CUSTOMER P/N *E205-9F924-AB*
 MAT. I.D. *74365-0049*
 CUP LOT #6
 CONV. LOT 149
 QTY. *2,770*

MAT. I.D. *74365-A-11-9*
 CUP LOT #6
 CONV. LOT 149
 QTY. *2,770*

TEST	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
ACTUATION	115	115	110	105	110	120	115	105	115	110	115	115	115	115	100	120	110	115
RELEASE	45	50	40	50	45	50	45	50	45	50	40	45	45	40	45	40	50	30
DIFF.	70	65	70	55	65	70	70	55	70	60	75	70	70	75	55	80	60	65
VOLT DROP	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---
CUR. LEAK	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---
PROOF	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---
IMPULSE	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---
ACTUATION	<i>100</i>	<i>110</i>	<i>95</i>	<i>105</i>	<i>100</i>	---	---	---	---	<i>100</i>	<i>100</i>	<i>100</i>	<i>105</i>	<i>105</i>	---	---	---	---
RELEASE	<i>50</i>	<i>50</i>	<i>45</i>	<i>45</i>	<i>50</i>	---	---	---	---	<i>45</i>	<i>40</i>	<i>45</i>	<i>45</i>	<i>40</i>	---	---	---	---
VOLT DROP	✓	✓	✓	✓	✓	---	---	---	---	✓	✓	✓	✓	✓	---	---	---	---
CUR. LEAK	✓	✓	✓	✓	✓	---	---	---	---	✓	✓	✓	✓	✓	---	---	---	---
PROOF	✓	✓	✓	✓	✓	---	---	---	---	✓	✓	✓	✓	✓	---	---	---	---
CREEP	✓	✓	✓	✓	✓	---	---	---	---	✓	✓	✓	✓	✓	---	---	---	---
BURST	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---
IDENTIFICAL	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
VISUAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SCREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
TERR. STM	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
ACTUATION	---	---	---	---	---	---	---	105	130	---	---	---	---	---	---	---	110	110
WELDING	---	---	---	---	---	---	---	50	40	---	---	---	---	---	---	---	50	30
VOLT DROP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
CUR. LEAK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
PROOF	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK

FINE PRODUCTION WHITE CANARY PINK
 Route to Finished Goods
 Route to Dept. Supervisor

DEVICE NUMBER
 77PSC-1


SPECIAL REQUIREMENT	TOTAL QUANTITY 9
---------------------	---------------------

MANU. ORDER NUMBER
 13-3

MO SUBTOTALS

1.
2.
3.
4.

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 10002

DATE 12/4/91 DEPARTMENT 294

FINISHED PRODUCTION ROUTING WHITE CANARY PINK
 Route to Finished Goods
 Route to Dept. Supervisor

DEVICE NUMBER
 77PSC-1


SPECIAL REQUIREMENT	TOTAL QUANTITY 9
---------------------	---------------------

MANU. ORDER NUMBER
 13-4

MO SUBTOTALS

1.
2.
3.
4.

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 10002

DATE 12/4/91 DEPARTMENT 294

-MSG M# 314470 FR=SBO1 TO=CPPC SENT=12/06/91 10:26 AM
R#540 ST=C DIV=0050 CC=00101 BY=SBO1 AT=12/06/91 10:26 AM

TO: Tom Burke MFPC Joe Schuck 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 Czarn

FR: Steve Offiler SBO1

SJ: Weekly Highlights

FORD MY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS

DIAPHRAGM LIFE:

The test of round diaphragms continues. Five of six controls (standard, square Kapton) have failed with a beta of 7.5 and theta of 1245, which is quite good. However, only two of the twenty test devices (round Kapton with various hexport steps) have failed, beginning at nearly 1700K. We are presently working on a new set of controls, which use square Kapton cut from the exact same material as the round parts. A "standard" control lot will again be included.

We have expanded the plans for the determination of the mechanism of teardrop formation. We are now looking at process and design contributors. Test lots are being built using all standard parts, as well as lots without gaskets, and lots with modified converters to produce a zero-height bump. These will be crimped to various stages of completion, including removal prior to air-blast, prior to final (stage II) crimp, and prior to stage I crimp. In order to examine the diaphragm in the pre-crimp condition (prior to stage I), we plan to have the model shop modify hexports to make them into 2-piece units which match a standard hexport when assembled but allow easy removal of the hex portion from the flange.

The test of possible asymmetry in the crimp procedure has been partially completed. We have observed no real correlation between the location of the teardrop and the orientation of the device relative to the nest. Based on this, we've decided to abort the rest of this test in order to place emphasis on the above test of teardrop mechanism.

57 TO 77 CONVERSION:

To date, using 77 switches calibrated to .089" and 57PSL8-1 sensors, pinned high, we have had one spring break (in the expected location, at the top of the rivet head) at 900K cycles. The remaining 9 have passed 1250K cycles, and the test continues.

We are formulating a game plan to begin a detailed test, based on tentatively positive results from the above. This will include a study at tolerance extremes, using high- and low-calibrated switches, pinned at each extreme of the pin window. The test will use the actual sensor assembly in question rather than the worst-case as above. Cycling will be done on the CCPS cycler rather than the production equipment, at the ES specified temperatures and

pressures.

Co-ordination with Marketing is planned, to ensure that our testing program is aimed at the high-volume 57PSL product(s), and to decide on the correct approach for customer approval and validation of the new product. At some point a decision will be reached on a TI part number designation for these; it is inappropriate to call them 57's, and it may be risky to call them 77's due to the price difference between these and cruise control 77's. It has been suggested to use the next available series number, probably 78PS.

DFMEA:

We plan to get work underway again on the Design FMEA. Given the number of parts and an estimate of the time required to complete each part based on recent hexport work, it looks like the completion date will be mid-February if all goes well.

Regards,
Steve O.

HIGHLIGHTS

Stephen B. Offler
Week Ending 91-12-06

*Not of
2/12/86*



FORD MY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS

DIAPHRAGM LIFE:

The test of round diaphragms continues. Five of six controls (standard, square Kapton) have failed with a beta of 7.5 and theta of 1245, which is quite good. However, only two of the twenty test devices (round Kapton with various hexport steps) have failed, beginning at nearly 1700K. We are presently working on a new set of controls, which use square Kapton cut from the exact same material as the round parts. A "standard" control lot will again be included.

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TI-NHTSA 004005

PRESSURE SWITCH DATA

Form 21605

TEST NO. 199-15-18

DEVICE CCPS	DATE REQUESTED 11/6/91	REQUESTED BY Steve Offiler	REQUESTED COMPL. DATE
PERFORMED BY Jeffrey D. Damico	DATE STARTED 12/6/91	DATE COMPLETED	APPROVED BY
PROJECT TITLE: Ford MY 92 Electronic Speed Control Deactivation PS			

CUSTOMER:

PURPOSE OF TEST: **To determine when and how the gasket begins to pack.**

PROCEDURE: **Build and cut open parts. Processes and components define below. Hand kit parts for AMT Co. of**

Build date 9/12/09

Device #	1st Comp	2nd Comp	Air Chl	Gasket	Condition	Displacement Condition
199-15-01	YES	YES	YES	YES	Flat	Typical 1/2" deep
-02	↓	↓	↓	↓	↓	
-03	↓	↓	↓	↓	↓	
199-15-04	YES	YES	NO	YES	Flat	Packer must
-05	↓	↓	↓	↓	↓	
-06	↓	↓	↓	↓	↓	
199-15-07	YES	YES	NO	NO	Normal	Large amount of gasket squeezed into the center
-08	↓	↓	↓	↓	↓	
-09	↓	↓	↓	↓	↓	
199-15-10	YES	NO	NO	YES	Normal	Packer must gasket requires to form
-11	↓	↓	↓	↓	↓	
-12	↓	↓	↓	↓	↓	
199-15-13	YES	NO	NO	NO	Normal	Large amount of gasket pushed into center
-14	↓	↓	↓	↓	↓	
-15	↓	↓	↓	↓	↓	
199-15-16	YES	NO	NO	YES	Flat	Packer must gasket requires to form
-17	↓	↓	↓	↓	↓	
-18	↓	↓	↓	↓	↓	

TI-NHTSA 004006

FINAL INSPECTION 77PCL2-1

DATE: 12-9-91
 DISC LOT 12-6
 REEL # 1
 LOT # 1
 WASHER LOT 115 1-CUT

CUSTOMER P/N F2K-9F924-AB
 MAT. I.D. 74869-*AB4-9*
 DISC LOT 12-6
 REEL # 1
 LOT # 1
 WASHER LOT 115 1-CUT
 QTY. 2000

MAT. I.D. 74869-*AB4-9*
 DISC LOT 12-6
 REEL # 1
 LOT # 1
 WASHER LOT 115 1-CUT
 QTY. 2000

TEST	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
ACTUATION	120	110	110	110	110	110	110	110	120	110	110	110	110	110	110	120	110	110
RELEASE	45	50	50	40	40	40	40	40	50	40	45	45	50	40	45	35	50	50
DIFF.	75	60	60	70	70	70	70	70	70	70	65	65	60	70	65	65	60	60
VOLT DROP	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---
CUR. LEAK	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---
PROOF	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---
IMPULSE	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---
ACTUATION	<i>105</i>	<i>90</i>	<i>105</i>	<i>100</i>	<i>100</i>	---	---	---	---	<i>110</i>	<i>105</i>	<i>105</i>	<i>100</i>	<i>105</i>	---	---	---	---
RELEASE	<i>50</i>	<i>50</i>	<i>55</i>	<i>50</i>	<i>50</i>	---	---	---	---	<i>45</i>	<i>50</i>	<i>45</i>	<i>50</i>	<i>45</i>	---	---	---	---
VOLT DROP	OK	OK	OK	OK	OK	OK	OK	---	---	OK	OK	OK	OK	OK	---	---	---	---
CUR. LEAK	OK	OK	OK	OK	OK	OK	OK	---	---	OK	OK	OK	OK	OK	---	---	---	---
PROOF	OK	OK	OK	OK	OK	OK	OK	---	---	OK	OK	OK	OK	OK	---	---	---	---
CREEP	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---
SUBST	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---
INSTONAL	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
VISUAL	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
TEMP. STB	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
ACTUATION	---	---	---	---	---	---	---	115	120	---	---	---	---	---	---	---	115	110
RELEASE	---	---	---	---	---	---	---	50	50	---	---	---	---	---	---	---	45	50
VOLT DROP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
CUR. LEAK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
PROOF	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK
CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK

FINISHED PRODUCTION ROUTING

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

DEVICE NUMBER

77PSL2-1

SPECIAL REQUIREMENT

TOTAL QUANTITY

9

MANU. ORDER NUMBER

MO SUBTOTALS

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

12-6

QUALITY CONTROL APPROVAL

IN PROCESS

IN PROCESS

FINAL
INSPECTION
AT
ACCEPT
DEC 9 1981

Form 18202

DATE 12-6-91 DEPARTMENT 294

FINISHED PRODUCTION ROUTING

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

DEVICE NUMBER

77PSL2-1

SPECIAL REQUIREMENT

TOTAL QUANTITY

9

MANU. ORDER NUMBER

MO SUBTOTALS

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

12-8

QUALITY CONTROL APPROVAL

IN PROCESS

IN PROCESS

FINAL
INSPECTION
AT
ACCEPT
DEC 9 1981

Form 18202

DATE 12-6-91 DEPARTMENT 294

FINAL INSPECTION 7 7912-1

DATE: 12-9-91
 DISC LOT 12-5
 VEL # 2
 LOT # 1
 WASHER LOT 115 L-CUT

CUSTOMER P/N F2K-9F924-AB
 MAT. I.D. 74869-0445
 CUP LOT #6
 CONV. LOT 145
 QTY. 2,000

MAT. I.D.
 CUP LOT #
 CONV. LOT
 QTY.

TEST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ACTUATION	113	110	113	110	110	120	115	105	110										
RELEASE	45	35	50	45	50	50	30	40	50										
DIFF.	70	75	65	65	60	70	85	85	60										
VOLT DROP	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
CUR. LEAK	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
PROOF	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---
IMPULSE	OK	OK	OK	OK	OK	---	---	---	---	OK	OK	OK	OK	OK	---	---	---	---	---
ACTUATION	105	100	105	105	105	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RELEASE	45	40	50	45	50	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---
BURST	OK	OK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---
DIMENSIONAL	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---	OK	OK
VISUAL	OK	OK	OK	OK	OK	OK	OK	OK	OK	---	---	---	---	---	---	---	---	---	---
CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---	OK	OK
TEMP. STR.	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---	OK	OK
ACTUATION	---	---	---	---	---	---	---	105	115	---	---	---	---	---	---	---	---	---	---
RELEASE	---	---	---	---	---	---	---	40	45	---	---	---	---	---	---	---	---	---	---
VOLT DROP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---	OK	OK
CUR. LEAK	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---	OK	OK
PROOF	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---	OK	OK
CREEP	---	---	---	---	---	---	---	OK	OK	---	---	---	---	---	---	---	---	OK	OK

FINISH PRODUCTION WHITE CANARY Route to Planned Works
LINE 2-5 Form to Dept. Supervisor

DEVICE NUMBER

77 PSL 2-1

SPECIAL REQUIREMENT

TOTAL QUANTITY

9

MANL ORDER NUMBER

MO SUBTOTALS

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

2-5

QUALITY CONTROL APPROVAL

IN PROCESS

IN PROCESS

FINAL

DEC 10 1991

Form 1000

DATE

12-6-91

DEPARTMENT

3941

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 1240430: Pressure Switch (E79C-3N824-AA)
Part Number 125070: Pressure Switch (E21C-4F824-AP)
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
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

CRIMP PRESSURE EXPERIMENT TEST 167-03-36 JAD 12/11/91

DEVICE #	CRIMP PRESSURE	BUILD DATE	CYC. TO FAILURE	CYC. TO SUSPEND
167-03-01	45 / 40	911011	450K	
167-03-02	45 / 40	911011	712K	
167-03-03	45 / 40	911011		872K
167-03-04	45 / 40	911011		872K
167-03-05	45 / 40	911011	470K	
167-03-06	45 / 40	911011	570K	
167-03-07	50 / 44	911011	547K	
167-03-08	50 / 44	911011	726K	
167-03-09	50 / 44	911011	561K	
167-03-10	50 / 44	911011	740K	
167-03-11	50 / 44	911011	726K	
167-03-12	50 / 44	911011	408K	
167-03-13	55 / 48	911011	585K	
167-03-14	55 / 48	911011	605K	
167-03-15	55 / 48	911011		872K
167-03-16	55 / 48	911011	363K	
167-03-17	55 / 48	911011		872K
167-03-18	55 / 48	911011	542K	
167-03-19	60 / 52	911011	398K	
167-03-20	60 / 52	911011		872K
167-03-21	60 / 52	911011	726K	
167-03-22	60 / 52	911011	377K	
167-03-23	60 / 52	911011	835K	
167-03-24	60 / 52	911011		872K
167-03-25	65 / 56	911011		872K
167-03-26	65 / 56	911011	490K	
167-03-27	65 / 56	911011	490K	
167-03-28	65 / 56	911011	542K	
167-03-29	65 / 56	911011	447K	
167-03-30	65 / 56	911011	835K	
167-03-31	70 / 60	911011	740K	
167-03-32	70 / 60	911011	857K	
167-03-33	70 / 60	911011	363K	
167-03-34	70 / 60	911011	542K	
167-03-35	70 / 60	911011	445K	
167-03-36	70 / 60	911011	585K	

TI-NHTSA 004013

FINAL INSPECTION 779L2-1

DATE: 12-11-81

CUSTOMER P/N: F2N0-9924-RR

DISC LOT 12-7
 REEL #1
 LOT #2
 WASHER LOT 110 1-CUT

WAT. I.D. 74968-804-9
 CUP LOT #2
 CONV. LOT 151
 STD. 2000

DISC LOT 12-4
 REEL #1
 LOT #4
 WASHER LOT 110 1-CUT

WAT. I.D. 74968-804-5
 CUP LOT #3
 CONV. LOT 151
 STD. 1720

TEST	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8		
ACTUATION	105	110	125	125	110	120	135	115	115	120	110	110	115	115	130	110	120	117	
RELEASE	40	50	45	50	45	40	45	45	45	45	45	50	45	40	45	35	35	45	
DIFF.	65	60	80	75	65	80	70	70	70	75	65	60	70	75	85	75	65	70	
VOLT DROP						✓	✓									✓	✓		
CUR. LEAK						✓	✓									✓	✓		
PROOF						✓	✓									✓	✓		
IMPULSE	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
ACTUATION	110	105	115	115	105					110	100	105	105	105					
RELEASE	40	50	45	50	45					45	45	45	45	45					
VOLT DROP	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
CUR. LEAK	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
PROOF	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
CREEP	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
BURST																			
DUSTING								✓	✓									✓	✓
VISUAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	OK/NO MSE
CREEP								✓	✓									✓	✓
TEMP. STR.								✓	✓									✓	✓
ACTUATION								115	115									115	110
RELEASE								40	45									35	45
VOLT DROP								✓	✓									✓	✓
CUR. LEAK								✓	✓									✓	✓
PROOF								✓	✓									✓	✓
CREEP								✓	✓									✓	✓

FINISHED PRODUCTION ROUTING

WHITE CANARY Route to Finished Goods
 PINK Route to Dept. Supervisor

DEVICE NUMBER
 77PSL2-1


SPECIAL REQUIREMENT	TOTAL QUANTITY
	9

MANU. ORDER NUMBER **12-9** NO SUBTOTALS

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

12-9

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 18282

DATE **12/10/91** DEPARTMENT **294**

FINISHED PRODUCTION ROUTING

WHITE CANARY Route to Finished Goods
 PINK Route to Dept. Supervisor

DEVICE NUMBER
 77PSL2-1


SPECIAL REQUIREMENT	TOTAL QUANTITY
	9

MANU. ORDER NUMBER **12-7** NO SUBTOTALS

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

12-7

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 18282

DATE **12/10/91** DEPARTMENT **294**

12-9-91
12-9-91
12-9-91
12-9-91
12-9-91
12-9-91
12-9-91
12-9-91
12-9-91

FINAL INSPECTION 77982-1

DATE: 12-11-1

CUSTOMER P/N F2V-9924-AB

DISC LOT 12-10
 REEL #1
 LOT #4
 WASHER LOT 110 1-CUT

MAT. I.D. 74866-AA-1
 CUP LOT #3
 CONV. LOT 151
 275,1470

DISC LOT 12-11
 REEL #1
 LOT #C
 WASHER LOT 110 1-CUT

MAT. I.D. 74866-AB-2
 CUP LOT #3
 CONV. LOT 151
 275,2000

TEST	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ACTUATION	120	120	110	115	110	120	120	115	115	110	110	110	110	110	110	115	110	115	115
RELEASE	50	50	47	50	50	50	50	50	50	50	45	51	45	50	50	50	50	50	50
DIFF.	70	70	63	65	60	70	70	65	65	60	65	60	65	60	60	65	60	65	65
VOLT DROP						✓	✓									✓	✓		
CUR. LEAK						✓	✓									✓	✓		
PROOF						✓	✓									✓	✓		
IMPULSE	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
ACTUATION	110	110	110	105	105					100	105	100	100	100					
RELEASE	45	40	40	45	46					40	40	45	35	40					
VOLT DROP	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
CUR. LEAK	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
PROOF	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
CREEP	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓					
BURST	✓	✓								✓	✓								
DIRECTIONAL								✓	✓										✓
VISUAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CREEP								✓	✓										✓
TERN. STR								✓	✓										✓
ACTUATION								115	115										120
RELEASE								40	30										45
VOLT DROP								✓	✓										✓
CUR. LEAK								✓	✓										✓
PROOF								✓	✓										✓
CREEP								✓	✓										✓

FINISHED PRODUCTION ROUTING

WHITE CANARY } Route to Finished Store
PLANT } Please to Dept. Supervisor

DEVICE NUMBER

77PSL2-1

SPECIAL REQUIREMENT

TOTAL QUANTITY

9

MANU. ORDER NUMBER

NO SUBTOTALS

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

12-11

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		NOTED BY ACCEPT DEC 11 1991

Form 10282

DATE 12/10/91

DEPARTMENT 294

FINISHED PRODUCTION ROUTING

WHITE CANARY } Route to Finished Store
PLANT } Please to Dept. Supervisor

DEVICE NUMBER

77PSL2-1

SPECIAL REQUIREMENT

TOTAL QUANTITY

7

MANU. ORDER NUMBER

NO SUBTOTALS

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

12-10

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		NOTED BY ACCEPT DEC 11 1991

Form 10282

DATE 12/10/91

DEPARTMENT 294

270
11-1
11-2
11-3
11-4
11-5
11-6
11-7
11-8
11-9
11-10
11-11
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12-31

TVL 11/12/93 AM

HIGHLIGHTS
Stephen B. Offler
Week Ending 91-12-13

Handwritten signature
9/12/93



FORD MY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS

VALIDATION: The two lots of PC revalidation parts (AMJ built and HL built) have completed the Fluid Resistance test, and are presently undergoing the Impulse test. This test will be completed by Tuesday morning, with final characterization to commence immediately, and final test report writeup to take place Wednesday in order to prepare the ISR package addendum by Friday. The plan is to report results from both lots, hopefully to gain approval from Ford for both processes.

DIAPHRAGM LIFE: The test of round diaphragms is nearing completion. Approx. nine survivors from the various test lots are presently at 2250K cycles, running in parallel with the above reval test. The control lot, with all standard components, is complete with Beta=5.3, Theta=1369, and Rel at 500K=99.52%. The lot with round Kapton and all other components standard has only 3 failures (beginning at 1933K) and no stat's calculated yet. The lot with round Kapton and .003" step in the hexport to control Kapton clamp has 5/6 dead, Beta=10.2, Theta=2090, and Rel at 500K=99.9999%. The other two experimental lots, with various size steps in the hexport, also do not have enough failures to allow stat's. These results certainly suggest that the round Kapton has much better life expectancy relative to square, but other significant problems exist, specifically device calibration drift and manufacturing concerns.
↳ TO KAPTON FROM THIS MATH LOT, NOT PLANNED

The test to determine the mechanism of teardrop formation is partially complete, and some initial conclusions can be made. Standard parts, parts without gaskets, and parts modified to produce zero-height converter buttons are being crimped to various stages of completion, in order to track the progress of teardrop formation. We've seen parts with the familiar teardrop after final crimp and air blast having a twin-apex teardrop (Mickey Mouse) pre-air blast, and a somewhat fuzzy suggestion of the Mickey shape pre-final crimp (post 45° crimp). The next significant milestone in this experiment is to check the condition of the diaphragm pre-45° crimp (post precrimp). The only way to do this is to use 2-piece hexports, which allow normal precrimp assembly action and also allow inspection of the diaphragm without needing to lube-cut the hexport. The model shop is presently working on these. The parts without gaskets are also very interesting. Pre-air blast (post final crimp) there is significant excess material which has been moved radially inward, although there is no suggestion of a teardrop shape. At the previous process step, pre-final crimp (post 45° crimp) the same sort of condition is apparent, but less material has been moved inward at this point. The 2-piece hexports will be used to complete this sequence as well. At this point, we are definitely seeing a progressive action taking place, which is tending to move material radially inward as the crimps are made. Without gaskets, much more material seems to be allowed to move.
↳ "RIGHT" HEXPORTS ?? VS. FUTURE VS. CLAMP FAILURE

57 TO 77 CONVERSION: Using 77PS switches calibrated to .089" and 57PSL8-1 sensors pinned high, we have seen 7/10 devices fail on the production cycler due to fractured springs. All are breaking in the expected location, at the top of the rivet head where the spring is effectively constrained and the bending stresses are concentrated per cantilever beam theory. Weibull analysis shows Beta=2.1 and Theta=3230 with Rel @ 225K=99.63% and Rel @ 1000K=91.83%.
NEED SCHEDULE FOR L2-2
#67"

Charlie Douglas hand-carried 6 samples of the 57PSL2-2 conversion to Tom Strauss at Ford Power Steering. These were well-received. Charlie discussed revalidation requirements, and also found out that they're planning to switch to the more robust UTA mating connector.

TEXAS
INSTRUMENTS



cc: Elaine R.

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 (E750-3N924-AA)
Part Number 12590701 Pressure Switch (E200-3F924-AB)
ISIR Submissions

Ref: 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 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

-MSG M#- 45296 FR=SBO1 TO=CPPC SENT=12/13/91 08:32 AM
R#-249 ST=C DIV=0050 CC=00101 BY=SBO1 AT=12/13/91 08:32 AM

TO: Tom Burke MFPC Steve Major WMLZ
Jaff 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

FORD MY'92 ELECTRONIC SPEED CONTROL DEACTIVATE PS

VALIDATION:

The two lots of PC revalidation parts (AMI built and RL built) have completed the Fluid Resistance test, and are presently undergoing the Impulse test. This test will be completed by Tuesday morning, with final characterization to commence immediately, and final test report writeup to take place Wednesday in order to prepare the ISR package addendum by Friday. The plan is to report results from both lots, hopefully to gain approval from Ford for both processes.

DIAPHRAGM LIFE:

The test of round diaphragms is nearing completion. Approx. nine survivors from the various test lots are presently at 2250K cycles, running in parallel with the above reval test. The control lot, with all standard components, is complete with Beta=5.3, Theta=1369, and Rel at 500K=99.52%. The lot with round Kapton and all other components standard has only 3 failures (beginning at 1933K) and no stat's calculated yet. The lot with round Kapton and .003" step in the hexport to control Kapton clamp has 5/6 dead, Beta=10.2, Theta=2090, and Rel at 500K=99.9999%. The other two experimental lots, with various size steps in the hexport, also do not have enough failures to allow stat's. These results certainly suggest that the round Kapton has much better life expectancy relative to square, but other significant problems exist, specifically device calibration drift and manufacturing concerns.

The test to determine the mechanism of teardrop formation is partially complete, and some initial conclusions can be made. Standard parts, parts without gaskets, and parts modified to produce zero-height converter buttons are being crimped to various stages of completion, in order to track the progress of teardrop formation. We've seen parts with the familiar teardrop after final crimp and air blast having a twin-apex teardrop (Mickey Mouse) pre-air blast, and a somewhat fuzzy suggestion of the Mickey shape pre-final crimp (post 45 degree crimp). The next significant milestone in this experiment is to check the condition of the diaphragm pre-45 degree crimp (post precrimp). The only way to do this is to use 2-piece hexports, which allow normal precrimp assembly action and also allow inspection of the diaphragm without needing to lathe-cut the hexport. The model shop is presently working on these. The parts without gaskets are also very interesting. Pre-air blast (post final crimp) there is significant excess material which has been moved radially inward, although there is no suggestion of a

TI-NHTSA 004020

teardrop shape. At the previous process step, pre-final crimp (post 45 degree crimp) the same sort of condition is apparent, but less material has been moved inward at this point. The 2-piece hexports will be used to complete this sequence as well. At this point, we are definitely seeing a progressive action taking place, which is tending to move material radially inward as the crimps are made. Without gaskets, much more material seems to be allowed to move.

57 TO 77 CONVERSION:

Using 77PS switches calibrated to .089" and 57PSL8-1 sensors pinned high, we have seen 7/10 devices fail on the production cyclar due to fractured springs. All are breaking in the expected location, at the top of the rivet head where the spring is effectively constrained and the bending stresses are concentrated per cantilever beam theory. Weibull analysis shows Beta=2.1 and Theta=3230 with Rel @ 225K=99.63% and Rel @ 1000K=91.83%.

Charlie Douglas hand-carried 6 samples of the 57PSL2-2 conversion to Tom Strauss at Ford Power Steering. These were well-received. Charlie discussed revalidation requirements, and also found out that they're planning to switch to the more robust UTA mating connector.

Regards,
Steve O.

FINAL INSPECTION 779L2-1

DATE: 12-13-91

CUSTOMER P/N F2V-9F924-AB

DISC LOT 12-14

NAT. I.I. 74865-483-1

DISC LOT 10-15

NAT. I.I. 74865-483-1

REEL # 1

CUP LOT # 6

REEL # 1

CUP LOT # 6

LOT # :

CONV. LOT 149

LOT # 4

CONV. LOT 149

WASHER LOT 110 1-OUT

QTY. 2000

WASHER LOT 110 1-OUT

QTY. 2000

TEST	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
ACTUATION	110	115	120	110	110	115	110	110	105	100	110	110	110	110	105	115	100	105
RELEASE	40	45	40	45	45	40	40	40	45	60	40	50	40	45	40	40	40	45
DIFF.	70	70	70	65	65	75	60	60	60	40	70	60	70	65	65	75	60	60
VOLT DROP																		
CUR. LEAK																		
PROOF																		
IMPULSE																		
ACTUATION	100	105	100	100	100					95	105	105	100	95				
RELEASE	40	45	45	45	45					45	45	50	40	45				
VOLT DROP	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				
CUR. LEAK	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				
PROOF	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				
CREEP	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				
BURST	✓	✓								✓	✓							
DISTONAL																		
VISUAL	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CREEP									✓	✓								✓
TEROL STR									✓	✓								✓
ACTUATION									110	105								100
RELEASE									40	40								40
VOLT DROP									✓	✓								✓
CUR. LEAK									✓	✓								✓
PROOF									✓	✓								✓
CREEP									✓	✓								✓

FINISHED PRODUCTION ROUTING

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

DEVICE NUMBER

77P5L7-1

SPECIAL REQUIREMENT	TOTAL QUANTITY
	9

MANU. ORDER NUMBER NO SUBTOTALS

- 1.
2. 12-15
- 3.
- 4.

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 10202

DATE 12/13/91 DEPARTMENT 294

FINISHED PRODUCTION ROUTING

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

DEVICE NUMBER


77P5L7-1

SPECIAL REQUIREMENT	TOTAL QUANTITY
	9

MANU. ORDER NUMBER NO SUBTOTALS

- 1.
2. 12-14
- 3.
- 4.

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 10202

DATE 12/13/91 DEPARTMENT 294

FINAL INSPECTION: 77PCL2-1

DATE: 12-13-1

CUSTOMER P/A: F24C-4924-AE

DISC LOT 12-12
 REEL #1
 LOT #3
 WASHER LOT 110 1-CUT

NAT. I.D. 74653-ABG-6
 CUP LOT #6
 CONN. LOT 150
 QTY. 2000

DISC LOT 12-12
 REEL #1
 LOT #2
 WASHER LOT 110 1-CUT

NAT. I.D. 74654-ABG-6
 CUP LOT #6
 CONN. LOT 150
 QTY. 2000

TEST	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
ACTUATION	115	110	120	120	120	120	120	115	115	115	115	110	110	115	110	115	117	115
RELEASE	45	45	50	45	45	45	45	45	45	35	40	40	35	40	40	40	45	40
DIFF.	70	65	70	75	75	90	75	70	70	80	75	70	75	75	70	75	70	70
VOLT DROP						✓	✓									✓	✓	
CUR. LEAK						✓	✓									✓	✓	
PROOF						✓	✓									✓	✓	
PULSE	OK	OK	OK	OK	OK					OK	OK	OK	OK	OK				
ACTUATION	105	100	105	105	105					95	100	100	100	105				
RELEASE	40	45	40	40	45					40	45	40	45	45				
VOLT DROP	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				
CUR. LEAK	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				
PROOF	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				
CREEP	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓				
BURST	✓	✓								✓	✓							
DISTORT								✓	✓									✓
VISUAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CREEP								✓	✓									✓
TEAR STR								✓	✓									✓
ACTUATION								115	115									115
RELEASE								40	35									45
VOLT DROP								✓	✓									✓
CUR. LEAK								✓	✓									✓
PROOF								✓	✓									✓
CREEP								✓	✓									✓

FINISHED PRODUCTION ROUTING WHITE } Route to Finished Goods
CANARY } Route to Dept. Supervisor
PINK } Route to Dept. Supervisor

DEVICE NUMBER

7705L2-1

SPECIAL REQUIREMENT	TOTAL QUANTITY
	9

MANU. ORDER NUMBER NO SUBTOTALS

- 1.
2. 12-12
- 3.
- 4.

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 1000

DATE 12/12/91 DEPARTMENT 294

FINISHED PRODUCTION ROUTING WHITE } Route to Finished Goods
CANARY } Route to Dept. Supervisor
PINK } Route to Dept. Supervisor

DEVICE NUMBER


7705L2-1

SPECIAL REQUIREMENT	TOTAL QUANTITY
	9

MANU. ORDER NUMBER NO SUBTOTALS

- 1.
2. 12-13
- 3.
- 4.

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL
		

Form 1000

DATE 12-10-91 DEPARTMENT 294

FINAL INSPECTION 77962-1

DATE: 12-16-91

CUSTOMER P/N F2VC-4F524-AB

CISC LOT 12-18
 REEL # 2
 LOT # 1
 WASHER LOT 112 2-CL7

NAT. I.D. 74563-483-6
 CUP LOT # 7
 CONV. LOT 149
 QTY. 2000

CISC LOT 12-17
 REEL # 1
 LOT # 1
 WASHER LOT 112 2-CL7

NAT. I.D. 74563-483-6
 CUP LOT # 7
 CONV. LOT 149
 QTY. 2000

TEST	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	
1 (ACTUATION)	120	135	135	135	130	135	130	135	130	135	120	135	135	135	130	140	135	135	
RELEASE	60	55	55	55	55	60	60	55	60	60	65	55	55	55	65	50	55		
DIFF.	60	55	55	70	75	75	70	85	70	75	85	55	50	60	65	50	55	55	
2 (VOLT DROP)							✓	✓								✓	✓		
3 (CUR. LEAK)							✓	✓								✓	✓		
4 (PROOF)							✓	✓								✓	✓		
5 (IMPULSE)	OK	OK	OK	OK	OK					OK	OK	OK	OK	OK					
(ACTUATION)	115	115	120	120	120					125	120	125	120	120					
RELEASE	50	50	50	55	50					60	60	55	50	60					
(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 (DIMENSION)									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
10 (TENS. STR)									OK	OK								OK	OK
(ACTUATION)									130	130								130	130
RELEASE									50	55								50	55
(VOLT DROP)									OK	OK								OK	OK
(CUR. LEAK)									OK	OK								OK	OK
(PROOF)									OK	OK								OK	OK
(CREEP)									OK	OK								OK	OK

FINISHED PRODUCTION ROUTING **WHITE CANARY** (INK) → Route to Finished Store
 (PINK) → Route to Dept. Supervisor

DEVICE NUMBER

77PSL 2-1

SPECIAL REQUIREMENT	TOTAL QUANTITY
	9

MANU. ORDER NUMBER NO SUBTOTALS

- | | |
|----|-------|
| 1. | 12-19 |
| 2. | |
| 3. | |
| 4. | |

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL ACCEPT DEC 16 1991
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Form 10002

DATE 12-14-91 DEPARTMENT 294

FINISHED PRODUCTION ROUTING **WHITE CANARY** (INK) → Route to Finished Store
 (PINK) → Route to Dept. Supervisor

DEVICE NUMBER

77PS L 2-1

SPECIAL REQUIREMENT	TOTAL QUANTITY
	9

MANU. ORDER NUMBER NO SUBTOTALS

- | | |
|----|-------|
| 1. | 12-18 |
| 2. | |
| 3. | |
| 4. | |

QUALITY CONTROL APPROVAL

IN PROCESS	IN PROCESS	FINAL ACCEPT DEC 16 1991
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Form 10002

DATE 12-14-91 DEPARTMENT 294



ATTORNEY GENERAL'S OFFICE

SAMPLE REPORT

REASON FOR REPORT	VENDOR	P.O.	PART NO. P/C	REV.
NEW PART			77P2L2-1	
REPLACEMENT TOOL.	REPORT REC'D BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL.	K-H			12-16-91
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-COMFORMANCE IN THE APPROPRIATE COLUMN.			
REVIEW				
OTHER				

IN	K-H	SPEC:	CIRCLE ALL OUT OF TOLERANCE DIMENSIONS!					DISPOSITION		
			1A	2C	3C	4D	5D	6D		
5	1	2.84 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93		
		0.01 (S) A	0.041	0.020	0.033	0.031	0.015	0.013		
		1.90	1.859	1.920	1.933	1.869	1.885	1.887		
15	2	22.88 MAX	18.64	18.57	18.84	18.60	18.63	18.61		
			18.56	18.66	18.66	18.77	18.71	18.67		
16	3	57.15 MAX	55.65	55.70	55.71	55.70	55.69	55.68		
	4	9.66 - 9.39	9.59	9.61	9.57	9.49	9.58	9.55		
			9.63	9.66	9.64	9.62	9.74	9.67	out of spec	
22	5	2.04 - 1.52 REF.	2.040	1.732	1.723	1.727	1.781	1.796		
23	6	Ø 8.03 - 7.82 REF.	7.94	7.94	7.97	7.97	7.98	7.96		
			7.50		7.99					
29	7	0.25 x 50° - 40° chamfer	N/A - THREADS HAVE BEEN ADDED							
30	8	3/8 - 24 UNF 2A THD SD	OK	OK	OK	OK	OK	OK		
31	9	1.40 - 1.10	1.316	MEASURED ON A Cross Sectioned Part						
32	10	0.16 D	0.051	0.048	0.048	0.008	0.030	0.056		
33	11	45°	OK	MEASURED ON A Cross Sectioned Part						
34	12	43° - 41°	41° 21'	"	"	"	"	"		
35	13	60° - 25°	N/A - THREADS HAVE BEEN ADDED							
38	14	Ø 3.60 - 3.30	3.45	3.45	3.43	3.45	3.44	3.45		
			3.46	3.43	3.42	3.46	3.47	3.45		
39	15	Ø 7.37 - 7.23	7.27	7.35	7.33	7.31	7.32	7.37		
			7.28	7.32	7.33	7.37	7.30	7.37		
40	16	Ø 5.85 - 5.58	5.61	5.72	5.64	5.67	5.60	5.61		
			5.68	5.68	5.66	5.70	5.66	5.63		

REMARKS AND/OR INSTRUCTIONS:

DISPOSITION: TOOL APPROVED FOR PROD.	RESUBMISSION REC'D
MFG. ENG.:	QRA ENG.:

DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-9F924-AB/12590701

	BLUEPRINT SPEC	CAVITY # 1B ACTUAL	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4D ACTUAL	CAVITY # 5D ACTUAL	CAVITY # 6D ACTUAL	
1	2.84 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93	
	0.1 ± A	0.041	0.020	0.033	0.031	0.015	0.013	
	1.90	1.859	1.920	1.933	1.849	1.835	1.887	
2	22.88 MAX	18.64	18.57	18.54	18.60	18.63	18.61	
		18.56	18.66	18.66	18.77	18.71	18.67	
3	57.15 MAX	55.65	55.70	55.71	55.70	55.69	55.68	
4	9.66 - 9.39	9.39	9.61	9.57	9.49	9.58	9.33	
		9.63	9.66	9.64	9.62	9.74	9.67	OUT OF SPEC.
5	2.04-1.52 ref	2.040	1.732	1.788	1.727	1.781	1.796	
6	8.03-7.82ref	7.94	7.94	7.97	7.97	7.98	7.96	
		7.90		7.99				
7	0.25(50-40 DEG) CHAMFER		N/A -	THREADS	HAVE BEEN	ABDED		
8	3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
	THD. D							
9	1.40 - 1.10	1.316	MEASURED	ON A CROSS	SECTIONED	PART		

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TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

FMC-RF924-AB

	BLUEPRINT SPEC	CAVITY # 18 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 30 ACTUAL	CAVITY # 40 ACTUAL	CAVITY # 50 ACTUAL	CAVITY # 60 ACTUAL	COMMENTS
1	19.45 - 19.61	19.55	19.61	19.56	19.56	19.57	19.57	
2	16.56 - 16.76	16.59/16.59	16.62/16.64	16.62/16.63	16.59/16.59	16.54/16.54	16.59/16.59	
3	11.87 - 12.21	12.974	13.051	13.035	13.043	13.076	12.946	
4	11.40 - 11.90	11.768	11.808	11.773	11.773	11.756	11.755	
5	2.84 - 3.05	2.93	2.92	2.92	2.92	2.95	2.93	
	3.1 ±	1.858/0.041	1.920/0.020	1.933/0.033	1.869/0.031	1.895/0.015	1.827/0.013	
6	11.50 - 11.92	11.63/11.71	11.67/11.71	11.72/11.68	11.60/11.63	11.53/11.6*	11.65/11.65	
7	1.24 - 1.45	1.252	1.250	1.289	1.289	1.290	1.285	
8	1.24 - 1.88	1.402	1.397	1.400	1.389	1.357	1.397	
9	1.25 - 2.06	2.304	1.974	1.996	1.964	1.954	1.936	
10	12.45 - 13.85	13.772	13.693	13.800	12.686	13.666	13.556	
11	3 SIDES +/- 20 DEG	30 DEG 34 MIN	29 DEG 53 MIN	31 DEG	29 DEG 04 MIN	29 DEG 09 MIN	30 DEG 08 MIN	
12	2.79 - 3.10 2F	2.90/2.89	2.90/2.90	2.90/2.90	2.90/2.90	2.89/2.89	2.90/2.94	
13	0.25 - 0.75	0.506/0.641	0.460/0.600	0.442/0.6731	0.498/0.671	0.490/0.744	0.450/0.737	OUT OF SPEC.
14	0.05 - 0.26 2F	0.051/0.049	0.074/0.127	0.140/0.076	0.127/0.125	0.153/0.163	0.071/0.036	
		0.140/0.147	0.092/0.089	0.065/0.114	0.046/0.061	0.038/0.613	0.137/0.145	
15	0 19.05 MAX	18.64 18.56	18.57 18.66	18.54 18.66	18.60 18.77	18.63 18.71	18.61 18.67	

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TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-07924-AB

	BLUEPRINT SPEC	CAVITY # 18 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 30 ACTUAL	CAVITY # 40 ACTUAL	CAVITY # 50 ACTUAL	CAVITY # 60 ACTUAL	COMMENTS
16	57.15 MAX	55.65	55.70	55.71	55.70	55.65	55.66	
17	12.59 - 12.11	12.74/12.86	12.72/12.84	12.77/12.76	12.76/12.77	12.75/12.81	12.73/12.60	
18	11.65 - 12.17	11.68/11.79	11.85/11.64	11.73/11.79	11.98/11.84	11.78/11.36	11.73/11.88	
19	14.23 MAX	13.66	13.65	13.67	13.65	13.65	13.66	
20	9.39 - 9.66	9.59/9.63	9.61/9.66	9.57/9.64	9.49/9.62	9.38/9.74	9.55/9.67	OUT OF SPEC.
21	6.12 MIN	6.96/9.09	9.13/9.54	9.12/9.16	6.98/9.56	9.14/9.22	9.11/9.14	
22	1.52 - 2.04	2.040	1.730	1.750	1.727	1.751	1.796	
23	0 7.82-8.03	7.94/7.50	7.94	7.97/7.99	7.97	7.95	7.96	
24	6.50 - 6.41	6.640	6.696	6.699	6.647	6.660	6.640	
24A	29DEG +/- .200 4X	29DEG 34MIN	30DEG 24MIN	MEASURED	ON A CROSS	SECTIONED	PART	
		30DEG 37MIN	28DEG 44MIN					
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	1.84-1.84	
26	7.23-7.75	7.74	7.52	7.51	7.54	7.55	7.53	
26A	NO FLASH OR	OK	OK	FLASH	OK	OK	FLASH	
	BURRS ALLOWED							
	ON SURFACE							
27	1.79-3.41	3.145	3.093	3.160	3.150	3.119	3.107	
28	0.68-1.30	1.113	1.160	1.179	1.148	1.161	1.153	

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TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-99924-AB

BLUEPRINT SPEC	CAVITY # 19 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 40 ACTUAL	CAVITY # 50 ACTUAL	CAVITY # 60 ACTUAL	COMMENTS
28A STAMP DATE	INVERTED	DELTA	OMITTED	HAS SINCE	BEEN	INCLUDED	
CODE & PART#	IN CODING	OPERATION,					
29 10.00MIN ± .40	N/A THREADS	HAVE BEEN	ADDED				
300 DEG CHAMFER							
30 5/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
31 1.10-1.40	1.316	MEASURED	ON A CROSS	SECTIONED	PART		
32 0.16 D	0.051	0.048	0.048	0.002	0.030	0.054	
33 2.5 c	OK	MEASURED	ON A CROSS	SECTIONED	PART		
34 41 DEG - ASSED	41 DEG 21MIN	MEASURED	ON A CROSS	SECTIONED	PART		
35 40-500 DEG CHAMF	N/A THREADS	HAVE BEEN	ADDED				
36 31.51 MAX	31.64 31.62 31.46 31.48 31.45 31.46 31.56 31.47 31.46 31.48 31.55 31.58						
37 14.02-14.53MAX	14.11	14.11	14.11/14.15	14.11/14.18	14.12/14.13	14.11/14.12	
38 3.30-3.60	3.45 ± 3.46	3.45 ± 3.43	3.43 ± 3.42	3.45 ± 3.46	3.44 ± 3.47	3.45 ± 3.45	
39 7.22-7.37	7.27 7.29	7.30 7.32	7.30 7.33	7.31 7.37	7.32 7.30	7.37 7.37	
40 5.58-5.85	5.61 5.68	5.72-5.68	5.64-5.66	5.67-5.70	5.60-5.66	5.61-5.63	
41 71.5000 ± .01	72000 30MIN	72000 10MIN	72000 13MIN	72000 26MIN	71000 54MIN	72000 10MIN	
2000 24	72000 30MIN	72000 14MIN	72000 50MIN	72000 37MIN	72000 11MIN	72000 36MIN	

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DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-9F924-AB

BLUEPRINT SPEC	CAVITY # 13 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 30 ACTUAL	CAVITY # 40 ACTUAL	CAVITY # 50 ACTUAL	CAVITY # 60 ACTUAL	COMMENTS
42 11.42-1.63 2X	1.62-1.62	1.63-1.63	1.58-1.63	1.63-1.60	1.60-1.59	1.60-1.57	
43 10.35-0.66 4X	0.66-0.65	0.57-0.59	0.57-0.60	0.58-0.58	0.58-0.57	0.57-0.59	
	0.57-0.59	0.59-0.58	0.58-0.57	0.59-0.56	0.56-0.55	0.55-0.56	
44 18.30-8.72 2X	8.43-8.46	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 2X	2.13-2.21	2.18-2.22	2.30-2.15	2.26-2.16	2.16-2.16	2.23-2.16	#1 OUT OF SPEC
46 23DEG +/- 2 2X	24DEG 36MIN	24DEG 41MIN	23DEG 14MIN	23DEG 38MIN	23DEG 29MIN	23DEG 34MIN	
	23DEG 04MIN	23DEG 45MIN	24DEG 31MIN	23DEG 53MIN	23DEG 52MIN	24DEG 24MIN	
47 HOUSING BROWN	BROWN	BROWN	BROWN	BROWN	BROWN	BROWN	
48 45DEG +/- 2 4X	44DEG 36MIN	46DEG 47MIN	46DEG 04MIN	45DEG 08MIN	45DEG 37MIN	43DEG	
	45DEG 48MIN	45DEG 18MIN	45DEG 20MIN	45DEG 04MIN	44DEG 11MIN	44DEG 05MIN	
	44DEG 43MIN	45DEG 44MIN	46DEG 44MIN	45DEG 16MIN	44DEG 17MIN	44DEG 01MIN	
	45DEG 12MIN	45DEG 23MIN	45DEG 39MIN	44DEG 43MIN	45DEG 34MIN	44DEG 54MIN	
49 10.86-1.17 4X	0.96-0.95	0.98-1.03	0.97-1.01	0.98-1.02	0.99-1.02	0.99-1.03	
	0.95-0.93	0.96-0.97	0.96-1.00	0.95-1.00	0.97-0.97	0.95-0.96	
50 10.35-0.66 4X	0.54-0.54	0.45-0.44	0.46-0.40	0.46-0.50	0.45-0.54	0.51-0.49	
	0.48-0.51	0.49-0.52	0.54-0.53	0.50-0.52	0.50-0.54	0.51-0.44	

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TI-NHTSA 004035

-MSG #= 98893 FR=ELB3 TO=PCQA SENT=12/16/91 12:39 PM
R#-169 ST=C DIV=0050 CC=00101 BY=ELB3 AT=12/16/91 12:39 PM

DECEMBER 16, 1991

TO: JIM WATT PCQA
CC: CHARLIE DOUGLAS CPFC
STEVE OFFILER SBOI
FR: DAVE CEARN ZARN
SJ: 77PSL2-1 ISR SUBMISSION (CCPS P/C SWITCH)

*cc = ELMIAF
FYI / PIST / PIPC?
data*

Jim,
As you know from the start-up meetings, we plan to send to Ford and the Tier 1's the information required to gain full production approval. We've agreed that this information would be sent out on Friday, 12/20/91.

*zarn
12/16/91*

Steve Offiler will give a completed test report to you on Friday.

Please determine what else must accompany the report in order to gain approval, and have it prepared for Friday shipment. This will at least need to include a cover letter that describes what we're submitting. The cover letter should state that the test report qualifies both the partially and fully automated production processes. I'd like you to get Charlie and Steve's inputs with regard to the letter.

TI 0024256

Thanks,
Dave Cearn
/dt

TO: 96
73

TI-NHTSA 004036

1388 NWS 100076 PR=5301 TO=5.88 SENT=12/10/91 01:22 P
PR=104 ST=0 DT=0054 LC=00101 BY=5301 AT=12/10/91 01:23 P

TO: Dave Czarn IABM
Charles Longene SACFC
att: dclaffa PCOM
Eric Sweet PCOM
Jim Watt SOQA

FR: Steve Officer SPO:

SO: OPS DEFA

On 12/07, I outlined a schedule designed to intercept a mid-February completion date for the DEFA. My workload prioritization has undergone the necessary rearrangements to allow this to happen. However, I am concerned that this schedule is already beginning to slip. I'd like to again ask the key players for due consideration of this matter, and send advance warning that we are in jeopardy of missing the completion date if the present trends continue.

Page 44,
Steve O.