

EA02025

TEXAS INSTRUMENTS, INC.'S

09/10/03 LETTER TO ODI

REQUEST 8

BOX 11

EA02-025
TEXAS INSTRUMENTS, INC.'S

Response to NHTSA Request No. 8



KELBEY-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			
REASON: CUSTOMER REQUEST: ☒ PLANT REQUEST: ☐ VENDOR/PURCHASING REQUEST: ☐ T.I. NOW HAS TIKER AUTOMATED ASSY GOING. - NEED TO UPDATE PRINTS SO ISIR WILL REFLECT PRODUCTION LEVEL SWITCH. AS THEY WILL BE PERFORMED ON ENTIRE VALVE FOR ISIR TO FORD.				VEHICLE APPLICATION: PASSENGER ☒ TRUCK TRAILER SERVICE				
IS TEST REQUIRED: YES ☒ NO ☐ CONCURRENT ☐ TEST DURATION, DAYS: 30				INITIATED BY: J. COSSINS B-2 DATE: 9-5-91				
APPROVED BY:								
PRODUCT ENGINEERING		DATE	DATE		DATE			
MFG ENGINEER J.M. COSSINS		8-2-91	D.A. T. PRYOR/LV		8-20-91			
MATERIALS MR			EALIS D. CLINE/CD		8-8-91			
MANAGER G.A. WILLI		8-2-91	CUST AUTHORIZATION YES ☐ NO ☐		MANUFACTURING R. KELLAN 8-20-91			
CHIEF ENGINEER C. DOWDING		8-2-91	COST RECOVERABLE? YES ☐ NO ☐		ENGINEERING SERV. CAM			
(SEE ENGINEERING MANUAL SECTION 2.81)								
AFFECTED DESIGN DATA BANK: REVIEWED? YES ☐ NO ☐			SERVICE MANUAL REVIEWED? NO ☐					
FMEA REVIEWED? YES ☐ NO ☐			FMEA REVIEWED? NO ☐					
DELETE	REPLACE	RELEASE	CHANGE	CHG. LEVEL	PART NAME / REVISION	CO-OR. CHG.	PURCH. PART X	STOCK DISPOSITION
			D-12590701	A	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. SO SPECIFIC CHANGES ARE: 1) CHANGE TO "37.15" MAX" WAS "62.23" MAX 2) CHANGE TO "7F2VC-0F924-AA" WAS "P2VC-0F924-AA" 3) CHANGE T.I. P/N TO "77PSL2-1" WAS "57PSL5-3" 4) REMOVE "FOR FINAL ASSY SEE DWG. 12575501" ASSY 'S - FM-10 DUAL PROP - REFLECT ABOVE CHANGES ON THESE DRAWINGS AND PARTS LIST	1	X	NO STK
			D-12603101	B				
			D-12603101	B				
			D-12603401	B				
			P-12603401	B				
			P-12603101	B				
APPROVED								

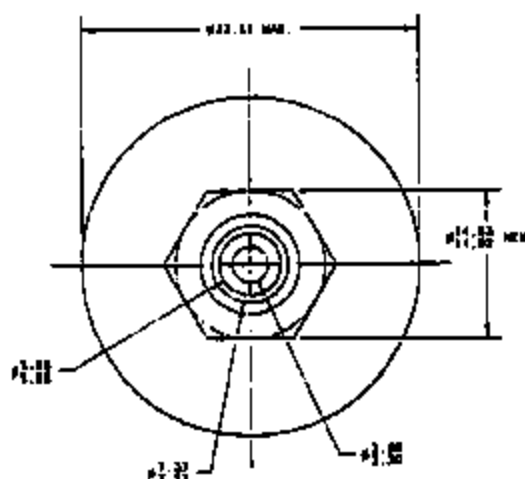
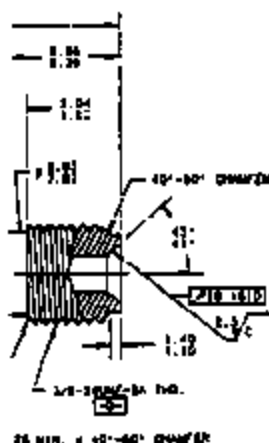
TI-NHTSA 016886

PLANT(S) INVOLVED: AUG 20 1991

MILFORD

ECN NO. 25136

REFERENCE					
ZONE/UTR		DESCRIPTION	TIME & DATE	DATE	APPROV
07	D	11.00-11.00 and 11.01-11.01 00 00 00 00 00	11-11-00		
08		00-30-00 00 00 00 00			
09		1.10-1.10 00 00 0.70-1.27			
10		0.00-0.00 1.00-0.00 and 0.75 in 75-1.00			
11		00.00-0.00 00 00 0.95-0.00			
12		0000 00 00			
13		0.00-0.00 00 00 0.00-0.00			
14	F	0.00-0.00 00 00 00 00 00			
15	F	0.00-0.00 00 00 00 00 00			
16	F	0.00-0.00 00 00 00 00 00			
17	F	0.00-0.00 00 00 00 00 00			
18	F	0.00-0.00 00 00 00 00 00			
19	F	0.00-0.00 00 00 00 00 00			
20	F	0.00-0.00 00 00 00 00 00			
21	F	0.00-0.00 00 00 00 00 00			
22	F	0.00-0.00 00 00 00 00 00			
23	F	0.00-0.00 00 00 00 00 00			
24	F	0.00-0.00 00 00 00 00 00			
25	F	0.00-0.00 00 00 00 00 00			
26	F	0.00-0.00 00 00 00 00 00			
27	F	0.00-0.00 00 00 00 00 00			
28	F	0.00-0.00 00 00 00 00 00			
29	F	0.00-0.00 00 00 00 00 00			
30	F	0.00-0.00 00 00 00 00 00			
31	F	0.00-0.00 00 00 00 00 00			
32	F	0.00-0.00 00 00 00 00 00			
33	F	0.00-0.00 00 00 00 00 00			
34	F	0.00-0.00 00 00 00 00 00			
35	F	0.00-0.00 00 00 00 00 00			
36	F	0.00-0.00 00 00 00 00 00			
37	F	0.00-0.00 00 00 00 00 00			
38	F	0.00-0.00 00 00 00 00 00			
39	F	0.00-0.00 00 00 00 00 00			
40	F	0.00-0.00 00 00 00 00 00			
41	F	0.00-0.00 00 00 00 00 00			
42	F	0.00-0.00 00 00 00 00 00			
43	F	0.00-0.00 00 00 00 00 00			
44	F	0.00-0.00 00 00 00 00 00			
45	F	0.00-0.00 00 00 00 00 00			
46	F	0.00-0.00 00 00 00 00 00			
47	F	0.00-0.00 00 00 00 00 00			
48	F	0.00-0.00 00 00 00 00 00			
49	F	0.00-0.00 00 00 00 00 00			
50	F	0.00-0.00 00 00 00 00 00			
51	F	0.00-0.00 00 00 00 00 00			
52	F	0.00-0.00 00 00 00 00 00			
53	F	0.00-0.00 00 00 00 00 00			
54	F	0.00-0.00 00 00 00 00 00			
55	F	0.00-0.00 00 00 00 00 00			
56	F	0.00-0.00 00 00 00 00 00			
57	F	0.00-0.00 00 00 00 00 00			
58	F	0.00-0.00 00 00 00 00 00			
59	F	0.00-0.00 00 00 00 00 00			
60	F	0.00-0.00 00 00 00 00 00			
61	F	0.00-0.00 00 00 00 00 00			
62	F	0.00-0.00 00 00 00 00 00			
63	F	0.00-0.00 00 00 00 00 00			
64	F	0.00-0.00 00 00 00 00 00			
65	F	0.00-0.00 00 00 00 00 00			
66	F	0.00-0.00 00 00 00 00 00			
67	F	0.00-0.00 00 00 00 00 00			
68	F	0.00-0.00 00 00 00 00 00			
69	F	0.00-0.00 00 00 00 00 00			
70	F	0.00-0.00 00 00 00 00 00			
71	F	0.00-0.00 00 00 00 00 00			
72	F	0.00-0.00 00 00 00 00 00			
73	F	0.00-0.00 00 00 00 00 00			
74	F	0.00-0.00 00 00 00 00 00			
75	F	0.00-0.00 00 00 00 00 00			
76	F	0.00-0.00 00 00 00 00 00			
77	F	0.00-0.00 00 00 00 00 00			
78	F	0.00-0.00 00 00 00 00 00			
79	F	0.00-0.00 00 00 00 00 00			
80	F	0.00-0.00 00 00 00 00 00			
81	F	0.00-0.00 00 00 00 00 00			
82	F	0.00-0.00 00 00 00 00 00			
83	F	0.00-0.00 00 00 00 00 00			
84	F	0.00-0.00 00 00 00 00 00			
85	F	0.00-0.00 00 00 00 00 00			
86	F	0.00-0.00 00 00 00 00 00			
87	F	0.00-0.00 00 00 00 00 00			
88	F	0.00-0.00 00 00 00 00 00			
89	F	0.00-0.00 00 00 00 00 00			
90	F	0.00-0.00 00 00 00 00 00			
91	F	0.00-0.00 00 00 00 00 00			
92	F	0.00-0.00 00 00 00 00 00			
93	F	0.00-0.00 00 00 00 00 00			
94	F	0.00-0.00 00 00 00 00 00			
95	F	0.00-0.00 00 00 00 00 00			
96	F	0.00-0.00 00 00 00 00 00			
97	F	0.00-0.00 00 00 00 00 00			
98	F	0.00-0.00 00 00 00 00 00			
99	F	0.00-0.00 00 00 00 00 00			
100	F	0.00-0.00 00 00 00 00 00			



SPECIFICATIONS AND NOTES

DEVELOPMENT CONFORM TO PLUMBING CODE. MFG. NO.  65-7200-WF24-44

ACTIVATION PRESSURE ——— 200 3041 MPa (126 225 psi)

RELEASE PHENOL ————— 134 SPOG MIN. (TU)

CONTACT ARRANGEMENTS: OFFICE HOURS: 9:00 A.M. TO 5:00 P.M. MONDAY THROUGH FRIDAY. OFFICE CLOSED ON PUBLIC HOLIDAYS.

WILLIAM C. MEYER, *Author of* *THE FIFTH*

DATE: 11/11/2009 10:30 AM

PROTECTIVE COVER ON THREADS REMOVED FOR SHIPMENT.

TI-NHTSA 015588

DIMENSIONING AND TOLERANCING IN
ACCORDANCE WITH ANSI Y14.5M-1982

MANUFACTURER TO ESTABLISH PRODUCT
ENGINEERING APPROVED CONTROL PLAN

CHANGE IN DESIGN COMPOSITION OR
PROCESSING FROM THE PART PREVIOUSLY
APPROVED FOR PRODUCTION REQUIRES
PRIOR ENGINEERING APPROVAL

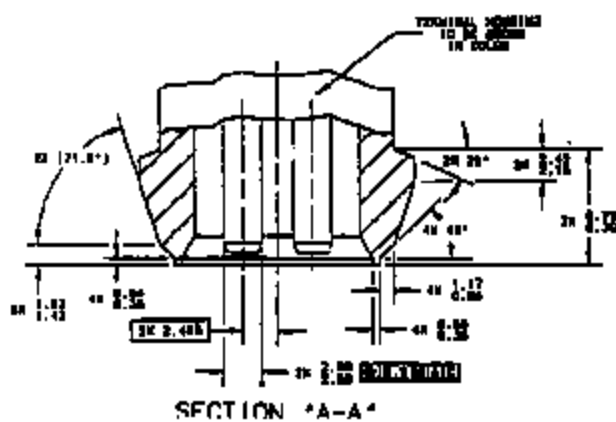
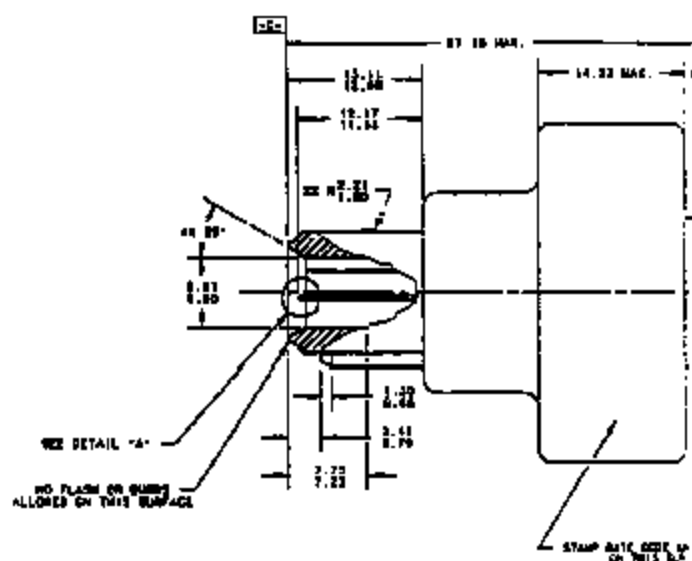
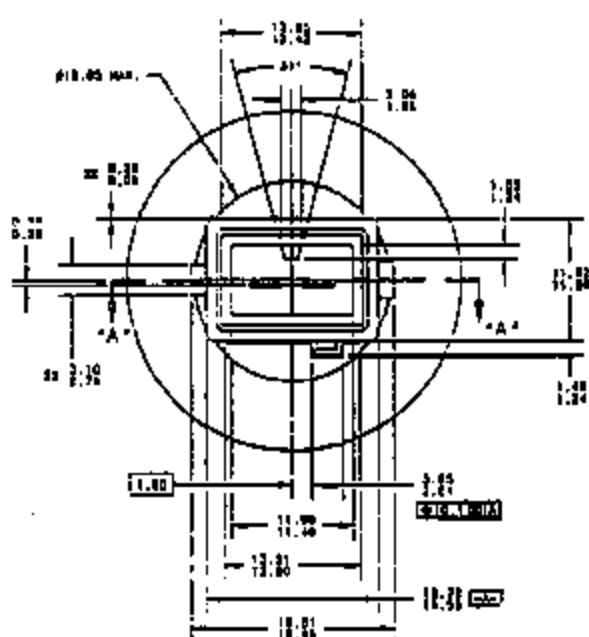
ENGINEERING APPROVAL OF PRODUCTION
SAMPLES FROM EACH SUPPLIER IS
REQUIRED PRIOR TO AUTHORIZATION
OF PRODUCTION

PART MUST COMPLY WITH SPECIFICATION
WHS-MSP989-A1 TO HELP SAFEGUARD
HEALTH, SAFETY AND THE ENVIRONMENT

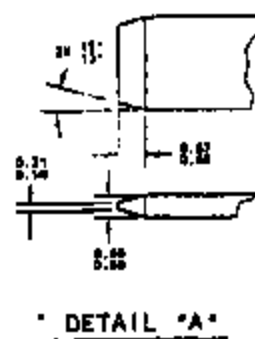
CONTROL ITEM — THE ∇ SYMBOL ALSO
THIS PRODUCT ENGINEERING DESIG-
3 CRITICAL CHARACTERISTICS. THERE,
ADDITIONAL CRITICAL CHARACTERISTICS
COPY BY SERVICES BUREAU 1-107

REVISED & REDRAWN		
910417	NCODE10079779005	10
DATE	REL. NO.	CR.
NAME SWITCH ASY - SPEED CONTROL DEACTIVATE		
NO. ▽F2VC-9F924-AB		

LIST OF CHARGES SPECIFIED BY THE ARE IN ROOM	BY	YOU CALL	DATE	7-1-55	 TEXAS INSTRUMENTS	BUREAU
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TI-NHTSA 015987



No. 147671



Supplier Request for Engineering Approval

DATE November 5 19 91

SUPPLIER TO COMPLETE	
SUPPLIER NAME AND ADDRESS Texaco Instruments Incorporated, 34 Forest Street, Attleboro, MA 02703	
FORD AND/OR SUPPLIER PART NAME AND PART NUMBER OF ASSEMBLY AND ITS COMPONENTS SWITCH ASY - SPEED CONTROL DEACTIVATE (delta) P2VC-9F924-AB	
ENGINEERING CONTROL CODE NUMBER SEE FORM 10-100 CONTROL FIRM AFFECTED ☐ YES ☒ NO CONTROL FIRM ☐ YES ☒ NO	
CHANGE:	☐ DESIGN ☒ COMPOSITION ☐ PROCESSING DESCRIPTION
The proposed change involves use of a blue-colored environmental seal in place of the present seal, which is reddish in color with a black stripe on its outer circumference. The blue seal is identical in dimensions and material, except for pigmentation. Presently, only the black stripe differentiates the pass-car seal, which has slightly different dimensions from other similar seals.	
EFFECT OF CHANGE: No effect on device performance or cost. Benefit is reduced possibility of assembly error.	
INTERCHANGEABILITY AFFECTED ASSEMBLY ☐ YES ☒ NO COMPONENTS ☐ YES ☒ NO	TOOLING OR FACILITY CHANGES REQUIRED ☐ YES ☒ NO IF YES, COST EFFECT \$
TIME TO INCORPORATE CHANGE AFTER APPROVAL Approx. 4-6 weeks.	PIECE COST AFFECTED ☐ YES ☒ NO IF YES, COST EFFECT \$
WILL INCORPORATION OF CHANGE AFFECT SHIPPING SCHEDULE? ☐ YES ☒ NO	SIGNATURE <u><i>Steve Off</i></u> 9/11/05 TITLE <u>MANUFACTURING</u>
PRODUCT ENGINEERING TO COMPLETE	
FOR IN PROCESS ☒ APPROVED ☐ REJECTED <u>D.F. Perse</u> 9/11/06	CONFORMED BY <u><i>B. J. Manoff</i></u> DATE <u>11/6/91</u>
BLANKET APPROVAL GRANTED FOR SUBSEQUENT CHANGES WHICH ARE SAME AS DESCRIBED ABOVE ☐ YES ☒ NO	SAMPLE OF CHANGE COMPONENT REQUIRED ☐ YES ☒ NO
REASON FOR REJECTION OR QUALIFYING CONDITIONS OF ACCEPTANCE:	

TI-NHTSA 016988

* This approval is granted upon the understanding that it is advisory in nature and in no manner changes the Seller's original responsibility for insuring that all characteristics, designated in the applicable engineering specifications and/or inherent in samples as originally tested and approved, are maintained. Seller accepts full responsibility for the changes or types of changes listed above; and should such changes result in less satisfactory performance than experienced with the originally approved item, Seller will fully reimburse the Buyer for all expenses incurred to correct the deficiency.

12-13-91

Need revision
Ford Part#

Revised
FBI 12/14
+ KFT 12/14
12-16-91



KELSEY-HAYES ENGINEERING CHANGE NOTICE

PROD. AREA: VALVES	SUBJECT: FN-10 PRESSURE SWITCH	PROGRAM: DUAL PROP	MODEL YEAR: 93	CUSTOMER(SI): FORD	ECN NO.: 25136
NATURE OF CHANGE: REVISE THE T.I. PRESSURE SWITCH - NEW AUTOMATED VERSION IS AVAILABLE.				EPA NO.: 48011-B	PAGE 1 OF 1
NOTE: THIS IS A CHANGE TO CUSTOMER DRAWING.				CLASSIFICATION:	
REASON: CUSTOMER REQUEST: ☒ PLANT REQUEST: ☐ VENDOR/PURCHASING REQUEST: ☐				REGULAR	X
T.I. NOW HAS THEIR AUTOMATED ASSY COMING.				RECORD	
- NEED TO UPDATE PRINTS SO ISIR WILL REFLECT PRODUCTION LEVEL SWITCH.				MANDATORY	
- TEST WILL BE PERFORMED ON ENTIRE VALVE FROM ISIR TO FORD.				EXPEDITED	
IS TEST REQUIRED? YES ☒ NO ☐ CONCURRENT ☐ TEST DURATION, DAYS: 30				VEHICLE APPLICATION:	
INITIATED BY: J. COSSINS 8-2 DATE: 9-5-91				PASSENGER	X
APPROVED BY:				TRUCK	
PRODUCT ENGINEERING				TRAILER	
DATE				SERVICE	
DESIGNER: J.M. COSSINS	DATE: 8-2-91	DATE: 8-20-91	ESTIMATING: K.B. HAWKINS	DATE: 8-20-91	
MATERIALS: NR		SALES: D. CLINE/CD	PURCHASING: R. LIVES	DATE: 8-13-91	
MANAGER: G.A. WILLI	DATE: 8-2-91	CUST AUTHORIZATION YES ☐ IN R ☐	MANUFACTURING: R. BELLAR	DATE: 8-20-91	
CHIEF ENGINEER: C. BOWDING	DATE: 8-2-91	COST RECOVERABLE? YES ☐ NO ☐	ENGINEERING SERV: GAH		
(SEE ENGINEERING MANUAL SECTION 2.81)		SERVICE MANUAL REVIEWED? NO	SERVICE MANUAL REVISED? NO		
AFFECTED DESIGN DATA BANK: REVIEWED? YES		FMEA REVIEWED? YES	FMEA REVISED? NO		
DELETE	REPLACE	RELEASE	CHANGE	CHG. LEVEL	PART NAME / REVISION
			D-12590701	AS	ASSY - PRESSURE SWITCH
					- REVISE TO T.I. PRINT 77PSL2-1 WAS TO 57PSL5-3.
					NOTE THE ONLY VISIBLE CHANGE IN THE OVERALL LENGTH ON SWITCH. SO SPECIFIC CHANGES ARE:
					1) CHANGE TO "57.15 MAX" WAS "62.23 MAX"
					2) CHANGE TO "7F2VC-9P924-AA" WAS "P2VC-9P924-BA"
					3) CHANGE T.I. P/N TO "77PSL2-1" WAS "57PSL5-3"
					4) REMOVE "FOR FINAL ASSY SEE DWG. 12575501"
					ASSY 'S - FN-10 DUAL PROP
					- REFLECT ABOVE CHANGES ON THESE DRAWINGS AND PARTS LIST
			U-12603101	B	
			D-12603101	B	
			D-12603401	B	
			P-12603401	B	
			C-12603101	B	
APPROVED					
PLANT(S) INVOLVED: AUG 20 1991					
BILFORD					
ECN NO. 25136					

TI-NHTSA 015990

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-9F924-RB/12590701

	BLEUPRINT SPEC	CAVITY # 1B ACTUAL	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4D ACTUAL	CAVITY # 5D ACTUAL	CAVITY # 6D ACTUAL	COMMENTS
1	2.84 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93	
	0.1 (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	
2	22.88 MAX	18.64	18.57	18.54	18.60	18.63	18.61	
		18.56	18.64	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	9.59	9.61	9.57	9.49	9.58	9.55	
5	2.04-1.52 ref	2.040	1.792	1.783	1.727	1.781	1.796	
6	8.03-7.82ref	7.94	7.94	7.97	7.97	7.98	7.96	
		7.50		7.99				
7	0.25X50-40 DEG CHAMFER	N/A	N/A	THREADS	HAVE BEEN	ADDED		
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		

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-9F924-AB/12590701

	BLUEPRINT SPEC	CAVITY # 1B ACTUAL	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4D ACTUAL	CAVITY # 5B ACTUAL	CAVITY # 6D ACTUAL	COMMENTS
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	1.869	1.885	1.887	
2	22.80 MAX	18.64	18.57	18.54	18.64	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	9.59	9.61	9.57	9.49	9.58	9.35	
		9.63	9.66	9.64	9.62	9.74	9.67	OUT OF SPEC. <i>Deleted</i>
5	2.04-1.52 rnf	2.040	1.732	1.793	1.727	1.781	1.796	<i>PEN TOL/ATH</i>
6	8.03-7.82 rnf	7.94	7.94	7.97	7.97	7.98	7.96	<i>1-9-93</i>
		7.50		7.99				
7	10.25X50-40 DEG CHAMFER	N/A		THREADS	HAVE BEEN	ADDED		
8	3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
	1THD. 0-0							
9	1.40 - 1.10	1.316	MEASURED	ON A CROSS	SECTIONED	PART		

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

FZYC-9F924-AB/12590781

	BLUEPRINT SPEC	CAVITY # 1B ACTUAL	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4D ACTUAL	CAVITY # 5D ACTUAL	CAVITY # 6D ACTUAL	COMMENTS
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	1.869	1.885	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	9.59	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.
5	2.04-1.52 ref	2.040	1.732	1.703	1.727	1.701	1.706	
6	8.03-7.82ref	7.94	7.94	7.97	7.97	7.98	7.96	
		7.50		7.99				
7	10.25X50-40 DEG CHAMFER	N/A	-	THREADS	HAVE BEEN	ADDED		
8	3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
	THD. 0.0							
9	1.40 - 1.10	1.316	MEASURED	ON A CROSS	SECTIONED	PART		

F24C-9F924-AB/12590701

TEXAS INSTRUMENTS INCORPORATED • 34 FOREST STREET • ATTLEBORO, MA 01903
508-499-5000 • TELEX 92 7708 TWX 710-245-0555 • CABLE TEXINS

TI-NHTSA 016994

④ ⑤

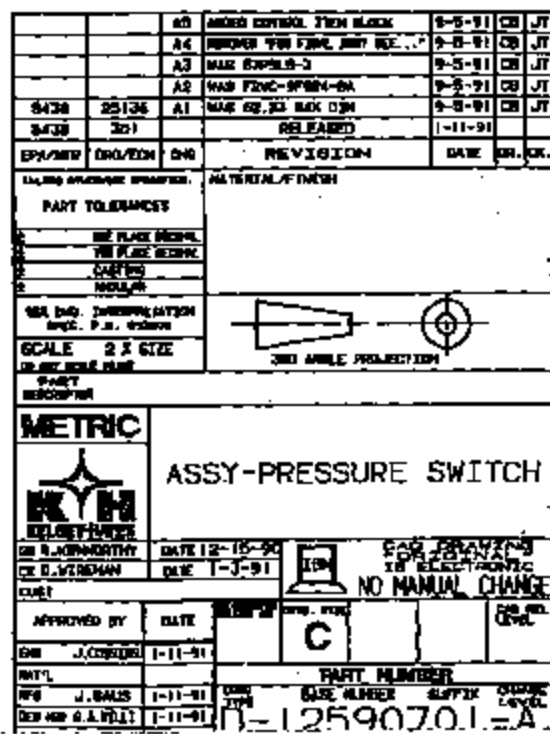
SPECIFICATION.

DEVICE MUST CONFORM TO FORD MOTOR CO.

SPEC NO. ES-F2VC-9F924-A

ACTUATION PRESSURE---- 862 $\pm$ 241 kPag (125 $\pm$ 35 psig).

RELEASE PRESSURE----- 138 kPag MIN. (20 psig)



TI-NHTSA 015885

**DRAWINGS AVAILABLE UPON
REQUEST**

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2YC-9F924-A0/12590701

	BLUEPRINT SPEC	CAVITY # 1B ACTUAL	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4D ACTUAL	CAVITY # 5B ACTUAL	CAVITY # 6D ACTUAL	COMMENTS
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	
	<u>1.98</u>	1.859	1.920	1.933	1.869	1.885	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	9.59	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.
5	2.04-1.52 ref	2.040	1.732	1.703	1.727	1.781	1.796	
6	0.03-7.82ref	7.94	7.94	7.97	7.97	7.98	7.96	
		7.58		7.99				
7	16.25x50-40 REGI CRAMFER		N/A -	THREADS	HAVE BEEN	ADDED		
8	3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
	1THD. <u>-D-</u>							
9	1.40 - 1.10	1.316	MEASURED	ON A CROSS	SECTIONED	PART		

具

F2YC-9F924-48/12590701

TEXAS INSTRUMENTS INCORPORATED • 34 FOREST STREET • ATTLEBORO, MA 01903
508-499-3800 • TELEX 62-7705 TWX 710-340-0568 • CABLE TEXINS

THHTSA 016998

FORD PART NO. V72VC-9F924-AA (A3)

(A4) (A5)

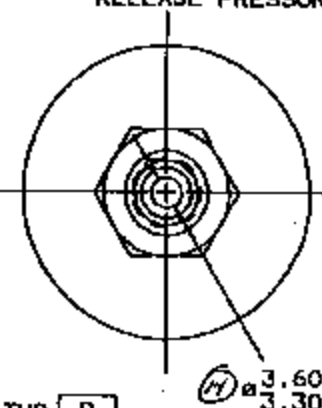
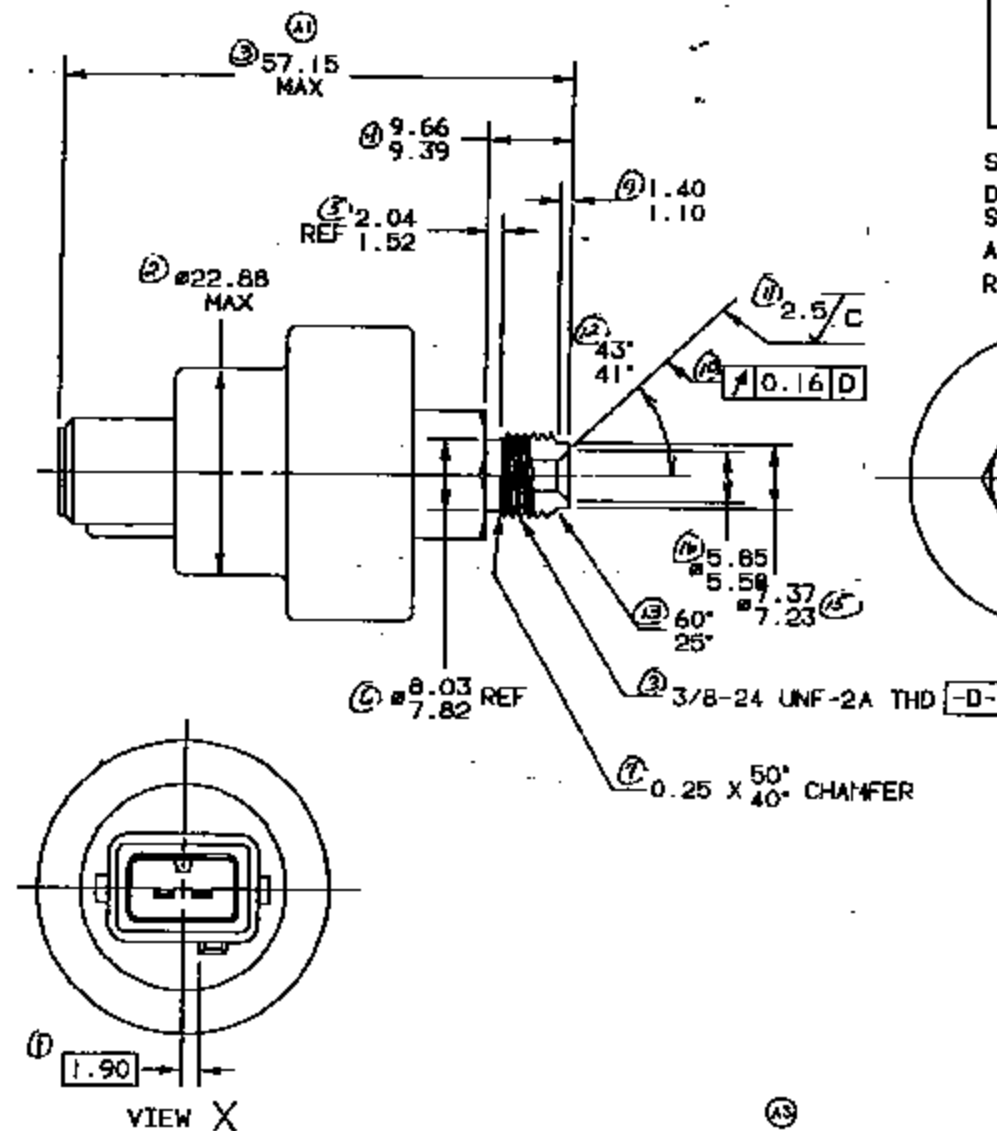
▽ CONTROL ITEM - THE ▽ SYMBOL ALSO IDENTIFIES PRODUCT ENGINEERING DESIGNATED CRITICAL CHARACTERISTICS. THESE, AND ADDITIONAL CRITICAL CHARACTERISTICS IDENTIFIED BY PROCESS REVIEWS, MUST APPEAR ON THE Q-101 CONTROL PLAN(S) WHICH REQUIRE PRODUCT ENGINEERING APPROVAL.

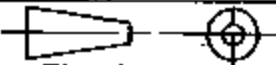
SPECIFICATION:

DEVICE MUST CONFORM TO FORD MOTOR CO.
SPEC NO. ES-F2VC-9F924-A

ACTION PRESSURE----- 862 ±241 kPag (125 ±35 psig).

RELEASE PRESSURE----- 138 kPag MIN. (20 psig)



		A5	ADDED CONTROL ITEM BLOCK	9-5-91	CS	JT
		A4	REMOVED THE FINAL ASSY REL...	9-5-91	CS	JT
		A3	MAX STRENGTH-3	9-5-91	CS	JT
		A2	MAX F2VC-9F924-AA	9-5-91	CS	JT
8438	25136	A1	MAX 42-23 MAX DIM	9-5-91	CS	JT
8438	301		RELEASED	1-11-91		
EPA/MTR	DRG/ECN	Q66	REVISION	DATE	DR.	CK.
UNLESS OTHERWISE SPECIFIED.			MATERIAL/FINISH			
PART TOLERANCES						
S	ONE PLACE DECIMAL					
S	TWO PLACE DECIMAL					
S	CASTING					
S	MILLING					
SEE DIM. INTERPRETATION SPEC. P. 8. 843808						
SCALE 2 X SIZE			3RD ANGLE PROJECTION			
DO NOT SCALE DIMS						
PART DESCRIPTION						
METRIC			ASSY-PRESSURE SWITCH			
						
BY R. KENMORTHY		DATE 12-15-90	CAD DRAWING ORIGINAL TO ELECTRONIC			
BY D. WIREMAN		DATE 1-3-91	NO MANUAL CHANGE			
CLIENT						
APPROVED BY		DATE	REVISED BY	DATE	REVISED BY	DATE
BY J. COSE		1-11-91	C		C	
PART		PART NUMBER				
BY J. GALT		1-11-91	BASE NUMBER		DIFFER LEVEL	
DES FOR G.A. NILLI		1-11-91	TYPE		CHANGE LEVEL	
D-12590701-A						

TI-NHTSA 016899

**DRAWINGS AVAILABLE UPON
REQUEST**



KELBEY-HAYES ENGINEERING CHANGE NOTICE

PROD. AREA: VALVES	SUBJECT: FN-10 PRESSURE SWITCH	PROGRAM: DUAL PROP	MODEL YEAR: 93	CUSTOMER(S): FORD	ECN NO.: 25136			
NATURE OF CHANGE: REVISE THE T.I. PRESSURE SWITCH - NEW AUTOMATED VERSION IS AVAILABLE.				EPA NO.: 48011-B	CLASSIFICATION:			
NOTE: THIS IS A CHANGE TO CUSTOMER DRAWING.				REF. DOCUMENTS:	REGULAR ☒			
REASON: CUSTOMER REQUEST: ☒ PLANT REQUEST: ☐ VENDOR/PURCHASING REQUEST: ☐				CUST. CHG.:	RECORD ☐			
T.I. NOW HAS THEIR AUTOMATED ASSY GOING.				K-H DEV./MCR:	MANDATORY ☐			
- NEED TO UPDATE PRINTS SO ISIR WILL REFLECT PRODUCTION LEVEL SWITCH.				K-H EST.:	EXPEDITED ☐			
ES TEST WILL BE PERFORMED ON ENTIRE VALVE FOR ISIR TO FORD.				K-H NTR:	VEHICLE APPLICATION:			
ES TEST REQUIRED: YES ☒ NO ☐ CONCURRENT ☐ TEST DURATION, DAYS: 30				ATTACHMENTS:	PASSENGER ☒			
APPROVED BY:				DISTRIBUTION CODE:	TRUCK ☐			
PRODUCT ENGINEERING				INITIATED BY: J. COSSINS 8-2	SERVICE ☐			
DATE				DATE	DATE			
MSP ENGINEER J.M. COSSINS 8-2-91				ESTIMATING K.R. HANKINS 8-20-91				
MAILING NR				PURCHASING R. LIVES 8-13-91				
MANAGER G.A. WILLI 8-2-91				MANUFACTURING R. BELLAR 8-20-91				
CHIEF ENGINEER C. DOWDING 8-2-91				ENGINEERING SERV. GAW				
[SEE ENGINEERING MANUAL SECTION 2.8.1]				SERVICE MANUAL REVIEWED? NO	SERVICE MANUAL REVISED? 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	1	X	NO STK
					- REVISE TO T.I. PRINT 77PSL2-1 WAS TO 57PSL5-3.			
					NOTE THE ONLY VISIBLE CHANGE IS THE OVERALL LENGTH ON SWITCH. SO SPECIFIC CHANGES ARE:			
					1) CHANGE TO "57.15" MAX" WAS "62.23" MAX			
					2) CHANGE TO "P2VC-9F924-AA" WAS "P2VC-9F924-BA"			
					3) CHANGE T.I. P/N TO "77PSL2-1" WAS "57PSL5-3"			
					4) REMOVE "FOR FINAL ASSY SEE DWG. 12575501"			
			D-12603101	B	ASSY 'S - FN-10 DUAL PROP	1		NO STK
			D-12603101	B	- REFLECT ABOVE CHARGES ON THESE DRAWINGS AND PARTS			
			D-12603401	B	LIST			
			P-12603401	B				
			P-12607101	B				
APPROVED								
PLANT(S) INVOLVED: AUG 20 1991						ECN NO.: 25136		

TL-NHTSA 016001

A1. B102

File: 77PLKH

TEXAS
INSTRUMENTS

ATTENTION: DIMENSIONALITY DEPT

PAGE ____ OF ____

SAMPLE REPORT

REASON FOR REPORT	VENDOR		P.O.	PART NO. <i>P/C</i>	REV.
NEW PART	REPORT REQ. BY		DATE	77PSL2-1	
REPLACEMENT TOOL.	<i>K-H</i>		INSPECTED BY		DATE
CORRECTED TOOL.					12-16-9
REPAIRED TOOL.					
REVIEW					
OTHER					

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-COMPLIANCE IN THE APPROPRIATE COLUMN.

		(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)						DISPOSITION	
LINE	INCH	SPEC:	1A	2C	3C	4D	5D	6D	
5	1	2.84-3.95	2.93	2.92	2.92	2.92	2.93	2.93	
		0.1 (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	18.54	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	
17	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	0.803-0.82 REF.	7.94	7.94	7.97	7.97	7.98	7.96	
			7.50		7.99				
29	7	0.25 X 50°-48° CHAMFER	N/A - THREADS HAVE BEEN ADDED						
30	8	3/8-24 UNF-2A T.H.D. (D)	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	4.50	OK	measured on a cross sectioned part					
34	12	4.2°-4.1°	41°21'	"	"	"	"	"	
35	13	60°-25°	N/A - THREADS HAVE BEEN ADDED						
38	14	0.360-0.330	3.45	3.45	3.43	3.45	3.44	3.45	
			3.46	3.43	3.48	3.46	3.47	3.45	
39	15	0.737-0.723	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	0.585-0.58	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.

REVISIONS REQ'D

MFG. ENG.:

QRA ENG.:

TI-NHTSA 016002

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	CAVITY # 7D ACTUAL
1	2.84 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93	
	0.01 ± A	0.041	0.020	0.033	0.031	0.013	0.013	
	1.90	1.839	1.920	1.933	1.869	1.885	1.887	
2	22.38 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	9.59	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.
5	2.04-1.52 ref	2.040	1.732	1.783	1.727	1.781	1.796	
6	ID 8.03-7.82 ref	7.94	7.94	7.97	7.97	7.98	7.94	
		7.50		7.99				
7	10.25/50-40 DEG CHAMFER		N/A -	THREADS	HAVE BEEN	ADDED		
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		

TI-NHTSA 016003

F2NC-9FY24-AB/12590701

TI-NHTSA 016004

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-9F924-A8

	BLUEPRINT SPEC	CAVITY # 1B ACTUAL	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4D ACTUAL	CAVITY # 5D ACTUAL	CAVITY # 6D ACTUAL	COMMENTS
1	19.45 - 19.81	19.55	19.61	19.56	19.56	19.57	19.57	
2	16.56 - 16.76	16.59/16.56	16.62/16.64	16.62/16.63	16.58/16.59	16.54/16.56	16.59/16.59	
3	11.30 - 11.21	11.974	11.951	11.935	11.943	11.978	11.946	
4	11.40 - 11.90	11.788	11.808	11.775	11.773	11.756	11.755	
5	2.94 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93	
	1.1 A	1.859/0.041	1.920/0.020	1.933/0.033	1.864/0.031	1.885/0.015	1.887/0.013	
6	11.60 - 11.92	11.69/11.71	11.67/11.71	11.72/11.68	11.60/11.63	11.63/11.67	11.65/11.65	
7	1.34 - 1.45	1.252	1.290	1.290	1.290	1.290	1.265	
8	1.24 - 1.55	1.402	1.397	1.400	1.399	1.397	1.397	
9	1.35 - 2.06	2.004	1.974	1.996	1.984	1.954	1.936	
10	12.45 - 13.85	13.772	13.693	13.600	13.664	12.666	12.556	
11	31DEG +/- 2DEG/30DEG 3MIN	29DEG 53MIN	31DEG	29DEG 04MIN	29DEG 03MIN	30DEG 06MIN		
12	2.79 - 3.10 2P	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	0.508/0.041	0.480/0.800	0.442/0.673	0.498/0.671	0.490/0.744	0.460/0.757	OUT OF SPEC.
14	0.05 - 0.26 2P	0.051/0.069	0.074/0.127	0.140/0.076	0.127/0.135	0.153/0.168	0.0711/0.036	
		0.140/0.147	0.092/0.099	0.086/0.114	0.048/0.081	0.038/0.813	0.137/0.165	
15	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

TI-NHTSA 016006

TEXAS INSTRUMENTS INCORPORATED - 34 FORREST STREET - ATTLEBORO, MA 01903
603-826-3800 - TELEX 88-7788 TWX 710-346-0666 - CABLE TEXINS

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2YC-9524-AB

	BLUEPRINT SPEC	CAVITY # 18 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 30 ACTUAL	CAVITY # 40 ACTUAL	CAVITY # 35 ACTUAL	CAVITY # 50 ACTUAL	COMMENTS
16	57.15 MAX	55.65	55.70	55.71	55.70	55.69	55.68	
17	12.59 - 13.11	12.74/12.86	12.72/12.84	12.77/12.76	12.76/12.77	12.75/12.81	12.73/12.80	
18	11.63 - 12.17	11.68/11.79	11.85/11.64	11.73/11.79	11.98/11.84	11.76/11.96	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	9.58/9.74	9.55/9.67	OUT OF SPEC.
21	8.12 MIN	8.98/9.29	9.13/9.54	9.12/9.18	8.96/9.56	9.14/9.22	9.11/9.14	
22	1.52 - 2.04	2.040	1.732	1.783	1.727	1.751	1.796	
23	0 7.82-8.03	7.94/7.50	7.94	7.97/7.99	7.97	7.96	7.96	
24	6.60 - 6.81	6.640	6.698	6.693	6.647	6.655	6.642	
24A	25DEG +/- .003 AT 29DEG 34MIN	30DEG 24MIN	30DEG 24MIN	MEASURED	ON A CROSS	SECTIONED	PART	
		30DEG 57MIN	28DEG 46MIN					
25	1.60-2.21R 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	7.33	7.54	7.55	7.53	
26A	NO FLASH OR	OK	OK	FLASH	OK	OK	FLASH	
	BURRS ALLOWED							
	ON SURFACE							
27	2.79-3.41	3.145	3.093	3.160	3.150	3.119	3.107	
28	0.68-1.30	1.115	1.168	1.179	1.148	1.161	1.153	

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-RF934-A8

	BLUEPRINT SPEC	CAVITY # 19 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 21 ACTUAL	CAVITY # 40 ACTUAL	CAVITY # 25 ACTUAL	CAVITY # 60 ACTUAL	COMMENTS
28A	STAMP DATE	INVERTED	DELTA	OMITTED.	HAS SINCE	BEEN	INCLUDED	
	CODE & PART#	IN CODING	OPERATION.					
29	10.25MIN X 40 -	N/A THREADS	HAVE BEEN	ADDED				
	50DEG CHAMFER							
30	3/8-24UNF-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	0.046	0.048	0.008	0.030	0.036	
33	2.5 c	OK	MEASURED	ON A CROSS	SECTIONED	PART		
34	41DEG - 45DEG	41DEG 21MIN	MEASURED	ON A CROSS	SECTIONED	PART		
35	40-50DEG CHAMF	N/A THREADS	HAVE BEEN	ADDED				
36	32.51 MIN	31.64 31.62 31.46	31.49 31.45	31.46 31.50	31.47 31.46	31.48 31.58	31.58	
37	14.02-14.53H6X	14.11	14.11	14.11/14.13	14.11/14.13	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	7.23-7.37	7.27 7.28	7.35 7.32	7.33 7.38	7.31 7.37	7.32 7.30	7.37 7.37	
40	5.38-5.83	5.61 5.48	5.72-5.68	5.64-5.66	5.67-5.70	5.60-5.66	5.61-5.63	
41	71.30DEG +/-	72DEG 30MIN	72DEG 11MIN	72DEG 12MIN	72DEG 26MIN	71DEG 56MIN	72DEG 10MIN	
	2DEG 2X	72DEG 30MIN	72DEG 14MIN	72DEG 50MIN	72DEG 37MIN	72DEG 11MIN	72DEG 36MIN	

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F20C-9F924-A2

BLUEPRINT SPEC	CAVITY # 19 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 30 ACTUAL	CAVITY # 40 ACTUAL	CAVITY # 50 ACTUAL	CAVITY # 60 ACTUAL	COMMENTS
42 1.42-1.63 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 0.35-0.66 4X	1.66-0.65	0.57-0.59	0.57-0.60	0.38-0.38	0.55-0.57	0.57-0.59	
	0.57-0.59	0.59-0.55	0.58-0.57	0.59-0.56	0.56-1.55	0.55-0.56	
44 8.30-8.72 21	8.43-8.46	8.51-8.44	8.41-8.44	8.41-8.42	8.59-8.45	9.42-8.54	
45 2.15-2.42 2X	2.13-2.21	2.18-2.22	2.30-2.15	2.20-2.16	2.14-2.16	2.23-2.16	#1 OUT OF SPEC
46 25DEG +/- 2 24	24DEG 36MIN	24DEG 41MIN	23DEG 14MIN	23DEG 35MIN	23DEG 09MIN	23DEG 34MIN	
	23DEG 06MIN	23DEG 45MIN	24DEG 51MIN	23DEG 53MIN	23DEG 58MIN	24DEG 24MIN	
47 HOUSING BROWN	BROWN	BROWN	BROWN	BROWN	BROWN	BROWN	
48 45DEG +/- 2 41	44DEG 36MIN	46DEG 47MIN	46DEG 09MIN	45DEG 06MIN	45DEG 37MIN	43DEG	
	45DEG 45MIN	45DEG 15MIN	43DEG 39MIN	45DEG 04MIN	44DEG 11MIN	46DEG 09MIN	
	44DEG 48MIN	45DEG 44MIN	46DEG 46MIN	45DEG 16MIN	44DEG 17MIN	44DEG 51MIN	
	45DEG 12MIN	45DEG 23MIN	45DEG 39MIN	44DEG 48MIN	43DEG 34MIN	44DEG 34MIN	
49 0.86-1.17 41	0.96-0.95	0.98-1.03	0.97-1.02	0.95-1.02	0.99-1.03	0.99-1.03	
	0.95-0.93	0.96-0.97	0.96-1.00	0.92-1.00	0.97-0.97	0.95-0.96	
50 0.35-0.66 41	0.54-0.54	0.45-0.44	0.46-0.46	0.46-0.50	0.45-0.54	0.51-0.49	
	0.48-0.51	0.49-0.52	0.54-0.53	0.52-0.52	0.50-0.54	0.51-0.44	

**TEXAS
INSTRUMENTS**



DIMENSIONAL ANALYSIS ON PART NUMBER

524C-96924-1B

[illegible]

12.16.91

FHI DATA
REWRITTEN to
K-H print

8 FMEA

TEXAS INSTRUMENTS



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	COMMENTS
1	2.84 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93	
	⊕ 0.1 ⊖ A	0.041	0.020	0.031	0.031	0.015	0.013	
	<u>1.98</u>	1.859	1.920	1.931	1.869	1.885	1.887	
2	22.88 MAX	18.54	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	9.59	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.
5	2.04-1.52 refl	2.040	1.732	1.703	1.727	1.701	1.796	
6	0.03-1.02refl	7.94	7.94	7.97	7.97	7.98	7.96	
		7.50		7.99				
7	1/8-25X50-40 DEG CHAMFER		N/A -	THREADS	HAVE BEEN	ADDED		
8	3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
	THD. <u>D</u>							
9	1.40 - 1.10	1.316	MEASURED	ON A CROSS	SECTIONED	PART		

TI-NHTSA 016011

F2WC-9F924-40/12590701

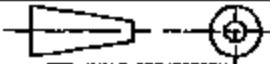
[illegible]

24 25

SPECIFICATION:

ACTUATION PRESSURE---- 862 $\pm$ 241 kPag (125 $\pm$ 35 psig).
RELEASE PRESSURE----- 138 kPag MIN. (20 psig)



		A5	ADDED CONTROL ITEM BLOCK	9-5-91	CR	JL
		A6	REMOVED "FOR FINAL, ARMY USE..."	9-5-91	CR	JL
		A3	WAS 57PBL3-3	9-5-91	CR	JL
		A2	WAS F2WC-9F324-BA	9-5-91	CR	JL
B438	2013A	A1	WAS GR.23 MAX OUT	9-5-91	CR	JL
B438	301		RELEASED	1-11-91		
EP/WR	DR/VECH	CHB	REVISION	DATE	DR	CK
UNLESS OTHERWISE SPECIFIED:		MATERIAL/FINISH				
PART TOLERANCES						
1 ONE PLACE DECIMAL 2 TWO PLACE DECIMAL 3 CASTING 4 ANGLE						
SEE ENG INTERPRETATION SPEC. P. 6. 000000		 3RD ANGLE PROJECTION				
SCALE 2 X SIZE						
OR NOT SCALE POINT						
PART DESCRIPTION						
METRIC		ASSY-PRESSURE SWITCH				
						
DR R. KENNEDY		DATE 12-15-90		 CAD DRAWING OF ELECTRICAL IS ELECTRONIC		
CK D. WERNER		DATE 1-3-91		NO MANUAL CHANGE		
CUST						
APPROVED BY	DATE	AS SHOWN	FORM. SIZE			2ND REL. LEVEL
ENG J. COBB	1-11-91		C			
MATERIAL		PART NUMBER				
WFO J. GALT	1-11-91	BASE NUMBER	SUFFIX	SHEET LEVEL		
DESIGN (C.A. MILL)		0-12590701-A				

**DRAWINGS AVAILABLE UPON
REQUEST**

KELSEY-HAYES ENGINEERING CHANGE NOTICE

PROD. AREA	SUBJECT	PROGRAM	MODEL YEAR	CUSTOMER(S)	ECN NO.
VALVES	FN-10 PRESSURE SWITCH	DUAL PROP	93	FORD	25136
NATURE OF CHANGE:	REVISE THE T.I. PRESSURE SWITCH - NEW AUTOMATED VERSION IS AVAILABLE.				PAGE 1 OF 1
NOTE: THIS IS A CHANGE TO CUSTOMER DRAWING.					EPA NO.: 48011-B
REASON: CUSTOMER REQUEST [X] TEST [] VENDOR/PURCHASING REQUEST []					CLASSIFICATION:
T.I. MM HAS THEIR AUTOMATED ASSY'S.					REGULAR [X]
- NEED TO UPDATE PRINTS SO ISIR WILL REFLECT PRODUCTION LEVEL SWITCH.					RECORD []
KS THAT WILL BE PERFORMED ON ENTIRE VALVE FOR ISIR TO FORD.					MANDATORY []
					EXPEDITED []
IS TEST REQUIRED: YES [X] NO [] CONCURRENT [] TEST DURATION, DAYS: 30					K-H DEV./MCR:
APPROVED BY:					K-H EST.:
PRODUCT ENGINEERING					K-H NTR.:
DATE					ATTACHMENTS:
J.H. COSSINS					DISTRIBUTION CODE:
8-2-91					INITIATED BY: J.COSSINS 8-2 DATE: 9-3-91
O.A. T.PRYOR/LV					
8-20-91					
SALES D.CLINE/CD					
8-8-91					
CUST AUTHORIZATION YES [] N R []					
MANUFACTURING: R.BELLAR					
8-20-91					
ENGINEERING SERV. CAW					
SERVICE MANUAL REVIEWED? NO					
FMEA REVIEWED? YES					
FMEA REVISED?					
DELETE REPLACE RELEASE CHANGE CHG. LEVEL PART NAME / REVISION CD-OR PURCH. STOCK					
D-12590701 AS ASSY - PRESSURE SWITCH 1 X NO STK					
- REVISE TO T.I. PRINT 77PSL2-1 WAS TO 57PSL5-3.					
NOTE THE ONLY VISIBLE CHANGE IS THE OVERALL DIM WITH					
ON SWITCH. SO SPECIFIC CHANGES ARE:					
1) CHANGE TO "57.15 MAX" WAS "62.23 MAX"					
2) CHANGE TO "P2VC-9F924-AA" WAS "P2VC-9F924-BA"					
3) CHANGE T.I. W/N TO "77PSL2-1" WAS "57PSL5-3"					
4) REMOVE "FOR FINAL ASSY SEE DWG. 12575501"					
ASSY'S - FN-10 DUAL PROP 1 NO STK					
- REFLECT ABOVE CHANGES ON THESE DRAWINGS AND PARTS					
LIST					
Q-12603101 B					
D-12603101 B					
D-12603401 B					
P-12603401 B					
P-12603101 B					
APPROVED					
PLANT(S) INVOLVED: AUG 20 1991 MILFORD					
COMPLETE ATTACHED COST SHEET					
ECN NO. 25136					

A1. B402

File: 77PLKH

TEXAS
INSTRUMENTS

ATTACHED DOCUMENTS 0702

PAGE _____ OF _____

SAMPLE REPORT

REASON FOR REPORT	VENDOR	P.O.	PART NO. <i>P/C</i>	REV.
NEW PART			77PSL2-1	
REPLACEMENT TOOL.	REPORT REC. BY	DATE	INSPECTED BY	DATE
CORRECTED TOOL.	<i>K-H</i>			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-CONFORMANCE IN THE APPROPRIATE COLUMN.			
REVIEW				
OTHER				

		(CIRCLE ALL OUT OF TOLERANCE DIMENSIONS)						DISPOSITION	
	K-H	SPEC:	1B	2C	3C	4D	5D	6D	
5	1	2.84 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93	
		0.1 (S) A	0.041	0.020	0.033	0.031	0.015	0.013	
		<u>1.90</u>	1.859	1.920	1.933	1.869	1.885	1.887	
15	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	
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	1.204 - 1.521 ref.	2.040	1.732	1.723	1.727	1.781	1.796	
23	6	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° - 4°	N/A - THREDS HAVE BEEN ADDED						
		at Hammer							
30	8	3/8 - 24 UNF - 2A	OK	OK	OK	OK	OK	OK	
		T.H.D. 5D							
31	9	1.40 - 1.10	1.316	measured on a Cross Sectional Part					
32	10	0.16 D	0.051	0.048	0.048	0.008	0.030	0.056	
33	11	4° - 4°	OK	measured on a Cross Sectional Part					
34	12	43° - 41°	41° 21'	"	"	"	"	"	
35	13	60° - 25°	N/A - THREDS HAVE BEEN ADDED						
38	14	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	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	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.

REVISION REQ'D

MFG. ENG.:

QRA ENG.:

TI-NHTSA 016016

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 # 6B ACTUAL	CAVITY # 7B ACTUAL
1	2.84 - 3.05	2.92	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	1.869	1.885	1.887	
2	22.08 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	9.59	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.
5	2.04-1.52 ref	2.040	1.732	1.783	1.727	1.781	1.796	
6	10 8.03-7.82ref	7.94	7.94	7.97	7.97	7.98	7.96	
		7.50		7.99				
7	0.25/50-40 DED CHAMFER		N/A -	THREADS	HAVE BEEN	ADDED		
8	3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
	ITD. D							
9	1.40 - 1.10	1.356	MEASURED	ON A CROSS	SECTIONED	PART		

TI-NHTSA 016017

FZVC-9F924-AB/12590701

TI-NHTSA 018018

Rewrote
FAI DATA
+ KIT PRINT
12-16-91

12-13-91

Need permission
Ford Part#



CELBEY-HAYES ENGINEERING CHANGE NOTICE

PROD. AREA: VALVES	SUBJECT: FM-10 PRESSURE SWITCH	PROGRAM: DUAL PROP	MODEL YEAR: 91	CUSTOMER(S): FORD	ECN NO.: 25136			
NATURE OF CHANGE: REVISE THE T.I. PRESSURE SWITCH - NEW AUTOMATED VERSION IS AVAILABLE.				EPA NO.: 48011-B	CLASSIFICATION:			
NOTE: THIS IS A CHANGE TO CUSTOMER DRAWING.				REF. DOCUMENTS:	REGULAR ☒			
REASON: CUSTOMER REQUEST, ☒ PLANT REQUEST, ☐ VENDOR/PURCHASING REQUEST, ☐ T.I. NOW HAS THEIR AUTOMATED ASSY GOING. - NEED TO UPDATE PRINTS SO ISIR WILL REFLECT PRODUCTION LEVEL SWITCH. - TEST WILL BE PERFORMED ON ENTIRE VALVE FOR ISIR TO FORD.				CUST. CHG.:	RECORD ☐			
				K-H DEV./MCR:	MANDATORY ☐			
				K-H EST.:	EXPEDITED ☐			
				K-H NTR.:	VEHICLE APPLICATION:			
				ATTACHMENTS:	PASSENGER ☒			
				DISTRIBUTION CODE:	TRUCK ☐			
					TRAILER ☐			
					SERVICE ☐			
IS IT REQUIRED, YES ☒ NO ☐ CONCURRENT ☐ TEST DURATION, DAYS: 30				INITIATED BY: J. COSSINS B-2	DATE: 9-5-91			
APPROVED BY:								
PRODUCT ENGINEERING		DATE	DATE		DATE			
RESP ENGINEER	J.M. COSSINS	8-2-91	D.A. T. PRYOR/LV	8-20-91	ESTIMATING K.W. HAWKINS 8-20-91			
MATERIALS	NR		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. BEIJAR 8-20-91			
CHIEF ENGINEER	C. DOWDING	8-2-91	COST RECOVERABLE? YES ☐ NO ☒		ENGINEERING SERV. GAW			
(SEE ENGINEERING MANUAL SECTION 2.61)			SERVICE MANUAL REVIEWED? NO					
AFFECTED DESIGN DATA BANK, REVIEWED? YES			SERVICE MANUAL REVISED? NO					
REVISED? NO			FMEA REVIEWED? YES					
FMEA REVISED? NO								
DELETE	REPLACE	RELEASE	CHANGE	DWG. 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 VERIFIABLE CHANGE IS THE OVERALL LENGTH ON SWITCH. SO SPECIFIC CHANGES ARE: 1) CHANGE TO "57.15 MAX" WAS "62.23 MAX" 2) CHANGE TO "77P2VC-9F924-AA" WAS "P2VC-9F924-HA" 3) CHANGE T.I. P/R 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			
			D-12603401	B	LIST			
			P-12603601	B				
			P-12603101	B				
APPROVED								
PLANT(S) INVOLVED: AUG 20 1991						ECN NO. 25136		

TI-NHTSA 016020

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2WC-9F924-AB/12590701

BLUEPRINT SPEC	CAVITY # 1B ACTUAL	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4D ACTUAL	CAVITY # 5D ACTUAL	CAVITY # 6D ACTUAL	COMMENTS
1 2.84 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93	
2 0.1 ⑤ A	0.041	0.030	0.033	0.031	0.015	0.013	
3 1.90	1.859	1.920	1.933	1.869	1.885	1.887	
4 22.88 MAX	18.44	13.57	18.54	18.60	18.63	19.61	
	18.56	18.66	18.66	18.77	18.71	18.67	
5 57.15 MAX	55.65	55.70	55.71	55.70	55.69	55.68	
6 9.66 - 9.39	9.39	9.61	9.57	9.49	9.38	9.35	
7 2.04-1.52 ref	2.040	1.732	1.783	1.727	1.781	1.796	
8 8.03-7.82ref	7.94	7.94	7.97	7.97	7.98	7.96	
	7.50		7.99				
9 0.25X30-40 DEG CHAMFER		N/A -	THREADS	HAVE BEEN	ADDED		
10 3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
11 0. -0-							
12 1.40 - 1.10	1.316	MEASURED	ON A CROSS	SECTIONED	PART		

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-9F924-AB/12590701

	BLUEPRINT SPEC	CAVITY # 10 ACTUAL	CAVITY # 20 ACTUAL	CAVITY # 30 ACTUAL	CAVITY # 40 ACTUAL	CAVITY # 50 ACTUAL	CAVITY # 60 ACTUAL	COMMENTS
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	
	<u>1.90</u>	1.859	1.920	1.933	1.869	1.885	1.887	
2	22.80 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	55.78	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.
5	2.84-1.52 ref	2.040	1.732	1.783	1.727	1.781	1.796	
6	⊕ 0.03-7.62ref	7.94	1.94	7.97	7.97	7.90	7.96	
		7.58		7.99				
7	10.25X50-40 DEG CHAMFER		N/A -	THREADS	HAVE BEEN	ADDED		
8	3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
	LTHD. <u>1-0-</u>							
9	1.40 - 1.10	1.316	MEASURED	ON A CROSS	SECTIONED	PART		

TEXAS INSTRUMENTS



DIMENSIONAL ANALYSIS ON PART NUMBER

F2VC-WF924-AB/12590701

	BLUEPRINT SPEC	CAVITY # 1B ACTUAL	CAVITY # 2C ACTUAL	CAVITY # 3C ACTUAL	CAVITY # 4B ACTUAL	CAVITY # 5D ACTUAL	CAVITY # 6D ACTUAL	COMMENTS
1	2.84 - 3.05	2.93	2.92	2.92	2.92	2.93	2.93	
	⊕ 0.1 15 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	
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	31.15 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	9.50	9.55	
		9.63	9.66	9.64	9.62	9.74	9.67	OUT OF SPEC. - E/A
5	2.04-1.52 REF	2.040	1.732	1.783	1.727	1.781	1.796	
6	8.03-7.82 REF	7.94	7.94	7.97	7.97	7.98	7.96	
		7.50		7.99				
7	10.25K50-40 DEG CHAMFER	N/A	N/A	THREADS	HAVE BEEN	AIDED		
8	3/8-24UNF-2A	OK	OK	OK	OK	OK	OK	
	THD. 0							
9	1.40 - 1.10	1.316	MEASURED	ON A CROSS	SECTIONED	PART		

F24C-9F924-AB/12590701

[illegible]

FORD PART NO. VF2VC-9F924-AA (A2)

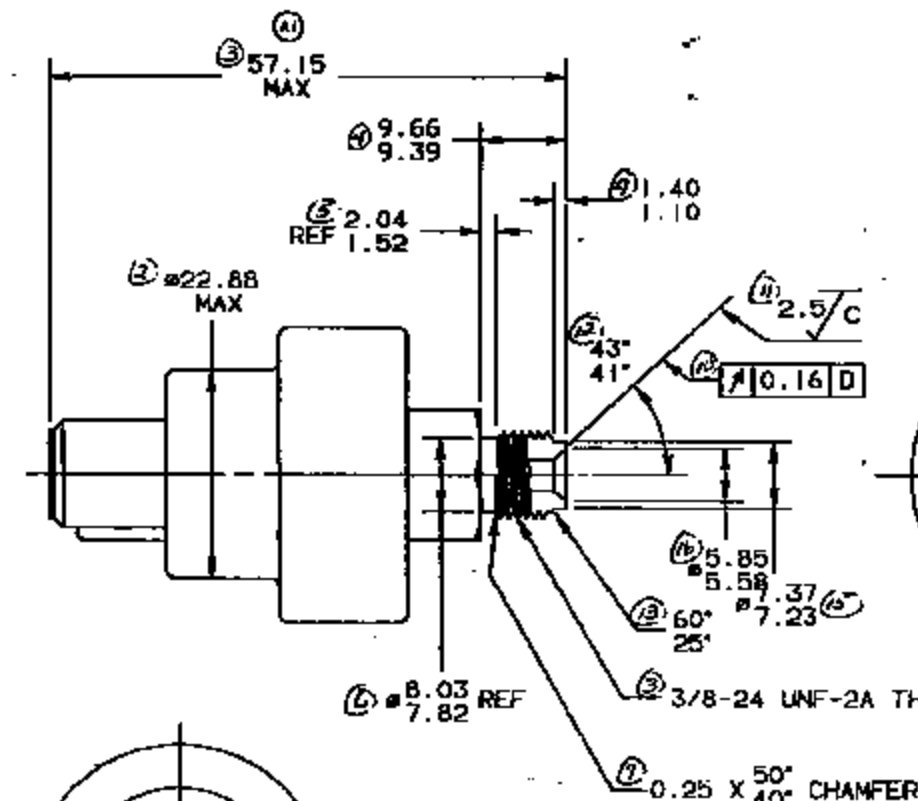
(A4) (A5)

▽ CONTROL ITEM - THE ▽ SYMBOL ALSO IDENTIFIES PRODUCT ENGINEERING DESIGNATED CRITICAL CHARACTERISTICS. THESE, AND ADDITIONAL CRITICAL CHARACTERISTICS IDENTIFIED BY PROCESS REVIEWS, MUST APPEAR ON THE Q-101 CONTROL PLAN(S) WHICH REQUIRE PRODUCT ENGINEERING APPROVAL.

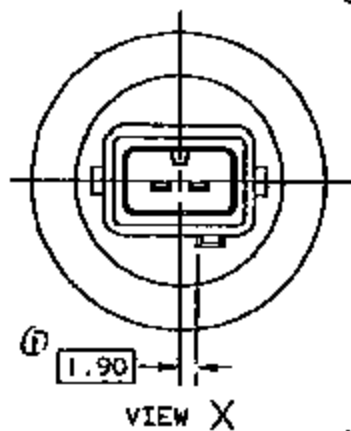
SPECIFICATION:

DEVICE MUST CONFORM TO FORD MOTOR CO.
SPEC NO. ES-F2VC-9F924-A

ACTION PRESSURE----- 862 ±241 kPag (125 ±35 psig).
RELEASE PRESSURE----- 138 kPag MIN. (20 psig)

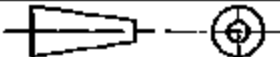


TI-NHTSA 016026



VIEW X

(A3)

		A5	ADDED CONTROL ITEM BLOCK	9-5-91	CS	JT
		A4	DESIGNED "FOR FINAL MNT USE..."	9-5-91	CS	JT
		A3	WAS STPPLS-3	9-5-91	CS	JT
		A2	WAS F2VC-9F924-AA	9-5-91	CS	JT
B43B	2513B	A1	WAS 82.23 MAX DIM	9-5-91	CS	JT
B43B	301		RELEASED	1-11-91		
EP/WR	DR/EDN	CHD	REVISION	DATE	DR.	CK.
UNLESS OTHERWISE SPECIFIED:			MATERIAL/FINISH			
PART TOLERANCES						
C			ONE PLACE DECIMAL			
E			TWO PLACE DECIMAL			
F			CASTING			
H			REGULAR			
SEE DIM. INTERPOLATION SPEC. P. 8 - 000000			 3RD ANGLE PROJECTION			
SCALE 2 X SIZE						
REPLACE PART						
PART DESCRIPTION						
METRIC						
			ASSY-PRESSURE SWITCH			
OR R. KENNEDY		DATE 12-15-90	 CADD DRAWING IS ELECTRONIC NO MANUAL CHANGE			
OR D. MURPHY		DATE 1-3-91				
CLUT						
APPROVED BY	DATE	SIGNATURE	REVISION			DWG. REV. LEVEL
ENG J. CALMS	1-11-91	C				
MAY						
RFB J. CALMS	1-11-91					
DES MGR E.A. WILLE	1-11-91					
			PART NUMBER			
			BASE NUMBER SUFFIX CHANGE LEVEL			
			D-12590701-A			

**DRAWINGS AVAILABLE UPON
REQUEST**

No. 282414

Supplier Request for Engineering Approval

DATE 06 APR 1993

SUPPLIER TO COMPLETE		DESIGN CONTROL	
SUPPLIER NAME AND ADDRESS		FORM NUMBER	
TEXAS INSTRUMENTS, INC. 34 FOREST STREET, ATTLEBORO, MA 02703		15-1103	
FORM AND/OR SUPPLIER PART NAME AND PART NUMBER OF ASSEMBLY AND ITS COMPONENTS		CONTROL TYPE	
SW. ASSY - SPEED CONTROL DEACTIVATION		APPROPRIATE	
F2VC-9F924-AB F58A-9F924-AA		☒ YES ☐ NO	
F2AC-9F924-AA F5DC-9F924-AA		CONTROL TYPE	
		☒ YES ☐ NO	
CHANGE: ☒ DESIGN ☐ COMPOSITION ☐ PROCESSING DESCRIPTION			
INCREASE ACTUATION PRESSURE SPECIFICATION FROM 125 PSIG +/- 35 PSIG TO 250 PSIG +/- 50 PSIG.			
EFFECT OF CHANGE:			
WILL ALLOW USE OF COMMON COMPONENTS FOR PASSENGER - CAR SWITCHES AND LIGHT TRUCK SWITCHES. WILL RESULT IN SIMPLIFICATION OF MANUFACTURING PROCESS.			
INTERCHANGEABILITY AFFECTED		TOOLING OR FACILITY CHANGES REQUIRED	
ASSEMBLY ☐ YES ☒ NO		☐ YES ☒ NO	
COMPONENTS ☐ YES ☒ NO		IF YES, COST EFFECT \$	
TIME TO INCORPORATE CHANGE AFTER APPROVAL		PIECE COST AFFECTED	
IMMEDIATE		☒ YES ☐ NO	
WILL INCORPORATION OF CHANGE AFFECT SHIPPING SCHEDULE?		IF YES, COST EFFECT \$	
☐ YES ☒ NO		.05 REDUCTION	
PRODUCT ENGINEERING TO COMPLETE		SIGNATURE	
FOR IN PROCESS		4/6/93	
☒ APPROVED ☐ REJECTED		DATE	
BLANKET APPROVAL GRANTED FOR SUBSEQUENT CHANGES WHICH ARE SAME AS DESCRIBED ABOVE		CONCURRED BY	
☐ YES ☐ NO		DATE	
REASON FOR REJECTION OR QUALIFYING CONDITIONS OF ACCEPTANCE:		SAMPLE OF CHANGED COMPONENT REQUIRED	
		☐ YES ☐ NO	

TI-NHTSA 016027

* This approval is granted upon the understanding that it is advisory in nature and in no manner changes the Seller's original responsibility

2/26/99

4/15/15 Base

Run
A.

Agilis

Replow

EX 3423-49

Run

6/28/90

Calamity ⁴³⁰⁰

11/9/90

LT. Teeue

B)

Calamity 4300

CN

155597

(CF)

4/9/91

C)

Norpl GTX 830

(-3)

5/4/92

dated

CRM 08996

(CF)

D)

Added -4 thru -9

5/1/92

Change color to grey

(on -2)

CRM 09125

(CF)

Norpl GTX 830
(-5, 6, 8, 9)

Calamity 4300

E)

Added -10

to Norpl

7/9/92

CRM 09981

(CF)

F)

changed in (NO mat'l change)

12/29/93

CRM 15919

(CF)

(A.R.)

2/26/99

46515 Base

KW

Cadraz

G) ✓ Dem ^{critical}
Added CCE note
no mtl

5/1/96

CD.W

CRN 29757 CFF

H) ✓ Note 4 was
required, was 50%

5/20/96

CDW

CRN 29867

CFF

J) ✓ Proj. 3 within
dim
Added note con dim

11/13/97

DS 66

CRN 32884 O.L.

K) ✓ Chg dim places
Revised 45-55 Chaf

12/16/97

DS 66

CRN 38265 J.G.

L) ✓ 1015/1045 Chaf 1030/1020

2/13/98

DS 66

CRN 39157 DS

467582

2/26/99

CRW

m) Added -11

✓ mat'l

4/1/98

D/H

GENOYL GTX 830

CRM 39965

(D.M.)

N) Added -12

CLANUS 4300#1 white

5/6/98

D/H

ECN M48538

(MF)

No. 147678

Supplier Request for Engineering Approval

DATE February 26, 1992

SUPPLIER TO COMPLETE

SUPPLIER NAME AND ADDRESS

TEXAS INSTRUMENTS INCORPORATED, 94 FOREST STREET, ATTLEBORO, MA 02703

FORD AND/OR SUPPLIER PART NAME AND PART NUMBER OF ASSEMBLY AND ITS COMPONENTS

(delta)
F2VC-9F924-ASDESIGN CONTROL
DATE REVISION
7-100 000DESIGN AND
AFFECTED☐ YES ☒ NO

CRITICAL YES

☐ YES ☒ NO

CHANGE

☒ DESIGN☐ COMPOSITION☐ PROCESSING

DESCRIPTION

ALLOW ALTERNATE RIVET HEAD CONFIGURATION, ON RIVET WHICH JOINS THE CONTACT ARM TO THE MOVABLE TERMINAL, INTERNAL TO SWITCH. PURPOSE IS TO IMPROVE THE FEEDING OF THE RIVET IN THE AUTOMATED ASSEMBLY PROCESS.

EFFECT OF CHANGE

REDUCE OR ELIMINATE FEEDING PROBLEMS WITH PRESENT CONFIGURATION; INCREASE EQUIPMENT EFFECTIVITY.

INTERCHANGEABILITY AFFECTED

ASSEMBLY

☐ YES☒ NO

COMPONENTS

☐ YES☒ NO

TOOLING OR FACILITY CHANGES REQUIRED

IF YES, COST EFFECT \$

☐ YES☒ NO

TIME TO INCORPORATE CHANGE AFTER APPROVAL

IMMEDIATE

PRICE COST AFFECTED

IF YES, COST EFFECT \$

☐ YES☒ NO

WILL INCORPORATION OF CHANGE AFFECT SHIPPING SCHEDULE

☐ YES☒ NO

SIGNATURE

[Signature]

DATE

PRODUCT ENGINEERING TO COMPLETE

FOR IN PROCESS

DATE APPROVED

☐ REJECTED☒ APPROVED

Bleane

920227

COMMENTS BY

[Signature]

DATE

2/27/92

DRAWING APPROVAL GRANTED FOR SUBSEQUENT CHANGES WHICH ARE SAME AS DESCRIBED ABOVE

☐ YES☒ NO

SAMPLE OF CHANGED COMPONENT REQUIRED

Recd

☐ YES☒ NO

REASON FOR REJECTION OR DISCREPANCY CONDITIONS OF ACCEPTANCE

Pan head  replaces oval head 

TORQUE SPEC DATA SUPPORTS CHANGE

* This approval is granted upon the understanding that it is advisory in nature and in no manner changes the Seller's original responsibility for insuring that all characteristics, designated in the applicable engineering specifications and/or inherent in samples as originally tested and approved, are maintained. Seller accepts full responsibility for the changes or types of changes listed above; and should such changes result in less satisfactory performance than experienced with the originally approved item, Seller will fully reimburse the Buyer for all expenses incurred to correct the deficiency.

**77PS-SREA-ALERT UPDATE
(FOR REFERENCE ONLY)**

Entry No.	SREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	T.P. N.
1	400068	27-Feb-95	Use of alternate pressure tapper for capacity improvement. Scribe mark indicating "test pass" to be on crimp ring rather than on the plastic connector base.	F2AC-8P824-AA F2VC-8P824-AB F3DC-8P824-AA F68A-8P824-AA F3TA-8P824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
2	400068	27-Feb-95	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F2AC-8P824-AA F2VC-8P824-AB F3DC-8P824-AA F68A-8P824-AA F3TA-8P824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
3	400097	8-Sep-94	Change p.n. from p.n. 94DA-8P824AA to p.n. 94DA-8P824AB	94DA-8P824AB	77P8L4-1
4	400811	17-Mar-94	Use of color pigments in plastic beze containing alternate material in lieu of heavy metal per governmental regulations	F3TA-8P824-CA	77P8L3-3
5	282442	22-Jan-93	Use of part submission of prior level "BA". Converting from snap to quiet disc switch. Change is to internal disc only.	F3TA-8P824-CA	77P8L3-3
6	147093	2-Dec-92	Reduce internal cup dimension by .004" from .081" to .082" nominal. Address potential open circuit condition under vacuum, tested to dry envelope under stack- up conditions	F2VC-8P824-AB F2AC-8P824-AA F3DC-8P824-AA	77P8L2-1 77P8L3-1 77P8L5-2
7	147073	21-Nov-91	Change thread gaging specification from 2A go to 3A go ring gage. Use of ANSI B1.1 Industry Standard for threaded allowance.	F3TA-8P824-CA	77P8L3-3
8	147071	5-Nov-91	Use blue colored environmental seal in lieu of reddish color with black stripe to help differentiate seal; to reduce potential assembly errors.	F2VC-8P824-AB	77P8L2-1
9	148090	3-Apr-91	Change terminal position dimension from 0.50+/- 0.20mm to 0.50+/- 0.25mm	F2TA-8C886-AA	87P8L5-2
10	147095	3-Apr-91	Change terminal position dimension from 0.50+/- 0.20mm to 0.50+/- 0.25mm	F3TA-8P824-CA	77P8L3-3
11	Alert No: A10108193	11-Oct-91	Use of manually loaded senior crimp machine vs auto in-line loaded crimper. Manual crimp passes E8 tests.	F2VC-8P824-AB	77P8L3-1

77P88REAUPDATE

Entry No.	BREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	T.P. N.
1	408980	27-Feb-85	Use of alternate pressure tester for capacity improvement. Scribe mark (indicating "test pass") to be on crimp ring rather than on the plastic connector base.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F3BA-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
2	408988	27-Feb-85	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F3BA-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
3	408997	8-Sep-84	Change p.n. from p.n. 84DA-8F824AA to p.n. 84DA-8F824AB	84DA-8F824AB	77P8L4-1
4	408911	17-Mar-84	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations	F3TA-8F824-CA	77P8L3-3
5	282442	22-Jan-83	Use of part submission of prior level "BA". Converting from snap to quiet disc switch. Change is to internal disc only.	F3TA-8F824-CA	77P8L3-3
6	147883	2-Dec-82	Reduce internal cup dimension by .004" from .091" to .087" nominal. Address potential open circuit condition under vacuum, traced to disc envelope under stack-up conditions	F2VC-8F824-AB F2AC-8F824-AA F3DC-8F824-AA	77P8L2-1 77P8L3-1 77P8L5-2
7	147873	21-Nov-81	Change thread gaging specification from 2A go to 3A go ring gage. Use of ANSI B1.1 Industry Standard for plated thread allowance.	F3TA-8F824-CA	77P8L3-3
8	147871	5-Nov-81	Use blue colored environmental seal in lieu of reddish color with black stripe to help differentiate seal to reduce potential assembly errors.	F2VC-8F824-AB	77P8L2-1
9	149588	3-Apr-81	Change terminal position dimension from 0.50+/- 0.20mm to 0.50+/- 0.25mm	F2TA-8C888-AA	57P8L5-2
10	147885	3-Apr-81	Change terminal position dimension from 0.50+/- 0.20mm to 0.50+/- 0.25mm	F3TA-8F824-CA	77P8L3-3
11	Alert No. A10186193	11-Oct-81	Use of manually loaded spread crimp machine vs auto in-line loaded crimper. Manual crimp passes E&S tests.	F2VC-8F824-AB	77P8L2-1

**77PS-SREA-ALERT UPDATE
(FOR REFERENCE ONLY)**

Entry No.	SREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	T.P. N.
1	409886	27-Feb-86	Use of alternate pressure tester for capacity improvement. Scribe mark indicating "test case" to be on crimp ring rather than on the plastic connector base.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F58A-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
2	409886	27-Feb-86	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F58A-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
3	409837	8-Sep-84	Change p.n. from p.n. 94DA-8F824AA to p.n. 94DA-8F824AB	94DA-8F824AB	77P8L4-1
4	409811	17-Mar-84	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations	F3TA-8F824-CA	77P8L3-3
5	282442	22-Jan-83	Use of part substitution of prior level "BA". Converting from snap to quiet disc switch. Change is to internal disc only.	F3TA-8F824-CA	77P8L3-3
6	147893	2-Dec-82	Reduce internal cup dimension by .004" from .081" to .067" nominal. Address potential open circuit condition under vacuum, traced to disc envelope under stack-up conditions	F2VC-8F824-AB F2AC-8F824-AA F3DC-8F824-AA	77P8L2-1 77P8L3-1 77P8L5-2
7	147873	21-Nov-81	Change thread gaging specification from 2A go to 3A go ring gage. Use of ANSI B1.1 Industry Standard for plated thread allowances.	F3TA-8F824-CA	77P8L3-3
8	147871	6-Nov-81	Use blue colored environmental seal in lieu of reddish color with black stripe to help differentiate seal, to reduce potential assembly errors.	F2VC-8F824-AB	77P8L2-1
9	149696	3-Apr-81	Change terminal position dimension from 0.60+-0.20mm to 0.60+-0.25mm	F2TA-8C858-AA	57P8L8-2
10	147885	3-Apr-81	Change terminal position dimension from 0.60+-0.20mm to 0.60+-0.25mm	F3TA-8F824-CA	77P8L3-3
11	Alert No: A10188183	11-Oct-81	Use of manually loaded sensor crimp machine vs auto in-line loaded crimper. Manual crimp passes ES tests.	F2VC-8F824-AB	77P8L2-1

Entry No.	BREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	TI-P. N.
1	409988	27-Feb-85	Use of alternate pressure easier for capacity improvement. Scribe mark indicating "test pass" to be on crimp ring rather than on the plastic connector base.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F38A-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
2	409988	27-Feb-85	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F38A-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
3	409937	8-Sep-84	Change p.n. from p.n. 84DA-8F824AA to p.n. 84DA-8F824AB	84DA-8F824AB	77P8L4-1
4	409911	17-Mar-84	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations	F3TA-8F824-CA	77P8L3-3
5	282442	22-Jan-83	Use of part submission of prior level "BA". Converting from auto to auto disc switch. Change is to internal disc only.	F3TA-8F824-CA	77P8L3-3
6	147893	2-Dec-82	Reduce internal cup dimension by .004" from .091" to .087" nominal. Address potential open circuit condition under vacuum, trapped to disc envelope under slack- up conditions	F2VC-8F824-AB F2AC-8F824-AA F3DC-8F824-AA	77P8L2-1 77P8L3-1 77P8L5-2
7	147673	21-Nov-81	Change thread gaging specification from 2A go to 3A go first gage. Use of ANSI B1.1 industry standard for plated thread allowance.	F3TA-8F824-CA	77P8L3-3
8	147871	6-Nov-81	Use blue colored environmental seal in lieu of reddish color with black stripe to help differentiate seal; to reduce potential assembly errors.	F2VC-8F824-AB	77P8L2-1
9	148586	3-Apr-81	Change terminal position dimension from 0.50+-0.20mm to 0.60+-0.25mm	F3TA-8C838-AA	87P8L5-2
10	147895	3-Apr-81	Change terminal position dimension from 0.50+-0.20mm to 0.60+-0.25mm	F3TA-8F824-CA	77P8L3-3
11	Alert No. A101881B3	11-Oct-81	Use of manually loaded sensor crimp machine vs auto in-line loaded crimper. Manual crimp passes EB tests.	F2VC-8F824-AB	77P8L2-1

-MSG NO= 428683 FR=SB01 TO=ZANN SENT=11/21/91 02:02 PM
BP=153 BT=C DTG=0050 CC=00101 BY=SB01 AT=11/21/91 02:02 PM

TO: Steve Major WKLZ

CC: Dave Charn ZANN

JB: Steve Offiler SB01

SJ1 Ford SHEA No. 147673

Steve, I'm sending you via normal mail the subject SHEA. This should be carried to John Falkey for his approval. The topic is thread gaging - we are presently using a procedure which is more strict than the ANSI B1.1 recommended procedure, which produces false rejections. The SHEA asks for Ford's approval to use the ANSI standard procedure. I believe Dave mentioned this verbally during a visit recently, and John was receptive to it. Once you receive the SHEA, please contact me if you or John need any further explanation or clarification.

Regards,
Steve O.

TI-NHTSA 016036

No. 147678

Supplier Request for Engineering Approval

DATE February 26, 1992

SUPPLIER TO COMPLETE

SUPPLIER NAME AND ADDRESS

TEXAS INSTRUMENTS INCORPORATED, 34 FOREST STREET, ATTLEBORO, MA 02703

TOLERANCE SUPPLIER PART NAME AND PART NUMBER OF ASSEMBLY AND ITS COMPONENTS

(delete)
P2VC-9P224-AS

DESIGN CHANGES	
YES	NO
☒	☐
MATERIAL CHANGES	
YES	NO
☐	☒

CHANGE: ☒ DESIGN ☐ COMPOSITION ☐ PROCESSING ☐ DESCRIPTION

ALLOW ALTERNATE RIVET HEAD CONFIGURATION, ON RIVET WHICH JOINS THE CONTACT ARM TO THE MOVABLE TERMINAL, INTERNAL TO SWITCH. PURPOSE IS TO IMPROVE THE FEEDING OF THE RIVET IN THE AUTOMATED ASSEMBLY PROCESS.

EFFECT OF CHANGE

REPAIR OR ELIMINATE FEEDING PROBLEMS WITH PRESENT CONFIGURATION; INCREASE EQUIPMENT EFFECTIVITY.

INTERCHANGABILITY AFFECTED ASSEMBLY ☐ YES ☒ NO COMPONENTS ☐ YES ☒ NO	TOOLS OR FACILITY CHANGES REQUIRED IF YES, COST EFFECT \$ ☐ YES ☒ NO
TIME TO INCORPORATE CHANGE AFTER APPROVAL IMMEDIATE	PRICE COST AFFECTED IF YES, COST EFFECT \$ ☐ YES ☒ NO
WILL INCORPORATION OF CHANGE AFFECT SHIPPING SCHEDULE? ☐ YES ☒ NO	SIGNATURE <i>[Signature]</i> OFFICE REPRESENTATIVE
PRODUCT ENGINEERING TO COMPLETE	
FOR IN PROCESS ☒ APPROVED ☐ REJECTED ☐ APPROVED BY <i>[Signature]</i> DATE 9/20/92	DATE 1/27/94
BLANKET APPROVAL GRANTED FOR SUBSEQUENT CHANGES WHICH ARE SAME AS DESCRIBED ABOVE ☐ YES ☒ NO	SAMPLE OF CHANGED COMPONENT REQUIRED <i>[Signature]</i> ☐ YES ☒ NO
REASON FOR REJECTION OR QUALIFYING CONDITIONS OF ACCEPTANCE	

Pin head  replaces oval head 

TOLERANCE SPEC SUPPORTS CHANGE

TI-NHTSA 018037

This approval is granted upon the understanding that it is advisory in nature and in no manner changes the Seller's original responsibility for insuring that all characteristics, designated in the applicable engineering specifications and/or inherent in samples as originally tested and approved, are maintained. Seller accepts full responsibility for the changes or types of changes listed above; and should such changes result in less satisfactory performance than experienced with the originally approved item, Seller will fully reimburse the Buyer for all expenses incurred to correct the deficiency.

March 26, 1992

To: Gary Snyder
 Cc: Steve Major
 Alby Berman.
 Charlie Douglas
~~XXXXXXXXXXXXXXXXXXXX~~

S.O.
 2

From: Norm Freda

Subject: SREA's at Ford for Hexport, Rivet, and Crimp Ring Change

On 3-25 I met with Gary Berlino to discuss status of above SREA's and determine the exact process to obtain approval at Ford Motor Company. He explained that it is engineering's responsibility to approve the change. The supplier then takes the approved SREA to purchasing. The buyer then has the responsibility to authorize the change. In the case where the part is supplied to a Tier 1 Supplier, the manufacturer can submit the SREA direct to Ford (as requested by Bruce Pease and Gary Berlino) or submit through the Tier 1 (as requested by John Kaippel).

To help organize this effort at Ford I have expanded your customer matrix to include customer part number and buyer.

HEXPORT CHANGE

=====

FORD PART #	TI PART #	FORD ENGINEER	FORD BUYER
F2VC-9F924-AA	77PSL2-1	Bruce Pease	Fred Hendershot

Status: Bruce has requested a sample tryout at one Tier 1 Supplier

F3TA-9F924-AA	77PSL2-3	John Pelkey	Fred Hendershot
---------------	----------	-------------	-----------------

Status: 30 samples sent to John for test purposes.

E57A-3N824-AA	57PSL2-2	Tom Strauss/ John Kaippel	Barb Reichert
---------------	----------	------------------------------	---------------

Status: John has requested that request goes through United Technology

E78C-3N824-AA	57PSF3-3	Gary Berlino	Collen Weiss
E80C-2C283-AA	57PSF3-5	Gary Berlino	Collen Weiss

Status: Gary is working with Bruce Pease to approve simultaneously.

RIVET CHANGE

=====

F2VC-9F924-AA	77PSL2-1	Bruce Pease	Fred Hendershot
---------------	----------	-------------	-----------------

Status: Bruce has been given a print and samples of proposed rivet for evaluation

TI-NHTSA 016038

Steve

E57A-3N824-AA 57PSL2-2 Tom Strauss/ Barb Reichert
John Kaippel

Status: John has requested that request goes through
United Technology

E75C-3N824-AA 57PSF3-3 Gary Berlino Collen Weiss
E80C-2C283-AA 57PSF3-5 Gary Berlino Collen Weiss

Status: Gary is working with Bruce Pease to approve
simultaneously.

RIVET CHANGE

F2VC-9F924-AA 77PSL2-1 Bruce Pease Fred Hendershot

Status: Bruce has been given a print and samples of
proposed rivet for evaluation

F3TA-9F924-AA 77PSL2-3 John Pelkey Fred Hendershot

Status: John has requested samples and print of
proposed rivet

Steve,
Pls close w/ Norm
& send parts/print
to him for deliver
to John Pelkey.

CRIMP RING

E75C-3N824-AA 57PSF3-3 Gary Berlino Collen Weiss
E80C-2C283-AA 57PSF3-5 Gary Berlino Collen Weiss

Dave

These are the BREA's that I am aware of. Could you please verify accuracy
and make any corrections or additions.

Regards,
Norm

March 26, 1992

To: Gary Snyder
Cc: Steve Major
Alby Berman
Charlie Douglas
~~W. J. [unclear]~~

5.0.
2

From: Norm Freda

Sj: SREA's at Ford for Hexport, Rivet, and Crimp Ring Change

On 3-25 I met with Gary Berlino to discuss status of above SREA's and determine the exact process to obtain approval at Ford Motor Company. He explained that it is engineering's responsibility to approve the change. The supplier then takes the approved SREA to purchasing. The buyer then has the responsibility to authorize the change. In the case where the part is supplied to a Tier 1 Supplier, the manufacturer can submit the SREA direct to Ford (as requested by Bruce Pease and Gary Berlino) or submit through the Tier 1 (as requested by John Kaippel).

To help organize this effort at Ford I have expanded your customer matrix to include customer part number and buyer.

HEXPORT CHANGE

FORD PART #	TI PART #	FORD ENGINEER	FORD BUYER
*****	*****	*****	*****
F2VC-9F924-AA	77PBL2-1	Bruce Pease	Fred Hendershot

Status: Bruce has requested a sample tryout at one Tier 1 Supplier

F3TA-9F924-AA	77PBL2-3	John Palkey	Fred Hendershot
---------------	----------	-------------	-----------------

Status: 30 samples sent to John for test purposes.

E57A-3N824-AA	57PBL2-2	Tom Strauss/ John Kaippel	Barb Reichert
---------------	----------	------------------------------	---------------

Status: John has requested that request goes through United Technology

E78C-3N824-AA	57PBF3-3	Gary Berlino	Collen Weiss
E80C-2C283-AA	57PBF3-5	Gary Berlino	Collen Weiss

Status: Gary is working with Bruce Pease to approve simultaneously.

RIVET CHANGE

F2VC-9F924-AA	77PBL2-1	Bruce Pease	Fred Hendershot
---------------	----------	-------------	-----------------

Status: Bruce has been given a print and samples of proposed rivet for evaluation

TI-NHTSA 016040

5/1/92

E57A-3N824-AA 57PSL2-2 Tom Strauss/ Barb Reichert
John Kalppel

Status: John has requested that request goes through
United Technology

E75C-3N824-AA 57PSF3-3 Gary Berlino Collen Weiss
E80C-2C283-AA 57PSF3-5 Gary Berlino Collen Weiss

Status: Gary is working with Bruce Pease to approve
simultaneously.

RIVET CHANGE

=====

F2VC-9F924-AA 77PSL2-1 Bruce Pease Fred Hendershot

Status: Bruce has been given a print and samples of
proposed rivet for evaluation

F37A-9F924-AA 77PSL2-3 John Felkey Fred Hendershot

Status: John has requested samples and print of
proposed rivet

Steve,
Pls close w/ Norm
& send parts/prints
to him for delivery
to John Felkey.

CRIMP RING

=====

E75C-3N824-AA 57PSF3-3 Gary Berlino Collen Weiss
E80C-2C283-AA 57PSF3-5 Gary Berlino Collen Weiss

These are the BREA's that I am aware of. Could you please verify accuracy
and make any corrections or additions.

Regards,
Norm

Dave

FEI "77PSL2-1 F2VC-9F924-AA"

77PSL2-1 F2VC-9F924-AB

PPAP Submitted 2/5/99
9/26/91 APP'd

Alert # A10166193

By: 10/2/91 ~ MANUAL SENSOR TRIMPER IS. Auto in LINE
~ 75 Days to RESOLVE

AI
TO Ford

12/4/91 ISW RESUBMITTED AGAINST Alert

12/20/91 ISW " " " 7-14-9

* # SREA 11-5-91 change to enviro seal (red to blue)
147671

App'd 11-6-91

ISW for SREA 1-9-92

AI-1
TO H

77PSL2-1 F2VC-9F924-AB

11-20-91
(3/16/92 letter & App'd
Ford warranty)

K-H ECN #25136

8-20-91

= print 1. ~ 2 from 57ASL5-3 to 77PSL2

- reflects base change all inclusive

- P/N "F2VC-9F924-BA" to "F2VC-9F924-AA"

K-H Supplier Mfg. Change Request 12-18-91

= update & change ECN #25136

- AB in part #

- 44 in ES spec.

AI-2

77PSL2-1

F2VC-9F924-AB

© 8-27-92

TO
Pitts
Ind.

"MEDHAT HABASHI"

Pf 2 TI P/N Cust P/N Submitted APPR'd

BOOK
JAL
1.2
=
FORD

77PSL2-3 F3TA-9F924-AA 9-19-91
(light truck)
RESUB PSW - 11-25-91
PER ALERT

* SREA # 147673 11-21-91
2A VS 3A 90 999C ANSI SPEC 12/5/91

A1-3 77PSL2-1 F2IC-9F924-AA 1-9-92

ITT
TEVES

ISW # 360069 documentary
11-25-92 Changes to internal (cup)
Component dimension change for
F3DC-9F924-AA (77L5-2)

* min. change made to circuitry
subjecting an open circuit condition
after apply vacuum.

A2-1
Hilite

77PSL2-3 F6LC-9F924-AA 12/16/94 Q1

A3 77PSL3-1 F2AC-9F924-AA 4-13-92 Q1
Ford ** Partial ISW to expedite "Quiet Switch"
to be complete 6-22-92

A4-1 77PSL3-1 F2AC-9F924-AA 8-19-92
Dana ISW # 360068
Ind. & Canada

PS.3	TI P/N	CUST P/N	Submitted	Approved
43.2	77PSL3-1	F2AC-9F924-AA	11-11-94	12-5-94
revised typical			RECEIVED	4-1-96

also Cover letter to Tokyo PPAP copied ^{by} similar
 BY Ford 77PSL3-3 F3TA-9F924-CA, 6-19-92
 ISW# 112397

* comments: fluid resistance test (per section M of
 ES-F2AC-9F924-AA) to be submitted
 for information purposes to John Pelkey
 by end of August 1992.
 N.A. &

ISW# 245856 - 12/8/92

F3TA-9F924-CA

* comments: this submission (Warrant only?)
 comprises the changes to the
 Quiet Switch for light truck Platforms
 (disc change only)

** SREA# 282442 1-22-93

- request for change from snap to quiet disc

** SREA# 393198 3-14-94

all Ford Hydi. (57, 87, 77)

- Change plastic base material from
 dyco containing heavy metals
 to dyco containing alternate acceptable

** ISW w/ SREA# 409911 3-17-94
 * Approval pending GE's concurrence on change effect on Tokyo
 * Copy of Government Regulation + Compliance

PR.4 TIE P/W Cust P/W Submitted App'd

AS 77PSL5-2 F3DC 9F92V-AA

EYES ES tests to be forwarded

Shd Jo. w
ISW # 360366 3/10/92 01 8-14-92
ISW # 360069 11/25/92
- interrupter dim change

* * SREA # 147693 12-2-92 12-2-92

(course 77L2-1
77L3-1
77L5-2)

= to eliminate loose disc connections
resulting in open circuit after
vacuum application.

n/a 77PSL6-1 945A-9F924-AB 1-16-92

Shd Jo. w
ISW # 112387

ES tests to be forwarded 3/92

ISW # 360070 w/Tests 2/19/93 3/2/93

AT 77PSL3-2 F58A-9F924-AB 12/16/92

70rd
Wri 88

PR	TI #	Cost #	Submitted	Approved
7-1	77PSL3-2	F580-9F924-AA	7-12-93	7-7-93
Ford	? "no snubber"			pre-app.
J. Habbouché	ISU # 360079			

A8
 TACCO
 *** 77PSL3-3 F3TA-9F924-CA 5-3-93
 ISU # 360071
 * SREA # 147673 (copy)
 24 330 30 3042

PR-1
 Allied
 Signal
 77PSL3-3 F3TA-9F924-CA 1-13-94 2-28-94
 * SREA # 409911 age for base color change

A9 (2 Books)
 Ford
 Austadia
 77PSL4-1 94DA-9F924-AA 6-3-93
 SREA # 409937 9-8-94
 Change P/N suffix from -AA to -A
 per. letter changed back to -AA 3/12/97

<u>Pf.</u>	<u>TIPN</u>	<u>Cust. #N</u>	<u>Submitted</u>	<u>App'd</u>
-	77L3-1	F200-9F924AF	4/92	
	~partial (ENS3 platform)			

Baumann, Russ

From: Watt, Jim
Sent: Wednesday, February 24, 1999 4:00 PM
To: Rahman, Aziz; McGuirk, Andy; Beringhouse, Steven; Dague, Bryan
Cc: Pechonis, John; Baumann, Russell
Subject: RE: Launch/PPAP/SREA dates- Changes via SREA- Alerts

Aziz,

As we discussed this morning, below is an excel file, that depicts the SREA- Alert for the 77PS family of products, that I compiled from our records here in TI-A:


77PS SREA-ALERT
UPDATE.XLS

Please call if any questions.

Jim Watt, CFA, mgid: jw02; mail station 12-33; page (508)236-1010, no. (0698)
ph (508) 236-1718;
fax (508)236-3153

From: McGuirk, Andy
Sent: Tuesday, February 23, 1999 11:18 AM
To: Rahman, Aziz
Cc: Watt, Jim; Pechonis, John
Subject: RE: Launch/PPAP/SREA dates

okay....

watt is out today on pers business. i will have him work this asap with charlie tomorrow first thing.

john, should we be having beth and charlie and others working this today? (elaine???)

a

AUTOMOTIVE SECTIONS AND CONTROLS CFA NUMBER
34 FOREST ST N/S 11-05
ATTLESBORO, MA 01701
TEL : (508) 236-1010
FAX : (508) 236-3746
PAGE: (508) 447-3750 P2H 404-2044

From: Rahman, Aziz
Sent: Tuesday, February 23, 1999 11:03 AM
To: McGuirk, Andy; Dague, Bryan; Sharpe, Robert; Beringhouse, Steven; Douglas, Charles
Subject: Launch/PPAP/SREA dates

Need list of dates for approval for all switches/changes by Ford part number with all suffixes from inception of CCPS program. Please provide the info to me by tomorrow AM

TI-NHTSA 018049

for the 2.00 meeting. This is gaining serious visibility as people are trying to understand all changes.

Thanks for your help.

Regards
Aziz

Entry No.	SREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	TI-P. N.
1	409986	27-Feb-95	Use of alternate pressure tester for capacity improvement.	F2AC-9F924-AA	77P8L3-1
			Scribe mark indicating "test pass" to be on crimp ring rather than on the plastic connector base.	F2VC-9F924-AB	77P8L2-1
				F3DC-9F924-AA	77P8L5-2
				F58A-9F924-AA	77P8L3-2
				F3TA-9F924-CA	77P8L3-3
2	409986	27-Feb-95	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption.	F2AC-9F924-AA	77P8L3-1
			10L07 steel made with same process.	F2VC-9F924-AB	77P8L2-1
				F3DC-9F924-AA	77P8L5-2
				F58A-9F924-AA	77P8L3-2
				F3TA-9F924-CA	77P8L3-3
3	409937	06-Sep-94	Change p.n. from p.n. 94DA-9F924AA to p.n. 94DA-9F924AB	94DA-9F924AB	77P8L4-1
4	409911	17-Mar-94	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations	F3TA-9F924-CA	77P8L3-3
5	282442	22-Jan-93	Use of part submission of prior level "BA". Converting from snap to quiet disc switch. Change is to internal disc only.	F3TA-9F924-CA	77P8L3-3
6	147893	02-Dec-92	Reduce internal cup dimension by .004" from .091" to .087" nominal. Address potential open circuit condition under vacuum, traced to disc envelope under stack-up conditions	F2VC-9F924-AB	77P8L2-1
				F2AC-9F924-AA	77P8L3-1
				F3DC-9F924-AA	77P8L5-2
7	147873	21-Nov-91	Change thread gaging specification from 3A go to 3A go ring gage. Use of ANSI B1.1 Industry Standard for plated thread allowance.	F3TA-9F924-CA	77P8L3-3
8	147871	05-Nov-91	Use blue colored environmental seal in lieu of reddish color with black stripes to help differentiate seal; to reduce potential assembly errors.	F2VC-9F924-AB	77P8L2-1
9	148290	03-Apr-91	Change terminal position dimension from 0.50+/- 0.25mm to 0.50+/-0.25mm	F2TA-0C888-AA	57P8L5-2
10	147856	03-Apr-91	Change terminal position dimension from 0.50+/- 0.25mm to 0.50+/-0.25mm	F3TA-9F924-CA	77P8L3-3
11	Alert No. A10168193	11-Oct-91	Use of manually loaded sensor crimp machine vs auto in-line loaded crimper. Manual crimp passes QS tests.	F2VC-9F924-AB	77P8L2-1

**TPS-DFMEA-Review1
(FOR REFERENCE ONLY)**

DFMEA	Review	F/ Effect	F/Cause	Design Verification
11. Converter	pn27408	leakage of brake fluid (reduced diaphragm life leading to leak)	11a. Irregularities on surface due to broken/ worn tool	Supplier process controls
		leakage of brake fluid (reduced diaphragm life leading to leak)	11b. Incorrect button diameter due to broken/ worn tool	Supplier process controls
12. Spacer	pn73858	ok		
13. Disc	pn38856	ok		
14. Cup	pn27288 pn27713	leakage of brake fluid (reduced diaphragm life leading to leak)	14a. Incorrect crimp area geometry due to broken/ worn tool	Supplier process controls
		leakage of brake fluid (reduced diaphragm life leading to leak)	14b. Wrong material thickness due to supplier error	Supplier process controls
		leakage of brake fluid (reduced diaphragm life leading to leak)	14c. Wrong material due to supplier error	Supplier process controls
15. Environmental Seal	pn74247	ok		
16. Transfer pin	pn74078	ok		
17. Crimp ring	pn74787	ok		

TI-NHTSA 016051

(FOR REFERENCE ONLY)

TI-NHTSA 016052

DFMEA	Review	F/Effect	F/Cause	Design Verification
1. Base	pn 46516	ok		
2. Stationary Terminal	pn 36888	ok		
3. Movable Terminal	pn 36897	ok		
4. Spring	pn 36889	ok		
5. Rivet	pn 74171	ok		
6. Movable contact	pn 74408	ok		
7. Hexport	pn 36900			
		leakage of brake fluid	7a.Broken tool causing improper geometry	Supplier process controls
		leakage of brake fluid (excessive gasket squeeze distorts gasket)	7b.Gasket gland geometry incorrect due to broken/ worn tool	Supplier process controls
		leakage of brake fluid (damage to gasket results in reduced life leading to leak)	7c.Gasket gland surface is irregular due to broken/ worn tool	Supplier process controls
8. Gasket	pn74353			
		leakage of brake fluid (excessive gasket squeeze distorts gasket)	8a.Wrong size due to wrong extrusion tool	Supplier process controls
		leakage of brake fluid (reduced gasket life leading to leak)	8b. Wrong material due to supplier error	Supplier process controls
9.Diaphragm	pn74176 (pn27225-1)			
		leakage of brake fluid (reduced life leading to leak)	9.Insufficient material properties due to supplier error	Supplier material certification (Dupont 500FN131L Kapton)
10.Washer	pn27639			
		leakage of brake fluid (reduced diaphragm life leading to leak)	10a.Surface roughness due to improper heat treat	Supplier process controls
		leakage of brake fluid (reduced diaphragm life leading to leak)	10b.Incorrect chamfer due to broken/ worn tool	Supplier process controls
		leakage of brake fluid (reduced gasket squeeze results in leak)	10c.Bent due to broken/ worn tool	Supplier process controls
		leakage of brake fluid (tool large results in reduced diaphragm life)	10d.Incorrect ID due to broken/ worn tool	Supplier process controls
		leakage of brake fluid (reduced diaphragm life leading to leak)	10e.Burrs due to broken/ worn tool	Supplier process controls

Prepared by Jim Watt 5/28/99

Prepared by Jim Watt 5/28/96

430032

9/8/91

TPSLA

change on from 94DA - 7' 24AA to
94DA - 7' 24AB

147/6T3

11/21/91

F31A-95029-AA

change from 2A to 3A to any
to ANSI 2.11 standard

147/6T3

11/5/91

F24C-9F924-AE

use Bim - good. can be used for
on - 121st - 121st - 121st - 121st
121st - 121st - 121st - 121st
121st - 121st - 121st - 121st

MEMO
 AREA No. DATE SUBMITTED IMPROVEMENT FORD P.N. T.P.N.

10/31/91 A131 63143 NCGS Chassis P20 (NCGS)

✓ 1.5... - 2... F2VC 91028 1/2" up
 - 610... the unit, no...

Use manually loaded 2x2x2 1/2" x 1/2" x 1/2" in line loaded rings
 1. manually ring, same 67-1-1

5725 L5-2 (F2TA-9C 52-109) 11/15/91

SACM
 28292 1/22/93 7785 L3-3 F3TA-7F 24-1A

✓ Use of part submissions of 2x2x2 1/2" x 1/2" x 1/2", and
 only change to use. on line SNA to insert.

~~248 850 1/22/93 7785 L3-3 F3TA-7F 24-1A~~

✓ 10/25/92 12/1/92 F2VC-9F424 - 4R

1. Caption...
 reduced...
 1. manually...
 2. manually...
 3. manually...

DATE = 3/1/11

E-Mail message information for Jim Watt
at file folder 77PS FORD EVENTS

PART #	Description	Revision Date	Revision Description	Part #	Description	Revision Date	Revision Description
74176-1	Seal	3-11-98	Add same note as on 74075 ECU # M39730	36656-24	3/4" Flanged Disc		
27225-1	Keyton Strip Spec 615 Bsp	7-13-98 8-29-98 5-07-94 7-25-94 8-15-94 9-21-94 6-30-95 8-11-95 4-14-98	Add 27225-4 Chg Material Add note 9 Add 27225-5 Add note 10 Change note 10 Set-up 15451, add to chg's Change mat'l of 27225-1-2 Delete white film core mat'l.	36656-28	3/4" Flanged Disc		
27239-1	Washer	8-29-96 14-30-96	Change notes, dimensions Add ident note	74949-1	Crimp Ring		none from 1992 to 1999.
27406-1	Converter		none from 1992 to 1999	74078-143	Transfer Pin		none from 1992 to 1999.
73958-2	Spacer	3-04-93 4-01-93	Add dash number Chg second note 3 to 4	74247-4	Environmented Seal	1-15-92 7-01-92 10-07-92 4-05-93 4-27-95 2-12-96	Add mat'l to 74247-4 Chg mat'l I.D. no. Add mid note Add Packing Column 8 74247-5 Delete, add dimensions Add note 4
74224-1	Keyton Tape (.001 lbs/ft)		none from 1992 to 1999	74888-1	Thread Cap	1-26-90	1st Issue, ECU#75-2
				27228-1	Carton Asm.		



PART #	Description	Revision Date	Revision Description	PART #	Description	Revision Date	Revision Description
46515-2	Base (buss)	5-12-92 6-05-92 7-21-92 1-12-94 5-08-96 5-24-96 1-15-97 1-29-98 2-28-98 4-17-98 5-14-98	Set-Up Add 46515-3 thru -6, -2 change color New P/L Set-ups Chg .005/.007 to .005/.008 Add test characteristic rate Change rate 4 Add new to scale Change dimensions Chg .030/.020 to .055/.051 Add 46515-11 Add 46515-12	74916-1 (continued)	Rivet	8-24-92 9-09-93	Change dimensions Change dimensions
36889-1	Stationary Terminal	1-13-97 1-13-97	Picture change Added note	36889-1	Spring Arm		none from 1992-1999
36889-1	Movable Terminal	2-21-92 5-28-93	.916/.926 was .915/.929 .950/.940 was .950/.947	27716-1	Spr Mat'l Strip spec. (.216 lbs/K)	11-11-94	Note 5, "15lbs", was "30 lbs". ID was "12" to "16".
74916-1	Rivet	6-15-92 7-29-92 1-21-93 3-4-93 7-21-93 10-14-93	Set-Up & Chg rivet Chg dimensions Add note 5 Delete note 3 & Parameter Add 74916-2 Delete 74916-2	28744-1	Movable Contact	9-18-95 10-26-95 2-26-96 2-28-96	Set-Up Change dimensions Change dimensions Change note 3
				36900-1	Mod SAE J512 Repair		
				74353-1	Gasket		none from 1992 to 1999
				27713-1	Cup	11-19-92 1-11-94 1-5-96 11-03-96 3-23-98	Add identification character no description Add 27713-2 Add min flat dimension no description

TI-NHTSA 016067

SLIPPER DOC 091-22
SLIPPER 001 CH-22
SLIPPER 002 191-22



77PSSREAUUPDATE

Entry No.	BREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	T.P. N.
1	400008	27-Feb-95	Use of alternate pressure tester for capacity improvement. Scribe mark indicating "test pass" to be on crimp ring rather than on the plastic connector base.	F2AC-9P924-AA F2VC-9P924-AB F3DC-9P924-AA F88A-9P924-AA F3TA-9P924-CA	77PBL3-1 77PBL3-1 77PBL3-2 77PBL3-2 77PBL3-3
2	400086	27-Feb-95	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F2AC-9P924-AA F2VC-9P924-AB F3DC-9P924-AA F88A-9P924-AA F3TA-9P924-CA	77PBL3-1 77PBL3-1 77PBL3-2 77PBL3-2 77PBL3-3
3	400837	5-Sep-94	Change p.n. from p.n. 94DA-9P924AA to p.n. 94DA-9P924AB	94DA-9P924AB	77PBL4-1
4	400911	17-Mar-94	Use of color polymers in photo beam containing alternate material in lieu of heavy metal per governmental regulations	F3TA-9P924-CA	77PBL3-3
5	282442	22-Jan-93	Use of part substitution of prior level "BA". Converting from snap to twist disc switch. Change is to internal disc only.	F3TA-9P924-CA	77PBL3-3
6	147693	2-Dec-92	Reduce internal cup dimension by .004" from .091" to .087" nominal. Add new potential open circuit condition under release. Refer to spec envelope under stack-up conditions	F2VC-9P924-AB F2AC-9P924-AA F3DC-9P924-AA	77PBL3-1 77PBL3-1 77PBL3-2
7	147673	21-Nov-91	Change thread gaging specification from 2A to 3A as final case. Use of ANSI B1.1 Industry Standard for plastic thread allowances.	F3TA-9P924-CA	77PBL3-3
8	147671	5-Nov-91	Use blue colored environmental seal in lieu of red/black color with black nylon to help differentiate seal to reduce potential assembly errors.	F2VC-9P924-AB	77PBL3-1
9	140588	3-Apr-91	Change terminal position dimension from 0.80+-0.20mm to 0.80+-0.25mm	F3TA-9P924-CA	77PBL3-3
10	147665	3-Apr-91	Change terminal position dimension from 0.50+-0.20mm to 0.80+-0.25mm	F3TA-9P924-CA	77PBL3-3
11	Alert No. A10166166	11-Oct-91	Use of manually loaded armor strip machine vs auto in-line loaded primer. Manual strip process IEL looks	F2VC-9P924-AB	77PBL3-1

77PS-SREA-ALERT UPDATE

Entry No.	SRERA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	TI P.N.
1	400086	27-Feb-86	Use of alternate pressure	F2AC-8F824-AA	77P8L3-1
			letter for capacity improvement.	F2VC-8F824-AB	77P8L2-1
			Scribe mark indicating "last	F3DC-8F824-AA	77P8L3-2
			pass" to be on crimp ring	F68A-8F824-AA	77P8L3-2
			rather than on the plastic	F3TA-8F824-CA	77P8L3-3
2	409885	27-Feb-86	connector base.		
			Use of 10L07 steel from cold headed	F2AC-8F824-AA	77P8L3-1
			supplier in lieu of 10L10 steel due to	F2VC-8F824-AB	77P8L2-1
			temporary material supply interruption.	F3DC-8F824-AA	77P8L3-2
			10L07 steel made with same	F68A-8F824-AA	77P8L3-2
3	409837	8-Sep-84	process.	F3TA-8F824-CA	77P8L3-3
			Change p.n. from	84DA-8F824-AB	77P8L4-1
			p.n. 84CA-8F824AA to		
			p.n. 84CA-8F824AB		
4	409811	17-Mar-84	Use of color pigments in plastic	F3TA-8F824-CA	77P8L3-3
			base containing abrasives		
			material in lieu of heavy metal		
			per governmental regulations		
5	282442	22-Jan-83	Use of part submission of	F3TA-8F824-CA	77P8L3-3
			prior level "BA". Converting		
			from snap to twist disc switch.		
			Change is to internal disc only.		
6	147883	2-Dec-82	Reduce internal cap dimension	F2VC-8F824-AB	77P8L2-1
			by .004" from .001" to .007" nominal.	F2AC-8F824-AA	77P8L3-1
			Address potential open circuit	F3DC-8F824-AA	77P8L3-2
			condition under vacuum, tested		
			to disc envelope under stack-		
7	147873	21-Nov-81	up conditions		
			Change thread gaging specification	F3TA-8F824-CA	77P8L3-3
			from 2A go to 3A go ring gage.		
			Use of ANSI B1.1 industry standard for		
			plated thread allowances.		
8	147871	8-Nov-81			
			Use blue colored environmental	F2VC-8F824-AB	77P8L2-1
			seal in lieu of reddish color with black		
			strips to help differentiate seal;		
			to reduce potential assembly errors.		
9	148888	3-Apr-81			
			Change terminal position	F3TA-8C888-AA	87P8L3-2
			dimension from 0.50+-0.20mm		
			to 0.50+-0.25mm		
10	147868	3-Apr-81			
			Change terminal position	F3TA-8F824-CA	77P8L3-3
			dimension from 0.50+-0.20mm		
			to 0.50+-0.25mm		
11	Alert No. A10188183	11-Oct-81			
			Use of manually loaded sensor crimp	F2VC-8F824-AB	77P8L2-1
			machine vs auto in-line loaded crimper.		
			Manual crimp passes 88 tests.		

Vps on idicon/quality/L. Watt

Updated 3/25/86

TI-NHTSA 016059

[illegible]

**77PS-Molded Base 48515 UPDATE
(FOR REFERENCE ONLY)**

Entry No.	Rev No	DATE OF BCN	Dwg Sys	VALUE IMPROVEMENT	Design Engr	FORD P.N.	TI-P. N.	p.n. 48515-2	Material
1	A	First Issue 8-Nov-80	Angle	Replaced EX 3423-46 dated 08/28/80 Cellanex 4300	Steve Offler	F2VC-8F824-AB F8LC-8F824-AA	77P8L2-1 77P8L2-3	-2(brown,#2) -1(black,#1)	Cellanex 4300 Cellanex 4300
2	B	6-Jan-81	Angle	Cellanex 4300 CN 155997 Correct/clarify print Views	Steve Offler	F2VC-8F824-AB F8LC-8F824-AA	77P8L2-1 77P8L2-3	-2(brown,#2) -1(black,#1)	Cellanex 4300 Cellanex 4300
3	C	4-May-82	Angle	Added (-3) Noryl GTX 830 CRM 06666	Steve Offler	F2AC-8F824-AA 84DA-8F824-AA F3DC-8F824-AA	77P8L3-1 77P8L4-1 77P8L5-2	-3(natural,#2) -3(natural,#2) -3(natural,#2)	GE Noryl GTX 830 GE Noryl GTX 830 GE Noryl GTX 830
4	D	21-May-82	Angle	Added (-4 through -8) CRM 08128 (-4, -7) Noryl GTX 830 (-5, -6, -8, -9) Cellanex 4300	Steve Offler	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L3-1 77P8L3-2 77P8L3-3 87P8L2-2 87P8L2-3 87P8L11-2	-3(natural,#2) -2(brown,#2) -3(natural,#2) -7(yed, #1) -8(gray, #1) -8(gray, #1) -8(green, #1)	GE Noryl GTX 830 Cellanex 4300 GE Noryl GTX 830 GE Noryl GTX 830 Cellanex 4300 Cellanex 4300 GE Noryl GTX 830
5	E	8-Jul-82	Angle	Added -10 (GE Noryl GTX 830) CRM 08981	Steve Offler	F58A-8F824-AA	77P8L3-2	-10(bl gr, #1)	GE Noryl GTX 830
6	F	29-Dec-83	Angle	Clarified dimensions CRM 15919	Aziz Rahman				
7	G	1-May-86	Cadins	Dim added CCC note CRM 28757	Chris Wagner				
8	H	20-May-86	Cadins	Note 4 Regrind was 50% CRM 29067	Chris Wagner				
9	J	13-Jan-87	CAD	Adjust 3 notch dim Added note CAD drag CRM 32804	Di Ha				
10	K	16-Dec-87	CAD	Change dim placet Remove 45-55 degree chamfer, CRM 35266	Di Ha				
11	L	23-Feb-88	CAD	Change .055/.045 chamfer to .030/.020 CRM 38157	Di Ha				
12	M	1-Apr-88	CAD	Added -11 Material GE Noryl GTX 830 CRM 39066	Di Ha		87P8L2-5	-11(bl, #1)	GE Noryl GTX 830
13	N	6-May-88	CAD	Added -12 Material Cellanex 4300 ECN 440636	Di Ha		87P8L2-6	-12(white,#1)	Cellanex 4300

**77PS-SREA-ALERT UPDATE
(FOR REFERENCE ONLY)**

Entry No.	SREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORM P.N.	T.P. N.
1	409988	27-Feb-95	Use of alternate pressure tester for capacity improvement. Scribe mark indicating "test pass" to be on crimp ring rather than on the plastic connector base.	F2AC-SP824-AA F2VC-SP824-AB F3DC-SP824-AA F58A-SP824-AA F3TA-SP824-CA	77PBL-3-1 77PBL-3-1 77PBL-3-2 77PBL-3-2 77PBL-3-3
2	409989	27-Feb-95	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel meets with same properties.	F2AC-SP824-AA F2VC-SP824-AB F3DC-SP824-AA F58A-SP824-AA F3TA-SP824-CA	77PBL-3-1 77PBL-3-1 77PBL-3-2 77PBL-3-2 77PBL-3-3
3	409937	4-Sep-94	Change p.n. from p.n. 84DA-SP824AA to p.n. 84DA-SP824AB	84DA-SP824AB	77PBL-4-1
4	409911	17-Apr-94	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations.	F3TA-SP824-CA	77PBL-3-3
5	282442	22-Jan-93	Use of part submission of prior level "BA". Converting from snap in quiet disc switch. Change is to internal disc only.	F3TA-SP824-CA	77PBL-3-3
6	147693	2-Dec-92	Reduce internal dip dimension by .054" from .261" to .207" nominal. Address potential case circuit operation under vacuum, trapped to disc emission under stack- up conditions.	F2VC-SP824-AB F2AC-SP824-AA F3DC-SP824-AA	77PBL-2-1 77PBL-2-1 77PBL-2-2
7	147672	21-Nov-91	Change thread plating specification from 24 to 34 on dip pins. (Use of AMS Q11.1 Industry Standard for plated thread elements).	F3TA-SP824-CA	77PBL-3-3
8	147671	5-Nov-91	Use blue colored environmental seal in lieu of reddish color with black edges to help differentiate parts; to reduce potential assembly errors.	F2VC-SP824-AB	77PBL-2-1
9	149595	3-Apr-91	Change terminal position dimension from 0.58+-0.20mm to 0.50+-0.20mm	F3TA-PC826-AA	57PBL-5-2
10	147688	3-Apr-91	Change terminal position dimension from 0.50+-0.20mm to 0.50+-0.25mm	F3TA-SP824-CA	77PBL-3-3
11	Alert No. A10196189	11-Oct-91	Use of manually loaded crimper versus machine vs auto in-line loaded crimper. Manual crimper requires 88 parts.	F2VC-SP824-AB	77PBL-2-1

Epstein, Sally

From: Pechonis, John (jpechonis@gmail.com)
Sent: Wednesday, March 03, 1999 7:29 PM
To: Rowland, Thomas
Subject: 77PSL2-1

Tom, I don't have all the pieces together yet, but I think I've got a pretty good ballpark of what I believe it will take to make 200K replacement units of the 77PSL2-1:

- 2 weeks to staff the third shift on the AMI sensor machine, device assembly and pressure test
- 2 weeks to get initial material in place (key components: base/hexport) May be slightly longer if we need to procure the Celanex material for the base
- I think we can initiate production before the end of this month provided we do not need to re-PPAP
- Actual build time for the 200K units should be 8-10 weeks through running this on the third shift

So, if all goes well, I think we can complete the build around the end of May. There is potential to pull this in if everything goes perfectly.

TI-NHTSA 016063

MORT
 SREA No. DATE SUBMITTED IMPROVEMENT FORD P.N. T-P. N.

10/1/91 A10166193 NCOO Charis PEO (LNCG)

✓ descrg TE to ship F2VC 9F924-AB w/
 exceptions to the mfg process.

Use manually loaded sensor crimp machine
 vs auto in line loaded crimp
 manually crimp from 6/1/91

57ASLS-2 (F2TA-9C888-AB) 11/15/90

SREA

282412 1/22/93 77PSL3-3 F3TA-9F924-CA

use of past submissions of prior final "BA" part.

only change to desc - go from SNG to Qued.

~~245 AS 10/1/92 F3TA-9F924-CA~~

147693 12/2/92

F2VC-9F924-AB
 F2AC-9F924-AB
 F3DL-9F924-AB

TI-NHTSA 016064

Caption. defines envelope of press. sensing disc
 reduced by 1004" from .091" ± .001 to .087" ± .001.

- to address potential open CKT condition under vacuum
 + needs to define disc envelope - discs used
 in low pressure (125PSI nominal) - under stacking
 conditions

Date = 3/5/99

E-Mail message information for Jim Watt
at file folder: 77PS FORD EVENTS

(2/26/99)

4/6/15 Base

Rev

A)

REGIS

Replacen

EX3423-49

Rev

6/28/90

Celanox 4300

11/9/90

NT Issue

B)

Celanox 4300

CN

155597

*

4/8/91

C)

~~1~~

Noryl GTX 830

(-3)

5/4/92

dated

CRM 08996

(CF)

D)

Added -4 thru -9

5/21/92

Change color to grey

(CN-2)

CRM 09125

(CF)

(-7) Noryl GTX 830

(-5, 6, 8, 9) Celanox 4300

E)

Added -10

to Noryl

7/9/92

CRM 09981

(CF)

F)

changed in (no mat'l change)

12/29/93

CRM 15919

(CF)

(2/26/99)

46515 Base

RW

(Cadraz)

G) ✓ Dem ^{critical}
Added ccc note
no mull

(5/1/96)

(CD.W)

CRM 28757 (CFF)

H) ✓ Note 4 was
replied, was 50%

(5/20/96)

(CD.W)

CRM 29067 (CFF)

I) ✓ Add: 3 notes
dem
Added note CD.W

(01/13/97)

Di. 6a

CRM 32004 O.L.

K) ✓ Chq dim. places
flange 45-55 chaf

(12/16/97)

(Di. 6a)

CRM 38265 J.G.

TI-NHTSA 016087

L) ✓ 1015/1045 chaf 1030/1020

2/13/98

Di. 6a

CRM 39157 DS

86515 Bar

2/26/98

RWR

m) Added - 61

4/1/98

Ditta

✓ mat'l

GENOxyl GTX 830

CRM 39965 (D.M.)

N) Added - 12

celanys 4300#1 white

5/6/98

Ditta

ECN M40538 (MF)

**77P5-Molded Base 46516 UPDATE
(FOR REFERENCE ONLY)**

Entry No.	Rev No	DATE OF ECH	Draw Desc	VALUE IMPROVEMENT	Design Eng	PCRD P.N.	T-P. N.	P.N. 44516-1	Material
1	A	First Issue 9-Nov-80	Apple	Replaced EX 3423-89 dashed 060990 Cellanex 4300	Steve Oller	F2VC-8F824-AB F8LC-8F824-AA	77P8L2-1 77P8L2-3	-2(brown, #2) -1(black, #1)	Cellanex 4300 Cellanex 4300
2	B	8-Jan-81	Apple	Cellanex 4300 CN 186987 Consolidate print Views	Steve Oller	F2VC-8F824-AB F8LC-8F824-AA	77P8L2-1 77P8L2-3	-2(brown, #2) -1(black, #1)	Cellanex 4300 Cellanex 4300
3	C	4-May-82	Apple	Added (-3) GE Noryl GTX 830 CRM 09099	Steve Oller	F2AC-8F824-AA 84DA-8F824-AA F3DC-8F824-AA	77P8L2-1 77P8L2-1 77P8L2-2	-3(black, #2) -3(black, #2) -3(black, #2)	GE Noryl GTX 830 GE Noryl GTX 830 GE Noryl GTX 830
4	D	21-May-82	Apple	Added (-4 through -8) CRM 09195 (-4, -7) GE Noryl GTX 830 (-5, -6, -8) Cellanex 4300	Steve Oller	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F3TA-8F824-CA F3TA-8F824-AA F3TA-8F824-AA 84DP-8F824-AA	77P8L2-1 77P8L2-1 77P8L2-2 77P8L2-3 87P8L2-2 87P8L2-3 87P8L11-2	-3(black, #2) -2(brown, #2) -3(black, #2) -7(grey, #1) -5(grey, #1) -5(grey, #1) -5(green, #1)	GE Noryl GTX 830 Cellanex 4300 GE Noryl GTX 830 GE Noryl GTX 830 Cellanex 4300 Cellanex 4300 GE Noryl GTX 830
5	E	9-Jul-82	Apple	Added -10 (GE Noryl GTX 830) CRM 09261	Steve Oller	F8SA-8F824-AA	77P8L2-2	-10(grey, #1)	GE Noryl GTX 830
6	F	29-Dec-82	Apple	Clarified dimensions CRM 10978	Apple Refman				
7	G	1-May-85	Cadex	Dim added CCC note CRM 26787	Chris Wagner				
8	H	20-May-85	Cadex	Note 4 Revised spec 80% CRM 26987	Chris Wagner				
9	J	13-Jun-87	CAD	Added 3 notch dim Added note C20 dim CRM 38004	DI Hu				
10	K	16-Dec-87	CAD	Change dim values Remove 48-56 diameter diameter. CRM 38205	DI Hu				
11	L	23-Feb-88	CAD	Change 089.048 diameter to .590/.590 CRM 39187	DI Hu				
12	M	1-Apr-88	CAD	Added -11 Material GE Noryl GTX 830 CRM 39655	DI Hu	8YH3-8F824-AA	87P8L2-3	-11(brown, #1)	GE Noryl GTX 830
13	N	6-May-88	CAD	Added -12 Material Cellanex 4300 BCN M40839	DI Hu	A87820	87P8L2-3	-12(brown, #1)	Cellanex 4300

Handwritten:
P.N. 44516-1
Rev 2.430
Ext 2524

**77PS-SREA-ALERT UPDATE
(FOR REFERENCE ONLY)**

Entry No.	SRBA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	T.P. N.
1	409085	27-Feb-95	Use of alternate pressure tester for capacity improvement. Scribe mark indicating "test piece" to be on crimp ring rather than on the plastic connector base.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F58A-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
2	409086	27-Feb-95	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F58A-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L2-1 77P8L5-2 77P8L3-2 77P8L3-3
3	409037	8-Sep-94	Change p.n. from p.n. 94DA-8F824AA to p.n. 94DA-8F824AB	94DA-8F824AB	77P8L4-1
4	409011	17-Mar-94	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations	F3TA-8F824-CA	77P8L3-3
5	282442	22-Jan-93	Use of card submission of prior level "BA". Converting from snap to push disc switch. Change is to internal disc only.	F3TA-8F824-CA	77P8L3-3
6	147893	2-Dec-92	Reduce internal cup dimension by .004" from .061" to .057" nominal. Address potential open circuit condition under vacuum, traced to disc envelope under stack-up conditions	F2VC-8F824-AB F5AC-8F824-AA F3DC-8F824-AA	77P8L2-1 77P8L3-1 77P8L5-2
7	147873	21-Nov-91	Change thread sealing specification from 2A to 3A per ring gage. Use of ANSI B1.1 Industry Standard for plated thread allowance.	F3TA-8F824-CA	77P8L3-3
8	147871	5-Nov-91	Use blue colored environmental seal in lieu of reddish color with black stripe to help differentiate seal to reduce potential assembly errors.	F2VC-8F824-AB	77P8L2-1
9	149598	3-Apr-91	Change terminal position dimension from 0.50+/- 0.20mm to 0.50+/- 0.25mm	F2TA-8C838-AA	57P8L5-2
10	147865	3-Apr-91	Change terminal position dimension from 0.50+/- 0.20mm to 0.50+/- 0.25mm	F3TA-8F824-CA	77P8L3-3
11	Alert No. A10186183	11-Oct-91	Use of manually loaded sensor crimp machine vs auto in-line loaded crimper. Manual crimp passes ES tests.	F2VC-8F824-AB	77P8L2-1

**77PB-Molded Base 46515 UPDATE
(FOR REFERENCE ONLY)**

Entry No.	Rev No.	DATE OF ECN	Dwg Sys	VALUE IMPROVEMENT	Design Engr	FORD P.N.	TYP. N.	q.n. 46515-x	Material
1	A	First Issue 8-Nov-90	Acgle	Replaced EX 3423-49 dated 08/28/90 Collanex 4300	Steve Offler	F2VC-8P824-AB F8LC-8P824-AA	77PBL2-1 77PBL2-3	-2(brown,#2) -1(black,#1)	Collanex 4300 Collanex 4300
2	B	8-Jan-91	Acgle	Collanex 4300 CN 165887 Correct/clarity print views	Steve Offler	F2VC-8P824-AB F8LC-8P824-AA	77PBL2-1 77PBL2-3	-2(brown,#2) -1(black,#1)	Collanex 4300 Collanex 4300
3	C	4-May-92	Acgle	Added (-3) GE Noryl GTX 830 CPM 08988	Steve Offler	F2AC-8P824-AA 84DA-8P824-AA F3DC-8P824-AA	77PBL3-1 77PBL4-1 77PBL5-2	-3(natural,#2) -3(natural,#2) -3(natural,#2)	GE Noryl GTX 830 GE Noryl GTX 830 GE Noryl GTX 830
4	D	21-May-92	Acgle	Added (-4 through -6) CRM 09125 (-4, -7) GE Noryl GTX 830 (-5, -6, -8) Collanex 4300	Steve Offler	F2AC-8P824-AA F2VC-8P824-AB F3DC-8P824-AA F3TA-8P824-CA F37A-8N824-AA F37A-8N824-AA 84BP-8N824-AA	77PBL3-1 77PBL2-1 77PBL3-2 77PBL3-3 87PBL2-2 87PBL2-3 87PBL11-2	-3(natural,#2) -2(brown,#2) -3(natural,#2) -7(red,#1) -8(grey,#1) -8(grey,#1) -8(green,#1)	GE Noryl GTX 830 Collanex 4300 GE Noryl GTX 830 GE Noryl GTX 830 Collanex 4300 Collanex 4300 GE Noryl GTX 830
5	E	8-Jul-92	Acgle	Added -10 (GE Noryl GTX 830) CPM 08981	Steve Offler	F58A-8P824-AA	77PBL3-2	-10(dk grey, #1)	GE Noryl GTX 830
6	F	28-Dec-93	Acgle	Clarified dimensions CRM 19919	Aziz Reisman				
7	G	1-May-95	Cadras	Dim added CCC note CRM 28787	Chris Wagner				
8	H	20-May-96	Cadras	Note 4 Reprint was 50% CRM 29067	Chris Wagner				
9	J	13-Jan-97	CAD	Adjust 3 notch dim Added note CAD dwg CRM 32804	DI Ha				
10	K	16-Dec-97	CAD	Change dim places Remove 45-55 degree chamber, CRM 35285	DI Ha				
11	L	23-Feb-98	CAD	Change .055/.048 chamber to .030/.020 CRM 39157	DI Ha				
12	M	1-Apr-98	CAD	Added -11 Material GE Noryl GTX 830 CRM 39888	DI Ha	XW43-8N824-AA	87PBL2-5	-11(brown, #1)	GE Noryl GTX 830
13	N	6-May-98	CAD	Added -12 Material Collanex 4300 ECN 440538	DI Ha	A50520	87PBL2-6	-12(white, #1)	Collanex 4300

TI-NHTSA 010071

**Plastic Generation Matrix
(FOR REFERENCE ONLY)**

FORD Part Number	Texas Instruments Part Number	Generation Of Plastic Material	UL Designation
F2VC-8F824-AB	77PSL2-1	Cellanex 4300	UL (HB)
F6LC-8F824-AA	77PSL2-3	Cellanex 4300	UL (HB)
.....			
F2VC-8F824-AB	77PSL2-1	Cellanex 4300	UL (HB)
F6LC-8F824-AA	77PSL2-3	Cellanex 4300	UL (HB)
.....			
F2AC-8F824-AA	77PSL3-1	GE Noryl GTX 830	UL (HB)
94DA-8F824-AA	77PSL4-1	GE Noryl GTX 830	UL (HB)
F3DC-8F824-AA	77PSL5-2	GE Noryl GTX 830	UL (HB)
.....			
F2AC-8F824-AA	77PSL3-1	GE Noryl GTX 830	UL (HB)
F2VC-8F824-AB	77PSL2-1	Cellanex 4300	UL (HB)
F3DC-8F824-AA	77PSL5-2	GE Noryl GTX 830	UL (HB)
F3TA-8F824-CA	77PSL3-3	GE Noryl GTX 830	UL (HB)
.....			
F58A-8F824-AA	77PSL3-2	GE Noryl GTX 830	* UL (HB)
.....			

* UL(HB)= Horizontal Burn

**77PS-SREA-ALERT UPDATE
(FOR REFERENCE ONLY)**

Entry No.	SREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORU P.N.	TI-P. N.
1	409966	27-Feb-95	Use of alternate pressure	F2AC-9F924-AA	77PBL3-1
			tester for capacity improvement.	F2VC-9F924-AB	77PBL2-1
			Scraps mark indicating "test	F3DC-9F924-AA	77PBL3-2
			pass" to be on crimp ring	F55A-9F924-AA	77PBL3-2
			rather than on the plastic	F3TA-9F924-CA	77PBL3-3
			connector base.		
2	409966	27-Feb-95	Use of 10L07 steel from cold headed	F2AC-9F924-AA	77PBL3-1
			supplier in lieu of 10L10 steel due to	F2VC-9F924-AB	77PBL2-1
			temporary material supply interruption.	F3DC-9F924-AA	77PBL3-2
			10L07 steel made with same	F55A-9F924-AA	77PBL3-2
			process.	F3TA-9F924-CA	77PBL3-3
3	409937	6-Sep-94	Change p.n. from	94DA-9F924AB	77PBL4-1
			p.n. 94DA-9F924AA to		
			p.n. 94DA-9F924AB		
4	409911	17-Mar-94	Use of color pigments in plastic	F3TA-9F924-CA	77PBL3-3
			base containing alternate		
			material in lieu of heavy metal		
			per governmental regulations		
5	252442	22-Jan-93	Use of part submission of	F3TA-9F924-CA	77PBL3-3
			prior level "BA". Converting		
			from snap to quick disc switch.		
			Change is to internal disc only.		
6	147663	2-Dec-92	Reduce internal cup dimension	F2VC-9F924-AB	77PBL2-1
			by .004" from .021" to .017" nominal.	F2AC-9F924-AA	77PBL3-1
			Address potential open circuit	F3DC-9F924-AA	77PBL3-2
			condition under vibration. Inced		
			to disc envelope under stack-		
			up conditions		
7	147673	21-Nov-91	Change thread gaging specification	F3TA-9F924-CA	77PBL3-3
			from 2A go to 3A go ring gage.		
			Use of ANSI B1.1 Industry Standard for		
			plated thread allowance.		
8	147671	6-Nov-91	Use blue colored environmental	F2VC-9F924-AB	77PBL2-1
			seal in lieu of reddish color with black		
			strips to help differentiate seal;		
			to reduce potential assembly errors.		
9	149596	3-Apr-91	Change terminal position	F2TA-9C886-AA	57PBL3-2
			dimension from 0.50+/- 0.20mm		
			to 0.50+/-0.25mm		
10	147655	3-Apr-91	Change terminal position	F3TA-9F924-CA	77PBL3-3
			dimension from 0.50+/- 0.20mm		
			to 0.50+/-0.25mm		
11	Alert No. A10165193	11-Oct-91	Use of manually loaded sensor crimp	F2VC-9F924-AB	77PBL2-1
			machine vs auto in-line loaded crimper.		
			Manual crimp passes ES tests.		

**77PS-SREA-ALERT UPDATE
(FOR REFERENCE ONLY)**

Entry No.	BREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORM P.N.	T.P.N.
1	40988	27-Feb-90	Use of alternate pressure tester	F2AC-8P824-AA	77P8L3-1
			for capacity improvement. Scribe mark	F2VC-8P824-AB	77P8L2-1
			indicating "test pass" to be on crimp	F3DC-8P824-AA	77P8L5-2
			ring rather than on the plastic	F8BA-8P824-AA	77P8L3-2
			connector base.	F3TA-8P824-CA	77P8L3-3
2	40985	27-Feb-90	Use of 10L07 steel from cold headed	F2AC-8P824-AA	77P8L3-1
			supplier in lieu of 10L10 steel due to	F2VC-8P824-AB	77P8L2-1
			temporary material supply interruption.	F3DC-8P824-AA	77P8L5-2
			10L07 steel made with same	F8BA-8P824-AA	77P8L3-2
			process.	F3TA-8P824-CA	77P8L3-3
3	40997	8-Sep-94	Change p.n. from p.n. 94DA-8P824AA to p.n. 94DA-8P824AB	94DA-8P824AB	77P8L4-1
4	409911	17-Mar-94	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations	F3TA-8P824-CA	77P8L3-3
5	282442	22-Jan-93	Use of part submission of prior level "BA". Converting from snap to quiet clip switch. Change is to internal clip only.	F3TA-8P824-CA	77P8L3-3
6	147883	3-Oct-92	Reduce internal cup dimension	F2VC-8P824-AB	77P8L2-1
			by .004" from .091" to .087" nominal.	F2AC-8P824-AA	77P8L3-1
			Address potential open circuit condition	F3DC-8P824-AA	77P8L5-2
			under vacuum, tested to clean envelope under stack-up conditions.		
7	147882	26-Feb-92	Change thread casing specification	E7SC-3N824-AA	87P8L3-3
			from 2A go to 3A go ring gage.	F3VC-8P824-AB	77P8L2-1
			Use of ANSI B1.1 Industry Standard for	F2AC-8P824-AA	77P8L3-1
			plated thread allowance.	F3DC-8P824-AA	77P8L5-2
8	147873	21-Nov-91	Specify 4.8 in-lb max torque w/BA go gage		
			Change thread casing specification	F3TA-8P824-CA	77P8L3-3
			from 2A go to 3A go ring gage.		
			Use of ANSI B1.1 Industry Standard for		
9	147871	5-Nov-91	plated thread allowance.		
			Use blue colored environmental	F2VC-8P824-AB	77P8L2-1
			seal in lieu of red/black color with black		
			epoxy to help differentiate seal;		
10	148080	3-Apr-91	to reduce potential assembly errors.		
			Change terminal position	F3TA-8C824-AA	87P8L5-2
			dimension from 0.80+-0.20mm		
			to 0.80+-0.20mm		
11	147885	3-Apr-91	Change terminal position	F3TA-8P824-CA	77P8L3-3
			dimension from 0.80+-0.20mm		
			to 0.80+-0.20mm		
12	Alert No. A10188183	11-Oct-91	Use of manually loaded sensor crimp	F2VC-8P824-AB	77P8L2-1
			machine vs auto in-line loaded sensor.		
			Manual crimp passes 88 tests.		

**77PS-SREA-ALERT UPDATE
(FOR REFERENCE ONLY)**

Entry No.	SREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	PCRD P.N.	T.P. N.
1	408888	27-Feb-88	Use of alternate pressure tester for capacity improvement. Scribe mark indicating "test pass" to be on crimp ring rather than on the plastic connector base.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F5BA-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L3-1 77P8L3-2 77P8L3-2 77P8L3-3
2	408888	27-Feb-88	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F2AC-8F824-AA F2VC-8F824-AB F3DC-8F824-AA F5BA-8F824-AA F3TA-8F824-CA	77P8L3-1 77P8L3-1 77P8L3-2 77P8L3-2 77P8L3-3
3	408837	6-Sep-84	Change p.n. from p.n. 84DA-8F824AA to p.n. 84DA-8F824AB	84DA-8F824AB	77P8L4-1
4	408911	17-Mar-84	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations.	F3TA-8F824-CA	77P8L3-5
5	282442	22-Jan-89	Use of part substitution of prior level "8A". Converting from snap to twist disc switch. Change is to internal disc only.	F3TA-8F824-CA	77P8L3-3
6	147883	2-Dec-82	Reduce internal cup dimension by .004" from .081" to .087" nominal. Address potential open circuit condition under vacuum, traced to disc envelope under stack-up conditions.	F2VC-8F824-AB F8AC-8F881-AA F3DC-8F824-AA	77P8L3-1 77P8L3-1 77P8L3-2
7	147873	21-Nov-81	Change thread gaging specification from 2A go to 3A go ring gage. Use of ANSI B1.1 industry standard for plated thread allowance.	F3TA-8F824-CA	77P8L3-3
8	147871	6-Nov-81	Use blue colored environmental seal in lieu of reddish color with black stripes to help differentiate seal to reduce potential assembly errors.	F2VC-8F834-AB	77P8L3-1
9	148888	3-Apr-81	Change terminal position dimension from 0.80+-0.20mm to 0.80+-0.25mm	F2TA-8C885-AA	57P8L3-2
10	147888	3-Apr-81	Change terminal position dimension from 0.80+-0.20mm to 0.80+-0.25mm	F3TA-8F824-CA	77P8L3-3
11	Alert No. A10188183	11-Oct-81	Use of manually loaded sensor crimp machine via auto in-line loaded crimper. Manual crimp passes E8 tests.	F2VC-8F824-AB	77P8L3-1

Use on Kibco/Quality/J. Watt

Updated 7/20/99

TI-NHTSA 016076

[illegible]

Updated 7/20/99

TI-NHTSA 016078

SREA No.	DATE SUBMITTED	IMPROVEMENT	FORD P.N.	TI-P. N.
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**77PS-Molded Base 48515 UPDATE
(FOR REFERENCE ONLY)**

Entry No.	Rev No.	DATE OF CHG	Drawn By	VALUE IMPROVEMENT	Design Eng	FORD P.N.	T.P. N.	P.N. 48515-2	Material
1	A	First Issues 8-Nov-90	Aspie	Replaced EX 3423-48 dated 08/24/90 Collamer 4300	Steve Ollier	P2VQ-SP824-A8 P8LC-SP824-AA	77P8L2-1 77P8L2-3	-2(brown, #2) -1(black, #1)	Collamer 4300 Collamer 4300
2	B	8-Jan-91	Aspie	Collamer 4300 CN 130587 Cartographically print views	Steve Ollier	P2VQ-SP824-A8 P8LC-SP824-AA	77P8L2-1 77P8L2-3	-2(brown, #2) -1(black, #1)	Collamer 4300 Collamer 4300
3	C	4-May-92	Aspie	Added -3) GE Noryl GTX 830 CRM 08098	Steve Ollier	F2AG-SP824-AA B4DA-SP824-AA F3DC-SP824-AA	77P8L2-1 77P8L2-4 77P8L2-2	-3(natural, #2) -3(natural, #2) -3(natural, #2)	GE Noryl GTX 830 GE Noryl GTX 830 GE Noryl GTX 830
4	D	21-May-92	Aspie	Added -4 through -8) CRM 08153 -4, -7) GE Noryl GTX 830 -5, -6, -8) Collamer 4300	Steve Ollier	P2AG-SP824-AA P2VQ-SP824-A8 F3DC-SP824-AA F3TA-SP824-CA F3TA-3NE24-AA F3TA-3NE24-AA P4BP-3NE24-AA	77P8L2-1 77P8L2-1 77P8L2-2 77P8L2-3 87P8L2-2 87P8L2-3 87P8L11-2	-3(natural, #2) -2(brown, #2) -3(natural, #2) -7(yel, #1) -8(gray, #1) -8(gray, #1) -8(gray, #1)	GE Noryl GTX 830 Collamer 4300 GE Noryl GTX 830 GE Noryl GTX 830 Collamer 4300 Collamer 4300 GE Noryl GTX 830
5	E	8-Jul-92	Aspie	Added -10) (GE Noryl GTX 830) CRM 08261	Steve Ollier	F2MA-SP824-AA	77P8L2-2	-10(8k gray, #1)	GE Noryl GTX 830
6	F	28-Dec-93	Aspie	Clarified dimensions CRM 18818	Aziz Rahman				
7	G	1-May-94	Cadman	Dim added CCC note CRM 28767	Chris Wagner				
8	H	20-May-96	Cadman	Note 4 Revised was 50% CRM 28827	Chris Wagner				
9	J	13-Jan-97	CAD	Adjust 2 notch dim Added note CAD draw CRM 32304	Di Ha				
10	K	18-Dec-97	CAD	Change dim places Remove 48-58 degree chamber, CRM 36598	Di Ha				
11	L	23-Feb-98	CAD	Change .005/.046 chamber to .002/.020 CRM 38187	Di Ha				
12	M	1-Apr-98	CAD	Added -11 Material GE Noryl GTX 830 CRM 38698	Di Ha	X0P43-3NE24-AA	87P8L2-4	-11(brown, #1)	GE Noryl GTX 830
13	N	8-May-98	CAD	Added -12 Material Collamer 4300 ECN 340838	Di Ha	A80820	87P8L2-4	-12(yel, #1)	Collamer 4300

aps on kibon/quality/L. Watt

Updated 7/20/99

TI-NHTSA 016078

77PS-SREA-ALERT UPDATE
(FOR REFERENCE ONLY)

Entry No.	SAREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORM P.N.	T.F. N.
1	408608	27-Feb-86	Use of alternate pressure tester for capacity improvement. Scribe mark indicating "test area" to be on crimp ring rather than on the plastic connector legs.	F2AC-8P824-AA F2VC-8P824-AB F3DC-8P824-AA F8BA-8P824-AA F3TA-8P824-CA	77P8L3-1 77P8L3-1 77P8L3-2 77P8L3-3 77P8L3-3
2	408608	27-Feb-86	Use of 10L07 steel heat sold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F1AC-8P824-AA F2VC-8P824-AB F3DC-8P824-AA F8BA-8P824-AA F3TA-8P824-CA	77P8L3-1 77P8L3-1 77P8L3-2 77P8L3-3 77P8L3-3
3	408637	8-Sep-84	Change p.n. from p.n. 84DA-8P824AA to p.n. 84DA-8P824AB	84DA-8P824AB	77P8L4-1
4	408611	17-Mar-84	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations	F3TA-8P824-CA	77P8L3-3
5	382442	22-Jan-80	Use of part substitution of after level "BA". Converting from snap to quick disconnect. Change is to internal disc only.	F3TA-8P824-CA	77P8L3-3
6	147923	3-Dec-82	Reduce internal cap dimension by .004" from .081" to .077" nominal. Address potential open circuit condition under vacuum, tested to disc assembly under start- up conditions	F2VC-8P824-AB F2AC-8P824-AA F3DC-8P824-AA	77P8L3-1 77P8L3-1 77P8L3-3
7	147973	21-Nov-81	Change thread gaging specification from 2A go to 3A go ring gage. Use of ANSI B1.1 industry standard for plated thread allowances.	F3TA-8P824-CA	77P8L3-3
8	147971	5-Nov-81	Use thin colored environmental seal in lieu of red/white color with black stripes to help differentiate seal. to reduce potential assembly error.	F2VC-8P824-AB	77P8L3-1
9	148088	3-Apr-81	Change terminal position dimension from 0.85 $\pm$ 0.20mm to 0.80 $\pm$ 0.25mm	F2TA-8C888-AA	87P8L3-3
10	147985	3-Apr-81	Change terminal position dimension from 0.85 $\pm$ 0.20mm to 0.80 $\pm$ 0.25mm	F3TA-8P824-CA	77P8L3-3
11	Alert No. A10188183	11-Oct-81	Use of factory loaded sensor crimp machine vs. one in-line loaded crimp. Manual crimp passes 88 tests.	F2VC-8P824-AB	77P8L3-1

**77PS-Molded Base 48515 UPDATE
(FOR REFERENCE ONLY)**

Entry No.	Rev No	DATE OF ECR	Eng Sys	VALUE IMPROVEMENT	Design Engr	FORM P.N.	THP. N.	p.n. 48515-8	Material
1	A	First Issue 8-Nov-90	Angie	Replaced EX 3493-48 dated 08/28/90 Cellanex 4300	Steve Oller	FEVC-8F884-AA F6LC-8F884-AA	77PSL2-1 77PSL2-3	-2(brown, #2) -1(black, #1)	Cellanex 4300 Cellanex 4300
2	B	5-Jan-91	Angie	Cellanex 4300 CM 188627 Connect/clarity print viewed	Steve Oller	FEVC-8F884-AA F6LC-8F884-AA	77PSL2-1 77PSL2-3	-2(brown, #2) -1(black, #1)	Cellanex 4300 Cellanex 4300
3	C	4-May-92	Angie	Added (-3) GE Noryl GTX 830 CFM 00888	Steve Oller	FEAC-8F884-AA 64DA-8F884-AA F3DC-8F884-AA	77PSL2-1 77PSL2-1 77PSL2-3	-3(natural, #2) -3(natural, #2) -3(natural, #2)	GE Noryl GTX 830 GE Noryl GTX 830 GE Noryl GTX 830
4	D	21-May-92	Angie	Added (-4 through -9) CFM 00128 (-4, -7) GE Noryl GTX 830 (-5, -8, -9) Cellanex 4300	Steve Oller	FEAC-8F884-AA FEVC-8F884-AA F3DC-8F884-AA F3TA-8F884-CA F37A-3N884-AA F37A-3N884-AA F48P-3N884-AA	77PSL2-1 77PSL2-1 77PSL2-2 77PSL2-3 87PSL2-2 87PSL2-3 87PSL2-1 2	-3(natural, #2) -2(brown, #2) -3(natural, #2) -7(brown, #1) -6(brown, #1) -6(brown, #1) -6(brown, #1)	GE Noryl GTX 830 Cellanex 4300 GE Noryl GTX 830 GE Noryl GTX 830 Cellanex 4300 Cellanex 4300 GE Noryl GTX 830
5	E	9-Jul-92	Angie	Added -10 (GE Noryl GTX 830) CFM 00081	Steve Oller	FE8A-8F884-AA	77PSL2-3	-10(dk grey, #1)	GE Noryl GTX 830
6	F	28-Dec-93	Angie	Clarified dimensions CFM 18878	Aziz Rahman				
7	G	1-May-94	Cedras	Dim added CCC note CFM 22757	Chris Wagner				
8	H	20-May-95	Cedras	Note 4 Revised w/ 50% CFM 22067	Chris Wagner				
9	J	13-Jan-97	CAD	Adjust 3 notch dim Added note CAD draw CFM 30004	Di Ha				
10	K	16-Dec-97	CAD	Change dim places Remove 45- 50 degree chamfer, CFM 30005	Di Ha				
11	L	25-Feb-98	CAD	Change .088/.045 chamfer to .090/.050 CFM 30187	Di Ha				
12	M	1-Apr-98	CAD	Added -11 Material GE Noryl GTX 830 CFM 30006	Di Ha	XW43-3N884-AA	87PSL2-3	-11(brown, #1)	GE Noryl GTX 830
13	N	8-May-98	CAD	Added -12 Material Cellanex 4300 ECN 180838	Di Ha	A30820	87PSL2-4	-12(white, #1)	Cellanex 4300

77PS-SREA-ALERT UPDATE

Entry No.	SREA/ALERT No.	DATE SUBMITTED	VALUE IMPROVEMENT	FORD P.N.	T.P. N.
1	409688	27-Feb-93	Use of alternate pressure tester for capacity improvement. Scribe mark indicating "test pass" to be on crimp ring rather than on the plastic connector base.	F2AC-9F824-AA F2VC-9F824-AB F1DC-9F824-AA F55A-9F824-AA F3TA-9F824-CA	77PSL3-1 77PSL2-1 77PSL3-2 77PSL3-2 77PSL3-3
2	409688	27-Feb-93	Use of 10L07 steel from cold headed supplier in lieu of 10L10 steel due to temporary material supply interruption. 10L07 steel made with same process.	F2AC-9F824-AA F2VC-9F824-AB F3DC-9F824-AA F55A-9F824-AA F3TA-9F824-CA	77PSL3-1 77PSL2-1 77PSL3-2 77PSL3-2 77PSL3-3
3	409937	08-Sep-94	Change p.n. from p.n. 94DA-9F824AA to p.n. 94DA-9F824AB	94DA-9F824AB	77PSL4-1
4	409911	17-Mar-94	Use of color pigments in plastic base containing alternate material in lieu of heavy metal per governmental regulations	F3TA-9F824-CA	77PSL3-3
5	262442	22-Jan-93	Use of part submission of prior level "BA". Converting from snap to quick disc switch. Change is to internal disc only.	F3TA-9F824-CA	77PSL3-3
6	147693	02-Dec-92	Reduce internal cap dimension by .004" from .091" to .087" nominal. Address potential open circuit condition under vacuum, forced to disc envelope under stack-up conditions	F2VC-9F824-AB F2AC-9F824-AA F3DC-9F824-AA	77PSL2-1 77PSL3-1 77PSL3-3
7	147673	21-Nov-91	Change thread gaging specification from 2A go to 3A go ring gage. Use of ANSI B1.1 Industry Standard for plated thread allowances.	F3TA-9F824-CA	77PSL3-3
8	147671	05-Nov-91	Use blue colored environmental seal in lieu of reddish color with black stripe to help differentiate seal to reduce potential assembly errors.	F2VC-9F824-AB	77PSL2-1
9	148608	03-Apr-91	Change terminal position dimension from 0.30+/- 0.30mm to 0.50+/- 0.50mm	F3TA-9C885-AA	57PSL3-2
10	147605	03-Apr-91	Change terminal position dimension from 0.50+/- 0.30mm to 0.50+/- 0.25mm	F3TA-9F824-CA	77PSL3-3
11	Alert No. A10188183	11-Oct-91	Use of manually loaded sensor crimp machine vs auto in-line loaded crimper. Manual crimp passes 85 tests.	F2VC-9F824-AB	77PSL2-1

Up on kit/om/quality/J. Watt

Updated 08/10/1999

TI-NHTSA 016081

**DRAWINGS AVAILABLE UPON
REQUEST**

77PS-Molded Base

Entry No.	Rev No.	DATE of ECH	Drawn By	VALUE, IMP Design Engr	FORD P/N	TI P/N	P/N 48515-3
1	A	First Issue 9-Nov-00	Aegle	Replaced E Steve Offler dated 08/28/00 Cellenex 4900	P2VC-8F82-77PSL2-1 F8LC-8F82-77PSL2-3		2 (brown, #) 1 (black, #1)
2	B	8-Jan-01	Aegle	Cellenex 49 Steve Offler CN 155597 Correct/clarify print views	P2VC-8F82-77PSL2-1 F8LC-8F82-77PSL2-3		2 (brown, #2) 1 (black #1)
3	C	4-May-02	Aegle	Added (-3) Steve Offler GE Noryl GTX 830 CRM 09008	P2AC-8F82-77PSL3-1 B4DA-8F82-77PSL4-1 F8DC-8F82-77PSL5-2		3 (natural #) 3 (natural #) 3 (natural #)
4	D	21-May-02	Aegle	Added (-4) Steve Offler CRM 08128 (-4, -7) GE Noryl GTX 8; (-5, -8, -9) Cellenex 49	P2AC-8F82-77PSL3-1 P2VC-8F82-77PSL2-1 F8DC-8F82-77PSL5-2 F3TA-8F82-77PSL3-3 F37A-8N82-87PSL2-2 F37A-8N82-87PSL2-3 B4BP-8N82-87PSL11-2		8 (natural #) 2 (brown #2) 3 (natural #) 7 (red, #1) 6 (gray #1) 6 (gray #1) 8 (green #1)
5	E	8-Jul-02	Aegle	Added -10 Steve Offler (GE Noryl GTX 830) CRM 09081	F58A-8F82-77PSL3-2		10 (dk gray)
6	F	29-Dec-03	Aegle	Clarified dim Aziz Rahman CRM 15919			
7	G	1-May-06	Cadras	Dim added Chris Wagner CRM 28757			
8	H	20-May-06	Cadras	Note 4 Chris Wagner Regrind was 50% CRM 29087			
9	J	12-Jan-07	CAD	Adjust 3 not DI Ha Added note CAD drwg CRM 32804			
10	K	16-Dec-07	CAD	Change dim DI Ha Remove 45-55 degree chamfer, CRM 38255			
11	L	23-Feb-08	CAD	Change .08 DI Ha chamfer to .030/.020 CRM 39167			
12	M	1-Apr-08	CAD	Added -11 DI Ha	XW45-3N82-87PSL2-5		11 (brown #)

GE Noryl GTX 830
CFM 30985

19	N	6-May-88	CAD	Added 12 M	DI Ha	A50520	87P8L2-8	12 (white #1
				Cellenax 4800				
				ECN M40638				

TI-NHT3A 016085

Material

Cellanex 4300
Cellanex 4300

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Cellanex 4300

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TI-NHT8A 016086

Callenex 4800

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TI-NHTSA 016087