EA02-025

TEXAS INSTRUMENTS, INC.'S

9/10/03 ATTACHMENT TO ODI

REQUEST #3

BOX 5

PARTS A - P

PART D

TEXAS INSTRUMENTS
INCORPORATED
MATERIALS AND CONTROLS GROUP

- [x] ATTLEBORO, MA [illegible]
- [ ] VERSAILLES, KY [illegible]
- [ ] CENTRAL LAKE, MI [illegible]

SHIP TO:
ATTN: TIM LANGE
401 N.BENDIX DRIVE
SOUTH BEND,INDIANA 46620

CHARGE TO:

DATE: [illegible] S.O.# [illegible]

REF. #

DATE SHIPPED: [illegible]

SHIPPED VIA: [illegible] Airborne 6/21

USE (CHECK ONE)

- [ ] SCRAP SALES
- [ ] SALE OF ASSETS
- [ ] OUTSIDE PROCESSING
- [ ] TRANSFERS BETWEEN TI LOCATIONS
- [ ] EXPENSE MATERIAL
- [x] OTHER, EXPLAIN: [illegible]

DIV/ACCT. # 030 CC: 140

QUANTITY	DESCRIPTION/PART #/PO	UNIT PRICE	TOTAL
1	77[illegible]-1 [illegible]	n/a	
3	77[illegible]-1 samples		

GROSS WEIGHT	NO. OF CONTAINERS	ORIGINATOR'S NAME (TYPED)	ORIGINATOR'S SIGNATURE
4	1	ELAINE ROSE ms 12-33	Elaine Rose

5-[illegible] UW

TI-NHTSA 7358

AlliedSignal AUTOMOTIVE

AlliedSignal Inc.
Braking Systems Americas
401 N. Bendix Drive
P.O. Box 4001
South Bend, IN 46634-4001
219 237 2100

Part Submission Warrant Request

Date Initiated: 11/03/95 **Warrant No:** SBDS3169 **Initiated By:** SQI
Submission Level 4: Warrant & Documents Only Delivered to ASBS Location
Deliver To Attention: Tom Lange; 401 N. Bendix Drive; South Bend, Indiana 46620
Number of Samples: 0
Date Required: 12/22/95 **Date Received:**

PART #: 2234330 **REV:** A **DATED:** 08/14/94 **DESCRIPTION:** Assy - Pressure Switch **SUPPLIER:** Texas Instruments **CODE:** 89070 **SURVEY SCORE:** 92 (05/31/91) **REASON FOR SUBMISSION:** Recertification	**NMR NO:** GP-0259 & 60; EN-114/EN-116 P.B. **PRODUCT:** Master Cylinder (90) **CUSTOMER:** Ford Motor Company **ASBS USING PLANTS:** Gallatin

SQI Contact: Shawn Murdoch 219-237-2439 **Buyer:**

Expect. Meet Date:	Req'd Yes/No	Approved Date	Approved By	Rejected Date	Rejected By
I. SUPPLIER INFORMATION REQUIRED					
A. Part Submission Warrant (AIAG - PPAP)	No				
B. Process Flow Chart	Yes				
C. Process FMEA (RPN 50-100: RPN >100:)	Yes				
Last Rev. Date:					
D. Control Plan	Yes				
Last Rev. Date:					
E. Dimensional Layout with Numbered Print	Yes				
F. Process Potential Study (Design. Charac.)	Yes				
G. Material and Other Eng Spec Certification	Yes				
Spec: Compound #:					
H. Supplier Functional Testing	Yes				
J. Other (See Remarks in Section V.)	No				
II. ASBS FUNCTIONAL TESTING	No				
Last Test Date:					
III. CFT APPROVING AUTHORITIES					
A. Product Engineering	No				
B. Plant Quality Engineering	No				
C. Plant Manufacturing Engineering	No				
IV. ASBS CUSTOMER APPROVAL (Other than ISW i.e. SREA, Black Box, etc.)	No				

V. REMARKS/SPECIAL INSTRUCTIONS (Design FMEA, Special Gages, Special Samples, Packages, Etc.)

Final Approval on This Form by ASBS Supply Base Management Authorizes Release of Purchased Parts.
APPROVED: **DATE:**
For Recertification, Current Approval to be Reviewed prior to:

On time delivery? Approved 1st time? **PPM:** 0

PART SUBMISSION WARRANT REQUEST

SUBMISSION LEVEL : 4 WARRANT & DOCUMENTS ONLY

DESCRIPTION : ASSY-PRESSURE SWITCH

SUPPLIER : TEXAS INSTRUMENTS

CODE : 89070 FORD P/N: F2AC-9F924-AA (AS # 2234330)

REASON FOR SUBMISSION : RECERTIFICATION

		REQ'D
1	SUPPLIER INFO REQ'D:	
	A. WARRANT	NO
	B. PROCESS FLOW	YES
	C. PFMEA	YES
	D. CONTROL PLAN	YES
	E. DIMENSIONAL LAYOUT / PRINT	YES
	F. PIPC	YES
	G. MATERIAL CERTS.	YES
	H. FUNCTIONAL TESTING	YES

ssr 12/95

PART SUBMISSION WARRANT REQUEST

SUBMISSION LEVEL : 4 WARRANT & DOCUMENTS ONLY

DESCRIPTION : ASSY-PRESSURE SWITCH

SUPPLIER : TEXAS INSTRUMENTS

CODE : 89070 FORD P/N: F2AC-9F924-AA (AS # 2234330)

REASON FOR SUBMISSION : RECERTIFICATION

		REQ'D
1	SUPPLIER INFO REQ'D:	
	A. WARRANT	NO
	B. PROCESS FLOW	YES
	C. PFMEA	YES
	D. CONTROL PLAN	YES
	E. DIMENSIONAL LAYOUT / PRINT	YES
	F. PIPC	YES
	G. MATERIAL CERTS.	YES
	H. FUNCTIONAL TESTING	YES

esr 12/95

WARRANT

TI-NHTSA 7362

Part Submission Warrant

Part Name: ASSEMBLY PRESSURE SWITCH Part Number: 2234330

Safety and/or Government Regulation: [ ] Yes [X] No Engineering Drawing Change Level: A Dated: 9/14/94

Additional Engineering Changes: N/A Dated: N/A

Shown on Drawing No.: 2234330 Purchase Order No.: N/A Weight: .052 kg

Checking Aid No.: N/A Engineering Change Level: N/A Dated: N/A

SUPPLIER MANUFACTURING INFORMATION

Precision Controls Department
Texas Instruments, Inc.
34 Forest Street ms 12-33
PO BOX 2964
Attleboro, Massachusetts 02703-0964

SUPPLIER CODE: T095A

SUBMISSION INFORMATION

[X] Dimensional [X] Material/Functional [X] Appearance

Customer Name/Division: ALLIED SIGNAL BRAKING SYSTEMS

Buyer/Buyer Code: N/A

Application: MASTER CYLINDER

REASON FOR SUBMISSION

- [ ] Initial Submission
- [ ] Engineering Change(s)
- [ ] Tooling: Transfer, Replacement, Refurbishment, or additional
- [ ] Correction of Discrepancy
- [X] Other-Please Specify: CUSTOMER REQUESTED RESUBMISSION
- [ ] Change to Optional Construction or Material
- [ ] Sub-Supplier or Material Source Change
- [ ] Change in Part Processing
- [ ] Parts Produced at Additional Location

REQUESTED SUBMISSION LEVEL (Check One)

- [ ] Level 1 - Warrant, Appearance Approval Report (for designated appearance items only).
- [ ] Level 2 - Warrant, Parts, Drawings, Inspection Results, Laboratory and Functional Results, Appearance Approval Report.
- [ ] Level 3 - At Customer Location-Warrant, Parts Drawings, Inspection, Results, Laboratory and Functional Results, Appearance Approval Report, Process Capability Results, Capability Study, Process Control Plan, Gage Study, FMEA.
- [X] Level 4 - Per Level 3, but without parts.
- [ ] Level 5 - At Supplier Location-Warrant, Parts Drawings, Inspection, Results, Laboratory and Functional Results, Appearance Approval Report, Process Capability Results, Capability Study, Process Control Plan, Gage Study, FMEA.

SUBMISSION RESULTS

The results for [X] dimensional measurements [X] material and functional tests and [X] appearance criteria and [X] statistical process package meet all drawing and specification requirements: [X] Yes [ ] No (If "No" - Explanation is Required).

DECLARATION

I affirm that the samples represented by this warrant are representative of our parts and have been made to the applicable customer drawings and specifications and in the case of production samples, are made from specified materials on regular production tooling with no operations other than the regular production process. I have noted any deviations from this declaration below:

EXPLANATION/COMMENTS: NO SAMPLES REQUIRED

Print Name: ELAINE ROSE Title: QA TECHNICIAN Phone: (508) 236-19

Supplier Authorized Signature: Elaine Rose Date: 12/27/9

FOR CUSTOMER USE ONLY

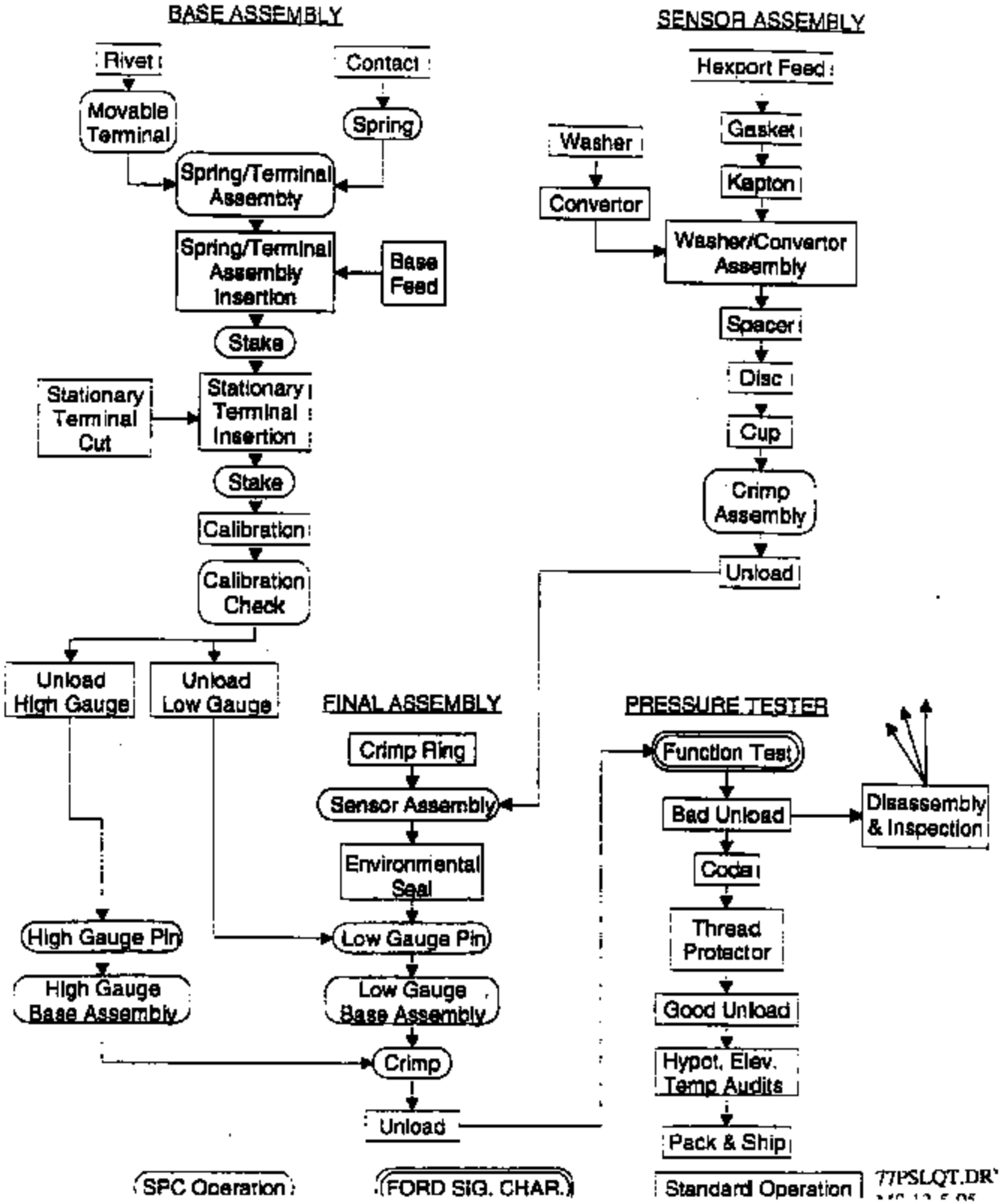
[ ] Approved [ ] Rejected Other

Part Disposition
Customer Name: Customer Signature: Date:

TI-NHTSA 7363

PROCESS FLOW

FORD NEXT GENERATION SPEED CONTROL (77PS)
QUIET SWITCH PROCESS FLOW CHART



FORD CRUISE CONTROL PRESSURE SWITCH
MANUFACTURING CONTROL PLAN
77PS QUIET SWITCH

PROCESS STEP DESCRIPTION	PRODUCT CHARACTERISTICS	EVALUATION METHOD	CONTROL METHOD	FREQUENCY OF TEST	REACTION PLAN
BASE ASSEMBLY (AMI AUTOMATION)	TERMINAL HEIGHT	DIAL INDICATOR	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	TERMINAL PUSHOUT	FORCE GAGE/ DIAL INDICATOR	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	TERMINAL SEPARATION/ ALIGNMENT	PLUG GAGE	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	SPRING ANGLE (B)	COMPARATOR	X/R	5pc/4Hr.	SORT SINCE LAST CHECK
	SPRING CONTACT WIDTH	CALIPERS	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	SPRING TORQUE	FORCE GAGE	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	SPRING BUMP HGHT (B)	CALIPERS	X/R	5pc/4Hr.	SORT SINCE LAST CHECK
	RIVET HEIGHT	DIAL INDICATOR	X/R	5Pc/Hr.	SORT SINCE LAST CHECK
	CALIBRATION DEFORMATION	CUSTOM CONTINUITY SYSTEM	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	VISUAL QUALITY (C)	VISUAL	P	5pc/Hr.	SORT SINCE LAST CHECK
SENSOR ASSEMBLY	CRIMP DIAMETER	CALIPERS	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	CRIMP HEIGHT	CALIPERS	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	VISUAL QUALITY	VISUAL	P	5pc/Hr.	SORT SINCE LAST CHECK
	GASKET PRESENCE	NO-CONTACT PROBE	100%	100%	NO SUBSEQUENT ASSEMBLY

FORD CRUISE CONTROL PRESSURE SWITCH
MANUFACTURING CONTROL PLAN
77PS QUIET SWITCH

PROCESS STEP DESCRIPTION	PRODUCT CHARACTERISTICS	EVALUATION METHOD	CONTROL METHOD	FREQUENCY OF TEST	REACTION PLAN
SENSOR ASSEMBLY CONTINUED	KAPTON PRESENCE	CONTINUITY	100%	100%	NO SUBSEQUENT ASSEMBLY
	WASHER PRESENCE	HEIGHT PROBE	100%	100%	NO SUBSEQUENT ASSEMBLY
	WASHER ORIENTATION	ORIENT. ESCAPE. FUNCTION TEST	100%	100%	FAILS ACTUATION
	NON-CONCENTRIC WASH-CONVERTER PLACEMENT	CUP PLACEMENT OP.	100%	100%	NO SUBSEQUENT ASSEMBLY
	CUT & ASSEM SPACER	CONTINUITY PROBE ANTI-STATIC STATION	100%	100%	NO SUBSEQUENT ASSEMBLY
	ASSEMBLE CUP	HEIGHT PROBE	100%	100%	NO SUBSEQUENT ASSEMBLY
	XFER SENSOR TO PUCK CONVEYOR	GROSS LEAKER ⊕ FUNCTION TEST	100%	100%	NO SUBSEQUENT ASSEMBLY

FORD CRUISE CONTROL PRESSURE SWITCH
MANUFACTURING CONTROL PLAN
77PS QUIET SWITCH

PROCESS STEP DESCRIPTION	PRODUCT CHARACTERISTICS	EVALUATION METHOD	CONTROL METHOD	FREQUENCY OF TEST	REACTION PLAN
FINAL ASSEMBLY (AMI AUTOMATION)	CRIMP DIAMETER (B)	GO/NO-GO GAGE	P	5pc/Hr.	SORT SINCE LAST CHECK
	CRIMP HEIGHT (B)	GO/NO-GO GAGE	P	5pc/Hr.	SORT SINCE LAST CHECK
	BASE TORQUE	TORQUE GAGE	X/R	5pc/Hr.	SORT SINCE LAST CHECK
	CODE CRIMP RING/ DIAMETER-LEGIBILITY	PLUG-VISUAL	P	5pc/Hr.	SORT SINCE LAST CHECK
	PIN HEIGHT (B)	DIAL INDICATOR	P	100%	SEPARATE FAILED LOT. PRODUCT TEAM REVIEW.
	ASSEMBLE ENVIR. SEAL TO CUP GLAND	HEIGHT PROBE	100%	100%	NO SUBSEQUENT ASSEMBLY
	ASSEMBLE TRANSFER PIN TO SENSOR	HEIGHT PROBE	100%	100%	NO SUBSEQUENT ASSEMBLY
FUNCTION TESTER	ACTUATION/RELEASE POINTS (Ford Significant Char.)	MASTERS	X/R	EACH SHFT	ENGINEERING EVALUATIONS
	ACTUATION/RELEASE POINTS (C) (Ford Significant Char.)	RAMP THROUGH PRESSURE RANGE	P	100%	YIELD TRACKING/ SCRAP CONTROL
PRODUCT AUDITS (PRODUCTION)	HIGH PINNING (B)	HYPOT SYSTEM	P	20PC/LOT	SEPARATE FAILED LOT. PRODUCT TEAM REVIEW.
	LOW PINNING (B)	OVEN/CONT METER	P	10pc/Lot	SEPARATE FAILED LOT. PRODUCT TEAM REVIEW.

Q.C. AUDITS (C)
- OUTLINED IN DETAIL IN TEXAS INSTRUMENTS (QAS 208), FMC (THREADS / Ford Significant Char.)
- ELEVATED TEMP IMPULSE CYCLING AUDITS. FREQUENCY TBD. PER DELTA ES-F2VC-9F924-AA SEC.III-E

6 December 1995 MJS/mja 77QTMODA..XLS 050-0435

TI-NHTSA 7370

[illegible]/Process [illegible]: [illegible]
[illegible] Responsibility: [illegible]
Other Areas Involved: [illegible], QUALITY [illegible]

Suppliers an[illegible] Affected: [illegible]
[illegible]
Engineering Release Date:

Prepared by: [illegible]
FMEA Date (Orig): [illegible]   (Rev): 12-5-[illegible]
Key Production Date: [illegible]

Process Description/ Purpose	Potential Failure Mode	Potential Effect(s) of Failure	Sev	Class	Potential Cause(s) of Failure	Occ	Current Controls	Det	R.P.N.	Recommended Actions	Area/Individual Responsibility	ACTION RESULTS Actions Taken	Sev	Occ	Det	R.P.N.
SENSOR ASSEMBLY: FEED [illegible] TO SPK NEST	DOES NOT FEED	NO SUBSEQUENT ASSEMBLY [illegible] YIELD LOSS	5		MACHINE ERROR	1	PREVENTIVE MAINT. 100% PRESENCE CHECK [illegible] OPERATION OF CHECK [illegible]	1	5							
	[illegible]	NO SUBSEQUENT ASSEMBLY [illegible]	5		[illegible] IN [illegible] MACHINE ERROR	1	PREVENTIVE MAINT. 100% PRESENCE CHECK	1	5							
	LOADS MULTIPLE [illegible]	NO SUBSEQUENT ASSEMBLY [illegible]	5		MACHINE ERROR	1	PREVENTIVE MAINT. 100% PRESENCE CHECK	1	5							
ASSEMBLE [illegible] TO [illegible]	MISPLACED [illegible]	[illegible]	7	[illegible]	MACHINE ERROR	1	100% FUNCTION TEST CONTINUITY PROBE CYCLING AUDITS	1	7			SEE [illegible] PROCESS DESCRIPTION BELOW				
	NO [illegible]	[illegible]	7	[illegible]	MACHINE ERROR	1	100% FUNCTION TEST CONTINUITY PROBE CYCLING AUDITS	1	7							
	MULTIPLE [illegible]	[illegible] YIELD LOSS	7	[illegible]	[illegible] OPERATOR [illegible]	1	100% FUNCTION TEST	1	7							
CUT AND PLACE 3 PIECES OF [illegible] ON [illegible] SUB-ASSEMBLY	ONLY 1 OR 2 PIECES	REDUCED [illegible] LIFE	5		[illegible] NOT [illegible] ON [illegible] STATION	1	MACHINE SPEC MACHINE SET-UP [illegible]	1	5							
	NO [illegible]	[illegible]	7	[illegible]	MACHINE ERROR	1	100% FUNCTION TEST CONTINUITY PROBE	1	7							
	IMPROPERLY CUT [illegible]	[illegible] [illegible] LIFE [illegible] [illegible] SUBSEQUENT ASSEMBLY YIELD LOSS	7	[illegible]	MACHINE ERROR	1	100% FUNCTION TEST CONTINUITY PROBE CYCLING AUDITS PREVENTIVE MAINT.	1	7							
	MIS-PLACED [illegible]	[illegible] REDUCED [illegible] LIFE	7	[illegible]	MACHINE ERROR OR STATIC	1	100% FUNCTION TEST CONTINUITY PROBE ANTI-STATIC STATION PREVENTIVE MAINT. CYCLING AUDITS	1	7							
	GREATER THAN THREE PIECES OF [illegible]	SHIFT IN [illegible]	7	[illegible]	STATIC BUILD UP	1	ANTI-STATIC STATION	1	7							
ASSEMBLE [illegible] TO WASHER	MISSED [illegible]	INOPERATIVE DEVICE	5		MACHINE MIS-FEED	3	100% PRESENCE CHECK 100% FUNCTION TEST	1	15							
	MISSED WASHER	INOPERATIVE DEVICE [illegible]	7	[illegible]	MACHINE MIS-FEED	3	100% PRESENCE CHECK 100% FUNCTION TEST	1	21							
	[illegible] WASHER	SHIFT IN [illegible] SET POINT REDUCED [illegible] LIFE	7	[illegible]	MACHINE MIS-FEED OPERATOR ERROR	1	[illegible] 100% FUNCTION TEST CYCLING AUDITS	1	7							
ASSEMBLE WASHER-[illegible] ASSY TO [illegible] SUB-ASSEMBLY	[illegible] OF [illegible]	INOPERATIVE DEVICE	[illegible]		[illegible] PICK AND PLACE [illegible]	1	OPERATOR SET-UP 100% FUNCTION TEST 100% PRESENCE CHECK PREVENTIVE MAINT. CYCLING AUDITS	1	[illegible]							

Part/Process Operation: [illegible]
Design Responsibility: [illegible]
Other Areas Involved: [illegible] QUALITY [illegible]

Suppliers and Plants Affected: [illegible]
Model Year/Vehicle(s): [illegible]
Engineering Release Date: [illegible]

Prepared by: [illegible]
FMEA Date (Orig): [illegible]
Key Production Date: [illegible]

Process Description/Purpose	Potential Failure Mode	Potential Effect(s) of Failure	Sev.	Class	Potential Cause(s) of Failure	Occ.	Current Controls	Det.	R.P.N.	Recommended Actions	Area/Individual Responsible	Actions Taken	S	O	D	R
[illegible] (CONTINUED)	NON-CONCENTRIC [illegible]	MIS-PLACED BUTTON REDUCED BUTTON LIFE MIS-PLACED DISC INOPERATIVE DEVICE	7	[illegible]	[illegible] PICK AND PLACE [illegible]	1	OPERATOR SET-UP 100% FUNCTION TEST 100% [illegible] CHECK [illegible] PROC. CYCLING AUDITS	1	7							
	FAILS TO LOAD [illegible]	NO [illegible] ASSEMBLY [illegible] [illegible] LOSS	5		MACHINE ERROR	1	[illegible] PROC. 100% [illegible] CHECK [illegible] OPERATION OF [illegible]	1	5							
	LOADS MULTIPLE [illegible]	NO [illegible] ASSEMBLY [illegible]	5		MACHINE ERROR	1	[illegible] PROC. 100% [illegible] CHECK	1	5							
[illegible] BUTTON SPACER AND ASSEMBLE TO [illegible] SUB-ASSEMBLY	MISPLACED SPACER	REDUCED DISC LIFE CONTINUITY FAILURE LOSS OF CALIBRATION DRIFT OVER LIFE	7	[illegible]	MACHINE ERROR	1	100% FUNCTION TEST CONTINUITY PROBE CYCLING AUDITS [illegible] DISC PROBE	1	7							
	NO SPACER	REDUCED DISC LIFE LOSS OF CALIBRATION DRIFT OVER LIFE	7	[illegible]	MACHINE ERROR TOOL [illegible], BROKEN, OR OPERATOR [illegible]	1	100% FUNCTION TEST CONTINUITY PROBE CYCLING AUDITS [illegible] PROC.	1	7							
	[illegible] CLIP [illegible], TOO LARGE	REDUCED DISC LIFE LOSS OF CALIBRATION DRIFT OVER LIFE CONTINUITY FAILURE	7	[illegible]	MACHINE ERROR TOOL [illegible], BROKEN, OR OPERATOR [illegible]	1	100% FUNCTION TEST CONTINUITY PROBE CYCLING AUDITS [illegible] PROC.	1	7							
	[illegible] CLIP [illegible], TOO SMALL	REDUCED DISC LIFE LOSS OF CALIBRATION DRIFT OVER LIFE	7	[illegible]	MACHINE ERROR TOOL [illegible], BROKEN, OR OPERATOR [illegible]	1		1	7							
	[illegible]	CONTINUITY FAILURE LOSS OF CALIBRATION DRIFT OVER LIFE	7	[illegible]	STATIC BUILD-UP	1	ANTI-STATIC [illegible]	1	7							
[illegible] DISC TO SENSOR SUB-ASSEMBLY	MISPLACED DISC [illegible]	CONTINUITY FAILURE	5		MACHINE ERROR	[illegible]	[illegible] PROBE [illegible] DISC PROBE 100% FUNCTION TEST	1	[illegible]							
	[illegible] DISC	CONTINUITY FAILURE	5		MACHINE ERROR	[illegible]	100% DISC PROBE [illegible] DISC PROBE 100% FUNCTION TEST	1	[illegible]							
	MULTIPLE DISC	CONTINUITY FAILURE ACTUATION FAILURE	5		MACHINE ERROR	[illegible]	100% DISC PROBE [illegible] DISC PROBE	1	[illegible]							
	[illegible] DISC	LOSS OF CALIBRATION	6		[illegible]	1	100% FUNCTION TEST DISC SLIPS [illegible] SLIPS	1	6							
	MISSING DISC	CONTINUITY FAILURE	5		MACHINE ERROR	1	100% DISC PROBE 100% FUNCTION TEST	1	5							
[illegible] CLIP OVER SENSOR SUB-ASSEMBLY	MISSING CLIP	NO SWITCH OPERATION	5		MACHINE INDEX ERROR	1	100% [illegible] CHECK 100% FUNCTION CHECK	1	5							
	MIS-LOCATION OF [illegible] COMPONENTS	INOPERATIVE SWITCH LOSS	7	[illegible]	MIS-ALIGNED [illegible] PICK AND PLACE	1	[illegible] DISC PROBE 100% FUNCTION TEST CYCLING AUDITS	1	7							

File Name: F [illegible] Printed at [illegible] On [illegible]

Process Failure Mode and Effects Analysis

Part/System Name/Part: [illegible] CRIMP [illegible]
Design Responsibility: [illegible]
Other Areas Involved: JIM [illegible], QUALITY [illegible]

Suppliers and Plants Affected: ALLIED [illegible]
Model Year/Vehicle(s): [illegible]
Engineering Release Date:

Prepared by: [illegible]
FMEA Date (Orig): [illegible] (Rev): 12-5-[illegible]
Key Production Date: [illegible]

Process Description/ Purpose	Potential Failure Mode	Potential Effect(s) of Failure	Sev.	Class	Potential Cause(s) of Failure	Occ.	Current Controls	Det.	R.P.N.	Recommended Actions	Area/Individual Responsible	Actions Taken	Sev.	Occ.	Det.	R.P.N.
ASSEMBLE CLIP CONTINUED:	MULTIPLE CLIPS LOADED	NO [illegible] ASSEMBLE [illegible]	5		MACHINE ERROR; INCORRECT OPERATOR [illegible]	1	100% [illegible] CHECK	1	5							
[illegible]-CRIMP SENSOR ASSEMBLY	UNDER CRIMP	DISLODGEMENT OF INTERNAL COMPONENTS DURING TRANSFER TO [illegible]	5		BROKEN OR WORN TOOLS; PRESSURE TOO LOW	3	OPERATOR SET-UP; 100% FUNCTION TEST; PREVENTIVE MAINT.	1	15							
	OVER CRIMP	INSUFFICIENT FINAL CRIMP DUE TO [illegible] WALL [illegible]	5		INCORRECT PRESSURE; SET-UP ERROR	3	PREVENTIVE MAINT.; SET-UP INSPECTION	1	15							
TRANSFER PRE-CRIMPED SENSOR ASSEMBLY TO [illegible]	DISLODGED INTERNAL COMPONENTS	LEAK; CONTINUITY FAILURE	7	S I C	INSUFFICIENT PRE-CRIMP	1	PREVENTIVE MAINT.; 100% FUNCTION TEST; SET-UP INSPECTION	1	7							
	FAILS TO TRANSFER	EMPTY [illegible], NO [illegible] ON SUBSEQUENT OPERATIONS	5		MACHINE ERROR	1	PREVENTIVE MAINT.	1	5							
	TRANSFERS MULTIPLE SENSOR ASSEMBLIES	SENSOR DAMAGE	5		INCORRECT OPERATOR [illegible]	1	OPERATOR AWARENESS TRAINING	1	5							
[illegible] CRIMP SENSOR ASSEMBLY	UNDER CRIMP	LOSS OF [illegible] CONTROL OF [illegible] ON [illegible]; POTENTIAL [illegible] LIFE PROBLEM	5		PRESSURE TOO LOW; TOOL WORN/DAMAGED	1	SPC DIA. AND HEIGHT; PROCESS SPEC SET-UP; PREVENTIVE MAINT.; 100% FUNCTION TEST; CYCLIC AUDITS	1	5							
	OVER CRIMP	CRIMP DIAMETER TOO LARGE [illegible]; Controlled [illegible]; POTENTIAL [illegible] LIFE PROBLEM	5		PRESSURE TOO HIGH	1	SPC DIA. AND HEIGHT; PROCESS SPEC SET-UP; PREVENTIVE MAINT.; 100% FUNCTION TEST; CYCLIC AUDITS	1	5							
	IMPROPER CRIMP	COMPONENT DAMAGE; CRIMP DIAMETER AND HEIGHT OUT OF SPEC.	5		OPERATOR SET-UP; [illegible]; [illegible] DIE CHANGE	3	SPC DIA. AND HEIGHT; PROCESS SPEC SET-UP; PREVENTIVE MAINT.; 100% FUNCTION TEST; CYCLIC AUDITS	1	15							
	FAILS TO CRIMP	COMPONENT DAMAGE AT [illegible] DEGREE CRIMP; CRIMP DIAMETER AND HEIGHT OUT OF SPEC.	5		MACHINE MALFUNCTION; SET-UP ERROR	1	PREVENTIVE MAINT.; SET-UP CHECK	1	5							
	IMPROPER TOOL [illegible]	MINOR [illegible] ERROR: [illegible]; MAJOR [illegible] ERROR: [illegible]	8		[illegible] ERROR; MAINTENANCE SET-UP ERROR	1	SPC DIA. AND HEIGHT; PREVENTIVE MAINT.	1	8							
[illegible] CRIMP SENSOR ASSEMBLY	UNDER CRIMP	[illegible] RESISTANCE INCREASED; LEAK; CRIMP HEIGHT OUT OF SPEC.; [illegible] FINAL CRIMPING	7	S I G	PRESSURE TOO LOW; TOOL WORN/DAMAGED; [illegible]	1	SPC DIA. AND HEIGHT; PROCESS SPEC SET-UP; P.M./Q.C. AUDITS; 100% FUNCTION TEST; CYCLING AUDITS	1	7							
	OVER CRIMP	CRIMP DIAMETER TOO LARGE [illegible] FINAL [illegible]	5		PRESSURE TOO HIGH	1	SPC DIA. AND HEIGHT; PROCESS SPEC SET-UP; PREVENTIVE MAINT.; 100% FUNCTION TEST; CYCLING AUDIT	1	5							

[illegible] Name: [illegible]
[illegible]
[illegible]
Supplier: [illegible] Affected: [illegible]
[illegible]
Engineering Release Date: [illegible]
Prepared by: [illegible]
FMEA Date (Orig): [illegible] (Rev): 12-5-9[illegible]
Key Production Date: [illegible]

Process Description/Purpose	Potential Failure Mode	Potential Effect(s) of Failure	Sev.	Crit.	Potential Cause(s) of Failure	Occ.	Current Controls	Det.	R.P.N.	Recommended Actions	Area/Individual Responsible	Actions Taken	Sev.	Occ.	Det.	R.P.N.
[illegible] BLANK TO ENSURE [illegible]	INSUFFICIENT [illegible]	UN-CRIMPED [illegible] AREA	5		[illegible] TOO LOW	[illegible]	100% [illegible] 100% FUNCTION TEST [illegible] AUDIT	[illegible]	5							
UNLOAD AND [illegible]	[illegible] CONTAMINANTS [illegible] INTO LINE	REDUCED DEVICE LIFE [illegible] OPERATION	5		[illegible] HANDLING [illegible]	1	100% INSPECTION Q.C. [illegible] 100% FUNCTION TEST [illegible] AUDIT	1	5							
[illegible] PART NUMBER AND DATE CODE ON CRIMP RING	INCORRECT DATA	LOSS OF LOT CONTROL OR [illegible]	6		INCORRECT SET-UP WRONG CODE	3	Q.C. SAMPLE OPERATOR VERIFY	1	18							
	ILLEGIBLE DATA	LOSS OF LOT CONTROL OR [illegible]	6		WRONG CODE INCORRECT SET-UP WORN/BROKEN CODE	3	Q.C. SAMPLE OPERATOR VERIFY	1	18							
	CRIMP RING [illegible]	WILL NOT [illegible] INTO THE [illegible]	5		[illegible] CODING [illegible]	5	P-CHART SPC Q.C. SAMPLE OPERATOR VERIFY	3	75	[illegible] CRIMP [illegible] SET-UP [illegible]	[illegible]	INCREASE CODE FONT SIZE	5	1	1	5
	NO DATA	LOSS OF LOT CONTROL OR [illegible]	6		INCORRECT SET-UP	1	Q.C. SAMPLE OPERATOR VERIFY	1	6							
[illegible] ASSEMBLY: CUT-OFF STATIONARY TERMINAL AND INSERT INTO BASE	CUT NOT COMPLETE	WILL NOT [illegible] INTO BASE TERMINAL POSITION OUT OF SPEC.	5		[illegible]	1	[illegible] & PILOT [illegible] TERMINAL POSITION SPC	1	5							
	TERMINAL NOT FULLY INSERTED INTO BASE	TERMINAL HEIGHT OUT OF SPEC. FAILURE AT CALIBRATION	5		TOOL WEAR ON CUT-OFF TOOL [illegible] ON CUT-OFF INSERTION [illegible] INSERTION [illegible]	3	TERMINAL HEIGHT SPC 100% PILOT [illegible] [illegible] MAINT. 100% [illegible]	1	15							
[illegible] STATIONARY TERMINAL	INSUFFICIENT [illegible]	LOOSE TERMINALS	5		[illegible] TOOLS INSUFFICIENT HEAD PRESSURE	1	PREVENTATIVE MAINT. [illegible] STRENGTH SPC SET-UP INSPECTION	1	5							
	[illegible] TOOL [illegible]	TERMINAL POSITION OUT OF SPEC	[illegible]		INCORRECT TOOL SET-UP TOOL [illegible]	3	TERMINAL POSITION SPC SET-UP INSPECTION	1	15							
[illegible] AND [illegible] SPRING	[illegible] INCORRECT	WILL NOT ALLOW SUBSEQUENT OPERATION	5		TOOL [illegible] SET-UP ERROR	1	VISUAL INSPECTION DURING SPC SET-UP INSPECTION	1	5							
	[illegible]	WILL NOT ALLOW SUBSEQUENT OPERATION	5		TOOL [illegible] SET-UP ERROR	1	VISUAL INSPECTION DURING SPC SET-UP INSPECTION	1	5							
	[illegible] PIN [illegible]	REDUCED [illegible] LIFE	5		TOOL [illegible] SET-UP ERROR	1	SET-UP INSPECTION [illegible] HEIGHT SPC VISUAL INSPECTION DURING SPC	1	5							
[illegible] SPRING TO TERMINAL STRIP	INSUFFICIENT [illegible]	LOOSE SPRING	5		[illegible] [illegible] INCORRECT SET-UP HEIGHT	1	[illegible] SPC [illegible] HEIGHT SPC SET-UP INSPECTION PREVENTATIVE MAINT.	1	[illegible]							

File Name: [illegible] Printed at [illegible] On [illegible]

Process Failure Mode and Effects Analysis

[illegible]

Prepared by: [illegible]

Process Description/ Purpose	Potential Failure Mode	Potential Effect(s) of Failure	Sev.	Crit.	Potential Cause(s) of Failure	Occ.	Current Controls	Det.	R.P.N.	Recommended Actions	Area/Individual Responsibility	Actions Taken	Sev.	Occ.	Det.	R.P.N.
	INCORRECT [illegible]	LOOSE SPRING DEFORMED SPRING	5		INCORRECT SET-UP HEIGHT	3	SPRING TORQUE SPC PREVENTATIVE MAINT. RIVET HEIGHT SPC SET-UP INSPECTION	1	15							
	RIVET MISSING	NO SPRING DEVICE WILL NOT OPERATE	3		MISFEED	5	100% PRESENCE SENSOR 100% FUNCTION CHECK	1	15	[illegible]	[illegible]	[illegible]	3	[illegible]	1	[illegible]
SPRING/RIVET [illegible] CONTACT	INSUFFICIENT ROLL	LOOSE CONTACT	5		WORN ANVIL BROKEN ANVIL INCORRECT SET-UP HEIGHT	1	ROLL DIAMETER ON SPC SET-UP INSPECTION PREVENTATIVE MAINT.	1	5							
	EXCESSIVE ROLL	DAMAGED CONTACT LOOSE CONTACT	5		INCORRECT SET-UP HEIGHT	1	ROLL DIAMETER ON SPC PREVENTATIVE MAINT. SET-UP INSPECTION	1	5							
	CONTACT MISSING	CONTACT RESISTANCE INCREASES OVER LIFE	5		MIS-FEED	3	100 % RESISTANCE CHECK	1	15							
FORM SPRING ANGLE	ANGLE TOO HIGH	REDUCED SPRING LIFE REDUCED [illegible] LIFE SHIFT IN SET-POINT OVER LIFE DEVICE [illegible]	7	S I C	WORN/BROKEN TOOL INCORRECT SET-UP	1	ANGLE SPC SET-UP INSPECTION PREVENTATIVE MAINT. 100% POSITION SENSOR	1	7			CAPABILITY OF FORM TOOL [illegible]				
	ANGLE TOO LOW	LOW CONTACT GAP [illegible] FAILURE [illegible] DEVICE	7	S I C	WORN TOOL INCORRECT SET-UP	1	ANGLE SPC SET-UP INSPECTION PREVENTATIVE MAINT. 100% POSITION SENSOR	1	7			"....SEE ABOVE...."				
CUT-OFF MOVABLE TERMINAL AND [illegible] INTO BASE	CUT NOT COMPLETE	WILL NOT GO INTO BASE TERMINAL POSITION OUT OF SPEC.	5		[illegible]	1	100 x [illegible] TERMINAL POSITION SPC	1	5							
	TERMINAL NOT [illegible] INTO BASE	TERMINAL HEIGHT OUT OF SPEC FAILURE AT CALIBRATION	5		CUT-OFF TOOL WORN/BROKEN INSERTION PUNCH WORN/BROKEN	3	100 x INSERTION [illegible] PREVENTATIVE MAINT. TERMINAL HEIGHT SPC	1	15							
STAKE MOVABLE TERMINAL ASSEMBLY	INSUFFICIENT STAKE	LOOSE TERMINAL	5		BROKEN TOOL INSUFFICIENT HEAD [illegible]	1	SET-UP INSPECTION [illegible] SPC PREVENTATIVE MAINT.	1	5							
	[illegible] TOOL [illegible]	TERMINAL POSITION OUT OF SPEC.	5		INCORRECT SET-UP TOOL WEAR/BREAKAGE	3	TERMINAL POSITION SPC SET-UP INSPECTION	1	15							
CALIBRATE BASE ASSEMBLY	CALIBRATION [illegible]	REDUCED CYCLE LIFE CREEP ACTUATION SHIFT IN CALIBRATION	7	S I C	OPERATOR SET-UP INCORRECT CALIBRATION SLOPE	1	100 x [illegible] AT CHECK STATION 100 x FUNCTION TEST CYCLING AUDITS PILOTING	1	7							
	CALIBRATION [illegible]	CREEP [illegible] REDUCED CYCLE LIFE SHIFT IN CALIBRATION	7	S I C	OPERATOR SET-UP INCORRECT CALIBRATION SIGMA	1	100 x [illegible] AT CHECK STATION 100 x FUNCTION TEST CYCLING AUDITS PILOTING	1	7							
	[illegible]	CREEP [illegible] REDUCED CYCLE LIFE SHIFT IN CALIBRATION	7	S I C	OPERATOR SET-UP	1	100 x [illegible] AT CHECK STATION 100 x FUNCTION TEST CYCLING AUDITS PILOTING	1	7							

Part/Process Name/Number: [illegible] QUIET [illegible]
Design Responsibility: [illegible]
Other Areas Involved: [illegible], QUALITY ENGINEERING

Suppliers and Plants Affected: ALLIED SIGNAL/BENDIX
Model Year/Vehicle(s): [illegible]
Engineering Release Date:

Prepared by: [illegible]
FMEA Date (Orig): [illegible] (Rev): [illegible]
Key Production Date: [illegible]

Process Description/Purpose	Potential Failure Mode	Potential Effect(s) of Failure	Sev.	Crit.	Potential Cause(s) of Failure	Occ.	Current Controls	Det.	R.P.N.	Recommended Actions	Area/Individual Responsible	Actions Taken	Sev.	Occ.	Det.	R.P.N.
[illegible] BASE ASSEMBLY CALIBRATION	CHECK STATION DRIFT LACK [illegible]	OUT OF RANGE CALIBRATION [illegible]	7	[illegible]	STATION WEAR LABL/SOFTWARE ERROR STATION [illegible] INCORRECT LABT SET-UP	1	OFF LINE SPC CHECK 100 x FUNCTION TEST CYCLING AUDITS [illegible] PREVENTATIVE MAINT.	1	7							
	HIGH CHECK BASE [illegible] INTO LOW CHECK CHUTE	INSUFFICIENT SPRING PRELOAD. LOWER ACTUATION PRESSURE AT ELEVATED TEMPERATURE.	5		SOFTWARE ERROR OPERATOR ERROR	3	SET-UP INSPECTION P-CHART SPC ELEVATED TEMPERATURE CONTINUITY CHECKS 100% FUNCTION TEST	1	15							
	LOW CHECK BASE [illegible] INTO HIGH CHECK CHUTE	INCREASED SPRING PRE-LOAD. HIGHER ACTUATION PRESSURE AT [illegible] TEMPERATURE.	5		SOFTWARE ERROR OPERATOR ERROR	3	SET-UP INSPECTION P-CHART SPC [illegible] TEST AT ELEVATED PRESSURE 100% FUNCTION TEST	1	15							
FINAL ASSEMBLY : ASSEMBLE [illegible] ASSEMBLY TO CRIMP RING	[illegible] NOT ASSEMBLE CORRECTLY	[illegible] SUBSEQUENT OPERATIONS	5		MACHINE ERROR	3	PREVENTATIVE MAINT. DIA. / HT. SPC 100% HEIGHT CHECK	3	45	SEE "CRIMP RING ASSEMBLY" ON PAGE 4	[illegible]	INCREASE CODE [illegible]	5	1	1	5
ASSEMBLE ENVIRONMENTAL SEAL TO CAP GLAND	MISSING SEAL	INTERNAL CORROSION OVER LIFE CRACKED BASE DURING CRIMPING	7	[illegible]	MACHINE ERROR	5	100 x [illegible] BASE TORQUE SPC	1	35							
	MIS-PLACED SEAL	INTERNAL CORROSION OVER LIFE CRACKED BASE DURING CRIMPING [illegible] OVER LIFE	7	[illegible]	MACHINE ERROR	5	100 x [illegible] BASE TORQUE SPC	1	35							
	MULTIPLE SEALS	LOSS OF CALIBRATION CRACKED BASE DURING CRIMPING	7	[illegible]	[illegible]	1	[illegible]	1	7							
ASSEMBLE TRANSFER PIN INTO CUP PIN [illegible]	WRONG SIZE PIN [illegible]	CRIMP OPERATION REDUCED CYCLE LIFE SHIFT IN CALIBRATION	7	[illegible]	OPERATOR ERROR MIXING	1	[illegible] CHECK [illegible] AUDITS 100% FUNCTION TEST CRIMP [illegible] P-CHART SPC HIGH TEMPERATURE CONTINUITY [illegible] [illegible]	1	7							
	MISPLACED/NO PIN	NO DEVICE OPERATION	5		MACHINE ERROR	1	[illegible] 100 x FUNCTION TEST	1	5							
[illegible] BASE ASSEMBLY TO [illegible] ASSEMBLY	WRONG BASE ASSEMBLY	LOSS OF LOT CONTROL WRONG SPECIFICATION	5		OPERATOR ERROR MIXING	1	[illegible] CHECK 100% FUNCTION TEST VISUAL INSPECTION Q.C. SAMPLE 100% FUNCTION TEST P-CHART SPC HIGH TEMPERATURE CONTINUITY [illegible] [illegible] TEST AT ELEVATED PRESSURE	1	5							
	DISLODGEMENT OF PIN	DEVICE WILL NOT OPERATE	5		PICK AND PLACE ERROR	1	100 x FUNCTION TEST PREVENTATIVE MAINT.	1	5							

TI-NHTSA 7378

File Name: [illegible] Printed at [illegible] On 1[illegible]-1995

Process Failure Mode and Effects Analysis

[illegible] ALLIED [illegible]

[illegible] JIT [illegible] QUALITY ENGINEERING

Engineering Release Date: [illegible]

Prepared by: [illegible] MFG. ENG.

Process Description/ Purpose	Potential Failure Mode	Potential Effect(s) of Failure	Sev.	Class	Potential Cause(s) of Failure	Occ.	Current Controls	Det.	R.P.N.	Recommended Actions	Area/Individual Responsibility	Actions Taken	Sev.	Occ.	Det.	R.P.N.
[illegible] TO [illegible] ASSEMBLY [illegible]	[illegible] OF [illegible]	CRACKED [illegible] [illegible]	7	[illegible]	PICK AND PLACE [illegible]	1	[illegible] x FUNCTION TEST PREVENTATIVE MAINT. [illegible] TORQUE SPC	1	7							
2ND STAGE FINAL CRIMP	CRIMP DIAMETER OUT OF SPEC.	VIOLATION OF CUSTOMER ENVELOPE INTERNAL CORROSION	7	[illegible]	INCORRECT [illegible] PRESSURE WORN CRIMP DIE BROKEN CRIMP DIE	1	PREVENTATIVE MAINT. TORQUE SPC CRIMP DIAMETER SPC CRIMP TO A STOP POKA YOKE FUNCTION TESTER	1	7							
	CRIMP HEIGHT OUT OF SPEC.	VIOLATION OF CUSTOMER ENVELOPE INTERNAL CORROSION	7	[illegible]	INCORRECT [illegible] PRESSURE WORN CRIMP DIE BROKEN CRIMP DIE	1	PREVENTATIVE MAINT. TORQUE SPC CRIMP DIAMETER SPC CRIMP TO A STOP POKA YOKE FUNCTION TESTER	1	7							
	CRACKED [illegible]	INTERNAL CORROSION	7	[illegible]	WORN CRIMP DIE BROKEN CRIMP DIE [illegible] HEAD PRESSURE	3	PREVENTATIVE MAINT. TORQUE SPC CRIMP TO A STOP	1	21							
FUNCTION TEST: (Find significant char.)	Calibration of [illegible]	SHIP DEFECTIVE PRODUCT SCRAP GOOD PRODUCT	7	[illegible]	TRANSDUCER OUT OF CALIBRATION [illegible] WRONG FAILED [illegible] BROKEN [illegible] OPERATOR SET-UP ERROR	1	CALIBRATION [illegible] ON SPC R & R [illegible] PULL-OUT Failure [illegible]	1	7							

TI-NHTSA 7377

DRAWINGS AVAILABLE UPON REQUEST

FORM 21781

TEXAS INSTRUMENTS

CERTIFICATION OF COMPLIANCE TEST

CUSTOMER: ALLIED SIGNAL

N/A CUSTOMER ORDER NO.:	N/A TI ORDER NO.:
2234330 CUSTOMER PART NO.:	77PSL3-1 TI PART NO.:
CUSTOMER SPEC: ES-F2VC-9F924-AA	TI SR: N/A
QUANTITY: 3	DATE SHIPPED: 1/17/96

IT IS HEREBY CERTIFIED THAT THE GOODS SPECIFIED ABOVE CONFORM TO THE TI ORDER SHOWN ABOVE, AS REVISED BY MUTUALLY AGREED WRITTEN AMENDMENTS, IF ANY. Further, component parts utilized have been scrutinized and do not vtolate Ford Engineering Materials Specifications NSS-M99P9999-A1/A2/A3 restrictions.

Claire Rose
PRECISION CONTROLS QUALITY CONTROL

DATED: 1/17/96

MATERIAL ANALYSIS

P/N F2AC-9F924-AA

PART NAME	PART NUMBER	CERTIFIED
BASE	46515-3	YES
STATIONARY TERM.	36666-1	YES
MOVABLE TERM.	36557-1	YES
RIVET	74616-1	YES
SPRING MATERIAL	27716-1	YES
MOVABLE CONTACT	74406-1	YES
HEXPORT	36600-1	YES
GASKET	74559-1	YES
CUP	27713-1	YES
KAPTON STRIP	27225-1	YES
WASHER	27639-1	YES
CONVERTER	27406-1	YES
KAPTON TAPE	74224-1	YES
CRIMP RING	74797-1	YES
TRANSFER PIN	74076-SEL	YES
ENVIRO. SEAL	74247-4	YES

ew - 1/96

Product Quality Documentation

CERTIFICATE OF COMPLIANCE

Customer Order Number	Customer Part Number	GE Requisition Number	Material, Grade and Color	
500188981		4189737/1	NORYL	GIN880 111

Lot Number	Qty. Shipped	U/M	Shipped From	Date Shipped	Shipper's Number
N650D	1,980	LB	MBT SELKIRK	11/01/95	02969851

It is hereby certified that the product indicated above conforms to our standard internal specifications for the designated material. This certification is subject to our standard conditions of sale applying to products sold by the General Electric Company.

Specification:

Specification Originator: NORYL

Specification Comments: P/N 46515-3

TEST	REFERENCE	REQUIREMENT	(ENGLISH)	(METRIC)
LOT DATA:				
HDT @264 PSI - 1/4"	ASTM D648	450.0 DEG F MINIMUM	460.0 DEG F	238 DEG C
NOTCHED IZOD IMPACT-1/8"	ASTM D256	1.6 FT-LB/IN MINIMUM	1.7 FT-LB/IN	90.9 J/M
% ELONGATION	ASTM D638	4 % MINIMUM	8 %	
TENSILE YIELD	ASTM D638	20,000 PSI MINIMUM	20,680 PSI	143.8 MPA
FLEXURAL MODULUS	ASTM D790	1,000,000 PSI MINIMUM	1,236,000 PSI	8,529.8 MPA
FLEXURAL STR @ YIELD	ASTM D790	28,000 PSI MINIMUM	34,380 PSI	236.6 MPA
FILTERED GLASS ANALYSIS	ASH/M-RAY	27.00-33.00 %	28.70 %	
SPECIFIC GRAVITY	ASTM D792	1.31-1.35 G/CC		1.32 G/CC
MOISTURE CONTENT	KARL FISCHER	0.30 % MAXIMUM	0.20 %	
PRODUCT AUDIT DATA:			DATE OF LAST AUDIT: 08/95	
FLAMMABILITY,.100" THICK FMVSS.302		4.00 IN/MIN MAXIMUM	SELF-EXTINGUISHING W/NO BURN RATE	

ALEX HARRISON
Quality Manager

STEPHEN A. GROVER
Manufacturing Manager

If you have any questions concerning this, please contact:

GINNY CHICHESTER

1-518-475-5585

RON BOTELHO
TEXAS INSTRUMENTS
34 FOREST ST. MS 1-24
ATTLEBORO MA 02703

CERTIFICATION

January 2, 1996

TEXAS INSTRUMENTS INC
ACCTS PAYABLE DEPT
P.O. BOX 666
ATTLEBORO MA 02703

This is to certify the parts furnished on your purchase order have been produced in accordance with specifications listed on your purchase order and/or blueprint. This certification and accompanying documents may not be reproduced, except in full, without written approval of Elco Textron Inc.

MATERIAL CERTIFICATION, FINAL INSPECTION SHEET ATTACHED
REV LEVEL: D.

Records covering material used and the tests and inspection conducted are on file, subject to examination. This is an original certification and has not been amended unless stated below.

Purchase Order No.	500205082
Register No.	57242
Part No.	36900-1
Description	3/8-24 X .81
Elco Textron Part No.	304-057-637270
Mfg. Lot No.(s)	20726 & 20727
Quantity	63,250

Authorized Signature
Quality Coordinator

CERTIFICATION

ELCO TEXTRON
Elco / Subsidiary of Textron Inc.

Elco Textron Inc.
Precision Automotive Division
1111 Samuelson Road • P.O. Box 7009
Rockford, IL 61125-7009
815.397.8165 • Fax 815.397.6724

MATERIAL CERTIFICATION

DATE OF CERTIFICATION PRINTING: 01/02/96

ELCO PART NUMBER: 304-057-637270
ELCO SHOP ORDER LOT NUMBER: 20727

DATE OF MATERIAL APPROVAL: 07/26/95
FINAL SUPPLIER: SHINSHO
MELT SUPPLIER: O & K
MATERIAL GRADE: SAE 10L10
HEAT NUMBER: C65016

CHEMICAL PROPERTIES

CARBON:	.110	BORON:		MOLYBDENUM:	
MANGANESE:	0.42	NITROGEN:		COPPER:	00.01
PHOSPHORUS:	.006	ALUMINUM:	.028	LEAD:	00.2000
SULFUR:	.019	CHROMIUM:	00.03		
SILICON:	0.03	NICKEL:	00.01		

COMMENTS:

Marc Crankshaw
Chief Metallurgist

This is to certify that parts from the above lot number have been produced from the raw material shown above in accordance with specifications listed on your purchase order and/or blueprint. This certification and accompanying documents may not be reproduced, except in full, without written approval of Elco Textron Inc.

Original certification from supplier on file at Elco Textron Inc.

ELCO TEXTRON
Elco Textron Inc.
1111 Samuelson Road • P.O. Box 7008
Rockford, IL 61125-7008
815.397.5155 • Fax 815.397.4669

TI-NHTSA 7388

METALLON™

1-4-96
36088-1
TH

Quality Assurance Manager
A.J. Knott Tool & Mfg.
P.O. Box 368
Milford, MA 01757

Date Shipped: 1-3-96

Weight Shipped: 1113.41#

We do hereby certify that, to the best of our knowledge and beliefs, this material conforms to the requirements of your purchase order:

PURCHASE ORDER: 4821

PART NO.: 36088-1 REV - 5 (12/5/95)

SPEC. NO.: REV.

MATERIAL CONTROL NO.: 3114-3942-1

MATERIAL: C26000 with Fine Au Inlay

SIZE: .028"+/-.00075" x 1.500"+/-.003"

TEMPER: Half Hard

ROCT: 59.8-65.3

BEND TEST: Passes, 90° GW .005 Radius without fracture

INLAY COMPOSITION: 99.992% Au

THICKNESS: .00115"

METHOD: Average by X-Ray

Kristen O'Connor

Kristen O'Connor
Quality Assurance Engineer

Post-it® Fax Note 7671	Date 1/10/96 # of pages 2
To Julie	From C. Tomaso
Co./Dept. T.I.	Co. A.J. Knott
Phone #	Phone # 508-473-1234
Fax # 508-836-3113	Fax #

1 508 473 0824   A J KNOTT   01/10/96 11:58 P.002/002

A.J. OSTER CO.

Brass Mill Products • Steel • Aluminum Mill Products

[illegible] TCR

A J OSTER - WARWICK
405 INDUSTRIAL DRIVE
WARWICK, [illegible]

36689
36689

*** CERTIFICATE OF CONFORMANCE ***

[illegible] ORDER:	CUST ORDR.	[illegible]	[illegible]
[illegible]	6540	@ 2396	11-9-95

CUSTOMER NAME:
J. KNOTT & MFG. CORP.

CUST PART#: [illegible]   SPEC CONFORMANCE: [illegible]

DESCRIPTION:	GAUGE:	TEMPER:	WIDTH:
[illegible] 260 COIL	.02500	2h	1.3250

CHEMICAL ANAL. [illegible]

BATCH..........	084425
COIL#..........	041553 A
CU.............	69.42000
ZN.............	30.55000
PB.............	.00100
FE.............	.01300
SN.............	.00500
SI.............	.00500

PHYSICAL TEST RESULTS

P/N 36689-1

ROCKWELL........	R30T 60.5-
TENSILE.........	61.0-
ELONGATION......	27 %

NOTES-

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE TO CONFORM TO SPECIFICATION/ OR REQUIREMENTS OF YOUR ORDER.

11-5-95
DATE

[signature]
LAB SUPERVISOR

TI-NHTSA 7390

LANDRETH ENGINEERING CO.
MILFORD RIVET DIVISION
857 Bridgeport Avenue
Milford Connecticut 06460
Phone : 203-878-4631
Fax : 203-878-5071

ATTENTION QUALITY ASSURANCE

CERTIFICATE OF COMPLIANCE

The Milford Group Certifies that the Purchase Order referenced on the packing slip for the part number and quantity called out on the same packing slip was processed in accordance with, and to conform to; you part number, revision, material, and process specifications as called out by your Purchase Order.

LANDRETH ENGINEERING CO.

Customer	: TEXAS INSTRUMENTS
Date	: 12/18/95
PO #	: 500205077
Cust Part#	: 74408-1 REV F
Milford Order#:	F85770
Milford Part#	: 6254-A REV G 0577/059X0.044
Pieces	: 64,470
Weight	: 6.9
Material	: COPPER
Finish	: PLAIN

VALENTINE TOOL & STAMPING, INC.

171 WEST MAIN ST. NORTON, MASS. 02766
(508) 285-6911

MATERIAL CERTIFICATION

DATE : MONDAY DECEMBER 11, 1995

CUSTOMER : TEXAS INSTRUMENTS INC

CUSTOMER P.O. NO : 505296776 SUPPLIER INVOICE NO.: 90093

PART DESCRIPTION : 27713-1 CUP REV.D

SUPPLIER PJO NO. : 20265

QUANTITY SHIPPED : 44,000

SHIPMENT DATE : 12/11/95

PRODUCTION LOT NO: 9513

WE CERTIFY THAT THE MATERIAL USED
TO PRODUCE THE PRODUCT IN THIS
SHIPMENT, NAMELY
[C1006]
CONFORMS TO T.I. DRAWINGS AND
T.I. PURCHASE ORDER REQUIREMENTS.

SIGNED _____
(Supplier Representative)

Jeanne Laflamme Quality Assurance Manager

VALENTINE TOOL & STAMPING, INC.

71 WEST MAIN ST. NORTON, MASS. 02766
(508) 285-6911 226-8946

CERTIFICATE OF CONFORMANCE

DATE : MONDAY DECEMBER 11, 1995

CUSTOMER : TEXAS INSTRUMENTS, INC.

CUSTOMER P.O. NO : 505296776 SUPPLIER INVOICE NO.: 90093

PART DESCRIPTION : 27713-1 CUP REV.D

SUPPLIER PJO NO. : 20265

QUANTITY SHIPPED : 44,000

SHIPMENT DATE : 12/11/95

PRODUCTION LOT NO: 9513

WE CERTIFY THAT ALL ITEMS SHIPPED ON THIS ORDER MEET THE REQUIREMENTS OF THE PURCHASE ORDER AND APPLICABLE DRAWINGS/SPECIFICATIONS. RESULTS OF REQUIRED MECHANICAL, VISUAL, FUNCTIONAL AND CHEMICAL TESTS ARE ON FILE IN OUR QUALITY ASSURANCE DEPARTMENT.

SIGNED Jeanne Laflamme

Jeanne Laflamme
Quality Assurance Manager

Certificate of Compliance

This certifies that material meets ordered specification

Valentino

P/N 27713-1

Specification
Size
2.00 X .040
PO Number
17558
Mill Number
25414

Heat	AISI	Rockwell
685508	C-1006	

%C	%Mn	%P	%S	%Si	%Cu	%Cr	%Mo	%Ni	%Cb	%V	%Ca
.06	.29	.011	.018					.015			

Tensile Strength (psi)	.2% Yield Strength (psi)	% Elongation in 2"

Surface	Inclusion Rating	Grain Size

Decarburization	Microstructure

Cold Bend

Parallel to the rolling direction over a ____ Radius Bend

Perpendicular to the rolling direction over a ____ Radius Bend

Hardenability	Miscellaneous

I certify that the above is a correct ... Date 8/11/95

Attest: ...

Notary Public, State of New York, County of Oneida

My commission expires: 1996

ROME STRIP STEEL
530 Henry St.
Rome, NY 13440
315-336-5500
FAX 315-338-5510

E. I. DU PONT DE NEMOURS & COMPANY
CIRCLEVILLE, OHIO 43113

NO: KC-12
Effective Date: 07/14/93

MATERIAL CERTIFICATION

DATE: _____

CUSTOMER: TEXAS INSTRUMENTS, ATTLEBORO

CUSTOMER ORDER NO. _____

CUSTOMER PART NO. & REV. 27225-2 (REV. R)

QUANTITY THIS SHIPMENT 5720

SHIPMENT DATE 1-26-95

We certify that the material used to produce the product in this shipment, namely 500FN131 Kapton*, 31/32" wide, conforms to TI drawing and TI purchase order requirements on file with the HPF Group of the Dupont Company.

Jerrell C Holloway
SUPPLIER REPRESENTATIVE
ENGINEER - QUALITY CONTROL - TITLE

K. F. BASSLER COMPANY, INC.
PRECISION TOOLING & METAL STAMPINGS
45 John Willem St. • Attleboro, MA 02703 • (508) 222-1061 • Fax: (508) 226-1605
EST. 1948

ELEMENT: 4.8 (Product Identification and Traceability)		Page 1 of 1
TITLE: Material Certification	FORM: 3.0	REVISION:

CUSTOMER: TEXAS INSTRUMENTS, INC.

CUSTOMER ORDER NO.: 505277139

CUSTOMER PART NO.: 27406-1

PART REVISION: P

QUANTITY THIS SHIPMENT: 40,250

LOT NO(S). THIS SHIPMENT: 329

SHIPMENT DATE: 12-11-95

K.F. Bassler Co., Inc. certifies that the material used to produce the product in this shipment, namely, AK 1008 CRS, conforms to TI'S drawing and purchase order requirements.

AUTHORIZED SIGNATURE:

Kathleen A. Penkala
Customer Service Manager

PMA PRECISION METALFORMING ASSOCIATION

THOMPSON
Steel Company Inc.

EXECUTIVE OFFICES
[redacted]

[redacted]

P/N 27406-1

K.F. BASSLER
45 JOHN WILLIAM ST.
ATTLEBORO, MA 02703

CONVERTE
REC'D 9-19-95

ANALYSIS REPORT

Item No.	YOUR ORDER NO.	OUR ORDER NO.	GRADE	SIZE	WEIGHT	SPECIFICATION NO.	PART NO.
1	16878	31685	1008AK	1.000 X .046	25.345		J038# 1923-
2							1930-
3							1972-
4							1929-
5							
6							

Item No.	HEAT NO.	C	MN	P	S	SI	CR	NI		ROCKWELL	SEND TEST	OTHER
1	411M8981	05	28	012	011					B 46		
2												
3												
4												
5												
6												

9-19-95
CERTIFIED BY:

Quality Control

TI-NHTSA 7397

INSULFAB PLASTICS, INC
PLASTIC FABRICATORS DIV.
155 NORTH MAIN STREET
FRANKLIN, NH 03235
(603) 934-2770

CERTIFICATE OF CONFORMANCE

TO: TEXAS INSTRUMENTS, INC DATE: 12/13/95

AT: ATTLEBORO, MA

ATT: QUALITY CONTROL SUPV.

THIS CERTIFIES THAT:
SHIPMENT #181961

PART # 73958-1 REVISION J

QUANTITY: 250,000

MATERIAL DESCRIPTION:

KAPTON HN

IS IN CONFORMANCE WITH THE REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS ON YOUR ORDER # 505287699-1

BY: INSULFAB PLASTICS
FRANKLIN, NH 03235

QUALITY ASSURANCE MANAGER

VALENTINE TOOL & STAMPING, INC.

171 WEST MAIN ST. NORTON, MASS. 02766
(508) 285-8911 226-8042

CERTIFICATE OF CONFORMANCE

DATE : MONDAY DECEMBER 18, 1995

CUSTOMER : TEXAS INSTRUMENTS, INC.

CUSTOMER P.O. NO : 505279165 SUPPLIER INVOICE NO.: 90133

PART DESCRIPTION : 74797-1 CRIMP RING REV.B

SUPPLIER PJO NO. : 20191

QUANTITY SHIPPED : 26,200

SHIPMENT DATE : 12/18/95

PRODUCTION LOT NO: 9541

WE CERTIFY THAT ALL ITEMS SHIPPED ON THIS ORDER MEET THE REQUIREMENTS OF THE PURCHASE ORDER AND APPLICABLE DRAWINGS/SPECIFICATIONS. RESULTS OF REQUIRED MECHANICAL, VISUAL, FUNCTIONAL AND CHEMICAL TESTS ARE ON FILE IN OUR QUALITY ASSURANCE DEPARTMENT.

SIGNED Jeanne Lafiamme
Jeanne Lafiamme
Quality Assurance Manager

VALENTINE TOOL & STAMPING, INC.

171 WEST MAIN ST. NORTON, MASS. 02766
(508) 285-6911

MATERIAL CERTIFICATION

DATE : MONDAY DECEMBER 18, 1995

CUSTOMER : TEXAS INSTRUMENTS INC

CUSTOMER P.O. NO : 505279165 SUPPLIER INVOICE NO.: 90133

PART DESCRIPTION : 74797-1 CRIMP RING REV.B

SUPPLIER FJO NO. : 20191

QUANTITY SHIPPED : 25,200

SHIPMENT DATE : 12/18/95

PRODUCTION LOT NO: 9541

WE CERTIFY THAT THE MATERIAL USED
TO PRODUCE THE PRODUCT IN THIS
SHIPMENT, NAMELY
[5052 AL]
CONFORMS TO T.I. DRAWINGS AND
T.I. PURCHASE ORDER REQUIREMENTS.

SIGNED _____ (Supplier Representative)

Jeanne Laflamme Quality Assurance Manager

UNITED ALUMINUM CORPORATION
100 United Drive, P.O Box 215, North Haven, CT 06473
Tel: (203) 239-5881 Fax: (203) 239-4441

SOLD TO: VA003
ATTN: DICK WHITNEY

VALENTINE TOOL & STAMPING INC.
PO BX 469, 171 W. MAIN
NORTON, MA 02766-0469

DATE September 11, 1995
CUST. PO# 18332
ORDER SPECS 5052-O .03200 x 2.312
UA ORDER# 191090B
SPECIFICATIONS ASTM B209-92a,QQA 250/8

P/N 74797-1

CHEMICAL COMPOSITION RESULTS

This is to certify that the following are the results of a chemical composition analysis performed by an independent laboratory, based on a single sample for each master coil listed below:

	SAMPLE ANALYSIS ACTUAL
SILICON	0.10
IRON	0.30
COPPER	0.05
MANGANESE	0.06
MAGNESIUM	2.4
CHROMIUM	[illegible]
ZINC	[illegible]
OTHER (EACH) - MAX	[illegible]
OTHER (TOTAL) - MAX	0.15
ALUMINUM	REM

MECHANICAL PROPERTY RESULTS

This is to certify that the following are the results of the mechanical property test(s) performed by United Aluminum, based on a minimum of one sample for each master coil listed below:

	HEAT# D419-86
TENSILE STRENGTH (KSI)	30.2
ELONGATION (%)	21.0

Any test results reported above are subject to the limitations of the testing process. All sales are subject to United Aluminum's Terms and Conditions contained on the reverse of its Sales Order Acknowledgement.

FOR UNITED ALUMINUM CORP.

BY: R Campbell Buchanan

R.CAMPBELL BUCHANAN
TECHNICAL MANAGER

WS SHIP SHIP QC 1

09/11/1995 11:44:16
00124-00273 28953 004968

TEXAS INSTRUMENTS, INC.
MATERIALS & CONTROLS COMP WHSE
SUFFOLK ROAD M & C DOOR 18
MANSFIELD MA 02048-1105

4210

PARKER HANNIFIN CORP.
JBL DIVISION
WEST CROFT CIRCLE
SPARTANBURG, S.C. 29302
TELEPHONE (803) 573-7332

J.B.L. Division of Parker Seal certifies that the material used to produce the product in this shipment, namely SILICONE/ S7519, Conforms to TI drawing and TI purchase order requirements.

PART TITLE... ENVIROMENTAL SEAL

CUST P/N... 74247-4 REV K

J.B.L. P/N... 317389

SILICONE COMPOUND... S7519

DATE SHIPPED

12/04/96

P/O...500205016

S/N 500327

QUANTITY... 104,000

HAROLD C. SEGER LAB MANAGER
PAUL METZGER Q.A. MANAGER

J.B.L. Division

PREPARED BY

12/3/96

Timothy Jeffries

TI-NHTSA 7402

Paratech, Inc.

MINIATURE TERMINAL CRIMPING

13940 Minnesota Avenue • P.O. Box 716 • Paramount, California 90723
Telephone (213) 633-5048 • FAX (213) 633-5807

MATERIAL CERTIFICATION

DATE: 12-14-95

TEXAS INSTRUMENTS, INC.

ORDER NO.: 50531784G

PART NO : 24028-139 REV. NO.: G

QUANTITY THIS SHIPMENT: 50,000

SHIPMENT DATE: 12-14-95

PART DESCRIPTION: PIN

WE CERTIFY THAT THE MATERIAL USED TO PRODUCE THE PRODUCT IN THIS SHIPMENT, NAMELY PIN / STEARITE - 43 CONFORMS TO T.I. DRAWING AND T.I. PURCHASE ORDER REQUIREMENTS.

PRODUCTION MANAGER

DIEMASTERS MANUFACTURING,INC.

MATERIAL CERTIFICATION

DATE: 12-08-95

CUSTOMER : TEXAS INSTRUMENTS

SUPPLIER PURCHASE ORDER : BL-4762

CUSTOMER PURCHASE ORDER : 5052791/61

PART NO.: 27839-1 REV.: D

PART DESCRIPTION : WASHER

QUANTITY THIS SHIPMENT : 73,140

SHIPMENT DATE : 12-08-95

TRACEABLE LOT NUMBER : TI-427

HEAT NUMBER : D00817

TYPE OF MATERIAL : CRS 1050 SOFT

****

WE CERTIFY THAT THE MATERIAL USED TO PRODUCE THE PRODUCT IN THIS SHIPMENT. NAMELY (SPECIFIC NAME/NUMBER OF MATERIAL),CONFORMS TO TEXAS INSTRUMENTS DRAWING AND PURCHASE ORDER REQUIREMENTS.

****

SIGNED _____
QUALITY ASSURANCE REPRESENTATIVE

TITLE: Q/A Inspector

TI-NHTSA 7404

T7420215

TEXAS INSTRUMENTS, INC.
MATERIALS & CONTROLS COMP WHSE
SUFFOLF ROAD-M&C-DOOR 18
MANSFIELD MA 02048-1105

PARKER HANNIFIN CORPORATI
JBL DIVISION
WEST CROFT CIRCLE
SPARTANBURG, S.C. 29302
TELEPHONE (803) 573-7332

J.B.L. Division of Parker Seal certifies that the material used to produce the product in this shipment, namely EPDM/E7104. Conforms to TI drawing and TI purchase order requirements.

PART TITLE... GASKET

CUST P/N... 74353-1 REV H

J.B.L. P/N.. 20216E

COMPOUND... E7104

DATE SHIPPED 12/11/96

P/O... 500205079

B/N... 001292

QUANTITY. 181,200

HAROLD C. SEGER LAB MANAGER
PAUL METZGER Q.A. MANAGER

J.B.L. Division
LAB TECHNICIAN

CERTIFICATION

November 30, 1995

TEXAS INSTRUMENTS INC
ACCTS PAYABLE DEPT
P.O. BOX 666
ATTLEBORO MA 02703

This is to certify the parts furnished on your purchase order have been produced in accordance with [illegible] on your purchase order and/or blueprint. This certification and accompanying documents [illegible] except in full, without written approval of Elco Industries, Inc.

MATERIAL CERTIFICATION, FINAL INSPECTION SHEET ATTACHED
REV LEVEL: D.

Records covering material used and the tests and inspection conducted are on file. [illegible] original certification and has not been amended unless stated below.

Purchase Order No.	500205082
Register No.	57242
Part No.	36900-1
Description	3/8-24 X .81
Elco Part No.	304-057-637270
Mfg. Lot No.(s)	13642
Quantity	9,000

Authorized Signature
Quality Control

CERTIFICATION

ELCO INDUSTRIES, INC.
[illegible]

F-61-6

ENGINEERED MATERIALS

1 BRUSH WELLMAN INC. 180 PASSAIC AVE FAIRFIELD NJ 07004

CERTIFICATE OF MATERIAL QUALITY

TEXAS INSTRUMENT
SUFFOLK ROAD
COMPONENT WHSE BLDG 16
MANSFIELD MA 02048-1103

OUR ORDER NO: FA9785 CUSTOMER NO: 897852
OUR ITEM NO: 01 SHIPMENT NO: 011
YOUR P.O. NO: 500008999 11/20/95
YOUR SPEC NO:
YOUR PART NO: 27716-1 REV.D

ALLOY	STRIP							
		190	HM	18482	0.005	+0.0002	-0.0002	" THI
		17200	TM04		0.183	+0.002	-0.002	" WID
								COI

SHIPMENT NBR 011 = 64.8 LBS
HEAT NUMBER 18482 = 64.8 LBS

***** CHEMICAL COMPOSITION (PERCENT) *****

1.870 BE	.22 CO	.06 NI	.05 FE	.08 SI	.04 AL
.005 SN	.01 ZN	.006 CR	.004 PB		

REMAINDER: CU

***** AS SHIPPED PROPERTIES *****

TENSILE	(KSI)	144.6	- 148.4
YIELD	(KSI)	120.8	- 120.9
ELONGATION	% IN 2"	13.0	- 13.0
HARDNESS-1	HV	290.0	- 295.0
CONDUCTIVITY % IACS		19.3	
GRAIN SIZE (MM)		.015	- .015

******* PO / LOT OR COIL NUMBER ******

66- A

P = PASSED F = FAILED

PJF
QUALITY ASSURANCE MANAGER

11-20-95
DATE

[redacted]

11/20/95 12:44:48

TI-NHTSA 7407

BIGELOW COMPONENTS CORPORATION
74 DIAMOND ROAD
SPRINGFIELD, NEW JERSEY 07081-3190
201-467-2100 FAX: 201-912-9397

MATERIAL CERTIFICATION/CONFORMANCE

Texas Instruments, Inc.
Materials & Controls
34 Forest Street
Attleboro, MA 02703-2481

Your P.O. No.	-	500205031
Your Part No.	-	74918-1
Rev. No.	-	F
Quantity Shipped	-	300,000
Shipment Date	-	11-13-95
Lot Number	-	1
Date Code	-	07-11-95

We certify that all the items shipped on this order meet the requirements of the Texas Instruments purchase order and Texas Instruments drawing specifications.

We certify that the parts shipped were made of CDA 260 brass material in accordance with Texas Instruments drawing specifications.

Sincerely,

C. Brett Harman

CBH:es

FUNCT./TESTS

FUNCTIONAL TESTING

FORD P/N F2AC-9F924-AA (AS P/N 2234390)

SPEC:	ACT 90-200 psig		
	REL 20psig MIN		
ACTUAL:	# 1	# 2	# 3
ACT	123	130.7	123.9
REL	92.2	102.3	94.2

eer 12/95

DRAWINGS AVAILABLE UPON REQUEST