Corporate Headquarters
1940 Craigshire Rd.
St. Louis, MO 63146
Phone 314.434.2888
Fax 314.434.2902
www.efc-intl.com

Approval to Ship

This letter authorizes EFC to ship the below mentioned part number(s) without PPAP approval.

If NO PPAP approval is required please check the box below, sign, date and send back via email to: cdavis@efc-intl.com

☐ No PPAP Approval required

Customer: **Nursan Otomotiv EOOD**

Customer Part # **EU5T-14E044-CA**

EFC Part # **09300417-PA6602**

Description **CLIP RET WIRE TAPEON 12.3X6.3 HL NYL/NAT**

Customer Signature _____

Date: _____

Printed Name _____

Title: _____

Comments: _____

Please reference PPAP Request # **29096** Sent Date: 5/13/2024

PLEASE NOTE: Shipment of Production Parts may be held until receipt of signed Part Submission Warrant or Approval to Ship form.

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Production Part Approval Submission

PART NUMBER:
EU5T-14E044-CA

EFC PART NUMBER:
09300417-PA6602

5/13/2024

To: Nursan Otomotiv EOOD

From: EFC INTERNATIONAL
1940 Craigshire Rd
St. Louis, MO 63146

Questions or comments concerning this submission may be directed to:
Steve Gaddy
Director of Quality
314.434.2888
sgaddy@efc-intl.com

Please reference PPAP Request # **29096**

PLEASE NOTE: Shipment of Production Parts may be held until receipt of signed Part Submission Warrant or Approval to Ship form.

Part Submission Warrant

Part Information

Part Name: CLIP RET WIRE TAPEON 12.3X6.3 HL NYL/NAT | Cust. Part Number: EU5T-14E044-CA

Shown on Drawing Number: EU5T-14E044-CA | EFC Part Number: 09300417-PA6602

Engineering Drawing Change Level: RELEASED | Dated: 3/18/2014

Additional Engineering Changes: NA | Dated: NA

Safety and/or Government Regulation: ☐ Yes ☑ No | Purchase Order No.: | Weight (kg): 0.0009

Checking Aid No.: NA | Checking Aid Engineering Change Level: NA | Dated: NA

ORGANIZATION MANUFACTURING INFORMATION

EFC International
Supplier Name & Supplier/Vendor Code

1940 Craigshire Rd
Street Address

St. Louis | MO | USA | 63146
City | Region | Country | Zip/Postal

CUSTOMER SUBMITTAL INFORMATION

Nursan Otomotiv EOOD
Customer Name/Division

NADIYE BARUTÇU
Contact

Application:

MATERIALS REPORTING

Has Customer-required Substance of Concern information been reported? ☑ Yes ☐ No

Submitted by IMDS or other Customer format: 495620706

Are polymeric parts identified with appropriate ISO marking codes? ☐ Yes ☐ No ☑ n/a

REASON FOR SUBMISSION (Check at lease one)

- ☑ Initial submission
- ☐ Engineering Change(s)
- ☐ Tooling: Transfer, Replacement, Refurbishment, or additional
- ☐ Correction of Discrepancy
- ☐ Tooling Inactive > than 1 year
- ☐ Change to Optional Construction or Material
- ☐ Sub-Supplier or Material Source Change
- ☐ Change in Part Processing
- ☐ Parts produced at Additional Location
- ☐ Other - please specify

REQUESTED SUBMISSION LEVEL (Check one)

- ☐ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
- ☐ Level 2 - Warrant with product samples and limited supporting data submitted to customer.
- ☑ Level 3 - Warrant with product samples and complete supporting data submitted to customer.
- ☐ Level 4 - Warrant and other requirements as defined by customer.
- ☐ Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.

SUBMISSION RESULTS

The results for ☑ dimensional measurements ☑ material and functional tests ☐ appearance criteria ☐ statistical process package

These results meet all design record requirements: ☑ YES ☐ NO (If "NO" - Explanation Required)

Mold / Cavity / Production Process: 1 MOLD / 4 CAVITIES / PLASTIC INJECTION MOLDING

DECLARATION

I affirm that the samples represented by this warrant are representative of our parts, which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further warrant that these samples were produced at the production rate of 3,500 / 8 hours. I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.

EXPLANATION/COMMENTS:

Is each Customer Tool properly tagged and numbered? ☐ YES ☐ NO ☑ Not Applicable

Organization Authorized Signature: | Date: 5/13/2024

Print Name: Candice Davis | Phone No.: 314-434-2888 | Fax No.: 314-439-4470

Title: Quality Assistant | E-mail: cdavis@efc-intl.com

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other

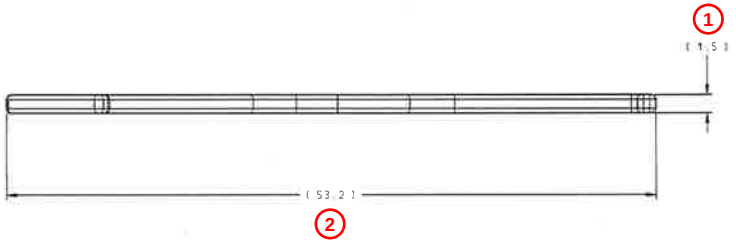
Customer Signature | Date:

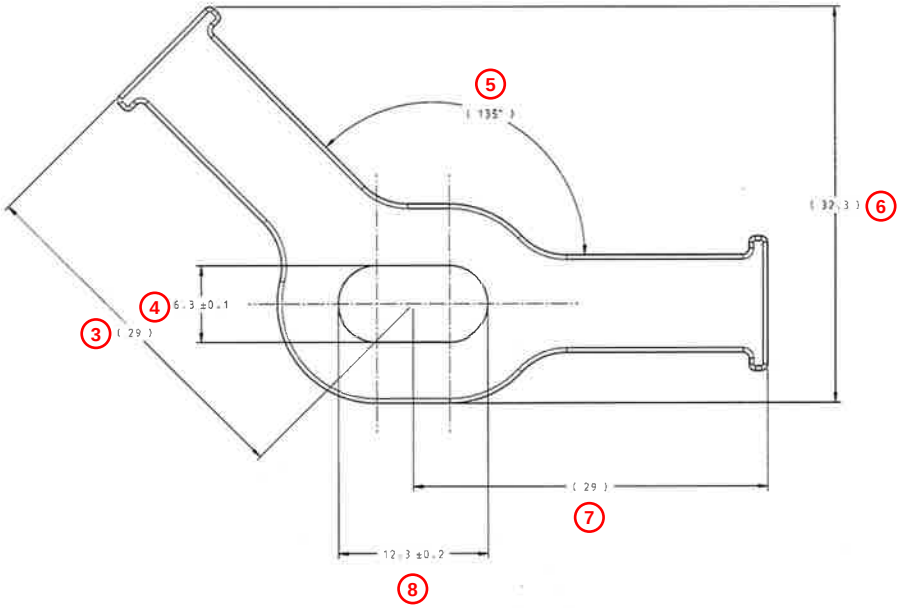
Print Name | Customer Tracking Number (optional)

PLEASE NOTE: Shipment of Production Parts may be held until receipt of signed Part Submission Warrant or Approval to Ship form.

LTRS	REVISIONS			
ORIGINATOR	CHECKER	ENGR APP	MATL APP	
RELEASED EUST-14E044-CA				
AELE-E-11789584-832		201403018		
DLIPP2	RVITALI	RVITALI	XXX	

ISOMETRIC (1:1)





GENERAL NOTES:

9. 1. FOR ENGINEERING APPROVED SOURCE, SEE THE WERS ENGINEERING NOTICE.
10. 2. FOR CURRENT RELEASE STATUS, SEE THE WERS RELEASE NOTICE.
11. 3. CHANGES AFFECTING DESIGN, COMPOSITION OR PROCESSING OF THE PART PREVIOUSLY APPROVED FOR PRODUCTION REQUIRE PRIOR APPROVAL FROM FORD PRODUCT ENGINEERING. REFER TO DS-9000.
12. 4. MATERIAL RECYCLING CODE >PA66< PER SAE J1344 TO APPEAR ON PART.
13. 5. PART BRANDING (TRADEMARK) AND CODING MUST BE IN ACCORDANCE WITH FORD ENGINEERING CAD AND DRAFTING STANDARDS, SECTION E-3. THIS PART/ASSEMBLY MUST COMPLY WITH BRANDING DIRECTIVE E-108 OR THE EXEMPTION NUMBER SHOWN IS THE AUTHORITY FOR NON COMPLIANCE. EXEMPT NO. _____ (FOR PROTOTYPE TOOLED PART; ONLY PART NUMBER IS REQUIRED)
14. 6. PART MUST BE PACKED IN A MANNER WHICH PREVENTS DISTORTION DURING SHIPPING AND STORAGE.
15. 7. WRITTEN ENGINEERING APPROVAL OF SAMPLE PARTS MAY BE REQUIRED PRIOR TO AUTHORIZATION OF PART PRODUCTION.
16. 8. PART MUST BE FREE OF BURRS AND FLASH WHICH MAY BE DETRIMENTAL TO ASSEMBLY SAFE HANDLING, APPEARANCE OR FUNCTION.
17. 9. SUPPLIER IS TO CERTIFY THEIR RAW MATERIALS TO THIS SPECIFICATION AND RECIEVE APPROVAL FROM FORD'S MATERIAL DEPARTMENT.
18. 10. PART MUST HAVE CAVITY IDENTIFICATION IF PRODUCED FROM MULTI-CAVITY TOOLING.
19. 11. THIS UTILITY FASTENER/RETAINER MAY BE USED ACROSS MULTIPLE PROGRAMS. CHANGES TO THIS DRAWING REQUIRE SUBMISSION OF A CHANGE REQUEST FORM IN ACCORDANCE WITH FAPO3-117.
20. 12. UNLESS OTERWISE SPECIFIED AND/OR INDICATED (ON DRAWING OR CAD DATA)
    - DIMENSIONS ARE FACE OF VIEW SHOWN AUTOMATICALLY ROUNDED BY COMPUTER FOR INSPECTION (SEE MATH MODEL FOR PRECISE DIMENSIONS). FOR ALL OTHE DIMENSIONS NOT SHOWN BUT REQUIRED FOR TOOL BUILD SEE MATH MODEL FOR PRECISE TOOL PATH DATA.
    - TOLERANCES: GENERAL DIMESIONAL TOLERANCE TABLE
    - WALL THICKNESS : DIM ± 0.15mm
    - ALL CORNERS AND EDGES SHOWN SHARP: MAX R0.4 ±0.25
    - 3D DRAFT IS MASTER, UN-DRAFTED SURFACES IS 2.0° MAX DRAFT°

21. MATERIAL:
<PA66> NYLON
PER FORD SPECIFICATION WSS-M4D706-B1
COLOR: NATURAL

GENERAL DIMENSIONAL TOL	
0.00 TO 10.00	±0.20
10.00 TO 20.00	±0.25
20.00 TO 30.00	±0.35
30.00 TO 50.00	±0.50
50.00 TO 100.00	±0.60
100.00 TO 150.00	±0.75
FOR EACH 25mm ABOVE 150	±0.13
ANGLE	±1°
ECCENTRICITY	Ø0.15

VOLUME : 817mm³
WEIGHT : 0.90g

REFERENCE

PART MUST COMPLY WITH RESTRICTED SUBSTANCE MANAGEMENT STANDARD WSS-M99P9999-A1 TO SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT.

DRAFTED IN ACCORDANCE WITH FORD MOTOR COMPANY ENGINEERING CAD AND DRAFTING STANDARDS VERSION 28

3RD ANGLE PROJ
DIMENSIONS ARE IN MILLIMETERS

CAD TYPE K-CATIA5	CAD LOC TCe	CAD FILE EUST-14E044-C REV:1(A) EUST-14E044-C.DWG REV:1(A)	DTMC IS MASTER
OPER. NO.	UNIT N/A	DRAWING EUST-14E044-CA	
DESIGN DLIPP2	DETAIL DLIPP2	TITLE RETAINER WIR CONN	SHT 1 OF 1
CHECKED RVITALI	SAFETY		
SCALE 5:1	DATE 20140301	DIVISION PLANT	

FORD MOTOR COMPANY

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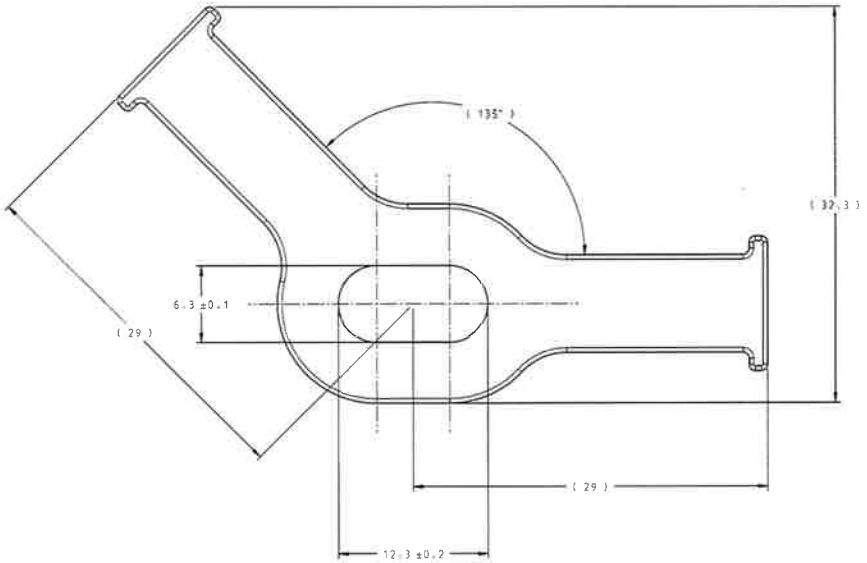
LTRS	REVISIONS			
ORIGINATOR	CHECKER	ENGR APP	MATL APP	
RELEASED EUST-14E044-CA				
AELE-E-11789584-832		201403018		
DLIPP2	RVITALI	RVITALI	XXX	

ISOMETRIC (1:1)



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    - 3D DRAFT IS MASTER, UN-DRAFTED SURFACES IS 2.0° MAX DRAFT°

MATERIAL:
<PA66> NYLON
PER FORD SPECIFICATION WSS-M4D706-B1
COLOR: NATURAL

VOLUME : 817mm³
WEIGHT : 0.90g

GENERAL DIMENSIONAL TOL	
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10.00 TO 20.00	±0.25
20.00 TO 30.00	±0.35
30.00 TO 50.00	±0.50
50.00 TO 100.00	±0.60
100.00 TO 150.00	±0.75
FOR EACH 25mm ABOVE 150	±0.13
ANGLE	±1°
ECCENTRICITY	Ø0.15

REFERENCE

PART MUST COMPLY WITH RESTRICTED SUBSTANCE MANAGEMENT STANDARD WSS-M99P9999-A1 TO SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT.

DRAFTED IN ACCORDANCE WITH FORD MOTOR COMPANY ENGINEERING CAD AND DRAFTING STANDARDS VERSION 28

3RD ANGLE PROJ
DIMENSIONS ARE IN MILLIMETERS

CAD TYPE	CAD LOC	CAD FILE	DTMC
K-CATIA5	TCe	EUST-14E044-C REV:1(A) EUST-14E044-C DWD REV:1(A)	IS MASTER
OPER. NO.	UNIT	DRAWING	
	N/A	EUST-14E044-CA	
DESIGN	DETAIL	TITLE	SHT 1
DLIPP2	DLIPP2	RETAINER WIR CONN	OF 1
CHECKED	SAFETY		
RVITALI			
SCALE	DATE	DIVISION	
5:1	20140301	PLANT	

FORD MOTOR COMPANY

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PROCESS FLOW DIAGRAM

Deltar#: 15-005282-AA
DATE: 08/11/23
REV.: RELEASED
PAGE: 1 of 1
CORE TEAM: R. BuhleA. SLIVAJ. GOODWINT. PEARSON

CUSTOMER PART NUMBER: 09300417-PA6602

PART DESCRIPTION: RETAINER WIR CONN

Step	Fabrication	Move	Store	Inspect	Operation (Description)	Item #	Key Product Characteristics	Item #	Key Control Characteristics
1					Incoming Receiving				Supplier Certification
2					Move & storage of product				
3					Move product to designated area				Injection Molding Central Feed Assembly area
4					Processing of raw material (if required)				WI M017 / Prospector
5					Start-up Inspection		PART THICKNESS		Visual aid P107 Pantag specification
6					Inprocess inspection				
7					Add moisture (if required)				WI M-001 Pantag specification
8					Final Inspection				Pantag specification
9					Move parts to storage.				Scan-to-bin
10					Storage of final product.				
11					Shipping				FIFO
12					Periodic Requirements				Customer specific requirements

P0002.xls
Orig. 5/28/96
Rev. 8/31/98

Deltar Part No: 15-005282-AA

ITW Deltar Fasteners — Division of ITW Automotive Group

POTENTIAL FAILURE AND EFFECTS ANALYSIS
PROCESS

Item Description	RETAINER WIR CONN		Efc P/N	09300417-PA6602	
Model Yr / Program	Current	Current	REVISION LEVEL	RELEASED	
Core Team	R. Buhle	Quality Mgr	J. GOODWIN	Manufacturing	
	A. SLIVA	QAE	T. PEARSON	Engineer	

Prepared By: SG
FMEA Date (Orig) 7/28/2014 FMEA Date (Rev) 8/11/2023
PPAP Due Date 8/11/2023

	Process Function / REQUIREMENTS	Potential Failure Mode	Potential Effect(s) of Failure	Sever	Class	Potential Cause(s)/ Mechanism(s) of Failure	Occur	Current Process Controls Prevention	Current Process Controls Detection	Detect	R.P.N.	Recommended Action(s)	Responsibility & Target Completion Date	ACTION RESULTS: Actions Taken	Sev	Occ	Det	R.P.N.
1	**INCOMING RAW MATERIAL.** / MUST MEET AUTOMOTIVE MATERIAL SPECIFICATION.	DOES NOT MEET AUTOMOTIVE MATERIAL SPECIFICATION.	CANNOT USE MATERIAL	5		VENDOR SHIPPED NON-CONFORMING PRODUCT	2	SUPPLIER CERTIFICATE OF ANALYSIS	INCOMING INSPECOR VERIFIES TEST VALUES. NOTIFIES SUPERVISOR IF VALUES ARE NOT IN SPEC.	8	80	NONE						
2	**MOVE RAW MATERIAL TO STORAGE.** / MUST MOVE TO CORRECT MATERIAL BIN LOCATION.	STORE IN WRONG AREA	CANNOT FIND MATERIAL TO RUN	6		RECEIVING STORED MATERIAL IN WRONG LOCATION	2	DESIGNATED BIN LOCATIONS	INVENTORY, ID TAG	8	96	NONE						
3	**STORAGE OF RAW MATERIAL**./ STORE CORRECT MATERIAL IN PROPER MATERIAL BIN LOCATION	RAW MATERIAL TAGGED WRONG	WRONG MATERIAL USED	6		OPERATOR DID NOT FOLLOW DEFINED PROCEDURES	2	OPERATOR TRAINING.	IN-PROCESS INSPECTION.	8	96	NONE						
4	**MOVE RAW MATERIAL TO INJECTION MOLDING MACHINE.** / MUST BE CORRECT MATERIAL AT MACHINE	MATERIAL CONTAMINATION	FOREIGN MATERIAL IN CONTAINER	6		MATERIAL OPEN TO THE ENVIRONMENT	2	OPERATOR TRAINING. COVERS FOR THE MATERIAL CONTAINERS	5-S, IN-PROCESS INSPECTION.	7	84	NONE						
5	**INJECTION MOLDING OF PART.** (START-UP INSPECTION) / BOX CHECKER VERIFICATION	UNDER-WEIGHT	NOT ENOUGH PARTS IN CARTON	6		SCALE NOT SET-UP CORRECTLY	2	PANTAG LABEL	SCALE; AND OR INDEXER	4	48	NONE						
5	**INJECTION MOLDING OF PART.** (START-UP INSPECTION) / NO SHORT SHOTS.	SHORT SHOTS	PART NOT FUNCTIONAL	8		LOW HEAT/LOW PRESSURE	2	PROCESS PARAMETERS ADJUST AROUND PRE-DETERMINED SETTINGS FOR PREVENTING CONDITION	PART THICKNESS :1.3 - 1.7 mm IN-PROCESS INSPECTIONS. CAVITY PRESSURE TRANSDUCER MONITORS EACH SHOT AND AUTOMATICALLY REJECTS SHOT THRU FLIP CHUTE IF SHOT DOES NOT MEET PRESSURE THRESHOLDS; PART WEIGHT	3	48	NONE						
5	**INJECTION MOLDING OF PART.** (START-UP INSPECTION) / NO EXCESS FLASH IN CRITICAL AREAS THAT INTERFERE WITH THE FUNCTION OF THE PART	EXCESSIVE FLASH IN CRITICAL AREAS	POOR APEARANCE / FUNCTION	7		Tooling	2	TOOLING MAINTENANCE;	VISUAL INSPECTION, 1ST PIECE, IN-PROCESS INSPECTIONS, GUAGE CHECK.	7	98	NONE						
6	**INPROCESS INSPECTION, QUALITY OF FINAL PRODUCT**./ FINISHED PRODUCT FLEXIBILITY DURING INSTALLATION	BRITTLENESS	PART BREAKS DURING INSTALLATION.	4		LACK OF MOISTURE IN NYLON PRODUCT ONLLY. CUSTOMERS ALLOWED NYLON PARTS TO DRY OUT.	2	PANTAG INSTRUCTIONS	ADD 2.5% MOISTURE TO NYLON PARTS FOR FLEXIBILITY DURING INSTALLATION	7	56	NONE						
7	**FINAL INSPECTION.**/ CORRECT PART IN PACKAGING PER PANTAG LABEL	CORRECT PART MIXED WITH WRONG PART	CANNOT USE WRONG PART	6		OPERATOR DID NOT FOLLOW DEFINED PROCEDURES	2	PACKAGING SCALES AT EVERY PRESS - ON DEMAND PRINTING AT EVERY PRESS	DOCK AUDITS/ FINAL INSPECTION. BAR CODE SCANNING AT EVERY PRESS.	3	36	NONE						
7	**FINAL INSPECTION**/ CORRECT AMOUNT OF PARTS IN PACKAGING PER PANTAG LABEL	OVERAGE/ UNDERAGE OF PARTS IN PACKAGING	POSSIBLE LINE SHORTAGE	4		VARIATION IN PART/ PACKAGING WEIGHT PER RUN	2	PART WEIGHT TREND CHARTING/ SCALE SETUP AS PIECE COUNT	DOCK AUDITS/ FINAL INSPECTION	7	56	NONE						

Deltar Part No: 15-005282-AA

ITW Deltar Fasteners — Division of ITW Automotive Group

POTENTIAL FAILURE AND EFFECTS ANALYSIS
PROCESS

Item Description	RETAINER WIR CONN		Efc P/N	09300417-PA6602	
Model Yr / Program	Current	Current	REVISION LEVEL	RELEASED	
Core Team	R. Buhle	Quality Mgr		J. GOODWIN	Manufacturing
	A. SLIVA	QAE		T. PEARSON	Engineer

Prepared By: SG
FMEA Date (Orig) 7/28/2014 FMEA Date (Rev) 8/11/2023
PPAP Due Date 8/11/2023

	Process Function / REQUIREMENTS	Potential Failure Mode	Potential Effect(s) of Failure	Sever	Class	Potential Cause(s)/ Mechanism(s) of Failure	Occur	Current Process Controls Prevention	Current Process Controls Detection	Detect	R.P.N.	Recommended Action(s)	Responsibility & Target Completion Date	ACTION RESULTS: Actions Taken	Sev	Occ	Det	R.P.N.
8	**MOVE PARTS TO STORAGE.** / MOVE CORRECT PARTS TO CORRECT BIN - STORAGE LOCATION	STORE IN WRONG LOCATION	CANNOT FIND PARTS TO SHIP	4		OPERATOR DID NOT FOLLOW DEFINED PROCEDURES	2	DESIGNATED BIN LOCATIONS	INVENTORY; BARCODE SCANNING	6	48	NONE						
9	**STORAGE OF FINAL PRODUCT**./ MUST HAVE THE CORRECT LABEL.	STORE PARTS IN WRONG LOCATION	SHIP WRONG PARTS	6		OPERATOR DID NOT FOLLOW DEFINED PROCEDURES	2	DESIGNATED BIN LOCATIONS	SCANNING OF ITW DELTAR PANTAG AGAINST CUSTOMER LABEL	3	36	NONE						
10	**SHIPPING.**/ MUST SHIP TO THE CORRECT LOCATION.	WRONG DESTINATION	CUSTOMER DID NOT GET PARTS OR GETS PARTS NOT ON THEIR INVOICE.	4		OPERATOR DID NOT FOLLOW DEFINED PROCEDURES	2	NONE	SCANNING OF ITW DELTAR PANTAG AGAINST CUSTOMER LABEL	3	24	NONE						
10	**SHIPPING.**/ MUST SHIP TO THE CORRECT LOCATION.	SHIP WRONG QUANITY	CUSTOMER DID NOT GET PARTS OR GETS PARTS NOT ON THEIR INVOICE.	4		PO NOT ACTIVE PREVENTING THE PROPER RELEASES FROM LOADING	2	EDI ERROR REPORTS ARE PRINTED BY IT AND GIVEN TO SALES COORDINATOR TO REVIEW AND FIX	EDI ERROR REPORT; BARCODE SCANNING	3	24	NONE						

ITW Deltar Fasteners
Division of ITW Automotive Group

DELTAR

Production Part Approval
Performance Test Results

ORGANIZATION: ITW Deltar Fasteners	PART NUMBER: 09300417-PA6602 15-005282-AA
SUPPLIER CODE: 049816044	PART NAME: RETAINER WIR CONN
NAMEof LABORATORY ITW Deltar Fasteners	DESIGN RECORD CHANGE LEVEL: RELEASED
* CUSTOMER SPECIFIED SUPPLIER/VENDOR CODE:	ENGINEERING CHANGE DOCUMENTS: N/A
* If source approval is req'd, include the Supplier (Source) & Customer assigned code.	

TEST SPECIFICATION / REV / DATE	SPECIFICATION / LIMITS	TEST DATE	QTY. TESTED	SUPPLIER TEST RESULTS (DATA) / TEST CONDITIONS 1	2	3	4	5	6	7	8	OK	NOT OK
N/A	N/A	08/11/23	1	NONE REQUIRED								X	

Blanket statements of conformance are unacceptable for any test results.

SIGNATURE	TITLE	DATE
Sharon Green	PPAP Coordinator	8/11/2023

ITW Deltar Fasteners
Division of ITW Automotive Group

DELTAR

Production Part Approval
Dimension Test Results

ORGANIZATION:	ITW Deltar Fasteners	PART NUMBER:	09300417-PA6602 15-005282-AA
SUPPLIER CODE:	049816044	PART NAME:	RETAINER WIR CONN
INSPECTION FACILITY:	ITW Deltar Fasteners	DESIGN RECORD CHANGE LEVEL:	RELEASED
		ENGINEERING CHANGE DOCUMENTS:	N/A

Item	DIMENSION/SPECIFICATION/LIMITS	TEST DATE	QTY. TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)/ CAVITY # 1A	2A	3A	4A	1B	2B	3B	4B	OK	NOT OK
1	1.5 REF	11/18/22	8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	X	
2	29.0 REF	11/18/22	8	28.7	29.2	29.2	29.1	28.8	29.3	29.3	28.9	X	
3	6.3 ± 0.1	11/18/22	8	6.2	6.3	6.2	6.2	6.3	6.3	6.3	6.2	X	
4	° 135 REF	11/18/22	8	134.7	134.9	134.7	134.9	134.9	134.9	134.8	134.7	X	
5	29.0 REF	11/18/22	8	28.8	28.8	29.0	28.9	28.8	28.9	28.9	28.9	X	
6	12.3 ± 0.2	11/18/22	8	12.3	12.2	12.2	12.2	12.2	12.2	12.2	12.2	X	
7	32.3 REF	11/18/22	8	32.6	32.3	32.6	32.1	32.4	32.2	32.5	32.5	X	
8	Material	11/18/22	8	See Attached Material Test Results								X	
9	Note 1	11/18/22	8	Conforms								X	
10	Note 2	11/18/22	8	Acknowledged								X	
11	Note 3	11/18/22	8	Acknowledged								X	
12	Note 4	11/18/22	8	Acknowledged								X	

Blanket statements of conformance are unacceptable for any test results.

SIGNATURE	TITLE	DATE
Tyler Baker - QES	Metrologist	11/18/2022

ITW Deltar Fasteners
Division of ITW Automotive Group

DELTAR

Production Part Approval
Material Test Results

ORGANIZATION: ITW Deltar Fasteners	PART NUMBER: 09300417-PA6602 15-005282-AA
SUPPLIER CODE: 049816044	PART NAME: RETAINER WIR CONN
MATERIAL SUPPLIER: ASCEND	DESIGN RECORD CHANGE LEVEL: RELEASED
* CUSTOMER SPECIFIED SUPPLIER/VENDOR CODE:	ENGINEERING CHANGE DOCUMENTS: N/A
* If source approval is req'd, include the Supplier (Source) & Customer assigned code.	NAME of LABORATORY: ASCEND

MATERIAL SPEC. NO. REV /DATE	SPECIFICATION / LIMITS	TEST DATE	QTY. TESTED	SUPPLIER TEST RESULTS (DATA)	OK	NOT OK
Nylon 66	See cert	08/11/23	1	See material certification	X	
NATURAL						

Blanket statements of conformance are unacceptable for any test results.

SIGNATURE	TITLE	DATE
Sharon Green	PPAP Coordinator	8/11/2023

Ascend Perfomance Materials Operations LLC
Nylon Plastics and Polymer
518 South Bay Street
Foley, Al 36535
Telephone : (251)952-1700

ITW DELTAR FASTENERS/MTK ELGIN
2501 GALVIN DR
ELGIN IL 60124-8392

Certificate Date : 31-Jul-23
Delivery No : 382671036
Shipped Qty : 20,700.000 Lbs
9,389.520 Kgs
Customer P.O. No: 700112-170-10
Container : SAV EXPRESS 7229

Certificate of Analysis

This certifies that Nylon Resin shipped to you from Ascend Performance Materials Operations LLC has been tested and found to meet:required specifications.

This material was produced under a Quality System that meets ISO 9001:2015 and IATF 16949:2016 criteria.

If you have questions or concerns about this Certificate of Analysis, please contact Ascend Performance Materials Customer Operations at 1-888-927-2363.

This product meets the requirements of the following specifications: SAE J1639 PA0171, ASTM D6779 PA0161, ASTM D4066 PA0161, Stellantis MS-DB-41 CPN 2055, Stellantis MS-DB-41 CPN 2521, Ford WSS M4D706-B1, Ford WQ 100B, & GM GMW16447 P-PA66-T2.

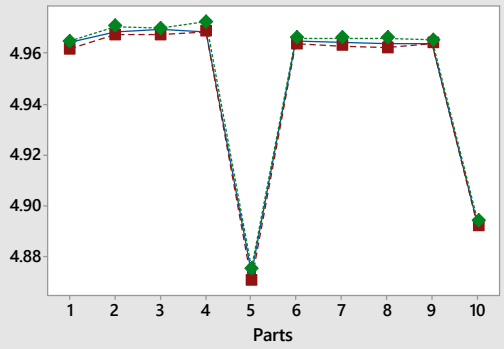
Material: VYDYNE 47H NT Q527 **Material No:** 10366059 **Batch No:** LG16FY01 **Date of Mfg:** 16-Jul-2023

Ascend Performance Materials Operations LLC Specification

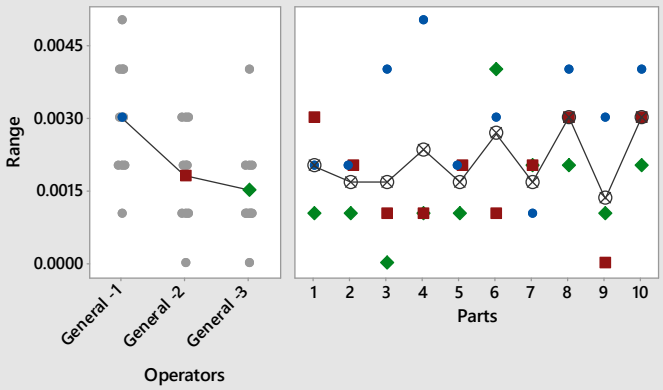
Lot Data Property	Test Method	Min	Max	Result	Units
Moisture	STM 00835	0.05	0.20	0.15	%

Gage R&R Study for Gram Scale Serial# 1121183552 Division: 0.001 g
Variation Report 6/23/22

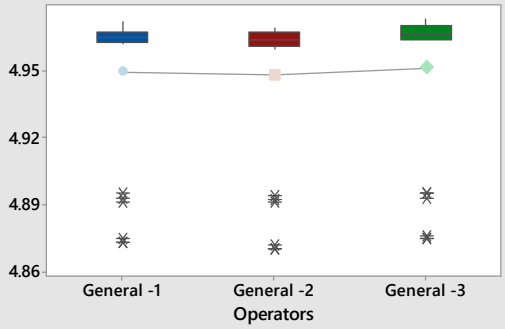
Reproducibility — Operator by Part Interaction
Look for abnormal points or patterns.



Test-Retest Ranges (Repeatability)
Operators and Parts with larger ranges have less consistency.



Reproducibility — Operator Main Effects
Look for operators with higher or lower averages.



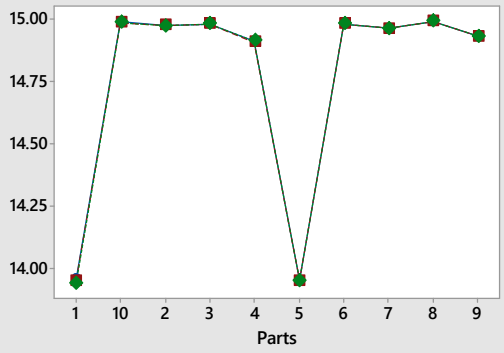
Source	StDev	%Study Variation
Total Gage	0.002	5.50
Repeatability	0.001	3.62
Reproducibility	0.001	4.14
Operator	0.001	4.14
Part-to-Part	0.035	99.85
Study Variation	0.035	100.00

Number of Distinct Categories = 25

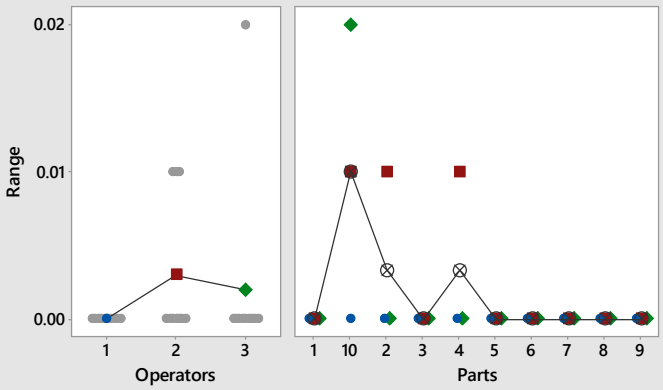
The Operator by Part interaction was not statistically significant and was removed from the table.

Gage R&R Study for Digital Caliper Serial# 4102520 Resolution mm/inch: 0.01 / .0005"
Variation Report 9/20/22

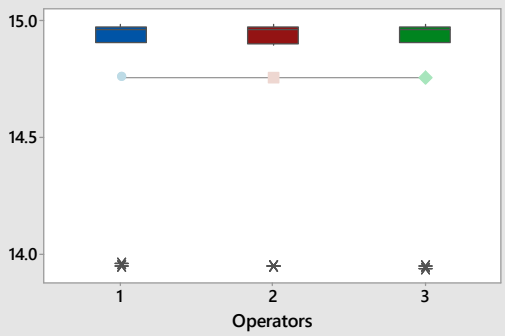
Reproducibility — Operator by Part Interaction
Look for abnormal points or patterns.



Test-Retest Ranges (Repeatability)
Operators and Parts with larger ranges have less consistency.



Reproducibility — Operator Main Effects
Look for operators with higher or lower averages.



Source	StDev	%Study Variation	%Tolerance
Total Gage	0.004	0.97	2.50
Repeatability	0.003	0.65	1.67
Reproducibility	0.003	0.73	1.86
Operator	0.001	0.19	0.49
Operator by Part	0.003	0.70	1.80
Part-to-Part	0.428	100.00	256.78
Study Variation	0.428	100.00	256.79

Tolerance (upper spec - lower spec): 1

Number of Distinct Categories = 144

Accredited Laboratory

A2LA has accredited

ASCEND PERFORMANCE MATERIALS

Cantonment, FL

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 28th day of October 2022.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0112.01
Valid to December 31, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ASCEND PERFORMANCE MATERIALS
3000 Old Chemstrand Road
Cantonment, FL 32533
John Harris Phone: 850 490 0323

MECHANICAL

Valid To: December 31, 2024 Certificate Number: 0112.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on plastics:

Test	Test Method(s)
Conditioning Plastics for Testing	ASTM D618
Tensile Properties (except Poisson Ratio)	ASTM D638; ISO 527-1, -2
Flexural Properties	ASTM D790; ISO 178
Impact (Izod)	ISO 180 (Type A)
Impact (Charpy)	ISO 179-1
Heat Deflection Temperature (HDT)	ASTM D648; ISO 75-1, -2
Specific Gravity/Density	ISO 1183-3
Transition Temperature (DSC)	ASTM D3418
Mold Shrinkage	ISO 294 -4
Road Vehicles and Tractors and Machinery for Agriculture and Forestry – Determination of Burning Behaviour of Interior Materials	ISO 3795
Flammability	UL 94V, UL 94HB
Dielectric Breakdown Voltage and Dielectric Strength	ASTM D149
Determination of Tensile-Impact Strength	ASTM D1822

5202 Presidents Court, Suite 220 | Frederick, MD 21703-8515 | Phone: 301 644 3248 | Fax: 240 454 8448 | www.A2LA.org

Accredited Laboratory

A2LA has accredited

ASCEND PERFORMANCE MATERIALS

Gonzalez, FL

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 8th day of November 2022.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0112.02
Valid to December 31, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ASCEND PERFORMANCE MATERIALS
3000 Old Chemstrand Road
Cantonment, FL 32533
Patrick O'Neal Phone: 850 968 8769

CHEMICAL

Valid To: December 31, 2024 Certificate Number: 0112.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on plastics:

Test	Test Method
Ash Analysis	ASTM D5630
Copper Content of Vydyne Resins	Ascend STM 00792
Moisture Analysis	ASTM D6869
Relative Viscosity - Brookfield	ASTM D789
Relative Viscosity - Capillary	ASTM D789
X-Ray Analysis for Additives in Polymers	Ascend STM 00667

5202 Presidents Court, Suite 220 | Frederick, MD 21703-8515 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2LA.org

ITW Deltar Fasteners
Division of ITW Automotive Group

DELTAR

Laboratory Scope

Lab Contact: Robert Buhle, Quality Mgr.
PH: 708-720-7057
FAX: 708-720-2612

E-mail: rbuhle@deltarfasteners.com

Suppler Code: GM - 049816044
Ford - I009C
Chrysler – 65105
VW - 6002014238

ITW Deltar has the capability to perform the following tests:

A. Environmental
   a. Temperature/Humidity Chamber
   b. GM7400M DS85 Dimensional Stability
   c. Test method/procedure per customer print

B. Compression/Tensile
   1. Chatillon/Instron
   a. Insertion/Removal Testing per customer specifications
   b. Test method/procedure per customer print

C. Dimensional Measurement
   1. Comparator/Calipers/Micrometers
   a. Linear measurement to customer print

D. Torque Test
   1. Torque Wrench/Driver
   a. Torque test per customer print/control plan

E. Melt Index
   1. Test melt flow of material per material certification requirement

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Calibrations performed per WI – 11.4

Robert R. Buhle, Quality Manager *January 1, 2021*

ANAB

ANSI National Accreditation Board

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Quality Engineering Service of the Chippewa Valley, Inc.

345 Frenette Drive, Suite 1
Chippewa Falls, WI 54729

Fulfills the requirements of

ISO/IEC 17025:2017

and

ANSI/NCSL Z540-1-1994 (R2002)

In the fields of

TESTING, DIMENSIONAL MEASUREMENT and CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 22 September 2024
Certificate Number: ACT-1189

ANAB

ANSI National Accreditation Board

ilac-MRA

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 AND ANSI/NCSL Z540-1-1994 (R2002)

Quality Engineering Service of the Chippewa Valley, Inc.
345 Frenette Drive, Suite 1
Chippewa Falls, WI 54729
Timothy A. Tozer
715-861-7723

TESTING, DIMENSIONAL MEASUREMENT AND CALIBRATION

Valid to: **September 22, 2024** Certificate Number: **ACT-1189**

TESTING

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Compression force, Insertion	CUP-T1001	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Tensile Testing Machine Up to 1 000 lbs.
Tensile Force, Extraction	CUP-T1002	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Tensile Testing Machine Up to 1 000 lbs.
Tensile, Breaks	CUP-T1004	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Tensile Testing Machine Up to 1 000 lbs.
Shear, Breaks, Adhesion Strength	CUP-T1003 CUP-D1002	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Tensile Testing Machine Up to 1 000 lbs.
Strip Torque, Drive Torque, Torsional Strength	CUP-F.I.P 1000	Screws, Grommets, Bolts	Torque Wrench Up to 300 in-lbs.
Ductility Testing	CUP-F.I.P 1000	Screws & Bolts	Visual
Drive Test	CUP-F.I.P 1000	Screws & Bolts	Visual
Part Weights	RFM-0025	Plastic Fasteners, Screws, Small parts, 3-D objects	Balance Up to 310 g

DIMENSIONAL MEASUREMENT

1 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-) [2]	Reference Standard, Method, and/or Equipment
Dimensional Measurement 1D	Up to 60 in	(1 400 + 14*L*) µin	Caliper, Length Gage
	Up to 12 in	1 500 µin	Height Gage
	Up to 2 in	(170 + 7.9*L*) µin	Micrometer
	Up to 6 in	1 200 µin	Depth Micrometer
	Up to 2 in	(220 + 4.2*L*) µin	Drop Indicator
	Up to 0.003 in	430 µin	Test Indicator
	(0.011 to 1.000) in	630 µin	Pin Gages
	Up to 180 °	1.3°	Protractors
	(0.01 to 2.00) in	3 700 µin	Radius Gages
	Up to 0.5 in Angular: 90 °	2 900 µin 1.6 °	Handheld Microscope (7x)
	Up to 1 in	120 µin	Laser Micrometer
Dimensional Visual Comparison	Pitches UNC (4 to 84)	Nearest 2 teeth per Inch	Screw Pitch Gage

2 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Dimensional Measurement 2D	Up to 14 in Dia. & Angular: 360 °	320 µin 0.24 °	Optical Comparator (10x)
	Up to 10 in x 6 in Angular: 360 °	400 µin 0.18 °	Profile Projector (5x, 10x, 20x)

3 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-) [2]	Reference Standard, Method, and/or Equipment
Dimensional Measurement 3D	Vision X & Y = Up to 12 in Z = Up to 9.8 in	(200 + 3.5*L*) µin	Video Measuring System – Vertex 312, Vertex 420, Sol 161
	Touch Trigger Probe X & Y = Up to 12 in Z = Up to 9.8 in	(210 + 3.3*L*) µin	Vertex 312 Renishaw Touch Probe
	X & Y = Up to 40 in Z = Up to 24 in	(120 + 9.1*L*) µin	Coordinate Measuring Machine – Zeiss Contura G2 Scanning

CALIBRATION

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) [2]	Reference Standard, Method, and/or Equipment
Calipers, Length Gages	Up to 60 in	(580 + 11*L*) µin	Caliper Calibration Set Gage Blocks Cal-001
Height Gages	Up to 20 in	(580 + 0.37*L*) µin	Gage Blocks Cal-001
Micrometers (ID, OD, Depth)	Up to 12 in	(80 + 6.7*L*) µin	Gage Blocks Cal-002, Cal-017, Cal-020
Drop or Dial Indicators	(0.000 1 to 6) in	(74 + 9.4*L*) µin	Gage Blocks Cal-003
Test Indicators	(0.000 1 to 0.1) in	180 µin	Gage Blocks Cal-004
Radius Gages	Up to 10 in	(200 + 1.5*L*) µin	Video Measurement System Cal-013
Protractors	Up to 180 °	0.78°	Angle Blocks Cal-015
Pin Gages	(0.01 to 1) in	30 µin	Laser Micrometer Cal-018

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) [2]	Reference Standard, Method, and/or Equipment
Thickness Gages & Other Fixed Gages	Up to 2 in	(220 + 4.2*L*) µin	Digital Indicator Cal-014, Cal-019
	Up to 12 in	(200 + 1.5*L*) µin	Video Measurement System Cal-014, Cal-019
Report of Values Only	Up to 40 in Angular: 360 °	(120 + 4.9*L*) µin 0.065°	Coordinate Measuring Machine – Zeiss Contura G2 Cal-012, Cal-014
Steel Rules	Up to 36 in	4 300 µin	Microscope Handheld / Master Steel Rule Cal-016

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 (k=2), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. L = Length in inches.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. ACT-1189.

R. Douglas Leonard Jr., VP, PILR SBU

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that:

EFC International
1940 Craigshire Road
St. Louis
Missouri
63146
USA

Holds Certificate No: **FS 81490**

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

Distribution of specialty fasteners, plastic and metal, electromechanical component parts and dying and kit assembly processes.

For and on behalf of BSI:

Carlos Pitanga, Managing Director Assurance, Americas

Original Registration Date: 2005-09-27
Effective Date: 2023-09-27
Latest Revision Date: 2023-09-06
Expiry Date: 2026-09-26

...making excellence a habit.™

Certificate No: **FS 81490**

Location	Registered Activities
EFC International 1940 Craigshire Road St. Louis Missouri 63146 USA	Distribution of specialty fasteners, plastic and metal, electromechanical component parts and dying and kit assembly processes.
EFC International 4150 Chandler Drive Hanover Park Illinois 60133 USA	Distribution of specialty fasteners, plastic and metal, electromechanical component parts and dying and kit assembly processes.
EFC International 926 Curie Drive Alpharetta Georgia 30005-2264 USA	Distribution of specialty fasteners, plastic and metal, electromechanical component parts.

Original Registration Date: 2005-09-27
Latest Revision Date: 2023-09-06

Effective Date: 2023-09-27
Expiry Date: 2026-09-26

ITW DELTAR FASTENERS

PROCESS CONTROL PLAN

ITW PART NUMBER:	15-005282-AA	**KEY CONTACT:**	ROBERT BUHLE	**PROTOTYPE:**		**CUSTOMER QUALITY APPROVAL:**	N/A
LATEST CHANGE LEVEL:	RELEASED	**PHONE NUMBER:**	708-720-2600	**PRE-LAUNCH:**		**CUSTOMER ENGINEERING APPROVAL:**	N/A
CUSTOMER NUMBER:	09300417-PA6602	**SUPPLIER:**	ITW DELTAR FASTENERS	**PRODUCTION:**	X	**OTHER APPROVAL 2:**	N/A
PART DESCRIPTION:	RETAINER WIR CONN	**SUPPLIER CODE:**	049816044	**ORIG. DATE:**	7/28/2014	**OTHER APPROVAL 1:**	N/A
PROCESS CORE TEAM:	QUALITY, ENGINEERING, MANUFACTURING, TOOLING			**LAST REVISED:**	8/11/2023	**SUPPLIER APPROVAL:**	ITW DELTAR FASTENERS

STEP #	Process/Name Operation Description	Machine, Device Jig, Tools For Mfg.	Characteristics No.	Characteristics Product	Characteristics Process	Special Char. Class.	Methods Product/Process Specification/ Tolerance	Methods Evaluation Measurement Technique	Methods Sample Size	Methods Sample Freq.	Methods Control Method	Reaction Plan
1	INCOMING RECEIVING		a	RAW MATERIAL	DOCUMENT & CONTAINER VERIFICATION		PER CUSTOMER REQUIREMENTS	INCOMING MATERIAL CERTIFICATION	1 LOT	PER SHIPMENT	RECEIVING WORK INSTRUCTION R-001	QUARANTINE IN HOLD AREA, CONTACT RECEIVING AND/OR SUPPLIER
			b	COMPONENTS			RECEIPT OF PRODUCT	VISUAL	1 LOT		RECEIVING WORK INSTRUCTION WI-10-1	
			c	FINISHED GOODS								
2	MOVE PRODUCT TO STORAGE STORAGE OF PRODUCT	FORK TRUCK OR PALLET JACK	a	RAW MATERIAL	MOVE TO STORAGE		STORAGE LOCATION	VISUAL	1 LOT	PER SHIPMENT	PRODUCT LABEL	QUARANTINE IN HOLD AREA, CONTACT MANUFACTURING MANAGER
			b	COMPONENTS								
			c	FINISHED GOODS								
			a	RAW MATERIAL	STORE PRODUCT		STORAGE CONDITION	VISUAL	1 LOT	WHEN STOCKING PRODUCT	SPECIFIED LOCATION / SCAN TO BIN	
			b	COMPONENTS								
			c	FINISHED GOODS								
3	MOVE PRODUCT TO DESIGNATED AREA: INJECTION MOLDING MACHINE / RAW MATERIAL CENTRAL FEED SYSTEM / ASSEMBLY STATION		a	RAW MATERIAL	MOVE TO DESIGNATED AREA		FIFO	VISUAL	1 LOT	WHENEVER LOADING	LOT DATE / SCAN TO BIN / PRODUCT LABEL / PRESS SCHEDULE	CONTACT CELL LEADER OR IMMEDIATE SUPERVISOR
			b	COMPONENTS			REFERENCE PRESS OR ASSEMBLY SCHEDULE	VISUAL	1 LOT			
4	PROCESSING OF RAW MATERIAL	DRYER		RAW MATERIAL	DRY MATERIAL **(IF REQUIRED)**		DRY TEMPERATURE & DRY TIME	MATERIAL DRYER	EACH CONTAINER	WHENEVER PROCESSING	MATERIAL WORK INSTRUCTION M-017 PROSPECTOR	ADJUST & RECHECK
5	START-UP INSPECTION	INJECTION MOLDING MACHINE INJECTION MOLDING TOOL	a	MOLDED PRODUCT / ASSEMBLY	VISUAL		REFERENCE P107	VISUAL INSPECTION	1 SHOT	START-UP	P107 INPECTION SHEET & VISUAL AID	QUARANTINE PRODUCT NOTIFY MOLD TECHNICIAN. REACT AND RECORD ON P107 SEE WI-13-1 FOR CONTAINMENT
			b		PART DIMENSION			CALIPERS			P107 INSPECTION SHEET	
			c		WEIGHT		PART WEIGHT	SCALE			P107 INSPECTION SHEET PANTAG SPECIFICATION	
			d		CARTON SIZE		CARTON SIZE PER PANTAG	VISUAL	1 CARTON	START-UP	PANTAG SPECIFICATION	
			e		CARTON QUANTITY		CARTON QUANTITY PER PANTAG	PIECE COUNT OR WEIGHT				
		ASSEMBLY (IF REQUIRED)	a	ASSEMBLY (IF REQUIRED)	VISUAL		REFERENCE P107	VISUAL INSPECTION	1 SHOT	REFERENCE P107	P107 INPECTION SHEET & VISUAL AID	
			b		PART FUNCTION (IF REQUIRED)			VISUAL FUNCTIONAL CHECK				
		INJECTION MOLDING	a	MOLDED PRODUCT	VISUAL		REFERENCE P107	VISUAL INSPECTION	1 SHOT	REFERENCE P107	P107 INPECTION SHEET & VISUAL AID	
			b		PART DIMENSION (IF REQUIRED)			CALIPERS				

ITW DELTAR FASTENERS

PROCESS CONTROL PLAN

ITW PART NUMBER:	15-005282-AA	**KEY CONTACT:**	ROBERT BUHLE	**PROTOTYPE:**		**CUSTOMER QUALITY APPROVAL:**	N/A
LATEST CHANGE LEVEL:	RELEASED	**PHONE NUMBER:**	708-720-2600	**PRE-LAUNCH:**		**CUSTOMER ENGINEERING APPROVAL:**	N/A
CUSTOMER NUMBER:	09300417-PA6602	**SUPPLIER:**	ITW DELTAR FASTENERS	**PRODUCTION:**	X	**OTHER APPROVAL 2:**	N/A
PART DESCRIPTION:	RETAINER WIR CONN	**SUPPLIER CODE:**	049816044	**ORIG. DATE:**	7/28/2014	**OTHER APPROVAL 1:**	N/A
PROCESS CORE TEAM:	QUALITY, ENGINEERING, MANUFACTURING, TOOLING			**LAST REVISED:**	8/11/2023	**SUPPLIER APPROVAL:**	ITW DELTAR FASTENERS

STEP #	Process/Name Operation Description	Machine, Device Jig, Tools For Mfg.	Characteristics No.	Characteristics Product	Characteristics Process	Special Char. Class.	Methods Product/Process Specification/ Tolerance	Methods Evaluation Measurement Technique	Methods Sample Size	Methods Sample Freq.	Methods Control Method	Reaction Plan
6	IN-PROCESS INSPECTION		c		PART FUNCTION (IF REQUIRED)			VISUAL FUNCTIONAL CHECK				
		ASSEMBLY (IF REQUIRED)	a	ASSEMBLY (IF REQUIRED)	VISUAL		REFERENCE P107	VISUAL INSPECTION	1 SHOT	REFERENCE P107	P107 INPECTION SHEET & VISUAL AID	QUARANTINE PRODUCT NOTIFY MOLD TECHNICIAN. REACT AND RECORD ON P107 SEE WI-13-1 FOR CONTAINMENT
			b		PART FUNCTION (IF REQUIRED)			VISUAL FUNCTIONAL CHECK				
7	ADD MOISTURE				ADD MOISTURE (IF REQUIRED)		PER PANTAG SPECIFICATION	MOISTURE MECHANISM	1 CARTON	EACH CARTON	WORK INSTRUCTION M-001 PANTAG	CONTAIN AND REPACKAGE
8	FINAL INSPECTION				PACKAGING			VISUAL	1 CARTON	WHEN PACKAGING PRODUCT	PANTAG	
9	MOVE PARTS TO STORAGE	FORK TRUCK OR PALLET JACK			MOVE TO STORAGE		STORAGE LOCATION	VISUAL		WHENEVER STORING	PANTAG / SCAN TO BIN	CONTAIN AND CORRECT ERROR
10	STORAGE OF FINAL PRODUCT				STORE PRODUCT		STORAGE CONDITION	VISUAL		WHENEVER STORING PRODUCT	SPECIFIED LOCATION	
11	SHIPPING				ROUTING		FIFO	VISUAL	QTY. TO BE SHIPPED	CARTON(S)	SHIPPING PICL SHEET	
							CARRIER/ CUSTOMER LABEL				BARCODE SCANNING	
12	PERIODIC REQUIREMENTS			ANNUAL VALIDATION			CUSTOMER PRINT	CALIBRATED INSPECTION EQUIPMENT	1 SHOT	ANNUAL REVALIDATION	AIAG LEVEL 1 PPAP	VERIFY DATA / NOTIFY QUALITY ENGINEER

Special Instructions:

Special Instructions: