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PPAP Package for:

**Newark Electronics
Customer Part Number: 82T3300
(TE Connectivity Part Number): 1-1456426-5
Jan-2020**

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Nondisclosure Agreement

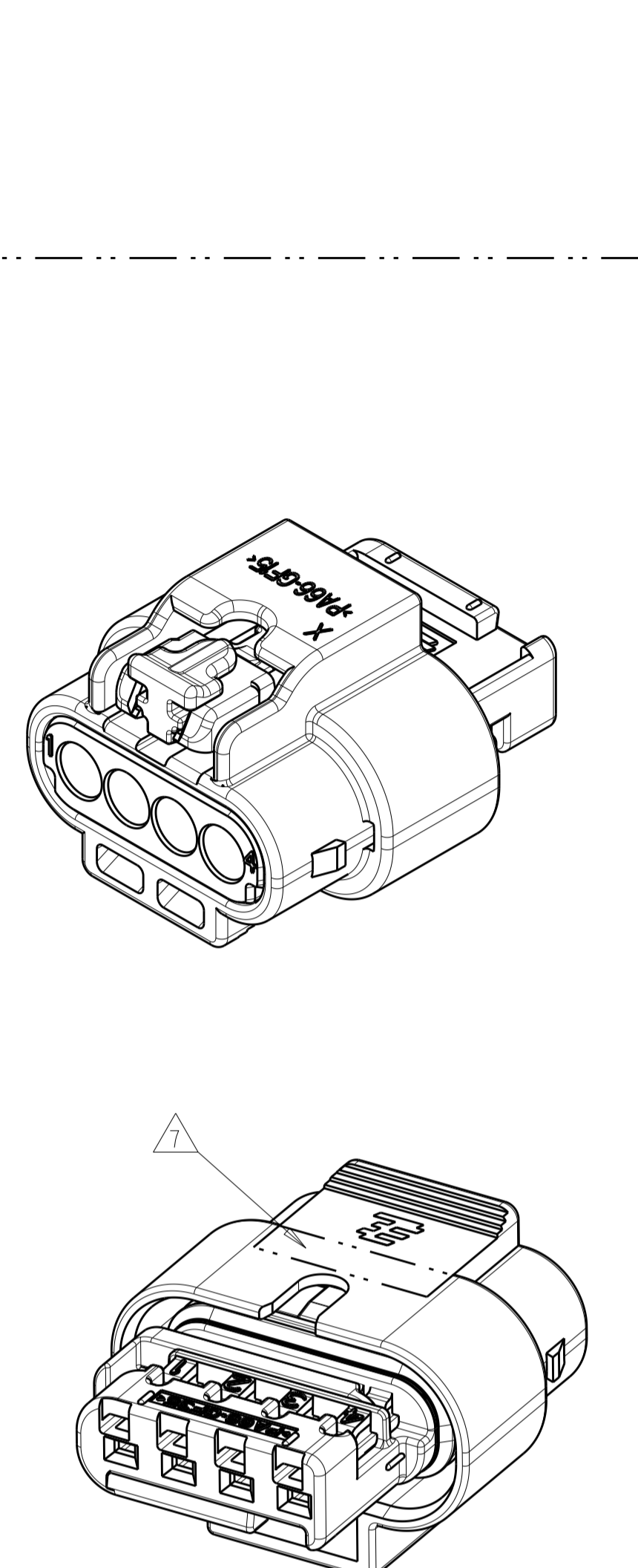
If a nondisclosure agreement has been reached with your company, it will be included on the following page(s). Please review the terms of this agreement to ensure that further actions associated with information contained within this PPAP package do not violate these terms.

If a nondisclosure agreement HAS NOT been reached, certain documents deemed confidential by TE Connectivity will not be included in this PPAP package. These documents include but are not limited to the Design FMEA, the Process Flow Diagram, the Process FMEA and the Control Plan. These documents can be reviewed by you company but cannot be retained.

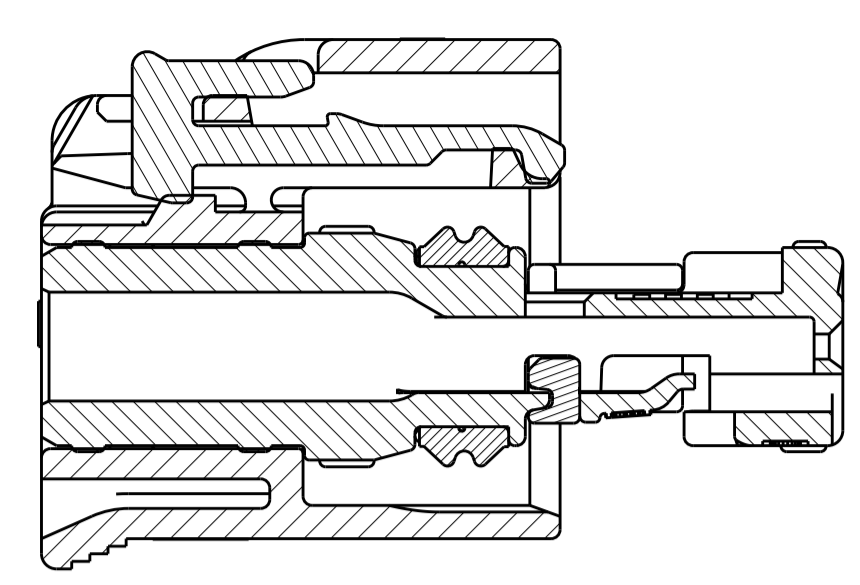
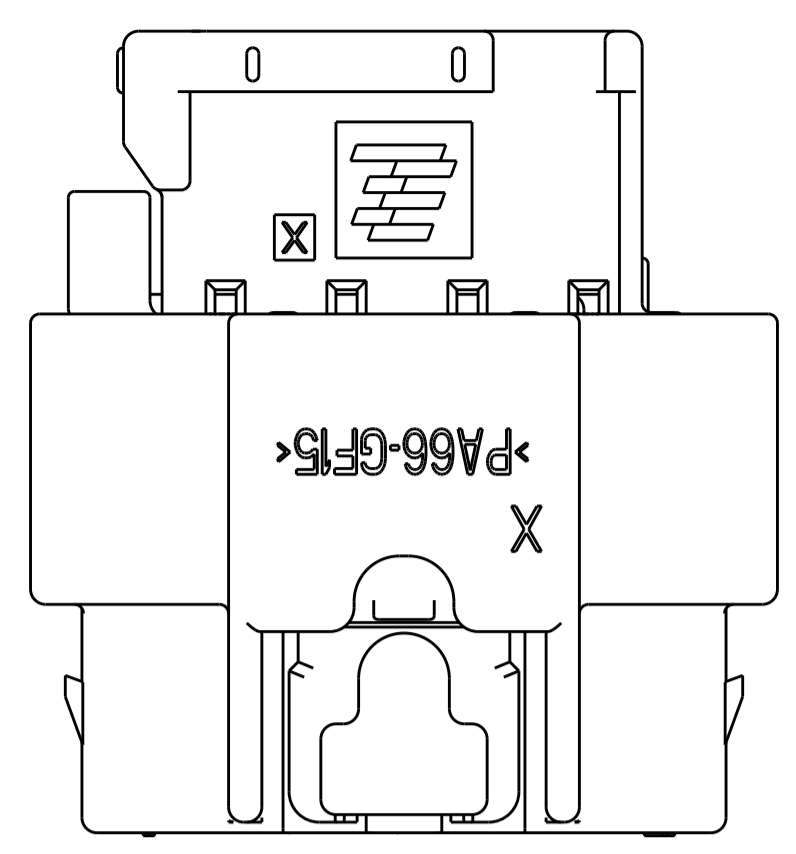


Section 1

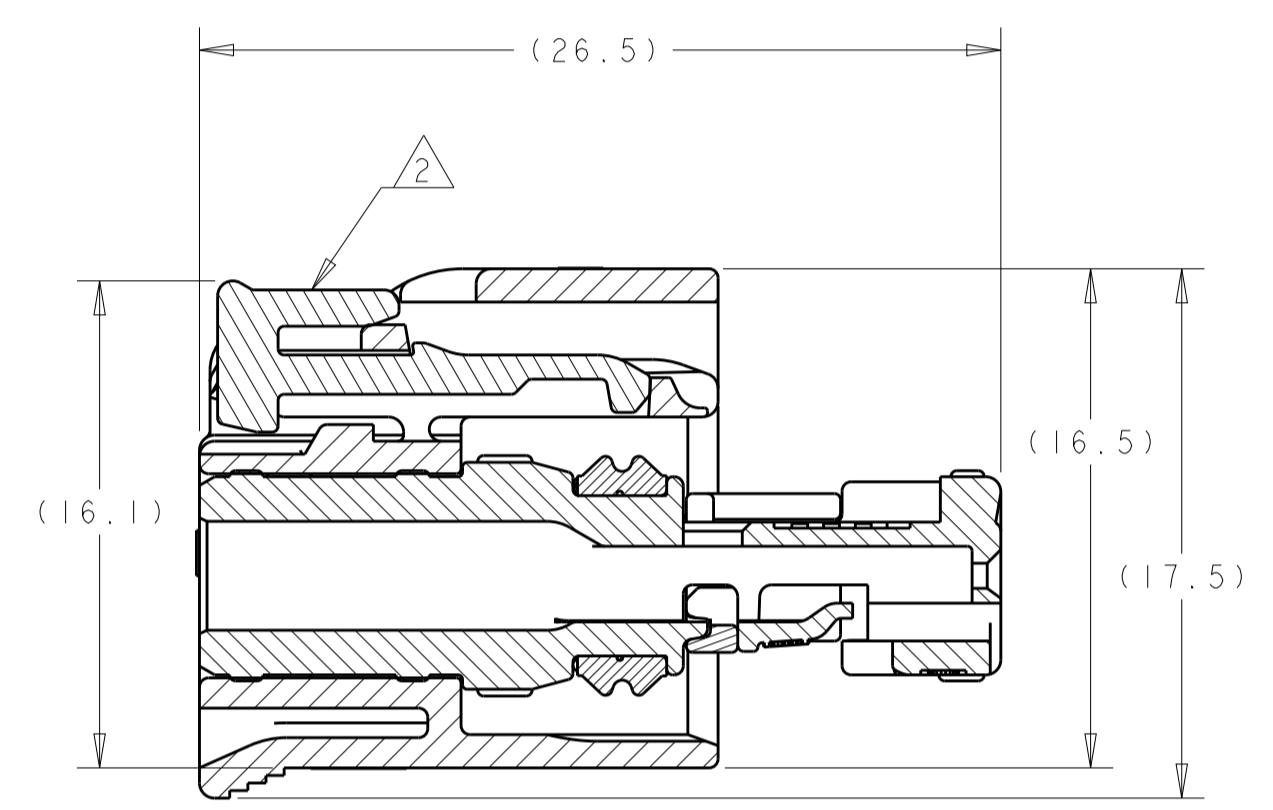
Design Records



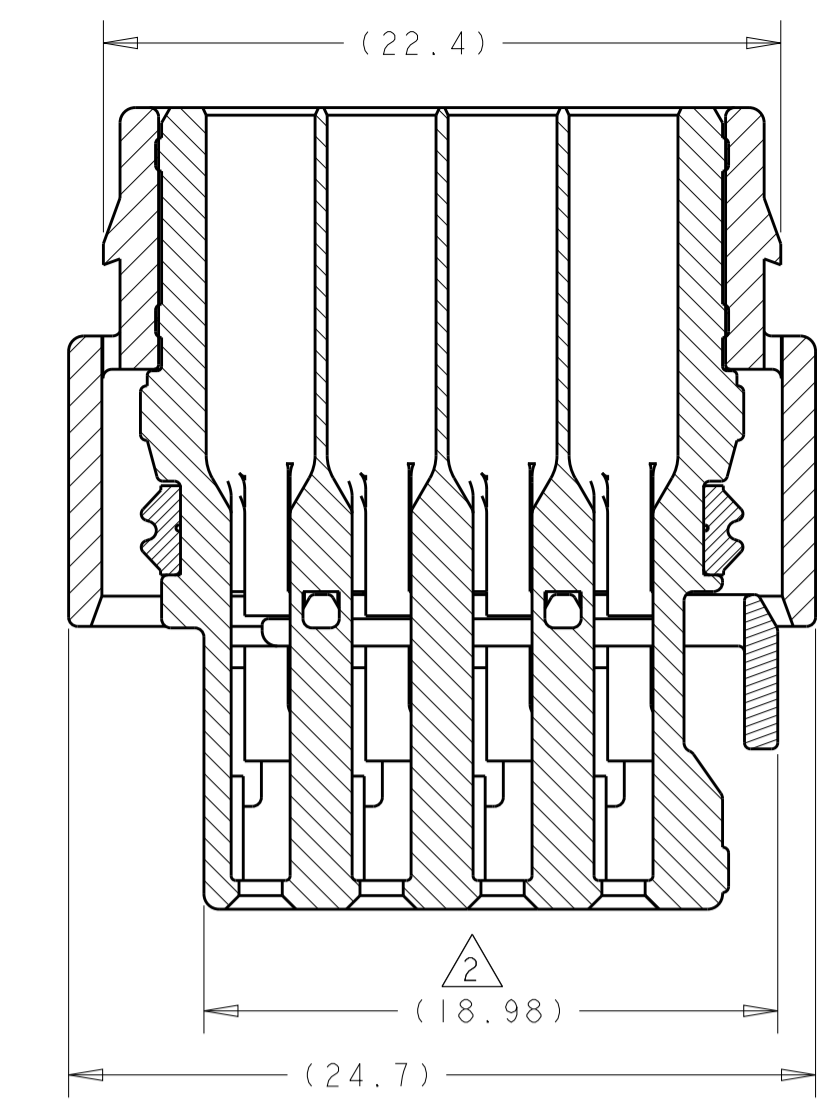
ISOMETRIC VIEWS
SCALE 3:1



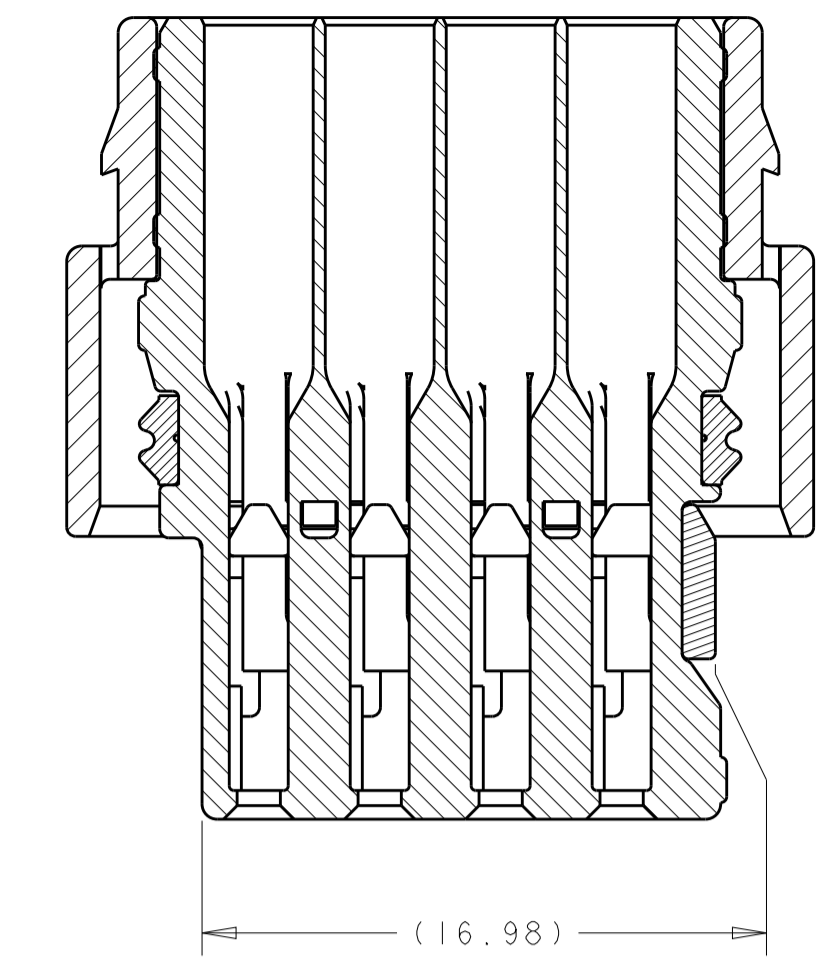
SECTION B-B
SHOWN WITH CPA (WHEN APPLICABLE)
IN ITS LATCHED POSITION
FOR REFERENCE ONLY



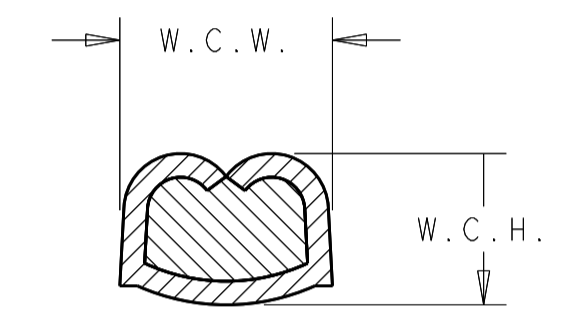
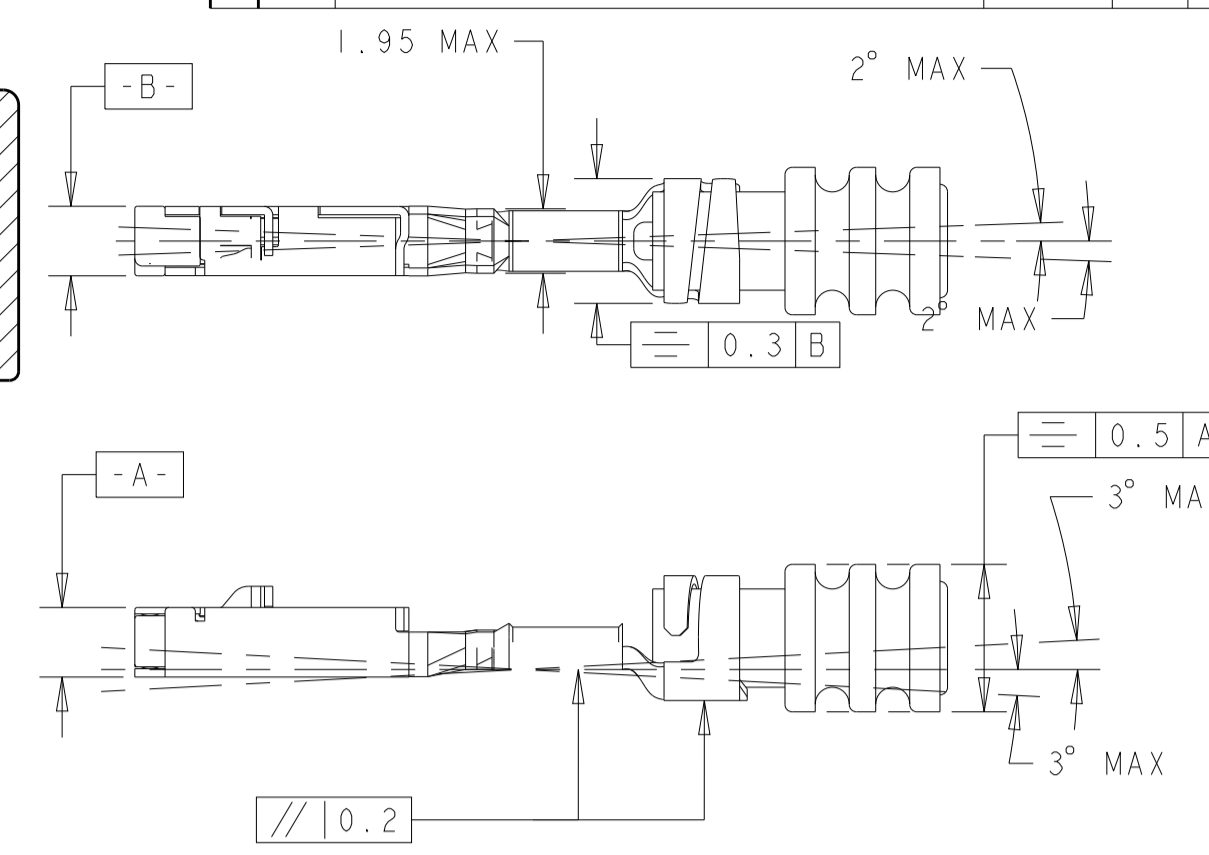
SECTION B-B



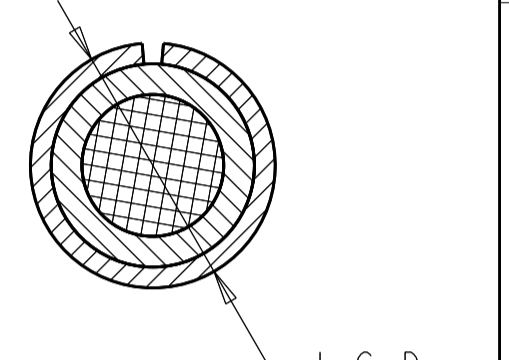
SECTION A-A



SECTION A-A
SHOWN WITH CPA
IN ITS LATCHED POSITION
FOR REFERENCE ONLY



WIRE CRIMP
DIMENSIONS

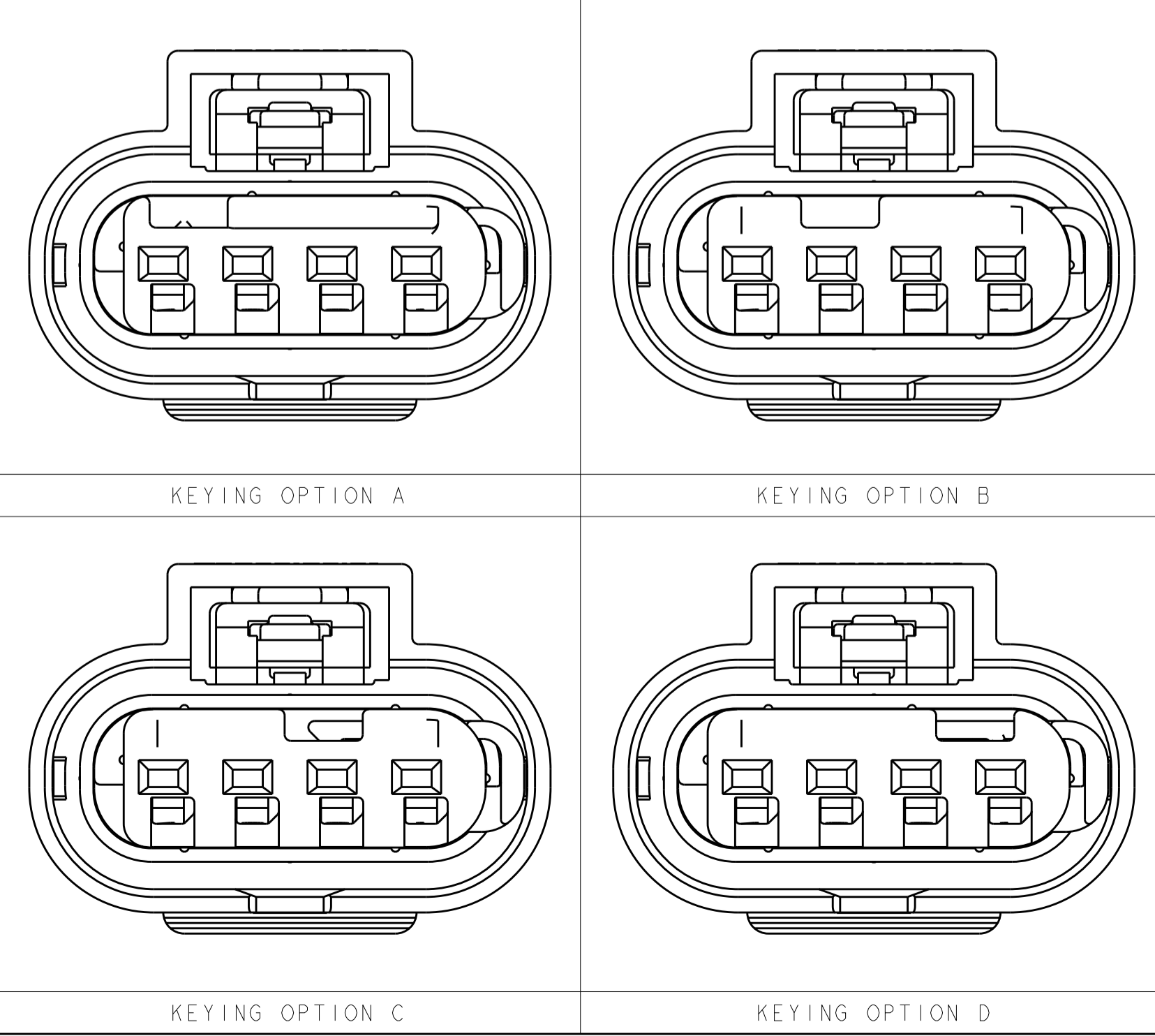


INSULATION CRIMP
DIMENSIONS

REVISIONS				
P. LTM	DESCRIPTION	DATE	OWN	APVD
B2	REVISED PER ECO-12-011336	19JUN2012	DLD	SLM
B3	REVISED PER ECO-14-014610	26SEP2014	DLD	SLM
B4	REVISED PER ECO-15-014533	08OCT2015	DLD	SLM

MAX TEMP	FEMALE TERMINAL PN	TERMINAL PLATING	AWG	APPLICABLE WIRE FINISHED O.D.	W.C.H.	W.C.W.	I.C.D.	WIRE SEAL PART NUMBER
125C	1670146-1	TIN	20	1.40 - 1.90mm	0.84 ±0.03	1.57 ±0.05	3.25 ±0.05	967067-1
125C	1670146-2	GOLD	20	1.40 - 1.90mm	0.84 ±0.03	1.57 ±0.05	3.25 ±0.05	967067-1
125C	1670146-3	SILVER	20	1.40 - 1.90mm	0.84 ±0.03	1.57 ±0.05	3.25 ±0.05	967067-1
125C	1418850-1	TIN	18	1.90 - 2.40mm	1.11 ±0.05	1.78 ±0.05	3.35 ±0.05	964972-1
125C	1418850-1	TIN	16	1.90 - 2.40mm	1.31 ±0.05	1.78 ±0.05	3.35 ±0.05	964972-1
125C	1418850-2	GOLD	18	1.90 - 2.40mm	1.11 ±0.05	1.78 ±0.05	3.35 ±0.05	964972-1
125C	1418850-2	GOLD	16	1.90 - 2.40mm	1.31 ±0.05	1.78 ±0.05	3.35 ±0.05	964972-1
125C	1418850-3	SILVER	18	1.90 - 2.40mm	1.11 ±0.05	1.78 ±0.05	3.35 ±0.05	964972-1
125C	1418850-3	SILVER	16	1.90 - 2.40mm	1.31 ±0.05	1.78 ±0.05	3.35 ±0.05	964972-1
150C	1670146-2	GOLD	20	1.40 - 1.90mm	0.84 ±0.03	1.57 ±0.05		2098582-1
150C	1670146-3	SILVER	20	1.40 - 1.90mm	0.84 ±0.03	1.57 ±0.05		2098582-1
150C	1418850-2	GOLD	18	1.40 - 1.90mm	1.11 ±0.05	1.78 ±0.05		2098582-1
150C	1418850-2	GOLD	16	1.40 - 1.90mm	1.31 ±0.05	1.78 ±0.05		2098582-1
150C	1418850-3	SILVER	18	1.40 - 1.90mm	1.11 ±0.05	1.78 ±0.05		2098582-1
150C	1418850-3	SILVER	16	1.40 - 1.90mm	1.31 ±0.05	1.78 ±0.05		2098582-1

KEYING CONFIGURATIONS



KEYING OPTION A

KEYING OPTION B

KEYING OPTION C

KEYING OPTION D

- PART NUMBER 1-1456426-5 SHOWN ON DRAWING.
- TPA AND CPA (WHEN APPLICABLE) ARE SHIPPED IN THEIR PRE-LATCHED POSITIONS. SEE INSTRUCTION SHEET 408-8968 FOR DIRECTIONS ON MOVING THE CPA AND TPA TO THE PRE-LATCHED POSITION, IF NECESSARY.
- TERMINALS SOLD SEPARATELY. FOR USE WITH TE MCON 1.2mm CLEAN BODY CONTACT WITH WIRE SEAL. SEE TE MCON 1.2-CB (CLEAN BODY) TABLE FOR APPLICABLE PART NUMBERS.
- APPLICABLE HEADER INTERFACE DRAWING 114-18679-3 IS AVAILABLE UPON REQUEST. A COPY OF THIS DRAWING CAN BE OBTAINED FROM THE TE CONNECTIVITY PRODUCT MANAGER, VIA YOUR TE CONNECTIVITY SALES REPRESENTATIVE OR CUSTOMER SERVICE.
- MINIMUM FEED THROUGH CONDITION WITH 1.0mm CLEARANCE ALL AROUND.
- NOTE LEFT BLANK INTENTIONALLY
- TRACEABILITY CODE (YY = TWO DIGIT YEAR, JJJ = 3 DIGIT JULIAN DAY, S = 1 DIGIT SHIFT) AND TE ASSEMBLY PART NUMBER PRINTED IN THIS LOCATION AT ASSEMBLY.
- FOR OPTIONAL TERMINAL CAVITY BLOCKING, USE TE CONNECTIVITY BLIND PLUG PART NUMBER 967056-1 FOR 125°C MAX TEMPERATURE.
- PROTOTYPE CONFIGURATION NOT SHOWN.
- PROTOTYPE ASSEMBLIES USE GERMAN OUTER HOUSING P/N: 1718657-1, CPA P/N: 1670193-1 AND SEAL P/N: 1718659-1.
- TPA ENGAGE FORCE: PRESET TO FULL >= 2 N AND <= 60 N.
- TPA DISENGAGE FORCE: DISENGAGE FROM FULL TO PRESET >= 2 N AND <= 60 N
- CPA ENGAGE FORCE: PRESET TO FULL WITHOUT CONNECTORS MATED >= 40 N.
- CPA ENGAGE FORCE: PRESET TO FULL WITH CONNECTORS MATED <30 N.
- POLARIZATION FEATURE EFFECTIVENESS:
CONNECTOR MATED TURNED 180° NO MATING > 125 N.
WRONG KEYING NO MATING > 125 N.
- VALIDATED UP TO USACAR-2 TEMPERATURE CLASS IV (150°C).
- SEE INSTRUCTION SHEET 408-8928.
- I.C.D IS DEPENDENT UPON WIRE INSULATION TYPE AND OD. MUST BE SUFFICIENT TO GRIP SEAL SO IT DOES NOT SLIDE OUT OF INSULATION CRIMP WHEN INSERTING INTO CONNECTOR CAVITY BUT NOT TEAR THE SEAL.
- REFERENCE ISOMETRIC VIEWS ON SHEET 2.

RELEASED	2138907-1	GRAY	D	4-1456426-4
RELEASED	2138907-1	BLUE	C	4-1456426-3
RELEASED	2138907-1	NATURAL/BROWN	B	4-1456426-2
RELEASED	2138907-1	BLACK	A	4-1456426-1
RELEASED	1488787-1	GRAY	D	1-1456426-8
RELEASED	1488787-1	BLUE	C	1-1456426-7
RELEASED	1488787-1	NATURAL/BROWN	B	1-1456426-6
RELEASED	1488787-1	BLACK	A	1-1456426-5
RELEASED	N/A	GRAY	D	1-1456426-4
RELEASED	N/A	BLUE	C	1-1456426-3
RELEASED	N/A	NATURAL/BROWN	B	1-1456426-2
RELEASED	N/A	BLACK	A	1-1456426-1
OBSOLETE				1456426-0
				1456426-7
				1456426-6
				1456426-5
				1456426-4
				1456426-3
				1456426-2
				1456426-1
STATUS	CPA	COLOR	KEY	PART NUMBER
		INNER HOUSING		

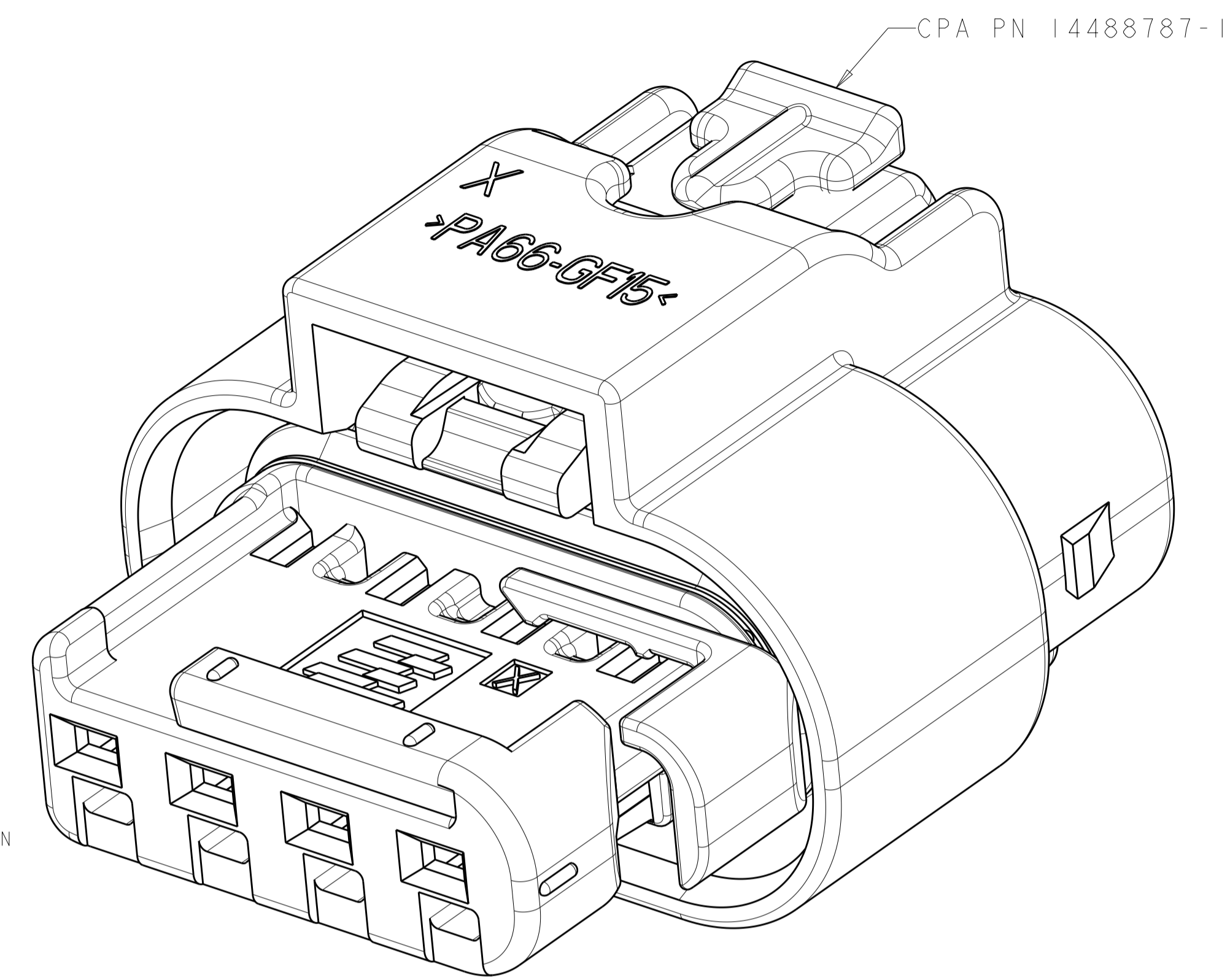
THIS DRAWING IS A CONTROLLED DOCUMENT. DIMENSIONS: mm. TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±0.3, 1 PLC ±0.10, 2 PLC ±0.15, 3 PLC ±0.2, 4 PLC ±0.25, ANGLES ±0.1°. MATERIAL: SEE TABLE. FINISH: SEE TABLE. WEIGHT: 4.3gms. CUSTOMER DRAWING. SCALE: 4:1. SHEET 1 OF 2. REV B4.

TE Connectivity
CONNECTOR ASSEMBLY, FEMALE, 4 POSITION SEALED, 1.2mm STANDARD LATCH VERSION

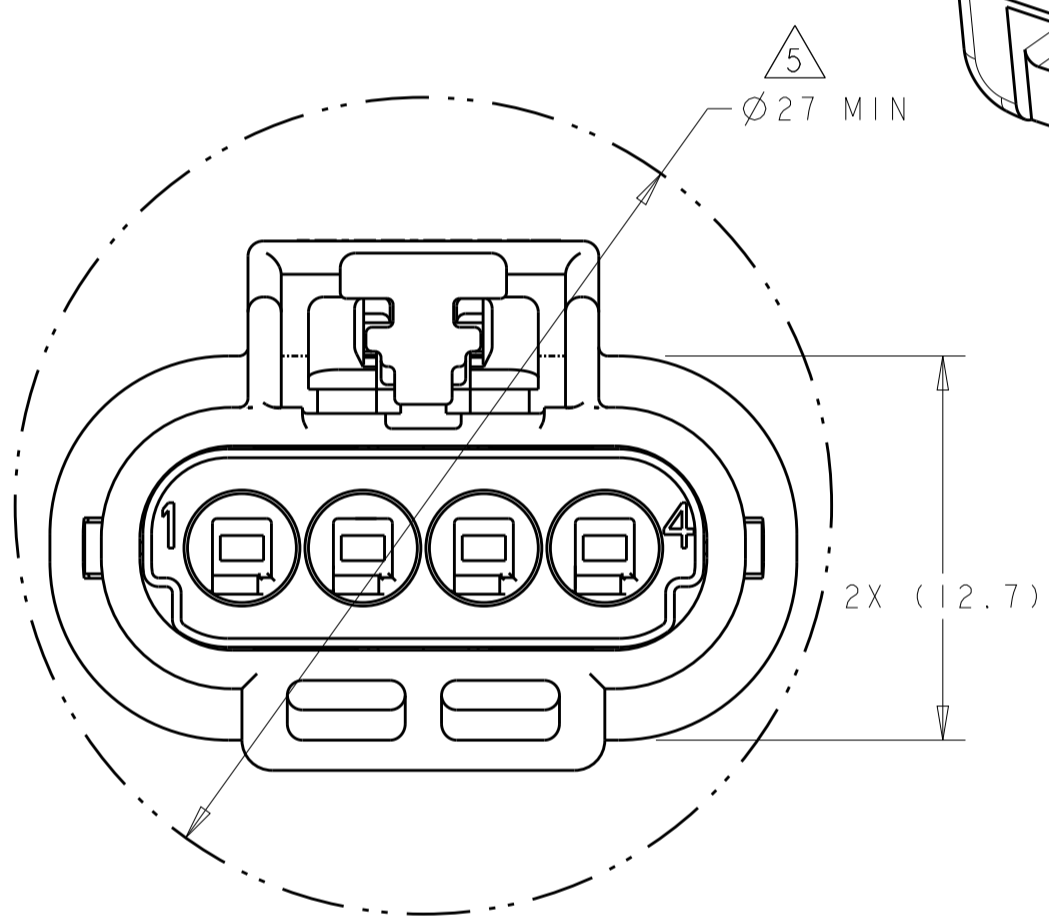
100779C=1456426

REVISIONS				
P.	LTM	DESCRIPTION	DATE	OWN APVD
-	-	SEE SHEET 1	-	-

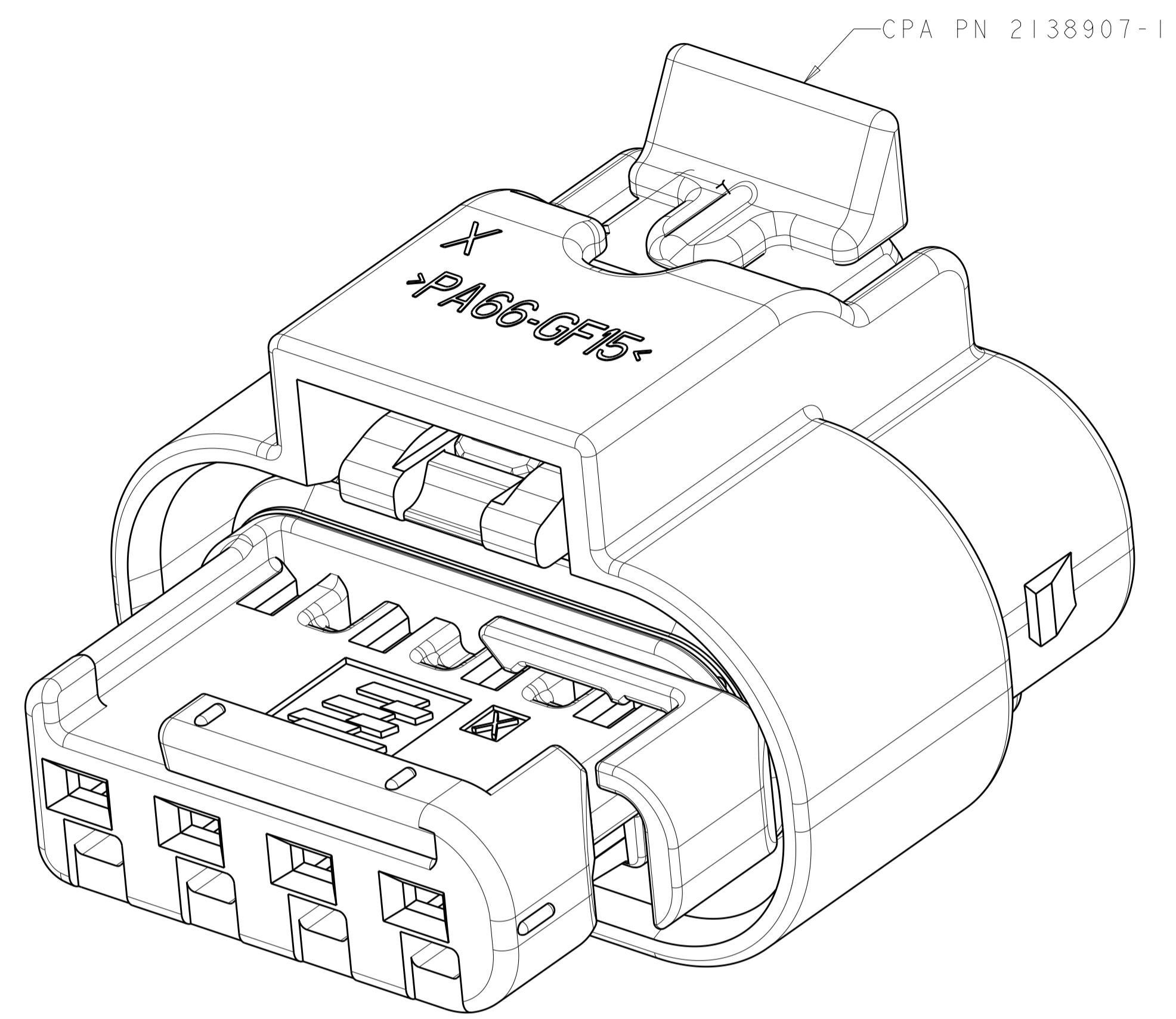
ISOMETRIC VIEWS



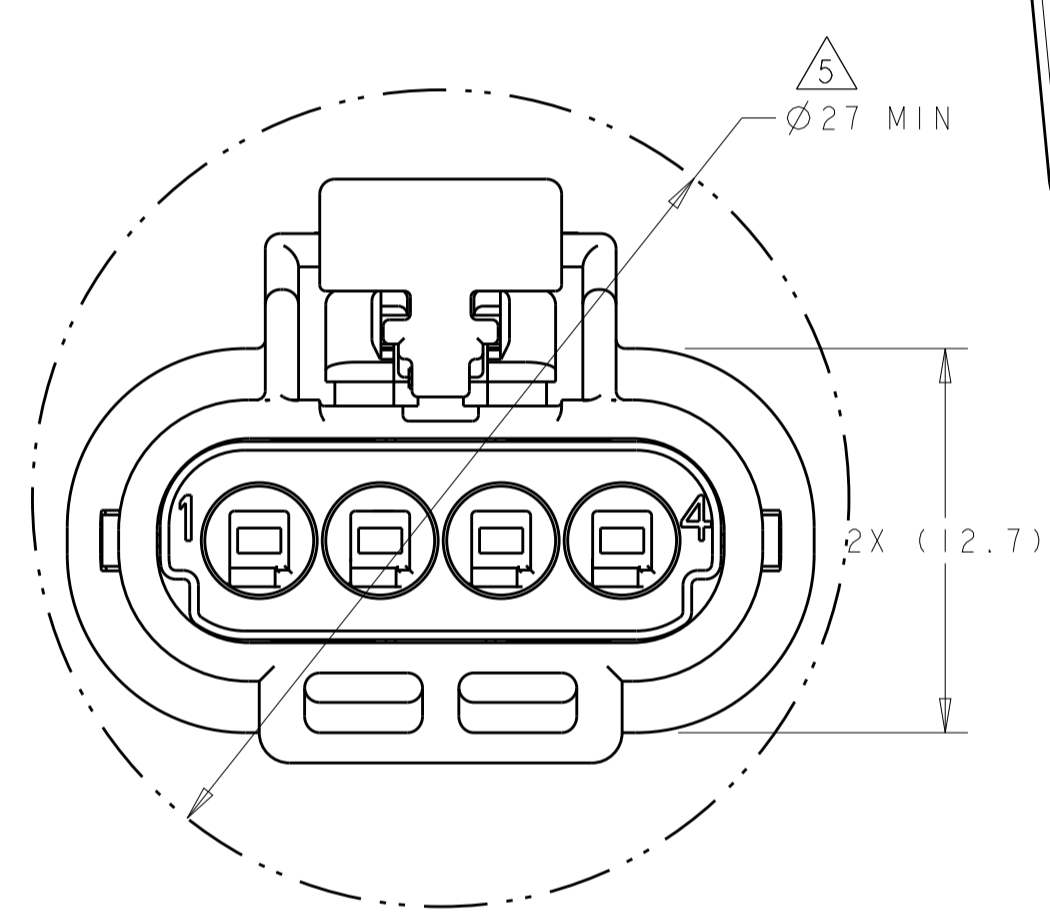
PN 1-1456426-5 SHOWN
SCALE 8:1



FEED THROUGH CONDITION



PN 4-1456426-1 SHOWN
SCALE 8:1



FEED THROUGH CONDITION

THIS DRAWING IS A CONTROLLED DOCUMENT.		OWN: M. FORLSKA 25SEP2006	TE Connectivity
DIMENSIONS: mm		CHK: G. MARTIN 25SEP2006	
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD: G. MARTIN 25SEP2006	NAME: CONNECTOR ASSEMBLY, FEMALE, 4 POSITION SEALED, 1.2mm STANDARD LATCH VERSION
0 PLC	±	PRODUCT SPEC	SIZE: A100779C=1456426
1 PLC	±0.3	APPLICATION SPEC	RESTRICTED TO
2 PLC	±0.10	WEIGHT: 4.3gms	SCALE: 4:1 SHEET 2 OF 2 REV: B4
3 PLC	±	CUSTOMER DRAWING	
4 PLC	±		
ANGLES	±		
FINISH	±		
SEE TABLE	-		



Section 2

Engineering Change Documents



Product Change Notification

Current Date: 09-Oct-2019

TE Connectivity

Product Change Notification: P-19-018058

PCN Date: 08-OCT-19

TE would like to inform you of the following change(s) to the listed TE Connectivity Product. In case of any further questions about this change(s), please contact your TE Connectivity Sales Engineer. Affected part, drawing and/or specification numbers are listed on the attached sheet(s).

General Product Description:

Multiple Part numbers. Phase 1. Americas Footprint Optimization

Description of Changes

We hereby inform you about a transfer of tools and/or processes to further improve our Supply Chain towards our customers. The transfer follows a strict procedure, which fully maintains quality, ability to supply and form-fit-function of the concerned products. The receiving manufacturing location operates under a certified quality management system in accordance with standard automotive requirements. These moves will be validated not to affect product fit, form and function, tool geometry, quality performance or the quality management system TE will uphold our responsibility to internally validate and approve these tools among appropriate first article dimensional and capability analysis, comparative 2-sample T-tests before and after moves, before and after CT scans where needed, and PV testing as defined by TE product engineering. TE is willing to provide any such validation data to our customers as our joint non-disclosure agreement statuses allow.

Reason for Changes:

These changes are part of an overall effort from TE to improve our supply chain toward our customers, to focus each plant on core products and processes, and to provide an overall better experience from TE to our customer base. A TE-internal release test based on the relevant part specifications will be executed before delivery and this notification serves to fulfill our notification requirements as prescribed by AIAG 4th edition. This change notification document accompanies a letter sent to your organization on September 13, 2019 signed by our Vice President of Sales and Marketing. Follow up conversations can occur upon request with your sales contact within 14 calendar days after receipt of this PCN. TE can share validation data with your organization upon request. If you have any questions or needs from this move, please contact your sales engineer within 15 days of receipt of this letter.

Estimated Dates:

Last Order Date (Obsolete Parts Only):	First Date To Ship (Changed Parts Only):
	31-DEC-2019
Last Ship Date (Obsolete Parts Only):	Last Date for Mixed Shipments: (Changed Parts Only):
	No Mixed Shipments

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
1-1419168-1	NO		"V23542-G1506-D101"			
1-1419168-2	NO		"V23542-G1506-D102"			
1-1419168-3	NO		"V23542-G1506-D103"			
1-1419168-5	NO					
1-1438153-1	NO					
1-1438153-2	NO					
1-1438153-3	NO					
1-1438153-4	NO					
1-1438153-5	NO					
1-1438153-6	NO					
1-1438153-7	NO					
1-1438153-8	NO					
1-1456426-1	NO					
1-1456426-2	NO					
1-1456426-5	NO					
1-1456426-6	NO					
1-1456985-0	NO					
1-1670915-1	NO					
1-1670916-1	NO					
1-1670917-1	NO					
1-1718643-1	NO		"EG9733-000", "AMP-1-1718643-1"			
1-1718643-3	NO					
1-1718644-1	NO					
1-1718644-2	NO					
1-1718644-5	NO					
1-1718888-1	NO					
1-1823608-1	NO					
1-1823608-4	NO					

Part Number	Part Discontinued per PCN	Customer Drawing	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
1-1823608-5	NO					
1-1924067-1	NO					
1-1924067-2	NO					
1-1924067-3	NO					
1-1924067-4	NO					
1-1924067-5	NO					
1-1924067-6	NO					
1-1924067-9	NO					
1-2141523-4	NO					
1-2203138-1	NO					
1-2203312-1	NO					
1-2203312-2	NO					
1-2203312-3	NO					
1-2203316-1	NO					
1-2203316-2	NO					
1-2203316-3	NO					
1-2203320-1	NO					
1-2203320-2	NO					
1-2203320-3	NO					
1-2203529-2	NO					
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1-2203663-7	NO					
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1-2203769-3	NO					
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1-2203773-1	NO					
1-2203773-2	NO					
1-2288986-1	NO					
1-2291436-1	NO					
1-2296694-1	NO					
1-2296694-2	NO					
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1326942-1	NO					
1326942-2	NO					
1326942-3	NO					
1326942-4	NO					
1326942-7	NO					
1419168-7	NO		"V23542-G1506-A101"			
1438153-1	NO					
1438153-4	NO					
1438153-5	NO					
1438153-6	NO					
1438153-8	NO					

Part Number	Part Discontinued per PCN	Customer Drawing	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
1456983-1	NO					
1456983-2	NO					
1456983-3	NO					
1456983-4	NO					
1456983-5	NO					
1456983-7	NO					
1456985-1	NO					
1456985-2	NO					
1456985-3	NO					
1456985-4	NO					
1456985-5	NO					
1456985-6	NO					
1456985-7	NO					
1456985-9	NO					
1488651-1	NO					
1488991-1	NO					
1488991-2	NO					
1488991-3	NO					
1488991-4	NO					
1488991-5	NO					
1488991-6	NO					
1488991-8	NO					
1488992-5	NO					
1488992-6	NO					
1587719-1	NO					
1670117-1	NO					
1732145-1	NO					
184139-1	NO					
184140-1	NO					
184141-1	NO					
1924311-1	NO					
1924957-2	NO					
2-1438153-1	NO					
2-1670917-1	NO					
2-1718643-1	NO					
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2-1823608-5	NO					
2-1924067-0	NO					
2-2203663-6	NO					
2-2203663-8	NO					
2-2203663-9	NO					
2098204-2	NO					
2098541-1	NO					
2098541-2	NO					
2098541-5	NO					
2098541-6	NO					
2098546-1	NO					
2098557-1	NO					
2098557-4	NO					
2098557-7	NO					
2098641-1	NO					
2098641-5	NO					
2098641-6	NO					
2098641-7	NO					
2138041-1	NO					
2138041-2	NO					
2138042-3	NO					
2138042-6	NO					
2203109-1	NO					
2203109-2	NO					
2203109-6	NO					
2203109-7	NO					

Part Number	Part Discontinued per PCN	Customer Drawing	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
2203332-1	NO					
2203663-5	NO					
2203663-6	NO					
2203663-7	NO					
2203769-1	NO					
2203771-1	NO					
2203773-1	NO					
2203773-2	NO					
2203773-7	NO					
2296694-1	NO					
2296694-2	NO					
2296695-1	NO					
2296695-2	NO					
2296695-4	NO					
2296698-1	NO					
2296698-2	NO					
2296700-3	NO					
2296700-6	NO					
2296702-1	NO					
2300498-1	NO					
2300498-2	NO					
2300498-6	NO					
2300498-7	NO					
2304514-1	NO					
2304514-2	NO					
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3-2203663-3	NO					
3-2203663-5	NO					
4-1456426-1	NO					
4-1456426-2	NO					
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4-1924067-1	NO					
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4-2098541-1	NO					
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4-2098557-1	NO					
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4-2272003-1	NO					
4-2272003-2	NO					
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4-2272003-4	NO					
4-2272003-5	NO					
4-2272004-1	NO					
4-2272004-2	NO					
4-2272005-1	NO					
4-2272005-2	NO					
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6-2203663-6	NO					
6-2203663-7	NO					
6-2203663-8	NO					
828904-1	NO		"CF0547-000", "AMP-0-0828904-1", "80.264.00", "8202609390", "8202611101"			
828904-2	NO					
828922-1	NO		"EG9737-000", "AMP-0-0828922-1", "80.263.00", "820A-37376"			
963530-1	NO		"1072609867", "820P-37717", "820P-37904", "43119-000"			
963531-1	NO		"1072607258"			
964972-1	NO					
967067-1	NO					

Part Number	Part Discontinued per PCN	Customer Drawing	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
			"0-0967067-1", "EG9740-000", "AMP-0-0967067-1"			
967067-2	NO					



Section 3

Customer Engineering Approval

Test Item	Test Requirement	Acceptance Criteria	Minimum Sample Size	Primary Terminal or Connector (****)										Secondary Terminal/Connector (****)										Notes						
				Sample Description		Test Number	Test Start Date	Test Completion Date	Test Results					Sample Description		Test Number	Test Start Date	Test Completion Date	Test Results											
				Terminal Size (mm)	Wire Size				Minimum	Maximum	Average	Standard Deviation	Pass/Fail	Terminal Size (mm)	Wire Size				Minimum	Maximum	Average	Standard Deviation	Pass/Fail							
Thermal Aging (Section 4.4.1) Test Sequence 31A																														
Pre Test Visual Examination (3.4)	Visually examine each test specimen before testing or conditioning	There shall not exhibit any evidence of deterioration, cracks and/or other deformities that could affect performance, function and/or appearance	10 Connector Pairs			20191205 ACL	12/2/2019	12/9/2019						PASS																
Pre Test Isolation Resistance (4.3.5)	With mated connector pairs, apply 500VDC to adjacent terminal pairs, measure resistance 15s of stabilized reading. If the connector is equipped with a shorting bar, measure the resistance between the 2 terminal that are connected to the shorting bar	Isolation Resistance ≥ 100MΩ		1.2	0.5				R: 20 Mohms	R: 20 Mohms	R: 20 Mohms	R: 20 Mohms	PASS																USCAR 2 Rev 4: R: 20 Mohms @ 500 VDC	
Pre Test Pressure/Vacuum Leak (Sealing Class 2) (3) (4.4.10)	Submerge test sample 300mm - 400mm in the salt water solution. Apply 7psig of pressure for 15 seconds. Switch the regulator source to vacuum 48kPa (7psig) for 15s.	Pressure - There shall be no loss of applied pressure and no bubbles visible exiting any test sample Vacuum - must meet isolation resistance acceptance criteria There must be no signs water inside the connector		1.2	0.5								PASS																	
Post Test Isolation Resistance (4.3.5)	With mated connector pairs, apply 500VDC to adjacent terminal pairs, measure resistance 15s of stabilized reading. If the connector is equipped with a shorting bar, measure the resistance between the 2 terminal that are connected to the shorting bar	Isolation Resistance ≥ 100MΩ		1.2	0.5				R: 20 Mohms	R: 20 Mohms	R: 20 Mohms	R: 20 Mohms	PASS																	USCAR 2 Rev 4: R: 20 Mohms @ 500 VDC
Thermal Aging (4.4.1)	Place samples in chamber at the maximum temperature specified in GM 3191 Table 2 for a duration of 1008 hours.	Test samples shall meet visual examination requirements and all mechanical assists and/or other elements required to separate connectors for service shall function without breakage		1.2	0.5								ENVIRON																	70hrs @150 C
Post Test Pressure/Vacuum Leak (Sealing Class 2) (3) (4.4.10)	Submerge test sample 300mm - 400mm in the salt water solution. Apply 4psig of pressure for 15 seconds. Switch the regulator source to vacuum 28kPa (4psig) for 15s.	Pressure - There shall be no loss of applied pressure and no bubbles visible exiting any test sample Vacuum - must meet isolation resistance acceptance criteria There must be no signs water inside the connector		1.2	0.5								PASS																	
Post Test Isolation Resistance (4.3.5)	With mated connector pairs, apply 500VDC to adjacent terminal pairs, measure resistance 15s of stabilized reading. If the connector is equipped with a shorting bar, measure the resistance between the 2 terminal that are connected to the shorting bar	Isolation Resistance ≥ 100MΩ		1.2	0.5				R: 20 Mohms	R: 20 Mohms	R: 20 Mohms	R: 20 Mohms	PASS																	USCAR 2 Rev 4: R: 20 Mohms @ 500 VDC
Post Test Visual Examination (3.4)	Visually examine each test specimen after testing, note any observable changes, such as swelling, corrosion, discoloration, physical distortion, cracks, etc.	There shall be no corrosion, discoloration, cracks, etc which could affect the functionality of the part											PASS																	

Sealed Connector Environmental Tests

Test	USCAR req't	Deviation	Orig Val	Empalme	Before Move	Empalme	Before Move
				4P Sm CPA WC 8625	4P Sm CPA WC 8625	4P HT - GM WC 8625	4P HT - GM WC 8625
Terminal - Connector Insertion Force - TPA in Open Position, Max Wire Size	30 N Max. 50 N Min. PT		Min: 10.60 Max: 17.43 PV			Min: 7.63 Max: 9.56 Avg: 8.50 St Dev: 0.55	Min: 9.27 Max: 11.10 Avg: 10.24 St Dev: 0.60
Terminal - Connector Insertion Force - TPA in Open Position, Min Wire Size	30 N Max. 50 N Min. PT		N/A			Min: 6.41 Max: 8.89 Avg: 7.87 St Dev: 0.72	Min: 6.67 Max: 8.15 Avg: 7.52 St Dev: 0.42
Terminal - Connector Extraction Force - TPA in Open Position, Max Wire Size	30 N Min.		Min: 55.69 Max: 66.35 PV			Min: 56.55 Max: 70.46 Avg: 64.52 St Dev: 4.42	Min: 54.02 Max: 62.57 Avg: 59.19 St Dev: 3.03
Terminal - Connector Extraction Force - TPA in Closed Position, Max Wire Size	75 N Min.		Min: 94.92 Max: 137.45 PV			Min: 95.22 Max: 149.34 Avg: 115.58 St Dev: 18.27	Min: 106.82 Max: 144.12 Avg: 119.07 St Dev: 14.58
Terminal - Connector Extraction Force - TPA in Closed Position, Max Wire Size, Moisture Conditioned	60 N Min.		Min: 98.89 Max: 132.94 PV			Min: 109.88 Max: 135.15 Avg: 120.17 St Dev: 9.38	Min: 111.73 Max: 137.48 Avg: 126.42 St Dev: 7.36
Connector to Connector Mating Force, TPA engaged	75N Max		Min: 30.93 Max: 36.98 Avg: 34.00 PV			Min: 25.03 Max: 31.01 Avg: 27.74 St Dev: 1.77	Min: 24.85 Max: 32.85 Avg: 27.96 St Dev: 2.35
Connector to Connector Un-Mating Force, TPA engaged, CPA not engaged	110 N Min.		Min: 142.82 Max: 150.14 PV			Min: 118.08 Max: 160.11 Avg: 130.08 St Dev: 11.80	Min: 111.55 Max: 122.18 Avg: 117.25 St Dev: 3.62
Connector to Connector Un-Mating Force, TPA engaged, Primary Lock Disengaged	75 N Max.		Min: 24.69 Max: 32.76 Avg: 28.50 DV			Min: 20.72 Max: 23.16 Avg: 22.15 St Dev: 0.90	Min: 28.19 Max: 31.99 Avg: 29.57 St Dev: 1.48
Connector to Connector Un-Mating Force, Primary Connector Lock Disengagement, CPA Disengaged	6 N Min. 51 N Max. Deviation	10N Min 70N Max	Min: 29.07 Max: 33.36 Avg: 30.09 DV			Min: 11.04 Max: 12.63 Avg: 11.50 St Dev: 0.65	Min: 28.05 Max: 34.74 Avg: 31.27 St Dev: 2.53
Misc Component Engage/Disengage Force - TPA, Pre-set to Full Install (Lock), No terminals	15N Min	2N Min 60N Max Per Print	N/A			Min: 2.62 Max: 8.35 Avg: 3.77 St Dev: 1.66	Min: 2.09 Max: 3.77 Avg: 2.95 St Dev: 0.57
Misc Component Engage/Disengage Force - TPA, Pre-set to Full Install (Lock), With terminals	60N Max	2N Min 60N Max Per Print	Min: 2.26 Max: 3.22 Avg: 2.79 DV			Min: 2.73 Max: 6.82 Avg: 3.61 St Dev: 1.20	Min: 2.20 Max: 4.16 Avg: 3.14 St Dev: 0.57
Misc Component Engage/Disengage Force - TPA, Full Install (Lock) to Pre-set, With terminals	60N Max	2N Min 60N Max Per Print	Min: 6.27 Max: 9.34 Avg: 7.83 DV			Min: 7.85 Max: 11.41 Avg: 9.56 St Dev: 1.18	Min: 3.57 Max: 7.66 Avg: 5.25 St Dev: 1.27
Misc Component Engage/Disengage Force - TPA, Pre-set to Removal, without terminals	25 N Min.		N/A Design Protects				
Misc Component Engage/Disengage Force - CPA, Pre-set to Full Install (locked), no terminals, unmated	60N Min	40N Min Per Print	N/A	Min: 47.49 Max: 83.50 Avg: 64.55 St Dev: 9.46	Min: 48.52 Max: 69.01 Avg: 58.47 St Dev: 7.60	Min: 59.54 Max: 69.90 Avg: 66.23 St Dev: 3.15	Min: 60.66 Max: 68.05 Avg: 64.94 St Dev: 2.14
Misc Component Engage/Disengage Force - CPA, Pre-set to Full Install (locked), no terminals, mated	22N Max	30N Max Per Print	Min: 10.55 Max: 14.69 Avg: 12.50	Min: 12.44 Max: 17.50 Avg: 15.39 St Dev: 1.76	Min: 14.10 Max: 18.55 Avg: 16.35 St Dev: 1.60	Min: 5.36 Max: 12.85 Avg: 9.14 St Dev: 2.41	Min: 7.94 Max: 12.52 Avg: 9.60 St Dev: 1.59

Misc Component Engage/Disengage Force - CPA, Full Install (locked) to Pre-set, no terminals, mated	10N Min 30N Max	55N Max Per Orig Val	Min: 43.46 Max: 50.25 Avg: 37.27	Min: 13.89 Max: 20.20 Avg: 18.09 St Dev: 1.90	Min: 20.56 Max: 30.45 Avg: 25.80 St Dev: 3.44	Min: 10.64 Max: 13.69 Avg: 11.97 St Dev: 0.98	Min: 15.23 Max: 31.92 Avg: 22.69 St Dev: 6.05
Misc Component Engage/Disengage Force - CPA, Pre-lock to Complete Removal, no terminals, unmated	30N Min		Min: 37.59 Max: 48.50 Avg: 41.47 Sm CPA	Min: 44.13 Max: 48.08 Avg: 46.43 St Dev: 1.03	Min: 75.96 Max: 95.06 Avg: 84.70 St Dev: 6.64	Min: 44.16 Max: 53.04 Avg: 46.87 St Dev: 3.17	Min: 74.06 Max: 79.21 Avg: 76.76 St Dev: 1.72

Sm CPA

Lg CPA

11. TPA ENGAGE FORCE: PRESET TO FULL WITH TERMINALS INSTALLED
>= 2 N AND <= 60 N.
12. TPA DISENGAGE FORCE: DISENGAGE FROM FULL TO PRESET
>= 2 N AND <= 60 N
13. CPA ENGAGE FORCE: PRESET TO FULL WITHOUT CONECTORS MATED
>= 40 N.
14. CPA ENGAGE FORCE: PRESET TO FULL WITH CONNECTORS MATED <30 N.



WINSTON-SALEM DIMENSIONAL INSPECTION

3900 Reidsville Road (067-060)

Winston-Salem, NC 27101

Request Number: 4P MCON_2272005_1456426_Customer FAI_18Dec19

Part Name:	4P 2pc CB MCON, High Temp	Report Date:	5-Sep-2019	Unit of Measure:	MM
Part Number:	4-2272005-1	Requested by:	Stacie Ice		
Print Number:	C-2272005	Vendor:	EMPALME MEXICO		
Print Revision:	A1	Cavity\Die Out:	2 (8 pcs)		
Tool Number:	WC-8625				

Inspection equipment and measurement of uncertainty: Refer to Instrument ID and certificate of calibration

WDI Technician:	Austin Ward	Measurement Method Device:	MITUTOYO TOOLMAKERS SCOPE (T2993-0016)
Email Address:	austin.ward@te.com		
Reviewed by:	Todd Vogler		
Review Date:	10-Sep-2019		

REPORT HEADING

LABEL = DIMENSION (PRINT) LABEL	LOWER = LOWER TOLERANCE OR LOWER LIMIT OF A RANGE
DESC = FEATURE DESCRIPTION	MMD = MEASUREMENT METHOD DEVICE
NOMINAL = NOMINAL VALUE	ACTUAL = ACTUAL MEASURED VALUE
UPPER = UPPER TOLERANCE OR UPPER LIMIT OF A RANGE	DEV>TOL = DEVIATION GREATER THAN UPPER OR LOWER TOLERANCE

NOTES

This dimension report applies to all variants of:

X-2272005-X

X-1456426-X

Vendor change to Empalme, Mexico

-Stacie Ice, TE Product Sustaining Engineer, 18Dec19

WINSTON-SALEM DIMENSIONAL INSPECTION

LABEL	DESC	NOMINAL	UPPER	LOWER	MMD	B1		B2		B3		B4	
						ACTUAL	DEV>TOL	ACTUAL	DEV>TOL	ACTUAL	DEV>TOL	ACTUAL	DEV>TOL
1		22.40	Ref		Scope	22.399		22.401		22.439		22.417	
2		18.98	Ref		Scope	18.658		18.810		18.776		18.817	
3		24.70	Ref		Scope	24.773		24.773		24.775		24.791	
4		16.98	Ref		Scope	16.914		16.883		16.906		17.152	
5		26.50	Ref		Scope	26.561		26.520		26.551		26.508	
6		16.50	Ref		Scope	16.363		16.260		16.318		16.300	
7		17.50	Ref		Scope	17.680		17.613		17.687		17.705	
8		4.00	Ref		Scope	4.001		3.996		3.994		4.003	
		4.00	Ref		Scope	3.999		4.007		3.996		3.999	
		4.00	Ref		Scope	3.992		3.996		3.998		3.985	
9		6.00	Ref		Scope	5.986		5.997		5.968		6.004	

LABEL	DESC	NOMINAL	UPPER	LOWER	MMD	B5		B6		B7		B8	
						ACTUAL	DEV>TOL	ACTUAL	DEV>TOL	ACTUAL	DEV>TOL	ACTUAL	DEV>TOL
1		22.40	Ref		Scope	22.399		22.367		22.403		22.385	
2		18.98	Ref		Scope	18.849		18.832		18.611		19.040	
3		24.70	Ref		Scope	24.759		24.785		24.787		24.777	
4		16.98	Ref		Scope	16.971		16.892		16.869		16.916	
5		26.50	Ref		Scope	26.435		26.410		26.423		26.407	
6		16.50	Ref		Scope	16.310		16.263		16.318		16.305	
7		17.50	Ref		Scope	17.556		17.603		17.627		17.692	
8		4.00	Ref		Scope	3.992		3.999		3.994		4.001	
		4.00	Ref		Scope	3.997		3.999		4.008		3.999	
		4.00	Ref		Scope	3.998		3.996		3.998		3.988	
9		6.00	Ref		Scope	5.959		5.963		6.005		5.962	



Section 4

Design FMEA

See Section A for nondisclosure conditions.

The Design FMEA, if included, is a Class II confidential document belonging to TE Connectivity. A class II document may not be further distributed and is subject to the conditions of the nondisclosure agreement.



Section 5

Process Flow Diagram

See Section A for nondisclosure conditions.

The Process Flow Diagram, if included, is a Class II confidential document belonging to TE Connectivity. A class II document may not be further distributed and is subject to the conditions of the nondisclosure agreement.



Section 6

Process FMEA

See Section A for nondisclosure conditions.

The Process FMEA, if included, is a Class II confidential document belonging to TE Connectivity. A class II document may not be further distributed and is subject to the conditions of the nondisclosure agreement.



Section 7

Control Plan

**See Section A for nondisclosure conditions.
The Control Plan, if included, is a Class II confidential document
belonging to TE Connectivity. A class II document may not be
further distributed and is subject to the conditions of the
nondisclosure agreement.**



Section 8

Measurement System Analysis



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1939

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER Agree	OPER VS SAMPLE Agree
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result		
1	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
6	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
8	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
11	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
13	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
15	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
16	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
17	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
18	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
19	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
22	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
25	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
27	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
29	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
30	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
31	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
33	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
36	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1939

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
39	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
42	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
43	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
44	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
46	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
47	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
49	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
50	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1939	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

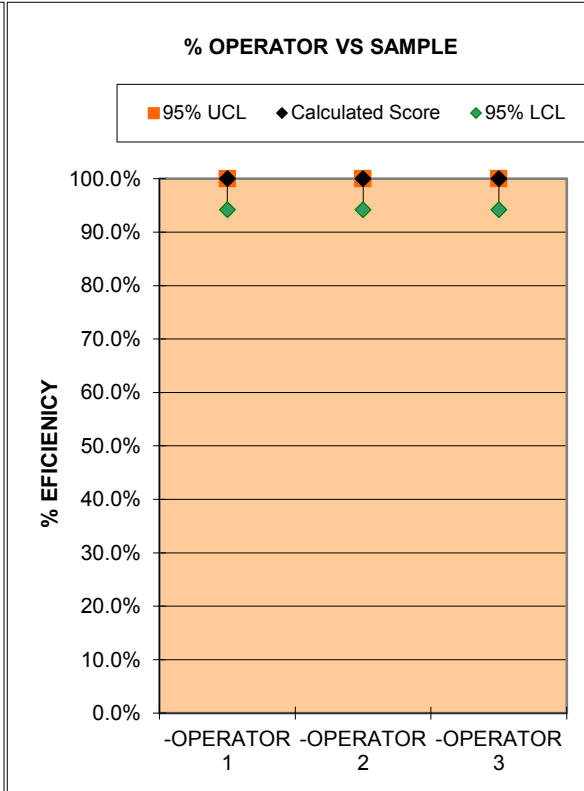
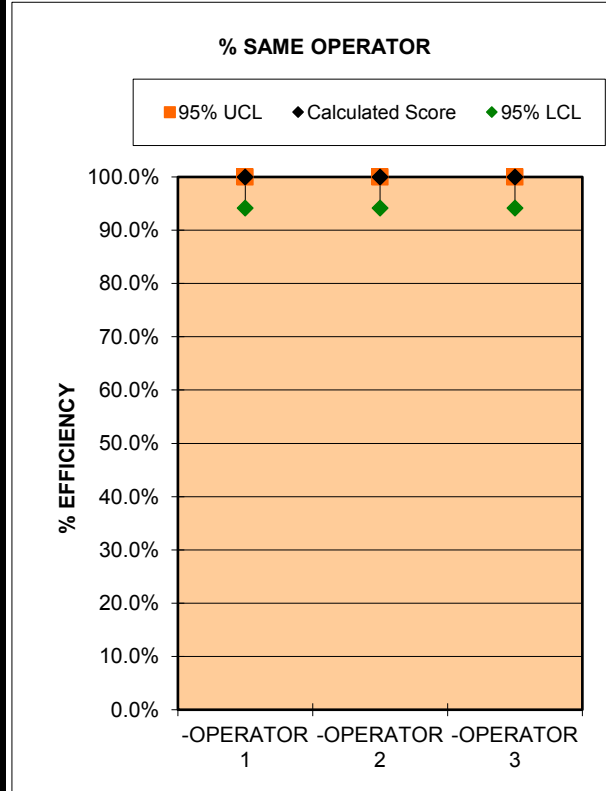
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 8 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1940

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
2	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
5	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
7	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
9	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
11	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
14	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
18	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
21	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
22	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
25	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
27	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
31	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
34	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
35	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER:	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 8 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1940

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
41	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
43	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
46	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
48	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
50	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1940	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

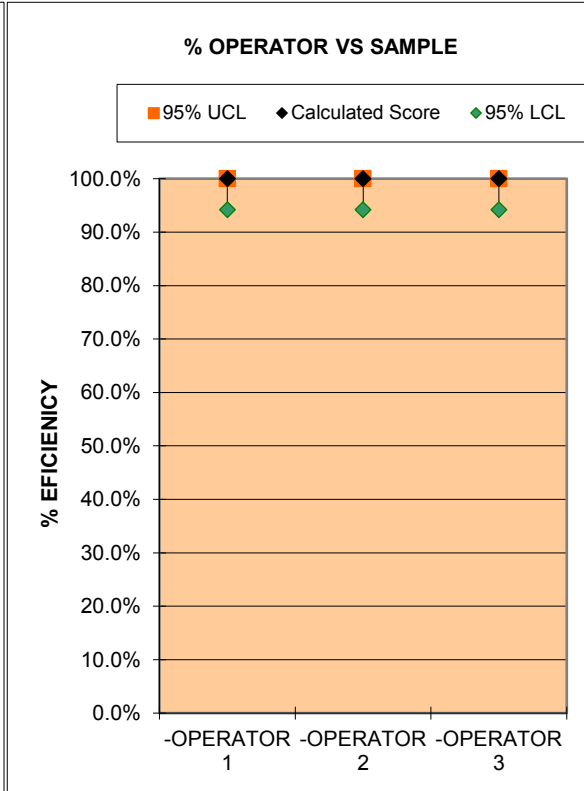
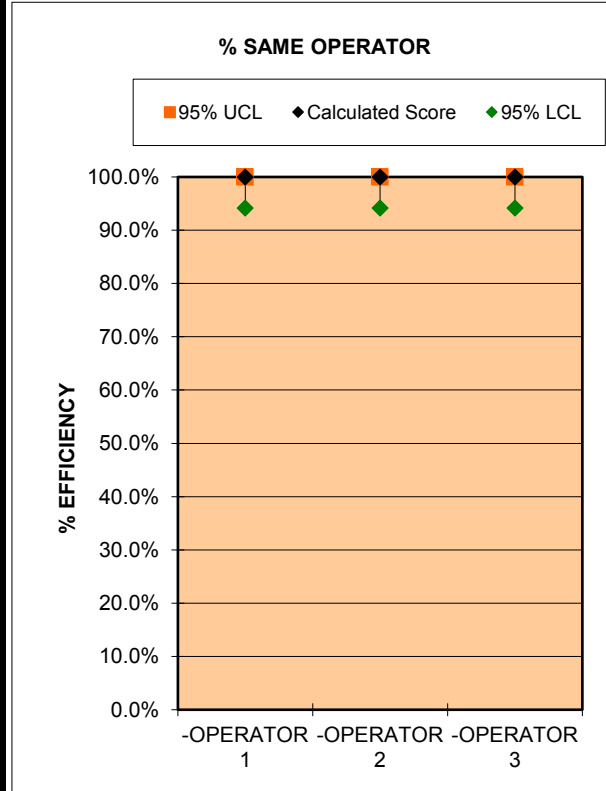
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 9 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1941

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
5	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
10	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
13	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
18	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
19	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
25	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
26	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
27	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
33	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 9 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1941

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
41	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
47	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
50	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1941	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

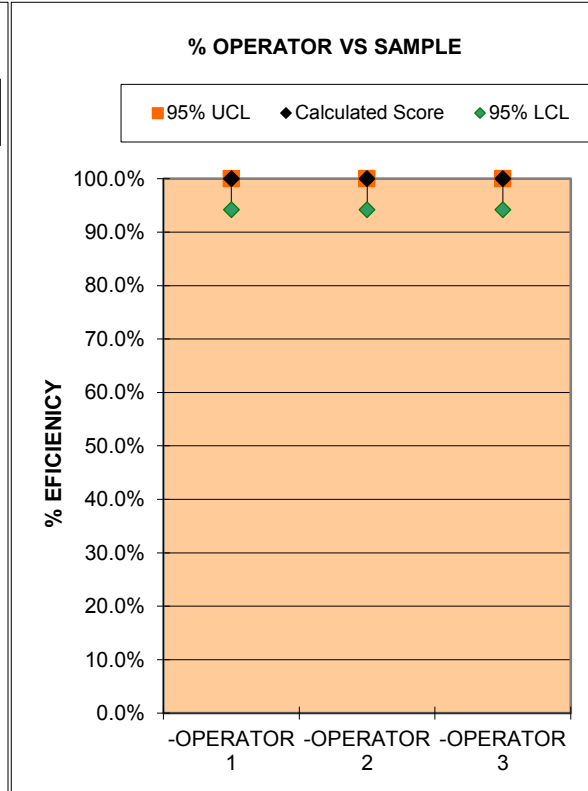
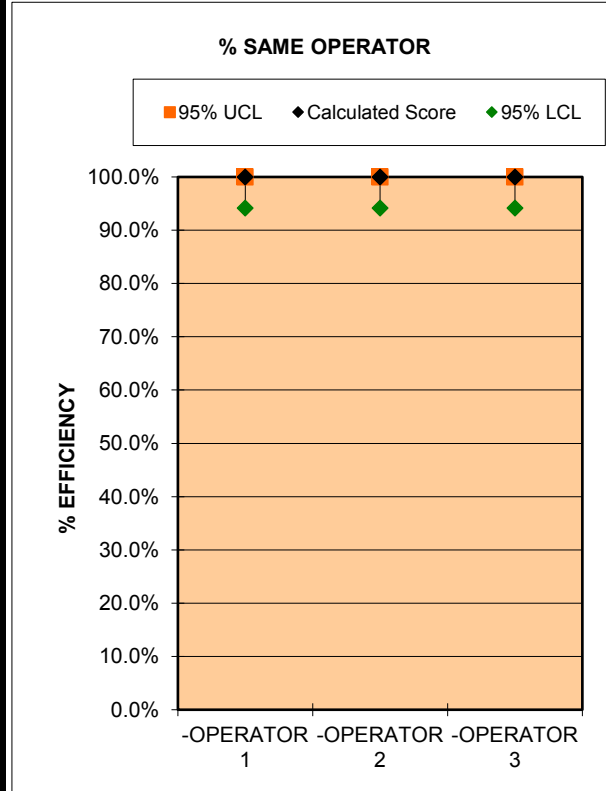
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	21-Nov-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 16 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1942

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
7	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
11	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
15	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
18	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
19	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
23	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
25	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
26	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
27	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
28	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
32	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
34	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
36	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	21-Nov-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 16 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1942

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
40	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
42	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
44	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
45	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
48	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
50	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	21-Nov-19	ID - EQUIPMENT
STANDAR RECORD	2019-1942	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

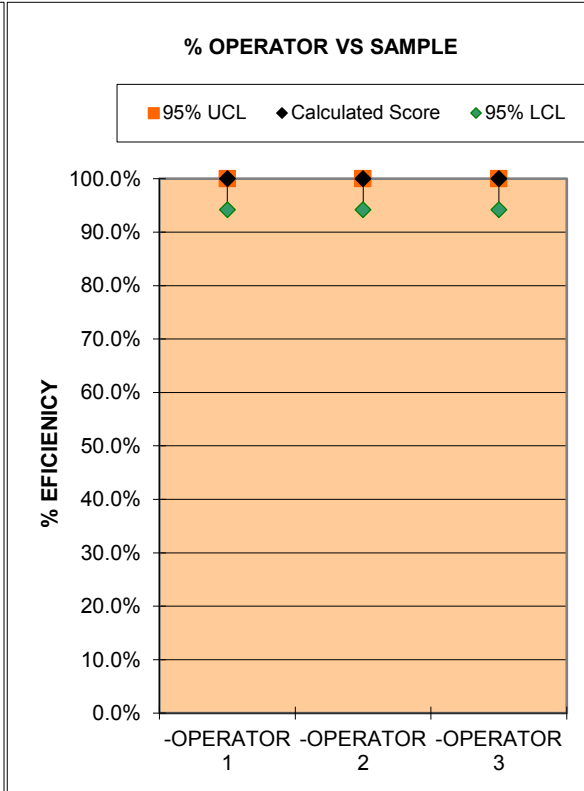
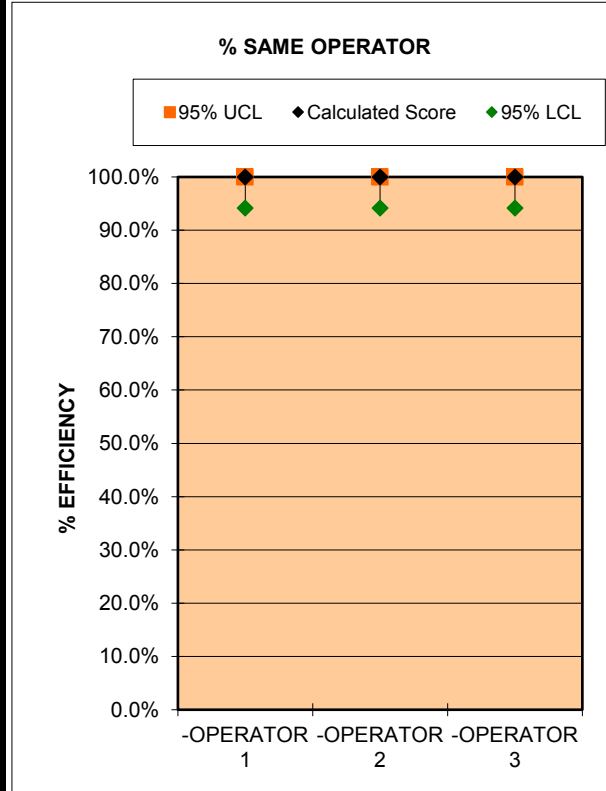
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1943

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
6	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
8	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
10	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
12	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
14	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
16	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
18	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
20	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
22	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
24	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
25	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
27	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
29	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
31	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
33	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
35	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
37	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1939

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
6	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
8	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
11	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
13	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
15	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
16	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
17	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
18	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
19	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
22	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
25	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
27	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
29	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
30	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
31	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
33	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
36	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1939

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
39	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
42	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
43	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
44	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
46	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
47	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
49	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
50	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1939	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

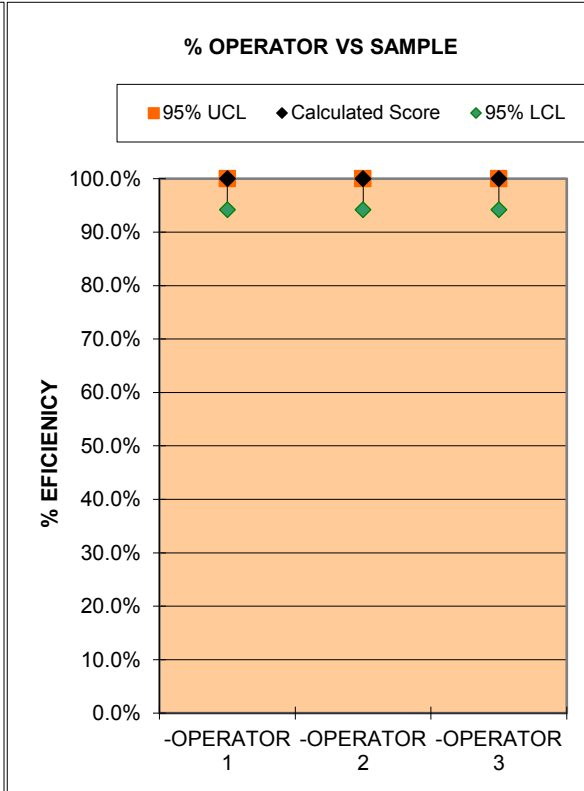
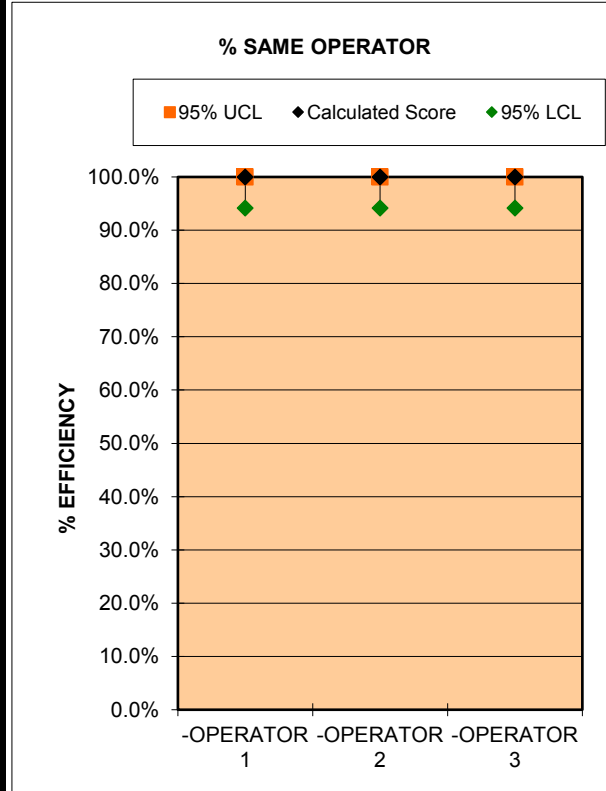
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 8 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1940

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
2	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
5	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
7	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
9	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
11	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
14	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
18	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
21	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
22	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
25	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
27	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
31	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
34	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
35	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 8 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1940

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
41	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
43	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
46	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
48	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
50	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1940	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

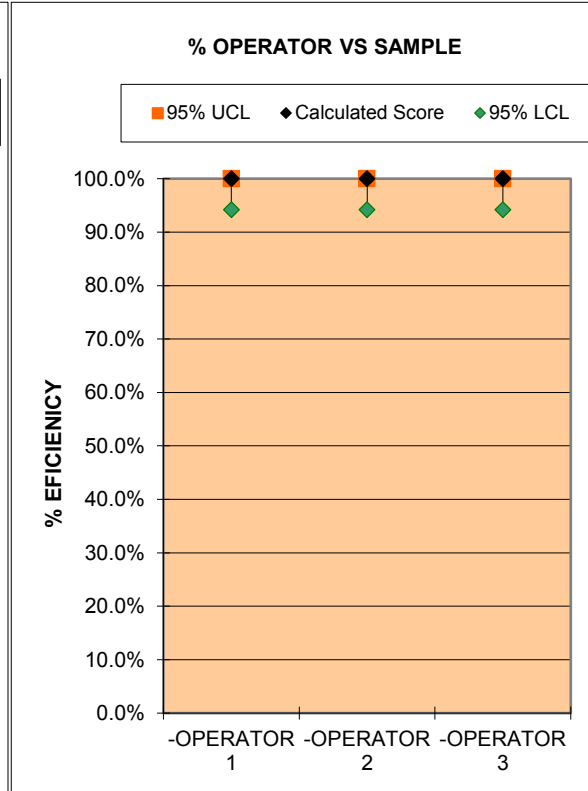
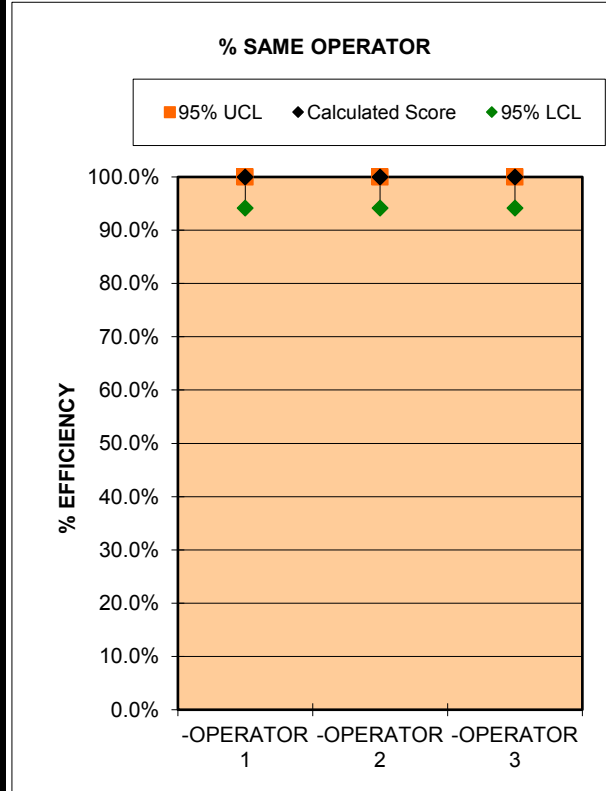
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
Total Inspected	50
coincidencias	50
95% UCL	100.0%
Calculated Score	100.0%
95% LCL	94.18%

Screen % Effective Score vs Standard	
Total Inspected	50
coincidencias	50
95% UCL	100.0%
Calculated Score	100.0%
95% LCL	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 9 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1941

# ID	Num Sample	DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
5	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
10	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
13	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
18	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
19	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
25	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
26	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
27	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
33	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 9 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1941

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
41	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
47	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
50	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1941	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

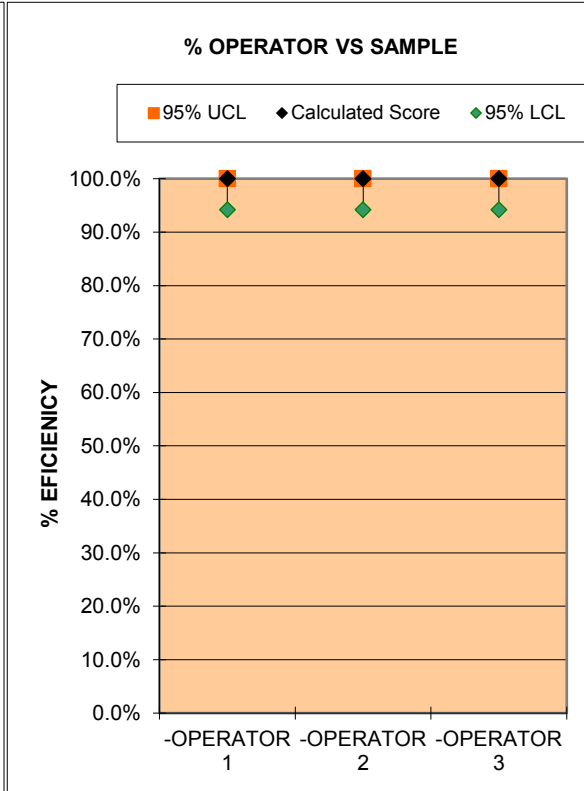
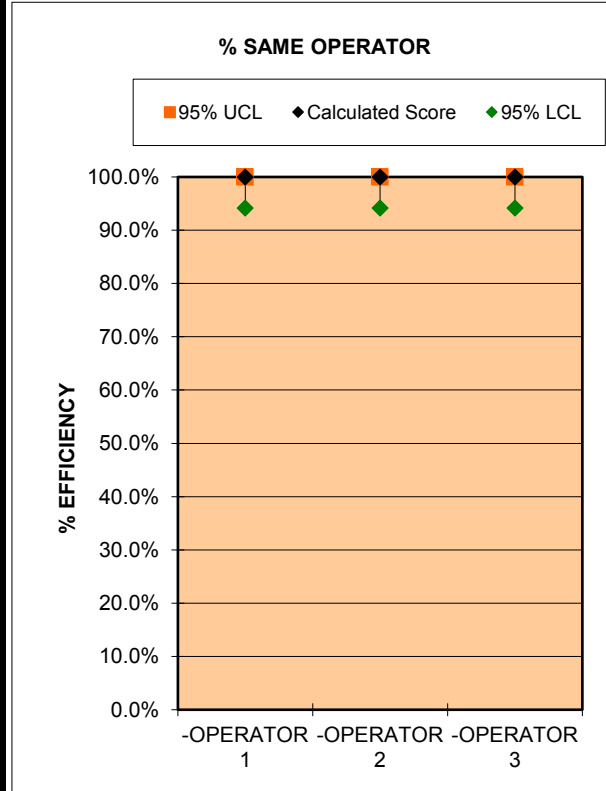
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	21-Nov-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 16 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1942

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER Agree	OPER VS SAMPLE Agree
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result		
1	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
7	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
11	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
15	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
18	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
19	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
23	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
25	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
26	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
27	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
28	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
32	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
34	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
36	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	21-Nov-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 16 Nicho A

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1942

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
40	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
42	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
44	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
45	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
48	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
50	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	21-Nov-19	ID - EQUIPMENT
STANDAR RECORD	2019-1942	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

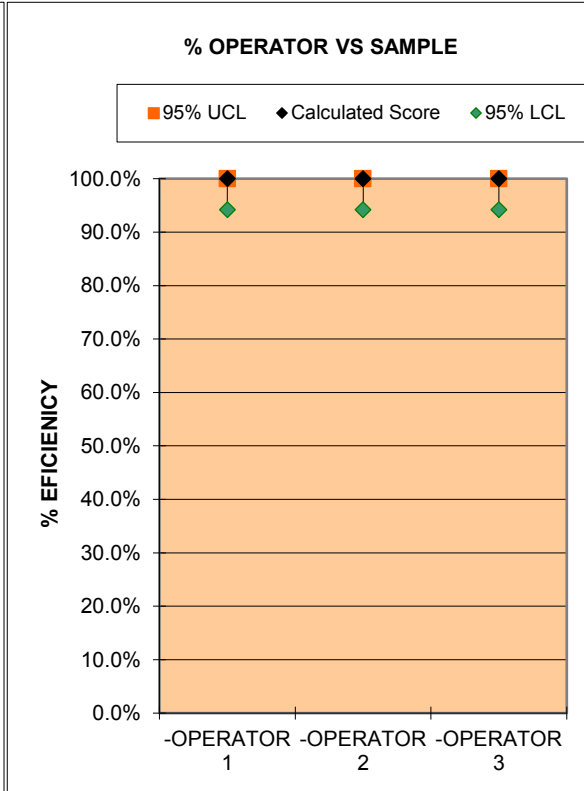
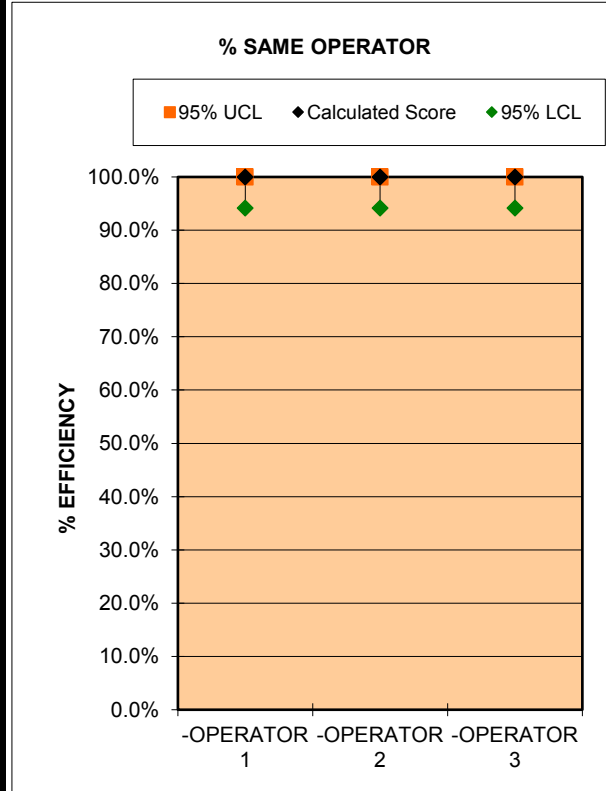
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1943

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
6	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
8	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
10	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
12	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
14	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
16	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
18	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
20	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
22	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
24	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
25	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
27	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
29	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
31	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
33	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
35	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
37	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1943

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
39	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
41	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
43	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
45	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
47	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
49	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
50	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1943

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
39	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
41	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
43	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
45	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
47	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
49	2	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
50	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1943	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

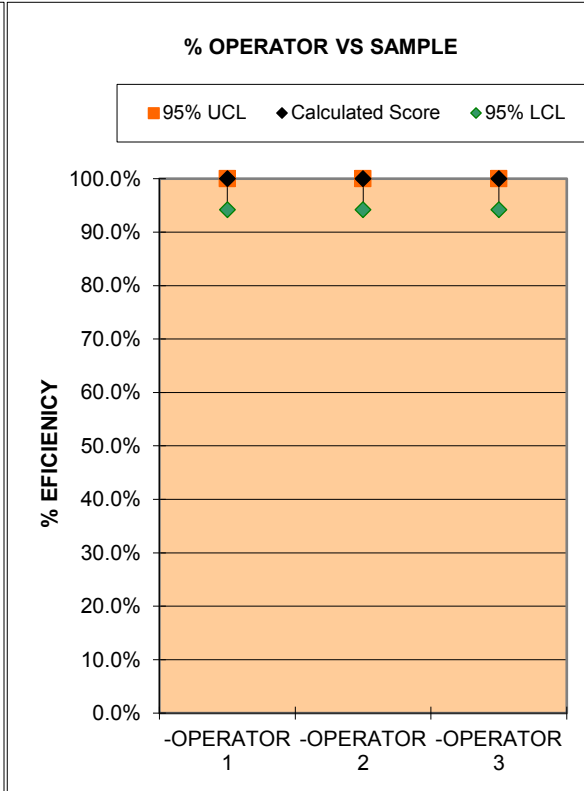
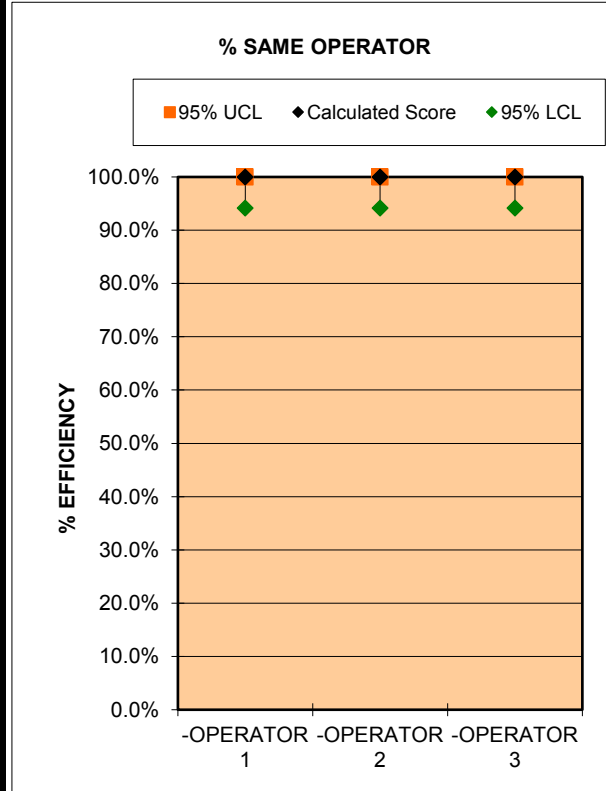
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19	Work Center:	AA-8625
REQUEST:	Aldo Carlos	NUM. Gage-Fixture	50132212
QUALITY ENGINEER:	Aldo Carlos	OPERATOR 1	-OPERATOR 1
MANUFACTURE ENGINEER	Jesus Morales	OPERATOR 2	-OPERATOR 2
PLANT:	Plant 2	OPERATOR 3	-OPERATOR 3
SPC TECHNICIAN:	Eliseo Cazarez	Standard Record	2019-1944
PART NUMBER:	1-1456426-1	COMMENT General: Estacion 8 Nicho B	

# ID	Num Sample	DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result		
1	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
8	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
9	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
12	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
15	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
17	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
18	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
21	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
24	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
25	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
27	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
28	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
31	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
35	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
37	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 8 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1944

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
40	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
41	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
45	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
48	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
49	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
50	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1944	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

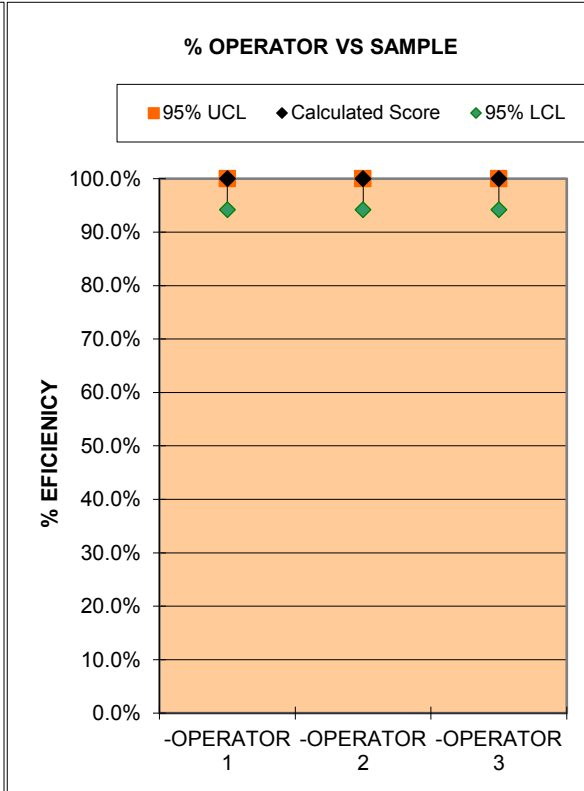
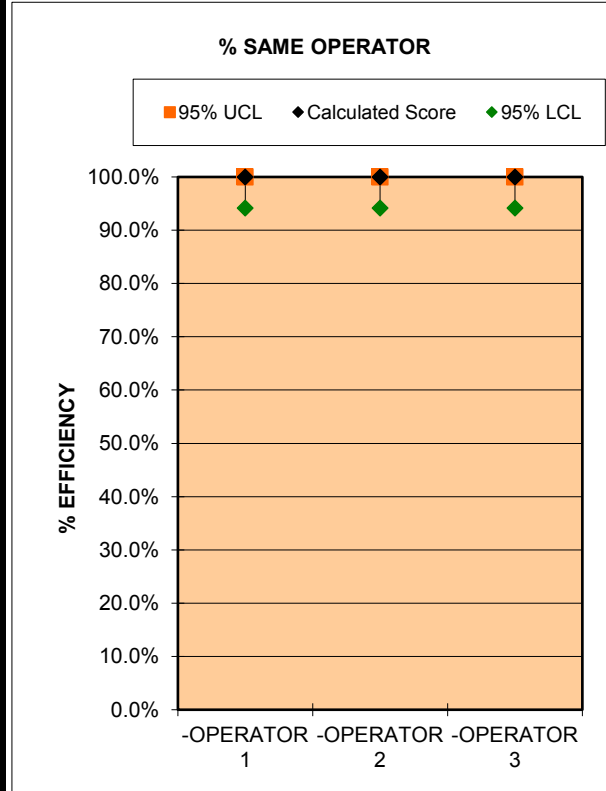
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER:	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 9 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1945

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER Agree	OPER VS SAMPLE Agree
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result		
1	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
5	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
13	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
18	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
25	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
27	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
29	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
31	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 9 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1945

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	4	LIGA COLOR INCORRECTO (NARANJA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
42	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
46	3	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
48	5	LIGA BAJA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
50	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1945	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

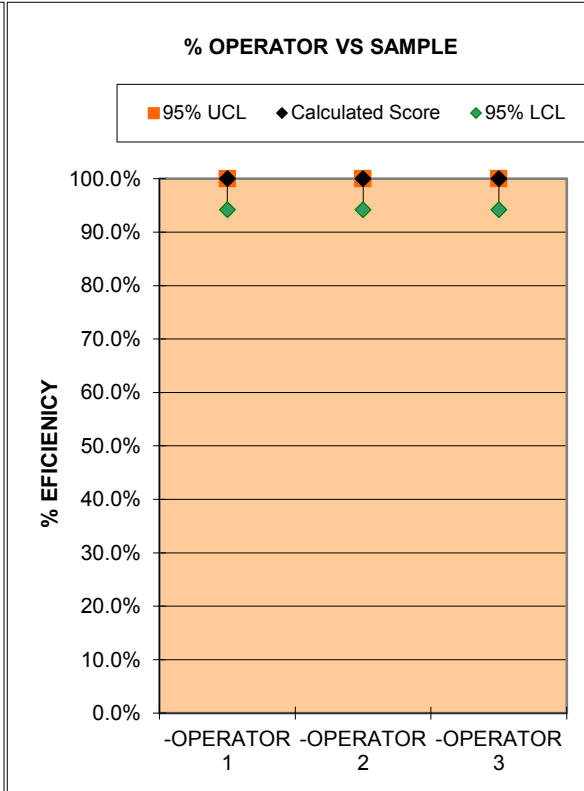
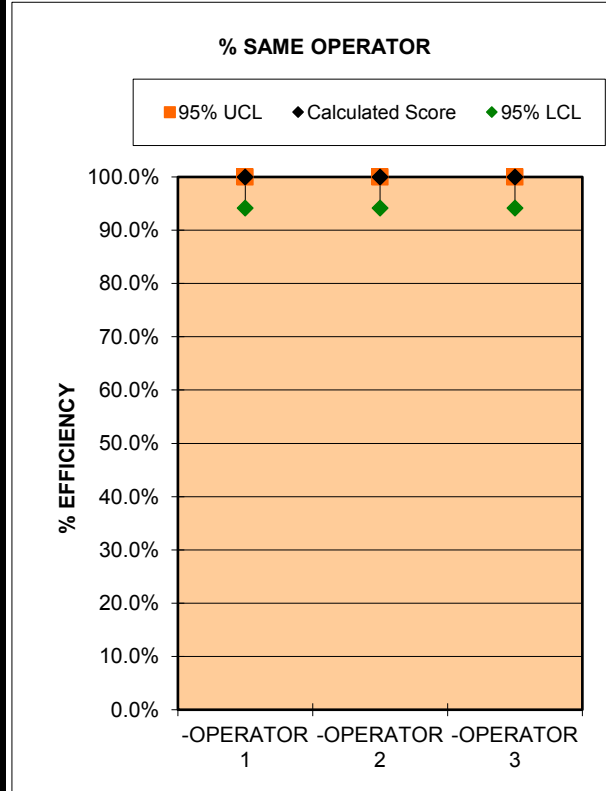
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%

Screen % Effective Score vs Standard	
	50
	50
	100.0%
Calculated Score	100.0%
	94.18%





DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 16 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1946

# ID	Num Sample	Known Population DETAILS	Standard	-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
				Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
1	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
3	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
5	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
9	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
13	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
15	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
16	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
18	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
20	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
24	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
25	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
27	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
29	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
32	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
33	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
34	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
36	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	5-Dec-19
REQUEST:	Aldo Carlos
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1-1456426-1
COMMENT General:	Estacion 16 Nicho B

Work Center:	AA-8625
NUM. Gage-Fixture	50132212
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1946

Known Population				-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS SAMPLE
# ID	Num Sample	DETAILS	Standard	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Try #1	Try #2	Try #3	Result	Agree	Agree
38	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
41	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
45	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
48	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
49	2	OUTER MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
50	3	CON CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK

Final comments of the study:

SPC Technician: Must be sent to answer to request, quality engineer and manufacture engineer.



REPORT GRR ATTRIBUTE

DATE	5-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1946	50132212
Work Center:	AA-8625	
RESULT	ACCEPTED	

Operators

Inspected total

Agreement

95% UCL

Calculated Score

95% LCL

% OPER VS OPER			% OPER VS SAMPLE		
-	-	-	-	-	-
OPERATO	OPERATOR	OPERATO	OPERATO	OPERATOR	OPERATO
R 1	2	R 3	R 1	2	R 3
50	50	50	50	50	50
50	50	50	50	50	50
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
94.18%	94.18%	94.18%	94.18%	94.18%	94.18%

Total Inspected

□ coincidencias

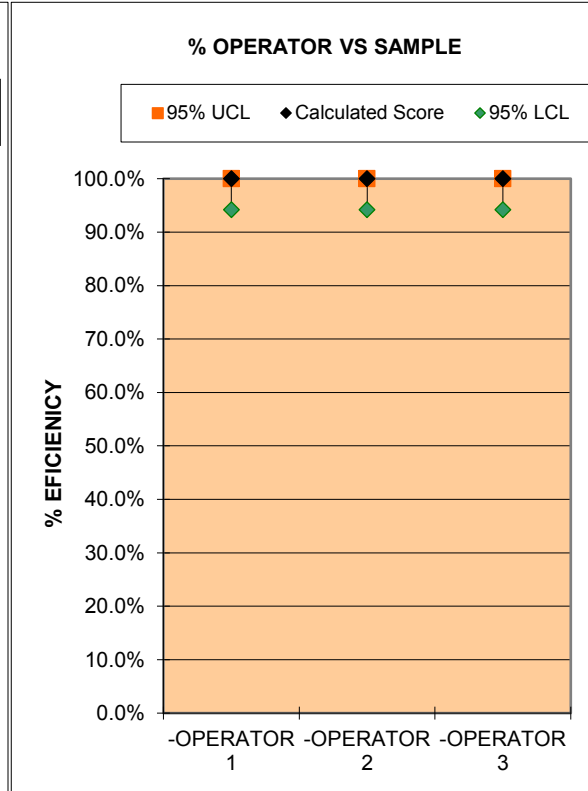
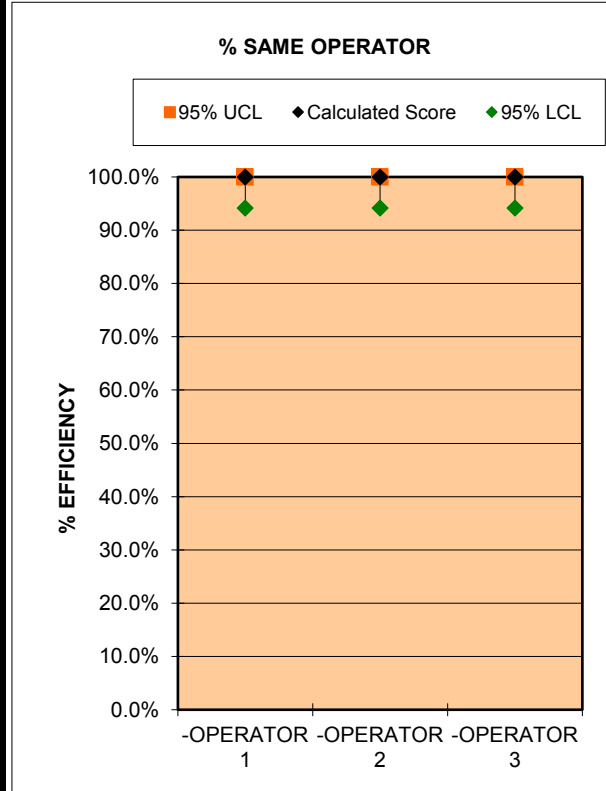
95% UCL

Calculated Score

95% LCL

Screen % Effective Score	
Total Inspected	50
coincidencias	50
95% UCL	100.0%
Calculated Score	100.0%
95% LCL	94.18%

Screen % Effective Score vs Standard	
Total Inspected	50
coincidencias	50
95% UCL	100.0%
Calculated Score	100.0%
95% LCL	94.18%



Section 9

Dimensional Results



Production Part Approval

DIMENSIONAL TEST RESULTS



TE Connectivity-Empalme is accredited by ANSI-ASQ National Accreditation Board for ISO/IEC 17025 under a defined calibration and/or testing scope.

Organization: TE Connectivity	Part Number: 1-1456426-5
Supplier/Vendor Code:	Part Name: CONNECTOR ASSEMBLY, FEMALE, 4 POSITION SEALED, 1.2mm STANDAR LATCH VERSION
INSPECTION FACILITY: TE Connectivity Empalme Metrology lab	Design Record Change Level: C-1456426 REV. B4
	Engineering Change Documents: N/A
	# Folio: 48136 Page <u>1</u> of <u>3</u>

Item	Dim./Spec.	Spec. / Limits tol + tol -		Units	Organization Measurement Results (Data)						Ok	Not Ok	Instrument # ID
					SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4	SAMPLE 5	SAMPLE 6			
					1	18.98	REF	REF	mm	18.688			
2	24.7	REF	REF	mm	24.675	24.695	24.690	24.684	24.675	24.681	✓		LMMC-009
3	22.4	REF	REF	mm	22.396	22.384	22.417	22.379	22.383	22.390	✓		LMMC-009
4	16.98	REF	REF	mm	16.727	16.699	16.699	16.715	16.732	16.708	✓		LMMC-009
5	26.5	REF	REF	mm	26.594	26.583	26.581	26.573	26.568	26.584	✓		LMMC-009
6	16.1	REF	REF	mm	16.222	16.207	16.191	16.208	16.195	16.188	✓		LMMC-009
7	16.5	REF	REF	mm	16.408	16.390	16.379	16.423	16.427	16.429	✓		LMMC-009
8	17.5	REF	REF	mm	17.412	17.399	17.398	17.417	17.392	17.406	✓		LMMC-009
9	4	REF	REF	mm	3.982	3.971	3.986	3.986	3.984	3.972	✓		LMMC-009
	4	REF	REF	mm	4.022	3.992	4.019	3.989	4.022	3.991	✓		
	4	REF	REF	mm	3.991	3.990	3.986	3.991	3.991	3.985	✓		
10	6	REF	REF	mm	6.055	6.035	6.043	6.011	6.042	6.052	✓		LMMC-009
	6	REF	REF	mm	5.922	5.922	5.917	5.934	5.910	5.925	✓		
11	27	MIN	MIN	mm	OK	OK	OK	OK	OK	OK	✓		LMMC-009
12	12.7	REF	REF	mm	12.916	12.915	12.909	12.908	12.899	12.915	✓		LMMC-009
	12.7	REF	REF	mm	12.884	12.891	12.880	12.890	12.905	12.893	✓		

NOTES:

1	PART NUMBER 1-1456426-5 SHOWN ON DRAWING		OK	OK	OK	OK	OK	OK	OK	OK	✓		
2	TPA AND CPA (WHEN APPLICABLE) ARE SHIPPED IN THEIR PRE-LATCHED POSITIONS. SEE INSTRUCTION SHEET 408-8968 FOR DIRECTIONS ON MOVING THE CPA AND TPA TO THE PRE-LATCHED POSITION IF NECESSARY.	visual	OK	OK	OK	OK	OK	OK	OK	OK	✓		
3	TERMINALS SOLD SEPARATELY. FOR USE WITH TE MCON 1.2mm CLEAN BODY CONTACT WITH WIRE SEAL, SEE TE MCON 1.2-CB (CLEAN BODY) TABLE FOR APPLICABLE PART NUMBERS.		NOTED PER APQP TEAM						✓				
4	APPLICABLE HEADER INTERFACE DRAWING 114-18679-3 IS AVAILABLE UPON REQUEST, A COPY OF THIS DRAWING CAN BE OBTAINED FROM THE TE CONNECTIVITY PRODUCT MANAGER, VIA YOUR TE CONNECTIVITY SALES REPRESENTATIVE OR CUSTOMER SERVICE.		NOTED PER APQP TEAM						✓				

March 2006 CFG-1003 AEF004J-EG Rev: J	SIGNATURE Omar Sanchez	TITLE Metrology Chief	DATE NOV-18-2019
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Production Part Approval

DIMENSIONAL TEST RESULTS



TE Connectivity-Empalme is accredited by ANSI-ASQ National Accreditation Board for ISO/IEC 17025 under a defined calibration and/or testing scope.

ACT-1173

Organization: TE Connectivity	Part Number: 1-1456426-5
Supplier/Vendor Code:	Part Name: CONNECTOR ASSEMBLY, FEMALE, 4 POSITION SEALED, 1.2mm STANDAR LATCH VERSION
INSPECTION FACILITY: TE Connectivity Empalme Metrology lab	Design Record Change Level: C-1456426 REV. B4
	Engineering Change Documents: N/A
	# Folio: 48136 Page <u>2</u> of <u>3</u>

Item	Dim./Spec.	Spec. / Limits tol + tol -	Units	Organization Measurement Results (Data)						Ok	Not Ok	Instrument # ID
				SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4	SAMPLE 5	SAMPLE 6			
5	MINIMUM FEED THROUGH CONDITION WITH 1.0mm CLEARANCE ALL AROUND.			OK	OK	OK	OK	OK	OK	✓		
6	NOTE LEFT BLANK INTENTIONALLY.			OK	OK	OK	OK	OK	OK	✓		
7	TRACEABILITY CODE (YY = TWO DIGIT YEAR, JJJ = 3 DIGIT JULIAN DAY, S = 1 DIGIT SHIFT) AND TE ASSEMBLY PART NUMBER PRINTED IN THIS LOCATION AT ASSEMBLY.		visual	OK	OK	OK	OK	OK	OK	✓		
8	FOR OPTIONAL TERMINAL CAVITY BLOCKING, USE TE CONNECTIVITY BLIND PLUG PART NUMBER 967056-1 FOR 125°C MAX TEMPERATURE.			NOTED PER APQP TEAM						✓		
9	PROTOTYPE CONFIGURATION NOT SHOWN.			OK	OK	OK	OK	OK	OK	✓		
10	PROTOTYPE ASSEMBLIES USE GERMAN OUTER HOUSING P/N: 1718657-1.CPA P/N: 1670193-1 AND SEAL P/N: 1718659-1.			NOTED PER APQP TEAM						✓		
11	TPA ENGAGE FORCE: PRESET TO FULL >=2N AND <= 60N.			NOTED PER APQP TEAM						✓		
12	TPA DISENGAGE FORCE: DISENGAGE FROM FULL TO PRESET >=2N AND < =60N.			NOTED PER APQP TEAM						✓		
13	CPA ENGAGE FORCE: PRESET TO FULL WITHOUT CONNECTORS MATED >= 40N.			NOTED PER APQP TEAM						✓		
14	CPA ENGAGE FORCE: PRESET TO FULL WITH CONNECTORS MATED < 30 N.			NOTED PER APQP TEAM						✓		
15	POLARIZATION FEATURE EFFECTIVENESS: CONNECTOR MATED TURNED 180° NO MATING > 125N. WRONG KEYING NO MATING >125 N.			NOTED PER APQP TEAM						✓		
16	VALIDATED UP USCAR -2 TEMPERATURE CLASS IV (150°C).			NOTED PER APQP TEAM						✓		
17	SEE INSTRUCTION SHEET 408-8928.			NOTED PER APQP TEAM						✓		
18	ICD IS DEPENDENT UPON WIRE INSULATION TYPE AND OD, MUST BE SUFFICIENT TO GRIP SEAL SO IT DOES NOT SLIDE OUT OF INSULATION CRIMP WHEN INSERTING INTO CONNECTOR CAVITY BUT NOT TEAR THE SEAL			NOTED PER APQP TEAM						✓		
19	REFERENCE ISOMETRIC VIEWS ON SHEET 2			OK	OK	OK	OK	OK	OK	✓		

March 2006 CFG-1003

AEF004J-EG Rev: J

SIGNATURE Omar Sanchez	TITLE Metrology Chief	DATE NOV-18-2019
----------------------------------	---------------------------------	----------------------------



Part Approval

DIMENSIONAL TEST RESULTS



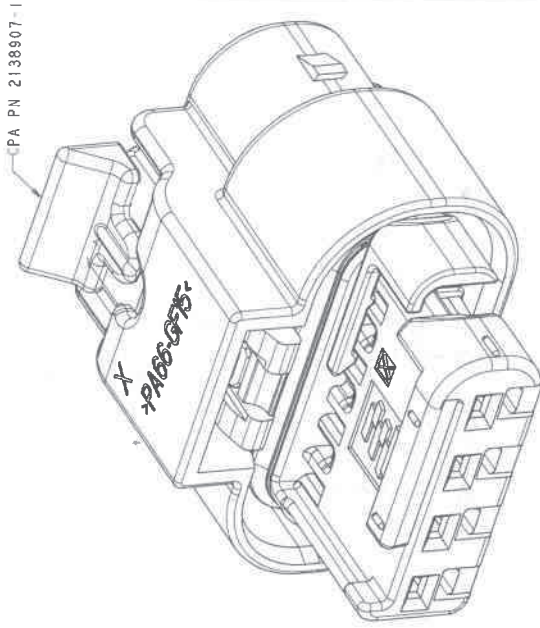
TE Connectivity-Empalme is accredited by ANSI-ASQ National Accreditation Board for ISO/IEC 17025 under a defined calibration and/or testing scope.

Organization: TE Connectivity Part Number: 1-1456426-5
Supplier/Vendor Code: Part Name: CONNECTOR ASSEMBLY, FEMALE, 4 POSITION SEALED, 1.2mm STANDAR LATCH VERSION
INSPECTION FACILITY: TE Connectivity Empalme Metrology lab
Design Record Change Level: C-1456426 REV. B4
Engineering Change Documents: N/A
Folio: 48136 Page 3 of 3

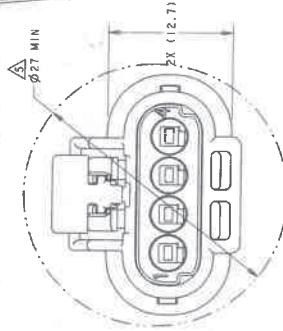
Main data table with columns: Item, Dim./Spec., Spec. / Limits (tol +, tol -), Units, Organization Measurement Results (Data) (SAMPLE 1-6), Ok, Not Ok, Instrument # ID. Contains summary statistics like TOTAL # OF FEATURES, LESS BASIC DIMENSIONS, etc.

SIGNATURE: Omar Sanchez TITLE: Metrology Chief DATE: NOV-18-2019

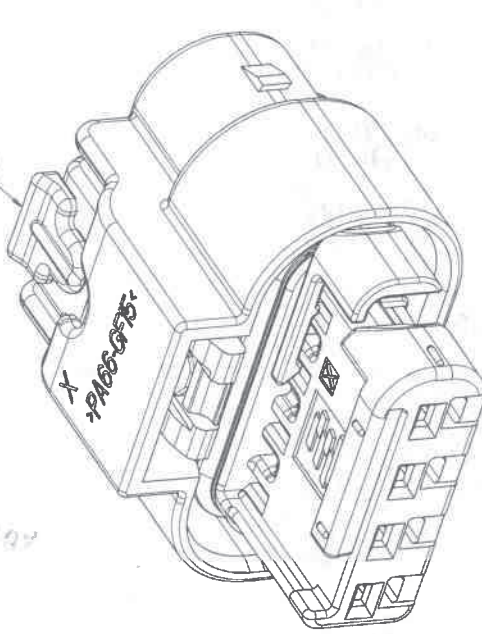
ISOMETRIC VIEWS



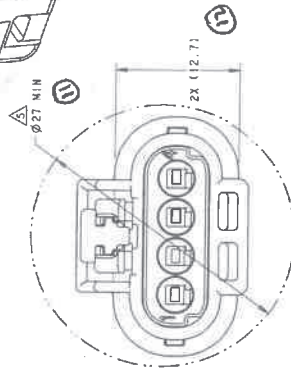
PN 4-1456426-1 SHOWN
SCALE 8:1



FEED THROUGH CONDITION



PN 1-1456426-5 SHOWN
SCALE 8:1



FEED THROUGH CONDITION

REV	BY	DATE	DESCRIPTION

SEE SHEET 1

THIS DRAWING IS A CONTROLLED DOCUMENT.

REV	DATE	DESCRIPTION

ORGANIZATION: SATE

PRODUCT: CONNECTOR ASSEMBLY

DESCRIPTION: FEMALE, 4 POSITION SEALED, 1.2mm STANDARD LATCH VERSION

QUANTITY: 1

DATE: 10/17/00

REVISED BY: A

FIG NO: 1456426

SYSTEM DRAWING



Section 10

Material, Performance Test Results

Certificate of Analysis

<p>Customer: PRISM PLASTICS INC 109 POPLAR ST MEADVILLE PA 16335-3572</p> <p>Attention: FAX: Cust Prod: V9110 Cust Prod Name: ULT.A3HG7 BK00564 726KG 11G Cust P.O.: 21142 Cust P.O. Line: 30 Inspection Certificate 3.1 according to EN 10204</p>	<p>Product Number : 51396684 Product Name : ULTRAMID® A3HG7 BLACK 00564 POLYAMIDE 726KG FIBREBOARD IBC Vehicle : Batch/Lot : WF9269091 Manuf.Date : Sep-26-2019 Shipped Date : Shipped Quantity : 3,201.112 LB Delivery Date : Nov-04-2019 Order Number : 117097090 000030 Delivery Note : 143938060 900004</p>
---	---

Characteristic	Result	UOM	----Specification----		Test Method
			Minimum	Maximum	
Ash / Filler Content	34.53	%	33.00	37.00	ASTM5630/ISO3451
Moisture Content	0.05	%		0.15	ASTM D6869 / ISO 15512B
Viscosity Number for Polyamides	142	ml/g	130	154	ISO 307

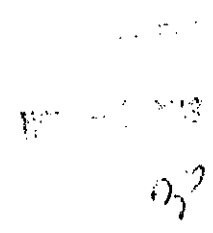
Comments :

Results shown are the means of individual test values determined on samples taken during production of the lot specified.

This product is approved to the following specifications:

GMP. PA66.013
GMW3038P-PA66-GF35H
GMW16802P-PA66-GF35
ASTM D6779 PA012G35

Please note: ASTM D4066 has been replaced by ASTM D6779 PA012G35



The information contained herein is based either on analytical tests of samples or on statistical process data; it is intended solely for purposes of comparison with the established specifications for the product. Warranties of the product are exclusively as set forth in the applicable contract documents.

THIS CERTIFICATE OF ANALYSIS HAS BEEN PRODUCED ELECTRONICALLY AND IS VALID WITHOUT A SIGNATURE.

Certificate of Analysis

Customer:	Product Number	: 51396684
PRISM PLASTICS INC	Product Name	: ULTRAMID® A3HG7 BLACK 00564
109 POPLAR ST		POLYAMIDE 726KG FIBREBOARD IBC
MEADVILLE PA 16335-3572	Vehicle	:
Attention:	Batch/Lot	: WF9269091
FAX:	Manuf.Date	: Sep-26-2019
Cust Prod: V9110	Shipped Date	:
Cust Prod Name: ULT.A3HG7 BK00564 726KG 11G	Shipped Quantity	: 3,201.112 LB
Cust P.O.: 21142	Delivery Date	: Nov-04-2019
Cust P.O. Line: 30	Order Number	: 117097090 000030
Inspection Certificate 3.1 according to EN 10204	Delivery Note	: 143938060 900004
dht		

The information contained herein is based either on analytical tests of samples or on statistical process data; it is intended solely for purposes of comparison with the established specifications for the product. Warranties of the product are exclusively as set forth in the applicable contract documents.

THIS CERTIFICATE OF ANALYSIS HAS BEEN PRODUCED ELECTRONICALLY AND IS VALID WITHOUT A SIGNATURE.

Certificate of Analysis

<p>Customer:</p> <p>PRISM PLASTICS INC 109 POPLAR ST MEADVILLE PA 16335-3572</p> <p>Attention:</p> <p>FAX:</p> <p>Cust Prod: V9109</p> <p>Cust Prod Name: ULT.A3WZG3 R01 BK3007 726KG 11G</p> <p>Cust P.O.: 21152</p> <p>Cust P.O. Line: 30</p> <p>Inspection Certificate 3.1 according to EN 10204</p>	<p>Product Number : 50534896</p> <p>Product Name : ULTRAMID* A3WZG3 R01 BLACK 3007 POLYAMIDE 726KG Fibreboard IBC (11G)</p> <p>Vehicle :</p> <p>Batch/Lot : 0208138647</p> <p>Manuf.Date : Aug-15-2019</p> <p>Shipped Date :</p> <p>Shipped Quantity : 3,201.112 LB</p> <p>Delivery Date : Oct-17-2019</p> <p>Order Number : 117093906 000030</p> <p>Delivery Note : 143890383 900004</p>
---	---

Characteristic	Result	UOM	----Specification----		Test Method
			Minimum	Maximum	
Ash / Filler Content	13.38	%	11.00	15.00	ASTM5630/ISO3451
Moisture Content	0.06	%		0.20	ASTM D6869 / ISO 15512B
MFR 280/2.16	9.90	g/10min	2.00	14.00	ASTM D1238A

Comments :
Results shown are the means of individual test values for those samples taken during production of the lot specified.

This product is approved for the following specification:

MS-DB41 CPN# 2184
ASTM D6779 PA016G15Z1

OCT 4 2019
RP

The information contained herein is based either on analytical tests of samples or on statistical process data; it is intended solely for purposes of comparison with the established specifications for the product. Warranties of the product are exclusively as set forth in the applicable contract documents.



MAT-FO-040

Materials

DATE:	6/27/19
ITEM NAME:	Celorex 4300 ES3801 Rod
LOT NUMBER:	0001175031
WAS C of C RECEIVED? (Yes/No)	Yes
DID COLOR MATCH SAMPLE? (Yes/No)	Yes
WAS THERE SIGNS OF ANY LONGS? (Yes/No)	NO
WAS THERE SIGNS OF ANY CONTAMINATION? (Yes/No)	NO
HAS FIFO DOTS BEEN ADDED AND COMPLETE? (Yes/No)	Yes
WAS C of C COMPARED TO MATERIAL DATA SHEET IN RECEIVING FOLDER? (Yes/No)	Yes
CONFIRM MATERIAL CERT HAS BEEN ATTACHED TO THIS FILE? (Yes/No)	Yes
NAME OF INBOUND INSPECTOR:	TL



ATLAS PRECISION INC
170 CLAYTON RD
ARDEN NC 28704
USA

PAT HEATON
Fax: 828-687-2700

The Verst Group
Ticona Polymers
1100 Burlington Pike
FLORENCE KY 41042
USA

Type 2 Certificate of Analysis

CELANEX 4300 ES3801 RED Z7

Customer Part No.: 703395-4
Formula No.: 4300
Catalog: 20000948
Color No.: ES3801
Produced at: Florence, KY, USA

Cert Issue Date: 24 Jun 2019
Qty Shipped: 6,614.000 LB
Order Item /date: 2104001 10 / 14 Jan 2019
Delivery item/date: 86180171 900001 / 28 Jun 2019
Account #: 1058050
Customer PO No.: 21950-APP
Rail car: See Senders Inst.

Batch 0001175031

In reference to the above, this is to advise you that this is a standard product and meets the following requirements:

BATCH RELEASE DATA		UoM	Value
Melt Flow Rate (MFR)	(ISO 1133-1, ASTM D1238)	g/10min	8.80
Ash Content		%(m)	29.52

These test data are determined based on standard ISO and/or ASTM testing procedures.

Polyester Global Business Line

If you have questions regarding this letter, please call your Customer Service Team at 800-526-4960.



TYCO ELEC - AUTOMOTIVE
 C/O ILS CROSSDOCK G12
 8350 EAST OLD VAIL ROAD
 TUSCON AZ 85747
 USA

The Verst Group
 Ticona Polymers
 1100 Burlington Pike
 FLORENCE KY 41042
 USA

Type 4 Certificate of Analysis

CELANEX 4300 ES3801 RED Z7

Customer Part No.: 703395-4	Cert Issue Date: 04 Oct 2019
Formula No.: 4300	Qty Shipped: 1,653.000 LB
Catalog: 20000948	Order Item /date: 2189354 10 / 25 Jul 2019
Color No.: ES3801	Delivery item/date: 86309781 900001 / 15 Oct 2019
Produced at: Florence, KY, USA	Account #: 2065708
	Customer PO No.: 2708953024
	Rail car: See Senders Inst.

Batch 0001200017

In reference to the above, this is to advise you that this is a standard product and meets the following requirements:

SPECIFICATIONS: ASTM D5927 TPES 011G30

BATCH RELEASE DATA	UoM	Value	Limit
Melt Flow Rate (MFR) (ISO 1133-1, ASTM D1238)	g/10min	6.70	
Ash Content	%(m)	29.97	28.00 - 32.00

ANNUAL TESTS (REVISED ON)	UoM	Value	Limit
Density (04 Nov 2018)	g/cm ³	1.540	1.500 - 1.590
Charpy Notched Impact Strength (04 Nov 2018)	kJ/m ²	9.08	min. 6.00
DTUL @ 1.8MPa (04 Nov 2018)	°C	201.8	min. 190.0
Tensile modulus (04 Nov 2018)	MPa	8970	min. 7000
Tensile Stress at break (04 Nov 2018)	MPa	130.0	min. 85.0

INITIAL CHARACTERIZATION	UoM	Value	Limit
Flammability	mm/min	31.0	max. 100.0

COMMENTS

Flammability is performed on a 100x355x1mm plaque test specimen for characterization data only. Meets FMVSS302. This is a test coupon only and does not replace a molded component.

These test data are determined based on standard ISO and/or ASTM testing procedures.

Polyester Global Business Line

If you have questions regarding this letter, please call your Customer Service Team at 800-526-4960.

DTI DISPERSION TECHNOLOGY, INC.

213607655

July 29, 2011

Tyco Electronics
719 Pegg Road
Greensboro, NC 27409

Attn: Quality control

CERTIFICATION

Product Description DTCOLOR K-76411

Purchase Order No. 2707650904 Date 4/3/19 DOM: 2/7/2019

Lot No. 28511 Code No. 705054-4

Quantity Shipped 100 LBS. Date Shipped 4/10/19

Packaging 2x50 lbs. No. of Pkgs. Shipped 2 PAILS

Nominal Composition

Blue Pigment
Silicone

Value

Blue Pigment
Silicone

<u>TEST</u>	<u>REQUIREMENT</u>	<u>TEST METHOD</u>	<u>RESULTS</u>
Visual Dispersion Check	Uniform Material Free from any foreign matter	DTI Test #D01	<u>PASS</u>
Form	Smooth Paste	DTI Test #D02	<u>PASS</u>
Color Comparison	Match Standard	DTI Test #D03	<u>PASS</u>

This is to certify that the above shipment has been determined to meet all DTI specification requirements at time of manufacture.

Dispersion Technology, Inc.

Yogesh L Parikh

Yogesh L. Parikh
President



TE North Carolina DC Componets
8000 Piedmont Triad Pkwy
Greensboro NC 27409

Date of delivery 11/04/2019
Requisition No. 2709579663 /
Order No. 10749083 / 000002 / 09/18/2019
Delivery note 26708527
Date of requisition 09/18/2019
Customer No. Fax 90128462

Customer material
1573529-5 A

ELASTOSIL® LR 3088/40 NM A US

date of issue: 11/01/2019

Material	60064190	Batch	399290	NET	190.000 kg (418.878 LBS)	Date of manufacture	10/06/2019	Best use before end	04/03/2020
----------	-----------------	-------	---------------	-----	--------------------------------------	---------------------	-------------------	---------------------	-------------------

Technical data	Test method/Inspection condition	Unit	Measured value	Lower limit	Upper limit
DUROMETER A/B-BLEND NPB	1110	nounit	41	35	45
TENSILE A/B-BLEND NPB PSI	1160	psi	1216	871	-
ELONGATION A/B-BLEND NPB	1160	%	570	400	-
TEAR-B A/B-BLEND NPB PPI	1160	lb/in	138	100	-
SPECIFIC GRAVITY	1154	nounit	1.13	1.10	1.16
CURE INITIATION TEMPERATURE	1359	°C	118.8	114.0	124.0
COMPRESSION SET 22/350 A/B NPB	1114	%	16	0	35

TE North Carolina DC Componets
 8000 Piedmont Triad Pkwy
 Greensboro NC 27409

Date of delivery	11/04/2019	Delivery note	26708527
Requisition No.	2709579663 /	Date of requisition	09/18/2019
Order No.	10749083 / 000002 / 09/18/2019	Customer No. Fax	90128462
		Customer material	1573529-5 A

ELASTOSIL® LR 3088/40 NM A US

date of issue: 11/01/2019

Material	60064190	Batch	399291	NET	380.000 kg (837.757 LBS)	Date of manufacture	10/06/2019	Best use before end	04/03/2020
----------	-----------------	-------	---------------	-----	--------------------------------------	---------------------	-------------------	---------------------	-------------------

Technical data	Test method/Inspection condition	Unit	Measured value	Lower limit	Upper limit
DUROMETER A/B-BLEND NPB	1110	nounit	42	35	45
TENSILE A/B-BLEND NPB PSI	1160	psi	1240	871	-
ELONGATION A/B-BLEND NPB	1160	%	564	400	-
TEAR-B A/B-BLEND NPB PPI	1160	lb/in	134	100	-
SPECIFIC GRAVITY	1154	nounit	1.13	1.10	1.16
CURE INITIATION TEMPERATURE	1359	°C	120.1	114.0	124.0
COMPRESSION SET 22/350 A/B NPB	1114	%	9	0	35

Wacker Chemical Corporation, Adrian/MI
 Quality Management, John Poelstra
 Telefax +1 (517) 266-8012

This certificate was issued by machine and is valid without a signature.

This data does not absolve the purchaser from checking the quality of all supplies immediately on receipt, particularly regarding the possible influences of transport and intermediate storage conditions over which we have no control.
 All sales of this product shall be subject to our General Conditions of Sale.

TE North Carolina DC Componets
 8000 Piedmont Triad Pkwy
 Greensboro NC 27409

Date of delivery 11/04/2019
 Requisition No. 2709579663 /
 Order No. 10749083 / 000002 / 09/18/2019
 Delivery note 26708527
 Date of requisition 09/18/2019
 Customer No. Fax 90128462

Customer material
 1573529-5 A

ELASTOSIL® LR 3088/40 NM A US

date of issue: 11/01/2019

Material	60064190	Batch	400082	NET	190.000 kg (418.878 LBS)	Date of manufacture	10/22/2019	Best use before end	04/19/2020
----------	-----------------	-------	---------------	-----	--------------------------------------	---------------------	-------------------	---------------------	-------------------

Technical data	Test method/Inspection condition	Unit	Measured value	Lower limit	Upper limit
DUROMETER A/B-BLEND NPB	1110	nounit	41	35	45
TENSILE A/B-BLEND NPB PSI	1160	psi	1258	871	-
ELONGATION A/B-BLEND NPB	1160	%	603	400	-
TEAR-B A/B-BLEND NPB PPI	1160	lb/in	159	100	-
SPECIFIC GRAVITY	1154	nounit	1.13	1.10	1.16
CURE INITIATION TEMPERATURE	1359	°C	117.6	114.0	124.0
COMPRESSION SET 22/350 A/B NPB	1114	%	4	0	35

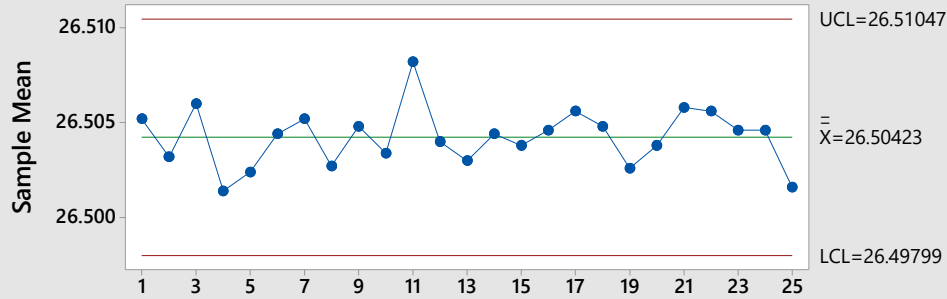


Section 11

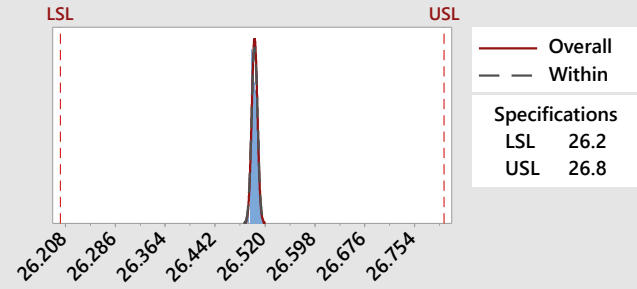
Initial Process Studies

Capability Study for NP 1-1456426-5 Characteristics DIM 1

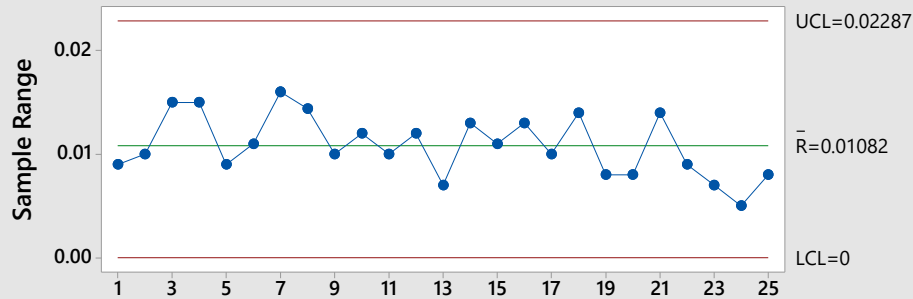
Xbar Chart



Capability Histogram

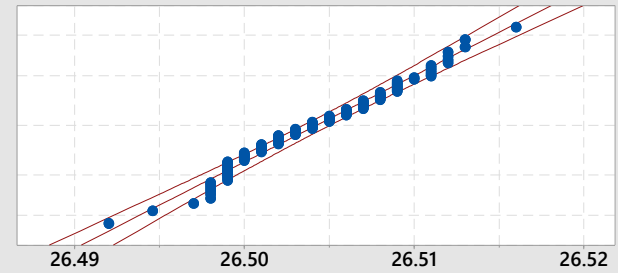


R Chart

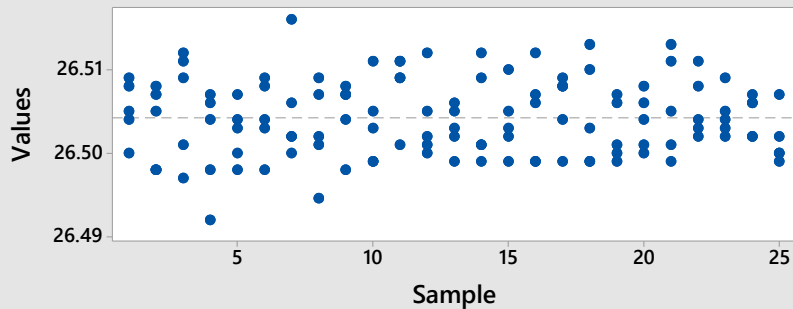


Normal Prob Plot

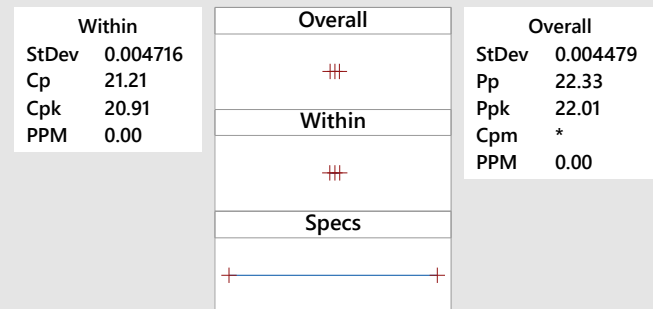
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Last 25 Subgroups



Capability Plot





Section 12

Qualified Laboratory Documentation

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - IATF 16949:2016

This is to certify that:

TE Connectivity
Global Automotive Division
Americas North
Carretera Internacional, KM 1969
Guadalajara-Nogales Km 2
Empalme
Sonora
85340
Mexico

operates a Quality Management System which complies with the requirements of IATF 16949:2016 for the following scope:

Design and manufacture of electrical interconnecting devices.

For and on behalf of BSI:



Carlos Pitanga, Chief Operating Officer Assurance – Americas

BSI Certificate Number: 514458-003

IATF Number: 0315420



Certification Date: 2018-07-11

Latest Issue: 2018-07-11

Page: 1 of 2

...making excellence a habit.™

Expiry Date: 2021-07-10

This certificate remains the property of BSI and shall be returned immediately upon request.

An electronic certificate can be authenticated [online](http://www.bsigroup.com/ClientDirectory). Printed copies can be validated at www.bsigroup.com/ClientDirectory

To be read in conjunction with the scope above or the attached appendix.

Further clarifications regarding the scope of this certificate and the applicability of IATF 16949 requirements may be obtained by consulting the organization.

IATF Contracted Office: BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.

Location

TE Connectivity
Global Automotive Division
Americas North
Carretera Internacional, KM 1969
Guadalajara-Nogales Km 2
Empalme
Sonora
85340
Mexico

Registered Activities

Manufacture of interconnecting devices.

Including the following remote support functions:

TE Connectivity
Global Automotive Division
Americas North
900 Wilshire Boulevard
Suite 150
Troy, MI 48084
Design and Development.

TE Connectivity
Global Automotive Division
Americas North
Fulling Mill Road
Middletown, PA 17057
Design and Development, Product Testing and Customer Service.

TE Connectivity
Global Automotive Division
Americas North
3800 Reidsville Road
Winston-Salem, NC 27102
Design and Development, Product Testing and Calibration, Business Office (Quote Process) and Purchasing.

TE Connectivity
Global Automotive Division
Americas North
20 Esna Park Drive
Markham, Ontario
L3R 1E1 Canada
Design and Development and product testing (optics lab)

TE Connectivity
Global Automotive Division
Americas North
2100 Paxton Street
Harrisburg, PA 17111
Provision of Product Testing to TE Connectivity Manufacturing Sites.

TE Connectivity North Carolina
Distribution Center
8000 Piedmont Triad Parkway
Greensboro, North Carolina 27409
Receiving Inspection, Storage / Inventory.

BSI Certificate Number: 514458-003

IATF Number: 0315420



Certification Date: 2018-07-11

Latest Issue: 2018-07-11

Expiry Date: 2021-07-10

Page: 2 of 2

This certificate remains the property of BSI and shall be returned immediately upon request.

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IATF Contracted Office: BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.



Section 13

Appearance Approval Report

Not Applicable



Section 14

Sample Product

**Sent in separate package
(if required)**



Section 15

Master Sample

Retained at manufacturing location



Section 16

Checking Aids



Not Applicable



Section 17

Records of Compliance with Customer-Specific Requirements

Informe de la MDS

Sustancias de conjuntos y materiales

Este informe está reservado exclusivamente para uso interno de la industria del automóvil. La distribución a clientes que no pertenecen al sector de la automoción es una violación de las condiciones de uso, y no está permitida sin una autorización por escrito de DXC Technology. El análisis no está permitido.

1. Empresa y nombre de producto

1.1 Datos del proveedor

Nombre [ID]: **Tyco Electronics GAD [913]**

Número DUNS: **-**

Calle/Código postal: **Amperestr. 12-14**
Nac./Cód. postal/Ciudad: **DE 64625 Bensheim**

No. Proveedor: **-**

Persona de contacto: **IMDS Team (India)
Engineering Services**

- Teléfono: **-**

- N.º fax: **-**

- Dirección de correo electrónico: **imds@te.com**

1.2 Identificación del producto

N.º componente/artículo: **1-1456426-5**

Descripción: **Conn Ass'y Female 4
Pos. Sealed, 1.2mm
Standard Latch Version**

No. Reporte de muestra: **-**

Fecha de reporte de muestra: **-**

No. Orden de Compra: **-**

No. Factura de entrega: **-**

MDS Preliminar: **No**

ID/versión IMDS: **110537520 / 8**

ID de nodo: **800407703**

Estado de la MDS (Fecha de modificación): **Publicado internamente
(24/01/2019)**

Informe de la MDS

Sustancias de conjuntos y materiales

No deben incluirse materiales que están sujetos a prohibiciones legales.
 Las sustancias peligrosas, formadas o liberadas durante su uso, también se deben declarar.
 Recuerde: La lista GADSL de sustancias que deben ser declaradas

2. Caracterización del componente

N.º componente/artículo: **1-1456426-5**






































































No. Reporte de muestra: -























































Descripción: **Conn Ass'y Female 4 Pos. Sealed, 1.2mm Standard Latch Version**

ID/versión IMDS: **110537520 / 8**

ID de nodo: **800407703**

Nivel de árbol	Descripción Descripción Nombre Nombre de la sustancia	N.º componente/artículo N.º artículo/mat. N.º material N.º CAS	ID/versión IMDS	Cantidad	Peso [g]	Porción [%]	Porción (desde - hasta) [%]	Clasif. GADSL, SVHC	Marcado de componentes Reciclado (Consumidor/industr.) Aplicación [ID]
1	Conn Ass'y Female 4 Pos. Sealed, 1.2mm Standard Latch Version	1-1456426-5	110537520 / 8		4.769				
-2	Housing, Outer, 4 Position. MCON 1.2-Black	0-1924888-1	108451894 / 4	1	1.91				S

Nivel de árbol	 Descripción  Descripción  Nombre  Nombre de la sustancia	 N.º componente/artículo  N.º artículo/mat.  N.º material  N.º CAS	   ID/versión IMDS	 Cantidad	   Peso [g]	   Porción [%]	   Porción (desde - hasta) [%]	 Clasif.  GADSL, SVHC	 Marcado de componentes  Reciclado (Consumidor/industr.)  Aplicación [ID]
└3	 PA66-I-GF13	 1573718-1	39290563 / 4		1.91			 5.1.a	 No
└4	 Further Additives, not to declare	 system				1			
└4	 GF-Fibre	 -				13			
└4	 PA66-I	 -				85.5			
└4	 Carbon black	 1333-86-4				0.5			
└2	 Inner Housing Female 4 Pos Sealed 1.2mm-Black	 0-1456427-1	91734574 / 2	1	2.501				 S
└3	 PA66-GF35	 1573375-3	1338320 / 4		2.501			 5.1.a	 No
└4	 Further Additives, not to declare	 system				2			
└4	 GF-Fibre	 -				35			
└4	 Carbon black	 1333-86-4				1			
└4	 PA66	 -				61.8			
└4	 N,N-Diphenyl-p-phenylenediamine	 74-31-7				0.2		 D	
└2	 TPA Female 4 Pos Sealed 1.2mm-Red	 1456429-1	91734601 / 5	1	0.098				 No aplica
└3	 PBT-GF30	 703395-4	175341184 / 3		0.098			 5.1.a	 No
└4	 PBT	 -				69.25			
└4	 GF-Fibre	 -				30			
└4	 Further Additives, not to declare	 system				0.5			

Nivel de árbol	 Descripción  Descripción  Nombre  Nombre de la sustancia	 N.º componente/artículo  N.º artículo/mat.  N.º material  N.º CAS	   ID/versión IMDS	 Cantidad	   Peso [g]	   Porción [%]	   Porción (desde - hasta) [%]	 Clasif.  GADSL, SVHC	 Marcado de componentes  Reciclado (Consumidor/industr.)  Aplicación [ID]	
└4	 Pigment portion, not to declare	 system				0.25				
└2	 Perimeter Seal Female, 4 Position, Sealed, 1.2mm-Light Blue	 0-1924956-2	114660933 / 2	1	0.14					 S
└3	 VM	 TEC-100-1167	54383203 / 8		0.14			 5.3		 No
└4	 Pigment portion, not to declare	 system				1	0 - 2			
└4	 VM	 -				99				
└2	 CPA, Sealed System-Red	 1488787-1	16531770 / 11	1	0.12					 No aplica
└3	 PBT-GF30	 703395-4	175341184 / 3		0.12			 5.1.a		 No
└4	 PBT	 -				69.25				
└4	 GF-Fibre	 -				30				
└4	 Further Additives, not to declare	 system				0.5				
└4	 Pigment portion, not to declare	 system				0.25				

Esta es una copia no controlada de un documento creado por IMDS. Fin del informe.



Section 18

Part Submission Warrant

Part Submission Warrant

EPPAP:

Part Name _____ Cust. Part Number _____
Shown on Drawing Number _____ Org. Part Number _____
Engineering Change Level _____ Dated _____
Additional Engineering Changes _____ Dated _____
Safety and/or Government Regulation Yes No Purchase Order No. _____ Weight (kg) _____
Checking Aid Number _____ Checking Aid Engineering Change Level _____ Dated _____

ORGANIZATION MANUFACTURING INFORMATION

CUSTOMER SUBMITTAL INFORMATION

Organization Name and Supplier Code _____
Street Address _____
City _____ Region _____ Postal Code _____ Country _____

Customer Name/Division _____
Buyer/Buyer Code _____
Application _____

MATERIALS REPORTING

Has customer-required Substance of Concern information been reported
Submitted by IMDS or other customer format Yes No NA
Are polymeric parts identified with appropriate ISO marking codes Yes No NA

REASON FOR SUBMISSION (Check at least one)

Initial submission	Change to Optional Construction or Material
Engineering Change(s)	Sub-Supplier or Material Source Change
Tooling: Transfer, Replacement, Refurbishment, or additional	Change in Part Processing
Correction of Discrepancy	Parts Produced at Additional Location
Tooling Inactive <input type="checkbox"/> than 1 year	Other - please specify

REQUESTED SUBMISSION LEVEL (Check one)

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

SUBMISSION RESULTS

The results for _____ dimensional measurement _____ 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 _____

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 affirm that these samples were produced at the production rate of **Production Rate is TE Proprietary**. I also certify that documented evidence of such compliance is on file and is available for review. I have noted any deviations from this declaration below.

EXPLANATION/COMMENTS

Is each Customer Tool properly tagged and numbered Yes No NA

Organization Authorized Signature _____ *Pablo Guillermo Jimenez* _____ Date _____
Print Name _____ Phone No. _____ Fax _____
Title _____ Email _____

FOR CUSTOMER USE ONLY (IF APPLICABLE)

PPAP arrant Disposition : Approved Rejected Other _____
Customer Signature _____ Date _____
Print Name _____ Customer Tracking Number (optional) _____



Section 18a

Bulk Material Requirements



Not Applicable