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PPAP Package for:

**Newark Electronics
Customer Part Number: 73W9187
(TE Connectivity Part Number): 1488991-5
January- 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.

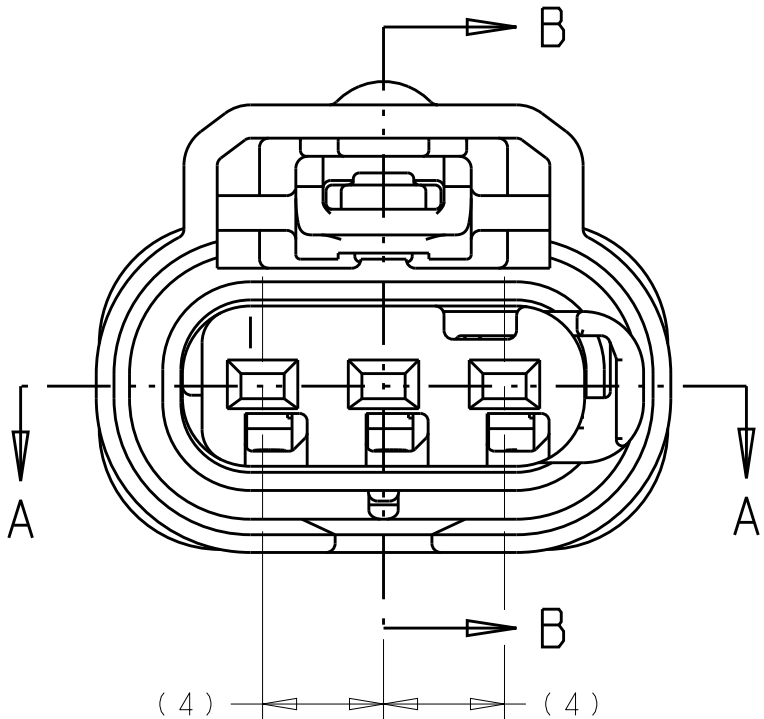
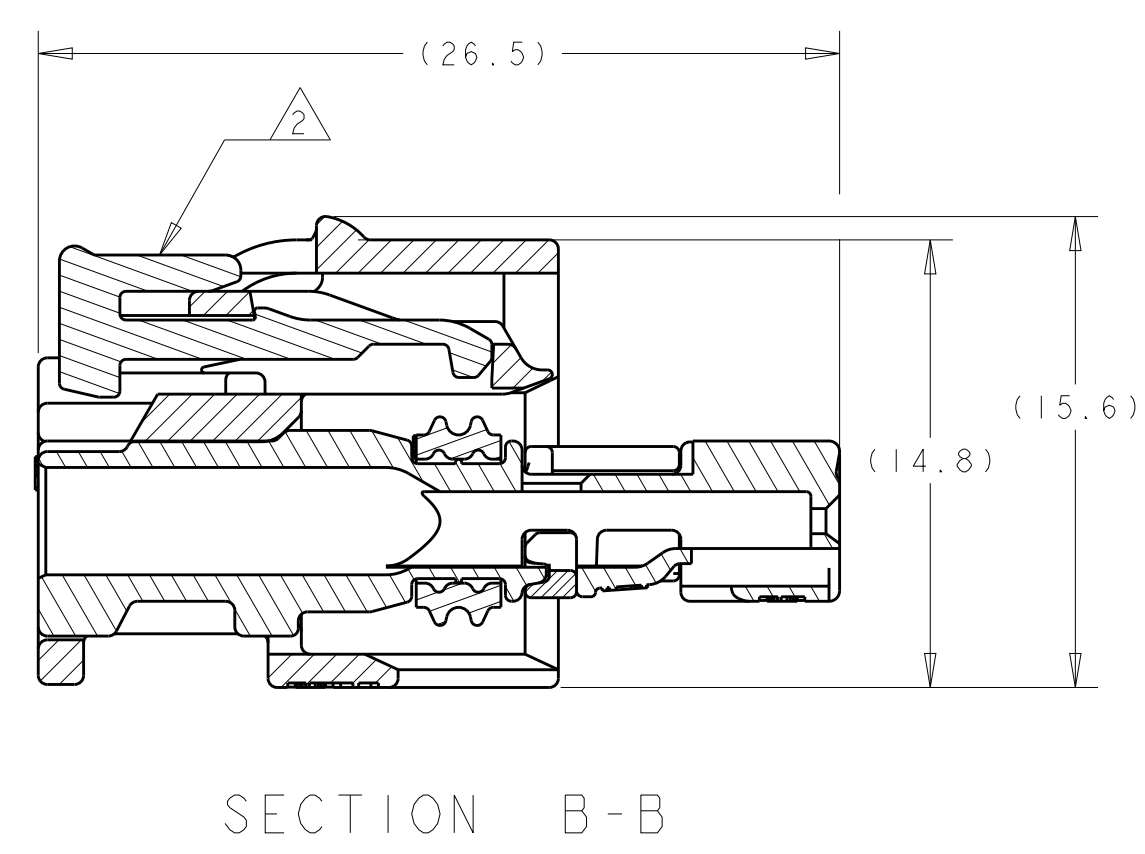
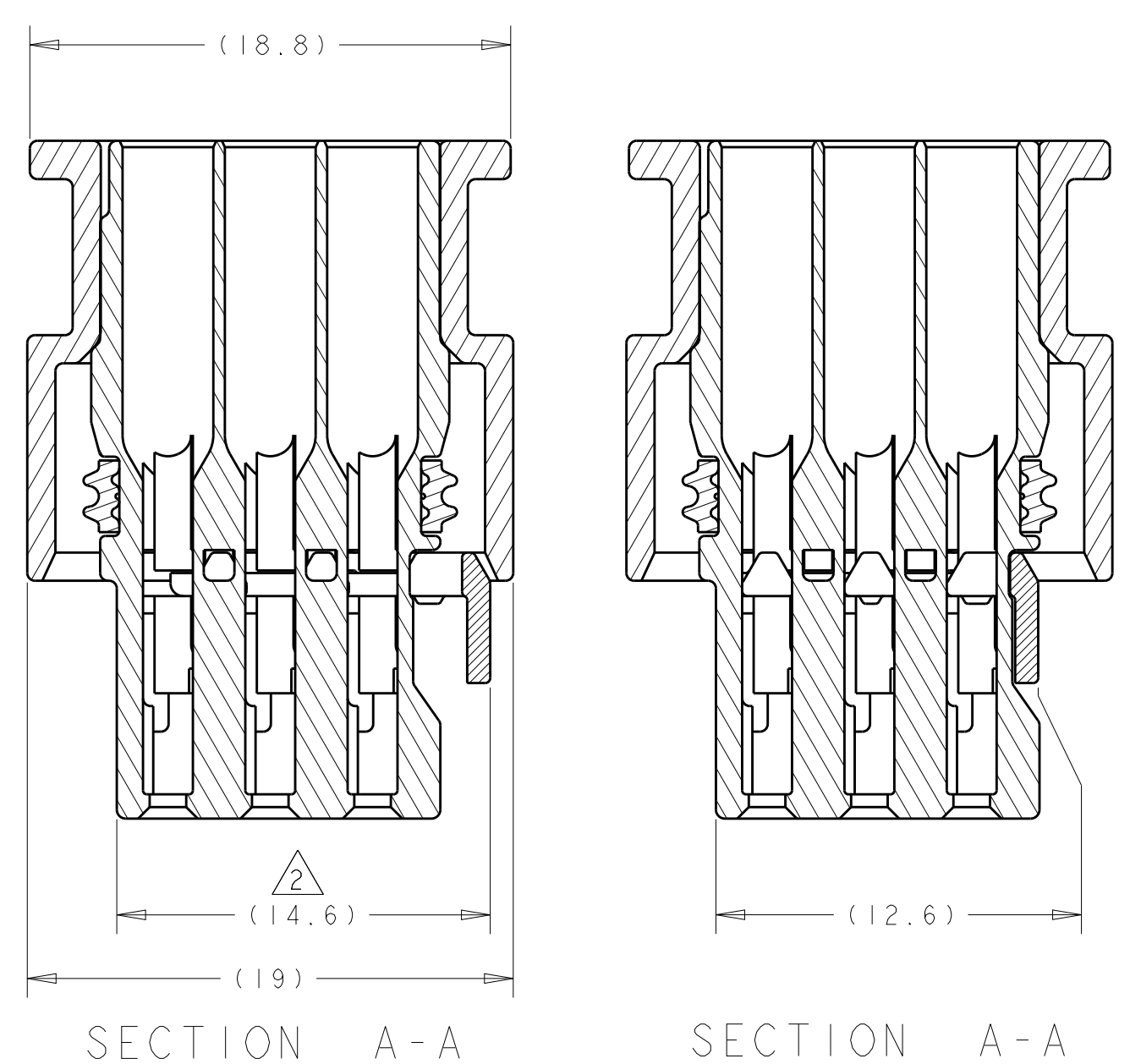
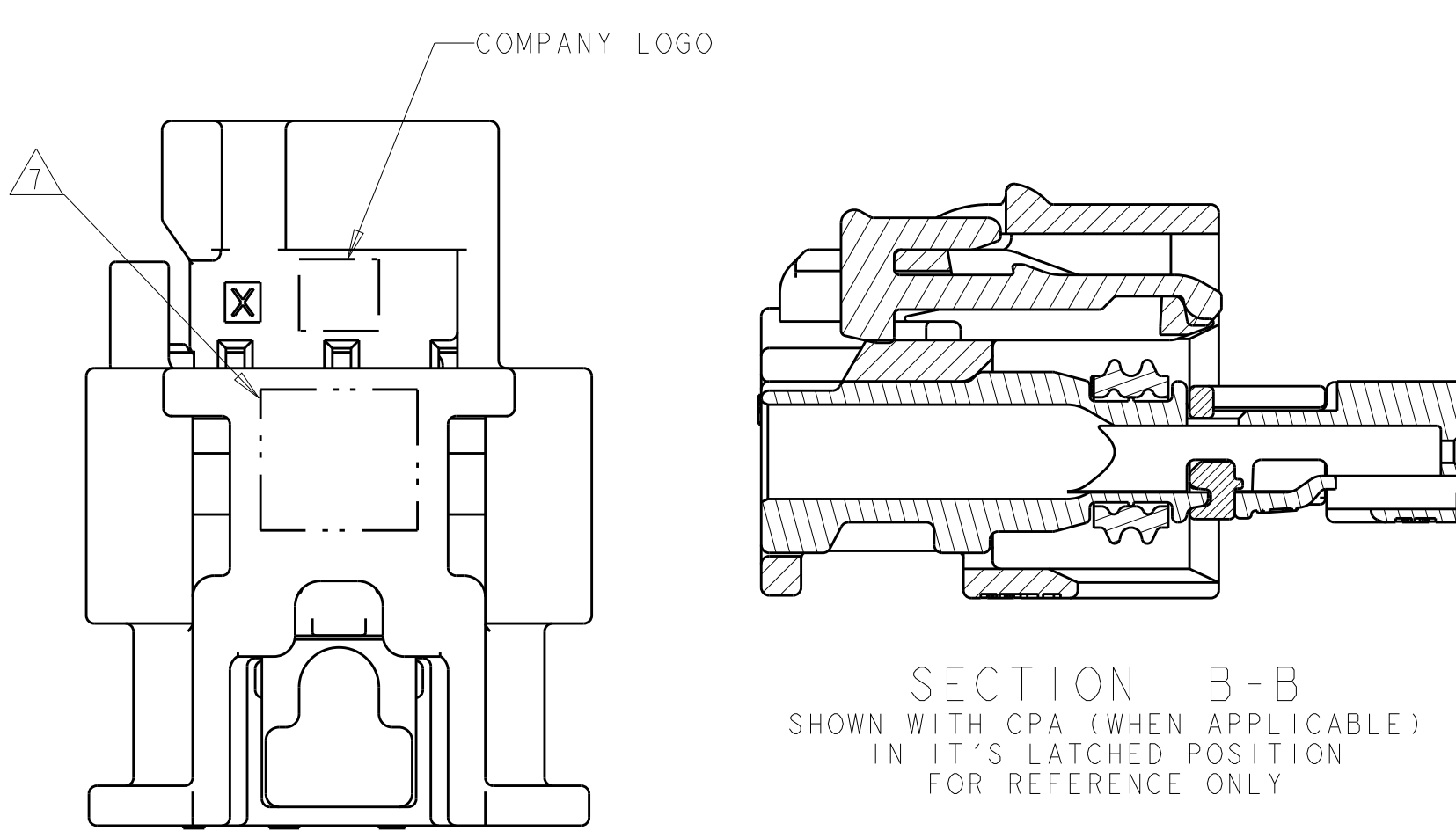
If a nondisclosure agreement HAS NOT been reached, certain documents deemed confidential by TE Connectivity will not be included in this PPAP package. These documents include but are not limited to the Design FMEA, the Process Flow Diagram, the Process FMEA and the Control Plan. These documents can be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



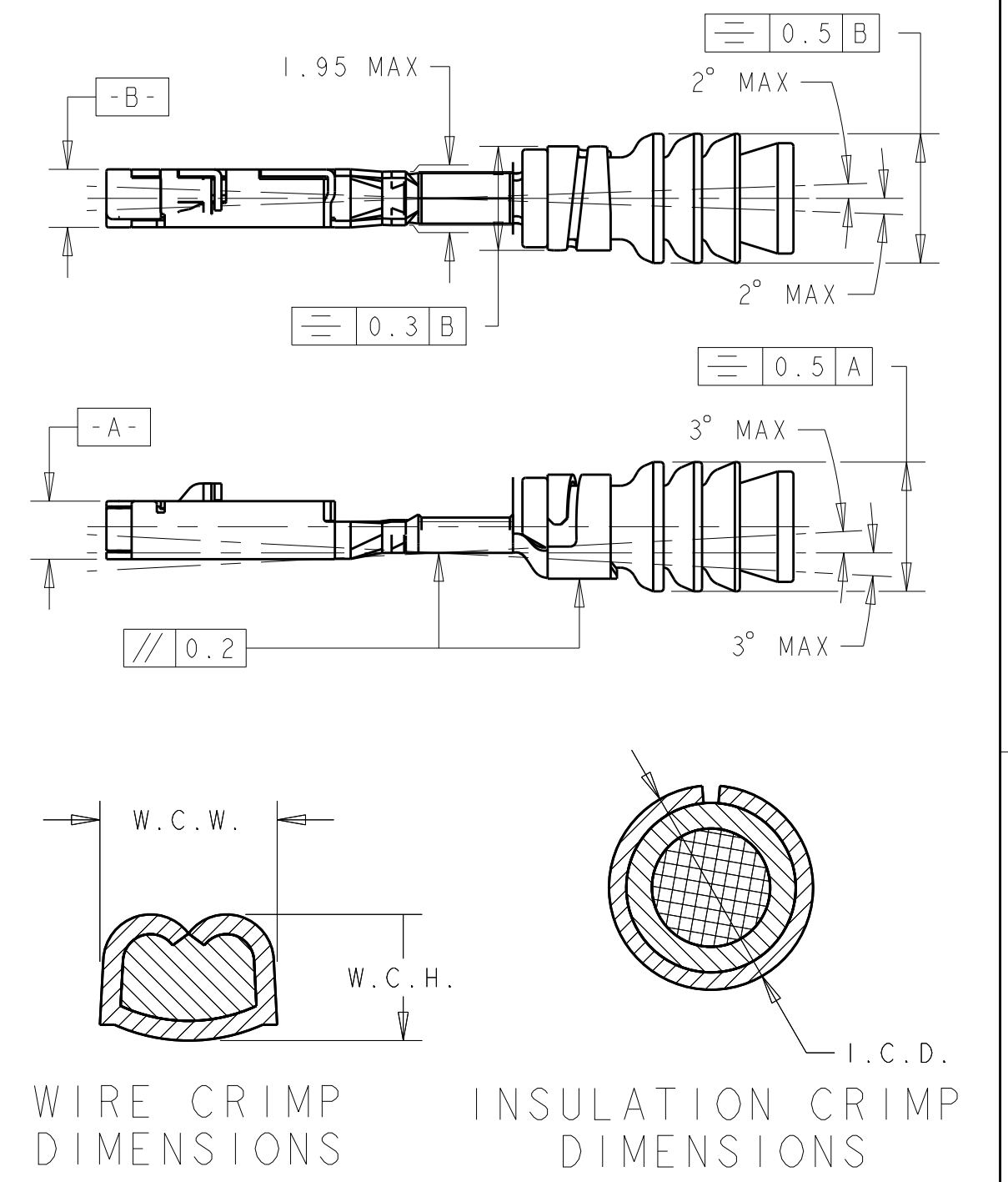
Section 1

Design Records

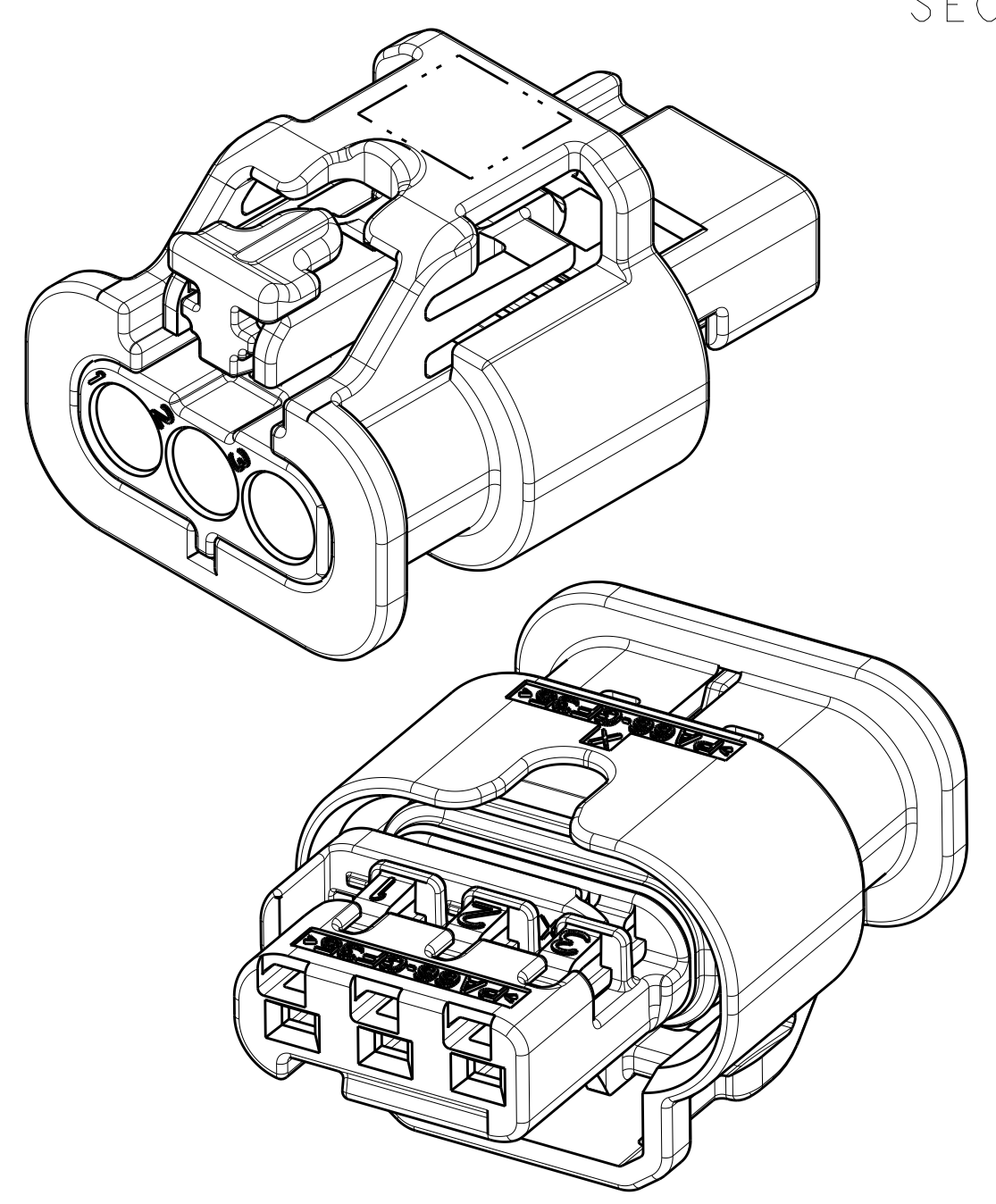
- PART NUMBER 1488991-5 SHOWN ON DRAWING.
- TPA AND CPA (WHEN APPLICABLE) ARE SHIPPED IN THEIR PRE-LATCHED POSITIONS. SEE INSTRUCTION SHEET 408-8928 FOR DIRECTIONS ON MOVING THE CPA AND TPA TO THE PRE-LATCHED POSITION, IF NECESSARY.
- TERMINALS SOLD SEPARATELY. FOR USE WITH TE CONNECTIVITY MCON 1.2mm CLEAN BODY CONTACT WITH WIRE SEAL. SEE MCON 1.2-CB (CLEAN BODY) TABLE FOR APPLICABLE PART NUMBERS.
- APPLICABLE HEADER INTERFACE DRAWING 1488738 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 0.5mm CLEARANCE ALL AROUND.
- A "X" IN THIS TABLE INDICATES THAT THE TERMINAL CAVITY IS BLOCKED AND WILL NOT ALLOW INSERTION OF THE MATING TERMINAL. A "O" IN THIS TABLE INDICATES THAT THE TERMINAL CAVITY IS OPEN AND WILL ALLOW INSERTION OF THE MATING TERMINAL.
- TRACEABILITY PRINTED IN THIS LOCATION AT ASSEMBLY.
- CONNECTOR SYSTEM MEETS THE REQUIREMENTS OF USCAR-2, REVISION 3, EXCEPT WHERE NOTED:
 TPA ENGAGE AND DISENGAGE FORCES ARE 10N MIN - 30N MAX.
 PRIMARY TERMINAL-CONNECTOR FORCE IS 30N MIN.
 SECONDARY TERMINAL-CONNECTOR FORCE IS 75N MIN.
 CPA ENGAGE AND DISENGAGE FORCES (WITH MATING CONNECTOR) ARE 30N MAX.
 CPA REMOVAL FORCE FROM CONNECTOR IS 15N MIN.
- FOR OPTIONAL TERMINAL CAVITY BLOCKING, USE TE CONNECTIVITY BLIND PLUG PART NUMBER: 967056-1.
- TERMINAL 1670146-X REPLACES 1418847-X
- REFERENCE ISOMETRIC VIEWS ON SHEET 2.



REVISIONS				
P. LTM	DESCRIPTION	DATE	OWN	APP'D
F8	REVISED PER ECO-13-001652	12FEB2013	DLD	SLM
F9	REVISED PER ECO-15-002909	25FEB2015	DLD	SLM
F10	REVISED PER ECO-15-011380	05AUG2015	DLD	SLM



KEYING CONFIGURATIONS	TERMINAL CAVITY CONFIGURATIONS
KEYING OPTION A	ALL TERMINAL CAVITIES OPEN
KEYING OPTION B	TERMINAL CAVITY #3 CLOSED
KEYING OPTION C	TERMINAL CAVITY #2 CLOSED
KEYING OPTION D	TERMINAL CAVITY #1 CLOSED



MCON 1.2-CB (CLEAN BODY)								
PART NUMBER	PLATING	WIRE STRIP LENGTH	AWG	INSL. RANGE	W.C.H.	W.C.W.	I.C.D.	WIRE SEAL PART NUMBER
1418844-3	SILVER	3.3 ± 0.3	22	1.2 TO 1.4	0.86 ± 0.03	1.27 ± 0.05	3.15 ± 0.05	967067-2
1418844-2	GOLD							
1418844-1	TIN							
1670146-3	SILVER	3.6 ± 0.3	20	1.4 TO 1.9	0.84 ± 0.03	1.57 ± 0.05	3.25 ± 0.05	967067-1
1670146-2	GOLD							
1670146-1	TIN							
1418850-3	SILVER			1.8 TO 2.4	1.11 ± 0.05	1.78 ± 0.05	3.35 ± 0.05	964972-1
1418850-2	GOLD	3.6 ± 0.3						
1418850-1	TIN							

RELEASED	2138907-1	GRAY	D	O	O	O	4-1488991-4
RELEASED	2138907-1	BLUE	C	O	O	O	4-1488991-3
RELEASED	2138907-1	NATURAL	B	O	O	O	4-1488991-2
RELEASED	2138907-1	BLACK	A	O	O	O	4-1488991-1
NOT RELEASED	1488787-1	GRAY	D				3-1488991-2
	1488787-1	BLUE	C	X	O	O	3-1488991-1
	1488787-1	NATURAL	B				3-1488991-0
	1488787-1	BLACK	A				2-1488991-9
RELEASED	N/A	GRAY	D				2-1488991-8
NOT RELEASED	N/A	BLUE	C	X	O	O	2-1488991-7
	N/A	NATURAL	B				2-1488991-6
RELEASED	N/A	BLACK	A				2-1488991-5
NOT RELEASED	1488787-1	GRAY	D				2-1488991-4
	1488787-1	BLUE	C	O	X	O	2-1488991-3
	1488787-1	NATURAL	B				2-1488991-2
	1488787-1	BLACK	A				2-1488991-1
NOT RELEASED	N/A	GRAY	D				2-1488991-0
	N/A	BLUE	C		X	O	1-1488991-9
	N/A	NATURAL	B	O	X	O	1-1488991-8
	N/A	BLACK	A				1-1488991-7
NOT RELEASED	1488787-1	GRAY	D				1-1488991-6
	1488787-1	BLUE	C	O	O	X	1-1488991-5
	1488787-1	NATURAL	B				1-1488991-4
	1488787-1	BLACK	A				1-1488991-3
NOT RELEASED	N/A	GRAY	D				1-1488991-2
	N/A	BLUE	C	O	O	X	1-1488991-1
	N/A	NATURAL	B				1-1488991-0
	N/A	BLACK	A				1488991-9
RELEASED	1488787-1	GRAY	D				1488991-8
RELEASED	1488787-1	BLUE	C				1488991-7
RELEASED	1488787-1	NATURAL	B	O	O	O	1488991-6
RELEASED	1488787-1	BLACK	A				1488991-5
RELEASED	N/A	GRAY	D				1488991-4
RELEASED	N/A	BLUE	C	O	O	O	1488991-3
RELEASED	N/A	NATURAL	B				1488991-2
RELEASED	N/A	BLACK	A				1488991-1

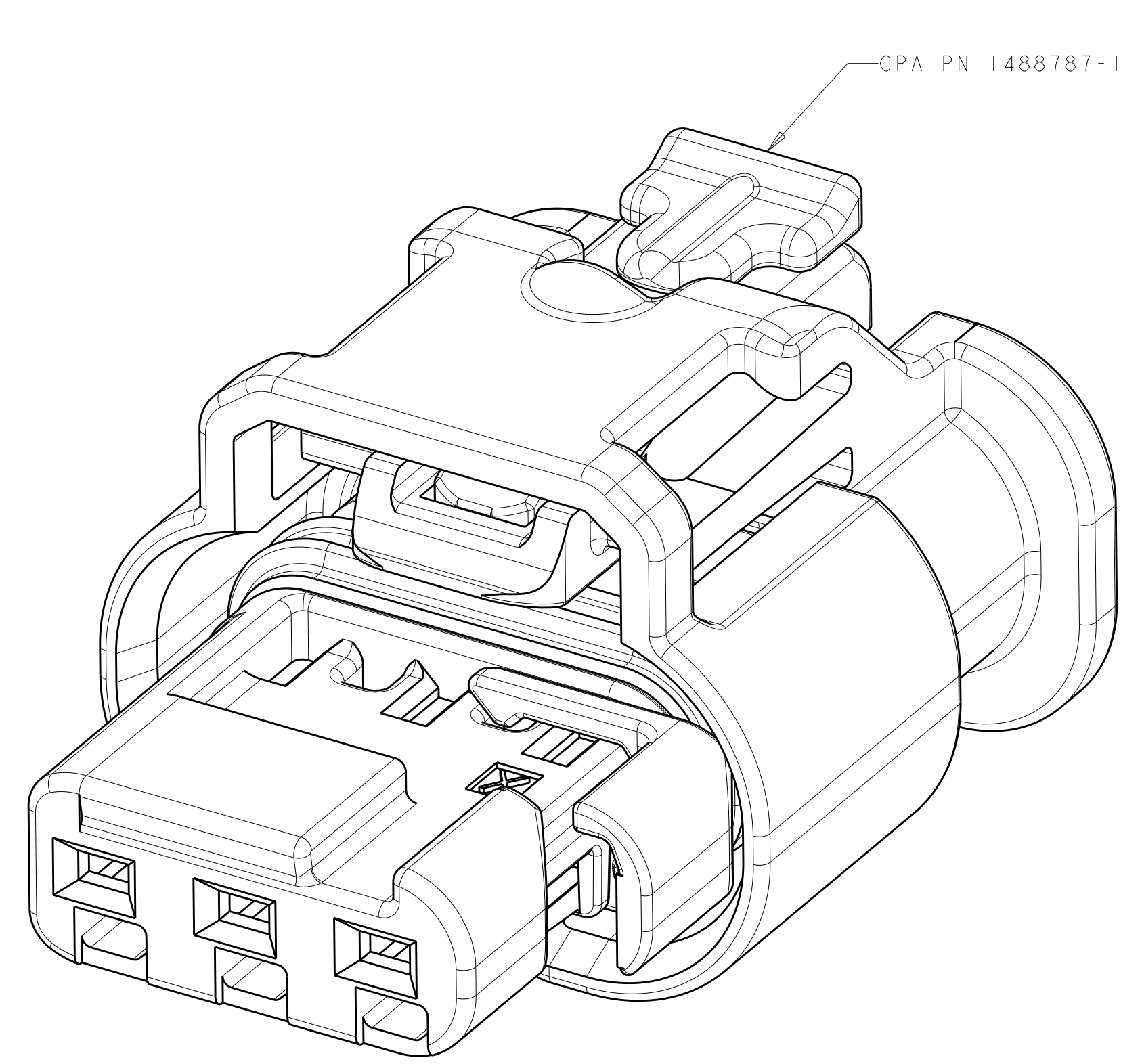
THIS DRAWING IS A CONTROLLED DOCUMENT. DIMENSIONS: mm. TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±0.3, 1 PLC ±0.10, 2 PLC ±0.15, 3 PLC ±0.2, 4 PLC ±0.25, ANGLES ±0.5°. MATERIAL: SEE TABLE. FINISH: SEE TABLE.

OWN: M. FORLSKA 08MAR2004. CHK: G. MARTIN 08MAR2004. AP'D: G. MARTIN 08MAR2004. PRODUCT SPEC: IS 408-8928. WEIGHT: 3.0 GRAMS. CUSTOMER DRAWING: A100779. SCALE: 4:1. SHEET 1 OF 2. REV: F10.

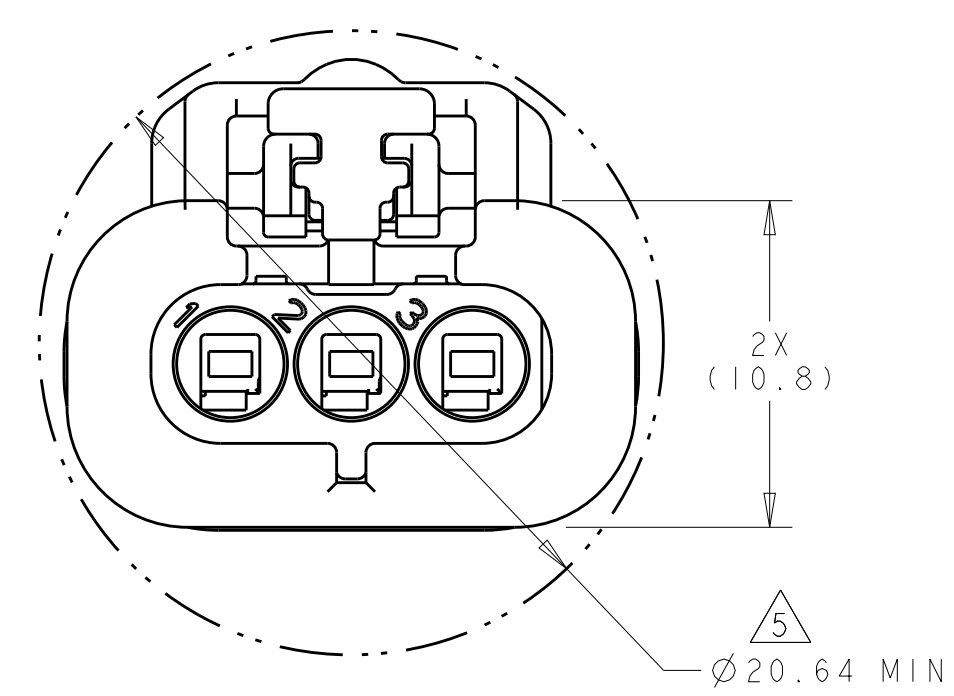
STE TE Connectivity
CONNECTOR ASSEMBLY, FEMALE, 3 POSITION, SEALED, 1.2mm (STANDARD LATCH VERSION)

REVISIONS				
P.	LTN.	DESCRIPTION	DATE	APVD.
-	-	SEE SHEET 1	-	-

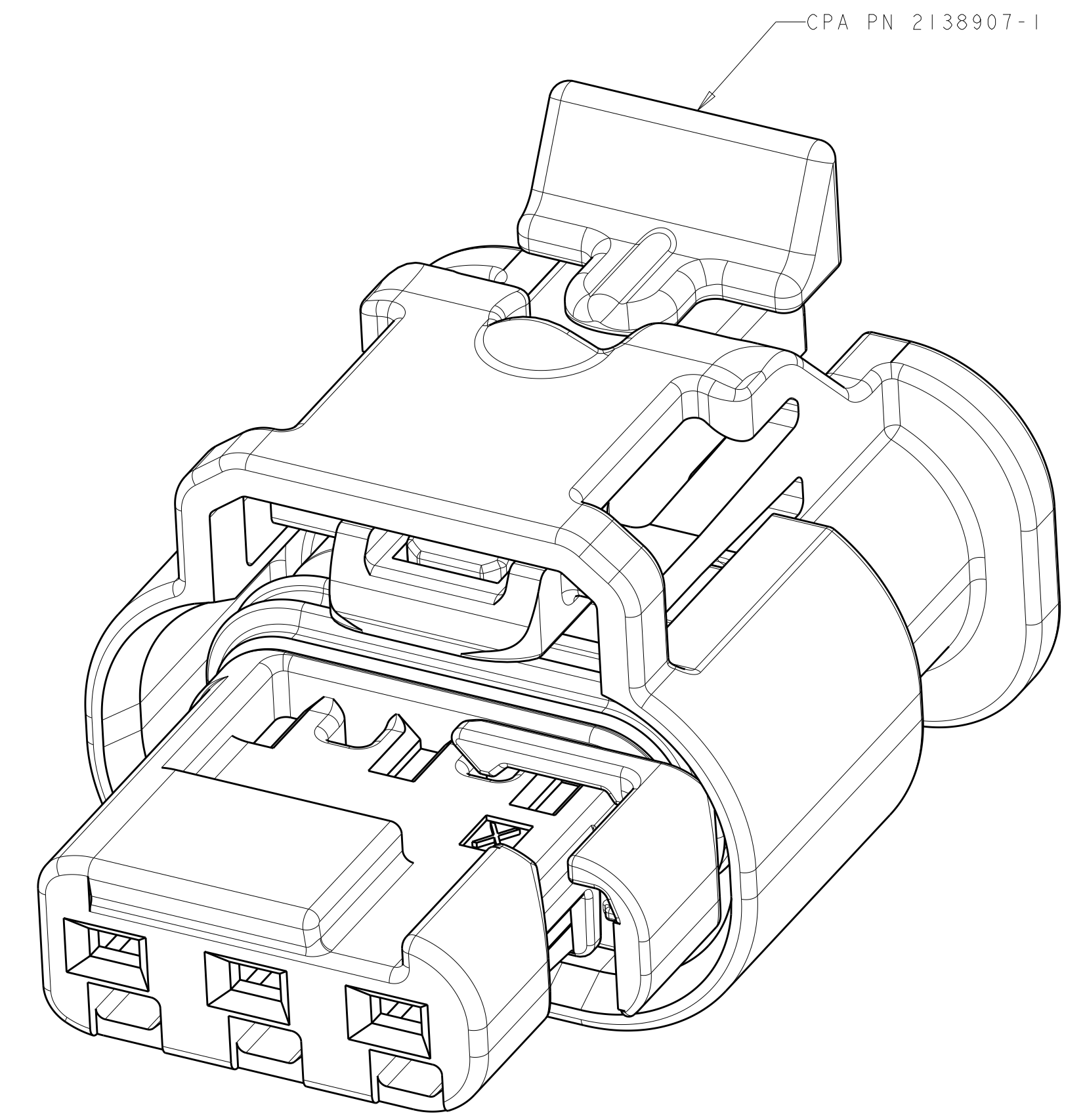
ISOMETRIC VIEWS



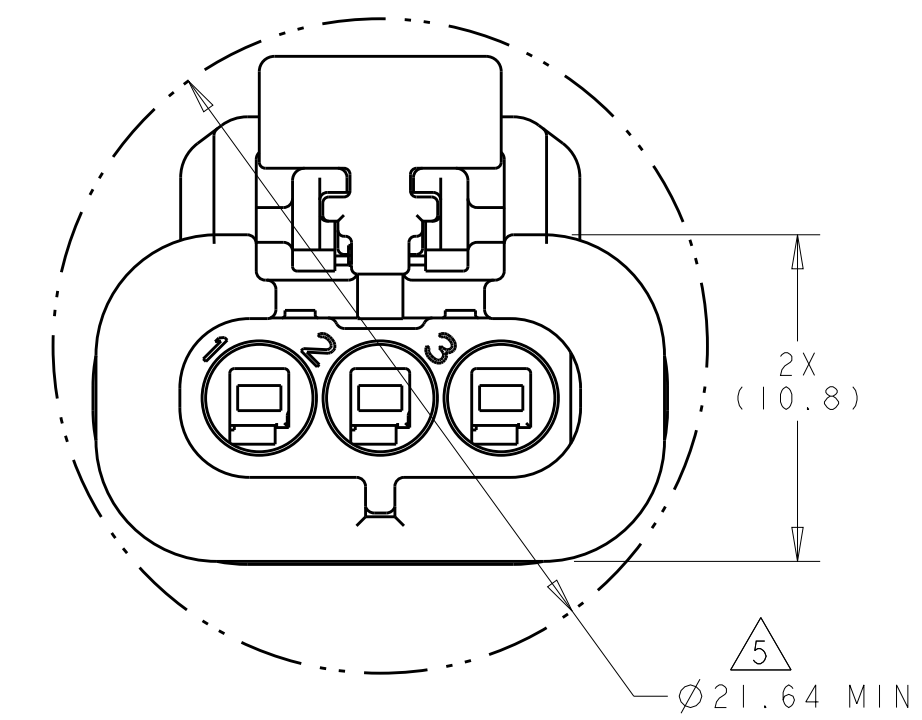
PN 1488991-5 SHOWN
SCALE 8:1



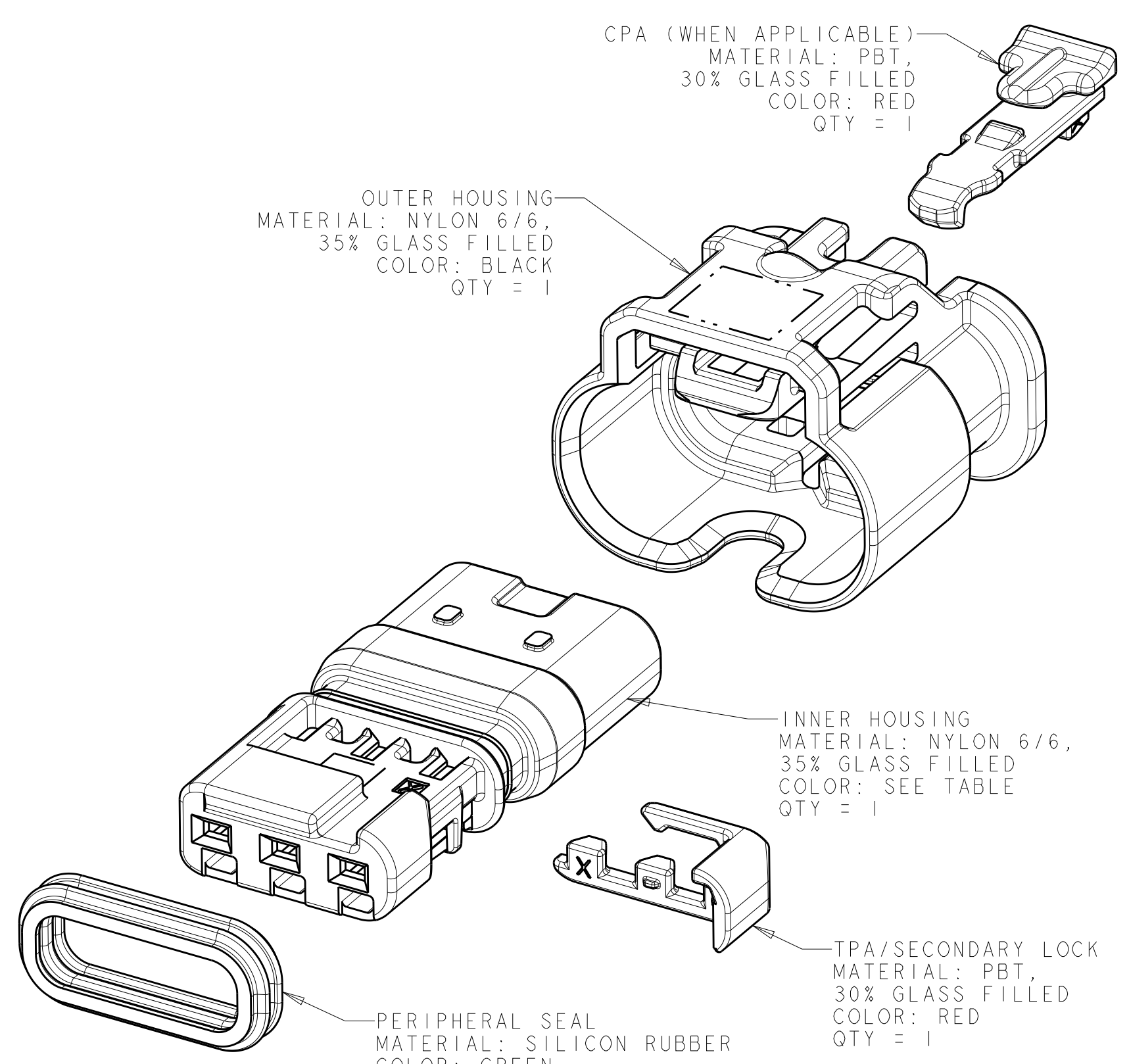
FEED THROUGH CONDITION



PN 4-1488991-1 SHOWN
SCALE 8:1



FEED THROUGH CONDITION



- CPA (WHEN APPLICABLE)
MATERIAL: PBT,
30% GLASS FILLED
COLOR: RED
QTY = 1
- OUTER HOUSING
MATERIAL: NYLON 6/6,
35% GLASS FILLED
COLOR: BLACK
QTY = 1
- INNER HOUSING
MATERIAL: NYLON 6/6,
35% GLASS FILLED
COLOR: SEE TABLE
QTY = 1
- TPA/SECONDARY LOCK
MATERIAL: PBT,
30% GLASS FILLED
COLOR: RED
QTY = 1
- PERIPHERAL SEAL
MATERIAL: SILICON RUBBER
COLOR: GREEN
QTY = 1

EXPLODED ISOMETRIC VIEW

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN: M. FORISKA 08MAR2004 CHK: G. MARTIN 08MAR2004 APVD: G. MARTIN 08MAR2004	STE TE Connectivity
DIMENSIONS: mm 		TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ± 1 PLC ±0.3 2 PLC ±0.10 3 PLC ± 4 PLC ± ANGLES ±1°	NAME: CONNECTOR ASSEMBLY, FEMALE, 3 POSITION, SEALED, 1.2mm (STANDARD LATCH VERSION) SIZE: CAGE CODE DRAWING NO. RESTRICTED TO WEIGHT: 3.0 GRAMS CUSTOMER DRAWING
MATERIAL: SEE TABLE		FINISH: - WEIGHT: 3.0 GRAMS SCALE: 4:1	A100779C=1488991 SHEET 2 OF 2 REV F10



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					
1-2203529-5	NO					
1-2203663-0	NO					
1-2203663-4	NO					
1-2203663-6	NO					
1-2203663-7	NO					
1-2203769-1	NO					
1-2203769-2	NO					
1-2203769-3	NO					
1-2203771-1	NO					
1-2203771-3	NO					
1-2203773-1	NO					
1-2203773-2	NO					
1-2288986-1	NO					
1-2291436-1	NO					
1-2296694-1	NO					
1-2296694-2	NO					
1-2296694-3	NO					
1-2296695-1	NO					
1-2296695-2	NO					
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1-2296702-2	NO					
1-2296704-1	NO					
1-2296704-2	NO					
1-2296704-3	NO					
1-2297114-1	NO					
1-2299071-1	NO					
1-2304514-1	NO					
1-2304514-2	NO					
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					
2-1718643-2	NO					
2-1718644-1	NO					
2-1718644-2	NO					
2-1823608-1	NO					
2-1823608-4	NO					
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					
3-2203663-1	NO					
3-2203663-3	NO					
3-2203663-5	NO					
4-1456426-1	NO					
4-1456426-2	NO					
4-1488991-1	NO					
4-1488991-2	NO					
4-1924067-1	NO					
4-1924067-2	NO					
4-2098541-1	NO					
4-2098541-2	NO					
4-2098557-1	NO					
4-2098641-1	NO					
4-2098641-2	NO					
4-2203663-4	NO					
4-2203663-5	NO					
4-2203663-6	NO					
4-2272003-1	NO					
4-2272003-2	NO					
4-2272003-3	NO					
4-2272003-4	NO					
4-2272003-5	NO					
4-2272004-1	NO					
4-2272004-2	NO					
4-2272005-1	NO					
4-2272005-2	NO					
5-2203663-3	NO					
5-2203663-7	NO					
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					



Not Applicable



Section 3

Customer Engineering Approval



Not Applicable



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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 1 Nicho A

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1886

# 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 (NAT)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	3	INNER HOUSING COLOR INCORRECTO (CAF)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	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 (NAT)	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
10	2	INNER HOUSING COLOR INCORRECTO (NAT)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	3	INNER HOUSING COLOR INCORRECTO (CAF)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	3	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 (NAT)	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	3	INNER HOUSING COLOR INCORRECTO (CAF)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	3	INNER HOUSING COLOR INCORRECTO (CAF)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
18	2	INNER HOUSING COLOR INCORRECTO (NAT)	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
21	2	INNER HOUSING COLOR INCORRECTO (NAT)	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	INNER HOUSING COLOR INCORRECTO (NAT)	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	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	2	INNER HOUSING COLOR INCORRECTO (NAT)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
30	2	INNER HOUSING COLOR INCORRECTO (NAT)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	3	INNER HOUSING COLOR INCORRECTO (CAF)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	3	INNER HOUSING COLOR INCORRECTO (CAF)	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	INNER HOUSING COLOR INCORRECTO (CAF)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	3	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	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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 1 Nicho A

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1886

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	INNER HOUSING COLOR INCORRECTO (NAT	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	INNER HOUSING COLOR INCORRECTO (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	3	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	3	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 (NAT	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 (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	3	INNER HOUSING COLOR INCORRECTO (CAF	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	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	3-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1886	50132211
Work Center:	AA-8624	
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

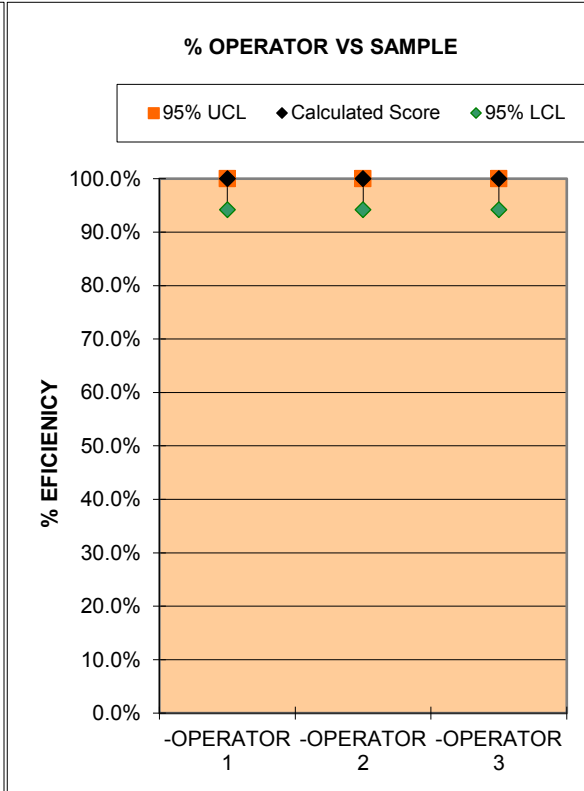
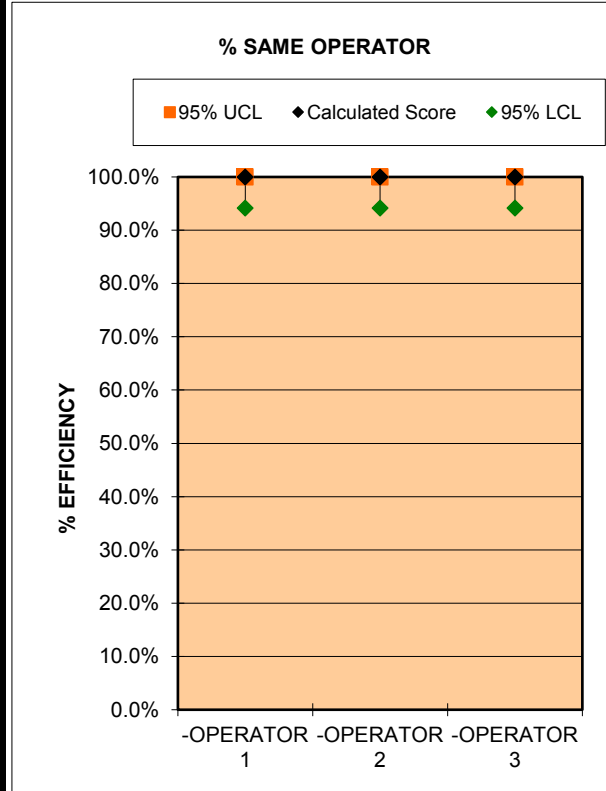
95% UCL

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:	3-Dec-19	Work Center:	AA-8624
REQUEST:	Jesus Morales	NUM. Gage-Fixture	50132211
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	2019-1887
PART NUMBER:	1488991-5		
COMMENT General:	Estacion 8 Nicho A		

# ID	Num Sample	Known Population		-OPERATOR 1			Expert	-OPERATOR 2			Expert	-OPERATOR 3			Expert	OPER VS OPER	OPER VS 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
1	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
5	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
6	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	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	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	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	3	TPA CERRADO	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
17	2	FALTANTE DE TPA	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
20	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	2	FALTANTE DE TPA	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	3	TPA CERRADO	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	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	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	3	TPA CERRADO	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	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	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



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	3-Dec-19	Work Center:	AA-8624
REQUEST:	Jesus Morales	NUM. Gage-Fixture	50132211
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	2019-1887
PART NUMBER:	1488991-5		
COMMENT General:	Estacion 8 Nicho A		

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
37	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
38	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
39	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
40	2	FALTANTE DE TPA	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	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	3	TPA CERRADO	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	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	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	3-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1887	50132211
Work Center:	AA-8624	
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

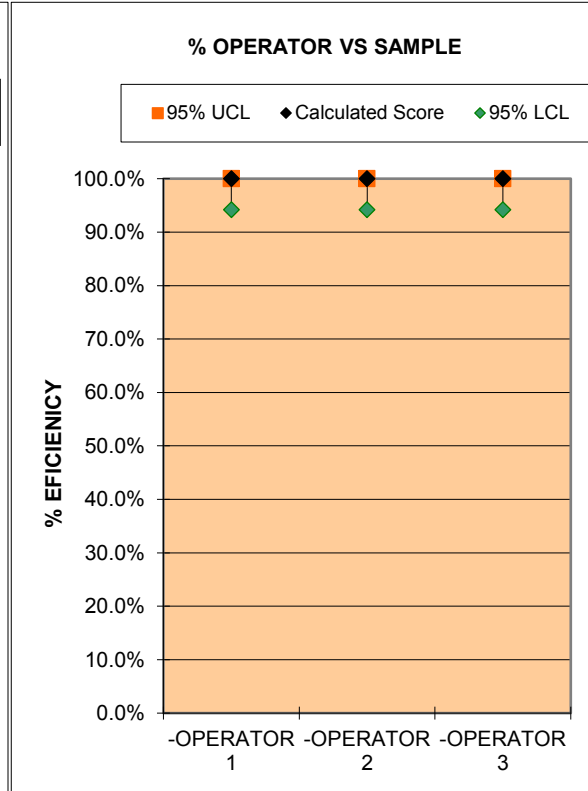
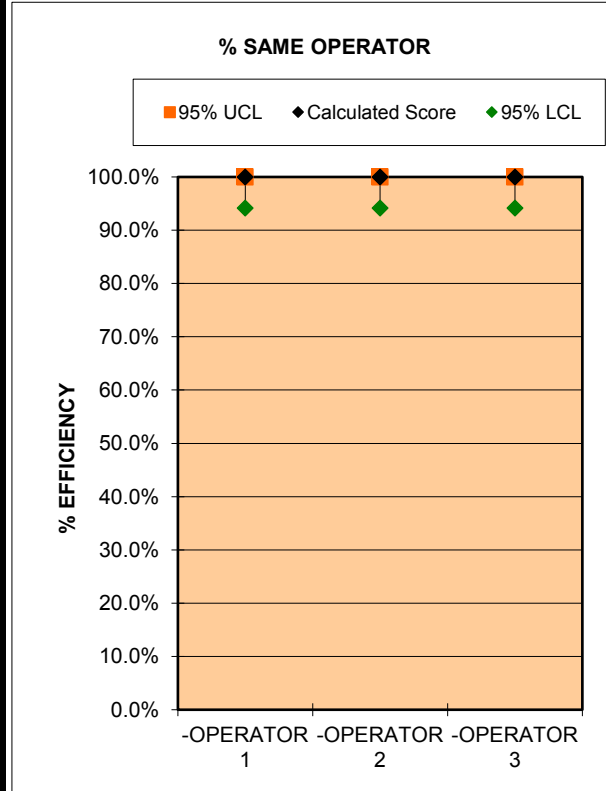
95% UCL

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:	3-Dec-19	Work Center:	AA-8624
REQUEST:	Jesus Morales	NUM. Gage-Fixture	50132211
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	2019-1888
PART NUMBER:	1488991-5		
COMMENT General:	Estacion 9 Nicho A		

# ID	Num Sample	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	9	LIGA DOBLE	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	4	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	3	LIGA COLOR INCORRECTO (AZUL)	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	5	LIGA FUERA DE POSICION	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	3	LIGA COLOR INCORRECTO (AZUL)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	3	LIGA COLOR INCORRECTO (AZUL)	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	5	LIGA FUERA DE POSICION	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	11	TPA DAÑADO LADO DERECHO	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	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	4	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
25	8	LIGA TORCIDA	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	9	LIGA DOBLE	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	7	LIGA INVERTIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	3	LIGA COLOR INCORRECTO (AZUL)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
33	8	LIGA TORCIDA	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	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	3-Dec-19	Work Center:	AA-8624
REQUEST:	Jesus Morales	NUM. Gage-Fixture	50132211
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	2019-1888
PART NUMBER:	1488991-5		
COMMENT General:	Estacion 9 Nicho A		

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
37	3	LIGA COLOR INCORRECTO (AZUL)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
38	5	LIGA FUERA DE POSICION	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	4	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	7	LIGA INVERTIDA	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	4	LIGA COLOR INCORRECTO (NEGRA)	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	3-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1888	50132211
Work Center:	AA-8624	
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

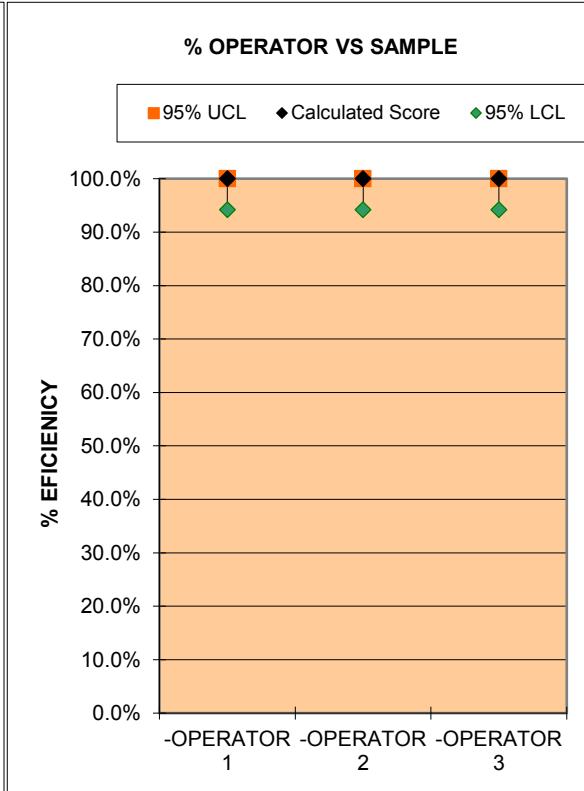
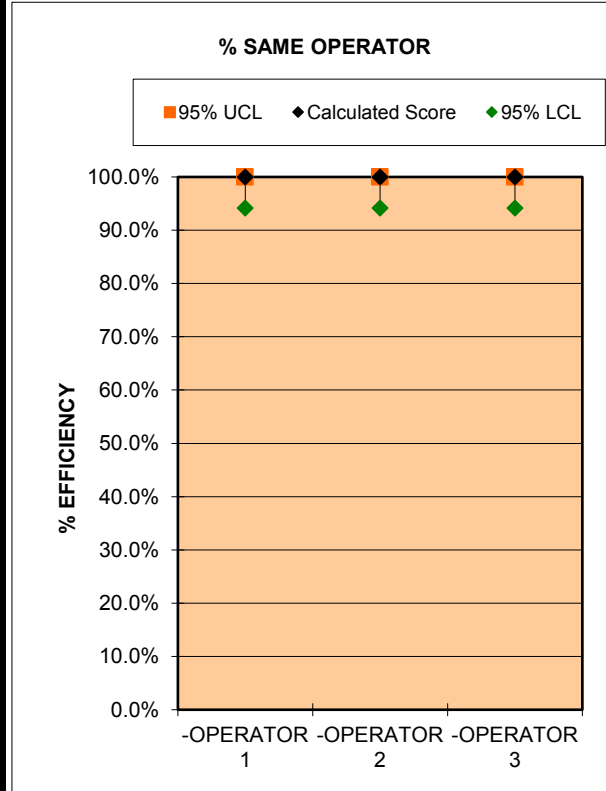
95% UCL

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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 16 Nicho A

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1889

# 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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
2	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	4	CPA INCORRECTO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	2	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	3	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
9	4	CPA INCORRECTO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
10	7	SIN CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	3	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	2	OUTER HOUSING MAL ENSAMBLADO	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	OUTER HOUSING MAL ENSAMBLADO	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	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	4	CPA INCORRECTO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	7	SIN CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
23	3	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	2	OUTER HOUSING MAL ENSAMBLADO	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	7	SIN CPA	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	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	4	CPA INCORRECTO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	2	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	3	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	2	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
35	3	OUTER HOUSING EQUIVOCADO	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	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 16 Nicho A

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1889

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	7	SIN CPA	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	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	4	CPA INCORRECTO	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	3	OUTER HOUSING EQUIVOCADO	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	OUTER HOUSING MAL ENSAMBLADO	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	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	7	SIN CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	5	CPA MAL ENSAMBLADO	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	3-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1889	50132211
Work Center:	AA-8624	
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

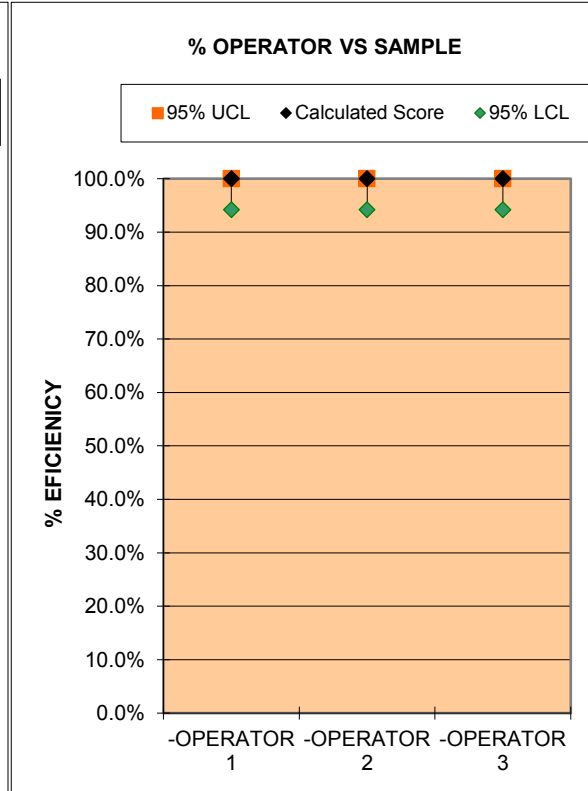
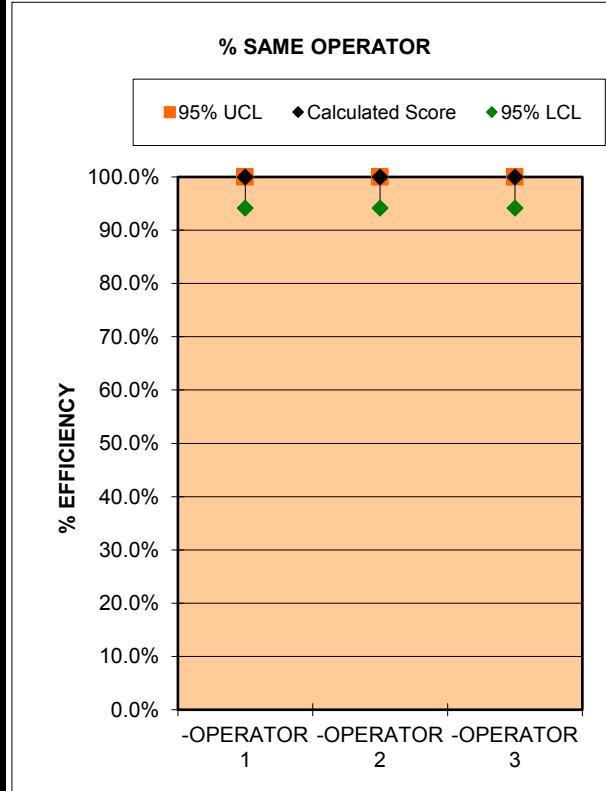
95% UCL

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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1890

# 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 (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	2	INNER HOUSING COLOR INCORRECTO (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	3	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	2	INNER HOUSING COLOR INCORRECTO (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	2	INNER HOUSING COLOR INCORRECTO (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	3	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	3	INNER HOUSING COLOR INCORRECTO (CAF	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
10	2	INNER HOUSING COLOR INCORRECTO (NAT	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
13	2	INNER HOUSING COLOR INCORRECTO (NAT	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	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	2	INNER HOUSING COLOR INCORRECTO (NAT	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	3	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	2	INNER HOUSING COLOR INCORRECTO (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	2	INNER HOUSING COLOR INCORRECTO (NAT	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	3	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	3	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 (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	3	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	3	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
32	3	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	2	INNER HOUSING COLOR INCORRECTO (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
34	2	INNER HOUSING COLOR INCORRECTO (NAT	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 1 Nicho B

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1890

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	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
42	2	INNER HOUSING COLOR INCORRECTO (NAT	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	2	INNER HOUSING COLOR INCORRECTO (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	3	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	3	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	2	INNER HOUSING COLOR INCORRECTO (NAT	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	3	INNER HOUSING COLOR INCORRECTO (CAF	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	2	INNER HOUSING COLOR INCORRECTO (NAT	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	3-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1890	50132211
Work Center:	AA-8624	
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

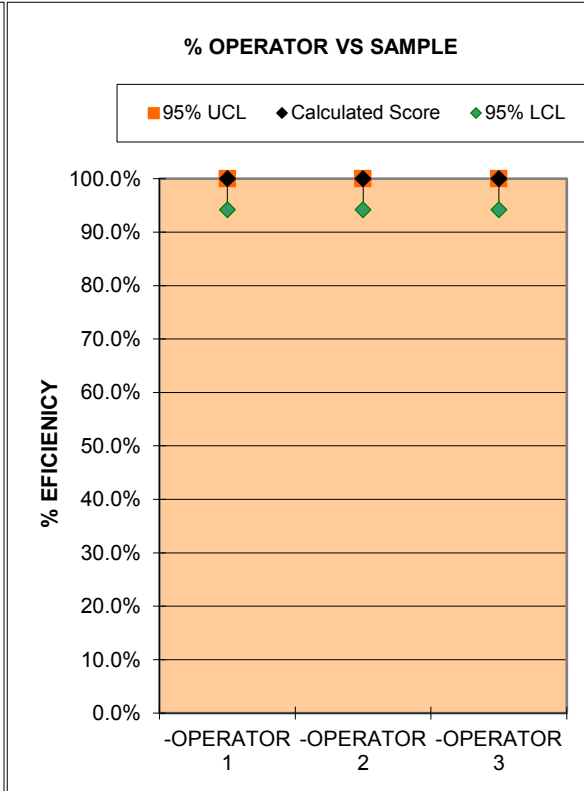
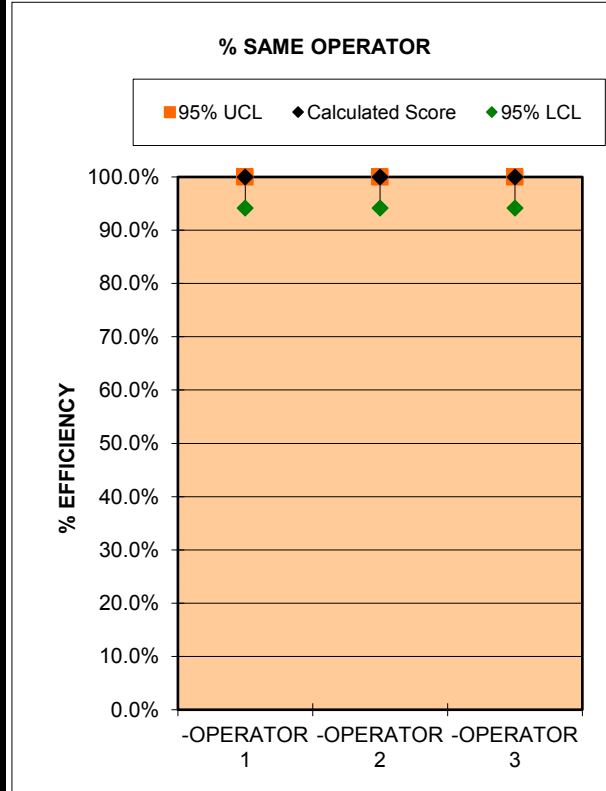
95% UCL

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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 8 Nicho B

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1891

# 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	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
5	2	FALTANTE DE TPA	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	2	FALTANTE DE TPA	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	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	3	TPA CERRADO	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	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	2	FALTANTE DE TPA	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	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	2	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	3	TPA CERRADO	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	2	FALTANTE DE TPA	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	2	FALTANTE DE TPA	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	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	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	FALTANTE DE TPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	2	FALTANTE DE TPA	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	2	FALTANTE DE TPA	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	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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 8 Nicho B

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1891

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	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
40	3	TPA CERRADO	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	3	TPA CERRADO	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	FALTANTE DE TPA	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	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	3	TPA CERRADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	3	TPA CERRADO	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	3-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1891	50132211
Work Center:	AA-8624	
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

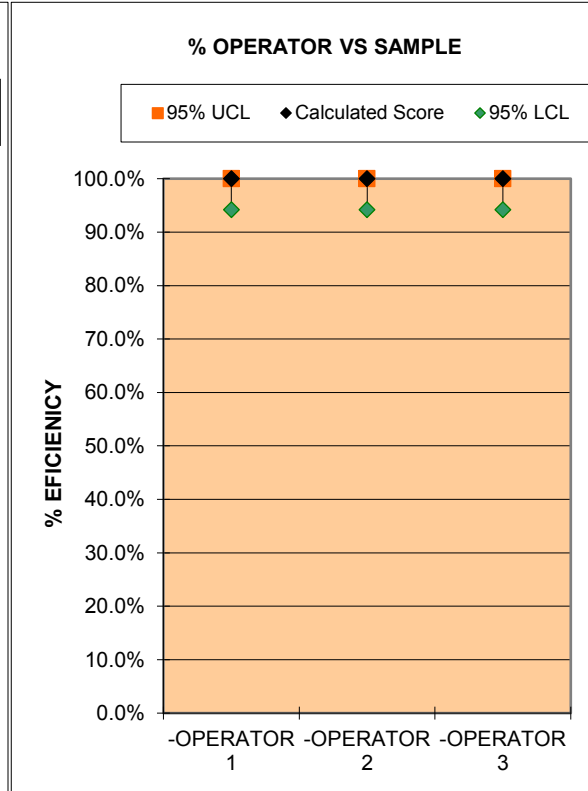
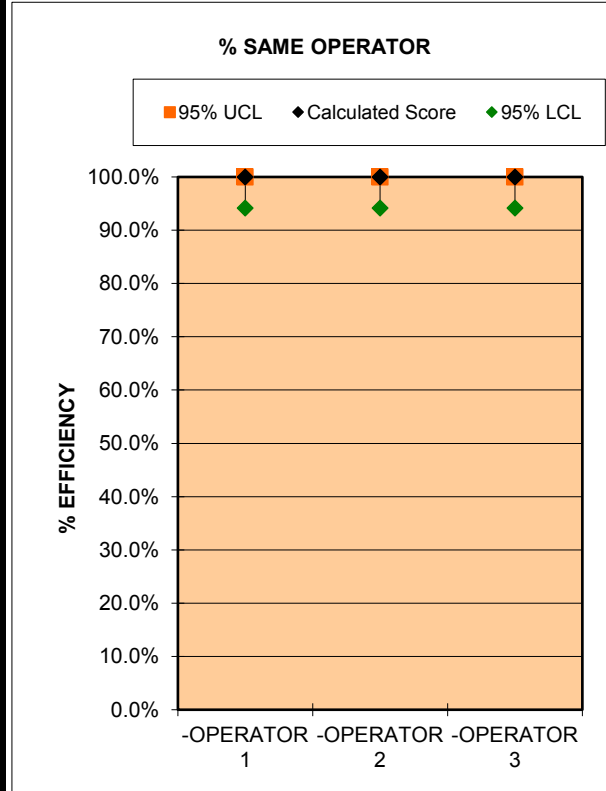
95% UCL

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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 9 Nicho B

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1892

# 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	11	TPA DAÑADO LADO DERECHO	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
4	5	LIGA FUERA DE POSICION	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
5	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
6	9	LIGA DOBLE	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	4	LIGA COLOR INCORRECTO (NEGRA)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	6	LIGA ALTA DE UN LADO	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	3	LIGA COLOR INCORRECTO (AZUL)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
12	3	LIGA COLOR INCORRECTO (AZUL)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
13	4	LIGA COLOR INCORRECTO (NEGRA)	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	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	3	LIGA COLOR INCORRECTO (AZUL)	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	5	LIGA FUERA DE POSICION	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	7	LIGA INVERTIDA	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	11	TPA DAÑADO LADO DERECHO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
24	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
25	3	LIGA COLOR INCORRECTO (AZUL)	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	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	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	8	LIGA TORCIDA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
30	9	LIGA DOBLE	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	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
33	2	FALTANTE DE LIGA	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	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
36	5	LIGA FUERA DE POSICION	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 9 Nicho B

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1892

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 LIGA	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	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
41	11	TPA DAÑADO LADO DERECHO	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	5	LIGA FUERA DE POSICION	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	6	LIGA ALTA DE UN LADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	10	TPA DAÑADO LADO IZQUIERDO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
46	2	FALTANTE DE LIGA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
47	3	LIGA COLOR INCORRECTO (AZUL)	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	4	LIGA COLOR INCORRECTO (NEGRA)	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 LIGA	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	3-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1892	50132211
Work Center:	AA-8624	
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

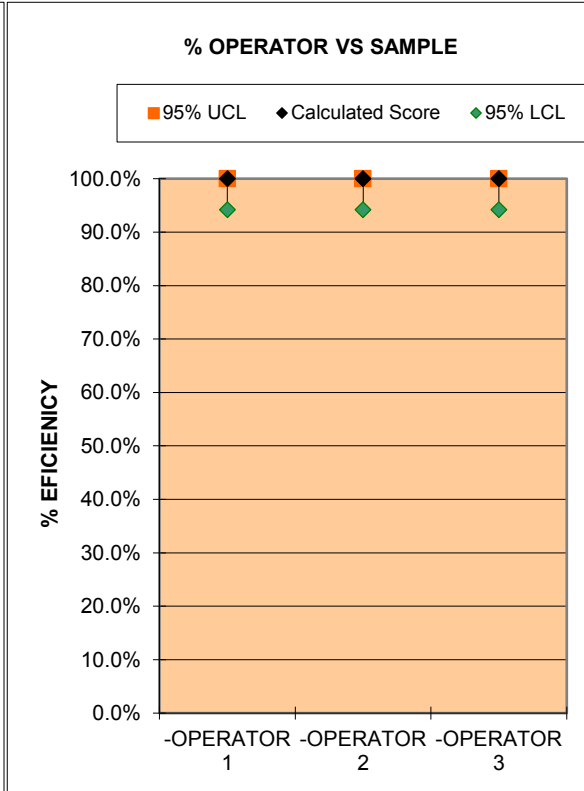
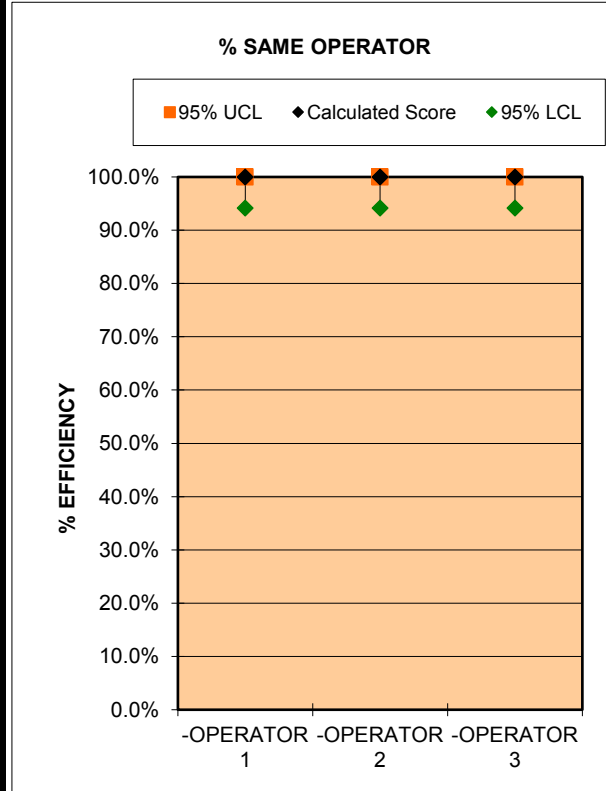
95% UCL

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:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 16 Nicho B

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1893

# 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	4	CPA INCORRECTO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
2	2	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
3	3	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
4	5	CPA MAL ENSAMBLADO	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	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
7	3	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
8	5	CPA MAL ENSAMBLADO	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	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
11	4	CPA INCORRECTO	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	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
14	7	SIN CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
15	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
16	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
17	7	SIN CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
18	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
19	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
20	7	SIN CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
21	2	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
22	3	OUTER HOUSING EQUIVOCADO	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	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
25	4	CPA INCORRECTO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
26	2	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
27	3	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
28	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
29	1	PIEZA BUENA	YES	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	YES	YES	YES	ACCEPTED	OK	OK
30	2	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
31	4	CPA INCORRECTO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
32	3	OUTER HOUSING EQUIVOCADO	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	6	CPA EQUIVOCADO COLOR	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 HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
37	3	OUTER HOUSING EQUIVOCADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK



DATA - GRR ATTRIBUTE STUDY

Empalme Site

DATE:	3-Dec-19
REQUEST:	Jesus Morales
QUALITY ENGINEER:	Aldo Carlos
MANUFACTURE ENGINEER	Jesus Morales
PLANT:	Plant 2
SPC TECHNICIAN:	Eliseo Cazarez
PART NUMBER:	1488991-5
COMMENT General:	Estacion 16 Nicho B

Work Center:	AA-8624
NUM. Gage-Fixture	50132211
OPERATOR 1	-OPERATOR 1
OPERATOR 2	-OPERATOR 2
OPERATOR 3	-OPERATOR 3
Standard Record	2019-1893

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	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
39	7	SIN 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	6	CPA EQUIVOCADO COLOR	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
42	4	CPA INCORRECTO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
43	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
44	2	OUTER HOUSING MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
45	3	OUTER HOUSING EQUIVOCADO	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	7	SIN CPA	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
48	5	CPA MAL ENSAMBLADO	NO	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	NO	NO	NO	ACCEPTED	OK	OK
49	6	CPA EQUIVOCADO COLOR	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	3-Dec-19	ID - EQUIPMENT
STANDAR RECORD	2019-1893	50132211
Work Center:	AA-8624	
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

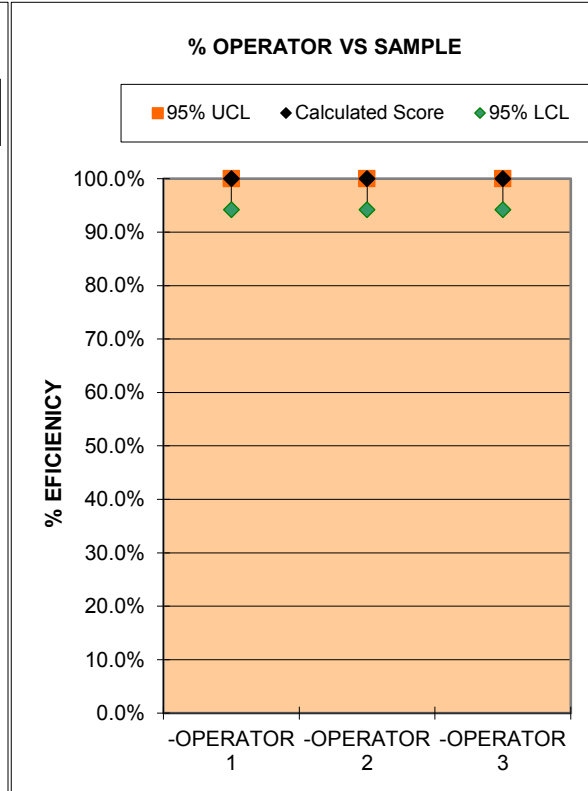
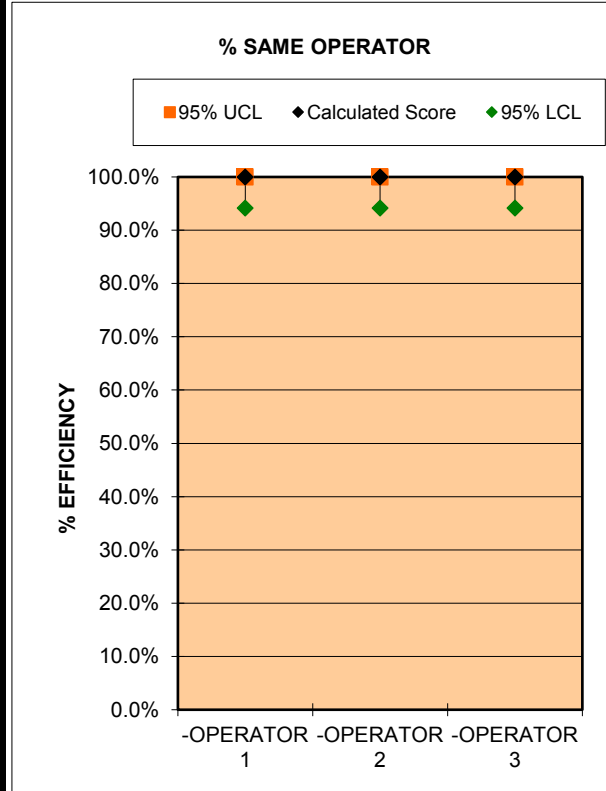
95% UCL

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%



Section 9

Dimensional Results



METROLOGY LABORATORY
 Carretera Int. Km. 1969 Guad-Nog Km.2
 Empalme Sonora, Mexico 85330
 Web: www.te.com

Phone: (622)2251095
 Fax: (622)2231140

Customer: TE 2 / CONECTORES

Part Name: CONNECTOR ASSEMBLY, FEMALE, 3 POSITION, SEALED, 1.2mm (STANDARD LATCH VERSION)

Part Number: 1488991-5

Drawing Number/Revision: C-1488991 REV: F10

Contact: ALDO CARLOS

Units: MM.

Date Received: 4 DICIEMBRE 2019

Folio Number: 48308

Lab Temperature: 20.8° C

Date Completed: 5 DICIEMBRE 2019

Lab Humidity: 48.6% RH

Inspected By: C. SALGADO

Tool Number: N/A

Email address: carlos.salgado@te.com

NMR (If applicable): N/A

Inspection equipment and measurement of uncertainty: See Laboratory Scope for Instrument Best Uncertainty.

Measurements performed by: C. SALGADO

Reviewed by: OMAR SANCHEZ

Title: Metrology Technician

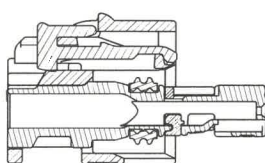
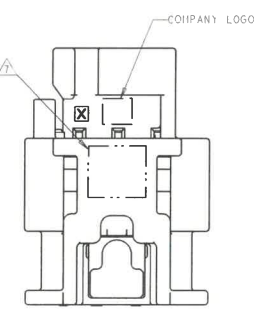
Title: Metrology Chief

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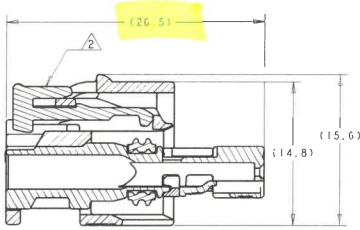
INSPECTION REPORT

Instrum. # ID	Dimension No.	Nominal	Tolerance		Inspection Results								Result	
			(+)	(-)									Accept	Reject
EEMI-236	1	26.5	0.3	0.3	26.547	26.538	26.536	26.549	26.566	26.553	26.567	26.557	✓	
		26.5	0.3	0.3	26.578	26.529	26.534	26.552	26.539	26.567	26.547	26.566	✓	
		26.5	0.3	0.3	26.522	26.548	26.564	26.576	26.551	26.545	26.558	26.554	✓	
		26.5	0.3	0.3	26.557	26.568	26.531	26.544	26.542	26.551	26.559	26.545	✓	
		26.5	0.3	0.3	26.555	26.570	26.563	26.561	26.546	26.553	26.542	26.556	✓	
		26.5	0.3	0.3	26.554	26.563	26.535	26.539	26.532	26.536	26.534	26.552	✓	
		26.5	0.3	0.3	26.572	26.547	26.559	26.544	26.538	26.549	26.564	26.545	✓	
		26.5	0.3	0.3	26.541	26.529	26.549	26.568	26.538	26.542	26.551	26.542	✓	
		26.5	0.3	0.3	26.539	26.559	26.558	26.545	26.548	26.551	26.552	26.551	✓	
		26.5	0.3	0.3	26.548	26.537	26.574	26.547	26.543	26.543	26.557	26.560	✓	
		26.5	0.3	0.3	26.545	26.539	26.542	26.564	26.563	26.564	26.554	26.562	✓	
		26.5	0.3	0.3	26.576	26.528	26.555	26.535	26.541	26.563	26.551	26.544	✓	
		26.5	0.3	0.3	26.560	26.554	26.567	26.543	26.547	26.562	26.552	26.533	✓	
		26.5	0.3	0.3	26.552	26.564	26.561	26.526	26.540	26.534	26.564	26.531	✓	
		26.5	0.3	0.3	26.527	26.536	26.564	26.560	26.547	26.576	26.555	26.570	✓	
		26.5	0.3	0.3	26.544	26.543	26.523	26.539	26.550				✓	

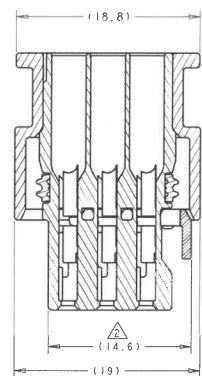
- PART NUMBER 1488991-5 SHOWN ON DRAWING.
- TPA AND CPA (WHEN APPLICABLE) ARE SHIPPED IN THEIR PRE-LATCHED POSITION. SEE INSTRUCTION SHEET 408-8928 FOR DIRECTIONS ON MOVING THE CPA AND TPA TO THE PRE-LATCHED POSITION, IF NECESSARY.
- TERMINALS SOLD SEPARATELY. FOR USE WITH TE CONNECTIVITY MCON 1.2mm CLEAN BODY CONTACT WITH WIRE SEAL. SEE MCON 1.2-CB (CLEAN BODY) TABLE FOR APPLICABLE PART NUMBERS.
- APPLICABLE HEADER INTERFACE DRAWING 1488730 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 0.5mm CLEARANCE ALL AROUND.
- A "X" IN THIS TABLE INDICATES THAT THE TERMINAL CAVITY IS BLOCKED AND WILL NOT ALLOW INSERTION OF THE MATING TERMINAL. A "O" IN THIS TABLE INDICATES THAT THE TERMINAL CAVITY IS OPEN AND WILL ALLOW INSERTION OF THE MATING TERMINAL.
- TRACEABILITY PRINTED IN THIS LOCATION AT ASSEMBLY.
- CONNECTOR SYSTEM MEETS THE REQUIREMENTS OF USCAR-2, REVISION 3, EXCEPT WHERE NOTED:
 TPA ENGAGE AND DISENGAGE FORCES ARE 10H MIN - 30N MAX.
 PRIMARY TERMINAL-CONNECTOR FORCE IS 30N MIN.
 SECONDARY TERMINAL-CONNECTOR FORCE IS 15N MIN.
 CPA ENGAGE AND DISENGAGE FORCES (WITH MATING CONNECTOR) ARE 30N MAX.
 CPA REMOVAL FORCE FROM CONNECTOR IS 15N MIN.
- FOR OPTIONAL TERMINAL CAVITY BLOCKING, USE TE CONNECTIVITY BLIND PLUG PART NUMBER: 967056-1.
- TERMINAL 1670146-X REPLACES 1418847-X
- REFERENCE ISOMETRIC VIEWS ON SHEET 2



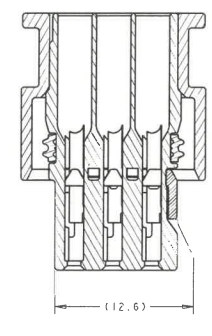
SECTION B-B
 SHOWN WITH CPA (WHEN APPLICABLE)
 IN IT'S LATCHED POSITION
 FOR REFERENCE ONLY



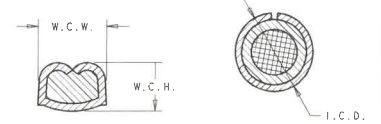
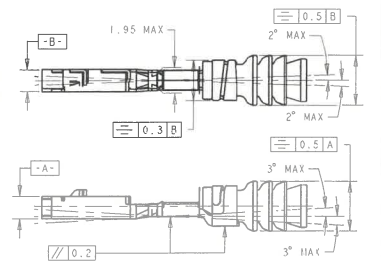
SECTION B-B



SECTION A-A

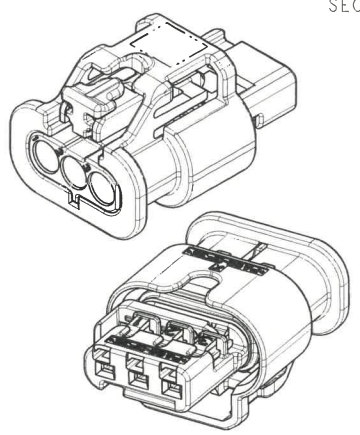


SECTION A-A
 SHOWN WITH TPA
 IN IT'S LATCHED POSITION
 FOR REFERENCE ONLY



WIRE CRIMP DIMENSIONS
 INSULATION CRIMP DIMENSIONS

KEYING CONFIGURATIONS	TERMINAL CAVITY CONFIGURATIONS
KEYING OPTION A	ALL TERMINAL CAVITIES OPEN
KEYING OPTION B	TERMINAL CAVITY #3 CLOSED
KEYING OPTION C	TERMINAL CAVITY #2 CLOSED
KEYING OPTION D	TERMINAL CAVITY #1 CLOSED



ISOMETRIC VIEWS

MCON 1.2-CB (CLEAN BODY)								
PART NUMBER	PLATING	WIRE STRIP LENGTH	AWG	INSL. RANGE	W.C.H.	W.C.W.	I.C.D.	
1418844-3	SILVER	3.3 ± 0.3	22	1.2 TO 1.4	0.88 ± 0.03	1.27 ± 0.05	3.15 ± 0.05	
1418844-2	GOLD							
1418844-1	TIN							
1670146-3	SILVER	3.6 ± 0.3	20	1.4 TO 1.9	0.84 ± 0.03	1.57 ± 0.05	3.25 ± 0.05	
1670146-2	GOLD							
1670146-1	TIN							
1418850-3	SILVER		18	1.9 TO 2.4	1.11 ± 0.05	1.78 ± 0.05	3.35 ± 0.05	
1418850-2	GOLD	3.6 ± 0.3			1.31 ± 0.05			
1418850-1	TIN				1.11 ± 0.05			
			16		1.31 ± 0.05			
PART NUMBER	PLATING	WIRE STRIP LENGTH	AWG	INSL. RANGE	W.C.H.	W.C.W.	I.C.D.	WIRE SEAL PART NUMBER

Digitally signed by Gladys Gallegos
 Date: 2019.12.04 11:18:28 -0700

RELEASED	2138907-1	GRAY	D	O	O	O	4-1488991-4
RELEASED	2138907-1	BLUE	C	O	O	O	3-1488991-3
RELEASED	2138907-1	NATURAL	B	O	O	O	4-1488991-2
RELEASED	2138907-1	BLACK	A	O	O	O	4-1488991-1
NOT RELEASED	1488787-1	GRAY	D				3-1488991-2
	1488787-1	BLUE	C				3-1488991-1
	1488787-1	NATURAL	B	X	O	O	3-1488991-0
	1488787-1	BLACK	A				2-1488991-9
RELEASED	N/A	GRAY	D				2-1488991-8
NOT RELEASED	N/A	BLUE	C				2-1488991-7
NOT RELEASED	N/A	NATURAL	B	X	O	O	2-1488991-6
RELEASED	N/A	BLACK	A				2-1488991-5
NOT RELEASED	1488787-1	GRAY	D				2-1488991-4
	1488787-1	BLUE	C				2-1488991-3
	1488787-1	NATURAL	B	O	X	O	2-1488991-2
	1488787-1	BLACK	A				2-1488991-1
NOT RELEASED	N/A	GRAY	D				2-1488991-0
NOT RELEASED	N/A	BLUE	C				1-1488991-9
NOT RELEASED	N/A	NATURAL	B		X	O	1-1488991-8
NOT RELEASED	N/A	BLACK	A				1-1488991-7
NOT RELEASED	1488787-1	GRAY	D				1-1488991-6
NOT RELEASED	1488787-1	BLUE	C				1-1488991-5
NOT RELEASED	1488787-1	NATURAL	B	O	O	X	1-1488991-4
NOT RELEASED	1488787-1	BLACK	A				1-1488991-3
NOT RELEASED	N/A	GRAY	D				1-1488991-2
	N/A	BLUE	C				1-1488991-1
	N/A	NATURAL	B	O	O	X	1-1488991-0
	N/A	BLACK	A				1488991-9
RELEASED	1488787-1	GRAY	D				1488991-8
RELEASED	1488787-1	BLUE	C				1488991-7
RELEASED	1488787-1	NATURAL	B	O	O	O	1488991-6
RELEASED	1488787-1	BLACK	A				1488991-5
RELEASED	N/A	GRAY	D				1488991-4
RELEASED	N/A	BLUE	C				1488991-3
RELEASED	N/A	NATURAL	B	O	O	O	1488991-2
RELEASED	N/A	BLACK	A				1488991-1
STATUS	CPA						

THIS DRAWING IS A CONTROLLED DOCUMENT. FOR USE ONLY BY AUTHORIZED PERSONNEL.

TE CONNECTIVITY
 CONTROLADA

CONNECTOR ASSEMBLY, FEMALE, 3 POSITION, SEALED, 1.2mm (STANDARD LATCH VERSION)

WEIGHT: 3.0 GRAMS

DATE: 2019.12.04

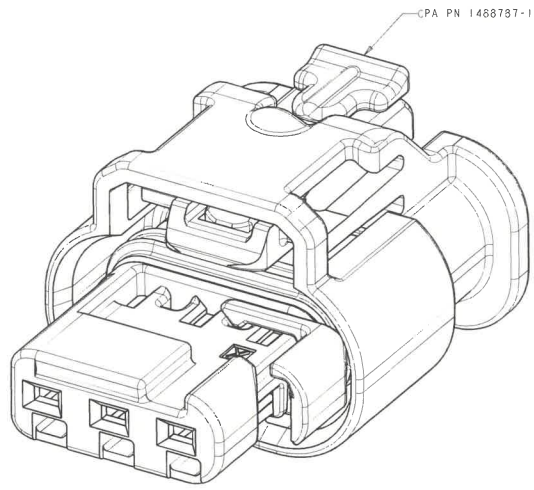
REV: 1.0

1488991-5

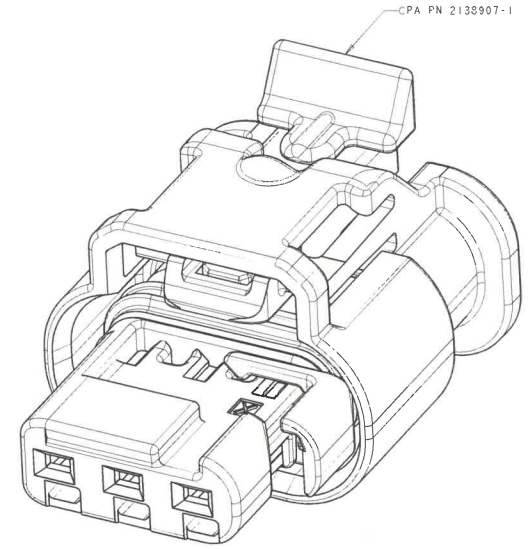
100779

REVISIONS				
REV	DATE	DESCRIPTION	BY	APP'D
1		SEE SHEET 1		

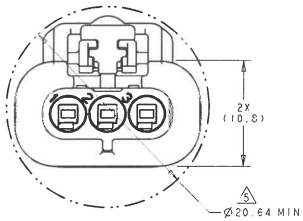
ISOMETRIC VIEWS



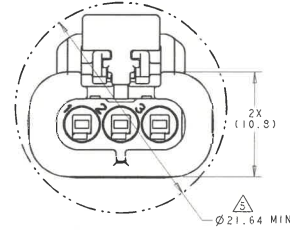
PN 1488991-5 SHOWN
SCALE 8:1



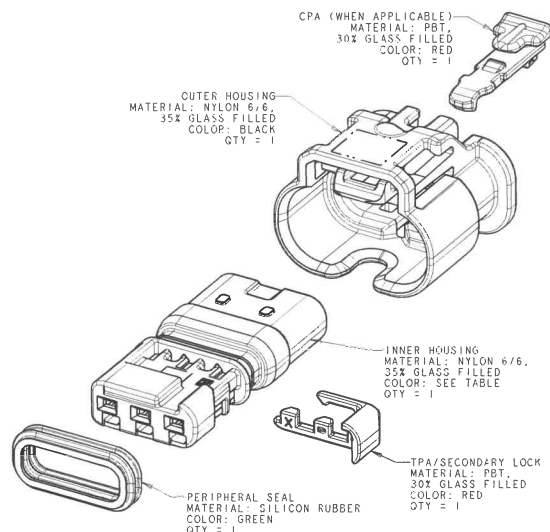
PN 4-1488991-1 SHOWN
SCALE 8:1



FEED THROUGH CONDITION



FEED THROUGH CONDITION



CPA (WHEN APPLICABLE)
MATERIAL: PBT
30X GLASS FILLED
COLOR: RED
QTY = 1

OUTER HOUSING
MATERIAL: NYLON 6/6,
35X GLASS FILLED
COLOR: BLACK
QTY = 1

INNER HOUSING
MATERIAL: NYLON 6/6,
30X GLASS FILLED
COLOR: SEE TABLE
QTY = 1

TPA/SECONDARY LOCK
MATERIAL: PBT,
30X GLASS FILLED
COLOR: RED
QTY = 1

PERIPHERAL SEAL
MATERIAL: SILICON RUBBER
COLOR: GREEN
QTY = 1

EXPLODED ISOMETRIC VIEW

STE Digitally signed
by Gladys Gallegos
Date: 2019.12.04
11:18:49 -0700

THIS DRAWING IS A CONTROLLED DOCUMENT.		REV: F01158A, 08/24/2014		CONNECTOR ASSEMBLY, FEMALE, 3 POSITION, SEALED, 1.2mm (STANDARD LATCH VERSION)	
DIMENSIONS: SEE TABLE		TO CONTACT WITH: 0.45mm		DATE: 08/24/2014	BY: MARIJAN
MATERIAL: SEE TABLE		FINISH: SEE TABLE	PRODUCT SPEC: IS 408-01078	WEIGHT: 3.0 GRAMS	SCALE: 4:1
APPLICATION SPEC: SEE TABLE		APPLICATION SPEC: SEE TABLE	SIZE: A1	CASE CODE: 00779	DRAWING NO: 1488991
CUSTOMER DRAWING		DATE: 2019.12.04	SHEET 2 OF 2		REV: 1.0



Section 10

Material, Performance Test Results

222031301

Certificate of Analysis

Customer:	Product Number	: 55558828
	Product Name	: ULTRAMID® A3EG7 BLACK 23189
TE CONNECTIVITY CORPORATION 719 PEGG RD, BLDG 253 GREENSBORO NC 27409-9672	POLYAMIDE	
	Vehicle	:
	Batch/Lot	: 0208558852
	Manuf.Date	: Nov-08-2019
Attention:	Shipped Date	:
FAX:	Shipped Quantity	: 20,702.000 KG
Cust Prod: 702661-9	Delivery Date	: Dec-06-2019
Cust Prod Name: ULT.A3EG7 BK23189	Order Number	: 117263527 000010
Cust P.O.: 2710443747		
Cust P.O. Line: 1	Delivery Note	: 144046709 000010

Inspection Certificate 3.1 according to EN 10204

Characteristic	Result	UOM	----Specification----		Test Method
			Minimum	Maximum	
Ash / Filler Content	34.117	%	33.000	37.000	ASTM5630/ISO3451
Moisture Content	0.09	%		0.15	ASTM D6869 / ISO 15512B
Viscosity Number for Polyamides	147	ml/g	130	160	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 for the following specifications:

- MS-DB41 CPN 2224
- MS-DB41 CPN 3695
- M5600
- M53122



TYCO ELECTRONICS NCDC2
 8000 PIEDMONT TRIAD PKWY
 GREENSBORO NC 27409
 USA

DAVID HAMILTON

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: 30 Dec 2019
 Qty Shipped: 6,614.000 LB
 Order Item /date: 2226178 10 / 22 Oct 2019
 Delivery item/date: 86410158 900001 / 06 Jan 2020
 Account #: 2080916
 Customer PO No.: 2709979044
 Rail car: See Senders Inst.

Batch 0001263254

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

BATCH RELEASE DATA

	(ISO 1133-1, ASTM D1238)	UoM	Value
Melt Flow Rate (MFR)		g/10min	7.00
Ash Content		%(m)	29.32

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.

Certificate of Analysis

Customer:	Product Number : 52506291
TE CONNECTIVITY CORPORATION 8000 PIEDMONT TRIAD PKWY GREENSBORO NC 27409-9407	Product Name : ULTRAMID® A3EG7 UNCOLORED POLYAMIDE 726KG FIBREBOARD IBC (11G)
Attention:	Vehicle :
FAX:	Batch/Lot : WF9106072
Cust Prod: 702661-2	Manuf.Date : Apr-16-2019
Cust Prod Name: ULT.A3EG7 UN 726KG 11G	Shipped Date :
Cust P.O.: 2707881948	Shipped Quantity : 28,810.008 LB
Cust P.O. Line: 1	Delivery Date : Apr-30-2019
Inspection Certificate 3.1 according to EN 10204	Order Number : 116803739 000010
	Delivery Note : 143351107 900001

Characteristic	Result	UOM	----Specification----		
			Minimum	Maximum	Test Method
Ash / Filler Content	34.69	%	33.00	37.00	ASTM5630/ISO3451
Moisture Content	0.05	%		0.12	ASTM D6869 / ISO 15512B
Viscosity Number for Polyamides	146	ml/g	130	160	ISO 307

Comments :

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

This product is approved for the following specifications:

- MS-DB41 CPN2224
- MS-DB41 CPN3695
- WSK-M4D673-A
- GMP.PA66.013
- GMW16802P-PA66-GF35
- 100-1302
- M53122
- M5600

NSF Standard 51 Listed
NSF Standard 61 Listed

Thank you for choosing a BASF Product

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.

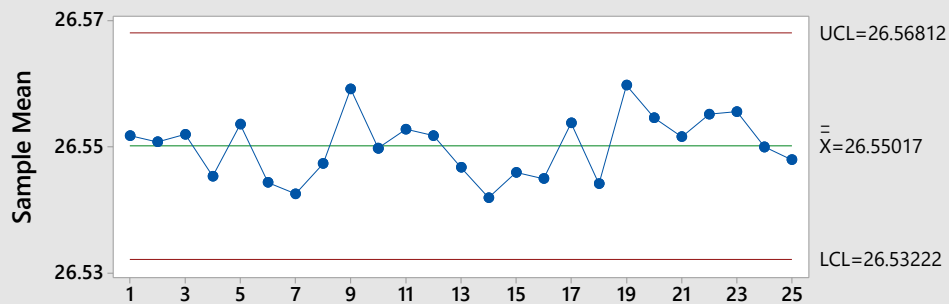


Section 11

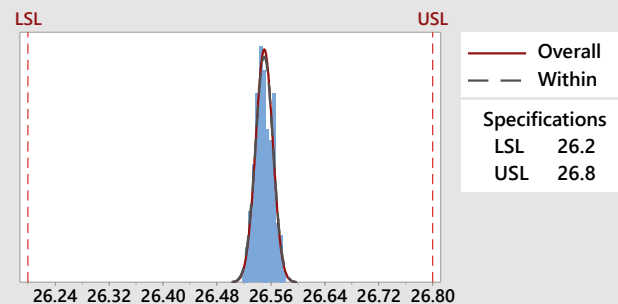
Initial Process Studies

Capability Study for NP 1488991-5 Characteristics DIM 1

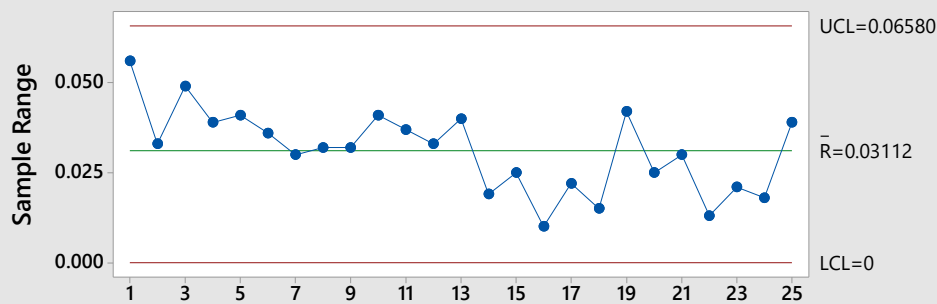
Xbar Chart



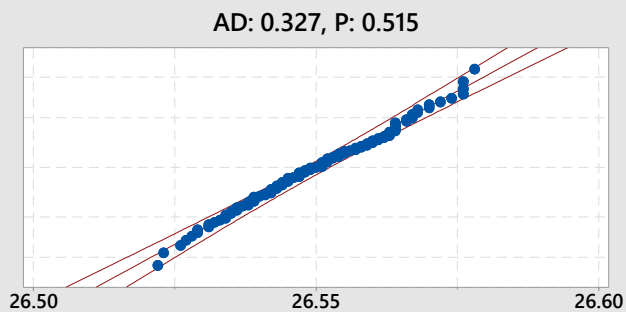
Capability Histogram



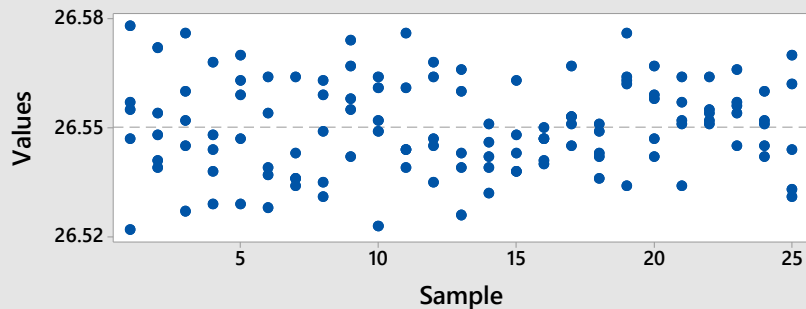
R Chart



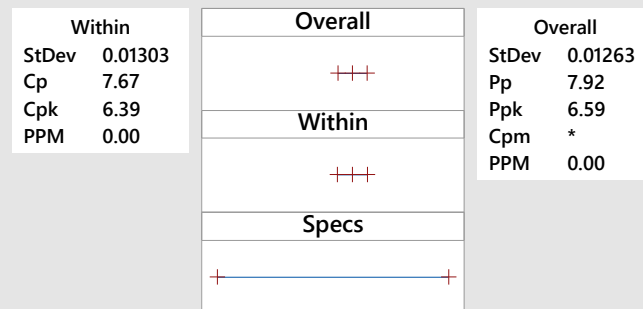
Normal Prob Plot



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.

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.



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: **-**

- Número fax: **-**

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

1.2 Identificación del producto

Número componente/artículo: **1488991-5**

Descripción: **Conn Assy Female 3
Posn Sealed 1.2mm**

No. Reporte de muestra: **-**

Fecha de reporte de muestra: **-**

No. Orden de Compra: **-**

No. Factura de entrega: **-**

MDS Preliminar: **No**

ID/versión IMDS: **137530976 / 12**

ID de nodo: **854081388**

Estado de la MDS (Fecha de modificación): **Publicado internamente (08/08/2019)**

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: 1488991-5








































































No. Reporte de muestra: -
















































Descripción: Conn Assy Female 3 Posn Sealed 1.2mm

ID/versión IMDS: 137530976 / 12

ID de nodo: 854081388

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 Assy Female 3 Posn Sealed 1.2mm	1488991-5	137530976 / 12		2.9791				
└2	Outer Housing, Standard Latch Placement Female 3 Position Sealed 1.2mm-Black	0-0776933-1	52991378 / 7	1	1.474				S
└3	PA66-GF35	702661-9	70521492 / 3		1.474			5.1.a	No

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	 Further Additives, not to declare	 system				0.5			
└4	 GF-Fibre	 -				35			
└4	 Carbon black	 1333-86-4				0.5			
└4	 PA66	 -				64			
└2	 Inner Housing Female, 3 Position, Sealed, 1.2 mm-Black	 0-1456519-1	49327655 / 5	1	1.221				 S□
└3	 PA66-GF35	 702661-9	70521492 / 3		1.221			 5.1.a	 No
└4	 Further Additives, not to declare	 system				0.5			
└4	 GF-Fibre	 -				35			
└4	 Carbon black	 1333-86-4				0.5			
└4	 PA66	 -				64			
└2	 TPA, Female, 3 Posn, Sealed, 1.2mm - Red	 1488996-1	16532266 / 17	1	0.072				 No aplica
└3	 PBT-GF30	 703395-4	175341184 / 3		0.072			 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			
└2	 1.2 Sealed Perimeter Seal	 1488651-1	507336923 / 3	1	0.0921				 No aplica
└3	 VM□	 AL2701GN			0.0921			 5.3	 No

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	 VM□	 -				98.5	98 - 99		
└4	 Chromium(III)oxide	 1308-38-9				0.6			
└4	 Siloxanes and silicones, di-Me, vinyl group-terminated	 68083-19-2				0.9			
└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			

□sta 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 Yes No NA
Submitted by IMDS or other customer format _____

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