

10 9 8 7 6 5 4 3 2 1

FORD PART NO. SUPPLIER PART NO. DESCRIPTION GREASED Y/N BASE MATERIAL TOP PLATING MATERIAL TOP PLATING THICKNESS (mm) SUBSTRATE PLATING MATERIAL SUBSTRATE PLATING THICKNESS (µm) COPPER WEIGHT (g) TOTAL WEIGHT (g) MATERIAL THICKNESS (mm) MAX AMBIENT TEMPERATURE (°C) CONDUCTOR MIN/MAX CSA (mm²) INSULATION MIN/MAX OD (mm) MATING PARTS FORD PART NO. SUPPLIER PART NO. W₁ ±0.2 (mm) W₂ ±0.2 (mm) H₁ ±0.2 (mm) R₁ ±0.15 (mm) R₂ ±0.15 (mm) L ±0.2 (mm)

EUST-14474-BAA B240-0477 2.8mm UNSEALED FEMALE SS-TYPE N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.52 0.52 0.3±0.02 125 0.35 1.20-1.63 EUST-14421-HA B230-5303 2.4 3.2 2.1 2.7 0.6 0.7 6.5

EUST-14474-EA B240-0423 2.8mm UNSEALED FEMALE S-TYPE N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.53 0.53 0.3±0.02 125 0.5/1.0 1.40-2.10 EUST-1421-AA B230-5257 3.2 3.8 2.8 3.2 0.9 0.87

EUST-14474-FA B240-0424 2.8mm UNSEALED FEMALE M-TYPE N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.57 0.57 0.3±0.02 125 15/2.5 2.09-3.00 EUST-14421-BA B230-5256 4.2 4.7 3.7 4.0 1.25 1.125 9.6

EUST-14474-GA B240-0425 2.8mm UNSEALED FEMALE L-TYPE N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.59 0.59 0.3±0.02 125 3.0 3.04-3.20 EUST-14421-CA B230-5256 4.4 5.2 3.9 4.6 1.3 1.6

EUST-14474-HA B240-0426 2.8mm UNSEALED FEMALE X-TYPE N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.63 0.63 0.3±0.02 125 5.0 3.40-3.88 EUST-14421-DA B230-5260 5.7 6.4 5.3 5.8 1.7 2.0

EUST-14474-JA B240-0427 2.8mm UNSEALED FEMALE DOUBLE CRIMP N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.59 0.59 0.3±0.02 125 0.8 1.86-2.02 EUST-14421-DA B230-5260 4.6 6.6 3.3 4.2 0.75 1.275

EUST-14474-KB B240-0518 2.8mm SEALED FEMALE S-TYPE N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.53 0.53 0.3±0.02 125 0.5/1.0 1.40-2.79 EUST-14421-AA B230-5257 3.2 5.1 2.8 5.05 0.9 1.5

EUST-14474-LB B240-0519 2.8mm SEALED FEMALE M-TYPE N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.57 0.57 0.3±0.02 125 15/2.5 2.18-3.43 EUST-14421-BA B230-5256 4.2 6.1 3.7 5.0 1.25 1.9

EUST-14474-MB B240-0430 2.8mm SEALED FEMALE L-TYPE N CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.59 0.59 0.3±0.02 125 3.0 3.10-3.94 EUST-14421-CA B230-5256 5.3 6.6 4.9 6.05 1.55 2.15

EUST-14474-NB B240-0620 2.8mm SEALED FEMALE S-TYPE WITH GREASE Y(768G) CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.53 0.53 0.3±0.02 125 0.5/1.0 1.40-2.13 EUST-14421-AA B230-5257 3.2 5.1 2.8 5.05 0.9 1.5

EUST-14474-PB B240-0621 2.8mm SEALED FEMALE M-TYPE WITH GREASE Y(768G) CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.57 0.57 0.3±0.02 125 15/2.5 2.18-3.43 EUST-14421-BA B230-5256 4.2 6.1 3.7 5.0 1.25 1.9

EUST-14474-RB B240-0622 2.8mm SEALED FEMALE L-TYPE WITH GREASE Y(768G) CAC60-H Sn 0.8-1.5 Cu MAX 0.3 0.59 0.59 0.3±0.02 125 3.0 3.10-3.94 EUST-14421-CA B230-5256 5.3 6.6 4.9 6.05 1.55 2.15

EUST-14474-SB B240-0520 2.8mm SEALED FEMALE S-TYPE AG PLATING N CAC60-H Sn/Ag 0.8-1.5 Cu MAX 0.3 0.53 0.53 0.3±0.02 150 0.5/1.0 1.40-2.79 EUST-14421-AA B230-5257 3.2 5.1 2.8 5.05 0.9 1.5

EUST-14474-TB B240-0521 2.8mm SEALED FEMALE M-TYPE AG PLATING N CAC60-H Sn/Ag 0.8-1.5 Cu MAX 0.3 0.57 0.57 0.3±0.02 150 15/2.5 2.18-3.43 EUST-14421-BA B230-5256 4.2 6.1 3.7 5.0 1.25 1.9

EUST-14474-UA B240-0436 2.8mm SEALED FEMALE L-TYPE AG PLATING N CAC60-H Sn/Ag 0.8-1.5 Cu MAX 0.3 0.59 0.59 0.3±0.02 150 3.0 3.11-3.94 EUST-14421-CA B230-5256 5.3 6.6 4.9 6.05 1.55 2.15

ISOMETRIC VIEW SCALE 1:1

14 13 12 11 10 9 8 7 6 5 4 3 2 1

SECTION B-B (DOUBLE CRIMP) SECTION C-C (DOUBLE CRIMP) SECTION B-B SECTION C-C

SECTION A-A

SECTION D-D SECTION E-E

CRIMP INFORMATION (FOR REFERENCE ONLY)

TERMINAL CRIMP AND GRIP REFERENCE TABLE (UNSEALED)

TERMINAL CRIMP AND GRIP REFERENCE TABLE (SEALED)

ROUND CAVITY

GENERAL TOLERANCES OVER LESS THAN

CAD TYPE CAD LOC. DATA CAD FILE

DESIGN CH. CHAN DETAIL CH. CHAN TITLE

CHECKED SAFETY

SCALE DATE DIVISION

5:1 20120907 PLANT

EUST-14474-EA EUST-14474-LB EUST-14474-TB EUST-14474-KB EUST-14474-GB EUST-14474-PB EUST-14474-RB EUST-14474-SB EUST-14474-TB EUST-14474-KB EUST-14474-GB EUST-14474-PB EUST-14474-RB EUST-14474-SB EUST-14474-TB EUST-14474-KB EUST-14474-GB EUST-14474-PB EUST-14474-RB EUST-14474-SB

TRMNL WIR SNF ON FEM

Sheet 1 of 3

Form Motor Company

Sumitomo Electric Wiring Systems, INC.-Components Division

PROCESS FLOW DIAGRAM

PRODUCT : Various Metal Stamping Parts
PROCESS: Metal Stamping

KEY CONTACT/DEPT. LOC. Debbie Gillenwater/L. Roth -QA Dept.
PHONE (270) 237-5419 X8583 & 8201 FAX (270) 237-4653

SUPPLIER APPROVALS:
General Plant Manager/Above:

Supplier/Loc. SEWS-Scottsville#5

Mfg. Sup.: K. Chapman

Prepared By: Dean Karteskindt QA Engineer

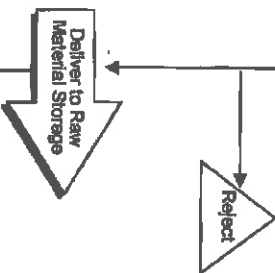
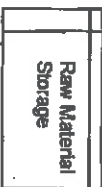
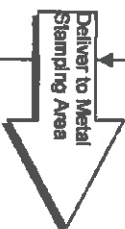
04.10.14	Revised set-up operation & characteristics	D. Gillenwater
02.25.14	Revised terminology to match PPMEACP	D. Gillenwater
12.13.13	Remove sections 110, 120 and 150.	L.R., J.F., D.G.
5.12.11	Remove In-Line Terminal Clean/Supervisor Audit	L. Roth, K. Chapman
8/31/06	Removed the name of cleaning sub-contractor	D. Karteskindt
4/1/05	GLOBAL QUALITY & ORG UPDATES	D. Karteskindt, K.
2/17/05	FORMAT CHANGES/UPDATED INFO	D. Karteskindt
2/9/00	ISSUED WITH FORMAT CHANGES	T. DAY
6/04/99	ISSUED W/ FORMAT CHANGES/UPDATES	T. GRAVIL, D. LYONS,
DATE	CHANGE POINTS	CORE/DEV. TEAM

Manufacturing Manager/Above:
K. Chapman
Quality Manager/Above:
Debbie Gillenwater
Customer Approval if required:

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OPER #	CI #	OPERATION DESCRIPTION	PROCESS FLOW						KEY CHARACTERISTICS	
0010	#	Raw Material Receiving (Metal Coils)							Visual Comparison Against Packing List Shipping-Receiving Red Tag Procedure	
0020	#	Raw Material Receiving Inspection							Per Inspection Instruction Sheet-Receiving Per Inspection Instruction Sheet-Receiving Per Inspection Instruction Sheet-Receiving	

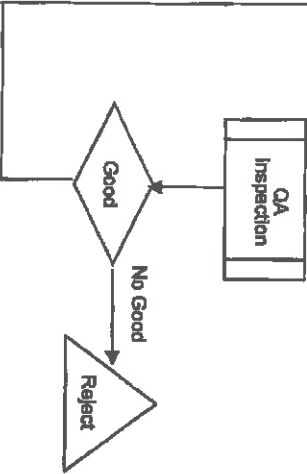
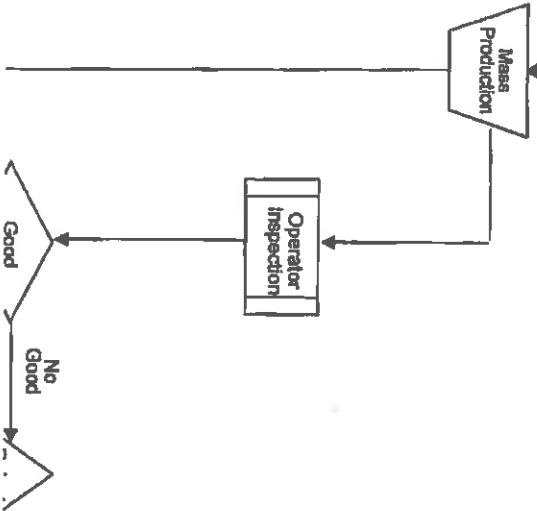
Sumitomo Electric Wiring Systems,INC.-Components Division

 PART AS REQ'D		 PART AS REQ'D		 OPERATION		 INSPECTION		 OPERATION/ INSPECTION		 STORAGE		 DELAY		 TRANSPORTATION		 OPERATION STEP		 OPERATOR			
OPER #	CI #	OPERATION DESCRIPTION						PROCESS FLOW										KEY CHARACTERISTICS			
		Characteristics																Per Inspection Instruction Sheet-Receiving			
		Reject																Red Tag Procedure			
0030		Raw Material Storage																Per Raw Material Lot Control Sheet			
0040		Metal Stamping Loading Raw Material																Per Raw Material Lot Control Sheet Per Shop Order and Barcode confirmation			

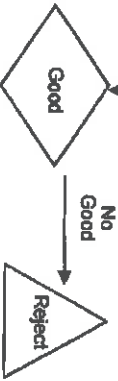
Sumitomo Electric Wiring Systems,INC.-Components Division

OPER #	CI #	OPERATION DESCRIPTION	PROCESS FLOW	KEY CHARACTERISTICS
 PART AND ASSY	 PART REQD	 OPERATION	 INSPECTION	 OPERATION/INSPECTION
 STORAGE	 DELAY	 TRANSPORTATION	 OPERATION STEP	 OPERATOR
0050		Metal Stamping Die/Machine Set-up Machine/Die PM Raw Material Machine Number Tool / Die Number Safety Checks Material Straightner Raw Material Vision System In-Line / Vision Inspection System Winder Set-Up	 	Per Shop Order & Barcode scanning Per Maintenance Schedule Per Shop Order & Barcode scanning Per Production Schedule Per Shop Order Per Daily Machine Check Per Material Straightner set-up Per Raw Material Vision set-up Per In-Line Inspection Set-Up and Vision System Set-up Per Winder Set-up Sheet
0060		Manufacturing Initial Inspection (Start Up)		# Part Appearance/Dimension/Function per Visual Inspection and Terminal Inspection Sheets

Sumitomo Electric Wiring Systems, INC.-Components Division

 PART ASSTD	 PART AS RECTD	 OPERATION	 INSPECTION	 OPERATION/INSPECTION	 STORAGE	 DELAY	 TRANSPORTATION	 OPERATION STEP	 OPERATOR
OPER #	CI #	OPERATION DESCRIPTION	PROCESS FLOW				KEY CHARACTERISTICS		
0070	#	Quality Assurance Inspection (Mass Production)					# Part Appearance/Dimension/Function per Visual Inspection and Terminal Inspection Sheets Per Red Tag Procedure Per Defective Terminal Procedure, Backtrack & Recall Procedure		
0080		Metal Stamping Production Checks (Manufacturing)					# Part Appearance/Dimension/Function per Visual Inspection and Terminal Inspection Sheets Stop Production- Make Adjustments, Reverify or Die Sent to Maintenance		

Sumitomo Electric Wiring Systems, INC.-Components Division

 PART AS ASSTY	 PART AS RECTD	 OPERATION	 INSPECTION	 OPERATION/ INSPECTION	 STORAGE	 DELAY	 TRANSPORTATION	 OPERATION STEP	 OPERATOR	
OPER #	CI #	OPERATION DESCRIPTION	PROCESS FLOW						KEY CHARACTERISTICS	
									Per Red Tag Procedure Per Defective Terminal Procedure, Backtrack & Recall Procedure	
0090		QA / Set Up Critical Defect Inspection Point to Change Point							# Part Appearance/Dimension/Function per Global Quality Standard Per Red Tag Procedure Per Defective Terminal Procedure, Backtrack & Recall Procedure	
0100		Finished Product Packing / Labeling							Per Operator Check Sheet	
0130		Finished Goods Storage							Per BPCS Electronic System	

Sumitomo Electric Wiring Systems, INC.-Components Division

PART AS REQD PART AS REQD OPERATION INSPECTION OPERATION / INSPECTION STORAGE DELAY TRANSPORTATION OPERATION STEP OPERATOR	OPER #	CI #	OPERATION DESCRIPTION	PROCESS FLOW	KEY CHARACTERISTICS
	0140		Warehouse Stock Assessment	Stock Assessment Finished Goods/Shipping Shipped to Customer	Per Weekly Stock Assessment Sheet
	0160		Shipping Finished Goods		Shipping Label Per BPCS Electronic System
	0170		Annual Layouts	Part Layout	Per Customer Drawing/Request

Sumitomo Electric Wiring Systems, Inc

Gage R&R Study

5/4/2015

1

Study Date 5/4/2015 Company Part No.: HW09-RET-06
 Gage ID 0003437 Part No.:
 Gage Desc 0 - 200 Caliper Part Desc.: HW09-RET-06
 Appraisers 3 Trials 3 Parts 10 Characteristic Length
 Study Type Long-AIAG Specification Limits Min 19.6 Max 20.2
 MSA Version 4 ☒ Approved Pp (or Ppk) Target: 6-Sigma Proc Variation

	Appr A Karen			Appr B Tabitha			Appr C Toni		
1	20.05	20.03	20.05	20.04	20.04	20.04	20.03	20.03	20.03
2	20.01	20.01	20.01	20.01	20.02	20.01	20.03	20.03	20.03
3	19.61	19.63	19.61	19.63	19.62	19.63	19.62	19.64	19.64
4	20.04	20.05	20.05	20.04	20.01	20.04	20.05	20.05	20.06
5	19.75	19.77	19.74	19.76	19.73	19.73	19.75	19.75	19.75
6	20.04	20.04	20.02	20.04	20.03	20.04	20.04	20.05	20.05
7	20.03	20.05	20.05	20.05	20.05	20.06	20.04	20.05	20.06
8	19.64	19.62	19.62	19.61	19.62	19.62	19.62	19.63	19.63
9	20.04	20.05	20.03	20.03	20.04	20.06	20.08	20.06	20.08
10	19.62	19.61	19.61	19.62	19.63	19.62	19.63	19.62	19.62

		% Contribution	% TV	% Tol		
Repeatability (EV)	0.008271	0.37%	6.1%	8.3%	R bar	0.014000
Reproducibility (AV)	0.004643	0.12%	3.4%	4.6%	UCL-R	0.036120
Appraiser x Part (INT)					Study Variation	0.136308
GRR	0.009485	0.48%	7.0%	9.5%	Total Variation (TV)	0.136308
Part-to-Part (PV)	0.135977	99.52%	99.8%	99.5%	Tolerance/6 (Tol):	0.1
number of distinct categories			20.2	14.8		

* Limit of individual R's (range values). An (*) is used to identify those sets of measurements that have a Range value that exceeds the UCL-R limit value. Correct by repeating those readings using the same appraiser and part or discard the values and recalculate the study results and the value UCL-R.

Comments

Approved by

[Signature]

Date

5/4/15

Gage R&R Study

Gage R&R Analysis Sheet

Study Date 5/4/2015 Gage ID 0003437 Gage Desc 0 - 200 Caliper Appraisers 3 Trials 3 Study Type Long-AIAG 4		Company Part No.: HW09-RET-06 Part No. Part Desc HW09-RET-06 Characteristic Length Specification Limits 19.6 20.2 6 Sigma Proc Var Pp (or Ppk) Target: Rp = 0.432222 Tol/6 = 0.100000																					
R bar A = 0.017000 X bar A = 19.882667 R bar B = 0.015000 X bar B = 19.882333 R bar C = 0.010000 X bar C = 19.891667 R bar = 0.014000 X bar Diff = 0.009333																							
Measurement Unit Analysis		% Total Variation (TV)	% Tolerance																				
Repeatability - Equipment Variation (EV) $EV = R \text{ bar} \times K1$ $= 0.008271$ <table border="1" style="display: inline-table; margin-left: 20px;"> <tr><td>Trials</td><td>K1</td></tr> <tr><td>2</td><td>0.8862</td></tr> <tr><td>3</td><td>0.5908</td></tr> </table>		Trials	K1	2	0.8862	3	0.5908	$\% EV = 100 [EV / TV]$ $= 6.1\%$	$\% EV = 100 [EV / (Tol / 6)]$ $= 8.3\%$														
Trials	K1																						
2	0.8862																						
3	0.5908																						
Reproducibility - Appraiser Variation (AV) $AV = \sqrt{[(X \text{ bar Diff} \times K2)^2 - (EV^2 / n \times r)]}$ $= 0.004843$ <table border="1" style="display: inline-table; margin-left: 20px;"> <tr><td>Appraisers</td><td>2</td><td>3</td></tr> <tr><td>K2</td><td>0.7071</td><td>0.5231</td></tr> </table> Note: If a negative value is calculated under the square root sign, AV defaults to zero. n = number of parts r = number of trials		Appraisers	2	3	K2	0.7071	0.5231	$\% AV = 100 [AV / TV]$ $= 3.4\%$	$\% AV = 100 [AV / (Tol / 6)]$ $= 4.6\%$														
Appraisers	2	3																					
K2	0.7071	0.5231																					
Repeatability & Reproducibility (GRR) $GRR = \sqrt{(EV^2 + AV^2)}$ $= 0.009485$		$\% GRR = 100 [GRR / TV]$ $= 7.0\%$	$\% GRR = 100 [GRR / (Tol / 6)]$ $= 9.5\%$																				
Part Variation (PV) $PV = R_p \times K3$ $= 0.135977$	<table border="1" style="font-size: x-small;"> <tr><td>Parts</td><td>K3</td></tr> <tr><td>2</td><td>0.7071</td></tr> <tr><td>3</td><td>0.5231</td></tr> <tr><td>4</td><td>0.4467</td></tr> <tr><td>5</td><td>0.4030</td></tr> <tr><td>6</td><td>0.3742</td></tr> <tr><td>7</td><td>0.3534</td></tr> <tr><td>8</td><td>0.3375</td></tr> <tr><td>9</td><td>0.3249</td></tr> <tr><td>10</td><td>0.3146</td></tr> </table>	Parts	K3	2	0.7071	3	0.5231	4	0.4467	5	0.4030	6	0.3742	7	0.3534	8	0.3375	9	0.3249	10	0.3146	$\% PV = 100 [PV / TV]$ $= 99.8\%$	$\% PV = 100 [PV / (Tol / 6)]$ $= 99.5\%$
Parts	K3																						
2	0.7071																						
3	0.5231																						
4	0.4467																						
5	0.4030																						
6	0.3742																						
7	0.3534																						
8	0.3375																						
9	0.3249																						
10	0.3146																						
		$ndc = 1.41(PV/GRR)$ $= 20.2$																					
Total Variation (TV) $TV = \sqrt{(GRR^2 + PV^2)}$ $= 0.136308$		If the 6 sigma process variation is known, then $TV = [6 \text{ sigma process variation}] / 6.00$ and $PV = \text{SQRT}[(TV^2) - (GRR^2)]$.																					

Approved by

[Signature]

Date

5/4/15

Gage R&R Study

DaimlerChrysler



Production Part Approval Dimensional Test Results

ORGANIZATION: SUMITOMO ELECTRIC WIRING SYSTEMS

SUPPLIER/VENDOR CODE:

NAME OF INSPECTION FACILITY:

Sumitomo Electric Wiring Systems PIL 5

PART NUMBER: 8240-0423

PART NAME: TER-US280FS-SN

DESIGN RECORD CHANGE LEVEL:

ENGINEERING CHANGE DOCUMENTS:

EU5T-14474-EA E5

02/18/16

NA

ITEM	DIMENSION / SPECIFICATION	SPECIFICATION / LIMITS		TEST DATE	QTY. TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)								OK	NOT OK
						SE1	SE1	SE1	SE2	SE2	SE2				
1	3.20	-0.20	0.20	5/31/18	6	3.25	3.25	3.25	3.28	3.28	3.28			O	
2	0.90	-0.20	0.20			0.89	0.90	0.90	0.92	0.94	0.93			O	
3	3.80	-0.20	0.20			3.89	3.88	3.88	3.85	3.85	3.85			O	
4	0.875	-0.20	0.20			0.87	0.88	0.84	0.85	0.86	0.90			O	
5	4.30	-0.20	0.20			4.26	4.26	4.26	4.28	4.28	4.28			O	
6	2.95	-0.20	0.20			2.93	2.93	2.93	2.93	2.93	2.93			O	
7	19.20	-0.30	0.30			19.08	19.10	19.08	19.16	19.15	19.15			O	
8	9.60	-0.20	0.20			9.54	9.56	9.55	9.52	9.52	9.52			O	
9	6.60	-0.20	0.20			6.56	6.58	6.58	6.58	6.57	6.58			O	
10	3.50	-0.20	0.20			3.52	3.51	3.52	3.52	3.52	3.52			O	
11	1.40	-0.20	0.20			1.30	1.31	1.30	1.30	1.30	1.30			O	
12	1.20	-0.20	0.20			1.20	1.21	1.21	1.22	1.20	1.22			O	
13	2.50	-0.20	0.20			2.54	2.54	2.54	2.50	2.50	2.50			O	
14	1.50	-0.20	0.20			1.52	1.52	1.52	1.52	1.52	1.52			O	
15	14.60	-0.30	0.30			14.60	14.60	14.59	14.60	14.58	14.60			O	
16	3.50	-0.10	0.00			3.49	3.49	3.49	3.47	3.47	3.47			O	
	3.50	-0.10	0.00			3.49	3.49	3.49	3.46	3.46	3.47			O	
17	2.20	-0.20	0.20			2.28	2.27	2.27	2.22	2.22	2.22			O	
18	3.00	-0.20	0.20			3.00	3.00	3.00	3.00	3.00	3.00			O	
NOTE:															
19 PARTS CONFORM TO ALL APPLICABLE SECTION OF						CORRECT								O	
20 SAE/USCAR-2 REV5, SAE/USCAR-12 REV2, SAE/USCAR-21, FORD SDS VER 21.						CORRECT								O	
21 MAXIMUM MATING FORCE FOR SINGLE UNSEALED Sn TERMINAL IS 5.7N															
22 Sn/Ag IS 6.9N, MAXIMUM MATING FORCE FOR SINGLE SEALED Sn TERMINAL															
23 IS 6.7N, Sn/Ag IS 8.2N.						CORRECT								O	
24 CAVITY SPECIFICATIONS, SEE SHEET #2.						CORRECT								O	
A) USCAR2 REV5 SEALED CONNECTOR SYSTEM ENVIRONMENTAL 5.9.7															
B) SDS 3.2 NOTE 3, FULL FORCES REQUIREMENTS															
C) USCAR21 REV 2.0 REQUIREMENTS EXCEPT 4.2.5, 9.B															
23 * INDICATES NOT PPAP APPROVED.						CORRECT								O	
24 GREASE TYPE IS NYE 768G.						N/A								O	

Blanket statements of conformance are unacceptable for any test results.

SIGNATURE

Robin Casada

TITLE

PPAP/SQA Leader

DATE

5/31/2018

MESSRS

PN 8240-0423

ORDER
SHINSHO CORPORATION NAGOYA SHITEN

DATA OF INSPECTION

No. 2-3F3976- 10 (6)

CUSTOMER
SUMITOMO ELECTRIC WIRING SYSTEMS, IN

COMMODITY TRCA60 STRIP

DATE 2018-04-10

SPECIFICATION						MANUFACTURING No.		SIZE OF ARTICLE					ORDER QUANTITY		MASS	
5-4255BA TRCA60 H						2-58315		0.3 X 54.4 XCOIL								
TEST ITEM REQUIREMENT	TEST PIECE (mm)			TENSION TEST			BENDING TEST	HARD-NESS HV	SPRING LIMIT	ELECT. CONDUCT % IACS	BENDING (T)	COPPER (MICRO)		TIN (MICRO)		
	G-LENGTH	THICKNESS	OUT DIA OR WIDTH	TENSILE STRENGTH (N/MM2)	YIELD STRENGTH (N/MM2)	ELONGATION %						A	B	A	B	
CHARGE No.	LOT No.			630. MIN 680. MAX		10. MIN 14.9 MAX	180 R= 0.6	180 220	350 MIN	40 MIN	180 -0.6T	0.3 MAX	0.8 -1.5			
C0877	32289	-2-1		645		14.9	GOOD	198.0	503	44.7	GOOD	0	0	1.1	0.9	
"	"	-2-2		647		15.2	GOOD	199.0			GOOD	0	0	0.9	1.0	
							SOLDER-BILITY %	PEELING TEST								
							95 MIN									
	32289	-2-1					GOOD	GOOD								
"	"	-2-2					GOOD	GOOD								
CHEMICAL COMPOSITION (%)																
REQUIREMENT	NI	SI	ZN	SN	CU									APPEARANCE		
	1.0 MIN 3.0 MAX	0.2 MIN 0.6 MAX	1.5 MAX	0.3 MAX	RE									MEASUREMENT	GOOD	
CHARGE No.														SURFACE		
(6457) C0877	1.79	0.40	1.10	0.10	RE											

CPK DATA

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ORGANIZATION: SUMITOMO ELECTRIC WIRING SYSTEMS (PLT.5)

PART Name/Desc: TER-US280FS-SNPART NO (s): 8240-0423Mold #: TD076-STested by/Date: Robin Casada 4/13/2015Design Rec. Change level/date: EU5T-14474-EA 12/3/13Eng. Change Documents: NA

CAVITY #:

SE1	4.30		2.95		19.20			SE2	4.30		2.95		19.20		
	+0.20	-0.20	+0.20	-0.20	+0.30	-0.30			+0.20	-0.20	+0.20	-0.20	+0.30	-0.30	
1	4.21		2.91		19.07				4.25		2.91		19.08		
2	4.22		2.91		19.09				4.25		2.91		19.08		
3	4.22		2.91		19.09				4.25		2.91		19.09		
4	4.21		2.91		19.08				4.24		2.91		19.08		
5	4.22		2.91		19.09				4.25		2.91		19.08		
6	4.22		2.91		19.08				4.24		2.91		19.10		
7	4.21		2.91		19.07				4.23		2.91		19.09		
8	4.22		2.91		19.09				4.24		2.91		19.08		
9	4.22		2.91		19.07				4.24		2.91		19.09		
10	4.21		2.91		19.09				4.25		2.91		19.09		
11	4.22		2.91		19.09				4.25		2.91		19.10		
12	4.21		2.91		19.08				4.25		2.91		19.08		
13	4.21		2.91		19.08				4.25		2.91		19.08		
14	4.21		2.91		19.08				4.25		2.91		19.07		
15	4.21		2.91		19.09				4.25		2.91		19.08		
16	4.22		2.91		19.08				4.25		2.91		19.09		
17	4.21		2.91		19.07				4.25		2.91		19.08		
18	4.21		2.91		19.09				4.25		2.91		19.09		
19	4.21		2.91		19.09				4.24		2.91		19.08		
20	4.21		2.91		19.08				4.25		2.91		19.08		
21	4.21		2.91		19.07				4.25		2.91		19.07		
22	4.21		2.91		19.09				4.25		2.91		19.09		
23	4.21		2.91		19.09				4.25		2.91		19.09		
24	4.22		2.91		19.08				4.25		2.91		19.07		
25	4.21		2.91		19.08				4.25		2.91		19.10		
26	4.21		2.91		19.08				4.25		2.91		19.09		
27	4.21		2.91		19.08				4.24		2.91		19.09		
28	4.21		2.91		19.07				4.25		2.91		19.10		
29	4.21		2.91		19.08				4.25		2.91		19.08		
30	4.22		2.91		19.08				4.25		2.91		19.09		

CPK DATA

ORGANIZATION: SUMITOMO ELECTRIC WIRING SYSTEMS (PLT.5)

Tested by/Date: Robin Casada 4/13/2015

PART Name/Desc: TER-US280FS-SN

Design Rec. Change level/date:

PART NO (s): 8240-0423

EU5T-14474-EA  12/3/13

Mold #: TD076-S

Eng. Change Documents: NA

CAVITY #1

SE1	4.30		2.95		19.20		SE2	4.30		2.95		19.20	
	+0.20	-0.20	+0.20	-0.20	+0.30	-0.30		+0.20	-0.20	+0.20	-0.20	+0.30	-0.30
31	4.21		2.91		19.07			4.25		2.91		19.09	
32	4.21		2.91		19.08			4.25		2.91		19.10	
33	4.22		2.91		19.09			4.24		2.91		19.09	
34	4.21		2.91		19.09			4.25		2.91		19.08	
35	4.21		2.91		19.09			4.25		2.91		19.07	
36	4.21		2.91		19.09			4.25		2.91		19.09	
37	4.22		2.91		19.10			4.24		2.91		19.07	
38	4.21		2.91		19.08			4.24		2.91		19.10	
39	4.21		2.91		19.08			4.25		2.91		19.08	
40	4.21		2.90		19.09			4.24		2.91		19.10	
41	4.21		2.91		19.09			4.25		2.91		19.08	
42	4.21		2.91		19.10			4.24		2.91		19.08	
43	4.21		2.91		19.09			4.24		2.91		19.10	
44	4.21		2.91		19.07			4.24		2.91		19.10	
45	4.21		2.91		19.09			4.24		2.91		19.09	
46	4.21		2.91		19.09			4.24		2.91		19.08	
47	4.21		2.91		19.10			4.25		2.91		19.07	
48	4.21		2.91		19.08			4.24		2.90		19.08	
49	4.10		2.91		19.08			4.24		2.91		19.09	
50	4.21		2.91		19.07			4.24		2.91		19.11	
51	4.21		2.91		19.09			4.25		2.91		19.09	
52	4.21		2.91		19.08			4.25		2.91		19.10	
53	4.21		2.91		19.09			4.25		2.91		19.10	
54	4.21		2.91		19.08			4.24		2.91		19.09	
55	4.21		2.91		19.09			4.24		2.91		19.11	
56	4.21		2.91		19.08			4.25		2.91		19.10	
57	4.21		2.91		19.09			4.24		2.91		19.10	
58	4.22		2.91		19.09			4.25		2.91		19.09	
59	4.21		2.91		19.08			4.24		2.91		19.10	
60	4.21		2.91		19.08			4.24		2.91		19.10	

CPK DATA

ORGANIZATION: SUMITOMO ELECTRIC WIRING SYSTEMS (PLT.5)

Tested by/Date: Robin Casada 4/13/2015

PART Name/Desc: TER-US280FS-SN

Design Rec. Change level/date:

PART NO (s): 8240-0423

EU5T-14474-EA Δ 12/3/13

Mold #: TD076-S

Eng. Change Documents: NA

CAVITY #↓

SE1	4.30		2.95		19.20			SE2	4.30		2.95		19.20		
	+0.20	-0.20	+0.20	-0.20	+0.30	-0.30			+0.20	-0.20	+0.20	-0.20	+0.30	-0.30	
61	4.21		2.90		19.09				4.25		2.91		19.10		
62	4.21		2.91		19.08				4.25		2.91		19.08		
63	4.21		2.91		19.08				4.25		2.91		19.09		
64	4.21		2.91		19.10				4.24		2.91		19.10		
65	4.22		2.91		19.08				4.25		2.91		19.10		
66	4.21		2.91		19.09				4.25		2.91		19.08		
67	4.21		2.91		19.10				4.25		2.91		19.09		
68	4.21		2.91		19.08				4.25		2.91		19.10		
69	4.21		2.91		19.08				4.24		2.91		19.08		
70	4.21		2.91		19.08				4.24		2.91		19.10		
71	4.21		2.91		19.08				4.25		2.91		19.08		
72	4.21		2.91		19.09				4.25		2.91		19.10		
73	4.21		2.91		19.08				4.24		2.91		19.09		
74	4.22		2.91		19.08				4.24		2.91		19.09		
75	4.21		2.91		19.07				4.25		2.91		19.09		
76	4.21		2.91		19.19				4.25		2.91		19.10		
77	4.21		2.91		19.08				4.24		2.91		19.09		
78	4.21		2.91		19.09				4.24		2.91		19.08		
79	4.21		2.91		19.07				4.25		2.91		19.09		
80	4.21		2.91		19.07				4.25		2.91		19.09		
81	4.21		2.91		19.09				4.25		2.91		19.08		
82	4.22		2.91		19.07				4.24		2.91		19.10		
83	4.21		2.91		19.09				4.24		2.90		19.09		
84	4.21		2.91		19.07				4.24		2.91		19.09		
85	4.21		2.91		19.10				4.25		2.91		19.08		
86	4.21		2.91		19.08				4.25		2.91		19.09		
87	4.21		2.91		19.08				4.24		2.91		19.09		
88	4.21		2.91		19.09				4.24		2.91		19.09		
89	4.21		2.91		19.08				4.25		2.91		19.08		
90	4.21		2.91		19.09				4.24		2.91		19.07		

CPK DATA

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ORGANIZATION: SUMITOMO ELECTRIC WIRING SYSTEMS (PLT.5)

PART Name/Desc: **TER-US280FS-SN**PART NO (s): **8240-0423**Mold #: **TD076-S**Tested by/Date: Robin Casada 4/13/2015Design Rec. Change level/date: EU5T-14474-EA D6 12/3/13Eng. Change Documents: NACAVITY #: **1**

SE1	4.30		2.95		19.20		SE2	4.30		2.95		19.20	
	+0.20	-0.20	+0.20	-0.20	+0.30	-0.30		+0.20	-0.20	+0.20	-0.20	+0.30	-0.30
91	4.21		2.91		19.08			4.25		2.91		19.09	
92	4.21		2.91		19.08			4.25		2.91		19.08	
93	4.21		2.91		19.08			4.24		2.91		19.08	
94	4.21		2.91		19.09			4.25		2.91		19.10	
95	4.21		2.91		19.08			4.25		2.91		19.10	
96	4.21		2.91		19.10			4.25		2.91		19.08	
97	4.21		2.91		19.09			4.24		2.91		19.09	
98	4.21		2.91		19.10			4.24		2.91		19.08	
99	4.21		2.91		19.09			4.25		2.91		19.10	
100	4.21		2.91		19.10			4.24		2.91		19.07	

average 4.21 2.91 19.09
 minimum 4.10 2.90 19.07
 maximum 4.22 2.91 19.19
 range 0.12 0.01 0.12
 std dev 0.01 0.00 0.01

4.25 2.91 19.09
 4.23 2.90 19.07
 4.25 2.91 19.11
 0.02 0.01 0.04
 0.01 0.00 0.01

LSL 4.10 2.75 18.90
 NOM 4.30 2.95 19.20
 USL 4.50 3.15 19.50

4.10 2.75 18.90
 4.30 2.95 19.20
 4.50 3.15 19.50

CPK 3.133970853 37.85690296 4.563262702

9.418487454 37.85690296 6.464141077

WORK INSTRUCTION

AREA:	QUALITY ASSURANCE LAB
TITLE	LABORATORY SCOPE - SCOTTSVILLE (SV5 & SV5 Building 2)

PURPOSE: To summarize the testing capabilities available at Scottsville Plant (SV5 & Building 2), and to clarify the equipment, tests performed, standards, recording method and reaction plan.	APPLICATION: Scottsville (SV5 & Building 2)
	RULE ENFORCER: QA Coordinator / Above

SV5 Tests Performed

TESTS PERFORMED	EQUIPMENT USED	TEST METHODS / STANDARD	RECORDING METHOD	REACTION METHOD
Melt Flow Rate	Tinius Olsen Extrusion Plastometer	QRW - MELTFLOW	Melt Index Record	Reject Tag Procedure
Waterproof Test	Waterproof Tester	QAW - WATERPROOFTST	Inspection Data Sheet	Reject Tag Procedure
Moisture Analysis (Reference Only)	Moisture Tester	F-A-SV5-010	Moisture Test Data Sheet	Reject Tag Procedure
Insertion / Retention Testing	Force Gage	QAW - INSERTRETPROC	Inspection Data Sheet	Reject Tag Procedure
Dimensional Measurement	Profile / Caliper / Micrometer / Depth Gage	Inspection Instruction Sheet	Inspection Data Sheet	Reject Tag Procedure
Part Weight	Scale	Inspection Instruction Sheet	Inspection Data Sheet	Reject Tag Procedure
Freeze Test	Freezer	SWS Inspection Standard	Inspection Data Sheet	Reject Tag Procedure

SV5 (Building 2) Tests Performed

TESTS PERFORMED	EQUIPMENT USED	TEST METHODS / STANDARD	RECORDING METHOD	REACTION METHOD
Hardness Test	Hardness Tester	H-A-001	Hardness Test Data Sheet	Reject Tag Procedure
Insertion / Retention Test	Force Gage	QAW - INSERTRETPROC	Inspection Data Sheet	Reject Tag Procedure
Contact Force Test	Contact Force Gage	MSW-Force Gage	Inspection Data Sheet	Reject Tag Procedure
Dimensional Measurement	Profile / Keyence System / OGP / Caliper / Micrometer / Depth Gage / Slip Gages	SWS Inspection Standard	Inspection Data Sheet	Reject Tag Procedure

WORK INSTRUCTION

AREA:	QUALITY ASSURANCE LAB
TITLE	LABORATORY SCOPE - SCOTTSVILLE (SV5 & SV5 Building 2)

Equipment Calibrations

	EQUIPMENT USED	TEST METHODS / STANDARD	RECORDING METHOD	REACTION METHOD
Calipers, Micrometers, Depth Gages, Weigh Scales, other process tools/jigs.	Certified Gages (Gage Blocks & Weights)	Per Calibration Procedure	Calibration Record and Gagetrak	Reject Tag Procedure
Force Gages	Certified Weights			
Freezer	Certified Meter			
Melt Indexer	Outside Vendor			
Moisture Analyzer	Outside Vendor			
Water Pressure Gage	Outside Vendor			
Hardness Tester	Outside Vendor			
Optical Comparator (Profile)	Outside Vendor			
Keyence Measurement Scope	Outside Vendor			
OGP	Outside Vendor			