CPI Shear Bolt WEJTAP™ Product Expansion
Now with a Captive Interface

Topics

- **What is wedge technology and why use it?**
- **The nuts and bolts of Fired-On and Bolted**
- **Introducing Captive Interface**

What is a Wedge Connector?

- Wedge connectors use a wedge to apply pressure between two conductors inside a C Body
- The most common WEDGE systems today are
  - **Fired-On**
  - **Bolted**
- Fired-on systems utilize a special tool that uses a specialized powder charge that forces the wedge between the conductors in a short period of time (<.01 seconds)

- Bolted wedge systems use a bolt to drive the wedge between the conductors, an interface, and the C body slowly

Fired-on vs Bolted Wedge Technology

BURNDY WEJTAP

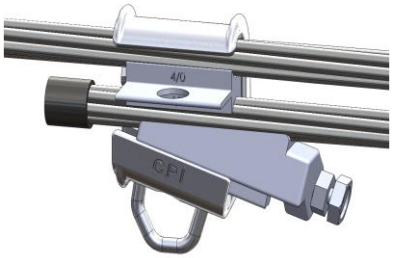
Connector

Firing Tool

Booster

- ***Reliable***
- ***Removable***
- ***AA ANSI heat cycle***
- ***Visual indicator***
- ***Utilizes tooling with safety redundancies***
- ***Lower resistance in ANSI testing***

CPI BOLTED WEJTAP



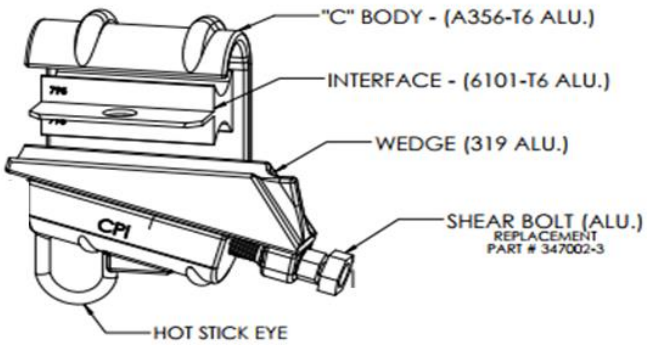
Connector

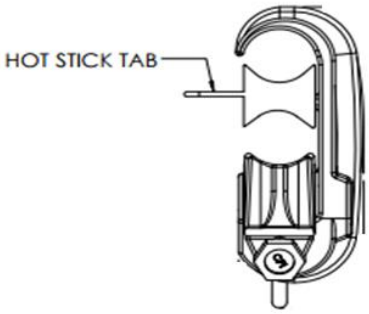
Impact Wrench

- ***Reliable***
- ***Removable***
- ***AA ANSI heat cycle***
- ***Visual indicator***
- ***Shearbolt Tech***
- ***No special tooling***
- ***Minimal training***
- ***Fast installation***
- ***Reduced install errors***

A closer Look at Bolted WEJTAP

- Bolted WEJTAP utilizes a highly conductive “Interface” to conduct most current
- The interface is a separate piece and is installed from the end
  - Requires an extra step during installation
  - Can be prone to falling
  - Inhibitor can wipe off decreasing reliability





Introducing Captive Interface

- The CPI Shear Bolt WEJTAP now comes with the Interface held captive to the C Body
- Eliminates the extra installation step
- Inhibitor stays in the connector
  - Stays off dielectric gloves
  - Improves performance
- Conductor side entry
  - Simplifies installation
- Stays put
  - Acts as a third hand during installation
- Catalog Number now on Interface

Connectors Available

- All connectors from #4 to 636 now available with a Captive Interface
  - Existing connectors still available
- To order, simply add an “F” to the standard part number
  - Example, 240101 → 240101F
  - Conversion charts available
    - Simplifies utility standards conversion
- Inventory available in BURNDY warehouse
  - Shorter lead times

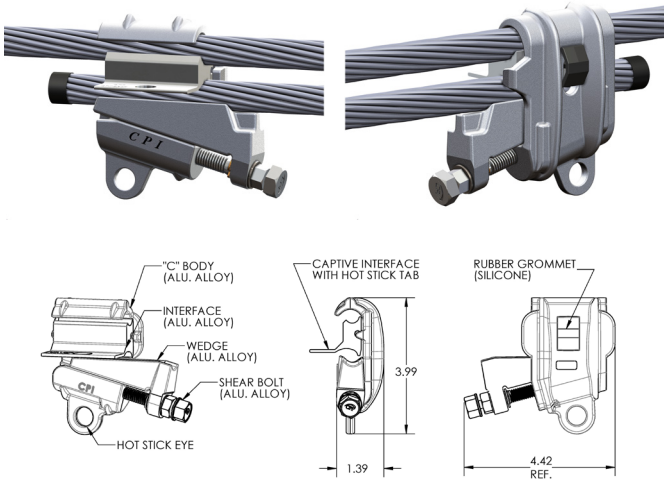
SMALL SERIES	
ORIGINAL CAT#	CAPTIVE INTERFACE CAT#
640101	640101F
240100	240100F
240101	240101F
240102	240102F
210103	210103F
210104	210105F
210105	210105F
210106	210106F
230107	230107F
230108	230108F
230109	230108F
230110	230110F
230111	230111F
264111	264111F
264112	264111F
264113	264113F
264114	264114F
264115	264115F
264117	264117F
350100	350100F
350109	350109F
350117	350117F
350118	350118F
350119	350119F
350120	350120F
350121	350121F
350122	350122F
350123	350123F
350124	350124F
350125	350125F

MEDIUM SERIES	
ORIGINAL CAT#	CAPTIVE INTERFACE CAT#
336222	336222F
336200	336222F
336104	336104F
336012	336012F
336866	336866F
336718	336718F
477057	477057F
477962	477962F
477853	477853F
477724	477724F
477633	477633F
477434	477434F
556956	556956F
556892	556892F
556783	556783F
556638	556638F
556504	556504F
556294	556294F
336962	336012F
336962	477962F

Bolted WEJTAP™ Connectors - Aluminum

CPI™ Shear Bolt WEJTAPTM Connectors with Captive Interface #4 - 350 Small Series Aluminum Tap

CPI Aluminum Taps are designed for use as a permanent connection for aluminum and copper conductors. CPI wedge connectors use high strength aluminum alloy, pure aluminum and a unique shear head bolt for a mechanically strong, electrically conductive and easy to install connection. The new Captive Interface is now "held" by the connector to facilitate installation and eliminate the risk of the interface falling. The Captive Interface also allows for conductor side entry which simplifies the installation.



Features and Benefits

- The new Captive Interface is contained by the C Body so it cannot fall out during installation
- The new Captive Interface allows conductor side entry which simplifies installation
- Industry-proven spring wedge technology easily installed with common socket or impact wrench - No Special Tools Required!
- "Spring Like" high strength C-Body ensures permanent connection with consistent pressure on the conductors
- Meets or exceeds current carrying capacity of conductors being connected
- Corrosion resistant highly conductive aluminum alloys with a pure aluminum insert between conductors increases conductivity and lowers electrical resistance
- Corrosion inhibitor factory applied for ease of installation
- Remains permanently locked through fault current or power surges
- Easy to remove without damage to conductor
- May be used in non-corrosive environments to connect copper conductors
- Excellent option for emergency restoration where outside crews might not have Shoot-On or compression tooling

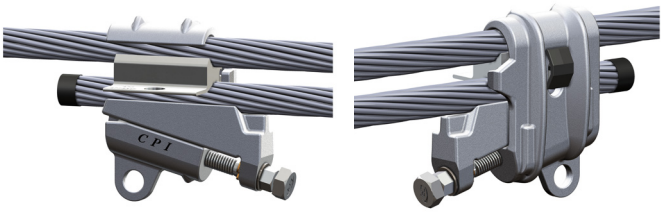
Catalog Number	Conductor			
	Main	Main Dia. Range	Tap	Tap Dia. Range
640101F	#6	0.162"-0.232"	#6, #4 Sol	0.162"-0.204"
240100F	#4, #2, #1 AAC	0.232"-0.328"	#6, #4 Sol	0.162"-0.204"
240101F			#4	0.232"-0.257"
240102F			#2, #1 AAC	0.292"-0.328"
210103F	#1 ACSR, 1/0, 2/0 AAC	0.354"-0.414"	#6 ACSR, #4 AAC	0.198"-0.232"
210105F			#4, #2, #1 AAC	0.232"-0.328"
210106F			#1 ACSR, 1/0, 2/0 AAC	0.354"-0.414"
230107F	2/0 ACSR, 3/0	0.447"-0.502"	#6 ACSR, #4 AAC	0.198"-0.232"
230108F			#4, #2, #1	0.232"-0.354"
230110F			#1 ACSR, 1/0, 2/0 AAC	0.354"-0.414"
230111F			2/0 ACSR, 3/0	0.447"-0.502"
264111F	3/0 ACSR, 4/0 250 AAC	0.502"-0.574"	#6 ACSR, #4, #1 AAC	0.198"-0.328"
264113F			#1 ACSR, 1/0, 2/0 AAC	0.316"-0.414"
264114F			2/0 ACSR, 3/0	0.447"-0.502"
264115F			4/0, 250 AAC	0.522"-0.574"
350117F	266.8 ACSR, 300 MCM, 336.4 AAC 336.4 ACSR 18/1, 350 MCM	0.609"-0.684"	#6, #4 AAC	0.162"-0.232"
350118F			#4	0.232"-0.257"
350119F			#2, #1 AAC	0.292"-0.328"
350120F			#1, 1/0 AAC	0.328"-0.368"
350121F			1/0 ACSR, 2/0	0.398"-0.447"
350122F			2/0 ACSR, 3/0	0.447"-0.502"
350123F			4/0, 250	0.522"-0.574"
350124F			266.8-19 AAC, 300 AAC, 266.8 ACSR	0.592"-0.642"
350125F			300 ACSR	0.665"-0.684"

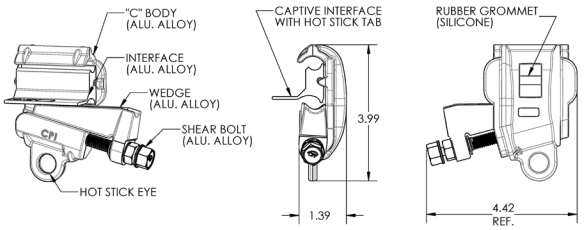
Not recommended for copper to copper applications, use copper Bolted WEJTAPTM. Use a 9/16" socket to install and remove the bolt.

Bolted WEJTAP™ Connectors - Aluminum

CPI™ Shear Bolt WEJTAPTM Connectors with Captive Interface 336.4 - 636 Medium Series Aluminum Tap

CPI Aluminum Taps are designed for use as a permanent connection for aluminum and copper conductors. CPI wedge connectors use high strength aluminum alloy, pure aluminum and a unique shear head bolt for a mechanically strong, electrically conductive and easy to install connection. The new Captive Interface is now "held" by the connector to facilitate installation and eliminate the risk of the interface falling. The Captive Interface also allows for conductor side entry which simplifies the installation.





Features and Benefits

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- "Spring Like" high strength C-Body ensures permanent connection with consistent pressure on the conductors
- Meets or exceeds current carrying capacity of conductors being connected
- Corrosion resistant highly conductive aluminum alloys with a pure aluminum insert between conductors increases conductivity and lowers electrical resistance
- Corrosion inhibitor factory applied for ease of installation
- Remains permanently locked through fault current or power surges
- Easy to remove without damage to conductor
- May be used in non-corrosive environments to connect copper conductors
- Excellent option for emergency restoration where outside crews might not have Shoot-On or compression tooling

Catalog Number	Conductor			
	Main	Main Dia. Range	Tap	Tap Dia. Range
336222F	300 MCM, 336.4, 350 MCM, 397 ACSR 18/1	0.63"-0.743"	#6, #4, #3 Cu	0.162"-0.292"
336104F	336.4, 350 MCM, 397 ACSR 18/1	0.666"-0.743"	#4 ACSR, #2, 1/0 AAC	0.257"-0.368"
336012F			1/0, 2/0, 3/0	0.368"-0.502"
336866F			4/0 ACSR, 266.8 AAC	0.522"-0.592"
336718F			266.8 ACSR 36/7, 336.4, 397.5	0.642"-0.806"
477057F	397 ACSR, 24/7, 450 MCM, 477, 500 MCM, 556.5 AAC	0.769"-0.858"	#6 AAC, #4, #2	0.162"-0.316"
477962F			#2, 1/0	0.292"-0.398"
477853F			1/0 ACSR, 2/0, 3/0 AAC	0.398"-0.464"
477724F			3/0 ACSR, 4/0,250, 266.8, 300 AAC	0.502"-0.628"
477633F			266.8 ACSR 36/7, 300 AAC, 336.4 397.5 ACSR 24/7	0.628"-0.772"
477434F			336.4 ACSR 26/7, 397, 477, 500 MCM, 556 AAC	0.72"-0.858"
556956F	477 ACSR 26/7, 556, 600 MCM, 636 ACSR 18/1, 605 ACSR	0.856"-0.953"	#6, #4, #2	0.162"-0.316"
556892F			#2, #1, 1/0	0.292"-0.398"
556783F			1/0, 2/0, 3/0, 4/0 AAC	0.368"-0.52"
556638F			4/0, 250, 266.8, 300 MCM, 336 AAC, 350 MCM	0.522"-0.68"
556504F			350 MCM, 336.4, 397.5, 477 AAC	0.68"-0.806"
556294F			397 ACSR 30/7, 477, 500 MCM, 556.5, 636 AAC	0.795"-0.918"

Not recommended for copper to copper applications, use copper Bolted WEJTAPTM. Use a 3/4" socket to install and a 9/16" socket to remove the bolt.

PRODUCT ANNOUNCEMENT

Simplify installation with BURNDY CPI Shear Bolt WEJTAP now featuring captive interface

The CPI Shear Bolt WEJTAP has undergone a major upgrade: the interface is now integral to the connector. An industry staple for decades, the CPI Shear Bolt WEJTAP connectors use wedge technology to create a reliable and long-lasting connection. In conjunction with a spring C Body, wedge, and shear bolt, the interface is essential to making a secure connection. With the interface secured to the body, installation becomes significantly easier.

Bolted WEJTAP connectors provide excellent reliability and service. They are comprised of a C Body that acts as a spring to ensure proper compression is applied to the connection for the life of its application. The compression is created by a wedge and bolt that shears at the proper torque which takes the guess work out of knowing how tight is tight. The interface is made from EC grade aluminum and ensures the electrical energy is transferred with minimal losses.

The interface is now “captive” to the C Body, which prevents it from “falling” during installation. The system acts as a third hand so the installer can focus on making the connection and not worry about the interface moving. This system greatly simplifies installation with gloves or hot sticks.

Current users of the CPI Bolted WEJTAP connectors can easily convert to the new Captive Interface version by simply adding the suffix “F” to the end of the standard catalog number.

The new WEJTAP from BURNDY is available today to improve the stability and reliability of wired connections for electrical utilities. The connector family will be offered for wire sizes ranging from #6 to 636 kcmil.

Small

Medium

To learn more about the new Burndy WEJTAP, contact your Hubbell sales representative or visit https://www.hubbell.com/burndy/en today.

Proud members of the Hubbell family.

www.hubbell.com/burndy | Customer Service 1-800-346-4175
International 603-647-5299 | Canada 1-800-465-7051

LI-BURN-SF-EN-01352 | 10/2023

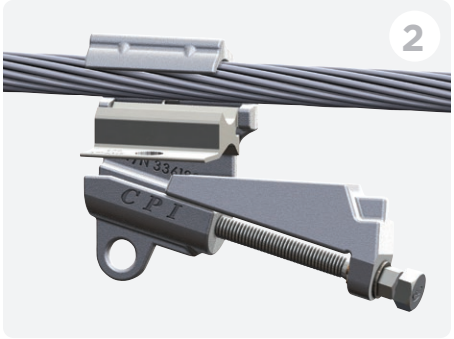
Shear Bolt WEJTAP™ with Captive Interface Connector

Pre-install checklist

- ☐ Verify you understand your utility's safety practices and methods.
- ☐ Confirm conductor size, stranding, and type.
- ☐ Confirm the connector catalog number matches applicable standards and/or is compatible with the wire sizes.
- ☐ Verify tooling has a 3/4 and/or 9/16 socket.
- ☐ Strip covered conductor.
- ☐ Wire brush both conductors to remove oxides for optimal connector performance.

Installation

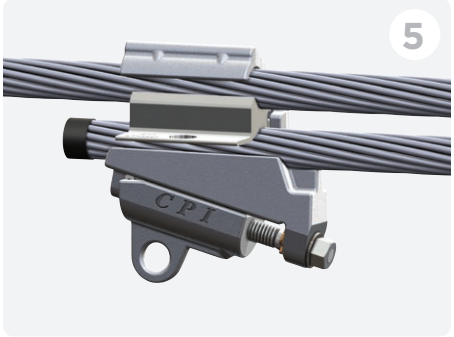
Gently unscrew the bolt to the fully open position.



Place the connector on the main, or larger, wire brushed conductor.

Install the tap, or smaller wire brushed conductor (from the end or the side), and hold in place.

Using a 3/4 or 9/16 socket, tighten the outer bolt until it shears.



Installation is now complete.
To remove the connector, use a 9/16 socket to unscrew the bolt completely and remove the assembly.

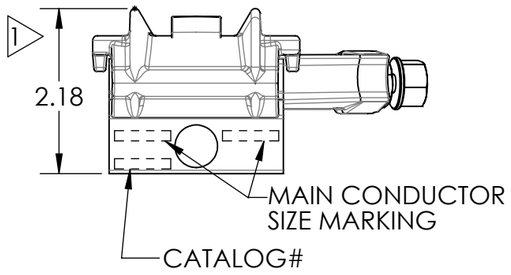
A proud member of the Hubbell family.

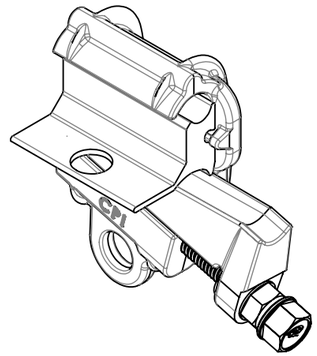
47 East Industrial Park Drive, Manchester, NH 03109
www.hubbell.com/cpi | 800-346-4175

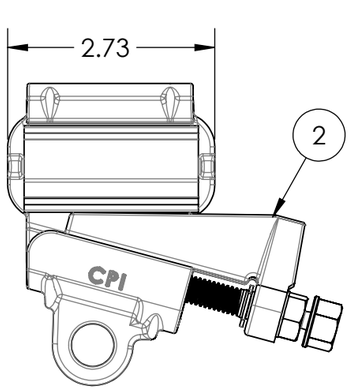
LI-CPI-IOM-EN-01272 | 10/2023

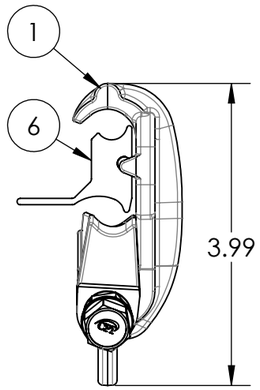
ITEM NO.	QTY.	DESCRIPTION	MATERIAL/FINISH
1	1	C-BODY	ALUMINUM ALLOY
2	1	WEDGE	ALUMINUM ALLOY
3	1	SHEAR BOLT	ALUMINUM ALLOY
4	1	WASHER	STAINLESS STEEL
5	1	RETAINING CLIP	STEEL / YEL. ZN PLATED
6	1	INTERFACE	ALUMINUM ALLOY
7	1	INTERFACE RETENTION GROMMET	SILICONE / BLACK

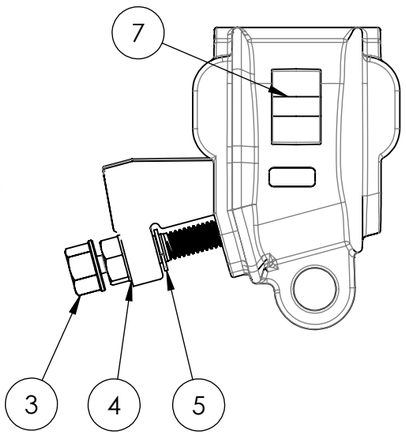
REVISIONS				
REV.	ECN or PRJ.#	DESCRIPTION	DATE	APPROVED
A	230412029428	INITIAL RELEASE	4/12/2023	CLY
B	230510030218	ADD SHT 3 INTERFACE MARKING TABLES	5/16/2023	CLY

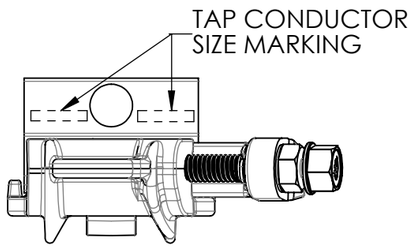












NOTES:

1. WIDTH VARIES BY INTERFACE

SMALL SERIES

CATALOG NUMBER	MAIN			TAP		
	CONDUCTORS	Ø MIN.	Ø MAX.	CONDUCTORS	Ø MIN.	Ø MAX.
640101F	#6	.162	.232	#6, #4 SOLID	.162	.204
240100F	#4, #2, #1 AAC	.232	.328	#6, #4 SOLID	.162	.204
240101F		.232	.328	#4	.232	.257
240102F		.232	.328	#2, #1 AAC	.292	.328
210103F	#1 ACSR, 1/0, 2/0 AAC	.354	.414	#6 ACSR, #4 AAC	.198	.232
210105F		.354	.414	#4, #2, #1 AAC	.232	.328
210106F		.354	.414	#1 ACSR, 1/0, 2/0 AAC	.354	.414
230107F	2/0 ACSR, 3/0	.447	.502	#6 ACSR, #4 AAC	.198	.232
230108F		.447	.502	#4, #2, #1	.232	.354
230110F		.447	.502	#1 ACSR, 1/0, 2/0 AAC	.354	.414
230111F		.447	.502	2/0 ACSR, 3/0	.447	.502
264111F	3/0 ACSR, 4/0, 250 AAC	.502	.574	#6 ACSR, #4, #1 AAC	.198	.328
264113F		.502	.574	#1 ACSR, 1/0, 2/0 AAC	.316	.414
264114F		.502	.574	2/0 ACSR, 3/0,	.447	.502
264115F		.502	.574	4/0, 250 AAC	.522	.574
350117F	266.8 ACSR, 300 MCM, 336.4 AAC 336.4 ACSR 18/1, 350 MCM	.609	.684	#6, #4 AAC	.162	.232
350118F		.609	.684	#4	.232	.257
350119F		.609	.684	#2, #1 AAC	.292	.328
350120F		.609	.684	#1, 1/0 AAC	.328	.368
350121F		.609	.684	1/0 ACSR, 2/0	.398	.447
350122F		.609	.684	2/0 ACSR, 3/0	.447	.502
350123F		.609	.684	4/0, 250	.522	.574
350124F		.609	.684	266.8 -19 AAC, 300 AAC, 266.8 ACSR	.592	.642
350125F		.609	.684	300 ACSR 26/7, 350, 336.4 18/1	.665	.684

	NAME	DATE
DRAWN	CLY	4/12/2023

CONNECTOR PRODUCTS INC.

TITLE: CAPTIVE INTERFACE BOLTED WEDGE TAP STD. ASSEMBLIES

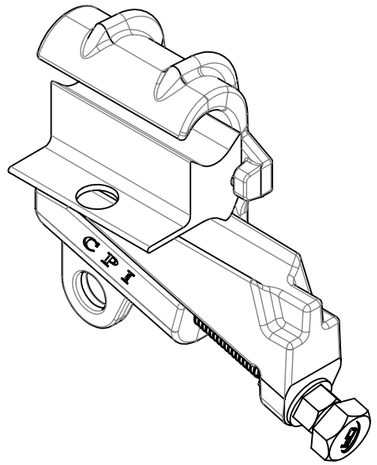
PART NO. SEE CHART

SIZE	DWG. NO.	REV.
B	50140136	B

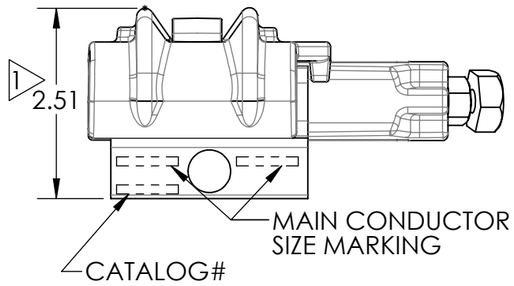
SCALE: 1:2 | WEIGHT: 0.60 LBS | SHEET 1 OF 3

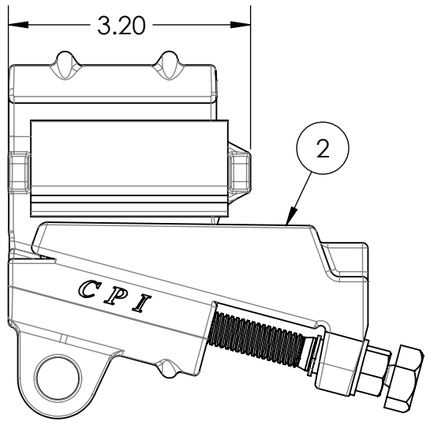
F73-47 (Rev -) CONNECTOR PRODUCTS INC. CUT SHEET

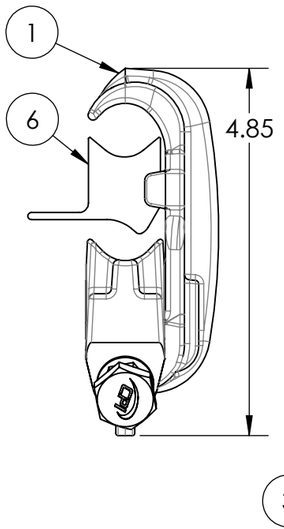
ITEM NO.	QTY.	DESCRIPTION	MATERIAL/FINISH
1	1	C-BODY	ALUMINUM ALLOY
2	1	WEDGE	ALUMINUM ALLOY
3	1	SHEAR BOLT	ALUMINUM ALLOY
4	1	WASHER	STAINLESS STEEL
5	1	RETAINING CLIP	STEEL / YEL. ZN PLATED
6	1	INTERFACE	ALUMINUM ALLOY
7	1	INTERFACE RETENTION GROMMET	SILICONE / BLACK

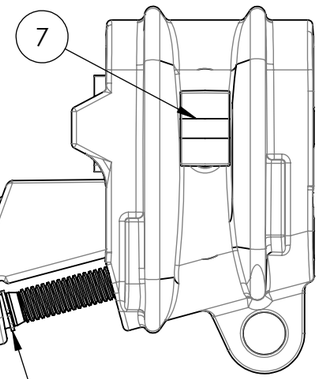


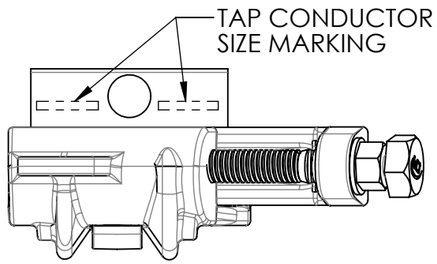
REVISIONS				
REV.	ECN or PRJ.#	DESCRIPTION	DATE	APPROVED
-	See Sheet1	See Sheet1	-	-











MEDIUM SERIES

CATALOG NUMBER	MAIN			TAP		
	CONDUCTORS	Ø MIN.	Ø MAX.	CONDUCTORS	Ø MIN.	Ø MAX.
336222F	300 MCM, 336.4, 350 MCM, 397 ACSR 18/1	.630	.743	#6, #4, #2 Cu	.162	.292
336104F	336.4, 350 MCM, 397 ACSR 18/1	.666	.743	#4 ACSR, #2, 1/0 AAC	.257	.368
336012F		.666	.743	1/0, 2/0, 3/0	.368	.502
336866F		.666	.743	4/0 ACSR, 266.8 AAC	.522	.592
336718F		.666	.743	266.8 ACSR 36/7, 336.4, 397.5	.642	.806
477057F	397 ACSR 24/7, 450 MCM, 477, 500 MCM, 556.5 AAC	.769	.858	#6 AAC, #4, #2	.162	.316
477962F		.769	.858	#2, 1/0	.292	.398
477853F		.769	.858	1/0 ACSR, 2/0, 3/0 AAC	.398	.464
477724F		.769	.858	3/0 ACSR, 4/0, 250, 266.8, 300 AAC	.502	.628
477633F		.769	.858	266.8 ACSR 36/7, 300 AAC, 336.4, 397.5 ACSR 24/7	.628	.772
477434F		.769	.858	336.4 ACSR 26/7, 397, 477, 500 MCM, 556 AAC	.720	.858
556956F	477 ACSR 26/7, 556, 600 MCM, 636 ACSR 18/1, 605 ACSR	.856	.953	#6, #4, #2	.162	.316
556892F		.856	.953	#2, #1, 1/0	.292	.398
556783F		.856	.953	1/0 , 2/0, 3/0, 4/0 AAC	.368	.520
556638F		.856	.953	4/0, 250, 266.8, 300 MCM, 336 AAC, 350 MCM	.522	.680
556504F		.856	.953	350 MCM, 336.4, 397.5, 477 AAC	.680	.806
556294F		.856	.953	397 ACSR 30/7, 477, 500 MCM, 556.5, 636 AAC	.795	.918

NOTE:

1 WIDTH VARIES BY INTERFACE

	NAME	DATE
DRAWN	CLY	4/12/2023

CONNECTOR PRODUCTS INC.

TITLE:
CAPTIVE INTERFACE BOLTED WEDGE TAP STD. ASSEMBLIES

PART NO. SEE CHART

SIZE	DWG. NO.	REV.
A	50140136	B

SCALE: 1:2 | WEIGHT: 0.60 LBS | SHEET 2 OF 3

F73-47 (Rev -) CONNECTOR PRODUCTS INC. CUT SHEET

REVISIONS				
REV.	ECN or PRJ.#	DESCRIPTION	DATE	APPROVED
-	See Sheet1	See Sheet1	-	-

SMALL SERIES INTERFACE MARKINGS		
CATALOG#	MAIN COND. SIZE	TAP COND. SIZE
640101F	#6	#6
240100F	#4 #2	#6 #4
240101F	#2	#4
240102F	#2	#4 #2
210103F	1/0 - 2/0	#4
210105F	1/0 - 2/0	#4 #2
210106F	1/0 - 2/0	1/0 - 2/0
230107F	2/0 - 3/0	#6 - #4
230108F	2/0 - 3/0	#4 - #1
230110F	2/0 - 3/0	1/0 - 2/0
230111F	2/0 - 3/0	2/0 - 3/0
264111F	4/0	#6 - #2
264113F	4/0	1/0 2/0 #2
264114F	4/0	2/0 - 3/0
264115F	4/0	4/0
350117F	350 336.4	#6 - #4
350118F	350 336.4	#4
350119F	350 336.4	#2 - 1/0
350120F	350 336.4	1/0
350121F	350 336.4	1/0 - 2/0
350122F	350 336.4	2/0 - 3/0
350123F	350 336.4	4/0
350124F	350 336.4	266.8
350125F	350 336.4	336.4 350

MEDIUM SERIES INTERFACE MARKINGS		
CATALOG#	MAIN COND. SIZE	TAP COND. SIZE
336222F	336.4	#6 #4 #2
336104F	336.4	#2 1/0
336012F	336.4	1/0 3/0
336866F	336.4	4/0 266.8
336718F	336.4	336.4
477057F	477	#6 #4 #2
477962F	477	#2 - 1/0
477853F	477	1/0 - 3/0
477724F	477	4/0 - 266.8
477633F	477	397.5 300 336.4
477434F	477	477
556956F	556.5	#6 #4 #2
556892F	556.5	#2 - 1/0
556783F	556.5	1/0 - 4/0
556638F	556.5 - 636	4/0 - 266.8
556504F	556.5	397.5 336.4
556294F	556.5	556.5

F73-47 (Rev -) CONNECTOR PRODUCTS INC. CUT SHEET

	NAME	DATE
DRAWN	CLY	4/12/2023

CONNECTOR PRODUCTS INC.

TITLE:
CAPTIVE INTERFACE BOLTED WEDGE TAP STD. ASSEMBLIES

PART NO. SEE CHART

SIZE	DWG. NO.	REV.
A	50140136	B

SCALE: 1:2 | WEIGHT: 0.60 LBS | SHEET 3 OF 3

C:\Users\cyork\HUBBELL INC\NPD-03181 - Documents\Design\Concepts\Elastomer Clip Concept\Sales Drawings\50140137

F73-47 (Rev -) CONNECTOR PRODUCTS INC. CUT SHEET

REVISIONS				
REV.	ECN or PRJ.#	DESCRIPTION	DATE	APPROVED
A	230412029428	INITIAL RELEASE	4/14/2023	CLY

SMALL SERIES	
ORIGINAL CAT#	CAPTIVE INTERFACE CAT#
640101	640101F
240100	240100F
240101	240101F
240102	240102F
210103	210103F
210104	210105F
210105	210105F
210106	210106F
230107	230107F
230108	230108F
230109	230108F
230110	230110F
230111	230111F
264111	264111F
264112	264111F
264113	264113F
264114	264114F
264115	264115F
264117	264117F
350100	350100F
350109	350109F
350117	350117F
350118	350118F
350119	350119F
350120	350120F
350121	350121F
350122	350122F
350123	350123F
350124	350124F
350125	350125F

MEDIUM SERIES	
ORIGINAL CAT#	CAPTIVE INTERFACE CAT#
336222	336222F
336200	336222F
336104	336104F
336012	336012F
336866	336866F
336718	336718F
477057	477057F
477962	477962F
477853	477853F
477724	477724F
477633	477633F
477434	477434F
556956	556956F
556892	556892F
556783	556783F
556638	556638F
556504	556504F
556294	556294F
336962	336012F
336962	477962F

	NAME	DATE
DRAWN	CLY	4/14/2023

CONNECTOR PRODUCTS INC.

TITLE: CAPTIVE INTERFACE CONVERSION CHARTS FOR BOLTED WEDGE (BW) TAP CONNECTORS

DWG. NO.	REV.
50140137	A

SIZE	PART NO.
A	SEE CHART

SCALE: 1:2 | WEIGHT: LBS | SHEET 1 OF 1

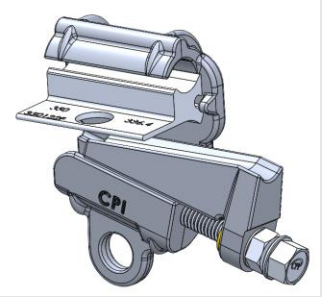
BURNDY LLC
An Affiliate of Hubbell Incorporated

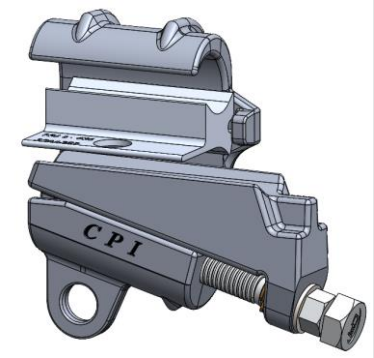
Testing done for the safety of our valued customers.

Global Circulation Laboratory Test Report

For Global Distribution

CPI Captive Tap Interface - Small and Medium Series





4/0 AWG AAC (7-Str), 636 kcmil AAC (37-Str), #6AWG AAC (7-Str), #6AWG Sol. Cu, 336.4 ACSR (18/1), 556.5 ACSR (26/7)

ANSI C119.4 Class AA Current Cycle Test (CCT), Class 3 Minimum Tension Test, and Run Conductor Damage Test

GCR-TD005326 REV. A

Requested by / Date:	*Authorized by / Date:*	*Completed by / Date:*
C York / 25-Mar-2021	G Schrader / 25-Mar-2021	C York / 12-Sept-2023
Engineering Approval / Date:	*Marketing Approval / Date:*	*Laboratory Approval / Date:*
C York / 12-Sept-2023	J Hall / 12-Sept-2023	M Jones / 12-Sept-2023

TABLE OF CONTENTS

PURPOSE OF TEST: 2
TEST REQUESTED: 2
CONCLUSIONS: 2
TEST DATA: 2
MATERIALS SUBMITTED: 11
TEST PROCEDURES: 12
ENGINEERING COMMENTS: 13
TEST EQUIPMENT LIST: 13

Global Circulation Laboratory Test Report

For Global Distribution

PURPOSE OF TEST:

To qualify the new design of CPI's Captive Interface connectors to ANSI C119.4 Class AA Current Cycle Test (CCT), Class 3 Minimum Tension Test, and Run Conductor Damage Test.

TEST REQUESTED:

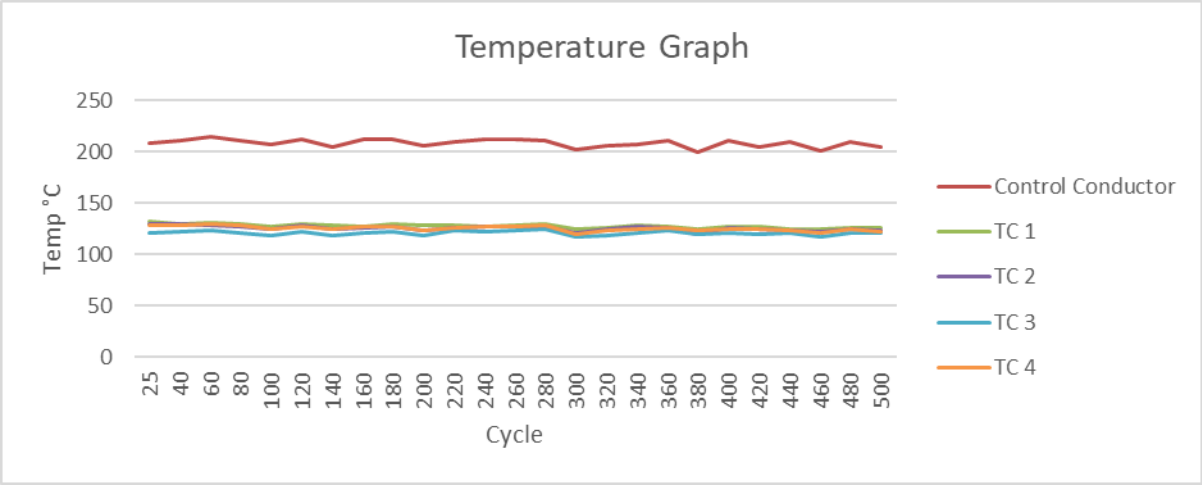
ANSI C119.4 Class AA Current Cycle Test (CCT), Class 3 Minimum Tension Test, and Run Conductor Damage Test.

CONCLUSIONS:

All samples tested met the ANSI C119.4 Class AA Current Cycle Test (CCT), Class 3 Minimum Tension Test, and Run Conductor Damage Test.

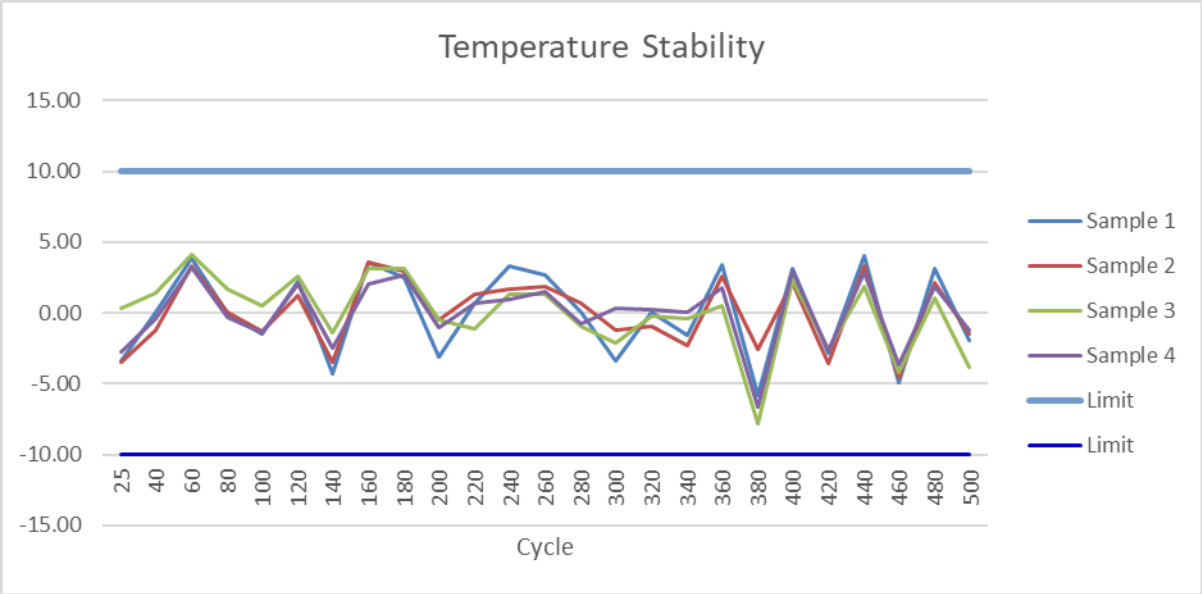
TEST DATA:

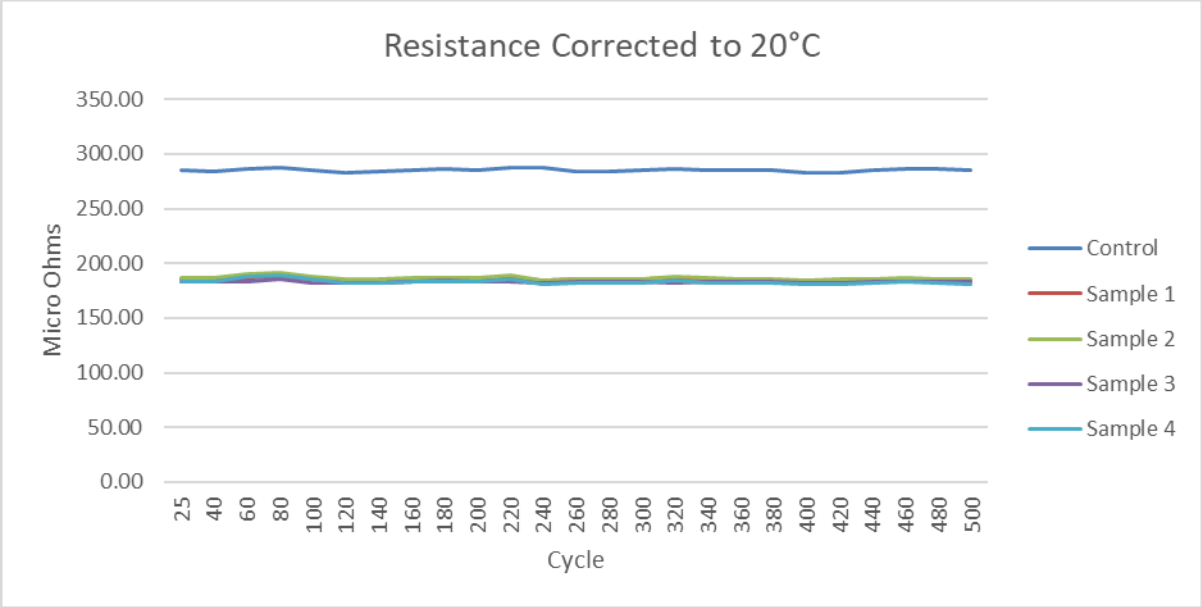
Current Cycle Testing, Small Series (264115F):



Global Circulation Laboratory Test Report

For Global Distribution

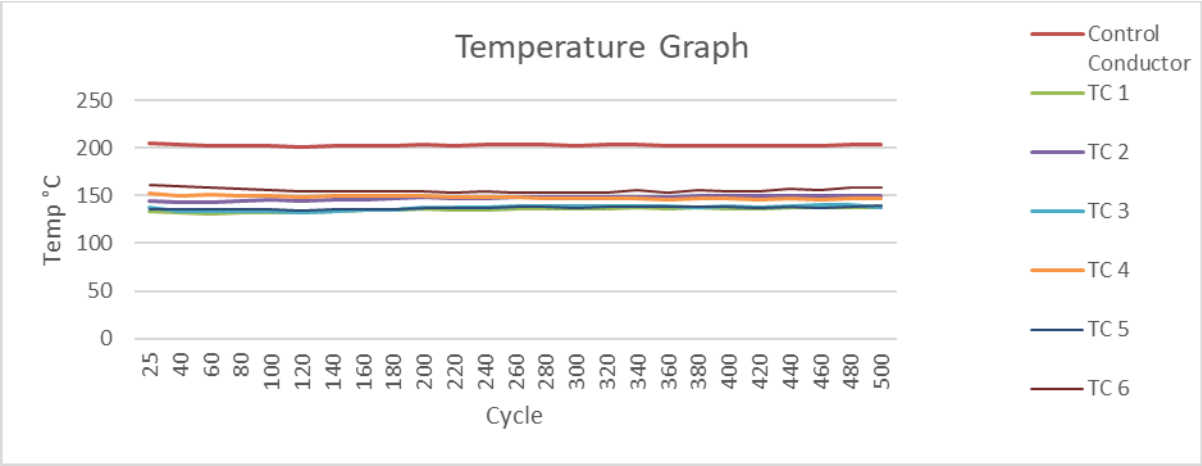


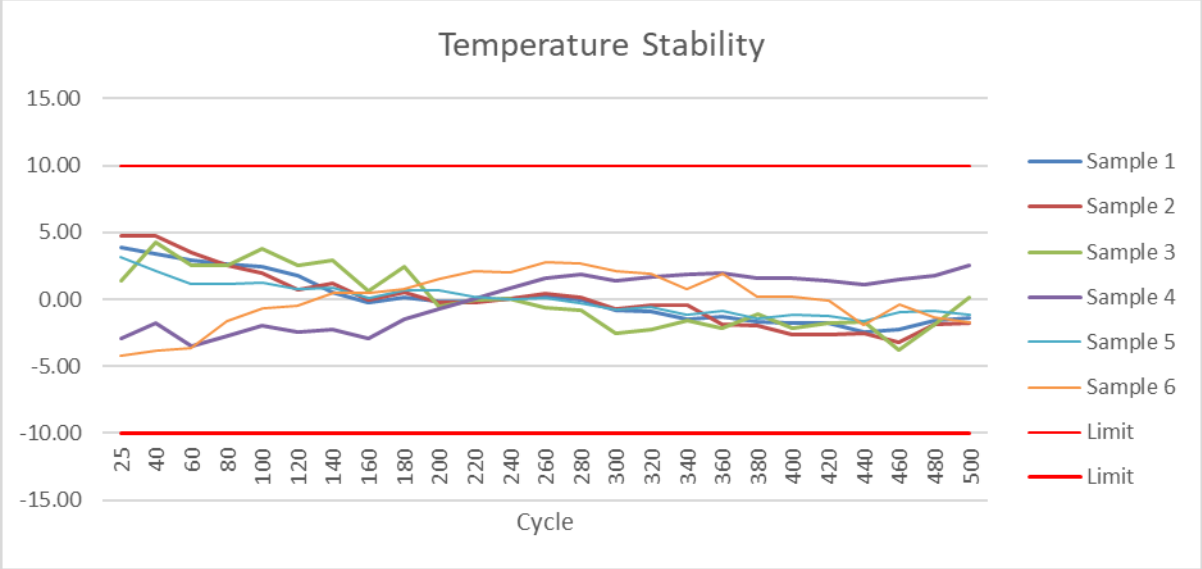


Global Circulation Laboratory Test Report

For Global Distribution

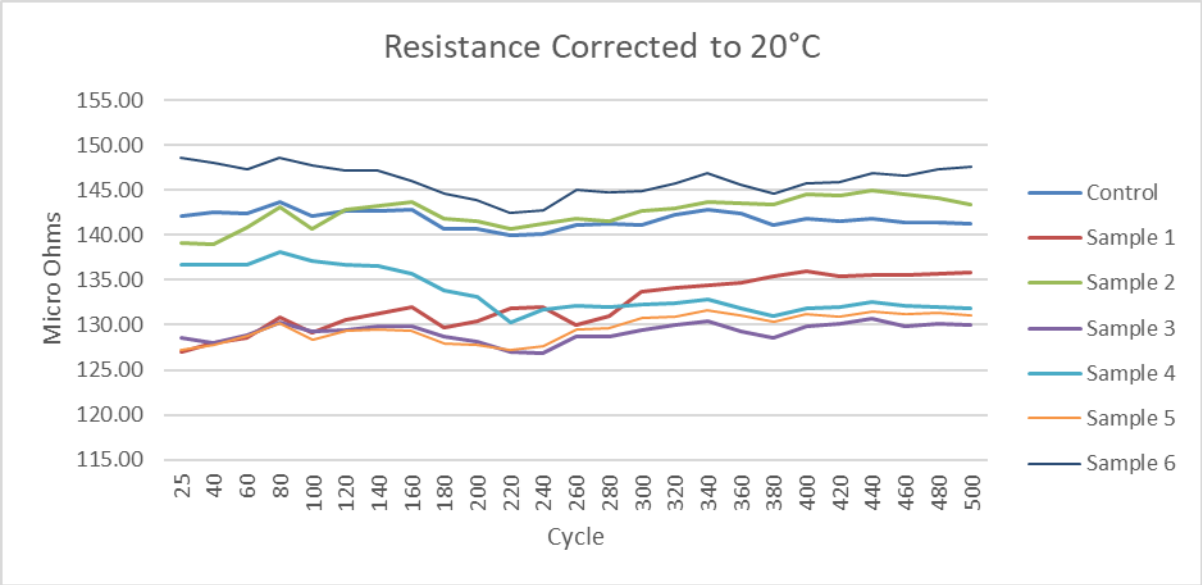
Current Cycle Testing, Medium Series (556294F):





Global Circulation Laboratory Test Report

For Global Distribution

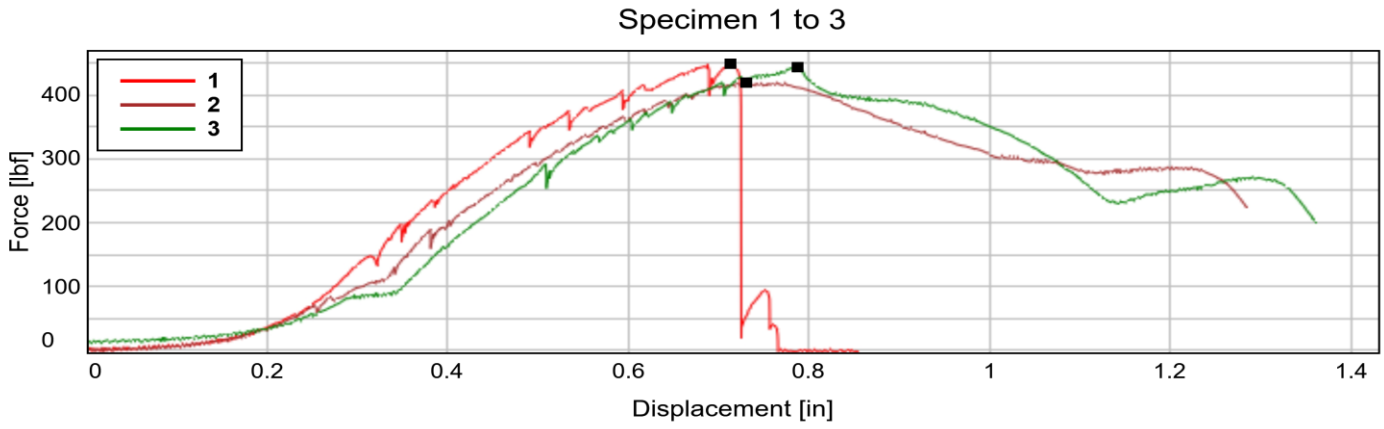


Class 3 Minimum Tension Test:

Table 1:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	5% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
640101F	#6 AAC (7-STR) "Peachbell"	#6 AAC (7-STR) "Peachbell"	10"	101	105	105	563	**28.15**	448.38	419.61	444.12

Graph 1:



Global Circulation Laboratory Test Report

For Global Distribution

Table 2:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	5% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
640101F	#6 SOL Cu (hard drawn)	#6 SOL Cu (hard drawn)	10"	105	102	100	1280	**64**	981.02	882.93	976.66

Graph 2:

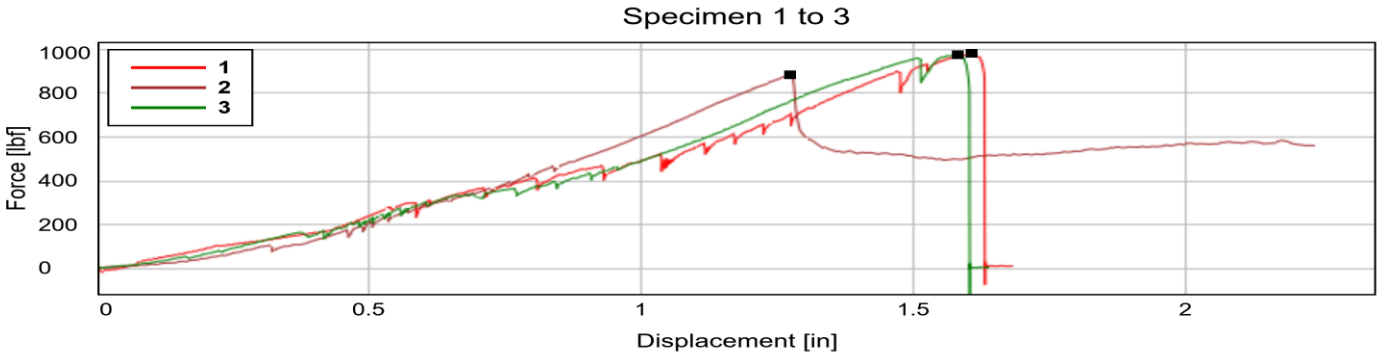
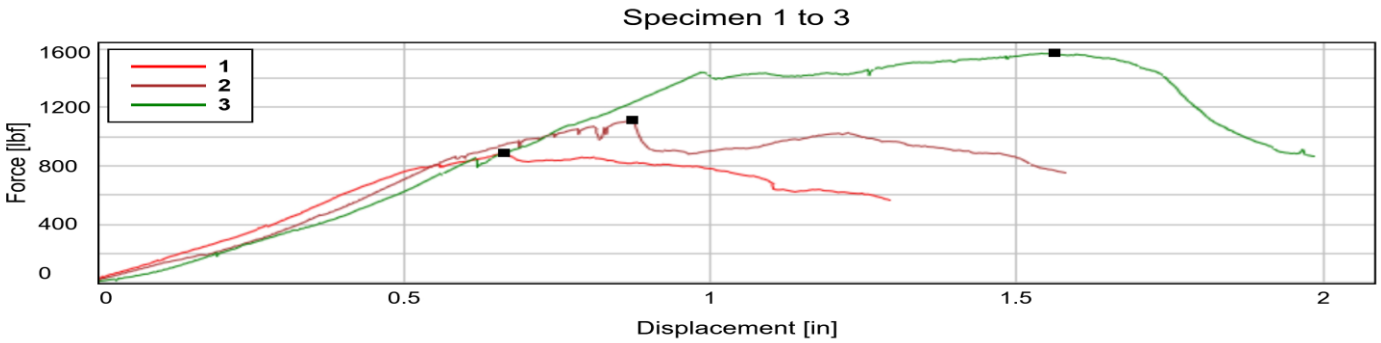


Table 4:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	5% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
350125F	336.4 ACSR (18/1) "Merlin"	336.4 ACSR (18/1) "Merlin"	10"	101	107	109	8680	**434**	888.13	1111.52	1571.21

Graph 4:



Global Circulation Laboratory Test Report

For Global Distribution

Table 6:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	5% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
336222F	336.4 AAC (19-STR) "Tulip"	#6 AAC (7-STR) "Peachbell"	10"	147	149	148	563	**28.15**	487.86	434.55	476.00

Graph 6:

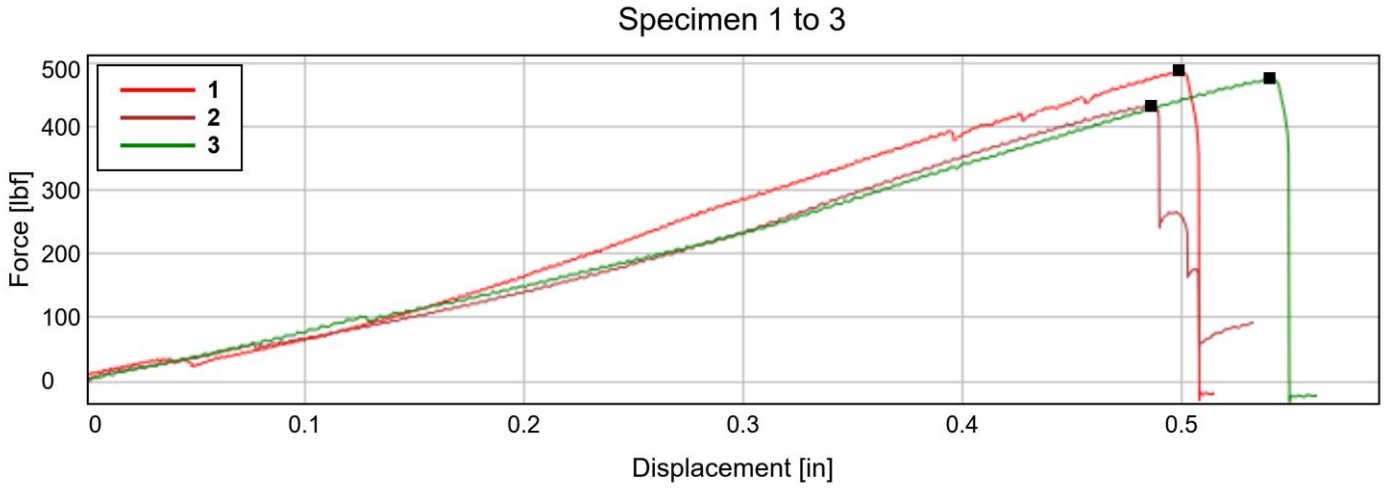
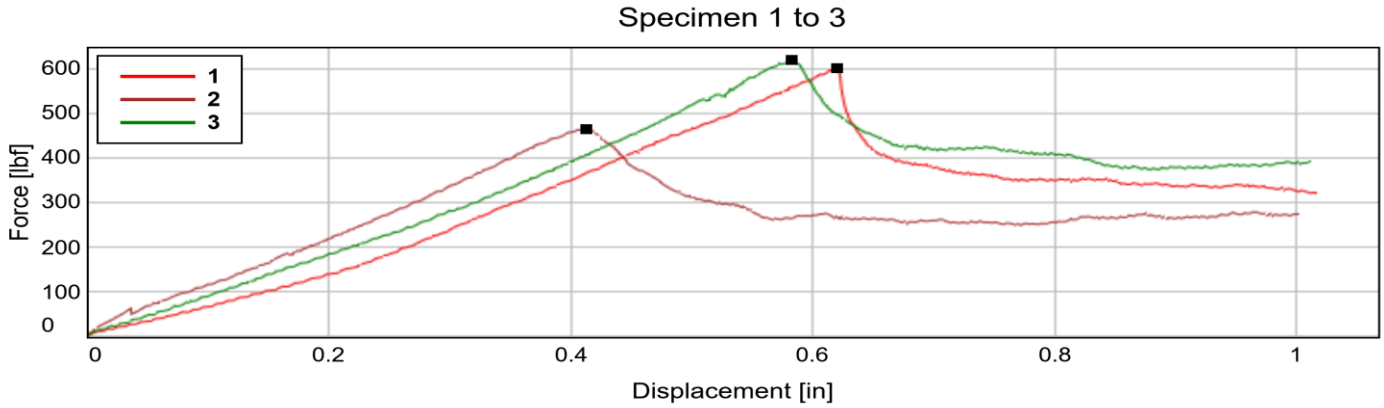


Table 7:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	5% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
336222F	336.4 AAC (19-STR) "Tulip"	#6 SOL Cu (hard drawn)	10"	147	148	150	1280	**64**	600.33	464.75	617.89

Graph 7:



Global Circulation Laboratory Test Report

For Global Distribution

Table 9:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	5% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
556294F	556.5 kcmil ACSR (26/7) "Dove"	556.5 kcmil ACSR (26/7) "Dove"	10"	150	149	148	22600	**1130**	1382.95	1502.25	1745.29

Graph 9:

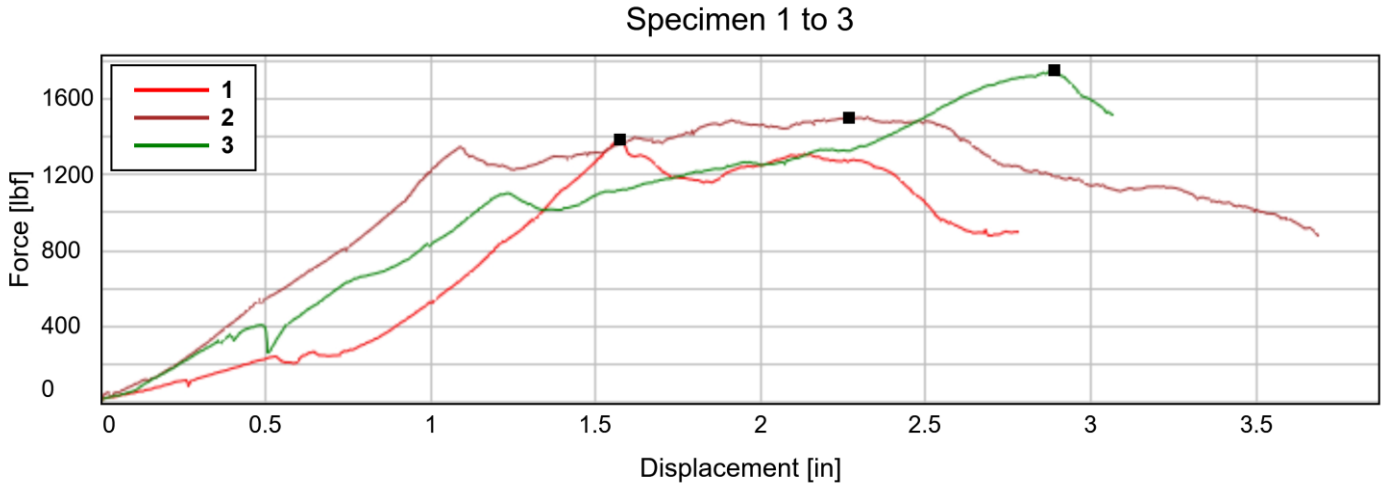
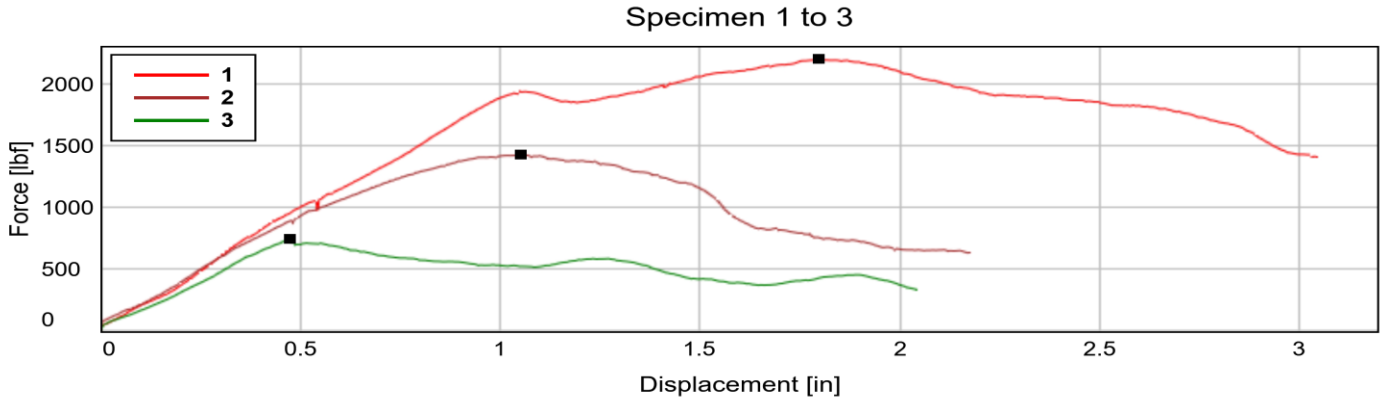


Table 10:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	5% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
556294F	636 AAC (37-STR) "Orchid"	636 AAC (37-STR) "Orchid"	10"	149	149	150	11400	**570**	2201.05	1432.28	744.78

Graph 10:



Global Circulation Laboratory Test Report

For Global Distribution

Run Conductor Damage Test:

Table 5:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	90% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
350125F	336.4 ACSR (18/1) "Merlin"	336.4 ACSR (18/1) "Merlin"	24"	108	108	103	8680	**7812**	8446	8555.69	8151.98

Graph 5:

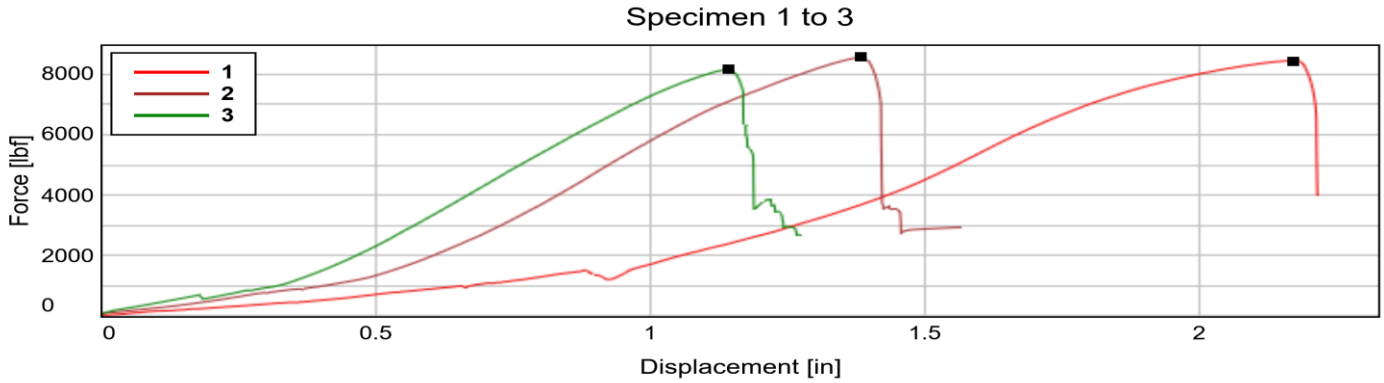
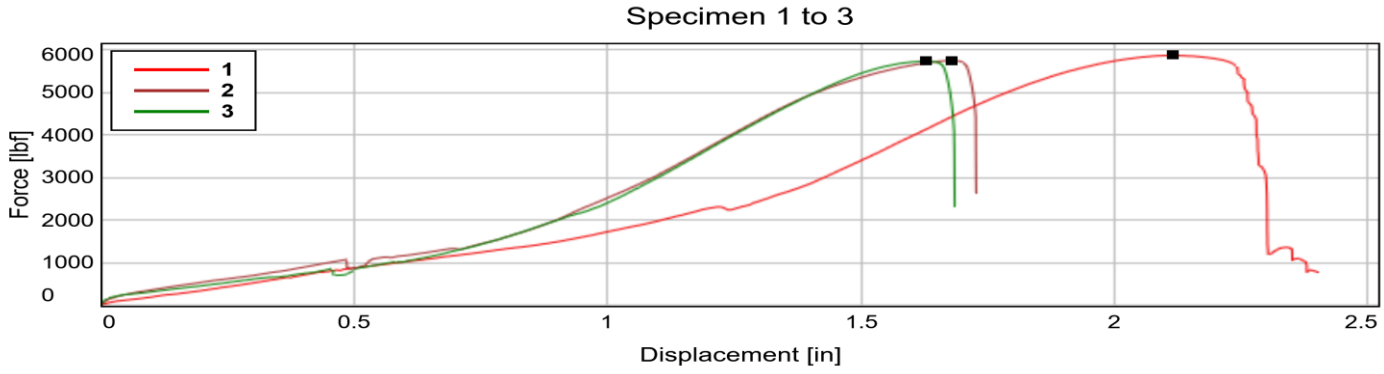


Table 8:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	90% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
336222F	336.4 AAC (19-STR) "Tulip"	#6 SOL Cu (hard drawn)	24"	150	150	150	6150	**5535**	5861.48	5744.047	5723.69

Graph 8:



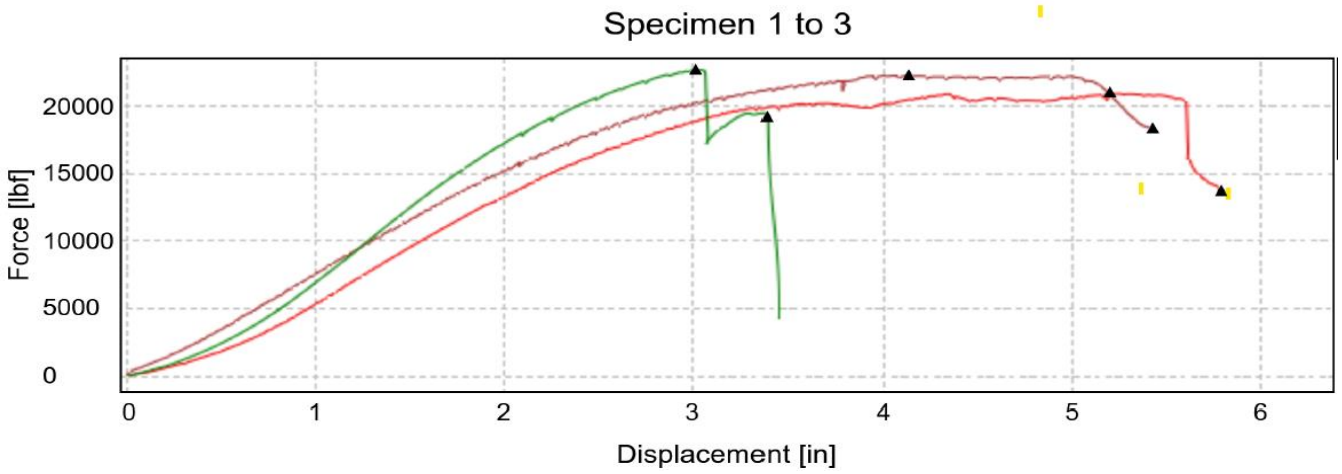
Global Circulation Laboratory Test Report

For Global Distribution

Table 11:

Connector Cat. No.	Cable #1	Cable #2	Cable Length	Torque in-lb Samples			SouthWire RBS	90% 5% RBS	Actual Pullout (lb) Samples		
				1	2	3			1	2	3
556294F	556.5 kcmil ACSR (26/7) "Dove"	556.5 kcmil ACSR (26/7) "Dove"	144"	150	151	146	22600	**20340**	21071.26	21680.07	22717.7

Graph 11:



Global Circulation Laboratory Test Report

For Global Distribution

MATERIALS SUBMITTED:

Current Cycle Testing, Small Series

Catalog No.	Quantity	Drawing/Rev #
CPI 264115F	04	50132172-F73-44 / Rev. B

Conductors

246.9kcmil (4/0 AWG) AAC (7 Str) O.D. 0.563”

Installation Tooling

Torque Wrench

Current Cycle Testing, Medium Series

Catalog No.	Quantity	Drawing/Rev #
CPI 556294F	04	50132173-F73-44 / Rev. A
CPI 556294 (standard prod.)	02	MEDIUMCASSEMBLY / Rev. -

Conductors

363kcmil 37str AAC (Orchid) O.D. 0.918in

Installation Tooling

PROTO Dial Torque Wrench (J6181F)

Class 3 Minimum Tension Test and Run Conductor Damage Test:

Catalog No.	Quantity	Drawing/Rev #
640101F	9	50132172-F73-44 / Rev B
350125F	6	50132172-F73-44 / Rev B
336222F	9	50132173-F73-44 / Rev B
556294F	9	50132173-F73-44 / Rev B

Conductors	OD
#6AAC 7 Str	0.184”
#6 Cu Sol	0.162”
336.4 ACSR 18/1 Str	0.684”
556.5 ACSR 26/7 Str	0.927”
636 AAC 37 Str	0.918”

Installation Tooling

Torque Wrench

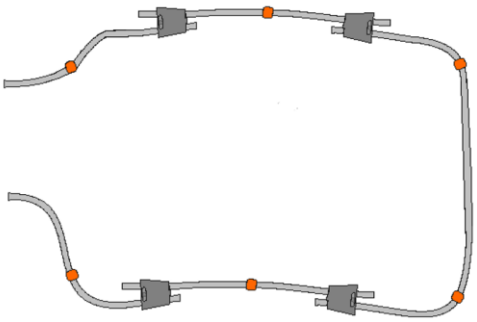
Global Circulation Laboratory Test Report

For Global Distribution

TEST PROCEDURES:

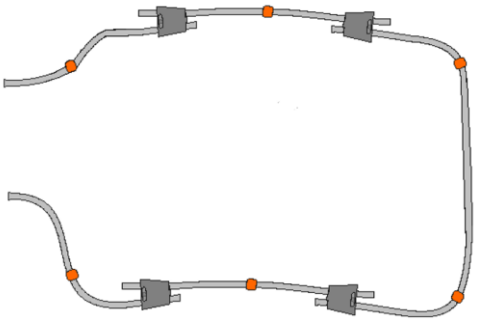
Current Cycle Testing, Small Series

Conductor was wire brushed and cleaned prior to any installations. Samples were assembled in a series loop configuration as shown below and connected to a current controller. All connectors were wired with resistance leads and thermocouples to monitor resistance and temperature throughout the test duration. Current was adjusted during the first 25 cycles to achieve a 175°C - 180°C temperature rise on the control conductor. Connector resistance and temperature were monitored and recorded using an automatic data acquisition control system.



Current Cycle Testing, Medium Series:

Conductors were cut to 60-inch lengths for the test samples and one 120-inch length for the control conductor. Compression equalizers were installed in the center of each 60-inch length and 30-inches in on either end of the control conductor. Conductor was wire brushed and cleaned prior to any installations. Samples were assembled in a series loop configuration and connected to a current controller as shown below. All connectors were wired with resistance leads and thermocouples to monitor resistance and temperature throughout the test duration. Current was adjusted during the first 25 cycles to achieve a 175°C temperature rise on the control conductor. Five Hundred 1.5 hour on / 1.5 hour off cycles were completed. Connector resistance and temperature were monitored and recorded using an automatic data acquisition control system.



Global Circulation Laboratory Test Report
For Global Distribution

Class 3 Minimum Tension Test:
Minimum and maximum run conductors were installed. Three samples of each assembly were individually mounted in the gripping jaws of either the Baldwin or Riehle tensile machine. The cross head was programmed at .5 inch per minute, the load was increased until failure occurred. Peak Load was recorded.

Run Conductor Damage Test:
A run conductor of appropriate length per ANSI C119.0 table 12 were installed into the gripping jaws of either the Baldwin or Riehle tensile machine and tensioned to 20% RBS of the conductor at a rate of .5 inch per minute. The tap connector was then installed onto the run conductor with the appropriate size tap conductor for the connector. The load was increased until failure occurred and peak Load was recorded. This was completed on the minimum and maximum run conductors for each series and three samples of each assembly were tested.

ENGINEERING COMMENTS:

All samples tested as outlined in this report met the ANSI C119.4 Class AA Current Cycle Test (CCT), Class 3 Minimum Tension Test, and Run Conductor Damage Test.

Regarding the medium series current cycle test, samples 1-4 were captive interface samples 556294F and samples 5 and 6 were standard (non-captive interface) samples placed into the loop for comparison purposes only.

Ref. TD005062, TD005326, and M23-06-47

Charlie York
Utility Engineering

TEST EQUIPMENT LIST:

Current Cycle Testing, Small Series (Compl. 2/14/2023):

MANUFACTURER	MODEL	DESCRIPTION	SERIAL #	RANGE	CAL DATE	DUE DATE
AGILENT	U1252B	DMM	MY57184963	AUTO	11/4/2022	11/4/2023
SEMITRONIC	ACT-001E	CURRENT TRANSDUCER	15101038 B7	1 ACA	6/17/2022	6/17/2023
HP	6264B	POWER SUPPLY	2215A04582	20V / 20A	6/17/2022	6/17/2023

Current Cycle Testing, Medium Series (Compl. 9/24/2021):

MANUFACTURER	MODEL	DESCRIPTION	SERIAL #	RANGE	CAL DATE	DUE DATE
AGILENT	U1252B	DMM	MY57184963	AUTO	11/13/20	11/13/21
BECKMAN	CT233	AC/DC CLAMP	0020158	600 AMPS	11/13/20	11/13/21

Global Circulation Laboratory Test Report

For Global Distribution

FLUKE	177	DMM	29190361 (Rene)	AUTO	11/13/20	11/13/21
PROTO	J6181F	DIAL TORQUE WRENCH	10161147	0 TO 600 lb-in	11/30/20	11/30/21
SEMITRONIC	ACT-001E	CURRENT TRANSDUCER	15101044 B8	1 ACA	06/23/21	06/23/22

Class 3 Minimum Tension Test and Run Conductor Damage Test (Compl. 9/12/2023):

MANUFACTURER	MODEL	DESCRIPTION	SERIAL #	RANGE	CAL DATE	DUE DATE
ARMSTRONG	64086	TORQUE WRENCH	4050187795	0-250 lb-ft	6/7/2023	6/7/2024
RIEHLE	N/A	TENSILE MACHINE	R35429	100,000 lb	1/11/2023	12/16/2023
BALDWIN	120 K	TENSILE TESTER	044-1905	60lb-120k lbs	4/19/2023	4/19/2024