

CUSTOMER SERVICE DASHBOARD

Incident ID: [TS-00339998](#)

Customer: [Amazon](#)

Location: [Edison, NJ \(LGA9\)](#)

Project #: [M-16-00155](#) [J-16-00155](#)

PO #: [Not Available](#)

Customer Incident #:

Business Unit: [Tilt Tray & Cross Belt](#)

Opened By: [Kevin Kreutz](#)

Assigned To: [Mark Hunt](#)

Closed By: [Lindsey Strack](#)

Resolved By: [Neil Kaszubski](#)

Date Opened: [4/4/2019 2:07:18 PM](#)

Date Assigned: [4/8/2019 10:24:29 AM](#)

Date Closed: [4/18/2019 10:12:56 AM](#)

Date Resolved: [4/5/2019 7:20:44 AM](#)

Status: [Closed](#)

Severity: [2. Serious](#)

Incident Type: [Service – Bulletin 100](#)

Request Type: [Phone/Hotline](#)

Contact: [Rabi Haq](#)

Email: haqrab@amazon.com

Business: [1\(732\)340-6206](#)

J47451. Shipping sorter (CB4000) Broken collector brush

Problem:

Shipping sorter (CB4000) Broken collector brush

<https://chime.aws/3433465666> Meeting ID: 3433 46 5666 U.S. Toll: +1 206-462-5569 Meeting PIN: 3433 46 5666
U.S. Toll-free: +1 855-552-4463 International: <https://chime.aws/dialinnumbers/>

Work Around:

With brushes 568, 580, 592, 604, 616, 628, 640, 652 removed from the system and the carrier chain disconnected at 567/568, 589/590 and 663/664 the system is running production.

cmc_setup.MaxFailedBrushes was set to 8 (instead of 0)

cmc_setup.NoOfNoCommCTBCRB was set to 120 (instead of 12).

CR_supervision, rung 13, these were set to 8, instead of 2.

(see Figure 1)

Carrier 582 had been replaced as 75 V was not making it thru this carrier.

Carriers 568 - 589 most likely needed to be removed from the system due to the connection between 567 and 568 being disconnected. This was expected to be reconnected and we did not find it was still disconnected until the brushed on 568 and 580 had been removed.

Resolution:

See RCA

Product: [Intellisort CB 4000](#)

Category: [Conductor Rail](#)

Subcategory: [Current Collector "Brushes"](#)

1 of 38

Incident ID: [TS-00339998](#)

Print Time: [04/18/2019 11:43:22 AM](#)

Print By: [Rick Tharp](#)

Root Cause:

RCA
LGA9 CB4000 Sev incident report..docx

Preventative Measures:

See Attached RCA

Incident Events

Email on **4/8/2019 10:29:52 AM**

Record by **Sergio Amaral** related to **Leslie James**

Summery for 4-7-19:

Today the sorter was available 9:15 and 1:15 for testing the continuity of the 75V carrier chain and checking carrier brushed. The following was noted. Continuity test went well, no issue was noted. Checked all brushes on sorter. The following issue was noted: Carrier #304 brush cable show sign of rubbing. See pic. Below. To be replaced by Facility Carrier #532 and #664 brush cables were taped were cable were rubbing at inlet. (To be replaced by Facility) Carrier #865 Motor Bracket was missing bolt. (Issue was resolved). Continue training on CR/brushes and DCP CR box functionality on the system. Checked DCP CR #9 480V box and no abnormalities were noted. CR #9 reported the initial fault that stop the sorter.

Note the only changes made to the system were brushes and two carriers.

This later this evening Joe Charon (Regional manager for Amazon Facility) and I will be discussing if any other tasks need to be addressed.

Broken spring from Brush assembly. Good and broken spring.

(see Figure 2)

Damage brush harness cable removed from sorter incident.

(see Figure 3)

Slot #1 and #3 are the correct location for brush installation. Slot #1 is 0V and slot #3 is 75V

(see Figure 4)

Brush Harness for carrier #304 shows sign of rubbing. Adjust harness cable

(see Figure 5)

Leslie James

Senior Customer Service Controls Engineer

Honeywell Intelligrated | Safety and Productivity Solutions

Conference Call on **4/7/2019 10:33:08 PM**

Record by **Omer Mohammed** related to **Omer Mohammed**

RCA added to the root cause section.

Event on **4/6/2019 9:36:06 AM**

Record by **Thien Dang** related to **Thien Dang**

Leslie called back asking for update on this ticket. I let him know that based on the last event, the sorter was restarted and it should be working now.

Event on **4/6/2019 7:00:45 AM**

Record by **Julia Zhang** related to **Julia Zhang**

Site restarted sorter and it's now back up and running.

Event on **4/6/2019 6:56:52 AM**

Record by **Julia Zhang** related to **Julia Zhang**

Site requested to have fault reset on shipping sorter.
Regi did that and tried reset button.

Product: **Intellisort CB 4000**

Category: **Conductor Rail**

Subcategory: **Current Collector "Brushes"**

3 of 38

Incident ID: **TS-00339998**

Print Time: **04/18/2019 11:43:22 AM**

Print By: **Rick Tharp**

Phone Call on 4/6/2019 1:36:11 AMRecord by **Regi Putra** related to **Regi Putra**

Carriers 570 - 670 have all successfully been downloaded and verified. only 2 carriers are in error which i have attempted another download & verify.

Sorter functionality is handed to operations and everyone is content to drop the call.

Conference Call on 4/6/2019 1:01:52 AMRecord by **Omer Mohammed** related to **Omer Mohammed**

Confirmed everything looks good. I have dropped at this time. Regi continue to monitor and site is content with it.

Conference Call on 4/6/2019 12:54:48 AMRecord by **Omer Mohammed** related to **Omer Mohammed**

Site were asking why two of the four CCAs are disabled. Regi said we are normally using only 2 CCAs and not sure why two of them would be disabled. He will have to ask around and get an answer about that.

Conference Call on 4/6/2019 12:51:41 AMRecord by **Omer Mohammed** related to **Omer Mohammed**

Items are inducting and discharging smoothly.

Conference Call on 4/6/2019 12:48:57 AMRecord by **Omer Mohammed** related to **Omer Mohammed**

All the items from the bellows has been removed and will be starting ops soon. So far everything looks good.

Conference Call on 4/6/2019 12:15:51 AMRecord by **Omer Mohammed** related to **Omer Mohammed**

*EDIT:

Carrier 582 and 656 had a bad connection and there were 20 other issues that were introduced during troubleshooting related to broken brush due to improper height installation, bad connectors due to improper screwing in the carrier chain cables) etc. So it took this all day to clear all those issues. Sorter has ran multiple revolutions without any errors at the moment.

PLC is back to original configuration and all sortation devices is put back in place.

Currently site is clearing items on bellows and Ops are expected to start around 1.

Conference Call on 4/5/2019 11:44:21 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

The carriers with update needed are confirmed not concerned electrically. Site should be good with inducting products and verify operations. Since they dont have alot of production, they will take this opportunity to clear bellows.

Conference Call on 4/5/2019 11:18:48 PMRecord by **Omer Mohammed** related to **Jamie Beltrami**

current carrier status. Since the sorter is running at the moment and hasn't stopped without any errors, they would like to enable an induct and test production.

Product: **Intellisort CB 4000**Category: **Conductor Rail**

4 of 38

Subcategory: **Current Collector "Brushes"**Incident ID: **TS-00339998**Print Time: **04/18/2019 11:43:22 AM**Print By: **Rick Tharp**

Conference Call on 4/5/2019 11:08:16 PM

Record by **Omer Mohammed** related to **Jamie Beltrami**

Sorter has started. Jamie and Neil are working on clearing carriers from error state. We have made almost 2 revolutions now without any errors

Conference Call on 4/5/2019 11:05:09 PM

Record by **Omer Mohammed** related to **Jamie Beltrami**

Site has stopped from jogging the sorter now. Neil confirmed PLC is in original state.

Conference Call on 4/5/2019 11:03:43 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Sorter still jogging

Conference Call on 4/5/2019 10:34:28 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

All brushes inspected and Jamie will try to jog the sorter.

Sorter is jogging and hasn't stopped yet.

Event on 4/5/2019 10:16:46 PM

Record by **Neil Kaszubski** related to **Jamie Beltrami**

It was found the at least some of the brushes installed today were done so in the incorrect height, causing them to break. Site is inspecting all 8 replaced brushes now.

Conference Call on 4/5/2019 10:13:07 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Neil sent Jamie the carrier numbers to be looked at that were replaced.

(see Figure 7)

Conference Call on 4/5/2019 10:12:00 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Site is discussing about replacing the brushes. They might need spare parts and working with EWR9 to get parts on site. Site also wants to verify other brushes before re jogging the sorter.

Conference Call on 4/5/2019 9:44:54 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Sorter jogged and stopped with brush failed at 562 . pictures below

Conference Call on 4/5/2019 9:43:20 PM

Record by **Omer Mohammed** related to **Jamie Beltrami**

Site continue to inspect continuity on area 570-580. Inspection completed and carrier replaced. Site is ready to jog the sorter.

Conference Call on 4/5/2019 9:12:16 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

(see Figure 10)

Conference Call on 4/5/2019 9:05:01 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Taking a closer look at 568 looks like cable management issue of wire harness on the bracket

(see Figure 11)

Conference Call on 4/5/2019 9:04:10 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

brush sent by Jamie

(see Figure 12)

Conference Call on 4/5/2019 8:24:07 PM

Record by **Omer Mohammed** related to **Jamie Beltrami**

Pin #2 pushed in on carrier 582

(see Figure 13)

Conference Call on 4/5/2019 8:22:39 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Site is continue to run resistance check/ continuity between 500-700 and 450-750. they will also replace the carrier 582 and then test the sorter.

Conference Call on 4/5/2019 7:46:56 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Matt S, has joined the call. Site is currently inspecting the sorter chain for bad connection. They found one at 582 and are replacing it now.

Conference Call on 4/5/2019 7:46:00 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

Site GM Rainy has also discussed they wont be running the night production and would like to give the system fully for troubleshooting. No production for tonight until morning shift.

Conference Call on 4/5/2019 7:45:10 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

Jo confirmed Ankit, field tech has arrived on site

Conference Call on 4/5/2019 7:37:32 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

Site is planning on replacing 582 carrier unless any other ideas being discussed. and they are also discussing about reduced capacity

Conference Call on 4/5/2019 7:19:49 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

Remote persons asked if site is working on 602-628? but local techs are around the area 582 carrier and found a bad pin. The bad pin was found between 581-582 carriers

According to Neil, Rabi has replaced the carrier 582 last night and also site verified they had 75v

Conference Call on 4/5/2019 7:15:16 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

Site is current discussing series of events from the beginning of the issue started.

Conference Call on 4/5/2019 7:02:07 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

Lindsey Called me in and she said their is going to be another field tech flying to site to night and will be there in couple of hours.

Conference Call on 4/5/2019 6:45:40 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

I have joined the call.

Event on 4/5/2019 6:31:12 PMRecord by **Sergio Amaral** related to **Sergio Amaral**

Site have found the bad resistance section to possibly be between 602-628.

Event on 4/5/2019 6:06:20 PMRecord by **Sergio Amaral** related to **Sergio Amaral**

While troubleshooting we found that some of the carriers that were disconnected last night were never properly reconnected.

Event on 4/5/2019 5:31:05 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site is still measuring for continuity throughout the sorter.

Event on 4/5/2019 4:50:16 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Started the sorter and we are not seeing different alarms. We will try to start the sorter again.

(see Figure 14)

Event on 4/5/2019 4:42:22 PM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

A bad connection was found and corrected. The reported carrier was 656 but this was not 100% positive to the correct cart number. The section that was reading 498 ohms, is now reading 0.8 ohms.

Event on 4/5/2019 4:40:35 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site found a bad carrier connection (Carrier 656). The high resistance measurement (498 Ohms) taken between carriers 628-700 might have been a result of the bad connection.

(see Figure 15)

Event on 4/5/2019 4:28:55 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Carriers 700 - 800 continuity measurement shows 0.8 Ohms
Site will now measure continuity from carrier 700-750

Event on 4/5/2019 4:00:32 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Carriers 628-700 continuity measurement shows 498 Ohms
Site will now measure continuity from carriers 700 - 800.

(see Figure 16)

Event on 4/5/2019 3:24:42 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Carriers 628-800 continuity measurement shows an Open
Site will now move jumper from 800 to 700.

Event on 4/5/2019 3:01:55 PM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

The sorter was started but the brush for carrier 628 was in CR02 when it stopped due to CR02 power supply failures. Earlier, the site did not measure continuity thru the cart chain. I have asked they place a jumper in the

Event on 4/5/2019 2:59:48 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Measuring for continuity from carrier 628 to 800 (female side - place jumper)

(see Figure 17)

Email on 4/5/2019 2:49:26 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site is measuring in between carts for continuity.

Event on 4/5/2019 2:35:38 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

We have reverted the PLC values to the initial values...

Event on 4/5/2019 2:08:34 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site is re-installing the remaining brushes. We will then revert the PLC changes.

Event on 4/5/2019 1:30:52 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

After running the sorter we see the original faults with CR9

(see Figure 18)

Event on 4/5/2019 1:27:02 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site has connected two brushes. Changed PLC value from 8 to 6

(see Figure 19)

Event on 4/5/2019 1:06:36 PM

Record by **James Neyhouse** related to **Sergio Amaral**

All CCAs are showing in error:

(see Figure 20)

I disabled the CCAs and enaled 1 and 2. They are now out of the error state:

(see Figure 21)

Event on 4/5/2019 12:39:16 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

While in the process of downloading and verifying:

(see Figure 22)

Event on 4/5/2019 12:36:38 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site is the process of downloading and verifying the carriers.

Event on 4/5/2019 12:19:47 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

The sorter Jog revolution has been completed successfully. Next step will be to connect the brushes to then run the sorter.

Event on 4/5/2019 12:09:54 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

After brushes are connected the following changes will need to take place:

Revert back the value from 8 to 0 (CR_Supervision)

(see Figure 23)

Revert back the value from 8 to 2 (CR_Supervision -> Rung 13)

(see Figure 24)

Revert back the value from 120 to 12 (CartStatusProgram)

(see Figure 25)

Event on 4/5/2019 12:09:13 PM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site is jogging the sorter

Event on 4/5/2019 11:42:51 AM

Record by **Sergio Amaral** related to **Sergio Amaral**

For testing - Site is connecting the carriers together only, no brushes are being connected at this point.

Event on 4/5/2019 11:03:33 AM

Record by **Sergio Amaral** related to **Sergio Amaral**

Carrier 304

(see Figure 26)

Event on 4/5/2019 10:55:38 AM

Record by **Sergio Amaral** related to **Sergio Amaral**

While troubleshooting site found broken wires in carrier 304. They're in the process of fixing the wiring issue.

Event on 4/5/2019 10:41:03 AM

Record by **Sergio Amaral** related to **Sergio Amaral**

Operations made the decision to shut down the sorter while we go through the troubleshooting process.

Event on 4/5/2019 10:18:26 AM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site will start by measuring all CR for voltage (DC for power rail) to make sure no damage is present.

Event on 4/5/2019 10:12:29 AM

Record by **Sergio Amaral** related to **Sergio Amaral**

Site is going over the timeline of events with Mikey Poelking (Field Service Eng).

Event on 4/5/2019 10:06:42 AM

Record by **Sergio Amaral** related to **Sergio Amaral**

Supplying additional drawings for DCP_CR_09 to site:
Section 8 - Sorter Main Power Panel

Event on 4/5/2019 9:44:34 AM

Record by **Sergio Amaral** related to **Sergio Amaral**

Field Service Eng has arrived on site.

Conference Call on 4/5/2019 9:00:58 AM

Record by **Shane Schlichter** related to **Shane Schlichter**

Field service is expected to arrive around 9:30 a.m.

Event on 4/5/2019 8:05:40 AM

Record by **Neil Kaszubski** related to **Rabi Haq**

The sorter is running as expected but the site noticed this on carrier 916:
(see Figure 27)

Event on 4/5/2019 8:02:33 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site found a frieght wire on Carrier 916.

Event on 4/5/2019 7:39:40 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

The cable on the carrier was plugged in backwards. casuing the brush to sag.

Event on 4/5/2019 7:36:05 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Carrier 544 has the upper part of the brush hanging. Site is currently inspecting the brush.

Event on 4/5/2019 7:34:27 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site found a low hanging Brush on the carrier in the 550 range. they have stopped the sorter to inspect.

Event on 4/5/2019 7:20:38 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Sorter has been running for 15 min now. 738 carrier are occupied and being used.

Event on 4/5/2019 7:10:54 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is currently inducting.

Event on 4/5/2019 6:54:15 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site has started the sorter. Also site found that Carrier 567 and 568 were already disconnected. This was from the troubleshooting efforts earlier. the cable was asked to be connected back but was never executed. We are going to continue to run the sorter without that the connection on those carriers.

Event on 4/5/2019 6:53:02 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site confirmed that Carrier 568 is good.

Event on 4/5/2019 6:38:07 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

we are going to disconnect 567 and 568

brushes that are going to be removed are 568 and 580.

Event on 4/5/2019 6:36:29 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

brush on Carrier 568 is being inspected.

Event on 4/5/2019 6:33:20 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

The sorter Stopped with CR fault on CR-14.

Event on 4/5/2019 6:32:00 AM

Record by **Neil Kaszubski** related to **Rabi Haq**

Carrier 568 going thru CR9 did not produce a clean supervision. The sorter stopped at CR14 shortly later with carrier 580 (meaning 568 just left it). I asked the site to check the brush on 568.

(see Figure 28)

Event on 4/5/2019 6:27:56 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site has started the sorter. they have also started inducting on the sorter.

Event on 4/5/2019 6:20:39 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

The carrier in the CR-9 is carrier 580.

Event on 4/5/2019 6:16:27 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

We are seeing a CR fault on CR-9. One of carts that should be online is being detected. this is what threw the alarm.

Event on 4/5/2019 6:15:33 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site has Completed removing the cables and brushes and are now starting the sorter.

Event on 4/5/2019 5:59:37 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

This gives us the ability to run the sorter at 90%

Event on 4/5/2019 5:50:23 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is Disconnecting cables at carriers 589-590 and 663-664

We are also going to disconnect the brushes at carriers 592, 604, 616, 628, 652

Event on 4/5/2019 5:48:58 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

We are going to go back to our safe configuration. this means taking off the brushes we had just put on. this will disable approx 75 carriers.

Event on 4/5/2019 5:47:41 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

The Sorter stopped with a Power supply health 3 fault. there is also CR fault on CR-3.

Event on 4/5/2019 5:39:39 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

we are going through the Steps to clear CR faults. We have reset the CR faults and are starting the sorter.

Email on 4/5/2019 5:35:18 AM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

both carriers 640 and 664 had 75 V. We will reconnect everything and test. We got the ok from operations to run over the 6 AM deadline by 15 minutes.

Event on 4/5/2019 5:28:00 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

We are currently in the process of putting everything back together. the 4 brushes that were removed are going to be put back on and the cables that were disconnected will be reconnected. We will then test the sorter to see if the carrier we fixed earleir potentially resolved our issues. if it has not we will proceed to disable necessary carriers to run sorter at a lower cpacity.

Event on 4/5/2019 5:18:31 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

We are going to inspect section for 640-664

Event on 4/5/2019 5:11:07 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

639-640 should be disconnected. 652 is the brush that needs to be put on and jogged to the CR.

Event on 4/5/2019 5:09:23 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

651 and 652 are going to be reconnected 663 and 664 will be disconnected. we are going to preform the same test to find a power disconnet.

Event on 4/5/2019 5:09:21 AM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

We are now moving our focus to carriers 640-664.

Event on 4/5/2019 5:07:52 AM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

Cart 582 has been replaced and power can now be seen at 592 as expected.

Event on 4/5/2019 4:58:19 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site has replaced carrier 582 and is seeing 75V on 583 as well. they will go ahead and verify 75V until carrier 592. Site has verified they are getting 75V until carrier 592

Event on 4/5/2019 4:33:24 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is currently working on replacing the carrier 582.

Event on 4/5/2019 4:30:16 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

We have 75V leaving carrier 581. we dont have any voltage on Carrier582. site is currently replacing carrier 582.

Event on 4/5/2019 4:16:15 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site confirmed 75v leaving carrier 580.

Event on 4/5/2019 4:06:14 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site does not have a good way to test the voltage leaving carrier 580.

Event on 4/5/2019 4:03:04 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

There is a disconnect between carrier 580 and carrier 582.

Event on 4/5/2019 3:55:42 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

There is no voltage on carrier 586. we checked carrier 583 and we could not get a reading. site is going to jog the sorter and try to keep carrier 580 on the CR while getting better accessability to carriers 580-583.

Event on 4/5/2019 3:48:16 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

We are going to check the voltage between 568 and 580 at the carrier. so we can do the same check on the section between 580 and 592. this is being done because there isnt a brush on 592 and we dont get a reading when we test it at the connector.

Event on 4/5/2019 3:44:13 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

on brush 568 we measured 74V. we are going to measure 592 next. the brush on 592 is disconnected we are going to measure it at the cable.

Event on 4/5/2019 3:39:47 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

CR-8 has 75V measured at Terminal block 1D. we are going to measure the Voltage at the brush on Carrier 568

Event on 4/5/2019 3:38:38 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is currently in the process of testing the voltage.

Event on 4/5/2019 3:30:23 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site was able to get carrier 580 to CR-8. they are putting on the right gear to in order to check the voltage on the CR by turning on the CR.

Event on 4/5/2019 3:12:13 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is currently jogging the sorter to bring carrier 580 to CR-8

Event on 4/5/2019 2:59:19 AM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

I have asked the site to reconnect carriers 589/590 and disconnect 567/568 and 592/593. We will then move carrier 580 to CR8 and power on the CR's with the test switch so we can check voltage at the end of the sorter chain segments (carriers 568 and 592) and load leaving the CR panel (CB06127).

Event on 4/5/2019 2:56:40 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

site is working on bringing carrier 580 to CR-8

Event on 4/5/2019 2:54:31 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site just got the sorter back from ops. we are going to continue troubleshooting

Event on 4/5/2019 2:53:00 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site would like to inspect the cables from the panel to brushes and the Conductor rails.

Event on 4/5/2019 2:40:00 AMRecord by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is going to stop the sorter. they are going to start the troubleshooting procedure

we are going to troubleshoot the CR one at a time.

first troubleshoot CR-8 - move carrier 580 to CR-8 and measure the load on the panel

disconnect cable between 568 and 567

reconnect cable 589 and 590. we will also measure the voltages on these carriers

Event on 4/5/2019 2:27:20 AMRecord by **Neil Kaszubski** related to **Neil Kaszubski**

With brushes 592, 604, 616, 628, 640, 652 removed from the system and the carrier chain disconnected at 589/590 and 663/664 (and 651/652), we confirmed operations can run.

cmc_setup.MaxFailedBrushes was set to 6 (instead of 0)
cmc_setup.NoOfNoCommCTBCRB was set to 120 (instead of 12).
CR_supervision, rung 13, these were set to 6, instead of 2.
(see Figure 29)

Event on 4/5/2019 2:23:24 AMRecord by **Salman Yousufuddin** related to **Salman Yousufuddin**

packages are inducting and diverting

Event on 4/5/2019 2:20:53 AMRecord by **Salman Yousufuddin** related to **Salman Yousufuddin**

site is turning on auto induct 1 and auto induct 7

Event on 4/5/2019 2:15:13 AMRecord by **Salman Yousufuddin** related to **Salman Yousufuddin**

approching less than 200 carriers on the 2nd revolution. after the second revolution we will open up the inducts.

Event on 4/5/2019 2:13:44 AMRecord by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is going to enable all chutes and also enable only one induct lane.

Event on 4/5/2019 2:04:27 AMRecord by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is ready to start the sorter and test it with the induct enabled.

Event on 4/5/2019 2:01:35 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

site is currently working on removing carrier brushes 616 , 604 and 592. The cable between 616 and 617 will be reconnected. The cable at 589 and 590 will be disconnected.

Event on 4/5/2019 1:58:56 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

We are prepping the sorter to run at 90% capacity. this means we will disable 72 carriers

Event on 4/5/2019 1:52:42 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

We are currently validating if running with 72 carriers disabled is a viable option with ops

Event on 4/5/2019 1:39:57 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Amazon wants to go ahead and run the sorter with 72 carriers disabled.

Event on 4/5/2019 1:20:26 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Intelligrated is going through all the options that we have. amazon is considering running the sorter with 10% of the carriers disabled.

Event on 4/5/2019 1:18:55 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

616 is at the beginning of CR-12 and 604 is at the end of CR-12.

Event on 4/5/2019 1:10:21 AM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

The sorter was able to run successfully, so we added brushed back to carriers 604 and 616, replaced the cable between carriers 592/693 and removed it between 616/617.

Event on 4/5/2019 1:03:13 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

my connection to the call dropped for a min. i have rejoined the call. there seems to be a CR fault on CR-12. we are going to inspect the brushes in the rail.

Event on 4/5/2019 12:42:45 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

site started the sorter.

Event on 4/5/2019 12:35:43 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

we are going to remove 652 brush and the the cable connection between 663 and 664.

Event on 4/5/2019 12:33:06 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

we are seeing a CR fault on CR-5. we are also seeing PS faults

Event on 4/5/2019 12:24:02 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site will go through the reset sequence and start the sorter.

Event on 4/5/2019 12:19:30 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is conductor rail fault on CR- 14. Carrier 639-654 are problematic. we are going to remove the cables between 651 and 652 and the remove brush on carrier 640.

Event on 4/5/2019 12:12:20 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site jogged the sorter to inspect the carriers and connections. they are going to start the sorter.

Event on 4/5/2019 12:04:25 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

652 and 653 are the ones that faulted out. Intelligrated would like to check the connection between the carriers 661,662 and 663

Event on 4/5/2019 12:00:43 AM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

effort to isolate a carrier. we are seeing a CR fault on CR-2

Event on 4/4/2019 11:54:59 PM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Site is going through the CR reset sequence.

Event on 4/4/2019 11:39:54 PM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

brushes on 640 and 652 were installed and 663 and 664 are going to be reconnected.

Event on 4/4/2019 11:36:46 PM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

intelligrated would like to see the connection between carrier 580 and carrier 579. Carrier 579 was in a default state

Event on 4/4/2019 11:31:42 PM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

The Daisy chain on the molex connector between the carriers is being inspected. the connection seems good. Intelligrated would like site to disconect this cable and inspect it for potential arching and reconnect.

Event on 4/4/2019 11:28:41 PM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Intelligrated would like to check the connection between 580 and 581. There doesnt seem to be an issue with carrier 592.

Event on 4/4/2019 11:13:36 PM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

we are on our 4th revolution. Intelligrated would like to see carrier 250 go through. Carrier 592 seems to be chatty. site is inspecting that brush

Event on 4/4/2019 11:12:23 PM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

Sorter stopped with a fault on CR14.

Event on 4/4/2019 11:04:38 PM

Record by **Salman Yousufuddin** related to **Salman Yousufuddin**

I have joined the call. taking over for Omer.

the conductor rail fault has been cleared and the sorter has started. the sorter has synced

Conference Call on 4/4/2019 10:49:18 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Ops has cancelled their production and will have start until morning 5:30. Site and intelligrated are continuing to troubleshoot remotely. Field tech scheduled to be on site tomorrow morning around 9 or 10 AM.

Conference Call on 4/4/2019 10:36:36 PM

Record by **Omer Mohammed** related to **Jamie Beltrami**

++Mikey

Brendon,

Here's the field techs details: He is expected to be on site between 9-10 AM.

Mikey Poelking
Michael.Poelking@Honeywell.com

Regards,

Event on 4/4/2019 10:32:28 PM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

Since carriers 581-662 are reporting program mode (this occurs if they have low voltage), this suspected carrier is this section. I have asked the site to remove the brush assemblies on carriers 616, 628, 640, and 652 and remove the power cable between carriers 663/664. The max failed brushes configuration in the PLC was set to 5 as well and the max CTB/CRB failure was set to 120 carriers instead of 12. These two instructions in rung 13 of CR_Supervision needed to be increased to 5 instead of 2.
(see Figure 30)

Event on 4/4/2019 10:31:40 PM

Record by **Neil Kaszubski** related to **Neil Kaszubski**

We had the site remove the brush assembly on carrier 604 and start the sorter. It then stopped due to CR11 power supply faults.

Conference Call on 4/4/2019 10:15:42 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

We asked the site to disconnect the power cables between carriers 592/593 and 615/616, so carrier 604 is the only one with a brush in the that electrical run. The sorter was started but then stopped at CR10 with power supply faults.

Conference Call on 4/4/2019 9:55:13 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

Escalated to Matt S. and Lindsey. She is currently working on field service to head out to site while Neil is troubleshoot this issue.

An update, the sorter stopped again. Neil wanted to isolate the carriers that might be the issue with running the sorter.

Conference Call on 4/4/2019 9:22:04 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

i have started the field service process to get someone on site from Carlos Quiterrez team. I reached out to him and left him a VM.

Event on 4/4/2019 9:05:34 PM

Record by **Neil Kaszubski** related to **Rabi Haq**

The spark was seen from carrier 604.
(see Figure 31)

Event on 4/4/2019 8:44:11 PMRecord by **James Neyhouse** related to **James Neyhouse**

After performing the carrier table reset all carriers were able to clear and update after sorter synchronization.

After some run time a large group of carriers went into error, but the sorter continued to run.

A short time thereafter the sorter stopped with the same PWS errors on conductor rail 9 with carrier 250 at the CPA.

One of the techs staged at conductor rail 9 said they saw a spark come from the rail. Waiting for further information on which cart that was generated from.

Conference Call on 4/4/2019 8:28:36 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

Neil suggested to reset carriers and run the sorter without attempting to discharge. Possibly suspecting a bad motor on a carrier. Site is also going to disable chutes.

Our idea is to monitor the sorter running and whether if the sorter will stop with power supply faults even if any of the carrier motor wouldn't run.

Event on 4/4/2019 8:08:49 PMRecord by **James Neyhouse** related to **James Neyhouse**

carrier 609 is at the conductor rail 9.

And once again we see carrier 250 at the CPA.

Event on 4/4/2019 7:53:07 PMRecord by **James Neyhouse** related to **James Neyhouse**

The sorter has just stopped again with Power Supply faults in Conductor Rail 09.

Site is unsure if the sorter stopped due to this or from them stopping the sorter from ICW. Based on the Database it appears the Power supply faults occurred in the same time the sorter began "Sorter: Stopping"

Events in SQL:
(see Figure 32)

Event on 4/4/2019 7:51:17 PMRecord by **James Neyhouse** related to **James Neyhouse**

Site has let the sorter jog for 2 revolutions and did not see any issues.

They are leaving the belly pans off of the sorter while operations is on break and will be running it at operational speed to monitor.

Following this the plan will be to put the belly pans back onto the sorter and turn over to operations if the system validates.

Event on 4/4/2019 7:30:15 PMRecord by **James Neyhouse** related to **James Neyhouse**

Site is going to stage themselves around the area from CR7 - CR14 to inspect the sorter while jogging the sorter

Event on 4/4/2019 7:24:39 PMRecord by **James Neyhouse** related to **James Neyhouse**

location of CR14 where Jiffy was found:
(see Figure 33)

Event on 4/4/2019 7:23:23 PMRecord by **James Neyhouse** related to **James Neyhouse**

Jiffy bag was found by conductor rail 14:
(see Figure 34)

Conference Call on 4/4/2019 7:21:22 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

Site reported to have seen a jiffy bag near conductor rails 14. More details coming shortly.

Event on 4/4/2019 7:09:31 PMRecord by **James Neyhouse** related to **James Neyhouse**

Missing fin found:
(see Figure 35)

Event on 4/4/2019 7:06:41 PMRecord by **James Neyhouse** related to **James Neyhouse**

site found the missing brush section between carrier 78 and 79 (carrier 465 at CPU) around the area of conductor rail 7

Conference Call on 4/4/2019 6:44:08 PMRecord by **Omer Mohammed** related to **Omer Mohammed**

the recent broken brush found in this situation. Site is inspecting to find the missing piece. Currently in CR7 to inspect.

(see Figure 36)

Escalation on 4/4/2019 6:21:40 PMRecord by **Lindsey Strack** related to **Lindsey Strack**

Received escalation call from Jimmy at 5:55pm. Reached out to Omer to join the call ASAP. I will be on in an hour.

Event on 4/4/2019 6:20:18 PMRecord by **James Neyhouse** related to **James Neyhouse**

Brush 544 was found to not have the upper brush connected:

Event on 4/4/2019 6:17:42 PM

Record by **James Neyhouse** related to **James Neyhouse**

The sorter has now just stopped with a brush fault on carrier 544:
(see Figure 38)

Event on 4/4/2019 6:15:01 PM

Record by **James Neyhouse** related to **James Neyhouse**

site has started the sorter and we are currently monitoring the system.

Event on 4/4/2019 6:08:50 PM

Record by **James Neyhouse** related to **James Neyhouse**

carrier 556 lower brush spring failure:
(see Figure 39)

Event on 4/4/2019 6:03:58 PM

Record by **James Neyhouse** related to **James Neyhouse**

site believes to have found a bad brush at carrier 556

site is going to replace this brush (which was replaced in February)

Upon replacement we are going to start up the sorter and monitor.

Conference Call on 4/4/2019 5:35:00 PM

Record by **Omer Mohammed** related to **Omer Mohammed**

I have joined the call

Event on 4/4/2019 5:27:53 PM

Record by **James Neyhouse** related to **James Neyhouse**

I am working on escalating to the Amazon team

I have enabled the CR reset function and have suggested site jog the sorter and visually inspect the carriers brushes going into the CR power rail especially in the 600 area (where we are stopping the sorter) for any potential physical issues.

Event on 4/4/2019 5:11:24 PM

Record by **James Neyhouse** related to **James Neyhouse**

The sorter stopped again with carrier 249 at RLCart once again.

Site is looking back into the carriers in the vicinity of conductor rail 9

Event on 4/4/2019 4:53:25 PM

Record by **James Neyhouse** related to **James Neyhouse**

Site has replaced the brush on carrier 628. It was not broken, but appeared to be worn down according to site.

The sorter has been started and is currently being monitored

Event on 4/4/2019 4:51:22 PM

Record by **James Neyhouse** related to **James Neyhouse**

I have also requested site inspect carriers from CR-08 to CR-10 to check for a potential brush that may be causing issues specifically on CR09.

Currently the PLC shows carrier 250 at the clock pulse array.

If carriers check out after contactor replacement we will once again start up the sorter.

Event on 4/4/2019 4:09:14 PM

Record by **Dashboard Application** related to **Dashboard Application**

Matt Sollenberger Notified on 04/04/2019 via SMS

Event on 4/4/2019 4:09:11 PM

Record by **James Neyhouse** related to **James Neyhouse**

Site was able to measure 280 leg to leg on DCP_CR-09, 480 going into the 3 power supplies, and 25V coming out of them.

Site is currently working on replacing the contactor for CB8207601:
(see Figure 40)

In both instances when the sorter has stopped it has run for ~10minutes before stopping with "too many conductor rails have failed" along with power supply faults on PWS1 and PWS2 for DCP_CR-09

Event on 4/4/2019 4:01:51 PM

Record by **James Neyhouse** related to **James Neyhouse**

I have once again enabled the CR reset button to allow site to reset the faults to bring 480V back into DCP_CR-09 to troubleshoot the issue.

Event on 4/4/2019 3:58:53 PM

Record by **James Neyhouse** related to **James Neyhouse**

The sorter has just stopped with similar errors reporting from Conductor Rail 09:
(see Figure 41)

Event on 4/4/2019 3:54:15 PM

Record by **Dashboard Application** related to **Dashboard Application**

Matt Sollenberger Notified on 04/04/2019 via SMS
Neil Kaszubski Notified on 04/04/2019 via SMS

Product: **Intellisort CB 4000**

Category: **Conductor Rail**

Subcategory: **Current Collector "Brushes"**

25 of 38

Incident ID: **TS-00339998**

Print Time: **04/18/2019 11:43:22 AM**

Print By: **Rick Tharp**

Event on 4/4/2019 3:51:53 PMRecord by **James Neyhouse** related to **James Neyhouse**

Site has hit the CR Fault Reset button and was able to start up the sorter.

There are multiple inductions in error that site is in the process of resetting.

Event on 4/4/2019 3:39:15 PMRecord by **Dashboard Application** related to **Dashboard Application**

Chris Van Andel Notified on 04/04/2019 via SMS

Jens Griesshammer Notified on 04/04/2019 via SMS

Event on 4/4/2019 3:18:03 PMRecord by **James Neyhouse** related to **James Neyhouse**

Site has validated 24v going into and out of DCP_IO_CR-09

To validate current alarms we have also enabled the CR reset button

Event on 4/4/2019 2:52:13 PMRecord by **James Neyhouse** related to **James Neyhouse**

Currently working on guiding site to the location DCP_IO_CR-09:
(see Figure 42)

Event on 4/4/2019 2:38:47 PMRecord by **James Neyhouse** related to **James Neyhouse**

DCP_CR-##:
(see Figure 43)

Event on 4/4/2019 2:27:00 PMRecord by **James Neyhouse** related to **James Neyhouse**

The PLC also yields that the only things preventing the sorter from running are A CR breaker, Too many failed CR, and a Safety Gate:
(see Figure 44)

I am once again suggesting site check to make sure there is power coming into DCP_CR-09 as site is still stating there is no power on the sorter.

Event on 4/4/2019 2:25:57 PMRecord by **James Neyhouse** related to **James Neyhouse**

Trying to understand what site is doing on the system as I see the following alarms now generating in ICW:
(see Figure 45)

Event on 4/4/2019 2:21:47 PM

Record by **James Neyhouse** related to **James Neyhouse**

I only show alarms for the CR-09 panel, but site is stating there is no power on the whole sorter

Currently restarting ICW loop sorter service to see if new alarms are generating

Event on 4/4/2019 2:18:52 PM

Record by **James Neyhouse** related to **James Neyhouse**

I have suggested site go to DCP_CR-09 to check the status of the power supplies.

Due to 2 power supplies showing as failed it is possible that the 1st fuse has blown (linking PWS1 and PWS2)

Event on 4/4/2019 2:12:34 PM

Record by **James Neyhouse** related to **James Neyhouse**

It appears the issue is actually isolated to DCP_CR-09:
(see Figure 46)

Phone Call on 4/4/2019 2:09:26 PM

Record by **Kevin Kreutz** related to **Rabi Haq**

Awaiting chime info

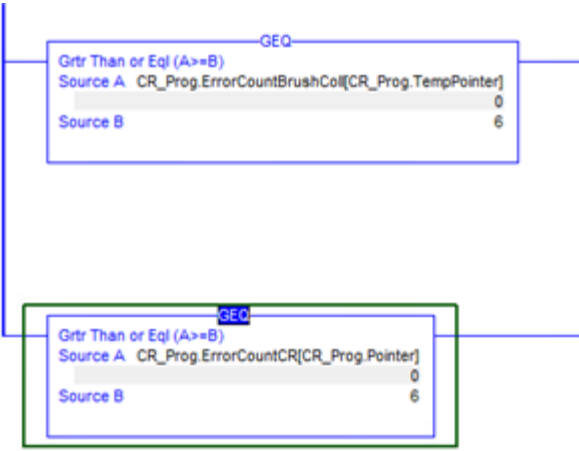


Image	Name
	Figure 1
	Figure 2
	Figure 3



Figure 4



Figure 5

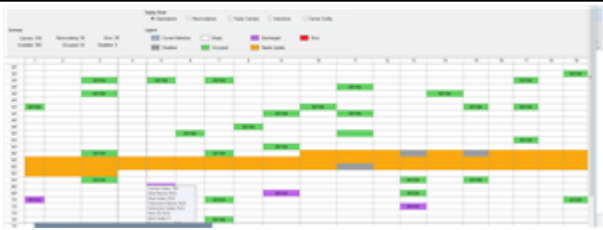


Figure 6

568
580
592
▼ 604
616
628
640
652

Figure 7



Figure 8



Figure 9

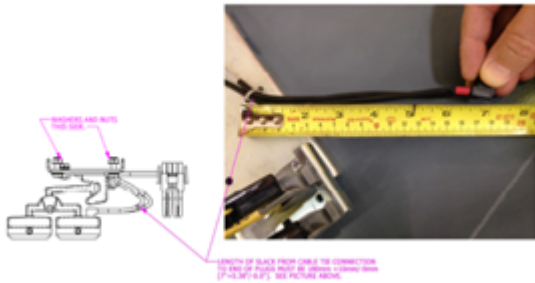


Figure 10



Figure 11



Figure 12



Figure 13

Project	Type	Location	Area	Design	Design	Design	Design	Description
1991	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
1992	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
1993	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
1994	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
1995	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
1996	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
1997	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
1998	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
1999	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00
2000	19/01/1991 14:00:00	Spain	194.000	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00	19/01/1991 14:00:00

Figure 14

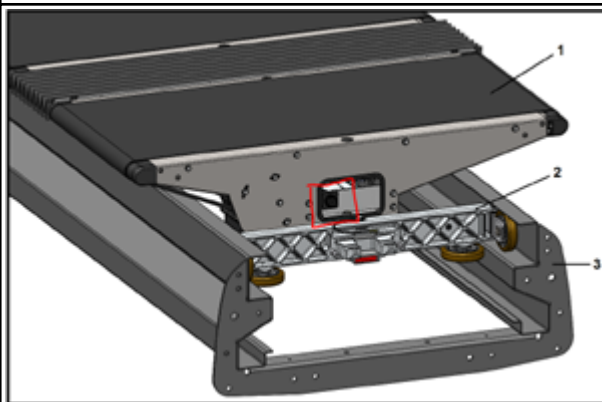


Figure 15

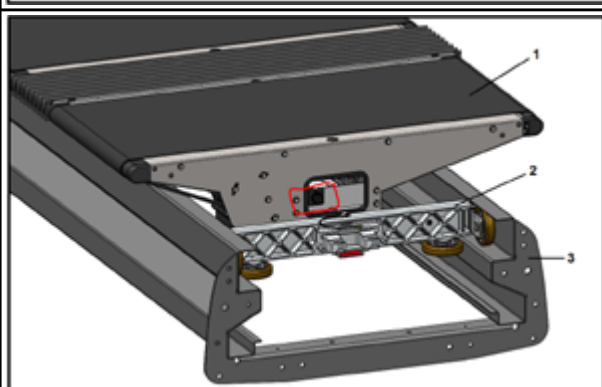


Figure 16

561			S01143		
581					
601					
621					
641					
661					S01104
681					
701	S01104				
721					
741					
761					
781					
801					
821					
841					

Figure 17

Asset Name, Description									
AssetID	Name	Description	SorterID	CCSID	Status	Source A	Source B	Source C	Source D
1000	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1001	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1002	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1003	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1004	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1005	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1006	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1007	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1008	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1009	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1010	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1011	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1012	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1013	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1014	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1015	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1016	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1017	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1018	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1019	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1020	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1021	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1022	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1023	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1024	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1025	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1026	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1027	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1028	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1029	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1030	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1031	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1032	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1033	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1034	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1035	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1036	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1037	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1038	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1039	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1040	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1041	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1042	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1043	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1044	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1045	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1046	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1047	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1048	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1049	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1050	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1051	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1052	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1053	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1054	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1055	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1056	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1057	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1058	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1059	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1060	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1061	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1062	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1063	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1064	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1065	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1066	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1067	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1068	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1069	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1070	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1071	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1072	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1073	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1074	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1075	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1076	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1077	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1078	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1079	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1080	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1081	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1082	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1083	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1084	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1085	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1086	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1087	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1088	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1089	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1090	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1091	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1092	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1093	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1094	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1095	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1096	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1097	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1098	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1099	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1100	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1101	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1102	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1103	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1104	4.0-0001-12-0000	Blank	1000	Blank	Completed	1000-0001-12-0000	Completed	1000-0001-12-0000	Completed
1105									

Figure 18

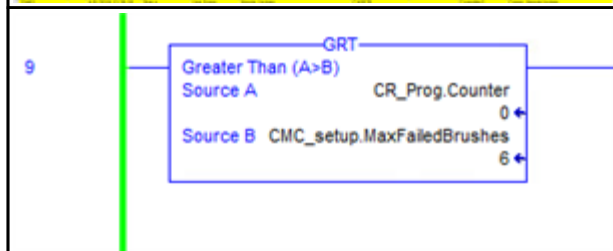


Figure 19

Enabled	Name	Description	SorterID	CCSID	Status
●	CCA 1.1	Center Configuration Array	900	1	NotRunning NotLogging CalibrationDisabled AutoConfigOff Error
●	CCA 1.2	Center Configuration Array	900	2	NotRunning NotLogging CalibrationDisabled AutoConfigOff Error
●	CCA 1.3	Center Configuration Array	900	3	NotRunning NotLogging CalibrationDisabled AutoConfigOff Error
●	CCA 1.4	Center Configuration Array	900	4	NotRunning NotLogging CalibrationDisabled AutoConfigOff Error

Figure 20

Enabled	Name	Description	SorterID	CCSID	Status
●	CCA 1.1	Center Configuration Array	900	1	Running NotLogging CalibrationDisabled AutoConfigOff
●	CCA 1.2	Center Configuration Array	900	2	Running NotLogging CalibrationDisabled AutoConfigOff
●	CCA 1.3	Center Configuration Array	900	3	NotRunning NotLogging Disabled CalibrationDisabled AutoConfigOff
●	CCA 1.4	Center Configuration Array	900	4	NotRunning NotLogging Disabled CalibrationDisabled AutoConfigOff

Figure 21

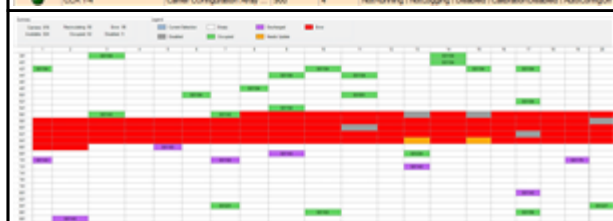


Figure 22

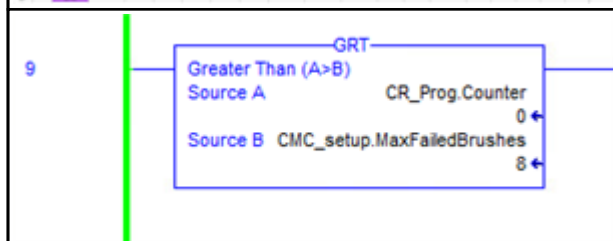


Figure 23

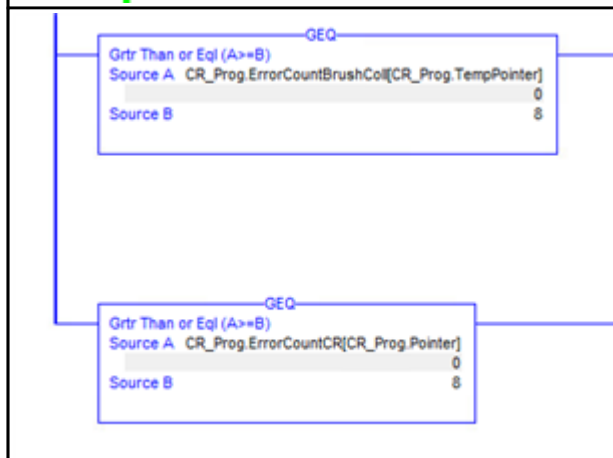


Figure 24

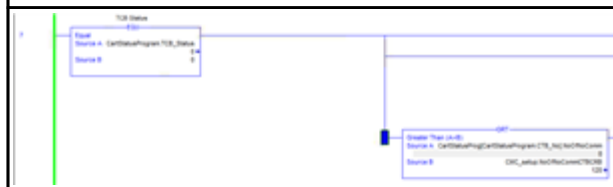


Figure 25

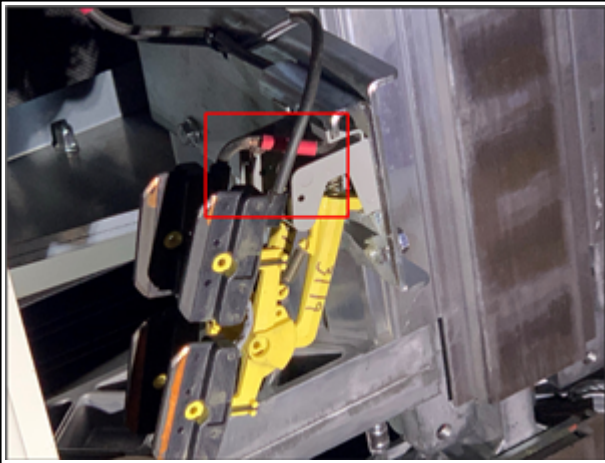


Figure 26



Figure 27

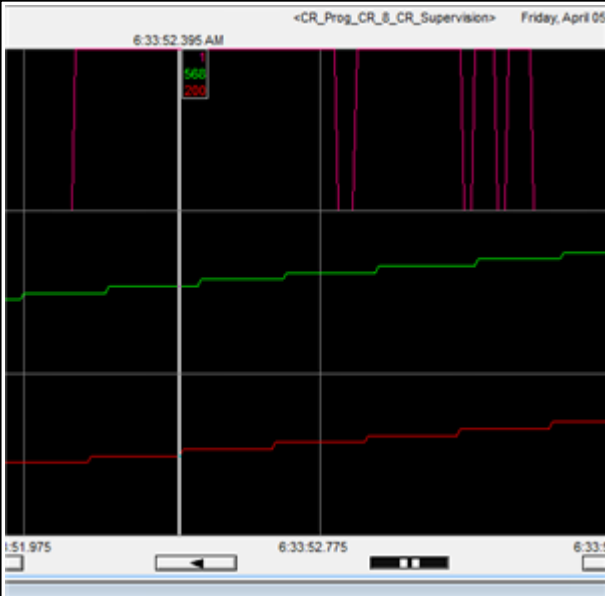


Figure 28

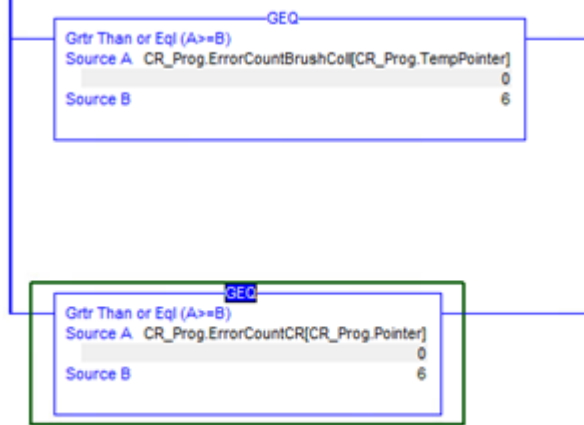


Figure 29

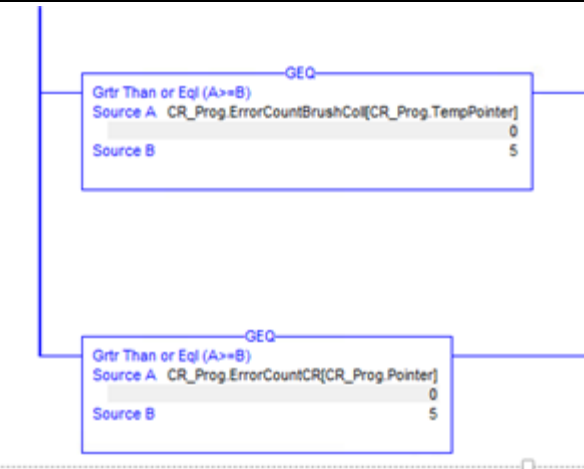


Figure 30

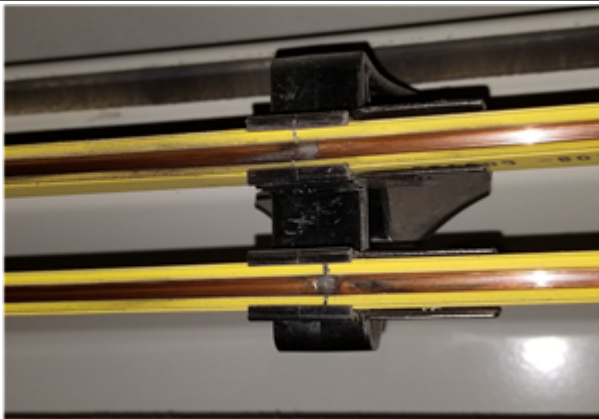


Figure 31

EventID	TypeID	EventStartTime	EventEndTime	EventID	EventDate	EventDevice	EventLocation
1	10210018	2013	NALL	2019-04-04 20:01:52	100	L3M-1000-06	U4r Sater 150m above Pumping
2	10210017	2013	NALL	2019-04-04 20:01:52	100	L3M-1000-05	U4r Sater 150m above Pumping
3	10210016	2013	NALL	2019-04-04 20:01:52	100	L3M-1000-03	U4r Sater 150m above Pumping
4	10210015	2013	NALL	2019-04-04 20:01:52	100	L3M-1000-04	U4r Sater 150m above Pumping
5	10210014	2013	NALL	2019-04-04 20:01:52	100	L3M-1000-02	U4r Sater 150m above Pumping
6	10210013	2013	NALL	2019-04-04 20:01:52	100	L3M-1000-01	U4r Sater 150m above Pumping
7	10210012	001	NALL	2019-04-04 20:01:52	100	CF1000-01	U4r Sater Sinter Stripping
8	10210011	20	2019-04-04 20:01:52	100	CF1000-01	U4r Sater Sinter Stripping	
9	10210009	20467	2019-04-04 20:01:30 300	NALL	10	PW1-1000-03	U4r Sater Powder Supply 2 Health
10	10210008	20467	2019-04-04 20:01:30 320	NALL	10	PW1-1000-03	U4r Sater Powder Supply 2 Health
11	10210007	20447	2019-04-04 20:01:30 300	NALL	10	PW1-1000-03	U4r Sater Powder Supply 1 Health
12	10210006	20504	2019-04-04 20:01:30 307	NALL	10	CF1000-01	U4r Sater Sinter. Too many conductive with heat treated
13	10210005	500	2019-04-04 20:01:30 303	NALL	10	CF1000-01	U4r Sater Sinter Common area
14	10210004	20506	2019-04-04 20:01:30 303	NALL	10	CF1000-01	U4r Sater Sinter Stripping
15	10210003	20506	2019-04-04 20:01:30 303	NALL	10	CF1000-01	U4r Sater Sinter Stripping allowed
16	10210002	21	NALL	2019-04-04 20:01:28 207	10	CF1000-01	U4r Sater Sinter Pumping

Figure 32

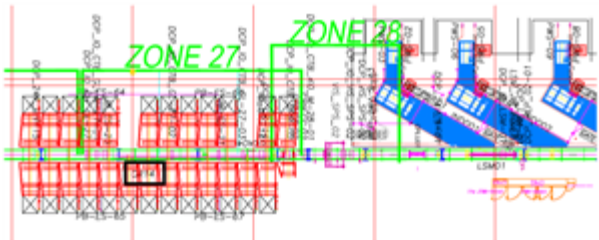


Figure 33



Figure 34



Figure 35



Figure 36



Figure 37

[illegible]

Figure 38



Figure 39

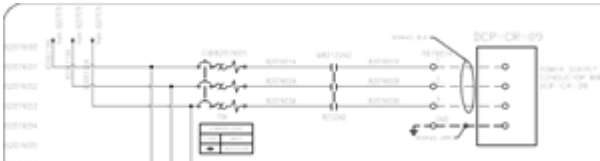


Figure 40

Asset#	Title	Security	Host	Type	Device	Device Map	Source	Description
1001	6/6/2019 13:00:00	Static	194.156.166.1	Tel-Phone Scans / Health	194.156.166.1	Connected	Connected	Tel-Phone Scans / Health
1002	6/6/2019 13:00:00	Static	194.156.166.2	Tel-Phone Scans / Health	194.156.166.2	Connected	Connected	Tel-Phone Scans / Health
1003	6/6/2019 13:00:00	Static	194.156.166.3	End-user Host and Connected	194.156.166.3	Connected	Connected	End-user Host and Connected
1014	6/6/2019 13:00:00	Static	194.156.166.4	Customer Store	194.156.166.4	Connected	Connected	Customer Store
1015	6/6/2019 13:00:00	Static	194.156.166.5	Disabled	194.156.166.5	Connected	Connected	Static Suspended Disabled
1000	6/6/2019 13:00:00	Static	194.156.166.6	Disabled	194.156.166.6	Connected	Connected	Static Suspended Disabled

Figure 41

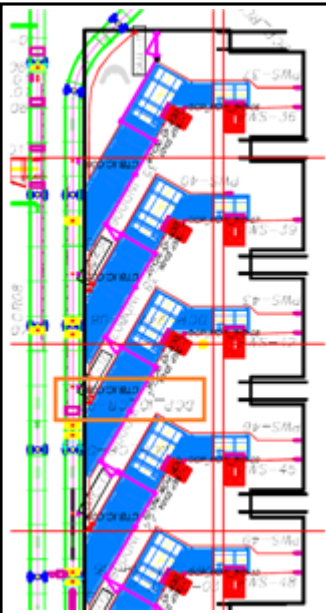


Figure 42

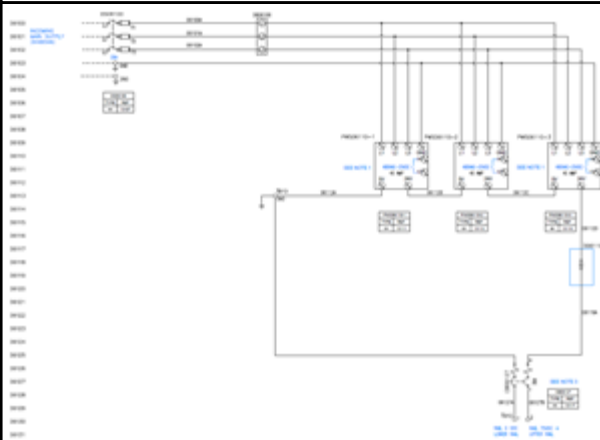


Figure 43



Figure 44

Item	Part	Qty	Unit	Description	Material	Notes
1001	1001-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1001-001
1002	1002-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1002-001
1003	1003-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1003-001
1004	1004-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1004-001
1005	1005-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1005-001
1006	1006-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1006-001
1007	1007-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1007-001
1008	1008-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1008-001
1009	1009-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1009-001
1010	1010-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1010-001

Figure 45

Item	Part	Qty	Unit	Description	Material	Notes
1011	1011-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1011-001
1012	1012-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1012-001
1013	1013-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1013-001
1014	1014-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1014-001
1015	1015-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1015-001
1016	1016-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1016-001
1017	1017-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1017-001
1018	1018-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1018-001
1019	1019-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1019-001
1020	1020-001	1	Unit	Current Collector Assembly	Aluminum	See Drawing 1020-001

Figure 46