roundabout db

MRP
WHOI Workflow
Parts + Subassemblies
Solution
Future

MRP
Manufacturing Resource Planning

Designed to track the manufacturing and shipping of lots of widgets

MRP
Manufacturing Resource Planning

**Returns are an exception
and are treated like a failure**

MRP
Manufacturing Resource Planning

Subassemblies are not tracked

MRP
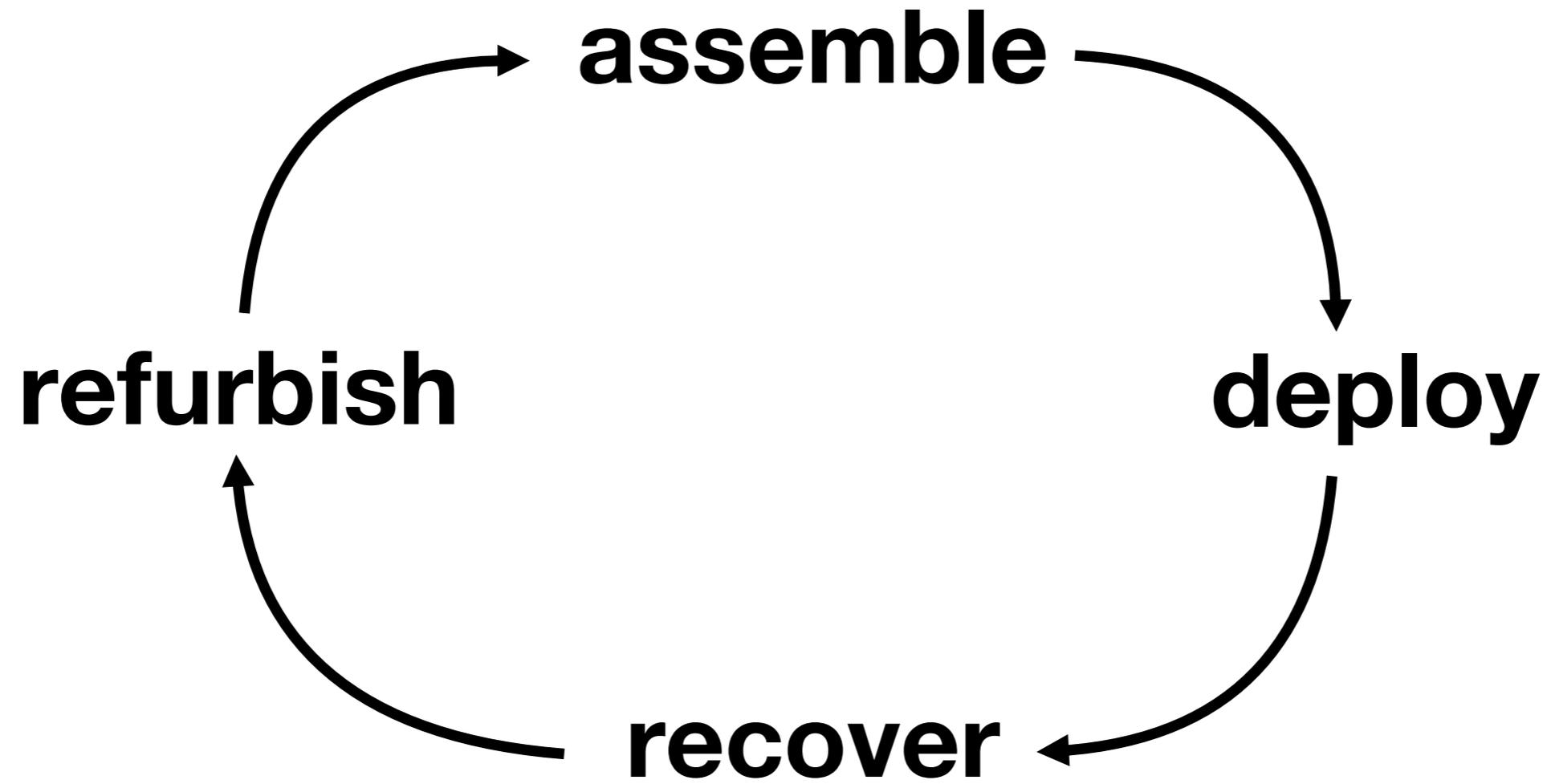# Manufacturing Resource Planning

Disassembly into inventory
is difficult

WHOI workflow is specialized

A buoy is **assembled**, **deployed** to sea by boat, sits in water and records data, **recovered** by boat, taken apart, parts are tested and **refurbished**, parts that pass are reused, parts that don't are replaced.

At WHOI:

We have no "customers"

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100% of our "products" come back

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They are disassembled

Subassemblies are tested

At WHOI:

We have no "customers"

100% of our "products" come back

They are disassembled

Subassemblies are tested

Decide if each part can be deployed

We care about each part:

Location

We care about each part:

Location

Parent+children

We care about each part:

Location

Parent+children

Configuration + Calibration

We care about each part:

Location

Parent+children

Configuration + Calibration

Documentation

We care about each part:

Location

Parent+children

Configuration + Calibration

Documentation

History

We care about each part:

Location

Parent+children

Configuration + Calibration
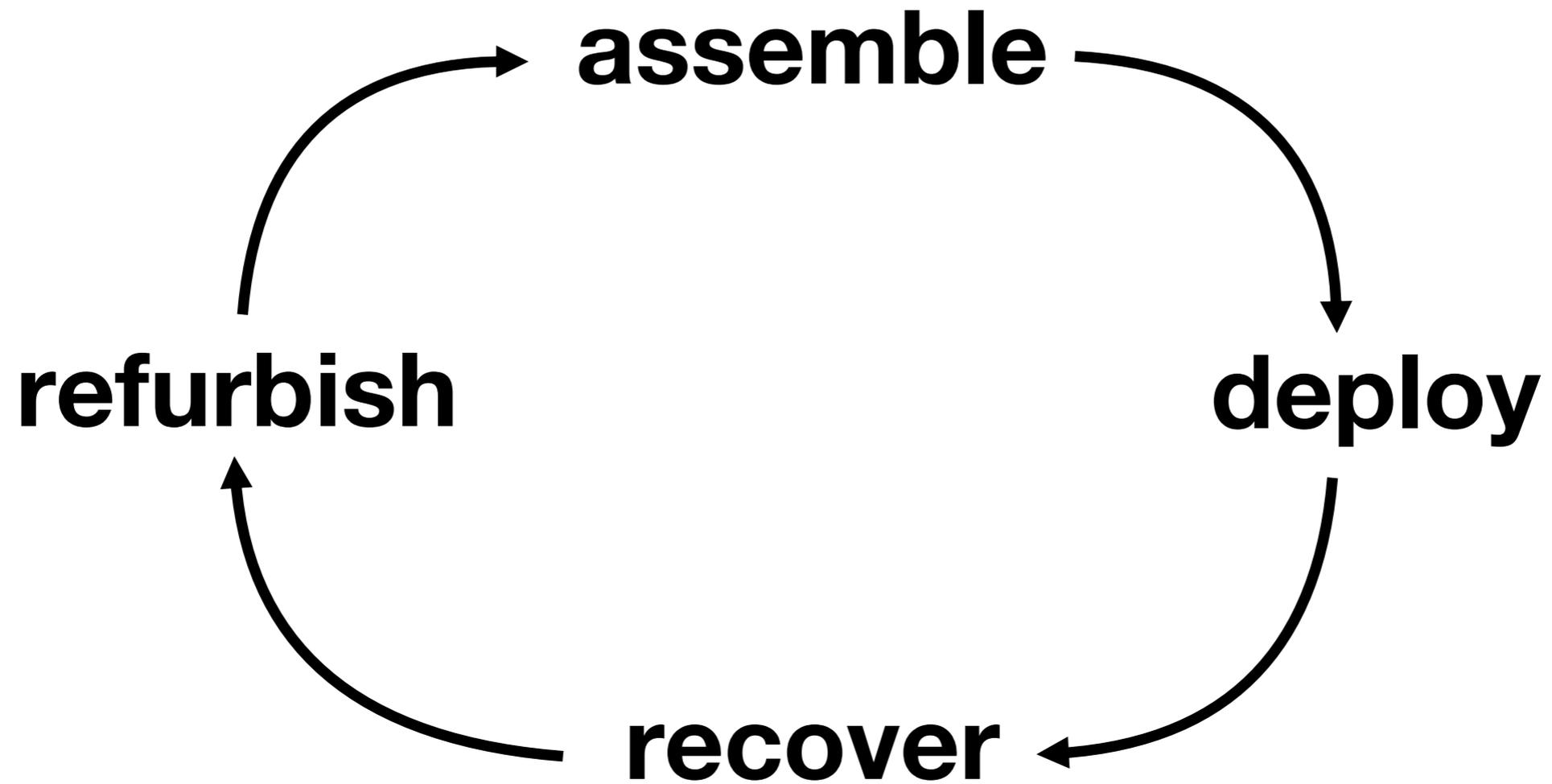
Documentation

History

Future

roundabout db

roundabout db

parts

location

parent+children

configuration

documentation

history

future

roundabout db

Part template

Part name
Part number
Documentation
Cost
Refurb cost

Part type:
Mechanical
Electrical
Instruments
Telemetry

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Part template

Assembly template

An assembly template is a series of subassemblies of part templates that define a mooring

In the case of gliders, AUV's, ROV's this would be renamed.

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Part template

Assembly template

Add inventory

Part number
Serial number
Equipment number
Print barcode
Location
Parent
Children
Notes
Historical Notes
Photo Notes
Part Type Info

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Part Types define custom fields that can be filled out for inventory:

Electrical: Test procedure, Firmware, Revision

Mechanical: refurb cost, refurb time

Instrument: Calibration, Configuration, Vendor ID, Vendor Info, Property Tags, Firmware

Telemetry: IEMI, SSID, MAC, MSISDN, IP Address, SIM#, RSN#, GSN, Firmware

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Part template

Assembly template

Add inventory

Create deployment

A deployment is an assembly template that goes through deployment states:

assembly

burn in

delivery

deployed

recovered

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"Can this part survive another deployment?"

roundabout db
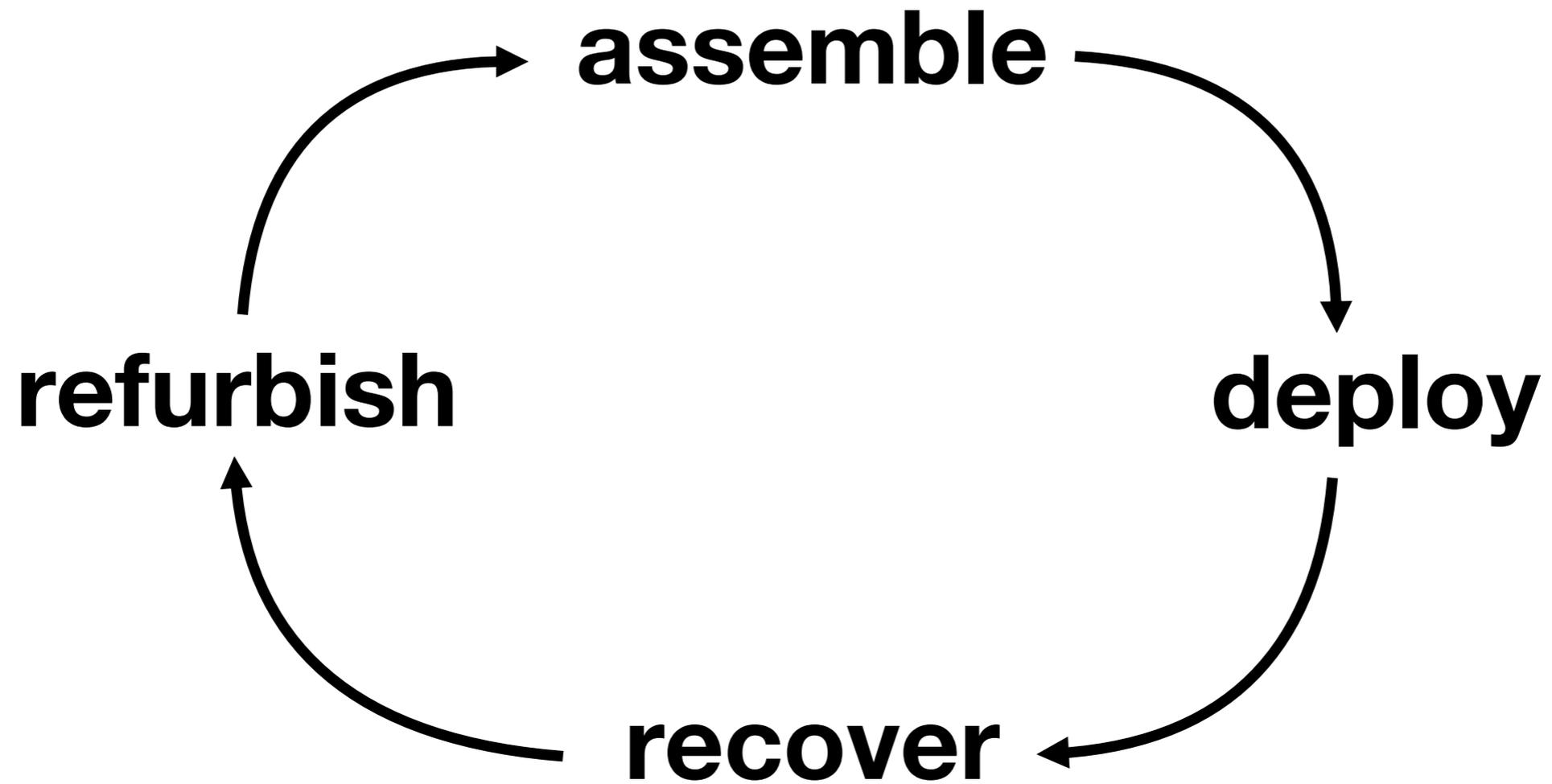
Analytics (usage, combined data)

Asset Management

Automated Test Integration

Tablet/Phone support

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assemble → deploy → recover → refurbish → assemble

PSC 2.0

Serial Number: 3709-02001-00000-20003

Print Barcode

Choose Action

Old Serial Number: 3709-00260 SN0014

Part Number: 3709-02001-00000

Revision: A

Current Location: EA Incoming

Time at Sea: 0 days 0 hours 0 min

History   Subassemblies   Part Specs

Date	Action	Details	Person	Location
6/14/19 17:05	Note	Notes from Fall 2018 Deployment: CE09OSSM-00008 (PSC 0014): Firmware incorrectly set. System still disables charging sources when percent charge >= 100%. Had to remotely reset it to a percent charge of 24% (2018-11-16) to spoof it into keeping the charging sources connected. Lost ability to communicate between PSC and CPM on 2018-11-02 at 21:27 UTC. After that log is full of messages to the effect of "ERROR_MSG psc_send_cmd [X], but no reply from PSC". Result was command to connect/disconnect the CVT was never processed and no more MFN data was recorded.	kpolitano	EA Incoming
6/14/19 15:09	Location Change	Moved to EA Incoming from At WHOI for refurb. Wind Turbine controllers were tested when comming in; both controllers correctly. No errors were found.	LucasP	EA Incoming
6/3/19 14:23	Location Change	Moved to At WHOI for refurb from CE Inventory ready.	kpolitano	At WHOI for refurb

PSC 2.0

Serial Number: 3709-02001-00000-20003

[Print Barcode]

[Choose Action]

Old Serial Number: 3709-00260 SN0014

Location Change

Add Subassembly

Part Number: 3709-02001-00000

Add to Parent Assembly

Revision: A

Add to Deployment

Current Location: EA Incoming

Assign Destination

Test

Time at Sea: 0 days 0 hours 0 min

Flag

Photo/Note

Historical Note

Edit Inventory Details

	History	Subassemblies	Part Specs

Date	Action	Details		
6/14/19 17:05	Note	Notes from Fall 2018 Deployment: CE09OSSM-00008 (PSC 0014): Firmware incorrectly set. System still disables charging sources when percent charge >= 100%. Had to remotely reset it to a percent charge of 24% (2018-11-16) to spoof it into keeping the charging sources connected. Lost ability to communicate between PSC and CPM on 2018-11-02 at 21:27 UTC. After that log is full of messages to the effect of "ERROR_MSG psc_send_cmd [X], but no reply from PSC". Result was command to connect/disconnect the CVT was never processed and no more MFN data was recorded.	kpolitano	EA Incoming
6/14/19 15:09	Location Change	Moved to EA Incoming from At WHOI for refurb. Wind Turbine controllers were tested when comming in; both controllers correctly. No errors were found.	LucasP	EA Incoming

ENDURANCE INSHORE SURFACE BUOY WELL END CAP ASSEMBLY

Serial Number: 3605-00018-00001-00016

Print Barcode

Old Serial Number: 0016 (3605-20018)

Part Number: 3605-00018-00001

Revision: E

Current Location: At WHOI for refurb

Time at Sea: 0 days 0 hours 0 min

Choose Action

History   Documentation   Part Specs

Date	Action	Details	Person	Location
5/30/19 11:26	Location Change	Moved to At WHOI for refurb from CE Inventory ready.	kpolitano	At WHOI for refurb
2/28/19 19:19	Note	During initial power & coms testing no gps data could be seen. It was found that no power is reaching the port, despite it being on. Toggling power on/off and restarting the dcl didn't help. Chased the wires and didn't find any loose connections. The rest of the ports on the end cap test fine.	kpolitano	CE Inventory ready
2/21/19 19:10	Location Change	Moved to CE Inventory ready from From WHOI. Arrived on flatbed shipment from WHOI on 2/18/19.	kpolitano	CE Inventory ready

CPM / DCL BOTTLE ASSEMBLY, NSIF

Serial Number: 3703-00274-00001-00012

Print Barcode

Choose Action

Old Serial Number: 0012

Part Number: 3703-00274-00001

Revision: G

Current Location: At WHOI for refurb

Time at Sea: 0 days 0 hours 0 min

History | Documentation | Part Specs

16:36	Change			for refurb
3/7/19 16:35	Note	During power/coms testing it was discovered that ethernet port JC114 was bent. This caused coms to cut in and out - if you wiggled the plug you could cause them to turn on/off depending on the direction you pushed. Bottle was overnighted back to WHOI on 3/7/19.	kpolitano	From WHOI

DCL BOTTLE ASSEMBLY, NSIF

Serial Number: 3703-00272-00001-00035

Print Barcode

Old Serial Number: 0035

Part Number: 3703-00272-00001

Revision: H

Current Location: CE Inventory ready

Time at Sea: 0 days 0 hours 0 min

Choose Action

| History | Documentation | Part Specs |

Document	Document Type
DCL BOTTLE ASSEMBLY, NSIF	Design
3407-20300	Incoming Inspection Checklist, 3703-00272 Bottle	Test
3407-20320	Final Closing Inspection Checklist, 3703-00272 Bottle	Test
3407-21121	NSIF DCL Bottle Test	Test
3704-20310	Pre-Closing Quality Assurance Checklist, 3703-00272 Bottle	Test

Move to Trash