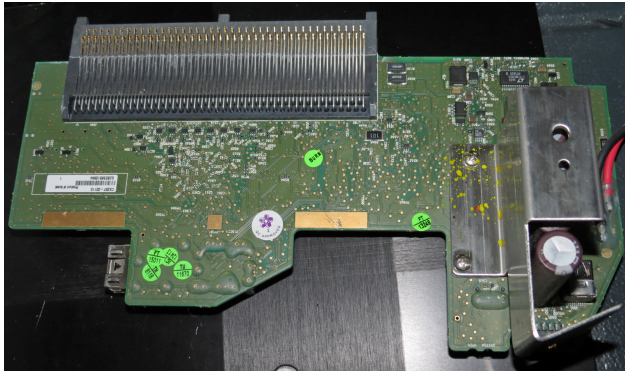




## Replacing a Dogmatix Board

CSR Level:	CSRA
Part Number:	CX257-00112
Part Name:	DOGMATIX PCBA WITH PROGRAMMING FILES
Frequency:	as needed
Document ID:	c05942225
Revision:	Rev. B
Date:	08-Aug-19



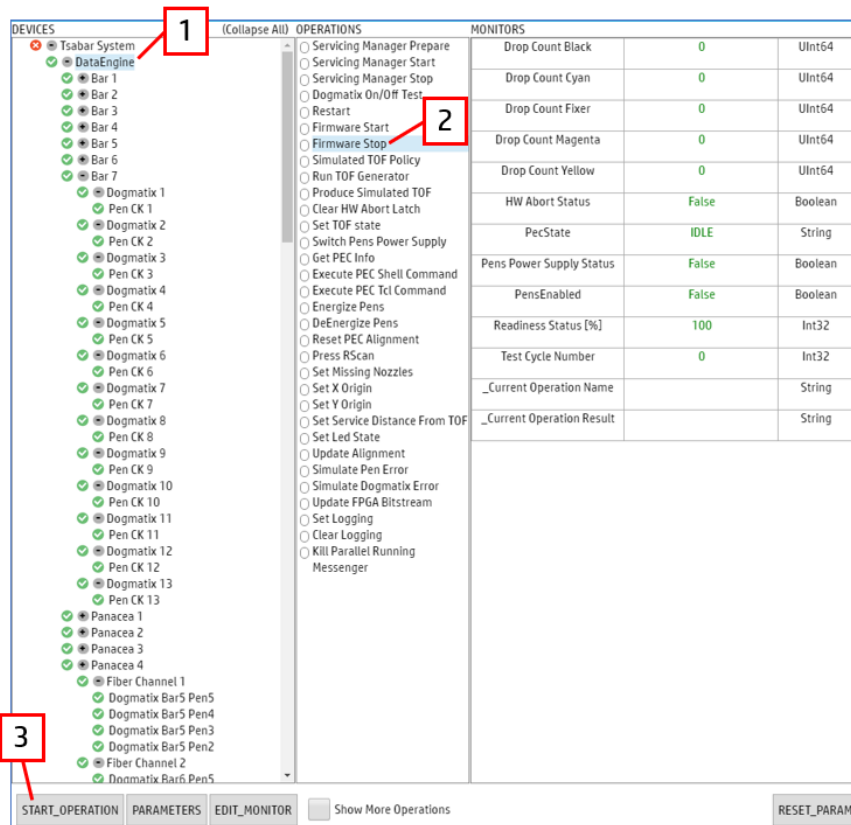
Required personnel:	1
Required time:	20 minutes
Required tools:	none

**Important:**

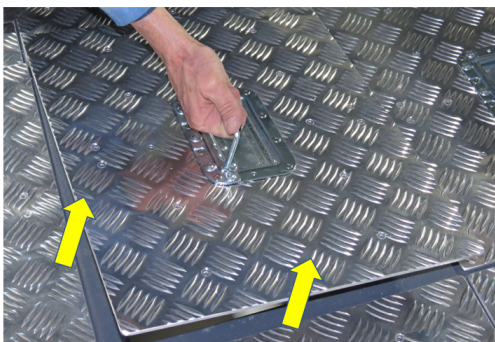
Make sure to comply with all relevant federal, state, and local regulations when disposing of replaced parts.

## Procedure

1. Shut down power to the Dogmatix boards:
  - a. In the C500 UI, switch to R&D mode.
  - b. Select **DataEngine** from the Device Tree.
  - c. Select **Firmware Stop** from the Operations list.
  - d. Tap **Start Operation**.

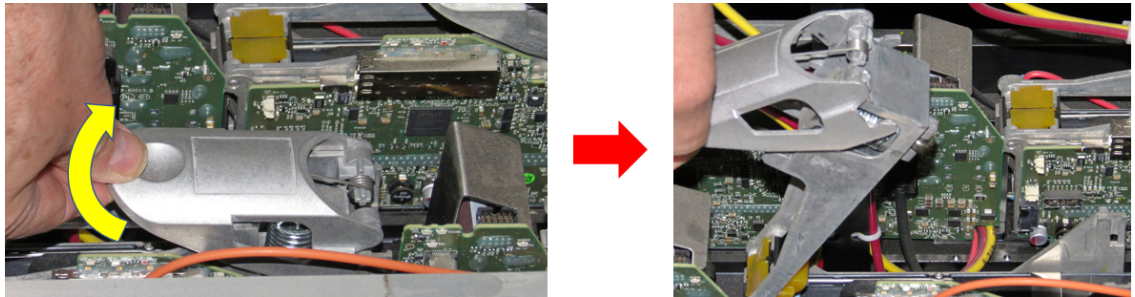


2. Climb up to the gallery.
3. Open the floor panel above the faulty Dogmatix board.

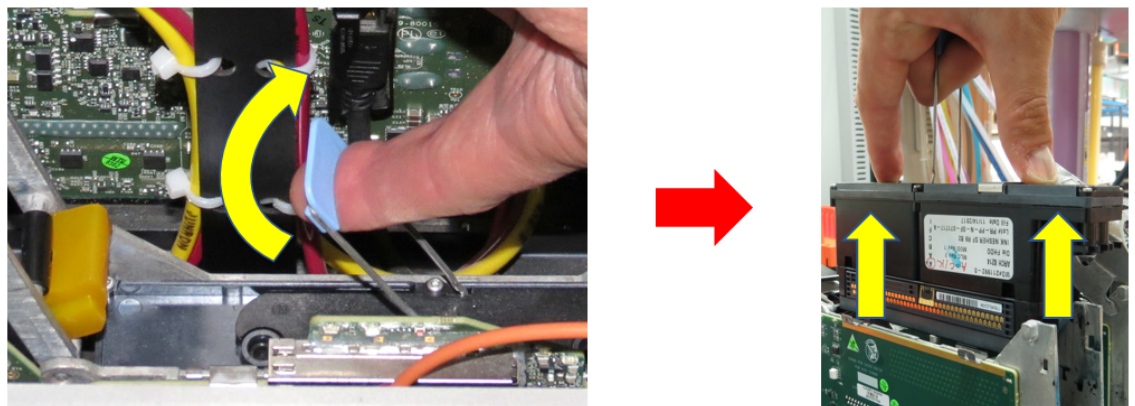


4. Remove the print head to which the Dogmatix board is connected, as follows:

a. Open the securing clamp on the print head by lifting the handle.

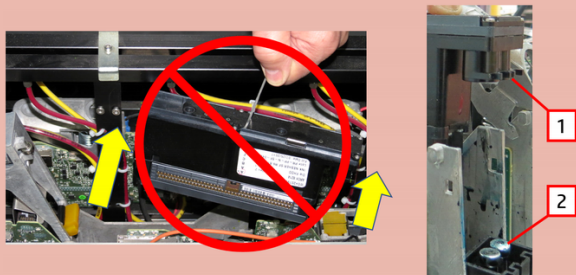


b. Lift the handle for the print head and remove the print head from the ink beam.



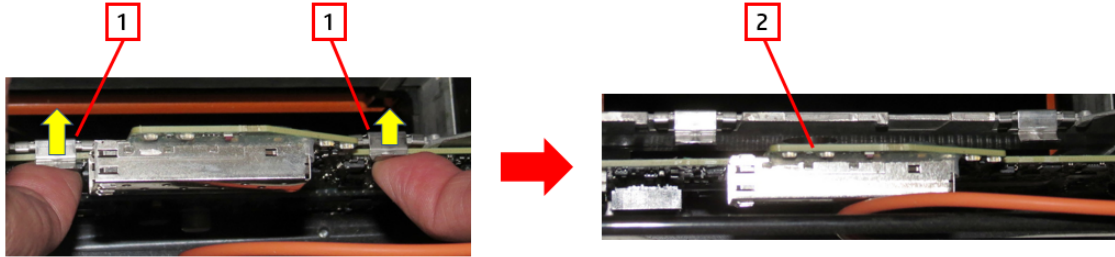
**Caution:**

Be sure to pull the print head straight up out of its pocket. Pulling the print head at an angle can damage the septums!



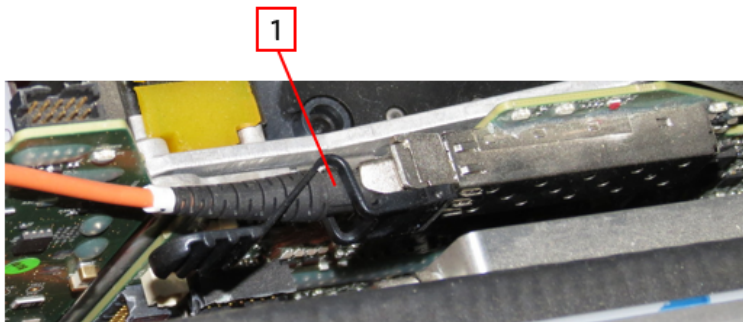
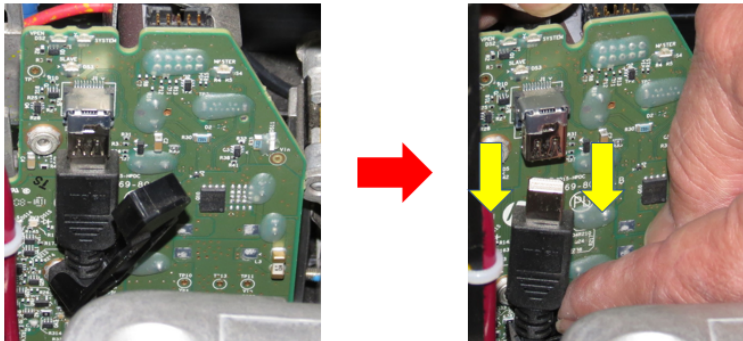
1	Needles on print head
2	Septums

5. Use your fingers to pry open the two metal clips that secure the top of the board.



1	Clips
2	Dogmatix board freed from clips

6. Disconnect the Ethernet cables (and optic cable, if relevant) connected to the faulty board.

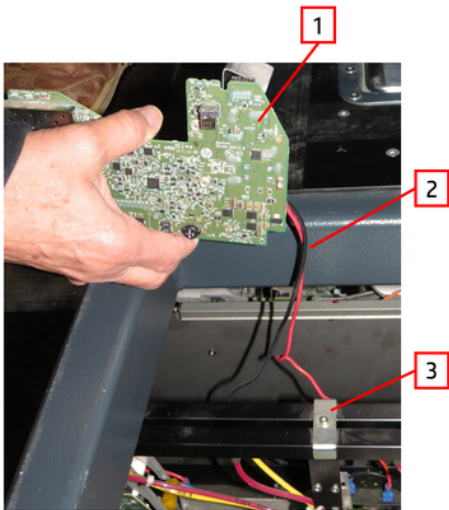


1	Optic cable on Dogmatix board
---	-------------------------------

**Caution:**

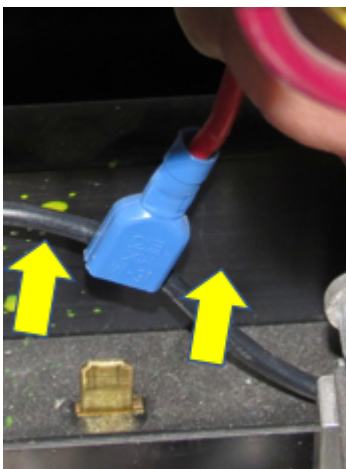
Use caution when handling fiber optic cables to prevent damaging them.

- Carefully lift the Dogmatix board from the ink beam. Make sure not to tear the electrical cables. Open the wire anchors, as required.



1	Dogmatix board
2	Electrical cables
3	Wire anchor

- Disconnect the electrical cables (red and black) from the terminals on the ink beam. Take note of the terminal to which each cable was connected.



- Remove the Dogmatix board from the ink beam.
- Insert the new Dogmatix board in its slot next to the print head.
- Close the clips to lock the board in place.

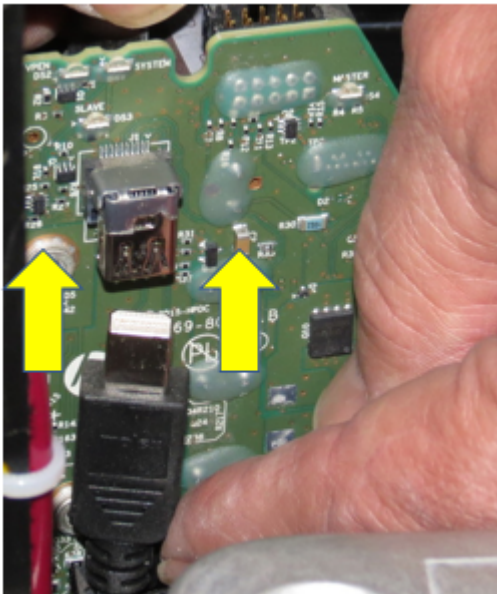
12. Connect the red and black electrical cables to the terminals on the ink beam, and close the wire anchors.



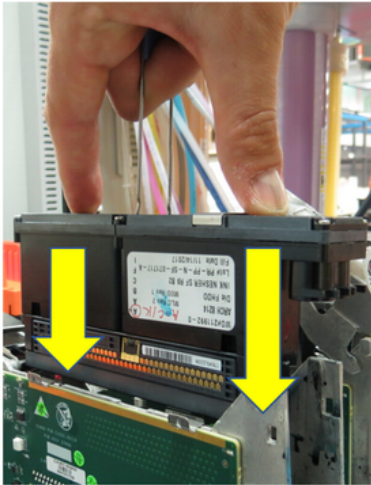
**Caution:**

Make sure to connect the cables to the proper terminals! The cables are identical other than the color.

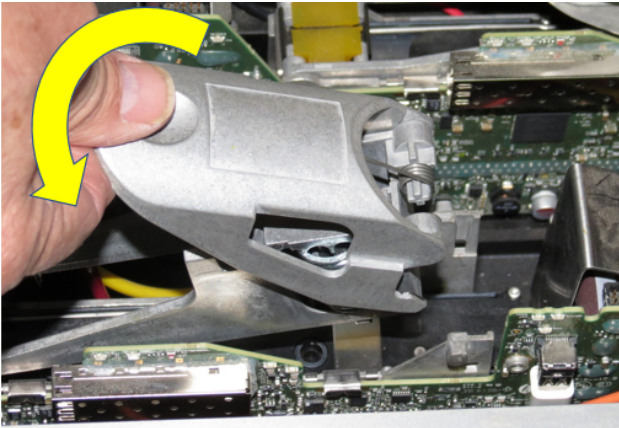
13. Connect the Ethernet cable (and optic cable, if relevant) to the Dogmatix board.



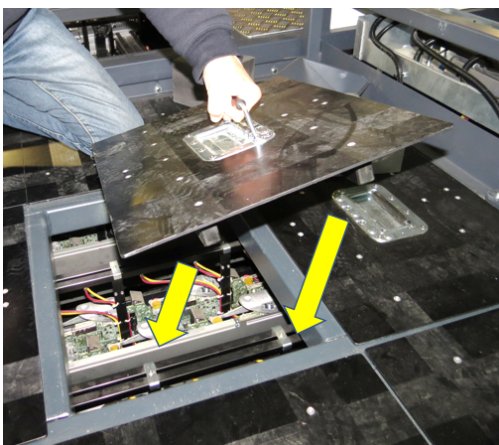
14. Reinsert the print head.



15. Close the securing clamp.



16. Close the floor panel.



17. Exit the gallery. Make sure to close the gate as you leave to engage the safety interlock.

18. Press the **Reset** button at the top of the stairs and return to the operator console.



19. Press the **Reset** button on the main operator console.



1

Reset button

**Note:**

Alternatively, press the **Reset** button on the secondary operator console.

20. Restore power to the Dogmatix boards:

- a. Select **DataEngine** from the Device Tree.
- b. Select **Firmware Start** from the Operations list.
- c. Tap **Start Operation**.

## Mixing Dogmatix Versions

There is a known communications issue when different versions of the Dogmatix board (**4.3.0** and **4.7.0**) are installed together on the same press. Version 4.7.0 of the Dogmatix board cannot communicate if it is physically installed *after* version 4.3.0 in the same chain.

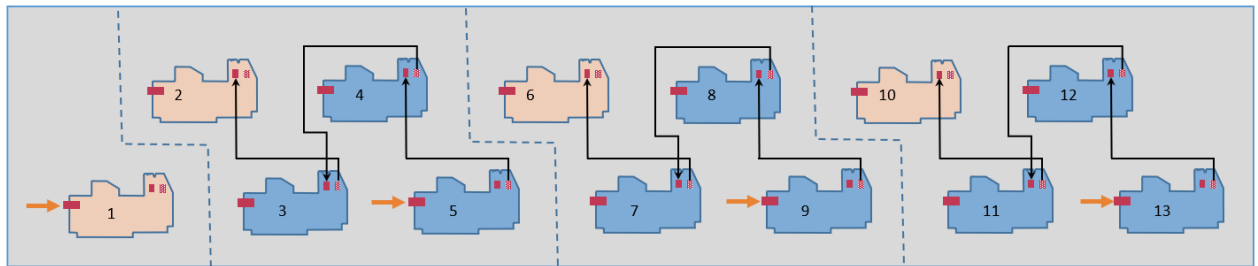
The error message that appears is "**boot failed the engine is dead**".

```
METAGOD: [2019-05-06 15:19:56.691] ready : Serial02003/Serial in 1.662000 ms.
Serial04008: [2019-05-06 15:20:01.683] ready : Serial02013/Serial in 0.944000 ms.
Serial04008: [2019-05-06 15:20:06.683] <SerialObelixPbi.cpp:readRegister#642 ERROR: Cannot
Serial04008: [2019-05-06 15:20:06.683] <SerialObelixPbi.cpp:readRegister#642 ERROR: Cannot
Serial04008: [2019-05-06 15:20:11.683] <SerialObelixPbi.cpp:readRegister#642 ERROR: Cannot
Serial04008: [2019-05-06 15:20:11.683] <SerialObelixPbi.cpp:config#244 ERROR: Cannot read f
METAGOD: [2019-05-06 15:20:11.683] failed : Serial04008/Serial in 15000.012305 ms.
boot : "start()" error at instance "Serial04008" (code: 1).

./patum.linux: boot failed the engine is dead .... arg9999999
```

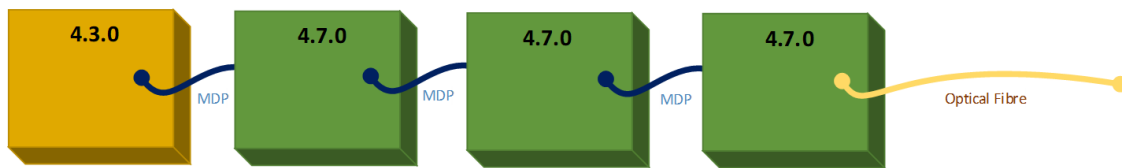


In order to mix both versions of the Dogmatix board on the same ink beam, the version 4.3.0 boards must be located at the **end** of the chains, in positions **1, 2, 6, or 10**.

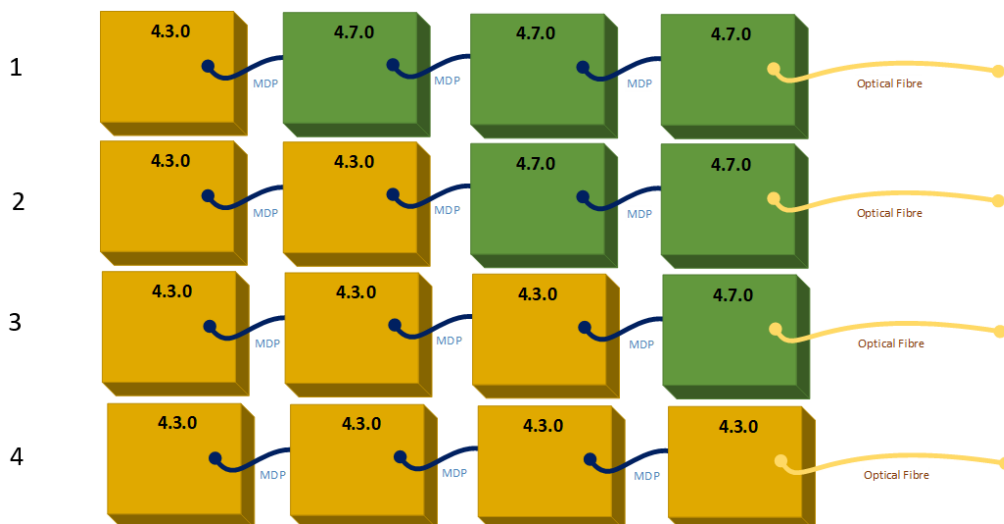


→ Copper

→ Fiber



Dogmatix 4.3.0 should must be last in chain to work properly



Additional configurations that work properly – Dogmatix 4.3.0 board are always the last in the chain