

E4990A Parts Replacement Procedure

2014 Oct 20

TOOL AND FIXTURE LIST

PART NO.	DESCRIPTION	TORQUE VALUE / SET UP
	T-10 Torque driver	3.5 lbin
	T-10 Torque driver	9 lbin
	T-15 Torque driver	14 lbin
	T-20 Torque driver	21 lbin
	5/8 Box Wrench	30.4 inlb
	9/16 Box Wrench	30.4 inlb
	5.5mm Box Torque driver	6 lbin
	1.27mm Allen Key	2 lbin
	5/16" Open End Wrench	9.5 lbin

REFERENCE DOCUMENTS

DOCUMENT NO.	DESCRIPTION
--------------	-------------

TOOL AND FIXTURE LIST

PART NO.	DESCRIPTION	TORQUE VALUE / SET UP
T-384162	Cart Arm	
T-384166	Front Overlay Installation Pin	
T-384165	Protective Template for BNC assembly	
T-384163	Cable holder of P/S cable	
T-384186	Angle Support Block	
T-386283	Wire Connector Head Removal Jig	
80-5286	Roller Jig	
1530-2247	Hubic Cart	

REFERENCE DOCUMENTS

DOCUMENT NO.	DESCRIPTION
--------------	-------------

Reverse Flow Dis-assembly Procedure Menu

Click the hyperlink below for any choice of dis-assembly procedure:

1. [LCD](#)
2. [SSD](#)
3. [CPU Module \(E5061-62180\)](#)
4. [Display Board \(E5061-66651\)](#)
5. [LF Source Module \(E4990-62007\)](#)
6. [TRD Module \(E4990-62005\) & BNC Port Assembly \(E4990-60102\)](#)
7. [Source Module \(E5061-62021\)](#)

Reverse Flow Dis-assembly Procedure Menu (cont'd)

Click the hyperlink below for any choice of dis-assembly procedure:

8. [VRD Module \(E4990-62008\)](#)
9. [I/O Control Board \(E4990-66653\)](#)
10. [Analog Mother Board \(E5061-66610\)](#)
11. [Oven \(Option 1E5\)](#)

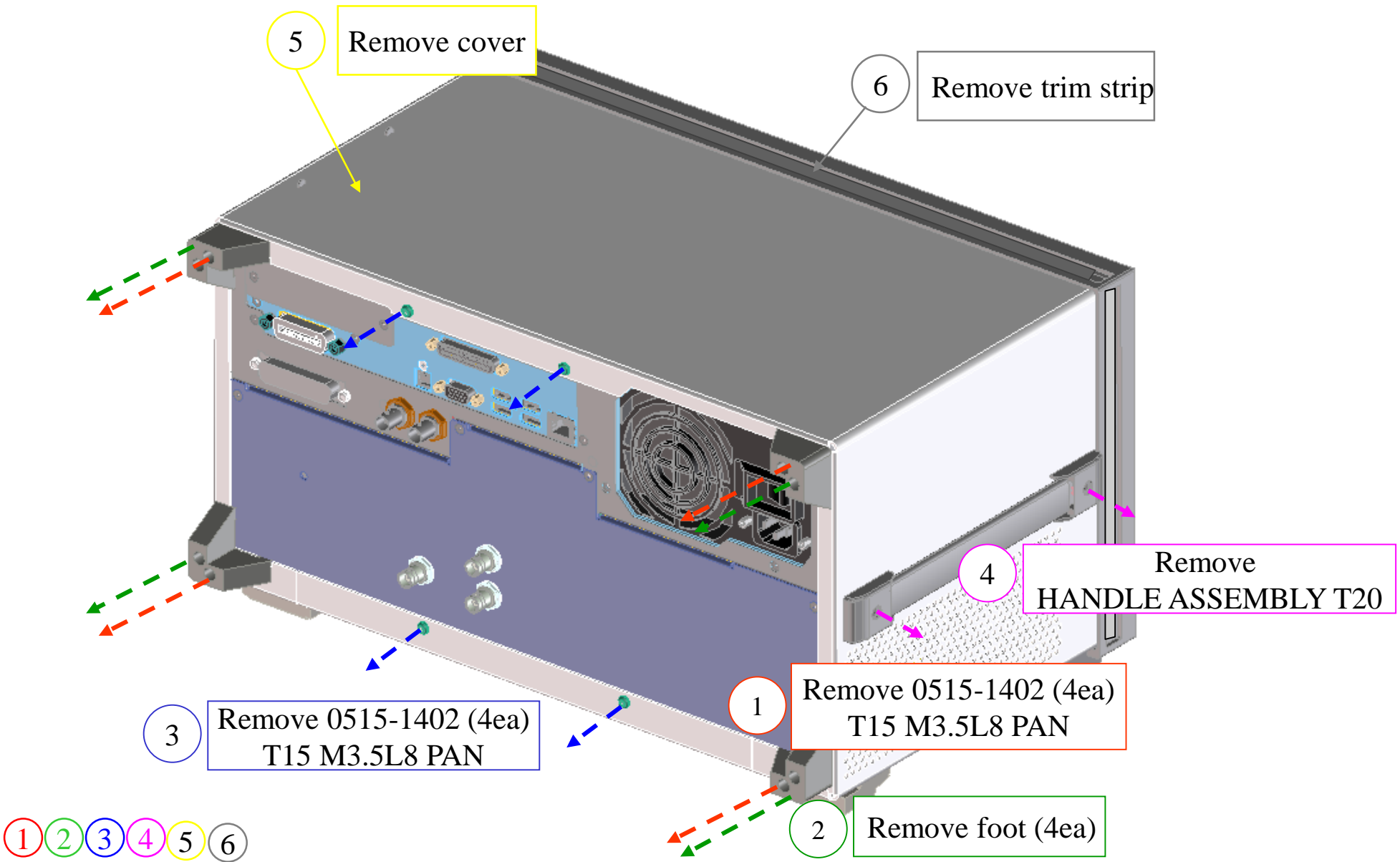
LCD

Dis-Assembly Procedure

Note:

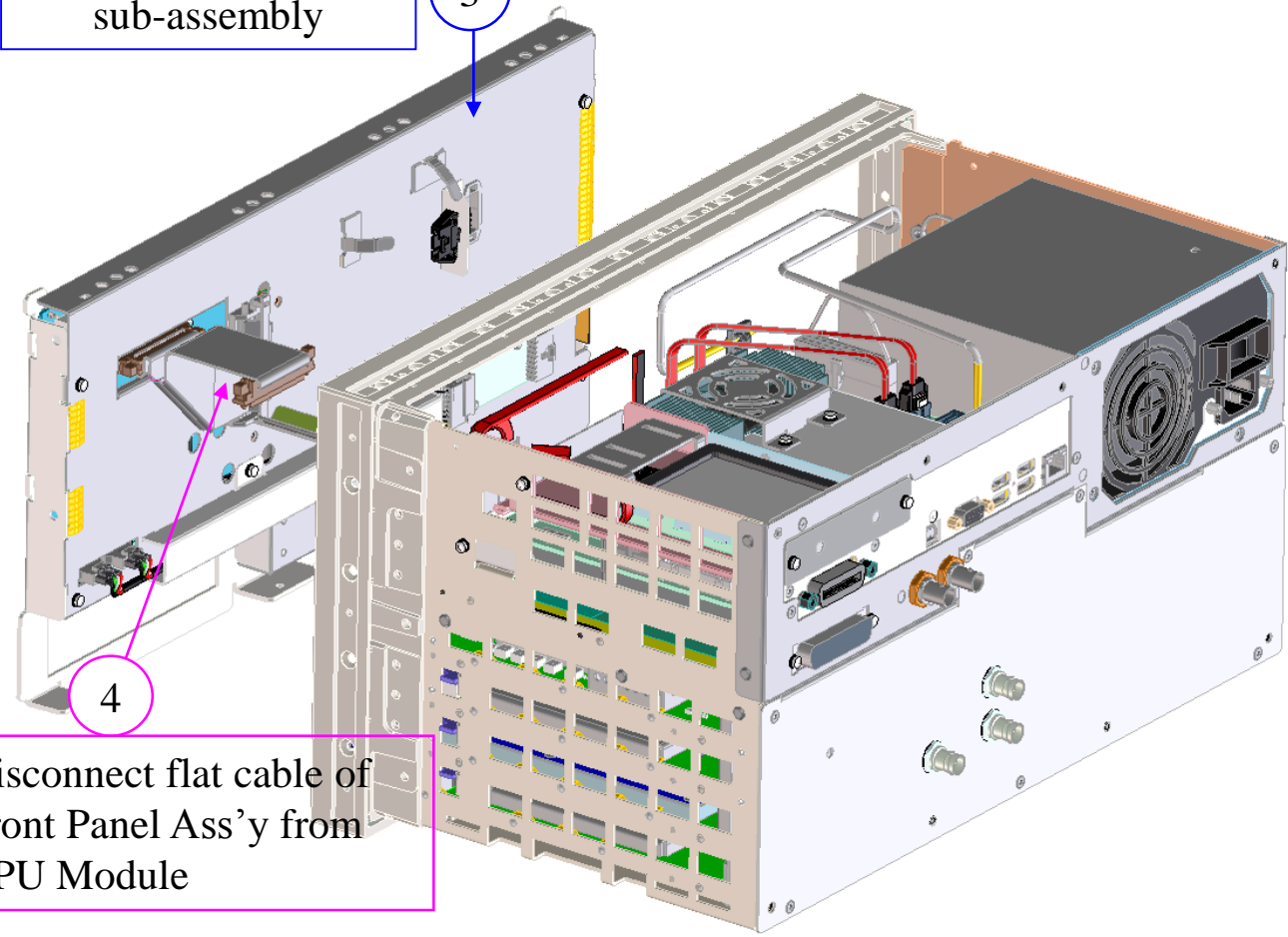
1. Torque value shown in this document is only for reference and only used during assembly.





Remove Front Panel sub-assembly

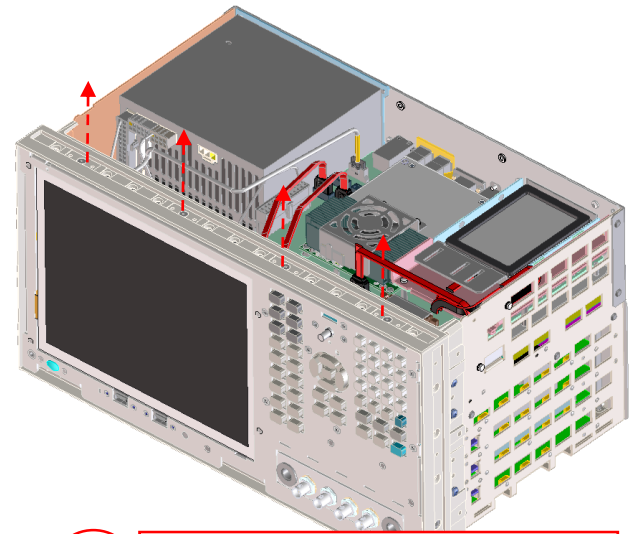
3



Disconnect flat cable of Front Panel Ass'y from CPU Module

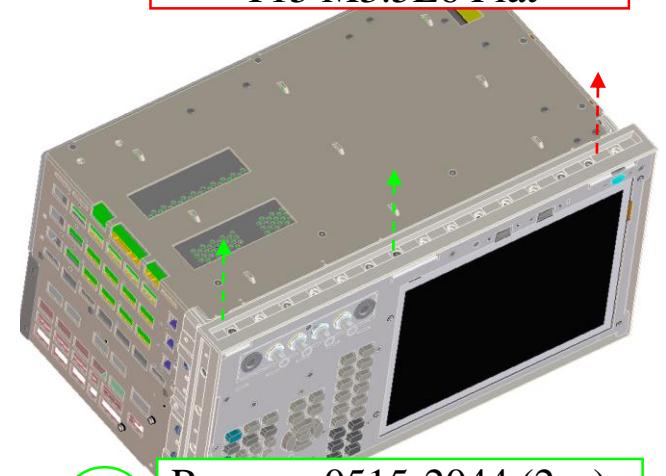
4

1 2 3 4



1

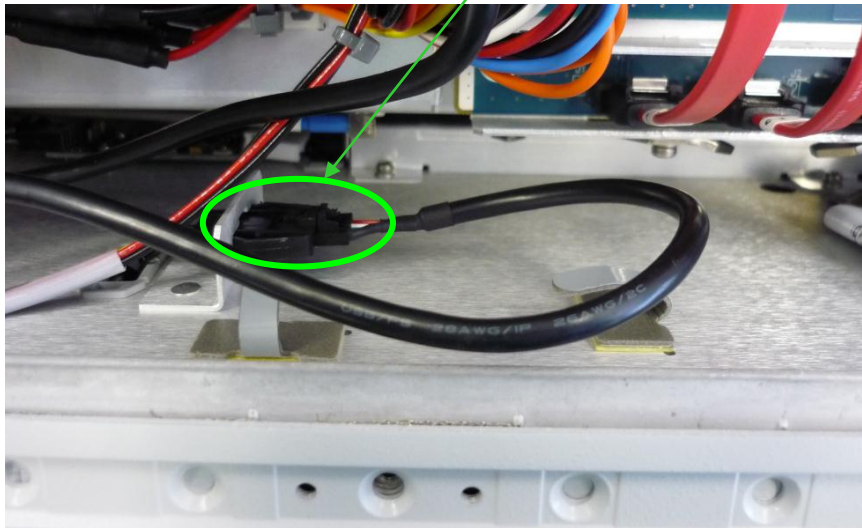
Remove 0515-1382 (5ea)
T15 M3.5L6 Flat



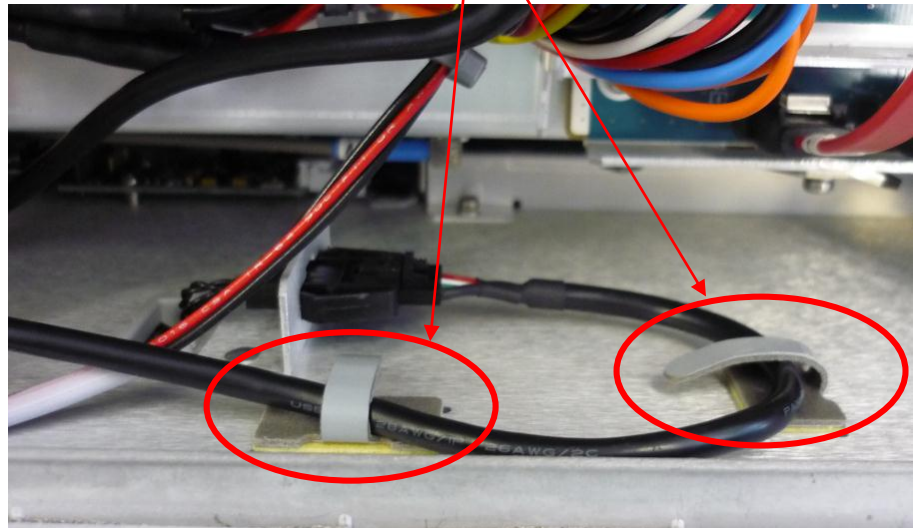
2

Remove 0515-2044 (2ea)
T20 M4L10 Flat

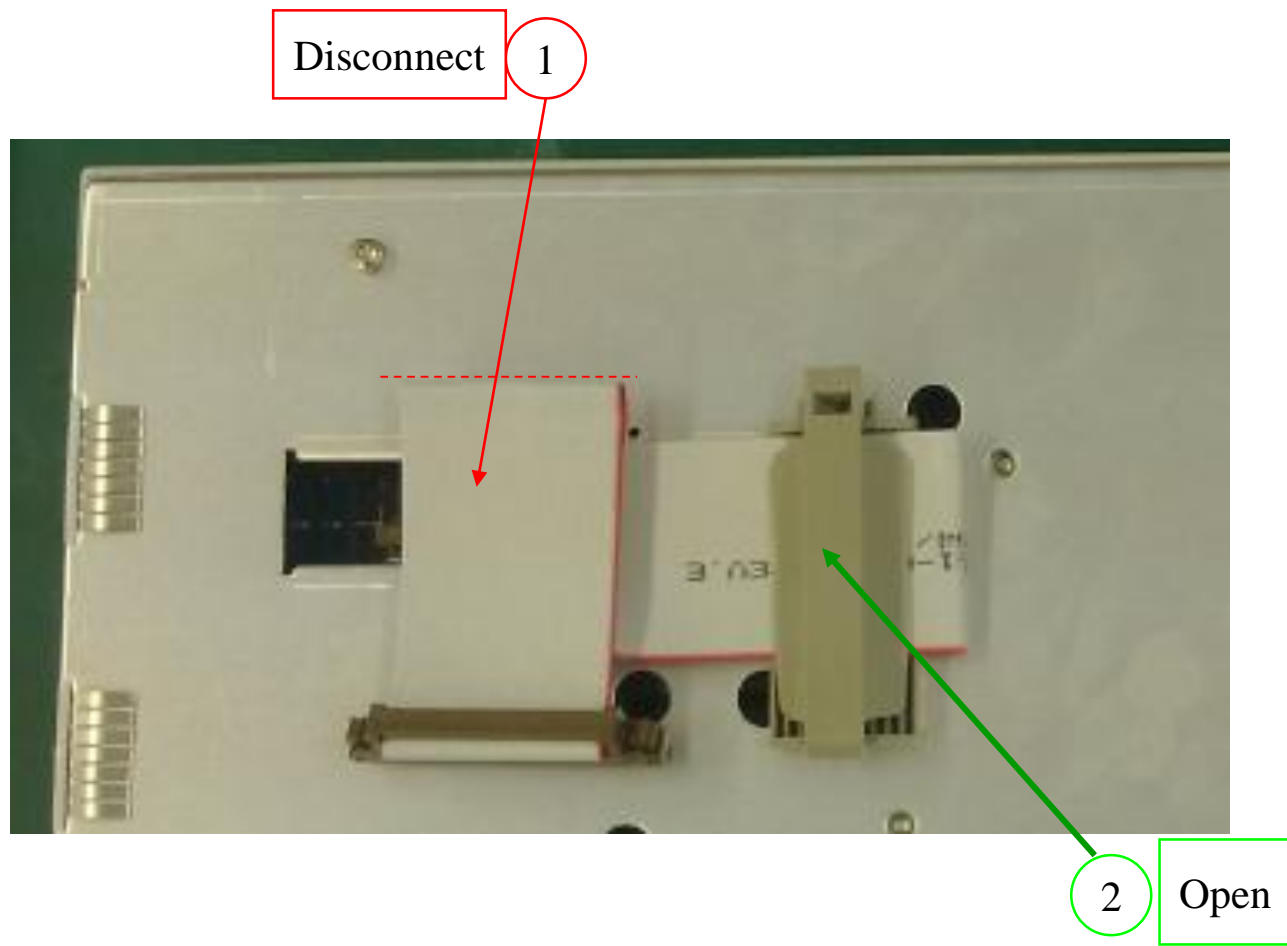
2 Disconnect



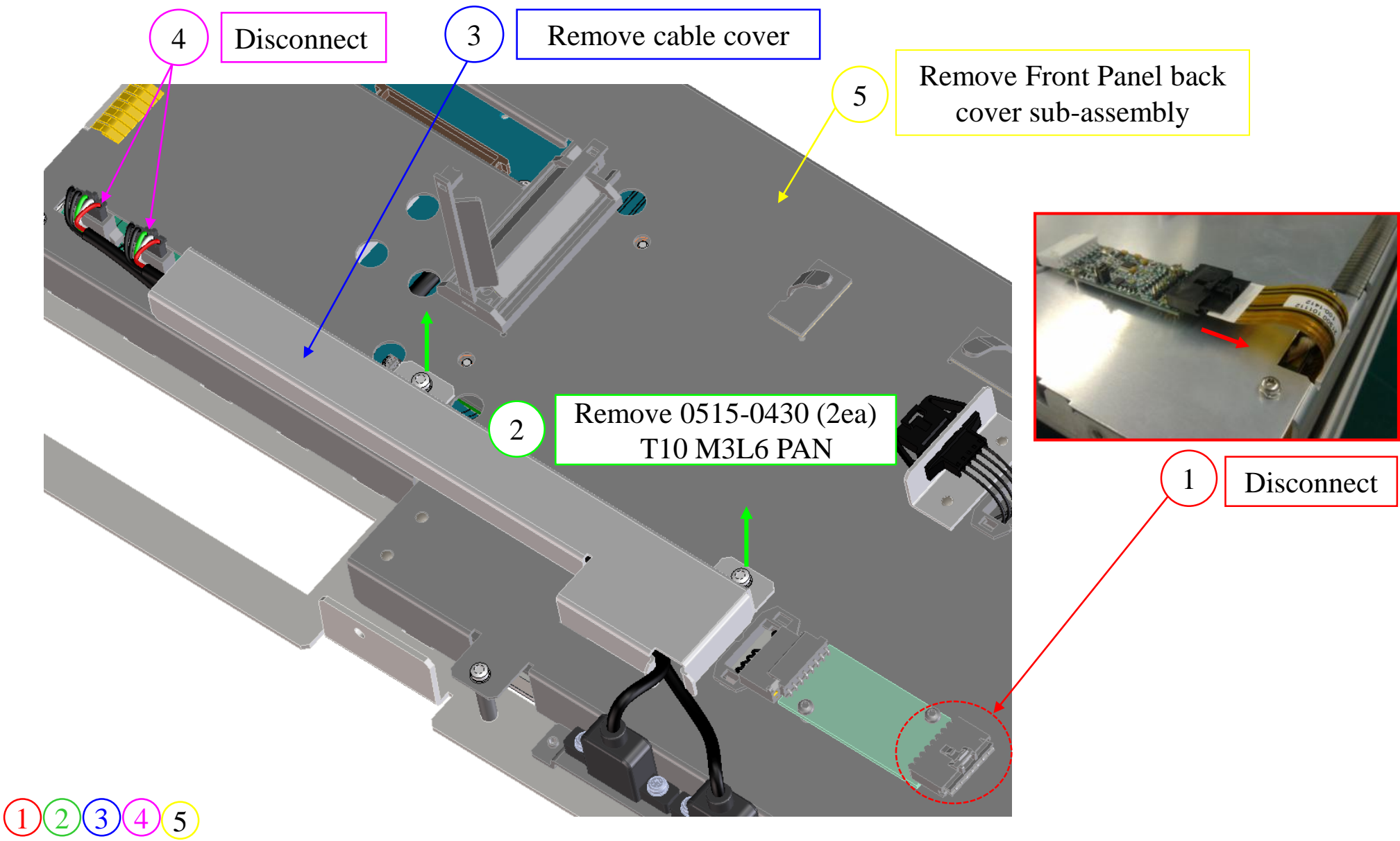
1 Open

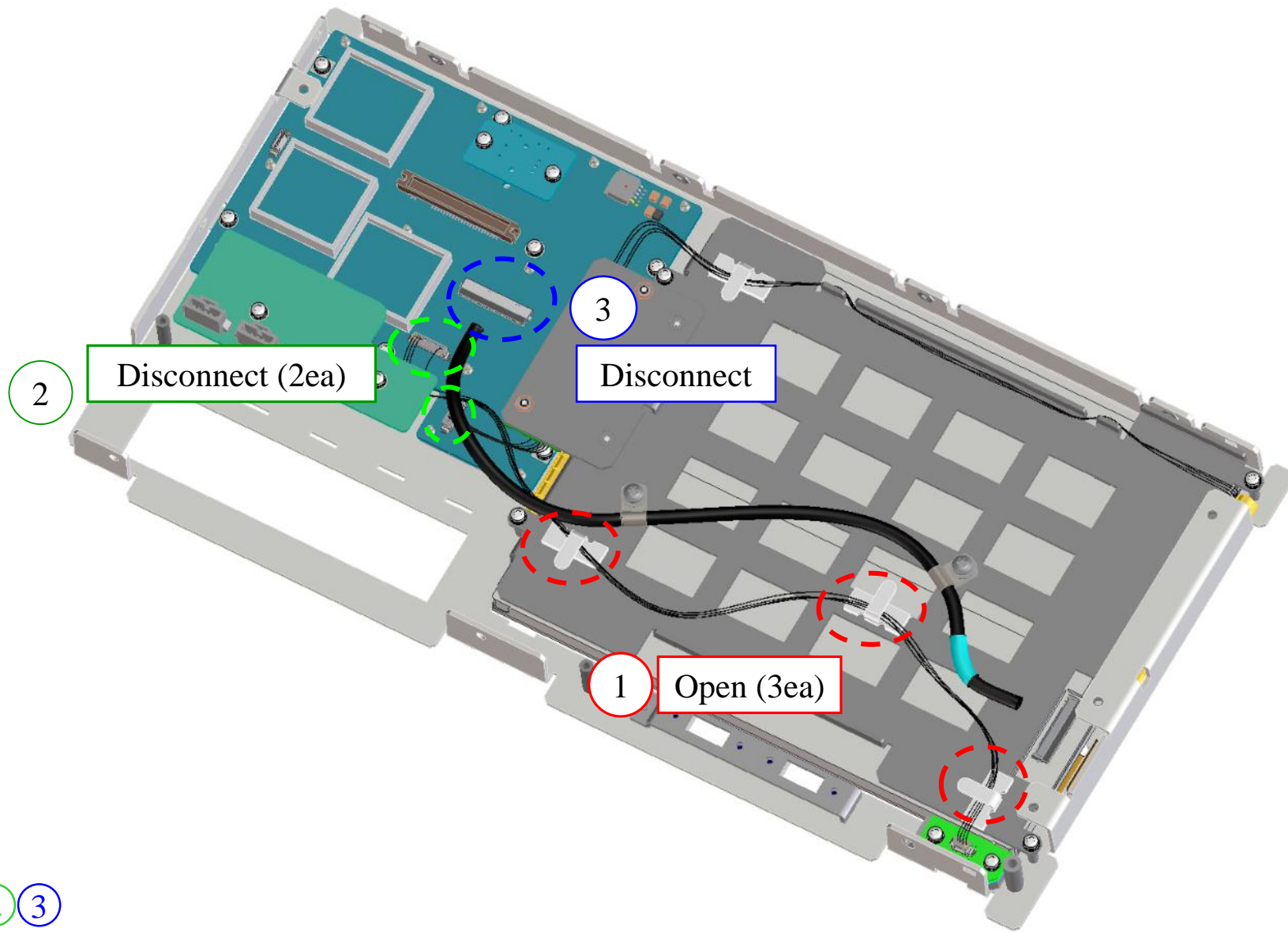


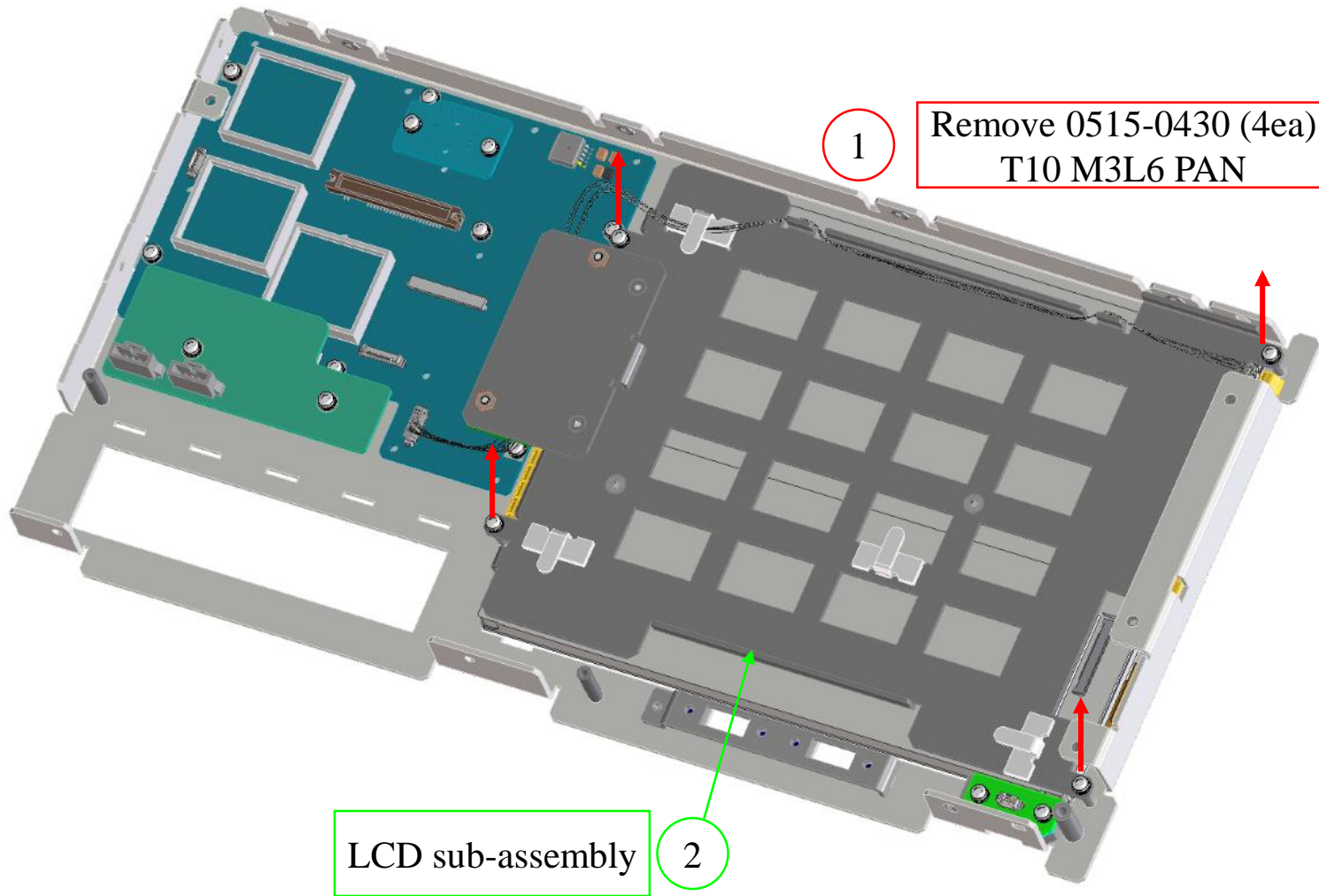
1 2



① ②







1 2

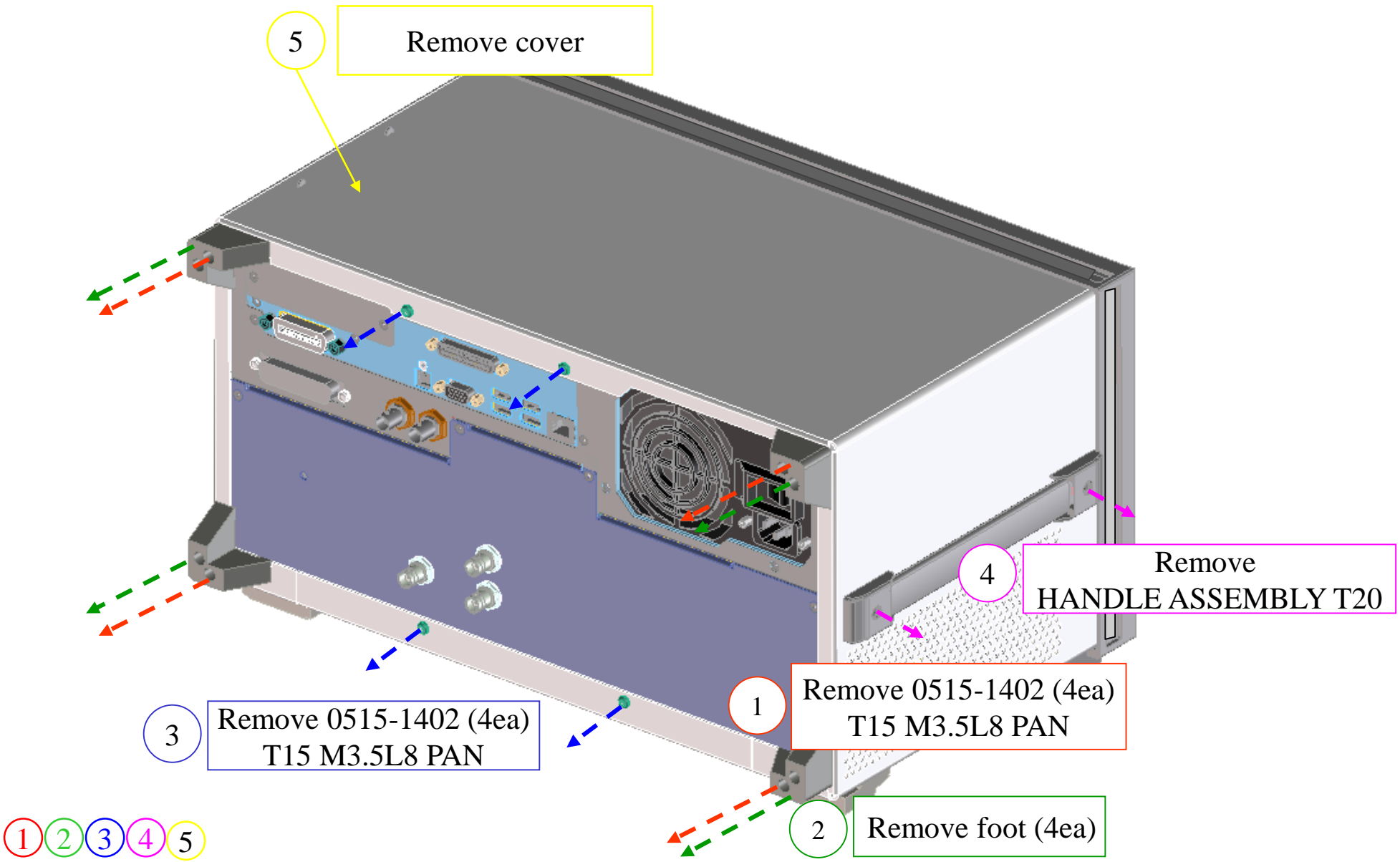
SSD

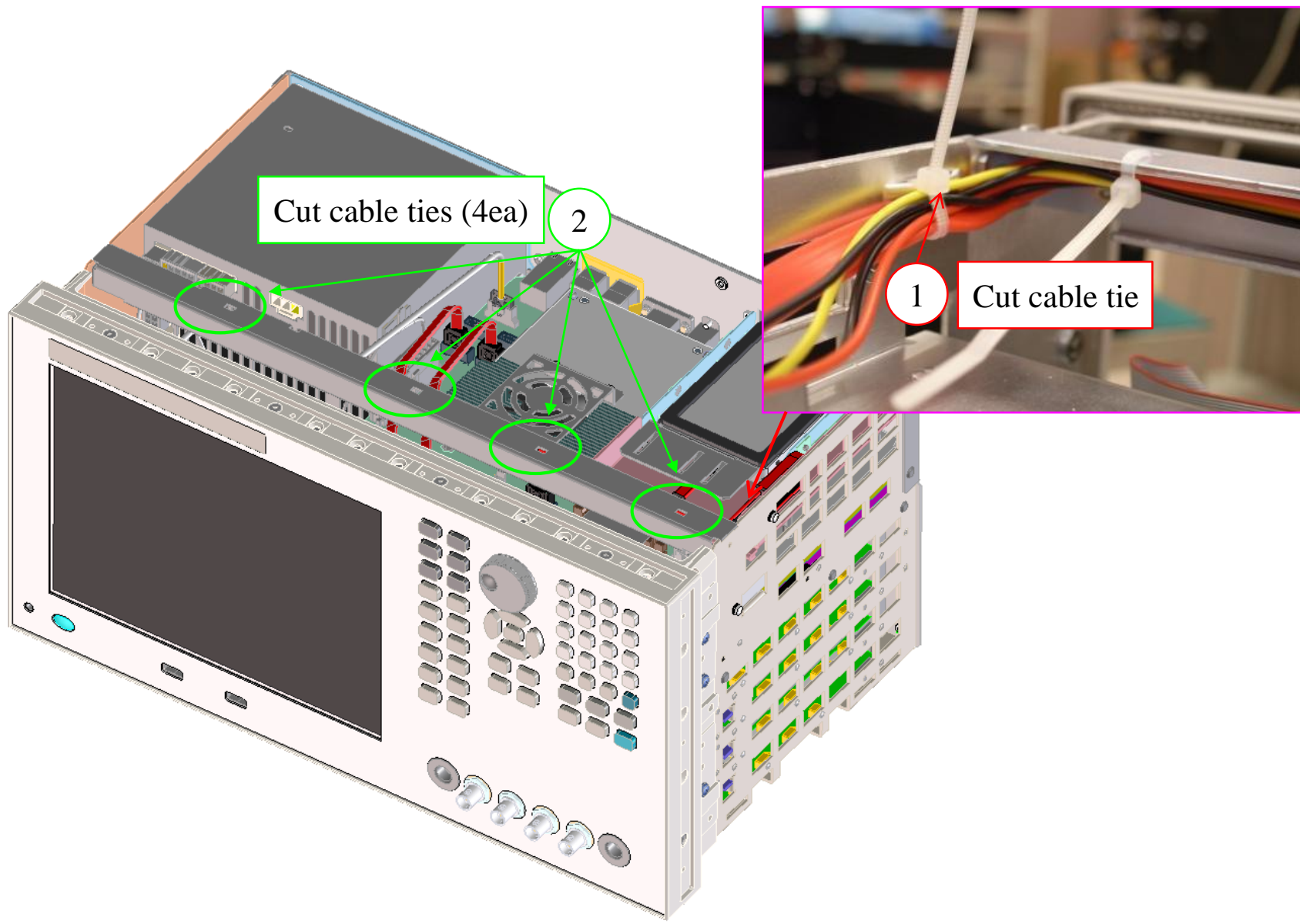
Dis-Assembly Procedure

Note:

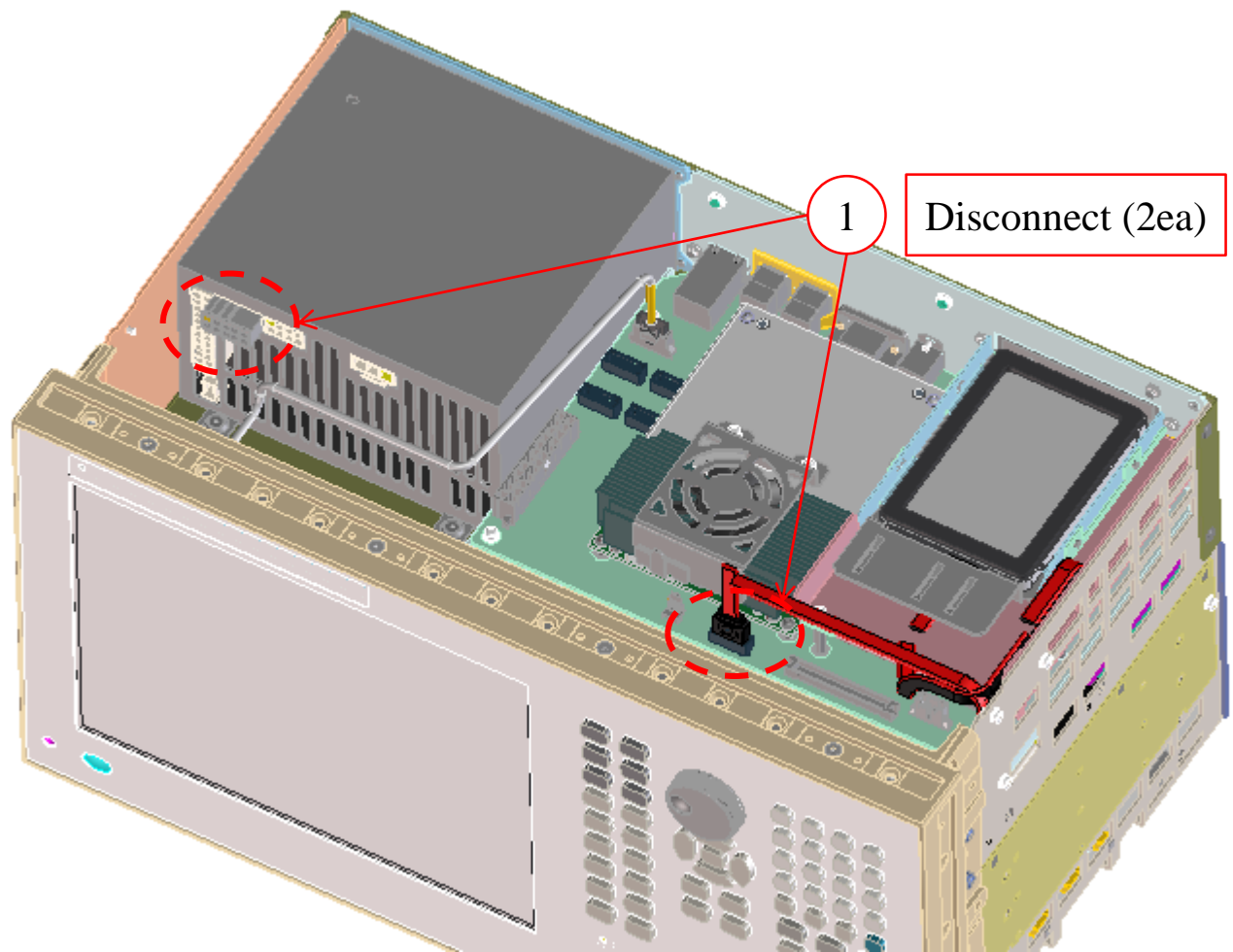
1. Torque value shown in this document is only for reference and only used during assembly.



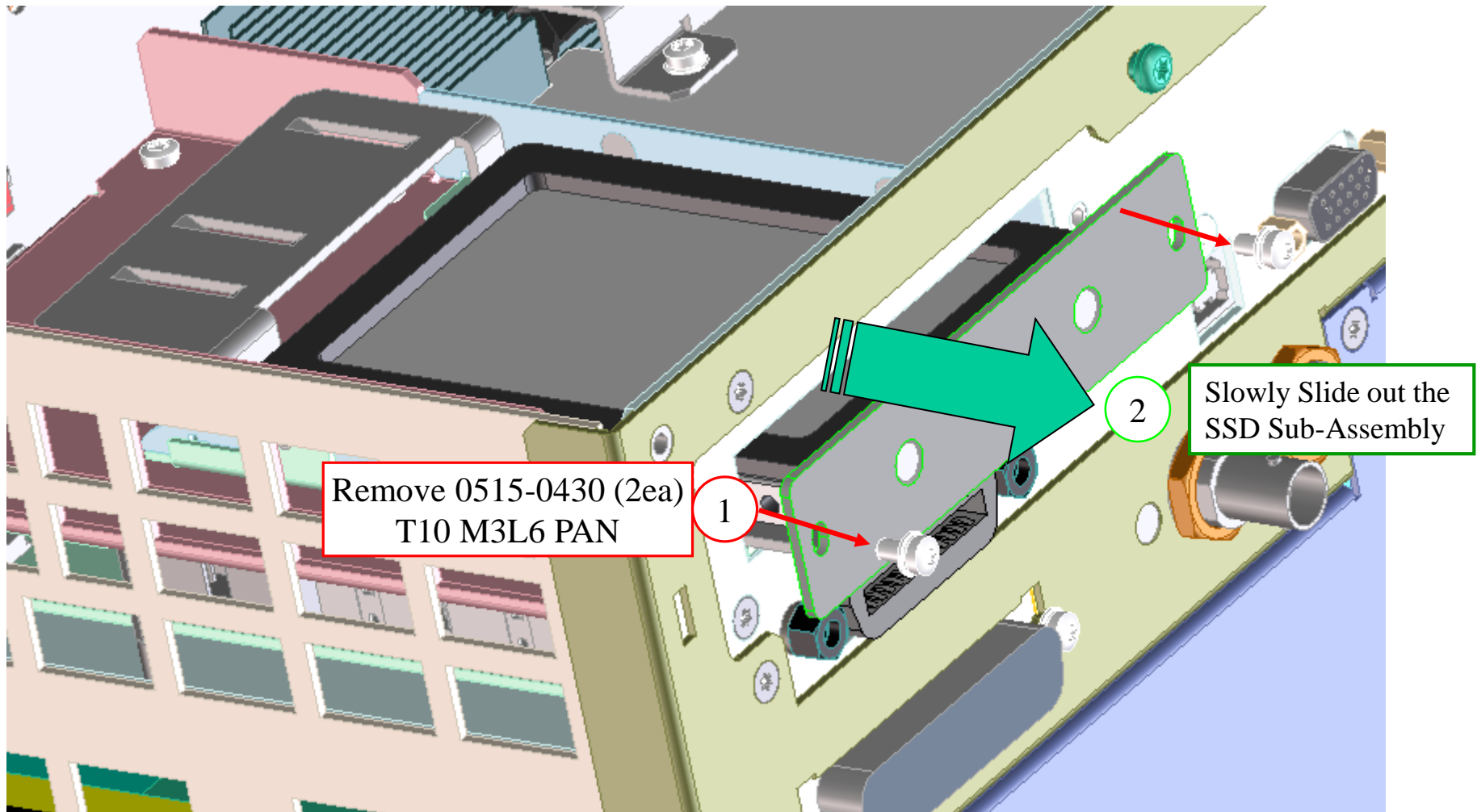




① ②



1



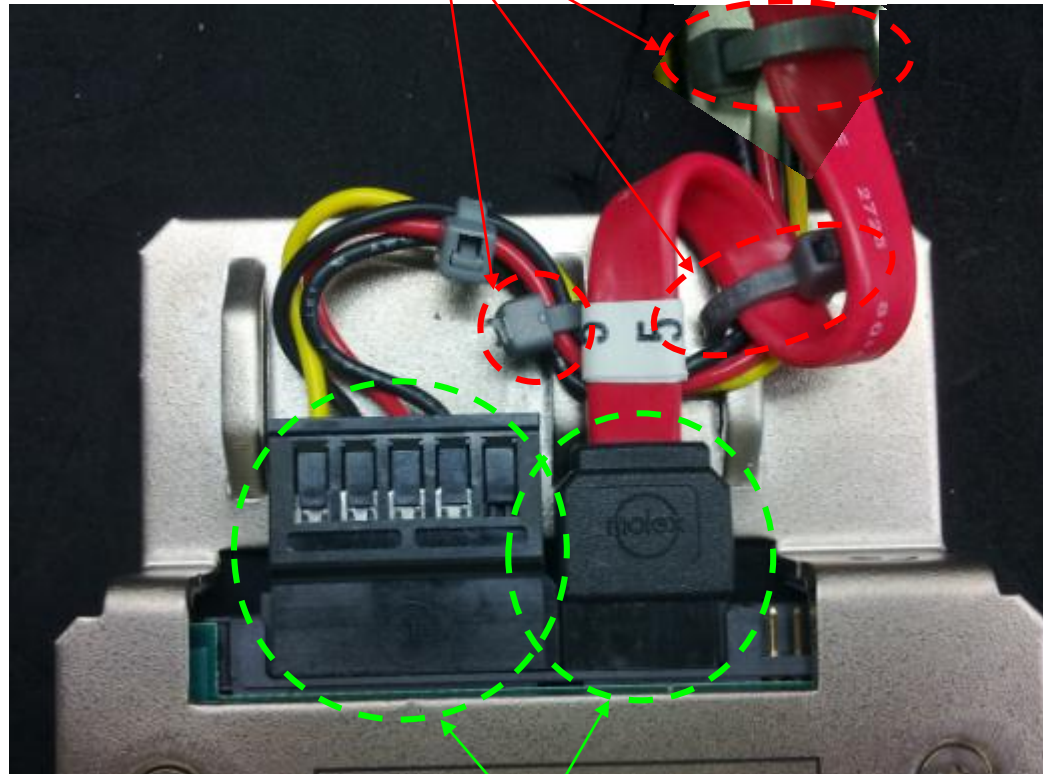
Remove 0515-0430 (2ea)
T10 M3L6 PAN

Slowly Slide out the
SSD Sub-Assembly

1 2

Cut cable ties (3ea)

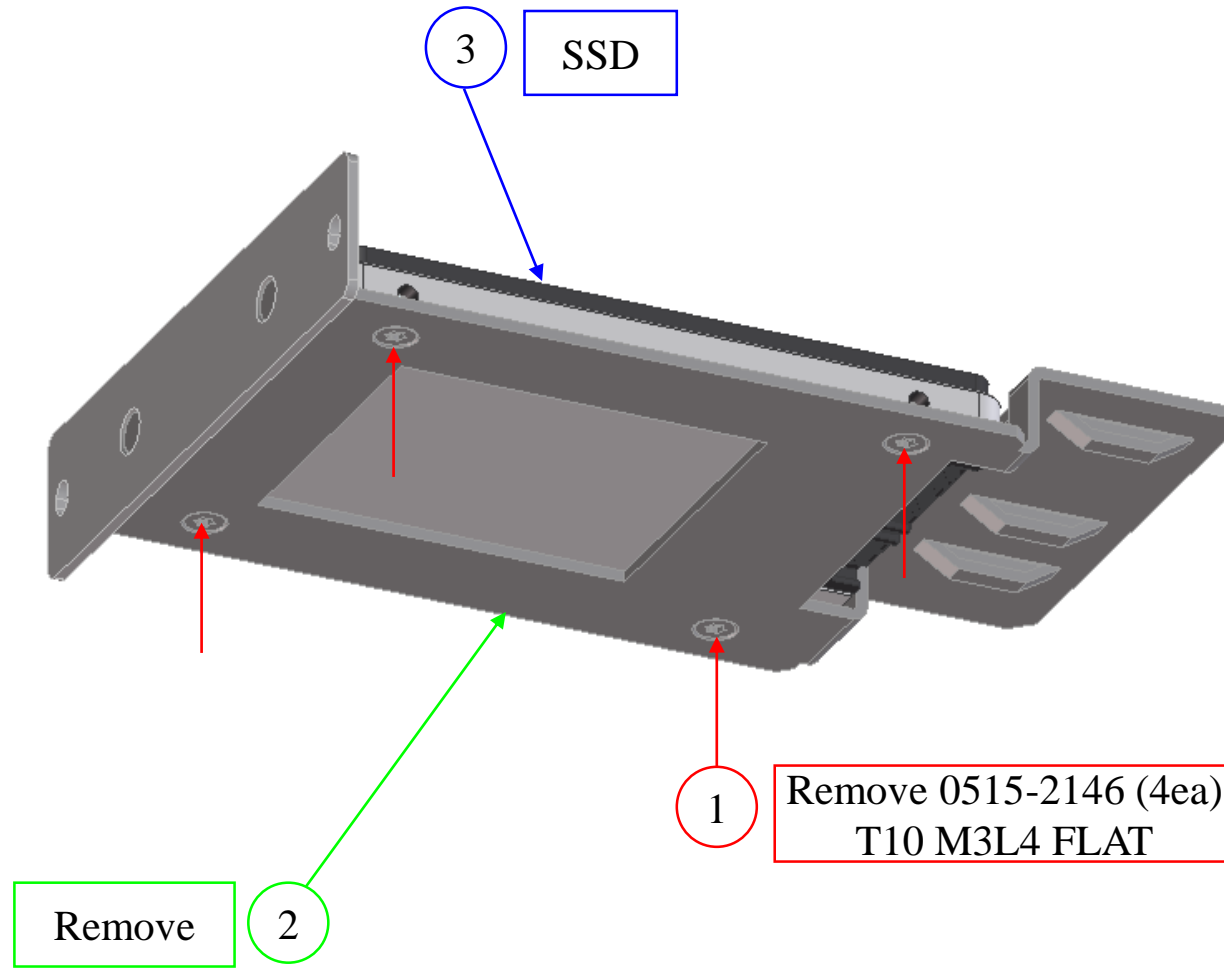
1



2

Disconnect

1 2



1 2 3

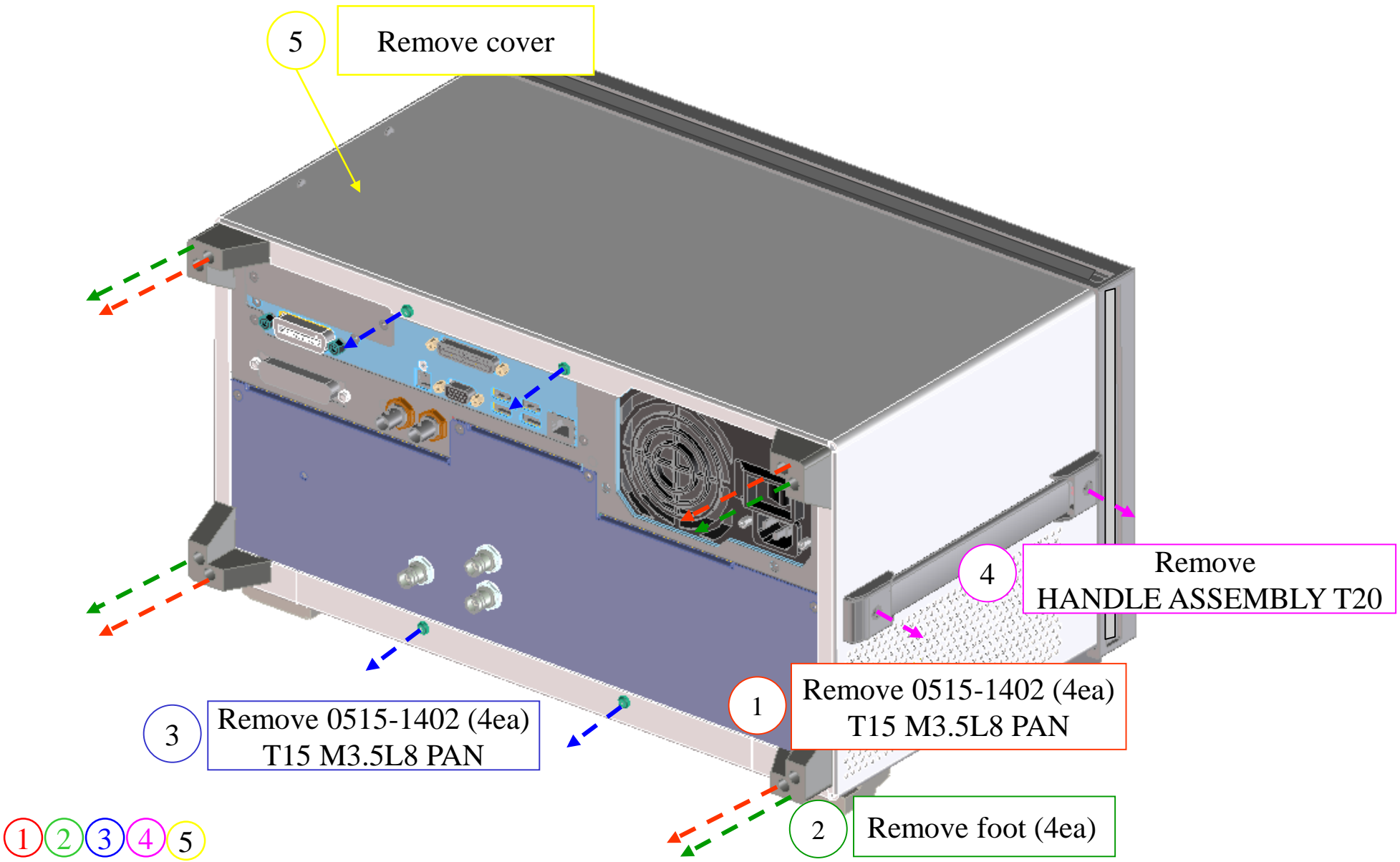
CPU Module (E5061-62180)

Dis-Assembly Procedure

Note:

1. Torque value shown in this document is only for reference and only used during assembly.





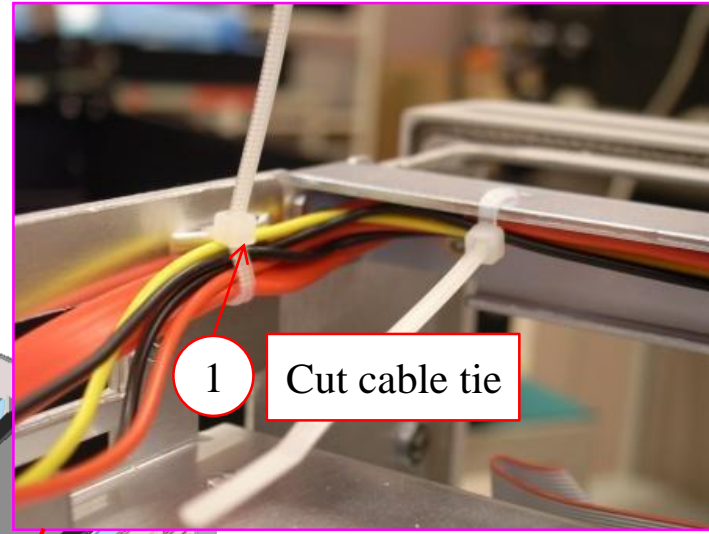
- ①
- ②
- ③
- ④
- ⑤

Remove angle bar

4

Cut cable ties (4ea)

2



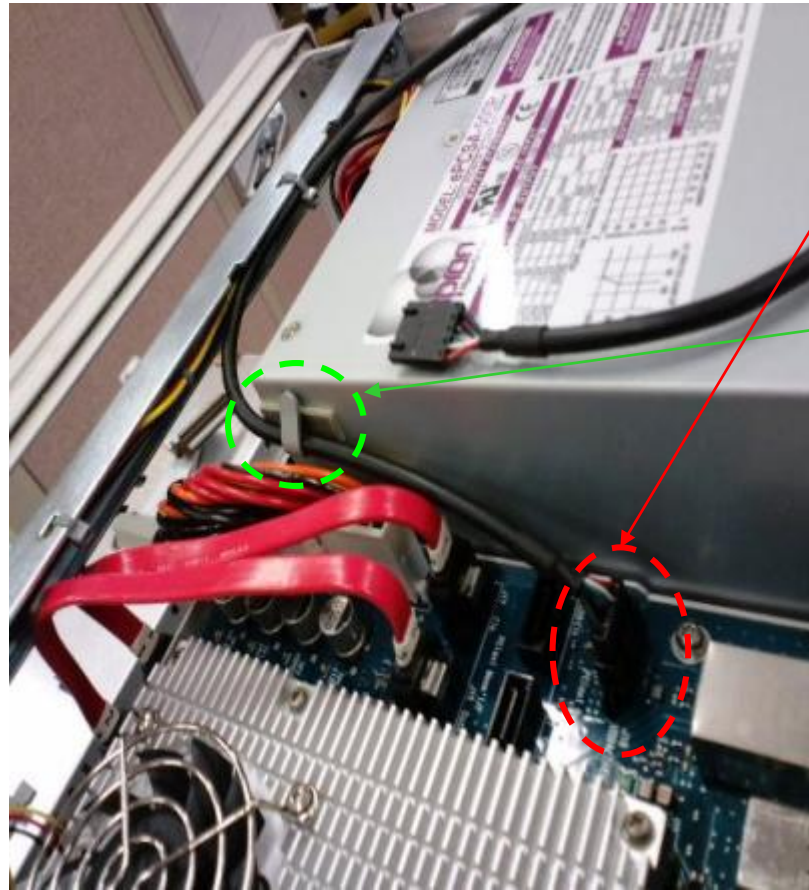
1

Cut cable tie

Remove 0515-0430 (2 ea)
T10

3

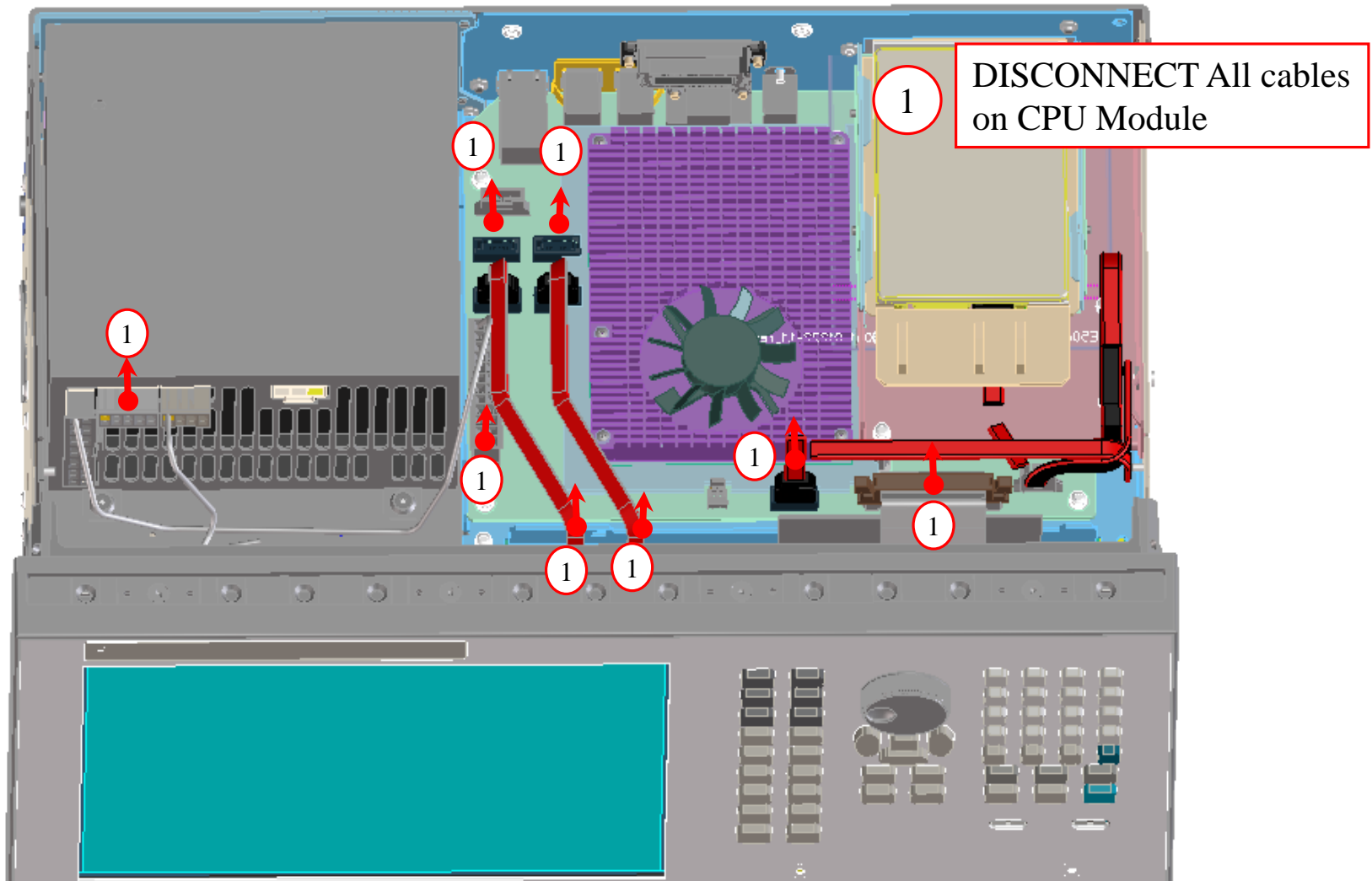
1 2 3 4



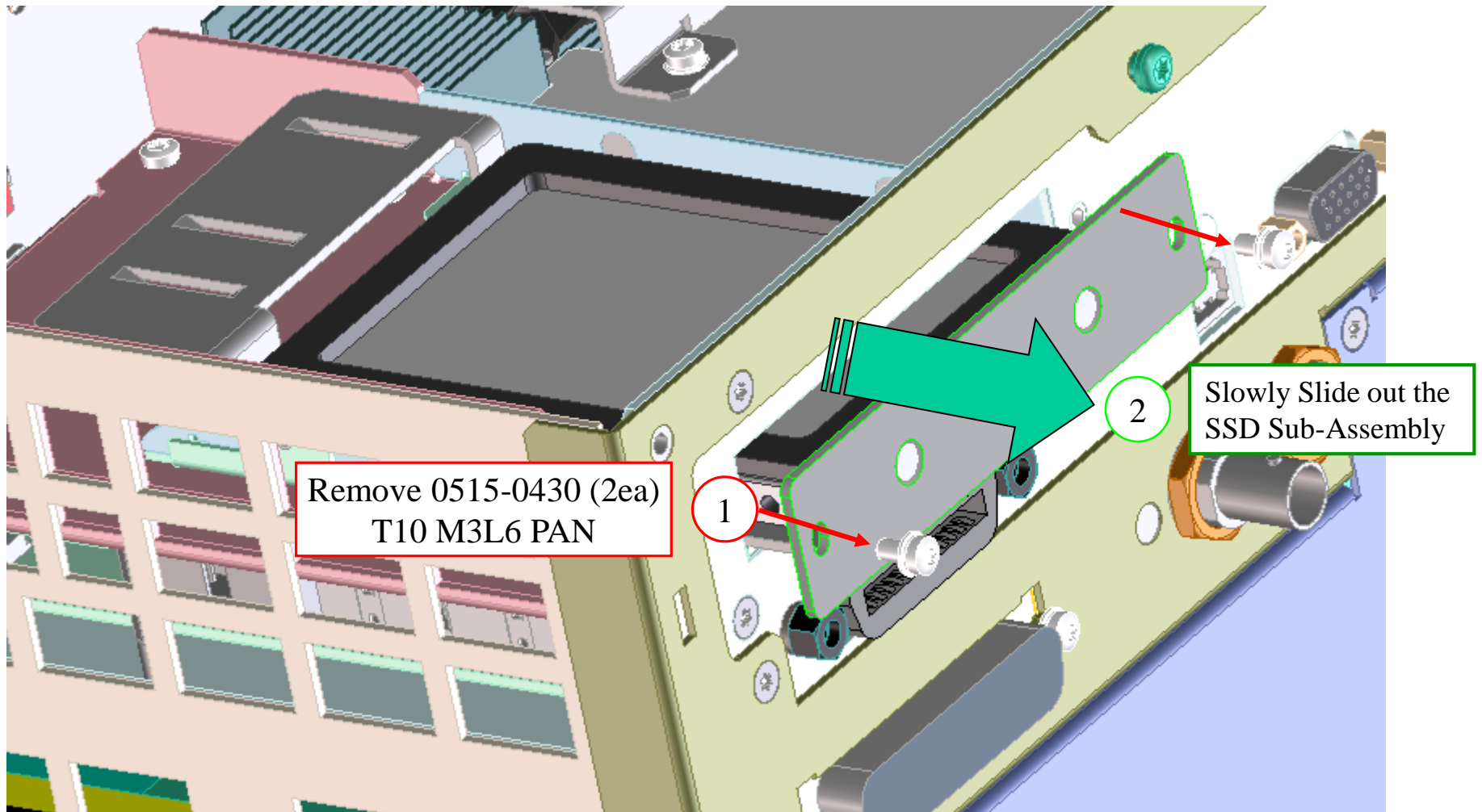
1 Disconnect

2 Open

1 2



1



1 2

Remove 0515-0430 (3ea)
T10 M3L6 PAN

2

Remove
CPU Module (E5061-62180)

3

Remove 0515-1946 (3ea)
T10 M3L6 Flat

1

1 2 3

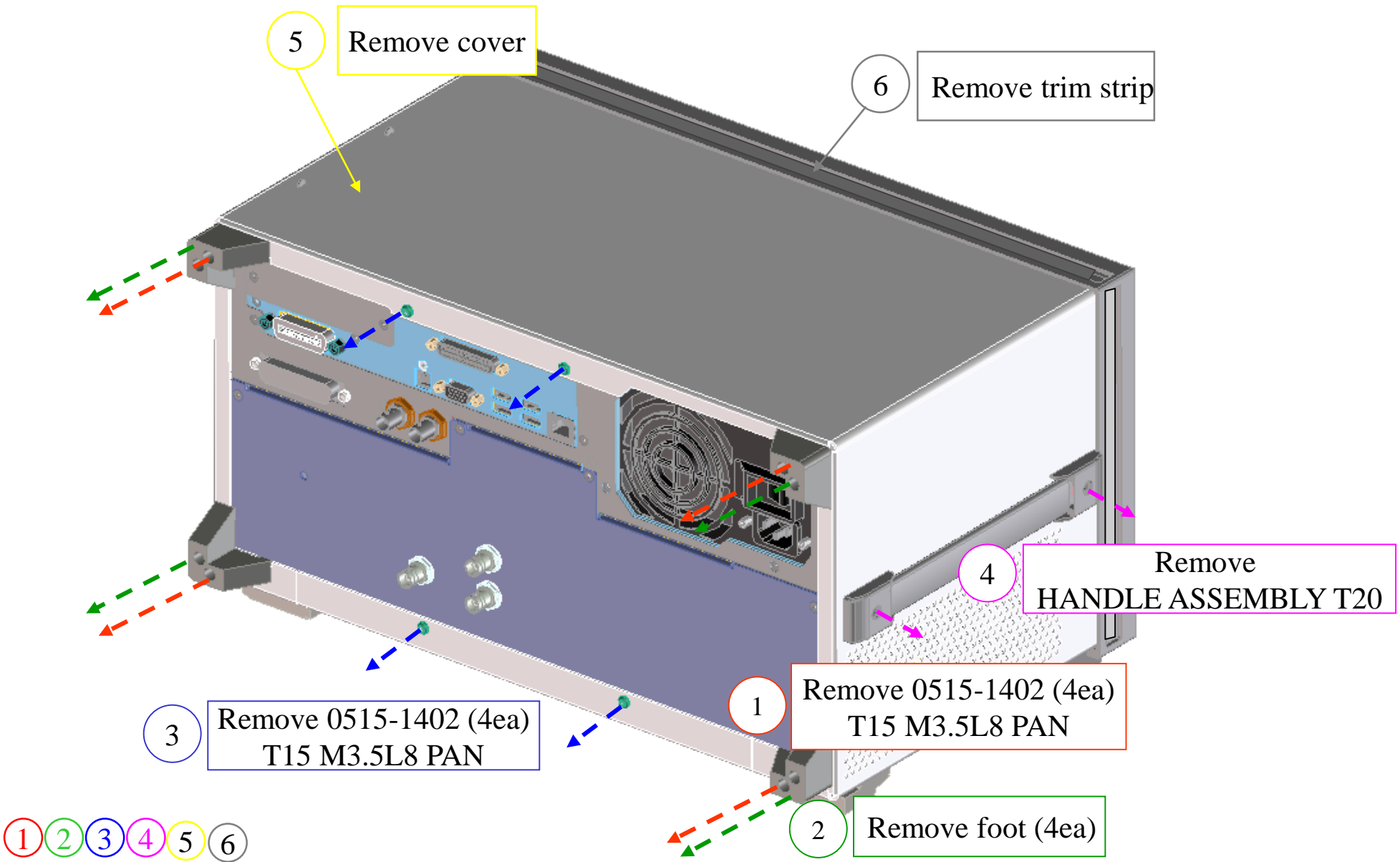
Display Board (E5061-66651)

Dis-Assembly Procedure

Note:

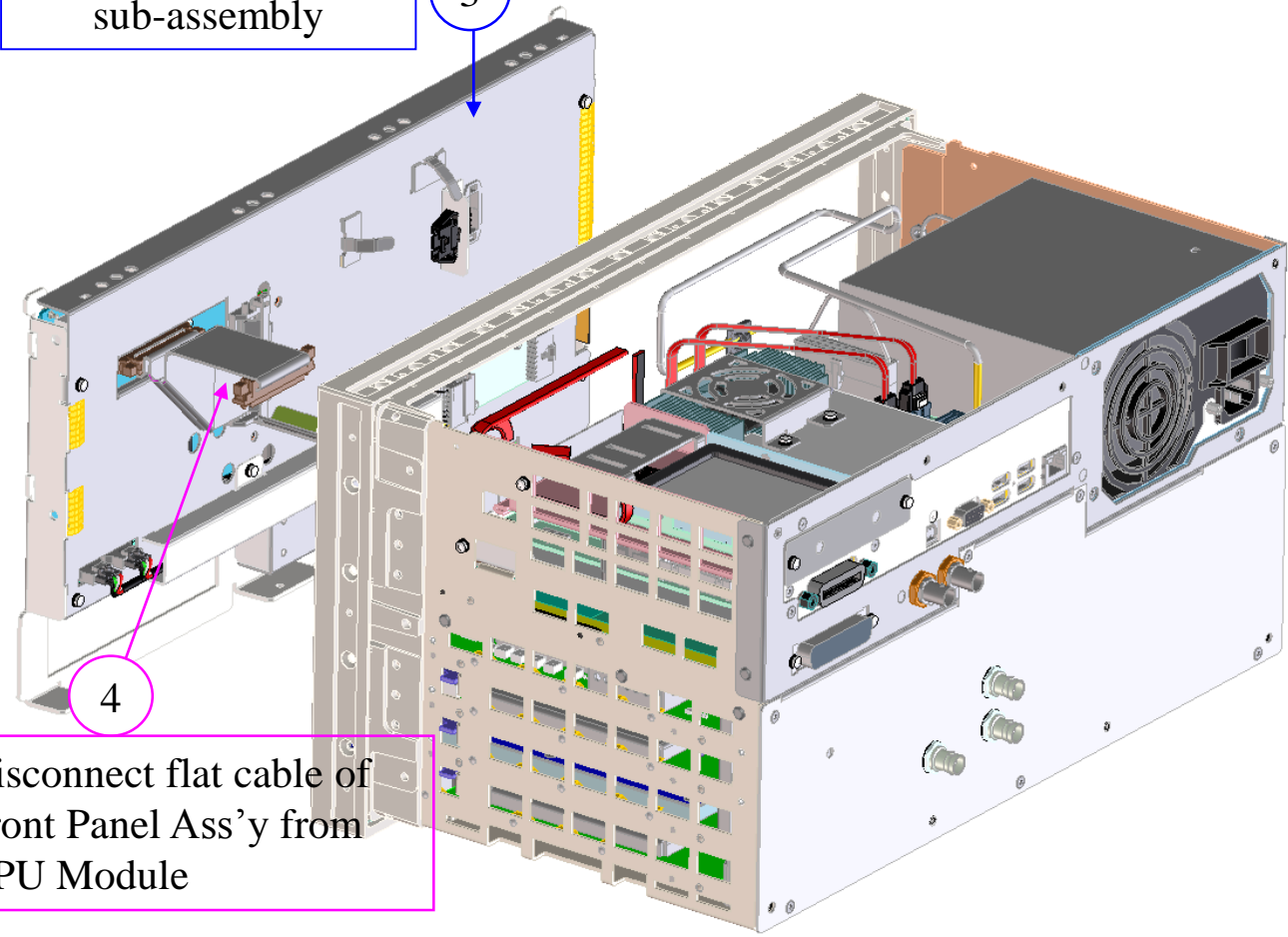
1. Torque value shown in this document is only for reference and only used during assembly.





Remove Front Panel sub-assembly

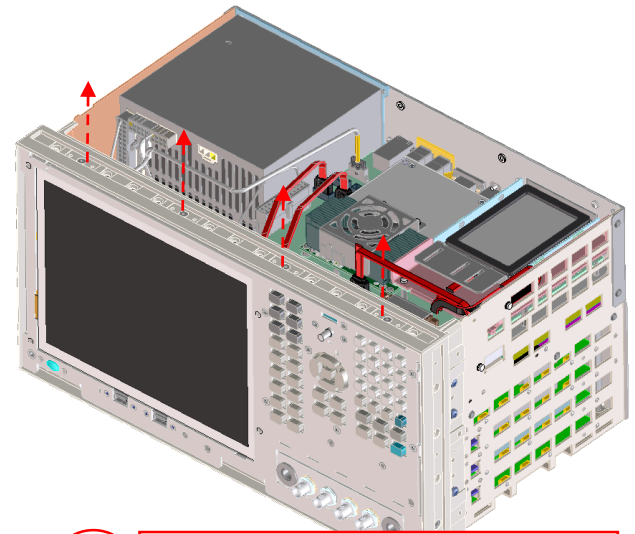
3



Disconnect flat cable of Front Panel Ass'y from CPU Module

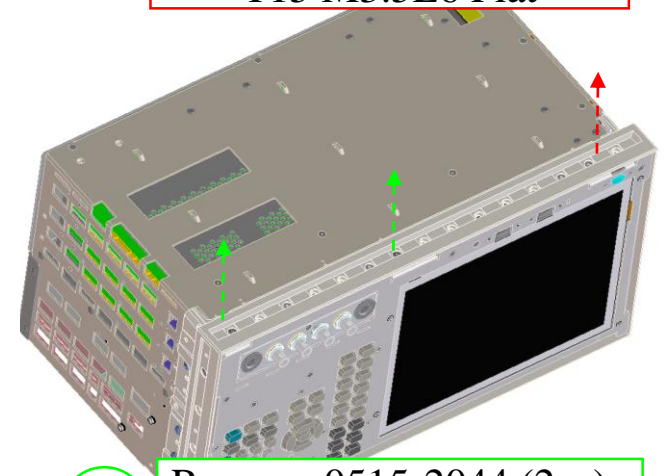
4

1 2 3 4



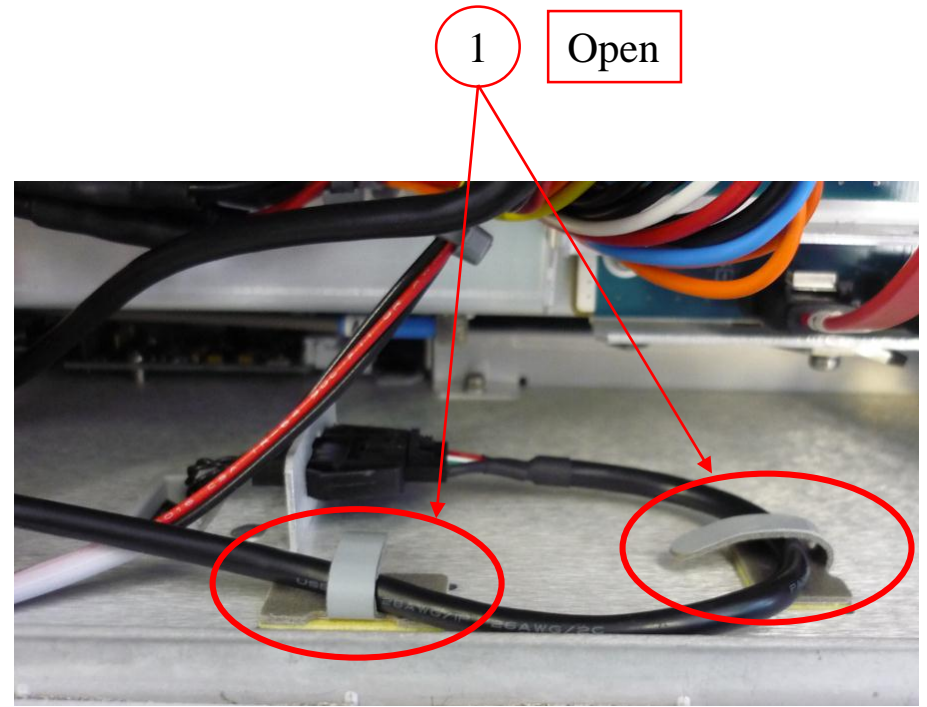
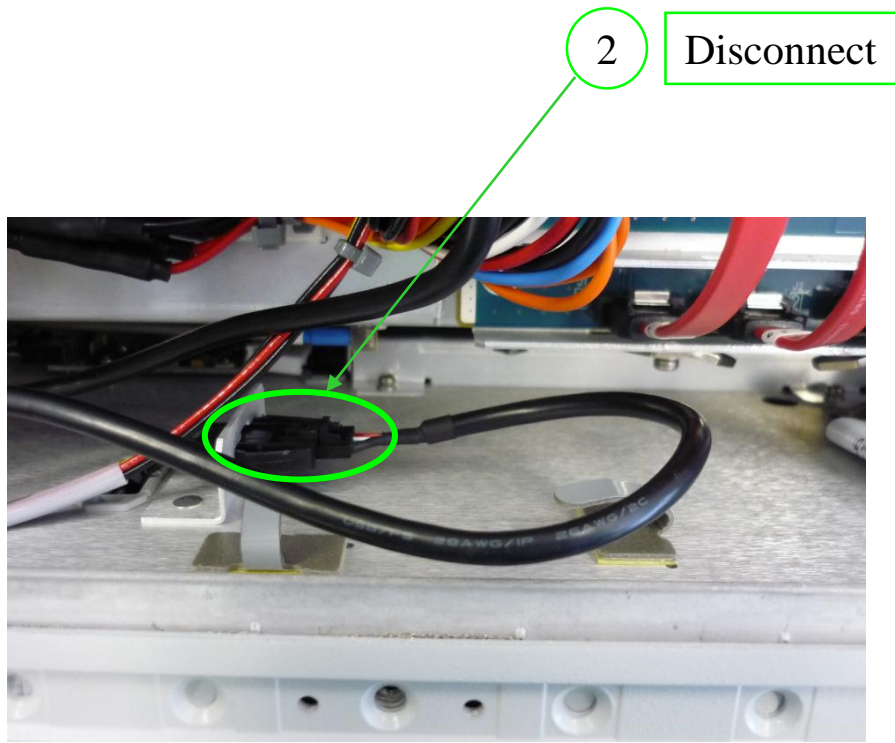
1

Remove 0515-1382 (5ea)
T15 M3.5L6 Flat

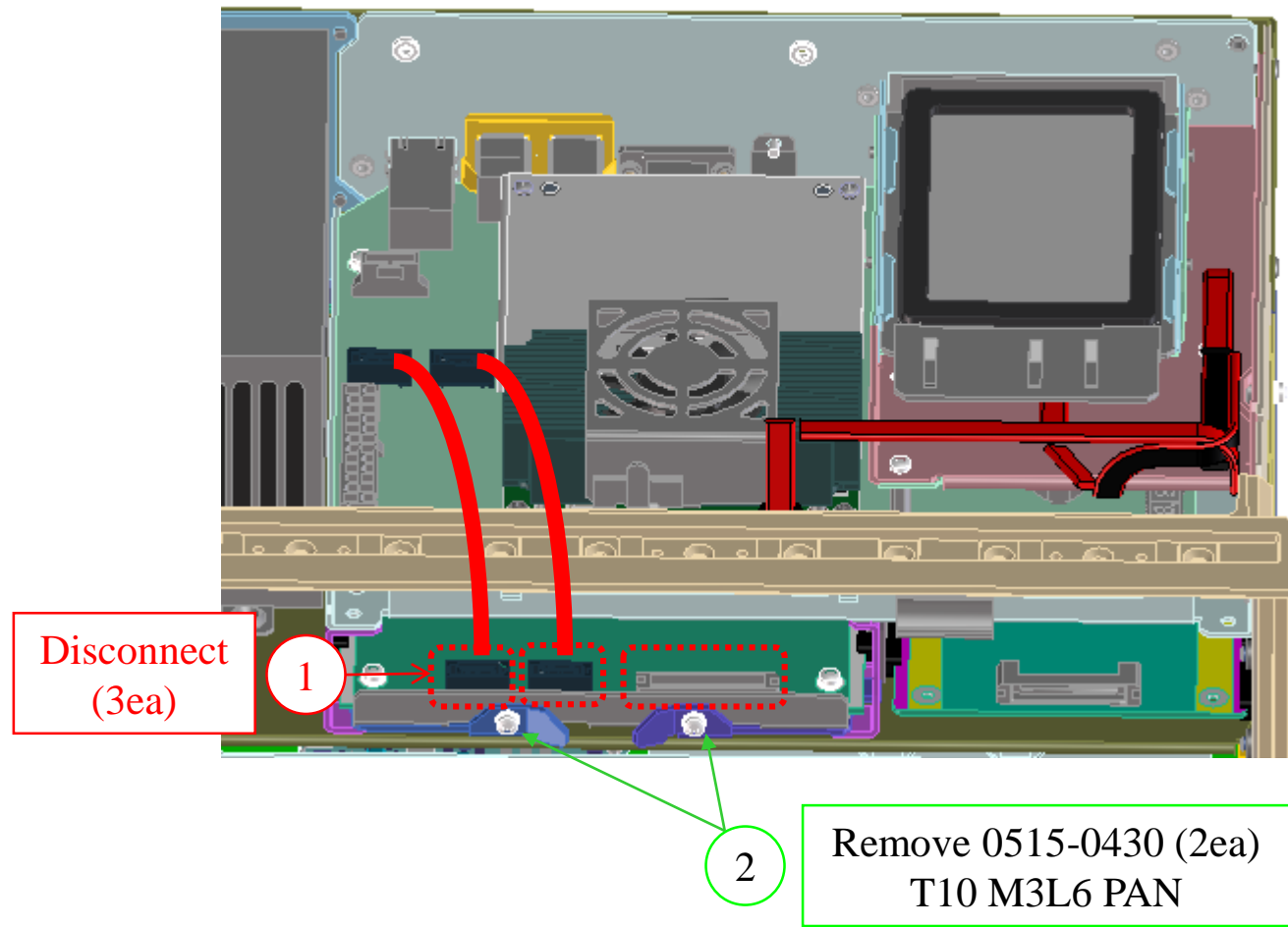


2

Remove 0515-2044 (2ea)
T20 M4L10 Flat



① ②



1 2

Remove Display Board
(E5061-66651)

3

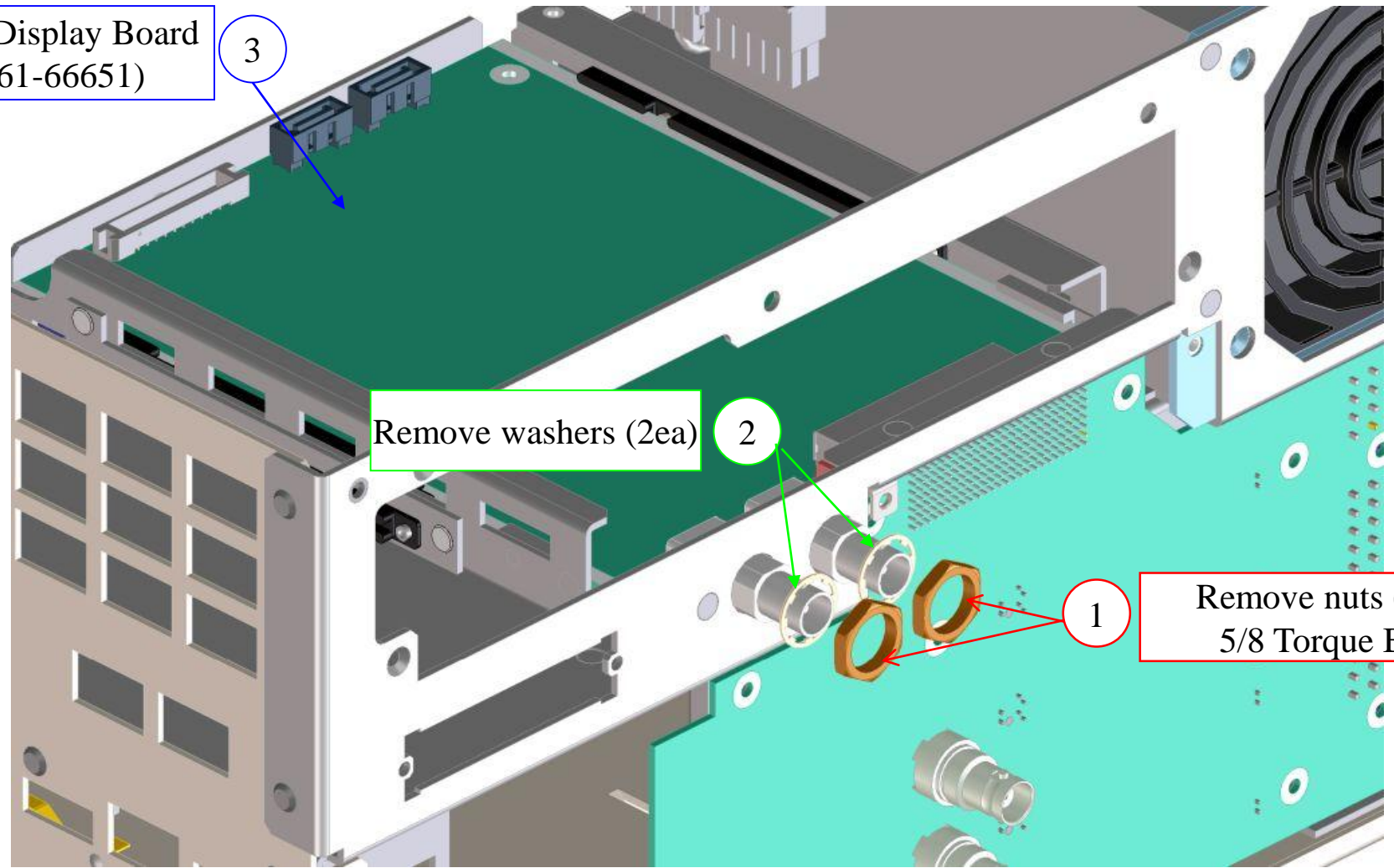
Remove washers (2ea)

2

Remove nuts (2ea)
5/8 Torque Box

1

1 2 3



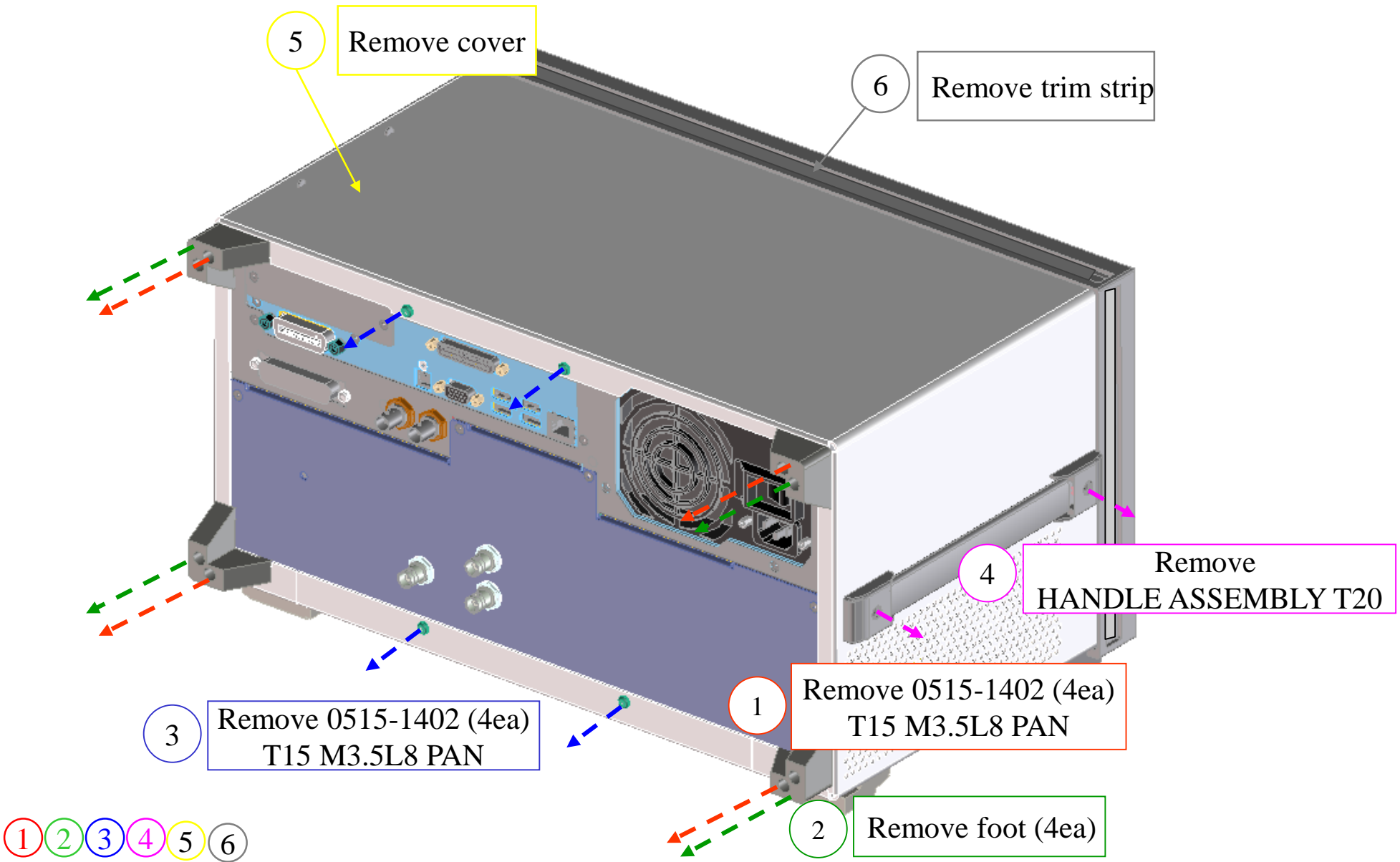
LF Source Module (E4990-62007)

Dis-Assembly Procedure

Note:

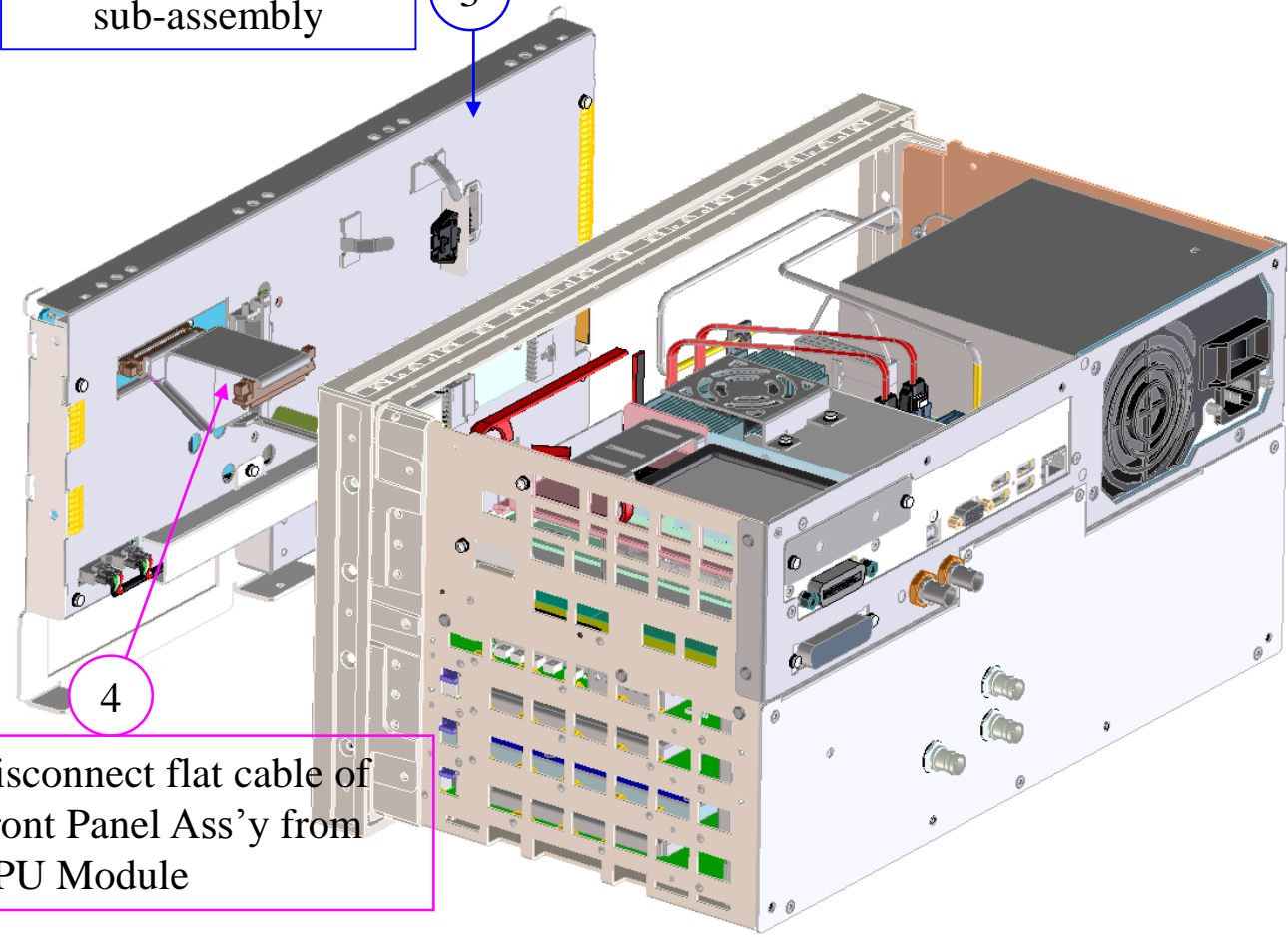
1. Torque value shown in this document is only for reference and only used during assembly.





Remove Front Panel sub-assembly

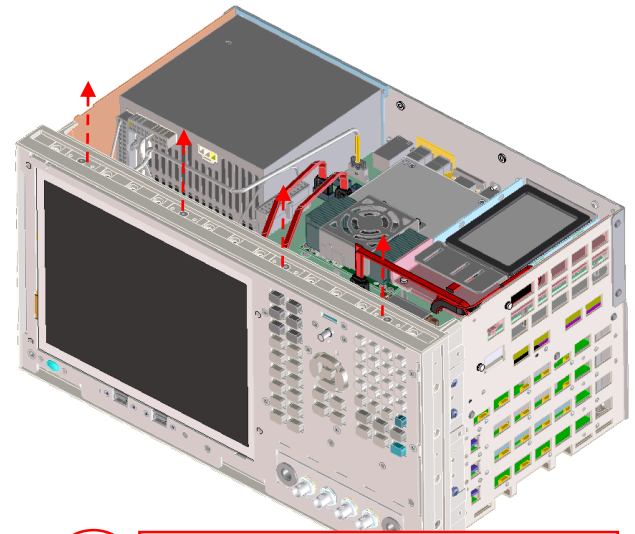
3



Disconnect flat cable of Front Panel Ass'y from CPU Module

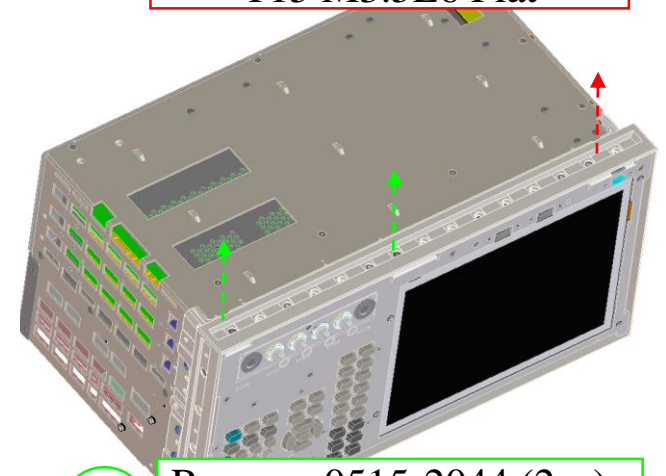
4

1 2 3 4



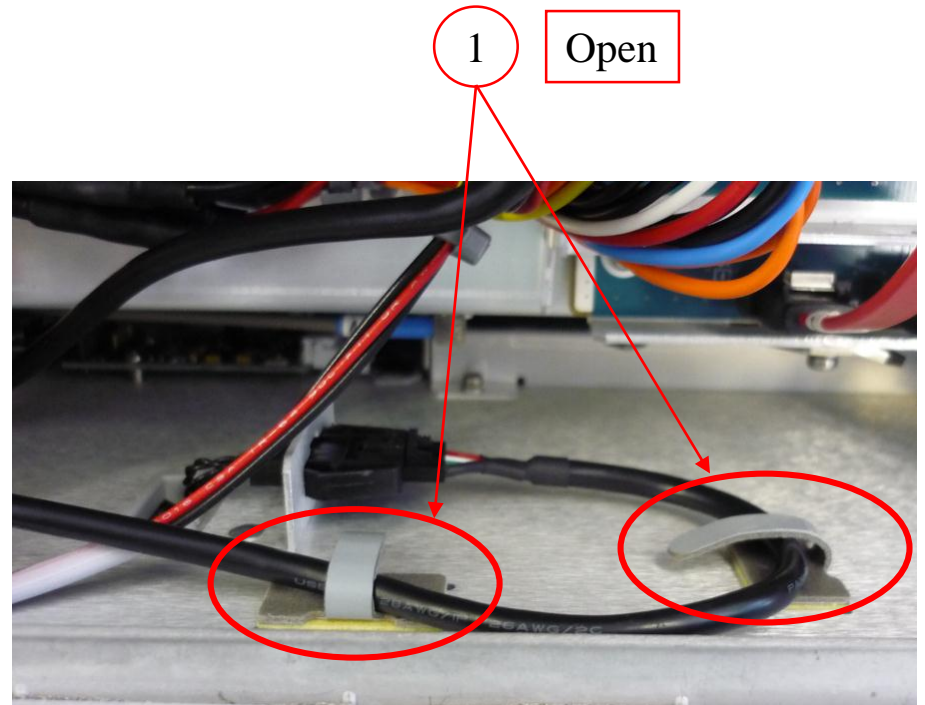
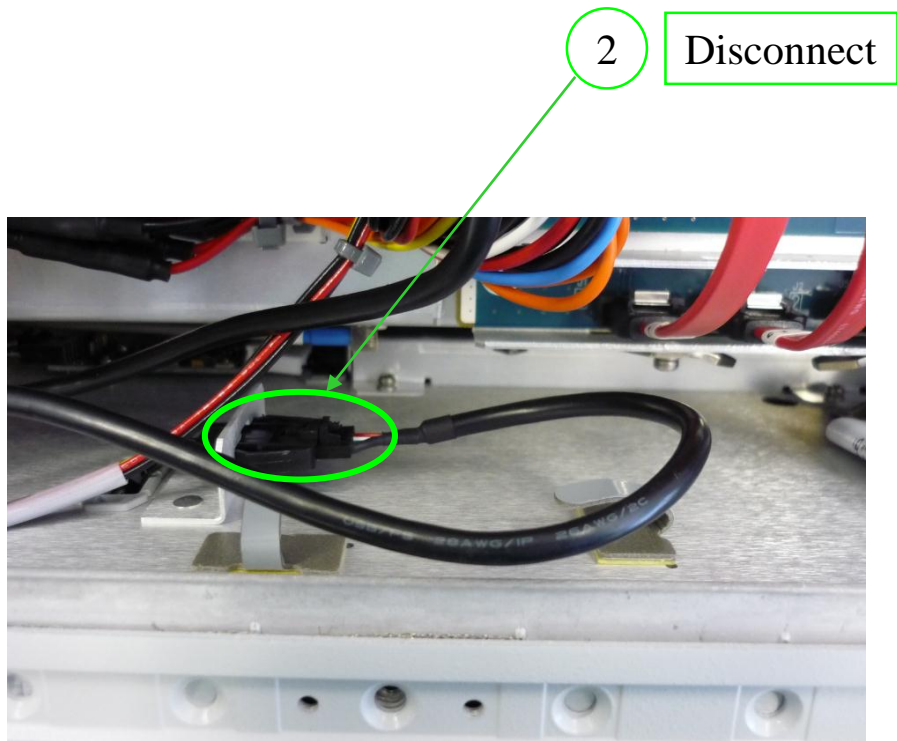
1

Remove 0515-1382 (5ea)
T15 M3.5L6 Flat

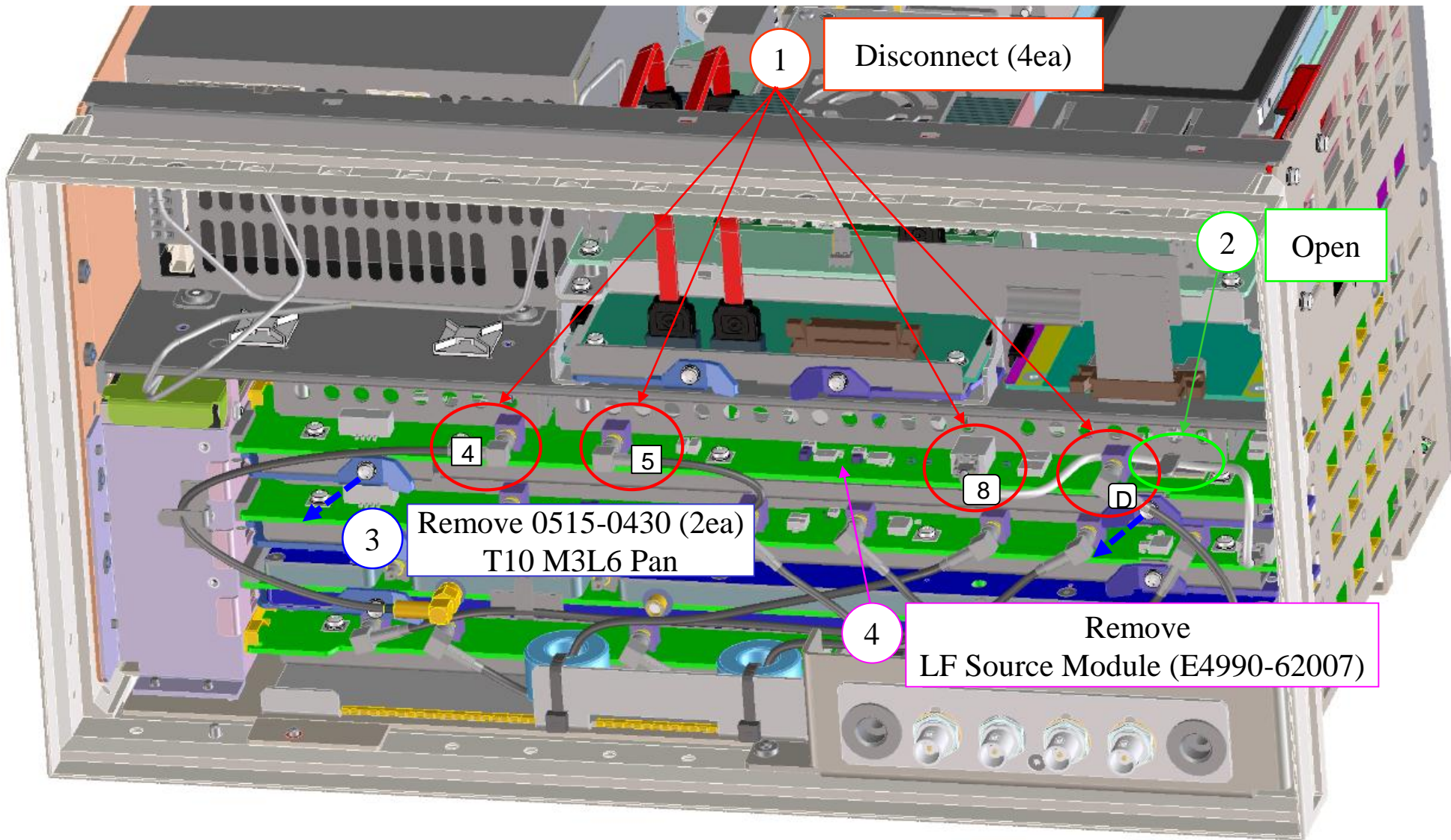


2

Remove 0515-2044 (2ea)
T20 M4L10 Flat



① ②



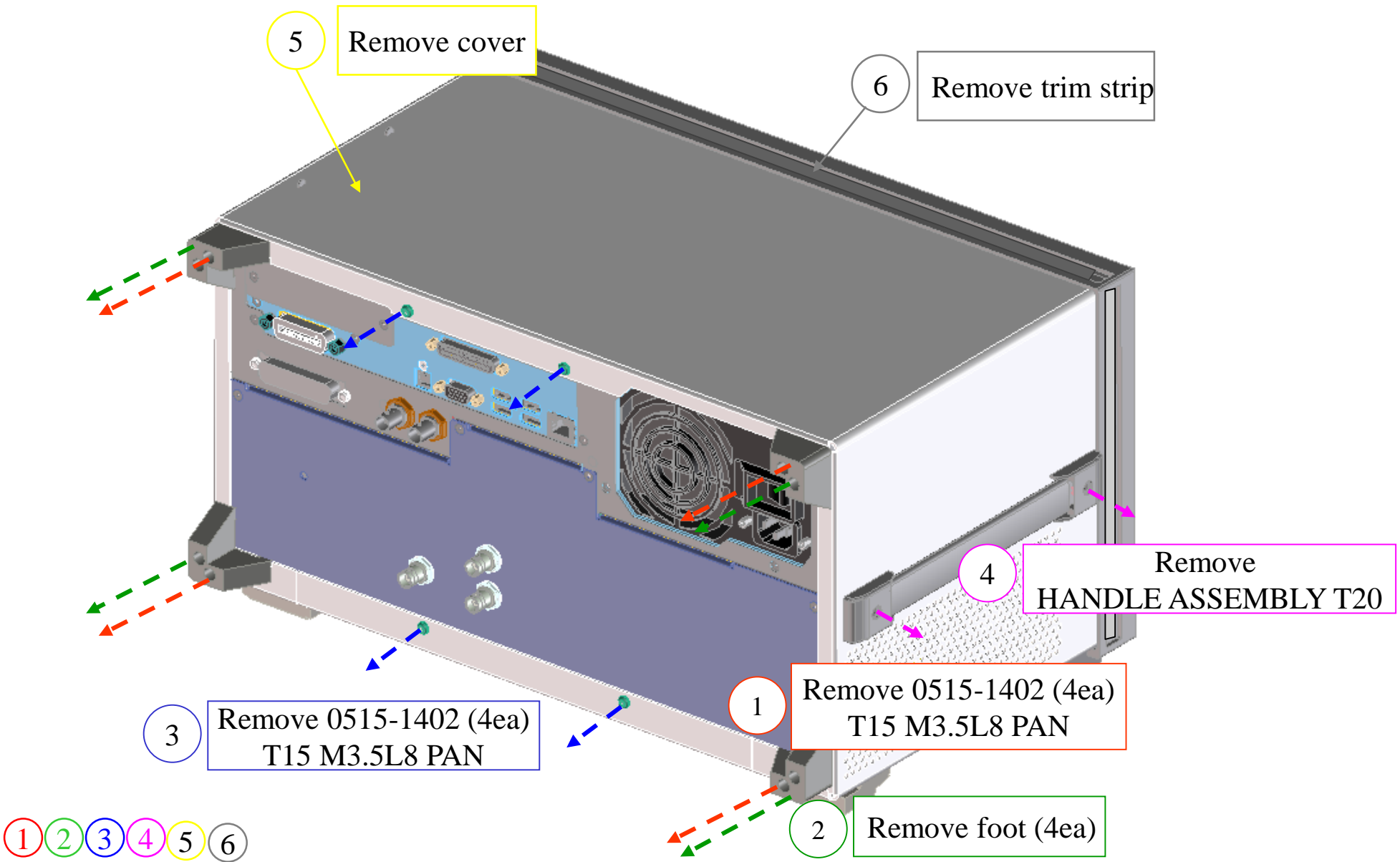
- ①
- ②
- ③
- ④

TRD Module (E4990-62005) & BNC Port Assembly Dis-Assembly Procedure

Note:

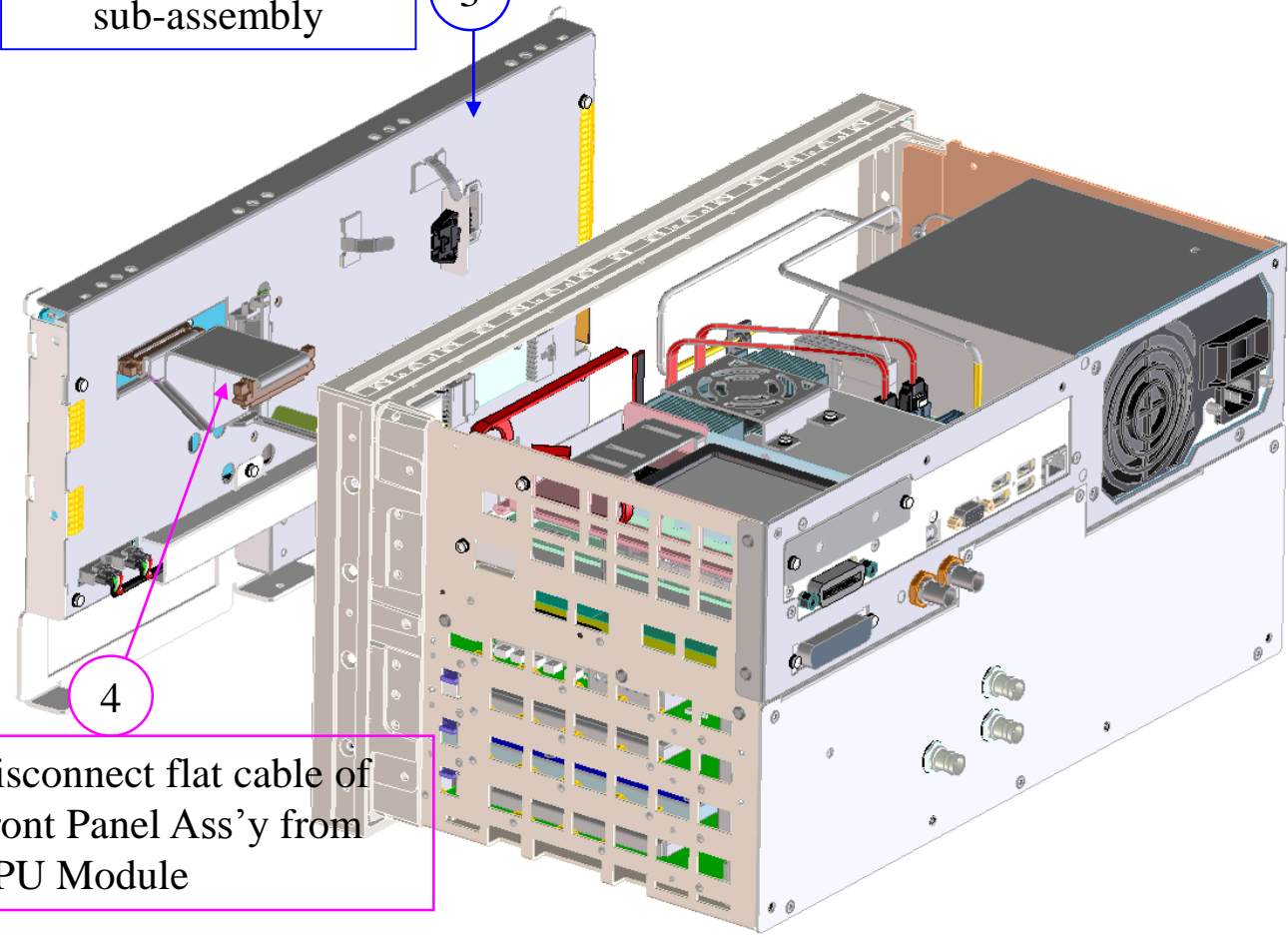
1. Torque value shown in this document is only for reference and only used during assembly.





Remove Front Panel sub-assembly

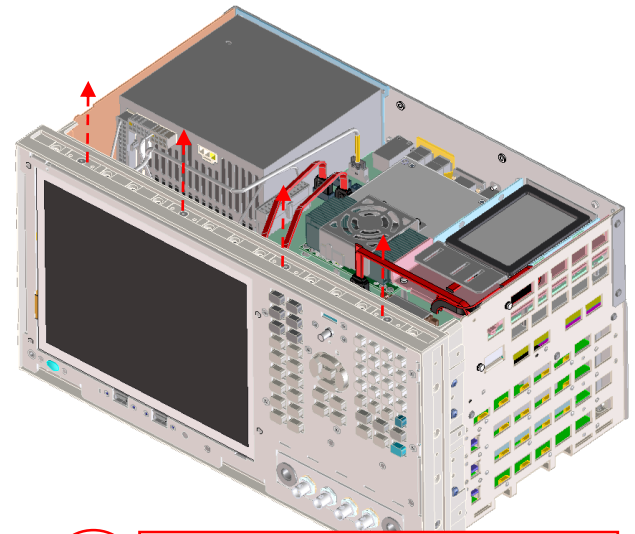
3



Disconnect flat cable of Front Panel Ass'y from CPU Module

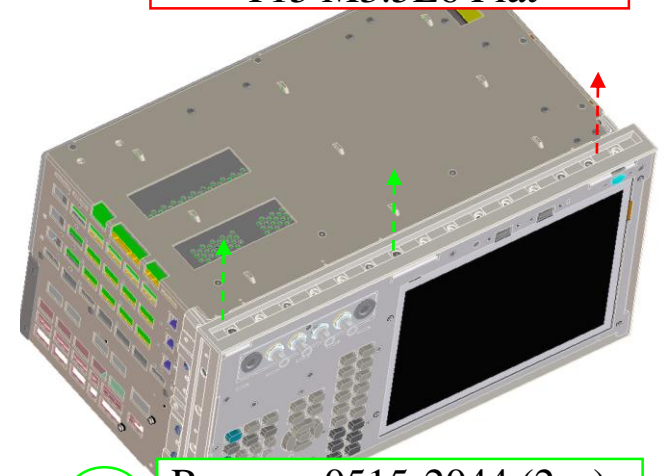
4

1 2 3 4



1

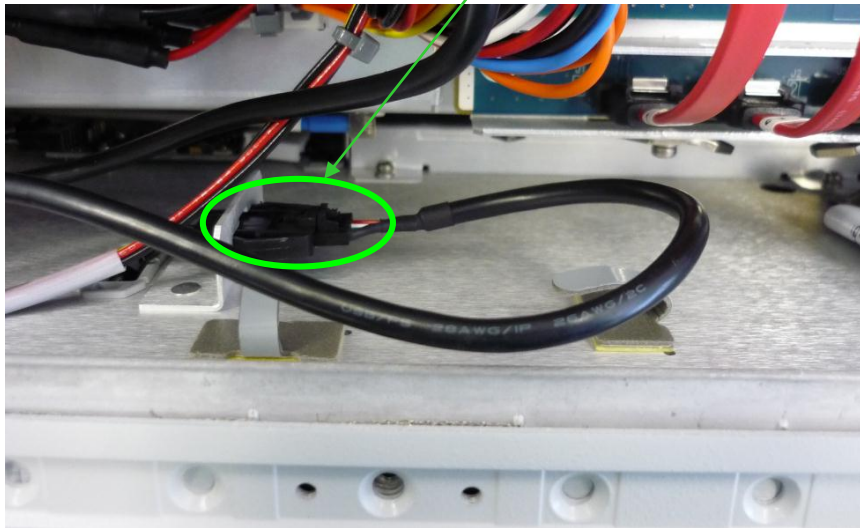
Remove 0515-1382 (5ea)
T15 M3.5L6 Flat



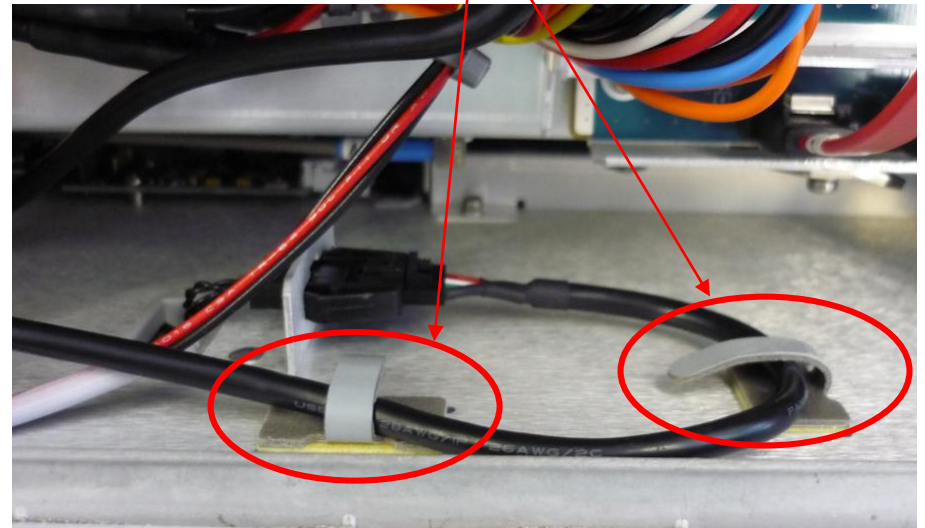
2

Remove 0515-2044 (2ea)
T20 M4L10 Flat

2 Disconnect

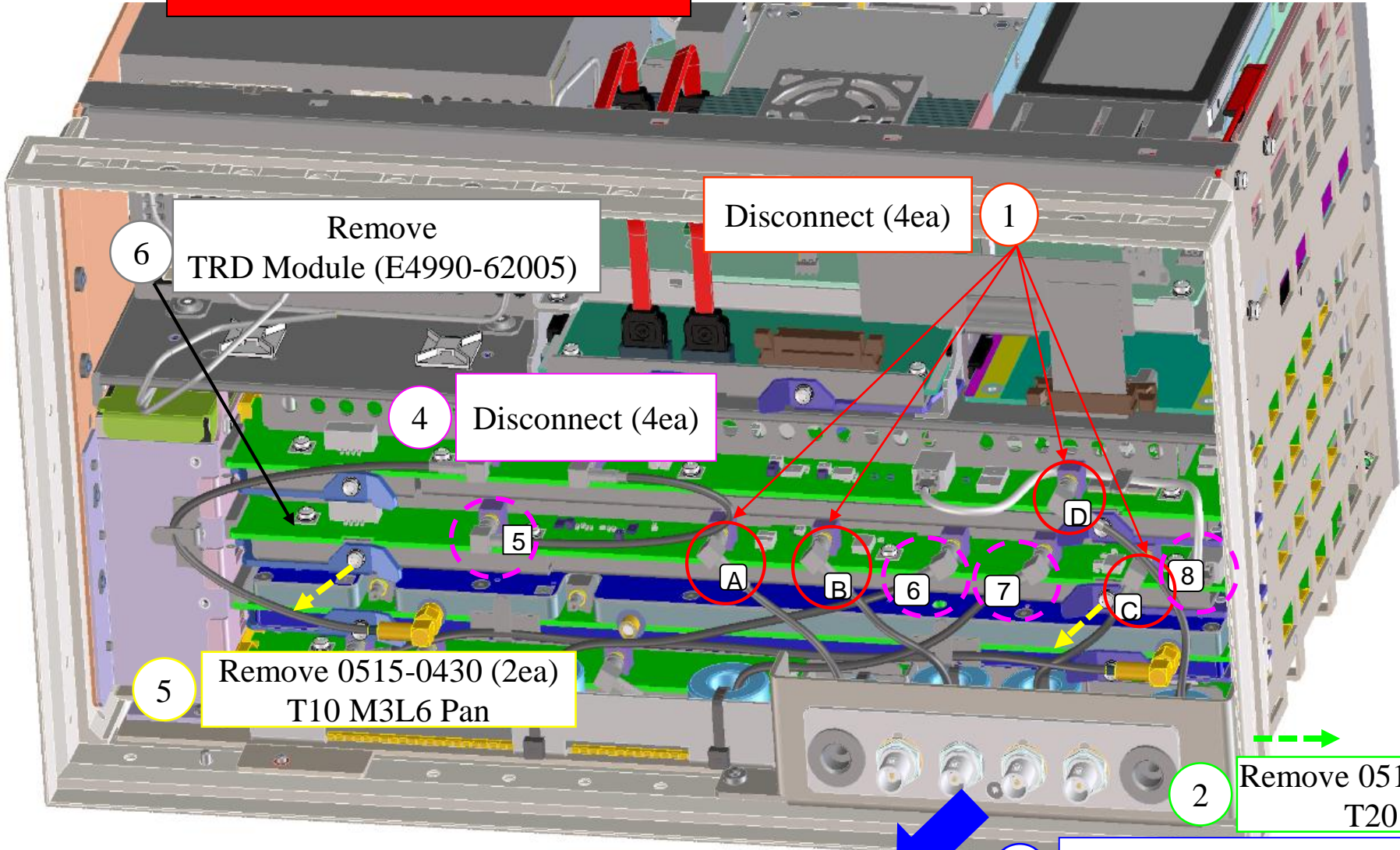


1 Open



① ②

BNC Port Assembly Removal Step



- 1
- 2
- 3
- 4
- 5
- 6

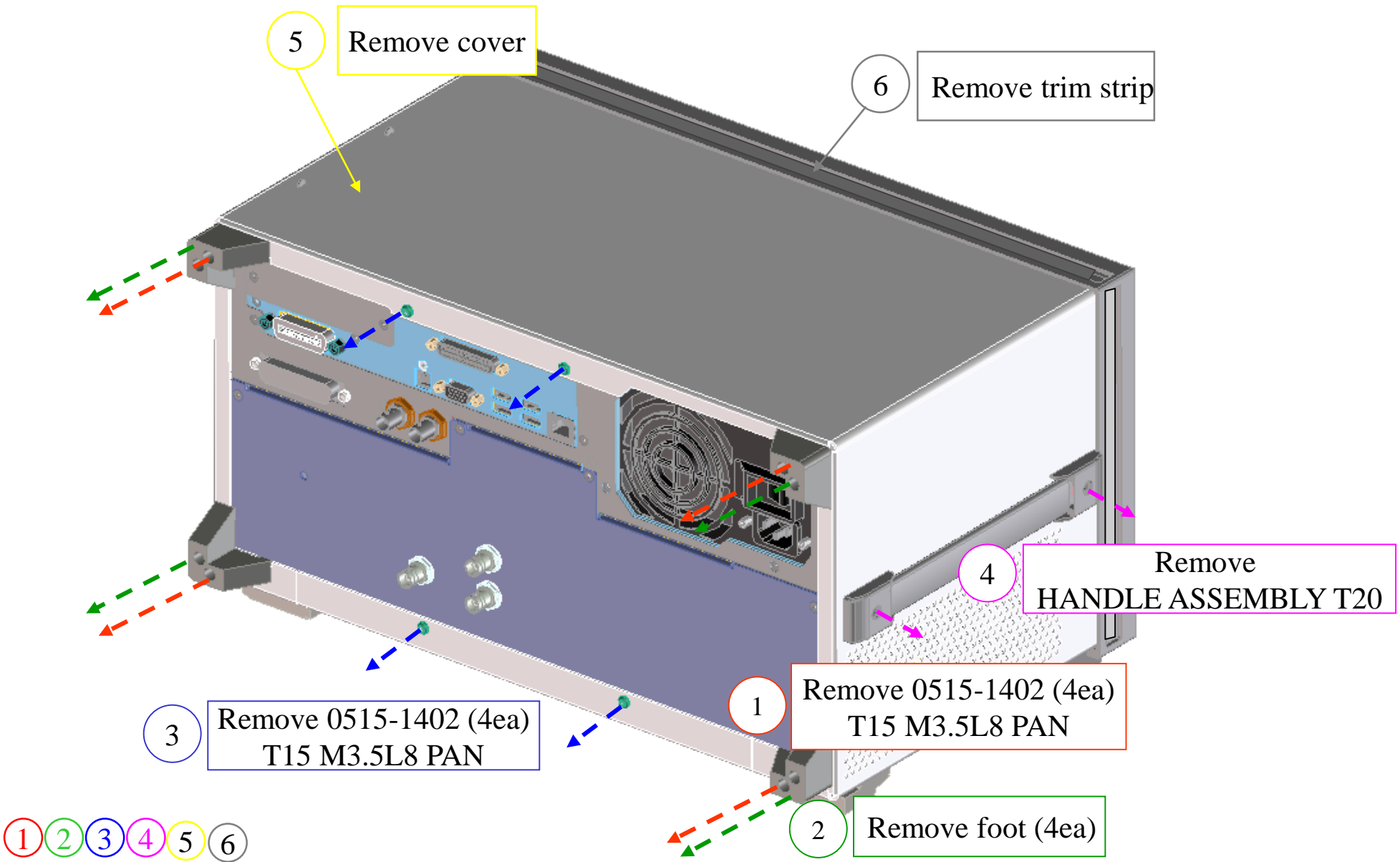
Source Module (E5061-62021)

Dis-Assembly Procedure

Note:

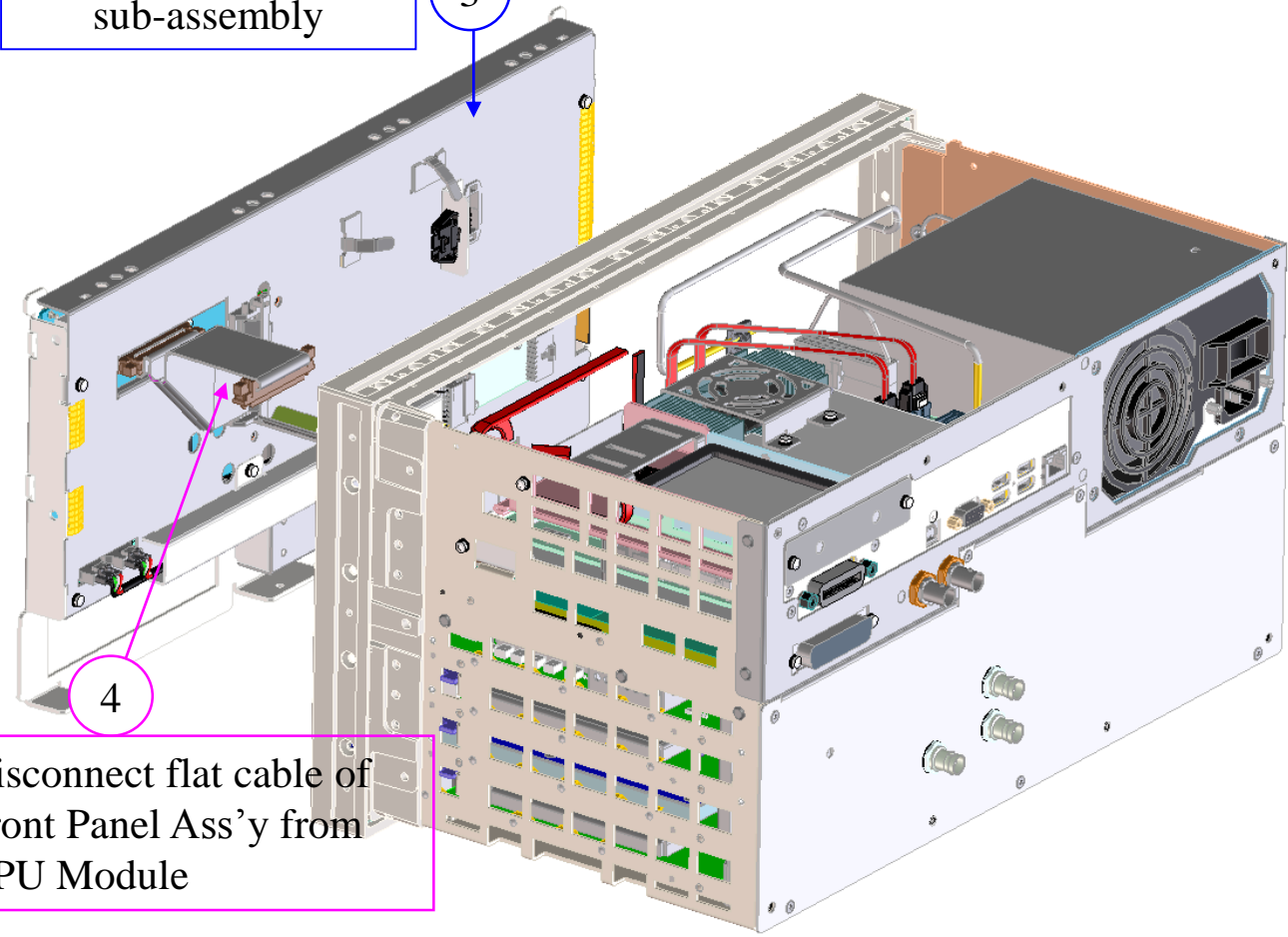
1. Torque value shown in this document is only for reference and only used during assembly.





Remove Front Panel sub-assembly

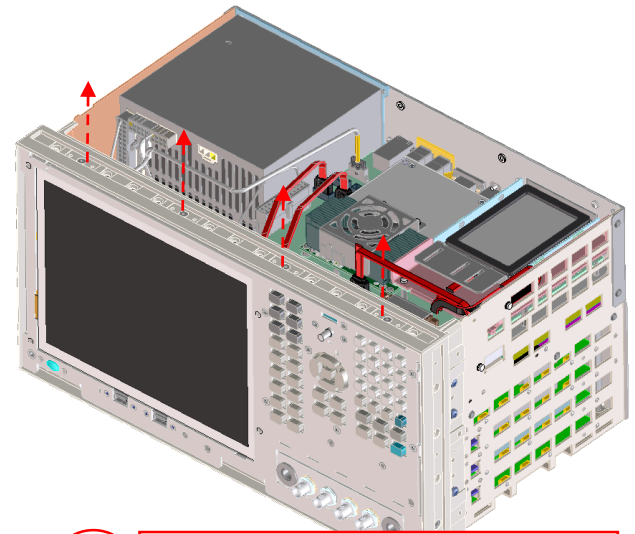
3



Disconnect flat cable of Front Panel Ass'y from CPU Module

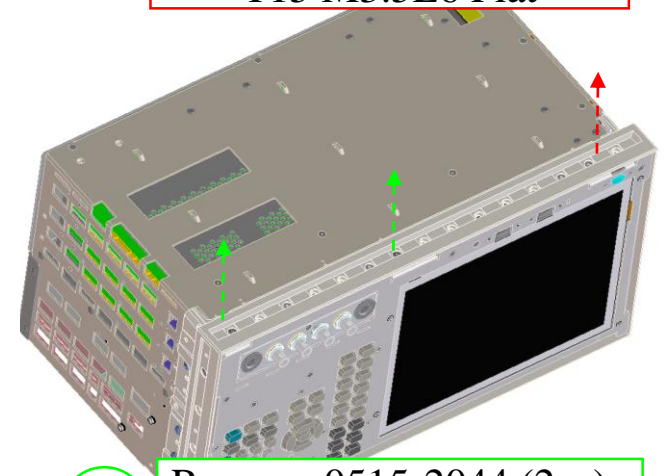
4

1 2 3 4



1

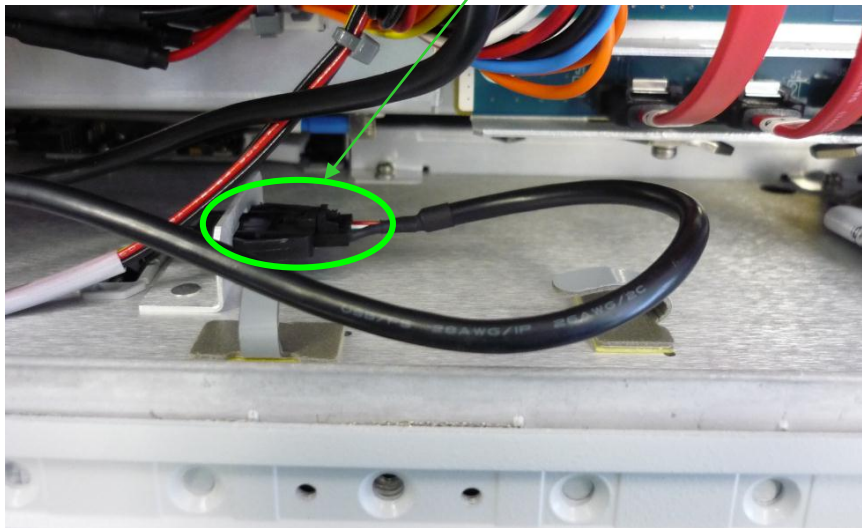
Remove 0515-1382 (5ea)
T15 M3.5L6 Flat



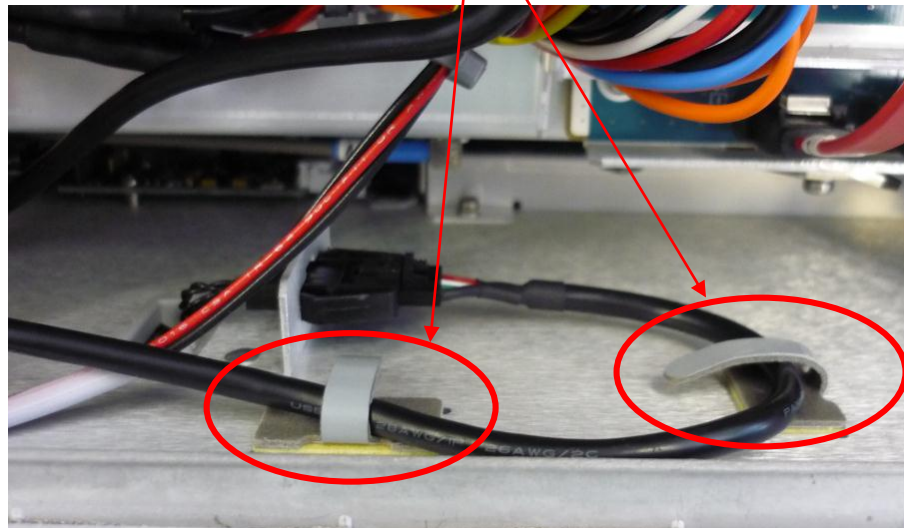
2

Remove 0515-2044 (2ea)
T20 M4L10 Flat

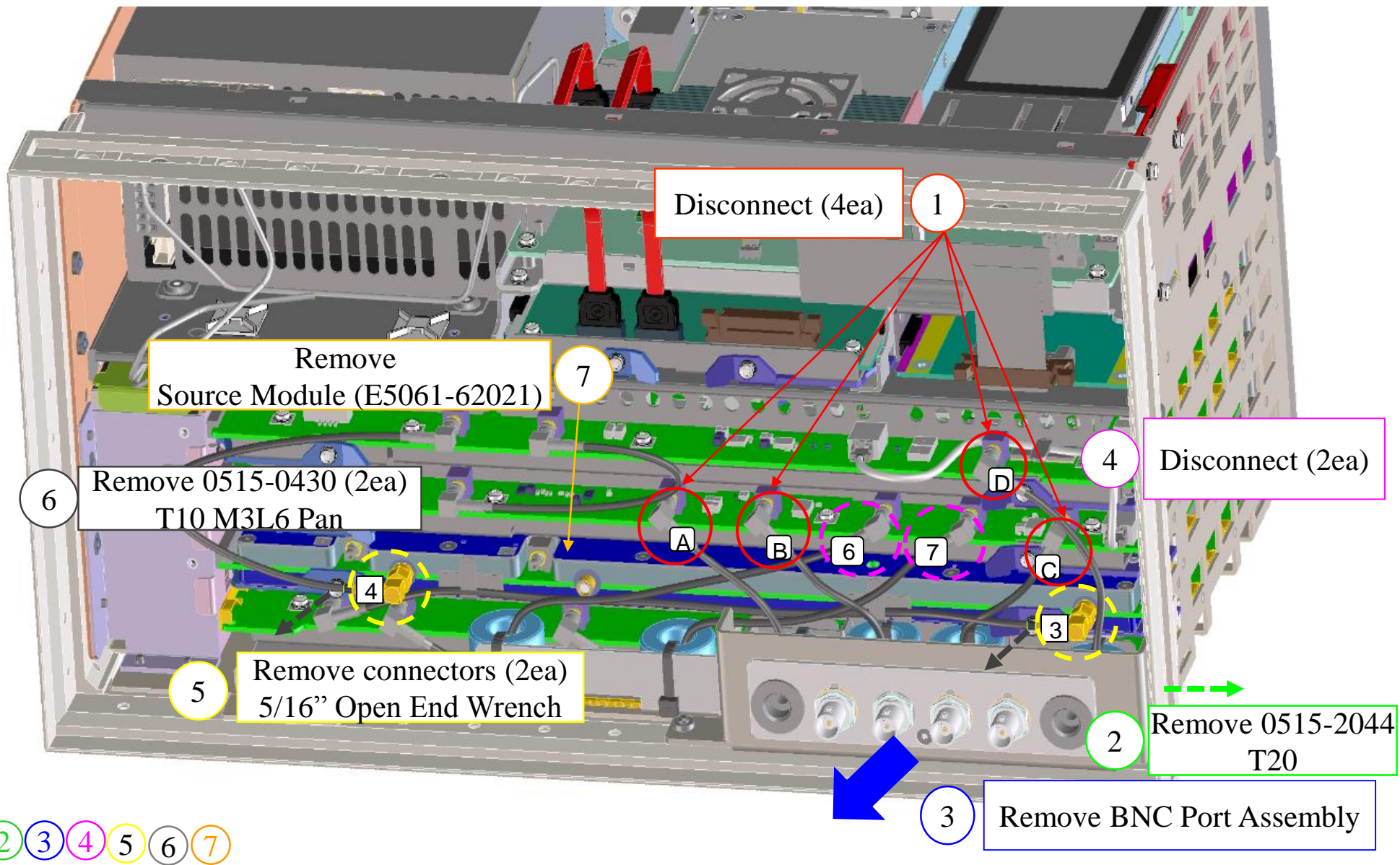
2 Disconnect



1 Open



1 2



- 1
- 2
- 3
- 4
- 5
- 6
- 7

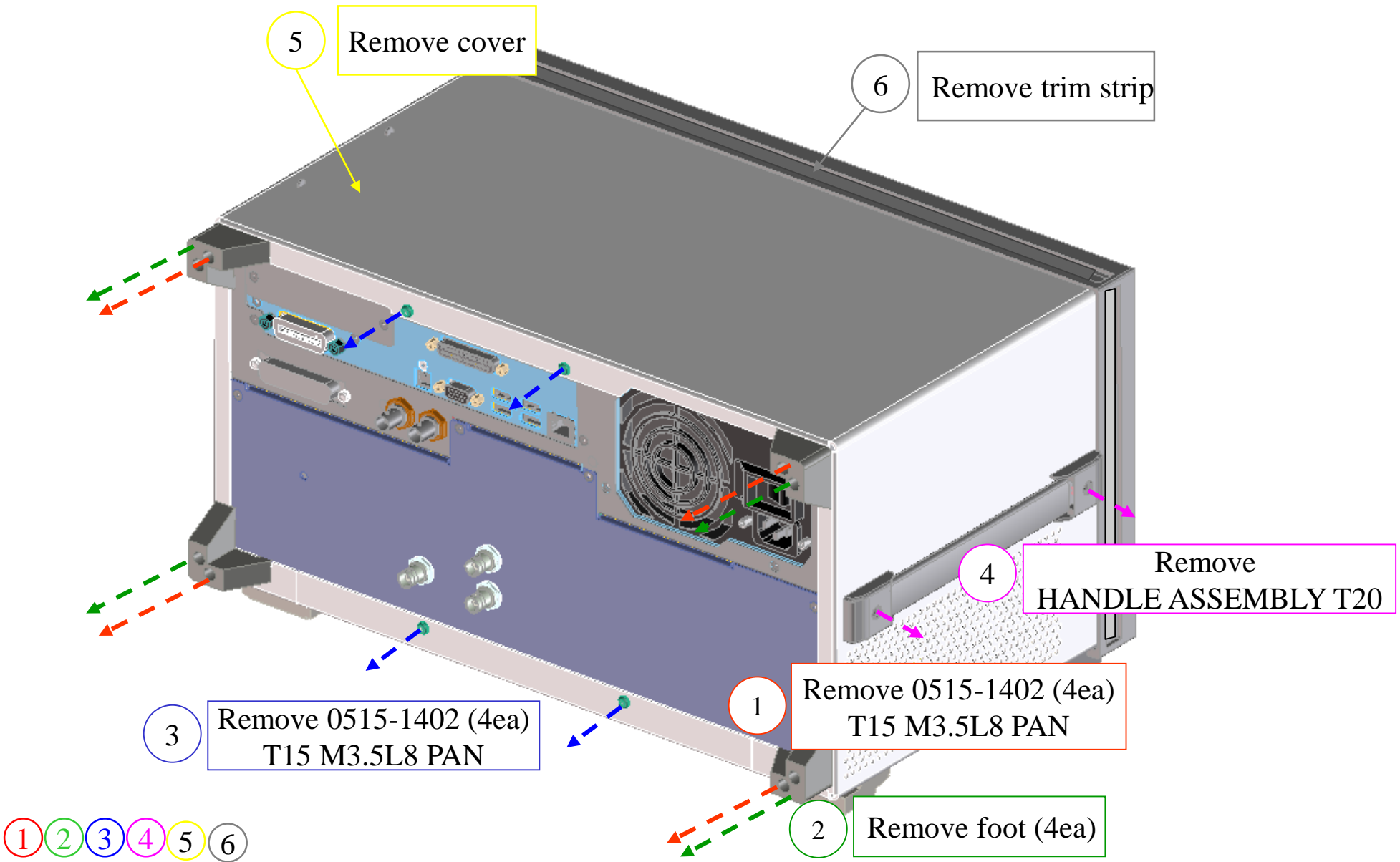
VRD Module (E4990-62008)

Dis-Assembly Procedure

Note:

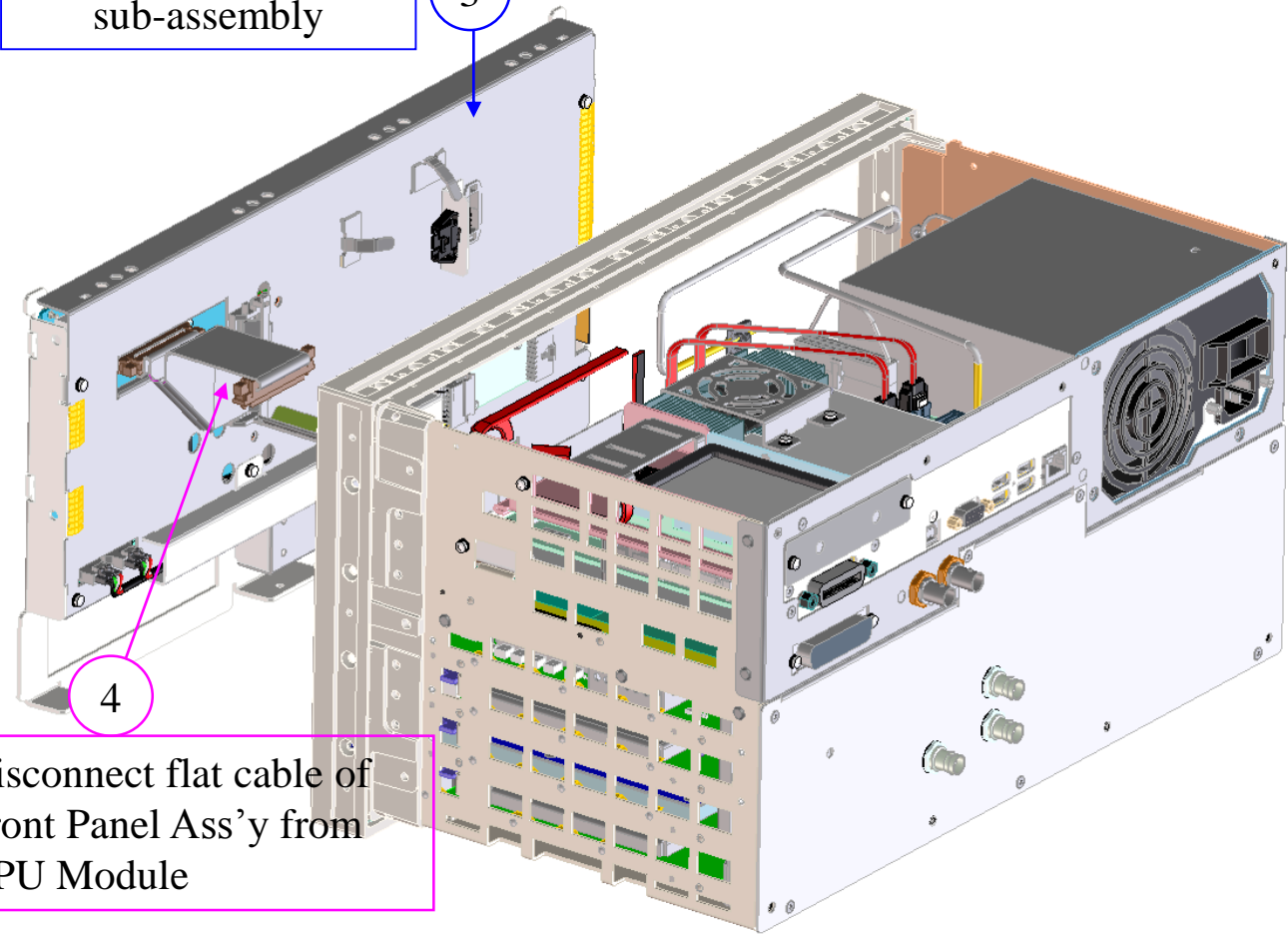
1. Torque value shown in this document is only for reference and only used during assembly.





Remove Front Panel sub-assembly

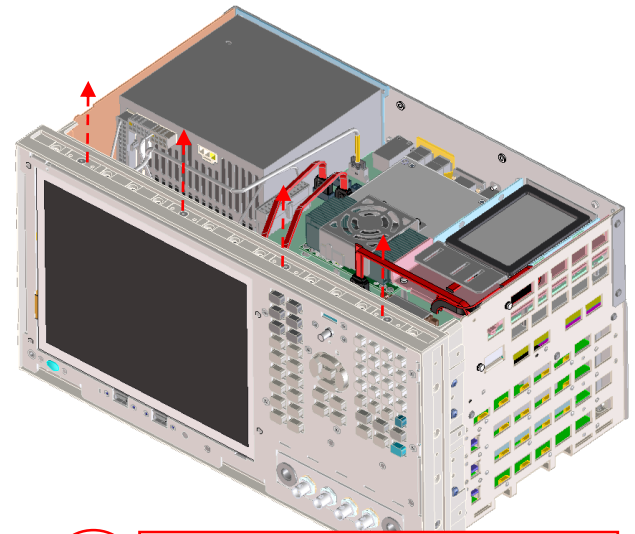
3



Disconnect flat cable of Front Panel Ass'y from CPU Module

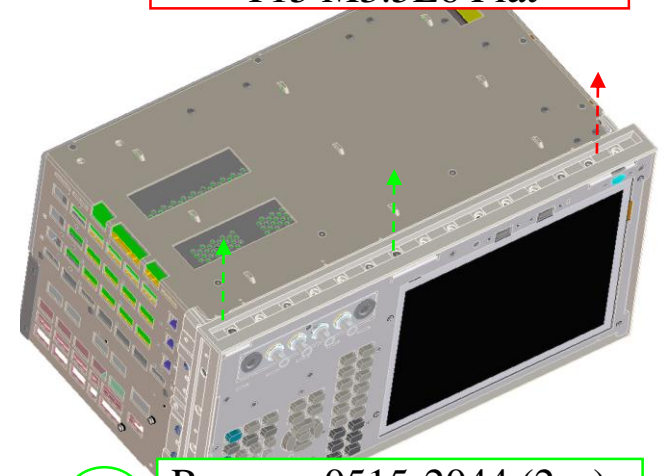
4

1 2 3 4



1

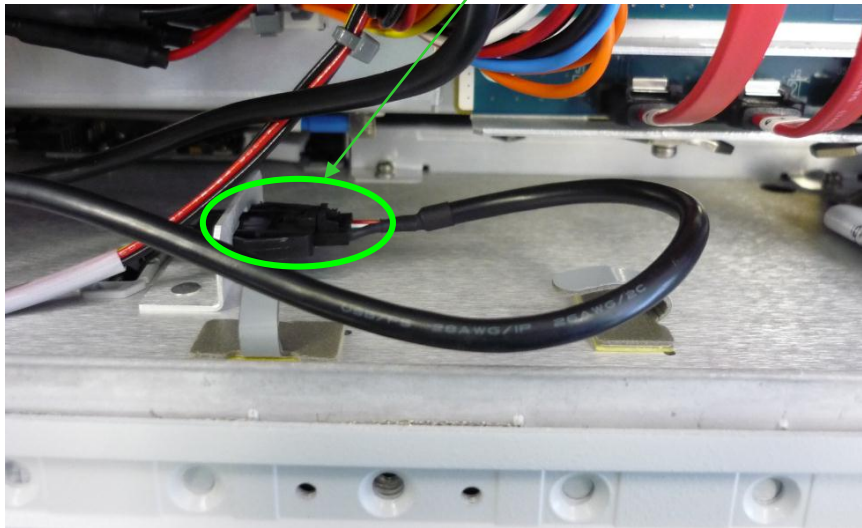
Remove 0515-1382 (5ea)
T15 M3.5L6 Flat



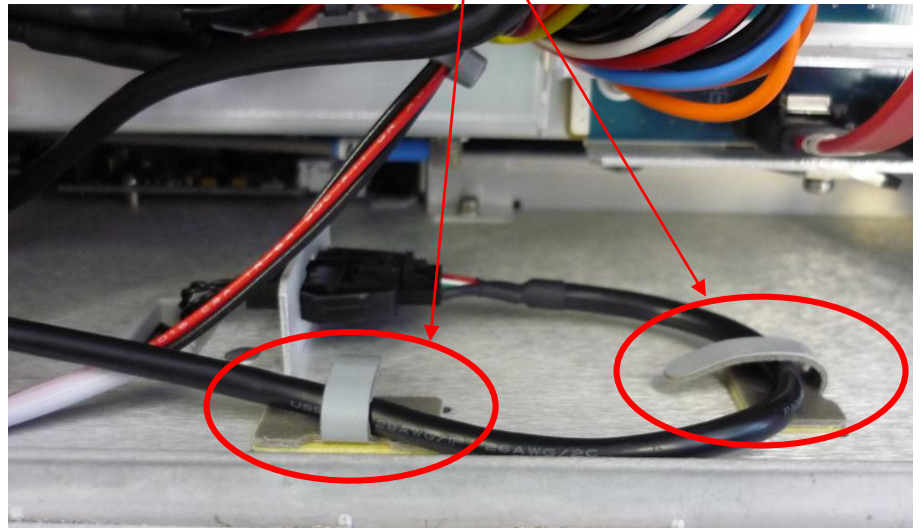
2

Remove 0515-2044 (2ea)
T20 M4L10 Flat

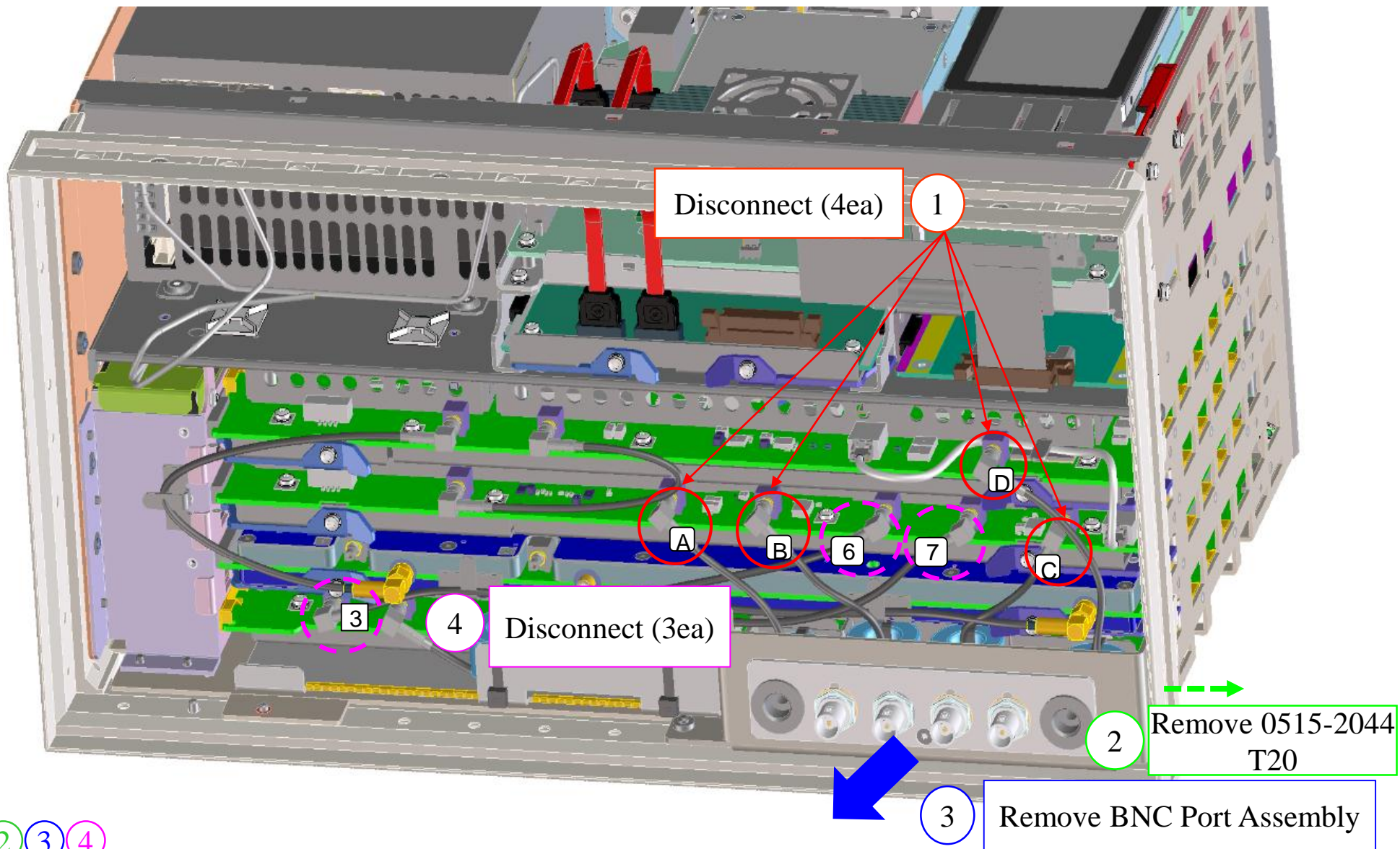
2 Disconnect



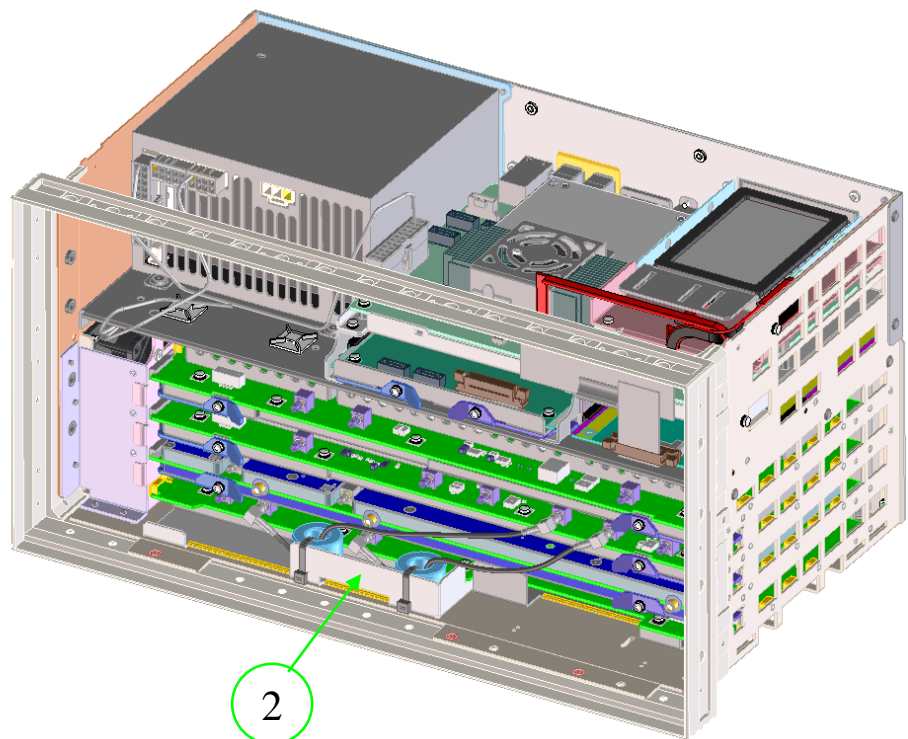
1 Open



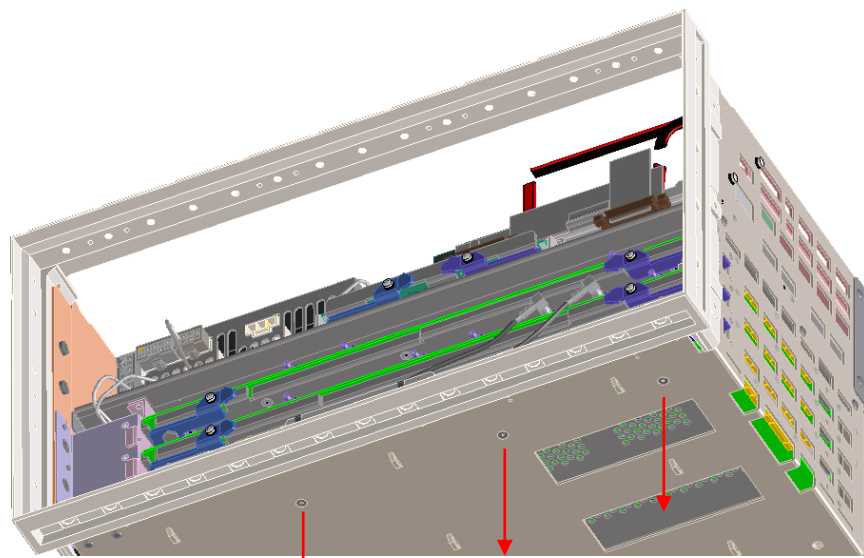
1 2



- ①
- ②
- ③
- ④



Remove
VRD Module (E4990-62008)



1 Remove 0515-1946 (3ea)
T10 M3L6 Flat

- 1
- 2
- 3
- 4

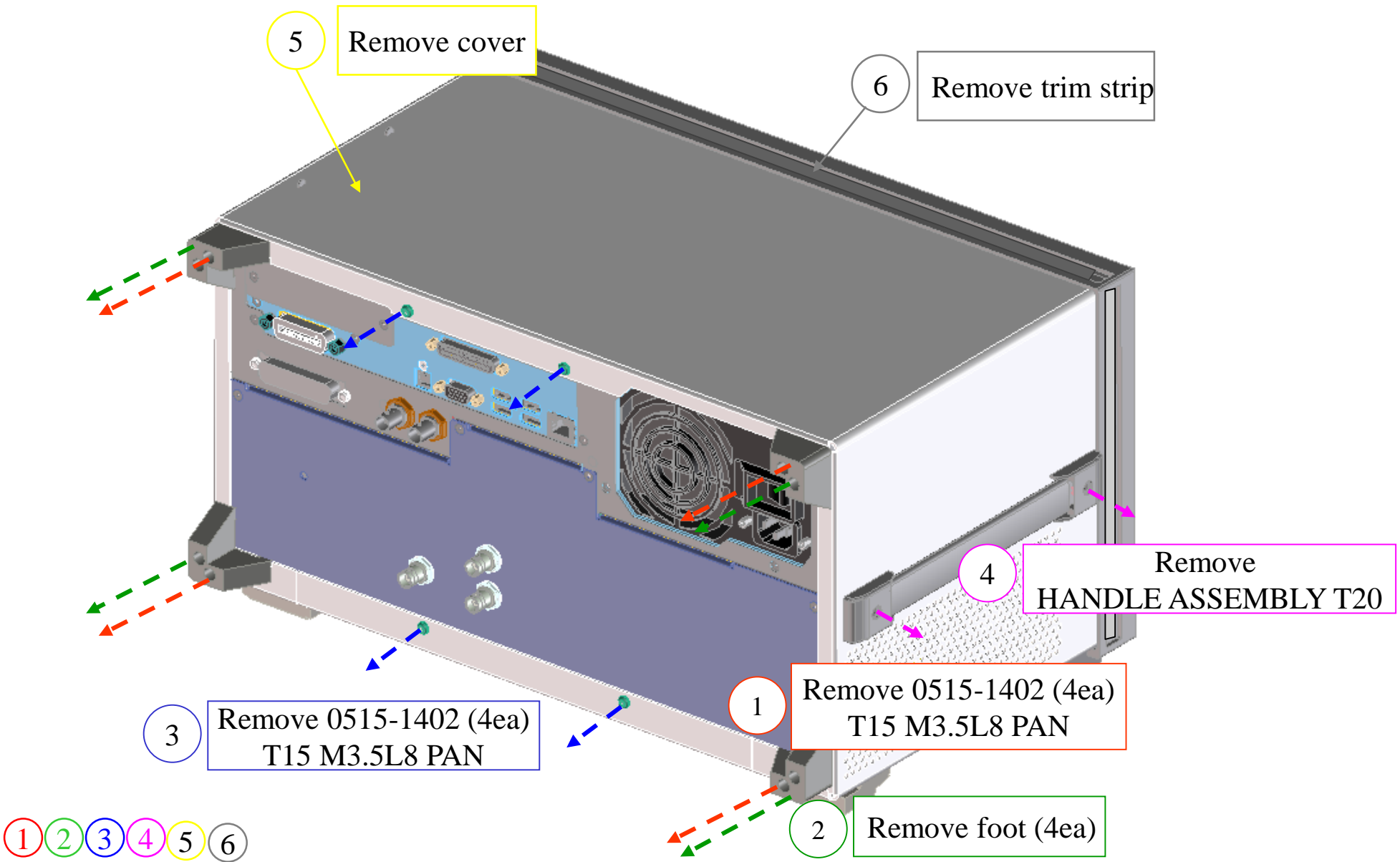
I/O Control Board (E4990-66653)

Dis-Assembly Procedure

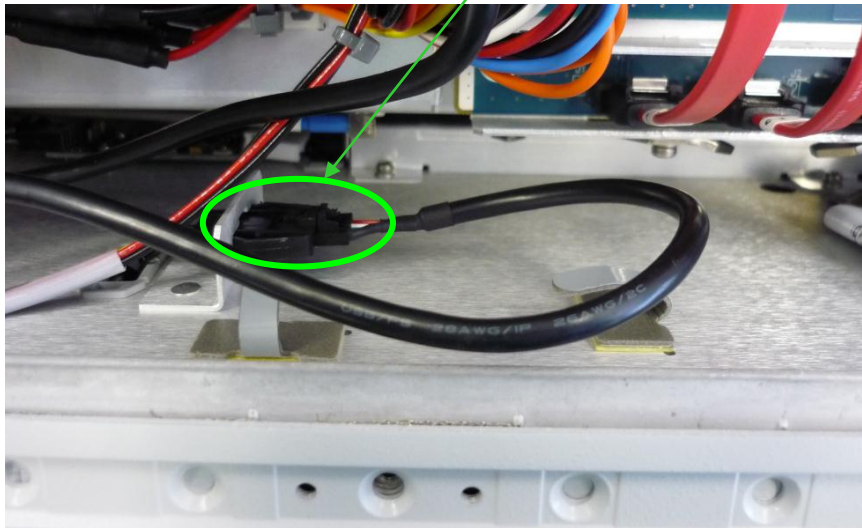
Note:

1. Torque value shown in this document is only for reference and only used during assembly.

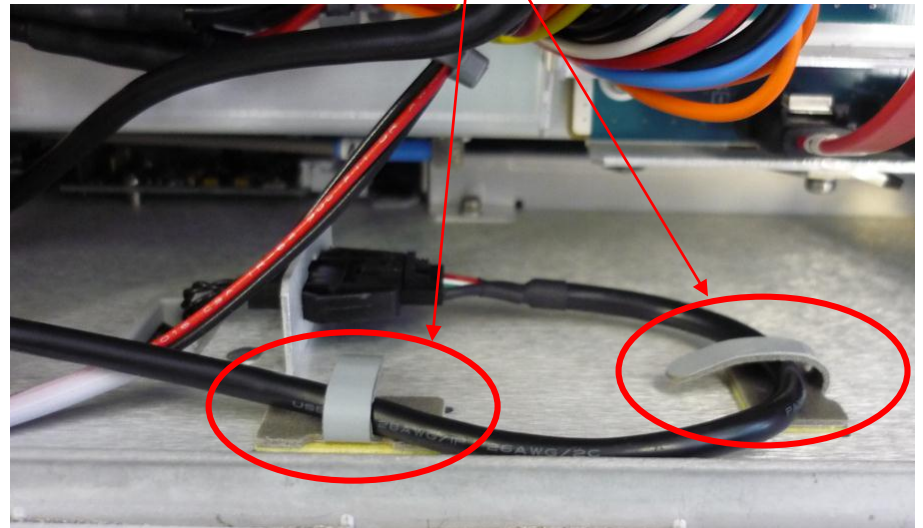




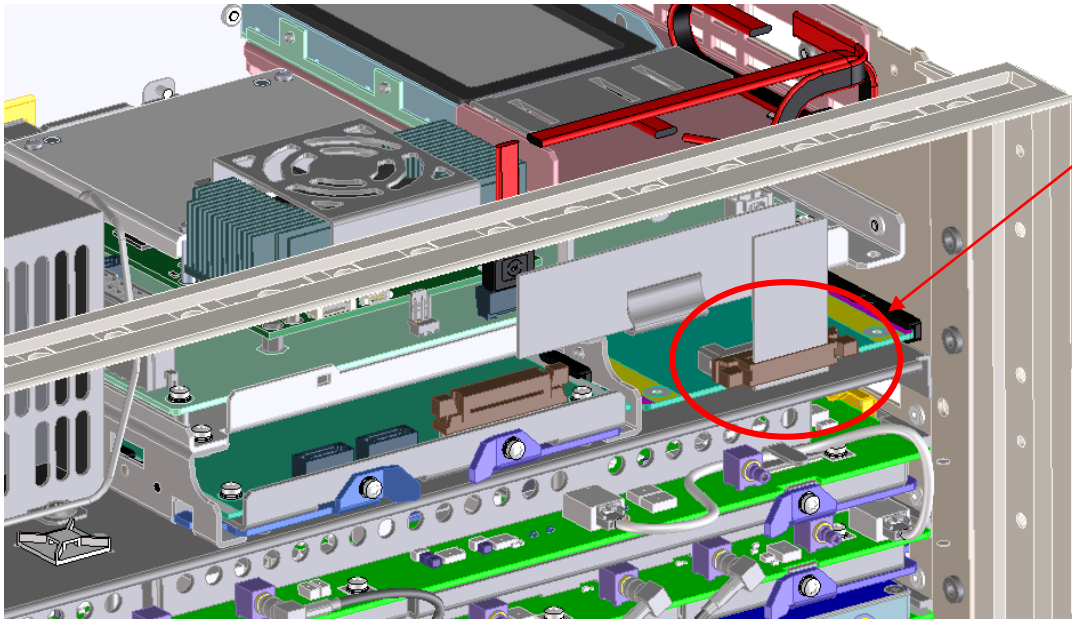
2 Disconnect



1 Open



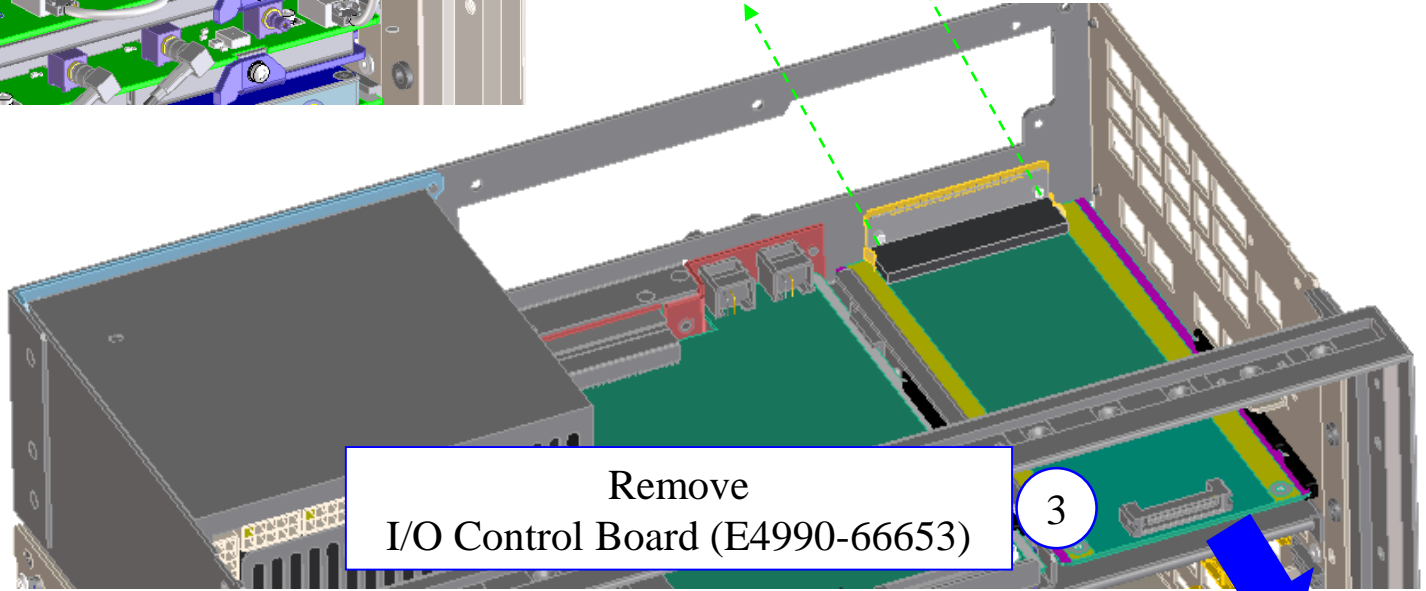
1 2



1 Disconnect

2

Remove 0515-0430 (2ea)
T10 M3L6 PAN



Remove
I/O Control Board (E4990-66653)

3

1 2 3

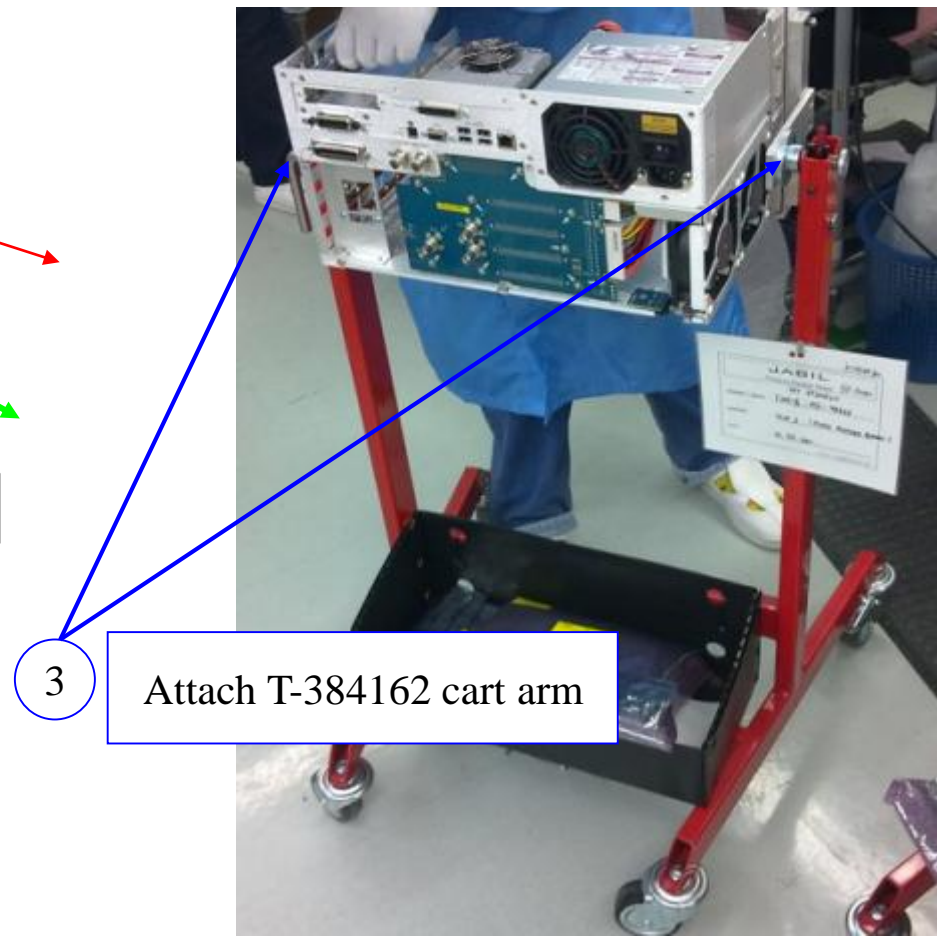
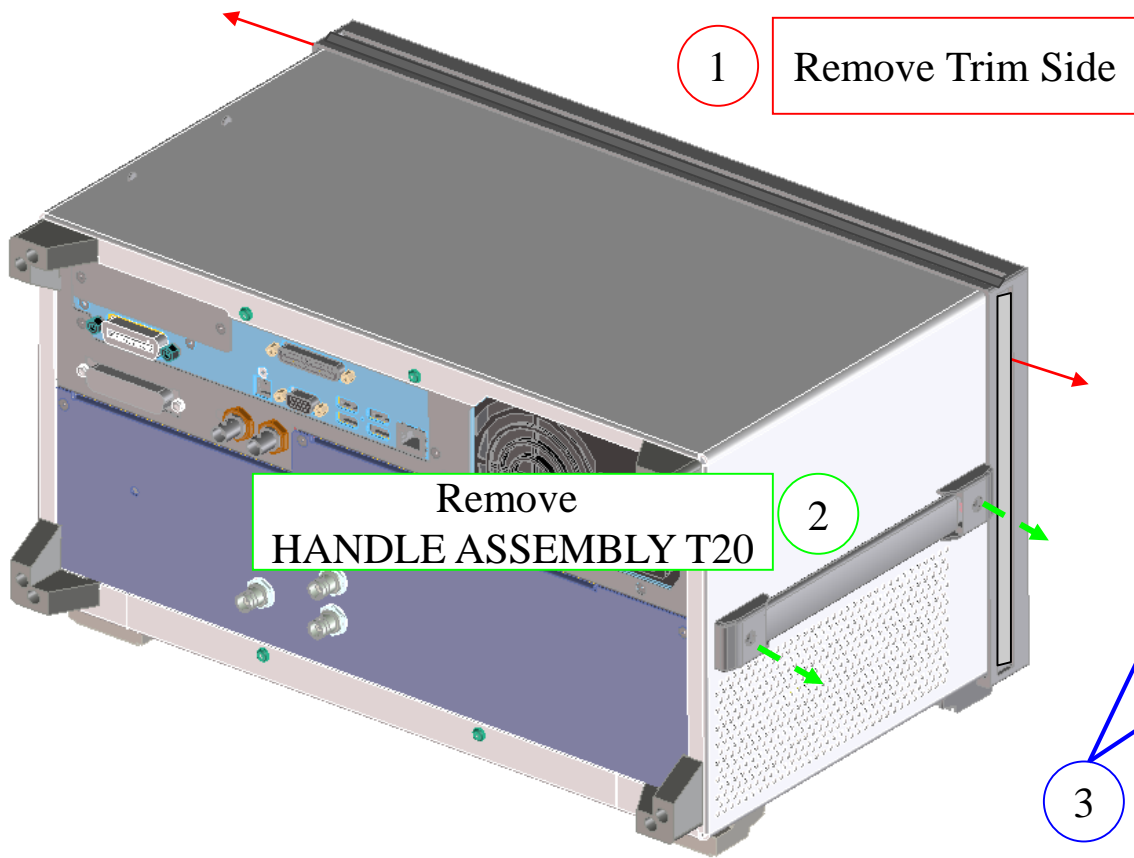
Analog Mother Board (E5061-66610)

Dis-Assembly Procedure

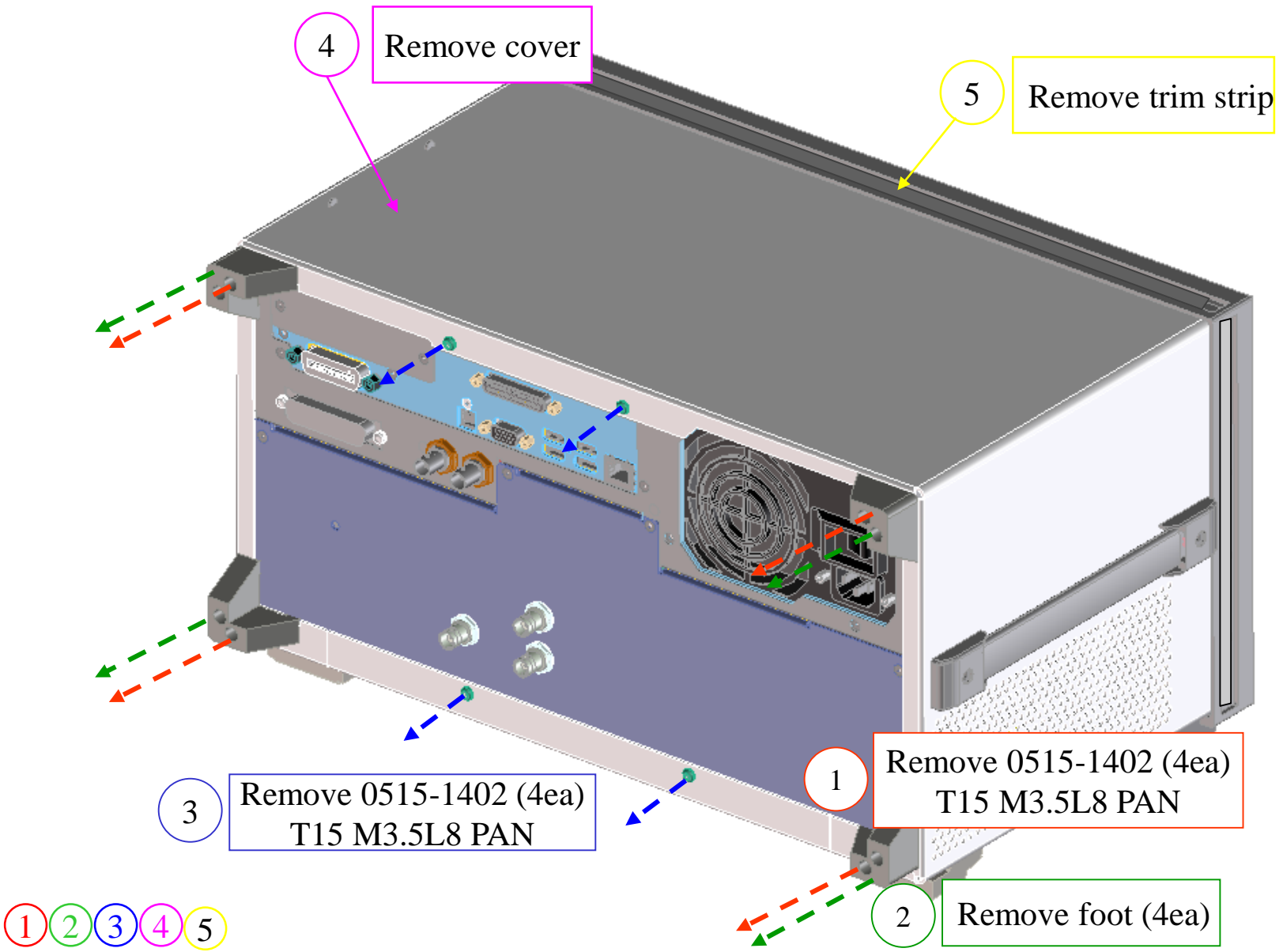
Note:

1. Torque value shown in this document is only for reference and only used during assembly.





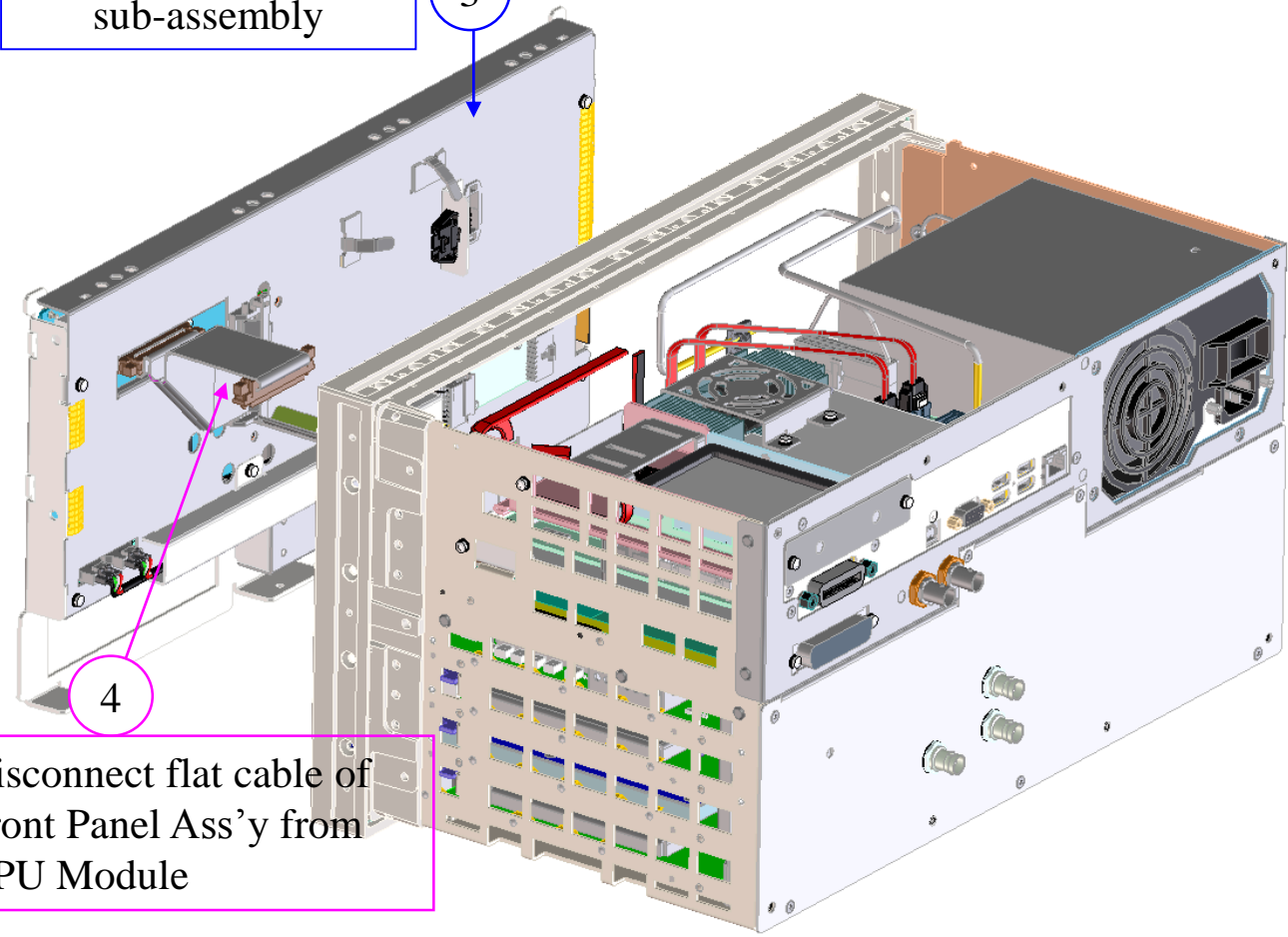
1 2 3



- ①
- ②
- ③
- ④
- ⑤

Remove Front Panel sub-assembly

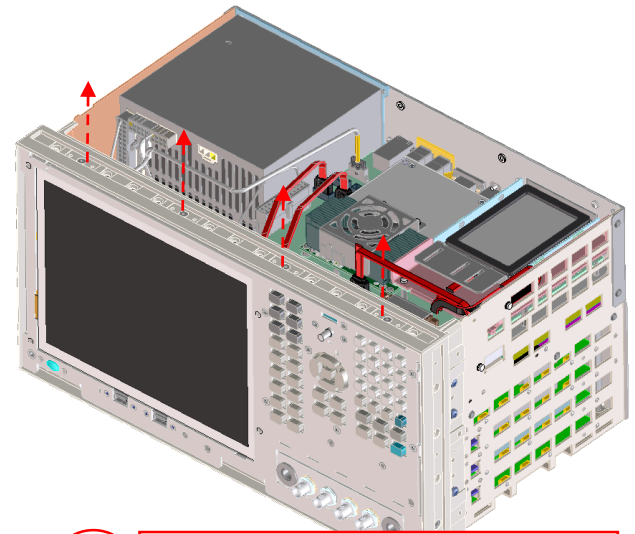
3



Disconnect flat cable of Front Panel Ass'y from CPU Module

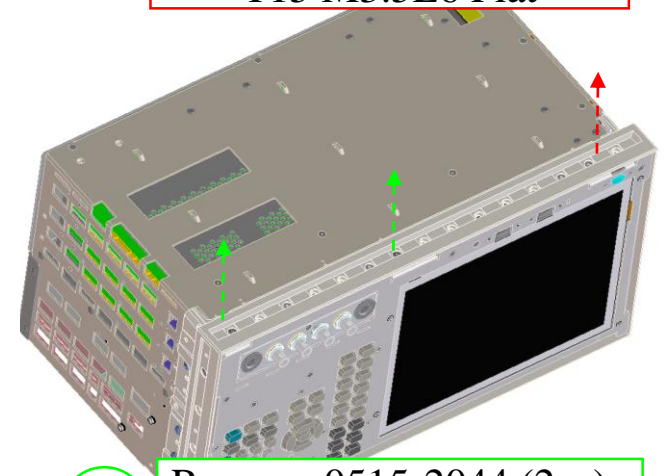
4

1 2 3 4



1

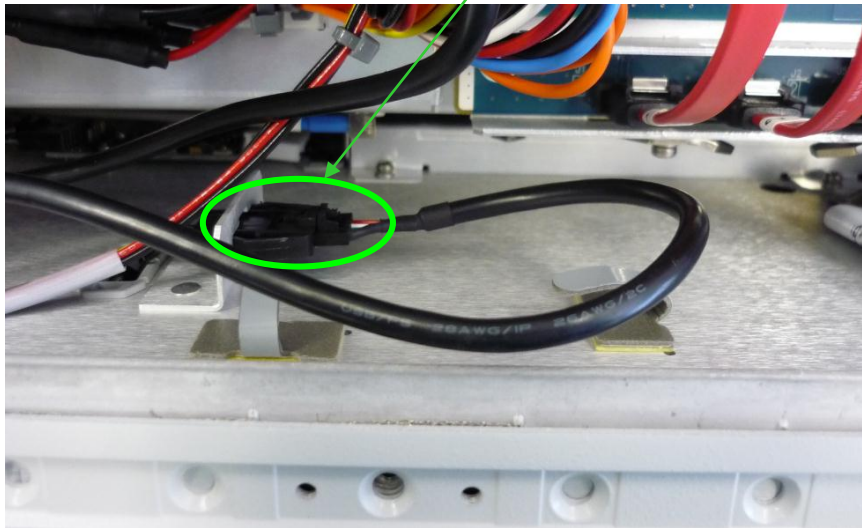
Remove 0515-1382 (5ea)
T15 M3.5L6 Flat



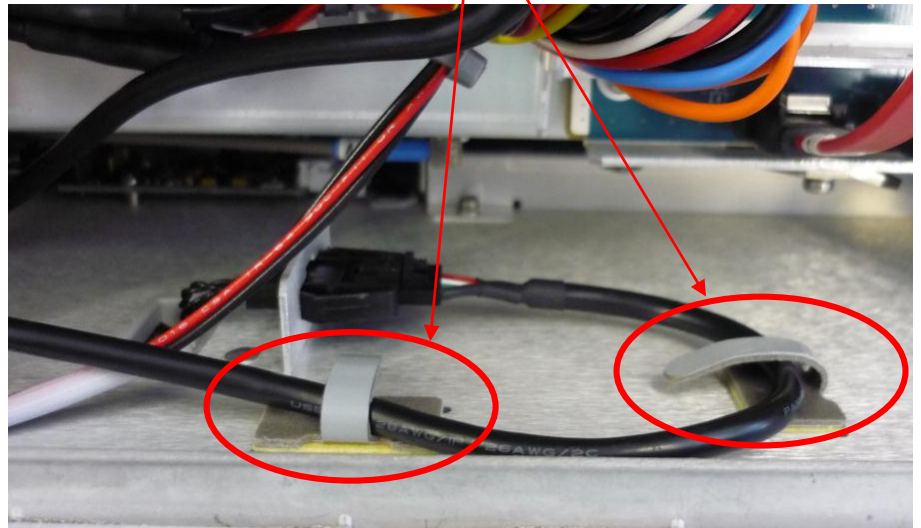
2

Remove 0515-2044 (2ea)
T20 M4L10 Flat

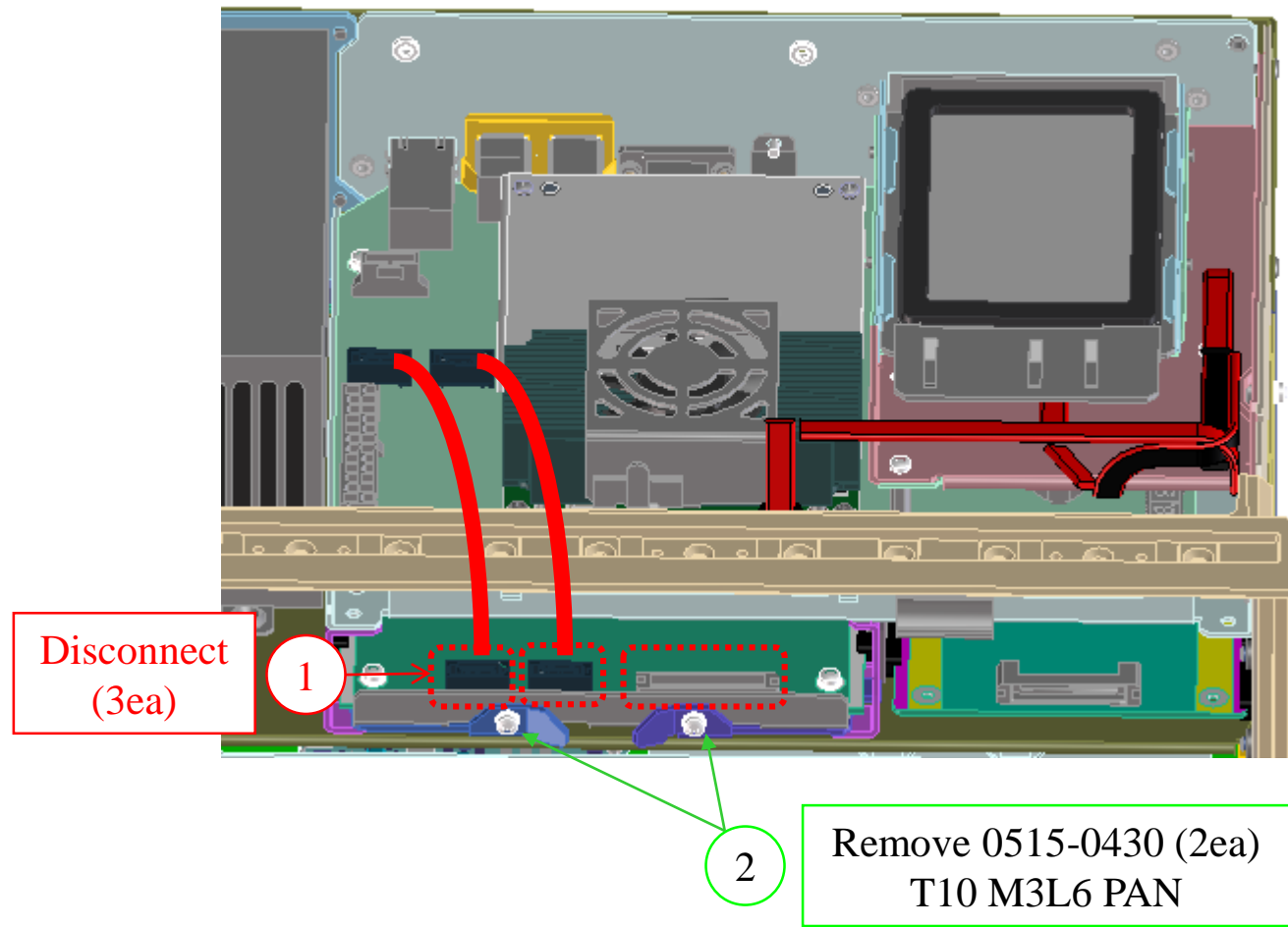
2 Disconnect



1 Open



1 2



① ②

Remove Display Board
(E5061-66651)

3

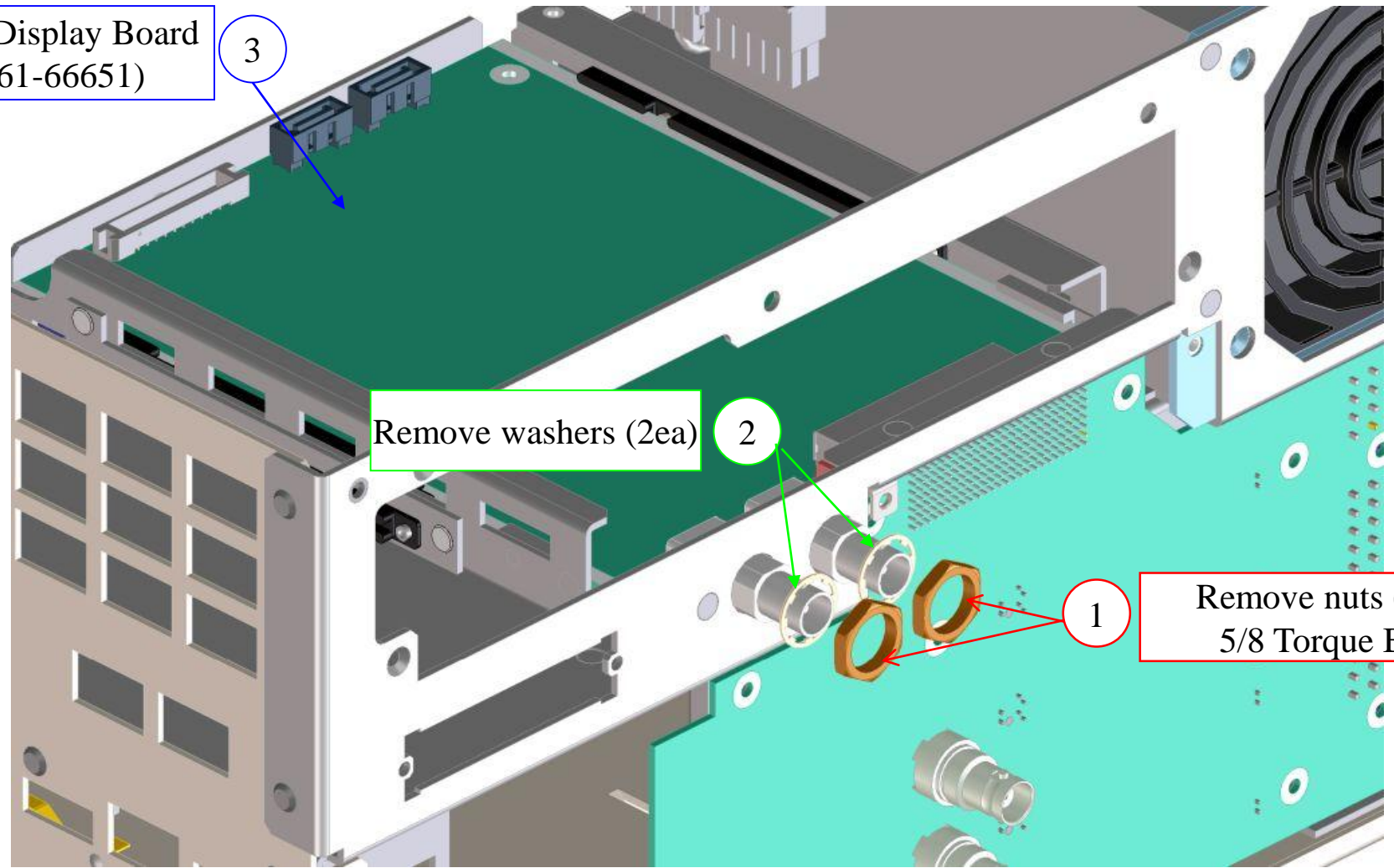
Remove washers (2ea)

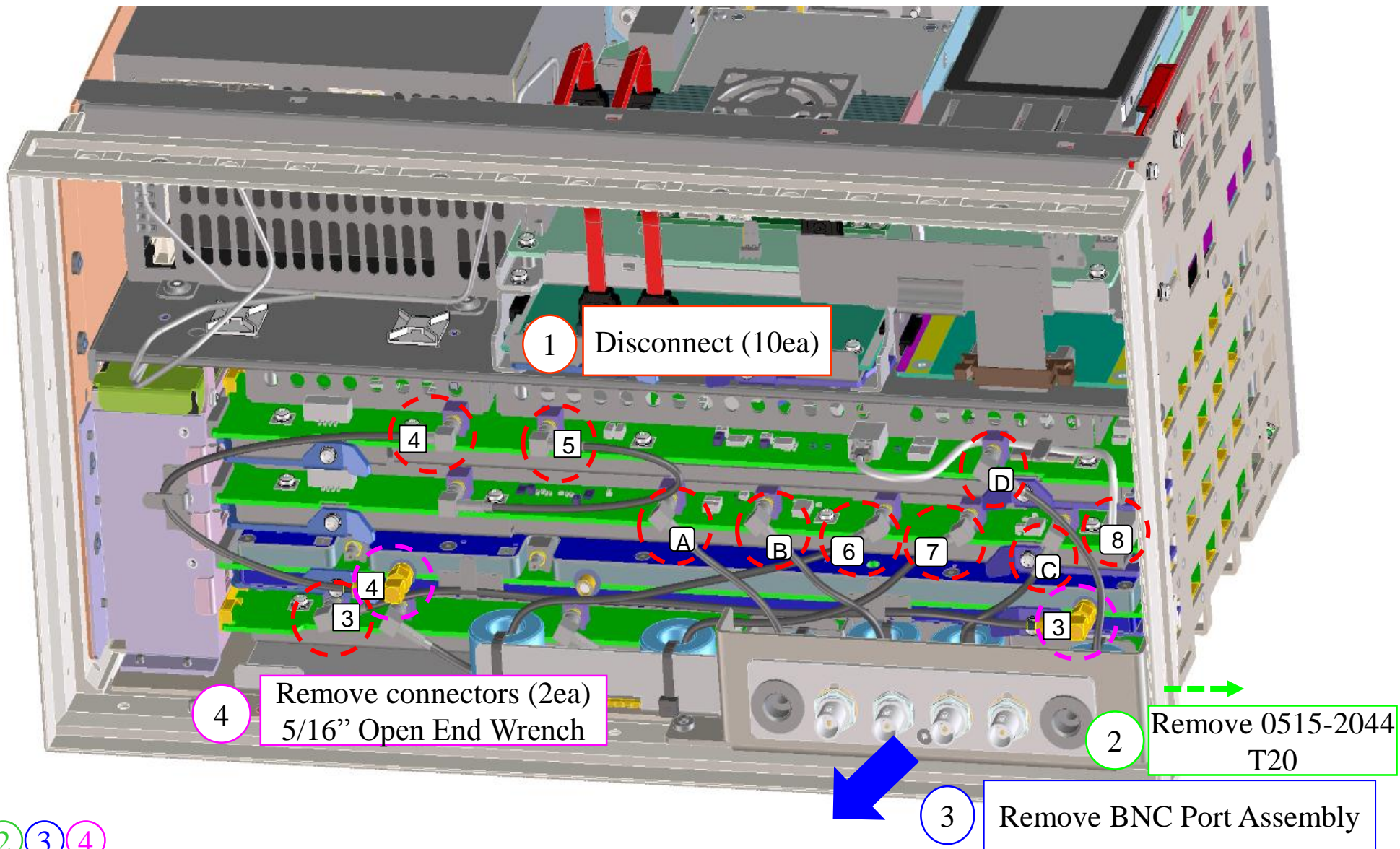
2

Remove nuts (2ea)
5/8 Torque Box

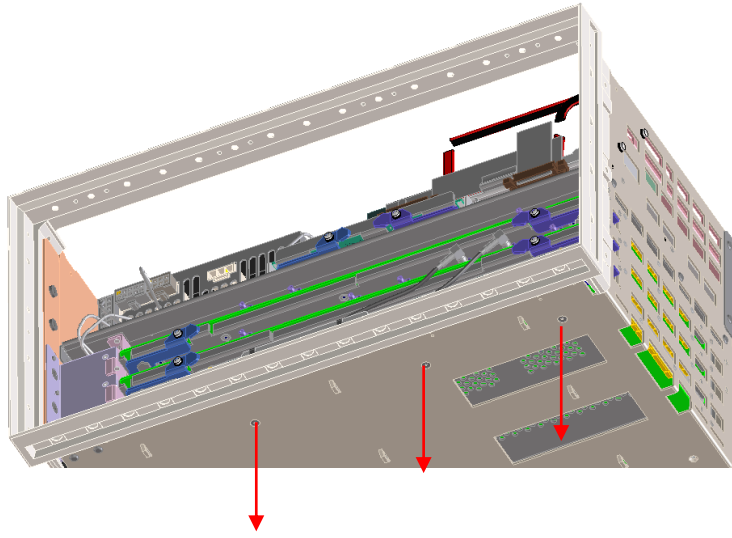
1

1 2 3

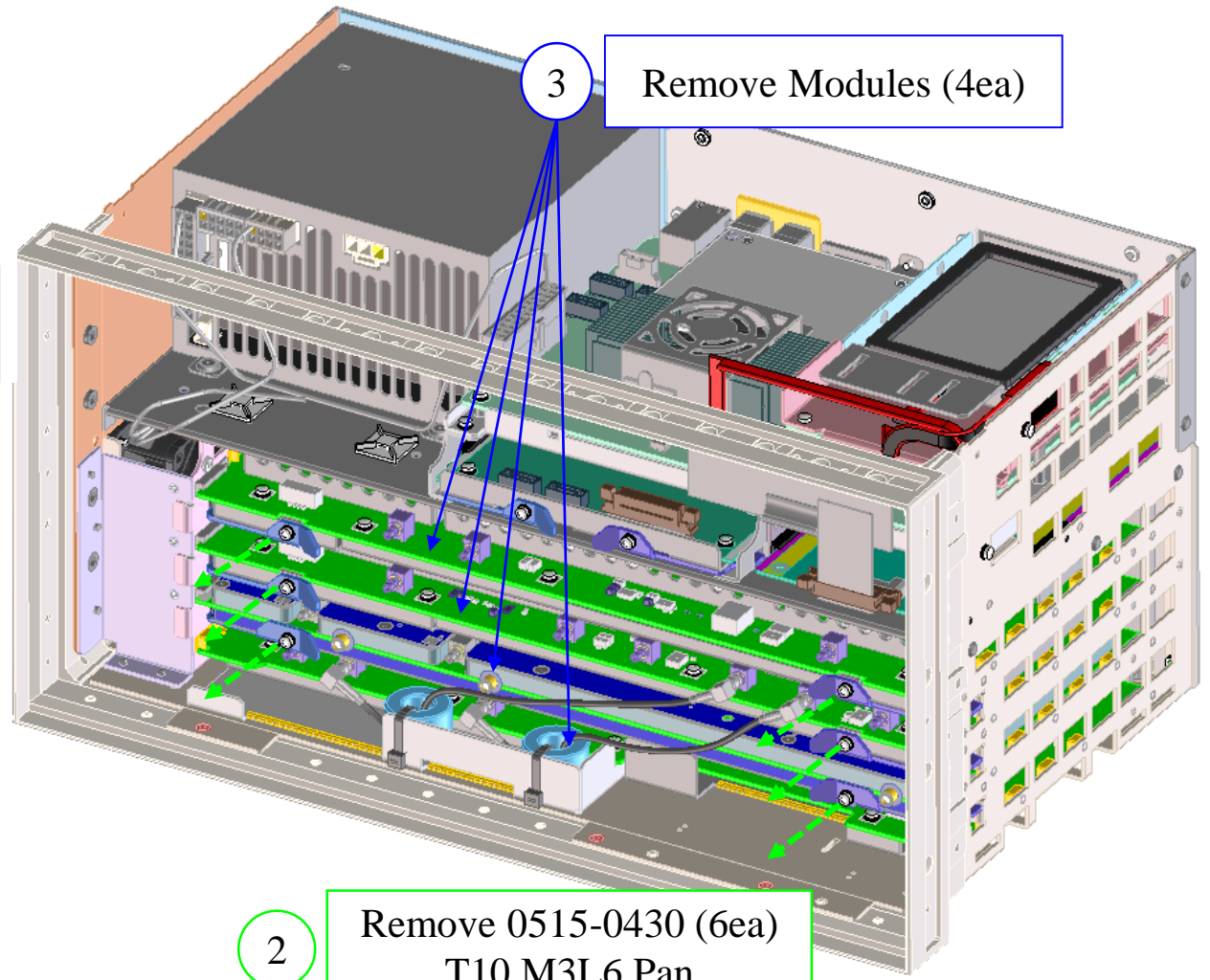




- ①
- ②
- ③
- ④



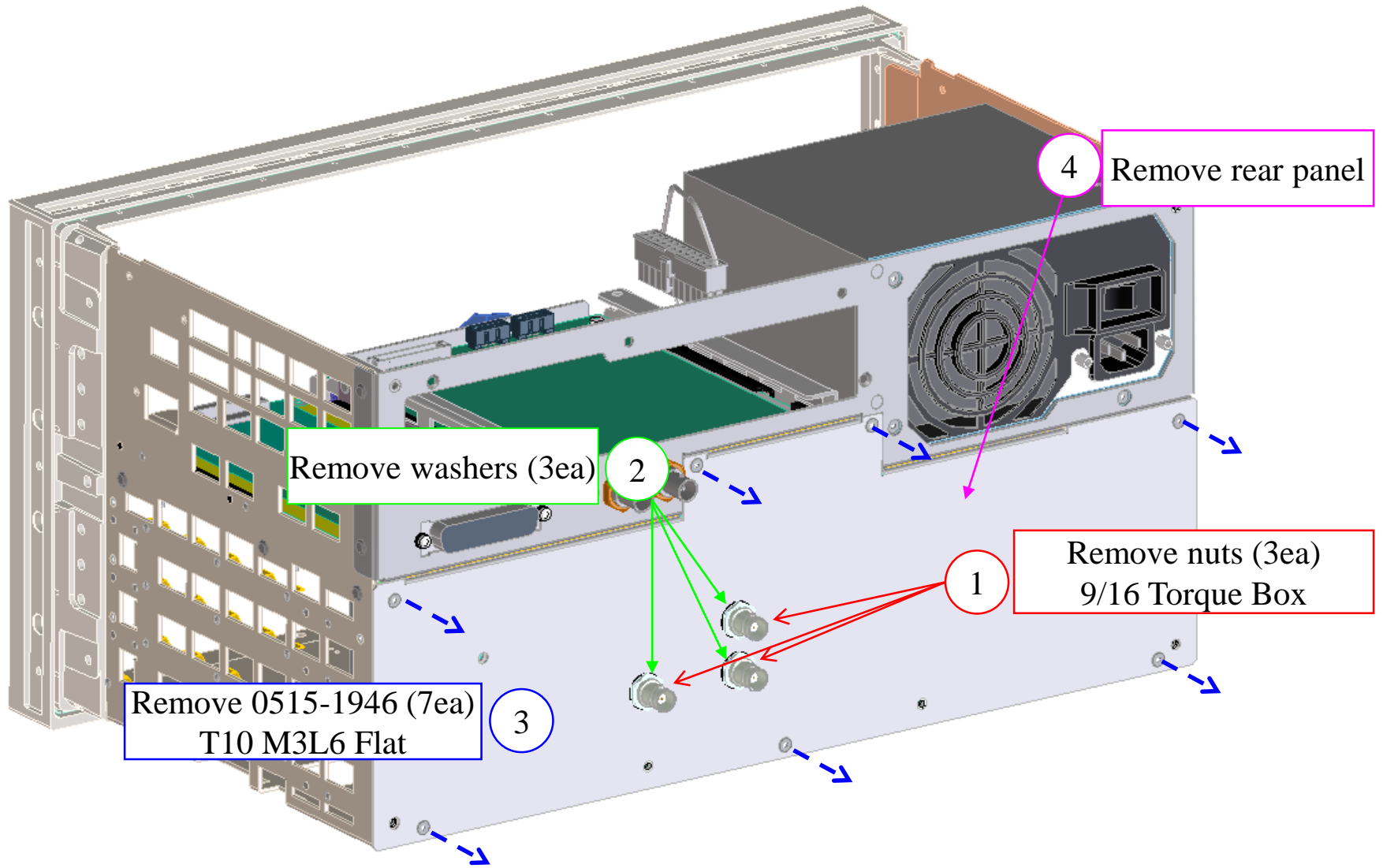
1 Remove 0515-1946 (3ea)
T10 M3L6 Flat



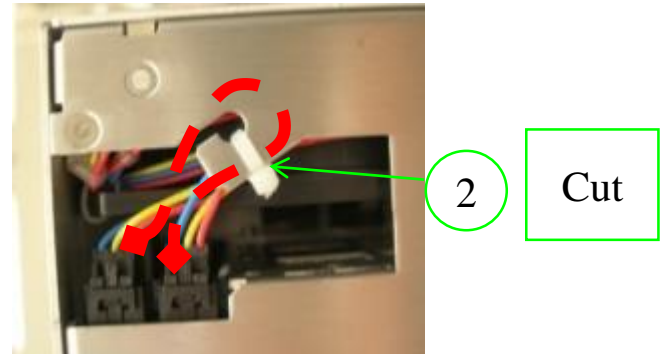
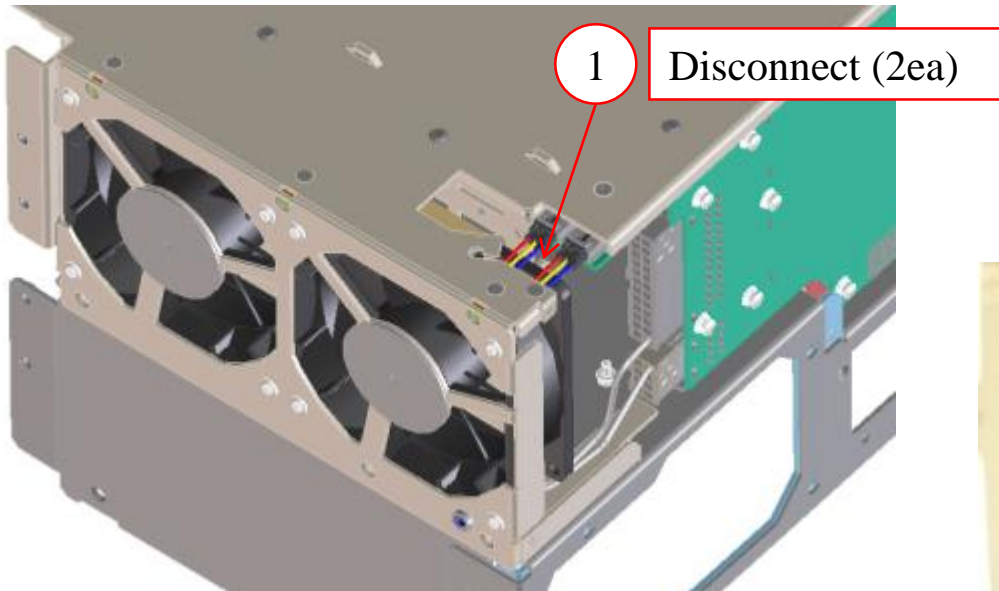
2 Remove 0515-0430 (6ea)
T10 M3L6 Pan

1 2 3

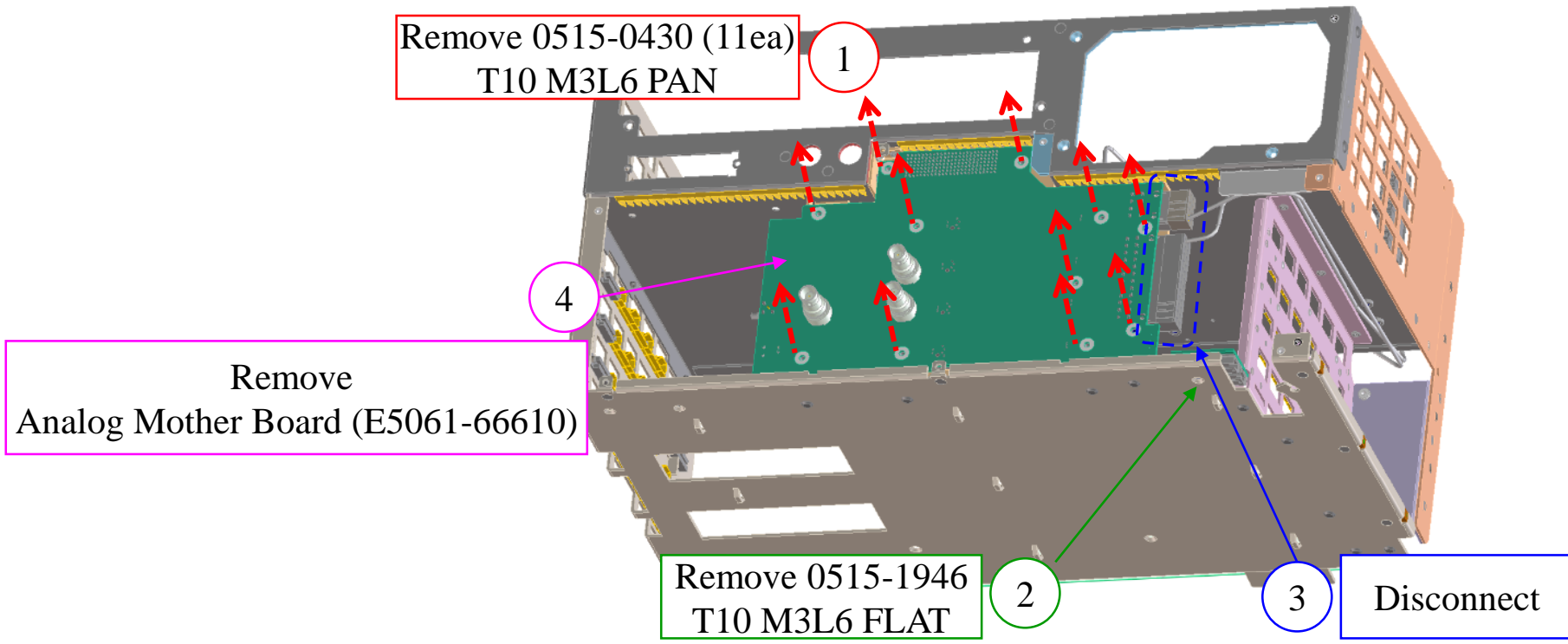
3 Remove Modules (4ea)



- ①
- ②
- ③
- ④



1 2



- ①
- ②
- ③
- ④

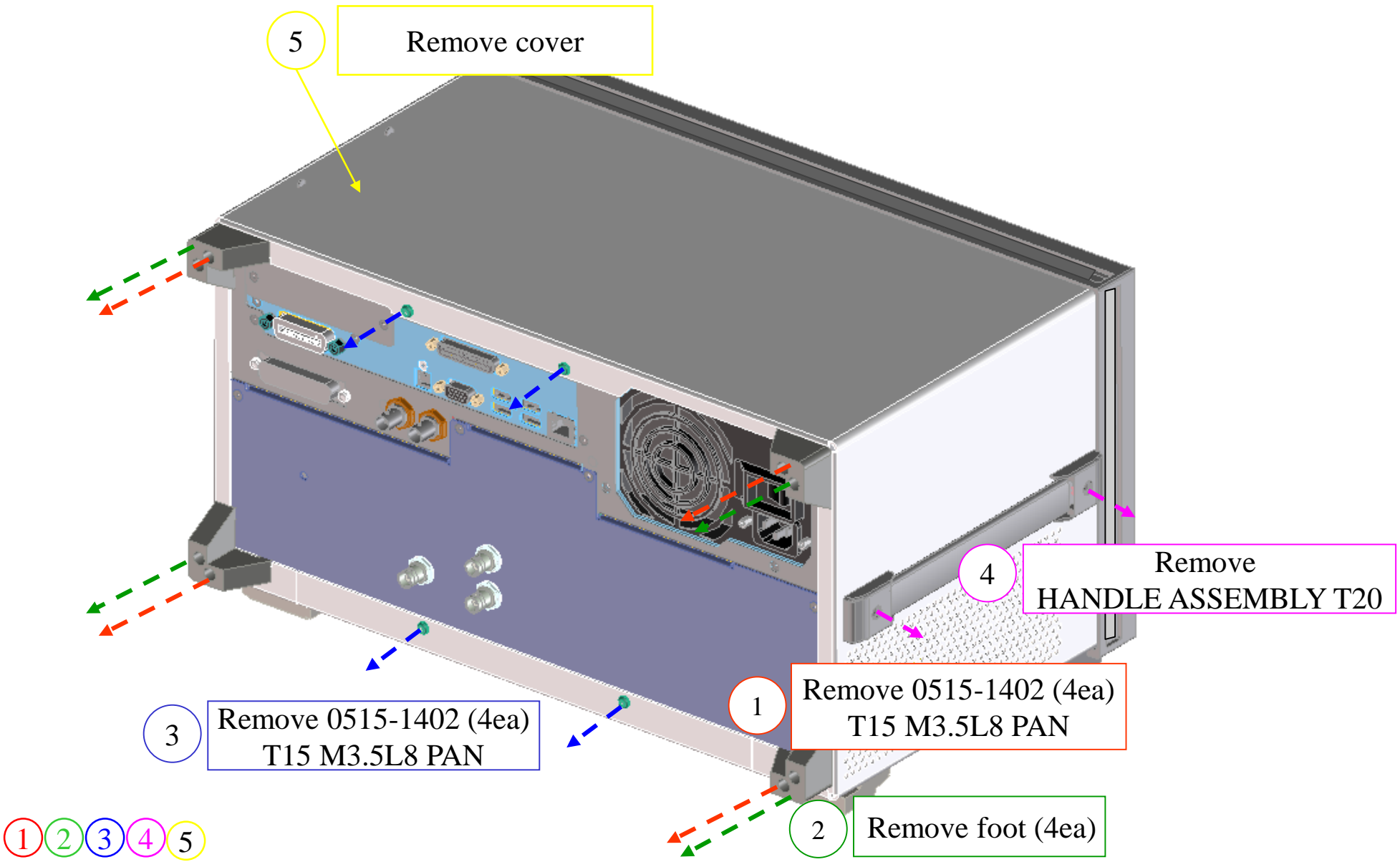
Oven (Option 1E5)

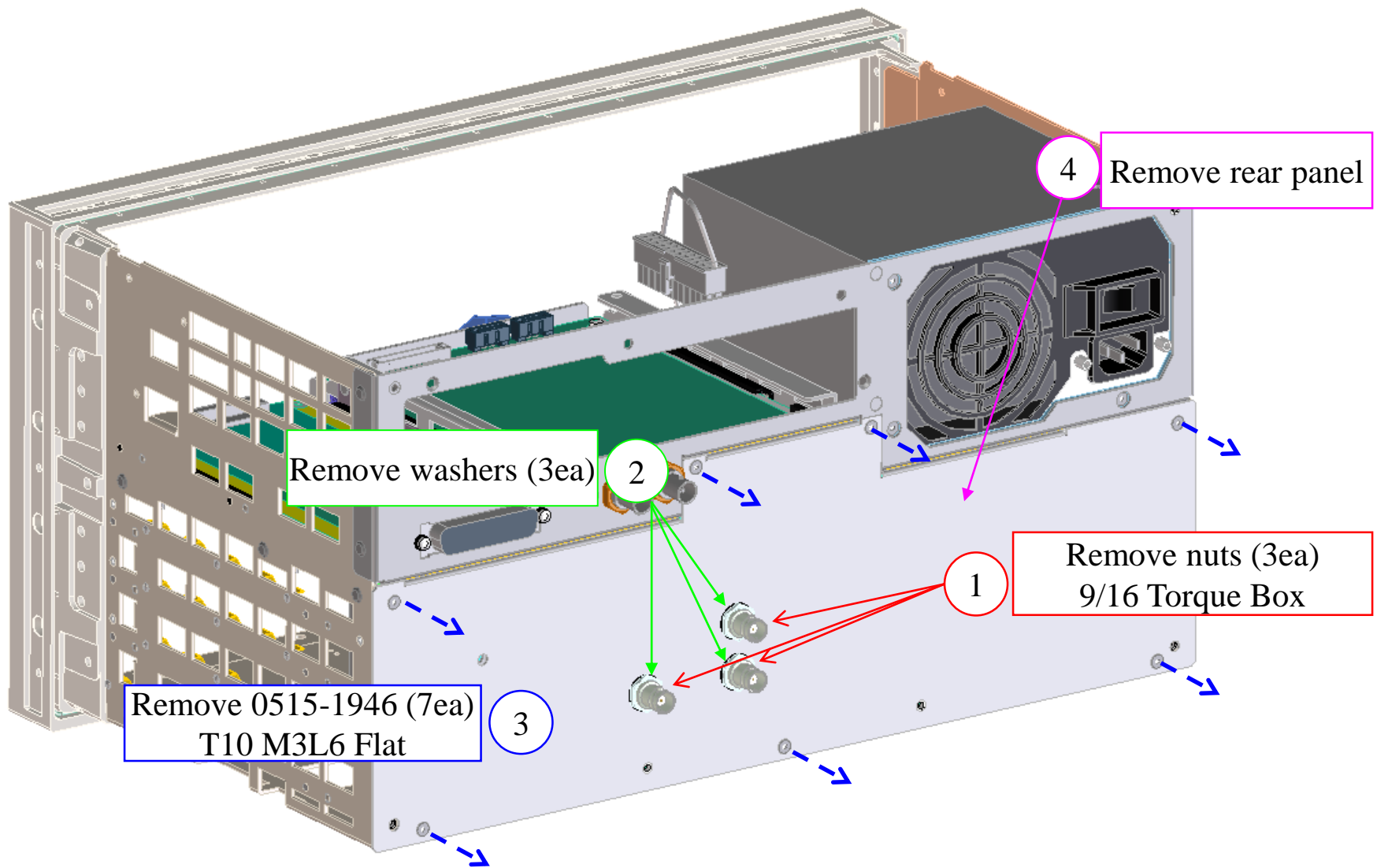
Dis-Assembly Procedure

Note:

1. Torque value shown in this document is only for reference and only used during assembly.

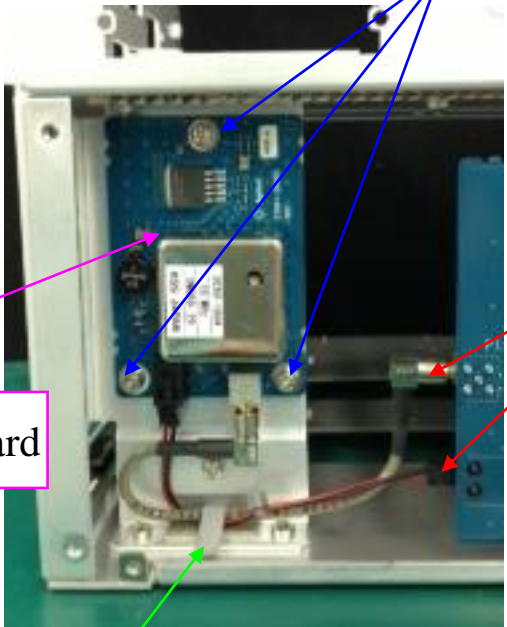






- 1
- 2
- 3
- 4

For Option 1E5 Only

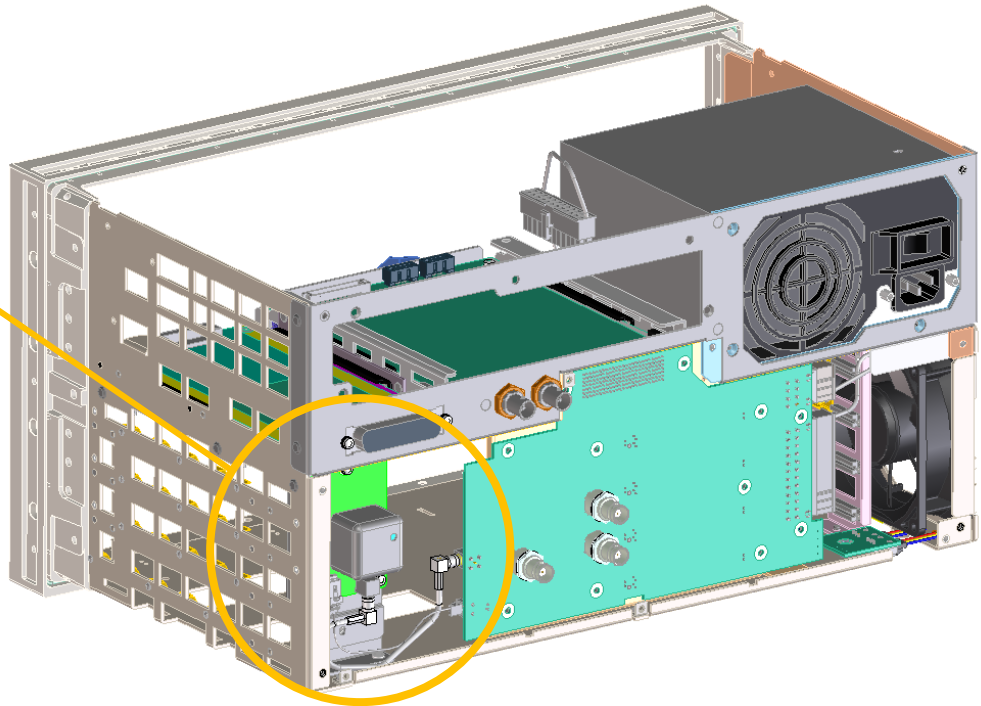


3 Remove 0515-0430 (3ea)
T10

1 Disconnect (2ea)

4 Remove Oven Board

2 Open



- 1
- 2
- 3
- 4
- 5