

CABLINE®-CAL IIF

Part No. 21088-050T-01,21089-050E-01

Instruction Manual

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Rev.	ECN	Date	Prepared by	Checked by	Approved by

This manual is to explain the insertion and removal methods and important points in handling of CABLINE-CAL IIF connectors for the purpose of proper use.

1. Product Names and Part Numbers

• Plug Connector

Product Name: CABLINE-CAL IIF PLUG SHELL ASSEMBLY

Part Number: 21088-050T-01

• Receptacle Connector

Product Name: CABLINE-CAL IIF RECEPTACLE ASSEMBLY

Part Number: 21089-050E-01

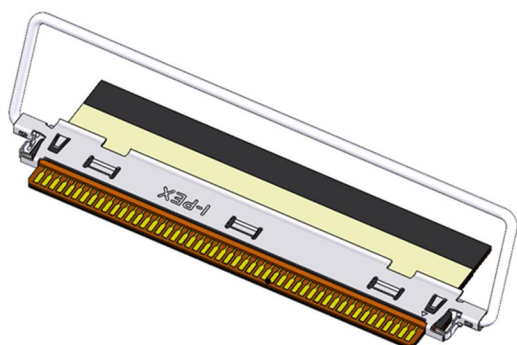


図 1. CABLINE-CAL IIF Plug Shell Assembly with FPC

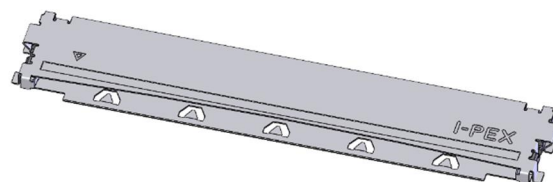


図 2. CABLINE-CAL IIF Receptacle Assembly

2. Names of the Connector Parts

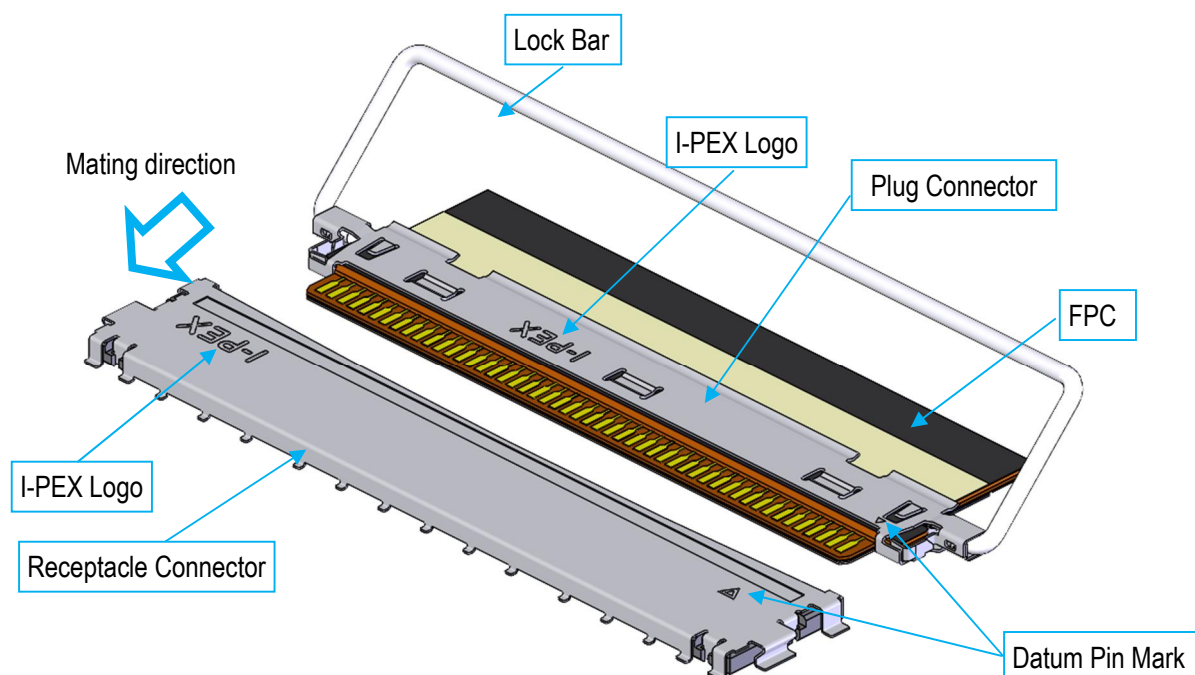


Fig. 1 Names of the Connector Parts

3. Connector Insertion Methods

3.1 Align the datum pin marks of the plug connector and the receptacle connector.

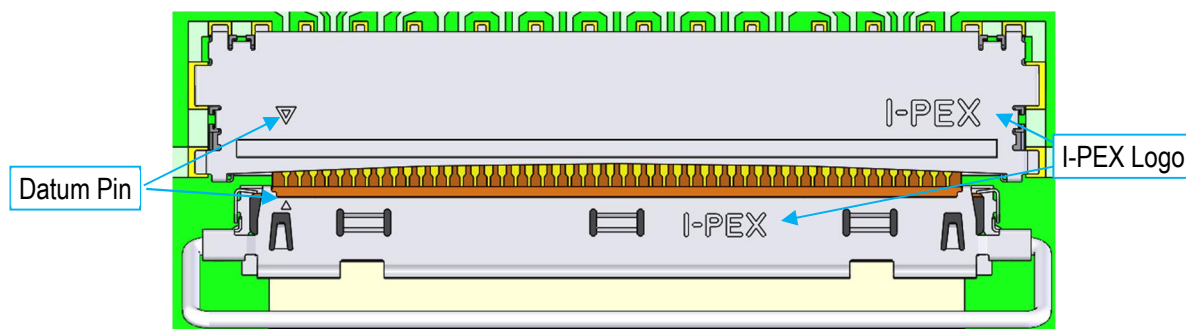


Fig. 2 Aligning Datum Pin Marks

3.2 Do not form an angle in the horizontal or vertical direction. Perform pre-insertion without applying excessive force in the direction of insertion.

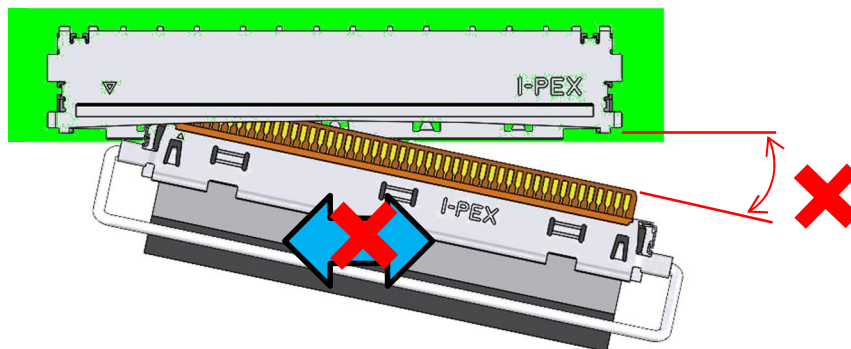


Fig. 3 Example of incorrect insertion method: horizontal direction

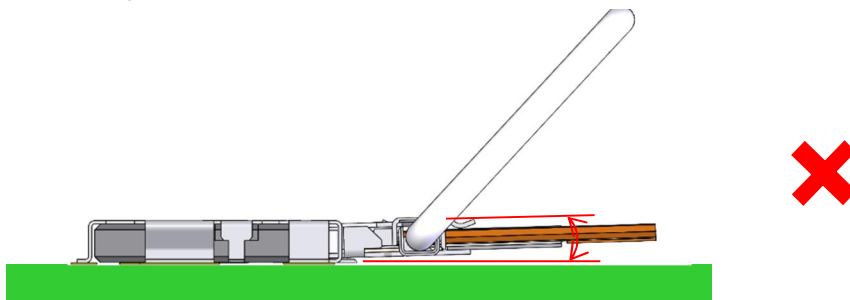


Fig. 4 Example of incorrect insertion method: vertical

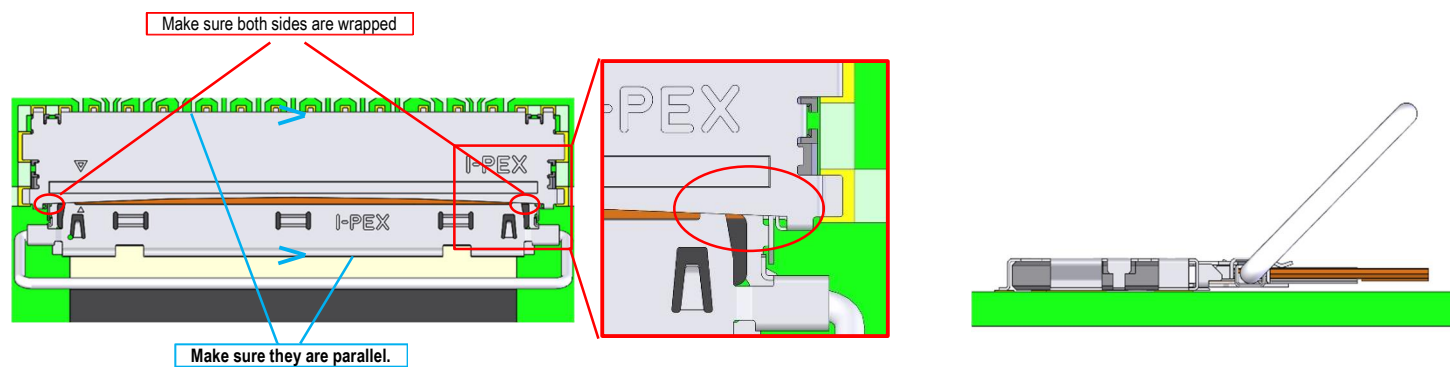
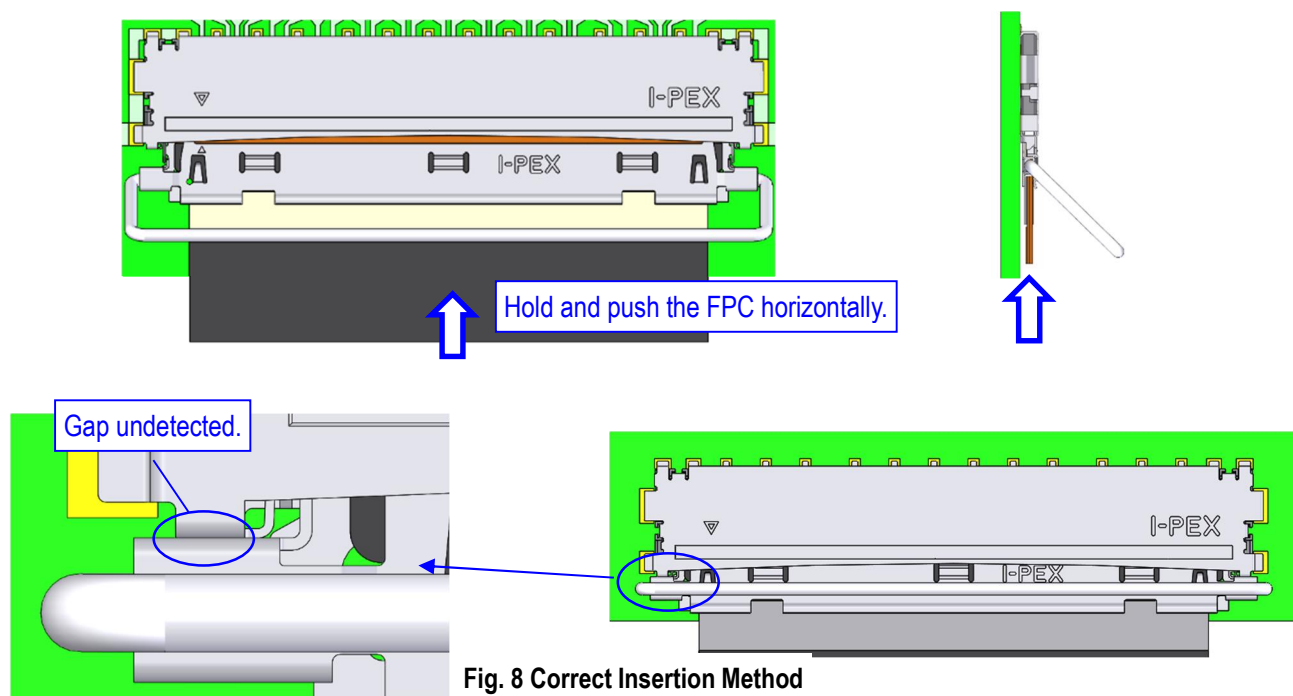


Fig. 7 Pre-insert

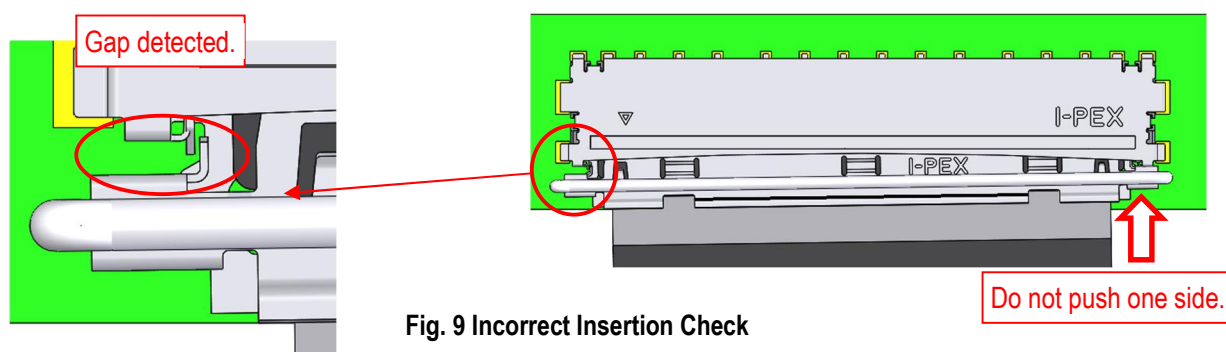
3.3 Hold and push the FPC horizontally along the guide after the pre-insertion. Ensure that the gap is undetected after the insertion.



Caution 1

Do not push one side of the plug connector alternately, as it may result in the incomplete insertion.

*Gap indicates incomplete insertion.



Do not close the plug lock bar if a gap is detected, as it may cause interference and deformation.

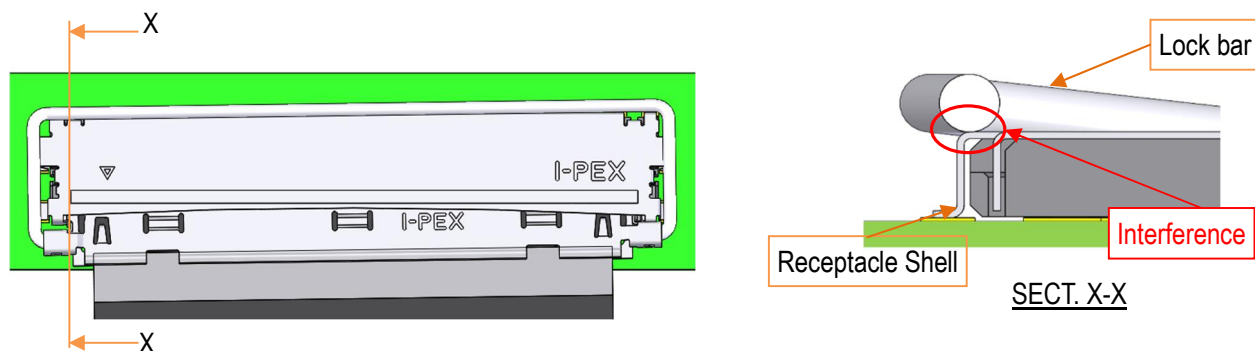


Fig. 10 Plug and Receptacle Interference

Caution 2

Ensure that the plug connector is inserted along the guide, as it may result in deformation.

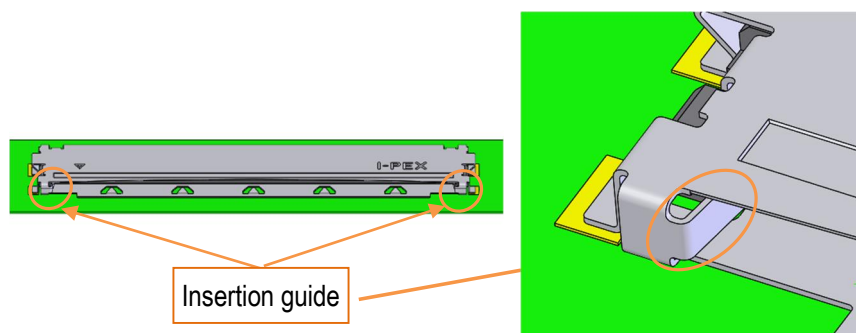
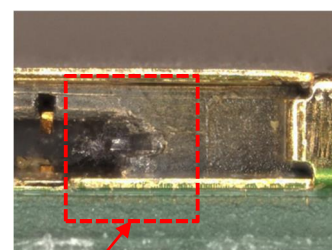
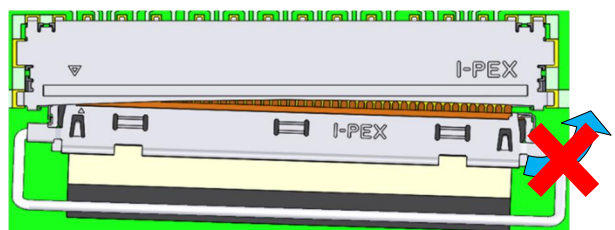
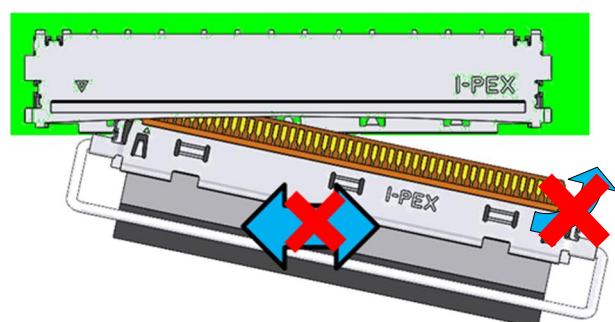


Fig. 11 Insertion Guide

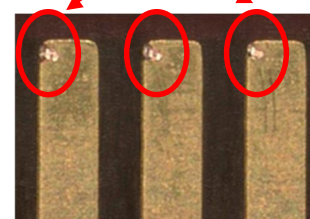
Caution 3

Please insert it straight. If you insert it while twisting it, it may cause the connector to deform or break.

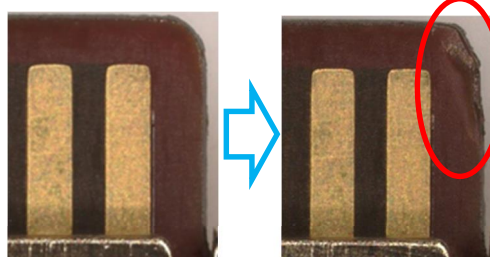


Receptacle Housing Damage

FPC Signal pattern Damage



FPC Damage



Receptacle shell Damage

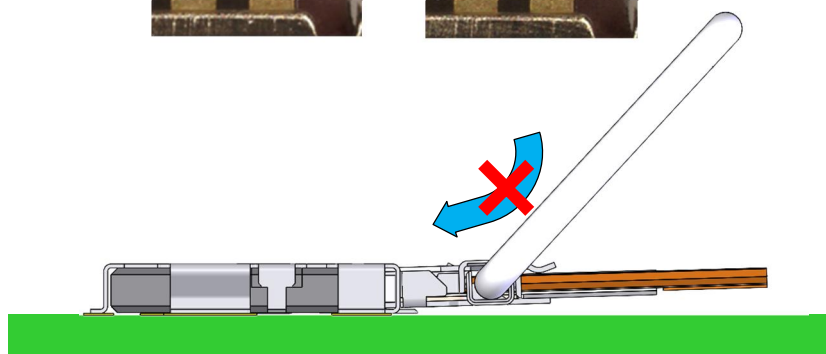
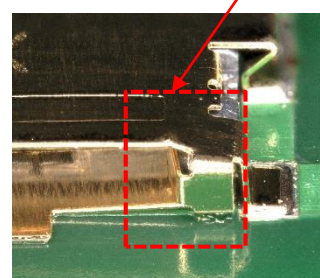


Fig. 12 Destructive mode when not inserted correctly

Caution 4

Do not insert the plug connector by pushing or pulling the lock bar, as it may result in connector damage.

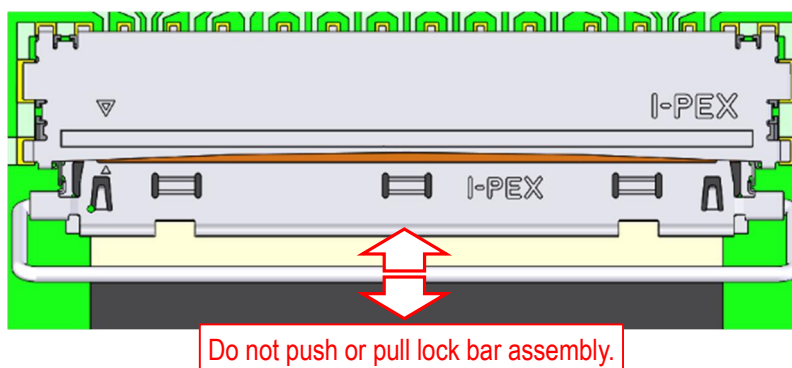


Fig. 13 Incorrect Insertion Method

Caution 5

Do not apply the force to the plug connector toward the PCB, as it may damage the connector and PCB.



Fig. 14 Force Applying Prohibition

Caution 6

Do not reinstall or use the lock bar once it has detached, as it may result in deformation of the lock bar.

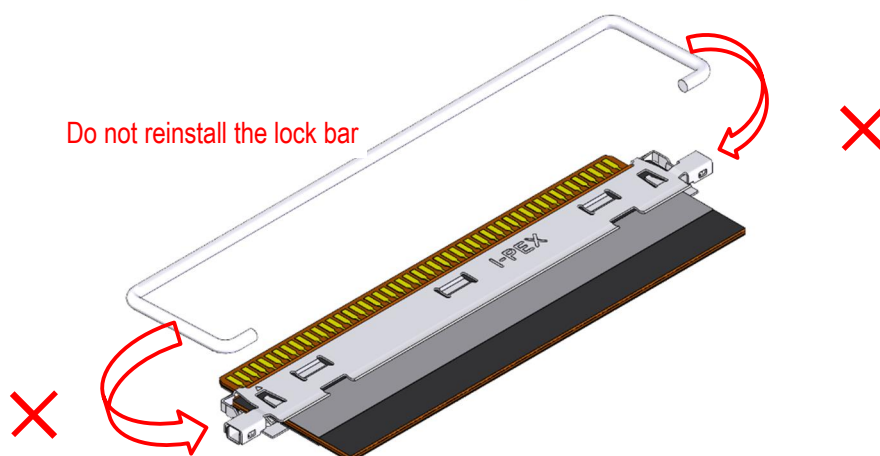


Fig. 15 Prohibition to Reinstall Lock bar

3.4 Push the circled areas of the lock bar toward the PCB to lock the receptacle shell and the lock bar .

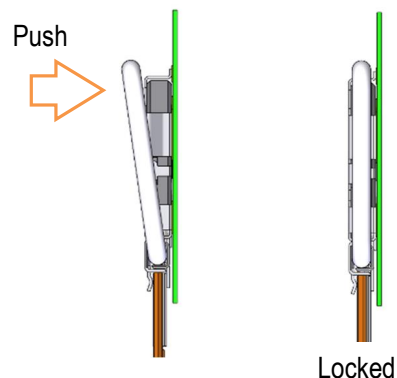
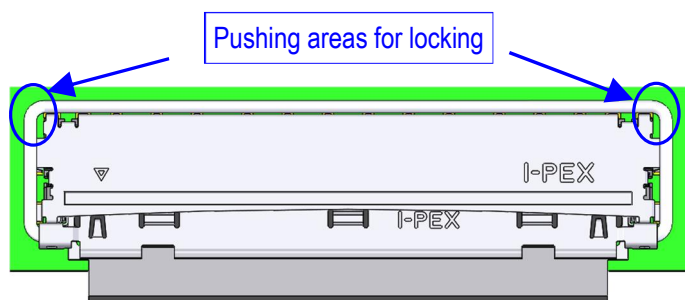


Fig. 16 Locking Method

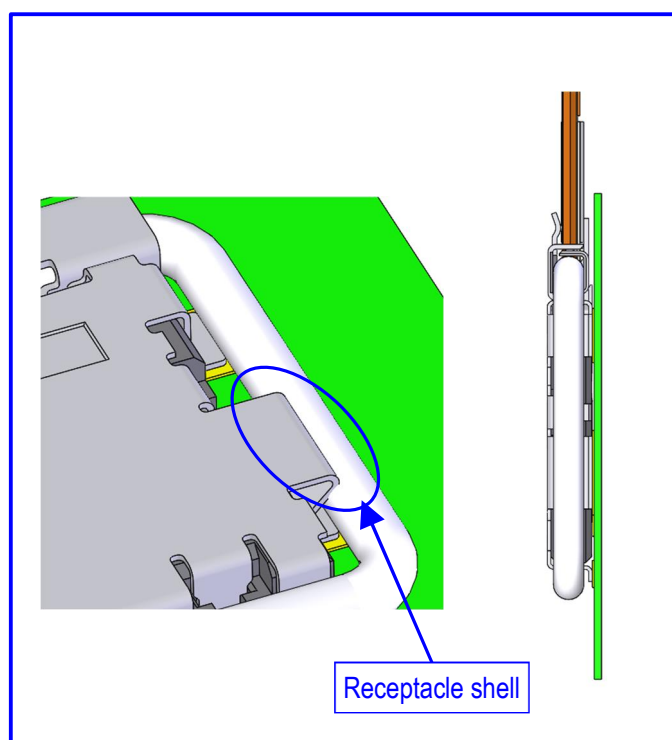


Fig. 17 Correctly Locked

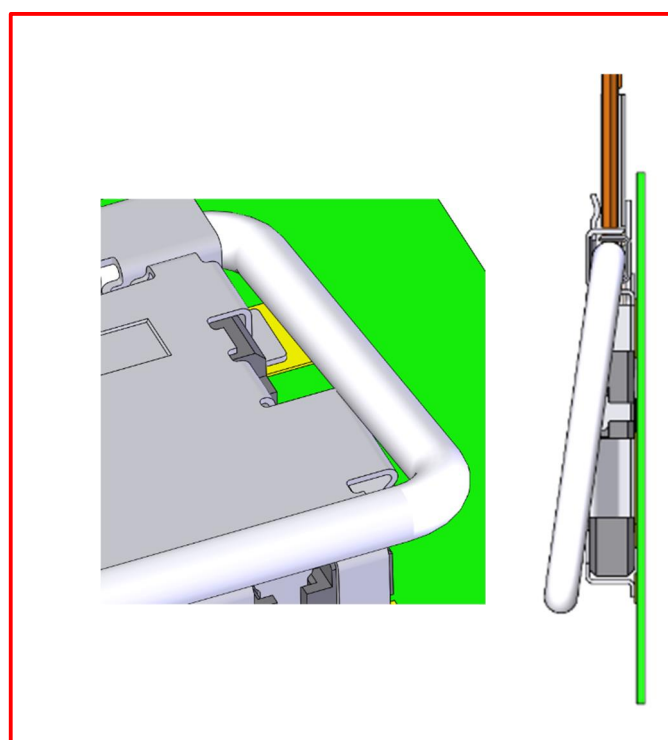


Fig. 18 Incorrectly Locked

4. Connector Removal Method

4.1 Lift up the circled area of the lock bar and rotate it to release the lock from the receptacle connector.

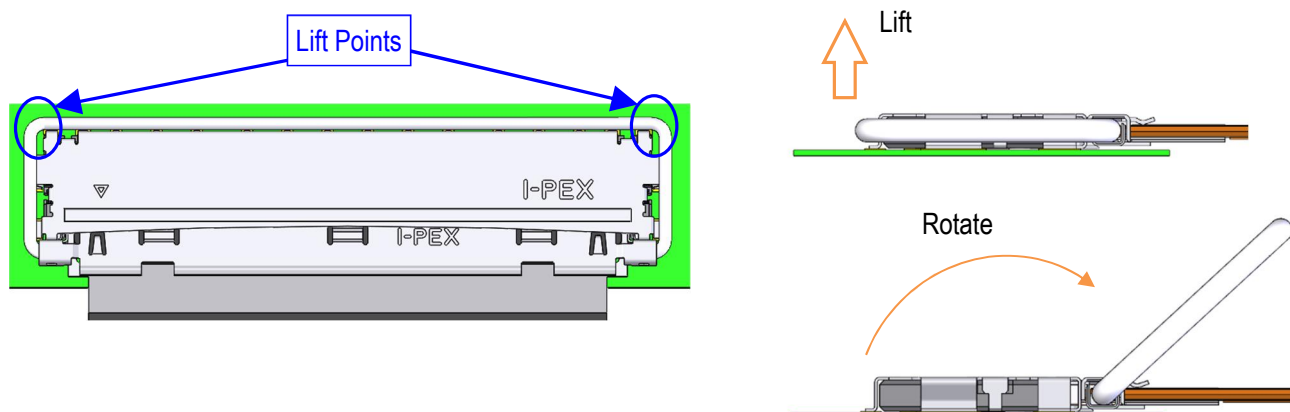


Fig. 19 Lock Release Method

Caution 7

Do not lift circled area of the lock bar during removal, as it may result in the deformation.

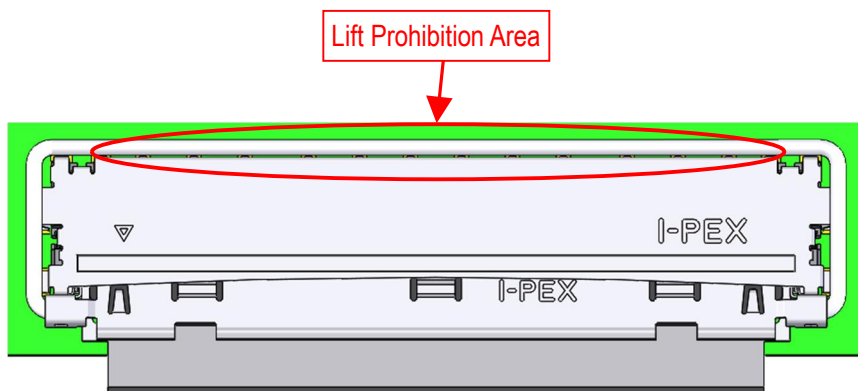


Fig. 20 Lift Prohibition Area

4.2 Hold and pull the FPC horizontally, keeping the ends parallel.

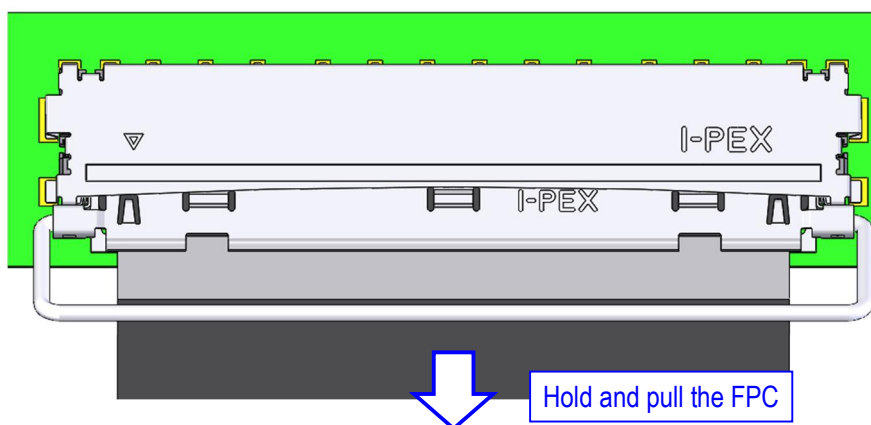


Fig. 21 Correct Removal Method

Caution 8

Do not push or pull circled area of the lock bar assembly during removal, as it may result in the damage or deformation.

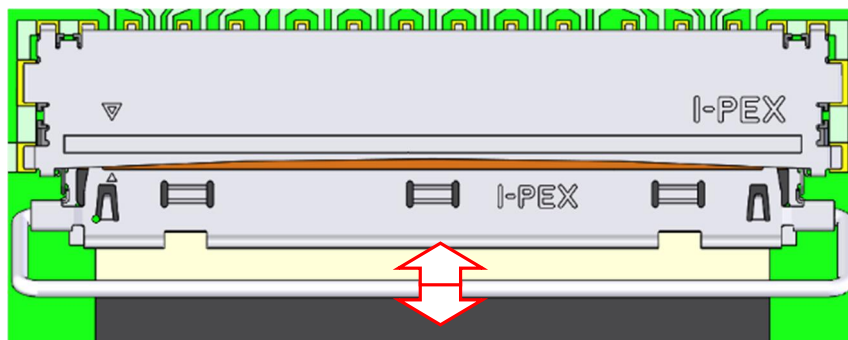


Fig. 22 Incorrect Removal Method

Caution 9

Do not apply the force to the plug connector toward the PCB during removal, as it may damage the PCB and result in the disconnection or short.

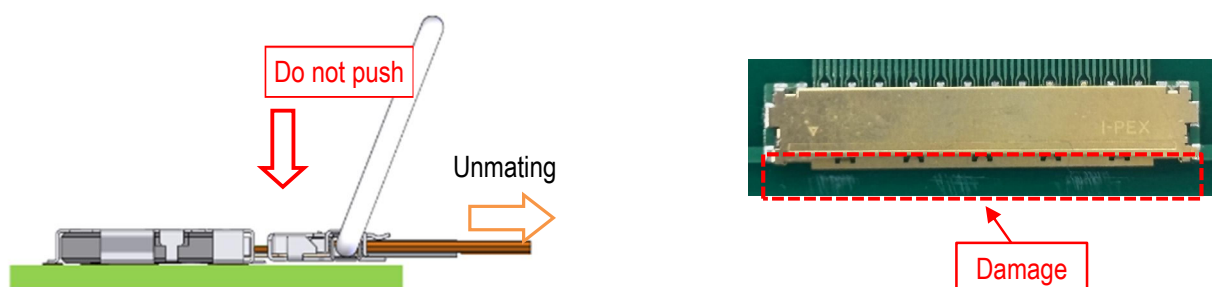


Fig. 23 Force Applying Prohibition

Caution 10

Do not reinstall or use the lock bar once it has detached, as it may result in deformation of the lock bar.

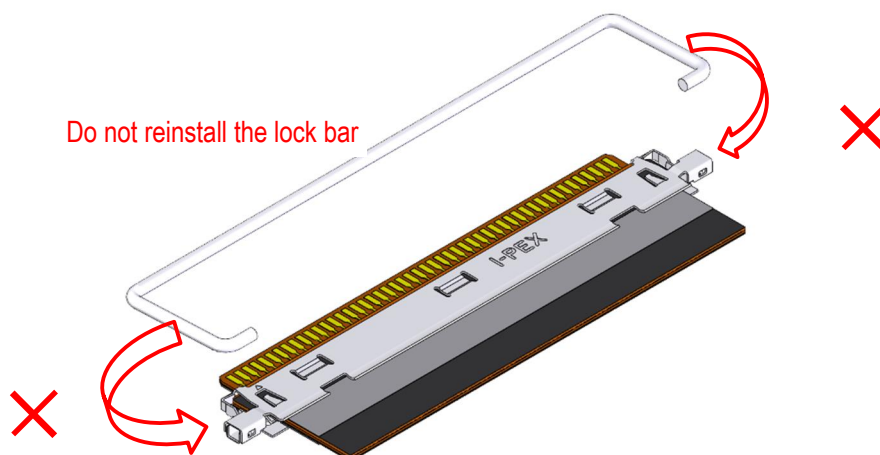


Fig. 24 Prohibition to Reinstall Lock bar

5. Cautions in handling the connector

5.1 Do not pull up the FPC or the lock bar assembly upward, as it may result in the deformation of the receptacle connector.

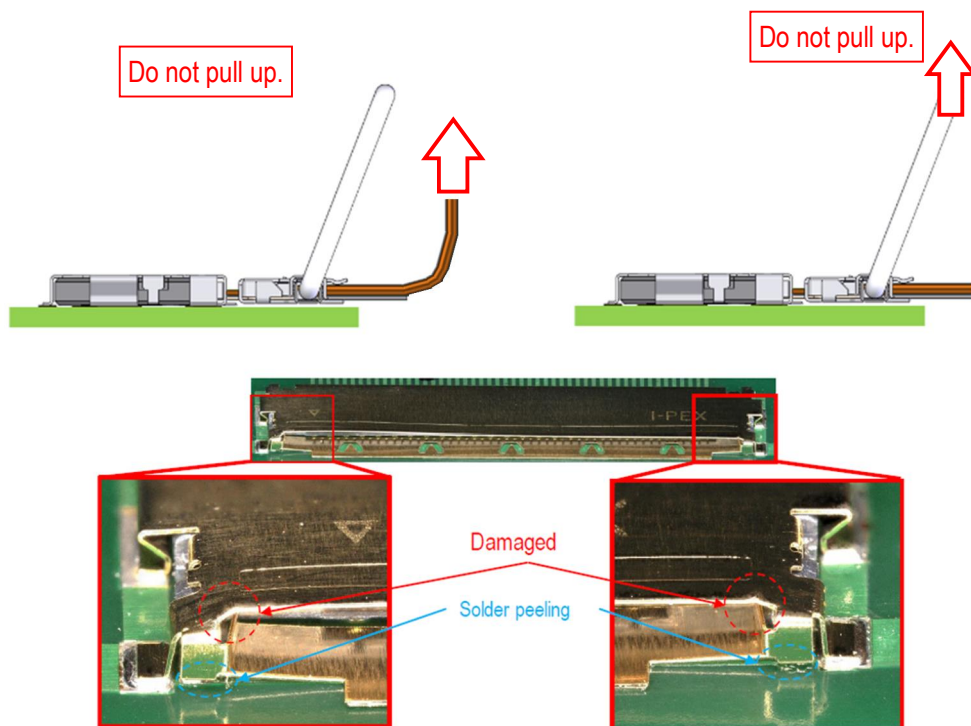


Fig. 25 Prohibition of FPC and Lock Bar Assembly Handling

5.2 Do not apply the continuous stress or excessive load to the connector, as it may result in the mating failure or the receptacle connector deformation or short.
When bending FPCs, ensure that stress or excessive load is not applied to the connectors.

Bending the FPC in the direction of arrows will cause stress or excessive load on the connector mating part.

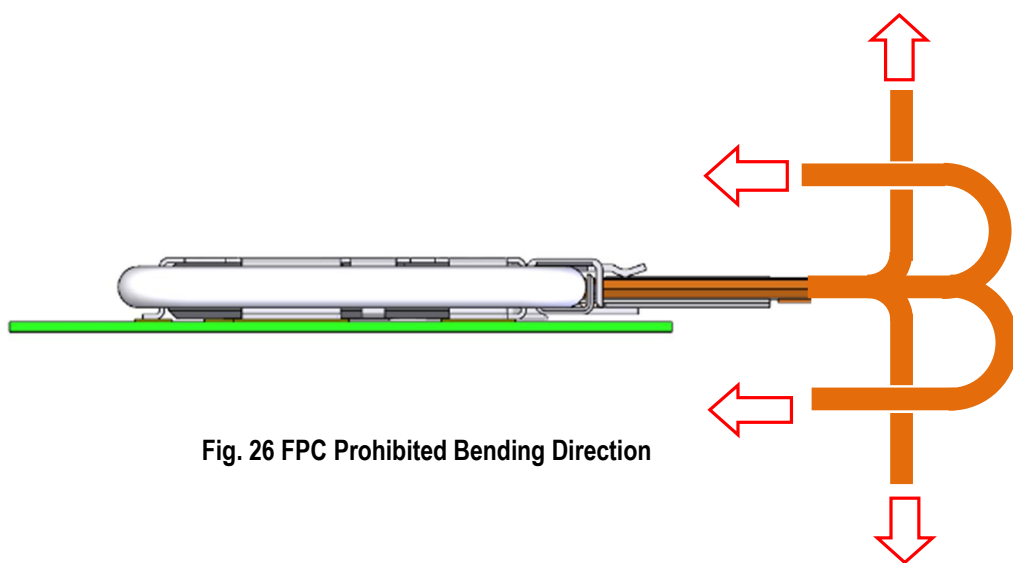


Fig. 26 FPC Prohibited Bending Direction