

CABLINE®-VSF

Part No.: 20645-0**T-01,3049-0**1

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-VSF connectors for the purpose of proper use.

1. Product Names and Part Numbers

• Plug Connector

Product Name/ Part Number: CABLINE-VSF plug shell assembly/ 20645-0**T-01

Product Name/ Part Number: CABLINE-VSF plug shell/ 3049-0**1

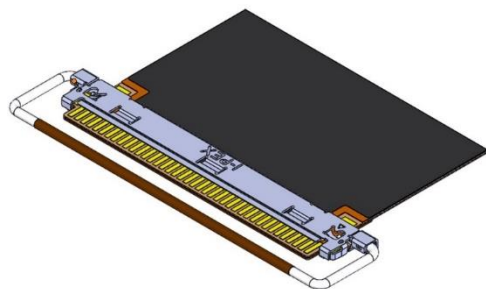


Fig. 1 Plug shell assembly with FPC

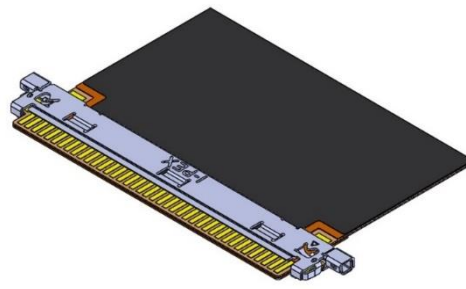


Fig. 2 Plug shell with FPC

• Receptacle Connector

Product Name/ Part Number: CABLINE-VS receptacle assembly/ 20455-0**E-###

“**”: Pin counts, “###”: Connector variations, please refer to the drawing for detailed information.

2. Names of the Connector Parts

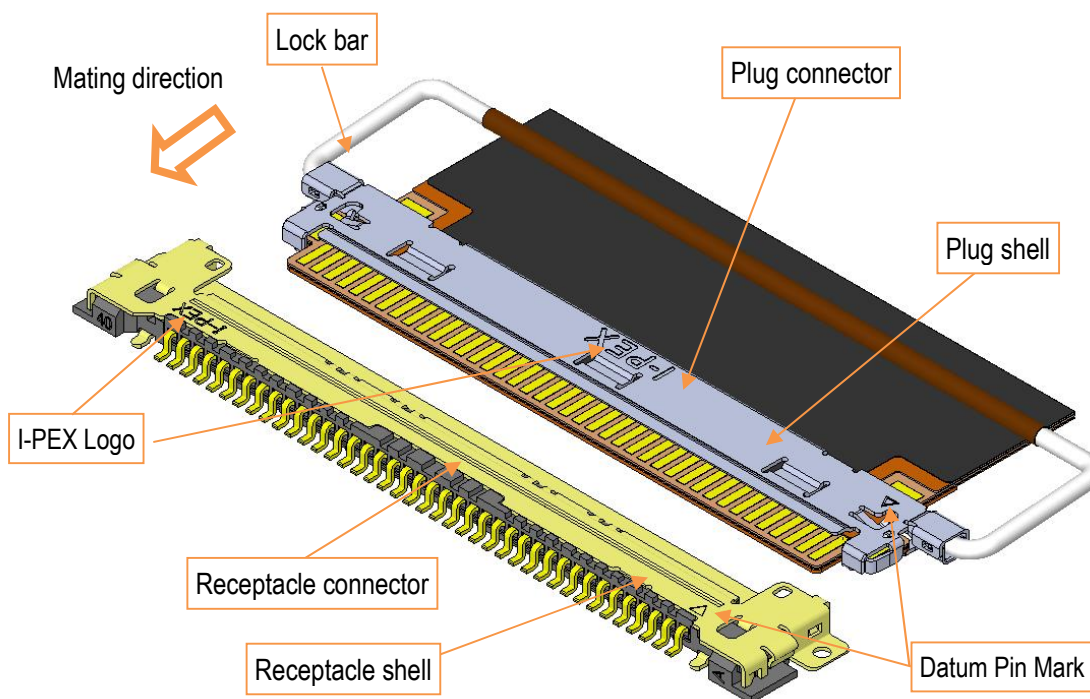


Fig. 1 Names of the Connector Parts

3. Connector Insertion Methods

Shell (without lock bar)

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

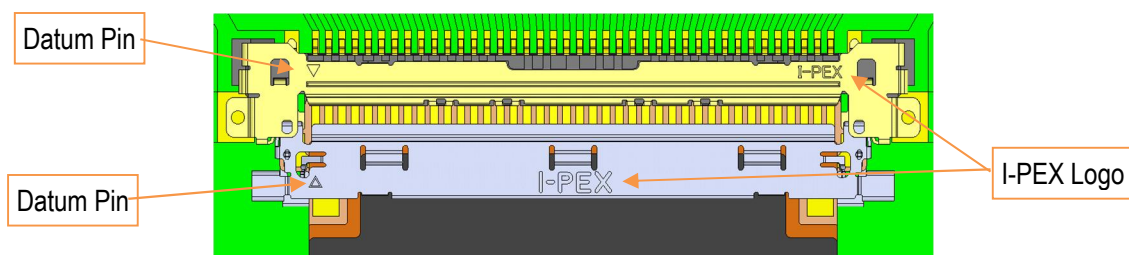


Fig. 4 Aligning Datum Pin Marks

3.2 Pre-insert the plug connector to the receptacle connector. Do not apply excessive load while pre-insertion.

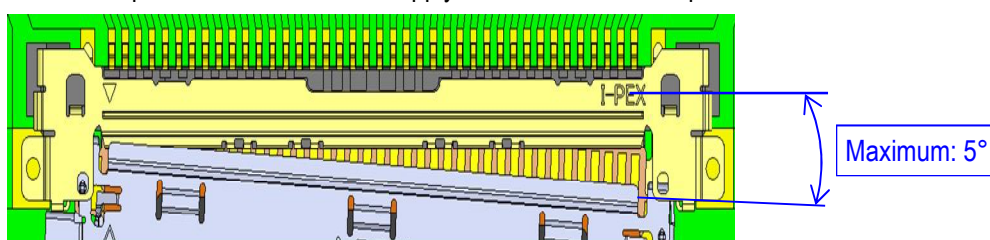


Fig. 2 Maximum Horizontal Insertion Angle

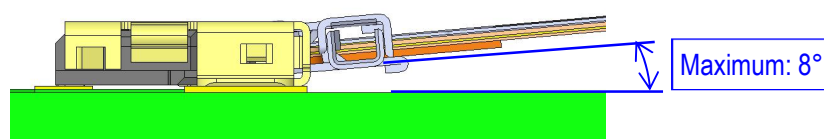


Fig. 6 Maximum Vertical Insertion Angle

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

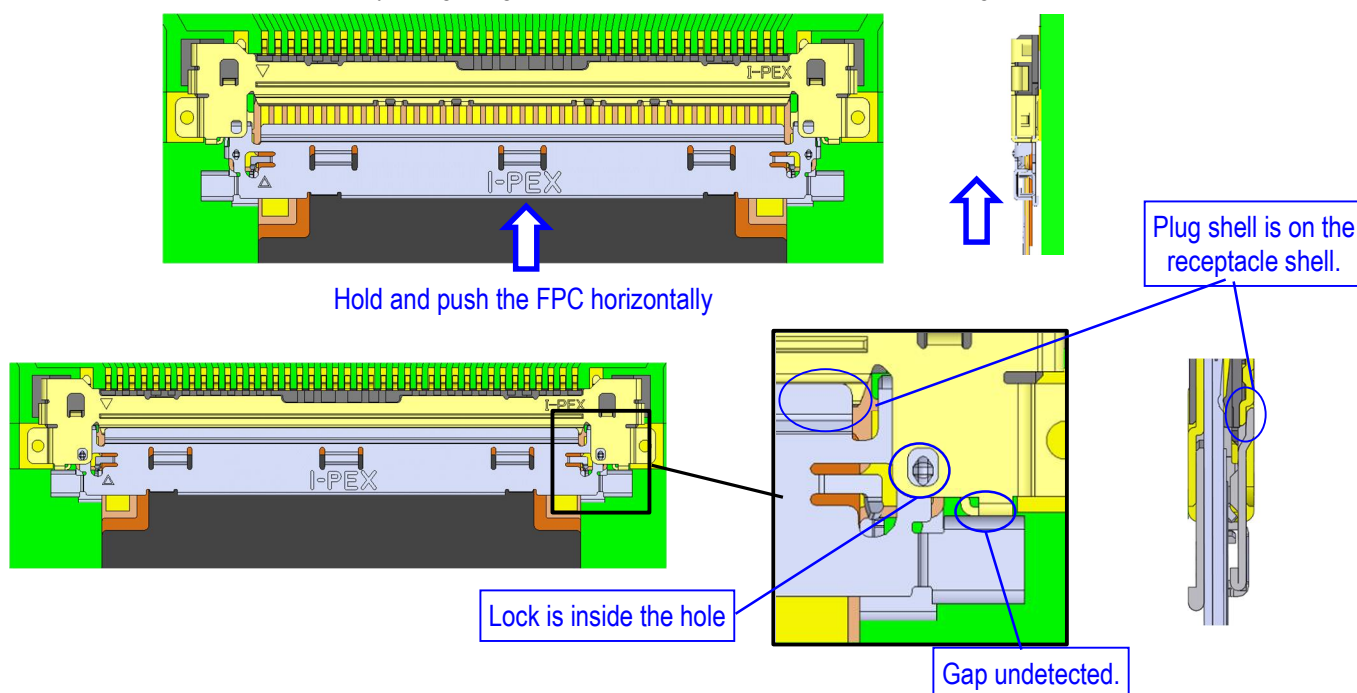


Fig. 7 Plug Connector Insertion Method

Shell Assembly (with lock bar)

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

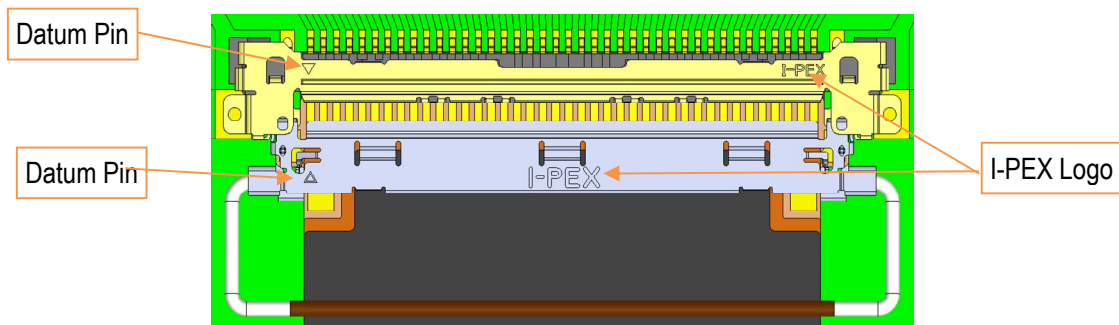


Fig. 8 Aligning Datum Pin Marks

3.2 Pre-insert the plug connector to the receptacle connector. Do not apply excessive load while pre-insertion.

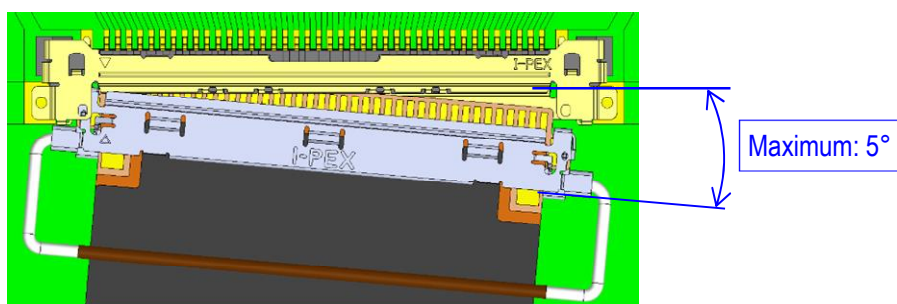


Fig. 9 Maximum Horizontal Insertion Angle

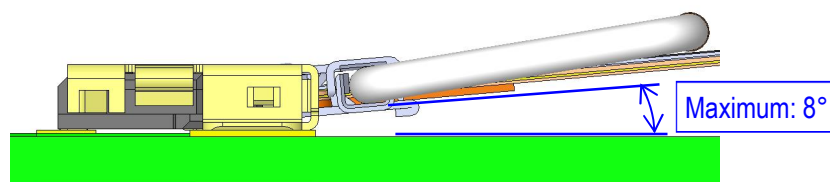


Fig. 10 Maximum Vertical Insertion Angle

3.3 After pre-insertion, rotate the lock bar toward the receptacle connector.

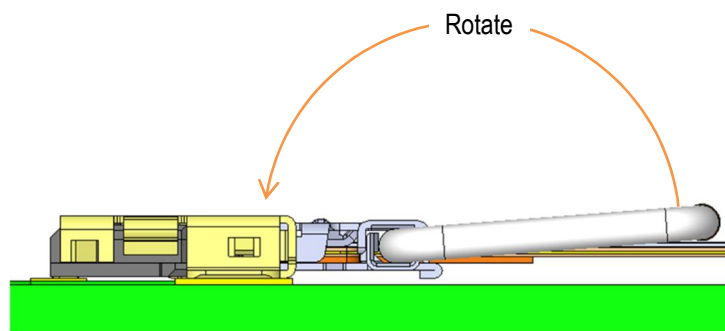


Fig. 11 Lock bar Operation

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

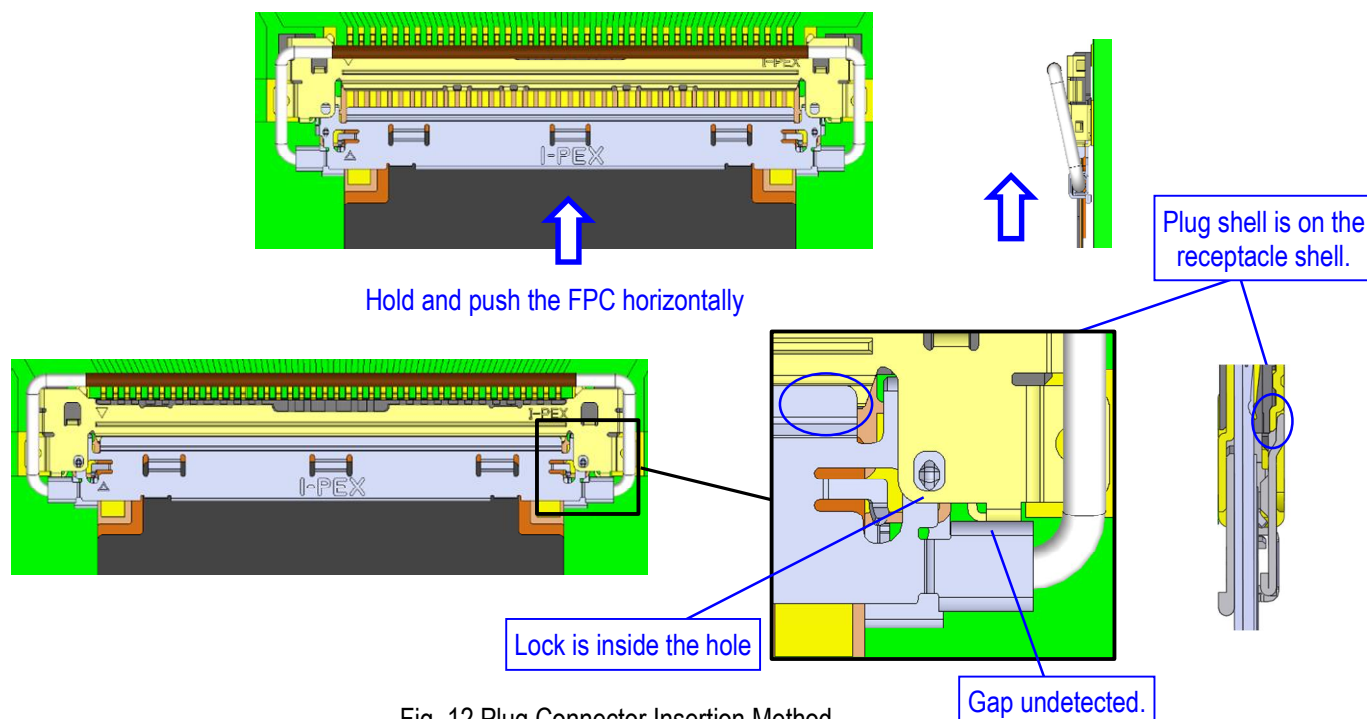


Fig. 12 Plug Connector Insertion Method

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

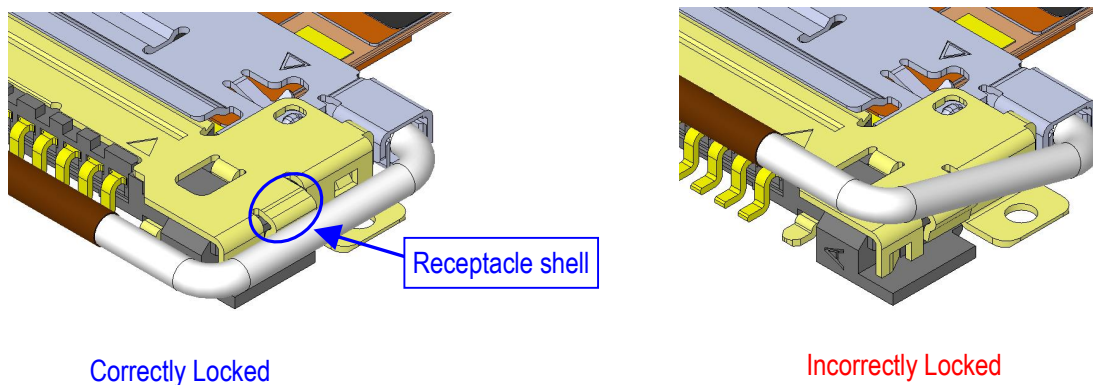
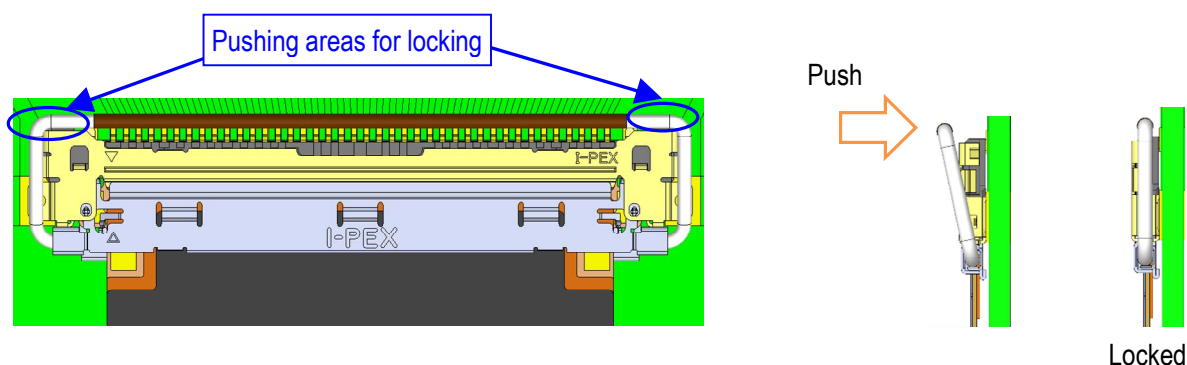
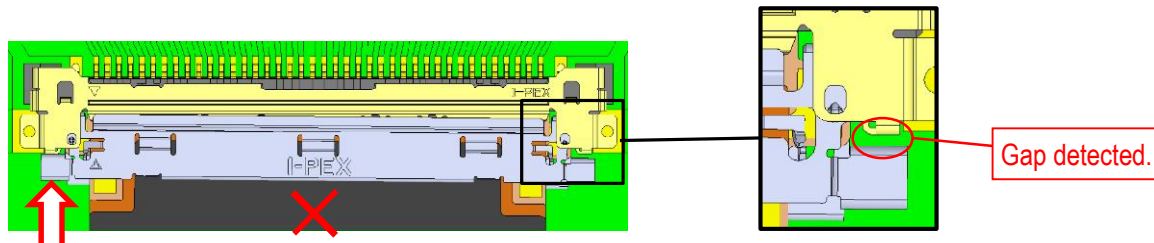


Fig. 13 Locking Method

Common**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 push one side.

Fig. 14 Incorrect Insertion Check

Caution 2

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

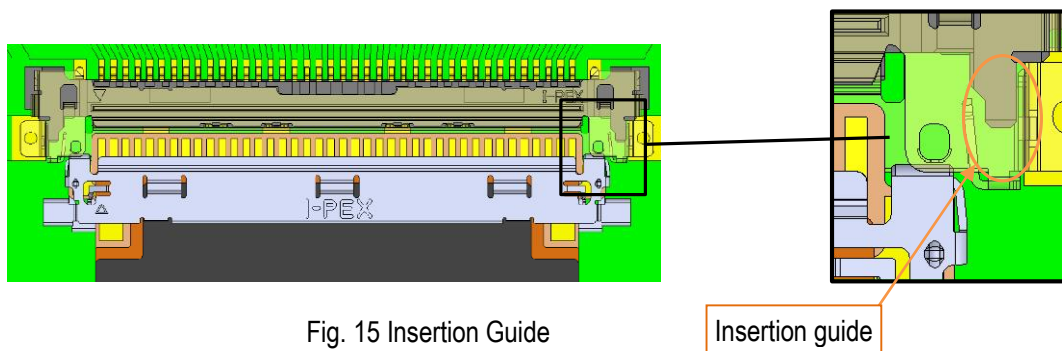


Fig. 15 Insertion Guide

Caution 3

Do not exceed 5° horizontal insertion angle during pre-insertion, as it may result in the damage or deformation.

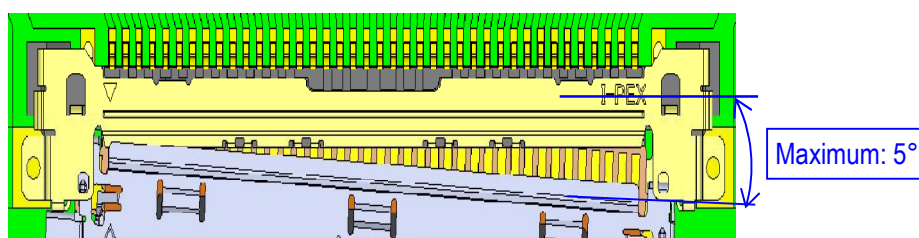


Fig. 16 Maximum Horizontal Insertion Angle

Caution 4

Do not exceed 8° vertical insertion angle during pre-insertion, as it may result in the damage or deformation.

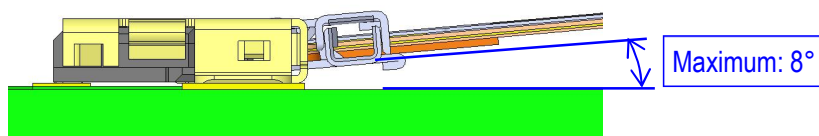


Fig. 17 Maximum Vertical Insertion Angle

Shell Assembly (with lock bar)

Caution 5

Do not open the lock bar sideways, push it toward the shell, or pull it away from the shell, as it may result in detaching the lock bar, the damage or deformation.

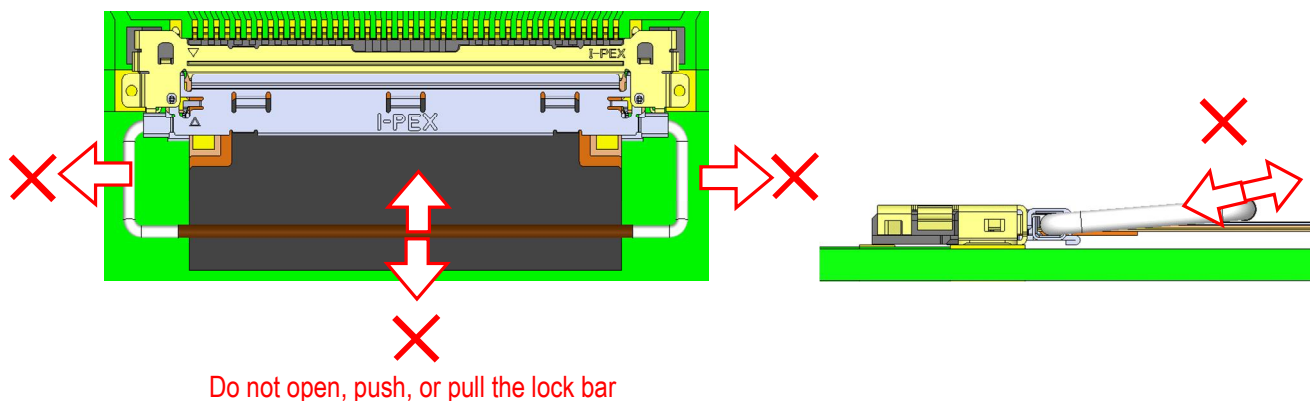


Fig. 18 Incorrect Lock bar Handling

Caution 6

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

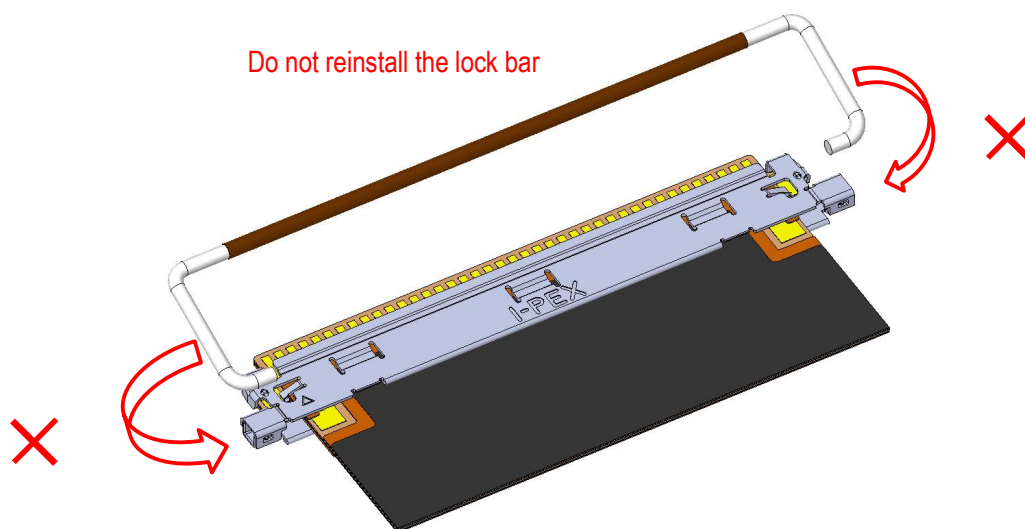


Fig. 19 Prohibition to Reinstall Lock bar

4. Connector Removal Method

Shell (without lock bar)

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

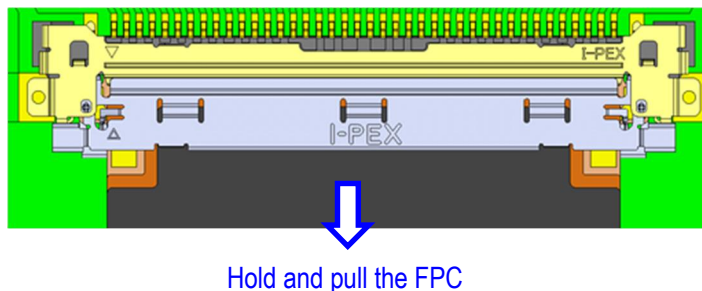


Fig. 20 Correct Removal Method

Shell Assembly (with lock bar)

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

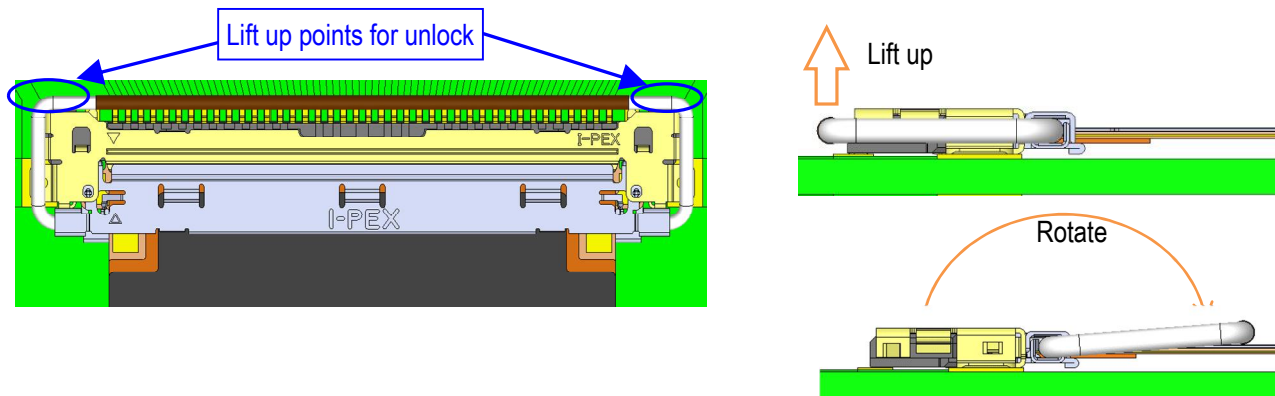


Fig. 21 Connector Unlock Operation

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

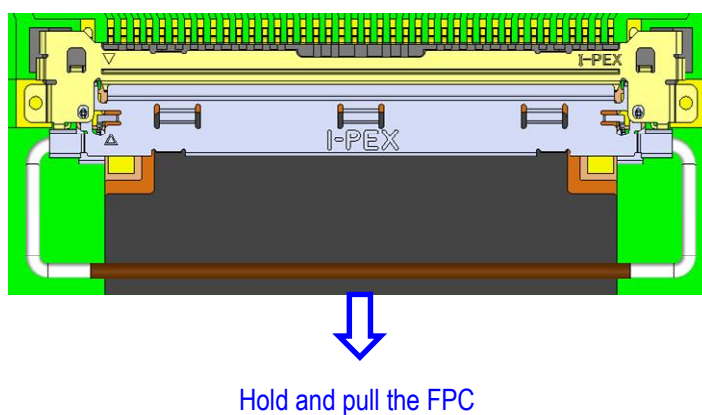


Fig. 22 Correct Removal Method

Common**Caution 7**

Do not exceed 5° horizontal removal angle during removal, as it may result in the damage or deformation.

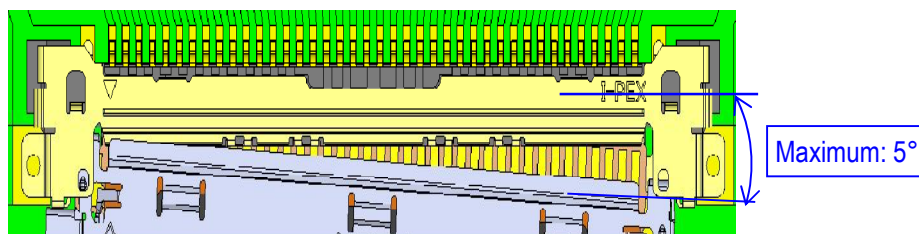


Fig. 23 Maximum Horizontal Removal Angle

Caution 8

Do not exceed 8° vertical removal angle during removal, as it may result in the damage or deformation.

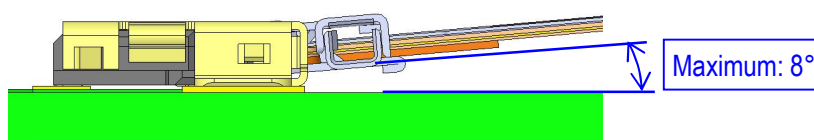


Fig. 24 Maximum Vertical Removal Angle

Shell Assembly (with lock bar)**Caution 9**

Do not lift up the lock bar using the insulated coat area, as it may result in the deformation.

Do not apply the metal or hard object to the insulated coat area, as it may result in peeling off the coat.

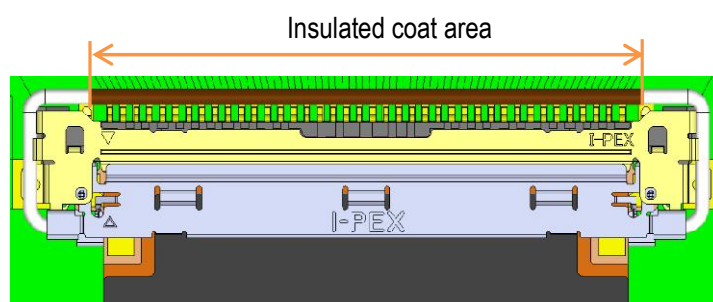


Fig. 25 Insulated Coat Area

Caution 10

Do not open the lock bar sideways, push it toward the shell, or pull it away from the shell, as it may result in detaching the lock bar, the damage or deformation.

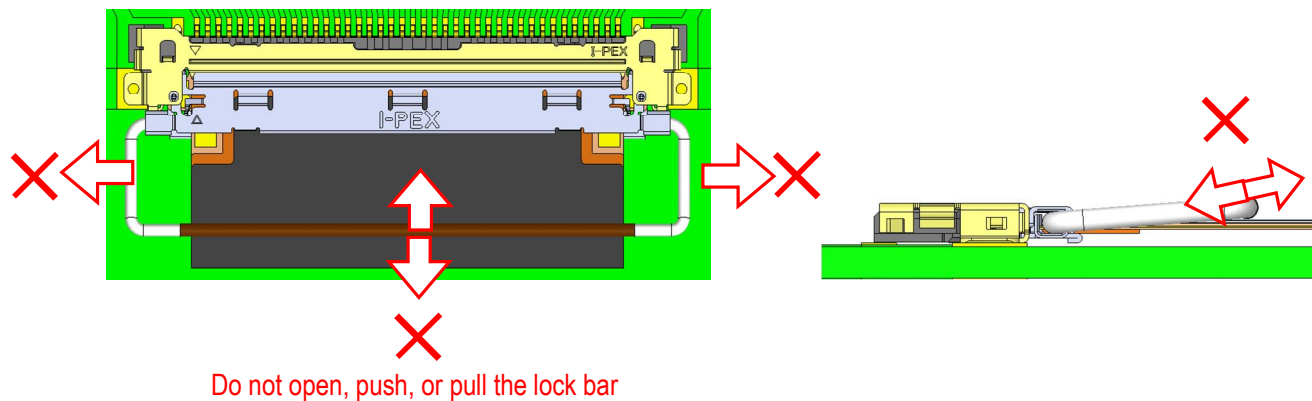


Fig. 26 Incorrect Lock bar Handling

Caution 11

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

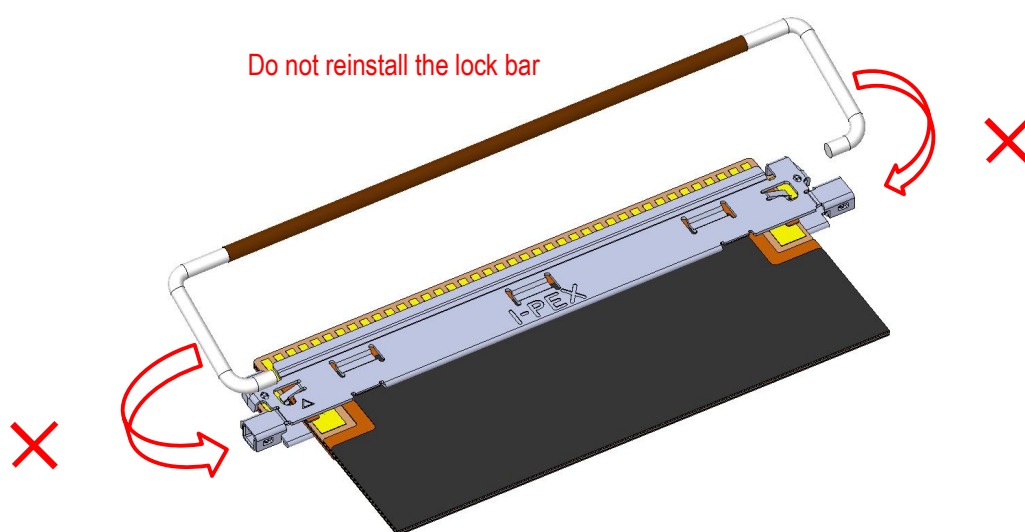


Fig. 27 Prohibition to reinstall lock bar

5. Cautions in handling the connector

Common

- 5.1 Do not pull up the FPC or the lock bar upward, as it may result in the deformation of the receptacle connector.
If FPC and plug shell are not soldering, it may result in falling off the FPC from the plug shell.

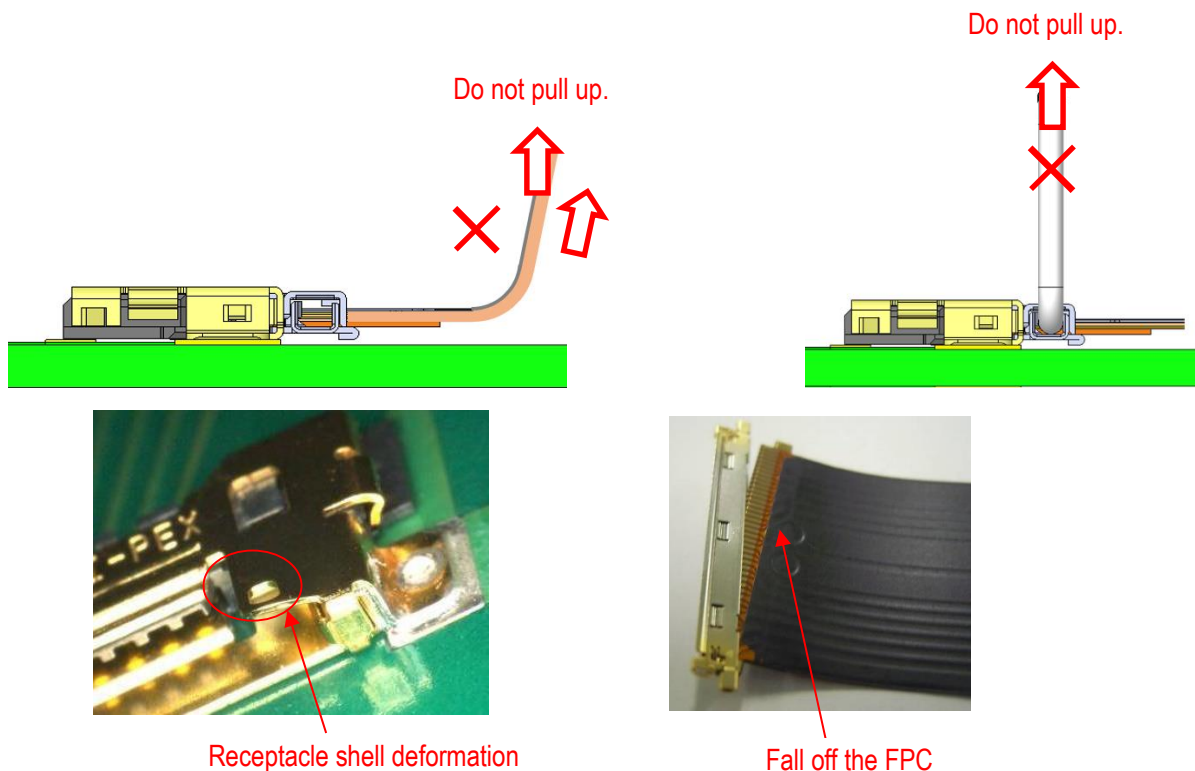


Fig. 28 Prohibition of FPC and Lock bar Handling

- 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.

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.

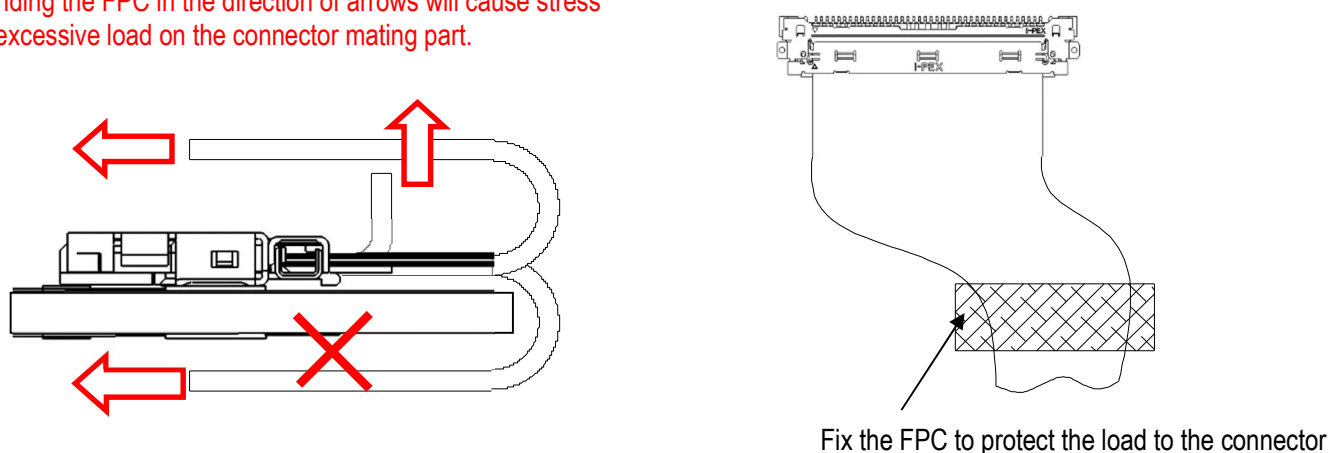


Fig. 29 FPC Prohibited Bending Direction