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http://www.commscope.com

Installation Instructions

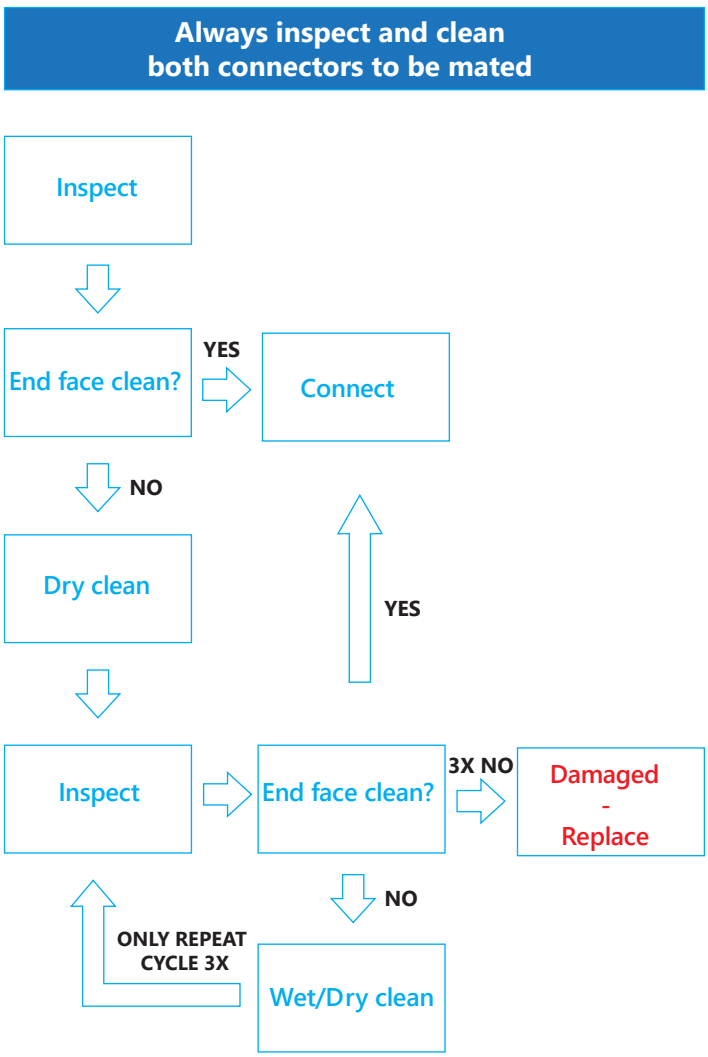
NOVUX™ Fiber Optic System
Cleaning the hardened connector and adapter

1 About this manual

This publication provides user information for the cleaning and maintenance of the Full Size hardened connector and adapter, the HMFOC connector and adapter and the Prodigy connector and adapter. Images in this manual are for reference only and are subject to change.

2 Maintenance

Follow specific cleaning instructions outlined for each specific connection type using the below Inspect/Clean Cycle.



CommScope® is not responsible for damage caused by cleaning.

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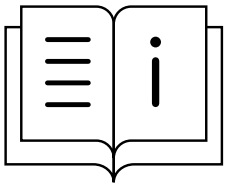
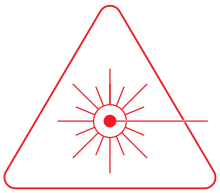
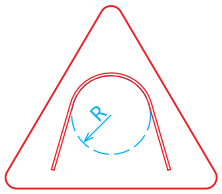
3 Warnings and Cautions







- Follow the installation instruction steps to ensure the performance of the closure. It is necessary to take precautions and keep the working space clean to protect the closure sealing materials and splices.
- Exposure to laser radiation can seriously damage the retina of the eye. Do not look into the ends of any optical fiber. Do not assume the laser power is turned off or that the fiber is disconnected at the other end. Looking into the ends of any optical fiber is entirely at your own risk. A protective cap or hood MUST be immediately placed over any radiating adapter or optical fiber connector to avoid the potential of dangerous amounts of radiation exposure. This practice also prevents dirt particles from entering the connector and adapter.
- Fiber optic cables may be damaged if bent or curved to a radius that is less than the recommended minimum bend radius. Always observe the recommended bend radius limit when installing fiber optic cables, subunits and patch cords.

4 Tools

The following basic tools, auxiliary equipment, and materials are required for cleaning:

- 216B key tool (used to open optical port dust cap)
- Hardened connector/adapter cleaning kit

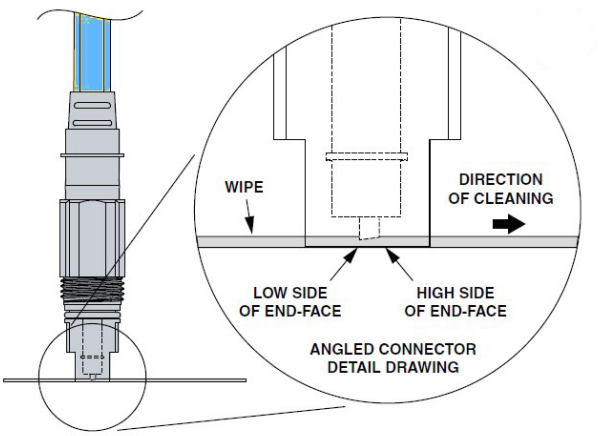
5 Cleaning the full size hardened connector and adapter

Use the following procedure for cleaning the hardened drop connector using the hardened connector/adapter cleaning kit (accessory kit **FHD-ACC-CLNKIT1**).

5.1 Full size hardened connector cleaning

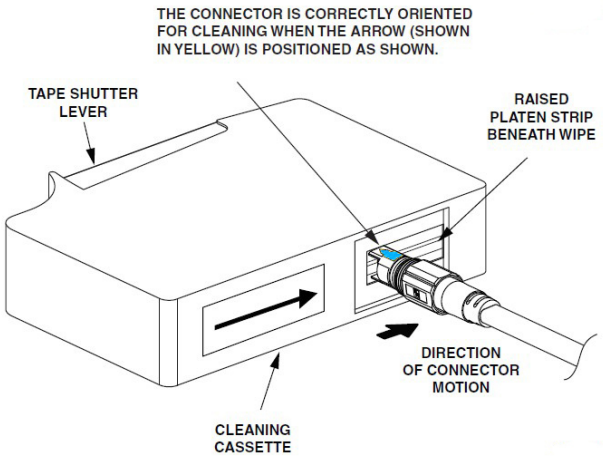
1. If the connector has been in use, clean the connector body, preferably using compressed air, to minimize contaminants introduced to the ferrule.

2. Unscrew connector from its optical port or unscrew dust cap from the end of the connector.



3. Examine the end of the connector and determine which is the high side and which is the low side of the connector end-face as shown in the figure above.

4. Open the tape shutter by squeezing the lever on the underside of the cassette and then keep the shutter open by continuing to squeeze the lever.



5. Hold the end-face of the connector perpendicular to the cleaning tape and with the high side of the connector pointing in the direction of cleaning as shown in the figure above.

Note: Do not use alcohol to clean the endface of the connector.

6. With **light pressure**, slide the connector end-face once across the tape in the direction shown using a smooth linear motion. Do not press too hard and do not repeat the cleaning motion with the same tape.

7. Release the lever on the underside of the cassette to close the tape shutter.

8. Repeat steps 3 through 6 until the connector has been cleaned three times.

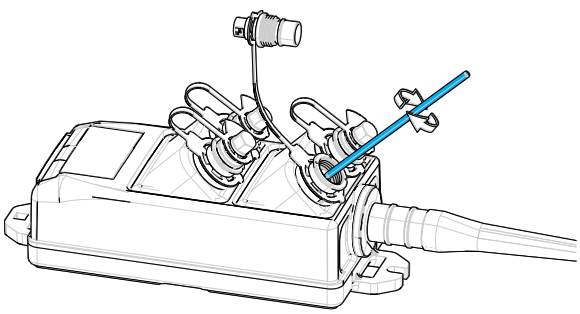
9. When the connector is clean, reinstall the drop cable dust cap and tighten until finger tight.

Note: Leave the drop cable dust cap on the connector until ready to connect the drop cable to an optical port.

5.2 Full size hardened adapter cleaning

1. If the adapter has been in use, clean around the port opening, preferably using compressed air, to minimize contaminants introduced to the ferrule.

2. Unscrew the connector from its optical port or using a 216B key tool unscrew the optical port dust cap from the adapter.



3. Insert a dry swab into the adapter as shown in the figure above.

Note: Do not apply alcohol to the swab or to the adapter.

4. While applying **light pressure** against the connector end-face, rotate the dry swab 360° **three times.**

5. Dispose of the dry swab after use.

6. When the connector end-face and adapter ferrule are clean, connect the drop cable to the optical port or reinstall the optical port dust cap.

Note: The optical port is not sealed until a drop cable connector or optical port dust cap is mated to the port adapter.

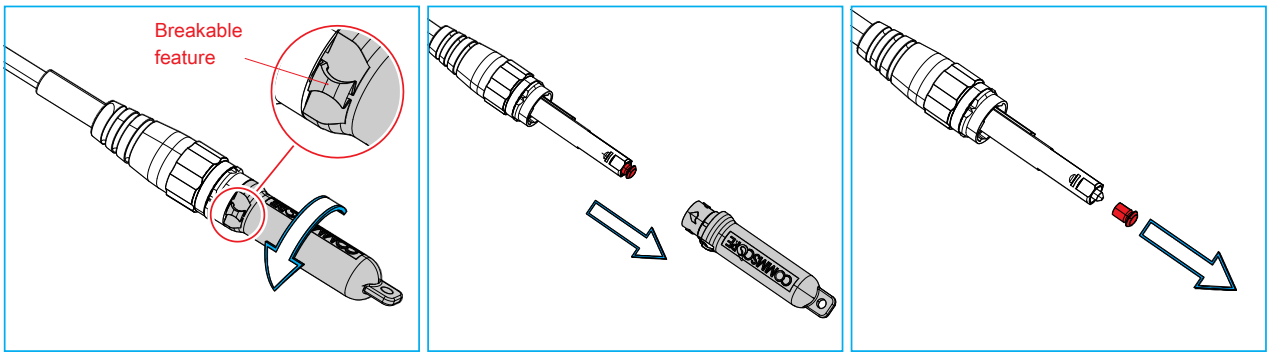
6 Cleaning the Prodigy connector and adapter

Use the following procedure for cleaning the hardened drop connector using the hardened connector/adapter cleaning kit (accessory kit **FHD-ACC-CLNKIT1**).

6.1 Prodigy connector cleaning

1 If the connector has been in use, clean the connector body, preferably using compressed air, to minimize contaminants introduced to the ferrule.

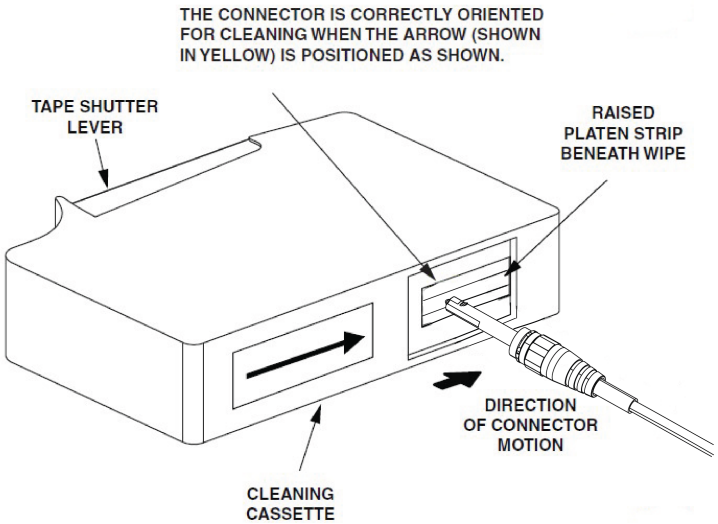
2 Unscrew the connector from its optical port or unscrew the black connector dust cap, and then pull the red ferrule dust cap off (if it's on).



Note: The connector dust cap contains a breakable feature (highlighted above) that once the cap is removed from the connector, it will break away. Therefore it is an indicator if the connector is still in factory sealed condition or not.

Note: Please keep in mind that if the connector is taken from the optical port, both dust caps are not on the connector, and unless the connector is never used and still in factory shipped condition, the red ferrule dust cap may not be there.

3 Open the tape shutter by squeezing the lever on the underside of the cassette and then keep the shutter open by continuing to squeeze the lever.



4 Hold the end-face of the connector perpendicular to the cleaning tape and with the high side of the connector pointing in the direction of cleaning as shown in the figure above.

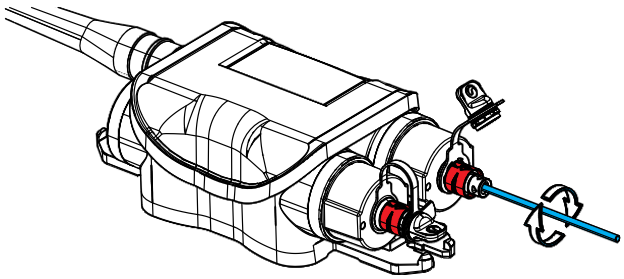
Note: Do not use alcohol to clean the endface of the connector.

5 With **light pressure**, slide the connector end-face once across the tape in the direction shown using a smooth linear motion. Do not press too hard and do not repeat the cleaning motion with the same tape.
6 Release the lever on the underside of the cassette to close the tape shutter.
7 Repeat steps 3 through 6 until the connector has been cleaned three times.
8 When the connector is clean, reinstall the drop cable dust cap and tighten until finger tight.

Note: Leave the drop cable dust cap on the connector until ready to connect the drop cable to an optical port.

6.2 Prodigy adapter cleaning

1 If the adapter has been in use, clean around the port opening, preferably using compressed air, to minimize contaminants introduced to the ferrule.
2 Unscrew the connector from its optical port or unscrew the optical port dust cap from the adapter.



3 Insert a dry swab into the adapter as shown in the figure above.

Note: Do not apply alcohol to the swab or to the adapter.

4 While applying **light pressure** against the connector end-face, rotate the dry swab 360º **three times.**
5 Dispose of the dry swab after use.
6 When the connector end-face and adapter ferrule are clean, connect the drop cable to the optical port or reinstall the optical port dust cap.

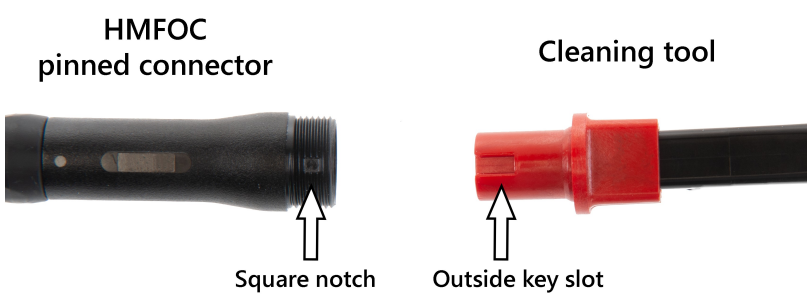
Note: The optical port is not sealed until a drop cable connector or optical port dust cap is mated to the port adapter.

7 Cleaning the HMFOC pinned/non-pinned connector

7.1 Cleaning the pinned HMFOC connector

1. Inspect the pinned HMFOC connector with a low-resolution microscope and inspect the complete ferrule surface including the area around the pins for dirt or guide pin damage. If dust, dirt or contaminants are detected, proceed to step 2.

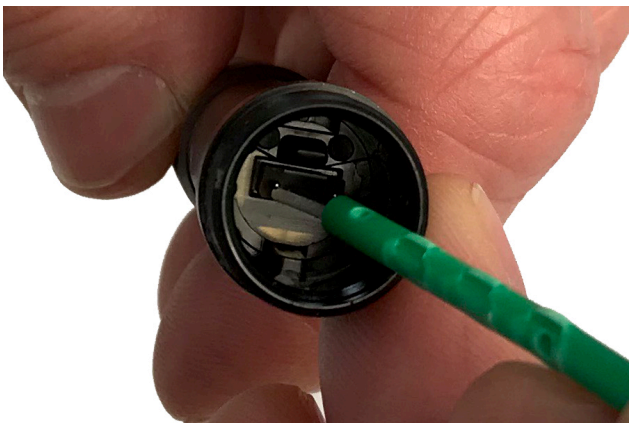
2. The following are directions for cleaning an HMFOC pinned connector using US CONEC IBC brand cleaning tool - MT Series.



Locate the red adapter on the cleaning tool and place it on the tip of the cleaning tool. Orientate the red adapter on the cleaning tool so that the outside key slot is on the top. Locate the square notch on the threaded portion of the pinned HMFOC connector. Hold the connector so the square notch is facing up.

Insert the cleaning tool into the pinned HMFOC until the cleaning tool is flush against the connector end face. Push the cleaning tool forward into the HMFOC connector until a click is heard, then release the tool. Repeat this cleaning motion as required.

Note: Always follow the cleaning tool manufacturer's cleaning instructions for best results.



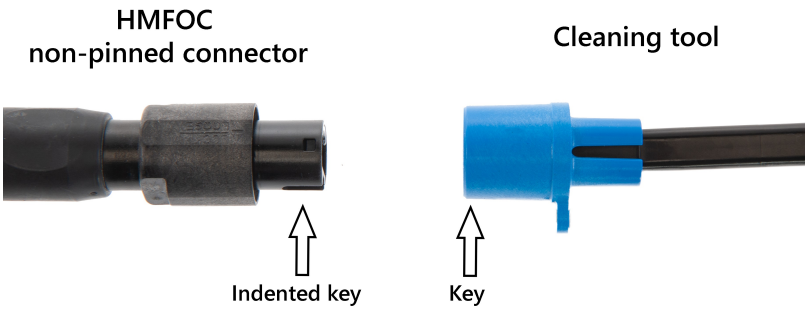
3. Inspect the connector. If there are still contaminants, use a small amount of non-isopropyl alcohol solvent on one or more 2.5mm fiber optic swabs to remove any remaining dust, dirt or contaminants from the ferrule end face and/or from around the guide pins. Always use a new swab for each connector and always follow-up with a dry clean using the cleaning tool procedure.

4. Connect the pinned connector to a non-pinned HMFOC or assemble the dust cap back on to the pinned connector until ready to install.

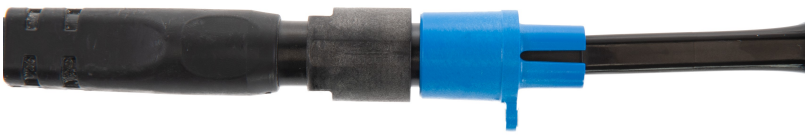
7.2 Cleaning the non-pinned HMFOC connector

1. Inspect the pinned HMFOC connector with a low-resolution microscope and inspect the complete ferrule surface including the area around the pins for dirt or guide pin damage. If dust, dirt or contaminants are detected, proceed to step 2.

2. The following are directions for cleaning an HMFOC pinned connector using US CONEC IBC brand cleaning tool - MT Series.



Locate the blue adapter on the cleaning tool and place it on the tip of the cleaning tool. Orientate the blue adapter so that the key on the bottom inside is facing downward. Locate the outside indented key on the non-pinned HFMOC connector and hold the connector so this indent is also facing downward.



Insert the cleaning tool over the non-pinned connector until it stops. Push the cleaning tool forward into the HMFOC connector until a click is heard, then release the tool. Repeat this cleaning motion as required.

Note: Always follow the cleaning tool manufacturer's cleaning instructions for best results.

3. Inspect the connector. If there are still contaminants, use a small amount of non-isopropyl alcohol solvent on one or more 2.5mm fiber optic swabs to remove any remaining dust, dirt or contaminants from the ferrule end face and/or from around the guide pins. Always use a new swab for each connector and always follow-up with a dry clean using the cleaning tool procedure.

4. Connect the non-pinned connector to a pinned HMFOC or assemble the dust cap back on to the pinned connector until ready to install.

7.3 Cleaning the pinholes on the non-pinned HMFOC connector

Note: Cleaning the pinholes on HMFOC connectors is the last resort for trouble-shooting a high loss connection, and only applicable for experienced personnel.

1. Inspect the connector with a 50x inspection scope. If there are contaminants around the pinholes, they may need to be cleaned according to the following procedure.

Wet the pink (0.4 mm) TePe brand dental (pinhole) brush with MicroCare FCC2 connector cleaner or equivalent cleaning solution and insert the brush into the pinhole while turning the brush 90 degrees. The brush will bottom-out before the handle reaches the ferrule end-face.

2. Pull the brush out of the hole while rotating 90 degrees and then inspect the pinhole with an inspection scope. With the scope at 50x magnification, inspect the leading edge of the pinhole for debris. Then focus down the pinhole (at least to the inner step diameter) for any remaining contamination. If additional cleaning is needed, verify that the cleaning solution has not dried on the brush. If it has, apply more solution and proceed with the cleaning.

3. With the brush bottomed-out in the pinhole, rotate the handle back and forth at least three times (180 degrees in each direction.

4. Pull the brush out of the hole while rotating 90 degrees and then inspect the pinhole with a scope. With the scope at 50x magnification, inspect the leading edge of the pinhole for debris. Then focus down the pinhole (at least to the inner step diameter) for any other contamination.

5. Connect the non-pinned connector to a pinned HMFOC or assemble the dust cap back on to the non-pinned connector until ready to install.

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