

## HMFOC CLEANING

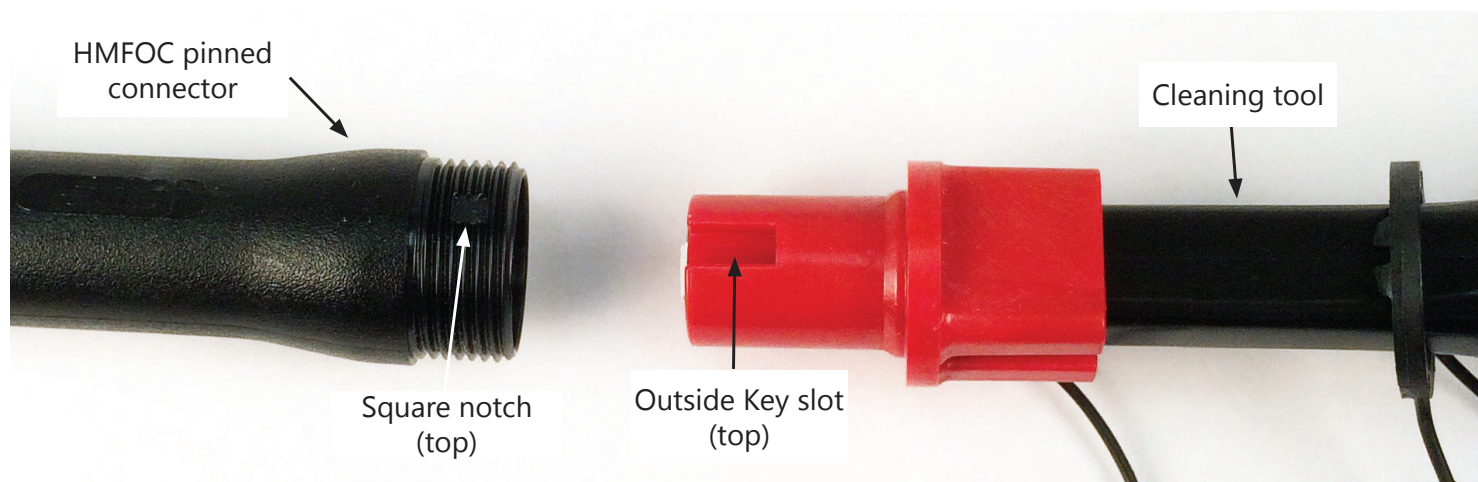
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### 1. Cleaning the Pinned HMFOC Connector

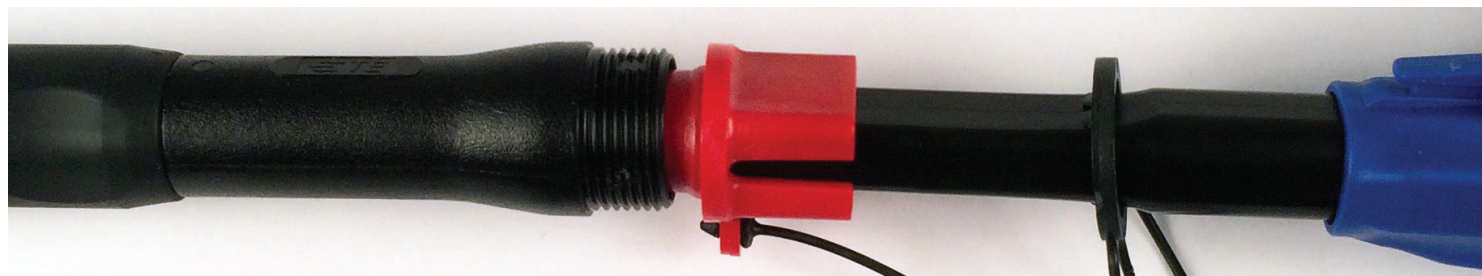
1.1. Inspect the pinned HMFOC connector with a low-resolution microscope (e.g. VIAVI FBP-P5000i Probe; VIAVI FBPT-COD-MTA Inspection Tip) as specified in IEC 61300-3-35 or equivalent. Inspect the complete ferrule surface including the area around the pins for dirt or guide pin damage. If dust, dirt or contaminants are detected, proceed to step 1.2.

1.2. The following are directions for cleaning an HMFOC pinned connector using US CONEC IBC brand cleaning tool - MT Series (PN 15639).



HMFOC Pinned Connector and Cleaning Tool

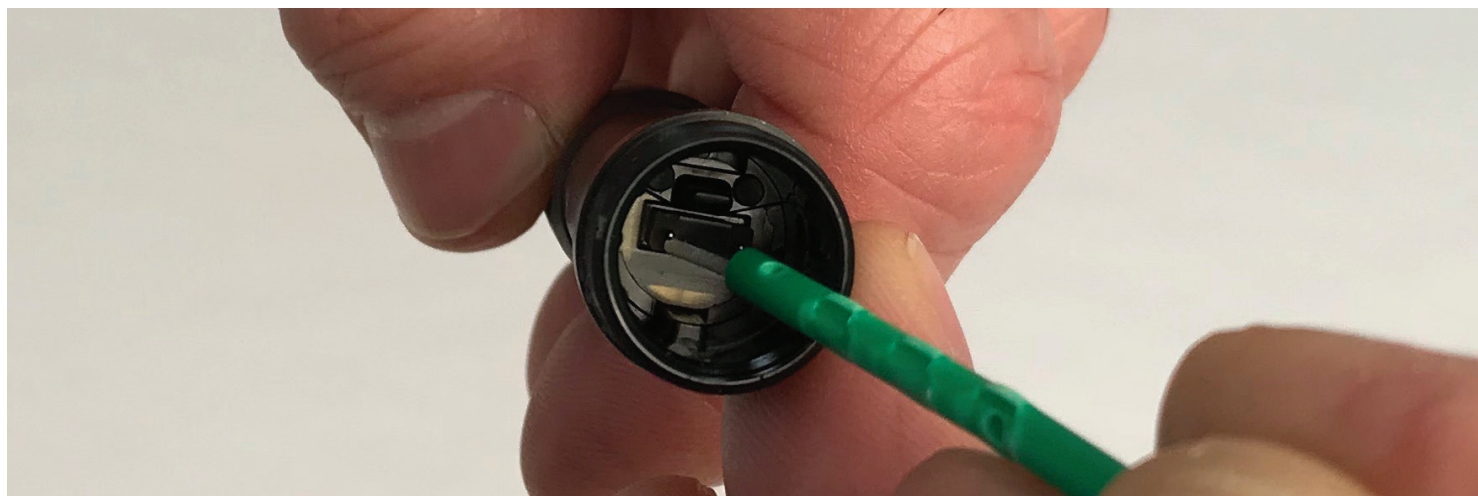
Locate the red adapter on the cleaning tool and place it on the tip of the cleaning tool. Orientate the red adapter on the cleaning tool so that the outside key slot is on the top. Locate the square notch on the threaded portion of the pinned HMFOC connector. Hold the connector so the square notch is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



Cleaning Tool Pushed into HMFOC Pinned Connector

\* Always follow the cleaning tool manufacturer's cleaning instructions for best results.

1.3. Inspect the connector. If there are still contaminants, use a small amount of non-isopropyl alcohol solvent (e.g. Chemtronics PX Wash, Sticklers MicroCare Cleaning Fluid FPF, etc.) on one or more 2.5mm fiber optic swabs (e.g. Chemtronics Coventry, Sticklers Clean Stixx MCC-S25, etc.) 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 from step 1.2.



*Cleaning Swab for Pinned HMFOC Connector*

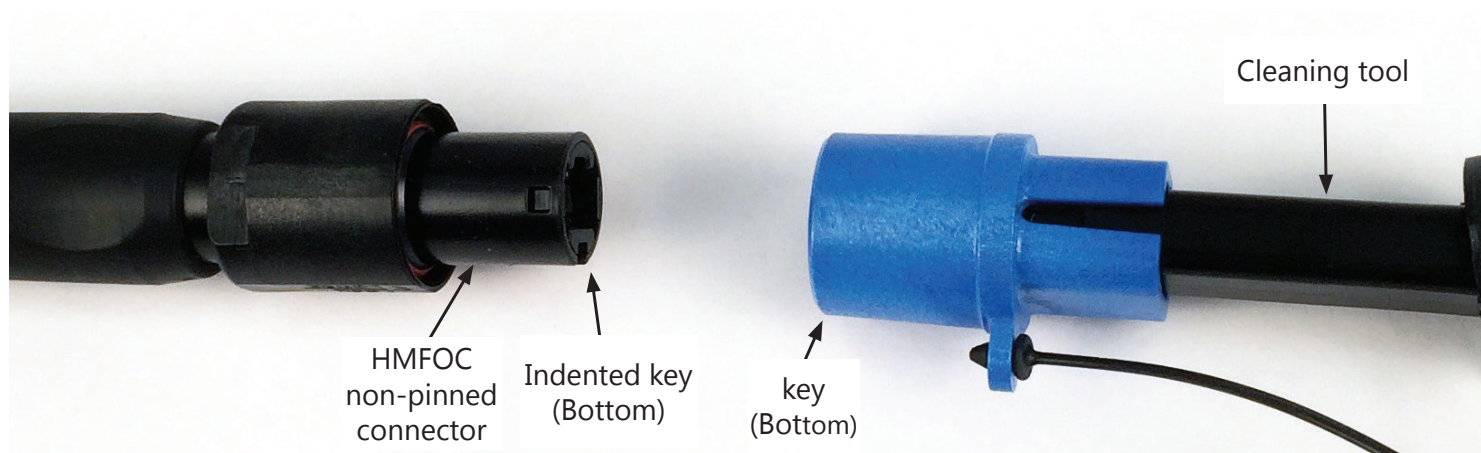
1.4. Connect the pinned connector to a non-pinned HMFOC or assemble the dust cap back on to the pinned connector until ready to install.

## 2. Cleaning the Non-Pinned HMFOC Connector

### 2.1. General cleaning instructions

2.1.1. Inspect the non-pinned HMFOC connector with a low-resolution microscope (e.g. VIAVI FBP-P5000i Probe; VIAVI FBPT-COD-MTA Inspection Tip) as specified in IEC 61300-3-35 or equivalent. If dust, dirt or contaminants are detected, proceed to step 2.1.2.

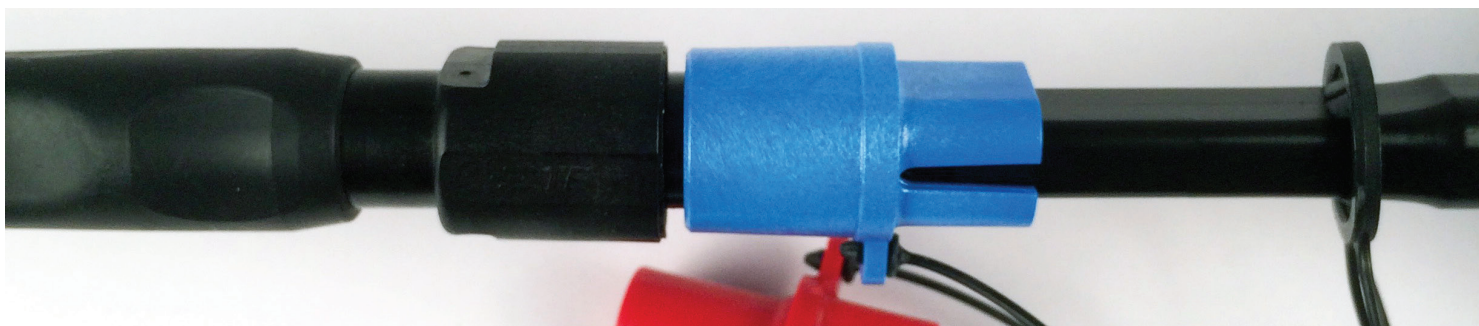
2.1.2. The following are directions for cleaning an HMFOC non-pinned connector using US CONEC IBC brand cleaning tool - MT Series (PN 15639).



*HMFOC Non-Pinned Connector and Cleaning Tool*



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 HMFOC 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\*.



*Cleaning Tool Pushed into HMFOC Non-Pinned Connector*

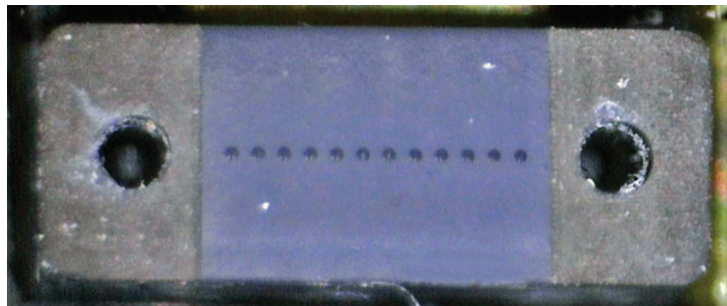
2.1.3. Inspect the connector. If there are still contaminants, use a small amount of non-isopropyl alcohol solvent (e.g. Chemtronics PX Wash, Sticklers MicroCare Cleaning Fluid FPF, etc.) on one or more 2.5mm fiber optic swabs (e.g. Chemtronics Coventry, Sticklers Clean Stixx MCC-S25, etc.) to remove any remaining dust, dirt or contaminants from the ferrule end face. Always use a new swab for each connector and always follow-up with a dry clean using the cleaning tool procedure from step 2.1.2.

2.1.4. 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.

## 2.2. Cleaning the Pinholes on the Non-Pinned HMFOC Connector

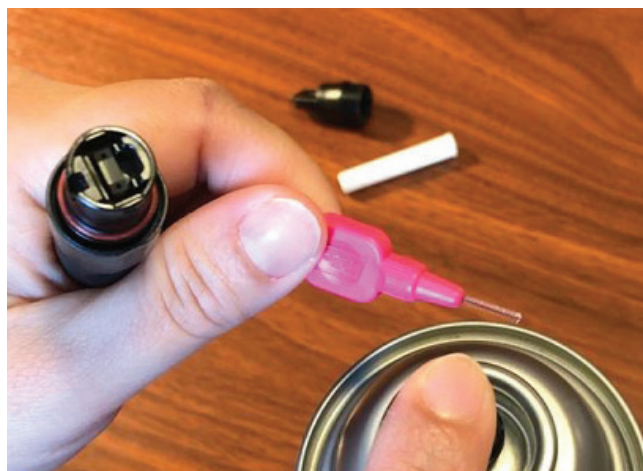
**Note: Cleaning the pinholes on HMFOC connectors is the last resort for trouble-shooting a high loss connection, and only applicable for experienced personnel.**

2.2.1. Inspect the connector with 50x inspection scope (e.g. Dino-Lite brand AM4815ZTL handheld digital microscope or equivalent). If there are contaminants around the pinholes, they may need to be cleaned according to the following procedure.



*Example of HMFOC Endface with Dirty Pinholes*

2.2.2. 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.

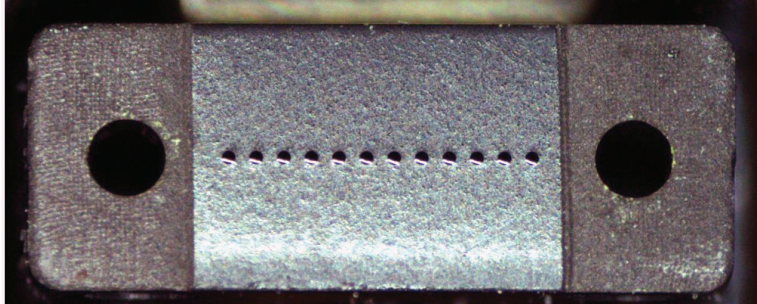


*\* Always follow the cleaning tool manufacturer's cleaning instructions for best results.*

2.2.3. 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.

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

2.2.5. 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.



*Example of a Clean HMFOC Endface with Clean Pinholes*

2.2.6. 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.