Fiber Optic Connector and Adapter Cleaning Procedures
I) Cleaning Single Fiber Connectors (LC/SC/ST) and Adapters

a) Connector Ferrule – Exposed Endface

1) Dry Cleaning: Using a reel-based cassette cleaner with medium pressure, wipe the connector endface against a dry cleaning cloth (single swipe per exposure) in one direction. For angled physical contact (APC) polished connectors, ensure that the entire endface surface mates with the cleaning cloth. Dry cleaning will generally remove airborne contamination and should be attempted first. Inspect the connector endface for contamination after cleaning.

Another method is to use single fiber In-bulkhead cleaners (I.B.C) that are especially designed for both physical contact (PC) and angled physical contact (APC) polished connectors. These devices feed a cleaning cloth across a head while the head rotates. The cleaning cloth is advanced to ensure it is clean. Install the connector into a clean adapter and after inserting a cleaner tip inside the adapter from the opposite end, press the lever to initiate cleaning. Some single fiber IBC cleaners offer intuitive cleaning with audible click when engaged. Always inspect the connector endface for contamination after cleaning.

2) Wet Cleaning: Lightly moisten a portion of a lint free wipe with fiber optic cleaning solution (or > 91% Isopropyl Alcohol) and applying medium pressure, first wipe the endface against the wet area and then onto a dry area to clean potential residue from the endface. For APC polished connectors, ensure that the entire endface surface mates with the cleaning wipes. Wet cleaning is more aggressive than dry cleaning, and will remove airborne contamination as well as light oil residue and films. Perform the dry cleaning as described above after wet cleaning and inspect the connector endface for contamination after cleaning.

   Caution: Always clean the sides and the tip of ferrule. Core alignment may be affected if ferrule is not thoroughly cleaned.

b) Connector Ferrule – Bulkhead Adapter Application

1) Dry Cleaning: Insert an appropriate size cleaning stick tip into the adapter until contact is made with the connector on the opposite end. Rotate the cleaning stick with medium pressure in one circular motion as it is pulled from the adapter. Inspect the endface for any contamination after cleaning.

Another method is to use In-bulkhead cleaners (I.B.C) that are especially designed for both physical contact (PC) and angled physical contact (APC) polished connectors. Insert cleaner tip inside the adapter until contact is made with the connector on opposite end and press lever to initiate cleaning. Some single fiber IBC cleaners offer intuitive cleaning with audible click when engaged. Inspect the connector endface for contamination after cleaning.

2) Wet Cleaning: Insert a lightly moistened, appropriate sized cleaning stick tip with fiber optic cleaning solution (or > 91% Isopropyl alcohol) into the adapter until contact is made with the connector on the opposite end. Rotate the cleaning stick with medium pressure in one circular motion as it is pulled from the adapter. Follow up with a dry cleaning stick and complete with dry cleaning method using In-bulkhead cleaners (I.B.C). Always inspect the connector endface for contamination after cleaning.

   Caution: Discard cleaning sticks after each use. Do not turn the cleaning stick back and forth pressing against the connector endface as this may cause scratches if a large contamination is present.
c) Single Fiber Adapters – Exposed/ Bulkhead Adapter Application

1) Dry Cleaning: For both exposed and connector mated adapters, insert a dry adapter cleaning stick (or fiber adapter sleeve brush) inside the adapter and pull out with twisting motion; cleaning inside surface of the alignment sleeve. After cleaning the adapter with the connector installed on one end, inspect the connector endface for contamination.

2) Wet Cleaning: For both exposed and connector mated adapters, insert an adapter cleaning stick (or fiber adapter sleeve brush) moistened with fiber optic cleaning solution (or > 91% Isopropyl Alcohol) inside the adapter and pull out with twisting motion; cleaning inside surface of the alignment sleeves. Follow up with a dry swab. After cleaning the adapter with the connector installed on one end, inspect the connector endface for contamination.

Caution: Discard cleaning sticks after each use. Do not rotate the cleaning stick back and forth while pressed against the connector endface as this may cause scratches if a large contamination is present.

II) Cleaning Multi-Fiber Array Connector (MPO) and Adapter

a) Connector Ferrule – Exposed EndFace

1) Dry Cleaning: Using a reel-based cassette cleaner with medium pressure, wipe against the dry cleaning cloth (single swipe per exposure) in one direction. There are special cleaners available, which can be used for the pinned and the unpinned (PC and APC polished) MPO connectors. For APC MPO connectors, ensure that the entire endface surface mates with the cleaning cloth. Dry cleaning will generally remove airborne contamination and should be attempted first. Always inspect the connector endface for contamination after cleaning.

Another method is to use a reel-based MPO In-bulkhead cleaner (IBC) especially designed for cleaning both the pinned and the unpinned (PC and APC polished) MPO connectors. Insert the MPO connector into the cap at the tip into the cleaner, and rotate the cleaner wheel to clean the connector endface. Always inspect the connector endface for contamination after cleaning.

2) Wet Cleaning: For an unpinned MPO connector, lightly moisten a lint free wipe with fiber optic cleaning solution (or > 91% Isopropyl Alcohol) and by applying medium pressure, wipe the endface of the MPO connector in a direction perpendicular to the fiber array. Repeat the process using a dry lintfree wipe. For APC MPO connectors, ensure that the entire endface surface mates with the cleaning cloth. Follow up with dry cleaning using an MPO In-bulkhead cleaner (IBC) as described above and always inspect the connector endface for contamination after cleaning.

For wet cleaning of a pinned MPO connector, fold the moistened wipe and using creased portion with medium pressure, wipe the endface of the MPO connector in a direction perpendicular to the fiber array. Repeat the process using dry lintfree wipe. For APC MPO connectors, ensure that the entire endface surface mates with the cleaning cloth. Follow up with dry cleaning using an MPO In-bulkhead cleaner (IBC) as described above and always inspect the connector endface for contamination after cleaning.
Another wet cleaning method for both pinned and unpinned MPO connectors is to use a lightly moistened 2.5 mm SC/ST cleaning stick tip with fiber optic cleaning solution (or > 91% Isopropyl alcohol). With a damp tip, clean the pins by holding the tip parallel to the pins such that the tip end contacts the ferrule. Applying medium pressure, wipe the cylindrical surface of the pins, the connector endface in a direction perpendicular to the fiber array and all the way around each pin. Repeat the process using a dry cleaning stick tip. Follow up with dry cleaning as described above. Always inspect the connector endface for contamination after cleaning.

Caution: To prevent scratching the end face, always clean the MPO connectors with a cleaning motion from top to bottom perpendicular to the fiber array. Never clean the MPO connector by rubbing across it from side to side (parallel to fiber array). Discard cleaning sticks after each use.

b) Connector Ferrule – Bulkhead Adapter Application

1) Dry Cleaning: Insert the tip of the In-bulkhead cleaners (IBC), especially designed for both the pinned and the unpinned (PC and APC polished) MPO connectors, inside the MPO adapter and rotate the cleaner wheel to clean the connector endface. Inspect the connector endface for contamination after cleaning.

2) Wet Cleaning: Lightly moisten a 2.5 mm SC/ST cleaning stick tip with fiber optic cleaning solution (or > 91% Isopropyl alcohol) into the adapter until a contact is made with the connector on opposite end. Clean the pins by holding the tip parallel to the pins such that the tip end contacts the ferrule and wipe the cylindrical surface of the pins. Applying medium pressure, wipe the end face in a direction perpendicular to the fiber array and all the way around each pin. Follow up with a dry cleaning stick tip and complete the dry cleaning using an MPO In-bulkhead cleaner (IBC) as described above. Always inspect the connector endface for contamination after cleaning.

Caution: Discard cleaning sticks after each use. Do not turn the cleaning stick back and forth pressing against the connector endface as this may cause scratches if a large contamination is present.

c) MPO Adapter - Exposed/ Bulkhead Adapter Application

1) Wet Cleaning: Remove the MPO connectors from the adapters. Wipe inside the surface with a cleaning stick moistened with fiber optic cleaning solution (or > 91% Isopropyl Alcohol). Follow up with a dry cleaning stick. After cleaning the adapter with a connector installed on one end, inspect the connector endface for contamination.

Warning
As compressed air products have the potential to deposit moisture and propellant debris on a critical optical surface, Commscope does not recommend the use of any canned air product when cleaning fiber optic connector surfaces.

Note
All other manufacturer’s equipment & devices that are part of the system installation should be cleaned according to the appropriate manufacturer’s recommended cleaning procedures.