

## 1. INTRODUCTION

This instruction sheet covers the cleaning and inspection procedure for the fiber optic connectors listed in Figure 1.

CONNECTOR	REFERENCE PART NUMBER
NETCONNECT* MPO	1457981-1
MT-RJ	1278398-1
LIGHTRAY MPX*	1374887-1

Figure 1

### NOTE



*Dimensions in this instruction sheet are in metric units [with U.S. customary units in brackets].*

## 2. DESCRIPTION

Cleanliness of fiber optic interfaces is extremely important for system performance. It is recommended that the end faces of mating connectors be inspected and clean:

- after removing the protective cap for installation

### NOTE



*The protective cap is not an air-tight seal and only intended to protect the end face from damage; therefore, the end face must be inspected for contamination (dust particles or residue) after removing the protective cap and, if necessary, cleaned.*

- immediately before mating the connectors
- if the end face is touched (with fingers or tools) or otherwise contaminated during installation

## 3. CLEANING AND INSPECTION

### DANGER



*Never inspect or look into the end of a fiber when optical power is applied to the fiber. The infrared light used, although it cannot be seen, can cause injury to the eyes.*

### 3.1. Tools and Materials

The following tools and materials are necessary for inspection and cleaning the end faces of the mating connectors. Follow the operating instructions packaged with the tools and safety guidelines packaged with the materials.

For single fiber connectors, or MPO or MT-RJ connectors *without* guide pins:

- filtered compressed air (138 through 414 kPa [20 through 60 psi])

- fiber optic inspection microscope (200×)
- tape
- isopropyl alcohol (99% pure)
- TEXWIPE TX604 TechniCloth™ wipers or dry, lint-free cloths, or equivalent

For MPO or MT-RJ connectors *with* guide pins, or LIGHTRAY MPX connectors:

- filtered compressed air (138 through 414 kPa [20 through 60 psi])
- magnifier (10×)
- isopropyl alcohol (99% pure)
- TEXWIPE TX604 TechniCloth wipers or dry, lint-free cloths, or TEXWIPE TX759B MicroAbsorbant™ swabs, or equivalent

### 3.2. Single Fiber Connectors and MPO and MT-RJ Connectors *Without* Guide Pins

1. If the connectors are covered with excessive dirt or debris, blow compressed air over the connectors to remove dirt or debris.
2. Remove the protective cap from the connector, or unmate the connectors.
3. Using the microscope, inspect the end face of the connectors for contamination (dust particles or residue). If contamination IS NOT present on either end face, mate the connectors immediately to prevent contamination, or re-install the protective caps to prevent damage.

### CAUTION



*IT IS IMPORTANT that the end face of both connectors are clean **BEFORE** mating.*

4. Place two wipers (or equivalent), one on top of the other, on a clean, dry, flat, smooth surface. Secure the top and bottom edges of the wiper to the surface with tape.

### NOTE



*Wipers (or cloths) should be discarded after 25 uses.*

5. Moisten a corner of the top wiper with the isopropyl alcohol. See Figure 2.
6. Holding the connector perpendicular to the wiper, place the end face on the moistened portion of wiper, and wipe the end face across the wiper by approximately 50.8 mm [2 in.]. Refer to Figure 3.

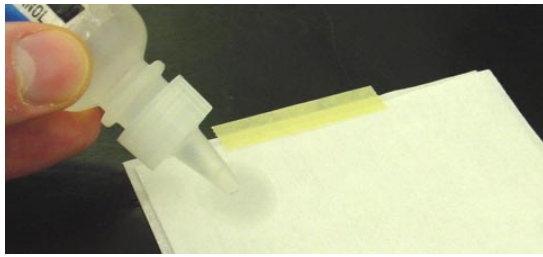


Figure 2

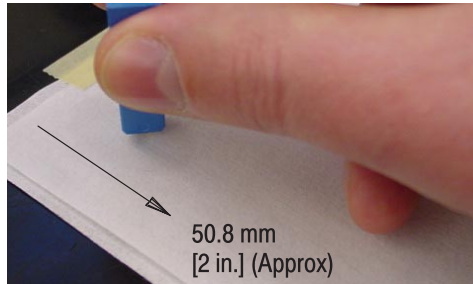


Figure 3

7. Using the microscope, inspect the end face to make sure that all contamination is removed. If not, repeat Steps 5 and 6.

8. Mate the connectors immediately to prevent contamination, or re-install the protective caps to prevent damage.

**NOTE**

*If protective caps are re-installed, the connectors must be inspected again for contamination BEFORE mating.*

### 3.3. MPO and MT-RJ Connectors With Guide Pins and LIGHTRAY MPX Connectors

1. If the connectors are covered with excessive dirt or debris, blow compressed air over the connectors to remove dirt or debris.

2. Unmate the connectors, or remove the protective cap from the connector.

3. Using the microscope, inspect the end face of the connectors for contamination (dust particles or residue). If contamination IS NOT present on either end face, mate the connectors immediately to prevent contamination, or re-install the protective caps to prevent damage.

**CAUTION**

*IT IS IMPORTANT that the end face of both connectors are clean BEFORE mating.*

4. Option 1 (refer to Figure 4):

a. Fold a wiper (or equivalent) into one-fourth its size; then lightly moisten one edge with the isopropyl alcohol.

**NOTE**

*Wipers (or cloths) should be discarded after 25 uses.*

b. Place the moistened edge of the wiper against one of the guide pins, and move the wiper toward the opposite guide pin.

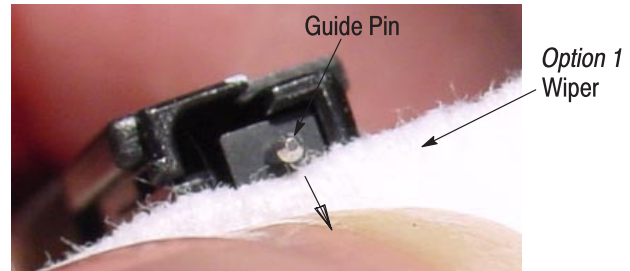


Figure 4

c. Using a clean dry wiper, wipe the end face the same way.

5. Option 2 (refer to Figure 5):

a. Lightly moisten a swab.

b. Place the swab, against one of the guide pins, and move the swab toward the opposite guide pin. Wipe again.

c. Using a clean dry wiper, wipe the end face the same way.

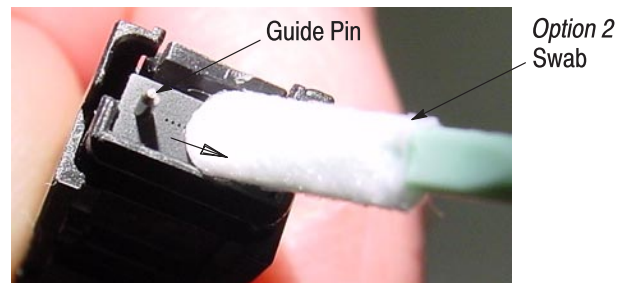


Figure 5

6. Using the magnifier, inspect the end face to make sure that all contamination is removed. If not, repeat Step 4 or 5.

7. Mate the connectors immediately to prevent contamination, or re-install the protective caps to prevent damage.

**NOTE**

*If protective caps are re-installed, the connectors must be inspected again for contamination BEFORE mating.*

## 4. REVISION SUMMARY

- Updated document to corporate requirements
- New format and deleted obsolete part numbers