CORNING

No Polish SC Connector SM and MM 250/900 µm

P/N 78-8140-0034-1
Issue 7

related literature | Search corning.com/opcomm. Click on "Resources/Standard Recommended Procedures."

INSTRUCTIONS

SAFETY PRECAUTIONS

Protective Eyewear

CAUTION

Safety glasses should be worn when handling chemicals and cleaving the optical fiber.

Chemical Precautions

WARNING

Storage, use and disposal of isopropyl alcohol should be per your company health, safety and environmental instructions.
Refer to Material Safety Data Sheet for health hazards, safe handling, proper use and control measures.

CAUTION

Product contains phenylmethyl silicone (63148-58-3), hydrophobic silica (68611-44-9) and may cause minimal eye irritation. Avoid contact with eyes and wash hands before eating or smoking. Upon eye contact, immediately flush eyes with water while holding eyelids open and continue flushing for ten minutes. Contact a physician. Upon skin contact, wash with soap and water. Product Information: Material Safety Data Sheet

Bare Fiber Handling

CAUTION

Cleaved glass fibers are sharp and can pierce the skin. Use tweezers when handling shards and dispose of them properly per your company health and safety instructions.

Fiber/Cable Handling

CAUTION

Optical fiber can be damaged by excessive tensile, compressive and bending forces. Consult the manufactures' specifications for proper handling instructions.

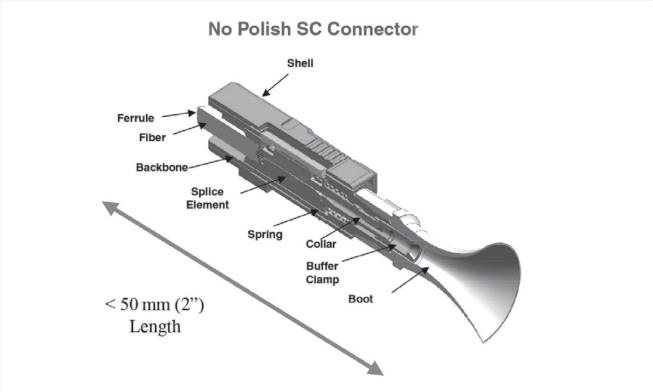
Laser Safety

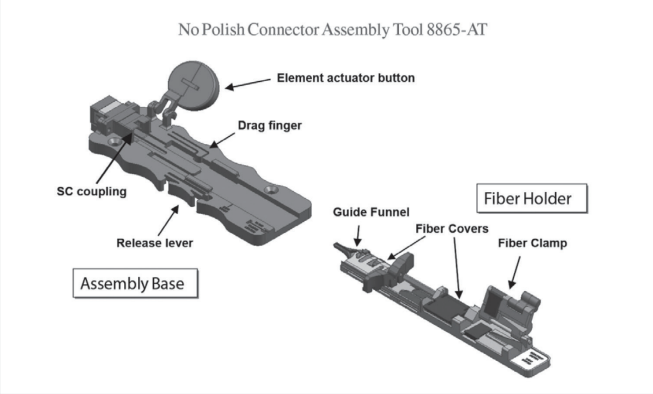
CAUTION

Take the proper precautions when working with optical fiber because invisible laser light may be present. The principal laser hazard when working with fiber optics is injury to the eye. Never look directly into the fiber or connector using the naked eye or a microscope.

1.0 KIT CONTENTS

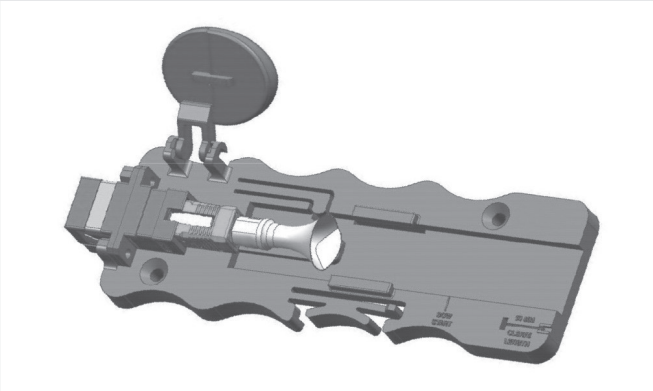
1.1 The diagrams below show the parts of the No Polish Connector (single mode pictured) and the No Polish Connector Assembly Tool 8865-AT. Please review these drawings to understand the instructions in the following pages.



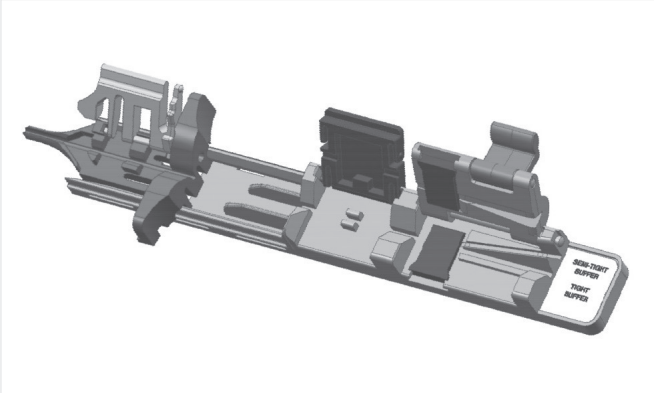


2.0 NO POLISH SC CONNECTOR SM AND MM 250/900 µM

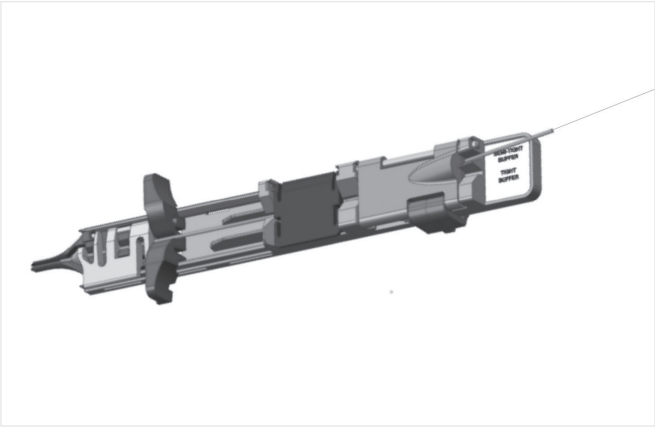
2.1 Remove the dust caps from the front and rear of the connector. Open the actuator button on the assembly tool. Insert the connector with the white actuation cap facing up into the coupling, pushing forward until it clicks.

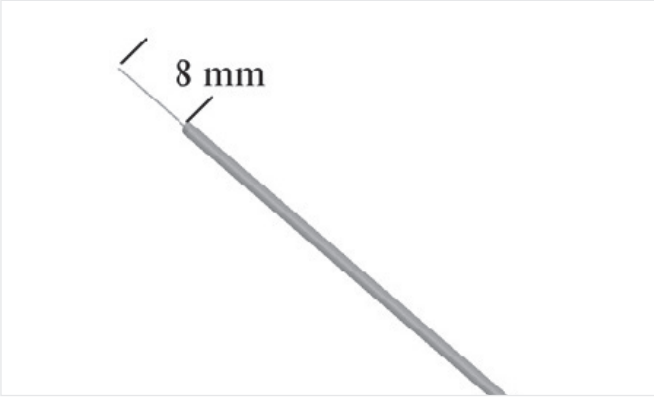


2.2 Clean the fiber holder with a lint-free cloth soaked with alcohol. Move guide funnel forward on fiber holder until it stops; open fiber covers and fiber clamp.



2.3 Strip, clean and cleave fiber to 8 mm +/- 0.5 mm (0.4 inches). Use the cleave length marker on the assembly base to verify the length. For semi-tight fiber, utilize the fiber holder in the stripping process by placing the fiber into the holder with the fiber to be stripped protruding from the rear of the holder, opposite the guide funnel. Close the rear clamp and proceed to strip the fiber. This will prohibit the buffer from moving or stretching during the stripping process. Once the fiber has been stripped remove the fiber from the holder.

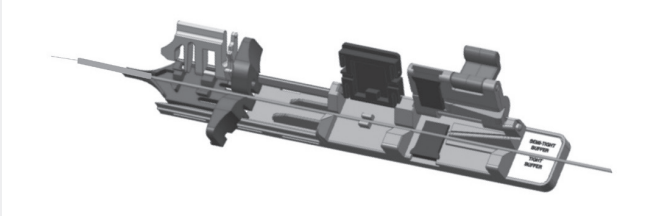


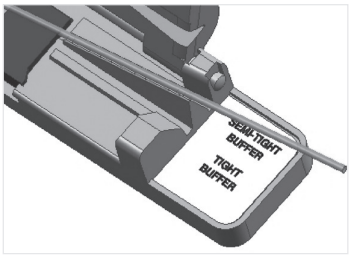


Note: For SEMI-TIGHT FIBER: To determine if using semi-tight buffer fiber, grip the 900 µm buffer in one hand and crimp the 900 µm with fiber strippers. If the buffer tube is easily pulled off with fingers, it is semi-tight buffer fiber. When using semi-tight buffer fiber, verify that the 250 µm acrylate coating does not protrude beyond the end of the 900 µm buffer after stripping is completed and after cleaving is completed.

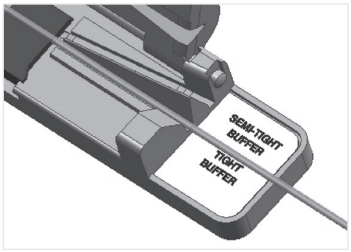
If the 250 µm fiber moves inside the 900 µm buffer after cleaving or stripping, an additional fiber holder is required. Place the second fiber holder eight inches (20 cm) away from the end to be stripped, with the fiber protruding from the back of the holder. Using the "semi-tight" groove, clamp the fiber and proceed to strip, clean, and cleave the fiber as if it was tight buffered. Leave the holder on the fiber until the entire termination process is complete.

2.4 Lay the fiber in the proper groove of the fiber holder pictured below.

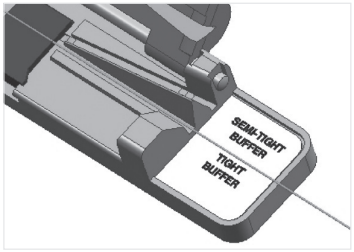




900 µm semi-tight buffer fiber



900 µm tight buffer fiber

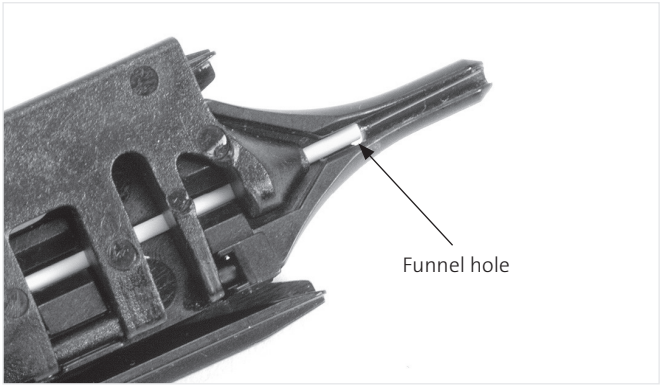


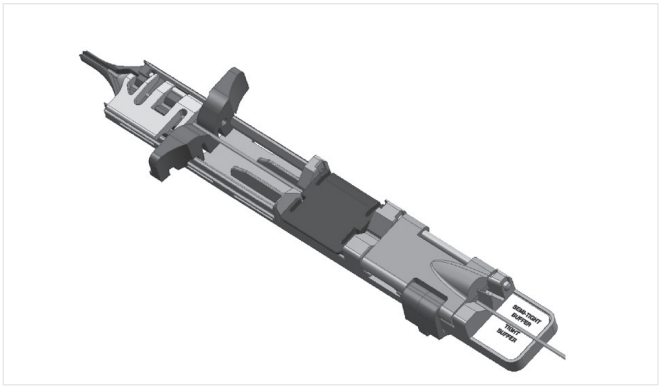
250 µm fiber

Note: For semi-tight buffer fiber, the fiber should be placed in the grove labeled "Semi-tight Buffer." For 250 µm fiber and 900 µm tight buffer fiber, place in the fiber holder groove which is labeled "Tight Buffer." This will provide the correct amount of clamping force for each type of fiber. In each case, make sure that the natural bow in the fiber is facing down, extending beyond the guide funnel end.

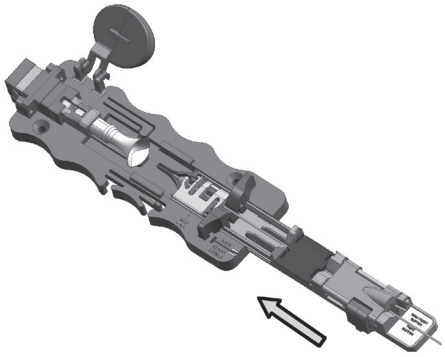
Note: For semi-tight buffer fiber, the fiber should be placed in the groove labeled "Semi-tight Buffer." For 250 µm fiber and 900 µm tight buffer fiber, place in the fiber holder groove which is labeled "Tight Buffer." This will provide the correct amount of clamping force for each type of fiber.

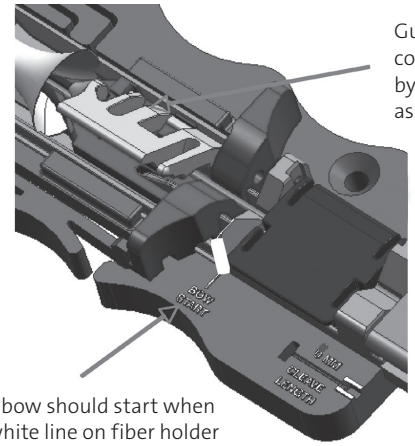
2.4 Verify the 8 mm cleave length again by using the length gauge on the assembly base. The 8 mm cleave length is measured from the end of the 900 µm buffer to the end of the cleaved fiber. Close the guide funnel and middle covers on the fiber holder. Ensure that the funnel is pushed completely forward to the end of the fiber holder. Pull fiber back until fiber end is flush with funnel end. To verify the cleave length is still correct, all coatings should align with the hole located in the funnel tip. Close the back clamp. On semi-tight buffer fiber, the 250 µm coating may protrude 1 mm past the 900 µm semi-tight buffer. Re-strip, clean and cleave the fiber, if necessary, to meet length requirements.



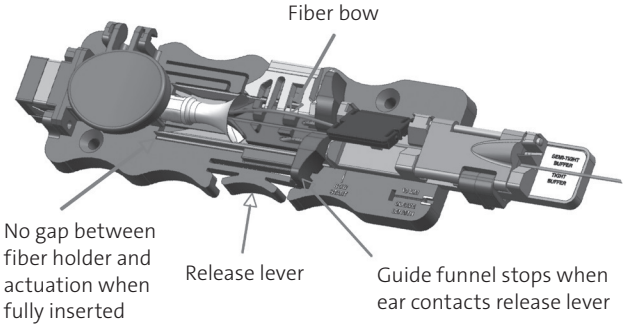


2.6 Place the fiber holder in assembly base and slowly slide the fiber holder forward.





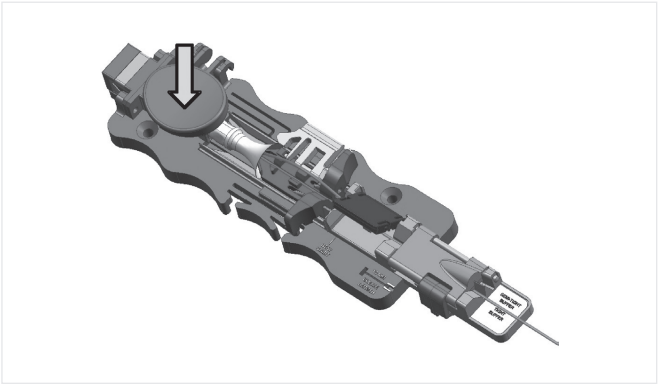
2.7 Continue to slowly slide the fiber holder toward the connector. A bow in the fiber should start when the white line on the fiber holder aligns with the white line (BOW START) on the assembly base. If a bow is not seen, slide the fiber holder back and re-strip, clean and cleave the fiber and begin the termination process again. If a bow is seen before the two white lines meet, re-strip, clean and cleave the fiber and start the termination process again.



2.8 Continue to slowly slide fiber holder towards connector until it stops. Verify fiber bow again.

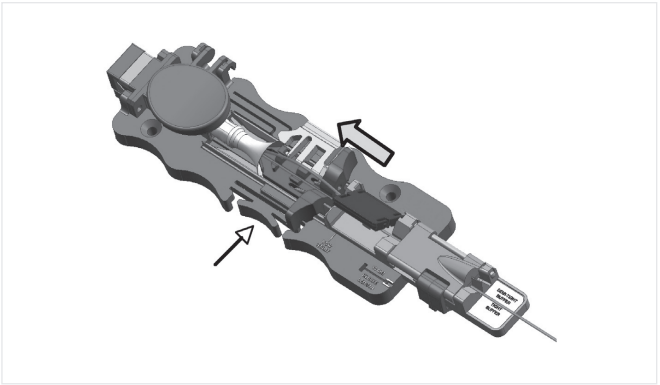
Note: The fiber will bow and lift the middle cover for rigid fibers and remain closed for flexible fibers. This ensures proper fiber insertion force.

2.9 Firmly press button to actuate splice element while maintaining fiber bow.

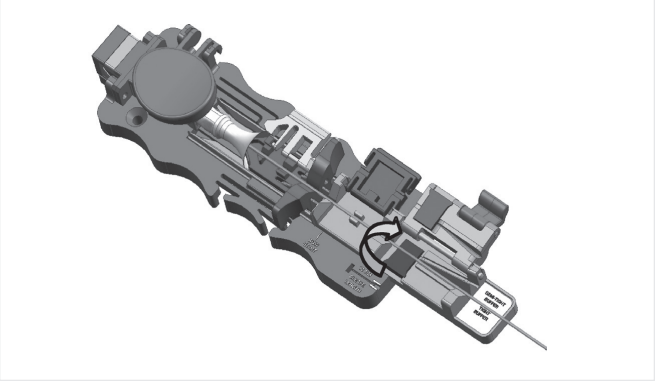


Note: If you require continuity verification or need to test the link prior to placing in service you will perform this step now. Do not proceed to step 2.10 until testing is complete. If re-termination is required, please skip to Section 3, No Polish Connector (NPC) Re-termination.

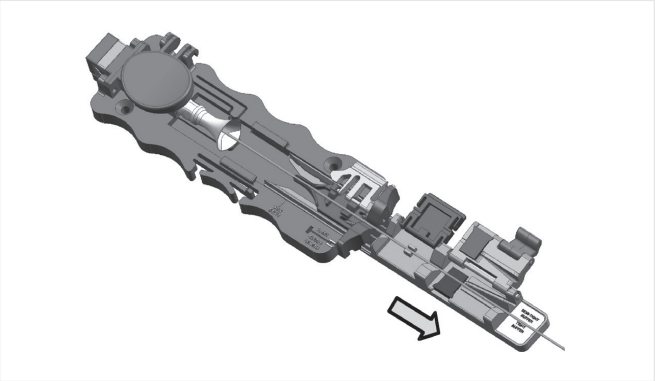
2.10 Press the release lever to allow forward motion of funnel. Push on ears to move funnel forward and actuate buffer clamp.



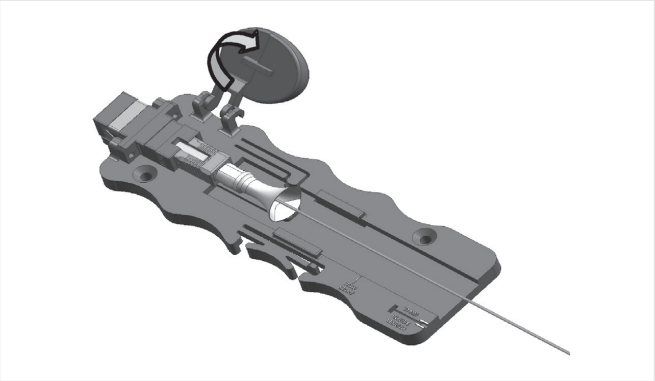
2.11 Lift the fiber clamp and fiber covers to release fiber.



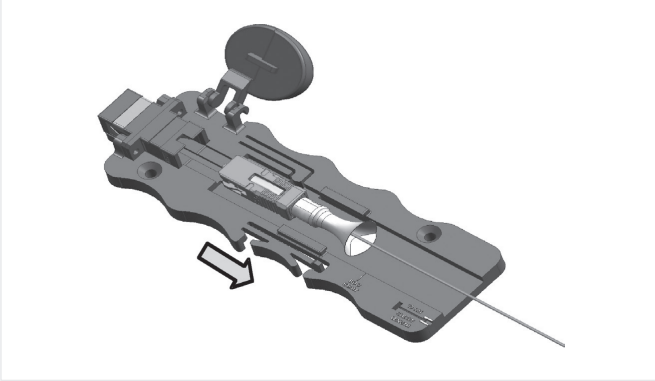
2.12 Slide the fiber holder from the actuation tool. Optional: No Polish Connector can be tested in tool using SC coupling.



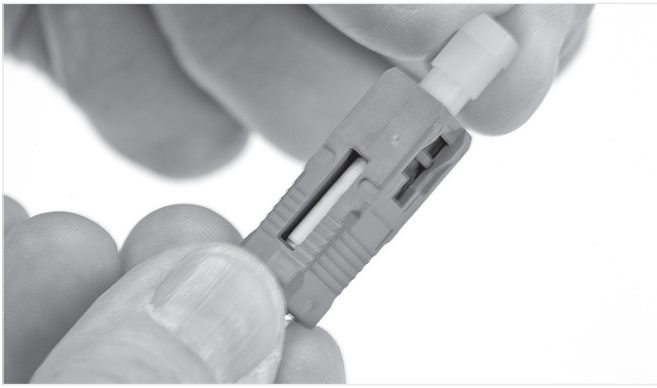
2.13 Lift element actuation button.



2.14 Pull the connector from the coupling.

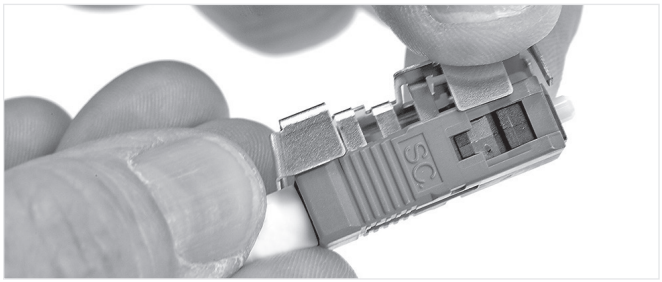


2.15 After removing the connector from the coupling, replace the dust cap on the ferrule until connector is ready to be placed in service.

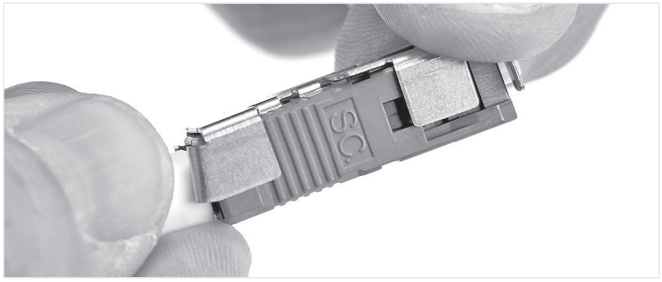


3.0 NO POLISH CONNECTOR (NPC) RE-TERMINATION

3.1 To re-terminate the No Polish Connecter, remove the connector from the actuation tool prior to activating the buffer clamp at the boot. Take the cap popper provided for you in the box of NPCs and place it in the three slots provided on the underside of the NPC connector shell as shown.

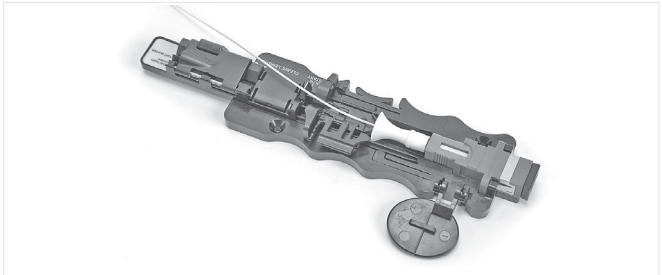


3.2 Firmly press the cap popper into the NPC shell until the actuation cap is depressed.



Note: Remove fiber and insert connector with the actuation cap facing up in the coupling, pushing forward until it clicks. Follow steps 2.3 through 2.9 to re-terminate the NPC connector.

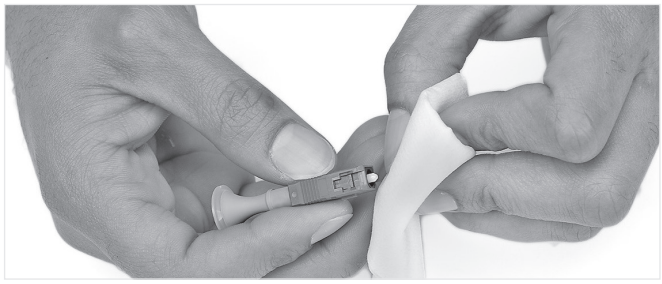
3.3 Upon verification that the connector has been terminated satisfactorily, slide the fiber holder back into the boot and proceed with steps 2.10 through 2.15 to complete the termination of the NPC connector.



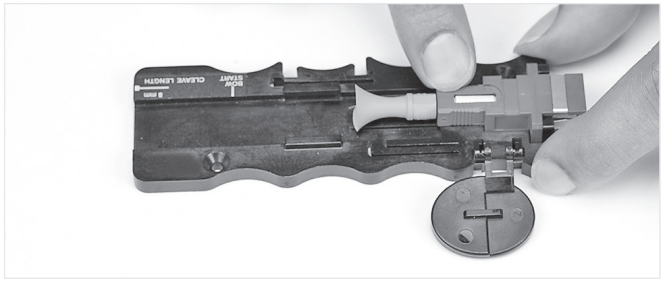
4.0 LOSS TESTING

This technical note is to provide a means for verifying connectivity prior to performing the final installation step of initiating the buffer clamp on the connector. Following the procedure below will allow the end-user to perform in-process testing, giving the technician the ability to re-terminate/connectorize using the same connector.

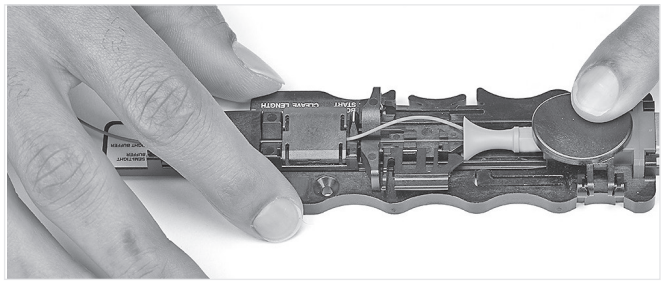
4.1 Clean the connector endface with reagent-grade isopropyl alcohol and a lint-free cloth.



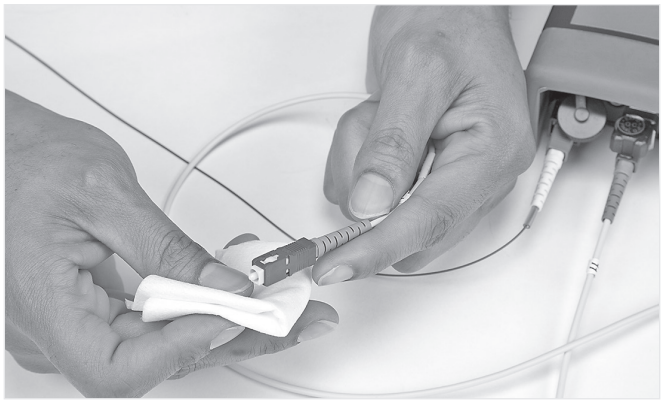
4.2 Insert the connector into the adapter.

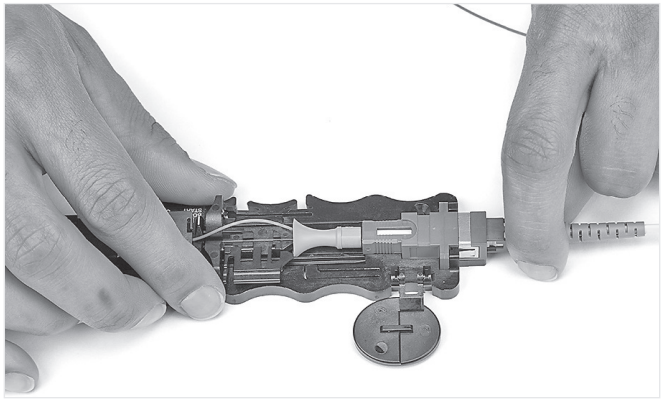


4.3 Follow the connector instructions for fiber preparation and termination, stop immediately after actuating the splice. **DO NOT ACTUATE THE BUFFER CLAMP.**

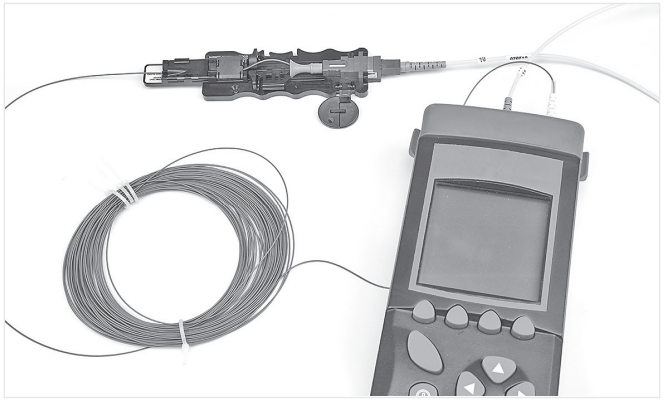


4.4 Insert the cleaned test lead into the No Polish Connector Assembly Tool 8865-AT.



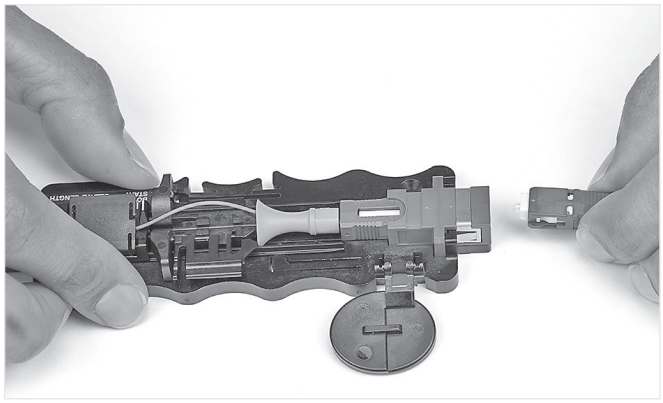


4.5 Initiate connectivity testing.

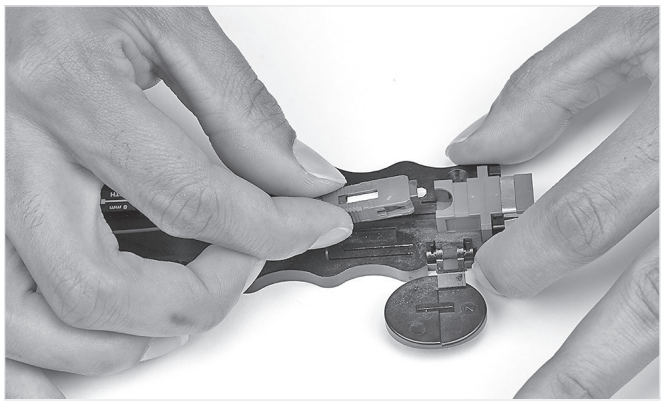


4.6 If connectivity testing results are within accordance of your company standards/specification, activate the buffer clamp. Remove the connector from the No Polish Connector Assembly Tool 8865-AT, replace the dust cap until the connector is ready to be placed into service.

4.7 Remove the test lead from the NPC assembly tool adapter.

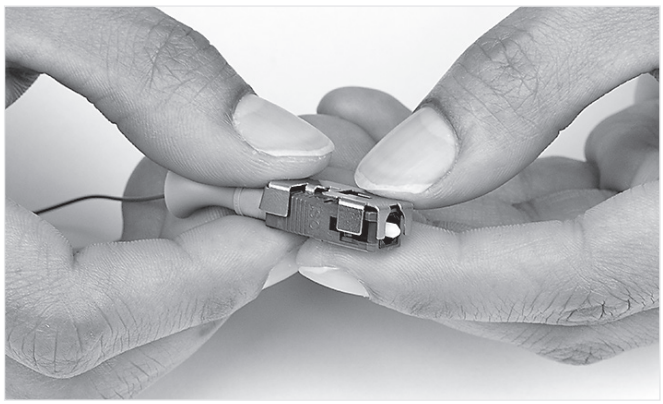


4.8 If connectivity testing results are not within your company standards/specification, disengage the No Polish Connector (NPC) from the assembly tool.



4.9 Remove the test lead from the NPC tool adapter.

4.10 Use the cap popper to disengage the activated cap/splice by inserting into the NPC shell.



4.11 Refer to the connector instructions for fiber preparation and re-termination.

4.12 Repeat the above verification procedure until the desired testing results are obtained.

No Polish Connector, Kit and Tool Descriptions	Packaging
8800 No Polish Connector SM SC Plug 250/900 µm with tool (blue housing)	60/package
6800-50 No Polish Connector SC MM 50 µm 250/900 µm with tool (black housing)	60/package
6800-50/LOMMF No Polish Connector SC MM 50 µm 250/900 µm LOMMF with tool (aqua housing)	60/package
6800-62.5 No Polish Connector SC MM 62.5 µm 250/900 µm with tool (beige housing)	60/package
8865/PR NPC Premium kit w/o Cleaver	1/package
8865 No Polish Connector Kit	1/package
8865-C No Polish Connector Kit with Cleaver	1/package
8865-AT No Polish Connector Assembly Tool	1/package

No Polish Connector Kit 8865-C with Cleaver
Kit Contents:
8865-AT NPC Assembly Tool 250/900 µm
2534 Fiber Cleaver (not included in 8865 kit or 8865/PR kit)
6362-TN Stripping Tool
6365-KS Kevlar Snips
Lint-Free Cloths (100/pkg)
Cleaning Alcohol Bottle
8835-AT NPC LC tool
Fiber Shard Container (Premium kit only)
NPC 8865-AT Euro Fiber Tool (Premium kit only)
Dual Lock (2) (Premium kit only)
NPC ST tool (Premium kit only)
Work Surface for Kit (Premium kit only)

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