Clearview Classic Cassette

Installation Manual

CLEARFIELD

Manual 019392 Rev A - Dec 2017

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Clearview Classic Cassette
Installation Manual

Application

The Clearview Classic Cassette supports patch only, patch and splice (Clearfield's in-cassette splicing option) and optical component packaging for all cable constructions and environments. The Clearview Classic Cassette multiplies and scales to meet your port density and application needs. It serves as a multiplier for fiber management solutions, scaling from 12 port wall boxes to 864 cross-connect panels and everything in between.

Description

The Clearview Classic Cassette is a system of six parts that fully nest together to support any application in the inside or outside plant. Parts are added or removed to support the configuration element desired for the environment into which it is being deployed. All types of fiber construction can be integrated into the cassette. The cassette can support all patch and splice, patch only, passive optical component hardware and plug-and-play scenarios.

The Clearview Classic Cassette is the heart of every product within the FieldSmart® fiber management system. With Clearview, the rules of fiber management have changed. No more does the service provider need to consider fiber management within the network layout - it's already built into the solution.

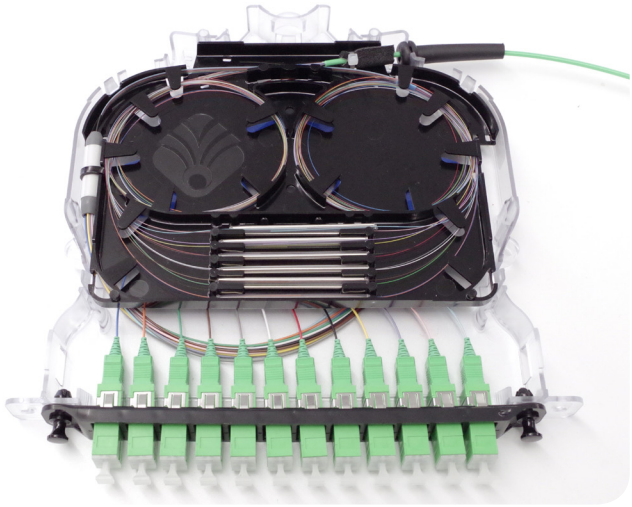
Technical Specifications

Clearview Classic Cassette	
Dimension	0.8" H x 8.6" W x 8.47" D
Ratings	Terminations are designed and tested to Telcordia GR-326; Clearfield® FiberDeep® Guarantee: 0.2 dB insertion loss or less, exceeding industry standards
Backwards Compatible	N/A
Material	Polycarbonate
Connector Types	Supports industry standard SC, LC, ST, FC and MPO singlemode and multimode connectors
Meters/Feet of Slack Storage	One meter of 250 µm used for internal splicing for patch and splice
Mounting Options	Integrated Clearview Mounting Ears

Configurations

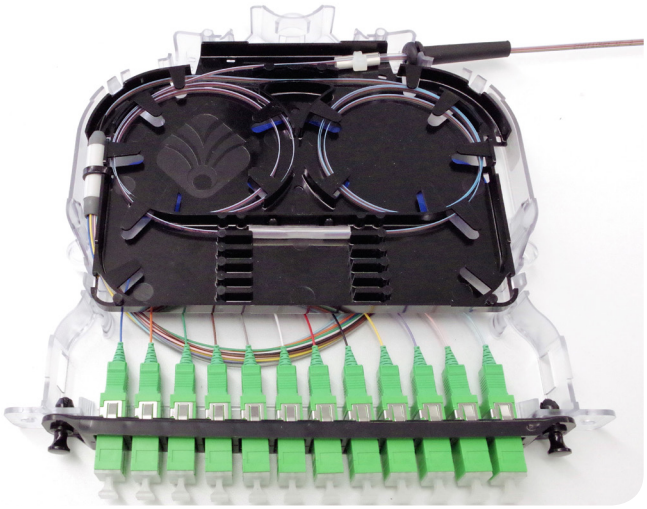
Patch and Splice: Loose Tube

A splice tray that nests into the lower tray is all that's needed to deliver an integrated patch & splice application. Up to two meters of 250 µm assemblies are pre-terminated, pre-loaded and slack stored inside the cassette for splicing to outside plant.



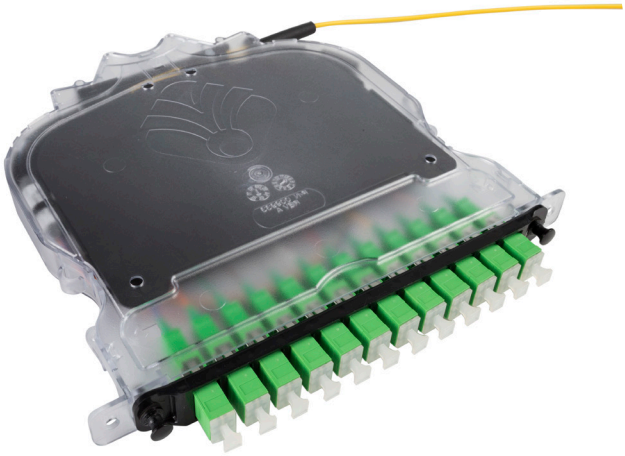
Patch and Splice: Ribbon

A splice tray that nests into the lower tray is all that's needed to deliver an integrated patch & splice application. One meter ribbon assembly broke out to 250 µm legs at front of the cassette.



Patch Only

Regardless of industry standard adapter style or cable construction, the Clearview Classic handles all patch only applications using the lower tray, bow-tie radius limiter, adapter plate and top cover.



Optical Components

Clearview integrates optical components into the identical cassette, allowing service providers to mix and match fiber modules with optical components in the same chassis.

MPO Plug and Play

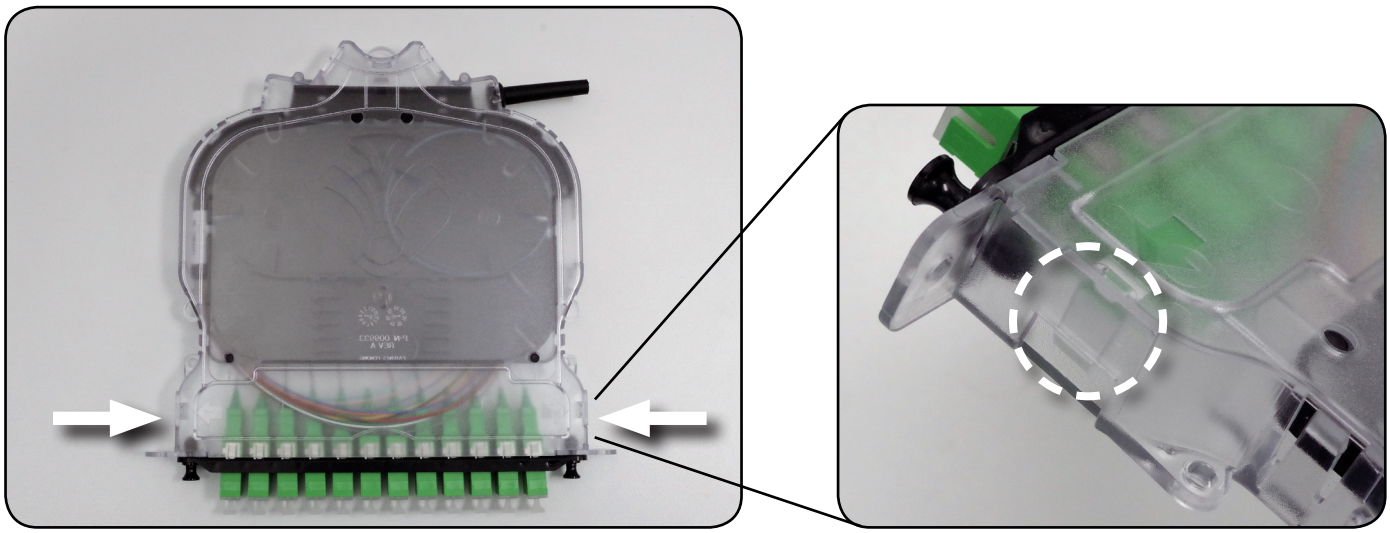
MPO to 12-fiber 900 µm assembly allows for plug-and-play by mating MPO to MPO with pre-terminated multi-fiber OSP or IFC. The standard version comes with MPO male in the cassette.

MPO Adapter Plate

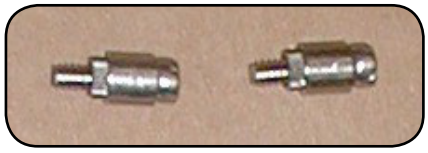
MPO Adapter Plate - LC/SC front input to 8-fiber MPO output allow for 1 x 16 or 1 x 32 splitting in a single cassette.

Splicing in the Clearview Classic: Loose Tube

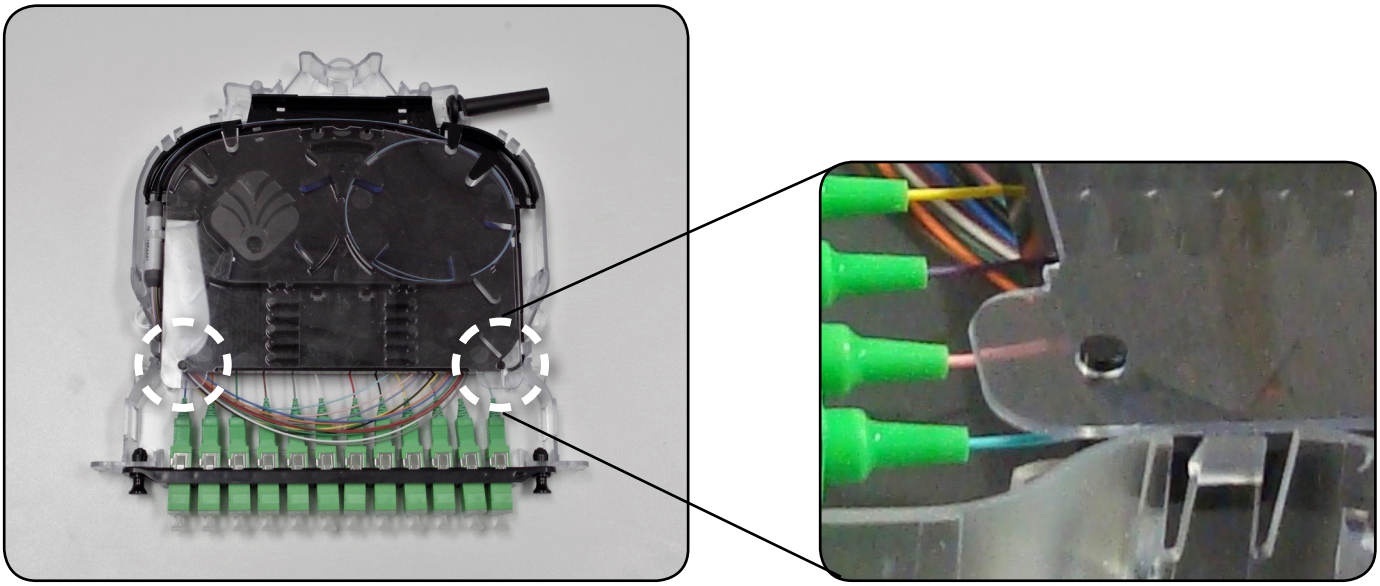
Remove the cover by pressing the tabs on the sides of the cassette, and lifting it from the base.



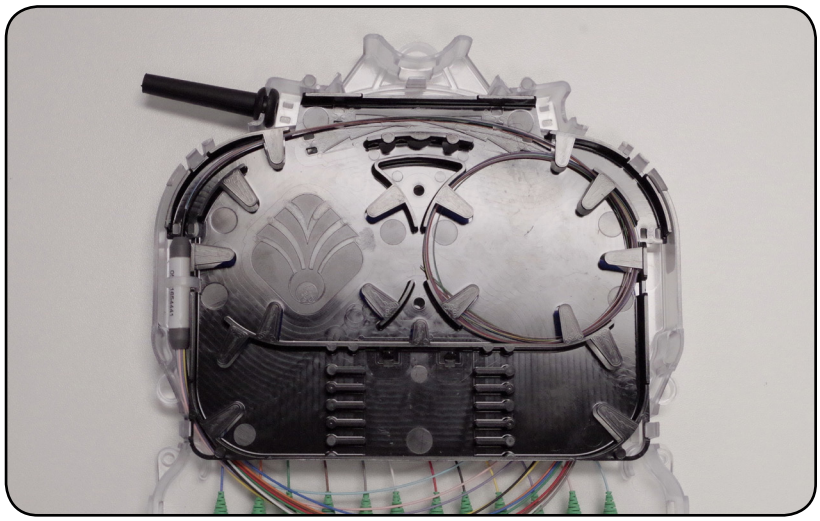
The mounting screws for the cassette are enclosed in a small bag and are attached to the back of the cassette. You will have (2) mounting screws. Remove them and set aside for future use.



The splice tray cover can be removed by lifting up on the two tabs in the corners of the cover, and then by moving it slightly forward.



The preloaded ready-to-splice 250 µm pigtails come pre-stored in the right raceway of the splice tray.



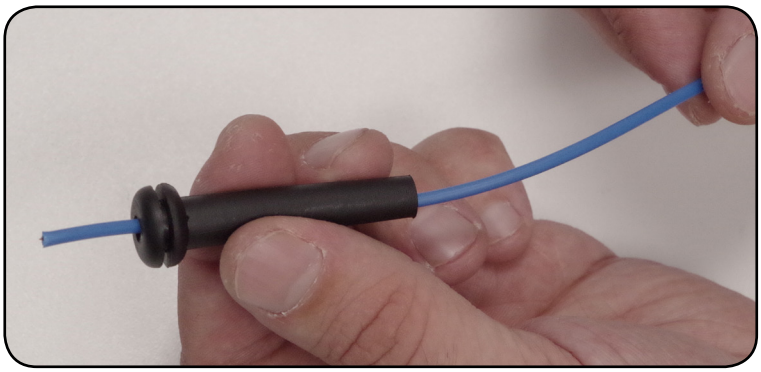
If in the end, after splicing, you need the cassette(s) exit to be “Left Exit” continue with the splicing instructions below. If you wish the cassette to be “Right Exit” Refer to page 12 for Right Rear Redirect special routing instructions.

Left Exit

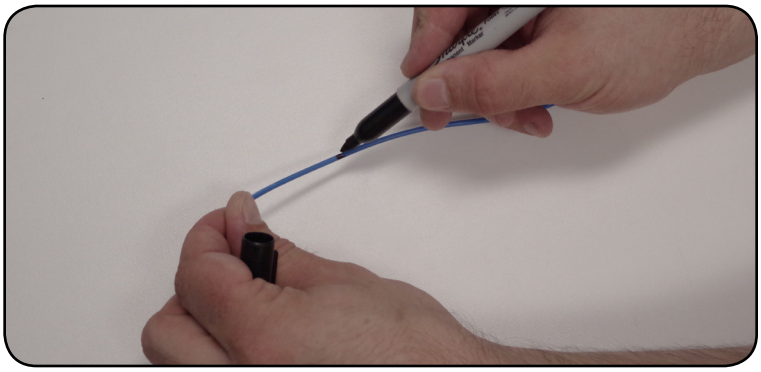
Right Exit

Note: *Exit is determined looking from the back of the cassette.*

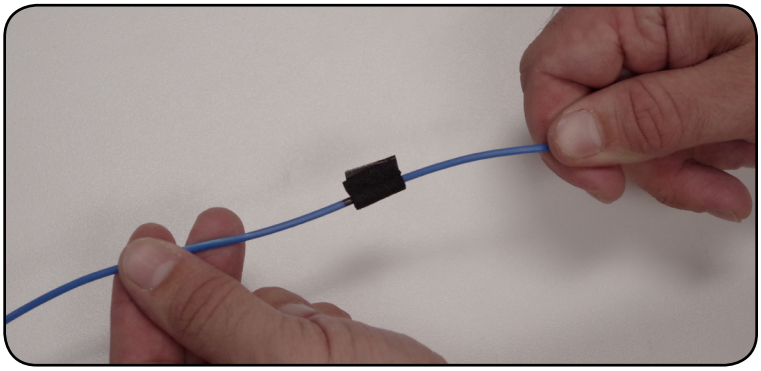
Take the incoming buffer tube that you wish to splice into the cassette, and slide the strain relief boot over 3 ft down the length of the buffer tube.



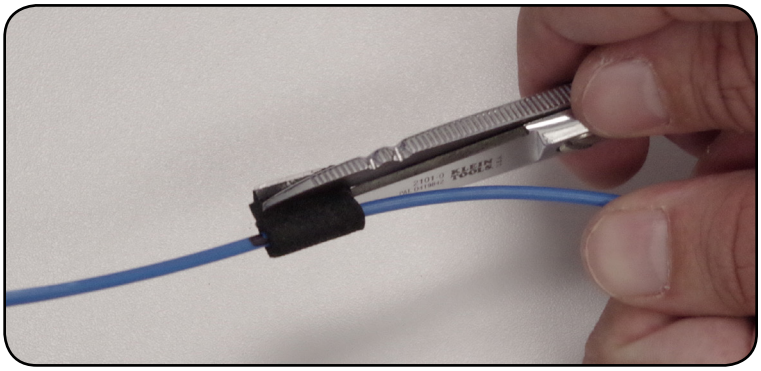
Mark the jacket of the buffer tube with a permanent marker 3 ft back from the end.



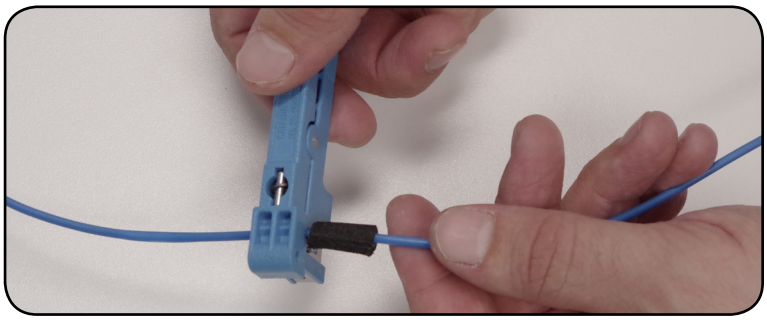
Wrap one lap of grommet tape around the buffer tube just behind your mark. Trim the excess.

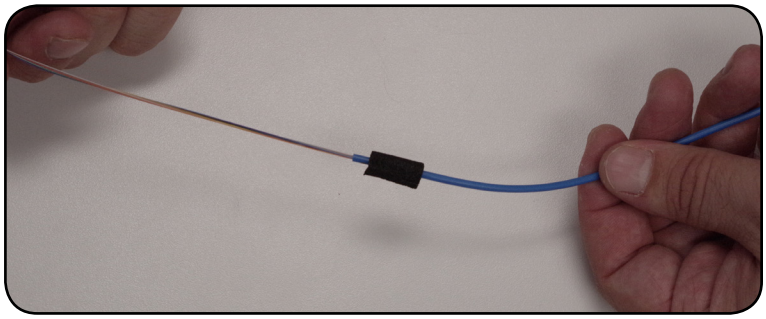


Note: *Do not wrap more than one layer of grommet tape as the added thickness could prevent the splice tray cover and cassette cover from closing properly.*



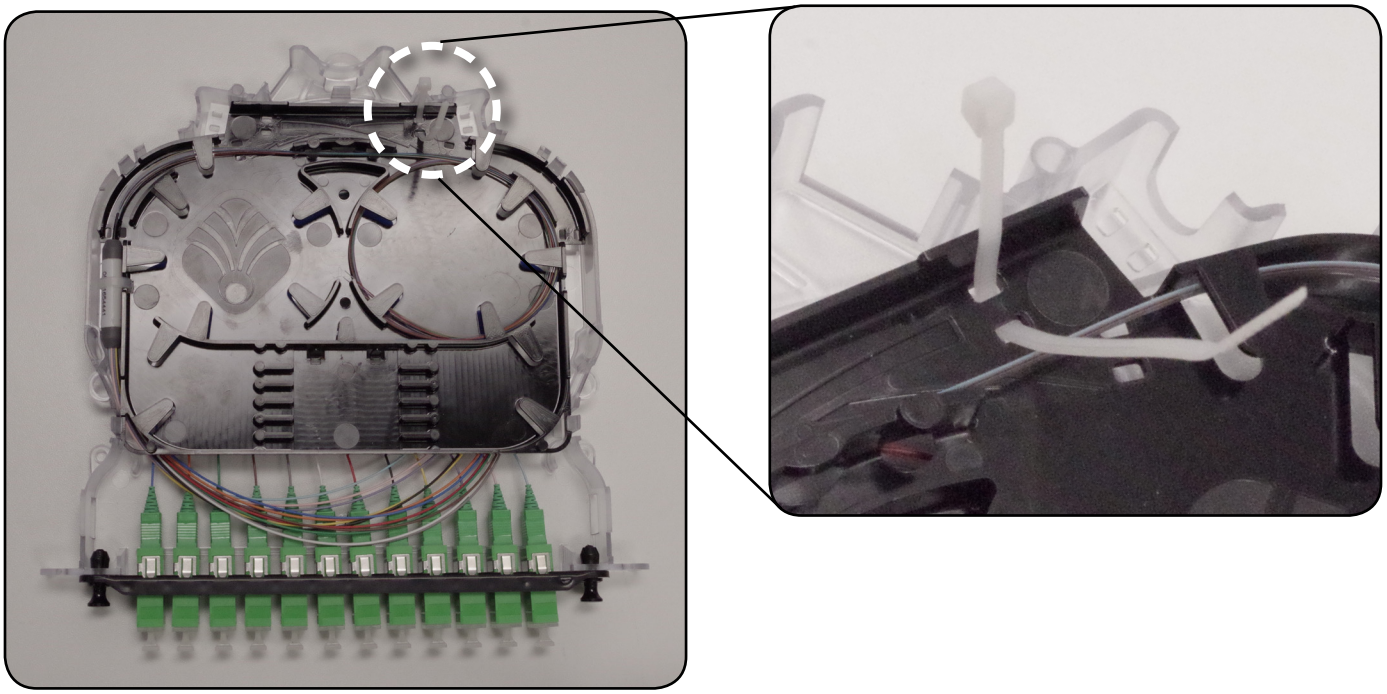
Using a buffer tube cutter, score the jacket at the mark you made and open up the buffer tube, pulling off the jacket.





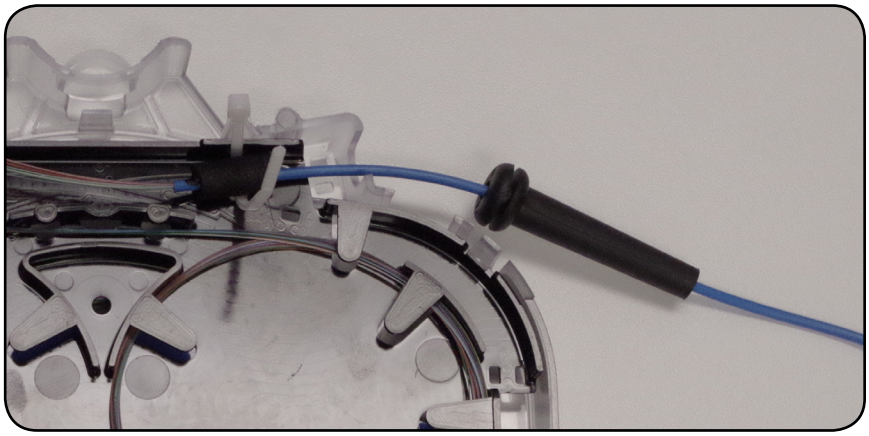
Note: *Be careful not to nick or cut the 250 micron fiber under the jacket.*

Take a 3/32” wide x 3” or 4” long zip tie (not supplied) and feed it through the tie down holes in the splice tray.

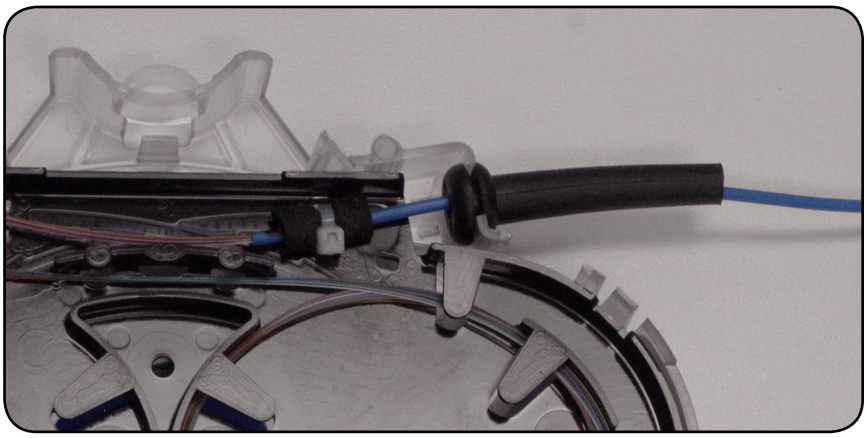


Note: *Instead of a zip tie, wax string can also be used to secure the buffer tube to the cassette. The splice tray in the cassette never has to be removed to perform a tie down or splicing function.*

Take the incoming buffer tube, place the grommet wrap in the splice tray and secure it with the zip tie.

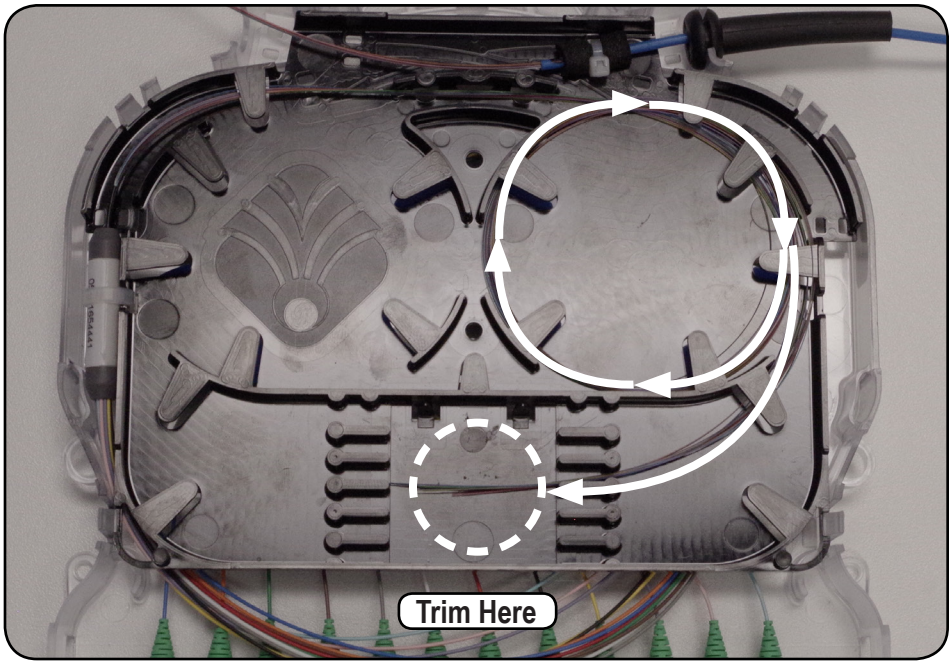


Trim the excess from the zip tie. Install the strain relief boot into the boot recepticle on the edge of the cassette base.

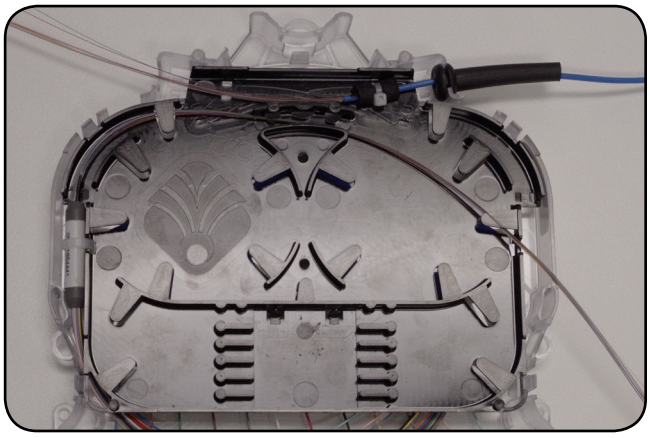


It is now time to bring the fibers into the splicing area.

Bring the pre-loaded 250 micron fiber pigtail into the splicing area from the right side and trim them to length.



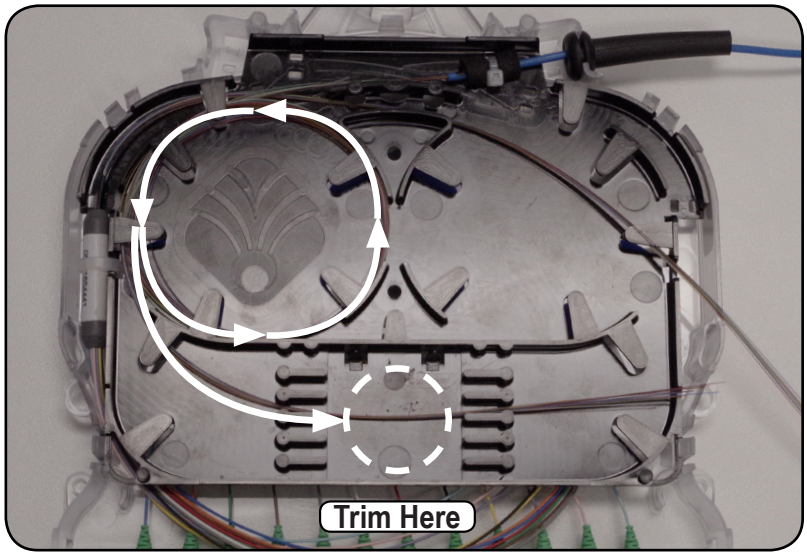
Pull the fibers out of the tray.



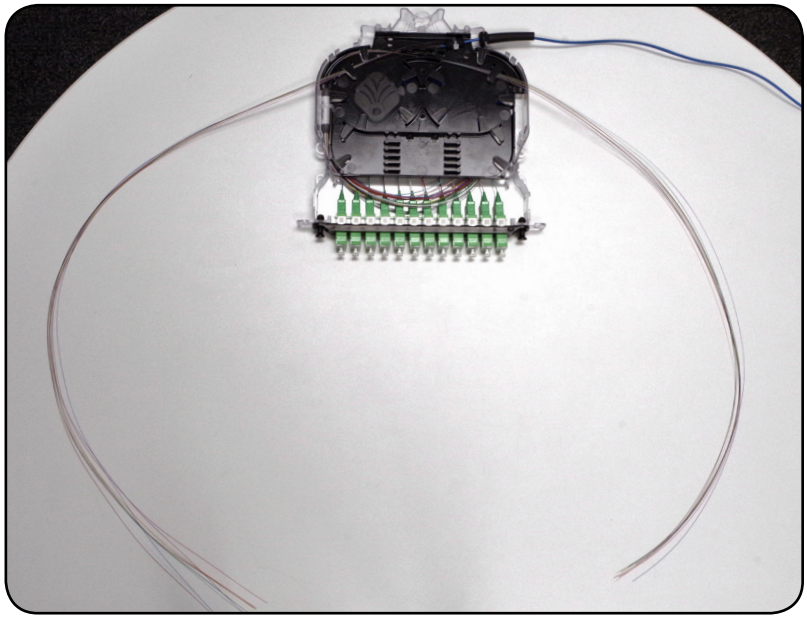
Take your incoming fibers and store 2-3 loops of fiber in the left slack storage chamber of the splice tray.

Bring your incoming fibers into the splicing area from the left side and trim to length.

Note: *Make sure the fiber is routed underneath the fiber management tabs located throughout the splice tray. This protects the fiber and helps hold it in place.*



Pull the fibers out of the tray.

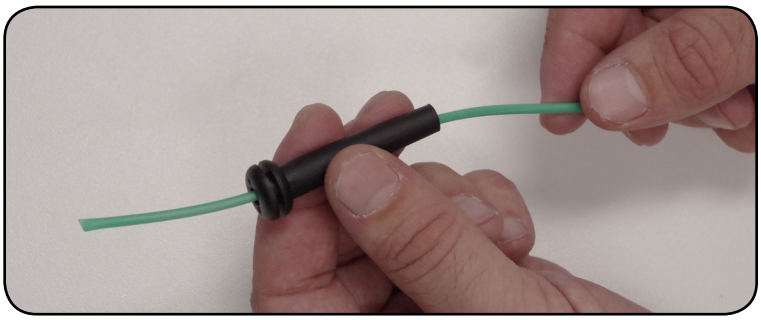


You are now ready to splice the fibers. Proceed to page 17.

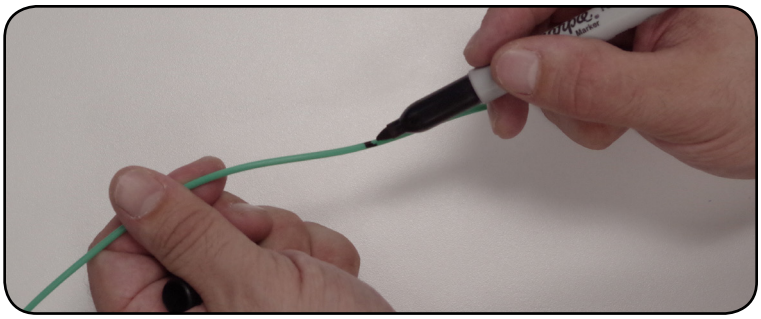
Right Rear Redirect

If you intend to use the right exit (looking from the back) of the Clearview Classic Cassette, your incoming fibers will be traveling in the same clockwise direction as the pre-loaded fiber pigtail. In order to remedy this and have the fibers meet end to end in the splicing area, you must perform a Right Rear Redirect. This will reverse the direction in which the incoming fibers enter the splicing area.

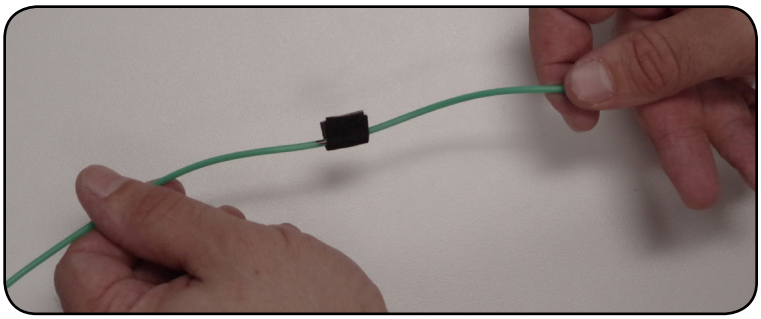
Take the incoming buffer tube that you wish to splice into the cassette, and slide the strain relief boot over 3 ft down the length of the buffer tube.



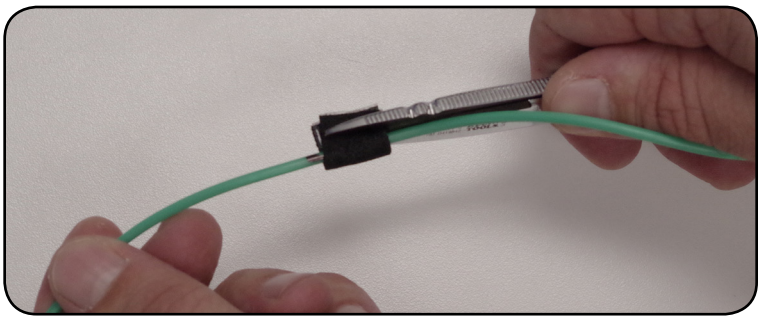
Mark the jacket of the buffer tube with a permanent marker 3 ft back from the end.



Wrap one lap of grommet tape around the buffer tube just behind your mark. Trim the excess.



Note: *Do not wrap more than one layer of grommet tape as the added thickness could prevent the splice tray cover and cassette cover from closing properly.*



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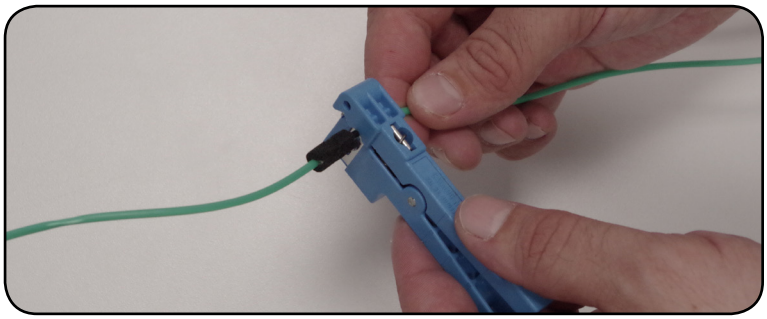
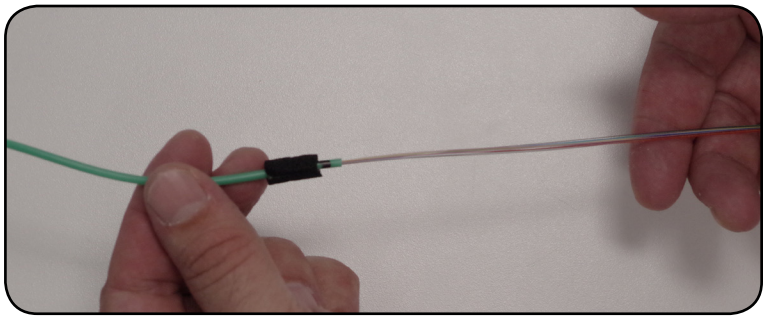
Using a buffer tube cutter, score the jacket at the mark you made and open up the buffer tube, pulling off the jacket.

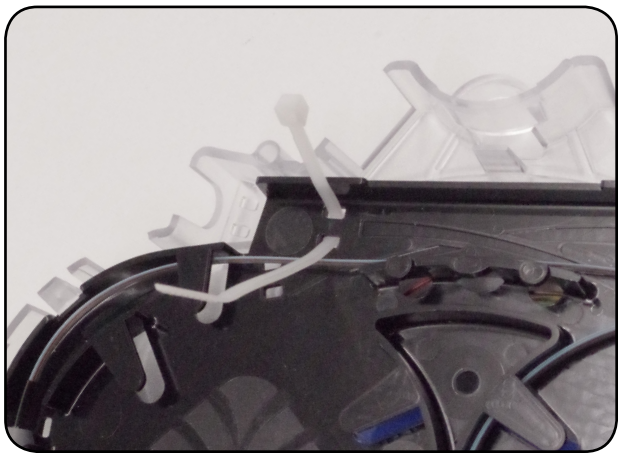




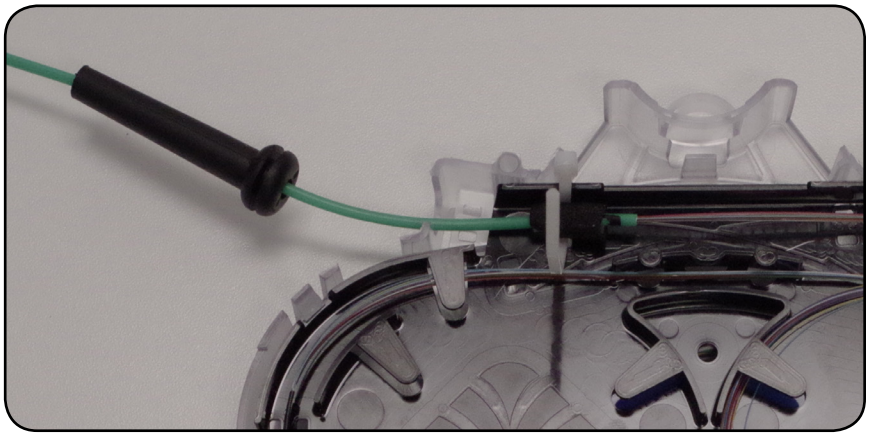
Note: *Be careful not to nick or cut the 250 micron fiber under the jacket.*

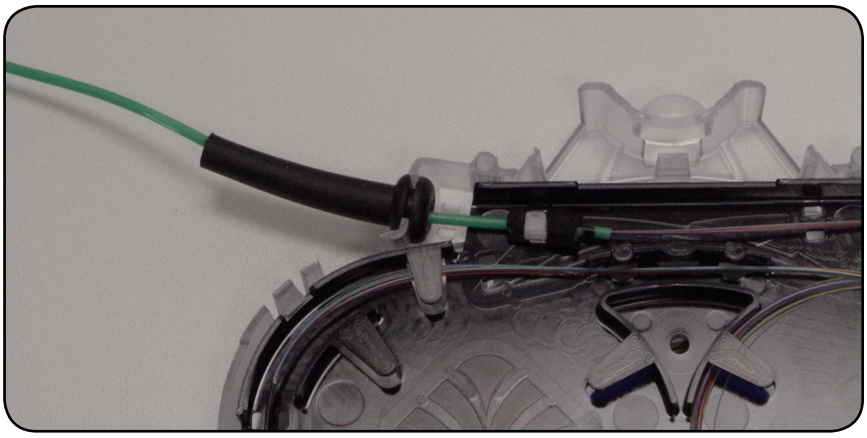
Take a 3/32” wide x 3” or 4” long zip tie (not supplied) and feed it through the tie down holes in the splice tray.

Note: *Instead of a zip tie, wax string can also be used to secure the buffer tube to the cassette. The splice tray in the cassette never has to be removed to perform a tie down or splicing function.*

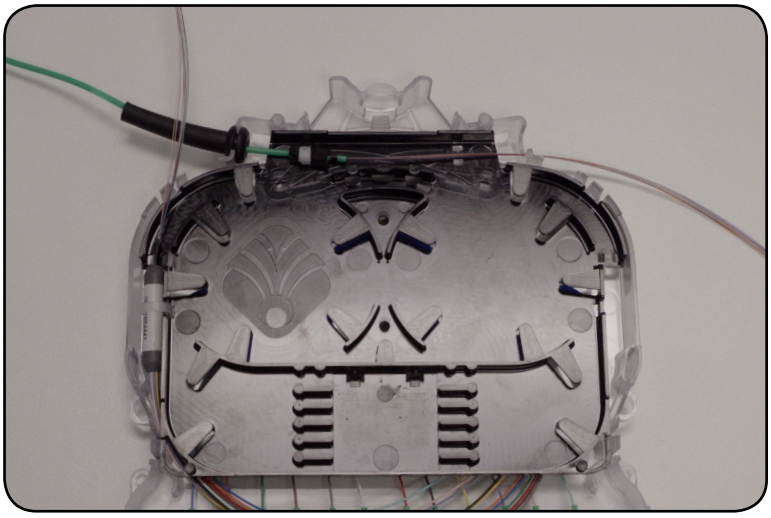


Take the incoming buffer tube, place the grommet wrap in the splice tray and secure it with the zip tie.



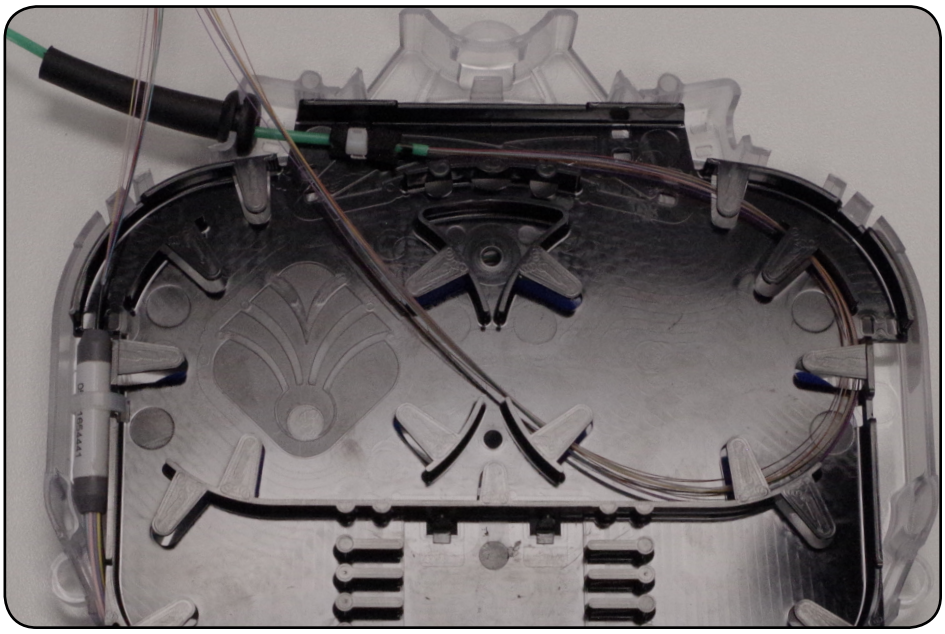


Trim the excess from the zip tie. Install the strain relief boot into the boot recepticle on the edge of the cassette base.



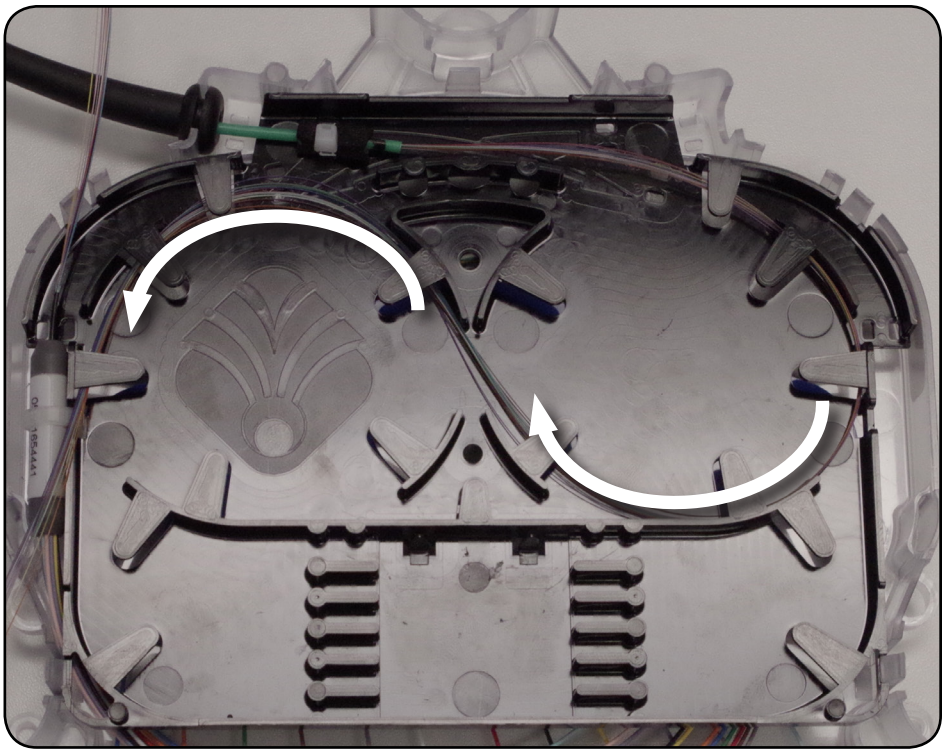
It is now time to bring the fibers into the splicing area.

Begin by pulling the pre-loaded 250 micron pigtail fibers out of the splice tray.

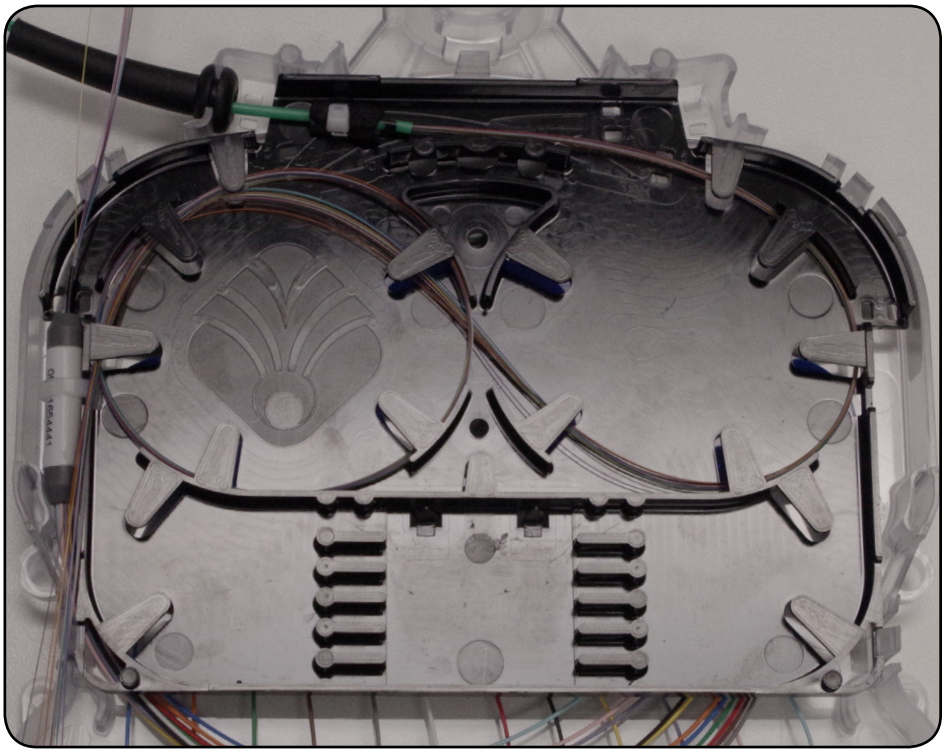


Route the incoming fiber down into the right side of the tray, and proceed to loop up and to the left through the middle of the splice tray storage area, keeping the fibers underneath the fiber management tabs.

Turn the fiber downwards and begin to route inside the left side of the splice tray.

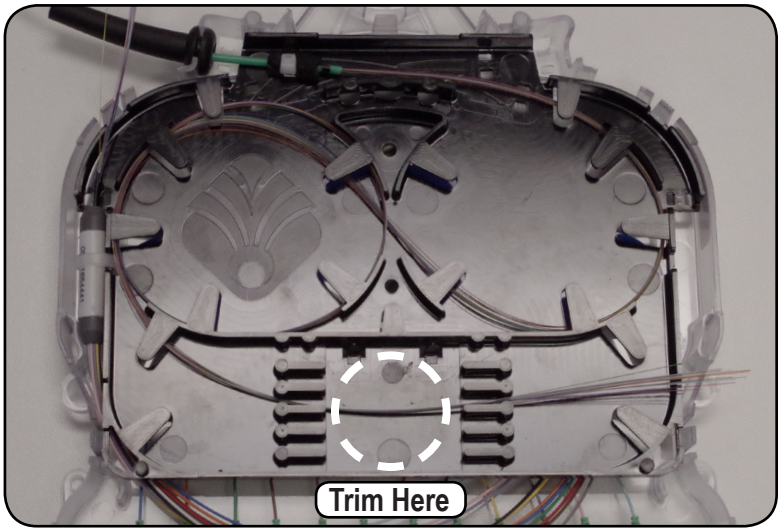


Store a few loops of the fiber inside the left side of the splice tray.



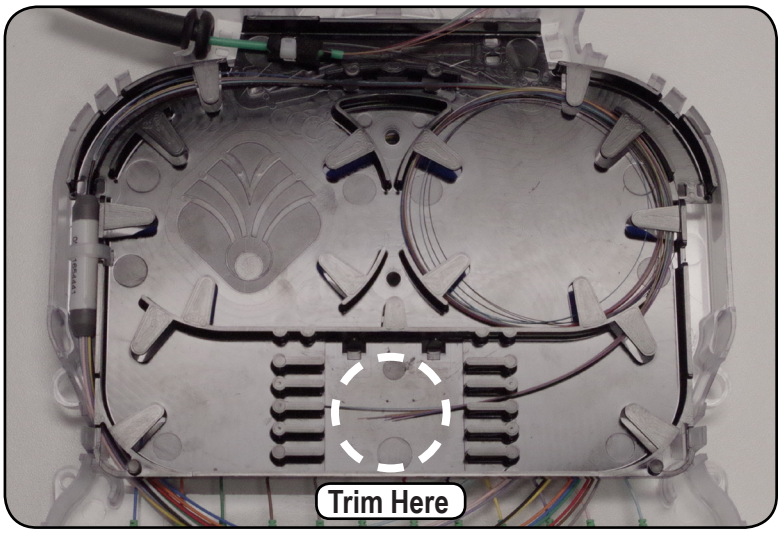
Bring the fiber into the splicing area from the left and trim to length.

Pull the fibers out of the splice tray.



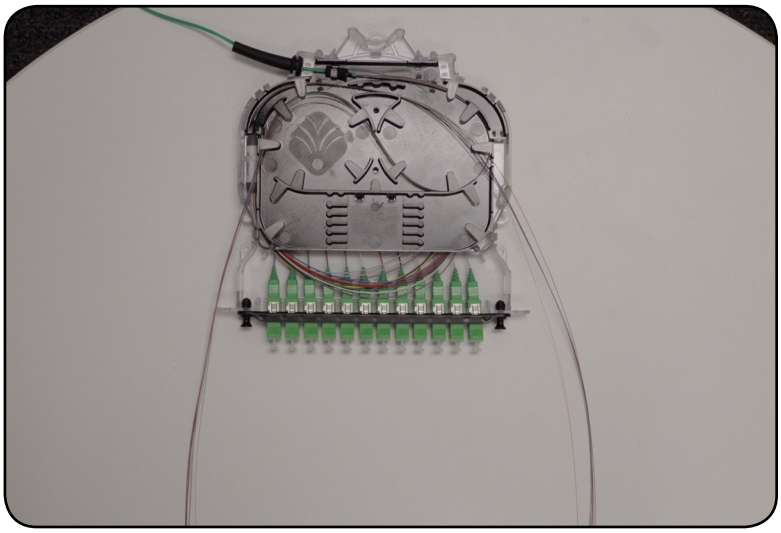
Store the pre-loaded fiber pigtail back in the right side of the cassette.

Bring the fiber into the right side of the splicing area and trim to length.



Pull the fibers out of the tray.

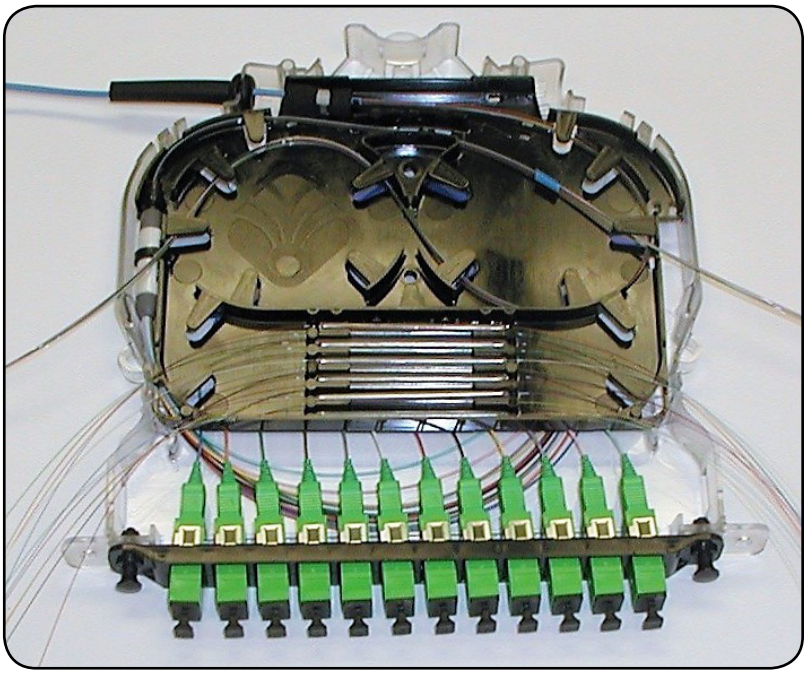
You are now ready to splice the fibers.



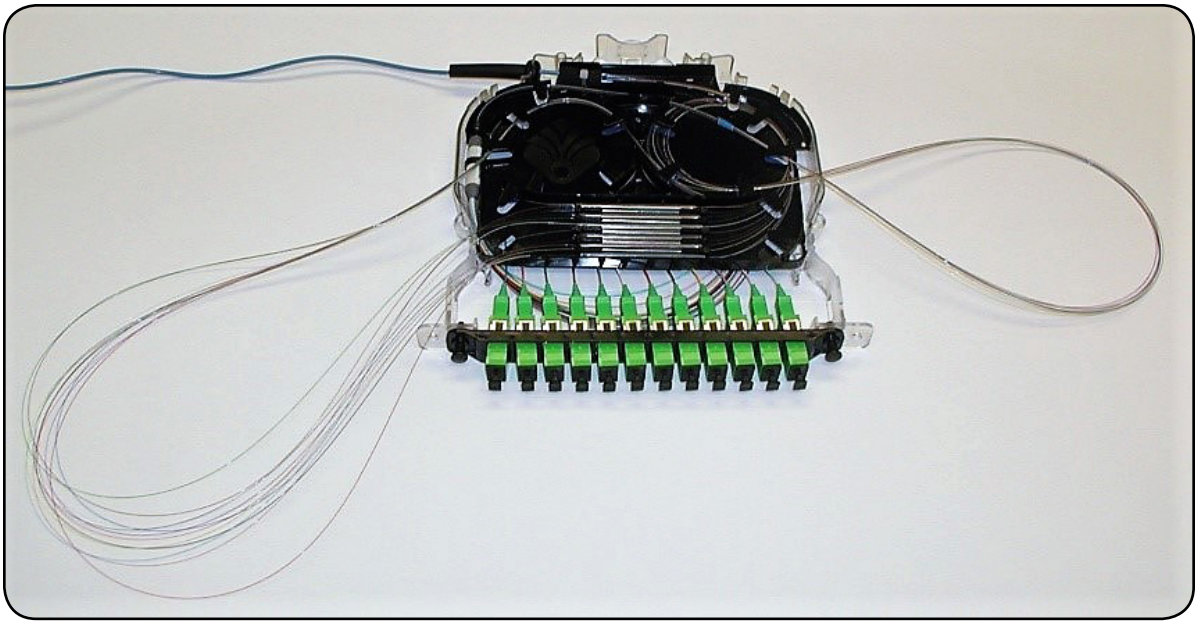
Splice the fibers per your local practice. The Clearview Cassette utilizes a common, industry, 6 x 2 splice areas. In other words, there are 6 splice slots which are deep enough to handle 2 splice sleeves. As the splice sleeve(s) are cooled and are moved to the splice tray they will be stacked, one on top of the other.

Note: *Clearfield recommends the use of standard 60mm splice sleeves for splicing in the Clearview Classic Cassette.*

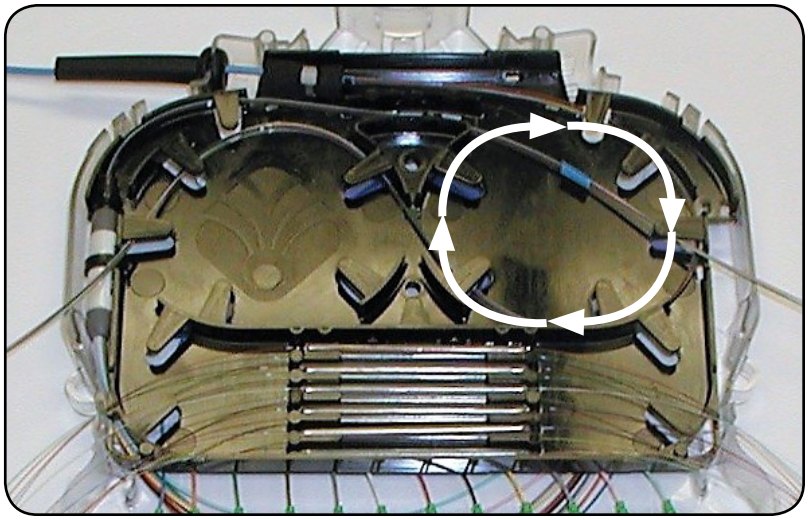
Note: *It is recommended to apply a small amount of RTV over the first (top) splice slot. This first slot is also the slot used for the ribbon splice sleeve if this was a ribbon cassette. The slot is slightly larger than the other 5 slots and the RTV will help hold the slice sleeve in place.*



After splicing is completed, whether a right or left exit was used, the cassette should look something like this. Notice the loops of fiber slack hanging off each side of the cassette.



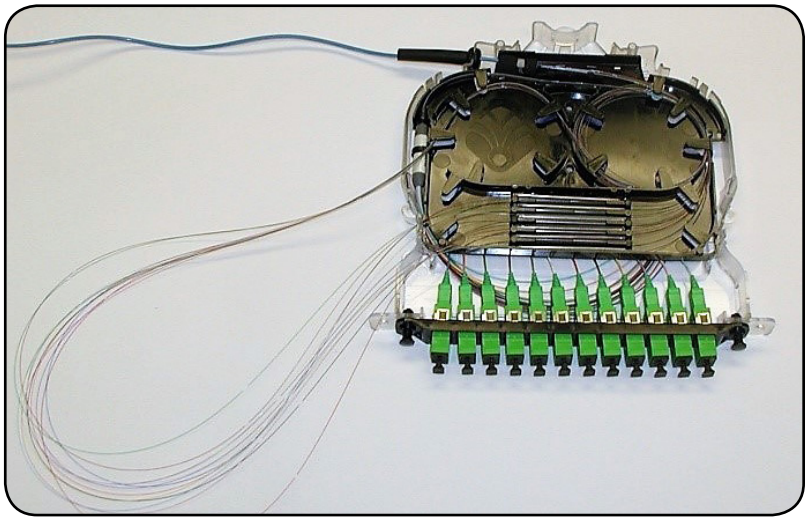
Now we need to route the extra fiber slack into the splice tray. Starting with the fibers coming out the right side of the splice sleeves, route the slack back into the on the right side of the cassette.



The fiber will naturally crossover itself.

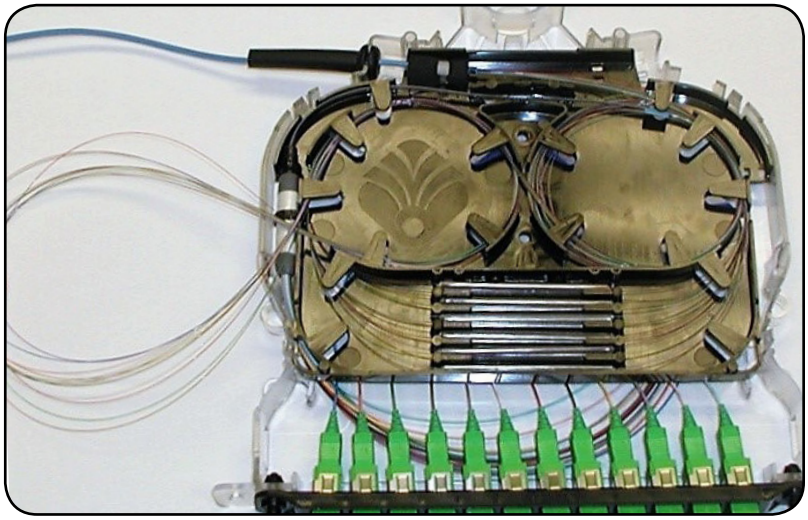
Continue routing the cable into the right side of the cassette until all the slack is properly stored. This is what it will look like when the fiber on the right has been completed stored.

Note: *Make sure that the fiber is routed underneath the fiber management tabs of the splice tray.*

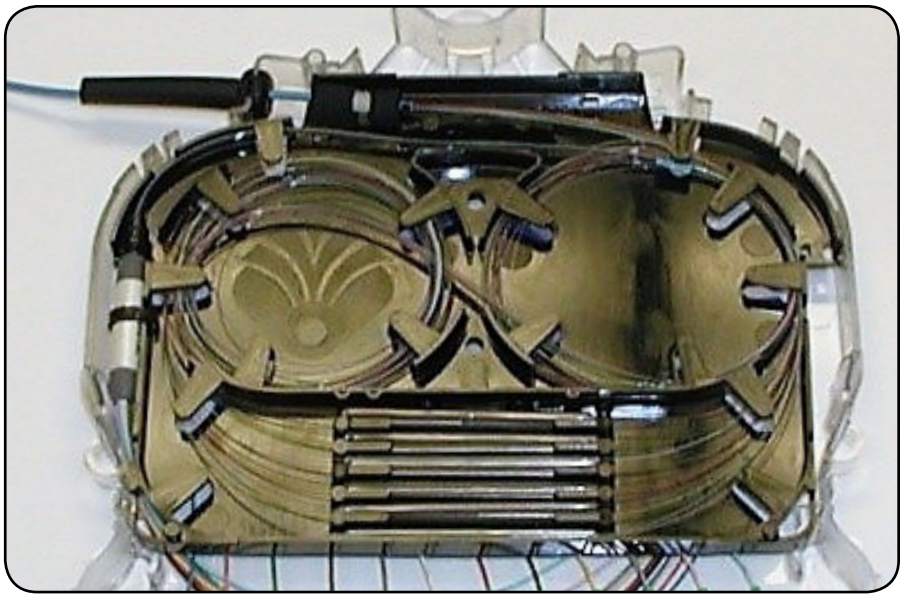


Now we need to route the extra fiber slack on the left side into the splice tray. Starting with the fibers coming out the left side of the splice sleeves, route the slack back into the on the left side of the cassette.

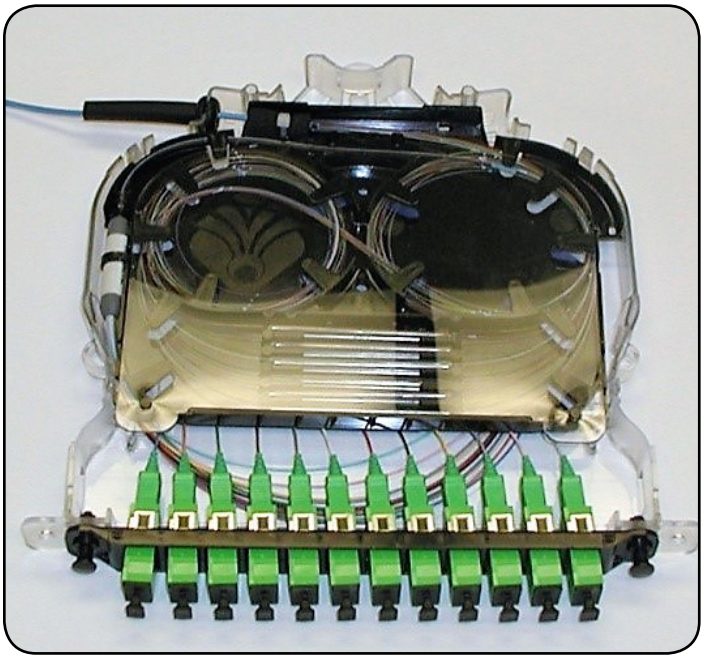
Continue routing the cable into the left side of the cassette until all the slack is properly stored.

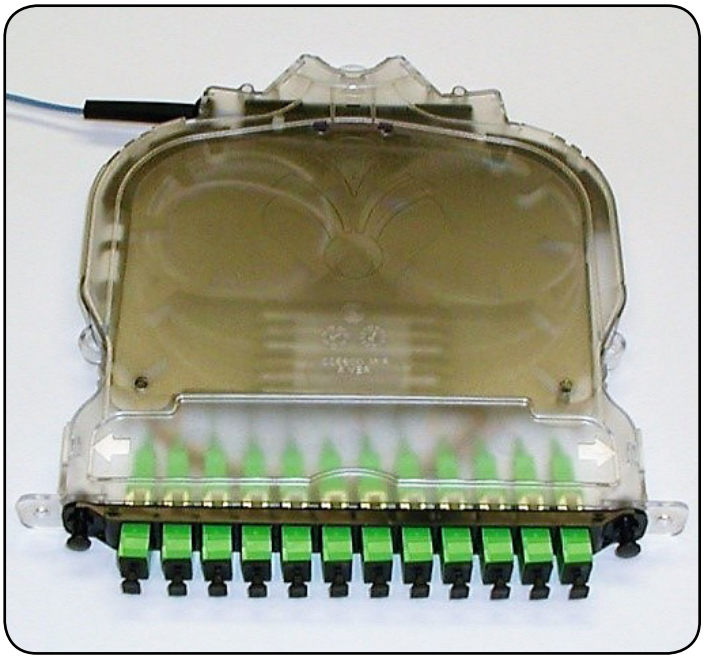


This is what the cassette will look like after the splice and storage of the slack has been completed.



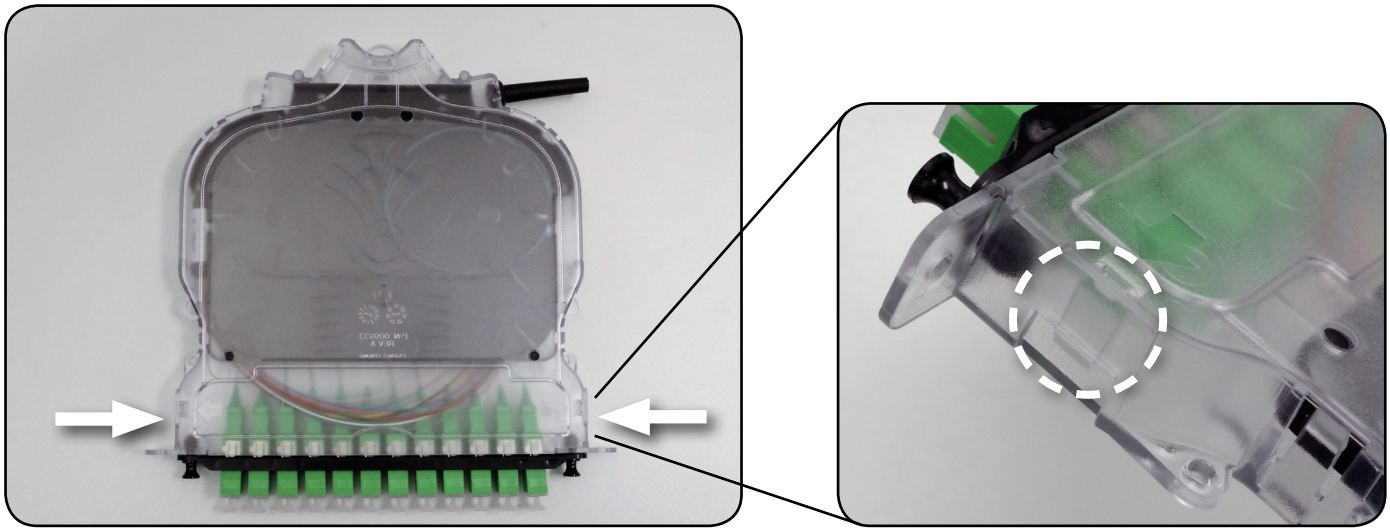
Replace the splice tray cover, followed by the cassette cover. You have complete a splice in the Clearview Classic Cassette



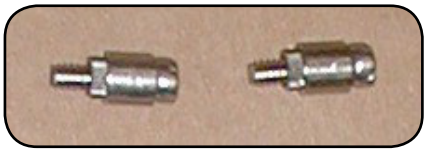


Splicing in the Clearview Classic: Ribbon

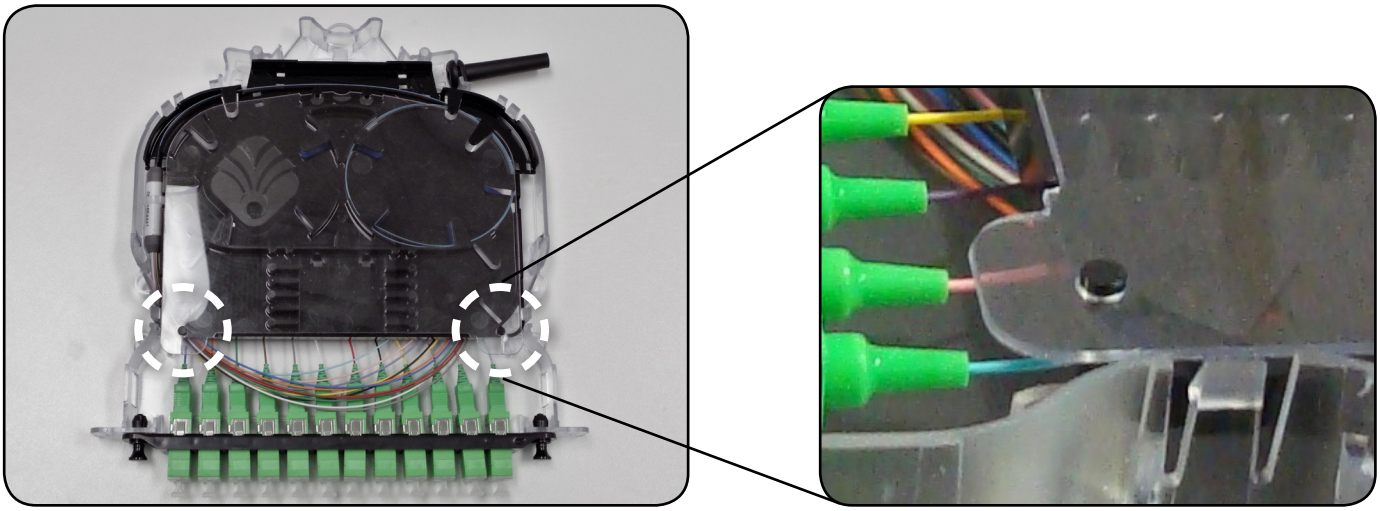
Remove the cover by pressing the tabs on the sides of the cassette, and lifting it from the base.



The mounting screws for the cassette are enclosed in a small bag and are attached to the back of the cassette. You will have (2) mounting screws. Remove them and set aside for future use.



The splice tray cover can be removed by lifting up on the two tabs in the corners of the cover, and then by moving it slightly forward.



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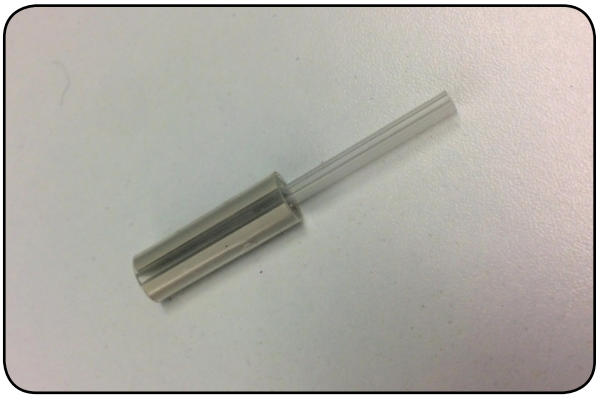
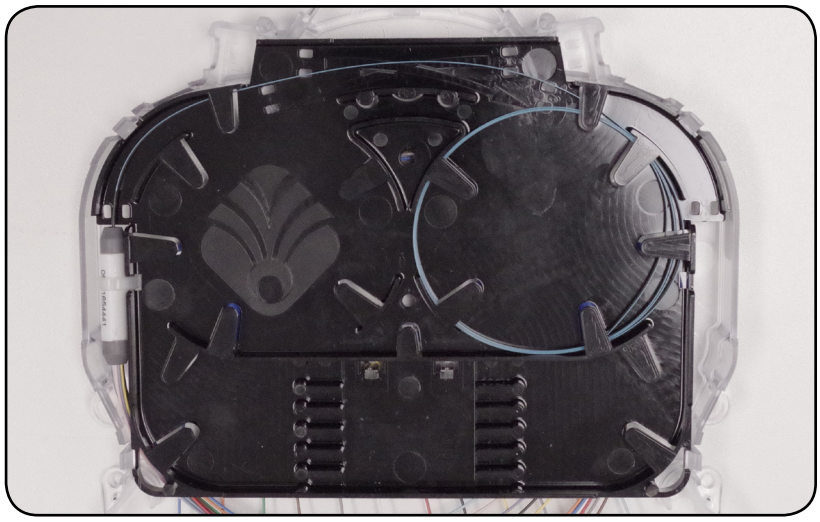
Provided with ribbon cassettes and located inside the splice tray is a ribbon tie-down. This will allow you to secure the ribbon fiber into the cassette if you choose to not utilize furcation tubing.

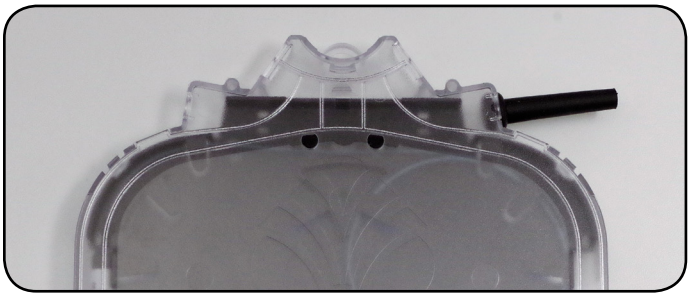
Note: *Never tie down bare, unprotected ribbon fiber.*



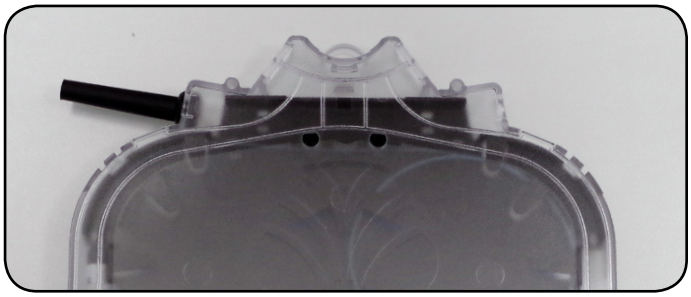
The preloaded ready-to-splice 250 µm pigtails come pre-stored in the right raceway of the splice tray.



If in the end, after splicing, you need the cassette(s) exit to be “Left Exit” continue with the splicing instructions below. If you wish the cassette to be “Right Exit” Refer to page 12 for Right Rear Redirect special routing instructions.



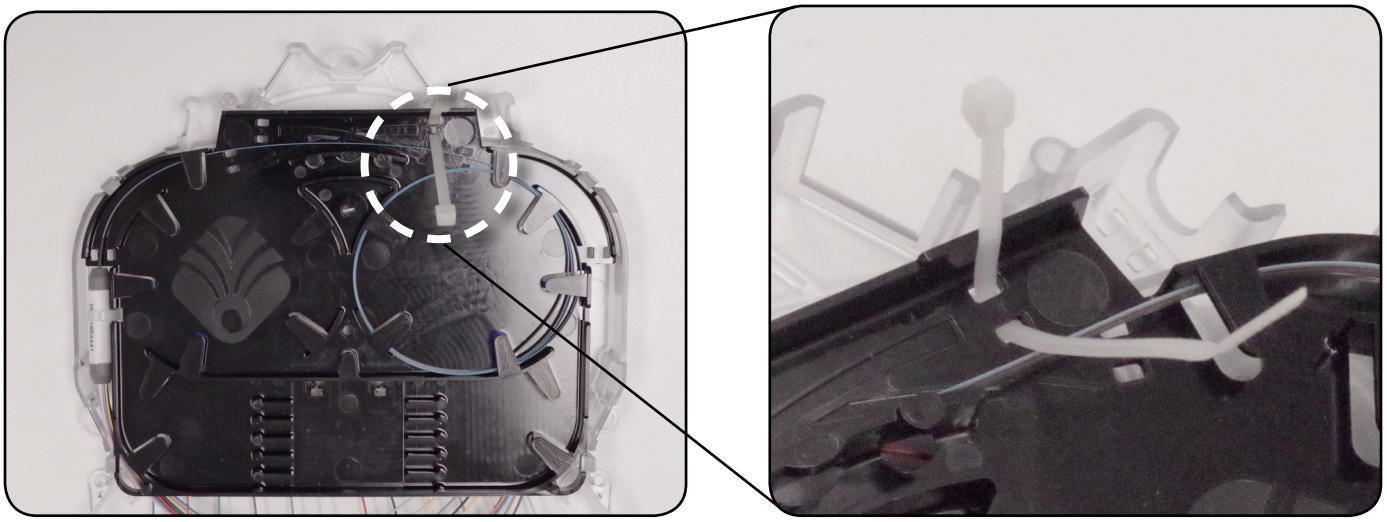
Left Exit



Right Exit

Note: *Exit is determined looking from the back of the cassette.*

Take a 3/32” wide x 3” or 4” long zip tie (not supplied) and feed it through the tie down holes in the splice tray.



Note: *Instead of a zip tie, wax string can also be used to secure the buffer tube to the cassette. The splice tray in the cassette never has to be removed to perform a tie down or splicing function.*

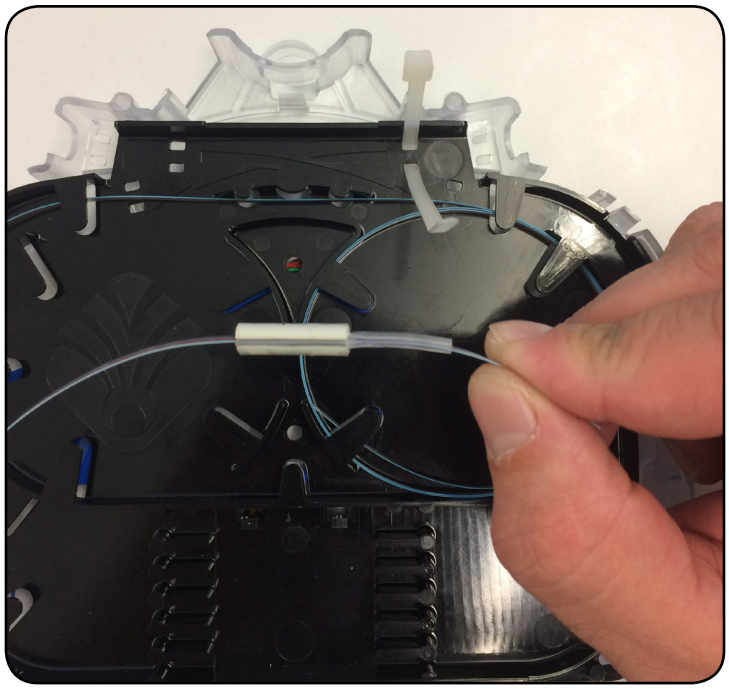
When securing ribbon fiber into the Clearview Classic, you may utilize the ribbon tie-down supplied with the cassette, which will secure the bare fiber into the casette and prevent any kinking inside the cassette if the bare ribbon is pulled on, or you may choose to use furcation tubing, which will protect the bare fiber before it is brought into the cassette and is secured inside the cassette in the same method as buffer tube.

Take the incoming ribbon you want to splice into the cassette, and slide the strain relief boot down the ribbon.

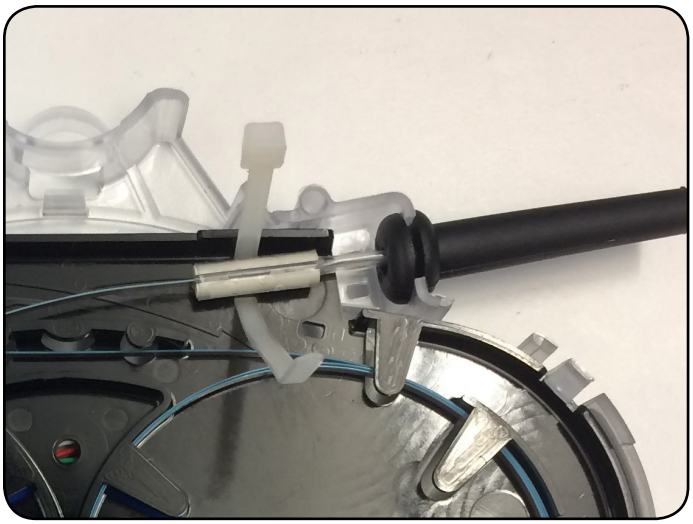
Follow this with the ribbon tie-down. Notice the “soft tube” portion of the tie-down. This is the end that you should insert the ribbon into, which will point towards the strain-relief boot and and protect the ribbon from macrobends.

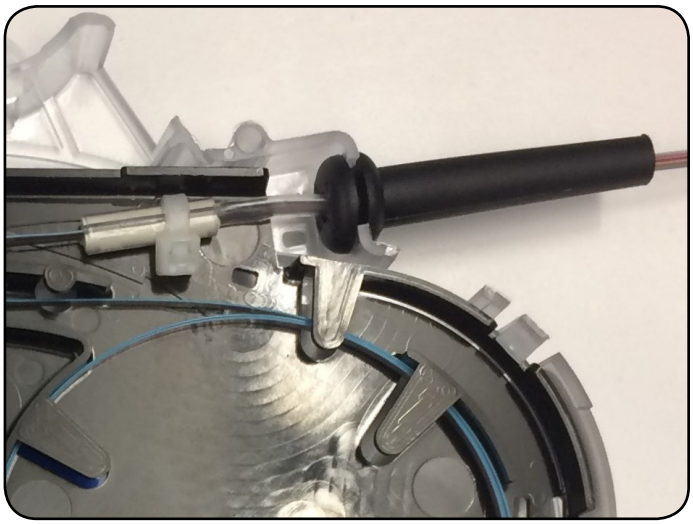
Measure 3 feet from the end of the ribbon and heat the tie down into place on the ribbon.

Note: *Clearfield recommends 3 ft of ribbon. The excess is stored in the cassette and will allow for extra fiber in case re-splicing is required.*



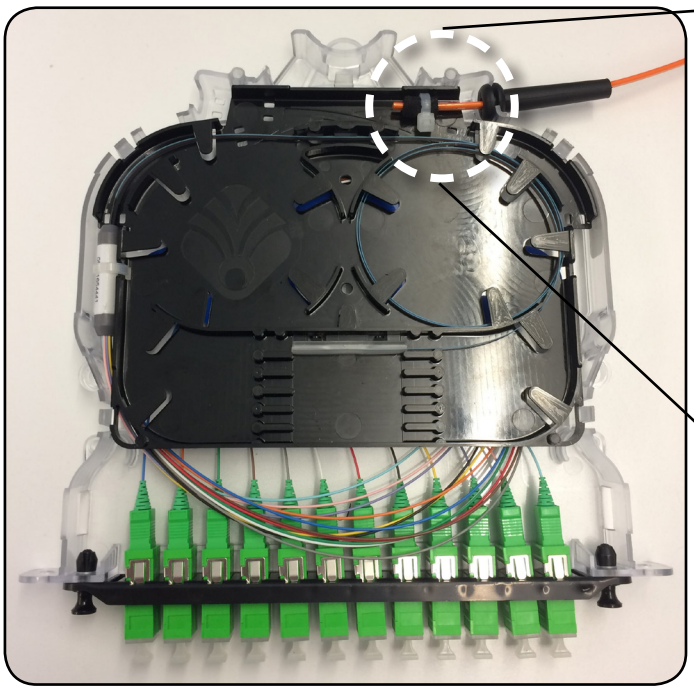
Secure the ribbon tie down in place with your cable tie or wax string as shown. Slide the strain relief boot up the ribbon and insert it into the strain relief boot recepticle on the edge of the cassette base.

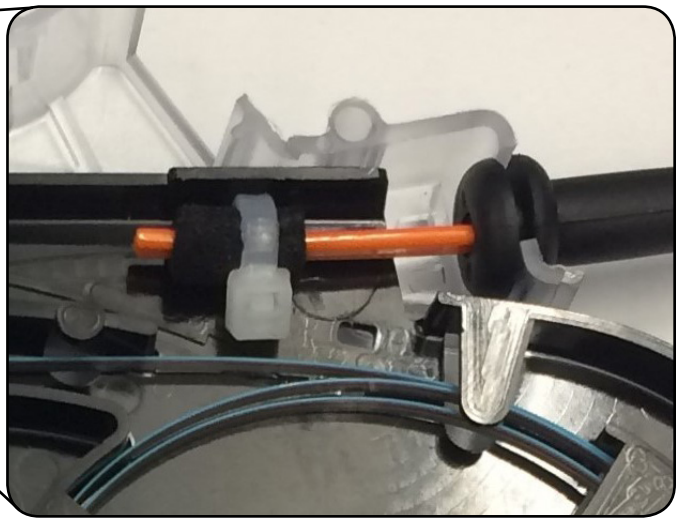




If using a ribbon breakout kit, the strain relief boot is slid over the furcation tube and secured to the splice tray in the same way as a buffer tube, shown earlier.

Fold a piece grommet tape around the furcation tube, trim the excess, and secure to the splice tray using a cable tie or piece of wax string

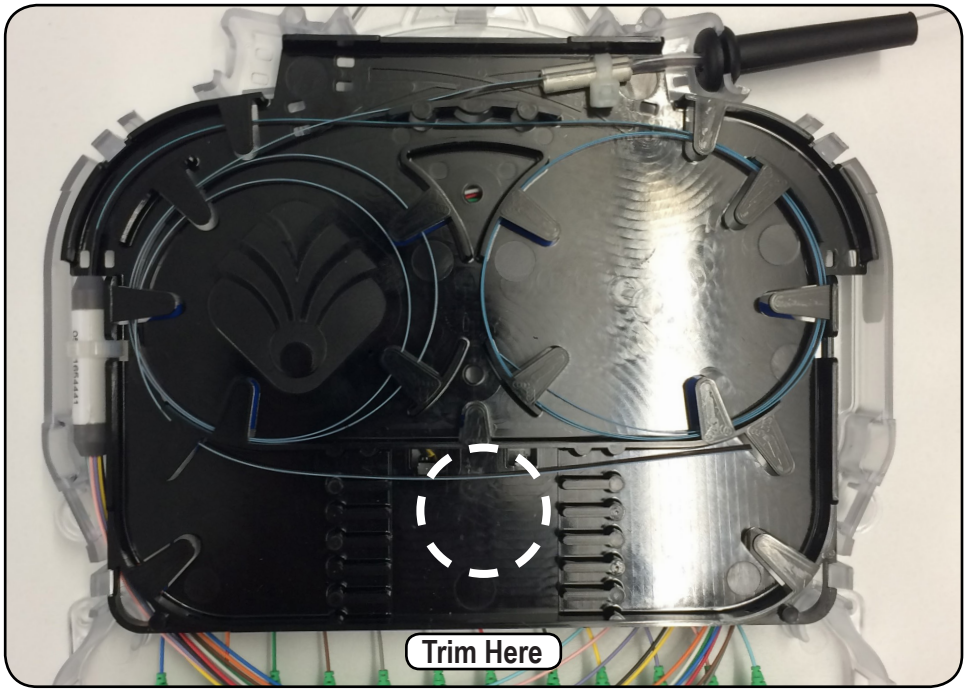




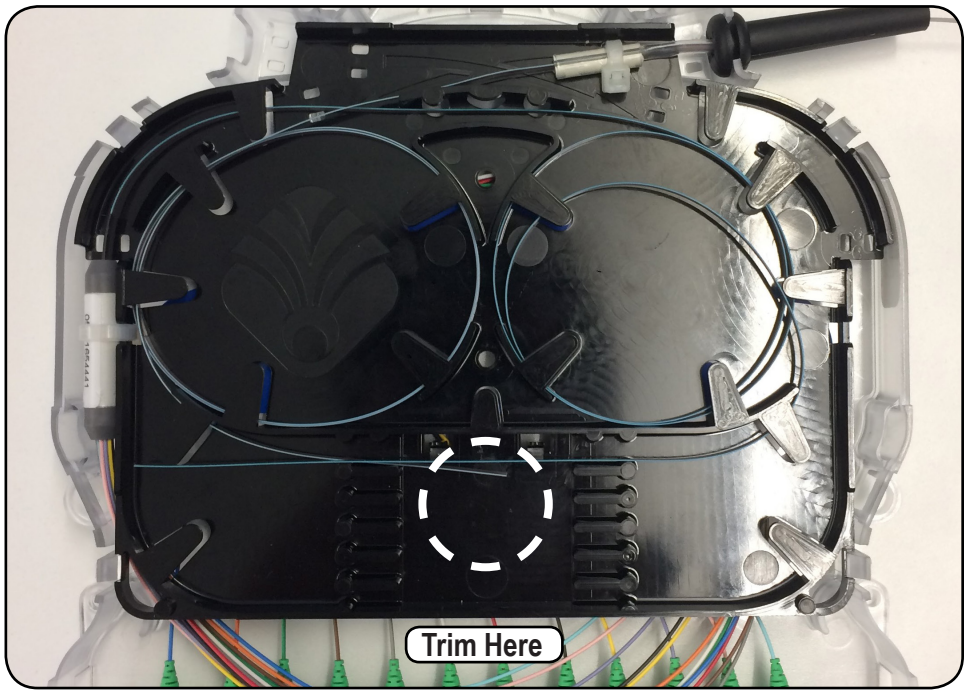
Now that the ribbon is secure, it is time to trim the fibers to the correct length for splicing.

Route the incoming ribbon inside the left compartment and under the fiber management tabs located throughout the splice tray. Store 2 or 3 loops and bring the ribbon into the left side of the splicing area.

Trim to length in the center of the splicing area



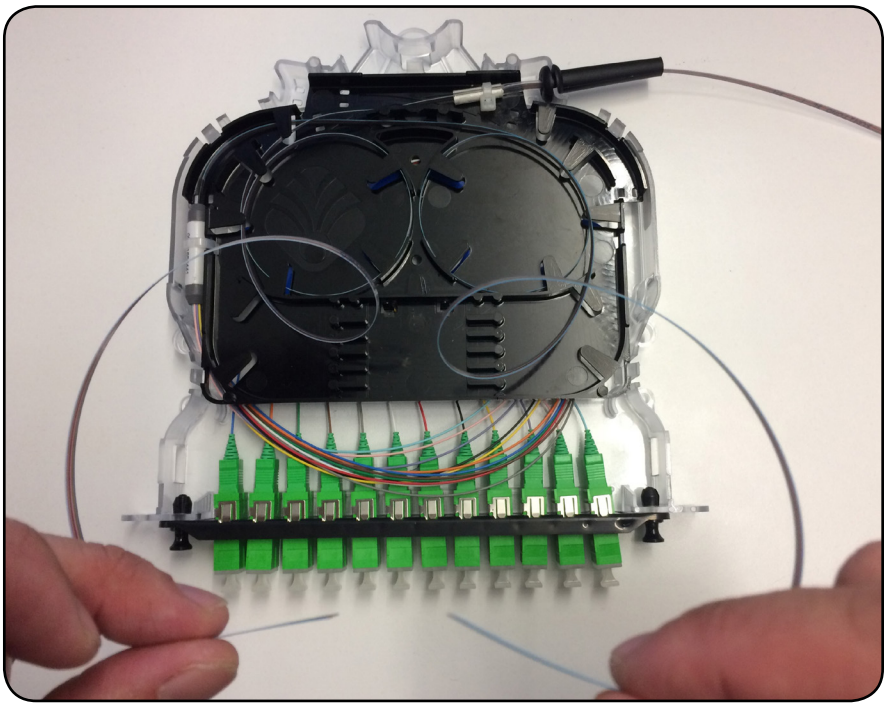
Next, bring the pre-loaded ribbon pigtail into the splicing area from the right, and trim to length.



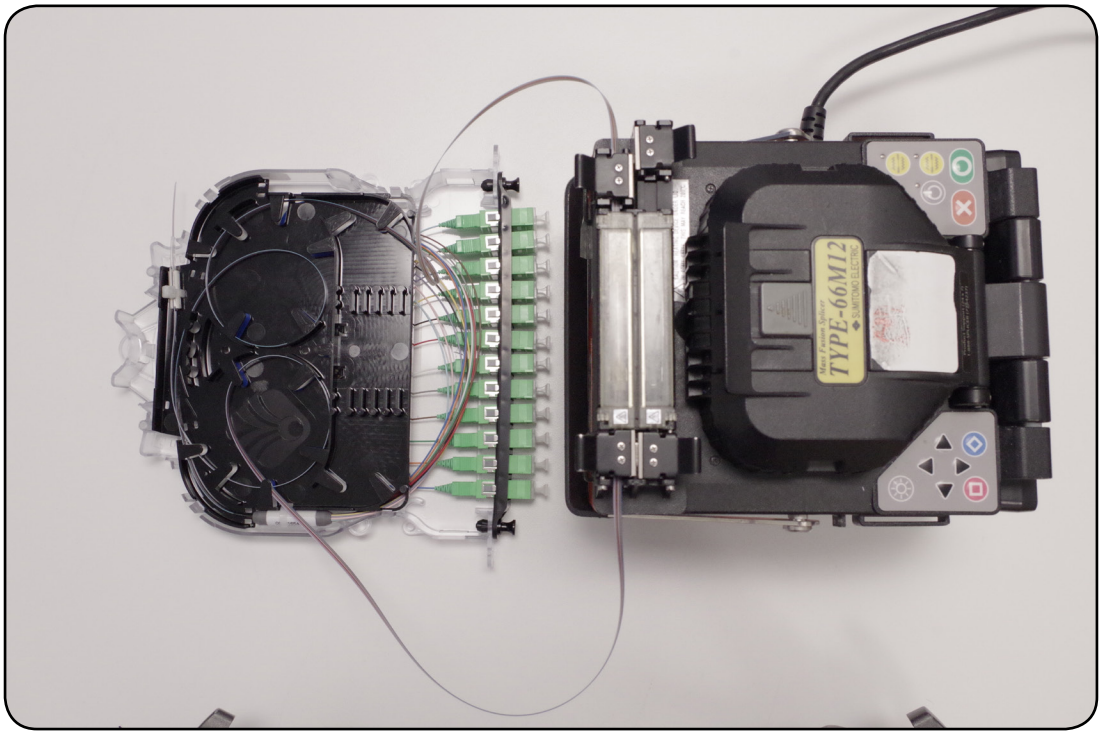
Once the fiber is trimmed, you are now ready to splice. Pull the fiber out of the cassette.

It is important to maintain the twists in the ribbon that made up the loops while the ribbons were stored in the left and right chambers of the splice tray.

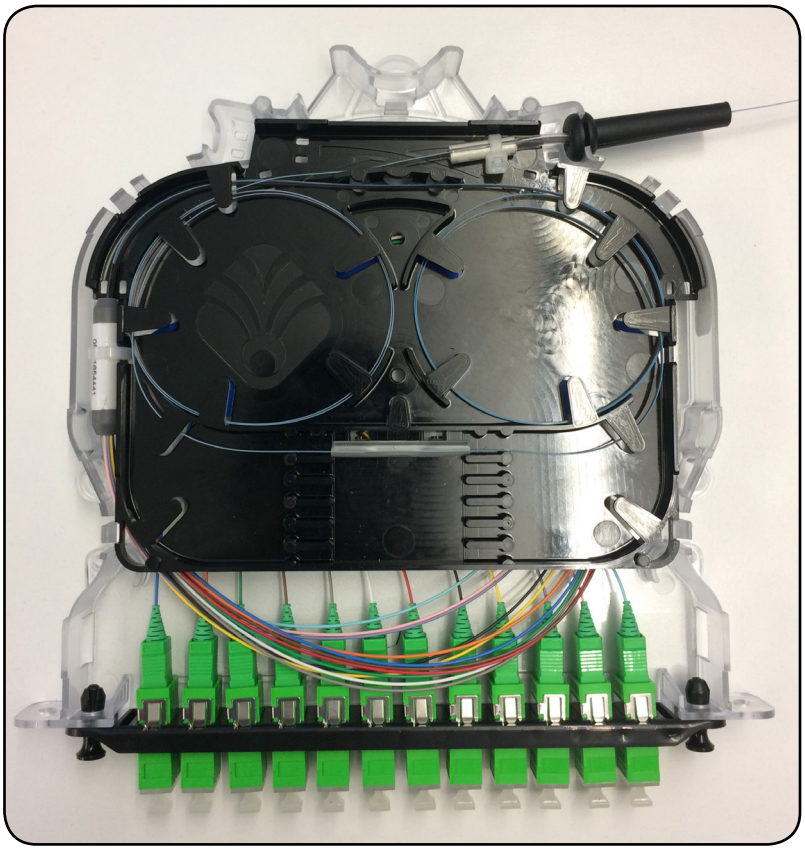
This will allow for the fiber to be routed back inside the tray and under the fiber management tabs with ease.



Slide the splice sleeve over a fiber and splice per your normal industry standard splice guidelines.



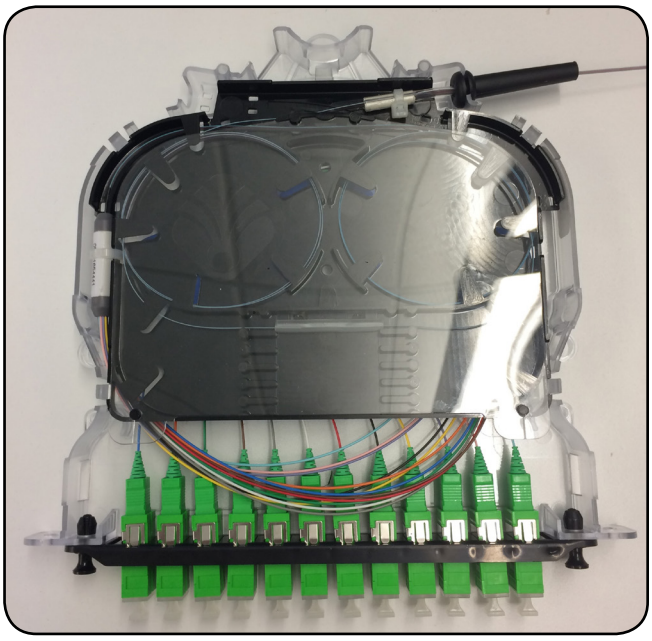
Place the completed splice into the first slot at the top of the splice tray. Route the ribbon slack back into the individual sides of the cassette splice tray.



Note: *Make sure the fiber is routed fully underneath the splice tray fiber management tabs as shown.*

Note: *You may want to use a small amount of RTV or silicone sealant in the first slot of the splice tray to hold the ribbon splice sleeve in place.*

Place the splice tray cover back on the cassette, followed by the cassette cover. You have completed a ribbon splice in the Clearview Classic Cassette.



Connector Cleaning Procedure

Whether factory terminated or field spliced, clean connectors are essential for proper system operation. Even the smallest dust particle can cause transmission problems, so for optimal network performance, inspect and if necessary, clean all connectors and adapters prior to mating.

I.B.Y.C…Inspect Before You Connect!

ALWAYS inspect the connector first thing with a clean fiber scope inspect the pair. Three types of contamination require different cleaning techniques. The use of Chemtronics end face and bulkhead cleaning products and techniques ensures a clean end face, no matter the type of contamination.

These are Clearfield recommended products/application. Use the product you feel will complete your cleaning procedures. Create a “best practice” for your company and follow those procedures.

***NOTE: It is NOT recommended to use IPA to clean the end-face.**

Cleaning the end-face…but not just the end-face

• Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen. **Figure 1**

• Apply small amount of precision cleaner (about 1” in diameter) with Electro-Wash MX pen on to one end of the wipe. **Figure 2**

• Hold end face 90 degree. Adjust for APC connection by slightly tilting the container or end face. Angle is correct when no drag is left on the end face. **Figure 3**

• Draw end face from wet to dry part of the wipe 3 times. Use just enough pressure to ensure complete contact between end face and the wipe.

DO NOT retrace previous step.

Figure 1

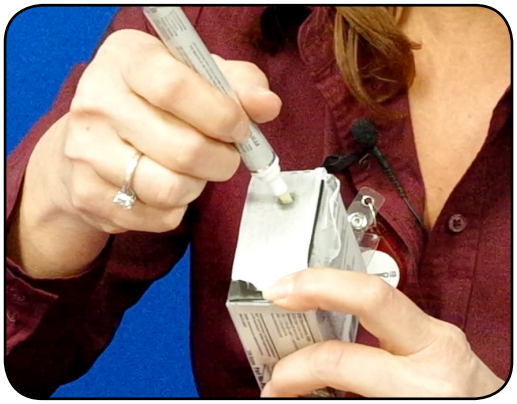


Figure 2

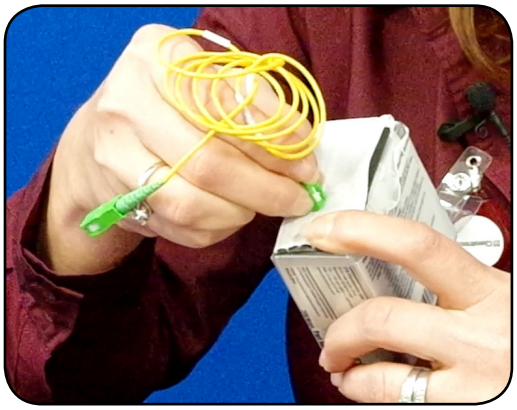


Figure 3

• **CLEAN THE FERRULE**…Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1”) of Electro-Wash PX or Electro-Wash MX pen onto the QBE-2. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5. **Figure 4**

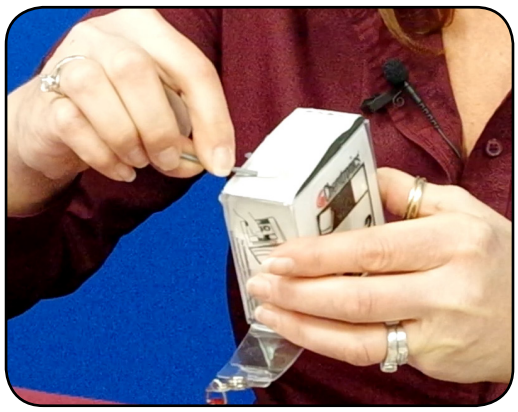


Figure 4

• Insert swab into side of ferrule, wet side to the ceramic ferrule and circle around 2-3 times and remove. Turn swab to dry side and repeat. **Figure 5**

Figure 5

Cleaning the mate through a bulkhead adapter AND the adapter itself!

• Lightly moisten the fiber optic swab(2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1”) of Electro-Wash PX or Electro-Wash MX pen onto the QBE-2. Hold the tip of the swab onto the wetted area and hold for a count of 1-2-3-4-5.

• Insert the swab into the adapter to the connector, press lightly against the connector, twist 2-3 times, remove and discard.

• Dry with a second dry swab.

• Inspect (re-clean if necessary) and test for signal strength.

• Use additional swabs to clean inside the actual adapter. Moisten swab, like above, insert through hole and remove while twisting. **Figure 6**

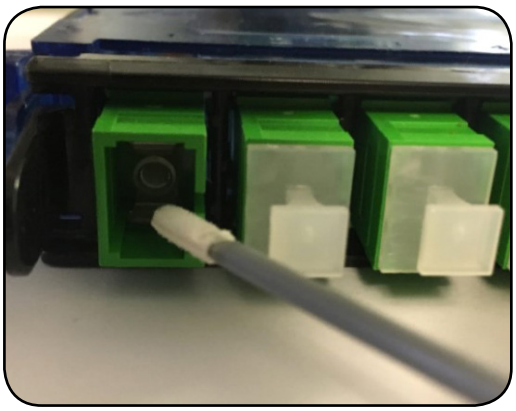


Figure 6

Cleaning an MPO/MTP Connector

Female Connector

• Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen and apply small amount of precision cleaner (about 1" in diameter) with Electro-Wash MX pen on to one end of the wipe. **Figure 1**

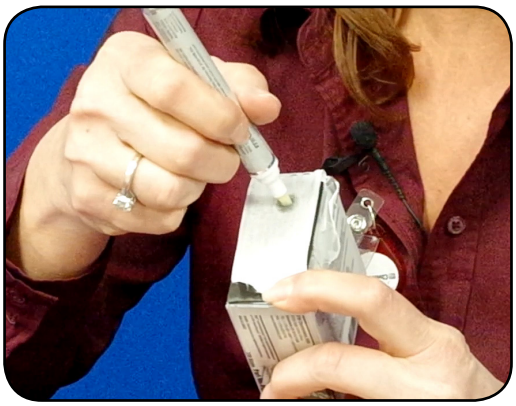


Figure 1

• Hold end face 90 degree. Adjust for APC connection by slightly tilting the container or end face. Angle is correct when no drag is left on the end face. **Figure 2**

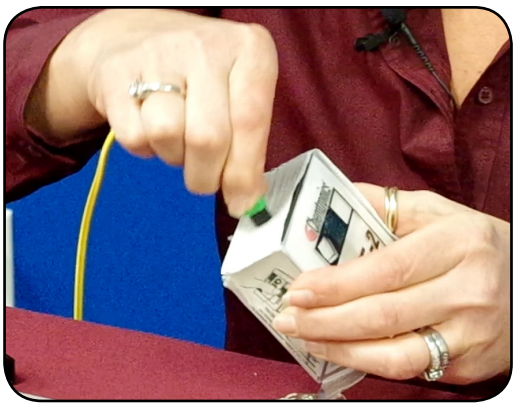


Figure 2

Male Connector

• Lightly moisten the fiber optic swab (CC505F) like above, moistening 1 side.

• Place swab, wet side down at one end of connector end-face and draw across in a diagonal sweep (ie: from fiber 1 up and across to fiber 12). Turn swab over to dry and draw back from fiber 12 to fiber 1. **Figure 3**

Figure 3

BEFORE cleaning any connector…be sure you know what type of contaminate you are cleaning…dry? Fluidic?...All the available products are good, it's the process that you need to be aware of. Using a dry cleaning method to clean "dirt" can lead to scratching of the end-face. Learn the process of cleaning properly!

Standard Warranty

Clearfield warrants to the original purchaser of the Product sold hereunder is free from defects in material and workmanship under normal use and service, subject to exceptions stated herein. Product purchased is warranted as follows: Clearfield designed and branded Products are warranted for three (3) years: Products manufactured by Clearfield to customer prints and/or specifications are warranted for one (1) year; and any Product Clearfield acquires from or through a third-party manufacturer or distributor and resells to Customer as the original customer will carry the manufacturer's pass-through warranty, if any. In all cases, the warranty period commences on the date of shipment to the original purchaser.

Warranty Claim Procedure

If any Product purchased from Clearfield is found defective under the above warranty, the following basic procedure must be followed:

1. Customer must contact Clearfield and obtain a Return Materials Authorization
2. Following authorization, the Customer ships the product-freight collect-to Clearfield's manufacturing facility
3. Clearfield shall repair or replace the defective Product at its sole option and discretion, and return the repaired or replacement Product to Customer's site, freight prepaid

Note: If the Product is not found to be defective at Clearfield, the product will be returned to the Customer and the customer billed for freight in both directions.

View our warranty policy here: https://www.seeclearfield.com/warranty.html

Limitations of Warranty

Correction of defects by repair or replacement, at the option of Clearfield Inc, shall constitute the exclusive sole remedy for a breach of this limited warranty. Clearfield shall not be liable under any circumstances for any special, consequential, incidental, punitive, or exemplary damages arising out of or in any way connected with the product or with agreement to sell product to buyer, including, but not limited to damages for lost profits, loss of use, or for any damages or sums paid by buyer to third parties. The foregoing limitation of liability shall apply whether the claim is based upon principles of contract, warranty, negligence or other tort, breach of statutory duty, principles of indemnity or contribution, the failure of any limited or exclusive remedy to achieve its essential purpose, or otherwise.

Clearfield will not be responsible for any labor or materials costs associated with installation or incorporation of Clearfield products at customer sites, including any costs of alteration, replacement or defective product, or any field repairs.

Other Limitations

Clearfield assumes no warranty liability regarding defects caused by:

1. Customer's modification of Product, excepting installation activities described in Clearfield documentation
2. Customer re-packaging of Product for shipment to third parties or destinations other than those originally shipped to by Clearfield, or any defects suffered during shipping where the Product has been re-packaged
3. Customer's installation or maintenance, excepting activities described in and performed in accordance with Clearfield documentation
4. Customer's improper or negligent use or application of Product
5. Other causes external to the Product, including but not limited to accidents, catastrophe, acts of God, government action, war, riot, strikes, civil commotion, sovereign conduct, or the acts or conduct of any person or persons not party to or associated with Clearfield
6. Environmental factors and weathering resulting in aging and damage not necessary or applicable to the function of the product

Proprietary Notice

Its purpose is to provide the user with adequately detailed documentation to efficiently install the equipment supplied. Every effort has been made to keep the information contained in this document current and accurate as of the date of publication or revision.

However, no guarantee is given or implied that the document is error free or that it is accurate with regard to any specification.

Technical Support

Clearfield, Inc. can be contacted for any issues that arise with the supplied product.

If you need to return the supplied product, you must contact the Clearfield, Inc. Customer Service Department to request a Returned Materials Authorization (RMA) number.

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Minneapolis, MN 55428

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Fax: 763.475.8457

Customer Support: sales@clfd.net
Technical Support: techsupport@clfd.net