

## MECHANICAL OVAL PORT INSTALLATION OF COF200, COF201 & COF730

Description	Tools Required																								
How to prepare and install a mid-span loop of cable into the mechanical oval port of the closure.	<b>Tools:</b> Large Screwdriver, File, Pilers, with 5mm Allen key bit.																								
<table style="width: 100%; border: none;"> <tr> <td style="width: 40%;"><b>1 Rubber Seal – 12.0mm to 14.9mm</b></td> <td style="width: 10%; text-align: right;"><b>Qty 1</b></td> <td style="width: 40%;"><b>7 Grease Sachet</b></td> <td style="width: 10%; text-align: right;"><b>Qty 1</b></td> </tr> <tr> <td><b>2 Rubber Seal – 15mm to 17.5mm</b></td> <td style="text-align: right;"><b>Qty 1</b></td> <td><b>8 Plastic sleeve 260mm</b></td> <td style="text-align: right;"><b>Qty 1</b></td> </tr> <tr> <td><b>3 External Plate</b></td> <td style="text-align: right;"><b>Qty 2</b></td> <td><b>9 Plastic sleeve 160mm</b></td> <td style="text-align: right;"><b>Qty 1</b></td> </tr> <tr> <td><b>4 Internal Plate</b></td> <td style="text-align: right;"><b>Qty 2</b></td> <td><b>10 Foam Tape</b></td> <td style="text-align: right;"><b>Qty 2</b></td> </tr> <tr> <td><b>5 Screw M6x50mm</b></td> <td style="text-align: right;"><b>Qty 2</b></td> <td><b>11 Velcro Straps</b></td> <td style="text-align: right;"><b>Qty 3</b></td> </tr> <tr> <td><b>6 5mm Allen key</b></td> <td style="text-align: right;"><b>Qty 1</b></td> <td><b>12 Jubilee Clips</b></td> <td style="text-align: right;"><b>Qty 2</b></td> </tr> </table>	<b>1 Rubber Seal – 12.0mm to 14.9mm</b>	<b>Qty 1</b>	<b>7 Grease Sachet</b>	<b>Qty 1</b>	<b>2 Rubber Seal – 15mm to 17.5mm</b>	<b>Qty 1</b>	<b>8 Plastic sleeve 260mm</b>	<b>Qty 1</b>	<b>3 External Plate</b>	<b>Qty 2</b>	<b>9 Plastic sleeve 160mm</b>	<b>Qty 1</b>	<b>4 Internal Plate</b>	<b>Qty 2</b>	<b>10 Foam Tape</b>	<b>Qty 2</b>	<b>5 Screw M6x50mm</b>	<b>Qty 2</b>	<b>11 Velcro Straps</b>	<b>Qty 3</b>	<b>6 5mm Allen key</b>	<b>Qty 1</b>	<b>12 Jubilee Clips</b>	<b>Qty 2</b>	
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**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
COF201 & COF730**

**Step 1**



- Knock out the oval port end plate of the Joint from the inside using a large screwdriver and remove any burrs using a file.

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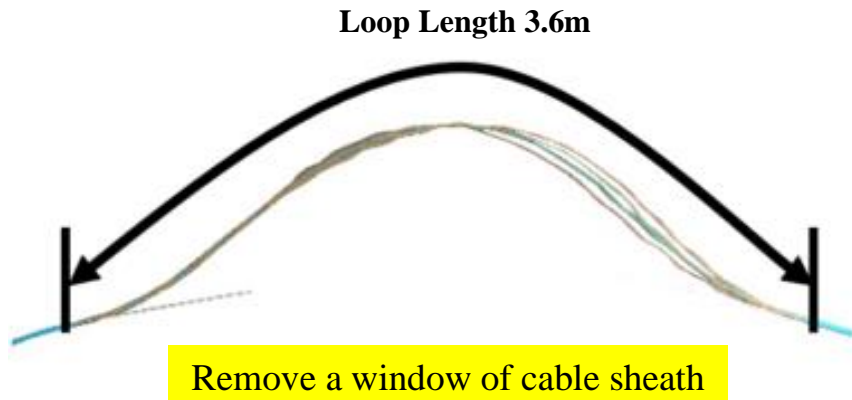
**Step 2**

**Mark centre point of mid span window**

- Remove the cables from the footway box and apply a reference mark to the cable where the centre of the window cut will be made.

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**Step 3**



- Apply two butt marks back either side of the mid span mark 1.8 metres to total a loop length of 3.6m overall. Before removing the sheath double check the two butt marks are the correct distance apart referring to the table in step 3.
- Remove the cable sheath between the two butt marks using approved practices.

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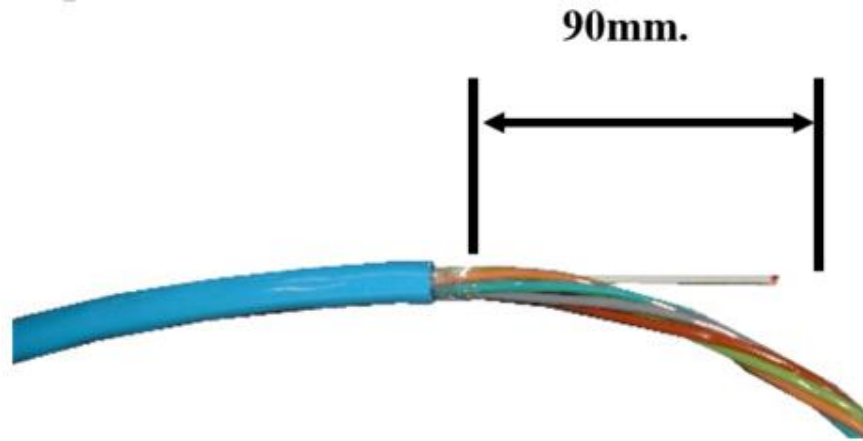
**Step 4**



- Remove all tapes and binders.
- Access the central strength and cut it in the centre.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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Step 5



- Cut each end back to 90mm for strength member or 150mm min for aramid from the cable butt as shown.

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**Step 6**

**Determine cable diameter  
&  
Identify rubber seal required**

<b>Rubber Seal Size</b>	<b>Cable Type</b>
12mm – 14.9mm	COF 200/201 up to 144f
15mm – 17.5mm	COF 200/201/730 > 144f

- Select rubber seal.
- Use larger seal for cables  $\varnothing$ 15-17.5mm COF200/COF201/COF730.
- Use smaller seal for cables  $\varnothing$ 12-14.9 COF200/COF201.

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**Step 7**

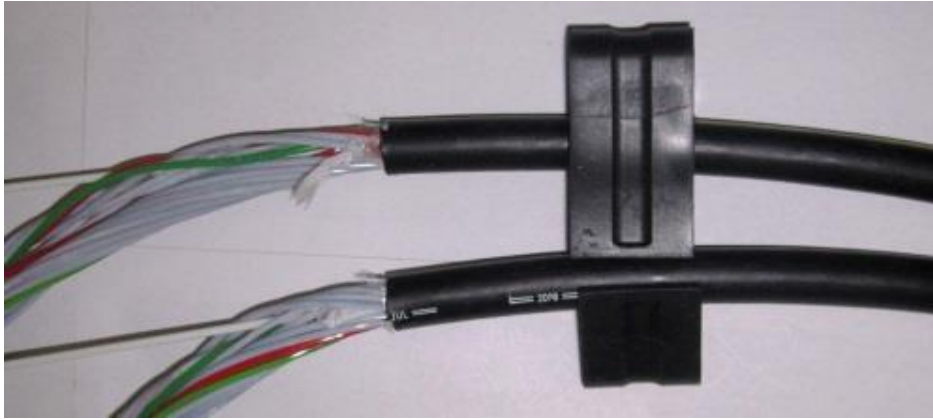


- If cable diameter is larger than '13.0mm' (refer to step 6). Use pliers to knock out external plate section.
- Repeat with internal plates.
- Ensure all 4 plate pieces are knocked out.



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**Step 8**



- Attach rubber seal over the cables.

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**Step 9**



- Assemble 2 parts of external plate to cable butt end.

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**Step 10**



- Assemble 2 parts of internal plate to cable butt end.

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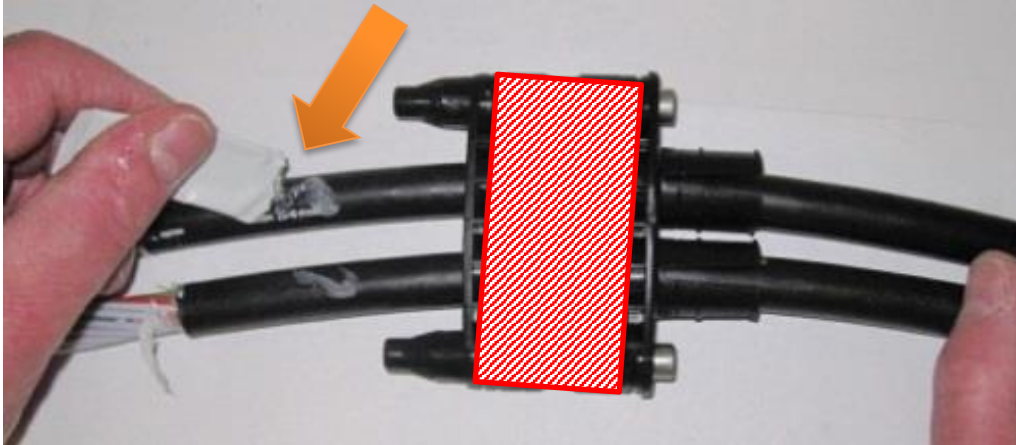
**Step 11**



- Insert screws into assembly and lightly screw together in place.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 12**



- Add grease to cable butt end.
- Ensure you spread the grease evenly.

**NOTE:** Ensure no grease is applied to external side of the seal.

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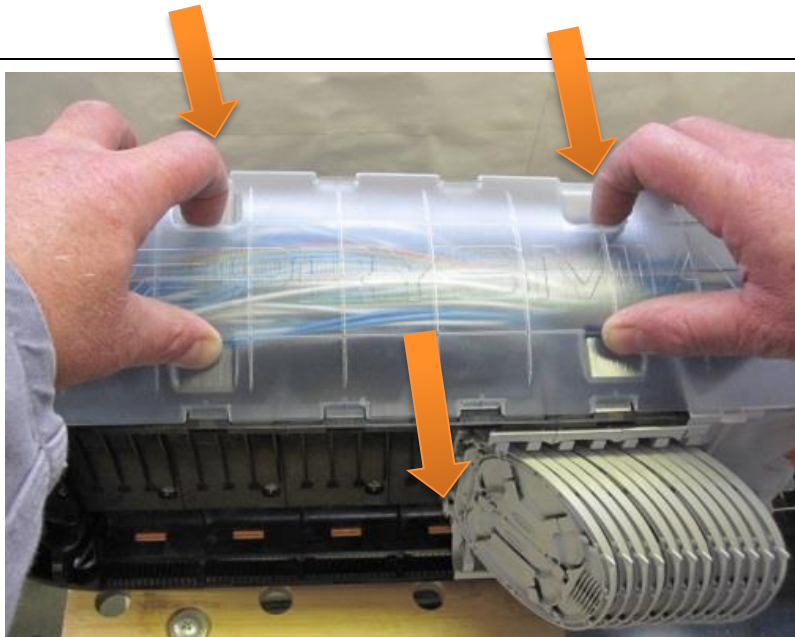
**Step 13**



- Push assembly towards cable butt end.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 14**



- Identify which UN joint you are installing. See table & remove loop storage guide cover or Velcro straps.

<b>BT Joint Type</b>	<b>Cover Type</b>
UN Large	2 x Velcro Straps
UN X Large	Storage Guide Cover

- Cover: Use 2 fingers in slots on one side. Flex to disengage clips.
- Velcro: Undo & pull the velcro out of the slots.

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**Step 15**

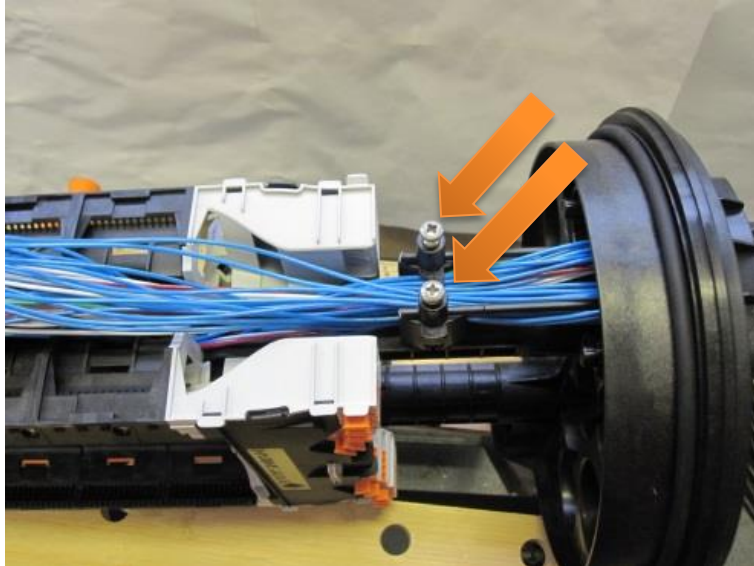


- Carefully insert loop into the oval port.



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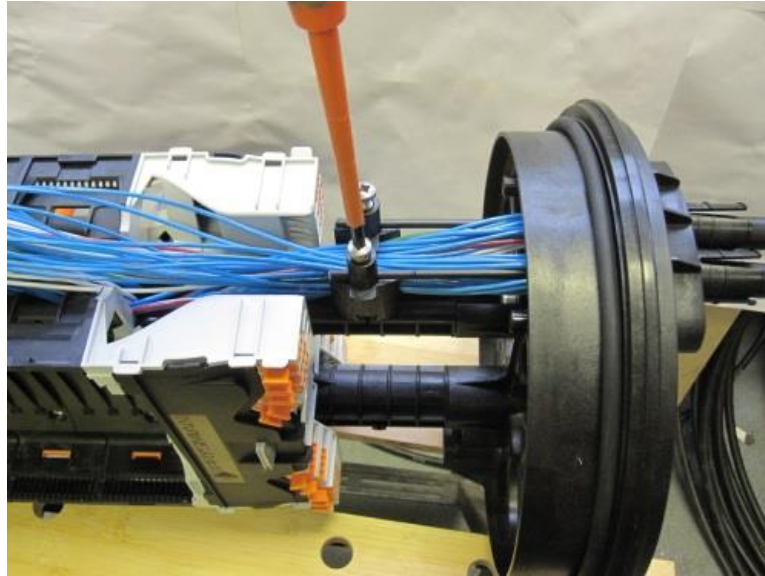
**Step 16**



- Fully insert the mechanical oval port assembly into the oval port.
- Ensure GRP is fully inserted in the cable anchor plate.

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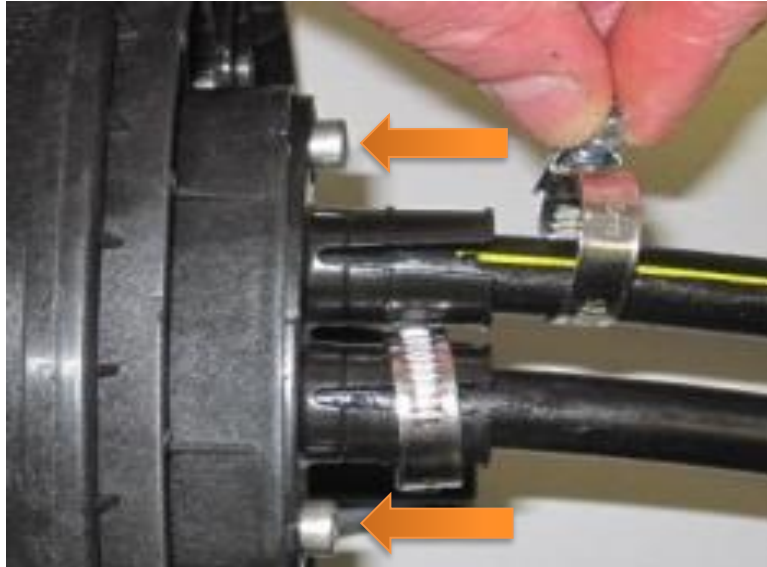
**Step 17**



- Ensure cable butts are still in correct position by visually checking inside the port.
- Tighten screws in the cable anchor plate until the GRP is secured.

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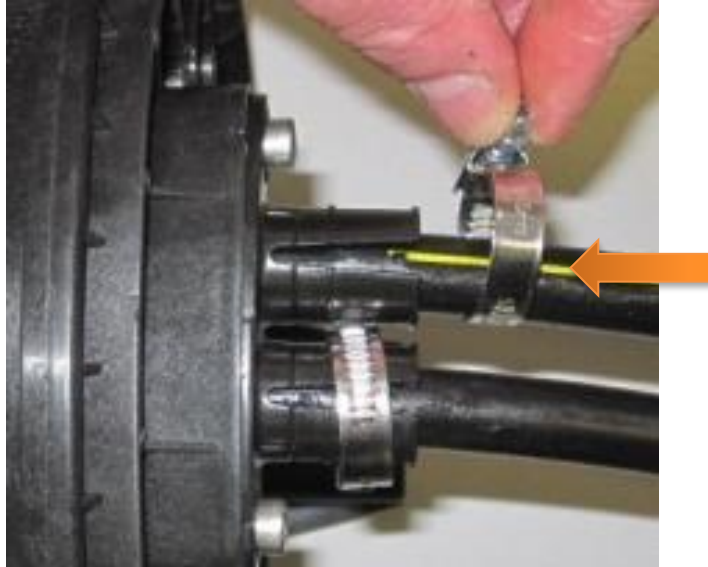
**Step 18**



- Tighten screws using a 5mm Allen Key.
- Ensure you tighten each screw evenly and in small increments until resistance is met.
- Ensure the port seal has not been damaged or cracked during installation of the screws.

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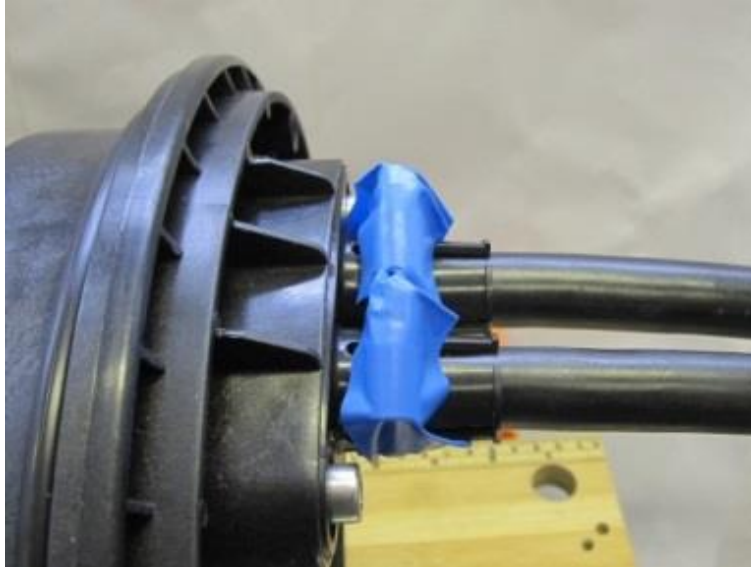
**Step 19**



- Assemble jubilee clips and tighten using a screwdriver.

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**Step 20**



- Apply 2 turns or electric tape around the jubilee clip.

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**Step 21**



- Firstly, separate the two ends of the loop. Gently straighten the loop away from the LMJ ready to loop into the spine.

**NOTE:** Take care not to kink the cable elements when installing the loop. Do not rush and follow the instructions precisely. The loop guide is designed to store loose tube elements.

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**Step 22**

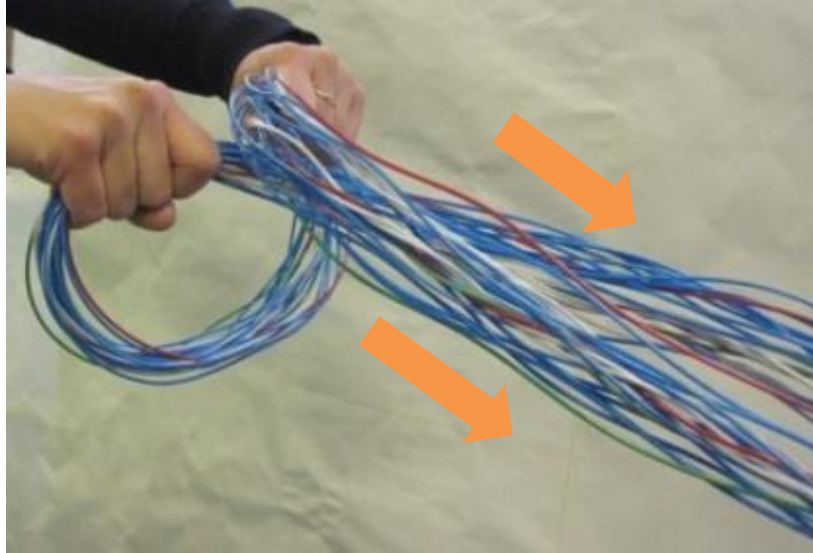


- See Table for number of loops to create.
- For the first loop, cross the elements at the top and flip the loop over to gather the elements.

<b>BT Joint Type</b>	<b>Cable Type</b>	<b>No. of Loops</b>
UN Large	LT	6 loops
UN X Large	LT	4 loops

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**Step 23**

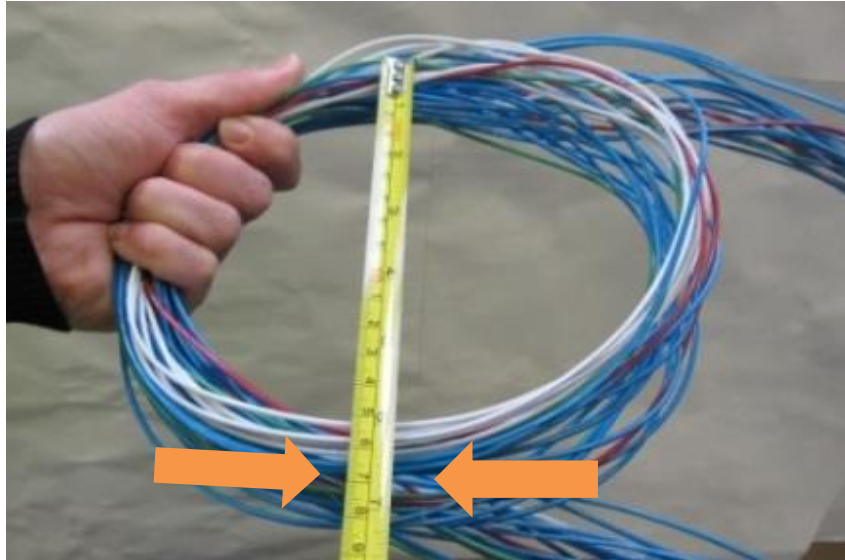


- Ensure the loop lengths are straight, even and crossed over as shown.
- The loop lengths are not crossed at the joint end, only at the top where you are creating a loop each time.
- **Check each loop looks the same.**



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**Step 24**



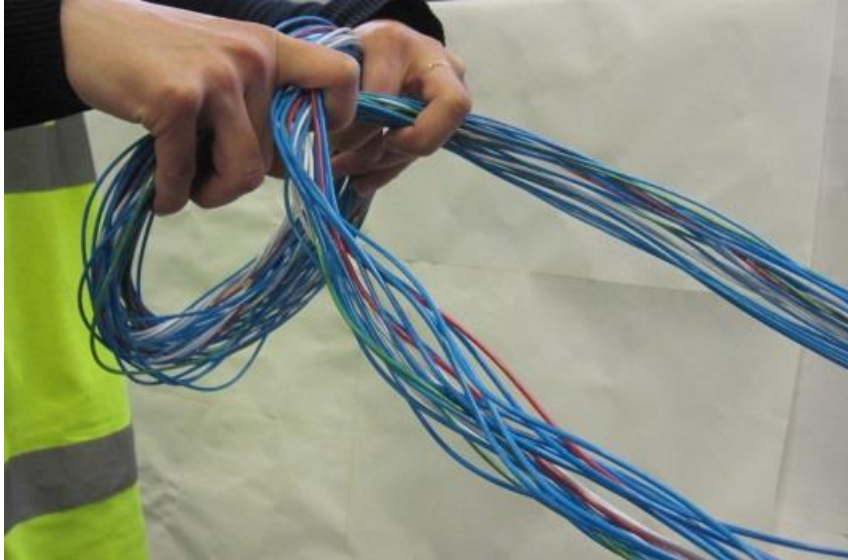
- Loosely holding the elements with one hand measure inside the loop diameter.
- See Table to select correct loop measurement for your joint.
- Return to Step 21 to 23 if you do not have the correct dimension.

<b>BT Joint Type</b>	<b>Cable Type</b>	<b>Loop Measurement</b>
UN Large	LT	150mm
UN X Large	LT	150mm

**NOTE:** See table and measure carefully the outside diameter loop stated dimensions.

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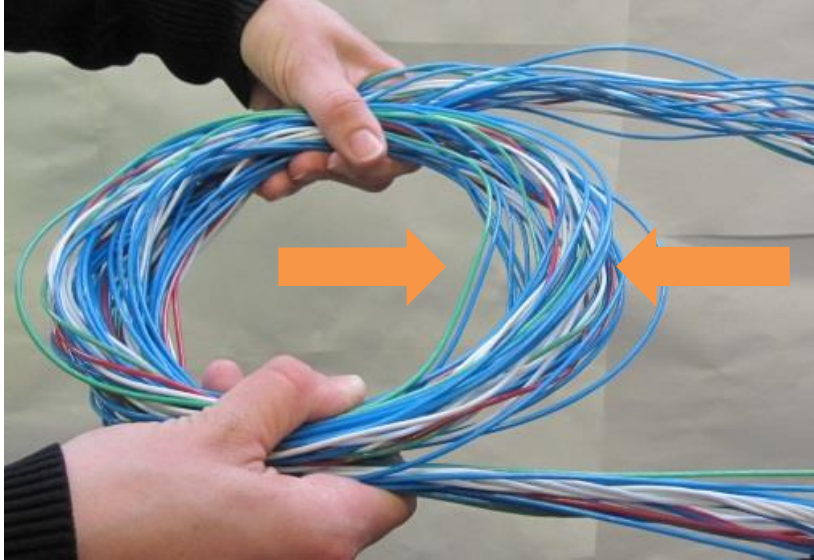
**Step 25**



- For the second loop, cross the elements at the top and flip the loop over to gather the elements.

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**Step 26**

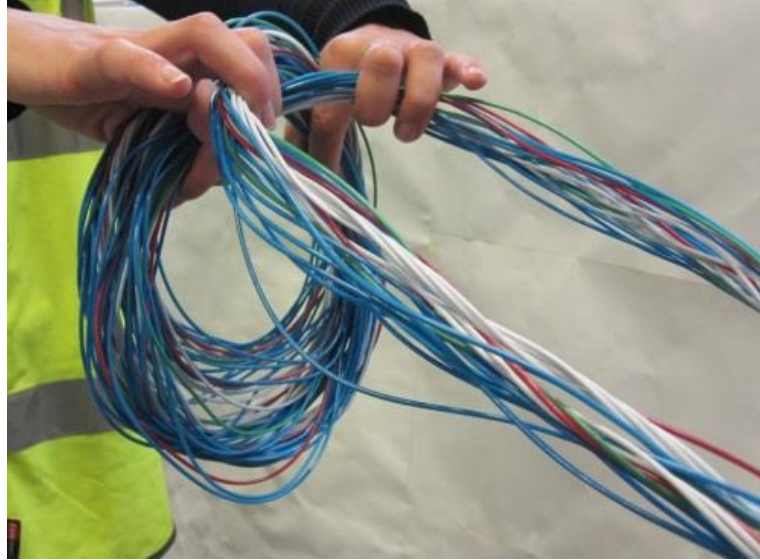


- Make the second loop, but ensure the loop is slightly larger than the first loop as shown in the photo.

**NOTE:** The loop diameter is now slightly wider than the first loop.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
COF201 & COF730**

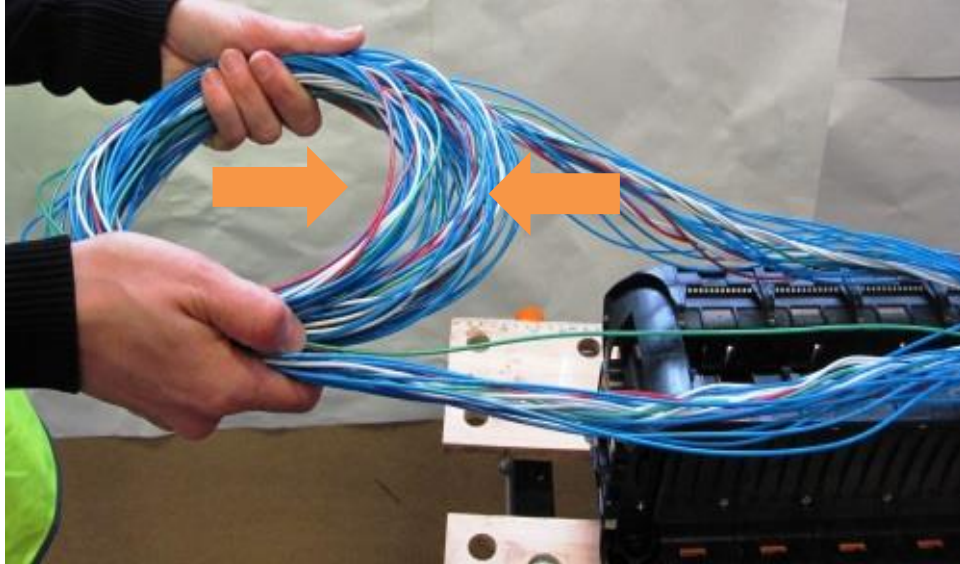
**Step 27**



- For the third loop, cross the elements at the top and flip the loop over to gather the elements.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 28**

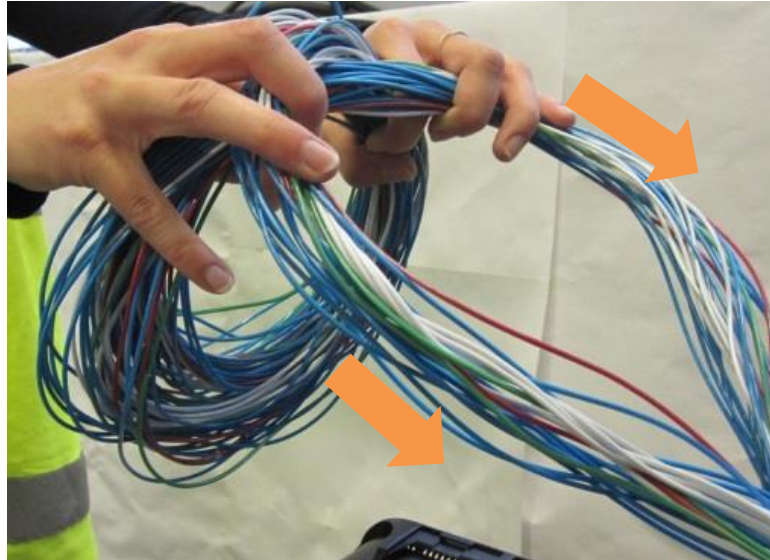


- Make the third loop, but ensure the loop is slightly larger than the first & second loop as shown in the photo.

**NOTE:** The loop diameter is now slightly wider than the second loop.

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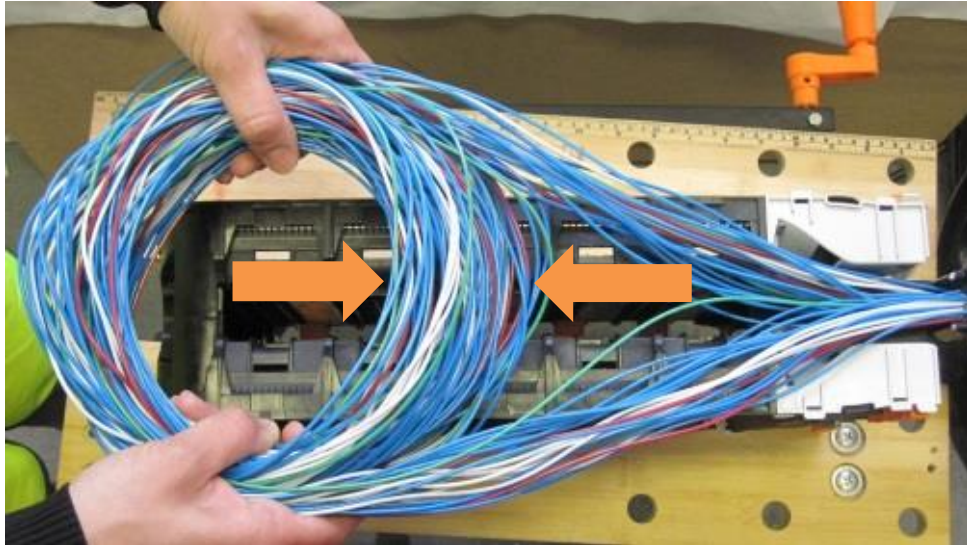
**Step 29**



- Repeat steps 27 and 28 for the fourth and fifth loops if required.
- For the final loop, cross the elements at the top and flip the loop over to gather the elements.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 30**



- Make the final loop, but ensure the loop is the same slightly larger than the first, second & third loop as shown in the photo.

**NOTE:** The loop diameter is now slightly wider than the third loop.

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**Step 31**

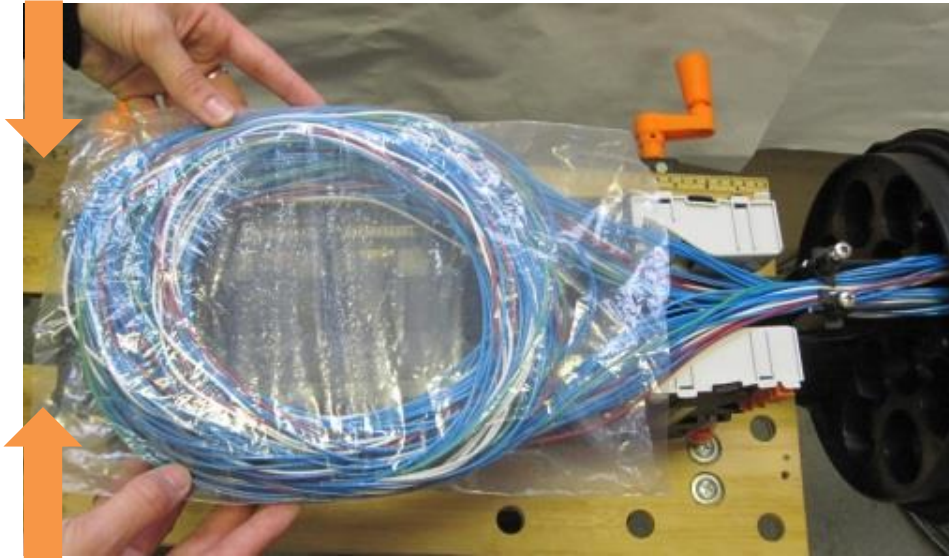


- Gather the loop in place with one hand.
- Locate the plastic sleeve and place your hand through the sleeve and hold onto the loop at the top.



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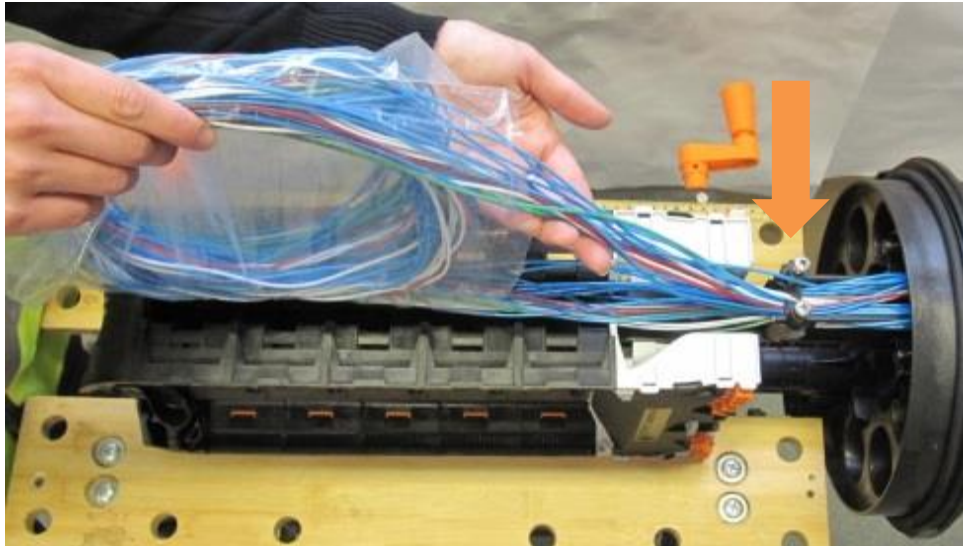
**Step 32**



- Using your free hand, carefully pull the plastic sleeve over the entire loop until the edge of the sleeve is in line with the top of loop.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 33**

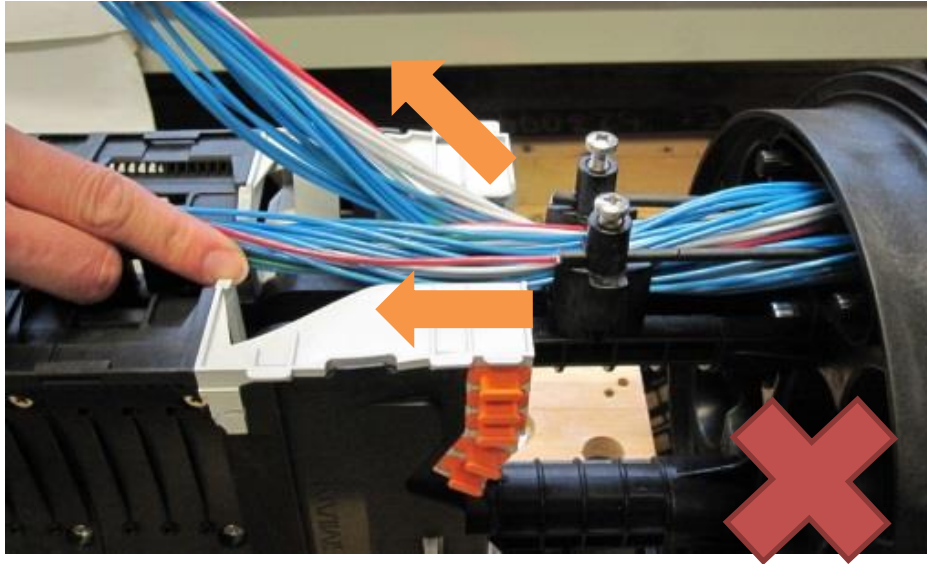


- Twist the loop 90 degrees ensuring elements are twisted in the natural direction that the element lay in the cable anchor position. See Step 34 & 37 for incorrect and correct twist.

**NOTE:** Do not twist against the elements.

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Step 34

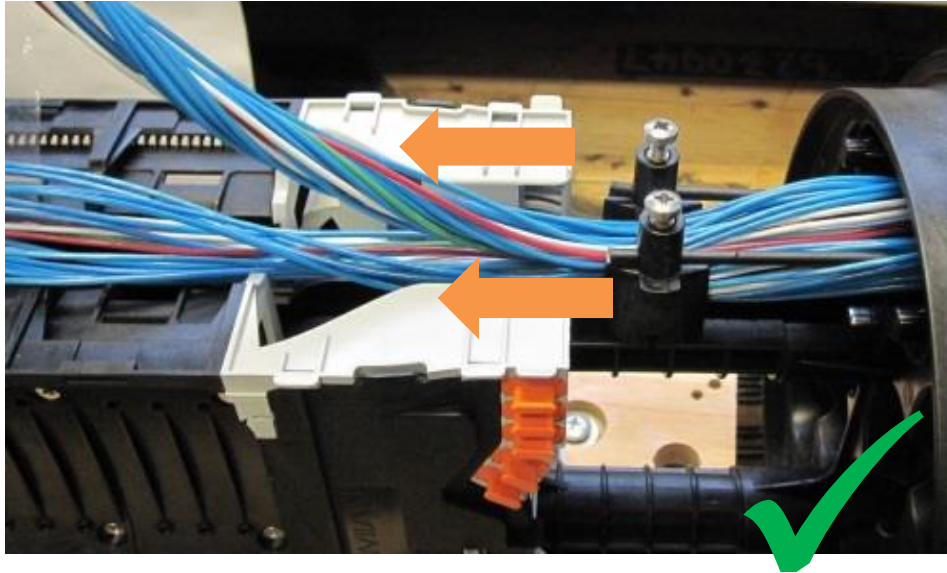


- Incorrect (unnatural) twist loop twist.

**NOTE:** The elements are twisted and do not sit neatly on top of one another.

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Step 35

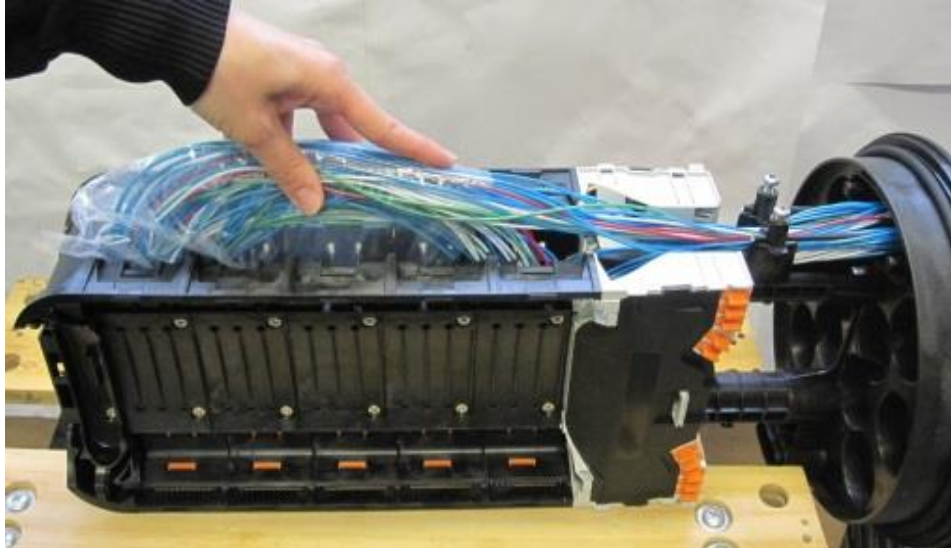


- Correct (natural) loop twist.

**NOTE:** The elements lay flat and neatly on top of one another.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 36**

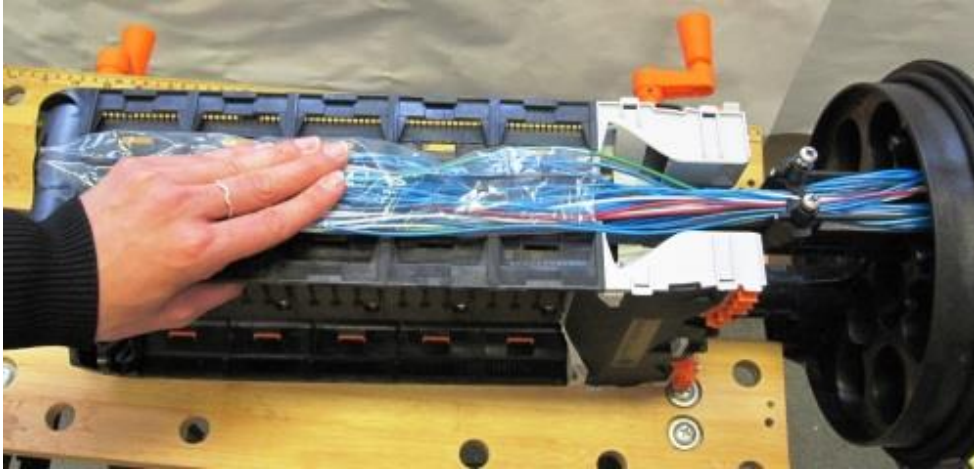


- Carefully push the loop into the open side of the loop storage area.
- Ensure to get the entire loop within the side walls of the spine.

**NOTE:** Ensure the plastic sleeve is pushed through evenly and without it twisting.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 37**



- Gently hold in place whilst you locate the loop storage cover or velcro.

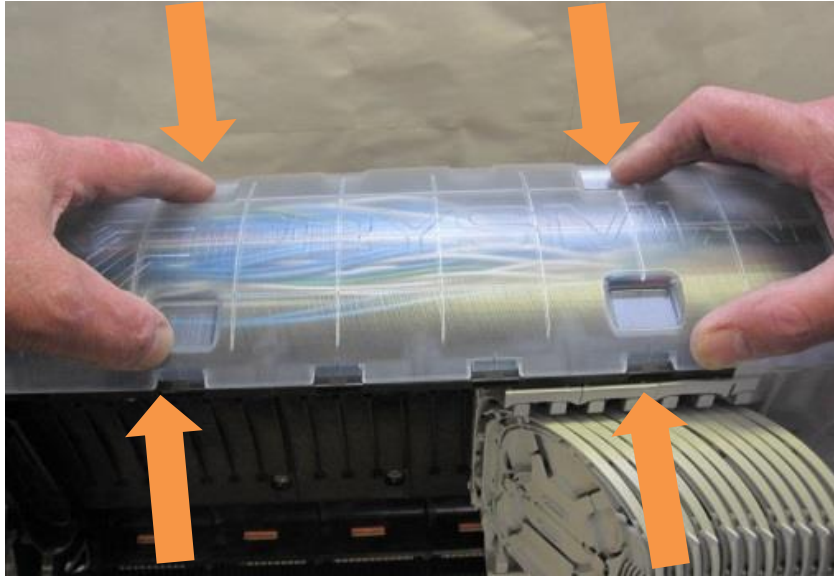
**NOTE:** Take care not to kink the cable elements when installing the loop. Do not rush and follow the instructions precisely.

**GO TO STEP 38 TO REPLACE LOOP COVER.**

**GO TO STEP 39 TO REPLACE VELCO STRAPS.**

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 38**



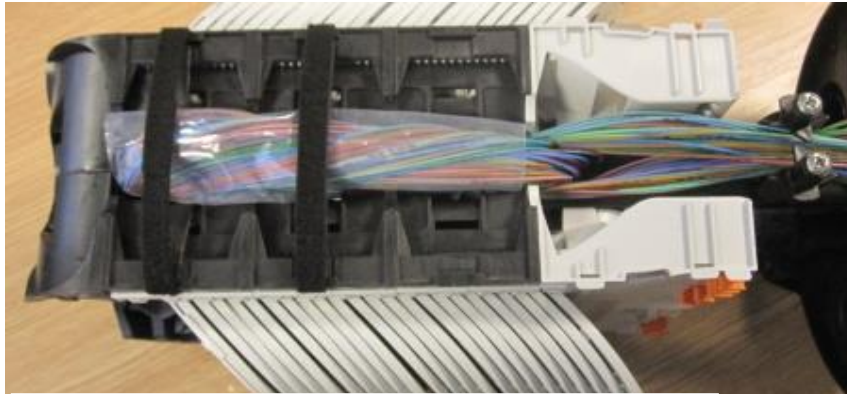
- Locate the tabs on one side of the loop storage cover and flex using 2 fingers.
- Push tabs on opposite side to clip the loop storage cover in place.

**NOTE:** Take care not to kink or catch the cable elements when installing the loop. Do not rush and follow the instructions precisely.

**MECHANICAL OVAL PORT INSTALLATION OF COF200,  
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**Step 39**

**BT Large**



**BT X Large – Use loop storage cover**

- Replace Velcro straps (see table for how many per node).
- Push the velcro into the slots, soft side down.
- Ensure loop is gently pushed down to ensure the velcro is as tight as possible securing the loop.

<b>BT Joint Type</b>	<b>Cover Type</b>
UN Large	2x Velcro Straps
UN X Large	Loop Storage Cover

**NOTE:** Take care not to kink or catch the cable elements when installing the loop. Do not rush and follow the instructions precisely.