

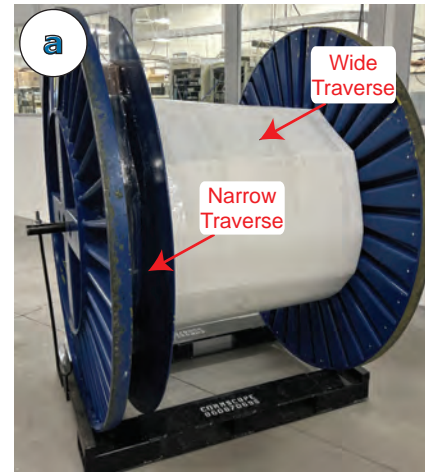


### Recommended Tools (or Equivalent)

	Phillips #2 Screwdriver
	Standard Straight Screwdriver
	8mm Socket Tool
	Adjustable Wrench 25mm Min Opening
	Side Cutter/Snips

### 1 Step 1: Receive Reels and Prepare for Payoff

- a) **CAUTION:** Cable assembly reels vary in weight from approximately 600lbs (270kg) up to 4400lbs (2000kg) depending on reel options and cable assembly length. Take appropriate safety precautions before handling.
- b) Remove white cable guard material located in wide traverse section of reel by removing packaging tape holding it in place. Once removed the primary pulling end or first end off will be exposed.

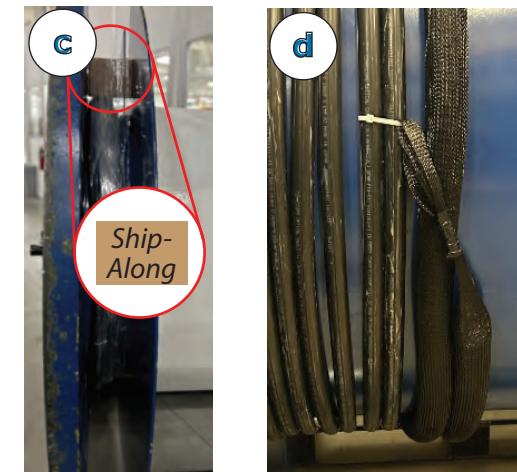


c) Remove stretch wrap and/or packaging tape from narrow traverse section to free ship-along items and expose the non-primarily pulling end or last end off.



d) When ready to start pulling, free the primary pulling end. The last end off should remain secured until the first end has been pulled leaving the wide traverse fully paid off.

e) Different reel material options are available based on configuration of the ordering MID (material id).



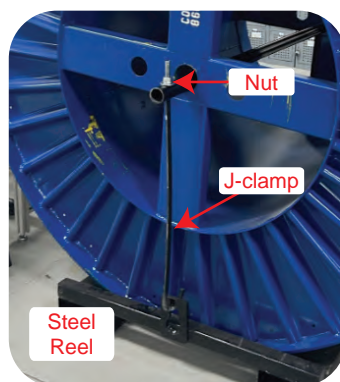
d) When ready to start pulling, free the primary pulling end. The last end off should remain secured until the first end has been pulled leaving the wide traverse fully paid off.

e) Different reel material options are available based on configuration of the ordering MID (material id).



### 2 Step 2: Load Reel onto Payoff Equipment

- a) Remove constraint to separate reel from pallet. For steel reels, remove J-clamp using wrench to remove nut. For wood reels, cut strapping with snips.
- b) Remove reel from shipping pallet to payout stand, trailer or other appropriately suited equipment by inserting spindle bar through reel center arbor hole and securing spindle to payout equipment to lift reel off of the pallet.



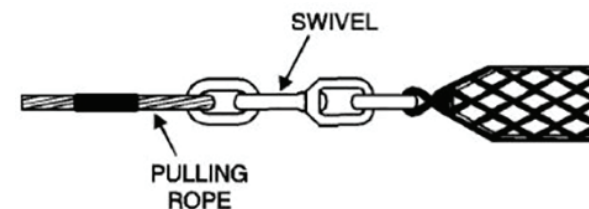
### 3 Step 3: Pull Cable Ends to Installation Locations

Using at least two persons, pay the cable off of the reel and into the cable pathway. CommScope strongly recommends the use of a swivel positioned between the eye of the pulling grip and the mule tape or pulling rope.

Attach the swivel to the pulling grip eye and tie the mule tape or pulling rope to the other end of the swivel. Using at least two persons, pay the cable off of the reel and into the cable pathway.

One person should monitor the reel to prevent it from overspinning and to ensure the proper payout of the cable and the other person(s) should pull the cable through the pathway to the end termination location.

**NOTE:** Avoid twisting the cable while it is being pulled in. Do not exceed 300lbf pulling for the primary pulling end for a 864-fiber or larger cable assembly. The primary pulling end is the cable assembly end that is pulled first off of the cable assembly reel. This end could be preterminated with connectors or as a stub assembly. If it is preterminated it will come with a pulling grip installed. If it is a stub end, the installer should use their preferred pulling grip. The last end off of the cable assembly reel will be the non-primary pulling end. This end is generally always terminated and will have a pulling force rating not to exceed 100lbf. For pulls greater than 500ft (150m) or where pulling loads exceed 100lbf it is recommended to apply appropriate telecommunication cable lubricate to cable jacket being pulled through conduit. Apply to cable jacket only. Do not apply to pulling socks or cable breakout ends.



### 4 Step 4: Identify cable management kit

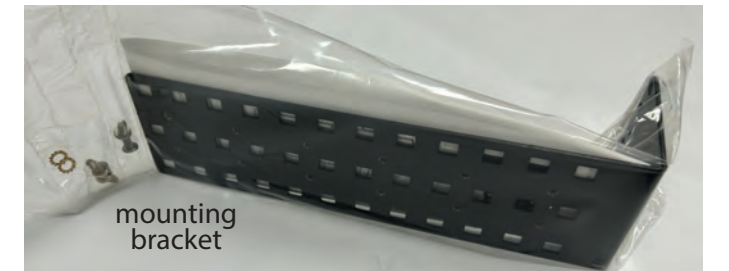
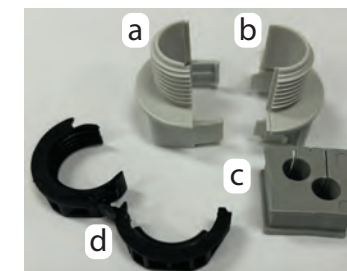
This boxed kit will be a ship-along item containing the following items:

One (1) rack mounting bracket and mounting screws.  
All contained within the same bag.

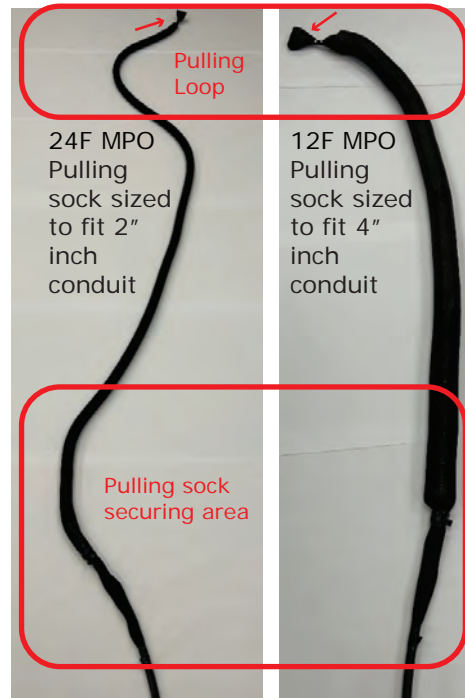
One (1) bagged split gland kit containing enough pieces to install cable assembly to CHD panel(s).

- a) Split housing with tabs
- b) Split housing without tabs
- c) Split grommet with two cable openings
- d) Split nut

Save kit for installation of cable assembly into CHD Panels.



**5 Step 5: Pulling Sock Removal**



24F MPO Pulling sock sized to fit 2" inch conduit

12F MPO Pulling sock sized to fit 4" inch conduit

Cable ends pulled to their installation locations

a) To remove pulling sock, focus on removing tape, cable ties, stretch wrap and clamp from pulling sock securing area indicated. Tape and shrink wrap is flagged for easy removal where removal is needed. Cable ties should be carefully cut to avoid cutting cable or subunit breakouts. Cable clamp should be removed completely before removing pulling sock. All pulling sock layers should easily be removable once these items are removed from the pulling sock securing area.



b) Remove tape where flagged.



c) Fold mesh back and forth as needed to remove all constraints.



d) Remove tape covering the cable tie and cut to remove.



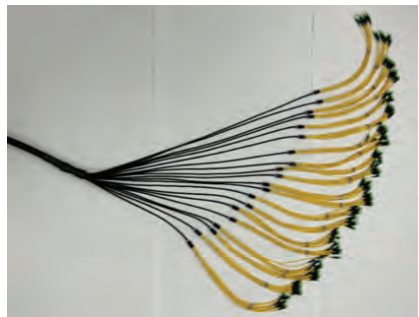
e) Remove tape covering cable clamp and remove clamp with socket tool.



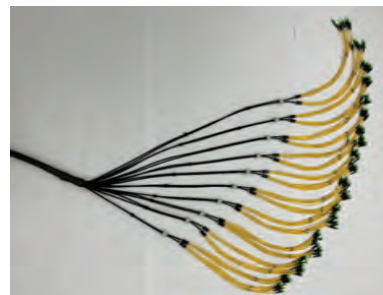
f) Remove stretch wrap from corrugate tube by trunk breakout.

**6 Step 6: Prep 12F Connector End for CHD Installation**

a) Organize 12F MPO end to group breakouts of equal length pairs. Subunits are numbered so that each equal length pair will coincide with each sequential number pair. 1&2, 3&4 continuing through final cable assembly subunit pair.



b) Using split glands from ship-along kit, place one split gland on every equal length subunit pair. Glands should be orientated with threads in the direction of the 12F MPO connectors and placed approximately 3 inches from the rear of the fanout housing.



**7 Step 7: Install CHD Panels into Rack**

Mount CHD Panels for cable assembly installation, see TC-96269-IP for additional information.

See customer design documentation to determine CHD panel installation locations.

Use four (4) mounting screws to secure each panel to rack frame.

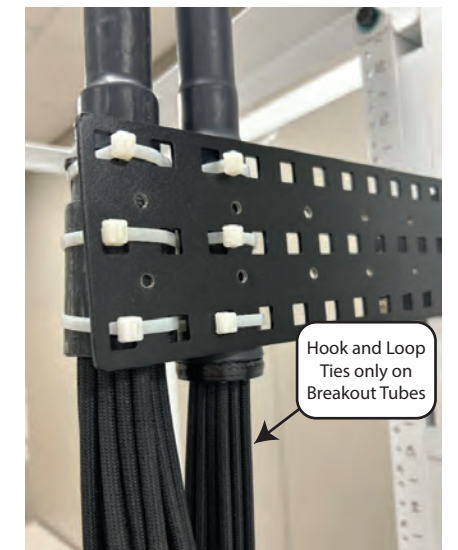
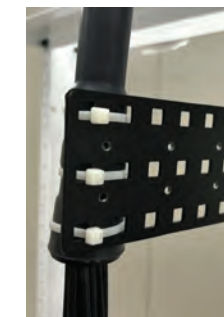
Repeat steps above for additional CHD Panels installed in this same rack. Start at the next defined customer location.

Install rack mounting bracket to rack frame behind installed CHD Panels. Bracket is recommended to be placed centrally or slightly higher in relation to the CHD panel(s) that the cable assembly(ies) will be installed into. Use two (2) mounting screws to secure each bracket to rack frame.



**8 Step 8: Attached Cable Breakout to Mounting Bracket**

Use multiple cable ties to secure cable assembly breakout housing to mounting bracket. Apply cable ties around breakout housing, strain relief heat shrink, or the cable jacket itself. Do not apply cable ties to braided sleeving breakout tubes.



When installing multiple cables into the same rack, leave room on the mounting bracket to avoid interference between cables.

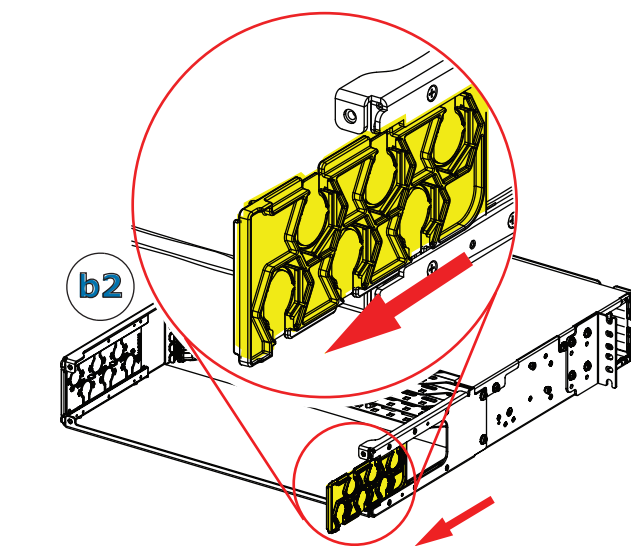
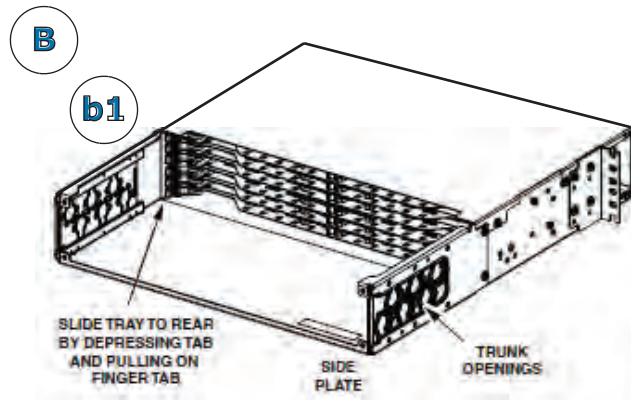
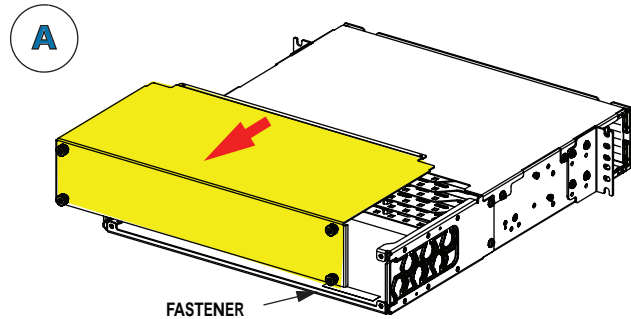
**9 Step 9: Attaching 12F MPO Breakouts to CHD Panel Inserts**

**Install the cable in fiber panel**

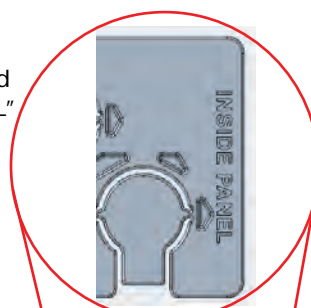
**NOTE:** Before securing cable to rack or bracket outside of panel, make sure inside length from side plate to connector is 30-33 in. (76.2-83.82 cm) for proper blade movement.

**CHD Panels**

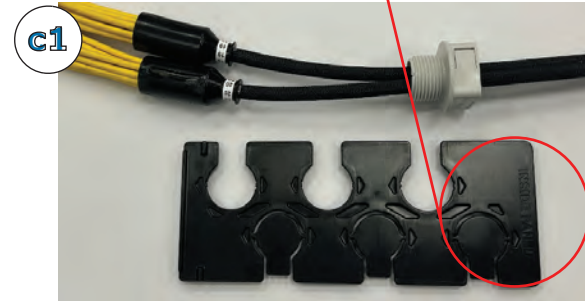
(A) Unfasten and remove panel rear cover.  
 (B) Slide out side plate. (C) Install cable gland in side plate. Re-install side plate and rear cover.



**C** Side plate is marked with "INSIDE PANEL" to guide proper installation.



c1) Install cable gland into side plate.



c2) Place split nut around breakout pairs and close.



c3) Hand tighten onto gland threads until gland is held tight to CHD side plate.



**D** Following 12F MPO installation maps, arrange cables neatly inside CHD panels using hook and loop bands. Position cables using gray tray fingers.

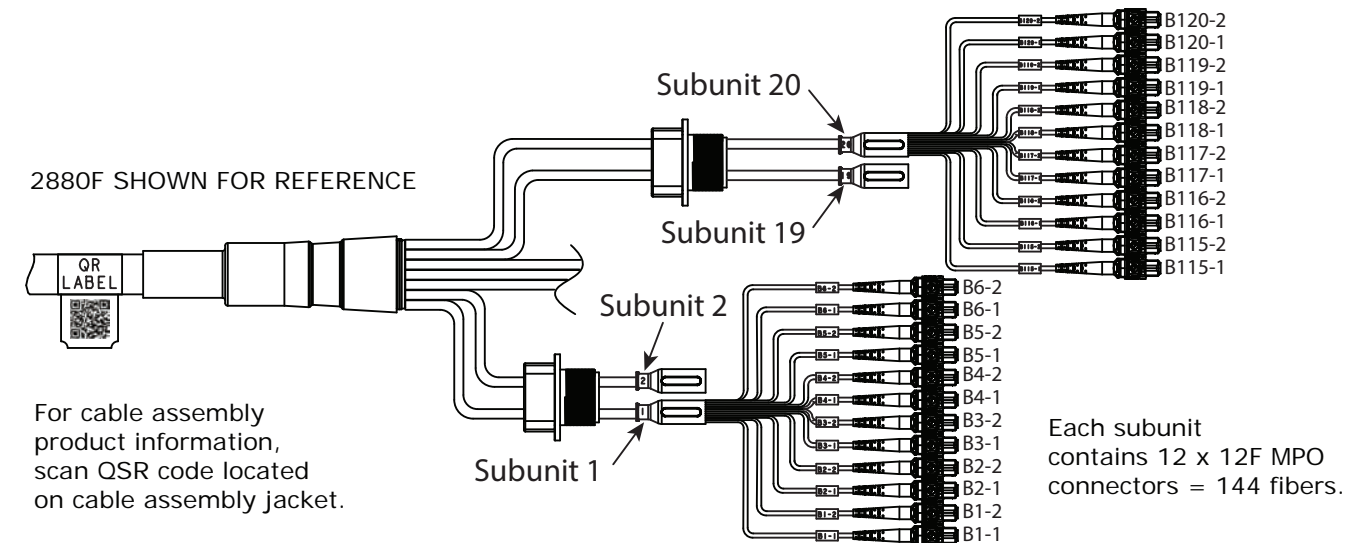


**10 Step 10: Installing 12F MPO Connectors into CHD Trays**

Front view CHD tray access:



	A [CHD-DP-4MPO-ALL-A]				B [CHD-DP-4MPO-ALL-A]				C [CHD-DP-4MPO-ALL-A]				D [CHD-DP-4MPO-ALL-A]	
CHD TRAY POSITION	1	2	3	4	1	2	3	4	1	2	3	4		Cable Subunit
12F MPO CONNECTOR LABEL	B1-1	B1-2	B2-1	B2-2	B3-1	B3-2	B4-1	B4-2	B5-1	B5-2	B6-1	EMPTY	B6-2	1

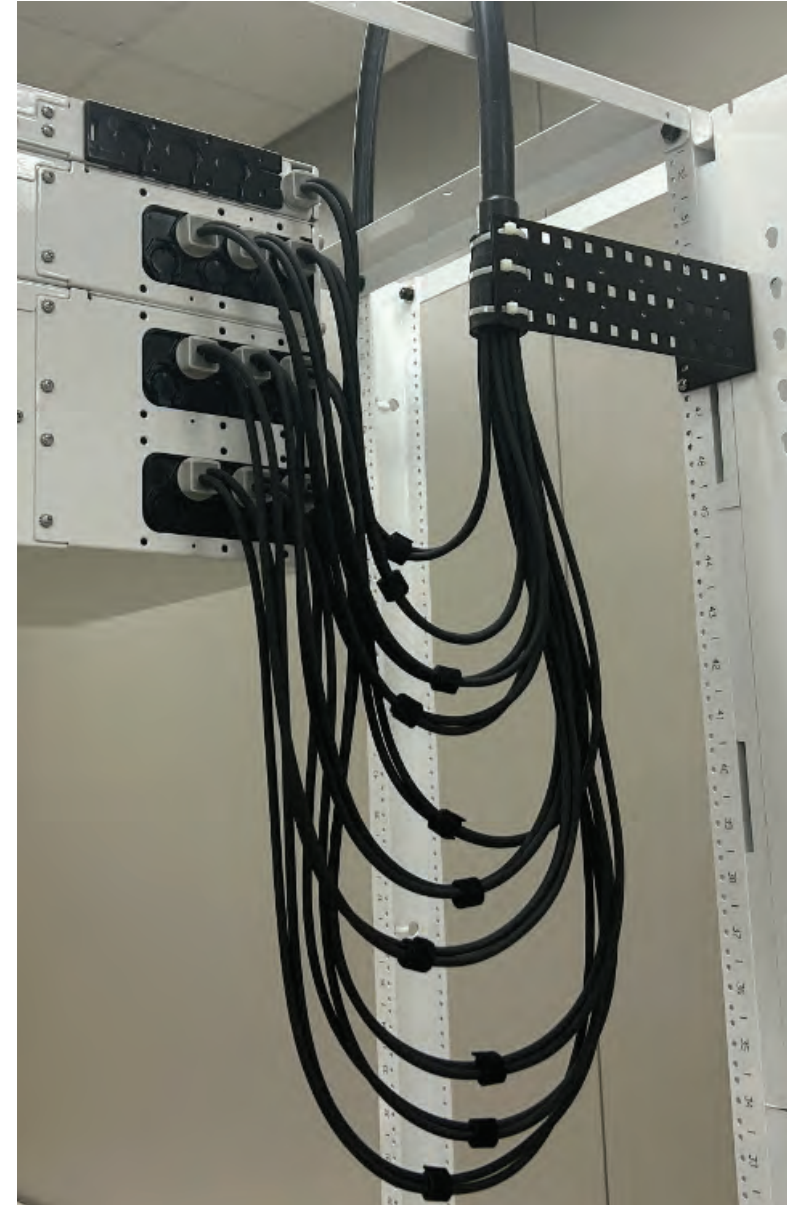


Subunits Per Cable Size	
One cable subunit installs into each CHD Tray	
Cable Size	Subunit Quantity
864 Fiber	6
1728 Fiber	12
2880 Fiber	20
3456 Fiber	24

**12 Step 12: Inspect Cable Assembly Installation into CHD Panels**

Verify all breakout subunits have a drip loop with generous bend radius going into installed split glands.

Adjust breakout cabling position to avoid sharp bends.

**13 Step 13: See TC-96321-IP document for installation of 24F MPO Connector End Terminated Trunks into OPE Cabinet (if applicable)**