Verizon NEBS™ Compliance: Craft Interaction & Connector Installation and Removal Procedure

Verizon Technical Purchasing Requirements

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1.0 PURPOSE

The purpose of this Verizon Technical Purchasing Requirement document is to provide Craft Interaction & Connector Installation and Removal Procedure.

2.0 SCOPE

FOC Testing

3.0 REFERENCES

GR-449-CORE, Issue 2	Generic Requirements for Next Generation Fiber Distribution Hubs

4.0 ACRONYMS

FDH	Fiber Distribution Hub
FOC	Fiber Optic Components
ITL	Independent Testing Laboratory
SIT	System Integration & Testing
TPR	Technical Purchasing Requirement

5.0 CRAFT INTERACTION & CONNECTOR INSTALLATION AND REMOVAL PROCEDURE

This TPR is issued to provide test procedure for conducting Craft Interaction & Connector Installation and Removal Procedure applicable to FDHs, Splice Closures and any Other Boxes, housing multiple connectors.

Front Plane Connector Disconnect and Re-Connect
Rear Plane Fiber Optic Terminal Connector Disconnect, Adapter Replacement and Re-Connect

Item	Requirements
Sample Configuration	1. All optical connector ports fully terminated on the front plane and the rear plane. 2. Pigtails from pass-thru or dummy splitters will be used in lieu of jumpers on the front plane. 3. The rear plane will be fully populated with fibers connected to the feeder and distribution cables as normal for product under test. 4. Location of pigtails to be monitored or to be disconnected per GR-449 Tables 5-3, 5-4 or 5-5 as appropriate for the connector panel configuration. 5. Monitored (disturbed) fibers concatenated for a single fiber network.
Product Testers	See GR-449 section 5.3.4 for details on hand size and level of experience.
Optical Measurements	1. Insertion loss at 1310, 1490, 1550 and 1625 nm before and after on the disturbed (adjacent) fiber network. 2. Insertion loss and return loss at 1625 nm at least every 200 ms during the craft interaction operation on the disturbed network.
Front Plane disconnect and reconnect procedure	1. Test operations are to be performed on the same connector by each tester before moving on to the next connector 2. Continuously monitor the adjacent (disturbed) network during the operation. 3. Disconnect the designated connector from the front plane and remove the pigtail back to the splitter. 4. Reroute the pigtail back to the area of disconnect. 5. Clean the connector 6. Reconnect the pigtail to the original position on the front plane.

Item	Requirements
Rear Plane disconnect and reconnect procedure	1. Test operations are to be performed on the same connector by each tester before moving on the next connector 2. Continuously monitor the adjacent (disturbed) network during the operation. 3. Disconnect the connector from the rear plane, including installation of the dust cap on the connector. 4. Remove the fiber pigtail back to the source. 5. Disconnect the mating pigtail from the front plane and install a dust cap on the connector. 6. Remove the connector adapter. 7. Reinstall the connector adapter. 8. Clean and re-connect the front plane pigtail in the adapter. 9. Clean and re-connect the rear plane fiber pigtail.
Optical Criteria	1. After testing, combined increase in IL of the monitored network not more than 0.25 dB. 2. During testing, combined increase in IL of the monitored network not more than 1.5 dB. 3. During testing, combined increase in return loss of the monitored network not more than 2 dB.
Reported Results	1. Tables showing the before to after change in insertion loss for each operation. 2. Graphs showing insertion loss and return loss superimposed during each craft interaction operation. 3. Tables summarizing the change in insertion loss and return loss.