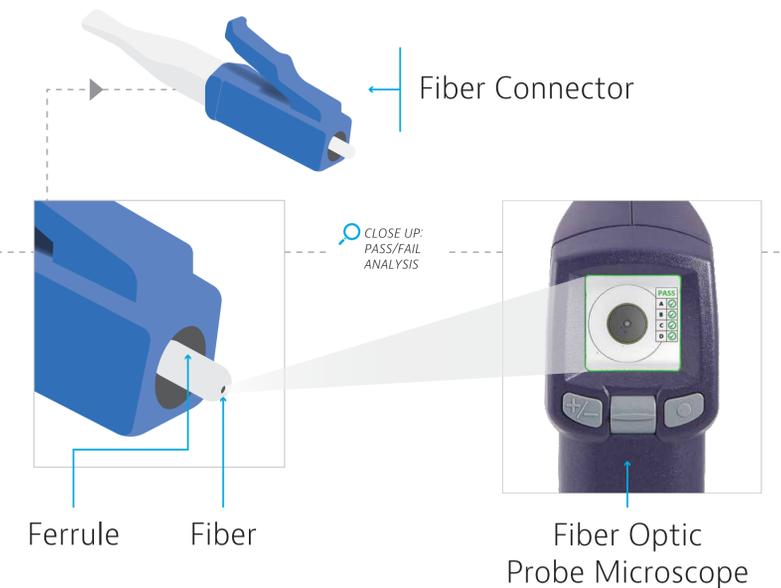


## Contamination — The #1 Reason for Fiber Network Failures

- Dirty connectors cause 80% of field test failures
- Microscopic debris significantly degrades signal performance and can cause permanent damage to connectors and the equipment they are plugged into
- Mating dirty connectors can break apart debris, spreading it across the fiber endface
- Typical debris on a fiber connector endface can be 2 - 20µm and can only be seen with a fiber optic probe microscope
- Following the **Inspect Before You Connect** process ensures fiber end faces are clean prior to mating connectors

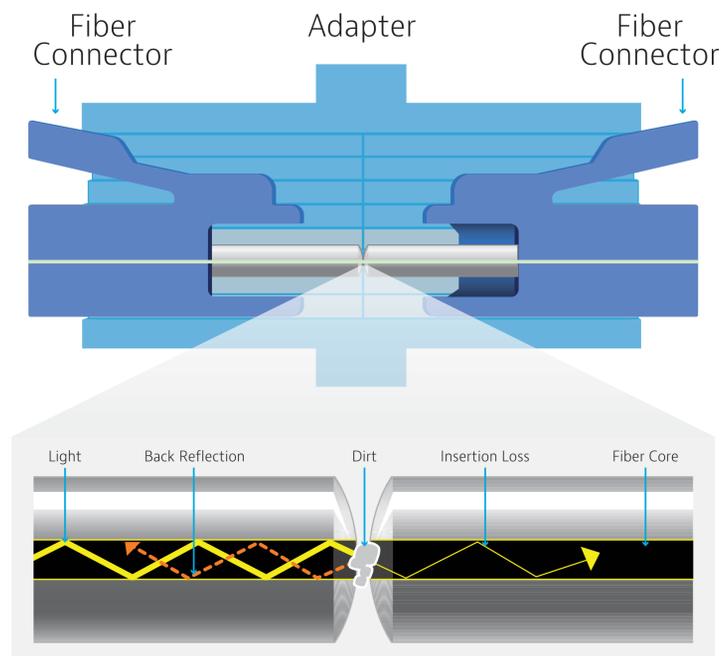


## Inspecting BOTH sides of the fiber connection is the ONLY WAY to ensure that it will be free of contamination and defects.

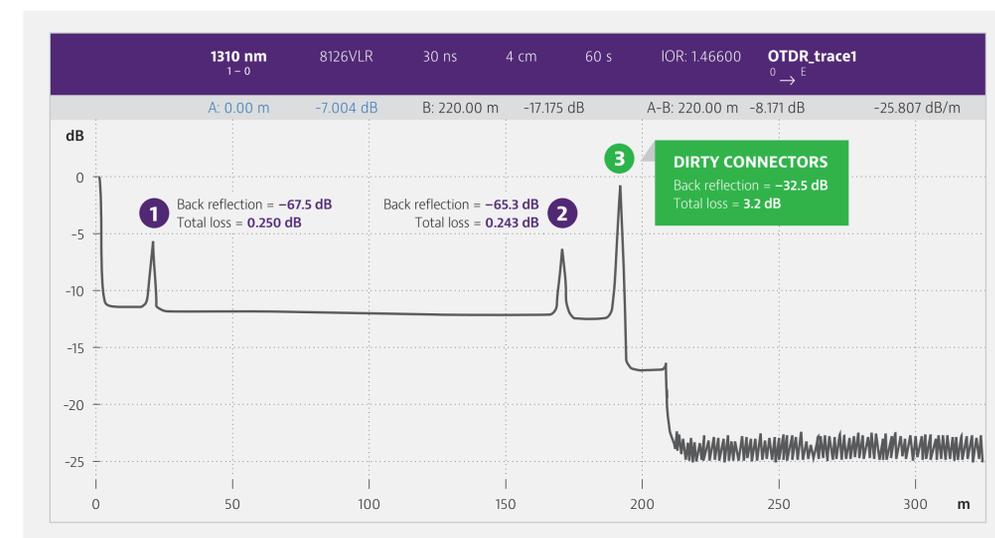
Patch cords are easy to access and view compared to the fiber inside the bulkhead, which is frequently overlooked. The bulkhead side may only be half of the connection, but it is far more likely to be dirty.

A single particle mated into the core of a fiber can cause significant **back reflection**, insertion loss and even **equipment damage**.

Inspecting and cleaning connectors, test ports and reference cords before testing network connectors **prevents cross-contamination**.



## OTDR Trace Showing the Effect of Fiber Contamination



This OTDR trace shows how a dirty fiber connection affects overall signal performance. **Inspect Before You Connect!** Proactively inspecting each fiber connection significantly reduces network downtime and troubleshooting.

<p>① CLEAN Connectors</p> <p>Back reflection = <b>-67.5 dB</b> Total loss = <b>0.250 dB</b></p>
<p>② CLEAN Connectors</p> <p>Back reflection = <b>-65.3 dB</b> Total loss = <b>0.243 dB</b></p>
<p>③ DIRTY Connectors</p> <p>Back reflection = <b>-32.5 dB</b> Total loss = <b>3.2 dB</b></p>