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Product Group 22

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FIBER ADAPTERS

INSTRUCTIONS

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Replacing the Elastomeric Splice

NOTE:

The elastomeric splice in the Fiber Adapter when you received your unit was installed for shipping purposes only. This splice may have become contaminated. Please replace this splice with one of the spares before attempting to use the Fiber Adapter.

Due to mechanical wear in the components and contamination of the splice's index-matching gel, degradation of the elastomeric splice can be expected over time and useage.

The number of fiber-mating cycles that can be expected with the splice will vary from user to user. Such factors as fiber-end condition, operator proficiency, and environmental contaminants will dramatically affect the splice's life expectancy.

Degredation of the Splice will be manifested as a small, progressive increase in insertion-loss with each successive cycle, until mechanical factors within the splice result in a sudden major loss increase.

Should splice-loss increase to an unacceptable level, the splice can be easily replaced with a new unit by following these steps:

1. Remove any user interfaced fiber-cable from the FA unit and the splice.
2. Remove the top sliding cover (1-1 -- see Figure 1, item 1) from the FA housing (1-2).
3. Loosen the splice clamp by turning the screws (1-3) counter-clockwise.
4. Turn the retainer thumbscrew (1-4) to loosen the retainer jaws (1-5) from the internal buffered fiber. Pull the internal fiber from the splice (1-6) and gently tighten the retainer jaws to temporarily hold the internal fiber.
5. Remove the splice from the splice clamp and discard the old splice.
6. Replace with a new splice. Push the splice gently into the clamp until it is centered in the clamp.
7. Tighten the splice clamp by turning the clamp screw clockwise.

CAUTION

The elastomeric splice will become deformed and unuseable if the clamp is tightened too much. Tighten the clamp screw just enough so the splice does not slide in or out of the clamp.

8. Reinsert the buffered internal fiber into the new splice (approximately halfway) and tighten the retainer jaws on the buffer.

Using the Fiber Adapter

1. Prepare the fiber to be tested by removing the jacket material (if any) to expose at least 2.0 inches of cladded fiber.
2. Remove the cladding to expose approximately 1.0 inch of bare fiber.
3. Cleave the fiber end in accordance with the fiber manufacturer's recommendations.
4. Move the traveler (1-7) to the middle (approximately) of its minimum/maximum travel range.
5. Check that the traveler locking-screw (1-8) is finger-tight to prevent the traveler from moving.
6. Check that both of the hinged traveler-retainer plates (1-9, 1-10) are in the open position.
7. Gently insert the prepared fiber through the 0.125" hole in the end of the fiber adapter until approximately 0.250" of fiber extends beyond the end of the traveler.

CAUTION

Any contact between the fiber end and any mechanical part during this step may damage or contaminate the fiber end.

8. Align the cladded portion of the fiber with the rear guide groove on the traveler, then gently close the rear retainer plate (1-9) to secure the fiber.

CAUTION

Do not over-tighten the hinge-plate locking screw or the fiber may become damaged.

9. Align the uncladded portion of the fiber with the forward guide groove, then gently close the forward retainer plate (1-10).

NOTE:

It may be necessary to gently hold the fiber in the groove with your finger while tightening. DO NOT touch the cleaved end with your finger; skin oils will contaminate the fiber and degrade performance.

10. Loosen the traveler locking screw (1-8) and gently slide the traveler forward toward the splice. The prepared fiber end should be aligned with the hole in the end of the splice (1-6).

NOTE:

Because of slight differences in fibers and splices, the fiber end may not be perfectly aligned with the center axis of the splice. In this event, gently apply pressure to the fiber end to ensure alignment.

11. Continue to slide the traveler forward until the fiber end enters the splice.

CAUTION

The previous step is critical in that, although the fiber should be inserted into the splice far enough to mate with the adapter fiber, care must be taken to avoid breakage or damage to the fiber ends. If the slightest resistance is felt while sliding the traveller forward, or the slightest bowing of the fiber end is observed, stop forward movement of the traveler.

NOTE:

An alternate method of inserting the fiber under test into the splice may be used. Apply a signal to the adapter and, while observing power or backscatter, insert the fiber into the splice. To obtain the minimum splice loss, a slight rotation of the fiber may be necessary.

12. Lock the traveler in place by tightening the traveler locking screw (**finger-tight** is sufficient).

The fiber should now be ready for testing.

Replacing the Fiber Adapter Cable

Removing the Cable

1. Remove the sliding cover (1-1) from the Fiber Adapter unit.
2. Loosen the thumbscrew (1-4) on the retainer assembly (1-11) and remove the fiber from the retainer jaws (1-5).
3. If the fiber is mated to an elastomeric splice (1-6), remove it by pulling the fiber straight back.

CAUTION

Use caution when removing the splice or handling the end of the bare fiber. The fiber end is easily contaminated or damaged.

4. Turn the Fiber Adapter unit over and remove four screws and the four feet (1-12).
5. Remove the bottom cover.
6. Remove the coiled fiber buffer from the housing cavity.
7. Loosen the outer ferrule (1-13). Remove the cable assembly through the ferrule assembly by pulling gently. The cable should easily slide out through the ferrule and strain-relief spring.

Installing a New Cable

Repeat the preceding steps in reverse order to install the new cable assembly.

1. Thread the cable through the ferrule and strain-relief spring, with approximately 0.125" of cable jacket visible inside the adapter. Tighten the outer ferrule to

secure the cable (firm finger-tight is sufficient). Carefully coil the buffered fiber in the housing cavity.

CAUTION

Use caution to avoid kinking or tight bends in the cable.

2. When all the buffered fiber has been coiled in the cavity, draw enough fiber from the coil to feed into the retainer cavity.
3. Replace the bottom cover, feet, and screws.

CAUTION

Verify that the fiber is clear of the cover before tightening the screws.

4. Place the Fiber Adapter unit on its feet. Draw enough fiber from the cavity to perform stripping and cleaving operations.

NOTE:

Prepare the fiber-end so that the cleave is 0.20" to 0.25" from the stripped buffer edge.

5. Guide the fiber end between the retainer jaws until it is aligned with the splice opening, then gently push the fiber end into the splice (approximately half way).
6. Tighten the retainer thumbscrew to close the jaws on the fiber buffer.

CAUTION

Do not overtighten the thumbscrew as the fiber will be damaged.

7. Gently push the excess fiber back into the housing cavity.
8. Replace the sliding cover on the Fiber Adapter housing.

The above procedure should be repeated if the fiber-end becomes damaged or contaminated during splicing operations.

REPLACEABLE MECHANICAL PARTS

PARTS ORDERING INFORMATION

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available and to give you the benefit of the latest circuit improvements developed in our engineering department. It is important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number (if applicable).

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative. If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

CROSS INDEX - MFR CODE TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
36208	H.L.GRISEL, INC.	1019 SOUTH HWY 97	BEND, OR 97702
80009	TEKTRONIX, INC.	P.O. BOX 500	BEAVERTON, OR 97077

ABBREVIATIONS

ASSY	ASSEMBLY	FBR	FIBER
CONN	CONNECTOR	MM	MULTI-MODE
FA	FIBER ADAPTER	SM	SINGLE-MODE

Fig.& Index	Tektronix Part No.	Serial/Model No. Eff. Dscont.	Qty.	Name & Description	Mfr. Code	Mfr. Part Number
1-1	200-3116-00		1	COVER, SLIDING: BRASS TOP	36208	200-3116-00
-2	380-0770-00		1	HOUSING, FA	36208	380-0770-00
-6	131-4008-00		1	CONN, FBR OPTIC, GTE ELASTOMERIC	36208	131-4008-00
-14	175-9899-00		1	CABLE ASSY: AT&T-MM FBR (FA-2 ONLY)	80009	175-9899-00
-15	175-4572-00		1	CABLE ASSY: DEUTSCH FBR (FA-1 ONLY)	80009	175-4572-00
-16	175-9990-00		1	CABLE ASSY: DIAMOND SM FIBER (FA-3 ONLY)	80009	175-9990-00
-17	175-9991-00		1	CABLE ASSY: FC-SM FIBER (FA-4 ONLY)	80009	175-9991-00
-18	175-9992-00		1	CABLE ASSY: AT&T-SM FBR (FA-5 ONLY)	80009	175-9992-00
-19	175-9893-00		1	CABLE ASSY: FC-MM FBR (FA-6 ONLY)	80009	175-9893-00
-20	175-9898-00		1	CABLE ASSY: SMA-MM FBR (FA-7 ONLY)	80009	175-9898-00
-21	174-0062-00		1	CABLE ASSY: DIAMOND MM FIBER (FA-8 ONLY)	80009	174-0062-00
-22	174-0063-00		1	CABLE ASSY: NEC D-4 SM FIBER (FA-9 ONLY)	80009	174-0063-00
-23	174-0064-00		1	CABLE ASSY: RADIALL SM FIBER (FA-10 ONLY)	80009	174-0064-00
-24	174-0065-00		1	CABLE ASSY: DIAMOND 2.5 SM FIBER (FA-11 ONLY)	80009	174-0065-00
	070-5471-00		1	MANUAL, TECH INSTR	80009	070-5471-00
	016-0811-00		1	CASE, CARRYING: 4.5Wx6.5Lx2.5H, VINYL	80009	016-0811-00

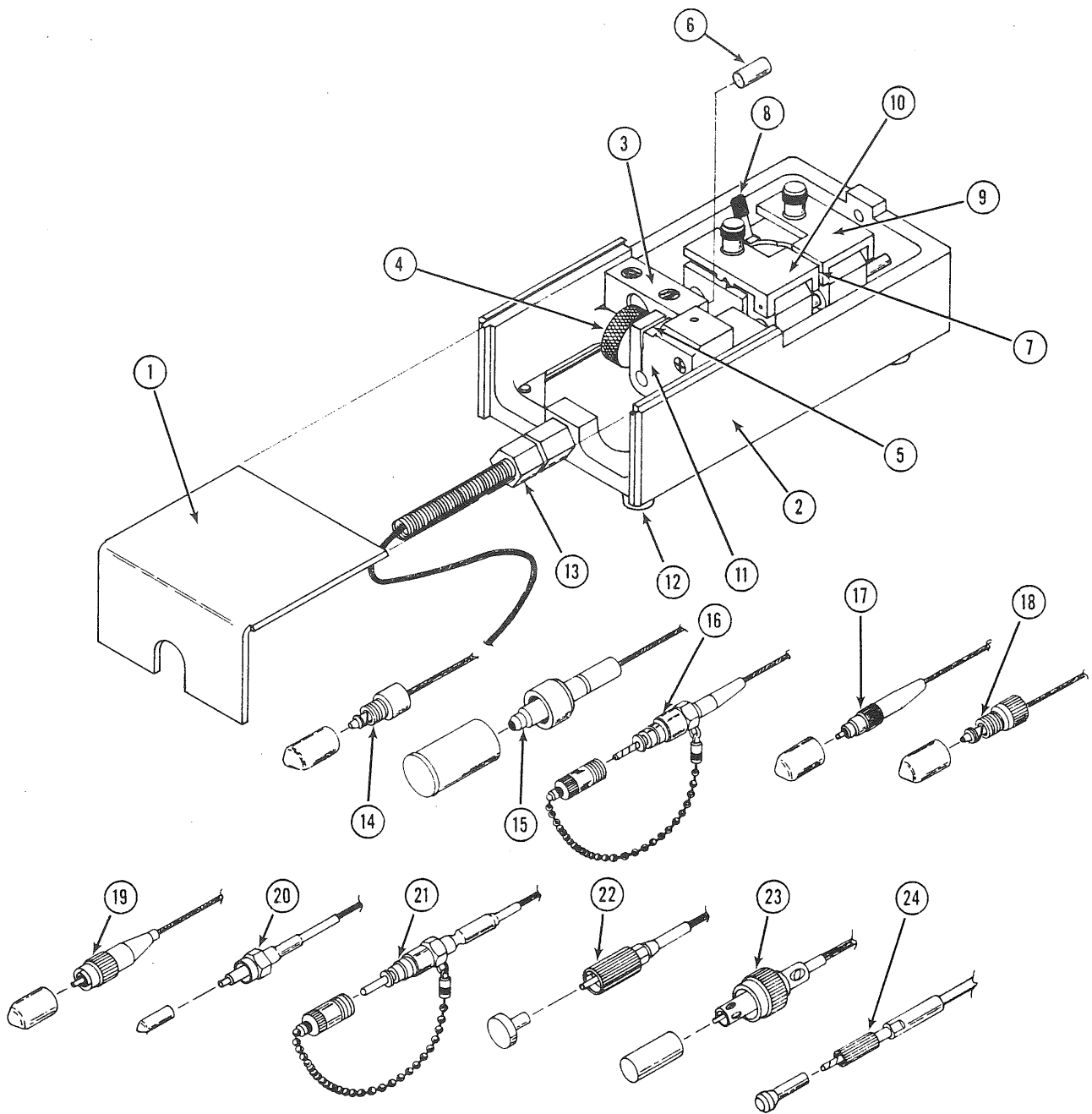


Figure 1. Fiber Adapter with Available Cables.

OPTIONS

There are no options for the Fiber Adapters at this time

ACCESSORIES

Standard Accessories

Accessory	Qty.	Tek P/N
Instruction Manual	1	070-5471-00
Carrying Case	1	016-0811-00
Elastomeric Splice	2	131-4008-00

Optional Accessories

Accessory	Qty.	Tek P/N
Elastomeric Splice	1	131-4008-00
Elastomeric Splice	10	131-4008-10
Optical Fiber Cable, Deutsch, Multi-mode	1	175-4572-00
Optical Fiber Cable, AT&T Single-mode	1	175-9992-00
Optical Fiber Cable, AT&T, Multi-mode	1	175-9899-00
Optical Fiber Cable, Diamond, Single-mode	1	175-9990-00
Optical Fiber Cable, Diamond, Multi-mode	1	174-0062-00
Optical Fiber Cable, Diamond 2.5, Single-mode	1	174-0065-00
Optical Fiber Cable, FC, Single-mode	1	175-9991-00
Optical Fiber Cable, FC, Multi-mode	1	175-9893-00
Optical Fiber Cable, SMA, Multi-mode	1	175-9898-00
Optical Fiber Cable, NEC D-4, Single-mode	1	174-0063-00
Optical Fiber Cable, Radiall, Single-mode	1	174-0064-00