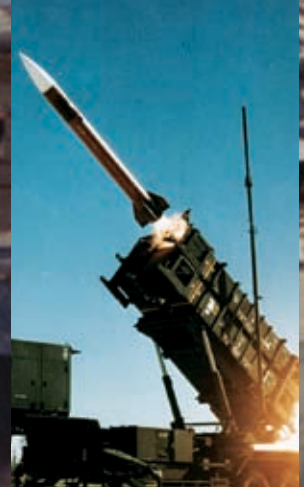# Military Catalog

KITCO
fiber optics

Our Mission

Our mission is to be the leading provider of fiber optic connectorization products, training and services to the military and commercial communications industry.

We will do this by exceeding our customers' expectations for service, quality and responsiveness in a way that also benefits our employees, our suppliers and our community.

KITCO Fiber Optics will design and deliver products and provide services at the highest standards in our industry, and we will strive to continually improve our business processes to provide our customers a level of service that consistently meets or exceeds expectations.

Contents

KITCO Fiber Optics is a leading provider of fiber optic connectorization products and consulting services to the military and commercial communications industry. We are recognized within the defense industry as fiber optic connectivity experts, and for over 10 years have customized our products and services to meet strict military standards.

Tools and Tool Kits

- Shipboard MIL-C-83522/16 and MIL-PRF-28876 connector; MIL-PRF-29504/14 and MIL-PRF-29504/15 termini
- Aviation MIL-DTL-38999 connector; MIL-PRF-29504/4; MIL-PRF-29504/5
- TFOCA Connector Termination Kits and Fusion Splicers
- ViViD, MIL-PRF-28876 connector; MIL-C-83522/16 connector
- BLOLITE™ Shipboard Blown Optical Fiber

Training

- Certified Military/Shipboard
- Certified Aviation Training
- TFOCA Ground Tactical Fiber
- ViViD—Pierside Connectivity
- Hermaphroditic Connectorization
- MIL-STD-2042B Supervisor

Field Services

- Termination for BOF & Conventional MIL-PRF-85045 cables
- Termination of M28876, M83522/16, M29504/14/15
- Termination of M38999, M29504/4/5
- Testing and Troubleshooting
- Certification/License for BOF
- System Repair
- INSURV Inspections

Custom Cable Assemblies

- Measurement Quality Jumpers (MQJs)
- Aerospace Measurement Quality Jumpers (AMQJs)
- MIL-PRF-28876 Connector; TFOCA; Hermaphroditic; ST; FC; SC; LC; FDDI, MIL-DTL-38999
- MIL-STD-2042B

KITCO is an ISO 9001:2000 Certified Company

Termination Kits

NAVY SUBMARINE FIBER OPTIC KIT
(Light Duty Connector, Heavy Duty Multiple Termini)

#0801-8030 NAVSEA DRAWING 7085185
NSN: 5180-01-494-7433

The 0801-8030 Navy Submarine Fiber Optic Kit contains all the proper tools and consumables that are needed to connectorize the M83522/16 (ST), Light Duty, Single Terminus M29504/14/15 Termini, and the M28876 (MT), Heavy Duty, Multiple Termini Connectors. This tool kit also supports the 31 channel M28876 connector (singlemode and multimode), as well as the EIA/TIA 604-3 (SC) Connector. A 70-90 durometer resilient pad, one tenth µm diamond paper, and ultrafine polishing papers are included to allow the installer to accomplish an "enhanced" singlemode polish.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
7085185-1	1	Torque Wrench 3/8" Drive	0701-3050
7085185-2	1	Insertion Tool, Straight	0701-3820
7085185-3	1	Glass Polishing Plate, 6" x 6" x .25"	0700-4110
7085185-4	1	Alignment Sleeve Insertion & Removal Tool (ASIRT)	0701-3901
7085185-6	1	Terminus Removal Tool	0701-3850
7085185-7	1	Scribe, Carbide	0700-3750
7085185-8	1	Cable Jacket Stripping Tool	0700-1240
7085185-9	1	Buffer Strip Tool, Optical Fiber	0700-3070
7085185-10	1	OFCC Strip Tool, 18 AWG	0700-3061
7085185-11	1	Flashlight	0700-1800
7085185-12	1	Ruler, Metric-English, 6"	0701-5010
7085185-13	1	Tweezers, Microtip	0700-8911
7085185-14	1	Safety Glasses with side shield, Nylon Flex Head	0700-8810
7085185-15	1	Insertion Tool, 90 Degree	0701-3810
7085185-16	1	Kevlar® Shears	0700-3321
	1	Die Set .0945 Hex for MIL-T-29504	0701-1890
7085185-18	1	Polishing Tool for MIL-T-29504/14&15 (Ceramic Termini)	0701-4100
7085185-19	1	Curing Oven Assembly (1 Part Number for 6 parts)	0701-4000
	1	Curing Oven / Cure Adapter Holders	0701-4010
	1	Heater Block / PHI, ST & FDDI Ports	0701-4020
	1	Cable Stand (Post)	0701-4030
	1	Cable Stand Ring	0701-4040
	16	Cure Adapter / Ceramic Termini for MIL-T-29504/14 & 15	0701-4050
	2	Cable Clips	0701-4060
7085185-20	1	Eye Loupe, 10X	0700-8710
7085185-21	1	Cloth, Cleaning, White, 1 PK., Min. 100 Wipes	0700-5200
7085185-22	1	Polishing Paper, 1 µm, Mylar , 5.5" x 5.5", 50 PK	0700-2620
7085185-23	1	Polishing Paper, 5 µm, Foam , 5.5" x 5.5", 50 PK	0700-2660
7085185-24	1	Epoxy, Bi-Pack, MIL-A-24792, Min. (1 six pack)	0700-5035
7085185-25	32	Alcohol Pad, Sealed	0700-9760
7085185-26	6	Syringe (3cc)	0700-5121
7085185-26	6	Needle Tip (20 AWG x 1")	0700-5111
7085185-28	1	Socket, Socket Wrench 1/4" Hex Adapter for 3/8" Drive	0701-3100
7085185-29	1	Water Bottle, 4 oz. Squeeze w/Cap	0700-9700
7085185-30	1	Canned Air, 10 oz.	3200-4161
7085185-31	1	125µm Cleaning Wire w/Container (3pcs. min.)	0700-3210
7085185-32	1	Tool Kit Case, 15" x 22" x 9.5" max.; Includes: Tool Pouches, Boxes, Shoulder Strap & Metal Ring, (1 PN for 7 Parts)	0701-7105
7085185-33	1	Backshell Wrench, C-Type	0701-3520
7085185-34	1	Dual Post, Torque Wrench Adapter, Shell Size 11	0701-3530
7085185-35	1	Tri-Post, Torque Wrench Adapter, Shell Size 13	0701-3540
7085185-36	1	Tri-Post, Torque Wrench Adapter, Shell Size 15	0701-3550
7085185-37	1	O-Ring Installation Tool, Shell Size 11	0701-3560
7085185-38	1	O-Ring Installation Tool, Shell Size 13	0701-3570
7085185-39	1	O-Ring Installation Tool, Shell Size 15	0701-3580
7085185-40	1	O-Ring Installation Tool, Shell Size 23	0701-3590
7085185-41	1	Polishing Paper, Diamond, Mylar Backed, 0.1 µm (3PK)	0700-2803
7085185-42	1	Resilient Pad, 70 to 90 Durometer	0700-2002
7085185-43	2	Strap Wrench w/ 3/8" Drive Adapter	0701-3060
7085185-44	20	Microclip	0300-4500
7085185-45	1	Template, Cut Length, MIL-C-83522	0700-3870
7085185-46	1	Polishing Tool, MIL-C-83522 and TIA-604-3 (SC)	0700-1740
7085185-55	1	Polishing Paper, Ultrafine, 5.5"x 5.5" min.	0700-2850

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
7085185-47	1	Crimp Tool w/Die for MIL-C-83522	0700-1855
7085185-48	1	Crimp Die for TIA-604-3 (SC)	0700-1870
7085185-49	20	Cure Adapter for MIL-C-83522 (ST)	0700-1450
7085185-50	6	Cure Adapter for TIA-604-3 (SC)	0700-1455
7085185-51	1	Boot Ring Tool, MIL-C-83522 for FSI STs	0701-3070
7085185-52	1	Marking Pen, Permanent, Black	1500-9200
7085185-53	1	Template, Cut Length, TIA-604-3 (SC)	0100-1045
7085185-54	1	Microscope Assembly, 400X (1 Part Number for 4 Parts)	0700-8601
7085185-55	3	Polishing Paper, Ultrafine, 5.5" x 5.5" min.	0700-2850
NA	1	Manual, KITCO Shipboard Kits	0799-7000
NA	1	Kit Key	0801-1030

KITCO
fiber optics

To see how KITCO can help you, call **1-888-548-2636** or **visit www.kitcofo.com**

Termination Kits

COMBINATION KIT
Navy Shipboard Fiber Optic Kit
(MIL-PRF-28876 Heavy Duty and MIL-C-83522/16 Light Duty)

#0701-7030 DELUXE CONTRACTOR'S VERSION
NSN: 5180-01-416-0565 & 5180-01-416-0567

The 0701-7030 Combination Connector Kit contains all the proper tools and consumables that are needed to connectorize the M28876 (MT), M29504/14/15 Termini Heavy Duty, Multiple Termini Connectors and the M83522/16 (ST), Light Duty, Single Terminus. This tool kit also supports the EIA/TIA 604-3 (SC) Connector. A 70-90 durometer resilient pad, one tenth μm diamond paper, and ultrafine polishing papers are included to allow the installer to accomplish an "enhanced" singlemode polish.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
6872813-21	1	Eye Loupe, 10X	0700-8710
6872813-22	1	Cloth, Cleaning, White, 1Pk., Min. 100 Wipes	0700-5200
6872813-23	2	Polishing Paper, 1 μm, Mylar 5.5"x 5.5", 50 PK	0700-2620
6872813-24	2	Polishing Paper, 5 μm, Foam (5.5"x 5.5"), 50 PK	0700-2660
6872813-25	2	Epoxy, Bi-Pack, MIL-A-24792, min. (1 six pack)	0700-5035
7085185-26	12	Syringe (3cc)	0700-5121
7085185-26	12	Needle Tip (20 AWG x 1")	0700-5111
6872813-29	1	Hex Drive Adapter (3/8" - 1/4")	0701-3100
6872813-30	1	Water Bottle, 4oz squeeze w/cap	0700-9700
6872813-31	1	Canned Air, 10 oz.	3200-4161
6872813-32	1	125 μm Cleaning Wire w/Container (3 pcs. min.)	0700-3210
6872813-33	1	Tool Kit Case, 15" x 22" x 9.5" max.; Includes: Tool Pouches, Boxes, Shoulder Strap & Metal Ring, (1 PN for 7 Parts)	0701-7105
6872813-34	1	Backshell Wrench, C-Type	0701-3520
6872813-35	1	Dual-Post Torque Wrench Adapter, Shell Size 11	0701-3530
6872813-36	1	Tri-Post Torque Wrench Adapter, Shell Size 13	0701-3540
6872813-37	1	Tri-Post Torque Wrench Adapter, Shell Size 15	0701-3550
6872813-38	1	O-Ring Installation Tool, Shell Size 11	0701-3560
6872813-39	1	O-Ring Installation Tool, Shell Size 13	0701-3570
6872813-40	1	O-Ring Installation Tool, Shell Size 15	0701-3580
6872813-41	1	Polishing Paper, Diamond, Mylar, 0.1 μm (3PK)	0700-2803
6872813-42	1	Resilient Pad, 70 to 90 Durometer	0700-2002
6872813-43	1	Microscope Assembly, 400X (1 Part Number for 4 Parts)	0700-8601
6872811-5	1	Template, Cut Length, MIL-C-83522	0700-3870
6872811-27	12	Cure Adapter for MIL-C-83522 (ST)	0700-1450
6872811-30	1	Polishing Tool, MIL-C-83522 & TIA-604-3 (SC)	0700-1740
6872811-32	1	Boot Ring Tool, MIL-C-83522 for FSI STs	0701-3070
7085185-48	1	Crimp Die Set for TIA-604-3 (SC)	0700-1870
6872811-35	6	Cure Adapter for TIA-604-3 (SC)	0700-1455
6872811-36	1	Template, Cut Length, TIA-604-3 (SC)	0100-1045
6872811-37	2	Hybrid Adapter, MIL-C-83522 to TIA-604-3 (ST to SC)	0200-2610
7085185-44	16	Microclip	0300-4500
7085185-47	1	Crimp Die for MIL-C-83522	0700-1850
7085185-52	1	Marking Pen, Permanent, Black	1500-9200
7085185-55	3	Polishing Paper, Ultrafine, Mylar 5.5" x 5.5" min.	0700-2850
NA	20	Protective Dust Caps	0700-9815
NA	2	ST-to-ST Adapter (MIL-C-83522/17NY, Singlemode)	0204-4170
NA	1	"O" Ring Lubricant	0701-3710
NA	1	Fiber Optic Light Source	0700-8500
NA	1	Adjustable 8" Wrench	0700-4650
NA	1	Microscope Assembly (100X)	0700-8000
NA	1	Miniature Reversible Screwdriver	4300-9000
NA	1	Heavy Duty Reversible Screwdriver	4300-9010
NA	1	3/4" Masking Tape (40 yds)	3300-6010
NA	1	Timer (Battery Operated)	0700-4302
NA	1	Buffer Strip Tool (NO-NIK)	0700-3130
7085185-43	2	Strap Wrench w/ 3/8" Drive Adapter	0701-3060
NA	2	ST Coupling Adapter Qty 2	0204-4070
NA	1	SC-ST Hybrid Coupler	0204-1060
NA	1	Manual, KITCO Shipboard Kits	0799-7000
NA	1	Kit Key	0701-4330

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
6872813-1	1	Torque Wrench 3/8" Drive	0701-3050
6872813-2	1	Insertion Tool, Straight	0701-3820
6872813-3	1	Glass Polishing Plate, 6" x 6" x .25"	0700-4110
6872813-4	1	Alignment Sleeve Insertion & Removal Tool (ASIRT)	0701-3901
6872813-6	1	Terminus Removal Tool	0701-3850
6872813-7	1	Scribe, Carbide	0700-3750
6872813-8	1	Cable Jacket Stripping Tool	0700-1240
6872813-9	1	Buffer Strip Tool, Optical Fiber	0700-3070
6872813-10	1	OFCC Strip Tool 18AWG	0700-3061
6872813-11	1	Flashlight	0700-1800
6872813-12	1	Ruler, Metric-English, 6"	0701-5010
6872813-13	1	Tweezers, Microtip	0700-8911
6872813-14	1	Safety Glasses w/ Side Shield, Nylon Flex Head	0700-8810
6872813-15	1	Insertion Tool, 90 Degree	0701-3810
6872813-16	1	Kevlar® Shears	0700-3321
	1	Crimp Tool w/die Set .0945 Hex for MIL-T-29504	0700-1895
6872813-18	1	Polishing Tool for M29504/14 & 15 (Ceramic Termini)	0701-4100
6872813-19	1	Curing Oven Assembly (1 Part Number for 6 parts)	0701-4000
	1	Curing Oven / Cure Adapter Holders	0701-4010
	1	Heater Block / PHI, ST & FDDI Ports	0701-4020
	1	Cable Stand (Post)	0701-4030
	1	Cable Stand (Ring)	0701-4040
	16	Cure Adapter / Ceramic Termini for MIL-T-29504/14 & 15	0701-4050
	2	Cable Clips	0701-4060
6872813-20	1	Dispenser, Solvent, 4 oz., Leakproof	0700-9750

Call **1-888-548-2636** or visit **www.kitcofo.com**

5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com

5

Termination Kits

MIL-PRF-28876 MULTIPLE TERMINI *NAVY SHIPBOARD FIBER OPTIC KIT*
(Heavy Duty Connector: Multimode and Singlemode)

#0701-7000 NAVSEA DRAWING 6872813
NSN : 5180-01-416-0567

The 0701-7000 MIL-PRF-28876 Multiple Termini Kit (Ceramic) contains all the proper tools and consumables that are needed to connectorize the M28876 Heavy Duty Multiple Termini connector. Tools and consumables are included to support connectorization of the MIL-T-29504/14 and 15 Termini. A 70-90 durometer resilient pad and one tenth µm diamond paper are included to allow the installer to accomplish an "enhanced" singlemode polish. This deluxe contractor's version meets NAVSEA #6872813 drawing requirements, and also includes many other tools and components.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
7085185-1	1	Torque Wrench 3/8" Drive	0701-3050
7085185-2	1	Insertion Tool, Straight	0701-3820
7085185-3	1	Glass Polishing Plate, 6" x 6" x .25"	0700-4110
7085185-4	1	Alignment Sleeve Insertion & Removal Tool (ASIRT)	0701-3901
7085185-6	1	Terminus Removal Tool	0701-3850
7085185-7	1	Scribe, Carbide	0700-3750
7085185-8	1	Cable Jacket Stripping Tool	0700-1240
7085185-9	1	Buffer Strip Tool, Optical Fiber	0700-3070
7085185-10	1	OFCC Strip Tool, 18 AWG	0700-3061
7085185-11	1	Flashlight	0700-1800
7085185-12	1	Ruler, Metric-English, 6"	0701-5010
7085185-13	1	Tweezers, Microtip	0700-8911
7085185-14	1	Safety Glasses with side shield, Nylon Flex Head	0700-8810
7085185-15	1	Insertion Tool, 90 Degree	0701-3810
7085185-16	1	Kevlar® Shears	0700-3321
7085185-17	1	Crimp Tool w/Die Set .0945 Hex for MIL-T-29504	0700-1895
7085185-18	1	Polishing Tool for MIL-T-29504/14&15 (Ceramic Termini)	0701-4100
7085185-19	1	Curing Oven Assembly (1 Part Number for 6 parts)	0701-4000
	1	Curing Oven / Cure Adapter Holders	0701-4010
	1	Heater Block / PHI, ST & FDDI Ports	0701-4020
	1	Cable Stand (Post)	0701-4030
	1	Cable Stand (Ring)	0701-4040
	16	Cure Adapter / Ceramic Termini for MIL-T-29504/14 & 15	0701-4050
	2	Cable Clips	0701-4060
7085185-20	1	Eye Loupe, 10X	0700-8710
7085185-21	1	Cloth, Cleaning, White, 1 PK., Min. 100 Wipes	0700-5200
7085185-22	1	Polishing Paper, 1 µm, Mylar , 5.5" x 5.5", 50 PK	0700-2620
7085185-23	1	Polishing Paper, 5 µm, Foam , 5.5" x 5.5", 50 PK	0700-2660
7085185-24	1	Epoxy, Bi-Pack, MIL-A-24792, Min. (1 six pack)	0700-5035
7085185-25	32	Alcohol Pad, Sealed	0700-9760
7085185-26	6	Syringe (3cc)	0700-5121
7085185-26	6	Needle Tip (20 AWG x 1")	0700-5111
7085185-28	1	Socket, Socket Wrench 1/4" Hex Adapter for 3/8" Drive	0701-3100
7085185-29	1	Water Bottle, 4 oz. Squeeze w/Cap	0700-9700
7085185-30	1	Canned Air, 10 oz.	3200-4161
7085185-31	1	125µm Cleaning Wire w/Container (3pcs. min.)	0700-3210
7085185-32	1	Tool Kit Case, 15" x 22" x 9.5" max.; Includes: Tool Pouches, Boxes, Shoulder Strap & Metal Ring, (1 PN for 7 Parts)	0701-7105
7085185-33	1	Backshell Wrench, C-Type	0701-3520
7085185-34	1	Dual Post, Torque Wrench Adapter, Shell Size 11	0701-3530
7085185-35	1	Tri-Post, Torque Wrench Adapter, Shell Size 13	0701-3540
7085185-36	1	Tri-Post, Torque Wrench Adapter, Shell Size 15	0701-3550
7085185-37	1	O-Ring Installation Tool, Shell Size 11	0701-3560
7085185-38	1	O-Ring Installation Tool, Shell Size 13	0701-3570
7085185-39	1	O-Ring Installation Tool, Shell Size 15	0701-3580
7085185-40	1	O-Ring Installation Tool, Shell Size 23	0701-3590
7085185-41	1	Polishing Paper, Diamond, Mylar, 0.1 µm (3 Pk.)	0700-2803
7085185-42	1	Resilient Pad, 70 to 90 Durometer	0700-2002
7085185-43	2	Strap Wrench w/ 3/8" Drive Adapter	0701-3060
6872813-43	1	Microscope Assembly, 400X (1 PN for 4 Parts)	0700-8601
7085185-43	1	Strap Wrench w/ 3/8" Drive Adapter	0701-3060
7085185-52	1	Marking Pen, Permanent, Black	1500-9200

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
7085185-55	3	Polishing Paper, Ultrafine, 5.5" x 5.5" min.	0700-2850
NA	1	"O" Ring Lubricant	0701-3710
NA	1	Fiber Optic Light Source	0700-8500
NA	1	Adjustable 8" Wrench	0700-4650
NA	1	Microscope Assembly (100X)	0700-8000
NA	1	Miniature Reversible Screwdriver	4300-9000
NA	1	Heavy Duty Reversible Screwdriver	4300-9010
NA	1	3/4" Masking Tape (40 yds)	3300-6010
NA	1	Timer (Battery Operated)	0700-4302
NA	1	Buffer Strip Tool (NO-NIK)	0700-3130
NA	1	Manual, KITCO Shipboard Kits	0799-7000
NA	1	Kit Key	0701-4300

KITCO *fiber optics*
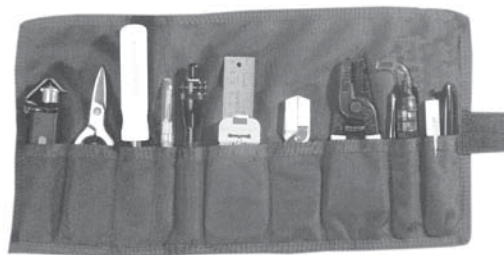
Termination Kits

MIL-C-83522/16 SINGLE TERMINUS
Navy Shipboard Fiber Optic Kit
(Light Duty Connector, COTS SC, Mulitmode & Singlemode)

#0701-7010 DELUXE CONTRACTOR'S VERSION OF NAVSEA DRAWING 6872811
NSN: 5180-01-416-0565

The 0701-7010 Single Terminus Kit contains all the proper tools and consumables that are needed to connectorize the M83522/16 (ST), Light Duty, Single Terminus. This tool kit also supports the EIA/TIA 604-3 (SC) Connector. A 70-90 durometer resilient pad and one tenth µm diamond paper are included to allow the installer to accomplish an "enhanced" singlemode polish. This Deluxe Contractor's Version meets NAVSEA #6872811 Drawing Requirements, and also includes many other tools and components.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
	1	Die for MIL-C-83522	0700-1850
6872811-3	1	Glass Polishing Plate, 6" x 6" x .25"	0700-4110
6872811-5	1	Template, Cut Length, MIL-C-83522	0700-3870
6872811-6	1	Eye Loupe, 10X	0700-8710
6872811-7	1	Scribe, Carbide	0700-3750
6872811-8	1	Cable Jacket Stripping Tool	0700-1240
6872811-9	1	Buffer Strip Tool, Optical Fiber	0700-3070
6872811-10	1	OFCC Strip Tool 18AWG	0700-3061
6872811-11	1	Flashlight	0700-1800
6872811-12	1	Ruler, Metric - English, 6"	0701-5010
6872811-13	1	Curing Oven Assembly (1 Part Number for 5 Parts)	0701-4005
	1	Curing Oven	0701-4015
	1	Heater Block / PHI, ST & FDDI Ports	0701-4020
	1	Cable Stand (Post)	0701-4030
	1	Cable Stand (Ring)	0701-4040
	2	Cable Clips	0701-4060
6872811-14	1	Safety Glasses w/ Side Shields, Nylon Flex Head	0700-8810
6872811-15	1	Dispenser, Solvent, 4 oz., Leakproof	0700-9750
6872811-16	1	Kevlar® Shears	0700-3321
6872811-17	1	Canned Air, 10 oz.	3200-4161
6872811-18	1	Cloth, Cleaning, White, 1 PK, Min 100 Wipes	0700-5200
6872811-19	1	Polishing Paper, 1 µm, Mylar 5.5" x 5.5", 50/pk	0700-2620
6872811-20	1	Polishing Paper, 5 µm, Foam (5.5" x 5.5"), 50Pk	0700-2660
6872811-21	2	Epoxy Bi-Pack, MIL-A-24792, min. (1 six pack)	0700-5035
7085185-26	6	Syringe (3cc)	0700-5121
7085185-26	6	Needle Tip (20 AWG x 1")	0700-5111
6872811-26	1	Water Bottle, 4oz. Squeeze w/cap	0700-9700
6872811-27	12	Cure Adapter for MIL-C-83522 (ST)	0700-1450
6872811-29	1	Tool Kit Case, 15" x 22" x 9.5" max. Includes: Tool Pouches, Boxes, Shoulder Strap & Metal Ring, (1 PN for 7 Parts)	0701-7105
6872811-30	1	Polishing Tool, MIL-C-83522 & TIA-604-3	0700-1740
6872811-31	1	Polishing Paper, Diamond, Mylar, 0.1 µm (3Pk)	0700-2803
6872811-32	1	MIL-C-83522 Boot Ring Tool	0701-3070
	1	Crimp Tool w/ Die for TIA-604-3 (SC)	0700-1875
6872811-34	1	Resilient Pad, 70 to 90 Durometer	0700-2002
6872811-35	6	Cure Adapter for TIA-604-3 (SC)	0700-1455
6872811-36	1	Template, Cut Length, TIA-604-3 (SC)	0100-1045
6872811-37	2	Hybrid Adapter, MIL-C-83522 to TIA-604-3 (ST-to-SC)	0200-2610
6872811-38	1	Microscope Assembly, (400X)	0700-8601
7085185-52	1	Marking Pen, Permanent, Black	1500-9200
7085185-55	3	Polishing Paper, Ultrafine, 5.5" x 5.5" min.	0700-2850
6872813-13	1	Tweezers, Microtip	0700-8911
6872813-32	1	125 µm, Cleaning Wire w/ Container (3 pcs. min.)	0700-3210
7085185-44	16	Microclip	0300-4500
NA	20	Protective Dust Caps	0700-9815
NA	1	Fiber Optic Light Source	0700-8500
NA	1	Microscope Assembly (100X)	0700-8000
NA	1	Miniature Reversible Screwdriver	4300-9000
NA	1	Heavy Duty Reversible Screwdriver	4300-9010
NA	1	3/4" Masking Tape, (40 yds.)	3300-6010

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
NA	1	Timer (Battery Operated)	0700-4302
NA	1	Buffer Strip Tool (NO-NIK)	0700-3130
NA	1	Manual, KITCO Shipboard Kits	0799-7000
NA	1	Kit Key	0701-4310

Call **1-888-548-2636** or visit **www.kitcofo.com**
5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com

7

Add-On Modules

NAVSEA 6872811 KIT UPGRADE TO COMBO KIT 6872811/6872813 #0801-8060

This Module allows the installer to upgrade an existing NAVSEA #6872811 Kit M83522/16 (Light Duty, ST) to a combination kit that will support both the light duty, ST and M28876, M29504/14/15 Termini MT (Multiple Termini) connectorization process. The tools are contained in a handy roll-up tool pouch.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
6872813-1	1	Torque Wrench, 3/8" Drive	0701-3050
6872813-2	1	Insertion Tool, Straight	0701-3820
6872813-4	1	Alignment Sleeve Insertion & Removal Tool (ASIRT)	0701-3901
6872813-6	1	Terminus Removal Tool	0701-3850
6872813-13	1	Tweezers, microtip	0700-8911
6872813-15	1	Insertion Tool, 90 degree	0701-3810
	1	Crimp Toolw/die set .0945 Hex for MIL-T-29504	0700-1895
6872813-18	1	Polishing Tool, for MIL-T-295041/14&15	0701-4100
6872813-29	1	Socket, Socket Wrench 1/4" Hex Adapter for 3/8" Drive	0701-3100
6872813-34	1	Backshell Wrench, C-Type	0701-3520
6872813-35	1	Dual Post, Torque Wrench Adapter, Shell Size 11	0701-3530
6872813-36	1	Tri-Post, Torque Wrench Adapter, Shell Size 13	0701-3540
6872813-37	1	Tri-Post, Torque Wrench Adapter, Shell Size 15	0701-3550
6872813-38	1	O-Ring Installation Tool, Shell Size 11	0701-3560
6872813-39	1	O-Ring Installation Tool, Shell Size 13	0701-3570
6872813-40	1	O-Ring Installation Tool, Shell Size 15	0701-3580
6872813-19	16	Cure Adapter/Ceramic Termini for MIL-T-29504/14&15	0701-4050
7085185-43	1	Strap Wrench w/ 3/8" Drive Adapter	0701-3060
	1	Inspection Tool Roll	0700-8040
	1	Plastic Box, 6 Chamber, Large	0700-9875

NAVSEA 6872813 KIT UPGRADE TO 6872813/6872811 #0801-8065

The 0801-8065 Add-On Module contains all of the tools proprietary to M83522/16 ST connectorization, SC connectorization and singlemode polishing.

| NAVSEA Drawing	Qty.	Replacement Parts	Part No.
6872811-32	1	Boot Installation Tool, MIL-C-83522 for FIS STs	0701-3070
6872811-33	1	Crimp Die for TIA-604-3 (SC)	0700-1870
6872811-35	6	Cure Adapter for TIA 604-3 Connector (SC)	0700-1455
7085185-53	1	Template, Cut Length, TIA-604-3 (SC)	0100-1045
7085185-47	1	Crimp Tool w/ Die for MIL-C-83522	0700-1855
6872811-37	1	Hybrid Adapter, MIL-C-83522 to TIA-604-3 (ST to SC)	0200-2610
6872811-5	1	Template, Cut Length, MIL-C-83522, Lucent & FSI	0700-3870
6872811-27	12	Cure Adapter for MIL-C-83522(ST)	0700-1450
6872811-30	1	Polishing Tool, MIL-C-83522/16 & TIA-604-3	0700-1740

FDDI CONNECTOR UPGRADE #0801-8040
NSN: 6080-01-431-0614

The 0801-8040 FDDI Connector Tool Supplement Module allows the installer to support FDDI connectorization aboard Navy vessels. This "Add-On Module" includes: crimping tool w/die, curing fixture, FDDI to ST adapters, 1 meter FDDI to ST jumper, FDDI polishing tool and FDDI strip template.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
	1	Crimp Tool w/Die for FDDI Connector	0700-1845
	2	FDDI -to- ST Adapter, Multimode, Ceramic	0200-2650
	1	Fiber Optic Cable, Duplex, FDDI -to- ST, 1 Meter	KFO 10481
	1	Assembly Kit for FDDI Bushing, Curing Fixture	0200-2990
	1	FDDI Polishing Tool	0700-1780
	1	FDDI Strip Template	0100-1090
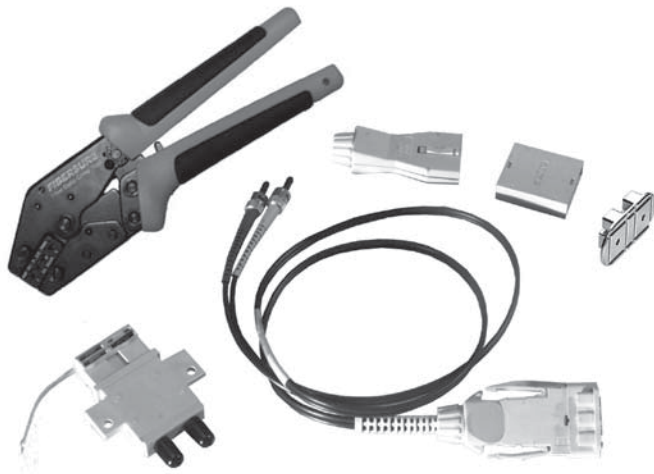
TIA-604-3 (SC) UPGRADE #0801-8080
NSN: 6080-01-475-02217

The 0801-8080 SC Upgrade Kit allows the installer to upgrade the existing #6872811 or #6872813 Termination Kits to support the SC (Subscription Channel) connector as well as the ST (Single Terminus) or MT (Multiple Termini) connector procedures.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
7085185-53	1	Template, Cut Length, TIA-604-3 (SC)	0100-1045
7085185-48	1	Crimp Tool w/Die for TIA-604-3 (SC)	0700-1875
7085185-50	6	Cure Adapter for TIA-604-3 (SC)	0700-1455
6872811-37	2	ST-SC Hybrid Coupler	0200-2610
6872811-30	1	Polishing Tool, MIL-C-83522 & TIA-604-3 (SC)	0700-1740

Call **1-888-548-2636** *or* **visit www.kitcofo.com**
5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com

9

Aviation Termination Kit

#0721-8000 AVIATION TERMINATION KIT

The 0721-8000 Aviation Termination Kit is designed to terminate and/or repair M29504/4 and M29504/5 termini for circular M38999 connectors. The kit also contains the required tooling to terminate M83522/16 ST connectors as well as the approved Commercial Off the Shelf (COTS) ST and SC connectors. This kit contains all of the tooling and consumables required to completely terminate the M29504/4/5 termini as well as the programmable oven required for installation of fiber optics in harsh environments onboard the aircraft. This kit meets and exceeds all of the current military Aviation Termination Kit requirements, and the rugged hard shell case meets the MIL–STD–810F requirements.

Qty.	Description	Part No.
1	Case (Including Roll-Up Pouch and Plastic Box)	0700-8075
18	ST SM Connector COTS	0200-3020
18	ST Coupling Adapter	0204-4070
6	Clip Micro-Gator 5 Amp	0300-4500
1	Jacket Stripper .18" - 1.0"	0700-1240
4	Cure Adapter/ST Conn	0700-1450
1	Profixture 2.5mm	0700-1740
1	Headband Light	0700-1810
1	Crimp Tool w/MIL-ST Die	0700-1855
1	Polish Pad 5 3/4 x 5 3/4	0700-2002
1	Film 1M Mylar 5.5 (50 PK)	0700-2620
1	Film 5M Foam 5.5 (50 PK)	0700-2660
1	Fibersure Strip Tool	0700-3125
1	Buffer Stripper No-Nik	0700-3130
1	Carbide Scribe	0700-3750
1	Fibersure OC0-100A	0700-3810
1	Fibersure Primer Non-HAZMAT	0700-3815
1	Glass Polish Plate 6" x 6"	0700-4110
5	Needle Tip (20 AWG x 1")	0700-5111
5	Syringe, 3CC	0700-5121
1	Wipes, Absorbwipe 4x4	0700-5200
1	200X Microscope	0700-7950
1	Safety Glasses	0700-8810
10	Alcohol Pads (each)	0700-9760
1	Metric-English 6" Ruler	0701-5010
1	Viaual Fault Locator	0705-7080
4	Duplex, LSZH Cable, 100 ft	0705-8012
4	Duplex, LSZH SM Cable, 100 ft	0705-8015
2	8-Furcation Unit, 3 ft	0705-8033
1	8MM Tube Coupler - Clear	0745-2350
3	Film 0.1m Diamond ML (10 sheets)	0799-2720
1	Permanent Marker Black	1500-9200

KITCO
fiber optics

Aerospace Measurement Quality Jumpers (AMQJs)

KITCO P/N*	Item Description	Length**
KFO 70010	2 Channel M38999 Plug-ST w/Sockets	1 Meter
KFO 70011	2 Channel M38999 Rcpt-ST w/Pins	1 Meter
KFO 70012	2 Channel M38999 Plug-ST w/Pins	1 Meter
KFO 70013	2 Channel M38999 Rcpt-ST w/Sockets	1 Meter
KFO 70014	4 Channel M38999 Plug-ST w/Sockets	1 Meter
KFO 70015	4 Channel M38999 Rcpt-ST w/Pins	1 Meter
KFO 70016	4 Channel M38999 Plug-ST w/Pins	1 Meter
KFO 70017	4 Channel Rcpt M38999-ST w/Sockets	1 Meter
KFO 70020	5 Channel M38999 Plug-ST w/Sockets	1 Meter
KFO 70021	5 Channel M38999 Rcpt-ST w/Pins	1 Meter
KFO 70022	5 Channel M38999 Plug-ST w/Pins	1 Meter
KFO 70023	5 Channel M38999 Rcpt-ST w/Sockets	1 Meter
KFO 70024	6 Channel M38999 Plug-ST w/Sockets	1 Meter
KFO 70025	6 Channel M38999 Rcpt-ST w/Pins	1 Meter
KFO 70026	6 Channel M38999 Plug-ST w/Pins	1 Meter
KFO 70027	6 Channel Rcpt M38999-ST w/Sockets	1 Meter
KFO 70030	8 Channel M38999 Plug-ST w/Sockets	1 Meter
KFO 70031	8 Channel M38999 Rcpt-ST w/Pins	1 Meter
KFO 70032	8 Channel M38999 Plug-ST w/Pins	1 Meter
KFO 70033	8 Channel Rcpt M38999-ST w/Sockets	1 Meter
KFO 70040	2 Channel ARINC 801 Circular Plug-ST	1 Meter
KFO 70041	2 Channel ARINC 801 Circular Rcpt-ST	1 Meter
KFO 70042	4 Channel ARINC 801 Circular Plug-ST	1 Meter
KFO 70043	4 Channel ARINC 801 Circular Rcpt-ST	1 Meter
KFO 70044	5 Channel ARINC 801 Circular Plug-ST	1 Meter
KFO 70045	5 Channel ARINC 801 Circular Rcpt-ST	1 Meter
KFO 70046	6 Channel ARINC 801 Circular Plug-ST	1 Meter
KFO 70047	6 Channel ARINC 801 Circular Rcpt-ST	1 Meter
KFO 70048	8 Channel ARINC 801 Circular Plug-ST	1 Meter
KFO 70049	8 Channel ARINC 801 Circular Rcpt-ST	1 Meter
KFO 70050	12 Channel Single Rectangular Plug-ST	1 Meter
KFO 70051	12 Channel Single Rectangular Rcpt-ST	1 Meter
KFO 70052	12 Channel Double Rectangular Plug-ST	1 Meter
KFO 70053	12 Channel Double Rectangular Rcpt-ST	1 Meter

KITCO Fiber Optics now offers a solution for testing fiber optic cable harnesses utilizing the MIL-DTL-38999 connectors and rectangular connectors. Until now, reliable Aerospace Measurement Quality Jumpers (AMQJ), also known as "Golden Cables" or reference cables, were not available to test aerospace fiber optic cables. KITCO's AMQJs are designed to duplicate the mating forces of two mated aerospace fiber optic cables, just as they would be installed on the aircraft platform.

KITCO's MIL-DTL-38999 connectors utilize a universal key to allow testing of any keying configurations that may be encountered. Our AMQJs are available in both the standard plug connectors with M29504/4 pin termini and standard receptacle connectors with M29504/5 socket termini. KITCO can also manufacture the plug connectors with socket inserts and receptacle connectors with pin inserts. Another design feature allows us to repair and /or replace individual strands, thereby eliminating a total replacement of the AMQJ and saving you time and money.

The adjacent table lists KITCO's standard AMQJ configurations. KITCO Fiber Optics specializes in developing and manufacturing custom AMQJs for most types of aerospace connectors, and we can work with you to develop the correct type of AMQJ for your platform application. Please call us for additional details.

NOTE: Not all connector types are listed. Any of the above part numbers can be modified to meet your specific interface requirements, please call for details.

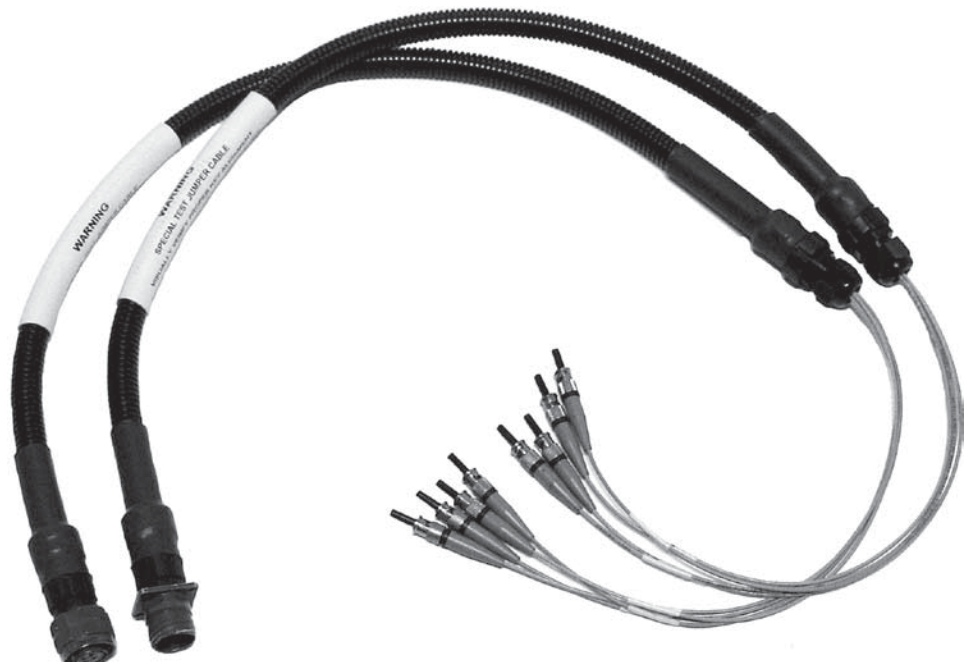* For 50µm cores add "-50" to the end of your part number, for example KFO 70010-50.
  For singlemode cores add "-SM" to the end of your part number, for example KFO 70010-SM.

** AMQJ lengths can be manufactured to your specification, please call for pricing.

TFOCA Tool Kits

At the request of the United States Marine Corps in early 1995 KITCO Fiber Optics expanded its fiber optic tool and kitting business into the ground tactical Warfighter arena. KITCO had recently assisted the Navy in developing a comprehensive product line that, to this day, still supports all shipboard training and maintenance worldwide. With the assistance and direction of MARCORSYSCOM (Marine Corps Systems Command) via GPETE (General Purpose Electronics & Test Equipment) and the DLA (Defense Logistics Agency, Columbus) our Tactical Fiber Optic Cable product line is now complete. The products described in this Military Catalog are the basic tools and tool kits that will allow the Warfighter to identify problems, repair the cable and/or connector, inspect the quality of the work, and test the reel before returning it to the field.

There are basically two types of M85045 fiber optic cable used by the Warfighter. The first generation (50 micron core size) has two strands of distribution style fiber and is typically found on 300 meter or 1000 meter reels. A multi-channel Dual Hermaphroditic Biconic Connector is on each end of the cable. This simply means that the connector has one pin and one socket making the connector "genderless" so that either end may be held in place while the fiber is deployed. The connector that is placed on the first generation TFOCA fiber reel is a Dual Hermaphroditic Biconic Connector and was formerly manufactured to Mil-C-83526/12. The Biconic termini is a physical contact termini that must be polished with a high precision digital length gauge in order to obtain low losses. KITCO has led the way in developing a digital version of this gauge in conjunction with a new polishing fixture which has proven to yield high quality endfaces. The Warfighter now has modern tools to repair and maintain the first generation reels of fiber.

The Second Generation (SG) of Tactical Fiber Optic Cable is the M85045/8A. This fiber has a 62.5 micron core. The fiber is distribution style and is also usually found on 300 or 1000 meter reels, but instead of two strands there are four. The Second Generation (SG) hermaphroditic connector contains 2 pins and 2 sockets utilizing 2.5mm ceramic ferrule termini. KITCO has proven that the MIL-STD-2042B polishing method for the TFOCA (SG) termini yields high quality endfaces and should be used in the termination/connectorization process for both the plug and receptacles.

U.S. MARINE CORPS TFOCA AND TFOCA (SG) FIBER OPTIC TERMINATION KIT
NSN : 5180-01-516-7227   #0801-8510

This termination kit was originally designed with input from the United States Marine Corps in 1995 to support the connectorization process for the M83526/12, Dual Biconic Hermaphroditic Connector now commonly known as TFOCA. The original part number was #0801-8500 but was recently changed as the kit has been upgraded to accommodate TFOCA (SG) products. This kit allows the Warfighter to replace either a TFOCA or the new TFOCA (SG) plugs and/or receptacles. The #0801-8510 is uniquely designed to equip the Warfighter with all the proper tools and consumables to strictly follow the MIL-STD-2042B polishing procedure for the 2.5mm ferruled termini. The Defense Logistics Agency analyzed and approved the procedure to assure high quality endfaces, compatibility, and interoperability—even in harsh field environments. The M83526/12, TFOCA, Dual Biconic Hermaphroditic termini's quality is assured by including a new high precision, digital length gauge and an improved polishing fixture. All products placed in this kit, such as epoxy, heat curing oven, microscope, scissors etc. are products that are found on the DOD's Recommended Parts List (RPL) or the Qualified Parts List (QPL).

U.S. MARINE CORPS TFOCA FUSION SPLICE KIT
NSN: 6080-01-520-8198   #0731-1115

The #0731-1115 Fusion Splicer Kit is designed especially for Tactical Fiber Optic Cable splicing. The small, portable S121M-CUST2 Fusion Splicer was custom designed by KITCO Fiber Optics and the Marines in order to allow the Warfighter to splice two 900 micron buffered fibers at the same time. The fiber stripping, cleaving, and glass protection is also a dual process. The Warfighter can actually strip two fibers, cleave two fibers and splice two fibers simultaneously. This saves the Warfighter literally hours in maintenance costs and re-works. The unique case that this product is housed in is actually a tool that assists the Warfighter in the fusion process by aligning the fiber and securing it in place. The Warfighter need not remove the cleaver or the splicer itself from the case unless necessary. This kit should be used in conjunction with the KITCO Fiber Optics #0731-1170, JPS-400 Splice Protection Sleeve, NSN :6070-01-527-2509.

TFOCA Tool Kits

TFOCA CONSUMABLES KIT
NSN: 6080-01-527-6964   **#0831-9010**

The #0831-9010 contains replenishment supplies for all the consumable items found in the #0801-8510 Termination Kit and the #0731-1115 Fusion Splice Kit.

TFOCA FIBER OPTIC TERMINATION KIT
NSN: 5180-01-503-8333   **#0831-8200**

This termination kit is basically the same as the #0801-8510 kit but it only supports M83526/12, TFOCA, Dual Biconic Hermaphroditic Cable Assemblies, ST and SC connectors.

TFOCA (SG) FIBER OPTIC TERMINATION KIT
NSN: 5180-01-503-8930   **#0831-8210**

This termination kit is basically the same as the #0801-8510 kit but it only supports TFOCA (SG) Cable Assemblies and ST and SC connectors.

TFOCA AND TFOCA (SG) COMBINATION
FIBER OPTIC TERMINATION KIT
NSN: 5180-01-503-8937   **#0831-8220**

This termination kit is basically the same as the #0801-8510 kit but it supports both M83526/12, TFOCA, Dual Biconic Connectors and the TFOCA (SG) connectors, and ST and SC connectors.

TFOCA AND TFOCA (SG) FIBER OPTIC
TERMINATION KIT AND FUSION SPLICER
NSN: 5180-01-503-8251   **#0831-8230**

This termination kit is basically the same as the #0801-8510 kit but it supports the M83526/12, TFOCA, Dual Biconic Connectors, the TFOCA (SG) connectors, ST and SC connectors and also contains the S121M-CUST2 Dual Fusion Splicer and fusion splice support products.

TFOCA (SG) UPGRADE KIT
NSN: 6080-01-531-4862   **#0801-8505**

This Upgrade Kit allows the Warfighter who has the #0801-8500 kit to upgrade to the newer #0801-8510 that supports the TFOCA (SG) Connectors. Other product upgrades are also included such as a new 200X Microscope, TFOCA cable jacket strip tool, the new Biconic Polishing Fixture, and the new high precision Biconic Digital Length Gauge.

TFOCA JACKET PROTECTION SLEEVE (JPS-400)
NSN: 6070-01-527-2509   **#0731-1170**

The JPS-400 Jacket Protection Sleeve was designed by KITCO and the U.S. Marine Corps to allow the Warfighter to properly protect the M85045 Tactical Fiber Optic Cable after it has been spliced. Extremely rugged, yet completely flexible when the Warfighter reels the fiber back onto the reel, the JPS-400 assumes the contour of the diameter of the fiber reel. This splice protector is perfect for the battlefield environment because it can be easily disassembled and re-used if a mistake is made during the initial protection process or if re-work should be required later. This product should be used in conjunction with the #0731-1115 Fusion Splice Kit.
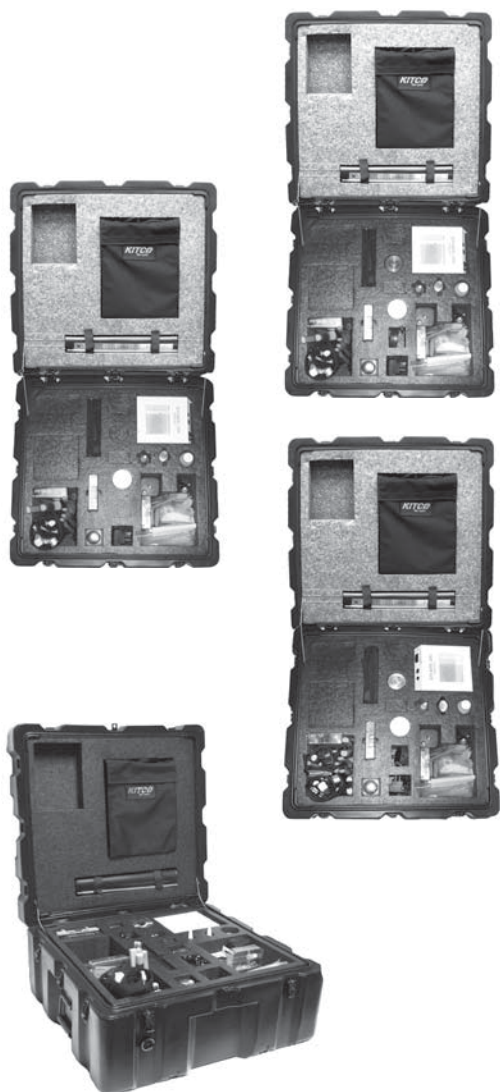
TFOCA Tool Kits

TFOCA GLASS PROTECTION SLEEVE (GPS-60)
NSN: 6060-01-527-2497   #0731-1187

The GPS-60 sleeves are used to protect the actual glass fibers after the fusion splice is accomplished. The oven that is attached to the S121M-CUST2 melts the shrinkable tubing that contains two metal "splints" that give the 900 micron buffered fiber tremendous support. Once the Glass Protection Sleeves are in place the JPS-400 is placed around the cable area that has been spliced and the cable is now completely protected and can be spooled back onto the reel.

TFOCA U.S. MARINE CORPS HQRC (HIGH QUALITY REFERENCE CABLE) KIT
NSN:TBD   #0801-8525

In order to properly test link loss in a cable reel or assembly that has been manufactured or re-connectorized a Light Source and Power Meter should be used. This equipment should be connected to the reel under test by utilizing High Quality Reference Cables (HQRCs). KITCO manufactures these jumpers in strict adherence to Military standards and several kits have been produced to provide the Warfighter with the proper jumpers to accurately test both the M83526/12 and the TFOCA (SG) cable reels. The #0801-8525 contains all the proper jumpers and couplings to perform link loss testing.

FIBER OPTIC INSPECTION, CLEANING, AND TEST PLATFORM KIT
NSN: TBD   #0831-8245

The KITCO Inspection, Cleaning and Test Platform Kit allows the technician to inspect, clean and test TFOCA and TFOCA (SG) reels of fiber. This kit will enable the Warfighter to find where a fiber is broken and determine the length of the fiber run. It contains a full featured, touch-screen OTDR that also serves as a Power Meter and all the necessary HQJs (High Quality Jumpers) and HQRCs (High Quality Reference Cables) to interface with the Light Source and Power Meter mode of the OTDR. HQLCs (High Quality Launch Cables) that eliminate the OTDR's 'dead zone' are also included. The kit contains an inspection probe with all appropriate tips that will enable the Warfighter to check the quality of the endface for visual defects and determine the actual dB loss of each termini's polish. This kit supports TFOCA and TFOCA (SG) cable reels and commercial ST, SC, FC and LC fiber runs. KITCO can also customize this kit to support only TFOCA (SG) multimode applications.

TFOCA TEST PLATFORM CONSUMABLES KIT
NSN: TBD   #0831-9015

The Test Platform Consumables Kit contains all of the expendable items used when cleaning the TFOCA and TFOCA (SG) connector reels, and will replenish the items contained in the #0831-8245 Kit.

TFOCA CLEANING & INSPECTION KIT
NSN: TBD   #0701-5433

The 0701-5433 Cleaning & Inspection Kit is designed for M83526/12, TFOCA and the TFOCA (SG) Plugs and Receptacles. This kit allows the user to inspect the termini endfaces for debris or damage. A portable handheld video probe microscope is used to inspect termini endfaces without removing the front insert adapters or disassembling the connector backshell. This saves the technician hours of disassembly and reassembly of the connector backshell and eliminates the chance of damaging or breaking the termini. The unit can be operated using battery or AC power.

TFOCA (SG) OPTICAL LOSS TEST SET KIT
NSN: TBD   #0831-8240

The #0831-8240 Optical Loss Test Set (OLTS) Kit is designed for testing the M83526/16, TFOCA (SG) cable reels for link loss. This kit comes with all the required High Quality Reference Cables (HQRCs) and an approved stabilized multimode Light Source and Power Meter for testing. The unit can be operated using battery or AC power.

The tools, tool kits, and test cables pictured and described in this Military Catalog have all been developed in strict adherence with the relevant military standards and specifications. A separate, more detailed TFOCA catalog is scheduled to be published in 2008.

KITCO fiber optics   To see how KITCO can help you, call **1-888-548-2636** or visit **www.kitcofo.com**

Fusion Splice Trays, Holders and Protection Sleeves

FIBER SPLICE TRAYS

KITCO's Fiber Splice Trays are designed to provide complete protection for delicate stripped fibers and splices for all types of fiber cable configurations and are designed to meet M24728/8 specifications. The aluminum trays are five inches wide to provide enhanced fiber management and are offered with a snap on cover. Crimp tabs and tie-down holes make it easy to secure all types of fiber and fiber cable sub-units. The trays also feature mounting thru-holes for installation into enclosures and higher density stacking.

SPLICE TRAY W/ALUMINUM COVER   **#0732-1106**

SPLICE SLEEVE HOLDERS

KITCO's Splice Sleeve Holders are designed to accommodate our standard fusion splice protection sleeves. These flexible and high quality silicone rubber devices can accommodate up to 12 splice sleeves and come with a high-peel strength 3M brand adhesive for easy application to almost any surface. Engineered to eliminate the concerns of water absorption, these holders may also be used for securing a variety of other types of fiber optic devices, such as splitters and mechanical splices.

SPLICE HOLDER (BLACK)   **#0732-1110**

STANDARD SERIES FUSION SPLICE PROTECTION SLEEVES

KITCO's "Standard Series" fusion splice protection sleeve is designed to provide robust performance and meet M24623/6-1 specifications. These sleeves have an after shrink diameter of 2.9mm and will accommodate fiber diameters up to 1.4mm. The splice protection sleeves are constructed with an inner EVA meltable adhesive tube, stainless steel strength member and a polyolefin heat shrink outer tube.

STANDARD SERIES FUSION SPLICE PROTECTION SLEEVE, 40MM   **#0703-3770**

SPLICE TRAY HOLDER

The 0732-1112 Splice Tray Holder (STH) is designed to meet MIL-DTL-24728/8, PIN M24728/8-50 for use in the MIL-I-24728 Fiber Optic Interconnection Box as an alternative to ST style patch panels. The STH will accommodate up to 4 each MIL-DTL-24728/8, PIN M24728/8-51 Splice Trays. Each splice tray can house 12 MIL-PRF-24623/6, PIN M24623/6-M24623/6-1 Splice Protectors. A fully populated STH will accommodate 48 splices offering a one-for-one replacement for ST's.

SPLICE TRAY HOLDER

#0732-1112

Call **1-888-548-2636** or visit **www.kitcofo.com**

5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com   15

ViViD − Pierside Connectivity

TERMINATION KIT – TABLE 1B CLIN #6009AA
(MIL-PRF-28876 Heavy Duty, MIL-C-83522 Light Duty & TIA-604-3)

#4000-1010 NAVSEA DRAWING 7325763

The 4000-1010 VIVID (Video, Voice and Data) Pierside Connectivity Fiber Optic Kit contains all the proper tools and consumables that are needed to connectorize the M28876 (MT), Heavy Duty, Multiple Termini Connectors and the M83522/16 (ST), Light Duty, Single Terminus. This tool kit also supports the EIA/TIA 604-3 (SC) Connector. A 70-90 durometer resilient pad and one tenth μm diamond paper are included to allow the installer to accomplish an "enhanced" singlemode polish.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
7325763-1	1	Kevlar® Shears	0700-3321
7325763-2	1	125μm Cleaning Wire w/Container (3pcs. min.)	0700-3210
6009BK	1	Insertion Tool, Straight	0701-3820
7325763-4	1	Insertion Tool, 90 degree	0701-3810
6009BG	1	Terminus Removal Tool	0701-3850
6009BH	1	Alignment Sleeve Insertion & Removal Tool (ASIRT)	0701-3901
7325763-7	1	Glass Polishing Plate, 6" x 6" x .25"	0700-4110
7325763-8	1	Cable Jacket Stripping Tool	0700-1240
7325763-9	1	Buffer Strip Tool, Optical Fiber	0700-3070
7325763-10	1	OFCC Strip Tool, 18 AWG	0700-3061
7325763-11	1	Template, Cut Length, MIL-C83522	0700-3870
7325763-12	1	Template, Cut Length, MIL-T-29504, Termini	0701-4340
7325763-13	1	Curing Oven Assembly (1 Part Number for 6 Parts)	0701-4000
	1	Curing Oven w/ Cure Adapter Holders	0701-4010
	1	Heater Block / PHI, ST & FDDI Ports	0701-4020
	1	Cable Stand (Post)	0701-4030
	1	Cable Stand (Ring)	0701-4040
	16	Cure Adapter, Ceramic Termini for MIL-T-29504/14 & 15	0701-4050
	2	Cable Clips	0701-4060
7325763-14	1	Marking Pen, Permanent, Black	1500-9200
7325763-15	1	Tweezers, Microtip	0700-8911
7325763-16	1	Flashlight	0700-1800
7325763-17	1	Polishing Tool for MIL-T-29504/14&15	0701-4100
7325763-18	1	Polishing Tool, MIL-C-83522/16 and TIA-604-3 (SC)	0700-1740
7325763-19	1	Eye Loupe, 10X	0700-8710
7325763-20	1	Crimp Tool, MIL-T-29504/14-15	0700-1895
7325763-21	1	Crimp Tool Frame, for ST Connector (MIL-C-83522)	0700-1830
7325763-22	1	Crimp Tool Die, for ST Connector (MIL-C-83522)	0700-1850
7325763-24	12	Cure Adapter for MIL-C-83522/16	0700-1450
7325763-25	20	Microclip	0300-4500
7325763-26	1	Microscope Assembly, (400X)	0700-8601
7325763-27	1	Water Bottle, 4 oz. Squeeze w/Cap	0700-9700
7325763-28	1	Safety Glasses w/Side Shields, Nylon Flex Head	0700-8810
7325763-29	1	Epoxy, Bi-Pack, MIL-A-24792, Min. (1 six pack)	0700-5035
7325763-30	1	Polishing Paper, 5 μm, Foam , 5.5" x 5.5", 50/Pk	0700-2660
7325763-31	1	Polishing Paper, 1 μm, Mylar , 5.5" x 5.5", 50/Pk	0700-2620
7325763-32	1	Polishing Paper, Diamond, Mylar, 0.1 μm (3Pk)	0700-2803
7085185-26	12	Syringe (3cc)	0700-5121
7085185-26	12	Needle Tip (20 AWG x 1")	0700-5111
7325763-34	1	Cloth, Cleaning, White, 1 PK., Min. 100 Wipes	0700-5200
7325763-35	1	Canned Air, 10 oz.	3200-4161
7325763-36	1	Scribe, Carbide	0700-3750
7325763-37	1	Dispenser, Solvent, 4 oz., Leak Proof	0700-9750
7325763-38	1	Tool Kit Case, Fiber Optic, Navy Submarine (1 Part Number for 7 parts)	0701-7105
N/A	1	Tool Kit Case	0701-7103
N/A	1	Prep Tool Pouch	0700-8035
N/A	1	Inspection Tool Pouch	0700-8040
N/A	1	Plastic Box, 6-Chamber, Small	0700-9870
N/A	1	Plastic Box, 6-Chamber, Large	0700-9875
N/A	1	Shoulder Strap	0799-1080
N/A	2	Metal Ring	0799-1085
7325763-39	1	Resilient Pad, 70 to 90 Durometer	0700-2000

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
7325763-40	1	6" Ruler, Metric-English	0701-5010
7325763-41	32	Alcohol Pad, Sealed	0700-9760
7325763-42	1	Allen Wrench, 5/64	0701-3110
7325763-43	12	Cure Adapter for TIA-604-3 (SC)	0700-1455
7325763-44	1	Boot Ring Tool, MIL-C-83522 for FIS STs	0701-3070
7325763-45	1	Lint Free Swabs, 100/PK	0701-5201
7325763-46	1	Template, Cut Length for AMP SC Connector	0100-1045
7325763-47	1	Crimp Die for TIA-604-3 (SC)	0700-1870
NA	1	Manual, KITCO Shipboard Kits	0799-7000
NA	1	Manual - 4000-1010 Kit	0100-2220
NA	1	Kit Key	0100-9535

ViViD – Pierside Connectivity

TERMINATION KIT – TABLE 1B CLIN#6009AA
#4000-1020 NAVSEA DRAWING 7325763

This kit includes an LED Light Source, a laser Light Source, and a Power Meter. All appropriate adapter caps are included. This kit is to be used in conjunction with MQJs (Measurement Quality Jumpers) to test cable links for loss.

QTY.	REPLACEMENT PARTS	PART NO.
1	LED Source 1/	0705-5360
1	Laser Source 2/	0705-5365
1	Power Meter 3/	0705-5370
1	Custom Case (not sold separately)	n/a

ST TO ST MQJ SET – TABLE 1D CLIN #6009AC
(Containing SC to ST Adapters)
#KFO 10022 NAVSEA DRAWING 7325763

MQJs (Measurement Quality Jumpers) must be used to test optical link loss. By interfacing the correct jumpers with a Light Source and Power Meter accurate loss measurements can be obtained. This kit includes: two (2) Multimode MQJs (ST-to-ST, 1 meter, Multimode), two (2) Singlemode MQJs (ST-to-ST, 1 meter, Singlemode), two ST-to-ST Adapters, and two SC-to-ST Adapters.

QTY.	REPLACEMENT PARTS	PART NO.
2	MQJ, ST-to-ST Connector, 1 Meter, Multimode 1/	KFO 10028
2	MQJ, ST-to-ST Connector, 1 Meter, Singlemode, 2/	KFO 10029
2	ST-to-ST Adapter, Singlemode, Split Ceramic Alignment Sleeve, Metal Housing	0204-4070
2	SC-to-ST Adapter, Simplex, Split Ceramic Sleeve, Metal Housing	0204-1060

HERMAPHRODITIC CONNECTOR MQJ SET – TABLE 1E CLIN#6009AD
(CP-12 Type)
#4000-1060 NAVSEA DRAWING 7325763

MQJs (Measurement Quality Jumpers) must be used to test optical link loss. By interfacing the correct jumpers with a Light Source and Power Meter accurate loss measurements can be obtained.

QTY.	REPLACEMENT PARTS	PART NO.
2	MQJ, Hermaphroditic Connector Cable Plug to ST Connector, 1 Meter	KFO 11347-M01

ST TO ST MQJ SET – TABLE 1F CLIN #6009AE
(Singlemode Enhanced and Multimode)
#4000-1065 NAVSEA DRAWING 7325763

This kit includes two (2) Singlemode Enhanced MQJs (ST-to-Socket, 1 meter, Singlemode Enhanced), two (2) Singlemode Enhanced MQJs (ST-to-Pin, 1 meter, Singlemode Enhanced), two (2) Multimode MQJs (ST-to-Socket, 1 meter, Multimode), two (2) Multimode MQJs (ST-to-Pin, 1 meter, Multimode), two Snap Lock Plugs, and two Snap Lock Receptacles.

QTY.	REPLACEMENT PARTS	PART NO.
2	MQJ, ST Connector-to-Socket Termini, 1m, Singlemode Enhanced	KFO 10024
2	MQJ, ST Connector-to-Pin Termini, 1m, Singlemode Enhanced	KFO 10025
2	MQJ, ST Connector-to-Socket Termini, 1m, Multimode	KFO 10026
2	MQJ, ST Connector-to-Pin Termini, 1m, Multimode	KFO 10027
2	Snap Lock, Plug, Termini-to-Termini Connection Device	4568515H
2	Snap Lock, Receptacle, Termini-to-Termini Device	4568516H
1	Termini Insertion Tool, Straight, M29504	0701-3820
1	Termini Removal Tool, M29504	0701-3850
1	Alignment Sleeve Insertion & Removal Tool (ASIRT)	0701-3901
6	Termini Alignment Sleeve (termini fixed type)	4569989H

Call **1-888-548-2636** or visit www.kitcofo.com
5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com

17

ViViD − Pierside Connectivity

CLEANING KIT – TABLE 1G CLIN#6009AF
(for Utility Hook-Up Personnel)

#4000-1030 NAVSEA DRAWING 7325763

This cleaning kit has the appropriate tools necessary to clean the 12 Channel Hermaphroditic Connector with removable insert.

Qty.	Replacement Parts	Part No.
1	Dispenser, Solvent, 4 oz., Leakproof	0700-9750
1	Canned Air, 10 oz.	3200-4161
1	Cloth, Cleaning, White, 1 PK., Minimum of 100 Wipes/PK	0700-5200
1	Eye Loupe, 10X	0700-8710
1	Allen Wrench, 5/64	0701-3110
32	Alcohol Pads	0700-9760
2	Swabs, 1.25μM, 50/PK	0700-5335
1	Custom Case	0700-8070

CONSUMABLES KIT – TABLE 1I CLIN#6009AG
#4000-1050 NAVSEA DRAWING 7325763

This consumables kit has enough polishing paper, epoxy, syringes, tips, and wipes to terminate 100 ST Connectors or Termini.

Qty.	Replacement Parts	Part No.
1	Epoxy, Six-Pak, MIL-A-24792	0700-5035
1	Polishing Paper, 5 μm, Foam , 5.5" x 5.5", 50/Pk	0700-2660
1	Polishing Paper, 1 μm, AO, Mylar , 5.5" x 5.5", 50/Pk	0700-2620
1	Polishing Paper, Diamond, Mylar, 0.1 μm 3Pk	0700-2803
12	Syringe (3cc)	0700-5121
12	Needle Tip (20 AWG x 1")	0700-5111
1	Wipes, Cleaning Cloth, White, Min. 25 Sheets	0700-5200

OLTS MQJ KIT – TABLE 1K CLIN#6009BY
#4000-1075 NAVSEA DRAWING 7325763

The OTDR (Optical Time Domain Reflectometer) - MQJ Kit includes a soft, padded carrying case with strap. This case is provided to protect all of the components during transportation and/or storage.

Qty.	Replacement Parts	Part No.
1	Carrying Case (not sold separately)	4000-2000
1	MQJ, ST Connector-to-Socket Termini, 50m, Singlemode Enhanced	KFO 60420
1	MQJ, ST Connector-to-Pin Termini, 50m, Singlemode Enhanced	KFO 60320
2	MQJ, ST Connector-to-ST Connector, 50m, Singlemode Enhanced	KFO 60120
4	Mandrel	0700-1410
1	MQJ, Hermaphroditic Cable Plug-to-ST Connector, 50m	1123854H
6	Index Matching Gel	0700-1595
1	MQJ, ST Connector-to-Socket Termini, 50m, Multimode	KFO 60410
1	MQJ, ST Connector-to-Pin Termini, 50m, Multimode	KFO 60310
1	MQJ, ST Connector-to-ST Connector, 50m, Multimode	KFO 60110

MQJ COMBO KIT – TABLE 1L CLIN#6009BM
#4000-1085 NAVSEA DRAWING 7325763

This combination kit includes everything that is in Table 1G, Table 1J and Table 1K.

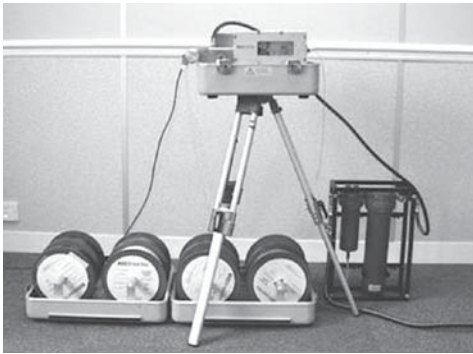| Qty.	Replacement Parts	Part No.
1	Cleaning Kit - Table 1G	4000-1030
1	OLTS - MQJ Kit - Table 1J	4000-1025
1	OTDR - MQJ Kit - Table 1K	4000-1075

OLTS MQJ KIT – TABLE 1J CLIN#6009BX
#4000-1025 NAVSEA DRAWING 7325763

The OLTS (Optical Loss Test Set) - MQJ Kit includes a soft, padded carrying case with strap that is provided to protect all of the components during transportation and/or storage.

Qty.	Replacement Parts	Part No.
1	Carrying Case	4000-1135
1	ST Connector-to-ST Connector - MQJ Set	KFO 10022
1	Hermaphroditic Connector-to-Termini - MQJ Set	4000-1060
1	ST Connector-to-Termini - MQJ Set	4000-1065

KITCO *fiber optics*   To see how KITCO can help you, call **1-888-548-2636** or **visit www.kitcofo.com**

Blown Optical Fiber Products

BIOLITE™ SHIPBOARD BLOWN OPTICAL FIBER INSTALLATION SYSTEM
Biolite™ is a trademark of BICC PLC and used under license.

Biolite™ installation equipment is leased through an agreement to certified installers. This lease also includes a sub-franchise to blow fiber under the original patented blowing apparatus and training for twelve technicians. On behalf of General Cable, KITCO Fiber Optics stocks support kits, duct testing kits, fiber, couplers, duct, and various tools. The efficient installation of optical fibers into a Biolite™ microduct route requires the use of specially designed equipment. The fiber installation equipment apparatus provides two units housed in sturdy carrying cases and a lightweight tripod.

An Air Supply Conditioning Unit - complete with filtration and air-drying units, in addition to the component parts of the payoff system, is housed in one case. The Installation Module - a blowing head utilizing a mechanically driven system to introduce the fibers into the microduct along with a fiber installation control device - is housed in another case. For more information on the installer agreement and leasing arrangement, please contact General Cable at: 1-800-338-0901, ext. 8723.

BIOLITE™ (for Shipboard Blown Optical Fiber) #0745-1010
Biolite™ is a trademark of BICC PLC and used under license.

The 0745-1010 Shipboard Biolite Support Kit contains all the tools needed to support the actual blowing of shipboard blown optical fiber. This kit enables the installer to switch and/or maintain inlet guides, as well as test the microduct. Specialty wrenches, sign-off sheets, cleaning wires, tube cutters, duct test head, and a new and improved SpadeLok™ Duct Connector Tool is included in this support kit. All tools are protected in a rugged, custom carrying case.

Qty.	Replacement Parts	Part No.	Qty.	Replacement Parts	Part No.	Qty.	Replacement Parts	Part No.
2	Adjustable Wrench, 6"	0745-2010	1	Side Cutters	0745-2060	1	Cable Ties, 8" (100/PK)	0745-2200
1	Teflon Tape	0745-2020	1	Gloves	0745-2070	1	Hack Saw	0745-2210
1	Electrical Tape	0745-2030	1	Safety Glasses	0700-8810	1	Hack Saw Blades (10)	0745-2220
1	Jacket Strip Tool	0700-1240	1	Hex Wrench, 3mm, (Ball Type)	0745-2080	1	Debris Bottle, Flip Top	0700-9975
1	Fiber Optic Light Source	0700-8500	1	Hex Wrench, 5mm (Ball Type)	0745-2090	1	Debris Bottle for Used Blades	0700-9977
1	Sign-off Sheet (Pad) for Documentation	0745-2040	1	Universal Screwdriver	4300-9010	1	Kevlar® Shears	0700-3321
1	Sign-off Sheet (Pad) for Documentation	0745-2050	1	Duct Test Head	0745-2100	1	Needle Nose Plier	0745-2260
1	Cleaning Wire for Inlet Guides (50)	0700-3220	1	Blowing Output Connector, 8mm	0745-2120	5	SpadeLok™ Duct Connector Tool	0745-2280
1	Tube Cutter (New Version), 5mm	0745-2300	1	Remote End Duct Trap	0745-2135	1	Back Pack	0745-2290
1	Tube Cutter (New Version), 8mm	0745-2310	1	Flexible Air Hose	0745-2150	1	Biolite™ ACU Blowing Head Hose	0745-2410
2	Replacement Blades for Tube Cutters	0745-2320	1	4.5 μm (.177") Projectiles (100/PK)	0745-2160	2	ACU Blowing Head Hose Coupling	0745-2420
1	Marking Pen, Black	1500-9200	1	4 Fiber Inlet Guide	0745-2180			
			1	8 Fiber Inlet Guide	0745-2190			

BIOLITE™ TESTING KIT (for Shipboard Blown Optical Fiber) #0745-1020
Biolite™ is a trademark of BICC PLC and used under license.

The 0745-1020 Duct Testing Kit contains all the tools needed to test the pressurized duct for leaks and blockage. Wrenches, tube cutters, duct test head, projectiles, remote end duct connectors and all support tools for 8mm and 5mm are included. All tools are protected in a rugged custom carrying case.

Qty.	Replacement Parts	Part No.	Qty.	Replacement Parts	Part No.	Qty.	Replacement Parts	Part No.
2	Adjustable Wrench, 6"	0745-2010	1	Blowing Output Connector, 5mm	0745-2110	1	Hack Saw Blades (10)	0745-2220
1	Sign-off Sheets (Pad) for Documentation	0745-2040	1	Blowing Output Connector, 8mm	0745-2120	1	Debris Bottle for Used Blades	0700-9977
1	Side Cutters	0745-2060	1	Remote End Duct Trap	0745-2135	1	Kevlar® Shears	0700-3321
1	Tube Cutter (New Version), 5mm	0745-2300	1	ACU Blowing Hose Coupling	0745-2420	1	Needle Nose Plier	0745-2260
1	Tube Cutter (New Version), 8mm	0745-2310	1	Flexible Air Hose	0745-2150	5	SpadeLok Duct Connector Tool	0745-2280
2	Replacement Blades for Tube Cutter	0745-2320	1	2.5 mm (.098") Projectiles (100)	0745-2165	1	Custom Case	0745-2290
1	Universal Screwdriver	4300-9010	1	4.5 mm (.177") Projectiles (100)	0745-2160	1	Biolite™ ACU Blowing Head Hose, 6'	0745-2410
1	Duct Test Head	0745-2100	1	Hack Saw	0745-2210			

Blown Optical Fiber Products

CASUALTY RESTORATION KIT NAVY SHIPBOARD FIBER OPTIC KIT*
(Emergency Repair Kit for 8mm, 7 Channel Shipboard Multiduct, Blown Optical Fiber)

#0701-8000 NAVSEA DRAWING 7344573

The #0701-8000 KITCO Casualty Restoration Kit is designed to enable the installer to quickly restore a completely severed section of BOF (blown optical fiber). Eight 100 foot low smoke, zero halogen duplex shipboard COTS (Commercial off the Shelf) jumpers are included in the Casualty Restoration Kit. These jumpers have M83522/16 ST connectors pre-installed on both ends to allow the technician to simply "plug and play." In a case where Blown Optical Fibers have been severed this kit includes 2 furcation units and all the tools necessary to install these units to prepare the blown fiber for connectorization. M83522/16 ST connectors and coupling adapters are also included as well as all appropriate connectorization tools. A rugged custom carrying case with shoulder strap protects all components and tools.

NAVSEA Drawing	Qty.	Replacement Parts	Part No.
7344573-1	1	Case (including Roll-Up Pouch & Plastic Box)	0700-8075
	18	ST Connectros	0200-3020
	18	ST SM Adapter	0204-4070
7085185-44	6	Clip Micro-Gator 5 AMP	0300-4500
7345573-16	2	Velcro Ties 18" Red 10/PK	0400-2700
7344573-6	1	Jacket Stripper .18"-1.0"	0700-1240
6872811-27	4	Cure Adapter / ST CONN	0700-1450
7344573-17	1	Profixture 2.5MM	0700-1740
7344573-9	1	Headband Light	0700-1810
	1	Crimp Tool w/ST Die Set	0700-1855
7344573-27	1	Polish Pad 5 3/4" x 5 3/4"	0700-2002
7344573-21	1	Film 1 M Mylar 5.5 50PK	0700-2620
7344573-22	1	Film 5 M Foam 5.5 50PK	0700-2660
7344573-23	0	Film .1 M Diamond ML 10SH	0700-2720
	1	Fibersure Strip Tool	0700-3125
7344573-7	1	Buffer Stripper NO-NIK	0700-3130
7344573-18	1	Kevlar® Shears	0700-3315
73445373-5	1	Scribe Carbide KITCO	0700-3750
7345573-2	1	Glass Polish Plate 6"x6"	0700-4110
7344573-13	5	Needle Tip (20 AWG x1")	0700-5111
7344573-13	5	Syringe (3CC-3 PARTS)	0700-5121
7344573-33	1	Wipes, ABSORBWIPE 4"x4"	0700-5200
	1	Microscope 200X	0700-7950
7344573-3	1	Safety Glasses	0700-8810
7344573-25	10	Alcohol Pads (Each)	0700-9760
7344573-29	4	Duplex, LSZH Cable 100FT	0705-8012
7344573-28	4	Duplex, LSZH SM Cable 100FT	0705-8015
7344573-12	2	8 - Furcation Unit 3FT	0705-8033
7344573-20	4	8MM Tube Coupler - Clear	0745-2350
7344573-14	1	Permanent Marker Black	1500-9200
7344573-10	2	Battery C Alkaline	3900-0300
	1	Visual Fault Locator	0705-7080
	1	Fibersure™ Adhesive	0700-3810
	1	Fibersure™ Non Hazmat Primer	0700-3815
	1	Template MIL-C-83522 Kit	0700-3870

*NOTE: THIS KIT IS CURRENTLY UNDER REVISION. PLEASE CALL FOR A CURRENT BILL OF MATERIALS AND FULL DETAILS PRIOR TO PLACING YOUR ORDER.

Blown Optical Fiber Accessories

#0745-2350

These pneumatic connectors feature locking collars to prevent accidental disconnection. They are installed onto 8mm Microducts. The transparent design permits visual verification of fiber population. Maximum operating pressure is 10 bar (g) or 145 psi.

8MM DUCT END CAPS   #0745-2335

These Duct End Caps fit securely into the 5mm and 8mm Duct Connectors to prevent contamination after Microducts are installed.

SPADELOK™ 8MM DUCT COUPLING TOOL   #0745-2280

The 0745-2280 SpadeLok™ Duct Connector Tool is a precision tool designed for locking and removing the Duct Connectors onto the Blolite Microduct. By wedging the SpadeLok™ between the housing of the connector and the collet, the installer guarantees that the connector is tight and secure. To remove the Duct Connector, simply turn the tool around and use to push the collet in to release the Microduct.

BLOWING OUTPUT ADAPTER 8MM   #0745-2120

The 0745-2120 Blowing Output Connector allows the installer to interface between the Duct Test Head and the Microduct.

DUCT TEST HEAD   #0745-2100

The 0745-2100 Duct Test Head interfaces between the Air Supply Conditioning Unit and the Microduct. Shut-off valves allow the installer to control the flow of the air and a pressure gauge allows the installer to monitor the pressure being applied. This requires the Blowing Output Adapter (0745-2120).

REMOTE END DUCT PROJECTILE TRAP, 8MM   #0745-2135

This device attaches to the far end of the microduct. A shut-off valve stops the flow of air to allow the installer to pressure test the duct. When the valve is opened a fiber optic projectile can be blown through the microduct to check for a blockage. A removable reservoir safely catches the projectile.

8MM TUBE CUTTER

The 0745-2310 Tube Cutter is specially designed to cut the microduct at a right angle that is necessary for proper Duct Connector installation.

8MM TUBE CUTTER   **#0745-2310**

BLOWN OPTICAL FIBER FURCATION UNIT
2 METER, 8 FIBER VERSION

KITCO Fiber Optics now manufactures U. S. Navy Shipboard approved furcation units. These units consist of low smoke, zero halogen 2.4 mm furcation tubing that surrounds Kevlar® and a 650 mm (ID), 900mm (OD) hollow tube. One end of the unit is strain relieved with polyethylene tubing, shrink tubing and an aggressive epoxy. An 8 mm Blown Optical Fiber Tube is also epoxied inside the shrinkable tubing to allow the installer to couple the furcation unit with the existing duct work. After sliding the 500 mm Blown Optical Fiber down the hollow tube the installer can utilize the Kevlar® and jacket to properly connectorize shipboard ST and SC connectors in accordance with MIL-STD-2042B. Immediately available in 4 fiber and 8 fiber, 2 meter configuration, singlemode and multimode. Other configurations available upon request.

8 FIBER FURCATION UNIT   **#0705-8130**
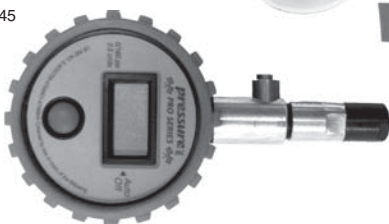**4 FIBER FURCATION UNIT**   **#0705-8120**

TAPERED TUBE PLUG   #0745-2325

This tapered tube plug is used to hold the optical fibers in place when attaching furcation units to the blown fiber microduct.

SEALANT TAPE   #0700-5065

This grey sealant tape is used to seal around the optical fibers inside the tapered tube plug. Measures 1 long by $^{1}/_{16}$ thick.

MICRODUCT DIGITAL AIR GAUGE   #0745-2145

KITCO's new digital air gauge simplifies testing air blown microduct. Our gauge reads up to 160 psi in increments of 0.50 psi. Used with our 0745-2155 Air Blown Test Valve Assembly, testing air blown microducts is a breeze.

0745-2350
0745-2335
0745-2280
0745-2120
0745-2100
0745-2135
0745-2310
0705-8130
0745-2325
0700-5065
0745-2145

Call **1-888-548-2636** *or* **visit www.kitcofo.com**
5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com

21

AIR BLOWN TEST VALVE ASSEMBLY #0745-2155

KITCO's Air Blown Test Valve Assembly is composed of an 8mm ten inch clear tube and an air valve on one end. Simply install the 8mm tubing into the microduct "tee" coupling and attach the Microduct Digital Air Gauge (0745-2145) to the air valve to check the microducts' internal air pressure.

Curing Products

CURE ADAPTERS

Cure Adapters protect the connector and fiber during the oven cure process. The ST adapter can be used to ensure a complete crimp for Lucent ST II connectors. NAVSEA listed and approved for MIL-STD-2042B applications.

ST CURE ADAPTER NSN 6070-01-420-0551 #0700-1450
SC CURE ADAPTER NSN 6060-01-478-9450 #0700-1455

CERAMIC TERMINI CURE ADAPTER NSN 6070-01-420-0522 #0701-4050

The 0701-4050 Cure Adapter protects the MIL-T-29504/14/15 termini when they are placed in the heater block to cure. These adapters easily and precisely snap onto the termini and are simple to remove even after thermal expansion. NAVSEA listed and approved for MIL-STD-2042B applications.

MICRO CLIPS NSN 5340-01-534-2682 #0300-4500

Use the 0300-4500 Micro Clip to hold connector pieces in place during the curing process.

CURING OVEN ASSEMBLY #0701-4000

KITCO Fiber Optics was tasked by NAVSEA Combat Systems in 1992 to produce an oven that would allow the shipboard installer to accomplish a vertical cure for the MIL-C-83522/16 Light Duty ST Connector, the MIL-T-29504/14/15 Heavy Duty Termini and the COTS FDDI Connector. A higher curing temperature of 248 degrees Fahrenheit assures a higher glass transition temperature needed for high vibration and harsh shipboard environments. A special heater block accepts termini when in one position and when flipped over the same heater block accepts ST, SC and/or FDDI Connectors. A solid post, a ring and cable clips allow the installer to precisely position the fiber into the block for a straight, vertical cure. Special side panels are affixed to the oven housing to hold the 16 termini cure adapters that come with this assembly.

NSN	Qty.	Replacement Parts	Part No.
4430-01-419-6384	1	Curing Oven	0701-4010
6070-01-420-7682	1	Heater Block	0701-4020
6070-01-420-0522	16	Cure Adapters	0701-4050
6070-01-430-4607	1	Cable Stand Post	0701-4030
5365-01-420-3692	1	Cable Stand Ring	0701-4040
5340-01-422-2168	2	Cable Clips	0701-4060

Post, ring & cable clips not shown.

The #0701-4005 version does not have the side panel holders.

Inspection Tools

BACK PLANE VIDEO FIBER INSPECTION PROBE KITS #0700-8640
#0700-8770

The Back Plane Video Fiber Inspection Probe Kits contain a portable, handheld microscope and the appropriate probes to inspect installed connectors located within patch panels, eliminating the need to access the backside of the patch panel. The VFIP Kit will also allow an installer to inspect MQJs (Measurement Quality Jumpers or any M28876 cable assemblies) without disassembling them; the alignment sleeve in the socket (receptacle side) does not need to be removed to view the endface. All products are packaged in a customized hard shelled case for protection, convenience and portability. This kit includes the following:

Qty.	Replacement Parts	Part No.
1	Video Probe (200 X) 0700-8640 only	0700-8648
1	Video Probe (400 X) 0700-8770 only	0700-8692
1	Hand Held LCD Video Display w/Power Supply	0700-8649
2	ST Tip	0700-8646
2	SC Tip	0700-8647
2	M28876 Pin Tip (for viewing Pin Endface)	0700-8644
2	M28876 Socket Tip (for viewing Socket Endface)	0700-8645
1	Customized Hard Shell Case	0400-1145

The #0700-8640 kit contains a 200X Video Probe and the #0700-8770 contains a 400X Video Probe.

KITCO fiber optics To see how KITCO can help you, call **1-888-548-2636** or visit **www.kitcofo.com**

VIDEO OUTPUT MODULE   #0700-8639

The #0700-8639 routes the video image from the Video Probe to a standard NTNC monitor (such as our VideoScope 400 #0700-8620 - seen below) without the need for the #0700-8649 Hand Held Display. Includes inputs for one probe and one FV (Fiber View) System with an AB switch.
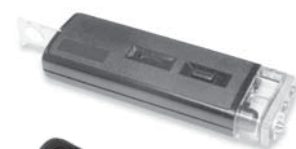
Inspection Tools

VIDEOSCOPE 400™   #0700-8620

Simply plug the connector into the universal "slip-grip" adapter and the 9" monitor will display your ferrule endface at crystal clear 400X (about the size of a tennis ball)! The installer can quickly examine ferrule endfaces to detect epoxy residue, cracks, scratches and other irregularities in the core or cladding glass.

100X MICROSCOPE   #0700-8000

This hand held microscope is perfect for checking a connector's endface for excess epoxy, core or cladding chips or any other irregularities. This 100X "straight view" scope is easy to adjust and will accept any 2.5µm ferrule. A special tygon tubing grips the ferrule so the installer does not have to hold the connector in place. A convenient 8X eye loupe is built in as well. Batteries are included.

OPTIVIEW 400™   #0700-8602

The OptiView 400™ is the best portable fiber view scope on the market. This powerful 400X scope is ruggedized and is made of tempered steel. The OptiView 400™ is perfect for viewing any 2.5µm ferrule, ST, SC, or FC. Easy to adjust for viewing and easy to maintain, the OptiView 400™ operates with two AAA batteries (included). NAVSEA listed and approved for MIL-STD-2042B applications.

FIBERSURE™ LIGHT SOURCE   #0700-8500

This universal light source is a sturdy Mini-Mag flashlight with a universal interface. It is perfect for providing a steady, strong light source at one end of a fiber optic cable for visual inspections of continuity. Two AA alkaline batteries and a dust cover are included. Allows inspection of ST, SC, FC and FDDI ferrules.

EYE LOUPE   #0700-8710

This 10X eye loupe allows the installer to inspect connector and termini endfaces to determine proper bead size and to examine cleaves. This loupe will fit most eye sockets allowing the installer a "hands-free" view. NAVSEA listed and approved for MIL-STD-2042B applications.

Crimp Tools

CONNECTOR NAME & DESCRIPTION

TIA-604-3 (COT/SC)	#0700-1875
MIL-C-83522/16 (ST & COTS ST)	#0700-1855
MIL-T-29504/14 & 15 NSN 5120-01-419-3730	#0700-1895

M28876 and M29504 Tools

90° INSERTION TOOL NSN 5120-01-145-5172   #0701-3810

For installation of Fiber Optic Termini into straight backshell connectors. NAVSEA listed and approved for MIL-STD-2042B applications.

STRAIGHT INSERTION TOOL NSN 5120-01-145-5338   #0701-3820

For installation of Fiber Optic Termini into 45 and 90 degree backshell connectors. NAVSEA listed and approved for MIL-STD-2042B applications.

ASIRT (ALIGNMENT SLEEVE INSERTION & REMOVAL TOOL)
NSN 5120-01-149-2942   #0701-3901

This precision tool will allow the careful removal or installation of ceramic alignment sleeves from multi-channel connector nests. The extraction mechanism will remove the alignment sleeve, yet leaves the termini and fiber undamaged. NAVSEA listed and approved for MIL-STD-2042B applications.

M28876 and M29504/14/15 Tools

TORQUE WRENCH, 3/8" DRIVE NSN 5120-01-230-6380 #0701-3050

The 0701-3050 Torque Wrench is used in conjunction with the backshell spanner wrench C-type and backshell grips to torque the M28876 strain relief and backshells to the appropriate torque as outlined in MIL-STD-2042B. NAVSEA listed and approved for MIL-STD-2042B applications.

STRAP WRENCH #0701-3060

The 0701-3060 Strap Wrench is used to torque the M28876 backshell to the proper level as outlined in MIL-STD-2042B. Used in conjunction with the 0701-3050 torque wrench and/or the 0701-3520 spanner wrench. Note: Two 0701-3060 strap wrenches are required for backshell size 23 applications. NAVSEA listed and approved for MIL-STD-2042B applications.

TORQUE WRENCH ADAPTERS

The 0701-3530, 0701-3540 and 0701-3550 Torque Wrench Adapters are used in conjunction with the 0701-3050 torque wrench and 0701-3100 hex drive adapter to torque the M28876 strain relief to the appropriate level. NAVSEA listed and approved for MIL-STD-2042B applications.

DUAL POST, SIZE 11 NSN 5120-01-420-2445 #0701-3530
TRI-POST, SIZE 13 NSN 5120-01-420-2444 #0701-3540
TRI-POST, SIZE 15 NSN 5120-01-420-2446 #0701-3550

TERMINUS REMOVAL TOOL NSN 5998-01-147-0198 #0701-3850

Used for extraction of Delphi Connection Systems Fiber Optic Termini from the nest without damaging the termini and fiber. This tool is also used to remove ceramic termini from the 0701-4100 polishing fixture. NAVSEA listed and approved for MIL-STD-2042B applications.

BACKSHELL SPANNER WRENCH NSN 5120-01-419-3283

Use this C-Type Backshell Spanner Wrench to torque the backshell and secure the 4 channel/8 channel and 31 channel connectors. A properly torqued backshell will insure lower dB loss in multi channel connectors. NAVSEA listed and approved for MIL-STD-2042B applications.

4 CHANNEL/ 8 CHANNEL #0701-3520
31 CHANNEL #0701-3525

O RINGS

To hold Kevlar® (aramid yarn) in place during straight backshell installation applications

O RING, 4 CHANNEL #0799-2010
O RING, 8 CHANNEL #0799-2012
O RING, 31 CHANNEL #0799-2015

O RING INSTALLATION TOOLS

Install these O-rings without breaking by using O-ring installation tools. Select the appropriate tool to secure the correct sized O-ring. NAVSEA listed and approved for MIL-STD-2042B applications.

O RING INSTALLATION TOOL, SIZE 11 NSN 5120-01-424-7866 #0701-3560
O RING INSTALLATION TOOL, SIZE 13 NSN 5120-01-424-7867 #0701-3570
O RING INSTALLATION TOOL, SIZE 15 NSN 5120-01-424-7868 #0701-3580
O RING INSTALLATION TOOL, SIZE 23 #0701-3590
O RING LUBE #0701-3710

Rotary Mechanical Splice Tools

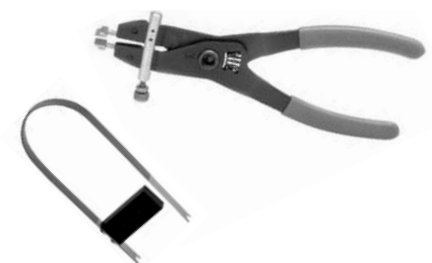## UV CURING LAMP W/BASE NSN: 6250-01-420-6491 #0700-8915

The Rotary Mechanical Splice requires a UV curable adhesive that is cured by an ultra violet light. The 0700-8915 assembly includes the UV Lamp and a custom designed base that holds the splices a specified distance from the light source to assure accurate curing of the adhesive.

ALIGNMENT CLIP TOOL NSN 5120-01-306-1967 #0700-3020

The 0700-3020 Alignment Clip Tool allows the installer to open the Rotary Mechanical Splice's alignment clip and insert the ferrules so that they touch.

SPLICE COMPRESSOR TOOL NSN 5120-01-376-7721 #0700-3030

The 0700-3030 Splice Compressor Tool allows the installer to compress the springs that are part of the Rotary Mechanical Splice and to install and remove the splice from the custom tray.

KITCO fiber optics To see how KITCO can help you, call **1-888-548-2636** or visit **www.kitcofo.com**

Preparation Tools

JACKET STRIP TOOL #0700-3065

This economical jacket stripper is perfect for cutting outer jackets of a variety of cables. Adjustable from 10 to 30 AWG.

OFCC JACKET STRIP TOOL #0700-3061

Perfect for stripping 10 to 18 AWG (.75 to 4.0 mm) cable. This jacket stripper has a spring-release handle and a cushioned grip. NAVSEA listed and approved for MIL-STD-2042B applications.

OUTER JACKET STRIP TOOL #0700-1240

Strip the outer jacket of a fiber optic cable accurately and quickly without damaging the inside components. The Outer Jacket Strip Tool has an adjustable blade that can be set to a wide range of depths. A flip of the lever will allow this blade to cut a cable longitudinally as well as vertically. It is capable of handling cable diameters up to 1.0 inch. NAVSEA listed and approved for MIL-STD-2042B applications.

BUFFER STRIPPER #0700-3150

This durable .0055" (.14mm) factory set precision tool makes quick work of stripping even the toughest acrylate coated fibers from both 250 and 900 mm cables. The cutting surface is machine hardened, ensuring a smooth, clean stripping action.

NO-NIK™ BUFFER STRIPPER #0700-3130

The most popular buffer stripper on the market for 900 mm tight buffered cable. This tool mechanically strips fiber coating with no nicks, cuts or scratches.

MICRO BUFFER STRIPPER NSN: 5110-01-419-4361 #0700-3070

This precision tool is designed to strip 900 mm fiber optic buffers. A cleaning brush and an extra replacement blade are included. NAVSEA listed and approved for MIL-STD-2042B applications.

THERMO BUFFER STRIPPER #0700-3072

The 0700-3072 Thermo Buffer Stripper uses heat to soften plastic buffers and acrylate coatings to easily strip tough cables.

SPRING LOCK KEVLAR® SHEARS #0700-3321

These high leverage Kevlar® shears have a non-slip, serrated blade specifically designed to cut Kevlar®. They are made of hot-forged carbon steel and feature a safety locking device, a quick action spring release and a comfortable rubber-coated handle. NAVSEA listed and approved for MIL-STD-2042B applications.

Call 1-888-548-2636 or visit www.kitcofo.com

5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com

25

Preparation Tools

FIBERSURE™ SCRIBE NSN: 5110-01-419-4360   #0700-3750

This unique hand scribe is a KITCO innovation. Made of a proprietary carbide tungsten and sharpened on both ends to a fine razor-sharp edge, the FiberSure™ Scribe's blade has twice the life of ordinary scribes. When the blade gets dull, simply remove and turn the blade around to continue scribing with precision. The FiberSure™ Scribe also features a user-friendly handle and protective screw-on cap. NAVSEA listed and approved for MIL-STD-2042B applications.

Featuring a
two edged blade.

CARBIDE SCRIBE   #0700-3770

KITCO's wedge shaped Carbide Scribe is built into the handle and provides an industry standard that has been used by professional fiber optic installers for years. NAVSEA listed and approved for MIL-STD-2042B applications.

Safety Materials

UV SAFETY GLASSES   #0700-8810

These "one size fits all" safety glasses are designed for installer comfort as well as safety. Each ear piece has a sliding handle to allow the installer to adjust the glasses for ultimate comfort and vision. The perfectly clear lens with side shields protect the installers' eyes from UV (Ultra Violet) light and from flying glass debris. NAVSEA listed and approved for MIL-STD-2042B applications.

UV "OVER YOUR GLASSES" GLASSES   #0700-1570

These UV (Ultra Violet) blocking glasses serve the same function as the 0700-8810 glasses with one exception; these amber colored glasses will fit over the installer's regular eye glasses.

MICRO TIP TWEEZERS   #0700-8911

These extra sharp tweezers come in handy for untangling acrylate coated fibers in crowded communication boxes. Tweezers may also be used to remove tiny shards of glass that may have been inadvertently embedded in your skin.

Polishing Tools

CERAMIC TERMINI POLISHING TOOL NSN: 5120-01-419-3142   #0701-4100

The 0701-4100 precision polishing tool is designed to polish the MIL-T-29504/14 (Ceramic Pin Termini) and the MIL-T-29504/15 (Ceramic Socket Termini). Manufactured to hold the termini perpendicular to the polishing paper, this fixture minimizes fiber undercut to allow for higher mechanical performance. Specifications dictate that this fixture is to be used in all applications involving MIL-STD-2042B, multimode and singlemode.

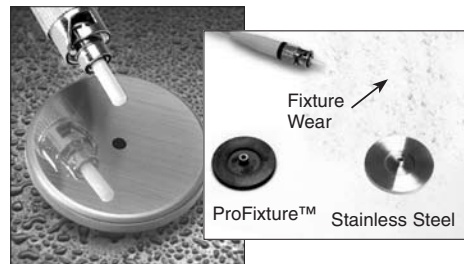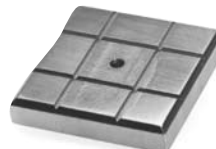## POLISHING TOOL NSN 5120-01-328-1227   #0700-4100

The 0700-4100 Rotary Mechanical Splice Polishing Tool will polish the glass ferrules to allow placement into the alignment mechanism. This unique design will allow water from the polishing procedure to be channeled away from the fixture, eliminating fixture "sticking" and allowing for a smoother polishing motion.

THE PROFIXTURE™   #0700-1750

The ProFixture™ is a must have for the professional fiber optic installer. Made of machine hardened tungsten, the ProFixture™ will not grind away during polishing. Less expensive fixtures leave a residue (actual fixture material) that can scratch and contaminate the fiber endface which can cause increased dB loss and less reliable performance. The ProFixture™ pays for itself by eliminating costly repairs due to faulty terminations and is designed to be used with ST, SC, and FC connectors and most 2.5mm ferruled connectors. The center hole diameter is held to 2 ten-thousandths of an inch tolerance to maintain the ferrule perpendicular to the polishing surface. The ProFixture™ is listed on NAVSEA Drawing 6872811 as an approved product for MIL-C-83522/16 polishing and SC COTS applications.

Fixture
Wear

ProFixture™   Stainless Steel

KITCO *fiber optics*   To see how KITCO can help you, call **1-888-548-2636** or **visit www.kitcofo.com**

Polishing Plates and Film

GLASS POLISHING PLATE, 6" NSN: 6080-01-377-4502   **#0700-4110**

The #0700-4110 Glass Polishing Plate is used in conjunction with the #0700-2660 5 mm foam backed polishing film to accomplish the initial grinding polish in accordance with MIL-STD-2042B.

RESILIENT POLISHING PADS 70 DUROMETER

The 70 Durometer Polishing Pads are used in accordance with MIL-STD-2042B to accomplish a domed endface polish.

POLISHING PAD, 6" x 6"   **#0700-2000**
POLISHING PAD, 5 3/4" x 5 3/4"   **#0700-2002**

Polishing Film

0.3 µM MYLAR-BACKED FILM (5.5" x 5.5", 50 sheets/pkg.)   **#0700-2610**
1.0 µM MYLAR-BACKED FILM (5.5" x 5.5", 50 sheets/pkg.)   **#0700-2620**
0.3 µM PAPER-BACKED FILM (5.5" x 5.5", 50 sheets/pkg.)   **#0700-2510**
8.0 µM PAPER-BACKED FILM (5.5" x 5.5", 50 sheets/pkg.)   **#0700-2570**
5.0 µM FOAM-BACKED FILM (5.5" x 5.5", 50 sheets/pkg.)   **#0700-2660**
    NSN: 5350-01-539-0496
0.1 µM DIAMOND FILM (5.5" x 5.5", 10 sheets/pkg.)   **#0700-2720**
 0.1 µM DIAMOND FILM* (5.5" x 5.5", 1 sheet)   **#0700-2802**
 0.1 µM DIAMOND FILM* (5.5" x 5.5", 3 sheets/pkg.)   **#0700-2803**
0.5 µM DIAMOND FILM (5.5" x 5.5", 10 sheets/pkg.)   **#0700-2800**
 ULTRAFINE POLISHING FILM* (5.5" x 5.5", 1 sheet)   **#0700-2850**
NAVSEA Listed & Approved / MIL-STD-2042B

Adhesives and Syringes

FIBERSURE™ FIBER OPTIC ADHESIVE   **#0700-3810**
FIBERSURE™ FIBER OPTIC PRIMER, NON HAZMAT   **#0700-3815**

The FiberSure™ 100 Anaerobic Adhesive System is a two-part system that uses a non-HAZMAT primer and adhesive. Specially formulated for fiber optic cable, this system provides strong adhesion within seconds to ceramic, stainless steel and most polymer ferrules. Anaerobic adhesives have many advantages which include: quick adhesion for immediate polishing, long-term reliability and repeatability. Approved for COTS use only!

FIBERSURE™ ANAEROBIC CONSUMABLES KIT   **#0700-3800**

• 1 btl. primer   • 1 btl. adhesive   • 10 alcohol pads   • 20 needle tips

EPOXY *NAVSEA Listed & Approved / MIL-STD-2042B*   **#0700-5035**
NSN: 8010-01-539-0513

The Epoxy Mini Six-Pack is a two-part system that uses a resin and hardener. Conveniently packaged in six one-gram packages, this epoxy cures in 10 to 30 minutes at 120°C.

UV ADHESIVE *NAVSEA Listed & Approved / MIL-STD-2042B*   **#0700-1590**

This adhesive (MIL-A-24793) comes pre-loaded in syringe and comes with two needle tips.

Syringes and Needle Tips

SYRINGE ONLY *(3cc)*   **#0700-5121**
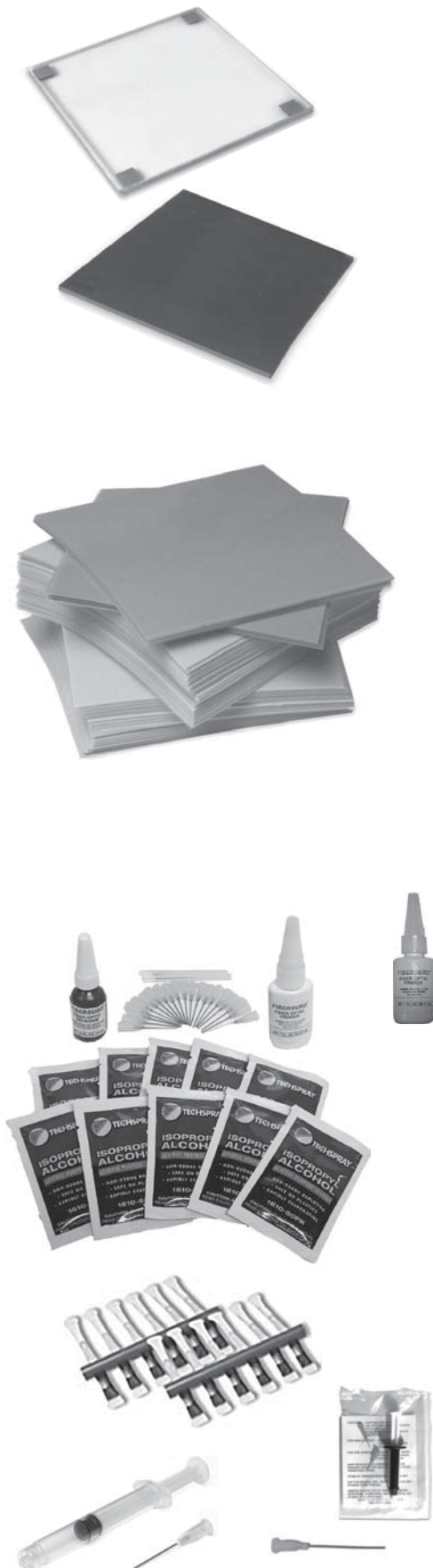**NEEDLE TIP ONLY** *(20 gauge, 1" tip)*   **#0700-5111**
SYRINGE AND NEEDLE TIP *(pkg of 24)*   **#0700-5100**
NEEDLE TIP ONLY *(20 gauge, 1.5" tip)*   **#0700-5115**

NAVSEA Consumables Kits
(for M83522 Connectors and M29504/14 and 15 Ceramic Pins and Sockets)

The polishing technique outlined in the latest version MIL-STD-2042B requires three polishing papers instead of the traditional two; using 0.1µm, mylar-backed, diamond paper on a 70 durometer resilient pad.

MULTIMODE   #0801-9050

1 Pkg. of 4" x 4" Wipes (100), 1 Vial of Cleaning Wire (3 pcs), 12 Syringes and Needle Tips, 2 Six-Paks of Epoxy, 0.1µm, Diamond Polishing Paper, Mylar-Backed (5 each), 1 Pkg. of 1µm Polishing Paper, Mylar-Backed (50), 1 Pkg. of 5µm Polishing Paper, Foam-Backed (50).

SINGLEMODE   #0801-9060

Same as above, plus a required domed endface, Resilient Pad, 70 to 90 Durometer.

Pad w/ 0801-9060 only

Cleaning and Consumable Products

CANNED AIR NSN: 6850-01-517-1506   #3200-4161

This dispenser of compressed canned air provides a tube that securely fits in the nozzle to remove particles from hard to reach areas. The ingredients are environmentally safe.

LINT FREE WIPES NSN: 7920-01-539-0494   #0700-5200

These absorbing wipes are perfect for cleaning fiber and connector endfaces. Each package contains 100 soft lint-free wipes.

CLEANING SWABS   #0701-5201

Cleaning swabs are required to clean hard to reach areas in fiber optic installations. The tips are .05" in diameter with a 6" total length. Excellent for cleaning MIL-T-29504/14/15 socket termini, even while the termini is still in the receptacle nest. Quantity: 100 per package.

ALCOHOL PADS NSN: 6510-01-543-5190

These alcohol soaked pads are placed in most of our fiber optic tool kits so that the installer will be able to immediately use the kit. Liquid alcohol is not included in our kits because of strict shipping restrictions. These wiping pads are saturated with optically pure 99% anhydrous alcohol, perfect for cleaning polishing pads, tools and connector endfaces.

INDIVIDUAL ALCOHOL PADS   #0700-9760
BOX OF 50 ALCOHOL PADS   #0700-9765

ALCOHOL PUMP DISPENSER   #0700-9750

This pump dispenser allows easy access to alcohol, while protecting its purity. By pressing the top, a small amount of alcohol rises and sits in the reservoir bowl. A one-way valve seals and protects the inside contents from contamination. This dispenser also has a locking spill proof top and a label clearly marked as "ALCOHOL."

KITCO *fiber optics* — To see how KITCO can help you, call **1-888-548-2636** or visit **www.kitcofo.com**

CLEANING WIRE NSN: 9505-01-376-9398 #0700-3210

Used to push broken fibers out of fiber optic connectors, the 0700-3210 Cleaning Wire will salvage connectors by clearing them to allow prepared fiber to be re-inserted.

DUST CAPS #0700-9815

Used to protect fiber optic endfaces from dust, dirt, and scratches, these dust caps will prolong the life of your fiber optic system.

FIBERAIDE #0700-5185

This lint-free fiber connector cleaner is hermetically sealed in a foil pouch and is ideal for harsh environment use. The cleaning pad can be used to clean connector endfaces either dry or moistened with fiber preparation fluid. Pack of 50.

FIBER CONNECTOR CLEANER #0700-5175

This specially-formulated fiber cleaning fluid eliminates unwanted film residue on glass surfaces after cleaning.

FIBER PREPARATION FLUID #0700-9755

The 0700-9755 Fiber Preparation Fluid is engineered to provide a non-flammable, non-hazardous cleaner for use on fiber after stripping, prior to termination or fusion splicing, and for cleaning connector endfaces after polishing. The fluid is packaged in a unique spill-proof container with a saturator dispenser top to provide fast and easy hands-free cleaning, and provides over 400 cleanings per container.

FIBERWIPES #0700-5165

These wipes are made from lint-free polyester fabric to provide a stronger, softer and more absorbent wipe than traditional cellulose wipes. Each mini-tub contains 90 perforated 4" x 2" wipes. The FiberWipe package is rugged and spill-proof, and protects the wipes from moisture and dust.

INDEX MATCHING MATERIAL #0700-1595

This .5 gram package of index matching material is used when installing the MIL-S-24623/4 Rotary Mechanical Splice. This gel has an index of refraction amazingly similar to the glass used in fiber optic applications. When smeared between the endfaces of Rotary Mechanical Splices or between connector endfaces, much less attenuation occurs due to index of refraction mismatch. NAVSEA requires this material to be used in MIL-S-24623/4 and MIL-STD-2042B applications.

PLUG AND SOCKET CLEANING STICKS

These cleaning sticks come in 3 different versions for use with M28876 plugs and sockets, Hermaphroditic connectors, MIL-T-205-4 Termini, and SC, ST, FC and LC plugs and sockets. 50 per pack.

CLEANING STICKS, 2.5mm Plugs		#0700-5390
CLEANING STICKS, 2.5mm Sockets		#0700-5391
CLEANING STICKS, 1.6mm Sockets		#0700-5392

QBE LINT-FREE WIPES #0700-5190

The Qbe lint-free wipes with durometer pad provide 100% endface contact ensuring removal of all debris—even on connector edges. 200 sheet pack.

CLEANBEAM™ MIL

#0700-5425

The CleanBeam™ MIL is designed to provide the highest level of cleaning for Military, Tactical, Shipboard and Commercial fiber optic plugs and sockets. The CleanBeam™ wet-to-dry cleaning system provides superior cleaning results while eliminating unwanted film residue on glass surfaces, and will improve system performance and prevent damage to expensive equipment and testers. This kit includes Qbe lint-free wipes with durometer pad, FCC2 Fiber Cleaning Fluid, S25 2.5 mm Socket Cleaning Sticks, P25 2.5 mm Plug Cleaning Sticks, and S16 1.6mm Socket Cleaning Sticks in a handy carrying case. (All consumable items are also available separately)

Qty.	Replacement Parts	Part No.
1	Fiber Connector Cleaner	0700-5175
1	Qbe Wipes	0700-5190
1	Cleaning Sticks, 2.5 mm Plugs (50/pak)	0700-5390
1	Cleaning Sticks, 2.5 mm Sockets (50/pak)	0700-5391
1	Cleaning Sticks, 1.6 mm Sockets (50/pak)	0700-5392

FERRULE MATE™ CLEANING WANDS

Specially designed for the field technician, the Ferrule Mate™ cleaning wands offer a fast, auto-mated way to clean fiber connectors without having to manually change cleaning tips or use special chemicals or tools. Self-advancing cleaning ribbon speeds up cleaning time while ensuring superior results. Each compact and easy-to-use cleaning wand performs over 300 cleaning applications and cleans both PC and Angle PC connnectors. Available in the SFM-250 Model for 2.5 mm SC, ST, and FC connectors and sockets and the SFM-125 Model for 1.25mm LC and MU connectors and sockets.

FERRULE MATE™ 2.5MM   #0795-0995
FERRULE MATE™ 1.25MM   #0795-0996

KITCO fiber optics

To see how KITCO can help you, call **1-888-548-2636** or visit **www.kitcofo.com**

SHIPBOARD FIBER CLEANING KIT

#0801-9065

The Shipboard Fiber Cleaning Kit is designed to allow proper cleaning, polishing and application of adhesive to ensure reliable termini and connector performance. Designed for termination or repair use, this handy kit contains everything needed to keep your shipboard fiber connections sound. All contents included in a padded carrying case

Qty.	Replacement Parts	Part No.
1	Polishing Film, 1 micron Mylar, 50/Pk	0700-2620
1	Polishing Film, 5 micron Foam, 50/Pk	0700-2660
1	Polishing Film, 0.1 micron Diamond, (5 sheets)	0799-2720
1	Cleaning Wire (3 pieces)	0700-3210
2	Epoxy Mini Six-Pack	0700-5035
12	Syringe (3cc)	0700-5121
12	Needle Tip (20 guage, 1" tip)	0700-5115
50	Alcohol Wipes, Single Pack	0700-9760
1	Lint-Free Wipes (100/Pk)	0700-5200

Call **1-888-548-2636** or visit **www.kitcofo.com**

5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com

31

Measurement Quality Jumpers

6877804-13

WHAT ARE MQJs?

(Measurement Quality Jumpers)

MQJs are reference cables or test jumpers that are manufactured and tested to meet the highest levels of optical performance, while allowing repeatability and flexibility in testing fiber. An MQJ will not pass a sub-standard component or link, nor will it fail a good component or link.

WHY USE MQJs?

Consistency, repeatability, flexibility, and accuracy. Even though the Power Meter is "zeroed out" before being attached to the cable to be tested, the quality of the reference cables can greatly affect your testing results. The use of MQJs minimizes these effects. MQJs fall within a testing range that ensures no matter which MQJ you use, your results will be consistent and repeatable. If various tests must be performed at different times, the results will be consistent because MQJs (by definition) yield consistent results.

WHY IS THE ONE JUMPER METHOD PRESCRIBED?

Many installers use the two (or three) jumper reference method for all of their testing requirements, regardless of the cable plant configuration. The two (or three) jumper reference methods can, however, understate the actual link loss. The one jumper reference method will approximate the installed performance loss more closely and will result in the safest and most conservative test results. In accordance with MIL-STD-2042B, Part 6 the one jumper reference method is the correct method for measuring link loss. This procedure is also the accepted method for measuring link loss according to TIA/EIA-568-B.3 in accordance with ANSI/TIA/EIA-526-14A, Method B.

MANUFACTURING & VERIFYING MQJS

In order to manufacture Measurement Quality Jumpers extensive testing and verification procedures must be followed. During the test procedure, each connector is mated and de-mated ten times. Not only must an MQJ fall within the range mentioned below (see Table 1 on page 33), it must also consistently fall within these prescribed ranges. The mean and standard deviation of these measurements are calculated and verified to fall within these prescribed ranges. The Navy requires MQJs to be manufactured using connectors made in accordance with MIL-C-83522/16, MIL-PRF-28876 or MIL-T-29504/14/15 specifications. The fiber must meet MIL-F-49291, and the jacketed cable must meet MIL-C-85045 criteria.

IN CONCLUSION

KITCO has chosen to take the lead in this area and is committed to ensure that fiber optic testing be performed solely with the use of the highest quality test jumpers-MQJs. The benefits of using MQJs are clear; Consistency, Repeatability, Flexibility, and Accuracy.
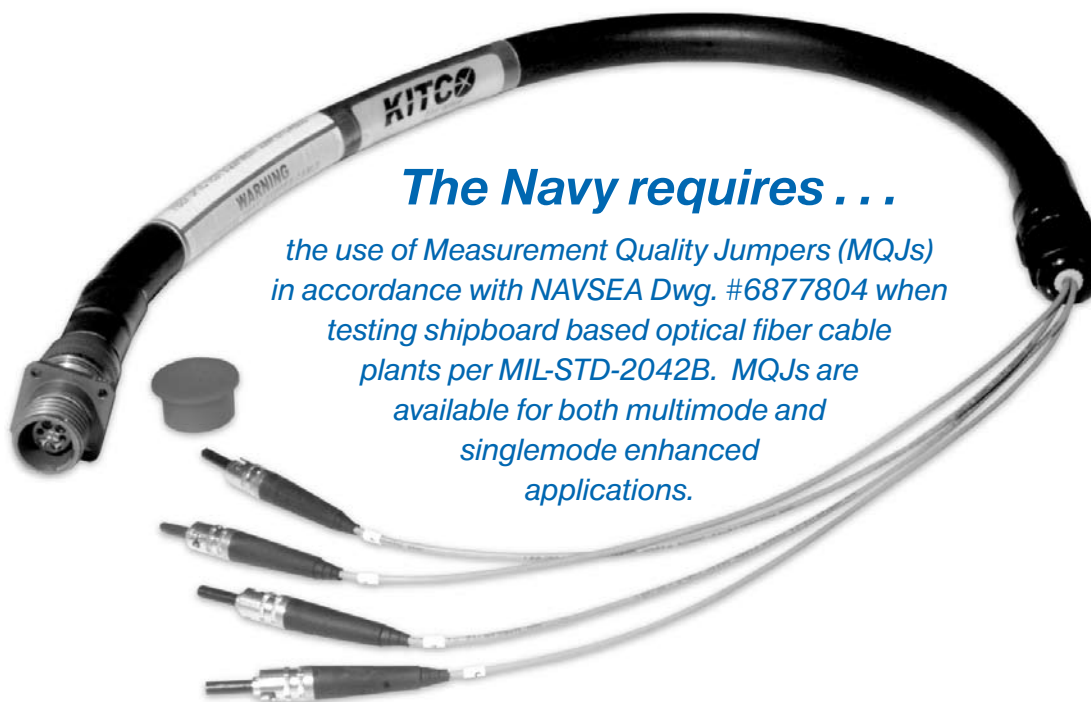
The Navy requires . . .

the use of Measurement Quality Jumpers (MQJs) in accordance with NAVSEA Dwg. #6877804 when testing shipboard based optical fiber cable plants per MIL-STD-2042B. MQJs are available for both multimode and singlemode enhanced applications.

KITCO fiber optics   To see how KITCO can help you, call **1-888-548-2636** or **visit www.kitcofo.com**

Measurement Quality Jumpers

TABLE 1 - LOSS ACCEPTANCE CRITERIA FOR MQJs

End Connection	Multimode 62.5/125		Singlemode 8.3/125	
	Acceptable Loss (dB)	Standard Deviation (dB)	Acceptable Loss (dB)	Standard Deviation (dB)
MIL-C-83522/16	0.00 < BST < 0.35	.05 (max)	0.00 < BST < 0.35	.10 (max)
MIL-T-29504/14 Pin Terminus	0.00 < BC < 0.70	.05 (max)	0.00 < BC < 0.70	.10 (max)
MIL-T-29504/15 Socket Terminus	0.00 < BC < 0.70	.05 (max)	0.00 < BC < 0.70	.10 (max)
MIL-S-24623/4 Splice	0.00 < BC < 0.30	.05 (max)	0.00 < BC < 0.30	.10 (max)

NAVSEA DRAWINGS FOR CURRENT MQJs (MULTIMODE)

NAVSEA #	NSN	Description	Length	Part No.
6877804-01	6020-01-417-1963	ST - ST	50 Meter	KFO 60110
6877804-02	6020-01-425-9732	ST - RMS Ferrule	50 Meter	KFO 60210
6877804-03	6020-01-417-1964	ST - Pin	50 Meter	KFO 60310
6877804-04	6020-01-417-1967	ST - Socket	50 Meter	KFO 60410
6877804-05	6020-01-417-5230	ST - ST	1 Meter	KFO 60510
6877804-06	6020-01-425-9721	ST - RMS Ferrule	1 Meter	KFO 60610
6877804-07	6020-01-417-5244	ST - 4 Fiber Plug	1 Meter	KFO 60710
6877804-08	6020-01-418-6285	ST - 4 Fiber Receptacle	1 Meter	KFO 60810
6877804-09	6020-01-425-9730	ST - 8 Fiber Plug	1 Meter	KFO 60910
6877804-10	6020-01-425-9730	ST - 8 Fiber Receptacle	1 Meter	KFO 61010
6877804-12	6625-01-495-7750	ST - 31 Fiber Plug	1 Meter	KFO 61210
6877804-13	6625-01-496-7552	ST - 31 Fiber Receptacle	1 Meter	KFO 61310

NAVSEA DRAWINGS FOR CURRENT MQJs (SINGLEMODE ENHANCED)

NAVSEA #	NSN	Description	Length	Part No.
6877804-01SME	6625-01-498-9987	ST - ST	50 Meter	KFO 60130
6877804-03SME	6625-01-498-9890	ST - Pin	50 Meter	KFO 60330
9877804-04SME	6625-01-498-9988	ST - Socket	50 Meter	KFO 60430
6877804-05SME	6625-01-495-9998	ST - ST	1 Meter	KFO 60530
9877804-07SME	6625-01-496-9904	ST - 4 Fiber Plug	1 Meter	KFO 60730
6877804-08SME	6625-01-496-9906	ST - 4 Fiber Receptacle	1 Meter	KFO 60830
6877804-09SME	6625-01-496-9913	ST - 8 Fiber Plug	1 Meter	KFO 60930
6877804-10SME	6625-01-496-9910	ST - 8 Fiber Receptable	1 Meter	KFO 61030
6877804-12SME	6625-01-496-9911	ST - 31 Fiber Plug	1 Meter	KFO 61230
6877804-13SME	6625-01-496-9912	ST - 31 Fiber Receptacle	1 Meter	KFO 61330

Call **1-888-548-2636** or visit **www.kitcofo.com**

5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com   33
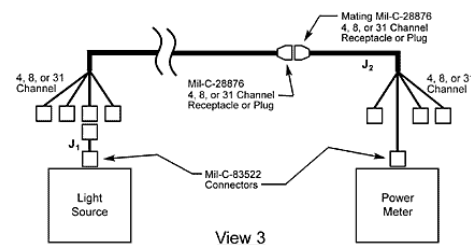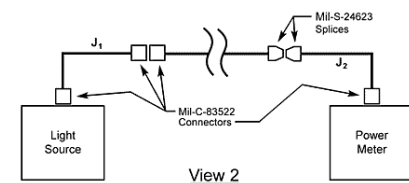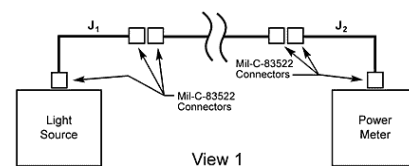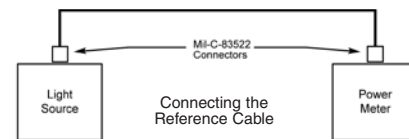
Measurement Quality Jumpers

REFERENCE CABLE SET-UP CONFIGURATION
NAVSEA DRAWING #7344573

This chart depicts how MQJs should be set up in relation to an approved light source and power meter. Refer to this chart to utilize MQJs to check for link loss for fiber plants aboard Navy vessels.

Termination at Light Source End	Source Jumper J_1 Config.	Termination at Power Meter End	Source Jumper J_2 Config.	View Fig:
M83522/16	A	M83522	A	1
M83522/16	A	M24623 4 CH PLUG (RECEPT)	B	2
M83522/16	A	M28876 8 CH PLUG (RECEPT)	C (D)	
M83522/16	A	M28876 31 CH PLUG (RECEPT)	E (F)	3
M83522/16	A	M28876	G (H)	
M28876 4 CH PLUG (RECEPT)	C (D)	M83522	A	
M28876 8 CH PLUG (RECEPT)	E (F)	M83522	A	7
M28876 31 CH PLUG (RECEPT)	G (H)	M83522	A	
M28876 4 CH PLUG (RECEPT)	C (D)	M28876 4 CH PLUG (RECEPT)	C (D)	
M28876 8 CH PLUG (RECEPT)	E (F)	M28876 8 CH PLUG (RECEPT)	E (F)	9
M28876 31 CH PLUG (RECEPT)	G (H)	M28876 31 CH PLUG (RECEPT)	G (H)	
M24623	B	M83522	A	4
M24623	B	M24623	B	5
M24623	B	M28876 4 CH PLUG (RECEPT)	C (D)	
M24623	B	M28876 8 CH PLUG (RECEPT)	E (F)	6
M28876 4 CH PLUG (RECEPT)	C (D)	M24623	B	
M28876 8 CH PLUG (RECEPT)	E (F)	M24623	B	8

A = (ST) M83522,   B = (RMS) M24623,   C = M28876, 4-Ch. Plug,   D = M28876, 4-Ch. Receptacle, E = M28876, 8-Ch. Plug,
F = M28876, 8-Ch. Receptacle,   G = M28876, 31-Ch. Plug,   H = M28876, 31-Ch. Receptacle

Connecting the Reference Cable

View 1

View 2

View 3

View 4

View 5

View 6

View 7

View 8

View 9
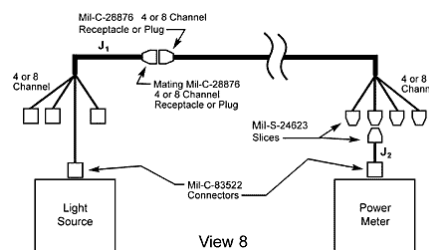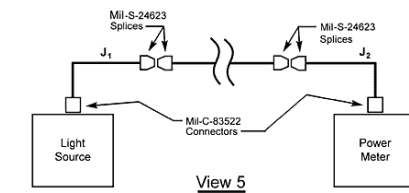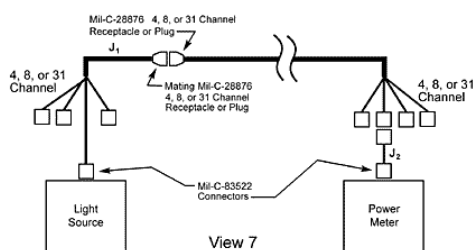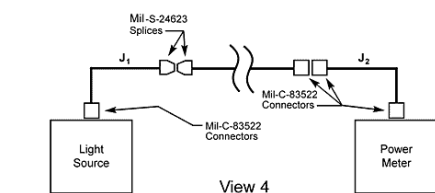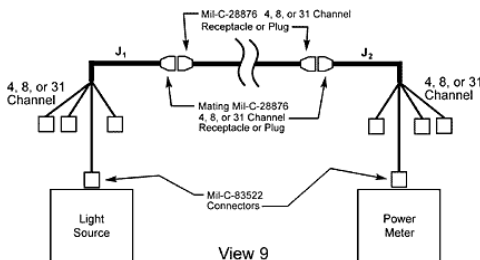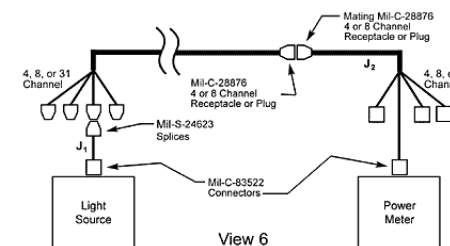
Measurement Quality Jumpers

MQJ TEST KIT

A Multimode Test Kit #0701-7045

ELIMINATE COSTLY REWORK

Link loss testing is a critical part of ensuring that any fiber optic installation meets the desired performance criteria. Many installers are not aware of the importance of this testing, or of the need to use only Measurement Quality Jumpers to ensure testing accuracy.

KITCO Fiber Optics developed this test kit for the United States Navy. The reference cables used for link loss testing must use the components listed in the NAVSEA Drawing #6877804.

MQJs are manufactured using high quality connectors with zirconia ceramic ferrules. Our strict assembly and testing procedures allow us to certify only cables that fall within a .01dB - .35dB loss range with a consistency of .05dB standard deviation. Because of these tolerances a MQJ will correctly reject a link that does not meet the prescribed standards.

The MQJ Light Source and Power Meter Kit includes three 1 Meter 6877804-05 ST/ST MQJs, as well as a precision light source and power meter with .01dB resolution. The light source and power meter are high quality devices that not only pass the Coupled Power Ratio (CPR) test but have also been approved for use by the United States Navy.

Use the KITCO MQJ Light Source & Power Meter Test Kit to ensure that your installations meet the required performance criteria.
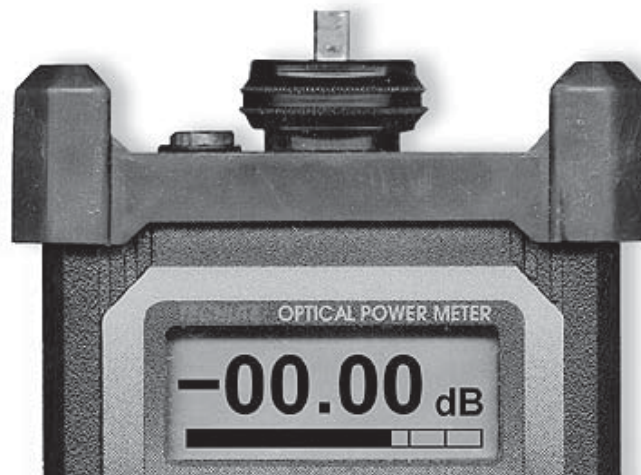
MQJ MULTIMODE TEST KIT #0701-7045

REPLACEMENT MQJs
(#06877804-05) KFO 60510

Qty.	Replacement Parts	Part No.
1	Manual - MQJ Power Loss	0100-2315
2	M83522/NX Adapter SM, ST	0204-4170
10	Swab for Coupling 3"	0700-5310
10	Alcohol Pads	0700-9760
1	Mini Swabs, 50/pk	0700-5300
1	Pouch, 1837A, CCMQJ Case	0705-5205
1	Light Source/Power Meter with ST Adapter, Manual	0705-5345
3	MQJ ST/ST 1 Meter	KFO 60510

Testing Equipment

TALK SETS

These Voice Link™ Talk Sets provide the installer or test technician with a quick and simple voice communication link over a single optical fiber. Available for singlemode or multimode fiber, options include either a push-to-talk remote speaker/mic or a VOX unit with headset and boom mic. Sold as a pair, the talk set includes a hard sided waterproof carry case, instruction manual, 2 base units and 2 remote speaker/mics or VOX units.

MULTIMODE W/ PUSH-TO-TALK (remote speaker/mic)	**#0705-6010**
SINGLEMODE W/ PUSH-TO-TALK (remote speaker/mic)	**#0705-6020**
MULTIMODE W/ HANDS FREE (VOX and headset w/ boom mic)	**#0705-6030**
SINGLEMODE W/ PUSH-TO-TALK (remote speaker/mic)	**#0705-6040**

LEAK DETECTION

The FLASHdetector™ series of optical leak detection equipment is designed to locate energy leaks in fiber optic systems. These energy or light leaks can be caused by splice loss, connector loss, breaks in the fiber or excessive bending. Detecting signals as low as -65 dBm, the probe is more sensitive than most visible lasers and is virtually unaffected by room light. All FLASHdetector™ sets include a probe unit, light source, AC wall pack, hard sided waterproof case and instruction manuals.

B603 PROBE W/ GE DETECTOR	**#0705-7020**
1300 µM LED SET (w/ D601-ge probe & D601 LED light source)	**#0705-7040**
850 µM LASER SET (w/ D601-ge probe & D601 Laser light source)	**#0705-7050**

VISUAL FAULT LOCATOR (VFL)   **#0705-7080**

KITCO's new Visual Fault Locator (VFL) is an ideal tool to aid in identifying broken fiber optic cables and fiber optic cables with excessive bends. The VFL can also be used to perform continuity checks and aid in the successful termination of pre-stub (pre-polished) fiber optic connectors. The universal adapter accepts any 2.5mm ferrule, allowing 650mm laser light to be injected into a fiber. This light enables breaks or sharp bends in a cable to be identified 6-7 km away on singlemode and 4-5 km away on multimode fiber.

OPTICAL POWER METER NSN 6650-01-469-0547   **#0705-5520**

The 0705-5520 Optical Power Meter is a rugged high quality general-purpose instrument suitable for many fiber optic measurement applications. Paired with one of the LED sources (#0705-5511 or #0705-5512) this optical power meter is ideal for insertion loss testing of multimode and single-mode fiber optic cables and connectors. The 0705-5520 optical power meter can also be used for link loss testing of installed cable harnesses. The 0705-5520 optical power meter simplifies output power measurements of transmitters and other light sources. The four calibration wavelengths, 1mm indium-gallium-arsenide (InGaAs) photodetector, and wide dynamic range make the 0705-5520 optical power meter suitable for measuring the output of both LED and laser based transmitters. In addition, a broad range of Snap-On Connector (SOC) adapters for both industry standard fiber optic connectors and many less common types, makes the 0705-5520 an indispensable tool for aerospace technicians. Snap-On Connector (SOC) adapters available separately. Call KITCO for details.

OPTICAL LOSS TEST SETS NSN# 6650-01-508-2431

Characterizing the insertion loss and return loss of your fiber has never been so easy! Testing fiber optic cable in the field is a time consuming and complicated process, but the 0705-5450 and 0705-5455 test sets simplify acceptance testing by automating the measurement process, informing the user of PASS/FAIL condition on the fiber under test based on user set thresholds. The unit is housed in a rugged rubberized protective case that can stand up to the rigors of the shipboard or field environment. The large backlit screen and sealed membrane panel enable the unit to be used in the harshest of environments. The internal rechargeable batteries provide a continuous 8 hours of operation on a full charge.

Both Test Sets come with hard carrying case, instruction manual, data transfer cable, Report Writer software, mandrel, AC adapter/charger and Snap-On Connector (SOC) adapters for SC, ST and FC connectors.

Snap-On Connector (SOC) adapters available separately. Call KITCO for details.

Multimode 850/1300nm Optical Loss Test Set	**#0705-5450**
Singlemode 1310/1550nm Optical Loss Test Set	**#0705-5455**

AEROSPACE 850NM AND 1300NM DUAL LED SOURCE #0705-5511

Paired with the 0705-5520 Optical Power Meter, the 0705-5511 serves as an economical dual wavelength LED source for testing the insertion loss of multimode fiber optic cables and connectors. The 0705-5511 can also be used with an optical power meter for link loss testing of installed cable plants. The 0705-5511 dual LED source is fitted with precision Universal Connector Interfaces (UCI) which ensure maximum accuracy and repeatability when performing critical measurements on fiber optic systems. A comprehensive range of UCI adapters is available for all industry standard fiber optic connectors.

UCI adapters available separately. Call KITCO for details.

AEROSPACE 1310NM AND 1550NM LASER SOURCE #0705-5512

Paired with the #0705-5220 Optical Power Meter the 0705-5512 facilitates certification of aircraft harnesses and installed fiber optic links. The 0705-5512 provides dual 1310/1550nm output with SAE AS062 launch profile for fiber applications per SAE aerospace standard ARP5061. The 0705-5512 is fitted with a precision Universal Connector Interface (UCI) which ensures maximum accuracy and repeatability when performing critical measurements on fiber optic systems. A comprehensive range of UCI adapters is available for all industry standard fiber optic connectors.

UCI adapters available separately. Call KITCO for details

SHIPBOARD OTDR/MQJ TEST SET #0701-8900

The Acterna (formerly known as Wavetek Wandel Goltermann) Mainframe OTDR System is designed specifically for the U.S. Navy. Optical Time Domain Reflectometers are used aboard United States Naval vessels to verify fiber lengths on reels of fiber obtained from vendors and also to locate fiber breaks and cable attenuation. Please refer to the MIL-STD-2042B for exact details concerning the use of OTDRs and other test equipment.

The 0701-8900 OTDR / MQJ Kit contains the Acterna/Wavetek OTDR mainframe system and the appropriate ST-to-ST MQJs (Measurement Quality Jumpers), coupling adapters, and the cleaning supplies to allow the installer to verify cable attenuation in accordance with MIL-STD-2042B. This kit also contains ST-to-SC adapters to allow SC as well as ST loss readings. Other MQJ-OTDR launch cables may be purchased separately.

Qty.	Replacement Parts	Part No.
4	Couplings, M83522/17 SM, ST	0204-4170
4	ST-to-SC Hybrid Coupling Adapter	0200-2610
2	MQJ, 50 Meter, ST-to-ST	KFO 60110
1	Wavetek Mainframe OTDR System	0705-5420
10	Alcohol Soaked Pads	0700-9760
1	Cleaning Swabs, 100/pack	0701-5201
1	Manual, MQJ Power Loss	0100-2315

M28876 Connectors

MIL-PRF-28876 FIBER OPTIC CONNECTOR SINGLE & MULTIMODE CAPACITY
DELPHI CONNECTION SYSTEMS (DCS)
(Utilizes the Delphi Connection Systems MIL-T-29504/14/15 Termini)

Developed and produced by Delphi Connection Systems (DCS), the MIL-PRF-28876 Fiber Optic Connector features low optical insertion loss, repeatability, exceptional strain relief, and reliability in harsh environments. This connector is used extensively by the United States Navy in shipboard applications and has been on the United States Government's Qualified Products List since 1983.

CONNECTOR MIL-SPEC ORDERING NOMENCLATURE

M28876/7   B   1   2   P   1   *

Connector Type	Strain Relief	Slash Sheet Designator
Wall Mount Receptacle	None	1
Wall Mount Receptacle	Straight	2
Wall Mount Receptacle	45˚	3
Wall Mount Receptacle	90˚	4
In-Line Receptacle	Straight	5
Plug Connector	None	6
Plug Connector	Straight	7
Plug Connector	45˚	8
Plug Connector	90˚	9
Jam Nut Receptacle	None	11
Jam Nut Receptacle	Straight	12
Jam Nut Receptacle	45˚	13
Jam Nut Receptacle	90˚	14

When ordering a /1, /6 or /11 connector type that DOES NOT require an insert retention nut and pressure sleeve, add N to the end of part number nomenclature (e.g.: M28876/6B1P1N)

Keying Position Designator
1 thru 6

Terminus Cavity Designator
P = Pin
S = Socket

Shell Size	Shell Size Designator
13	B
15	C
23	F

# of Cavities	Shell Size	Insert Designator
4	13	1
8	15	1
31	23	1

(Omit if No Strain Relief)

| Backshell # Designator	Max. Cable Diameter in Inches & (mm) Shell Size		
	13	15	23
1	.285 (7.24)	.500 (12.70)	
2	.346 (8.79)	.250 (6.35)	1.000 (25.40)
3		.375 (9.53)	

For reference only. Accuracy not guaranteed.

M28876 Connectors

MIL-PRF-28876 FIBER OPTIC CONNECTOR SINGLE & MULTIMODE CAPACITY
DELPHI CONNECTION SYSTEMS (DCS)
(Utilizes the Delphi Connection Systems MIL-T-29504/14/15 Termini)

WALL MOUNT RECEPTACLE
Straight Backshell Configuration
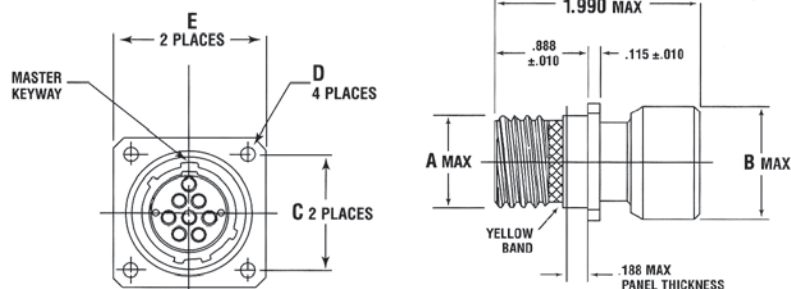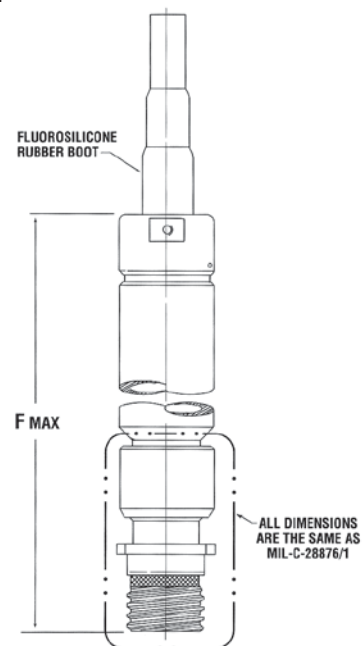
M28876/1

M28876/2

Shell Size	A Max.	B Max.	C	D	E	F Max.	G Max.	H Max.	J Max.	K Max.
13	.875	1.085	.843	.130 .115	1.158 1.116	6.150	6.250	3.580	4.250	4.250
15	1.062	1.225	.968	.130 .115	1.278 1.236	6.150	6.500	3.850	4.500	4.500
23	1.500	1.705	1.281	.130 .115	1.738 1.698	6.150				

For reference only. Accuracy not guaranteed.

PANEL CUTOUT DIMENSIONS

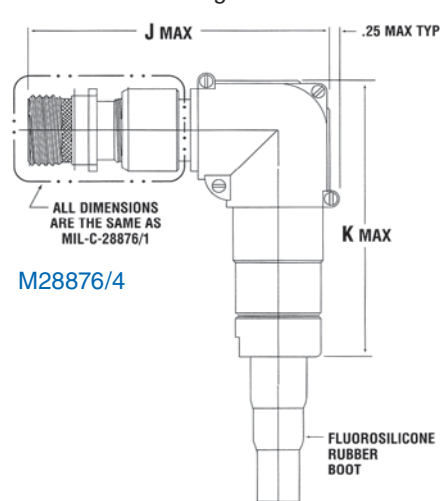| Shell Size	A	B
13	.937	.843
15	1.125	.968
23	1.562	1.281

For reference only. Accuracy not guaranteed.

WALL MOUNT RECEPTACLE
45˚ Backshell Configuration
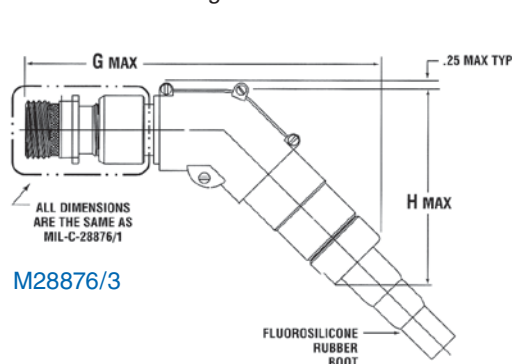
M28876/3

WALL MOUNT RECEPTACLE
90˚ Backshell Configuration

M28876/4

Call **1-888-548-2636** or visit **www.kitcofo.com**
5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com
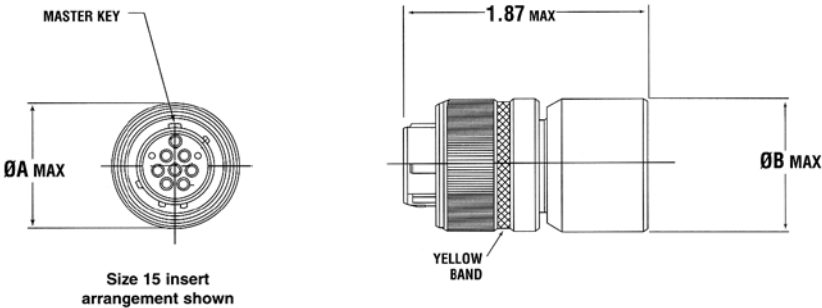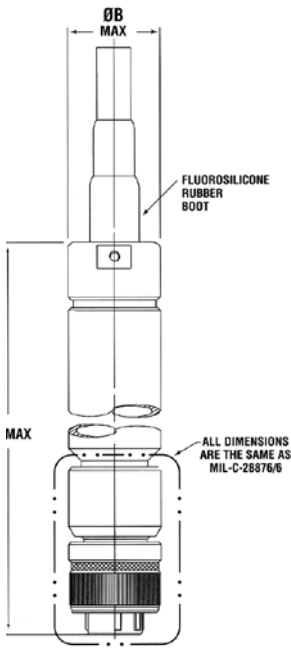
39

M28876 Connectors

MIL-PRF-28876 FIBER OPTIC CONNECTOR SINGLE & MULTIMODE CAPACITY
DELPHI CONNECTION SYSTEMS (DCS)
(Utilizes the Delphi Connection Systems MIL-T-29504/14/15 Termini)

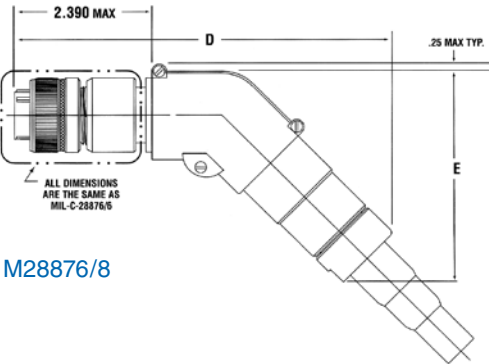**PLUG CONNECTOR**
Straight Backshell Configuration

M28876/6

M28876/7

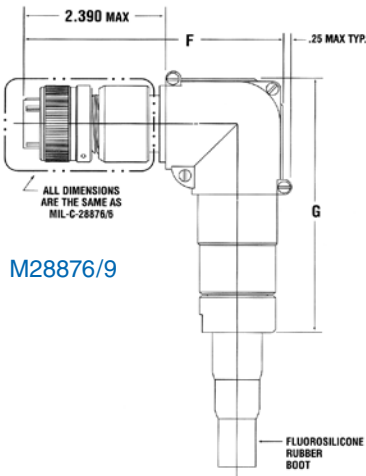| Shell Size	A Max.	B Max.	C Max.	D Max.	E Max.	F Max.	G Max.
13	1.141	1.085	5.960	6.160	3.580	4.190	4.250
15	1.263	1.255	5.960	6.440	3.580	4.500	4.500
23	1.705	1.705	5.960				

For reference only. Accuracy not guaranteed.

PLUG CONNECTOR
45˚ Backshell Configuration

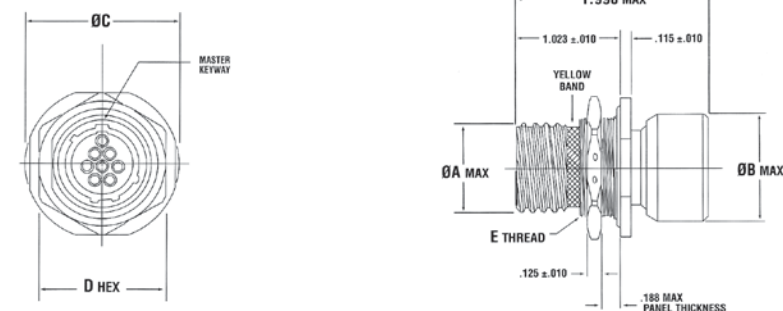M28876/8

PLUG CONNECTOR
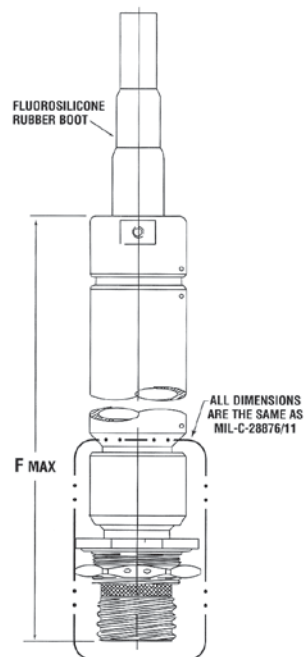*90˚ Backshell Configuration*

M28876/9

M28876 Connectors

MIL-PRF-28876 FIBER OPTIC CONNECTOR SINGLE & MULTIMODE CAPACITY
DELPHI CONNECTION SYSTEMS (DCS)
(Utilizes the Delphi Connection Systems MIL-T-29504/14/15 Termini)

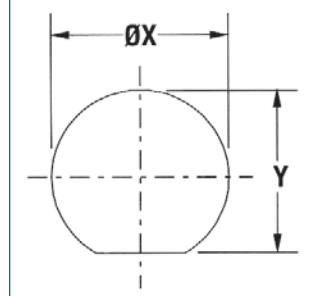**JAM NUT RECEPTACLE**
Straight Backshell Configuration

M28876/6

M28876/12

Shell Size	A Max.	B Max.	C	D Max.	E Thread	F Max.	G Max.	H Max.	J Max.	K Max.
13	.875	1.085	1.508 1.485	1.205 1.171	1.000-20 UNEF	6.150	6.250	3.580	4.250	4.250
15	1.062	1.225	1.608 1.585	1.392 1.358	1.875-18 UNEF	6.150	6.500	3.850	4.500	4.500
23	1.500	1.705	2.118 2.095	1.829 1.795	1.625-18 UNEF	6.150				

For reference only. Accuracy not guaranteed.

PANEL CUTOUT DIMENSIONS

Shell Size	ØX +.005	ØY +.005
13	1.010	.973
15	1.198	1.160
23	1.635	1.598

For reference only. Accuracy not guaranteed.

JAM NUT RECEPTACLE
45˚ Backshell Configuration
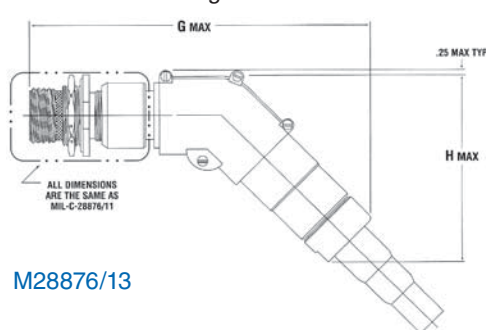
M28876/13

JAM NUT RECEPTACLE
90˚ Backshell Configuration

M28876/14

Call **1-888-548-2636** or visit **www.kitcofo.com**
5269 Cleveland Street, Virginia Beach, VA 23462 Phone: 888-KITCOFO (548-2636) Fax: 757-518-9700 Web: www.kitcofo.com

41

M28876 Connectors

MIL-PRF-28876 KEYWAY ARRANGEMENT

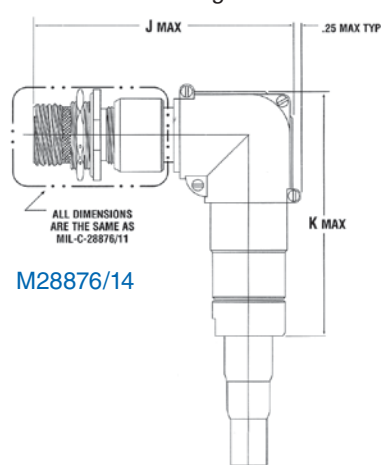| Shell Size	Key & Keyway Arrangement	AR° or AP°	BR° or BP°	CR° or CP°	DR° or DP°
	0	-	-	-	-
	1	95	141	208	236
	2	113	156	182	292
13	3	9	14	195	252
	4	53	156	220	255
	5	119	146	176	298
	6	51	141	184	242
	0	-	-	-	-
	1	80	142	196	293
	2	135	170	200	310
15	3	49	169	200	244
	4	66	140	200	257
	5	62	145	180	280
	6	79	153	197	272
	0	-	-	-	-
	1	80	142	196	293
	2	135	170	200	310
23	3	49	169	200	244
	4	66	140	200	257
	5	62	145	180	280
	6	79	153	197	272

RECEPTACLE

PLUG

MIL-PRF-28876 DUST COVERS MIL-SPEC ORDERING NOMENCLATURE

Assembly Configuration (PHI Number)	Shell Size Designator	Attachment Designator	Material and Finish Designator
10-	**C**	**C**	**W**

Connector Type	Slash Sheet Designator
Plug None	/10
Receptacle	/15

Material & Finish Number	Type of Material & Finish
W	Aluminum w/ Olive Drab Cadmium Plating
D	Stainless Steel w/ Black Cadmium Plating

Shell Size	Shell Size Designator
13	B
15	C
23	D

Attachment Designator	Type of Attachment
C	Wire Rope w/ Fastener
D	Wire Rope w/ Ring
E	Without Rope

/10

/15

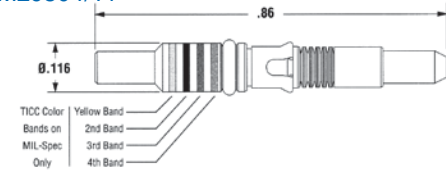For reference only. Accuracy not guaranteed.

M29504/14/15 Termini

MIL-T-29504 FIBER OPTIC TERMINI SINGLE & MULTIMODE CAPACITY
DELPHI CONNECTION SYSTEMS (DCS)

PIN
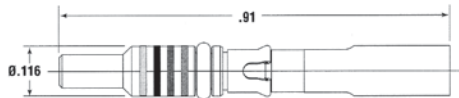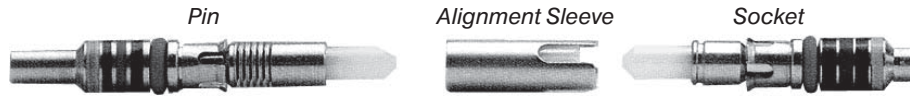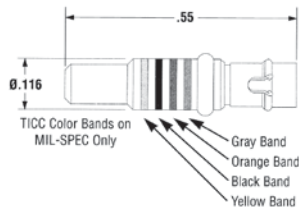M29504/14

SOCKET
M29504/15

DUMMY TERMINIS
M29504/03-4038

Pin   *Alignment Sleeve*   *Socket*

CERAMIC TERMINI MIL-SPEC ORDERING NOMENCLATURE

MIL-SPEC Termini	Terminus Type 14=Pin, 15=Socket	TICC Dash #	Crimp Sleeve Option*
M29504/	**YY-**	**XXXX**	**C**

PIN

M29504/14-Dash#		Max Fiber
Multimode	Singlemode	Diameter in Microns
4131C	4141C	126.0

For reference only. Accuracy not guaranteed.

SOCKET

M29504/15-Dash#		Max Fiber
Multimode	Singlemode	Diameter in Microns
4171C	4181C	126.0

For reference only. Accuracy not guaranteed.

* The "C" indicates that a crimp sleeve for 2.4 max. single channel cable is supplied with the terminus. To terminate other size cables, the crimp sleeve must be ordered separately.

TICC Dash# Color Code Reference

The four digits in the "Dash #" can be cross referenced with the color codes (i.e. # 4131 would have these color bands:

4 - Yellow, 1 - Brown, 3 - Orange, 1 - Brown).

0 - Black	5 - Green
1 - Brown	6 - Blue
2 - Red	7 - Violet
3 - Orange	8 - Gray

ALIGNMENT SLEEVE (SOLD SEPARATELY)   4569989H

This Alignment Sleeve is the proper product to use with M29504 applications.

CRIMP SLEEVE (SOLD SEPARATELY)   1127696-6S

The 1127696-6S Crimp Sleeve is the proper crimp sleeve to use with the KITCO 0700-1895 Crimp Tool for M29504/14/15 applications.

M83522/16 (ST) Connectors and Adapters

MIL-C-83522 FIBER OPTIC CONNECTOR (ST) AND ADAPTERS

The United States Navy specifies (for shipboard applications) that QPL ST connectors are to be used on all fiber optic cable plant backbones and all cable drops for tactical applications. KITCO Fiber Optics stocks QPL MIL-C-83522/16 ST connectors as well as MIL-C-83522/17 multimode and singlemode coupling adapters. See chart below for appropriate part numbers.

0204-4210

0204-4220

QUALIFIED PRODUCTS LISTED - CONNECTORS & COUPLINGS

Description	MIL-Spec Part #	KITCO Part #
Multimode ST Connector	MIL-C-83522/16 DNX (replacement for BNX & CNX versions)	0204-4210
Singlemode ST Connector	MIL-C-83522/16 DNY (replacement for BNY & CNY versions)	0204-4220
Multimode ST Coupling Adapter	MIL-C-83522/17 NX	0200-2745
Multimode & Singlemode ST Coupling Adapter	MIL-C-83522/17 NY	0204-4170

Call **1-888-548-2636** or visit **www.kitcofo.com**

5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com   43

Navy Approved Commercial (ST) Connectors and Adapters

NOT QUALIFIED TO MIL-C-83522/16 SPECIFICATIONS

While the Navy specifies that the QPL'd M83522 ST Connector should be used on all fiber optic cable plant backbones and cable drops used for tactical applications, there are some situations where the Navy has approved the use of the following commercial connectors (and adapters). See chart below for details.

Description	Cable Size
Multimode Commercial ST Connector (Navy approved COTS, non-locking boot)	0200-3000 or 0200-3010
Singlemode Commercial ST Connector (Navy approved COTS, non-locking boot)	0200-3020
Multimode Commercial ST Coupling Adapter (Navy approved COTS)	0200-3040 or 3050
Singlemode Commercial ST Coupling Adapter (Navy approved COTS)	0200-3060 or 0200-3070

ST to ST Coupling Adapters
(Multimode & Singlemode)

QPL VS. NAVY APPROVED COMMERCIAL ST CONNECTORS

• QPL ST connectors are to be used on all fiber optic cable plant backbones.

• QPL ST connectors are to be used on all cable drops for tactical applications.

• Navy approved COTS, Commercial ST connectors may be used on cable drops for non-tactical applications.

• Navy approved COTS, Commercial ST connectors should not be mated to the QPL ST connectors with the stiffer spring constant (such as at the shock mounted rack patch panel).

• Navy approved COTS, Commercial ST connectors may be used to mate with adapters on commercial interface cards which includes Network Interface Cards (NIC cards).

• ST connectors are not to be used on the cabinet exterior and for other external connections on tactical applications. MIL-PRF-28876 multiple termini connectors are to be used for this application.

• Since the QPL ST has been known to break off or shear the adapter tabs (pins) of plastic or softer metal ST adapters they should not be used on these types of commercial interfaces. The Navy approved COTS, commercial ST should be used instead.

• Navy approved COTS, Commercial ST connectors may be used to mate with equipment and patch panels mounted to the interior of internal or external "shock isolated" cabinets for tactical applications.

• Navy approved COTS, Commercial ST connectors are not to be used to mate with equipment and patch panels mounted to the interior of a non-shock isolated cabinet for tactical applications.

COTS (SC) Connectors and SC to ST Adapter

COMMERCIAL OFF-THE-SHELF SC CONNECTORS AND HYBRID ADAPTER

The EIA/TIA (Electronics Industry Association & Telecommunications Industry Association) have accepted the SC (Subscriber Connector) as the standard for the telecommunications industry. Consequently, electronics that have the SC interface can be found aboard naval vessels. The SC (TIA-604-3) connectors below have been chosen by the Navy as the approved connectors to connect to this commercial adapter interface.

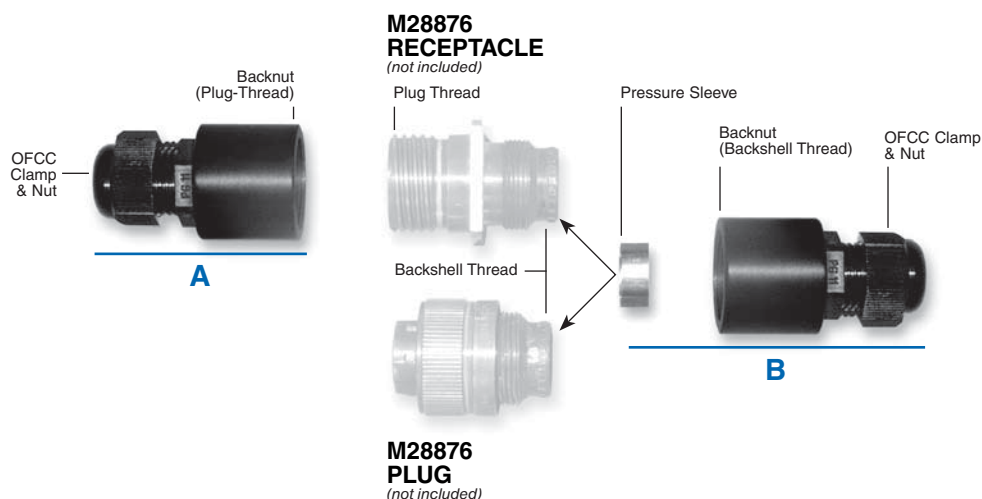| Description	Cable Size	KITCO Part #
Multimode SC Connector	3.0mm	0200-2770
Multimode SC Connector	2.0mm	0200-2780
Singlemode SC Connector	3.0mm	0200-2790
Singlemode SC Connector	2.0mm	0200-2800
ST to SC Hybrid Coupling Adapter	n/a	0200-2610

WidgCo™ *Feedthru Strain Relief (WFSR)*

KITCO Fiber Optics has designed a complete line of WidgCo™ Feedthru Strain Relief (WFSR) devices that are compatible with M28876 (4, 8 and 31 Channel) Plugs and Receptacles. These devices are available in two configurations. Configuration A is compatible with the plug-thread side of the M28876 Connector. Configuration B is compatible with the backshell-thread side of the M28876 Receptacle and the backshell-thread side of the M28876 Plug. This concept allows flexibility for the installer who may be faced with space restrictions.

Care was taken in the design of the WFSR to make sure the pressure sleeve (which is included) makes contact with the nest inside the connector to prevent slippage on the backshell side. If the plug side of the M28876 is the side that is strain relieved, the installer should make sure the backnut of the M28876 Connector (not pictured) is installed with the pressure sleeve to assure that slippage does not occur on that side. The OFCCs will not move if the special gland is activated by tightening the WFSR's OFCC Clamp & Nut.

	Description	Part #	Description	Part #	Description	Part #
A	31 Channel, Screws onto Receptacle Threads · Backnut · OFCC Cable Clamp w/Gland & Nut	0900-3100	8 Channel, Screws onto Receptacle Threads · Backnut · OFCC Cable Clamp w/Gland & Nut	0900-3180	4 Channel, Screws onto Receptacle Threads · Backnut · OFCC Cable Clamp w/Gland & Nut	0900-3260
B	31 Channel, Screws onto Plug or Receptacle Backshell Threads · Pressure Sleeve · Backnut · OFCC Cable Clamp w/Gland & Nut	0900-3160	8 Channel, Screws onto Plug or Receptacle Backshell Threads · Pressure Sleeve · Backnut · OFCC Cable Clamp w/Gland & Nut	0900-3240	4 Channel, Screws onto Plug or Receptacle Backshell Threads · Pressure Sleeve · Backnut · OFCC Cable Clamp w/Gland & Nut	0900-3320

A

M28876 RECEPTACLE *(not included)*

M28876 PLUG *(not included)*

B

W.F.S.R.
Assembled as

*Call **1-888-548-2636** or visit **www.kitcofo.com***

*5269 Cleveland Street, Virginia Beach, VA 23462 **Phone:** 888-KITCOFO (548-2636) **Fax:** 757-518-9700 **Web:** www.kitcofo.com*

45

Field Services

Our Field Services Response Team was a logical outgrowth of our industry training expertise and now sets the standard for fiber optic connectivity support. Our highly skilled team can reliably troubleshoot, terminate, splice (fusion and mechanical) and provide final system testing for a wide range of fiber optic applications from conventional to Blown Optical Fiber (BOF). KITCO's Field Service Team is prepared to respond to your fiber optic requirements anytime, anywhere—rapidly providing the best solutions for overcoming system problems or delays. We provide some of the nation's largest defense contractors (including AMSEC, BAE Systems, General Dynamics, L3/Unidyne, MILCOM, Northrop Grumman, Raytheon and RCI) and government agencies (including FODMS, MARMC, NAVAIR, NAVSEA Code 937, PMA-263, PMS 312, and the U.S. Senate) with quality on-site termination and testing support.

Military Services

BOF & CONVENTIONAL M85045 CABLES

- **Termination M28876, M29504, M83522, COT's SC, M38999, M38999 W/MTRJ, Hermaphroditic, Ground Tactical [TFOCA and TFOCA (SG)], Deutsche MC3MKII**

- **Testing and Troubleshooting Link Loss Testing, Optical Return Loss (ORL), Optical Time Domain Reflectometer (OTDR)and Troubleshooting**

- **Certification/License for BOF**

- **Fiber Optic Cable Mapping**

- **System Repair (i.e. Connector and Cable)**

- **Consulting to the MIL-STD-2042B(SH)**

- **C5RA (formerly known as CSRR) Fiber Optic Cable Plant Inspection**

- **Ship's Operational Verification and Testing (SOVT) and Records of FOCP (Fiber Optic Cable Plant)**

- **INSURV Inspections**

- **Technical Support (On-site)**

Commercial Services

- **Termination 3M, AMP, Lucent, Deutsche, Delphi Hermaphroditic and 1145846, MTRJ (Plug), LC, Expanded Beam (Fusion Splice)**

- **Testing and Troubleshooting Link Loss Testing, Optical Return Loss (ORL), Optical Time Domain Reflectometer (OTDR) and Troubleshooting**

- **Certification/License for BOF**

- **FIber Optic Cable Mapping**

- **System Repair (i.e. Connector and Cable)**

- **Fusion and Mechanical Splicing**

KITCO fiber optics

To see how KITCO can help you, call **1-888-548-2636** *or* **visit www.kitcofo.com**

Certified Fiber Optic Training

Our training division was created to share our broad industry knowledge, and our hands-on training and advanced certification program have become the hallmarks of our superior reputation. Our trainers have strong credentials including advanced industry certifications and substantial field experience. We have trained thousands of students worldwide on terminating, splicing and testing fiber systems. Our main training facility is located in our headquarters in Virginia Beach, Virginia, and a west coast presence serves San Diego and the surrounding area. Additionally, with our established mobile training services, we have the ability to train at your desired location—anywhere in the world—customizing and tailoring our courses to meet your training requirements.

Military

We develop curriculum and provide training worldwide for the U.S. Armed Forces and we are privileged to continue to serve as the U.S. Navy's sole shipboard fiber optic trainer. Over the last decade our KITCO instructors have worked closely with shipyard and Navy personnel terminating and testing fiber optic topologies aboard U.S. Navy ships and submarines. In addition, our instructors collaborated on the design of termination and testing equipment currently specified in MIL-STD-2042B (SH) sections 5 and 6 (the standard governing the installation of fiber on U.S. Navy ships).

Utilizing this experience we provide the only commercially available shipboard training course which teaches fiber principles in strict adherence to Navy standards, and we are working closely with the Army and Marines to develop ground tactical maintenance and aircraft fiber optic support training. Our primary military training capabilities include:

- **Shipboard Fiber Optics**

- **38999 Connector Training**

- **TFOCA Fiber Optic Training**

- **ViViD—Pierside Connectivity**

- **Hermaphroditic Connectorization**

- **MIL-STD-2042 Supervisor Training**

- **Aviation MIL-PRF-38999 Connector**

Commercial

At KITCO we are proud to be a premier provider of certified commercial fiber optic training. Our courses are approved for BICSI Cabling Installation Program Continuing Education Credits (CECs) and we offer certifications by 3M, Alcoa Fujikura, Delphi Connection Systems and KITCO. Industry standards including those of the Telecommunications Industry Association/Electronic Industries Alliance (TIA/EIA) and the National Electrical Code (NEC) are incorporated into KITCO's courses. Students are offered the option of taking the Electronics Technicians Association (ETA) Certified Fiber Optic Installer (CFOI) and the Certified Fiber Optic Technician (CFOT) exams. Some of the highlights of our training capabilities follow:

- **Technician, Installer and Advanced Optical Time Domain Reflectometer (OTDR) Courses**

- **2 Day Commercial Inspector Course**

- **Fusion Splicing/FTTP Training**

- **BioIite™ Licensed Training (BOF)**

- **Hermaphroditic Connectorization**

At KITCO we will meet your custom training needs by tailoring any of our courses to meet your training requirements for delivery at your place or ours. While we normally conduct our courses using KITCO provided tools and test equipment, we can also train using your equipment if so desired.

Advanced Certification Resources:

TOOLS & TOOL KITS

TEST CABLES (MQJs)

CUSTOM CABLE ASSEMBLIES

CONNECTORS

CERTIFIED TRAINING

FIELD SERVICES

AND MORE

KITCO
fiber optics