



REV	APPLICATION		REVISIONS			
	NEXT ASSY	USED ON	REV	DESCRIPTION	DATE	APPROVED
D			A	SHEET 1: SIGNATURE BLOCK	7-7-98	K. HIGA
1			B	SHEET 1: DISTRIBUTION STATEMENT	7-24-98	K. HIGA
			C	ALL SHEETS : REVISED PER REV L OF CHANGE NOTICE 1	4-1-99	K. HIGA
			D	ALL SHEETS : REVISED PER REV A OF CHANGE NOTICE 2	7-31-99	K. HIGA

NAVSEA DRAWING NO. 7325762  
 ESWS 499

NOTES:

1. IDENTIFICATION OF THE SUGGESTED ITEMS HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY.
2. SUBSTITUTION OF ITEMS IS NOT ALLOWED WITHOUT APPROVAL OF THE DESIGN ACTIVITY, NSWCCD-SSES CODE 9631.
3. INDIVIDUAL ITEMS SHALL BE PROCURED USING THE VENDOR PART NUMBER.
4. COMPLETE KITS FOR SURFACE SHIPS SHALL BE PROCURED USING THE BASE DRAWING NUMBER ONLY. COMPLETE KITS FOR BOTH SURFACE SHIPS AND SUBMARINES ARE DEFINED ON SHEET 3.
5. QUANTITIES SHOWN ARE FOR THE INDIVIDUAL ITEMS AND MAY NOT CORRESPOND TO THE QUANTITY SUPPLIED FOR THE VENDOR PART NUMBER LISTED.

REV STATUS OF SHEETS	REV	D	D	D	D	D	D	D	D	D											
	SHEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		CAGE CODE CONTRACT NO.		DEPARTMENT OF THE NAVY NAVAL SEA SYSTEMS COMMAND WASHINGTON, D.C. 20362-5101															
FRACTIONS n	DECIMALS .XXn	APPROVED	G. Brown	6-30-98	PIERSIDE CONNECTIVITY, SHIP KIT FIBER OPTIC, SHIP INTERFACE TO PIER														
ANGLES P	.XXXn	APPROVED	CDR M. ZIEGLER	7-7-98															
DO NOT SCALE DRAWING		APPROVED	D. INMAN	7-7-98															
		ENGINEER	E. Bluebond	6-30-98															
MATERIAL:	ACCEPTED FOR NAVSEA	H. LEWIS	7-7-98	SIZE	CAGE	ESWS	DRAWING NO.	REV											
FINISHES:	APPROVED BY NAVSEA	SIGNATURE DOES NOT DENOTE APPROVAL		A	53711	499	7325762	D											
		(SIGN ONLY IF ENGINEERING HAS BEEN "PROVED" BY MANUFACTURE AND TEST)		SCALE: NONE	UCI	WT GRP	SHEET	1 OF 9											



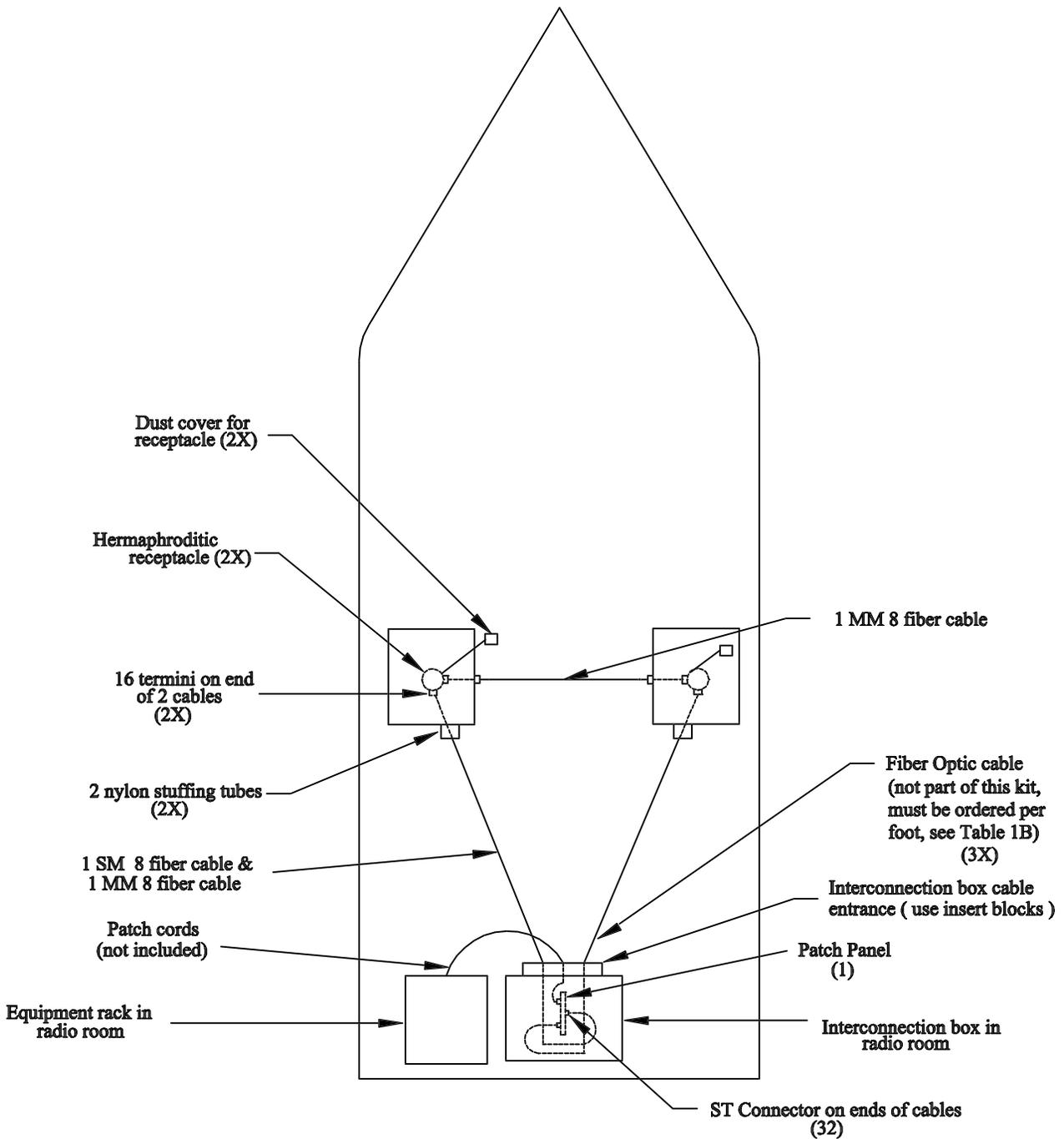
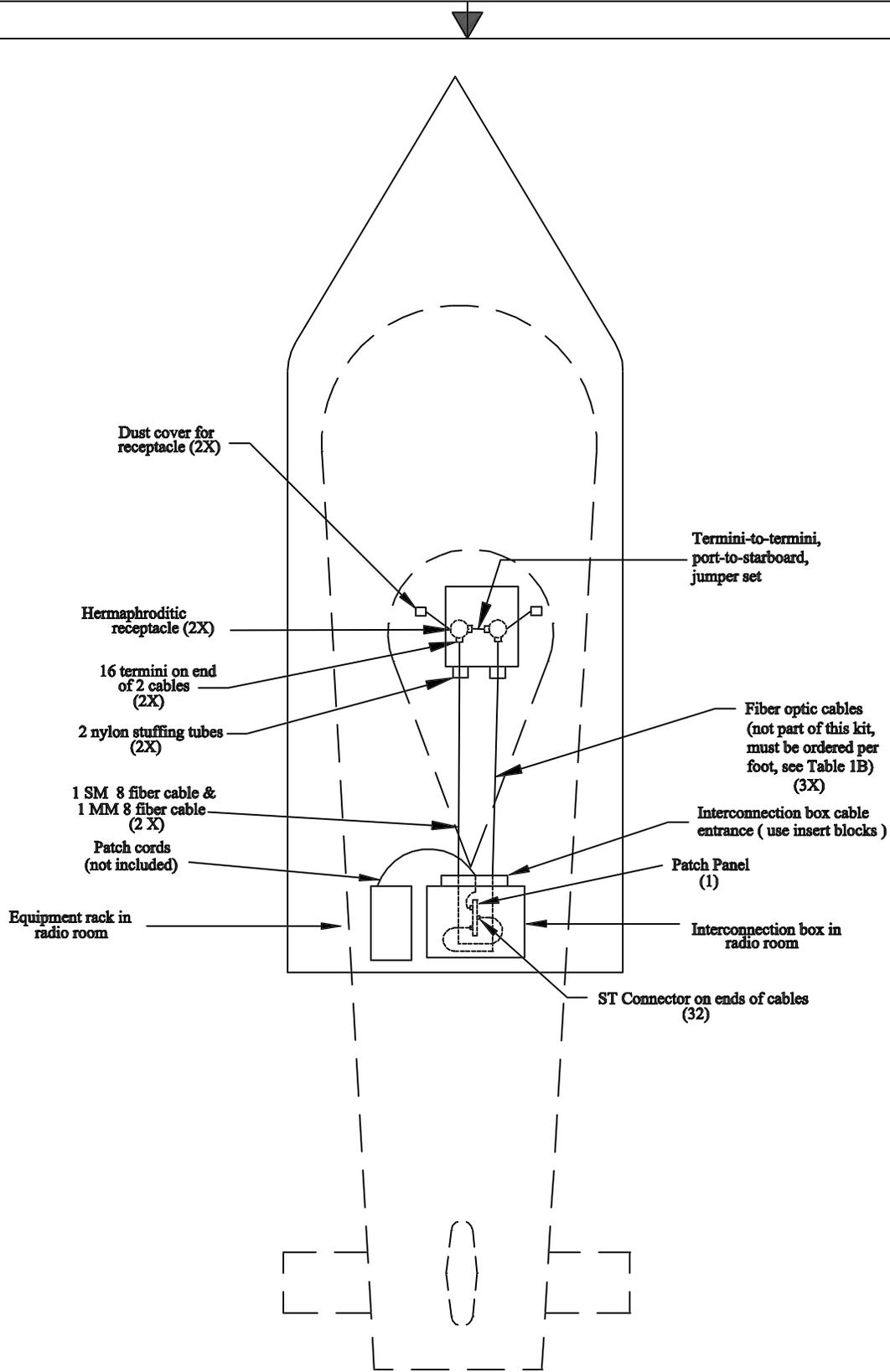


FIGURE 1. ITEMS OFFERED AS PART OF THIS DRAWING, INSTALLATION A KIT ( FORMERLY SHIP KIT )

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SCALE: NONE	UCI	WT GRP	SHEET	2



**FIGURE 2. ITEMS OFFERED AS PART OF THIS DRAWING,  
INSTALLATION B KIT ( FORMERLY KIT SUBMARINE )**

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SCALE: NONE	UCI	WT GRP	SHEET	3

## Ship Kit Contents

Items in this kit comprise the fiber optic cable plant components to be installed on ships for connection to the pier while the ship is in port. The interconnection boxes installed at the port and starboard locations on most surface ship classes, or at a central location on a submarine and some small deck surface ship classes, contain a fiber optic receptacle to mate with an umbilical assembly. This umbilical assembly (cabling) connects the pier to the ship.

Items offered as part of "Installation A Kit" (formerly ship kit), the three interconnection box configuration, are shown in Figure 1. Items offered as part of "Installation B Kit" (formerly submarine kit), the two interconnection box configuration, are shown in Figure 2. These kits contain the fiber optic cable plant components for pier-side connectivity except for the cable. The cable length, which will vary by ship class and routing, must be obtained separately.

For purposes of ordering an "Installation A Kit" to the NAVSEA Drawing number, the Installation A Kit is to include the items in table 1A with quantities specified for the Installation A Kit. Specify NAVSEA Drawing number 7325762 for the Installation A Kit. For the Installation B Kit, specify NAVSEA Drawing number 7325762-B. This latter part number is to include the items in table 1A with quantities specified for the Installation B Kit.

The most visible difference between the two installation kits being offered is the number of interconnection boxes. The Installation A Kit, with three interconnection boxes, has an interconnection box placed at port and starboard for umbilical assembly connection and a third in the radio room for connections to equipment. Shipboard cables are run among these three interconnection boxes. The Installation B Kit, with two interconnection boxes, has one interconnection box placed at a central location for umbilical assembly connection and a second in the radio room for connections to equipment. The centrally located interconnection box has two fiber optic receptacles to allow for simultaneous "port and starboard" umbilical assembly connection. Shipboard cables are run between these two interconnection boxes. The multimode cable that would run between the port and starboard interconnection boxes on a three interconnection box configuration are supplied as internal "termini-to-termini jumpers" for the Installation B Kit."

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Table 1A. Ship Kit List & Quantity

Item #/	Description	Quantity	
		Installation A Kit NAVSEA DWG Part No 7325762	Installation B Kit NAVSEA DWG PART No 7325762-B
6004BA	Ship Kit, Pierside Connectivity, Installation A <u>1/</u> , <u>7/</u> , <u>9/</u>	1	
6004AZ	Ship Kit, Pierside Connectivity, Installation B <u>1/</u> , <u>7/</u> , <u>10/</u>		1
6004AC	Connector, receptacle, jam nut mounted, hermaphroditic compatible (CR-12-DI-A-12) <u>2/</u> , <u>3/</u> , <u>6/</u>	2	2
6004AD	Dust cover, hermaphroditic connector, with female threads (DR-A) <u>2/</u> , <u>4/</u> , <u>6/</u>	2	2
6004AE	Termini, socket, no alignment sleeve, crimp sleeve included (TS-SM-A) <u>5/</u> , <u>6/</u>	32	20
6004AF	Termini, pin, crimp sleeve included (TP-SM) <u>5/</u> , <u>6/</u>	32	20
0345	Interconnection box, with MCP, MIL-I-24728/1	1	1
0346	Interconnection box, without MCP, MIL-I-24728/1	2	1
0351	Patch panel for interconnection box, 48 port, MIL-I-24728/6	1	1
0331	ST connector, multimode, MIL-C-83522/16	20	20
0343	ST connector, single mode, MIL-C-83522/16	20	20
0344	ST-to-ST adapter, single mode, MIL-C-83522/17	48	48
6004AM	Nylon stuffing tube, straight tube, tube size 3	6	4
6004AR	O-ring, for nylon stuffing tube, size 3	6	4
6004AQ	Packing assembly, for nylon stuffing tube, 8 fiber cable	6	4
0352	Insert block, 20x20x60 mm, for cable OD from 0.16 inch to 0.53 inch(per MIL-P-24705)	4	4
0353	Insert block, 20x20x60 mm, solid (per MIL-P-24705)	20	20
6004AT	Tallow, compound (lubricant) used during insert block installation, 1/2 oz size (small)	1	1
6004AU	Cable markers	60	60
6004BB	Jumper set, termini-to-termini, port-to-starboard <u>11/</u>	0	1
6004BD	Dust protector, terminus	36	36

Notes for table 1A:

1/ Components meeting the applicable military specification must be used for the pierside connectivity shipboard cable plant backbone per NAVSEA Fiber Optic Program Office direction. A special exception has been granted for the hermaphroditic connector and termini. The connector and termini do meet a reduced NAVSEA shipboard requirement set established for this application.

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- 2/ Component shall meet Commercial Item Description (CID) A-A-XX159 Fiber Optic Connectors, Hermaphroditic, Multiple Removable Termini, Draft dated 31 July 1999 or latest version.
- 3/ Gasket/o-ring shall be provided with connector receptacle, if not an itegral part of receptacle.
- 4/ Mounting hardware shall be provided with each dust cover.
- 5/ Component shall meet Commercial Item Description (CID) A-A-XX160 Removable Termini For Multiple Termini Fiber Optic Connectors, Draft dated 31 July 1999 or latest version.
- 6/ Approval process for this item to be in accordance with NSWCCD-SSES ltr 9504 Ser 9542/27 of 13 Mar 98 or latest revision. Vendor quality system to be equivalent to that specified in enclosure (2). NSWCCD-SSES audit may be substituted for DSCC audit if deemed appropriate.
- 7/ The ship kit does not include fiber optic cable which must be obtained separately.
- 8/ When an item ordered separately rather than part of the ship kit, the quantity offered may be different than that listed in the table.
- 9/ Item number 6004BA is comprised of the remainder of the items in column 3, table 1A.
- 10/ Item number 6004AZ is comprised of the remainder of the items in column 4, table 1A.
- 11/ Termini-to-termini jumper configuration and permanent markings on the cable markers shall conform to table 5.

Table 1B. MIL-C-85045 Shipboard Cable

Item	Description	Quantity
0327	MIL-C-85045/17 shipboard, 8 fiber cable, MM thermoset	Per foot <u>1/</u>
0329	MIL-C-85045/18 shipboard, 4 fiber cable, MM thermoset <u>2/</u>	Per foot <u>1/</u>
6004AA	MIL-C-85045/17 shipboard, 8 fiber cable, SM thermoset	Per foot <u>1/</u>
6004AB	MIL-C-85045/18 shipboard, 4 fiber cable, SM thermoset <u>2/</u>	Per foot <u>1/</u>

Notes for table 1B:

- 1/ Cable length is to be determined and order per requirements for each install.
- 2/ The 4 fiber cable is not installed as a component of the pierside trunk cable in the fiber optic cable plant. The 4 fiber cable is listed in this table for reference in other application.

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Table 2. Ship Kit &amp; MIL-C-85045 Shipboard Cable Recommended Sources Of Supply

Item	Vendor Name	Part Number	Vendor Address	Vendor Phone/FAX
6004AC	Packard Hughes Interconnect	1123770H	17150 Von Karman Ave. Irvine, CA 19685	(949) 660-5704 (949) 660-6981
6004AD	Packard Hughes Interconnect	1143808-4H	17150 Von Karman Ave. Irvine, CA 19685	(949) 660-5704 (949) 660-6981
6004AE	Packard Hughes Interconnect	1020079H	17150 Von Karman Ave. Irvine, CA 19685	(949) 660-5704 (949) 660-6981
6004AF	Packard Hughes Interconnect	1020078H	17150 Von Karman Ave. Irvine, CA 19685	(949) 660-5704 (949) 660-6981
0345	1/	M24728/1-005		
0346	1/	M24728/1-006		
0351	1/	M24728/6-001		
0331	1/	M83522/16-DNX		
0343	1/	M83522/16-DNY		
0344	1/	M83522/17-NY		
6004AM	1/	M19622/1-003		
6004AR	1/	MS28775-216		
6004AQ	1/	M19622/18-0018		
0352	ROX Corp.	RM-20	P.O. Box 35493 Tulsa, OK 74153-0493	(918) 252-0481 (918) 252-2544
0353	ROX Corp.	RM-20/0	P.O. Box 35493 Tulsa, OK 74153-0493	(918) 252-0481 (918) 252-2544
6004AT	ROX Corp.	Lubricant, small	P.O. Box 35493 Tulsa, OK 74153-0493	(918) 252-0481 (918) 252-2544
6000AU	Note: Item does not require source approval 2/			
0327	1/	M85045/17-01P		
0329	1/	M85045/18-01P		
6004AA	1/	M85045/17-02P		
6004AB	1/	M85045/18-02P		
6004BB	Packard Hughes Interconnect	1123855H	17150 Von Karman Ave. Irvine, CA 19685	(949) 660-5704 (949) 660-6981
6004BD	Packard-Hughes Interconnect	1123857H	17150 Von Karman Ave. Irvine, CA 19685	(949) 660-5704 (949) 660-6981
6004BE	Packard-Hughes Interconnect	1127696-6S	17150 Von Karman Ave. Irvine, CA 19685	(949) 660-5704 (949) 660-6981

Notes for table 2:

1/ Use qualified vendors per applicable military specification. Sources of supply for these items are on the applicable Qualified Products List (QPL) and listed in the Navy Recommended Fiber Optic Components Parts List, NSWCCD-SSES ltr 9504 Ser 9542/28 of 1 Apr 98 or latest revision.

2/ Installation personnel prefer Raychem TMS-SCE-1/2-2.0-9 since this cable marker will shrink down at a lower temperature than some other brands used.

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Table 3. National Stock Numbers For Selected Items

Item	Description	National Stock Number
0351	Patch panel for interconnection box, 48 port, MIL-I-24728/6	6099-01-417-8374
0344	ST-to-ST adapter, single mode, MIL-C-83522/17	6060-01-423-1029
6004AM	Nylon stuffing tube, straight tube, tube size 2	5975-00-296-4093
6004AR	O-ring, for nylon stuffing tube, size 2	5330-00-579-3163
6004AQ	Packing assembly, for nylon stuffing tube, 8 fiber cable	5330-00-202-2588
0352	Insert block, 20x20x60 mm, for cable OD from 0.16 inch to 0.53 inch(per MIL-P-24705)	5975-01-386-6541
0353	Insert block, 20x20x60 mm, solid (per MIL-P-24705)	5975-01-386-6541
6004AT	Tallow, compound (lubricant) used during insert block installation, ½ oz size (small)	5975-01-386-6508

Table 4. Spare Part Provisioning Kit

Item	Description	Quantity
6004BC	Ship kit spare part provisioning per site <u>1</u> /	1
6004AC	Connector, receptacle, jam nut mounted, hermaphroditic compatible (CR-12-DI-A-12)	2
6004AD	Dust cover, hermaphroditic connector, with female threads (DR-A)	1
6004AE	Termini, socket, no alignment sleeve, crimp sleeve included (TS-SM-A)	32
6004AF	Termini, pin, crimp sleeve included (TP-SM)	32
0346	Interconnection box, without MCP, MIL-I-24728/1	2
0331	ST connector, multimode, MIL-C-83522/16	40
0343	ST connector, single mode, MIL-C-83522/16	40
0344	ST-to-ST adapter, single mode, MIL-C-83522/17	48
6004BB	Termini-to-termini jumper set, port to starboard	1

Note for table 4:

1/ Item 6004BC is comprised of the other items listed in table 4.

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A	53711	499	7325762	D
SCALE:	NONE	UCI	WT GRP	SHEET
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Table 5. Termini-To-Termini Jumper Configuration 1/, 2/, 3/

Cable End A Termini Type	Cable End B Termini Type	Cable Color	Cable Marking Designation
Multimode Socket	Multimode Pin	Blue	FO-PIER-5-M-101
Multimode Pin	Multimode Socket	Orange	FO-PIER-5-M-102
Multimode Socket	Multimode Pin	Green	FO-PIER-5-M-103
Multimode Pin	Multimode Socket	Brown	FO-PIER-5-M-104
Multimode Socket	Multimode Pin	Gray	FO-PIER-5-M-105
Multimode Pin	Multimode Socket	White	FO-PIER-5-M-106
Multimode Socket	Multimode Pin	Red	FO-PIER-5-M-107
Multimode Pin	Multimode Socket	Black	FO-PIER-5-M-108

Notes for table 5:

1/ Termini shall meet Commercial item Description (CID) A-A-XX-160 Removable Termini For Multiple Termini Fiber Optic Connectors, Draft dated 31 July 1999 or latest version.

2/ Each termini-to-termini jumper is to have an end-to-end minimum length of 114 cm (45 inch). Cable is to meet MIL-C-85045. A cable marker is to be placed about 5 cm (2 inch) from each terminus and permanently marked as specified in the table.

3/ Each termini-to-termini jumper shall be tested to and shall meet the link loss performance requirements of MIL-STD-2042, method 7F1.

Table 6. Spare Sub-Components

Item	Description	Quantity
6004BE	Crimp sleeve, termini, spares, for items 6004AE and 6004AF.	1

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