NOTES CONTINUED:

5. SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON NOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. DXXXXXXX-VY, S/N 001. EXAMPLE: VIBRATORY TOOL MAY BE USED.

6. APPROXIMATE WEIGHT = X.XXX LB.

7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364.

8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.

9. ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4

10. ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL. AFTER DELIVERY OF FINISHED PARTS. USE NITRONIC 60 THREADED INSERTS.

11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (I.e. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.

12. SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.

13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E1000083 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 2.5-3X HOLE DIAMETER CENTERED ON BOTH SIDES OF THE HOLE.

14. DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.

15. BEND RADIUS: UNLESS OTHERWISE NOTED, THE BEND RADIUS SHOULD BE THE MINIMUM REQUIRED TO FORM WITHOUT CRACKING OR REQUIRING ADDITIONAL WORK WHEN FORMING. IN PARTICULAR IF SHEET METAL IS TO BE PORCELAIN COATED, THE BEND RADIUS SHALL BE A MINIMUM OF .12" OUTSIDE RADIUS OF BEND UNLESS OTHERWISE NOTED.

GOLD METALIZED OVER ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK

PIN 1
PIN 25
VENT HOLE Ø 0.125"

CONNECTOR J1

1.600in [40.64mm]
0.355in [9.02mm]
Ø 0.150in [3.81mm]
2.665in [67.69mm]

GOLD METALIZED OVER ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK

CONNECTOR J1 (E)

GLENAIR CLAMPING BANDS # 600-052 (BAND-IT # A10086)

PIN 1
2.168in [55.07mm]
0.109in [2.77mm]
0.112in [2.85mm]
1.852in [47.03mm]
2.400in [60.96mm]
PIN 25
NOT METALIZED BETWEEN THE PINS

0.730 [18.54]   0.375 [9.53]   Ø 0.100in [2.54mm]

PEEK OVERBRAID
COPPER BRAID (SHIELD)
6 CONDUCTOR 3 TWISTED PAIR
COONER WIRE 28AWG (CZ1105)

PIN 1
CONNECTOR J1 (E)
VENT HOLE

CABLE #1
CABLE #2
CABLE #3
CABLE #4

PEEK

LENGTH NOT TO SCALE

CONNECTOR J2 (A)
CONNECTOR J3 (B)
CONNECTOR J4 (C)
CONNECTOR J5 (D)

48in. [1219.2mm]
NOT TO SCALE

PIN 6   PIN 9
PIN 1   PIN 5
PIN 9   PIN 1

0.400in [10.16mm]
1.100in [27.94mm]
0.300in [7.62mm]
0.900in [22.86mm]

1.042in. [26.47mm]   Ø 0.185in [4.70mm]
Ø 0.250in [6.35mm]

V25N-48 CABLE ASSEMBLY CIRCUIT SUMMARY
V-DB25 M/S1-48-4_u9D F/S

FROM

CONNECTOR J1 - 25 PIN MALE SUBMINI_D CONNECTOR (METALIZED PEEK)

PIN	WIRE NAME	LENGTH	TWISTED PAIR
1, SHELL	(CABLE 1) COPPER BRAID		(SHIELD)
14	(CABLE 1) WIRE 14		TP-1
2	(CABLE 1) WIRE 2		TP-1
15	(CABLE 1) WIRE 15	CABLE 1 48in. *	TP-2
3	(CABLE 1) WIRE 3		TP-2
16	(CABLE 1) WIRE 16		TP-3
4	(CABLE 1) WIRE 4		TP-3
1, SHELL	(CABLE 2) COPPER BRAID		(SHIELD)
17	(CABLE 2) WIRE 17		TP-4
5	(CABLE 2) WIRE 5		TP-4
18	(CABLE 2) WIRE 18	CABLE 2 48in. *	TP-5
6	(CABLE 2) WIRE 6		TP-5
19	(CABLE 2) WIRE 19		TP-6
7	(CABLE 2) WIRE 7		TP-6
1, SHELL	(CABLE 3) COPPER BRAID		(SHIELD)
20	(CABLE 3) WIRE 20		TP-7
8	(CABLE 3) WIRE 8		TP-7
21	(CABLE 3) WIRE 21	CABLE 3 48in. *	TP-8
9	(CABLE 3) WIRE 9		TP-8
22	(CABLE 3) WIRE 22		TP-9
10	(CABLE 3) WIRE 10		TP-9
1, SHELL	(CABLE 4) COPPER BRAID		(SHIELD)
23	(CABLE 4) WIRE 23		TP-10
11	(CABLE 4) WIRE 11		TP-10
24	(CABLE 4) WIRE 24	CABLE 4 48in. *	TP-11
12	(CABLE 4) WIRE 12		TP-11
25	(CABLE 4) WIRE 25		TP-12
13	(CABLE 4) WIRE 13		TP-12

V25N-48 CABLE ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J2 - 9 PIN FEMALE MICRO_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	(CABLE 1) COPPER BRAID	SHIELD
1	(CABLE 1) WIRE 14	PHOTO DIODE CATHODE - (UL PD K)
6	(CABLE 1) WIRE 2	PHOTO DIODE ANODE + (UL PD A)
2	(CABLE 1) WIRE 15	LED ANODE + (UL LED A)
7	(CABLE 1) WIRE 3	LED CATHODE - (UL LED K)
4	(CABLE 1) WIRE 16	UL FN
9	(CABLE 1) WIRE 4	UL ST
3	NOT CONNECTED	NOT CONNECTED
5	NOT CONNECTED	NOT CONNECTED
8	NOT CONNECTED	NOT CONNECTED

V25N-48 CABLE ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J3 - 9 PIN FEMALE MICRO_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	(CABLE 2) COPPER BRAID	SHIELD
1	(CABLE 2) WIRE 17	PHOTO DIODE CATHODE - (LL PD K)
6	(CABLE 2) WIRE 5	PHOTO DIODE ANODE + (LL PD. A)
2	(CABLE 2) WIRE 18	LED ANODE + (LL LED A)
7	(CABLE 2) WIRE 6	LED CATHODE - (LL LED K)
4	(CABLE 2) WIRE 19	LL FN
9	(CABLE 2) WIRE 7	LL ST
3	NOT CONNECTED	NOT CONNECTED
5	NOT CONNECTED	NOT CONNECTED
8	NOT CONNECTED	NOT CONNECTED

V25N-48 CABLE ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J4 - 9 PIN FEMALE MICRO_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	(CABLE 3) COPPER BRAID	SHIELD
1	(CABLE 3) WIRE 20	PHOTO DIODE CATHODE - (UR PD K)
6	(CABLE 3) WIRE 8	PHOTO DIODE ANODE + (UR PD A)
2	(CABLE 3) WIRE 21	LED ANODE + (UR LED A)
7	(CABLE 3) WIRE 9	LED CATHODE - (UR LED K)
4	(CABLE 3) WIRE 22	UR FN
9	(CABLE 3) WIRE 10	UR ST
3	NOT CONNECTED	NOT CONNECTED
5	NOT CONNECTED	NOT CONNECTED
8	NOT CONNECTED	NOT CONNECTED

V25N-48 CABLE ASSEMBLY CIRCUIT SUMMARY

TO

CONNECTOR J5 - 9 PIN FEMALE MICRO_D CONNECTOR (PEEK)

PIN	WIRE NAME	SIGNAL
SHELL	(CABLE 4) COPPER BRAID	SHIELD
1	(CABLE 4) WIRE 23	PHOTO DIODE CATHODE - (LR PD K)
6	(CABLE 4) WIRE 11	PHOTO DIODE ANODE + (LR PD K)
2	(CABLE 4) WIRE 24	LED ANODE + (LR LED A)
7	(CABLE 4) WIRE 12	LED CATHODE - (LR LED K)
4	(CABLE 4) WIRE 25	LR FN
9	(CABLE 4) WIRE 13	LR ST
3	NOT CONNECTED	NOT CONNECTED
5	NOT CONNECTED	NOT CONNECTED
8	NOT CONNECTED	NOT CONNECTED

BILL OF MATERIALS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
1	TICOR #TS0125-3	DB25 MALE CONNECTOR (J1) FOR UHV (METALIZED PEEK)	1	
2		DB25 CONNECTOR BACKSHELL FOR UHV (STAINLESS)		
3	TICOR #TS0094 WITH FLYING LEADS	u9D SOCKET (FEMALE) CONNECTOR (J2,J3,J4,J5) FOR UHV (PEEK)	4	
4		u9D CONNECTOR BACKSHELL FOR UHV (STAINLESS)	4	
5	CABLE INCLUDING COONER WIRE # CZ1105 + 6 + 7	6 COND. (3 TWISTED PAIR) CABLE (AND COPPER BRAID (SHIELD) 6. AND PEEK OVERBRAID) 7.	4	48in.*
6	CONTINENTAL PART #24x3x40BC	COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC	4	
7	PART #6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT	4	
8	GLENAIR # 600-052 or BAND-IT # A10086	GLENAIR # 600-052 STANDARD BRAID CLAMP or BAND-IT PART # A10086 (0.240" WIDE) ("BAG OF 100" # A10089)	8	

* NOTE: THE OVERALL LENGTH IS MEASURED FROM BAND CLAMP ("CABLE SIDE" EDGE) (25 PIN) TO BAND CLAMP ("CABLE SIDE" EDGE) (9 PIN) OF THE CABLE. Use whatever length is necessary for the internal wiring of the connectors and strip length to achieve the correct overall length.

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. MATERIAL: a. CONNECTOR SHELL - PEEK VICTREX GRADE TDS-450G.
   b. BACKSHELL - STAINLESS STEEL WITH 4 PORTS AND VENT HOLE.
   c. CONTACTS - BERYLLIUM COPPER ALLOY C17300 0.000050 MIN. GOLD OVER NICKEL
   d. HARDWARE: CORROSION RESISTANCE STEEL, PASSIVATED
   e. PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED

2. CABLE 6 COND. 28 AWG (65 STRD 46 AWG) WITH PFA INSULATION COONER # CZ1105
   3 TWISTED PAIRS (4 TO 6 TWISTS PER INCH)
   OVERALL 40AWG COPPER BRAID 90% COVERAGE
   OVERALL PEEK BRAID MIN. 50% COVERAGE
   OVERALL CABLE O.D. WILL BE APPROX. 0.240 IN.