

REV.	DATE	DCN #	DRAWING TREE #

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 ANGLE AND PROCEEDED CONSECUTIVELY. USE 07 HIGH CHARACTERS. EXAMPLE: A DXXXXXX.YY.5N.001

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-ED900364.

8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION ED900364.

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

NOTES 13 and 14 DO NOT APPLY TO THIS PART

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

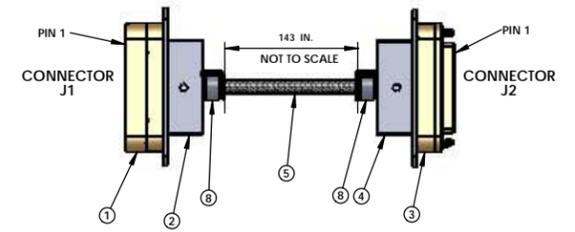
11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (i.e. NO WELD REPAIRS, PULGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-ED900364.

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

13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION ED900364 AFTER FABRICATION. THE MOUNTING HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING. THE COATING SHALL BE A MINIMUM OF 0.001 INCH THICK AND COVERED ON BOTH SIDES OF THE HOLE.

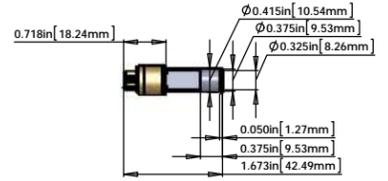
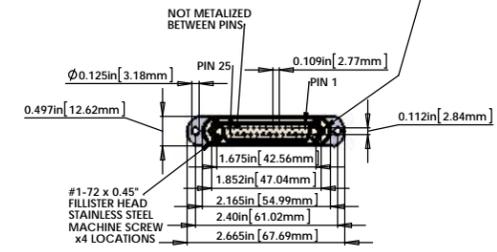
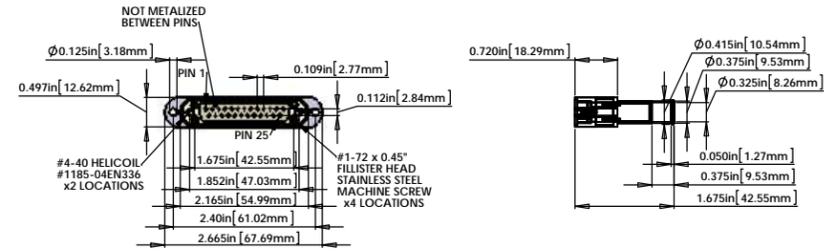
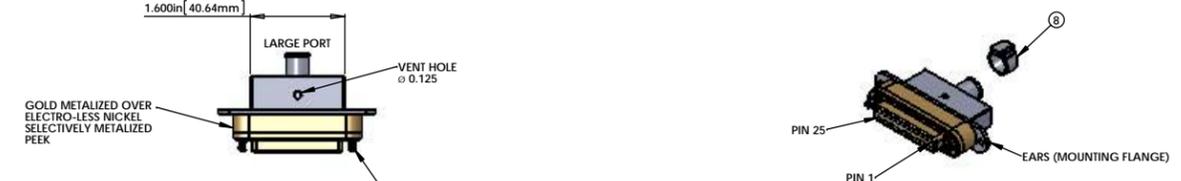
14. THE COATING SHALL BE PORCELAIN COATING WITH A MINIMUM OF 0.001 INCH THICK.

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.



CONNECTOR J1

CONNECTOR J2



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
1	TICOR # (IS0149-25C20B51-325F) OR EQUIVALENT	DB25 MALE CONNECTOR (J1) FOR UHV (GOLD METALIZED PEEK)	1	
2		DB25 CONNECTOR BACKSHELL (WITH EARS) (LARGE PORT) FOR UHV (STAINLESS)	1	
3	TICOR # (IS0148-25C20B51-325F) OR EQUIVALENT	DB25 FEMALE CONNECTOR (J2) FOR UHV (GOLD METALIZED PEEK)	1	
4		DB25 CONNECTOR BACKSHELL (WITH EARS) (LARGE PORT) FOR UHV (STAINLESS)	1	
5	COONER WIRE # C22205	16 COND. 22GA. (8 TWISTED PAIR) CABLE WITH COPPER BRAID (SHIELD) AND PEEK OVERBRAID	1	143in *
6	CONTINENTAL PART #24x3x40BC	COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC	1	
7	#6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT	1	
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)	2	
9	HELICOIL #1185-04EN336	#4-40 Nitronic 60- HELICOIL 0.336" LENGTH	2	

* NOTE: USE WHATEVER LENGTH IS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH TO ACHIEVE THE CORRECT OVERALL LENGTHS.

NOTES: (UNLESS OTHERWISE SPECIFIED)

- A. MATERIAL: a. J1 CONNECTOR SHELL - GOLD OVER ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK VICTREX 450GL30. b. J2 CONNECTOR SHELL - GOLD OVER ELECTRO-LESS NICKEL SELECTIVELY METALIZED PEEK VICTREX 450GL30. c. BACKSHELLS - STAINLESS STEEL WITH VENT HOLE. d. CONTACTS - BERYLLIUM COPPER ALLOY C17300, 0.00050 MIN. GOLD OVER NICKEL. e. HARDWARE: STAINLESS STEEL, PASSIVATED. f. PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED - SUPPLIED BY LIGO.
- B. CABLE: 16 COND. 22 AWG, (150 STRD 44 AWG) WITH 0.005" PFA INSULATION. (COONER WIRE #C22205) 8 TWISTED PAIRS (4 TO 5 TWISTS PER INCH). OVERALL 40AWG COPPER BRAID 50% COVERAGE - SUPPLIED BY LIGO. OVERALL PEEK BRAID MIN. 50% COVERAGE. OVERALL CABLE O.D. WILL BE 0.240 IN.
- C. CONNECTORS: WILL BE SUPPLIED WITH HARDWARE. SCREWS SHOULD BE THE PROPER LENGTH FOR MATING.

V25C-143 CABLE ASSEMBLY CIRCUIT SUMMARY V-DB25HD M/S1-143-DB25HD F/S1					
CABLE NAME	COND. - WIRE ID	TWISTED PAIR	LENGTH *	FROM	TO
V25A-143	16 COND. CABLE	(8 TOTAL)	143 in.	Conn. J1	Conn. J2
	SHIELD		143 in	PIN 1, SHELL	PIN 1, SHELL
	W13	TP-1	143 in	PIN 13	PIN 13
	W25		143 in	PIN 25	PIN 25
	W12	TP-2	143 in	PIN 12	PIN 12
	W24		143 in	PIN 24	PIN 24
	W11	TP-3	143 in	PIN 11	PIN 11
	W23		143 in	PIN 23	PIN 23
	W10	TP-4	143 in	PIN 10	PIN 10
	W22		143 in	PIN 22	PIN 22
	W9	TP-5	143 in	PIN 9	PIN 9
	W21		143 in	PIN 21	PIN 21
	W8	TP-6	143 in	PIN 8	PIN 8
	W20		143 in	PIN 20	PIN 20
	W7	TP-7	143 in	PIN 7	PIN 7
	W19		143 in	PIN 19	PIN 19
W6	TP-8	143 in	PIN 6	PIN 6	
W18		143 in	PIN 18	PIN 18	

* THE LENGTH SHOWN IN THIS LIST IS THE LENGTH OF THE CABLE BETWEEN THE TWO CONNECTORS. ADD ADDITIONAL LENGTH AS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH.

SEE REFERENCE DCC# LIGO-D1100670

ISC TRANSMON PICOMOTOR CABLE SEISMIC TABLE TO SUSPENDED TRANSMON TABLE V-DB25HD M/S1-143-DB25HD F/S1		
STANDARD USE FOR THIS CABLE		
SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	PICOMOTORS TOP TO TABLE

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

1. INTERPRET DRAWING PER ASME Y14.5-1994.

2. REMOVE ALL SHARP EDGES. 0.05-0.15 FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS.

3. DO NOT SCALE FROM DRAWING.

4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

MATERIAL: Material <not specified>

FINISH: μinch

SCALE: 1:1

PROJECTION: 1st Angle

SHEET 1 OF 1

CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PART NAME: CUSTOM CABLE SPECIFICATION V25C-143

DESIGNER: R. ABBOTT
DRAFTER: E. BROWN
CHECKER:
APPROVAL:

DATE: 04/07/2012
DATE: 04/07/2012

SIZE: E

DWG. NO: D1000921

REV: v6