NOTES CONTINUED (5) SCRIBE, ENGRAVE (A VIBRATORY TOOL MAY BE S SCRIBE, ENGRAVE (A VIBRATORY TOOL MAY BE USED), LASER MARK OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER, REVISION (AND VARIANT OR "TYPE" IF APPLICABLE) ON NOTIED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE MINIMIMIO 12" HIGH CHARACTERS, LUNLESS THE SIZE OF THE PART DICTATES SIMALLER CHARACTERS. EVANDIES TO THE PART DICTATES SIMALLER CHARACTERS. 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 EXAMPLE: DXXXXXXX-VY, TYPE-XX, S/N XXX . APPROXIMATE WEIGHT = X.XXX LB. **CONNECTOR** MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH, USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364 J1, J2 PLAIN PEEK 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. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364. #1-72 x 0.45" FILLISTER HEAD . ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4 STAINLESS STEEL MACHINE SCREW NOTES 9, 10, 13 and 14 DO NOT APPLY TO THIS PART x4 LOCATIONS **CONNECTOR** 1.600in[40.64mm] J1 PLAIN PEEK PIN 25 MOUNTING FLANGE (EARS) -MOUNTING FLANGE (EARS) 0 PIN 1 #4-40 x 0.305" STAINLESS STEEL HEX SOCKET HEAD VENTED JACKSCREW **x2 LOCATIONS**  $\emptyset$  0.125in[ 3.18mm] 0.109in[2.77mm] Ø0.315in 8mm 0.311in[7.90mm PLAIN PEEK Ø0.275in 6.99mm 0.112in[ 2.84mm ] PLAIN PEEK  $\emptyset$ 0.225in 5.72mm 0.497in 12.62mm 1.675in 42.56mm 1.852in 47.04mm 0.718in 18.24mm 0.050in 1.27mm 2.165in [54.99mm 2.40in 61.02mm 0.375in 9.53mm 1.673in 42.49mm 2.665in [67.69mm COPPER BRAID
1 CONDUCTOR (SHIELD) OVERBRAID 25 CONDUCTOR 28 AWG 12 TWISTED PAIR + 1 WIRE ITEM NO PART NUMBER DESCRIPTION LENGTH TICOR# GLENAIR CLAMPING DB25 FEMALE CONNECTOR (J1,J2) FOR UHV (PEEK) 1 2 (TS0148-25C020BS1-225F) OR EQUIVALENT BANDS # 600-052 (BAND-IT # A10086) 2 DB25 CONNECTOR BACKSHELL FOR UHV (STAINLESS STEEL) 2 25 COND. (12 TW PAIR + 1 WIRE + SHIELD) CABLE 3 C1 WITH 4 COPPER BRAID (SHIELD) AND 5 PEEK OVERBRAID Ō 4 CONTINENTAL PART #24x3x40BC COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC 156in PEEK BRAID - PART #6759 MANUFACTURED WITH (5) PART # 6759 ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT - SUPPLIED BY LIGO GLENAIR # 600-052 or GLENAIR # 600-052 STANDARD BRAID CLAMP or 6 BAND-IT PART # A10086 (0.240" WIDE) ("BAG OF 100" # A10089) \* NOTE: USE WHATEVER LENGTH IS NECESSARY FOR THE INTERNAL WIRING OF THE CONNECTORS AND STRIP LENGTH TO ACHIEVE THE CORRECT OVERALL LENGTHS.

DIMENSIONS ARE IN

OLERANCES:

.XXX ±

V-DB25 F/1-156-DB25 F/1						
CABLE NAME	COND WIRE ID	TWISTED PAIR	LENGTH *	FROM	то	
V25D	25 COND. CABLE	(12 TOTAL)	156 in.	Conn. J1	Conn. J2	
C1	SHIELD (COPPER BRAID)		156 in.	PIN 1, SHIELD (N/C SHELL)	PIN 1, SHIELD (N/C SHELI	
	W1	SINGLE WIRE	156 in.	N/C	N/C	
	W2	TP-1	156 in.	PIN 2	PIN 2	
	W14		156 in.	PIN 14	PIN 14	
	W3	TP-2	156 in.	PIN 3	PIN 3	
	W15	1 IP-2	156 in.	PIN 15	PIN 15	
	W4	TP-3	156 in.	PIN 4	PIN 4	
	W16	IP-3	156 in.	PIN 16	PIN 16	
	W5	TD 4	156 in.	PIN 5	PIN 5	
	W17	TP-4	156 in.	PIN 17	PIN 17	
	W6	W6 TP-5	156 in.	PIN 6	PIN 6	
	W18	1 IP-5	156 in.	PIN 18	PIN 18	
	W7	TP-6	156 in.	PIN 7	PIN 7	
	W19		156 in.	PIN 19	PIN 19	
	W8		156 in.	PIN 8	PIN 8	
	W20		156 in.	PIN 20	PIN 20	
	W9	TP-8	156 in.	PIN 9	PIN 9	
	W21	117-8	156 in.	PIN 21	PIN 21	
	W10	TP-9	156 in.	PIN 10	PIN 10	
	W22	117-9	156 in.	PIN 22	PIN 22	
	W11	TP-10	156 in.	PIN 11	PIN 11	
	W23	IP-10	156 in.	PIN 23	PIN 23	
	W12	TP-11	156 in.	PIN 12	PIN 12	
	W24	18-11	156 in.	PIN 24	PIN 24	
	W13	TP-12	156 in.	PIN 13	PIN 13	
	W25	IP-12	156 in.	PIN 25	PIN 25	

	V-DB	325 F/1-156-DB25 F/1
	STANE	DARD USE FOR THIS CABLE
SUBSYSTEM	AIR/VAC	STANDARD USE
ISC	IN-VAC	TIP TILT OSEMS (OPTICAL SENSOR ELECTROMAGNETIC MOTOR
ISC	IN-VAC	MC2 (TOP) MC3 (TOP)

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY I. INTERPRET DRAWING PER ASME Y14.5-1994.
 REMOVE ALL SHARP EDGES, 005-015, FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATLEY R.02 FOR SHEET METAL PARTS.
 J. DO NOT SCALE FROM DRAWING. **CUSTOM CABLE SPECIFICATION V25D** 

NOTES: (UNLESS OTHERWISE SPECIFIED)

a. CONNECTOR SHELL - PEEK VICTREX 450GL30. b. BACKSHELL - STAINLESS STEEL WITH VENT HOLE. A. MATERIAL:

C. CONTACTS - BERYLLIUM COPPER ALLOY C17300, 0.000050 MIN. GOLD OVER NICKEL.

d. HARDWARE: STAINLESS STEEL, PASSIVATED.
e. PEEK BRAID - PEEK VICTREX GRADE TDS-450CA30 CARBON LOADED - SUPPLIED BY LIGO.

CABLE 25 COND. 28 AWG, (40 STRD 44 AWG) WITH 2 LAYERS OF KAPTON TAPE. 12 TWISTED PAIRS ( 4 TO 5 TWISTS PER INCH ) + 1 WIRE.
OVERALL 40AWG COPPER BRAID 50% COVERAGE - SUPPLIED BY LIGO. OVERALL PEEK BRAID MIN. 50% COVERAGE.

OVERALL CABLE O.D. WILL BE 0.240 IN CONNECTORS WILL BE SUPPLIED WITH HARDWARE. SCREWS SHOULD BE THE PROPER LENGTH FOR MATING.

MATERIAL ANGULAR±°

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

DESIGNER R. ABBOTT JUN/18/2012 SIZE DWG. NO D1000224 DRAFTER E. BROWN

APPROVAL

REV.

DATE

156 in

NOT TO SCALE

DCN#

PLAIN PEEK

PIN 1

**CONNECTOR** 

J2

DRAWING TREE #

μinch

SYSTEM

**ISC** 

CHECKER

SCALE: 1:1 PROJECTION: