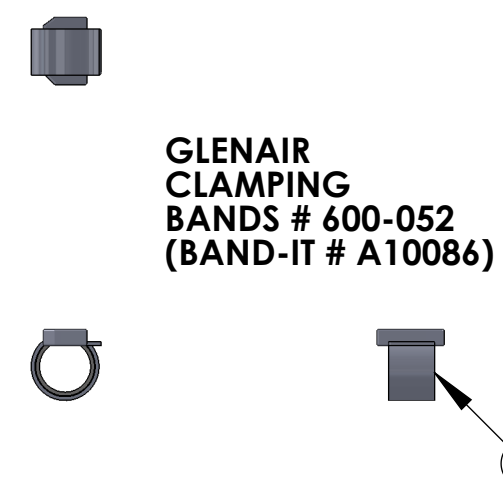
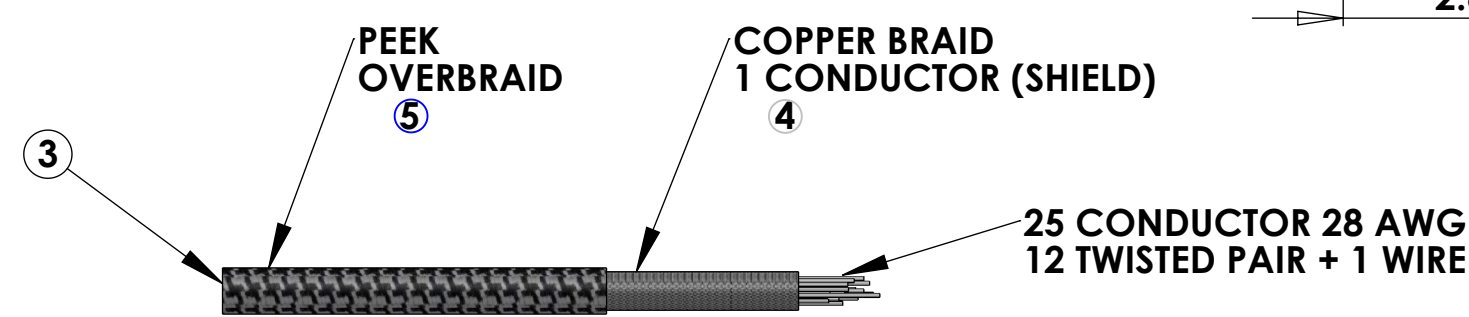
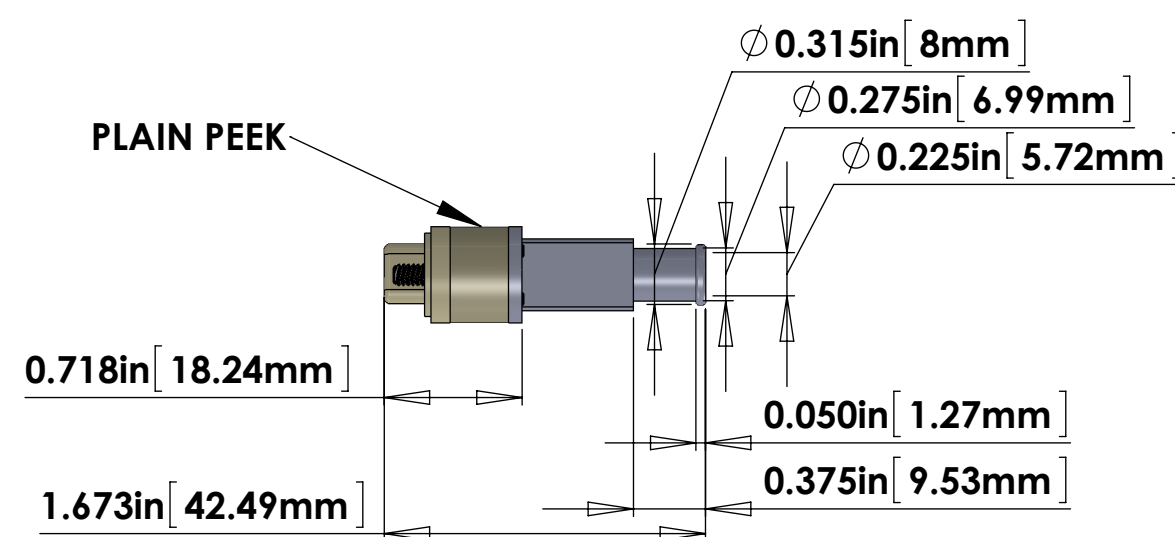
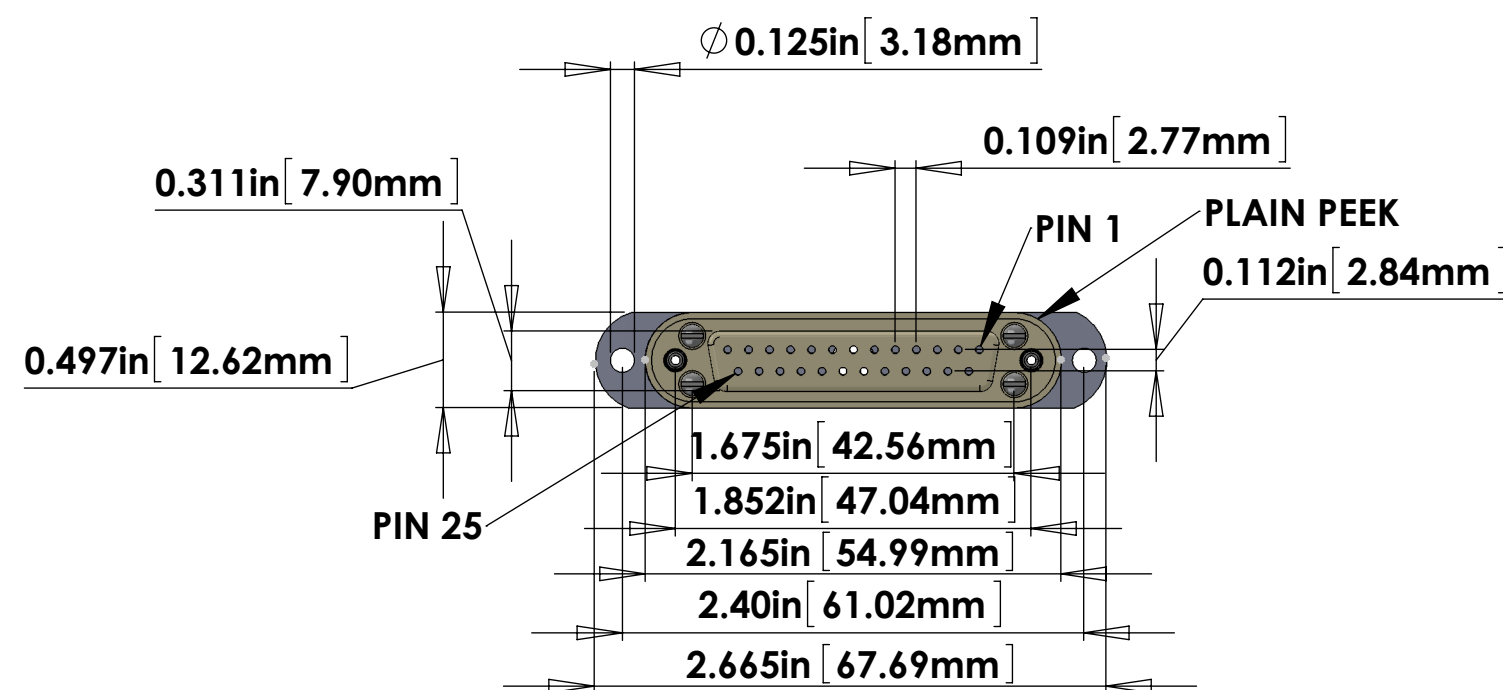
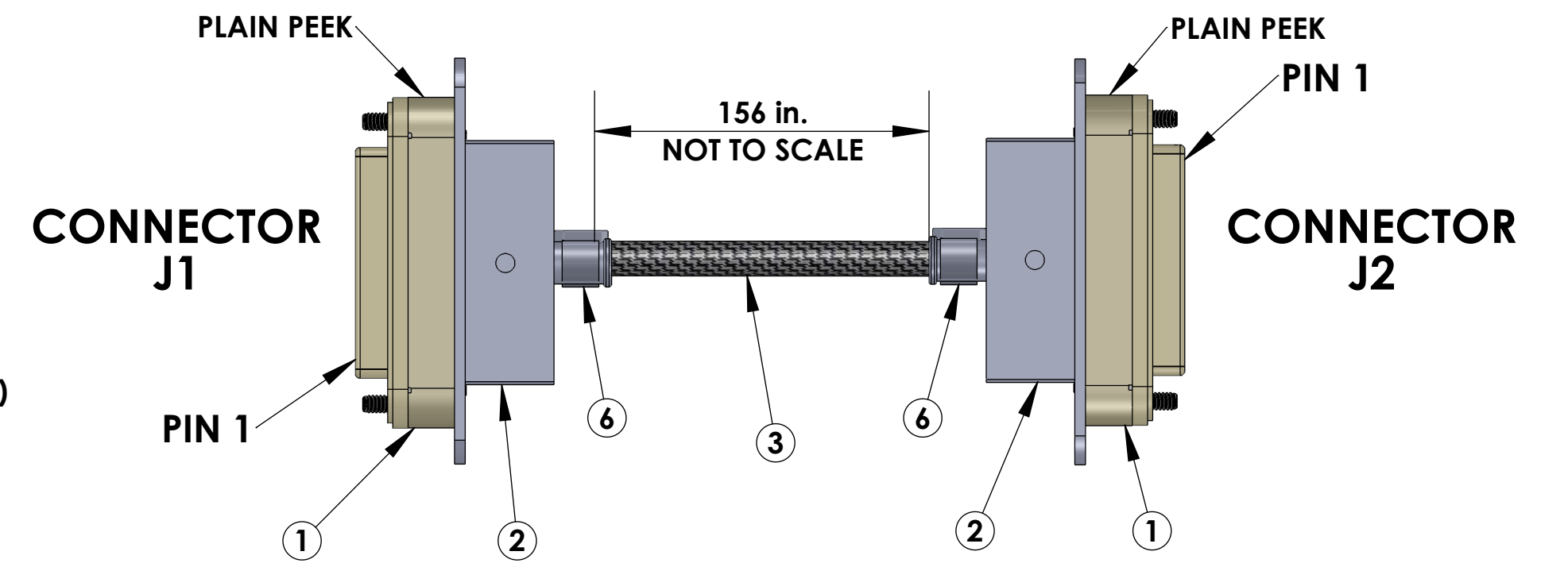
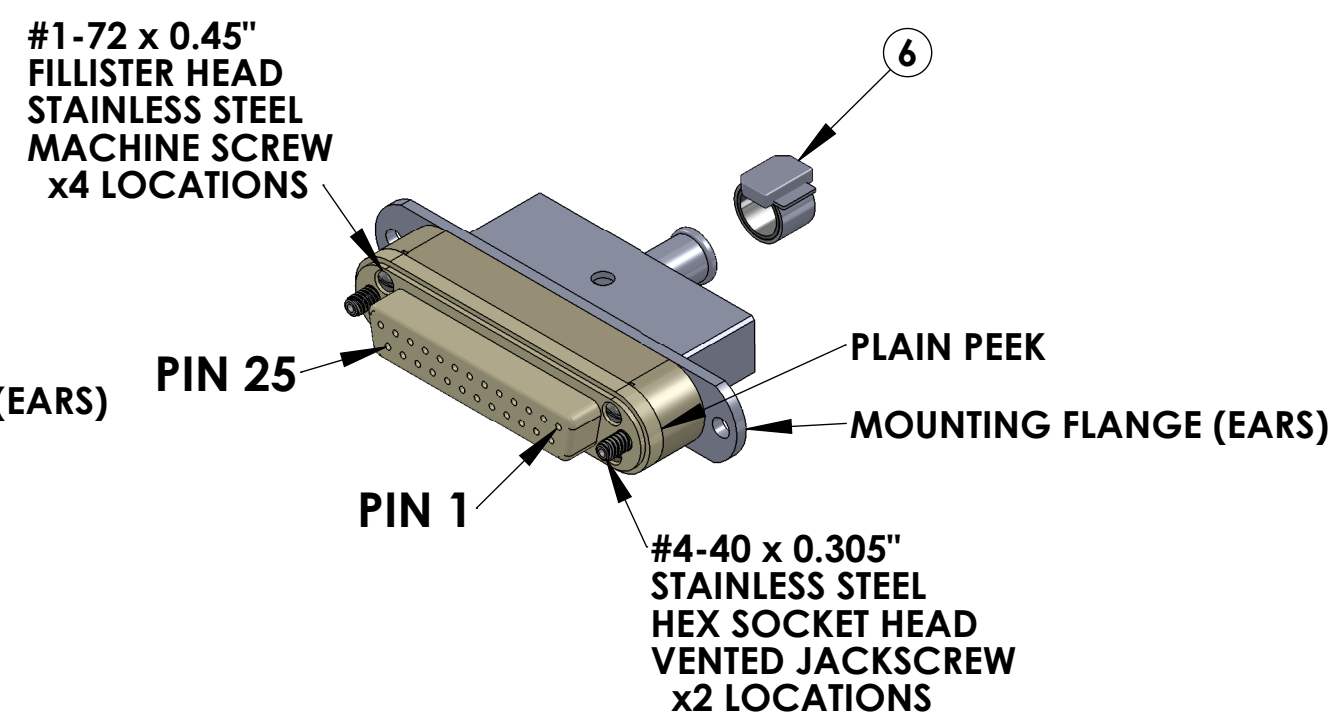
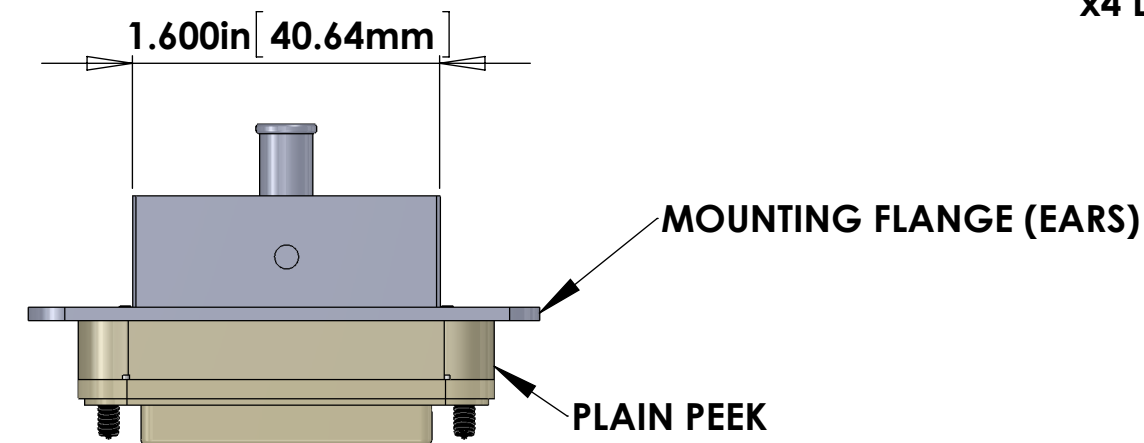


- NOTES CONTINUED:
- SCRIBE, ENGRAVE (A VIBRATORY TOOL MAY BE USED), LASER MARK OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER, REVISION (AND VARIANT OR 'TYPE' IF APPLICABLE) ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE MINIMUM 0.12" HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALLER CHARACTERS. EXAMPLE: DXXXXXX-VY, TYPE-XX, S/N XXX
 - APPROXIMATE WEIGHT = X.XXX LB.
 - MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364
 - ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.
 - ALL HELIX-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELIX-COIL PRODUCT CATALOG, HC2000, REV. 4

- ALL HELIX-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL AFTER DELIVERY OF FINISHED PARTS. USE NITRONIC 80 THREADED INSERTS.
- 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.
- SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.
- 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.
- DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.
- 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.

NOTES 9, 10, 13 and 14 DO NOT APPLY TO THIS PART.

CONNECTOR J1, J2



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	LENGTH
1	TICOR # (TS0148-25C020BS1-225F) OR EQUIVALENT	DB25 FEMALE CONNECTOR (J1,J2) FOR UHV (PEEK)	2	
2		DB25 CONNECTOR BACKSHELL FOR UHV (STAINLESS STEEL)	2	
3	C1	25 COND. (12 TW PAIR + 1 WIRE + SHIELD) CABLE WITH 4 COPPER BRAID (SHIELD) AND 5 PEEK OVERBRAID	1	156in *
4	CONTINENTAL PART #24x3x40BC	COPPER BRAID - CONTINENTAL CORDAGE PART #24x3x40BC	1	
5	PART # 6759	PEEK BRAID - PART #6759 MANUFACTURED WITH ZEUS 0.016" BLACK PEEK DRAWN MONOFILAMENT - SUPPLIED BY LIGO	1	
6	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	

* 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)

- MATERIAL:
 - CONNECTOR SHELL - PEEK VICTREX 450G130.
 - BACKSHELL - STAINLESS STEEL WITH VENT HOLE.
 - CONTACTS - BERYLLIUM COPPER ALLOY C17300, 0.000050 MIN. GOLD OVER NICKEL.
 - HARDWARE: STAINLESS STEEL, PASSIVATED.
 - 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.

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)	
DIMENSIONS ARE IN	1. INTERPRET DRAWING PER ASME Y14.5-1994. 2. REMOVE ALL SHARP EDGES, .005-.015, 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.
TOLERANCES:	.XX ± .XXX ±
ANGULAR ± °	

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME	
SYSTEM	ISC	CUSTOM CABLE SPECIFICATION V25D	
DESIGNER	R. ABBOTT	JUN/18/2012	SIZE DWG. NO.
DRAFTER	E. BROWN	JUN/18/2012	D D1000224
CHECKER			REV. v5
APPROVAL		SCALE: 1:1	PROJECTION:

REV.	DATE	DCN #	DRAWING TREE #

V25D CABLE ASSEMBLY CIRCUIT SUMMARY V-DB25 F/1-156-DB25 F/1

CABLE NAME	COND.- WIRE ID	TWISTED PAIR	LENGTH *	FROM	TO
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 SHELL)
	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		156 in.	PIN 15	PIN 15
	W4	TP-3	156 in.	PIN 4	PIN 4
	W16		156 in.	PIN 16	PIN 16
	W5	TP-4	156 in.	PIN 5	PIN 5
	W17		156 in.	PIN 17	PIN 17
	W6	TP-5	156 in.	PIN 6	PIN 6
	W18		156 in.	PIN 18	PIN 18
	W7	TP-6	156 in.	PIN 7	PIN 7
	W19		156 in.	PIN 19	PIN 19
	W8	TP-7	156 in.	PIN 8	PIN 8
	W20		156 in.	PIN 20	PIN 20
	W9	TP-8	156 in.	PIN 9	PIN 9
	W21		156 in.	PIN 21	PIN 21
	W10	TP-9	156 in.	PIN 10	PIN 10
	W22		156 in.	PIN 22	PIN 22
	W11	TP-10	156 in.	PIN 11	PIN 11
	W23		156 in.	PIN 23	PIN 23
	W12	TP-11	156 in.	PIN 12	PIN 12
	W24		156 in.	PIN 24	PIN 24
	W13	TP-12	156 in.	PIN 13	PIN 13
	W25		156 in.	PIN 25	PIN 25

* 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.

V-DB25 F/1-156-DB25 F/1 STANDARD 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)

D:\000224-5-comb-V25D-PART.PDM.REV.-DRAWING.FDM.REV.