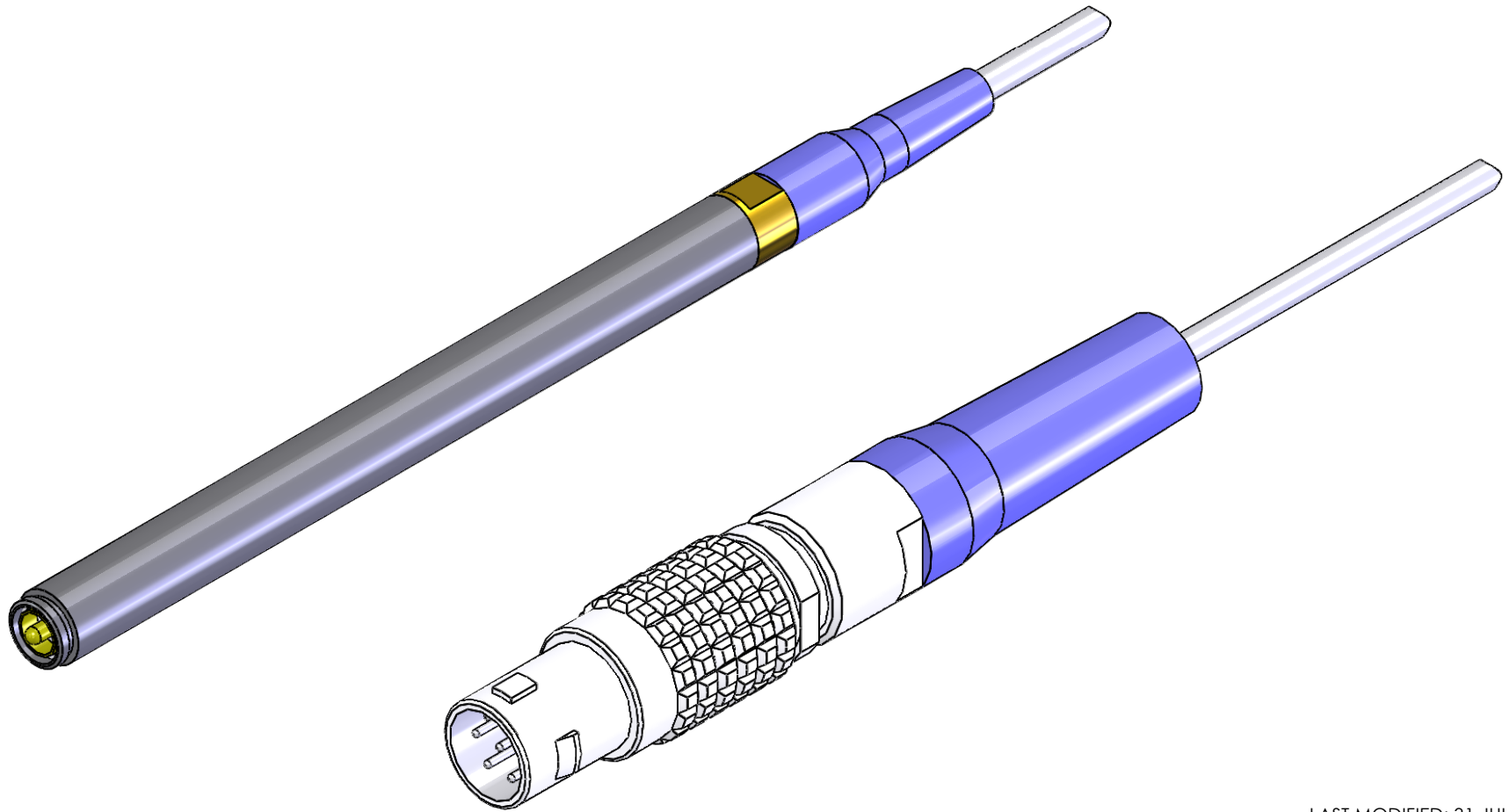

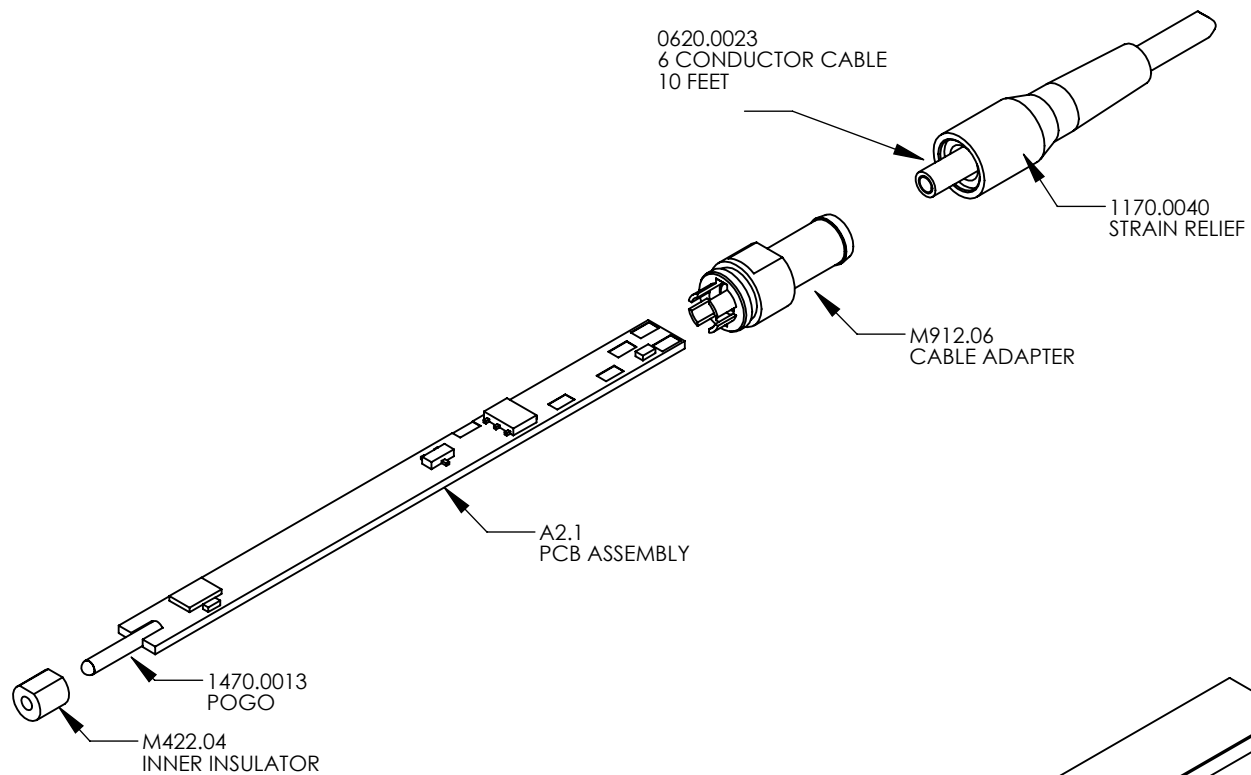


REV	DESCRIPTION	DATE	BY	ECO
A	PART CREATION	6/13/06		
N/A	RELEASED	4/9/07	J. DAVIS	3523
D	A2.1 BOARD TO REV B	8/7/07	J. DAVIS	3569
E	UPDATED A2.1 VIEWS AND WIRING CONFIG. TABLE	5/29/19	D. WEBSTER	4854



LAST MODIFIED: 31 JULY 2007 12:25 PM

MATERIAL	--	DIMENSIONS ARE IN INCHES	NAME	DATE	 LARSON DAVIS Provo, Utah, USA (801) 375-0177	
FINISH	--	<u>DIMENSIONAL TOLERANCES</u>	DRAWN	J DAVIS		31 JUL 2007
GENERAL NOTES		.X ±.050 .XX ±.010 .XXX ±.005 .XXXX ±.003 ANGULAR ±.5°	CHECKED	-		-
		<u>HOLE TOLERANCES</u>	ENGINEER	J DAVIS		
		Ø .013 - .249 +.003, -.002 Ø .250 - .499 +.005, -.003 OVER Ø .499 ±.005	SIGNED			
<p>PROPRIETARY AND CONFIDENTIAL THIS DOCUMENT, SUBMITTED IN CONFIDENCE, CONTAINS PROPRIETARY INFORMATION WHICH SHALL NOT BE REPRODUCED OR TRANSFERRED TO OTHER DOCUMENTS OR DISCLOSED TO OTHERS OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF LARSON DAVIS, INC.</p>			DATE		TITLE	
<p>COPYRIGHT © LARSON DAVIS, INC. FILE NAME: S912.01 0.25in PREAMPLIFIER ASSEMBLY</p>					1/4" MICROPHONE PREAMPLIFIER	
					SIZE A NUMBER S912.01 REV. E	
					SCALE 1:1 WEIGHT SHEET 1 OF 6	



ASSEMBLY INSTRUCTIONS

1. BREAK A2.1 BOARD OUT OF PANEL AND SAND OFF BREAKOFFS FLUSH TO BOARD EDGE WITH 600 GRIT SANDPAPER. BE CAREFUL NOT TO SAND TOO FAR INTO BOARD.
2. MEASURE BOARD WIDTH AT POINTS ALONG ENTIRE LENGTH WITH CALIPERS. WIDTH SHOULD NOT EXCEED MORE THAN 0.183 INCHES. REPEAT STEP 1 IF SO.
3. SLIDE INNER INSULATOR (M422.04) ONTO POGO (FROM REAR DIRECTION, TO PREVENT POGO FROM JAMMING) AND PLACE POGO, INNER INSULATOR, PCB, AND CABLE ADAPTOR INTO SOLDER FIXTURE (T912.01).

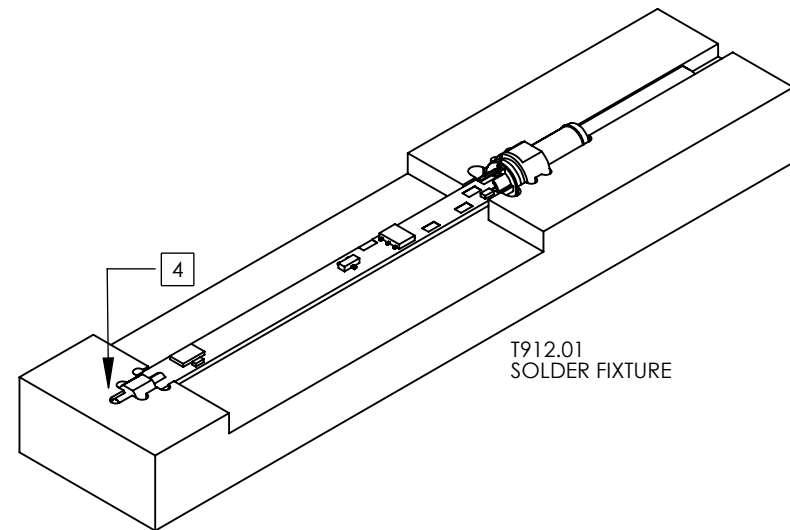
4 SOLDER POGO IN PLACE.

DO NOT SOLDER BACK OF POGO AS THIS WILL CAUSE POGO COMPRESSION TO JAM.

DO NOT SOLDER CABLE ADAPTOR TO PCB AT THIS TIME!

5. FLIP OVER ENTIRE ASSEMBLY AND REPEAT STEP 4.
6. REMOVE ASSEMBLY FROM FIXTURE.
7. ENSURE THAT POGO COMPRESSES ALL THE WAY IN BEFORE CONTINUING.
8. PERFORM HIGH IMPEDANCE WASH ON BOARD AT THIS POINT.

NOTE: ALSO, IF THEY HAVEN'T BEEN PERFORMED YET, WASH THE M912.01 AND M912.02 COMPONENTS AS WELL, USING THE 'MECHANICAL PART CLEANING PROCESS' FOUND IN D0001.7039.



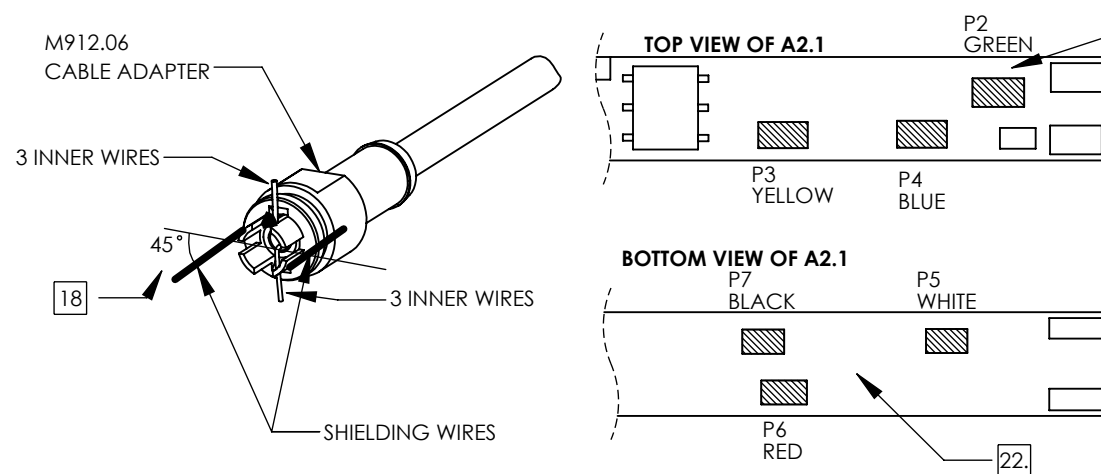
SIZE	NUMBER	S912.01	REV.
A			E
SCALE 2:1	WEIGHT	SHEET 2 OF 6	

9. CUT 10' OF CABLING (0620.0023).
10. INSTALL LEMO STRAIN RELIEF (1170.0040) ONTO CABLE AND SLIDE OUT OF THE WAY.
11. SLIDE CABLE ADAPTOR M912.06 ONTO CABLE AND OUT OF THE WAY.
12. STRIP CABLE OUTER INSULATION BACK BY 1", KEEPING THE SHIELDING WIRE.
13. STRIP INNER INSULATIONS OF THE SIX WIRES BY 0.03".
14. PLACE CABLE ADAPTOR, WITH CABLE, INTO ARTICULATING VISE.
15. TIN THE SIX INNER CONDUCTOR WIRES (COULD POSSIBLY DO THIS STEP USING A SOLDER POT AS WELL).
16. SEPARATE STRANDS OF SHIELDING INTO TWO GROUPS AND ALSO SEPARATE THE SIX WIRES INTO TWO GROUPS, KEEPING ONE GROUP OF THREE WIRES AND SHIELDING FOR THE APPLICABLE PADS FOR THE TOP OF THE BOARD, AND ONE GROUP FOR THE BOTTOM.
17. SLIDE CABLE ADAPTOR UP CABLE UNTIL CUT EDGE OF OUTER INSULATION IS JUST INSIDE OF CABLE ADAPTOR.
18. PULL ONE SHIELDED WIRE GROUP UP THROUGH SLOT AND DOWN ACROSS A CABLE ADAPTOR TAB AT APPROX. 45°. SOLDERING THE SHIELD WIRES TO THE ADAPTER TAB, PULLING WIRES TIGHT WHILE BEING SOLDERED.
19. Roll CABLE ADAPTOR 180° AND REPEAT STEP 18 WITH THE OTHER SHIELDED WIRE GROUPING.
CUT EXCESS SHIELDED WIRE FLUSH TO CABLE ADAPTOR ONLY AFTER INSPECTING SOLDER JOINTS.
20. PLACE PCB A2.1 SUBASSEMBLY INTO THE CABLE ADAPTOR SLOTS (THAT DON'T HAVE THE CABLE ESCAPES SLOTS) ENSURING THAT THE CORRECT WIRES CORRESPOND TO THE TOP AND BOTTOM OF THE BOARD (SEE FIGURES BELOW).
21. SOLDER THREE APPROPRIATE WIRES TO PCB PADS, USE A HEAT SINK (TWEEZERS, ETC.) ON WIRES TO PREVENT WIRE INSULATION FROM SHRINKING BACK TOO MUCH. USE FIGURES BELOW FOR WIRE PLACEMENTS.
22. ROTATE ASSEMBLY 180° AND REPEAT STEP 21 FOR THE OTHER THREE WIRES ON OPPOSITE SIDE OF BOARD.
23. USING A JEWELERS LOUPE OR MICROSCOPE, **INSPECT ALL SOLDER JOINTS AS WELL AS INNER WIRE INSULATIONS.** IF ANY INNER WIRE INSULATION HAS BEEN MELTED, EXPOSING CONDUCTORS, WILL HAVE TO DESOLDER EVERYTHING, AND START OVER.
24. PLACE A2.1 SUBASSEMBLY AND CABLE ADAPTOR BACK INTO SOLDER FIXTURE (T912.01). WRENCH FLATS SHOULD BE HORIZONTALLY ORIENTED.
25. SOLDER CABLE ADAPTOR TABS TO A2.1 SOLDER PADS.
26. REPEAT STEPS 24 AND 25 FOR OTHER SIDE OF BOARD.

NOTE: DO NOT SLIDE ON CABLE ADAPTOR STRAIN RELIEF AT THIS TIME. IT'S EXTREMELY HARD TO GET OFF.

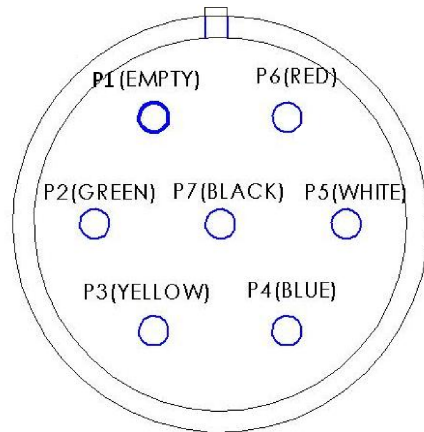
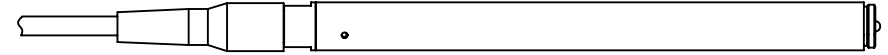
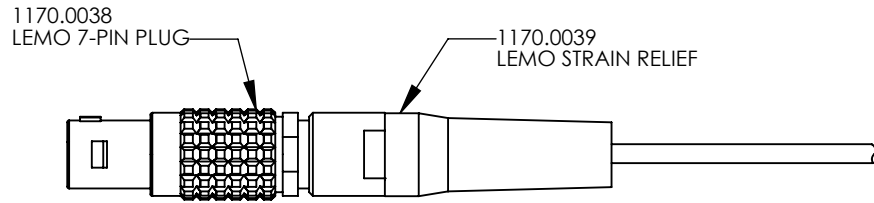
27. GENEROUSLY SPRAY ELECTRICAL CLEANING SOLVENT ON ALL SOLDER JOINTS.
NOTE: HANG WITH POGO SIDE UP WHEN DRYING TO PREVENT CONTAMINANTS FROM MIGRATING TO POGO AREA.

NOTE: SOLDER PADS FOR A2.1 ARE DIFFERENT FROM REV A TO REV B. THIS VIEW IS FOR REV B BOARD ONLY.



WIRING CONFIGURATIONS

A2.1 PAD NUMBER	LEMO CONNECTOR PIN NUMBER	WIRE COLOR	FUNCTION
N/A	1	N/A	N/A
P2	2	GREEN	GROUND
P3	3	YELLOW	MIC. POLARIZATION
P4	4	BLUE	SIGNAL OUT
P5	5	WHITE	TEDS
P6	6	RED	POWER SUPPLY +
P7	7	BLACK	POWER SUPPLY -
18	M912.06 ADAPTER TABS	SHIELD	SHIELD



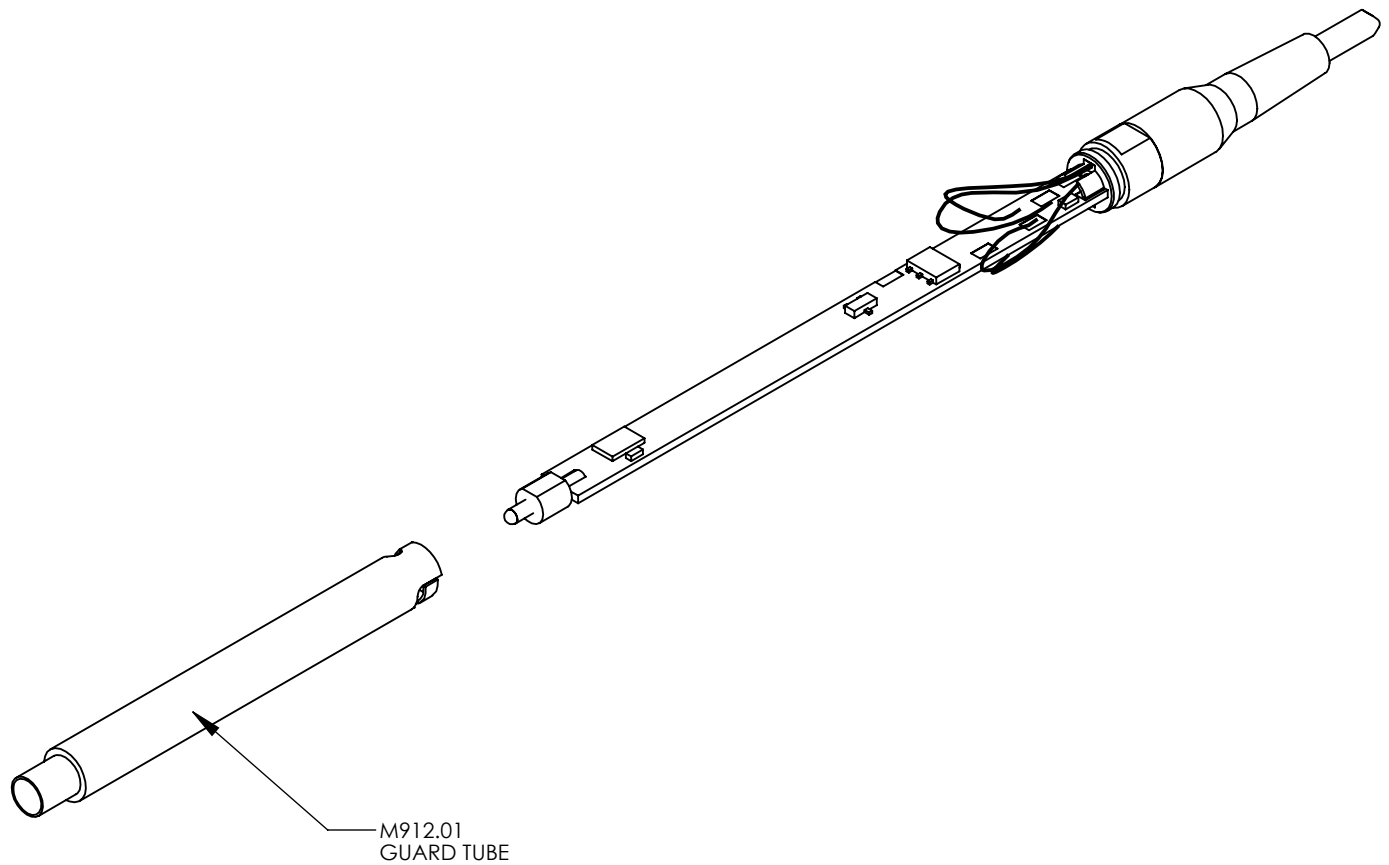
BACK VIEW OF 7-PIN LEMO CONNECTOR ON SOLDER SIDE

28. INSTALL 7-PIN LEMO CONNECTOR ON OPPOSITE END OF CABLE. FOLLOW FIGURE FOR SOLDERED PIN CONNECTIONS.

TO PREVENT SWEARING, MAKE SURE TO SLIDE ON STRAIN RELIEF (1170.0039) AS WELL AS OTHER APPLICABLE LEMO CONNECTOR COMPONENTS BEFORE SOLDERING ON THE WIRES.

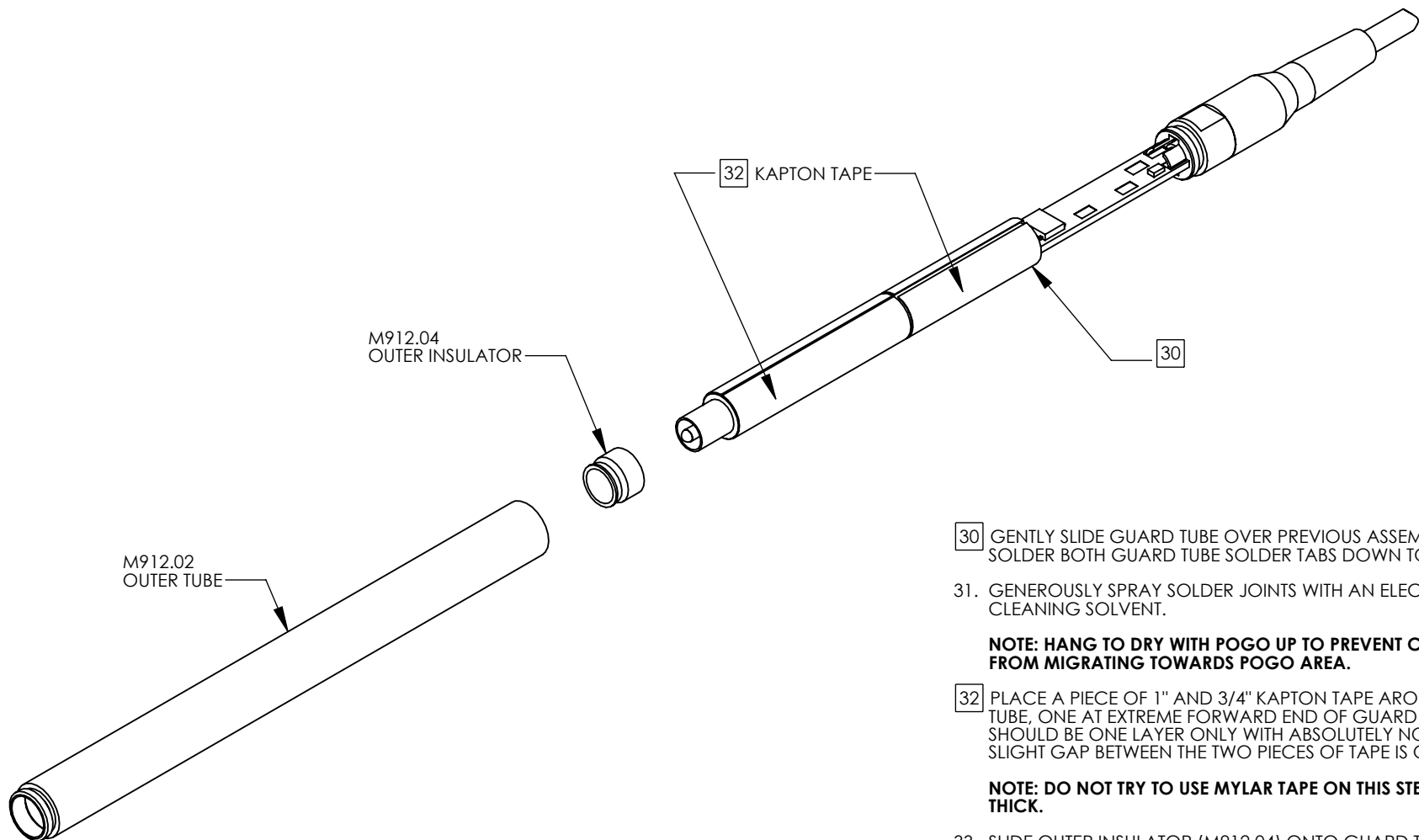
29. PERFORM PRETEST (WITHOUT GUARD TUBE OR OUTER TUBE INSTALLED YET) (SEE D0001.8324).

A2.1 PAD NUMBER	LEMO CONNECTOR PIN NUMBER	WIRE COLOR	FUNCTION
N/A	1	N/A	N/A
P2	2	GREEN	GROUND
P3	3	YELLOW	MIC. POLARIZATION
P4	4	BLUE	SIGNAL OUT
P5	5	WHITE	TEDS
P6	6	RED	POWER SUPPLY +
P7	7	BLACK	POWER SUPPLY -
18 M912.06 ADAPTER TABS		SHIELD	SHIELD



M912.01
GUARD TUBE

SIZE A	NUMBER	S912.01	REV. E
SCALE 2:1	WEIGHT	SHEET 5 OF 6	



30 GENTLY SLIDE GUARD TUBE OVER PREVIOUS ASSEMBLY AND SOLDER BOTH GUARD TUBE SOLDER TABS DOWN TO PCB PADS.

31. GENEROUSLY SPRAY SOLDER JOINTS WITH AN ELECTRICAL CLEANING SOLVENT.

NOTE: HANG TO DRY WITH POGO UP TO PREVENT CONTAMINANTS FROM MIGRATING TOWARDS POGO AREA.

32 PLACE A PIECE OF 1" AND 3/4" KAPTON TAPE AROUND GUARD TUBE, ONE AT EXTREME FORWARD END OF GUARD TUBE. TAPE SHOULD BE ONE LAYER ONLY WITH ABSOLUTELY NO OVERLAP. SLIGHT GAP BETWEEN THE TWO PIECES OF TAPE IS OK.

NOTE: DO NOT TRY TO USE MYLAR TAPE ON THIS STEP. IT'S TOO THICK.

33. SLIDE OUTER INSULATOR (M912.04) ONTO GUARD TUBE.

34. GENTLY SLIDE OUTER TUBE (M912.02) OVER GUARD TUBE AND SCREW ONTO THE CABLE ADAPTOR. TIGHTEN WITH 7/32 WRENCH AND SHEET OF RUBBER.

35. WITH OHMMETER, CHECK TO ENSURE THAT RESISTANCE FROM GUARD TUBE TO OUTER TUBE IS HIGH (OVER 1 MEG OHMS). IF THE RESISTANCE IS LOWER, REMOVE OUTER TUBE AND KAPTON TAPE, AND REPEAT STEPS 32 THRU 34.

36. SLIDE ON BOTH STRAIN RELIEFS.

37. RUN FINAL PERFORMANCE TESTS ON COMPLETED UNIT (SEE D0001.8325).

SIZE	NUMBER		REV.
A		S912.01	E
SCALE 4:1	WEIGHT		SHEET 6 OF 6