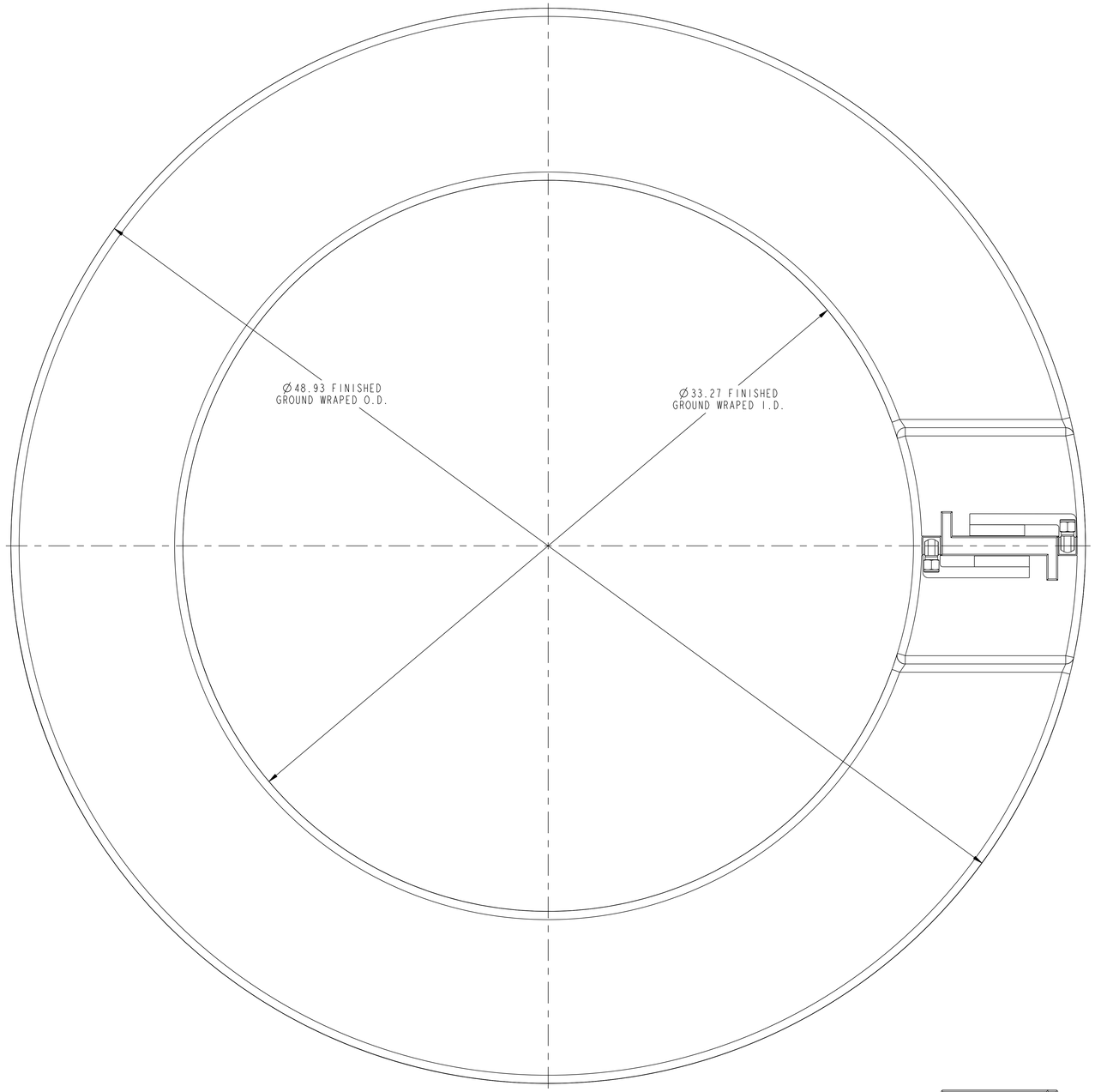
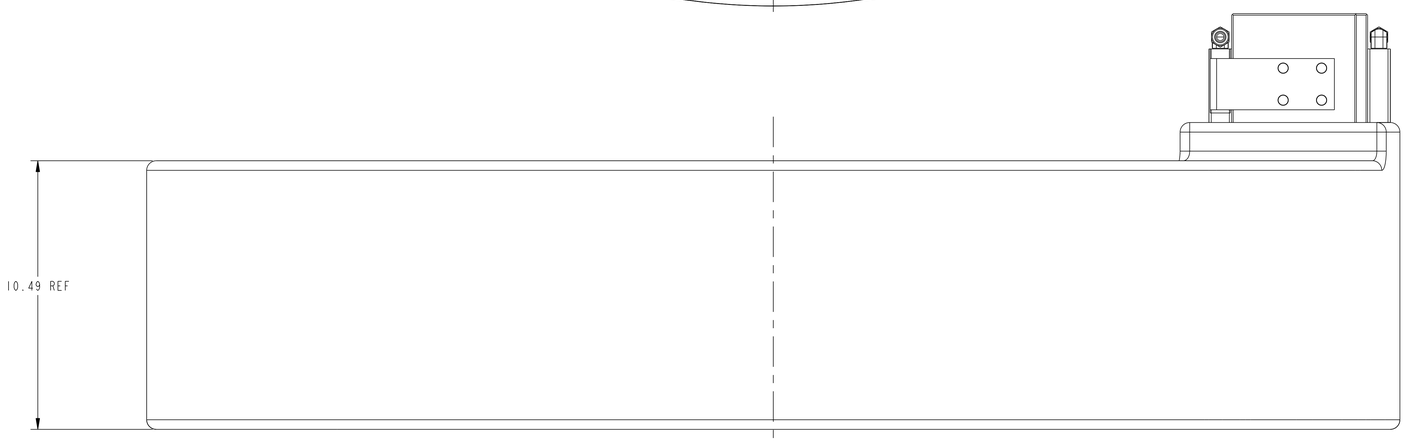
NO.	REVISION	BY	CH	SUP	APPROVED	DATE





PF-4 COIL ASSEMBLY
NO REQUIRED = 2

GENERAL NOTES:

1. TURN INSULATION (APPROX .049") THICK
   1 (1/2 LAPPED) LAYER KAPTON/ADHESIVE TAPE
   2 (1/2 LAPPED) LAYERS GLASS TAPE
   SPEC. NO. NCSX-CSPEC-132-02 FOR TURN TO TURN DETAILS

2. LONGITUDINAL SPLICING OF CONDUCTOR TO BE PREFORMED PER SPECIFICATION NO. NCSX-CSPEC-132-02 AND DRAWING SC132-039.

3. VOIDS IN COIL AREAS BETWEEN CONDUCTORS GREATER THAN 1/8" TH'K ARE TO BE FILLED WITH G-11CR SPACE FILLERS PART NO. 11, ALL OTHER AREAS LESS THAN 1/8" TO BE FILLED WITH GLASS OR GLASS EPOXY.

4. ONE LAYER OF GLASS TAPE TO BE APPLIED BETWEEN MATING G-11CR PARTS / SURFACES.

6. DIAGNOSTIC-LOOP-WIRE PART NO. 12 TO BE INSTALLED PER SECTION A-A SHOWN ON SHEET 2 & ENGINEERING INSTRUCTION PRIOR TO LAST LAYER OF GROUND WRAP.

7. FOR GROUND WRAP INSULATION AND VACUUM IMPREGNATION OF COIL SEE SPECIFICATION NO. NCSX-CSPEC-132-02

PART NO,	DRAWING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY REQ'D
14	COMM	EPOXY	SEE NOTE 7	AR
13	COMM	GROUND WRAP S2 GLASS .015" TH'K X 2" WIDE (3/8" TOTAL THICKNESS)	SEE NOTE 7	AR
12	DIANOSTIC-LOOP-WIRE	ARI INDUSTRIES #32-IN-C	316SS SHEATH/COND	AR
11	THIS DWG	SPACE FILLERS SIZED BY VENDOR SEE NOTE 2	G-11 CR	AR
10	THIS DWG	FLAG LEAD INSULATION BLOCK (SEE DETAIL)	G-11 CR	1
9	THIS DWG	1/8" TH'K X 1-1/2" WD X LG TO SUIT BEND TO CONFORM TO 6 OR 7	G-11 CR	1
8	THIS DWG	Ø.50 NOM PIN LG TO SUIT	G-11 CR	4
7	THIS DWG	OUTER LEAD LOCK BLOCK (SEE DETAIL)	G-11 CR	1
6	THIS DWG	INNER LEAD LOCK BLOCK (SEE DETAIL)	G-11 CR	1
5	THIS DWG	2" X 2"X 1/2" NUT PLATE (SEE DETAIL)	316SS	2
4	THIS DWG	LEAD FLAG (SEE DETAIL)	ETP110	2
3	SE131-013	COOLANT FITTING SEE DRAWING FOR DETAILS	SEE DWG	2
2	THIS DWG	.049 TURN TO TURN INSUL. SEE NOTE 1	SEE NOTE 1	AR
1	SE132-010	PF-5 CONDUCTOR APPROX. LENGTH = 862 Ft.	SEE DWG	AR

PARTS LIST

NCSX-SE132-040

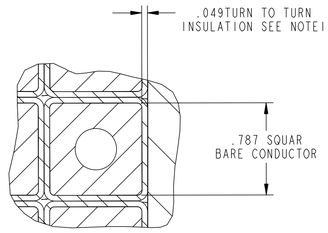
COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLARATOR EXPERIMENT	
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES 125	STELLARATOR CORE CONVENTIAL COILS PF-4 COIL WINDING ASSEMBLY / DETAILS	
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/.020		
	TOLERANCES NON-CUMULATIVE	DSN: B.PAUL 2/12/08	DRAWING NO:
NEXT ASSEMBLY	DECIMAL-INCH: .X +/-.100, .XX +/-.030, .XXX +/-.005, ANGULAR +/-0°-15'; FRACTIONS: 0"-12" +/-1/16, 12"-72" +/-1/8, 72"-120" +/-1/4, OVER 120" +/-1/2	CHK: M. KALISH 2/12/08	SE132-040
		ENGR: J.CHRZANOWSKI 2/12/08	
		SUPV: J.SEIGEL 2/12/08	SHEET 1 OF 4 REV 0

WEIGHT	
1957.5 lbs	
MODEL NAME	
SE132-040	
WELDING ENGINEER	L.DUDEK 2/12/08

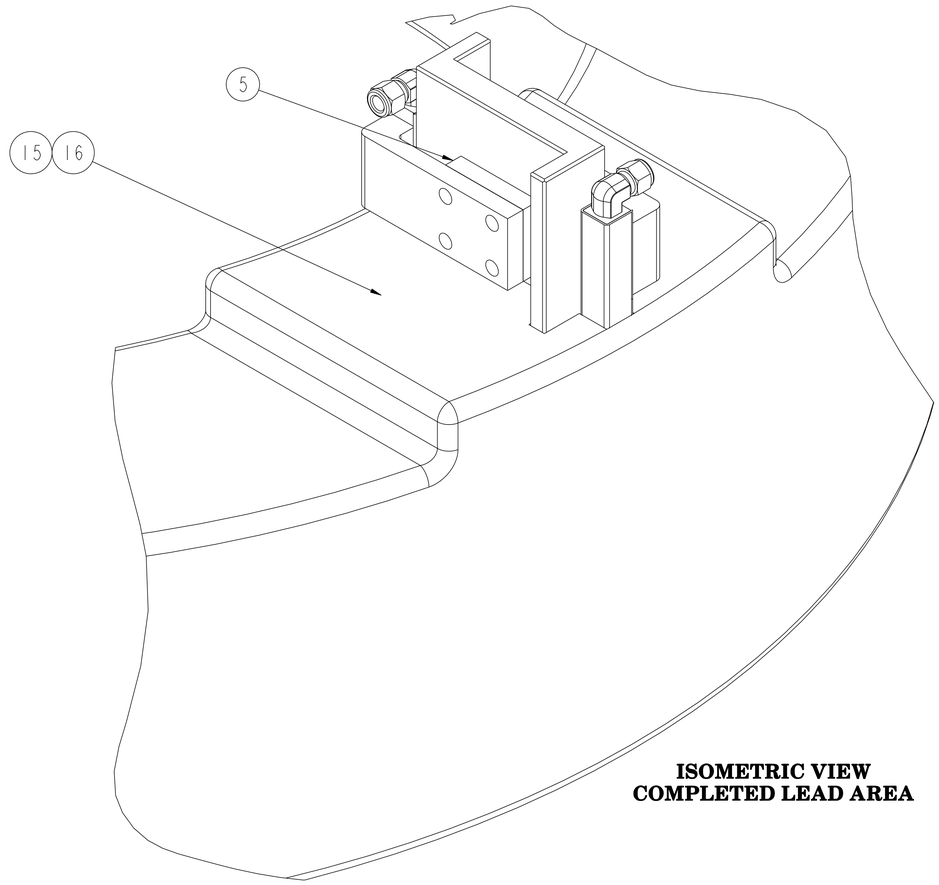
RELEASE LEVEL: Preliminary Design
DWG VERSION NO: 40

NCSX_ASSY_FORMAT_E

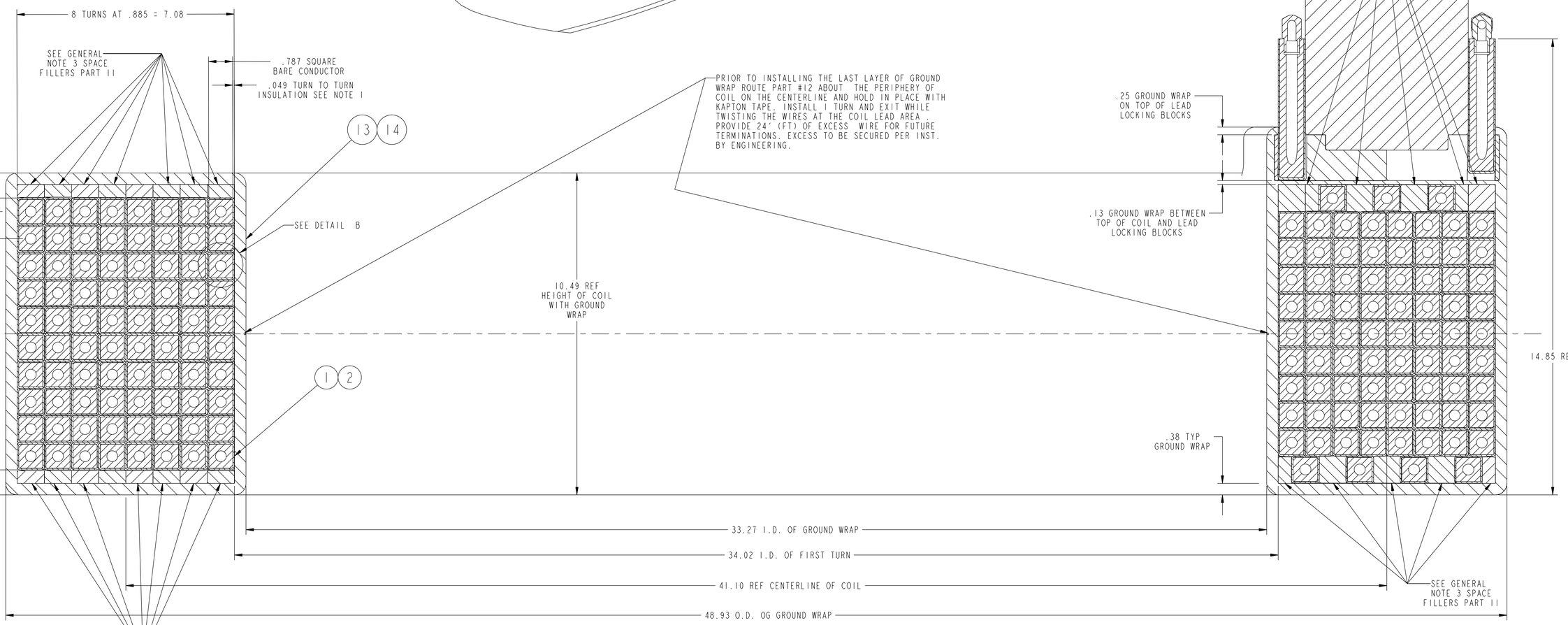
NO.	REVISION	BY	CH	SUP	APPROVED	DATE



DETAIL B
SCALE 2.000



ISOMETRIC VIEW
COMPLETED LEAD AREA



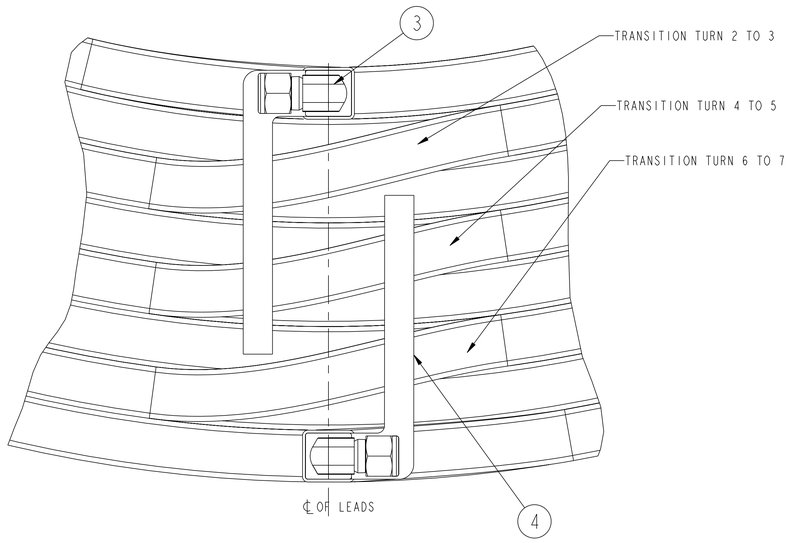
SECTION A-A

NCSX-SE132-040

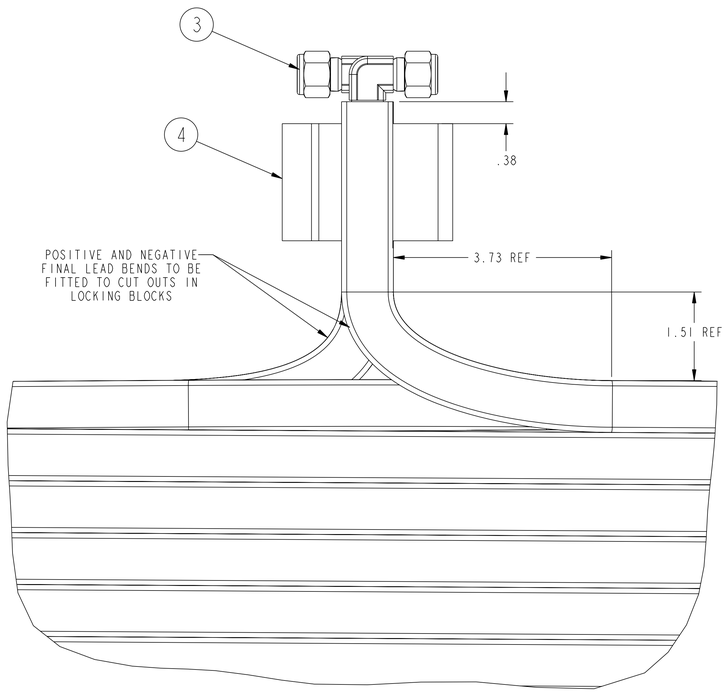
RELEASE LEVEL: Preliminary Design	WEIGHT 1957.5 lbs	COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLARATOR EXPERIMENT
DWG VERSION NO: 40	MODEL NAME SE132-040	Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES	STELLARATOR CORE CONVENTAILS COILS PF-4 COIL WINDING ASSEMBLY / DETAILS
	WELDING ENGINEER L.DUDEK 2/12/08	DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/.020	
		NEXT ASSEMBLY	TOLERANCES NON-CUMULATIVE	DSN: B.PAUL 2/12/08 DRAWING NO:
			DECIMAL-INCH FRACTIONS .X +/-.100 0°-12° +/-1/16 .XX +/-.030 12°-72° +/-1/8 .XXX +/-.005 72°-120° +/-1/4 ANGULAR +/-0°-15' OVER 120° +/-1/2	CHK: M. KALISH 2/12/08 SE132-040
				ENGR: J.CHRZANOWSKI 2/12/08
				SUPV: J.SEIGEL 2/12/08 SHEET 2 OF 4 REV 0

NCSX_ASSY_FORMAT_E

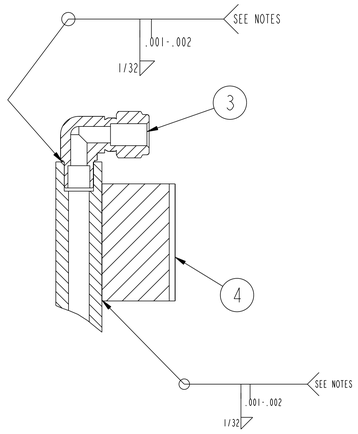
NO.	REVISION	BY	CH	SUP	APPROVED	DATE



PLAN VIEW

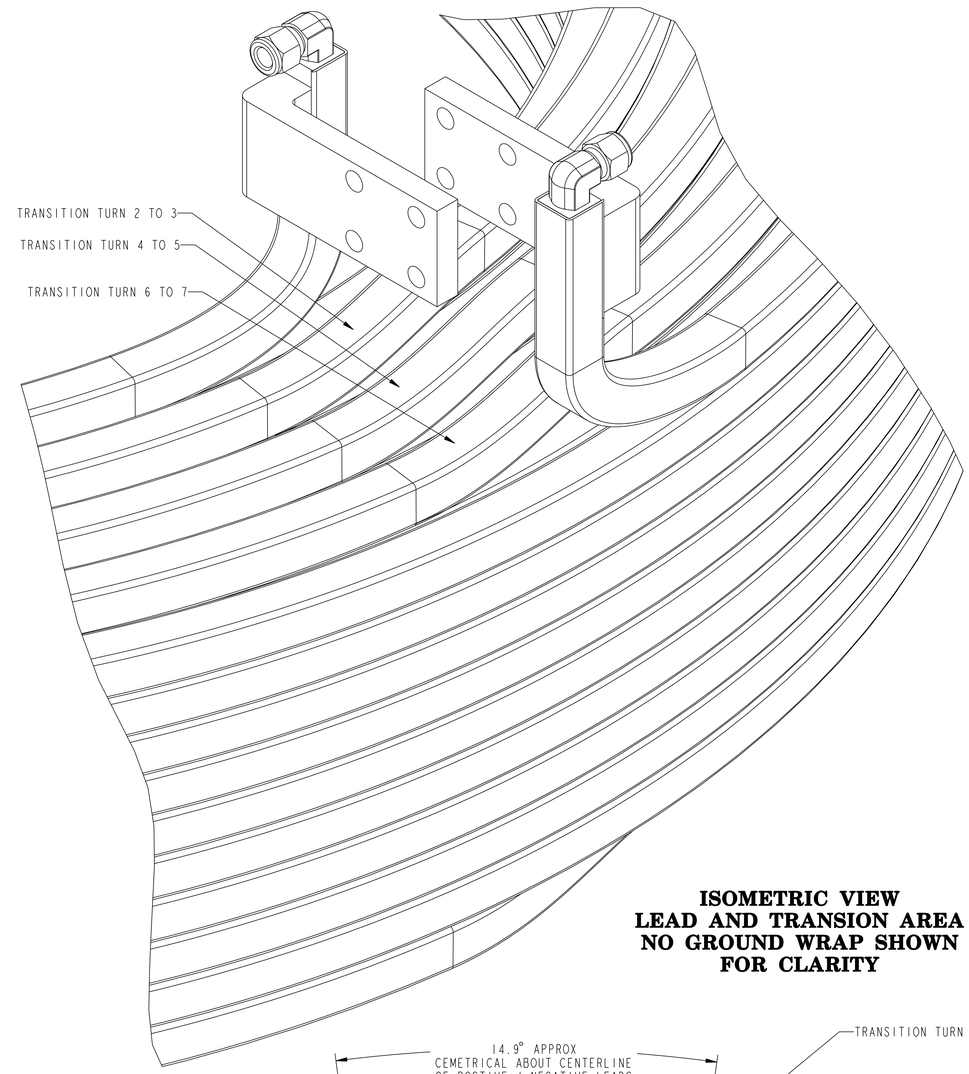


LEAD AREA ELEV. VIEW
NO GROUND WRAP SHOWN
FOR CLARITY

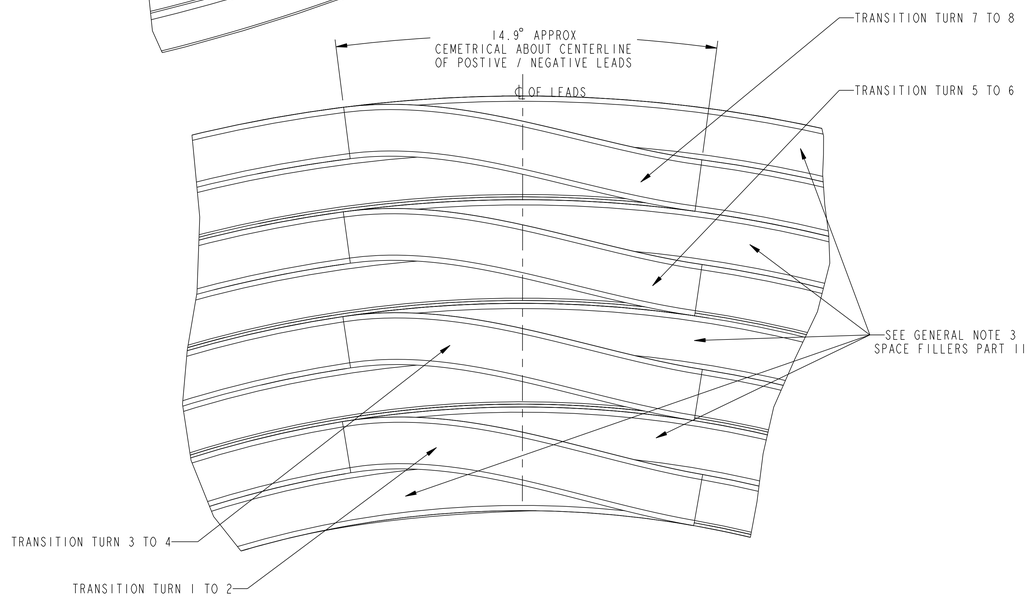


LEAD FLAG AND FITTING BRAZE NOTES

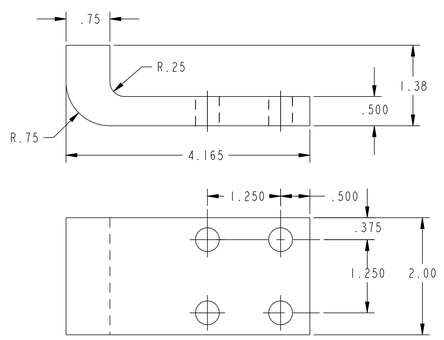
1. CLEAN THE JOINT AREAS (LEADS) WITH SCOTCH-BRITE, THEN WASH WITH ACETONE PRIOR TO INSTALLATION OF FITTINGS.
2. ASSEMBLE WITH CLEANED FITTINGS AND SIL-FOS WAFERS. SEE SPECIFICATION FOR TYPE OF SIL-FOS.
3. HEAT ASSEMBLED JOINT AREA WITH TORCH. CONTINUE TO HEAT THE AREA UNTIL THE SIL-FOS STARTS TO MELT, THEN ADD ADDITIONAL SIL-FOS AS NEEDED, AND DO NOT MOVE THE FITTING DURING BRAZING & COOLING.
4. FILE OR GRIND OFF EXCESS SIL-FOS FROM JOINT AREA. VISUAL INSPECTION OF BRAZE JOINT SHALL BE MADE TO INSURE THE COMPLETE FLOW OF SIL-FOS BRAZE MATERIAL INTO THE JOINTED AREA. JOINTS MUST BE FREE FROM CRACKS AND EXCESSIVE POROSITY.
5. PROTECT TURN AND GROUNDWRAP INSULATION FROM DAMAGE DURING ALL TORCH BRAZING OPERATIONS
6. FITTING (PART #3) TO BE BRAZED TO LEAD PRIOR TO GROUNDWRAP AND VPI.
7. SEE SPEC. NO. NCSX-CSPEC-132-02 FOR QUALIFICATION AND TESTING REQUIREMENTS OF ALL BRAZE JOINTS.



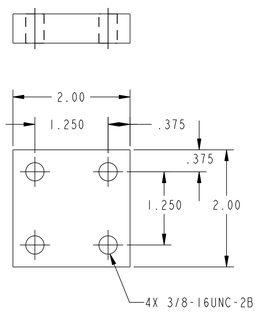
ISOMETRIC VIEW
LEAD AND TRANSION AREA
NO GROUND WRAP SHOWN
FOR CLARITY



LEAD / TRANSITION AREA
BOTTOM VIEW
NO GROUND WRAP SHOWN
FOR CLARITY



PART (4)



PART (5)

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY NATIONAL COMPACT STELLARATOR EXPERIMENT	
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES 125	STELLARATOR CORE CONVENTIAL COILS PF-4 COIL WINDING ASSEMBLY / DETAILS	
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/.020		
	TOLERANCES NON-CUMULATIVE	DSN: B.PAUL 2/12/08	DRAWING NO:
NEXT ASSEMBLY	DECIMAL-INCH: .X +/-.100, .XX +/-.030, .XXX +/-.005, ANGULAR +/-0°-15'; FRACTIONS: 0°-12° +/-1/16, 12°-72° +/-1/8, 72°-120° +/-1/4, OVER 120° +/-1/2	CHK: M. KALISH 2/12/08	SE132-040
WEIGHT 1957.5 lbs		ENGR: J.CHRZANOWSKI 2/12/08	
MODEL NAME SE132-040		SUPV: J.SEIGEL 2/12/08	SHEET 3 OF 4 REV 0
WELDING ENGINEER L.DUDEK 2/12/08			

RELEASE LEVEL: Preliminary Design
DWG VERSION NO: 40

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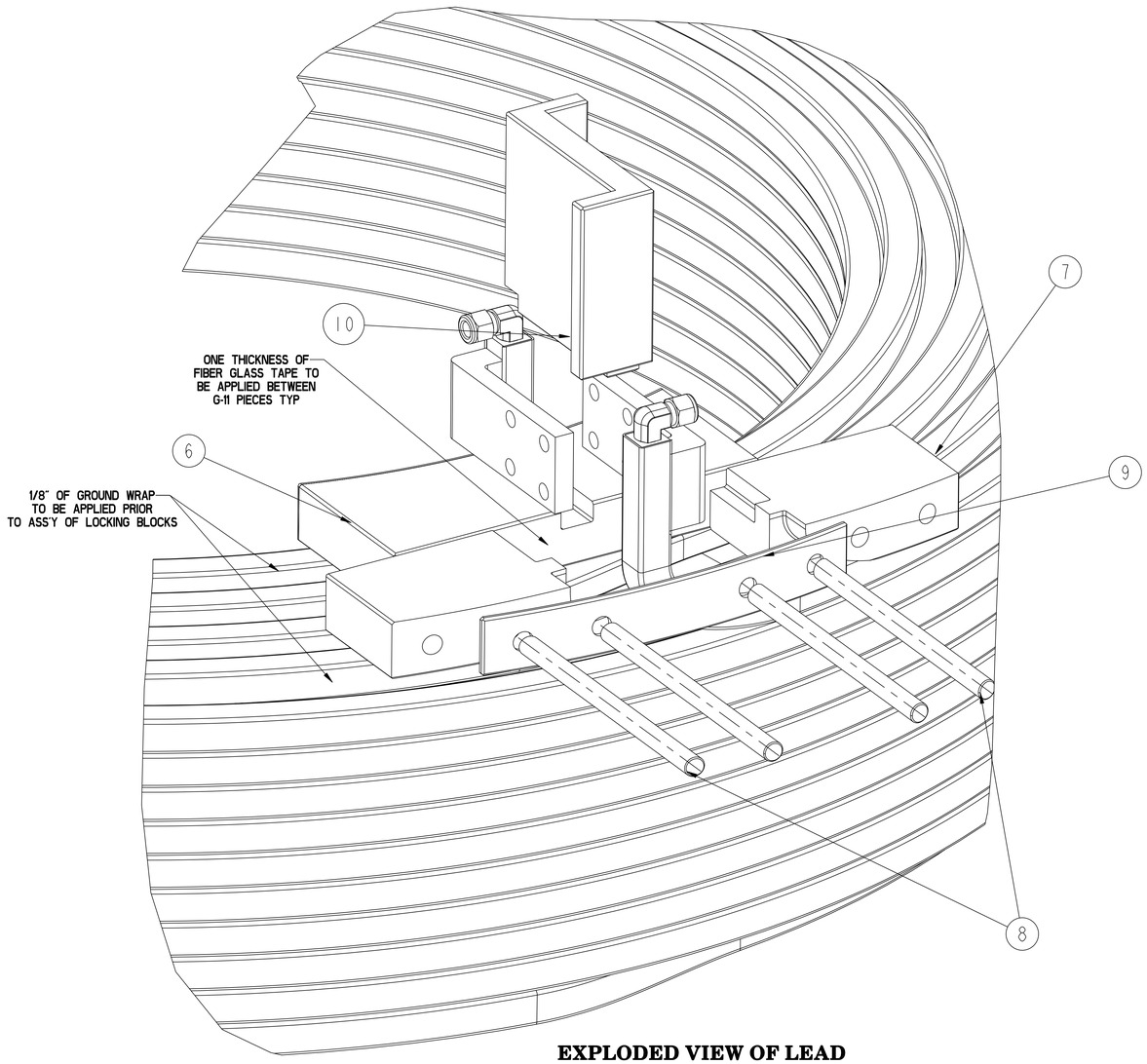
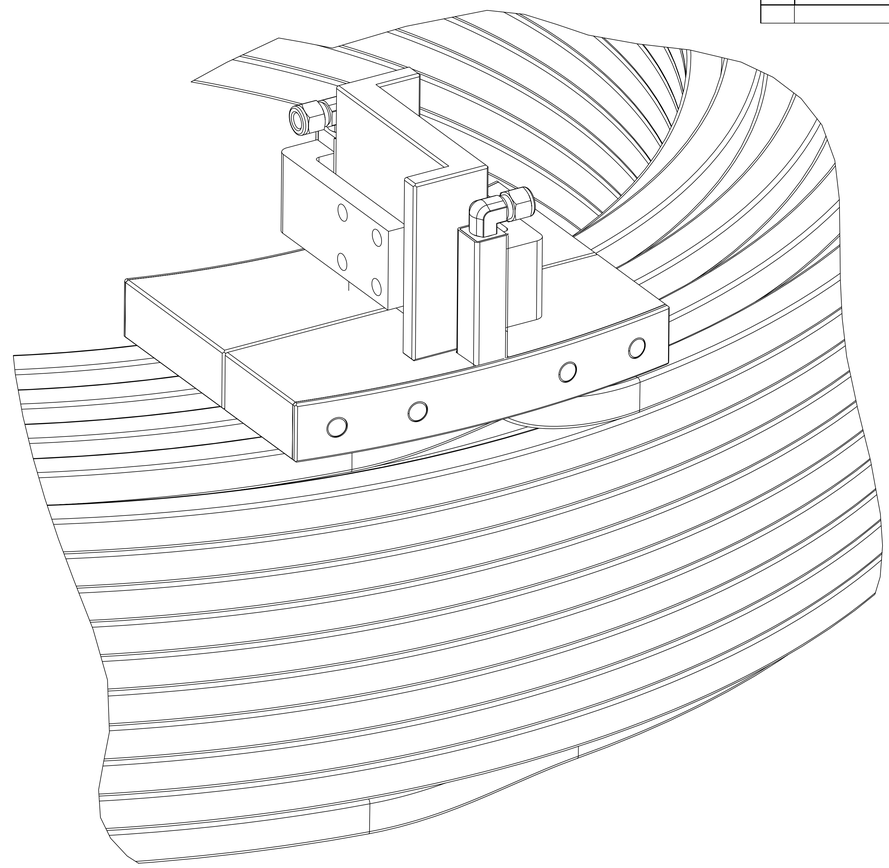
NCSX-SE132-040

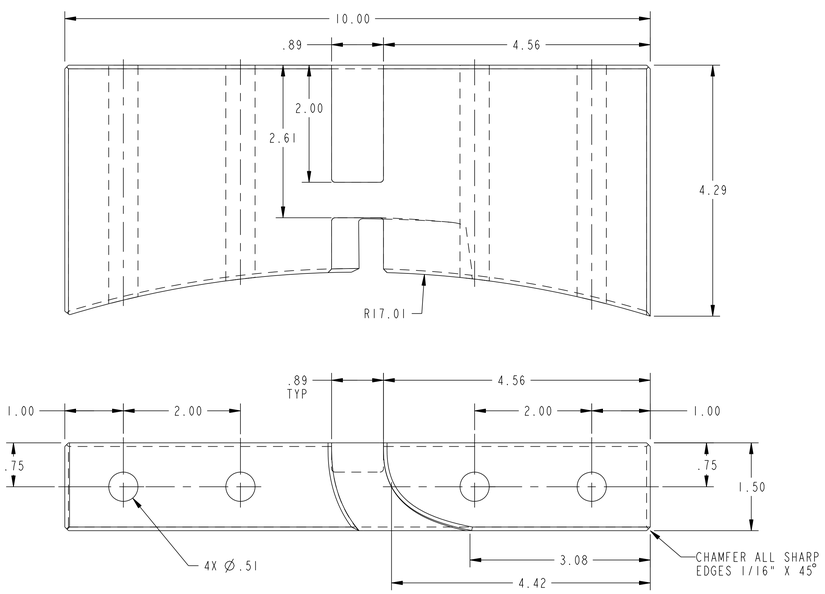
NO.	REVISION	BY	CH	SUP	APPROVED	DATE



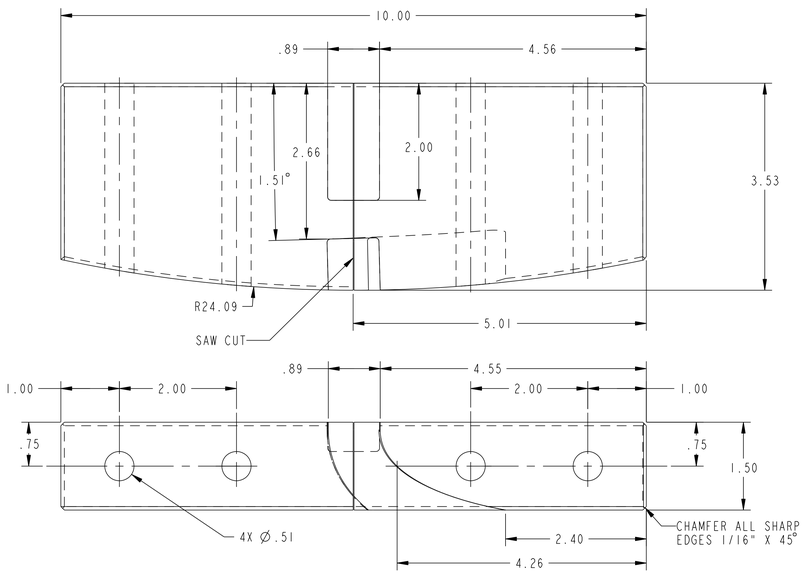
EXPLODED VIEW OF LEAD LOCKING BLOCK ASSEMBLLY NO GROUND WRAP SHOWN



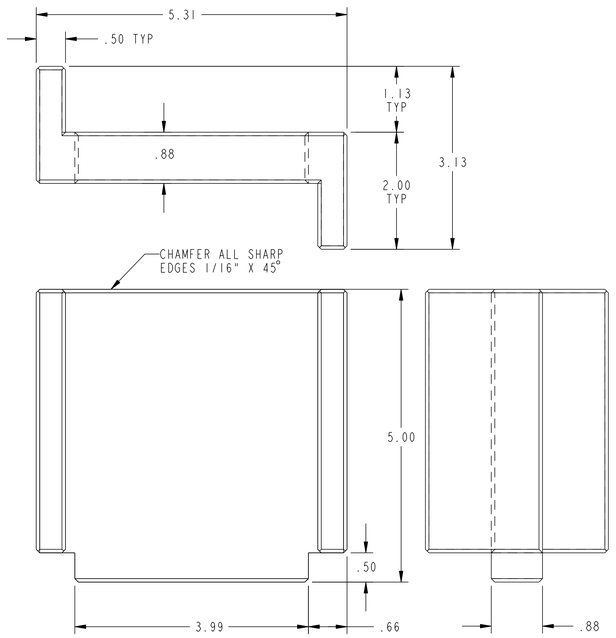
VIEW OF LEAD LOCKING BLOCK ASSEMBLLY NO GROUND WRAP SHOWN



PART 6



PART 7



PART 10

WEIGHT	1957.5 lbs		
MODEL NAME	SE132-040		
WELDING ENGINEER	L.DUDEK 2/12/08		

RELEASE LEVEL: Preliminary Design
DWG VERSION NO: 40

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY			
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES 125	NATIONAL COMPACT STELLARATOR EXPERIMENT			
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/.020	STELLARATOR CORE CONVENTIAL COILS PF-4 LEAD LOCKING ASSEMBLY / DETAILS			
	TOLERANCES NON-CUMULATIVE	DSN: B.PAUL	2/12/08	DRAWING NO:	
NEXT ASSEMBLY	DECIMAL-INCH / FRACTIONS .X +/-.100 / 0°-12° +/-1/16 .XX +/-.030 / 12°-72° +/-1/8 .XXX +/-.005 / 72°-120° +/-1/4 ANGULAR +/-0°-15' / OVER 120° +/-1/2	CHK: M. KALISH	2/12/08	SE132-040	
		ENGR: J.CHRZANOWSKI	2/12/08		
		SUPV: J.SEIGEL	2/12/08	SHEET 4 OF 4	REV 0

NCSX-SE132-040

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