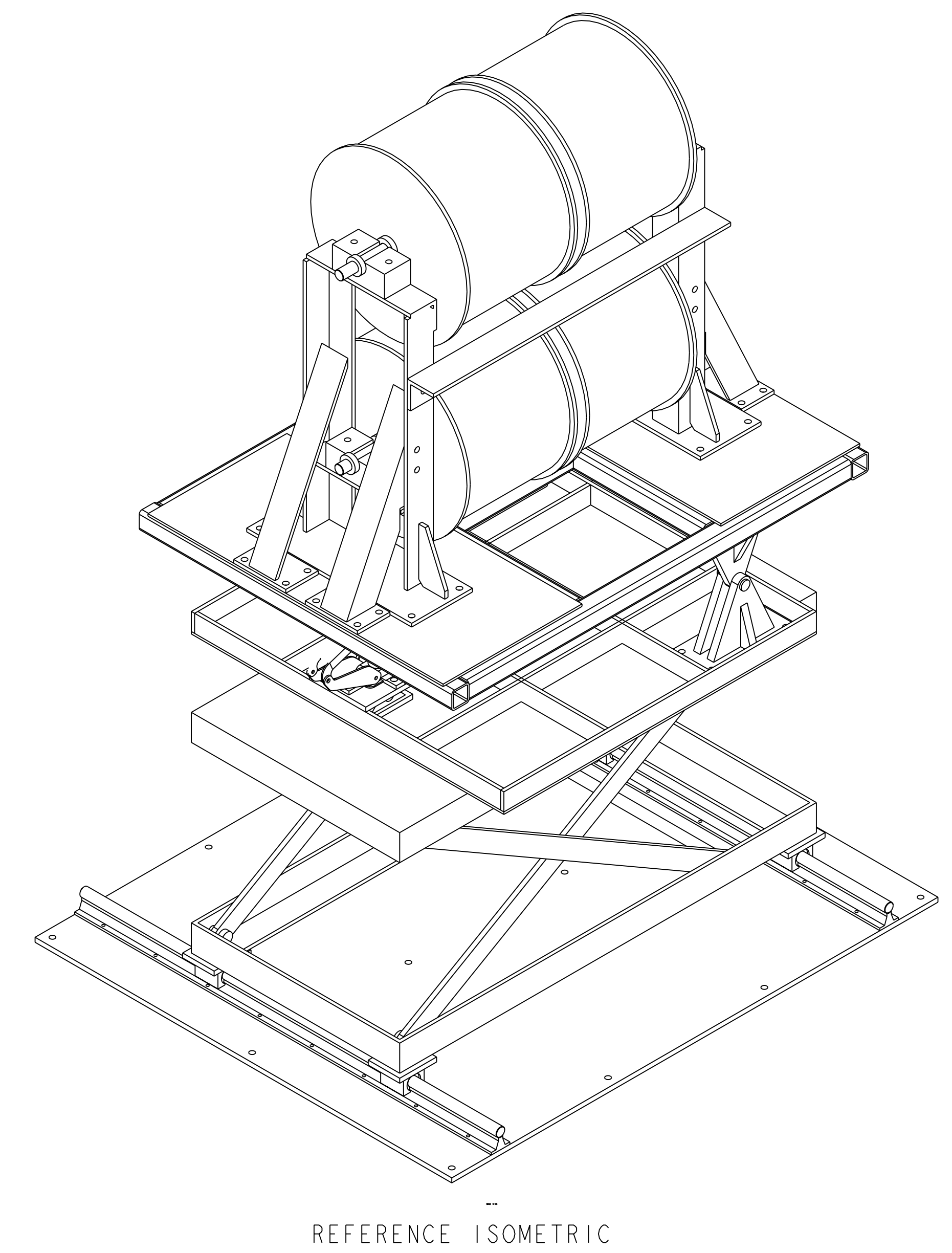
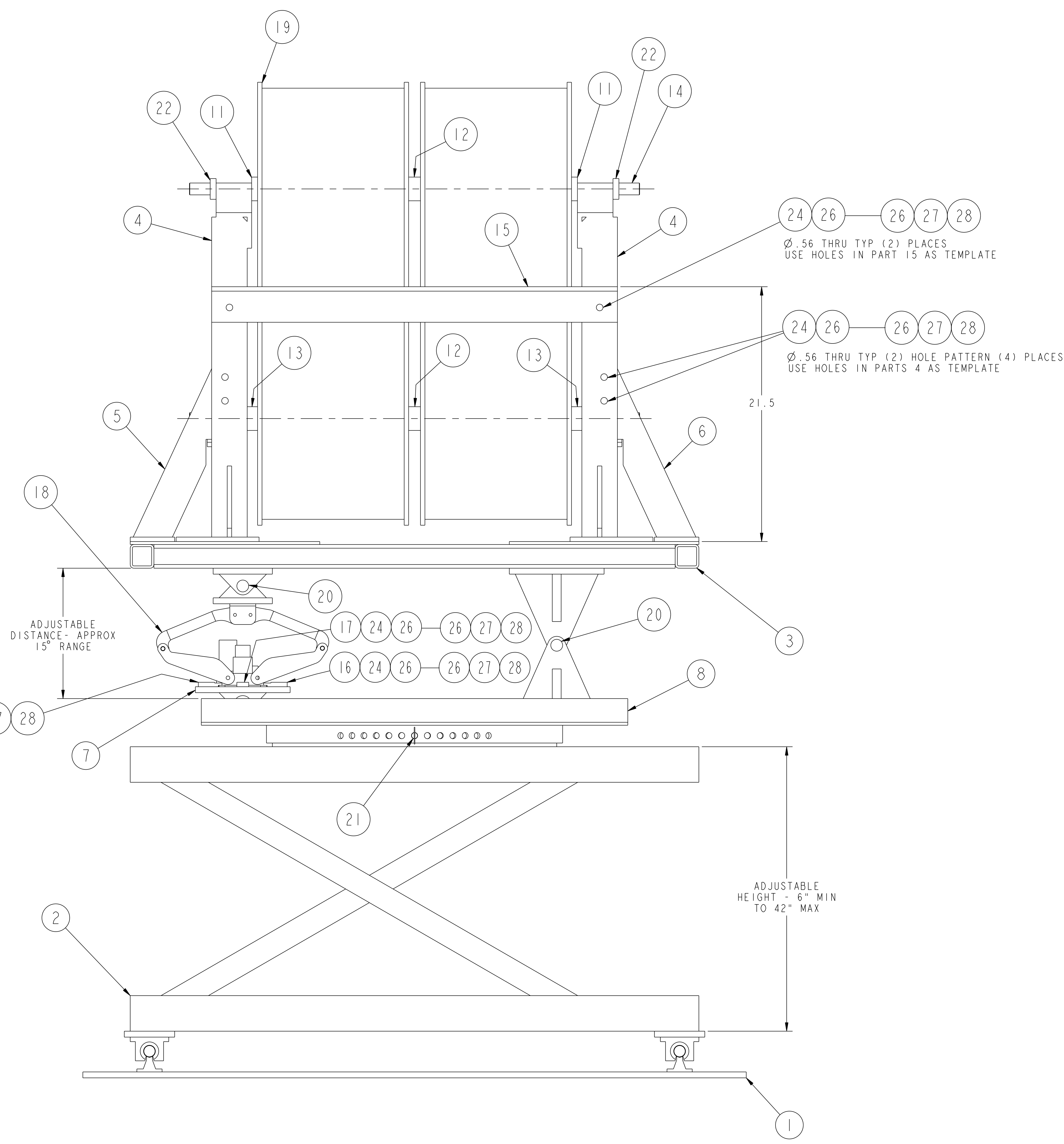


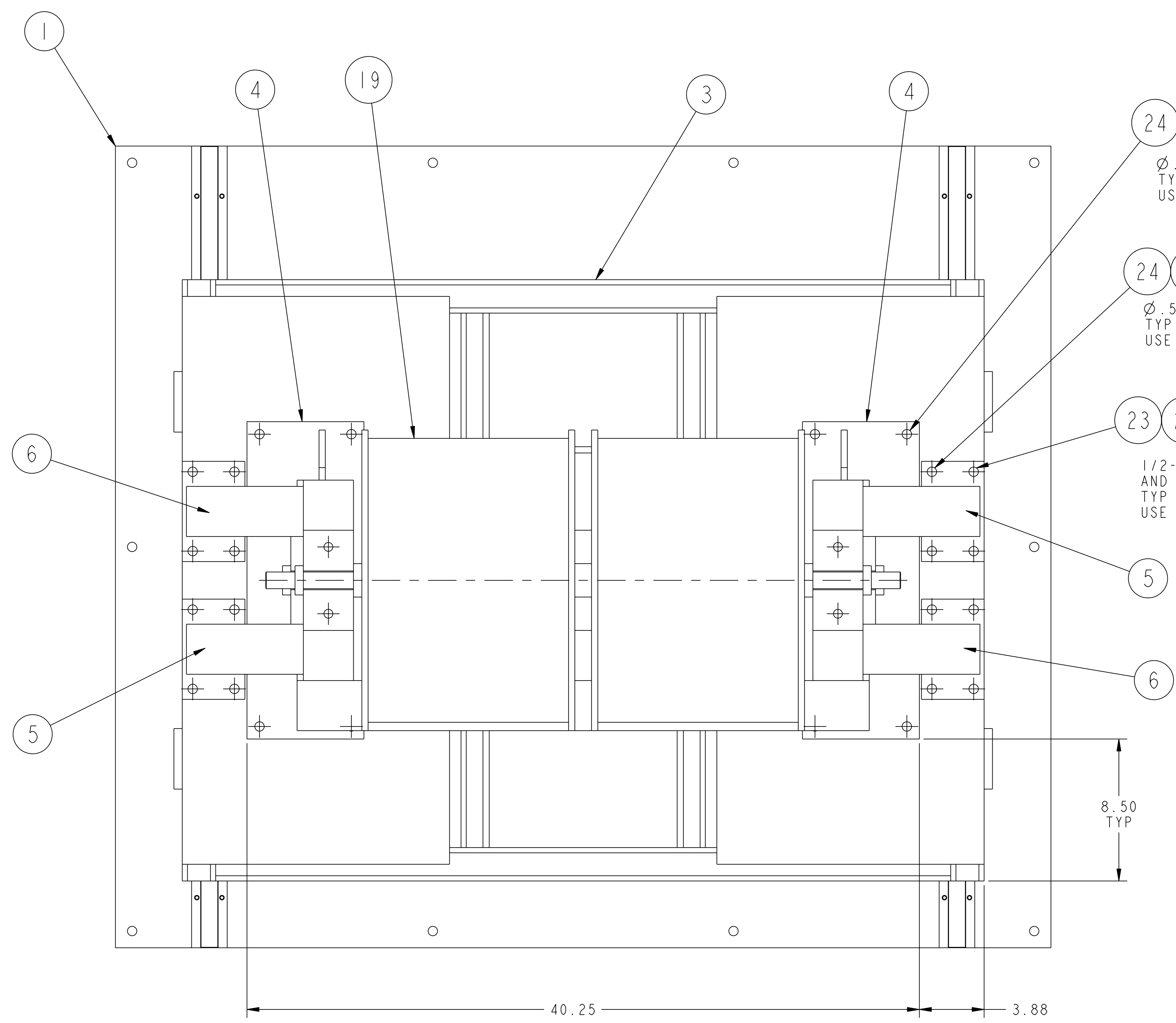
NO.	REVISION	BY	CH	SUP	APPROVED	DATE



45	28	COMM	1/2-13 UNC-2B HEX NUT	C'STL - ZN PLT	
45	27	COMM	1/2" NOM SPLIT LOCK WASHER	C'STL - ZN PLT	
74	26	COMM	1/2" NOM FLAT WASHER	C'STL - ZN PLT	
8	25	COMM	1/2-13 UNC-2A X 4" LG HEX HD CAP SCREW	C'STL - ZN PLT	
29	24	COMM	1/2-13 UNC-2A X 2" LG HEX HD CAP SCREW	C'STL - ZN PLT	
8	23	COMM	1/2-13 UNC-2A X 1" LG HEX HD CAP SCREW	C'STL - ZN PLT	
4	22	COMM	1" DIA LOCKING COLLAR	C'STL	
1	21	COMM	QUICK RELEASE PIN - 1/2" DIA X 1" LG GRIP	C'STL - ZN PLT	
4	20	COMM	CLEVIS PIN - 3/4" DIA X 2 3/4" LG	1018 C'STL	
4	19	COMM	COPPER WIRE SPOOL	---	
1	18	SE144-130	JACK WELDMENT	SEE DWG	
1	17	SE144-129-10	JACK RETAINING FINGER - TYPE B	SEE DWG	
2	16	SE144-129-9	JACK RETAINING FINGER - TYPE A	SEE DWG	
1	15	SE144-129-8	SUPPORT STAND CONNECTING ANGLE	SEE DWG	
2	14	SE144-129-7	1" DIA SPOOL AXLE	SEE DWG	
2	13	SE144-129-6	SPOOL SPACER - 1 1/4" WIDE	SEE DWG	
2	12	SE144-129-5	SPOOL SPACER - 1" WIDE	SEE DWG	
2	11	SE144-129-4	SPOOL SPACER - 1/2" WIDE	SEE DWG	
4	10	SE144-129-3	SPOOL AXLE SUPPORT BLOCK	SEE DWG	
1	9	SE144-129-01	TURNTABLE RETAINER WELDMENT	SEE DWG	
1	8	SE144-128	TURNTABLE TOP ASSEMBLY	SEE DWG	
1	7	SE144-126-05	JACK BASE CLEVIS TONGUE BRACKET WELDMENT	SEE DWG	
2	6	SE144-125-03	SUPPORT STAND BRACE WELDMENT - OPPOSITE	SEE DWG	
2	5	SE144-125-02	SUPPORT STAND BRACE WELDMENT - AS SHOWN	SEE DWG	
2	4	SE144-125-01	SPOOL SUPPORT STAND WELDMENT	SEE DWG	
1	3	SE144-124	SPOOL PLATFORM WELDMENT	SEE DWG	
1	2	SE144-122	LIFT TABLE MODIFICATION ASSEMBLY	SEE DWG	
1	1	SE144-121	BASE PLATE ASSEMBLY	SEE DWG	
01	PART ASSY	DRAWING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY REQD
PARTS LIST					
THIS DWG COPPER SPOOLS MANIPULATOR ASSEMBLY					

WEIGHT 2631.1 lbs	MODEL NAME SE144-120	WELDING ENGINEER	COMPUTER GENERATED DRAWING CHANGES NOT PERMITTED	CENTRAL FILES:	PRINCETON PLASMA PHYSICS LABORATORY		
			DO NOT VERIFY INFORMATION BY SCALING DRAWING	UNLESS OTHERWISE SPECIFIED	PRINCETON UNIVERSITY		
NEXT ASSEMBLY		TOLERANCES NON-CUMULATIVE	NATIONAL COMPACT STELLARATOR EXPERIMENT				
RELEASE LEVEL: Fabrication		DECIMAL-INCH FRACTIONS	MODULAR COIL WINDING FACILITY		DRAWING NO:		
DWG VERSION NO:		XXX +/- .005 OVER 120" +/- .125	COPPER SPOOLS MANIPULATOR		SE144-120		
		ANGULAR +/- 0°-15'	COPPER SPOOLS MANIPULATOR ASSEMBLY		SHEET 1 OF 3		
			ENGR: J. CHRZANOWSKI		REV 0		
			SUPV: J. SIEGEL		NCSX-ASSY-FORMAT.E		

NO.	REVISION	BY	CH	SUP	APPROVED	DATE

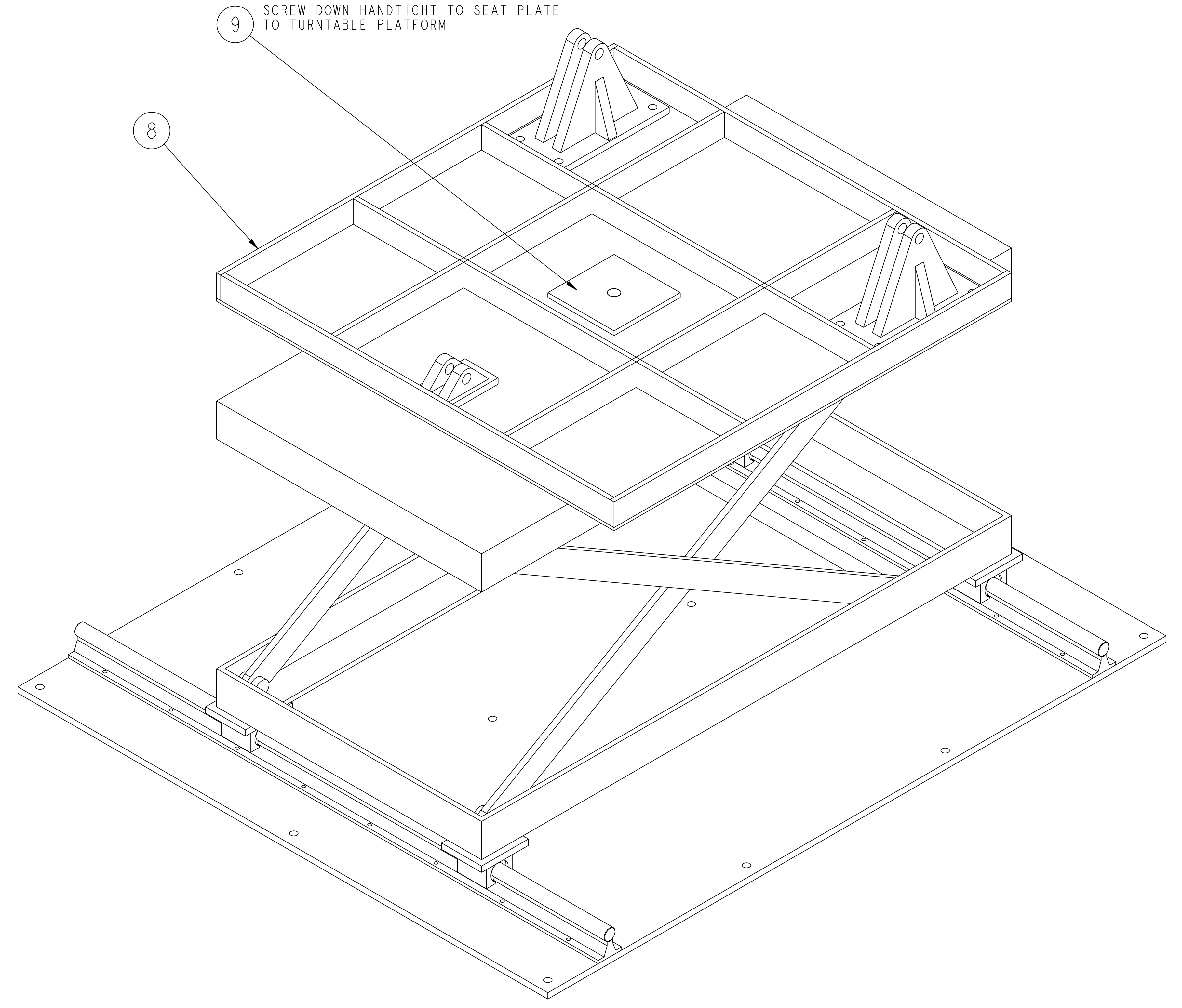


24 26 — 26 27 28  
 Ø.56 THRU PLATFORM TOP PLATE  
 TYP (4) HOLE PATTERN (2) PLACES.  
 USE SUPPORT STAND BASE AS TEMPLATE

24 26 — 26 27 28  
 Ø.56 THRU PLATFORM TOP PLATE  
 TYP (2) HOLE PATTERN (4) PLACES.  
 USE SUPPORT BRACE AS TEMPLATE

23 26 27  
 1/2-13 UNC-2B TAP THRU PLATFORM TOP PLATE  
 AND 2" SQUARE TUBE OF PLATFORM WELDMENT  
 TYP (2) HOLE PATTERN (4) PLACES.  
 USE SUPPORT BRACES AS TEMPLATE

9 SCREW DOWN HANDTIGHT TO SEAT PLATE  
 TO TURNABLE PLATFORM



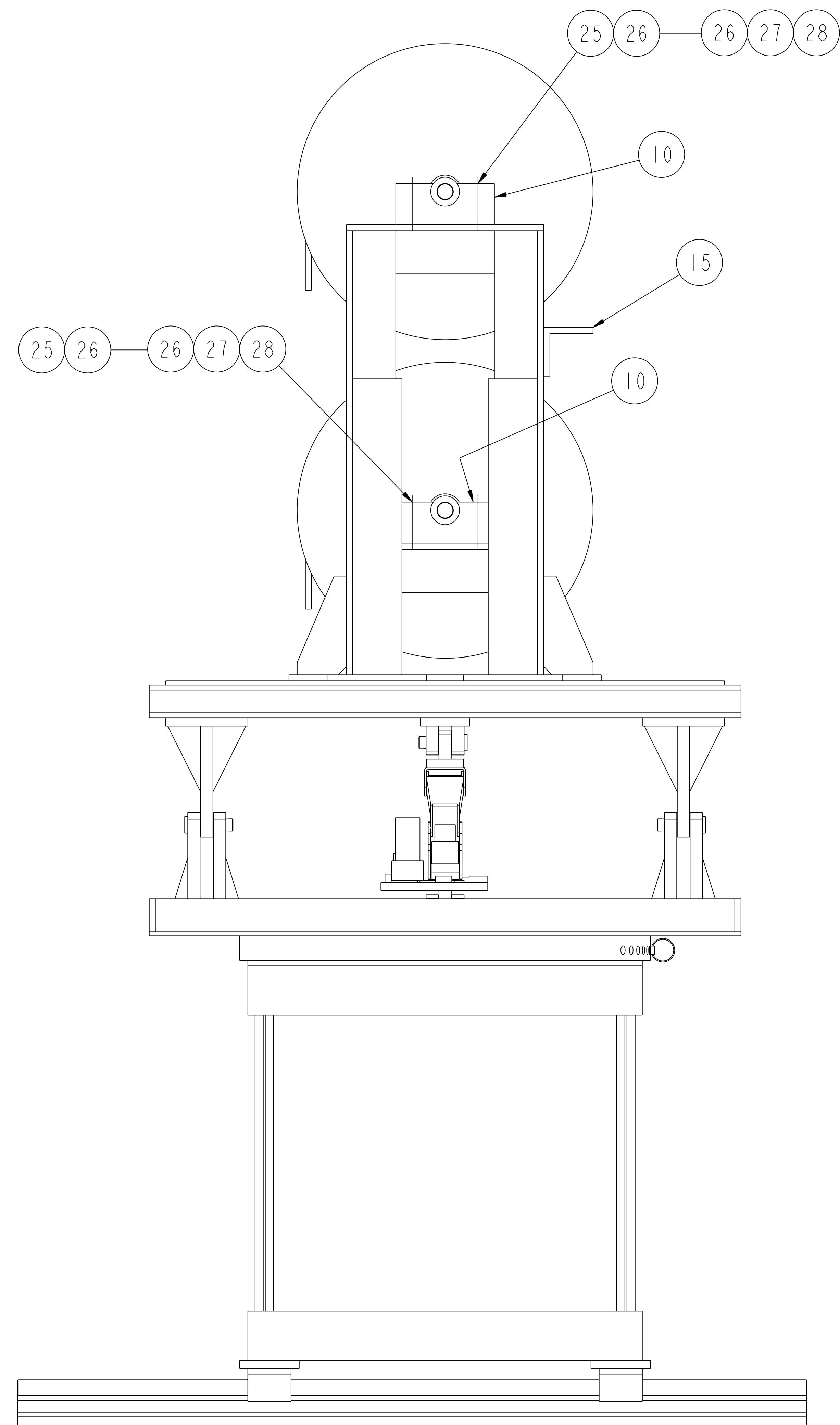
FOR NOTES AND BILL OF MATERIAL SEE SHEET 1

RELEASE LEVEL: Fabrication  
 DWG VERSION NO: 2

WEIGHT  
 2631.1 lbs  
 MODEL NAME  
 SE144-120

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Pro E	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY <b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>	
DO NOT VERIFY INFORMATION BY SCALING DRAWING	DIMENSIONS ARE IN INCHES MACHINE SURFACES BREAK SHARP EDGES .005/.020	MODULAR COIL WINDING FACILITY COPPER SPOOLS MANIPULATOR COPPER SPOOLS MANIPULATOR ASSEMBLY	
NEXT ASSEMBLY	TOLERANCES NON-CUMULATIVE DECIMAL-INCH FRACTIONS .X ±.100 0°-120° ±.100 .XX ±.030 120°-120° ±.100 .XXX ±.005 120°-120° ±.100 ANGULAR ±.0°-15° OVER 120° ±.100	DSN: L. MORRIS CHK: S. RAFTOPOULOS ENGR: J. CHRZANOWSKI SUPV: J. SIEGEL	DRAWING NO: <b>SE144-120</b> SHEET 2 OF 3 REV 0

NO.	REVISION	BY	CH	SUP	APPROVED	DATE



FOR NOTES AND BILL OF MATERIAL SEE SHEET 1

**RELEASE LEVEL: Fabrication**  
**DWG VERSION NO: 2**

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED Pro E	CENTRAL FILES:	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY	
	UNLESS OTHERWISE SPECIFIED	<b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>	
DO NOT VERIFY INFORMATION BY SCALING DRAWING	DIMENSIONS ARE IN INCHES MACHINE SURFACES	MODULAR COIL WINDING FACILITY COPPER SPOOLS MANIPULATOR COPPER SPOOLS MANIPULATOR ASSEMBLY	
NEXT ASSEMBLY	BREAK SHARP EDGES .005/.020	DSN: L. MORRIS	DRAWING NO:
	TOLERANCES NON-CUMULATIVE	CHK: S. RAFTOPOULOS	<b>SE144-120</b>
WEIGHT 2631.1 lbs	DECIMAL-INCH FRACTIONS	ENGR: J. CHRZANOWSKI	SHEET 3 OF 3
MODEL NAME SE144-120	.X +/- .000 0°-12° +/- .010 .XX +/- .030 12°-12° +/- .100 .XXX +/- .005 12°-120° +/- .100 ANGULAR +/- .0°-15° OVER 120° +/- .100	SUPV: J. SIEGEL	REV 0
WELDING ENGINEER			

NCSX-SE144-120