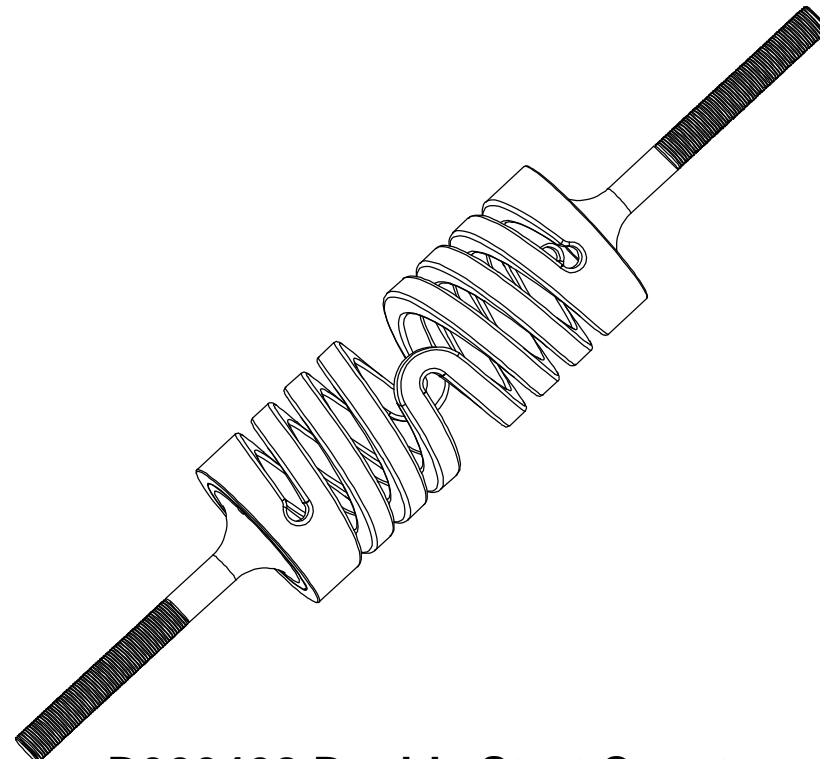
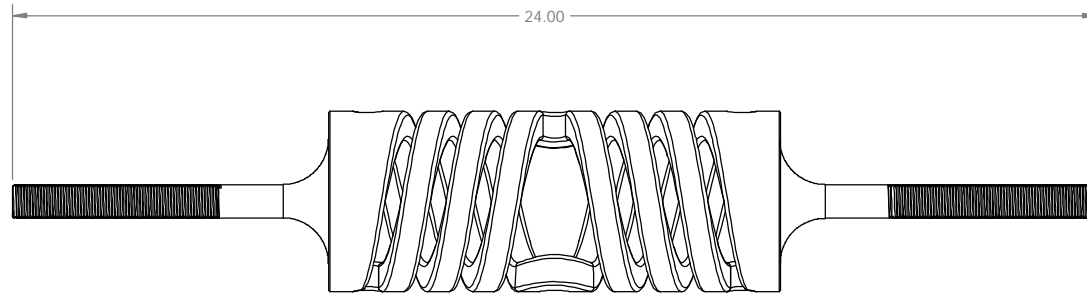


REV.	DATE	DCN #	DRAWING TREE #
B	6/2/03	E030308-00-E	



D020408 Double Start Counterwound Spring Assembly

4) Electroless Nickel Plate per the following procedure:

Recommended Surface Prep:
 Cathodic Alkaline Clean 75 asf, 1 min.
 Pumice Scrub and rinse.
 Cathodic alkaline clean, 75 asf, 15 sec
 Water Rinse
 Anodic in 25% sulfuric acid, 200 asf, 2 min at room temperature
 Dip in chromium-sulfuric acid 1 min.
 Water Rinse hot
 Water rinse Cold

Electroless Nickel Plating
 Protect 3/4-20 threads on D020407 per best shop practice.
 Immerse 1 minute and plate one minute at 30 asf in acid nickel chloride bath at room temperature. Transfer w/out rinsing to regular nickel plating bath.

3) Join assembly per the following procedure:

Wire brush threads on mating parts.
 Solvent clean to remove oils.
 Apply silver solder paste (All-State Silver Solder or equivalent) to the mating threads of the cleaned and dry parts.
 Assemble parts together. Assure that Connectors (D020407) seat entirely to obtain 24" overall length.
 Bake at 400 degrees for 4 hours.
 Remove parts and allow cooling to 120 degrees.
 Wire brush to remove excess flux.

2) Age C-300 for 6 hours @ 925 F.
 Air Cool. Certificate of Heat treat required.
 Test for Rockwell Hardness (1 only). Certificate required.

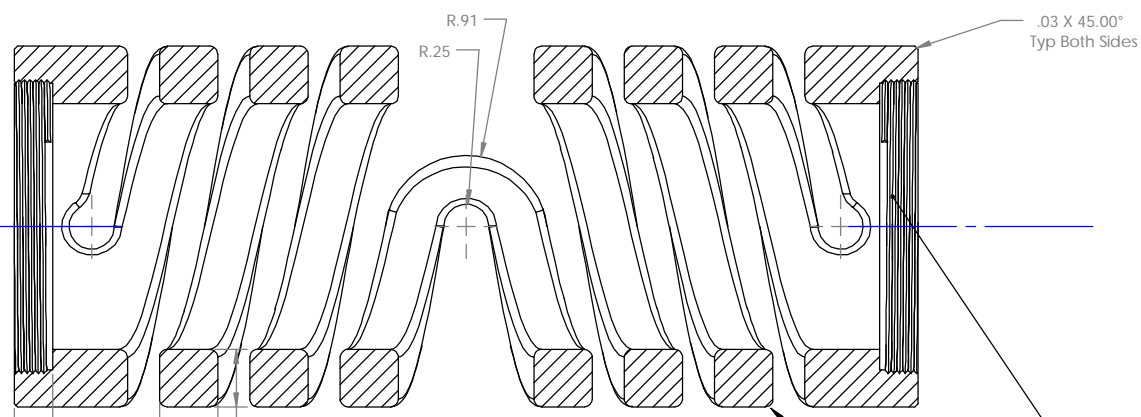
1) Break all sharp edges

Notes

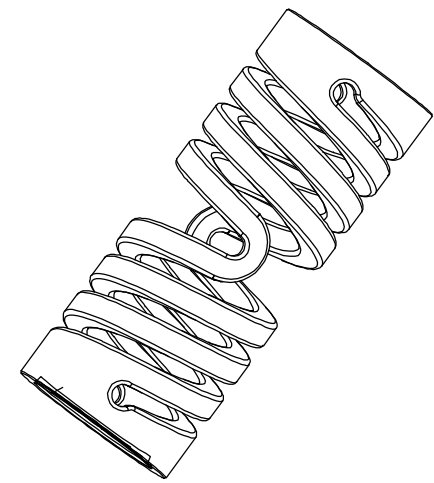


2	2	D020407	4340 Steel 4" x 8" bar stock	Connector, Spring, DSCW
1	1	D020406	C300 Maraging Steel 4" x 14" bar stock	Spring, Double Start, Counterwound, BSC
ITEM NO.	QTY	PART NO.	MATERIAL	DESCRIPTION
UNLESS OTHERWISE SPECIFIED:				
DIMENSIONS ARE IN INCHES		Drawn	DATE: 5/14/03	NAME: M. Hammond
TOLERANCES:		Stress	5/14/03	M. Hammond
.XX ± 0.020"		Checked	J. Kern	
.XXX ± 0.005"		PART NAME BSC Double Start Counterwound Spring		
ANGULAR ± 30°		SIZE DWG. NO. D020408-B-E		
MATERIAL		COMMENTS:		REV B
FINISH		SCALE:		SHEET 1 OF 3

REV.	DATE	DCN #	DRAWING TREE #
B	6/2/03	E030308-00-E	



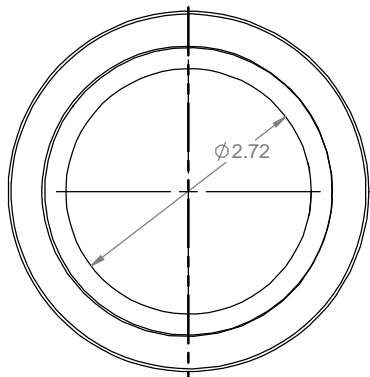
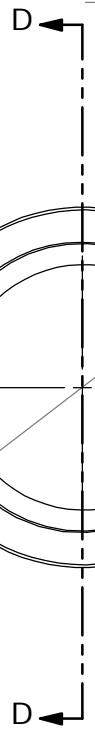
**SECTION D-D
SCALE 1 : 1**



.085 Fillet
typ farside
and nearside

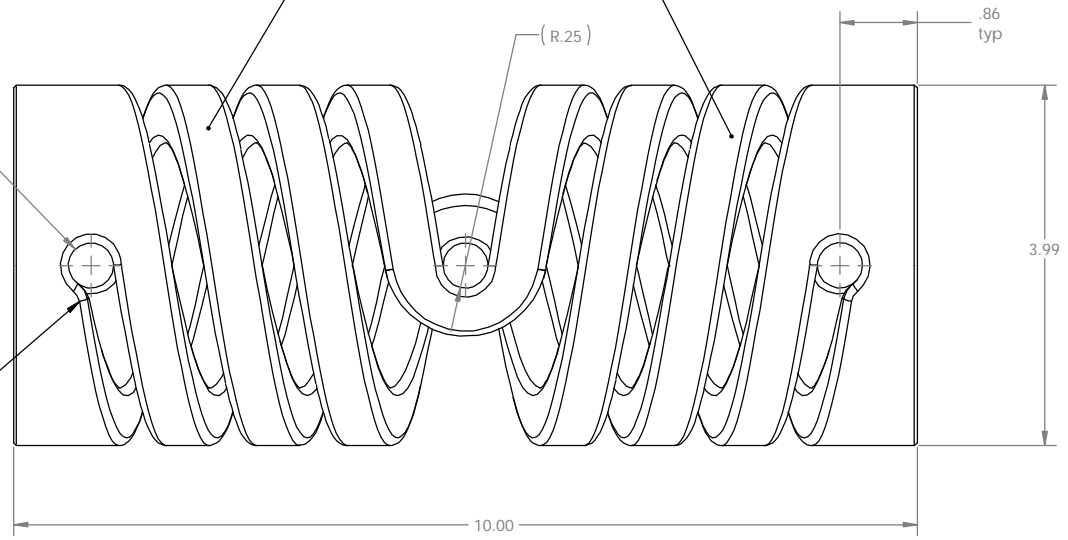
Double start profile:
pitch 2" (far side near side)
revolutions: 2
left side :CCW
right side: CW
width of cut: .334

3 1/4-16 UN-1A thread x .385 deep
typ both sides



R.25
typ

.25 fillet
typ 4
plcs



UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES

TOLERANCES:
XXX ±0.020"
.XXX ±0.005"
ANGULAR ±30°

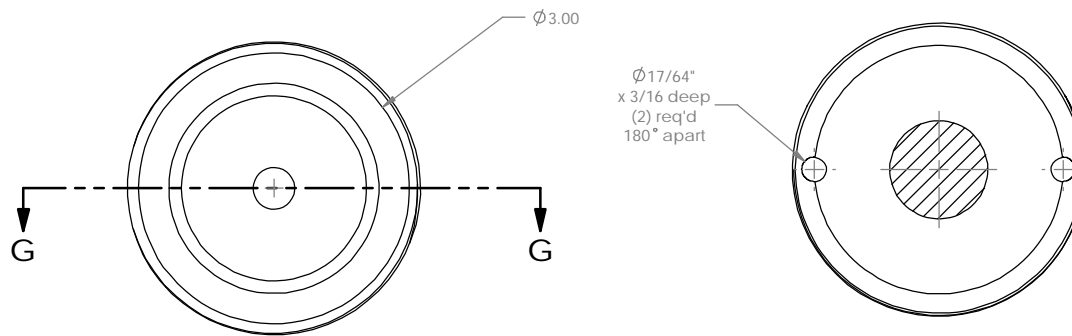
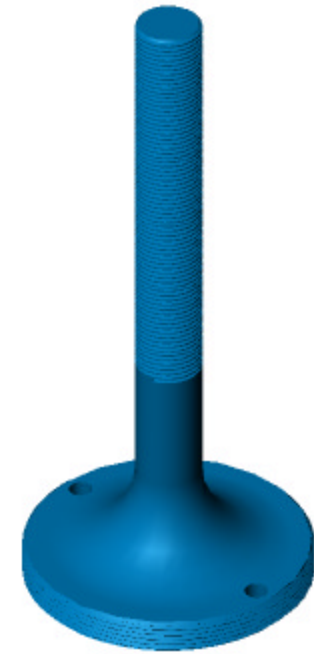
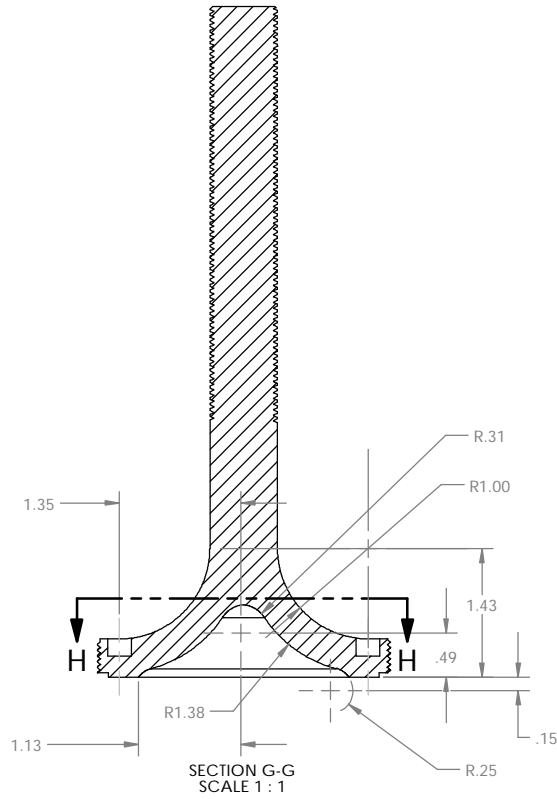
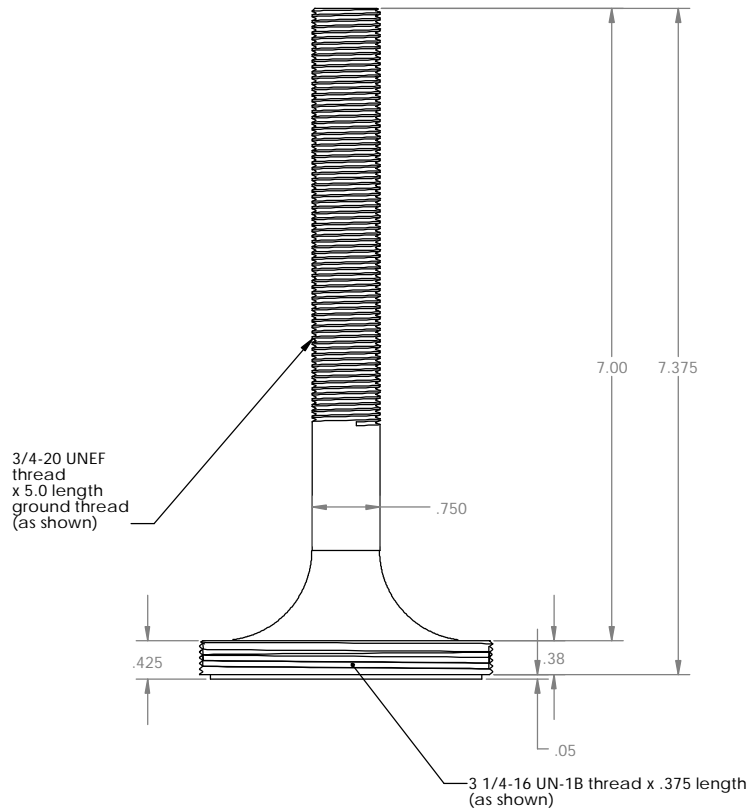
MATERIAL:
C300 Maraging
Steel

FINISH:

DATE	NAME
5/14/03	M. Hammond
5/14/03	M. Hammond
	J. Korn

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SYSTEM	LASTI
SUB-SYSTEM	External Pre- Isolation
NEXT ASSY	
PART NAME	BSC Double Start Counterwound Spring
SIZE	DWG. NO. D020406-B-E
SCALE:	REV B

REV.	DATE	DCN #	DRAWING TREE #
B	6/2/03	E030308-00-E	



UNLESS OTHERWISE SPECIFIED:		DATE	NAME	CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
DIMENSIONS ARE IN INCHES		Drawn	5/14/03	M. Hammond	SYSTEM LASTI
TOLERANCES: XX ± 0.020 "		Stress	5/14/03	M. Hammond	SUB-SYSTEM External Pre-Isolation
XXX ± 0.005 "		Checked		J. Kern	NEXT ASSY
ANGULAR $\pm 30'$		COMMENTS:		PART NAME Double Start Counterwound Spring Connector	
MATERIAL	4340 Steel	SIZE	C	DWG. NO.	D020407-B-E
FINISH		SCALE:		REV	B
				SHEET 3 OF 3	