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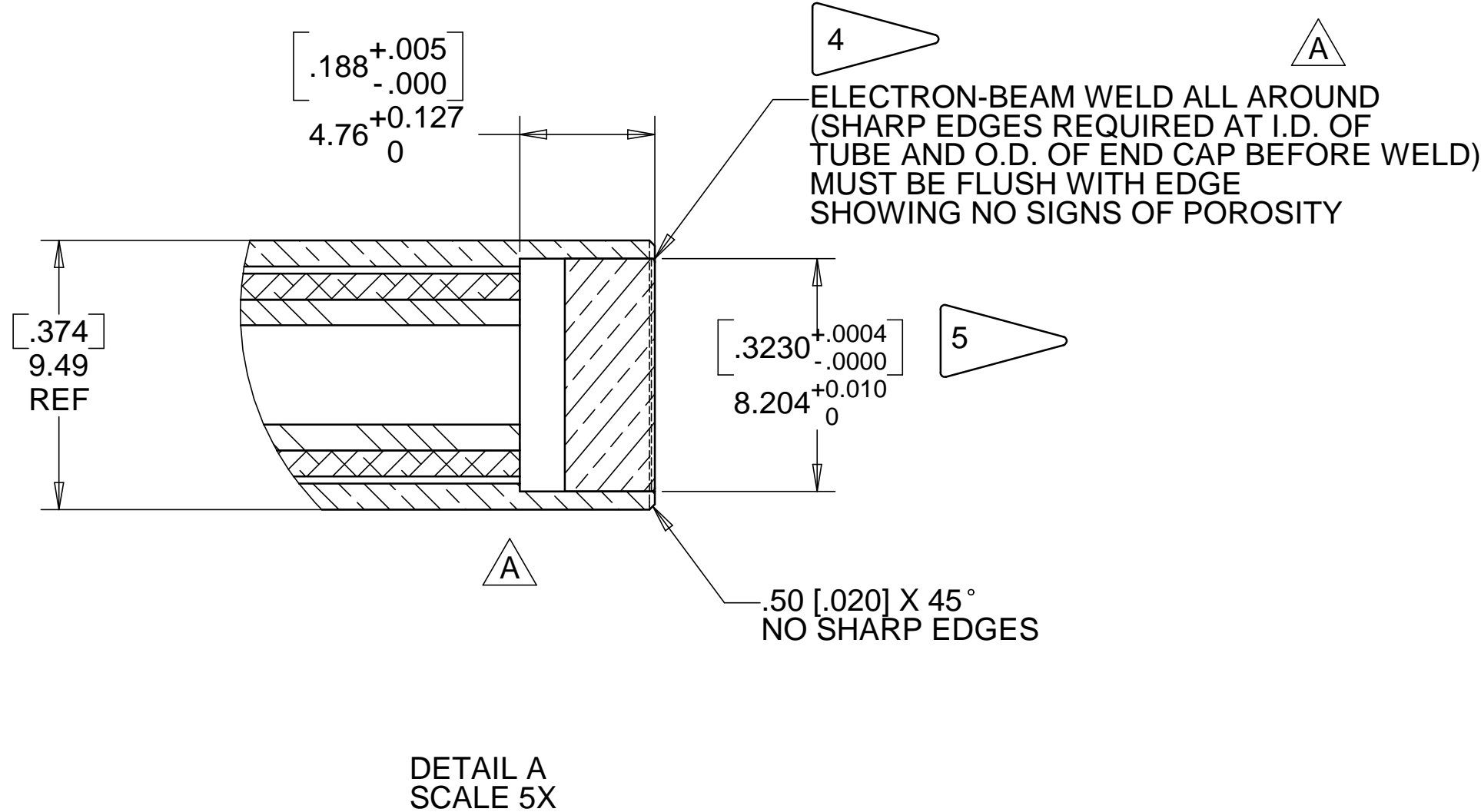
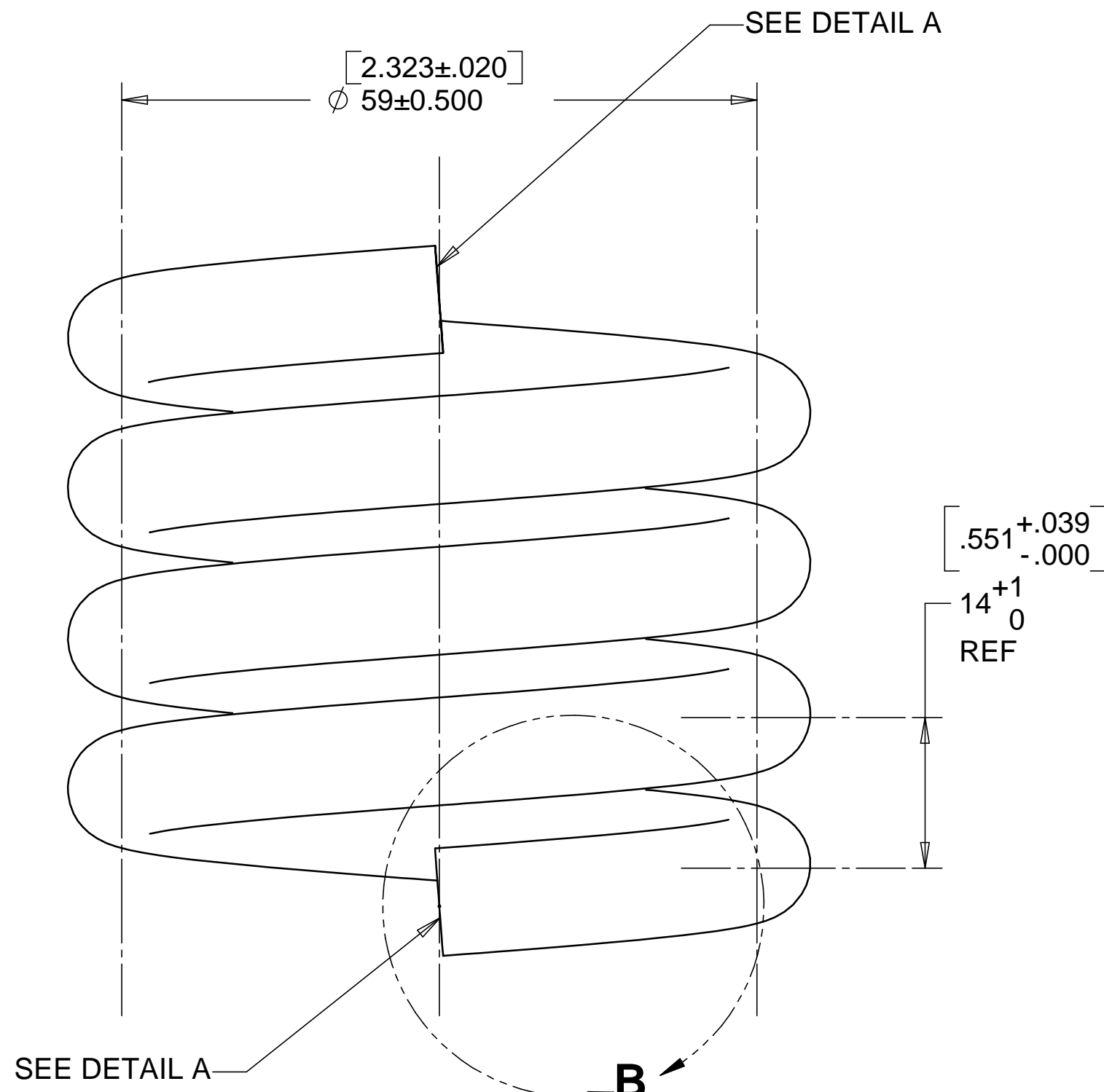
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REVISIONS		
REV.	DESCRIPTION	DATE
A	SEE ECN# 972218-A	8-26-98
		T. THOMPSON

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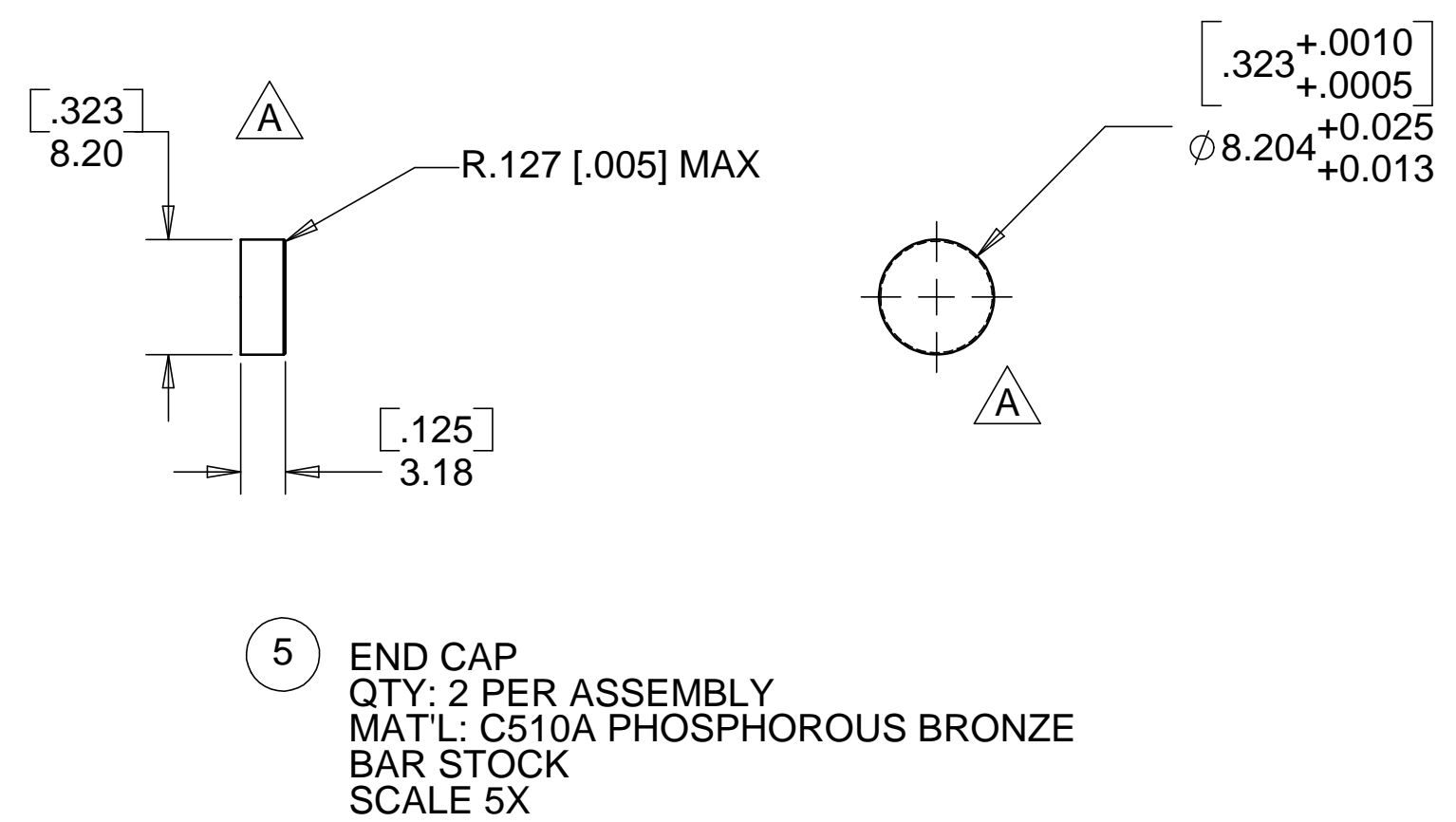
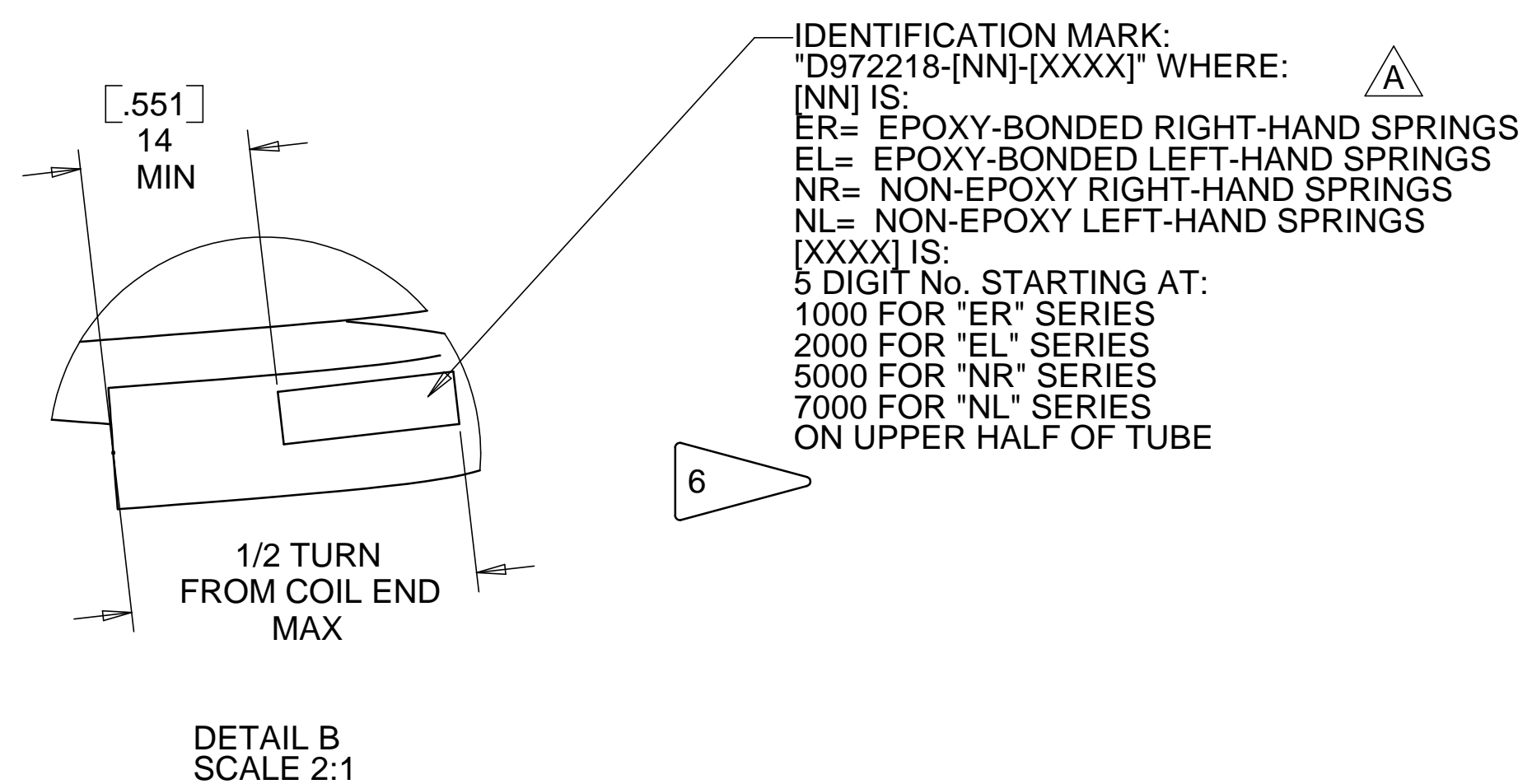


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- NOTES:
1. ALL DIM'S IN mm [inches].
 2. ALL MACHINING AND WELDING PROCESSES MAINTAINED TO STANDARD ULTRA-HIGH VACUUM TECHNIQUES OR SPECIFIC REQTS LISTED HERE OR DOC HYTEC-TS-LIGO-06, WHICHEVER IS MORE STRINGENT.
 3. CERTIFICATIONS SHALL BE PROVIDED FOR ALL MATERIALS, CHEMICALS, CUTTING FLUIDS, ETC. USED IN THE FABRICATION.
 4. WELD JOINT SHALL BE LEAK TIGHT. FINISHED AND CLEANED PART WILL BE SUBJECTED TO RGA ANALYSIS AS DESCRIBED IN DOC. LIGO-9-E960022-02.
 5. END CAP TO BE FORCE FITTED (FN1) INTO MACHINED COIL END.
 6. EACH UNIT SHALL BE UNIQUELY IDENTIFIED USING A VIBRATORY MARKING TOOL WITH A MINIMUM TIP RADIUS OF .005"

PARTS LIST			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS [INCHES]		CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE DO NOT SCALE DRAWING	
TOLERANCES: DECIMAL PLACES .XX = ±.76 [.03] .XXX = ±.254 [.010]		ANGULAR = ±.30 SURFACE FINISH = 250	
FINISH	SIGNATURE	DATE	HYTEC, INC TITLE LIGO ISOLATION SYSTEM COIL SPRING
DESIGNED	ERIC PONSLET	03/25/97	
DRAWN	E.PIOTROWICZ/E.PONSLET	08/01/97	
CHECKED	T. THOMPSON	08/15/97	
PART NO.	ENGR.	E. PONSLET	DWG. NO.
D972218-1 -2 -3 -4	APPROVED	T. THOMPSON	D972218
		08/15/97	SIZE
			D
			SHEET NO.
			3 of 3
			REVISION
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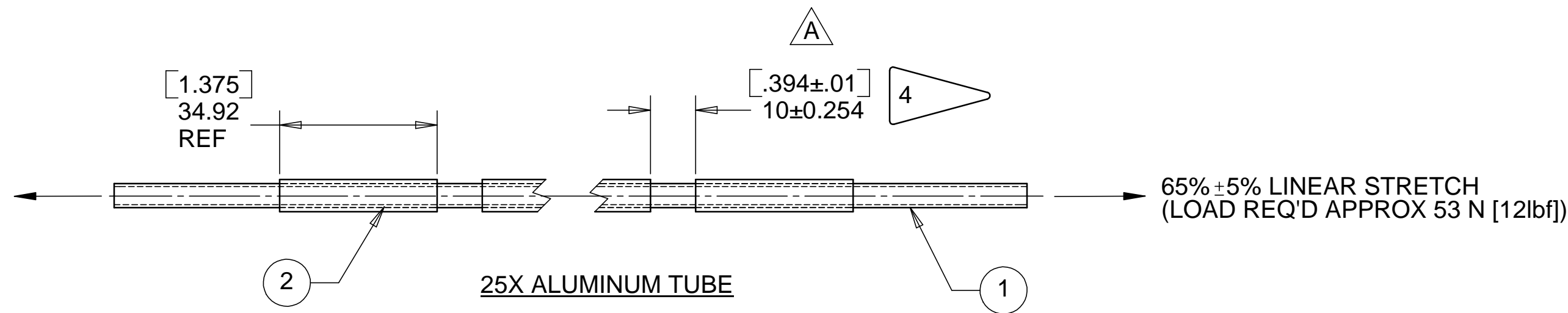
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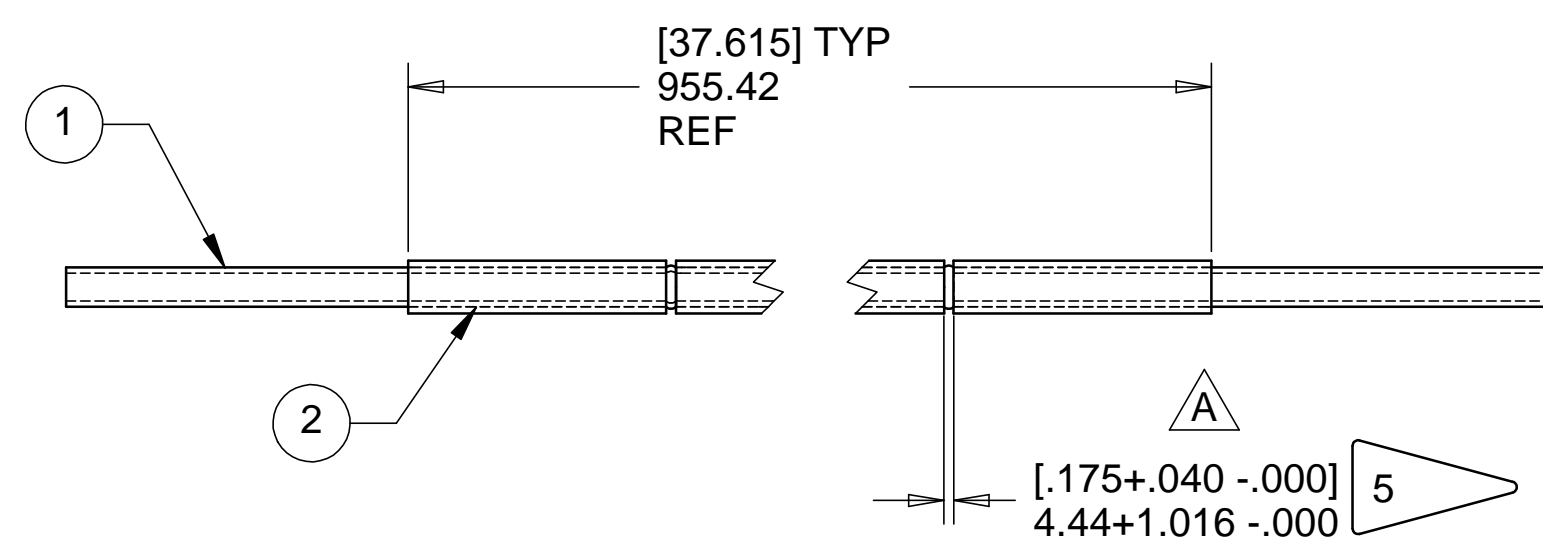
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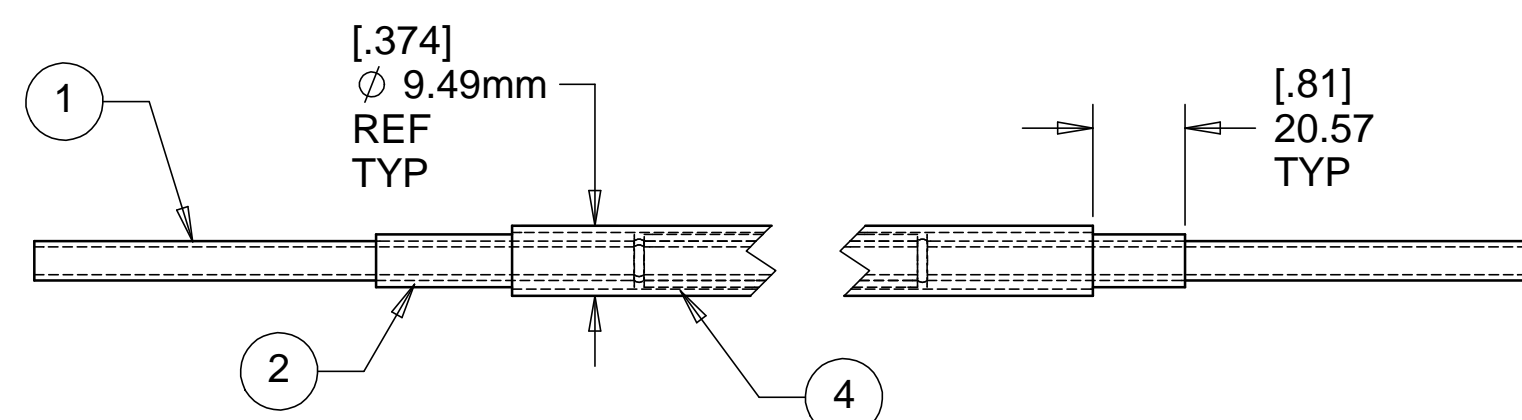
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	SEE ECN# 972218-A	8-26-98	T. THOMPSON



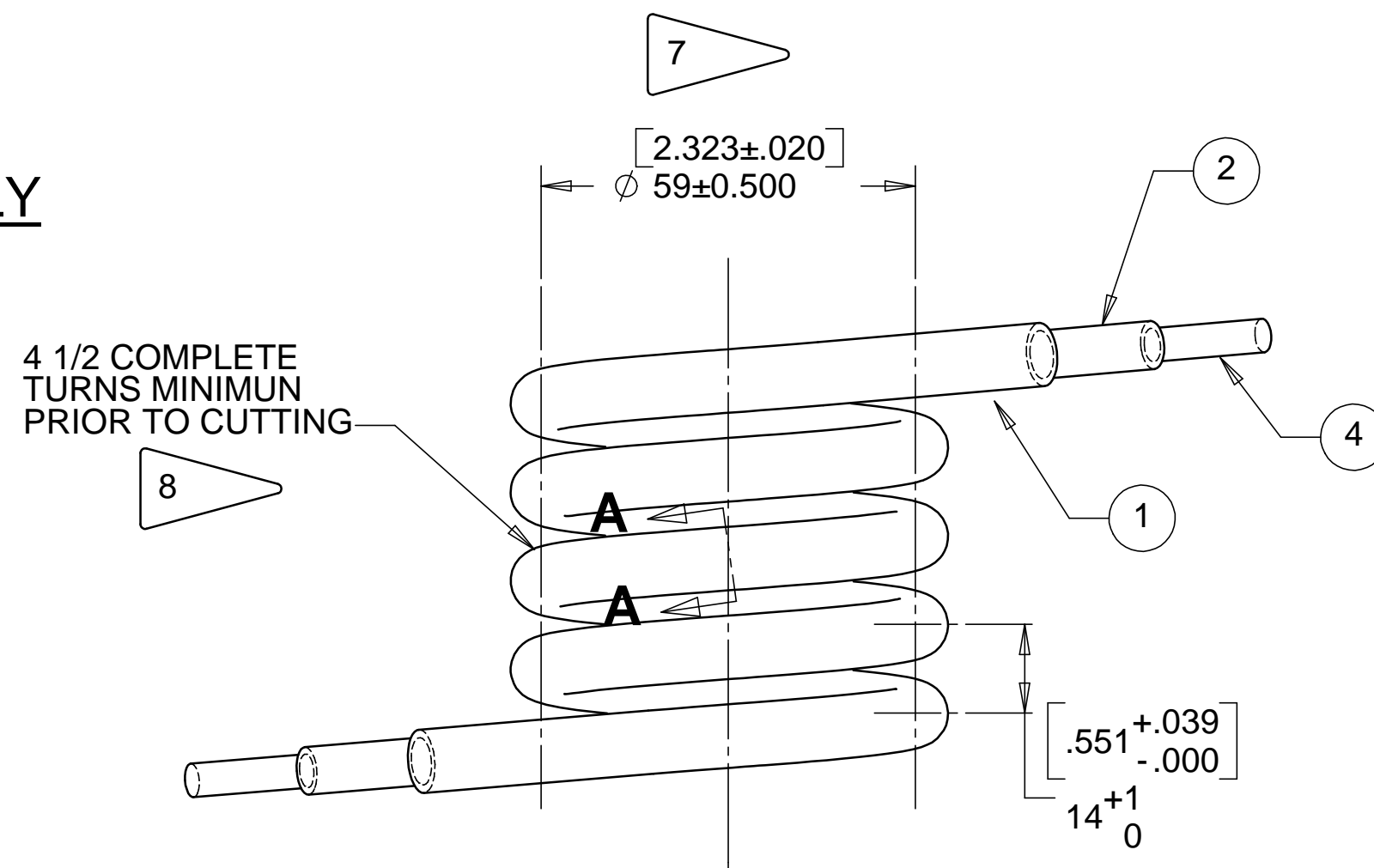
STEP 1: SPACE ALUMINUM SECTIONS ON STRETCHED SILICONE TUBE



STEP 2: COMPLETED ALUMINUM/SILICONE SUB-ASSEMBLY

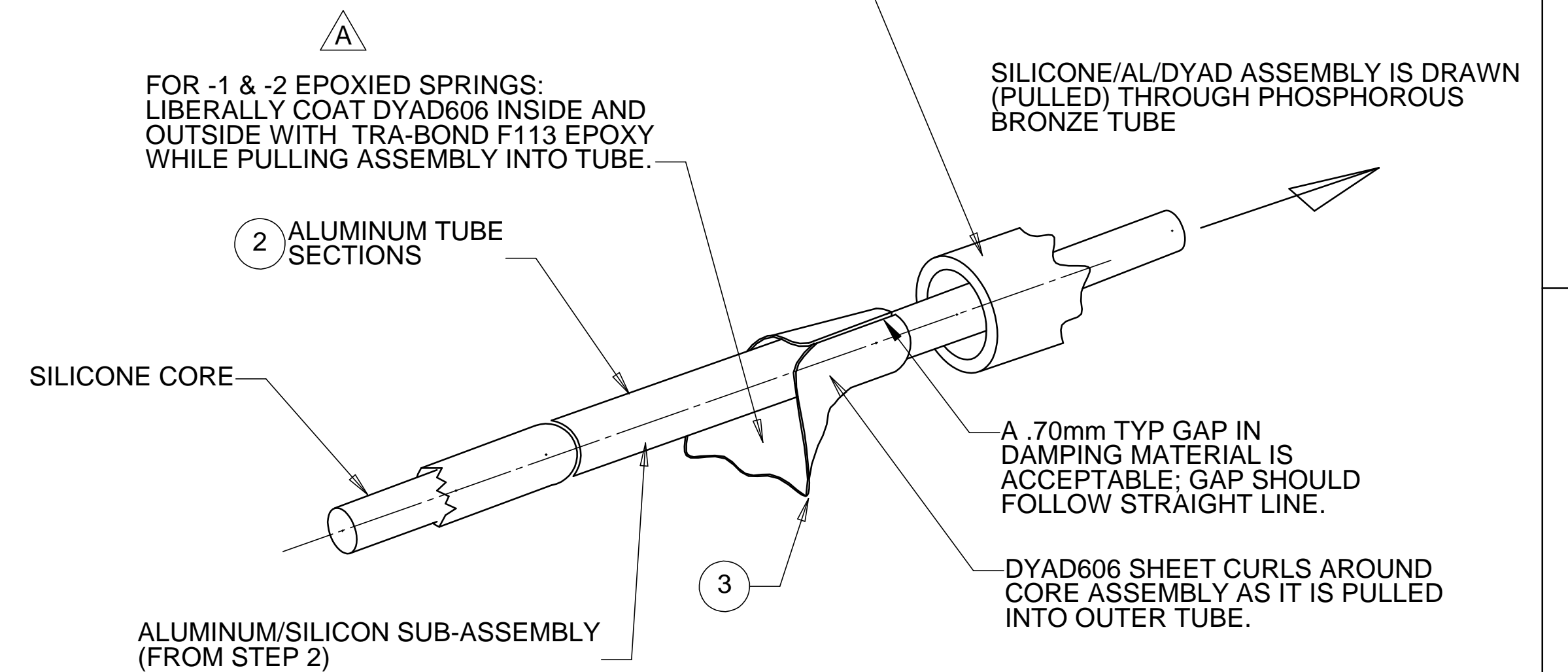


STEP 4: SWAGED ASSEMBLY

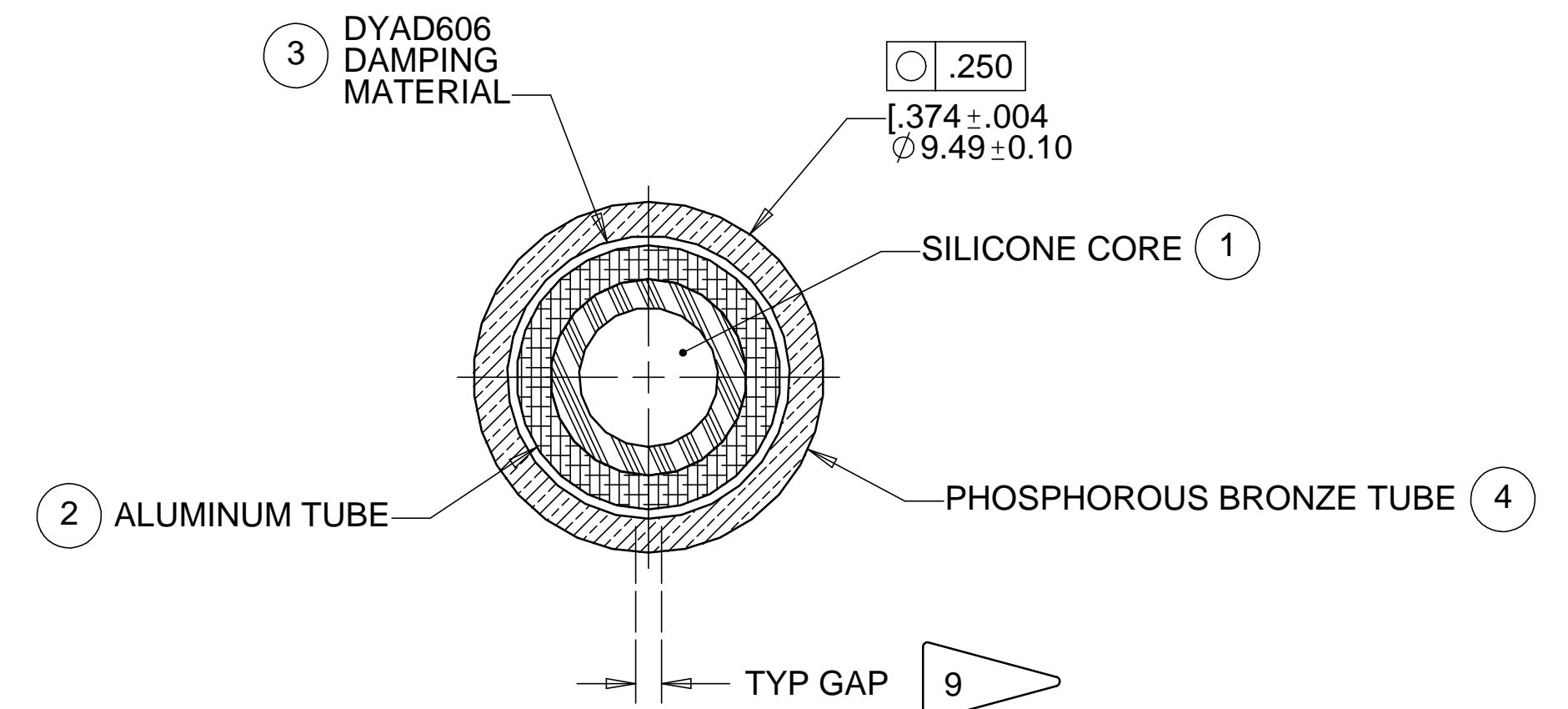


STEP 5: UNTRIMMED COIL

4 PHOSPHOROUS BRONZE TUBE SLIDES OVER ASSEMBLY. COAT INSIDE OF TUBE WITH EPOXY PRIOR TO ASSEMBLY.



STEP 3: FABRICATION BEFORE SWAGE PROCESS



SECTION A-A (ANYWHERE ALONG 4 TURNS) SCALE 6X

PART NO.	DESCRIPTION
D972218-1	RH SPING WITH EPOXY
D972218-2	LH SPRING WITH EPOXY
D972218-3	RH SPRING WITHOUT EPOXY
D972218-4	LH SPRING WITHOUT EPOXY

NOTES:

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- ALL MACHINING AND WELDING PROCESSES MAINTAINED TO STANDARD ULTRA-HIGH VACUUM TECHNIQUES OR SPECIFIC REQTS LISTED HERE OR DOC HYTEC-TS-LIGO-06, WHICHEVER IS MORE STRINGENT.
- CERTIFICATIONS SHALL BE PROVIDED FOR ALL MATERIALS, CHEMICALS, CUTTING FLUIDS, ETC. USED IN THE FABRICATION.
- ASSEMBLY IS PERFORMED WITH SILICON CORE STRETCHED 65 PERCENT (REQUIRES ABOUT 12 LB FORCE).
- DIMENSION TO BE CHECKED 15 MINUTES MINIMUM AFTER RELEASING STRETCH ON SILICON CORE.
- ASSEMBLY MUST BE SWAGED WITHIN 1 HOUR OF MIXING EPOXY ADHESIVE.
- COILING MUST TAKE PLACE WITHIN 2 HOURS OF MIXING EPOXY ADHESIVE.
- EACH UNIT SHALL BE UNIQUELY IDENTIFIED USING A VIBRATORY MARKING TOOL WITH A MINIMUM TIP RADIUS OF .005" AS SHOWN ON PAGE 3 OF 3, DETAIL B (REFER TO HYTEC-LIGO-06).
- SWAGED ASSEMBLY SHOULD ENGAGE COILING TOOLS SUCH THAT GAP IN DYAD MAT'L IS ALONG AXIS OF COIL AS SHOWN IN SECTION A-A.

PARTS LIST			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS [INCHES]		CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE. DO NOT SCALE DRAWING.	
TOLERANCES: DECIMAL PLACES: .XX = ±.76 [03] .XXX = ±.254 [010]		ANGULAR = ±.30 SURFACE FINISH = 250	
FINISH	SIGNATURE	DATE	<p>HYTEC, INC</p> <p>TITLE: LIGO ISOLATION SYSTEM COIL SPRING</p> <p>DWG. NO. D972218 SIZE D SHEET NO. 1 of 3</p>
DESIGNED	ERIC PONSLET	3/25/97	
DRAWN	E.PIOTROWICZ/E.PONSLET	08/01/97	
CHECKED	T. THOMPSON	08/01/97	
PART NO. D972218-1 -2 -3 -4	ENGR. E. PONSLET	08/01/97	SCALE ----
	APPROVED T. THOMPSON	08/01/97	REVISION A

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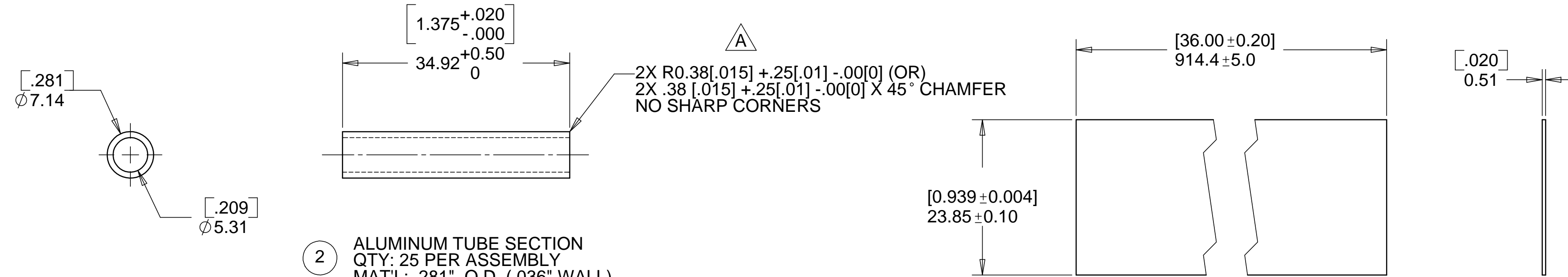
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ECN# 972218-A	8-26-98	T. THOMPSON

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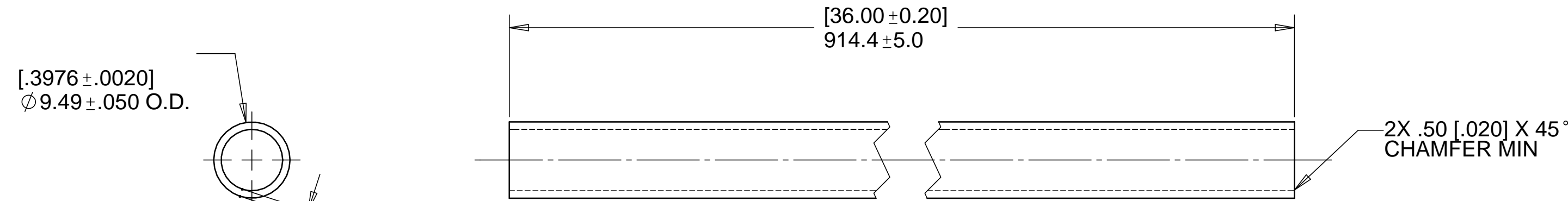


2 ALUMINUM TUBE SECTION
 QTY: 25 PER ASSEMBLY
 MAT'L: .281" O.D. (.036" WALL)
 6061-0 AL TUBE
 SCALE: 2X

3 DAMPING SHEET
 QTY: 1 PER ASSEMBLY
 MAT'L: .020" THK SOUNDCOAT DYAD 606
 SCALE: 2X

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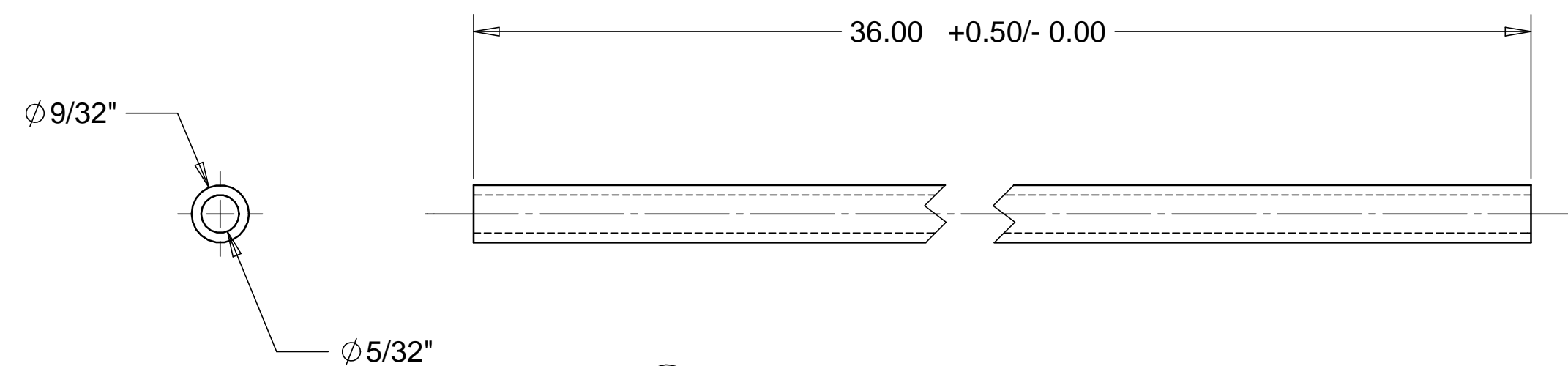
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4 OUTER TUBE
 QTY: 1 PER ASSEMBLY
 MAT'L: .3976" O.D. (.032" NOM. WALL)
 C510A 3/4 HARD PHOSPHOROUS BRONZE
 SCALE: 2X

B

B



1 SILICON CORE
 QTY: 1 PER ASSEMBLY
 MAT'L: AEROTREND ATP1007 SILICONE TUBING
 9/32" O.D. X 5/32" I.D.
 SCALE: 2X

NOTES:
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PARTS LIST			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS [INCHES]	-TOLERANCES-		CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE DO NOT SCALE DRAWING
	DECIMAL PLACES .XX = ±.76 [.03"] .XXX = ±.254 [.010"]	ANGULAR = ±.30 SURFACE FINISH = 250	
FINISH	DESIGNED	ERIC PONSLET	03/25/97
PART NO. D972218-1 -2 -3 -4	DRAWN	E PIOTROWICZ/E PONSLET	08/01/97
	CHECKED	T. THOMPSON	08/15/97
	ENGR.	E. PONSLET	08/15/97
	APPROVED	T. THOMPSON	08/15/97
TITLE HYTEC, INC LIGO ISOLATION SYSTEM COIL SPRING		DWG. NO.	SIZE SHEET NO.
		D972218	D 2 of 3
SCALE 1/1		REVISION A	

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