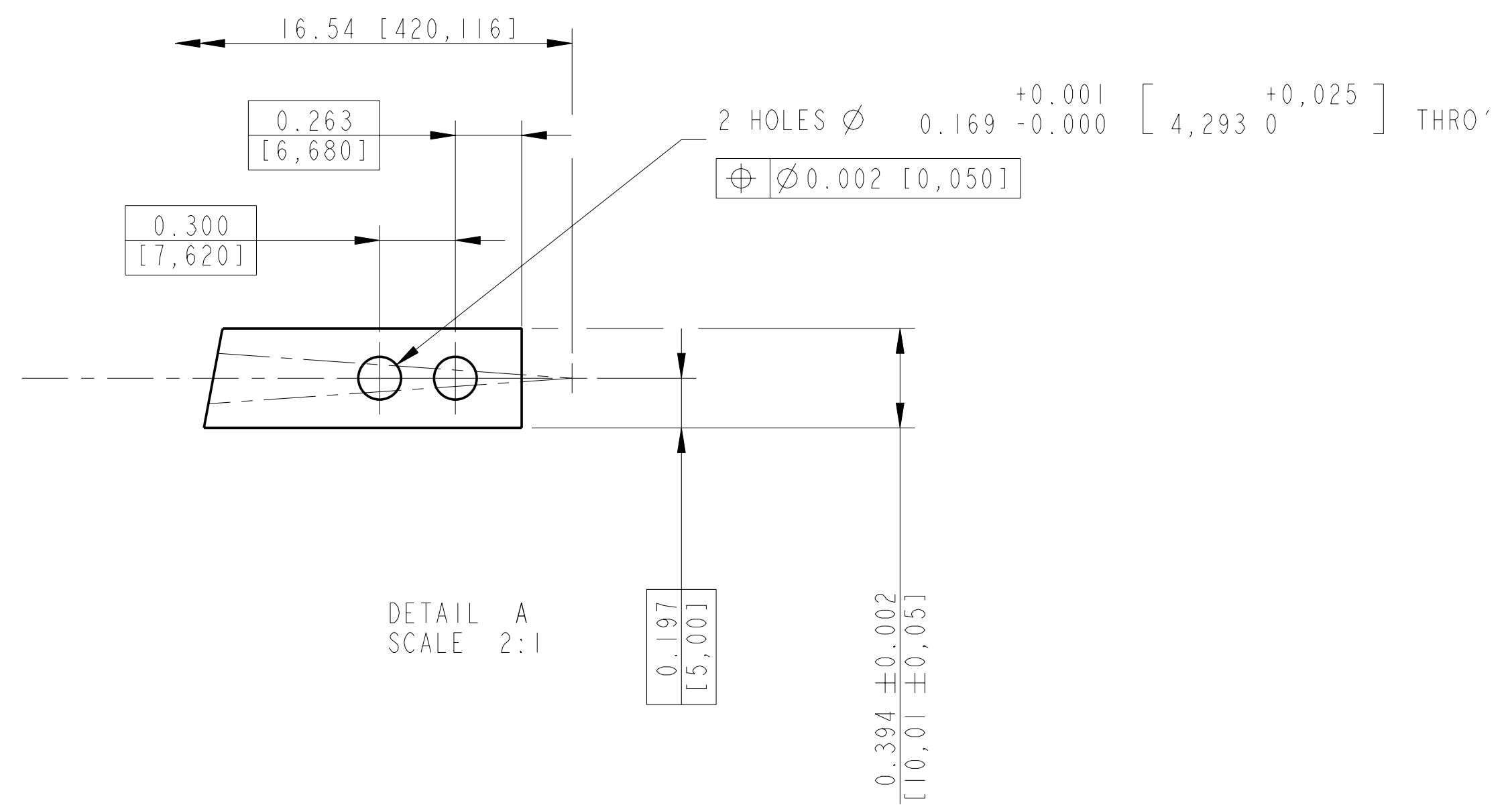
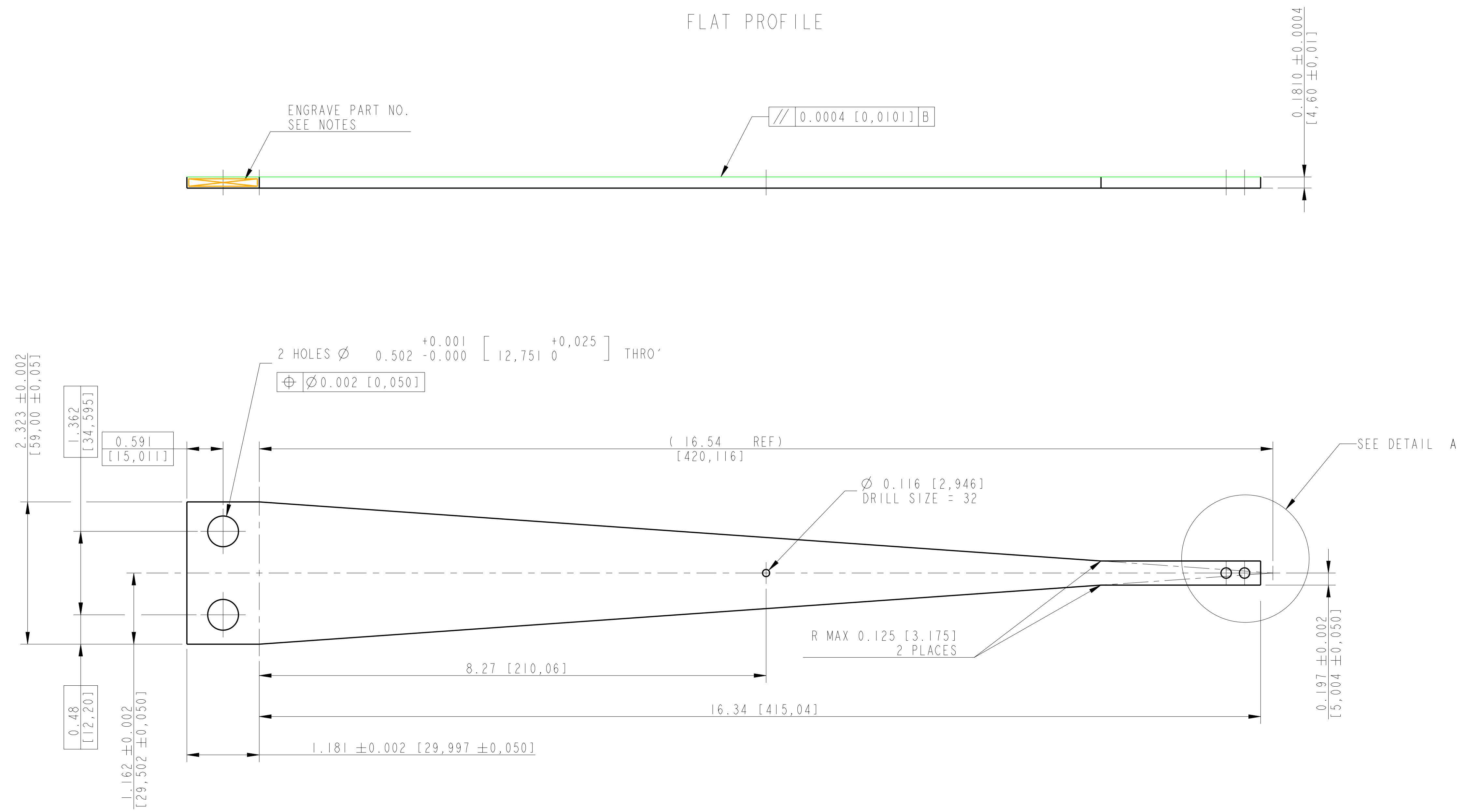


REV	DATE	DCN #	DRAWING TREE #
A	02/JUL/04	E040312-01-K	
B	20/JUL/04	E040345-00-K	

FLAT PROFILE



NOTES: (UNLESS OTHERWISE SPECIFIED)

- DO NOT SCALE FROM DRAWING.
- INTERPRET DIMENSIONS PER: ANSI Y14.5 1982
- ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACON'S CINTECH 410 (STAINLESS STEEL).
- FABRICATE FROM SHEET MATERIAL. FORM RADIUS BY ROLLING.
- REMOVE ALL SHARP EDGES. R 0.02 MIN.
- SCRIBE, ENGRAVE OR STAMP DRAWING PART NUMBER ON NOTED SURFACE OF PART AND A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST PART AND PROCEED CONSECUTIVELY. USE 07" HIGH CHARACTERS. EXAMPLE: 000109-001. A VERNER TOOL MAY BE USED.
- AFTER PARTS ARE ROLLED TO RADIUS, HARDEN FOR HEAT TREATMENT AT 435 DEG. C. FOR 100 HOURS AND AIR COOL. PARTS MUST BE SUPPORTED WITH TOOLING DURING HEAT TREATMENT TO AVOID RADIUS CHANGE DUE TO SELF WEIGHT. TOOLING FOR HEAT TREATMENT MAY BE A "SINE BACK" TYPE OF TOOL THAT WILL ALLOW THE PARTS TO BE MOUNTED ON THEIR SIDES. PARTS MAY BE ROLLED AGAIN AFTER HEAT TREATMENT TO ADJUST RADIUS TO SPECIFICATION.

DIMENSIONS ARE IN INCHES (mm)

X.XX  $\pm$  0.01 (0.250 mm)  
X.XXX  $\pm$  0.005  
ANGULAR  $\pm$  0.250 °

MATERIAL: MACHINING STEEL 250  
R<sub>u</sub> = 32 (0.8)

FINISH: CLEAN AND DEGREASED  
 $\sqrt{Ra}$  (µm) : .....

DRAWN	J. WILMOT	20/JUL/04	SIZE	
CHECKED	...	...	...	...
APPROVED	...	...	...	...

PART NAME: MIDDLE BLADE SPRING  
QUAD CONTROLS PROTOTYPE

ORG. NO. D040297

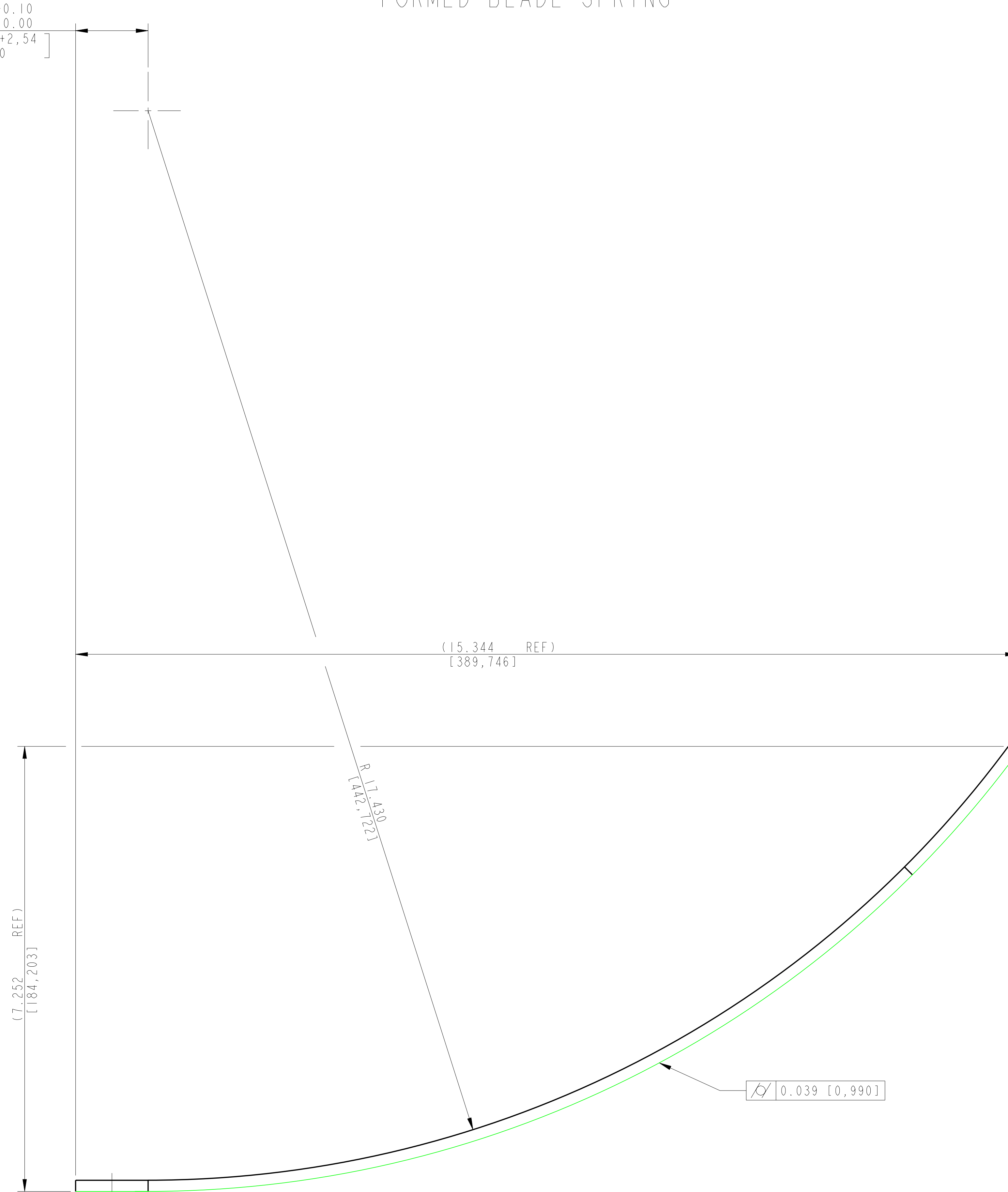
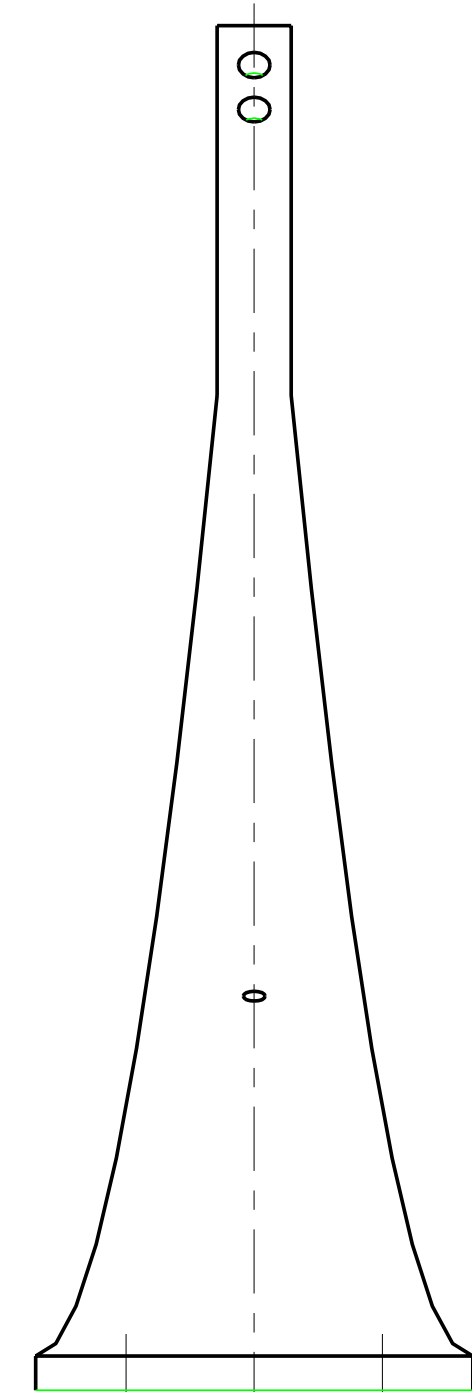
SCALE: 1:1 PROJECTION: SHEET 1 OF 1

FOR INTERNAL USE ONLY:

E=186Mpa  
 ALPHA=1.35  
 TOTAL SUSP MASS = 50 KG  
 UI MASS = 11 KG  
 PREDICTED:  
 F = 2.48Hz  
 1st INTERNAL MODE = 98.17Hz  
 MAX = 990Mpa  
 REF: COMMUNICATION WITH BLADE COMMITTEE

# FORMED BLADE SPRING

+0.10  
 1.18 -0.00  
 [ 30.00 0 ]



NOTES: (UNLESS OTHERWISE SPECIFIED)		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY IGR, GLASSON UNIVERSITY GED 600 GROUP WILHELMFORD APPLETON LABORATORIES	
1. DO NOT SCALE FROM DRAWING.	2. INTERPRET DIMENSIONS PER: ANSI Y14.5 1992	DIMENSIONS ARE IN INCHES (mm)	SYSTEM: <b>ADVANCED LIGO</b>
3. ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACON'S CIMTECH 410 (STAINLESS STEEL).	4. FABRICATE FROM SHEET MATERIAL. FORM RADIUS BY ROLLING.	X.XX ±0.01 (0.250 mm) X.XXX ±0.005 ANGULAR ±0.250°	SUB-SYSTEM: <b>SUS</b>
5. REMOVE ALL SHARP EDGES. 0.02 MIN.	6. SCRIBE, ENGRAVE OR STAMP DRAWING PART NUMBER ON NOTED SURFACE OF PART AND A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST PART AND PROCEED CONSECUTIVELY. USE "01" HIGH CHARACTERS.	MATERIAL: MARAGING STEEL 250 FINISH: CLEAN AND DEGREASED W/10 μm Ra ±0.32 (0.8)	NEXT ASSY: <b>TOP MASS</b>
7. AFTER PARTS ARE ROLLED TO RADIUS, HARDEN FOR HEAT TREATMENT AT 435 DEG C FOR 100 HOURS AND AIR COOL. PARTS MUST BE SUPPORTED WITH TOOLING DURING HEAT TREATMENT TO AVOID RADIUS CHANGE DUE TO SELF WEIGHT. TOOLING FOR HEAT TREATMENT MAY BE A "BAG SACK" TYPE OF TOOL THAT WILL ALLOW THE PARTS TO BE MOUNTED ON THEIR SIDES. PARTS MAY BE ROLLED AGAIN AFTER HEAT TREATMENT TO ADJUST RADIUS TO SPECIFICATION.		DATE: 20/JUL/04	PART NAME: <b>MIDDLE BLADE SPRING</b>
		DRAWN: J. MILMOT	QUAD CONTROLS PROTOTYPE
		CHECKED: ...	DRG NO: <b>D040297</b>
		APPROVED: ...	SCALE: 1:1 PROJECTION:  SHEET: 2 OF 3