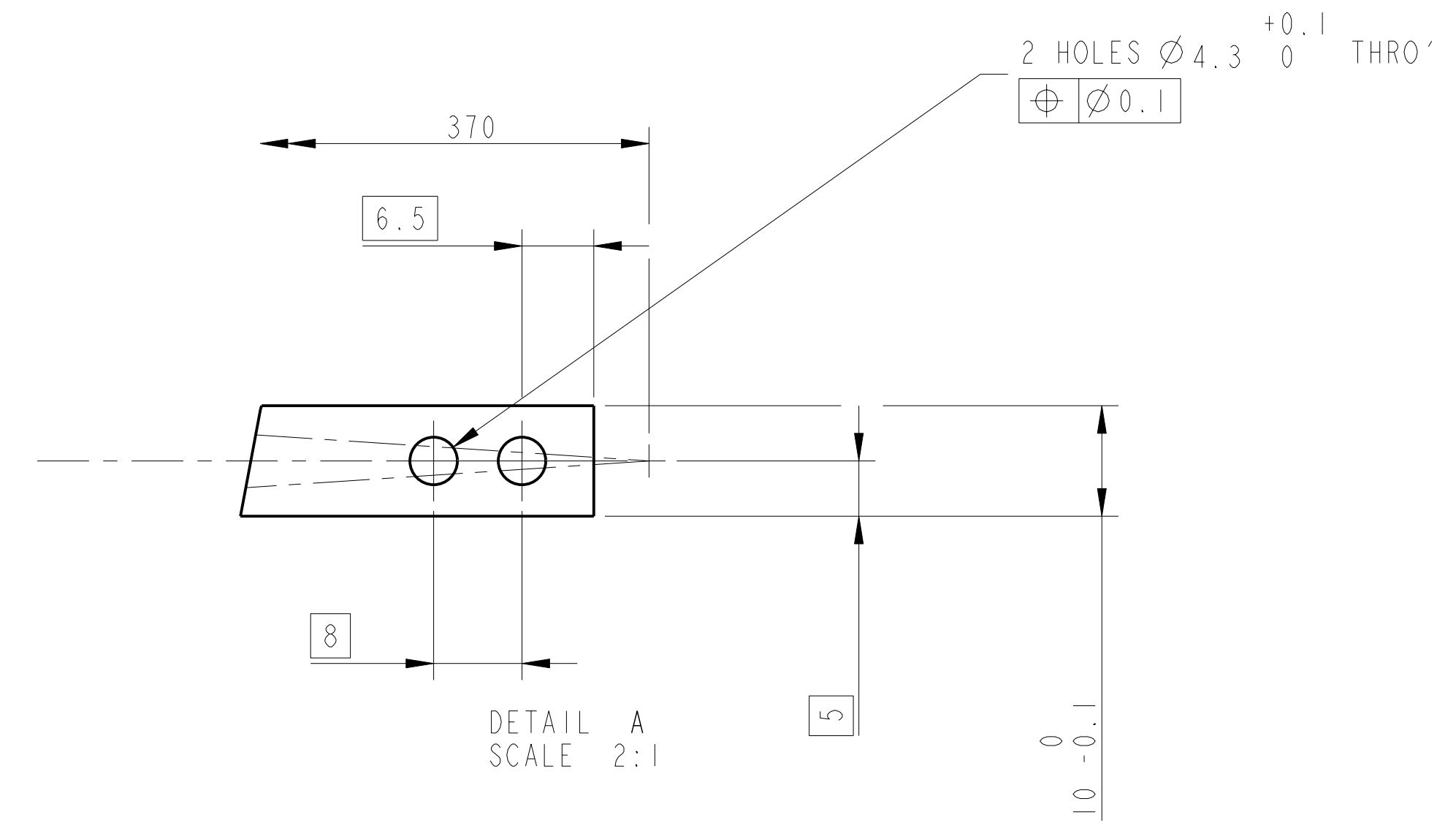
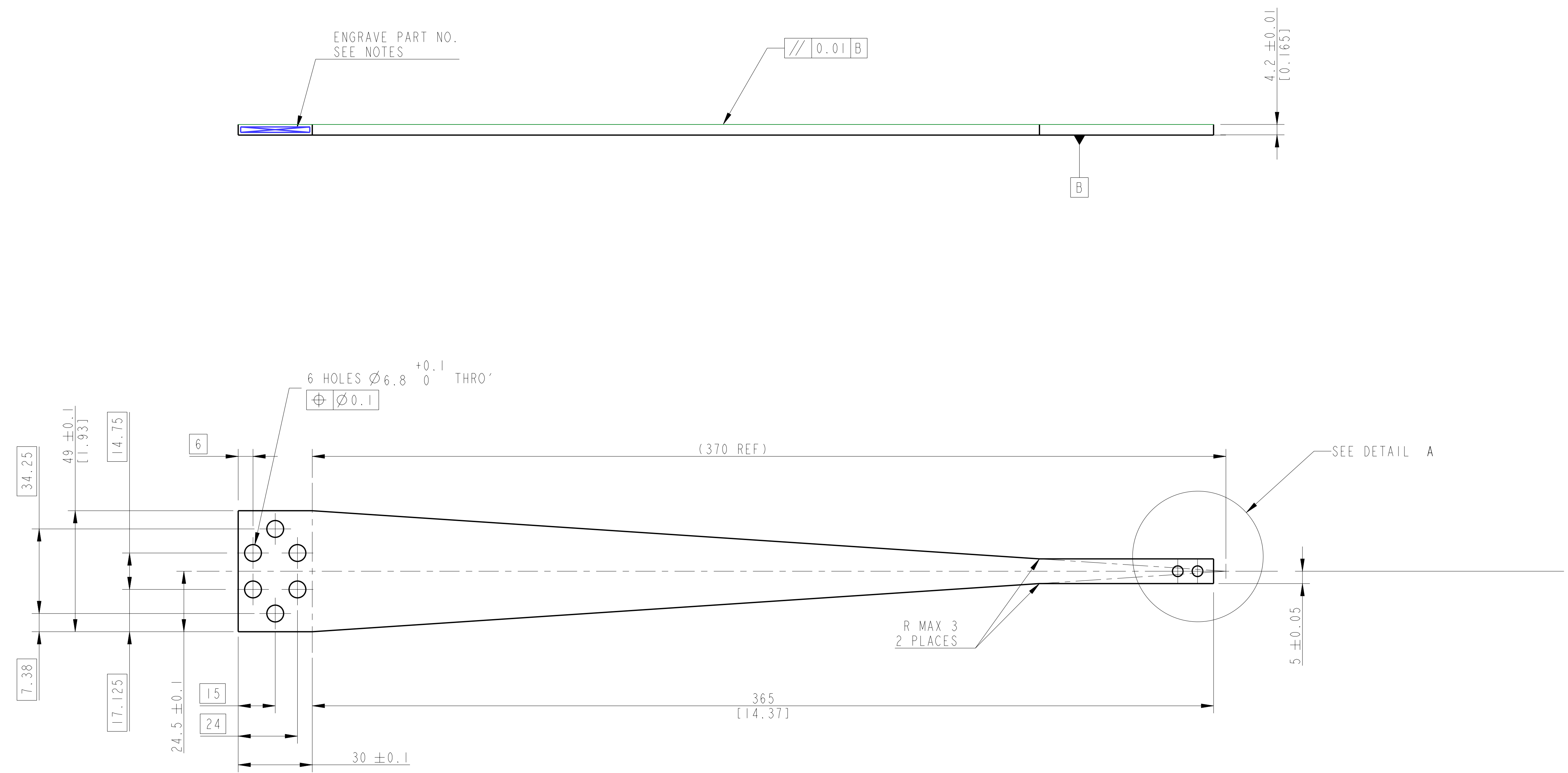


FLAT PROFILE



NOTES: (UNLESS OTHERWISE SPECIFIED)

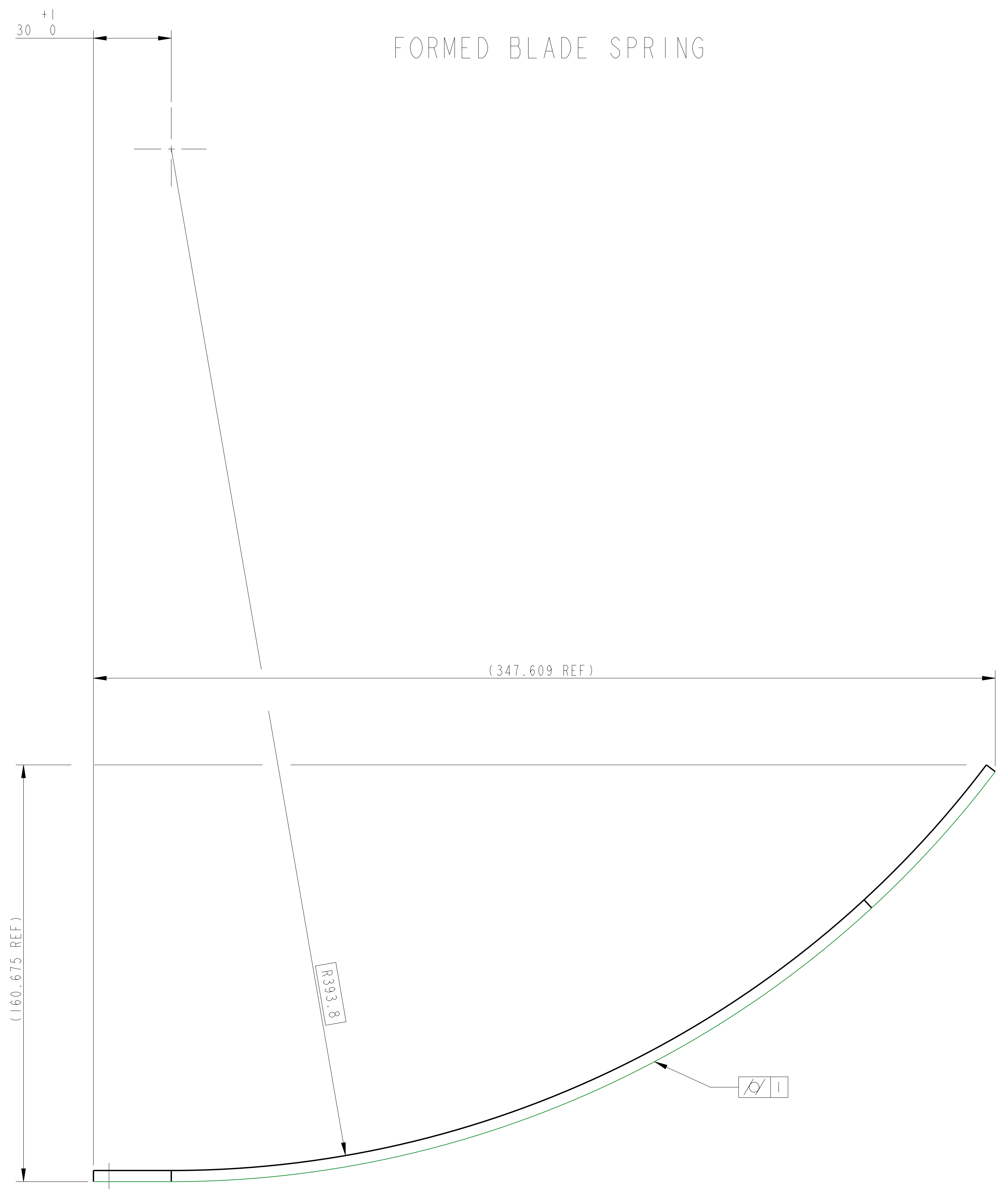
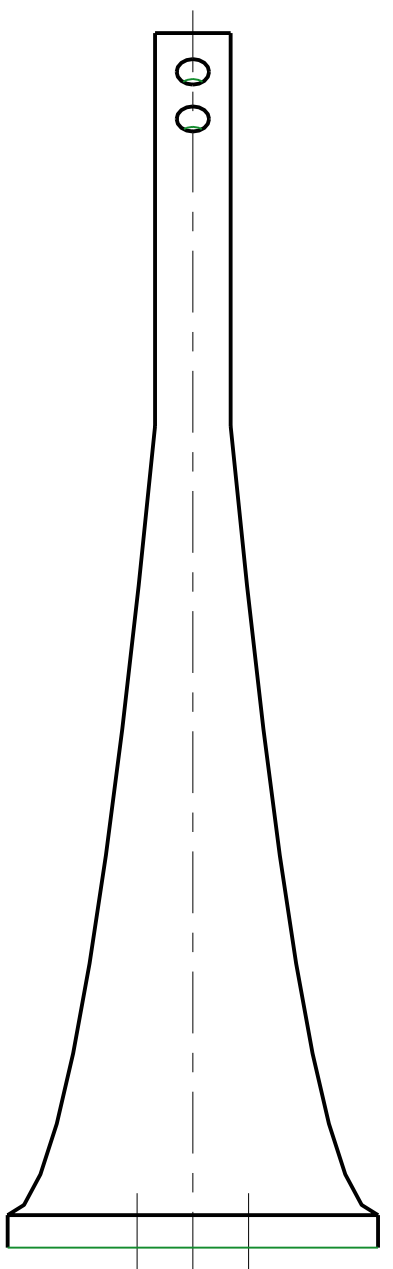
- DO NOT SCALE FROM DRAWING.
- INTERPRET DIMENSIONS PER: ANSI Y14.5-1987
- ALL MACHINING FLAVES SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACRON'S CIMTECH 410 (STAINLESS STEEL).
- FABRICATE FROM SHEET MATERIAL; FORM RADIUS BY ROLLING.
- REMOVE ALL SHARP EDGES; 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 "01" HIGH CHARACTERS. EXAMPLE: 000100-001 - A VIGNATION 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 "BIRE 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 mm		TOLERANCES:	
LINEAR ± 0.25 mm		ANGULAR $\pm 0.25^\circ$	
MATERIAL: MARAGING STEEL 250		FINISH: CLEAN AND DEGREASED	
NAME: _____		DATE: _____	
DRAWN: I WIMOT 26/JUL/08		CHKD: _____	
CHECKED: MB 15/MAR/10		APPROVED: JOD 15/MAR/10	

SYSTEM	aLIGO
SUB-SYSTEM	SUS
PART NAME	BOTTOM BLADE SPRINGS
DRG. NO.	D060237
SCALE	1:1
PROJECTION	1
SHEET	1 OF 2

FOR INTERNAL USE ONLY:
 E=186Gpa
 TOTAL SUSP MASS = 39.5 KG
 WIRE CLAMP OFFSET = 4.12 DOWN
 BLADE BEND RAD CALCULATED BY FEA

FORMED BLADE SPRING



NOTES: (UNLESS OTHERWISE SPECIFIED)

- DO NOT SCALE FROM DRAWING.
- INTERPRET DIMENSIONS PER: ANSI Y14.5 1987
- ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACRON'S CIMTECH 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 "01" HIGH CHARACTERS. EXAMPLE: 000100-001. A VIBRATION 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 "BIRE 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 mm		TOLERANCES:	
LINEAR ± 0.25 mm		ANGULAR ±0.25 °	
MATERIAL: MARRAGING STEEL 250			
FINISH: CLEAN AND DEGREASED		Ra : 0.8	
DRAWN	1 WLMOT	26/JUL/04	STY
CHECKED	MB	15/MAR/10	
APPROVED	JDD	15/MAR/10	

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY OR, GLASGOW UNIVERSITY GEC ROX GROUP RUTHERFORD APPLETON LABORATORIES	
SYSTEM	ADVANCED LIGO
SUB-SYSTEM	SUS
NEXT ASSY	UPPER INTERMEDIATE MASS
PART NAME	BOTTOM BLADE SPRINGS
DRG. NO.	D060237
SCALE	1:1
PROJECTION	1
SHEET	2 OF 2