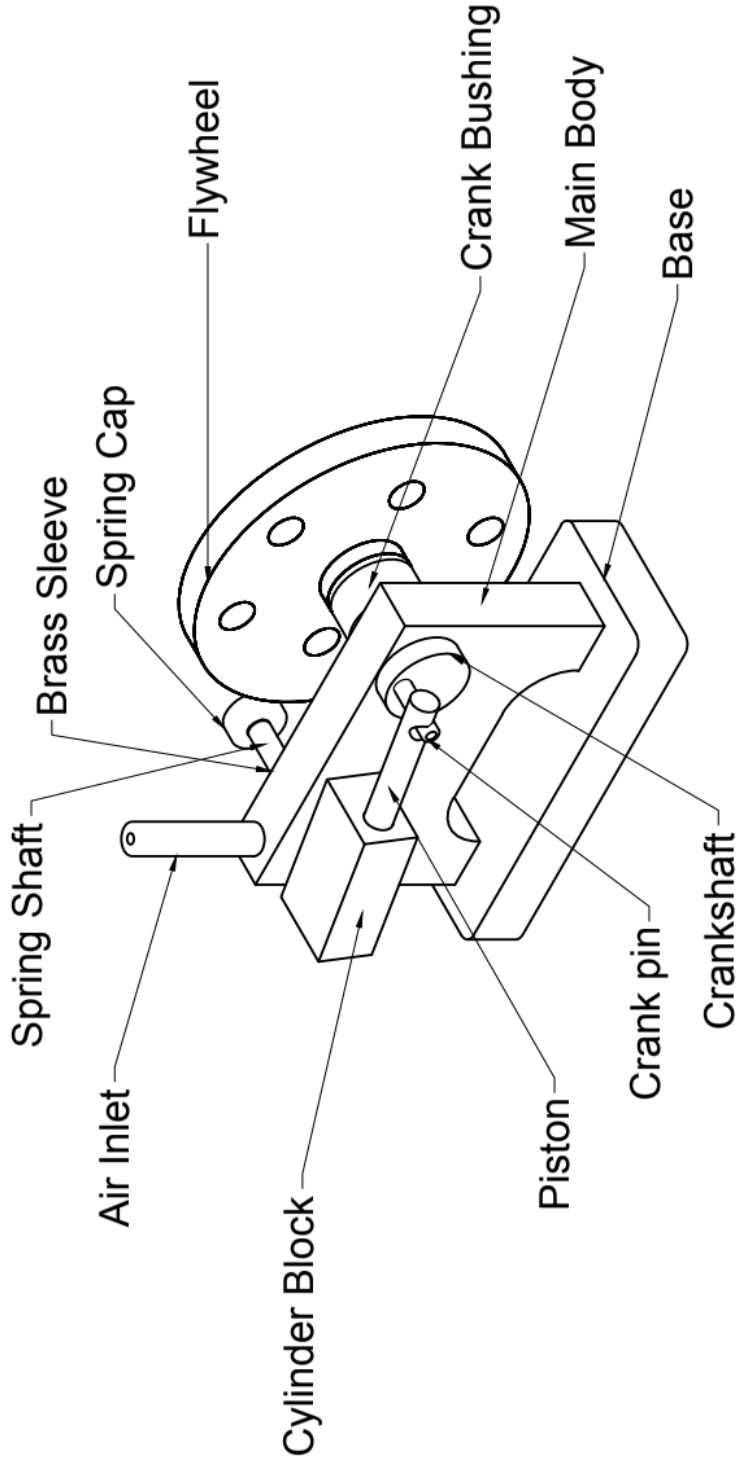
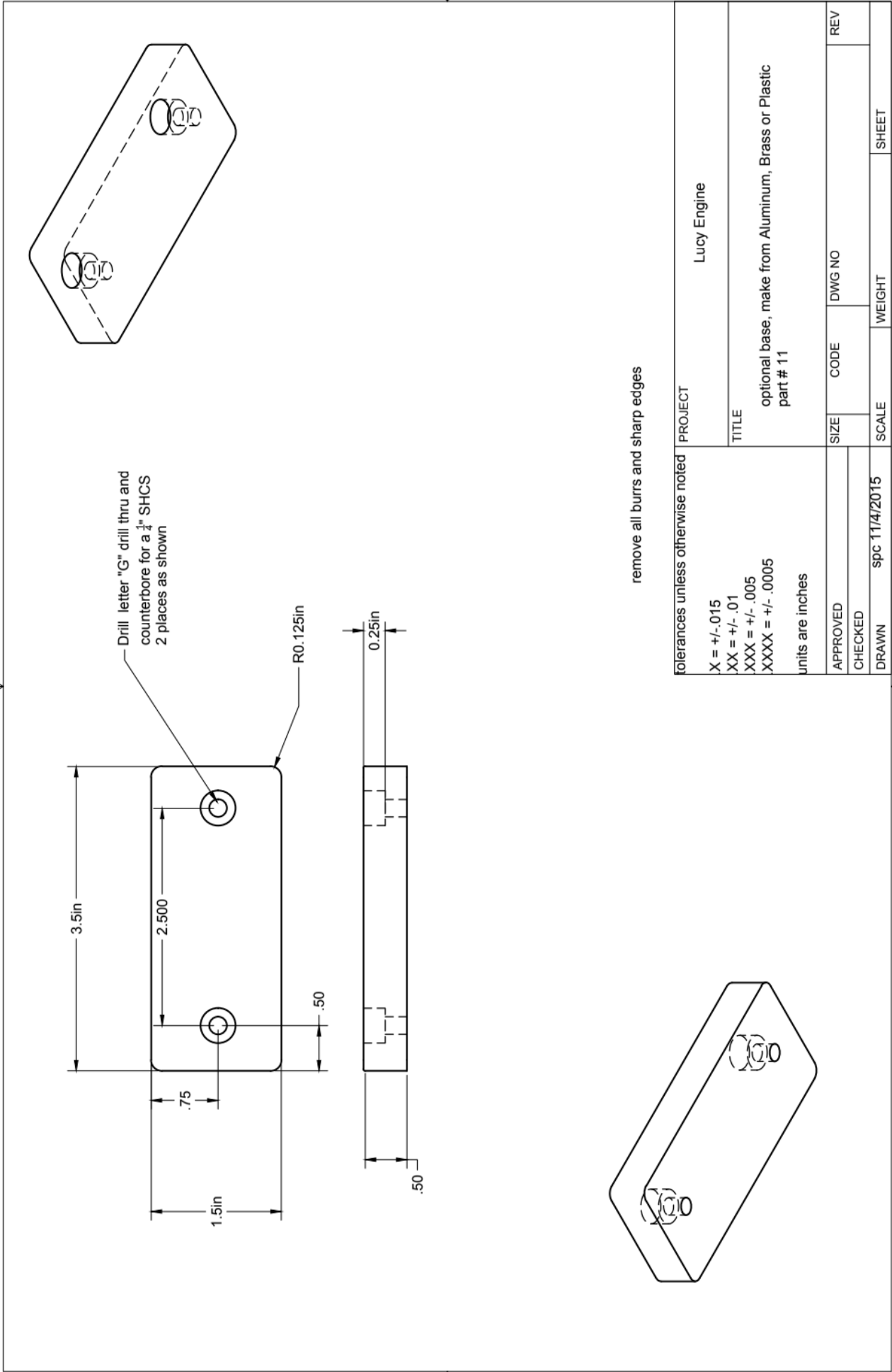


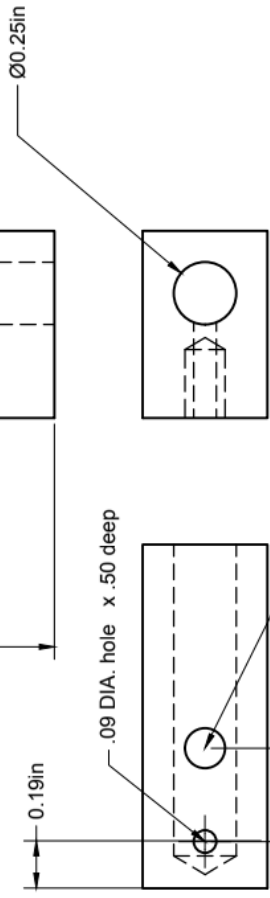
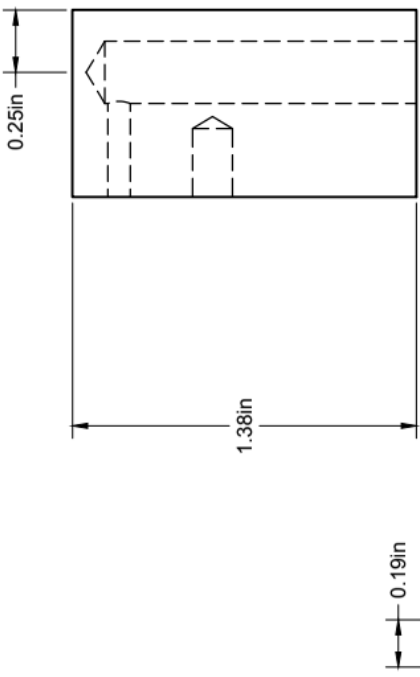
Lucy Engine Project Cut List

- Acrylic, .50" x 2.25" x 3.25" (1 piece)** Main Body Part #1
- Acrylic, .50" x 1.0" x 1.625" (1 piece)** Cylinder Block Part #2
- Alum or Brass, .50" x 3.25" x 3.25" (1 piece)** Flywheel Part #10
- Brass .75" DIA. X 1.25" long (1 piece)** Crank Brushing #7
- Brass .25" DIA x 4.0" long (1 piece)** Air Inlet Part #9 and Sleeve Part #7
- Steel, .75" DIA x 4" long (1 piece)** Crankshaft Part #6
- Steel, .156" DIA x 1.0" long (1 piece)** Crank Pin #3
- Steel, .25" DIA x 2.25" long (1 piece)** Piston Part #8
- Steel, .25" DIA x 3.0" long (1 piece)** Spring Shaft #4
- Brass or Alum. .50" x 1.75" x 3.75" (1 piece)** Base Part #11
- Brass, .50" DIA x .50" long (1 piece)** Spring Cap #5



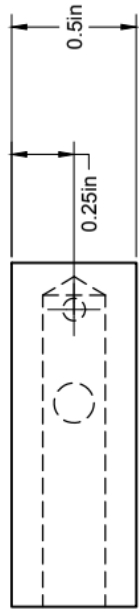
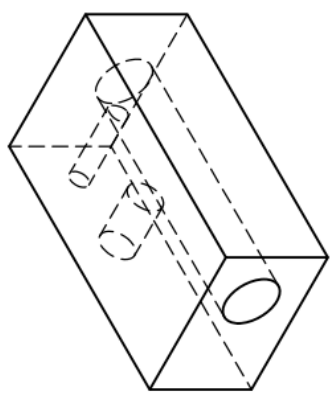
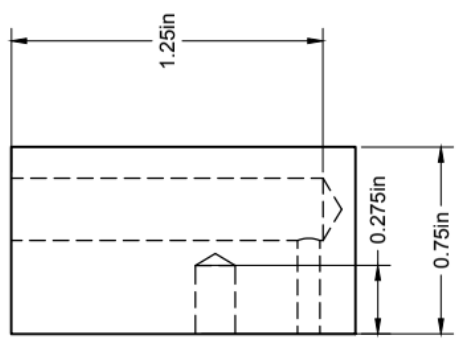
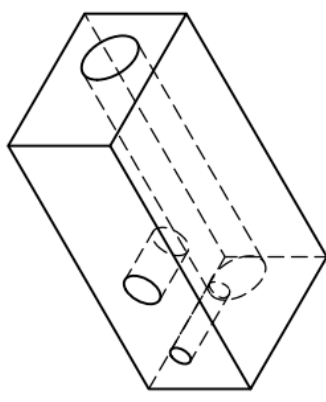
PROJECT		Lucy Engine	
TITLE		Assembly	
APPROVED	SIZE	CODE	DWG NO
CHECKED			
DRAWN	SCALE	WEIGHT	SHEET
			REV





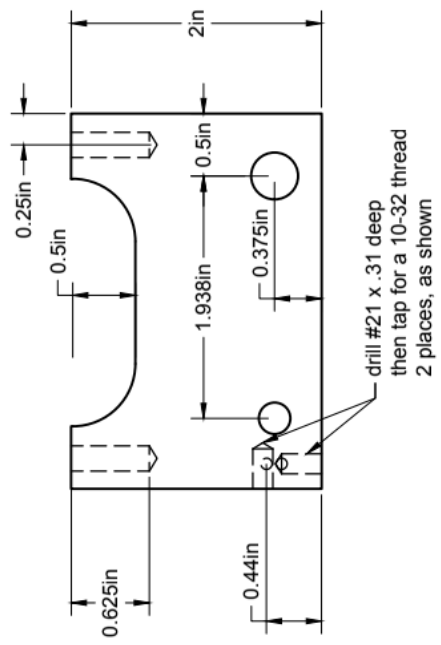
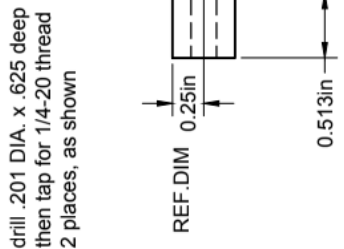
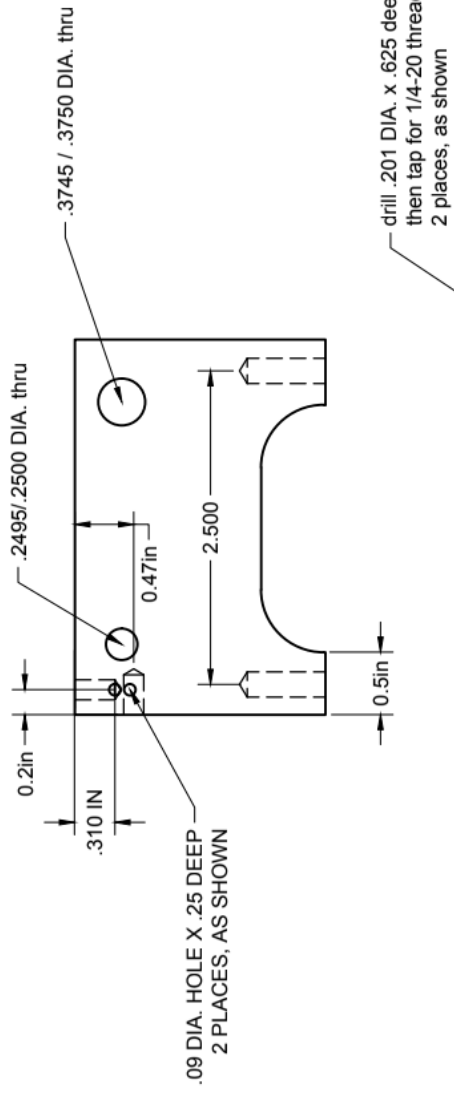
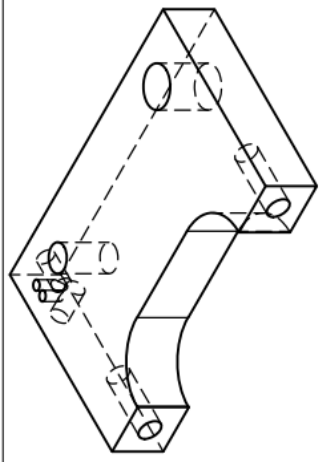
.09 DIA. hole x .50 deep

drill and tap for #10-32 thread



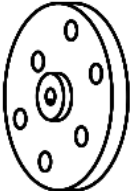
remove all burrs and sharp edges

tolerances unless otherwise noted		PROJECT	Lucy Engine	
.X = +/- .015		TITLE	cylinder block, Part #2	
.XX = +/- .01			Make from Plexiglass	
.XXX = +/- .005		SIZE	CODE	DWG NO
>XXXX = +/- .0005		CHECKED	SCALE	WEIGHT
APPROVED		DRAWN	SPC, 11/3/2015	SHEET
				REV

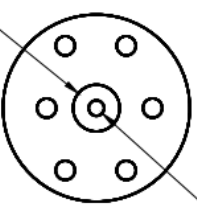


round off all edges, remove all burrs from part

Tolerances, unless otherwise noted		PROJECT	
X = +/- .015		Lucy Engine,	
XX = +/- .01		TITLE	
XXX = +/- .005		Main Body, Part #1	
XXXX = +/- .0005		Make from plexiglass	
APPROVED	SIZE	CODE	DWG NO
CHECKED			
DRAWN	SCALE	WEIGHT	SHEET 1/1
	SPC, Oct 30, 2015		

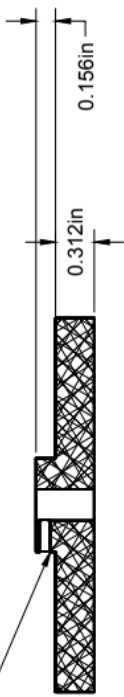
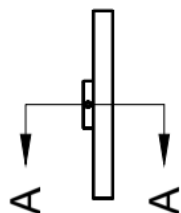


Ø0.75in



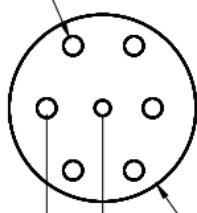
Ø0.251in

#5-40 threaded hole through to .251
DIA. one place as shown, centered
on both planes



SECTION A-A
SCALE 1:1

Ø0.312in
6 places equally spaced
as shown

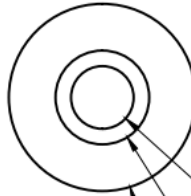
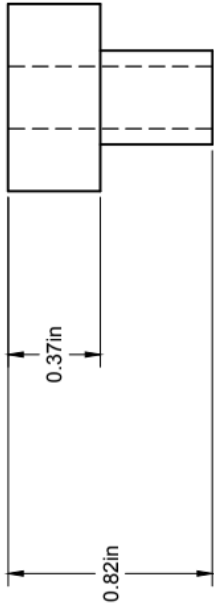
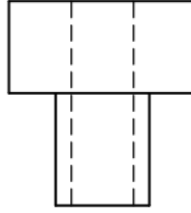


0.9in

Ø3in

remove all burrs and sharp edges

Tolerances, unless otherwise noted		PROJECT	
X = +/- .015	Lucy Engine		
XX = +/- .01	TITLE		
XXX = +/- .005	Flywheel, make from brass or aluminum part #10		
XXXX = +/- .0005	units are inches		
APPROVED	SIZE	CODE	DWG NO
CHECKED	SCALE		
DRAWN	spc 11/4/2015	WEIGHT	SHEET 1/1
REV		REV	



$\varnothing 0.75\text{in}$
 $\varnothing 0.376\text{in}$
 (+/- .001)
 $\varnothing 0.25\text{in}$
 (crank shaft must slide freely)

remove all burrs and sharp edges

unless otherwise noted

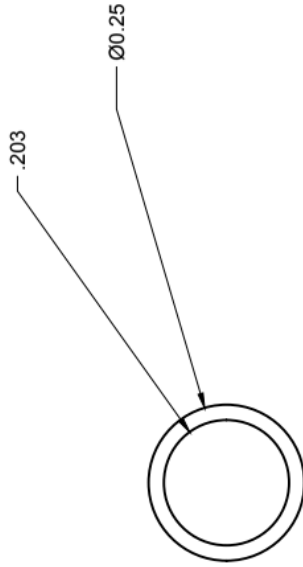
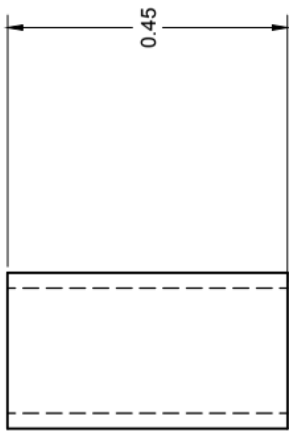
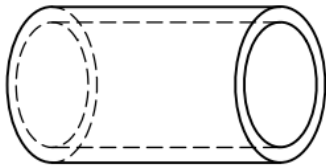
.X = +/- .03

.xx = +/- .01

.XXX = +/- .005

units are inches

PROJECT		Lucy Engine	
TITLE		crank bushing, Brass part #7	
APPROVED	SIZE	CODE	DWG NO
CHECKED	SCALE		WEIGHT
DRAWN	SPC 11/3/2015		SHEET
REV		REV	



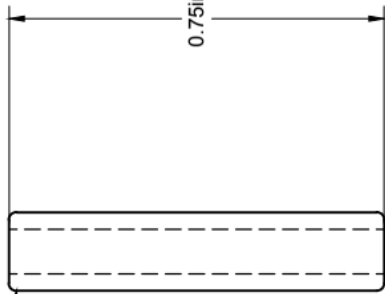
remove all burrs and sharp edges

Tolerances, unless otherwise noted		PROJECT		lucy - steam engine	
X = +/- .015		TITLE		sleeve, brass	
XX = +/- .01		SIZE		CODE	DWG NO
XXX = +/- .005		APPROVED		SCALE	WEIGHT
XXXX = +/- .0005		CHECKED		SCALE	SHEET
units are inches		DRAWN		SCALE	SHEET
		SPC 11/3/2015		SCALE	SHEET
				SCALE	SHEET



Drill #43 through part, then
tap for #4-40 thread .30 deep
from each side

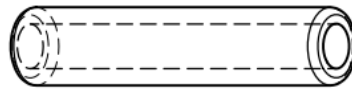
round off edges and
remove all burrs



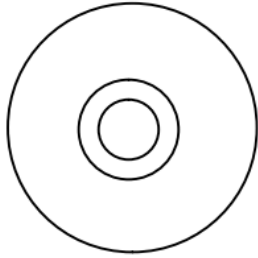
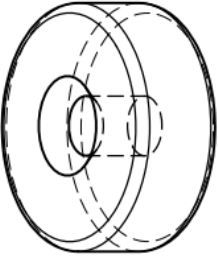
0.75in



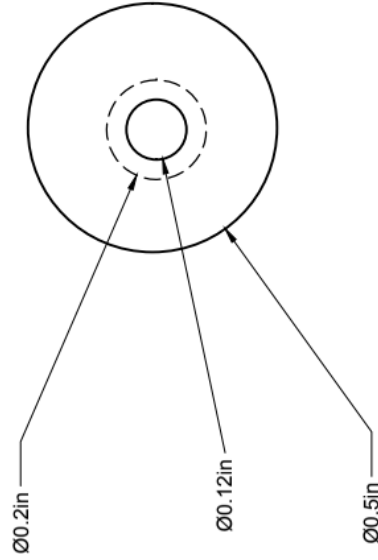
Ø0.156in



tolerances, unless otherwise noted		PROJECT Lucy Engine	
.X = +/- .015 .XX = +/- .010 .XXX = +/- .005 .XXXX = +/- .0005		TITLE crank Pin, Part #3 make from steel	
APPROVED	SIZE	CODE	DWG NO
CHECKED			
DRAWN	SCALE	WEIGHT	SHEET
	SPC, 11/3/2015		



BREAK ALL SHARP EDGES

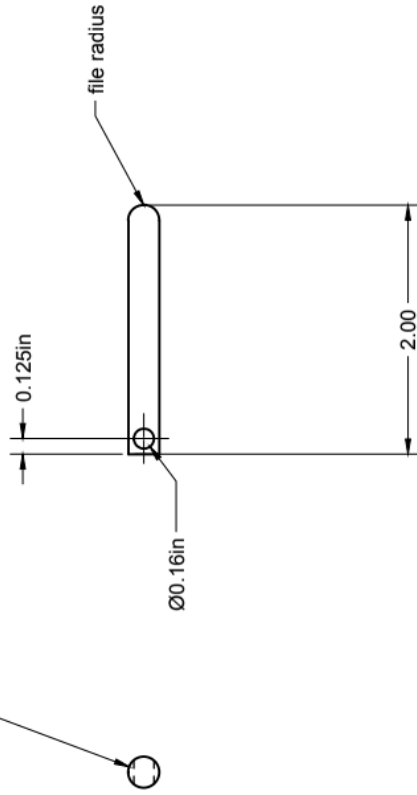


MAKE FROM BRASS

tolerances unless otherwise noted		PROJECT	Lucy Engine
X = +/- .015		TITLE	spring cap, Part #5
XX = +/- .01			Make from brass
XXX = +/- .005		SIZE	CODE
XXXX = +/- .0005		CHECKED	DWG NO
		DRAWN	SCALE
			WEIGHT
			SHEET

X = +/- .015		PROJECT	Lucy Engine
XX = +/- .01		TITLE	spring cap, Part #5
XXX = +/- .005			Make from brass
XXXX = +/- .0005		SIZE	CODE
		CHECKED	DWG NO
		DRAWN	SCALE
			WEIGHT
			SHEET

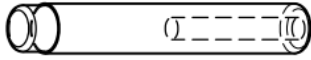
Ø0.248in
(must fit inside cylinder freely)



remove all burrs and sharp edges

tolerances unless otherwise noted		PROJECT		Lucy Engine	
X = +/- .015	XX = +/- .01	TITLE		Piston, Make from Steel Part #8	
XXX = +/- .005	XXXX = +/- .0005	SIZE	CODE	DWG NO	REV
units are inches					
APPROVED					
CHECKED					
DRAWN	SPC 11/3/2015	SCALE	WEIGHT	SHEET	

BREAK ALL SHARP EDGES
MAKE FROM STEEL



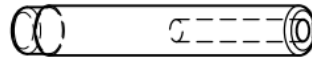
MACHINE TO
.187 DIA. AND
THREAD 10-32

0.13in

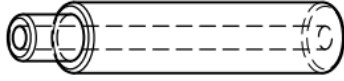
DRILL #43 X .62 DP.
AND TAP 4-40 X .3 DP.

1.38in

.200 DIA.
+.001 / -.002



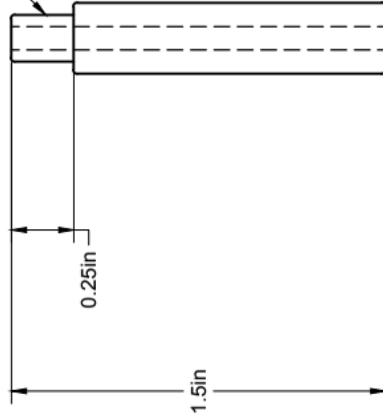
tolerances unless otherwise noted		PROJECT Lucy Engine	
.X = +/- .015 .XX = +/- .01 .XXX = +/- .005 .XXXX = +/- .0005		TITLE spring shaft, part #4 Make from Steel	
APPROVED	SIZE	CODE	DWG NO
CHECKED	SCALE		WEIGHT
DRAWN	spc, 11.03/2015		SHEET
			REV



.250 DIA.



turn to .185 DIA. then
thread #10-32

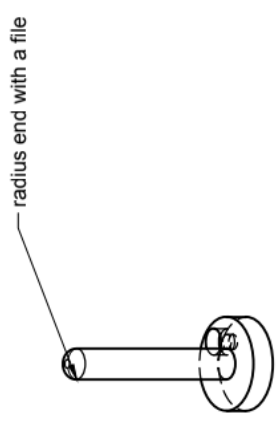
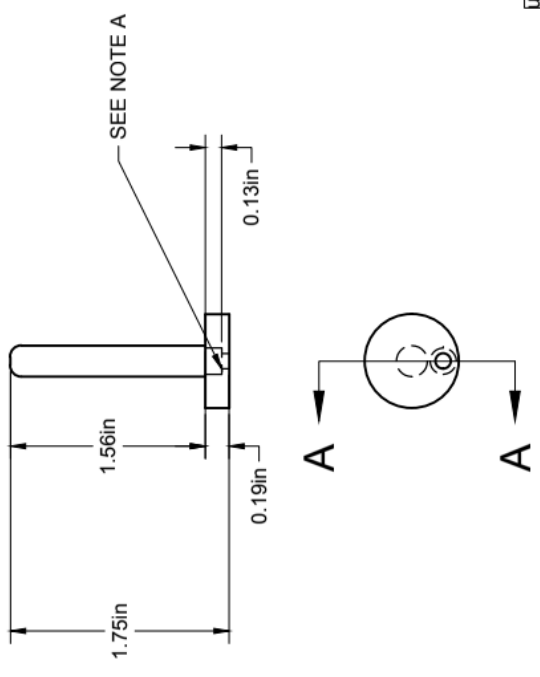
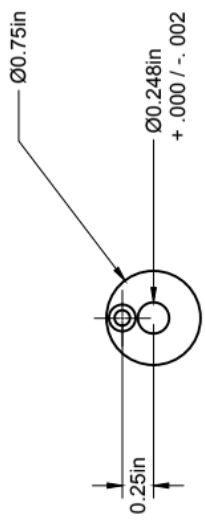


Ø0.093in
through
hole

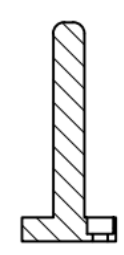


please remove burrs and sharp edges

tolerances unless otherwise noted		PROJECT		Lucy Engine		
X = +/- .015	units are inches	TITLE		Air Inlet, Part #9 make from brass		
XX = +/- .01		SIZE	CODE	DWG NO	REV	
XXX = +/- .005		DRAWN		SCALE	WEIGHT	SHEET
XXXX = +/- .00005		CHECKED				



SECTION A-A
SCALE 1:1



NOTE A
DRILL .12 DIA. THROUGH AND COUNTER BORE FOR A #4
SHCS

unless otherwise noted		PROJECT		Lucy Engine	
X = +/- .015		TITLE		Crankshaft, Part #6	
XX = +/- .01		SIZE		CODE	DWG NO
XXX = +/- .005		DRAWN		SCALE	WEIGHT
XXXX = +/- .0005		spc 11/3/2015		SCALE	SHEET
APPROVED	CHECKED	SCALE	WEIGHT	SHEET	REV