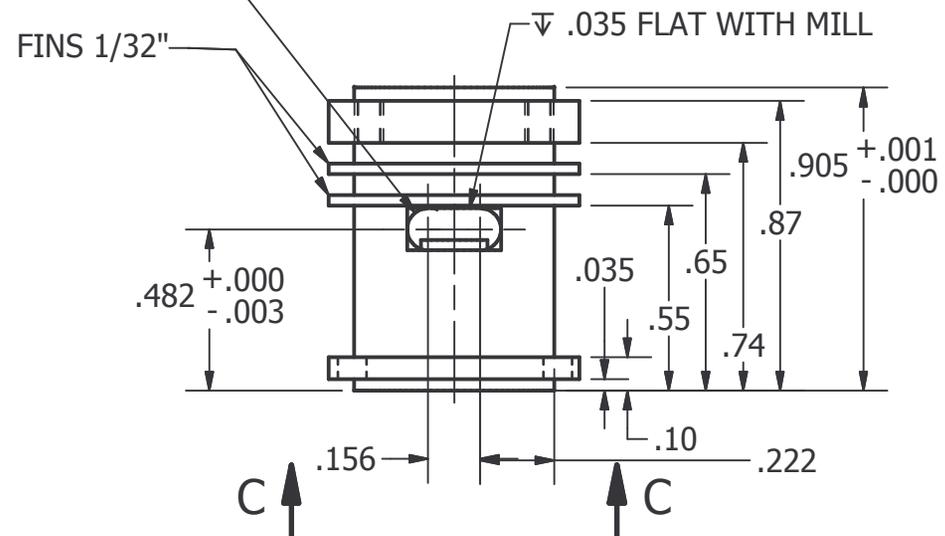
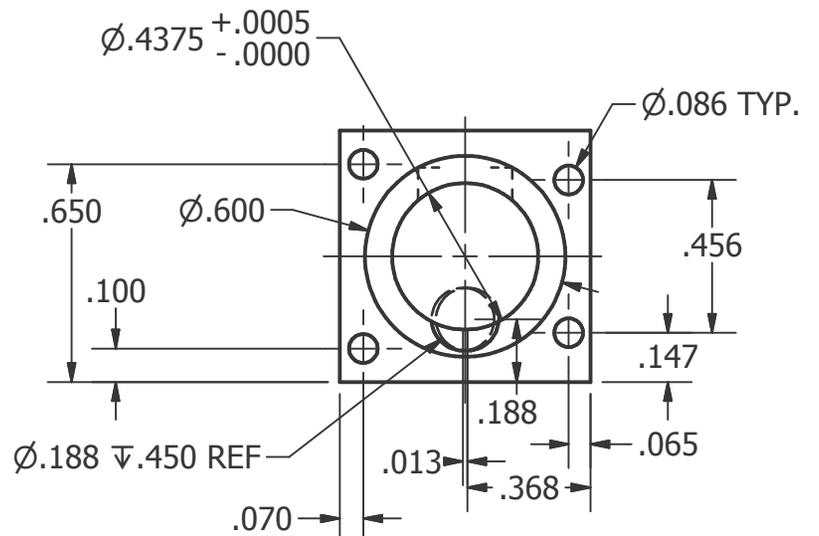
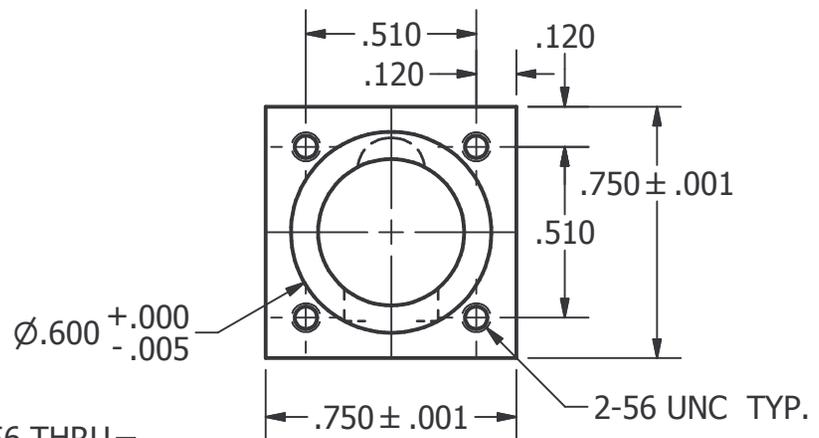
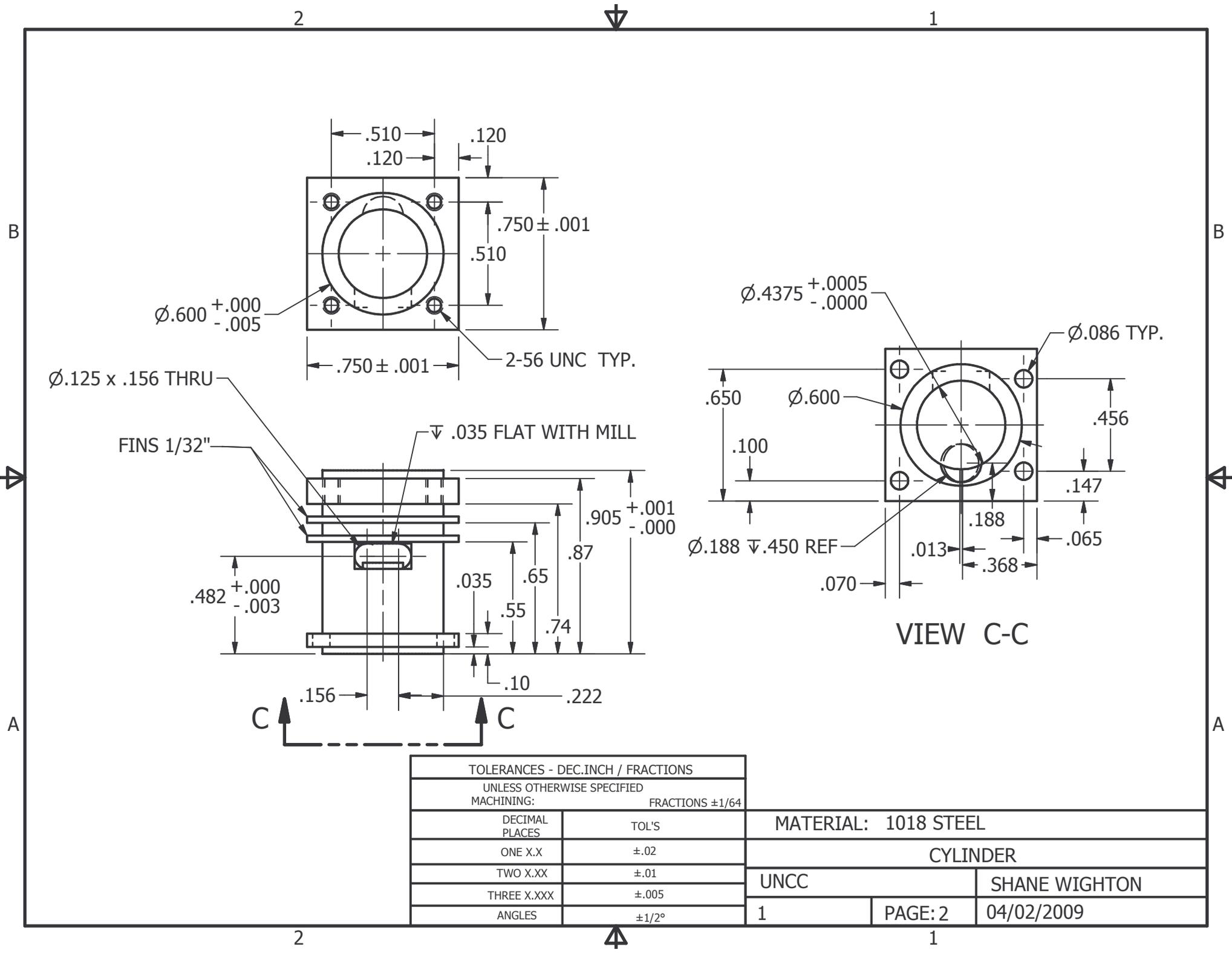


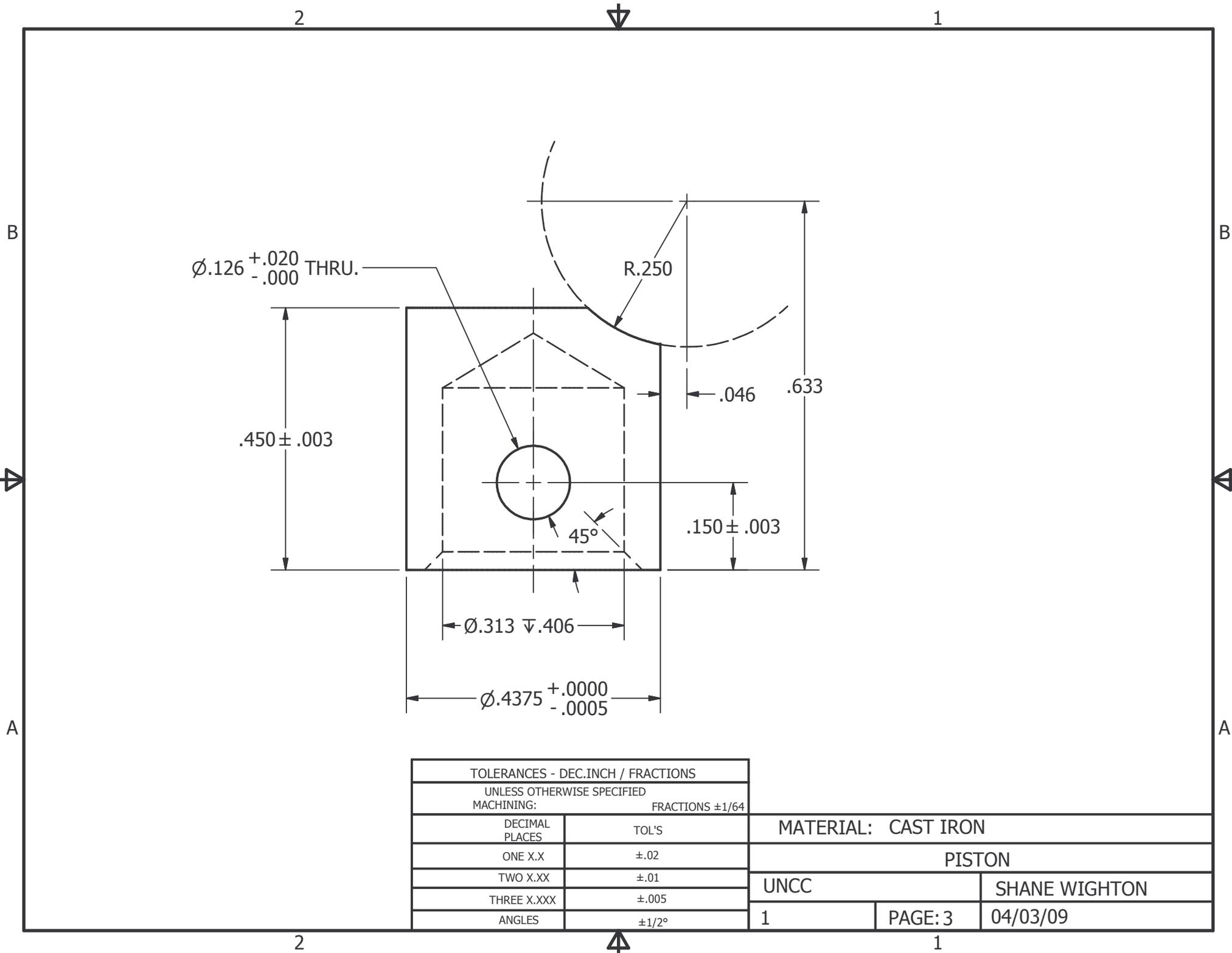
Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	Con Rod	.125 x .25 Steel
2	1	Crank Body	.625 x .125 thick Steel
3	1	Crank Case	.75" sq. x 3/4" Al
4	1	Rotart Valve	.625 x .175 thick steel
5	1	Piston	.4375 x .4 Cast Iron
6	1	Wrist Pin	.125" Dowel
7	1	cylinder	.75" sq. x .9" Steel
8	12	2-56	2-56 x .2" Socket Head
9	1	Crank Seal	.75" sq. x .3" Al
10	1	Cylinder Head	.75" sq. x .2" Steel
12	1	Crank Shaft	.1875" x 1.5 Drill Rod
13	1	Crank Pin	.125" Dowel

TOLERANCES - DEC.INCH / FRACTIONS	
UNLESS OTHERWISE SPECIFIED	
MACHINING:	FRACTIONS ±1/64
DECIMAL PLACES	TOL'S
ONE X.X	±.02
TWO X.XX	±.01
THREE X.XXX	±.005
ANGLES	±1/2°

MATERIAL: N/A		
BOM		
UNCC	SHANE WIGHTON	
1	PAGE: 1	04/02/2009

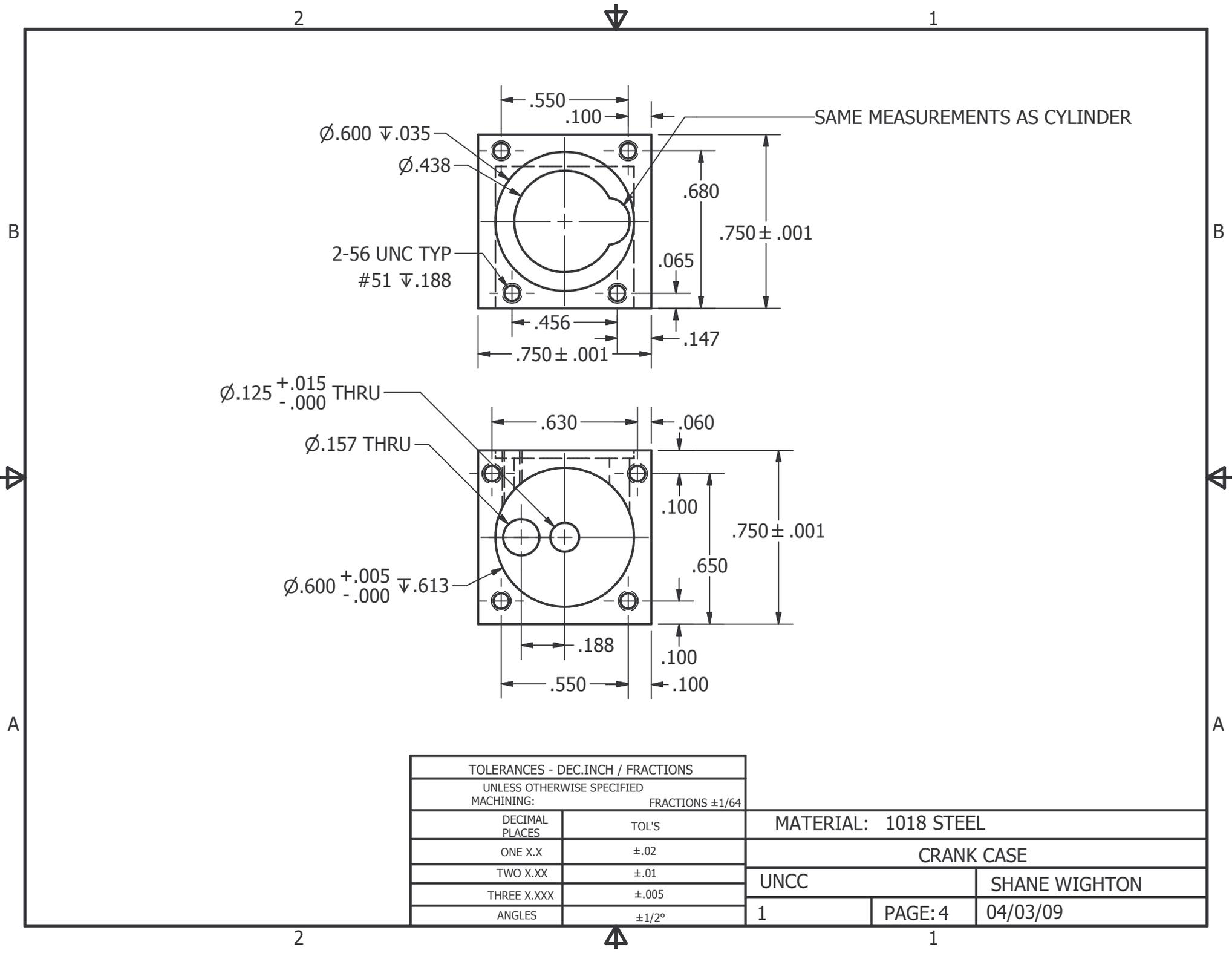


TOLERANCES - DEC.INCH / FRACTIONS		MATERIAL: 1018 STEEL	
UNLESS OTHERWISE SPECIFIED		CYLINDER	
MACHINING:		UNCC	SHANE WIGHTON
DECIMAL PLACES	TOL'S	1	PAGE: 2
ONE X.X	±.02		04/02/2009
TWO X.XX	±.01		
THREE X.XXX	±.005		
ANGLES	±1/2°		



TOLERANCES - DEC.INCH / FRACTIONS	
UNLESS OTHERWISE SPECIFIED	
MACHINING:	FRACTIONS ±1/64
DECIMAL PLACES	TOL'S
ONE X.X	±.02
TWO X.XX	±.01
THREE X.XXX	±.005
ANGLES	±1/2°

MATERIAL: CAST IRON		
PISTON		
UNCC	SHANE WIGHTON	
1	PAGE: 3	04/03/09



$\varnothing .600 \sqrt{.035}$

$\varnothing .438$

2-56 UNC TYP
#51 $\sqrt{.188}$

SAME MEASUREMENTS AS CYLINDER

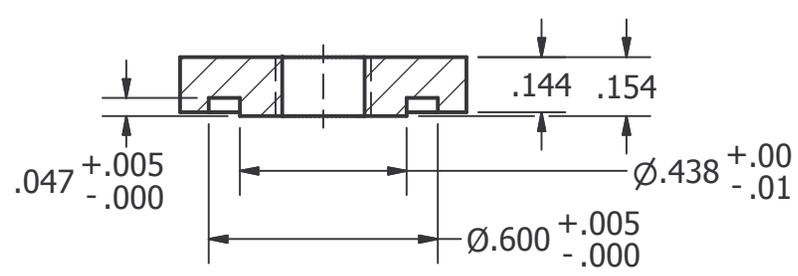
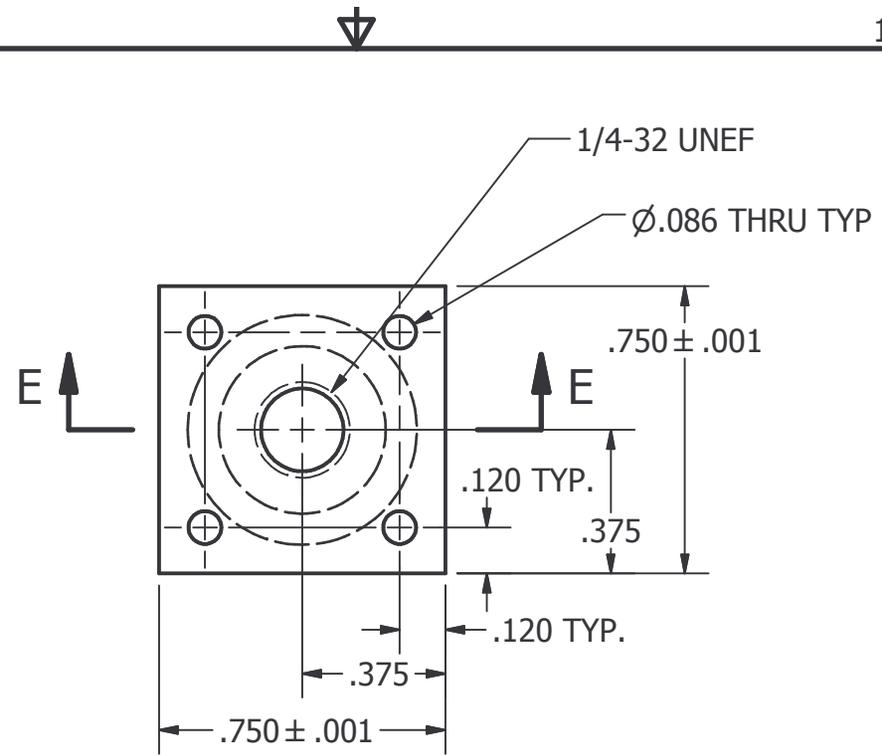
$\varnothing .125^{+.015}_{-.000}$ THRU

$\varnothing .157$ THRU

$\varnothing .600^{+.005}_{-.000} \sqrt{.613}$

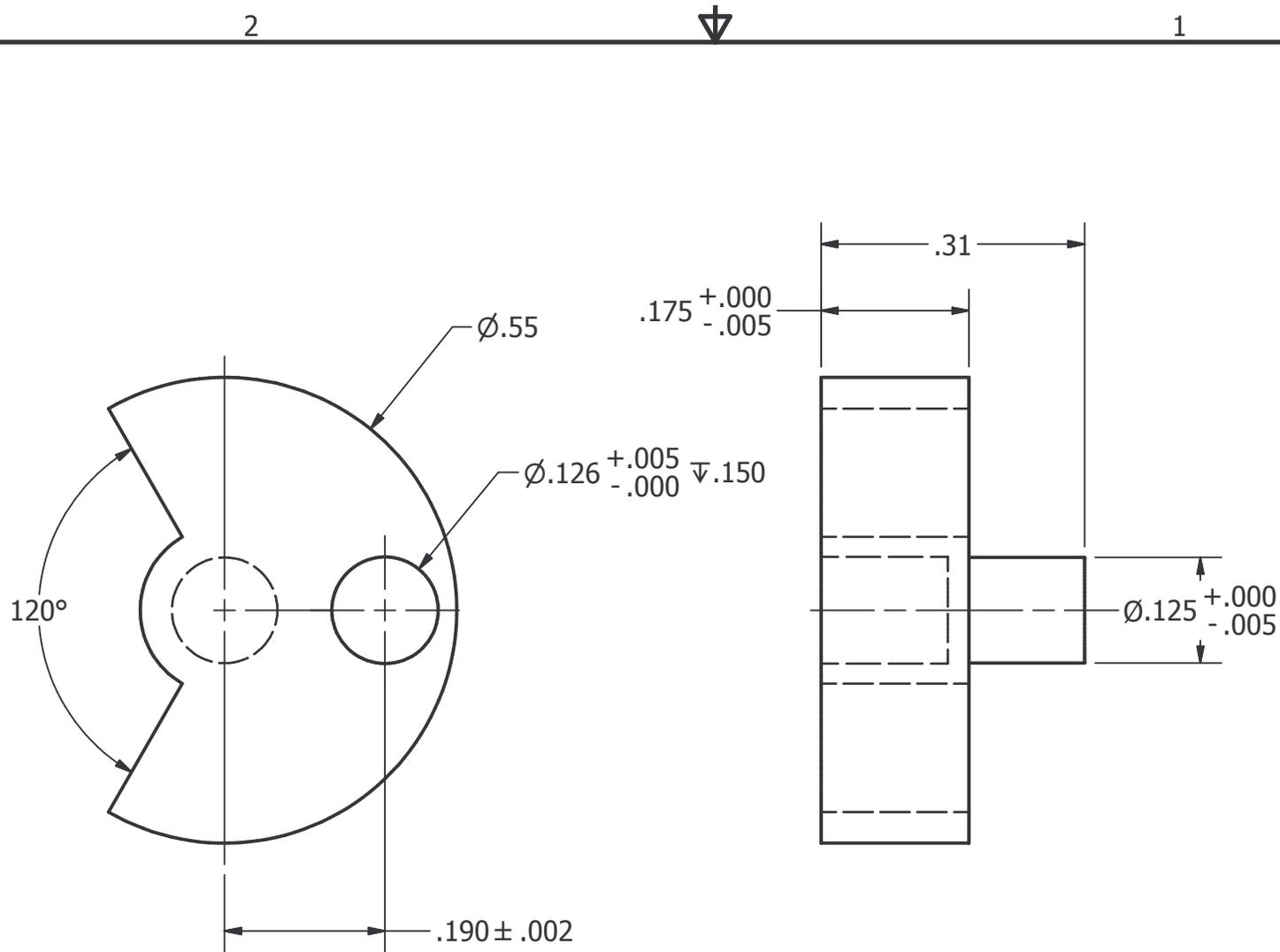
TOLERANCES - DEC.INCH / FRACTIONS	
UNLESS OTHERWISE SPECIFIED	
DECIMAL PLACES	TOL'S
ONE X.X	$\pm .02$
TWO X.XX	$\pm .01$
THREE X.XXX	$\pm .005$
ANGLES	$\pm 1/2^\circ$

MATERIAL: 1018 STEEL		
CRANK CASE		
UNCC	SHANE WIGHTON	
1	PAGE: 4	04/03/09

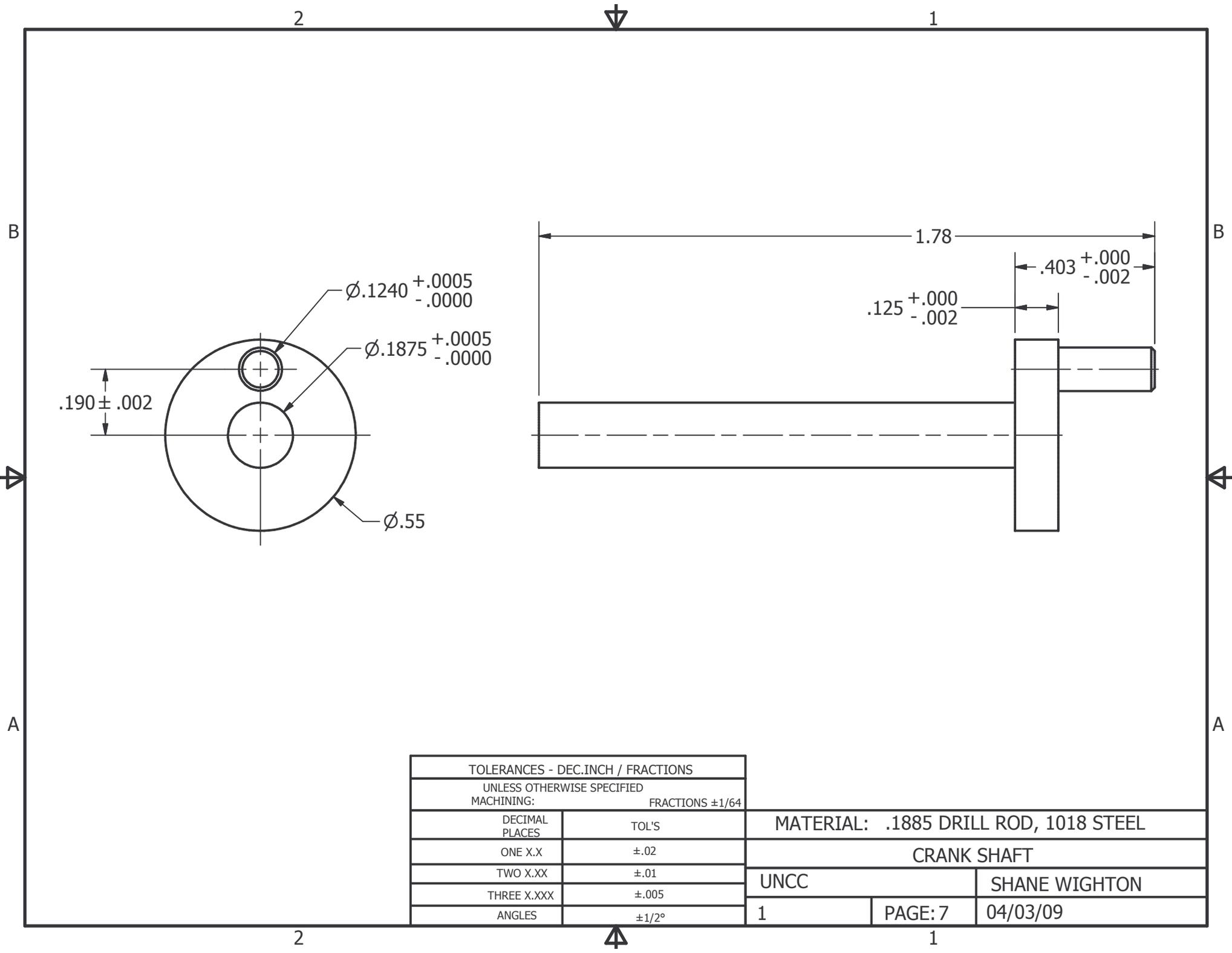


SECTION E-E

TOLERANCES - DEC.INCH / FRACTIONS			
UNLESS OTHERWISE SPECIFIED			
MACHINING:		FRACTIONS ±1/64	
DECIMAL PLACES	TOL'S	MATERIAL: 1018 STEEL	
ONE X.X	±.02	CYLINDER HEAD	
TWO X.XX	±.01	UNCC	SHANE WIGHTON
THREE X.XXX	±.005	1	PAGE: 5
ANGLES	±1/2°		04/03/09

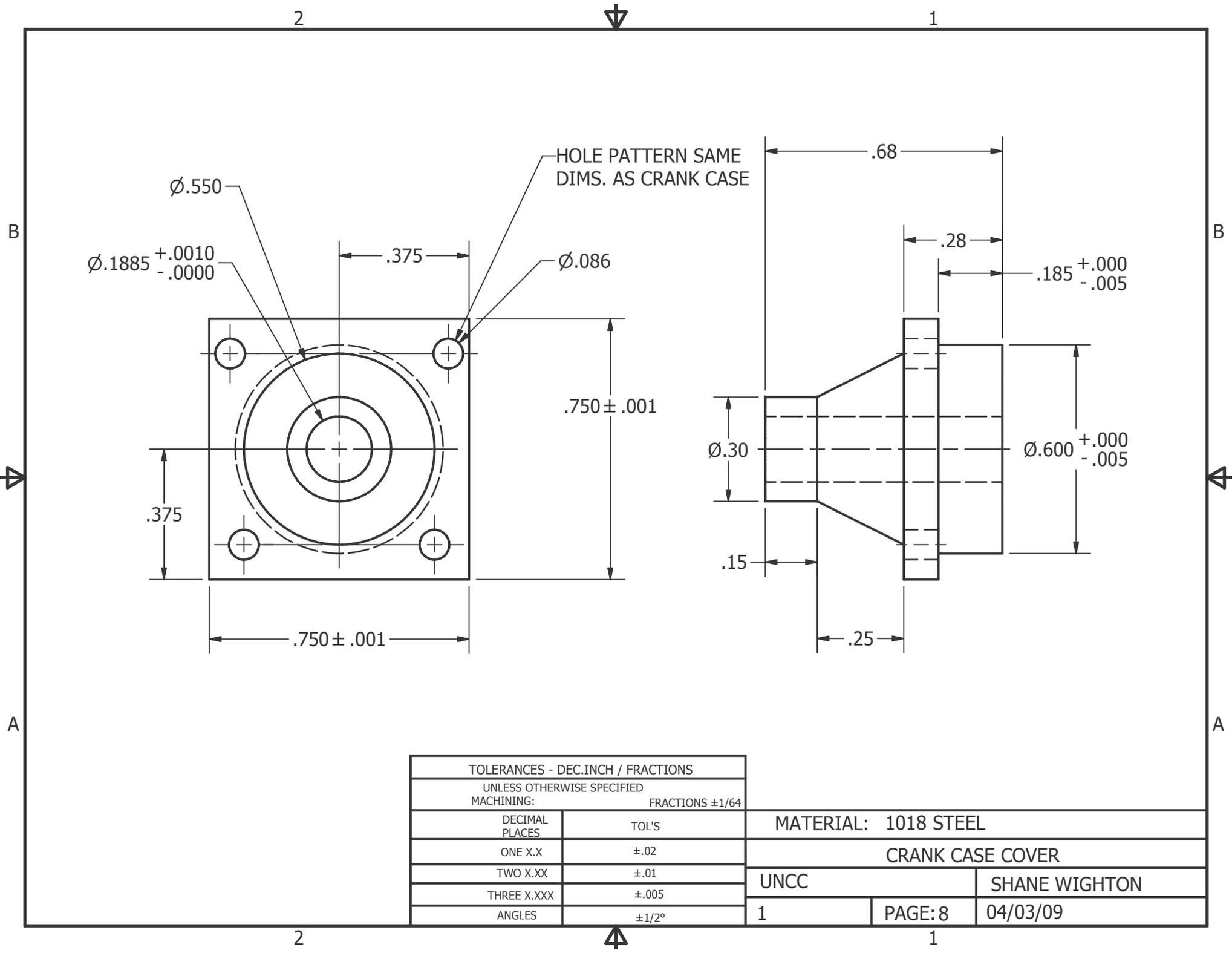


TOLERANCES - DEC.INCH / FRACTIONS		MATERIAL: BRASS	
UNLESS OTHERWISE SPECIFIED			
MACHINING:		FRACTIONS $\pm 1/64$	
DECIMAL PLACES	TOL'S	ROTARY VALVE	
ONE X.X	$\pm .02$	UNCC	SHANE WIGHTON
TWO X.XX	$\pm .01$	1	PAGE: 6
THREE X.XXX	$\pm .005$		04/03/09
ANGLES	$\pm 1/2^\circ$		



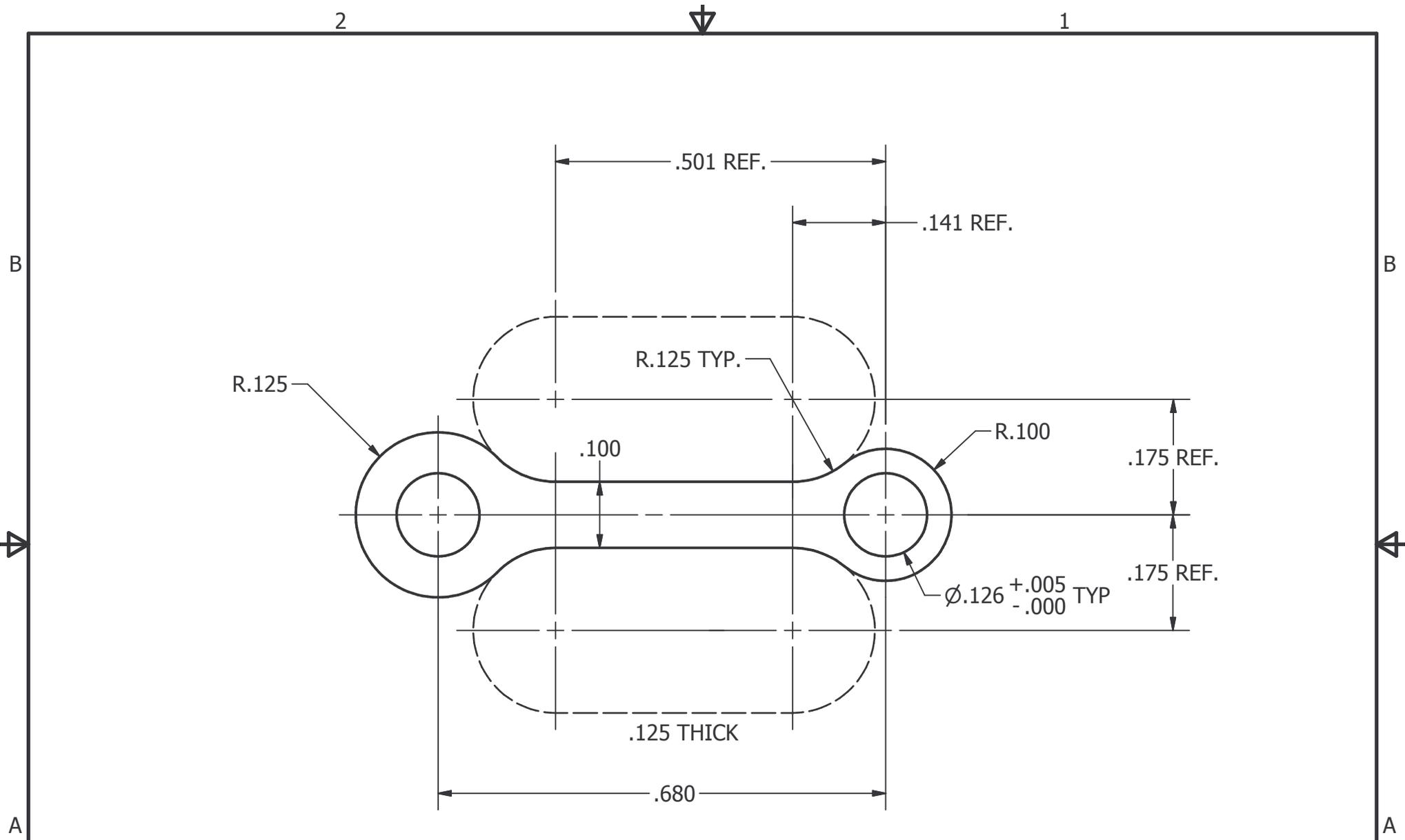
TOLERANCES - DEC.INCH / FRACTIONS	
UNLESS OTHERWISE SPECIFIED	
MACHINING:	FRACTIONS $\pm 1/64$
DECIMAL PLACES	TOL'S
ONE X.X	$\pm .02$
TWO X.XX	$\pm .01$
THREE X.XXX	$\pm .005$
ANGLES	$\pm 1/2^\circ$

MATERIAL: .1885 DRILL ROD, 1018 STEEL		
CRANK SHAFT		
UNCC	SHANE WIGHTON	
1	PAGE: 7	04/03/09



TOLERANCES - DEC.INCH / FRACTIONS	
UNLESS OTHERWISE SPECIFIED	
MACHINING: FRACTIONS $\pm 1/64$	
DECIMAL PLACES	TOL'S
ONE X.X	$\pm .02$
TWO X.XX	$\pm .01$
THREE X.XXX	$\pm .005$
ANGLES	$\pm 1/2^\circ$

MATERIAL: 1018 STEEL		
CRANK CASE COVER		
UNCC	SHANE WIGHTON	
1	PAGE: 8	04/03/09



TOLERANCES - DEC.INCH / FRACTIONS	
UNLESS OTHERWISE SPECIFIED	
MACHINING:	FRACTIONS $\pm 1/64$
DECIMAL PLACES	TOL'S
ONE X.X	$\pm .02$
TWO X.XX	$\pm .01$
THREE X.XXX	$\pm .005$
ANGLES	$\pm 1/2^\circ$

HIDDEN LINES REPRESENT TOOL PATHS		
MATERIAL: 1018 STEEL		
CON-ROD		
UNCC	SHANE WIGHTON	
1	PAGE: 9	04/03/09

2

1

B

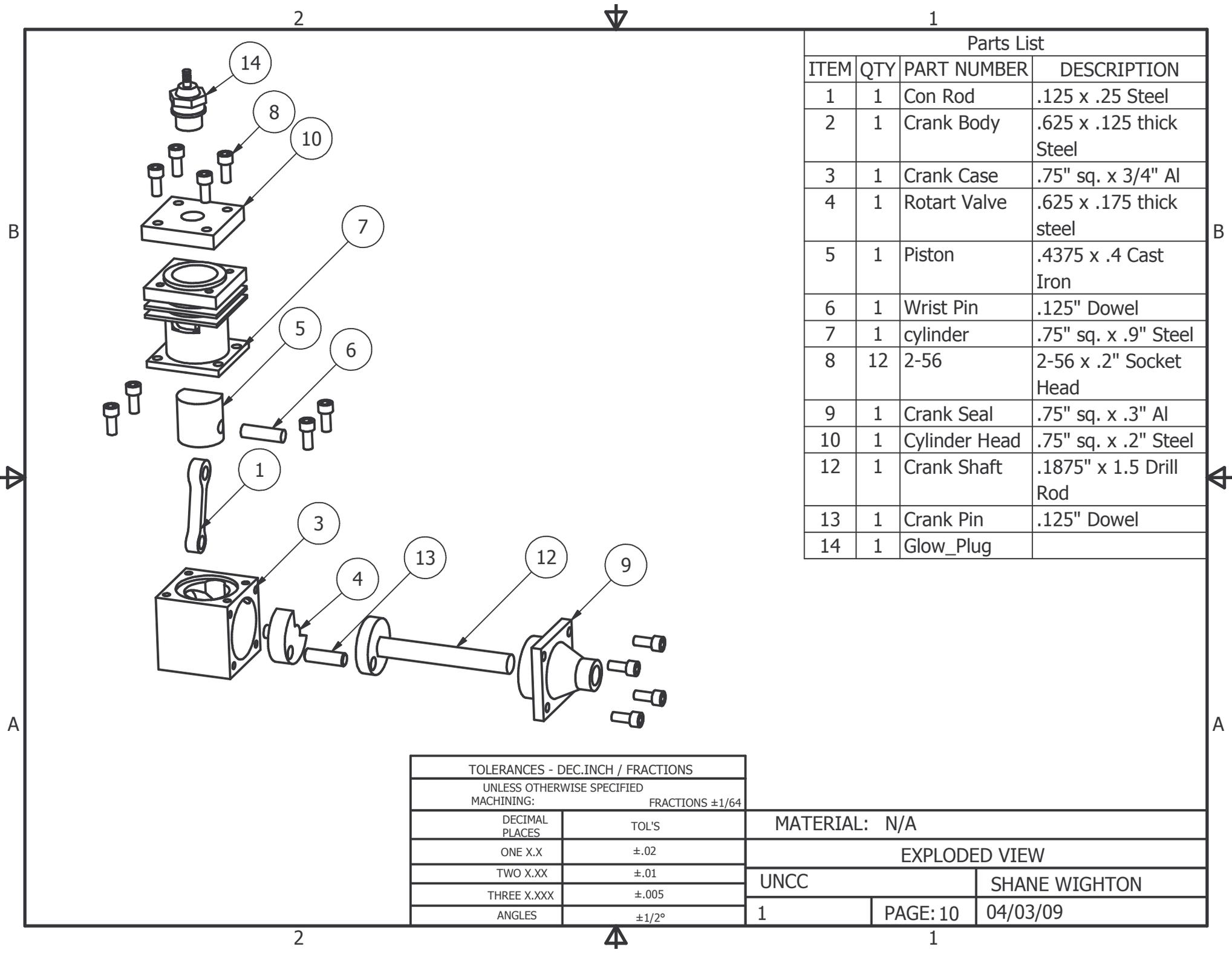
B

A

A

2

1



1

2

Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	Con Rod	.125 x .25 Steel
2	1	Crank Body	.625 x .125 thick Steel
3	1	Crank Case	.75" sq. x 3/4" Al
4	1	Rotart Valve	.625 x .175 thick steel
5	1	Piston	.4375 x .4 Cast Iron
6	1	Wrist Pin	.125" Dowel
7	1	cylinder	.75" sq. x .9" Steel
8	12	2-56	2-56 x .2" Socket Head
9	1	Crank Seal	.75" sq. x .3" Al
10	1	Cylinder Head	.75" sq. x .2" Steel
12	1	Crank Shaft	.1875" x 1.5 Drill Rod
13	1	Crank Pin	.125" Dowel
14	1	Glow_Plug	

TOLERANCES - DEC.INCH / FRACTIONS	
UNLESS OTHERWISE SPECIFIED	
MACHINING: FRACTIONS ±1/64	
DECIMAL PLACES	TOL'S
ONE X.X	±.02
TWO X.XX	±.01
THREE X.XXX	±.005
ANGLES	±1/2°

MATERIAL: N/A		
EXPLODED VIEW		
UNCC	SHANE WIGHTON	
1	PAGE: 10	04/03/09

2

1