

Ballista Project

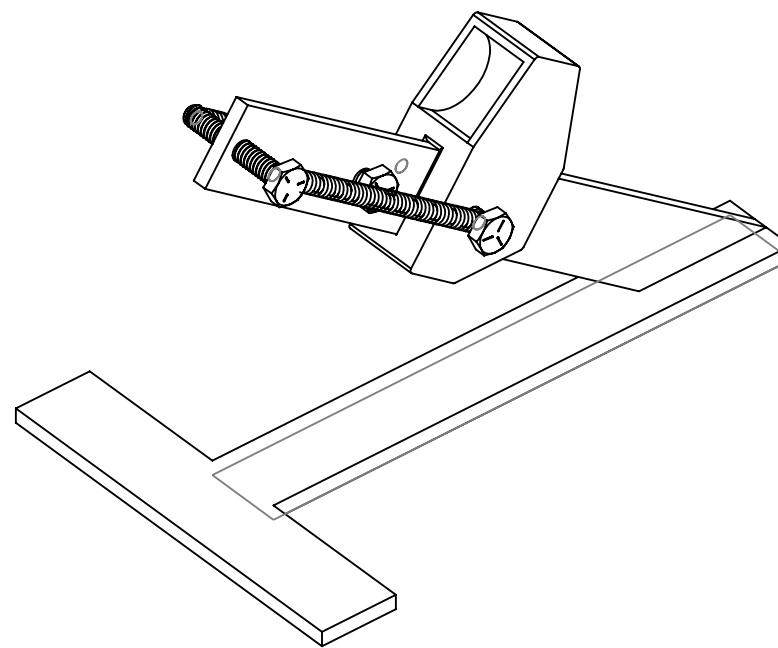
Neil Hasenstaub, Bryan Keister Christian Sudduth, Christian Burton, Blake Lawrence
EGN2002C Mechanical Engineering Skills and Design
Florida Polytechnic University

2

1

B

B



A

A

		UNLESS OTHERWISE SPECIFIED:			NAME	DATE				
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL \pm ANGULAR: MACH \pm BEND \pm TWO PLACE DECIMAL \pm THREE PLACE DECIMAL \pm		DRAWN	NH	4/3/25				
		INTERPRET GEOMETRIC TOLERANCING PER:		CHECKED						
		MATERIAL		ENG APPR.						
		NEXT ASSY		MFG APPR.						
		USED ON		Q.A.						
		FINISH		COMMENTS:						
		APPLICATION		DO NOT SCALE DRAWING						
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TITLE: Ballista Assembly

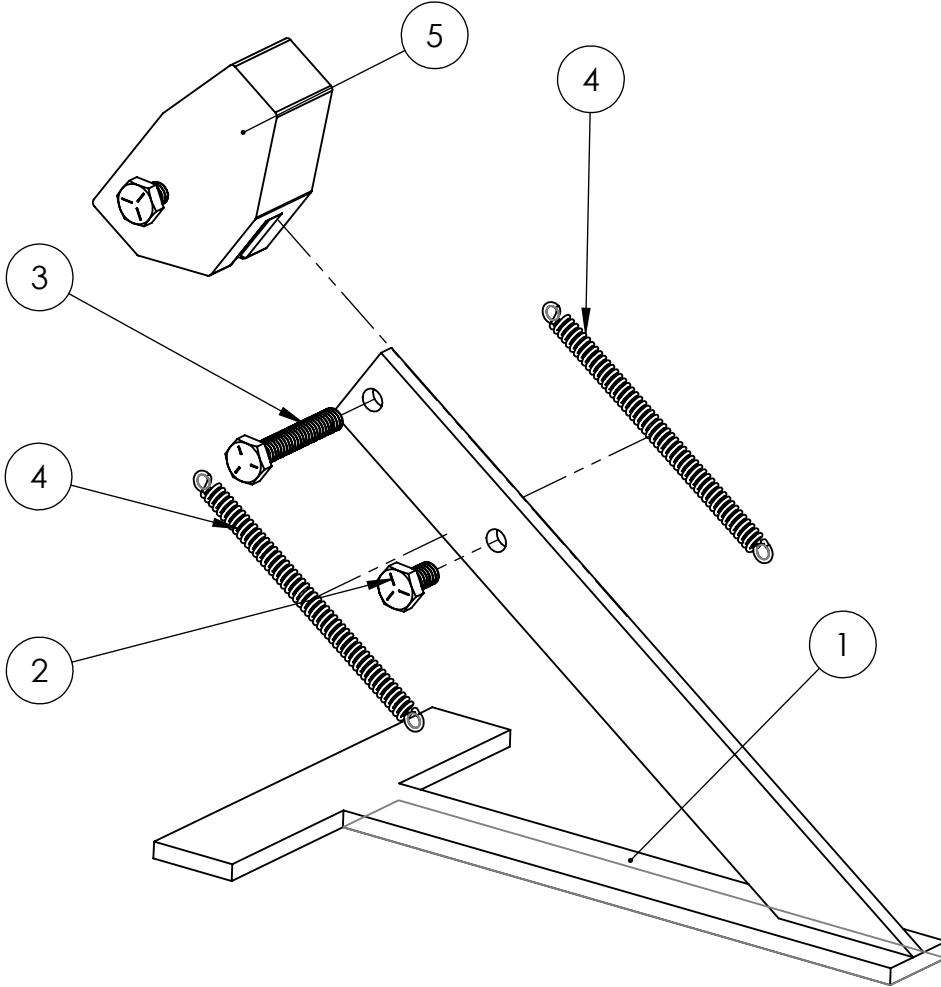
SIZE	DWG. NO.	REV
A	A1	1
SCALE: 1:2	WEIGHT:	SHEET 2 OF 9

2

1

2

1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	cat design 2		1
2	92965A537	Black-Oxide Grade 5 Steel Hex Head Screws	1
3	92865A546	Medium-Strength Grade 5 Steel Hex Head Screw	1
4	5108N3I	Music Wire Steel Extension Spring with Loop Ends	2
5	throwingar massembly		1

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UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL \pm
ANGULAR: MACH \pm BEND \pm
TWO PLACE DECIMAL \pm
THREE PLACE DECIMAL \pm

INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL

NEXT ASSY USED ON

FINISH

APPLICATION

DO NOT SCALE DRAWING

DRAWN NAME DATE
CHECKED
ENG APPR.
MFG APPR.
Q.A.
COMMENTS:

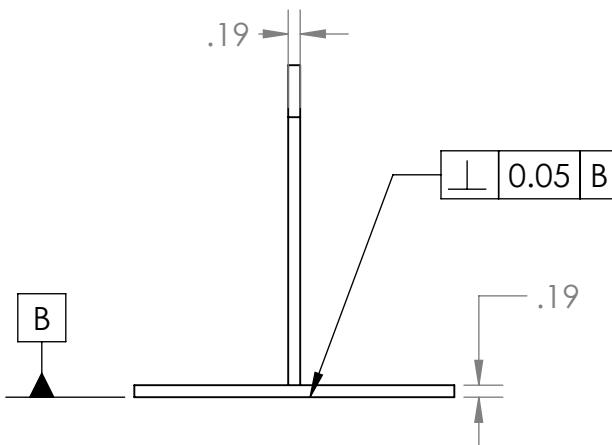
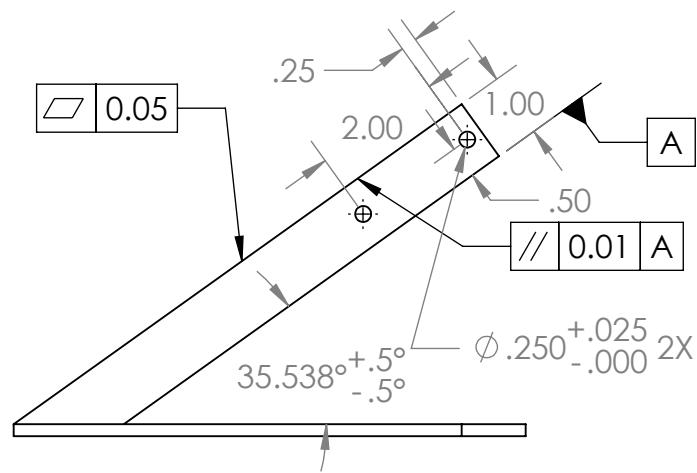
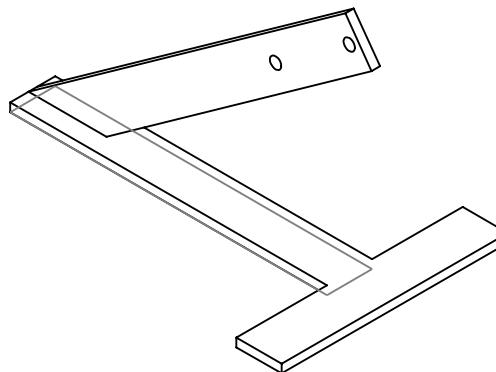
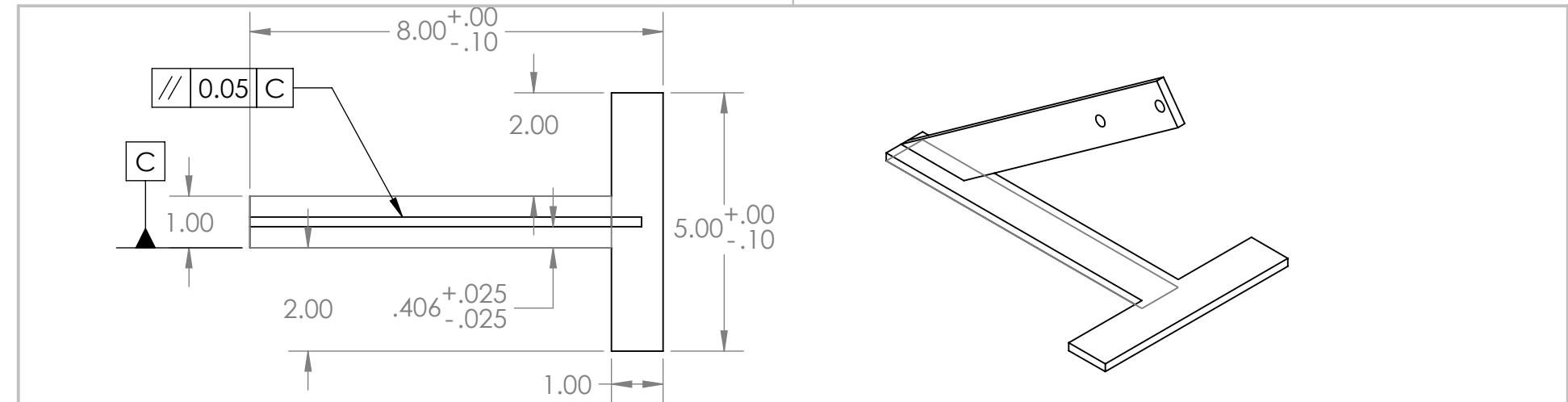
TITLE:

Main Assembly and BOM

SIZE	DWG. NO.	REV
A	A2	
SCALE: 1:2		WEIGHT:
		SHEET 3 OF 9

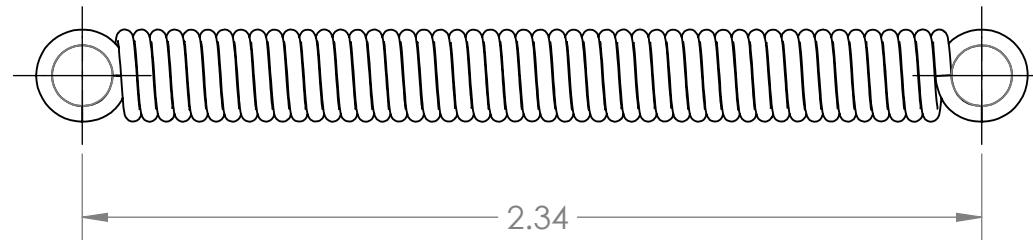
2

1



		UNLESS OTHERWISE SPECIFIED:		DRAWN	NAME	DATE	TITLE: Frame		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±							
		INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL		CHECKED	ENG APPR.	MFG APPR.			
		NEXT ASSY							
		USED ON		FINISH		COMMENTS:			
		APPLICATION		DO NOT SCALE DRAWING					
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PURCHASED PART



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UNLESS OTHERWISE SPECIFIED:

NAME DATE

DIMENSIONS ARE IN INCHES

DRAWN

TOLERANCES:

CHECKED

FRACTIONAL \pm

ENG APPR.

ANGULAR: MACH \pm BEND \pm

MFG APPR.

TWO PLACE DECIMAL \pm

Q.A.

THREE PLACE DECIMAL \pm INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

NEXT ASSY

USED ON

FINISH

APPLICATION

DO NOT SCALE DRAWING

TITLE:

Spring

SIZE

DWG. NO.

REV

A

A4

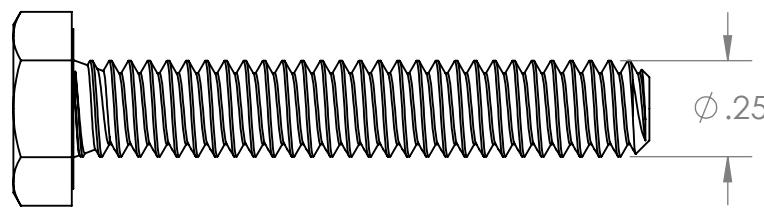
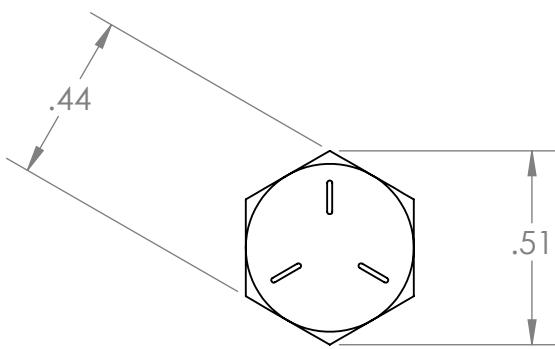
A

SCALE: 2:1

WEIGHT:

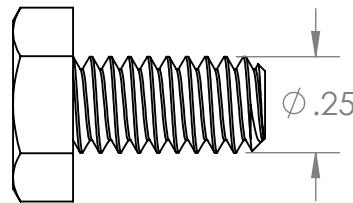
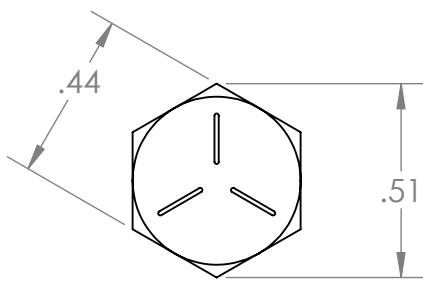
SHEET 5 OF 9

PURCHASED PART



		UNLESS OTHERWISE SPECIFIED:			NAME	DATE	TITLE: 1.5" Bolt	
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL \pm ANGULAR: MACH \pm BEND \pm TWO PLACE DECIMAL \pm THREE PLACE DECIMAL \pm		DRAWN	CHECKED	ENG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL		COMMENTS:				
PROPRIETARY AND CONFIDENTIAL				NEXT ASSY	USED ON	FINISH		
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PURCHASED PART

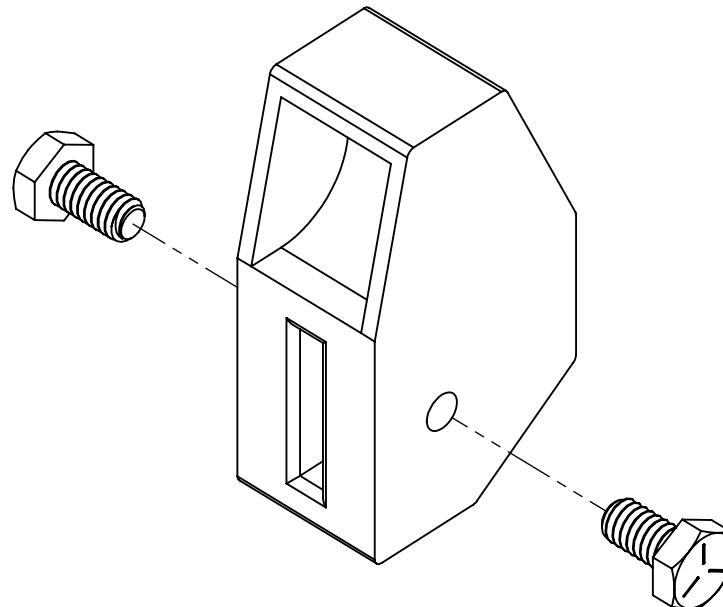


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		UNLESS OTHERWISE SPECIFIED:			NAME	DATE	TITLE:
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL \pm ANGULAR: MACH \pm BEND \pm TWO PLACE DECIMAL \pm THREE PLACE DECIMAL \pm		DRAWN			
		INTERPRET GEOMETRIC TOLERANCING PER:	MATERIAL	CHECKED			
				ENG APPR.			
				MFG APPR.			
				Q.A.			
		COMMENTS:					
SIZE	DWG. NO.						REV
A	A6						
SCALE: 2:1		WEIGHT:		SHEET 7 OF 9			

2

1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	throwingarm		1
2	92965A537	Black-Oxide Grade 5 Steel Hex Head Screws	2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL \pm ANGULAR: MACH \pm BEND \pm TWO PLACE DECIMAL \pm THREE PLACE DECIMAL \pm	DRAWN		
			CHECKED		
			ENG APPR.		
			MFG APPR.		
			Q.A.		
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:		
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

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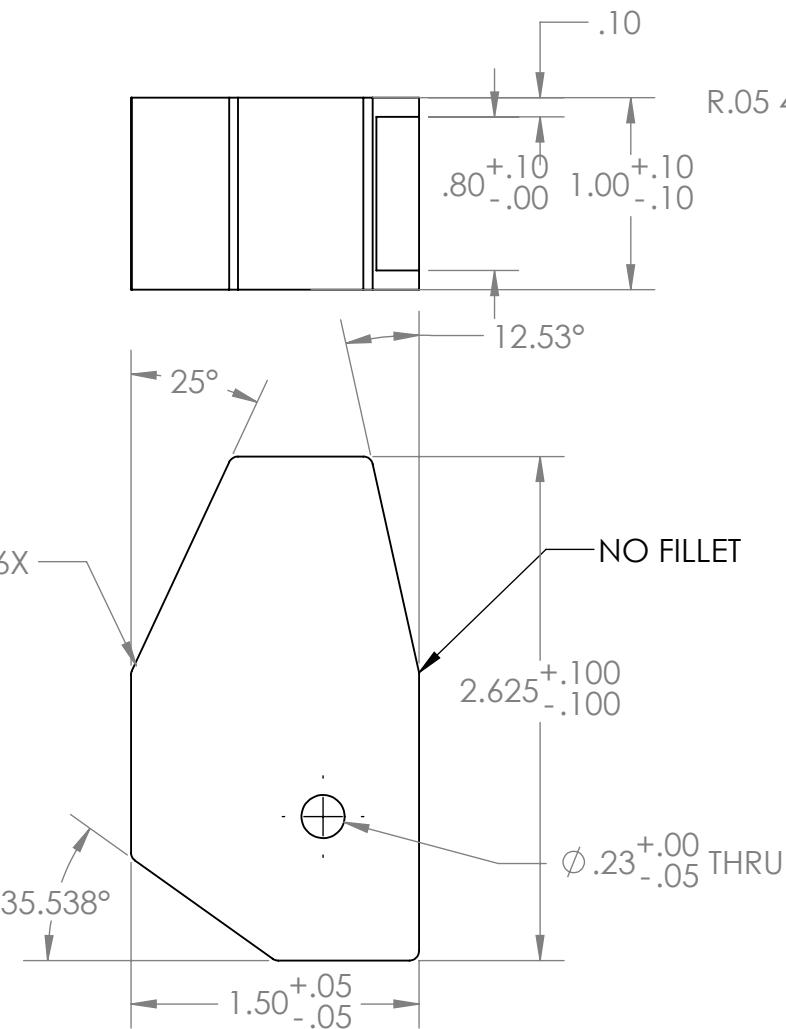
Throwing Arm Assembly and BOM

SIZE	DWG. NO.	REV
A	A7	
SCALE: 1:1	WEIGHT:	SHEET 8 OF 9

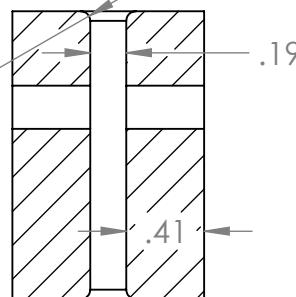
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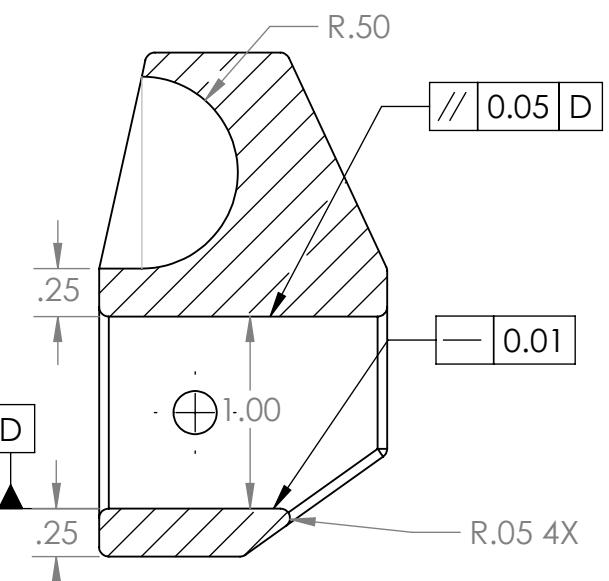
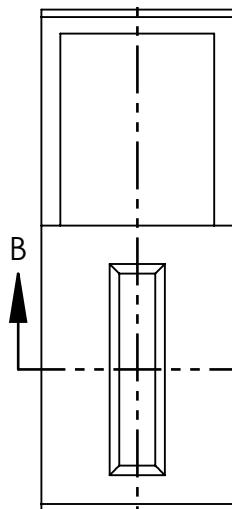
B



R.05 4X



SECTION B-B



A

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2

1

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE: Throwing Arm
DIMENSIONS ARE IN INCHES		TOLERANCES:		DRAWN		
FRACTIONAL ±		ANGULAR: MACH ± BEND ±		CHECKED		
TWO PLACE DECIMAL ±		ENG APPR.		MFG APPR.		
THREE PLACE DECIMAL ±		MATERIAL		Q.A.		
INTERPRET GEOMETRIC TOLERANCING PER:		COMMENTS:				
NEXT ASSY	USED ON	FINISH				SIZE DWG. NO. REV
APPLICATION		DO NOT SCALE DRAWING				A A8
SCALE: 1:1		WEIGHT:				SHEET 9 OF 9