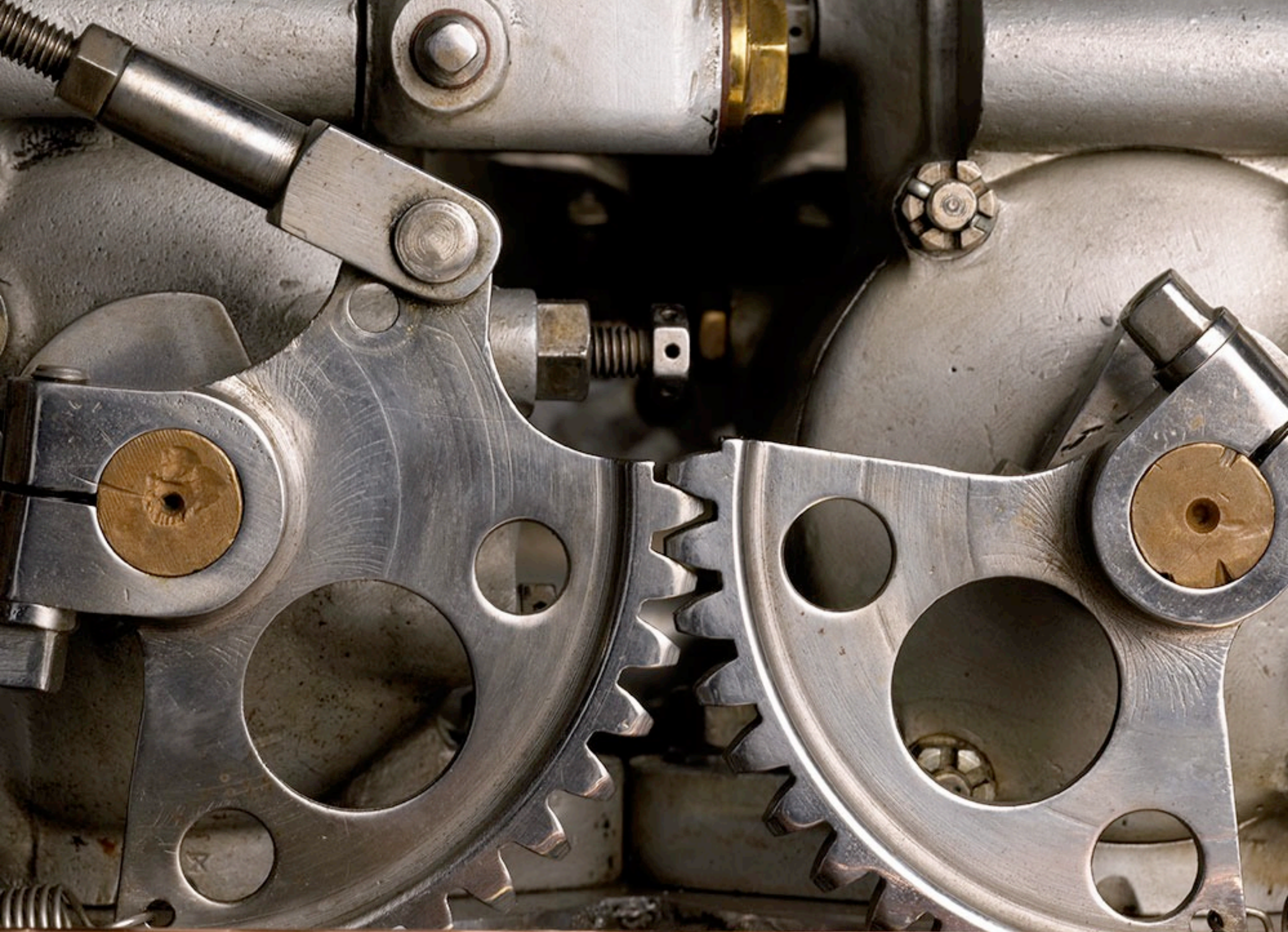


MEAM 201 machine design and manufacturing Fall 2012

Logistics

Locations

Towne 315
lectures (T 3:00-4:20)

Towne 169
machine shop*
labs (R 10:30, R 1:30, F 11:00, F 1:00)

Towne 205
door code: 4-2-19
19 CAD stations

Towne 193 (GM)
Prototrak emulators

Towne 167
laser cutting*

* = training required

Resources

Textbook

Machine Elements in Mechanical Design, 4th ed.
Robert L. Mott

Supplies

consider purchasing: calipers, safety glasses, smock, hand tools

Course Wiki

http://medesign.seas.upenn.edu

Staff Email

meam201staff@lists.seas.upenn.edu

Components

n quizzes

7-8 individual assignments

8 “full-spec” machining exercises

7+ mechanical design challenges

1 engine

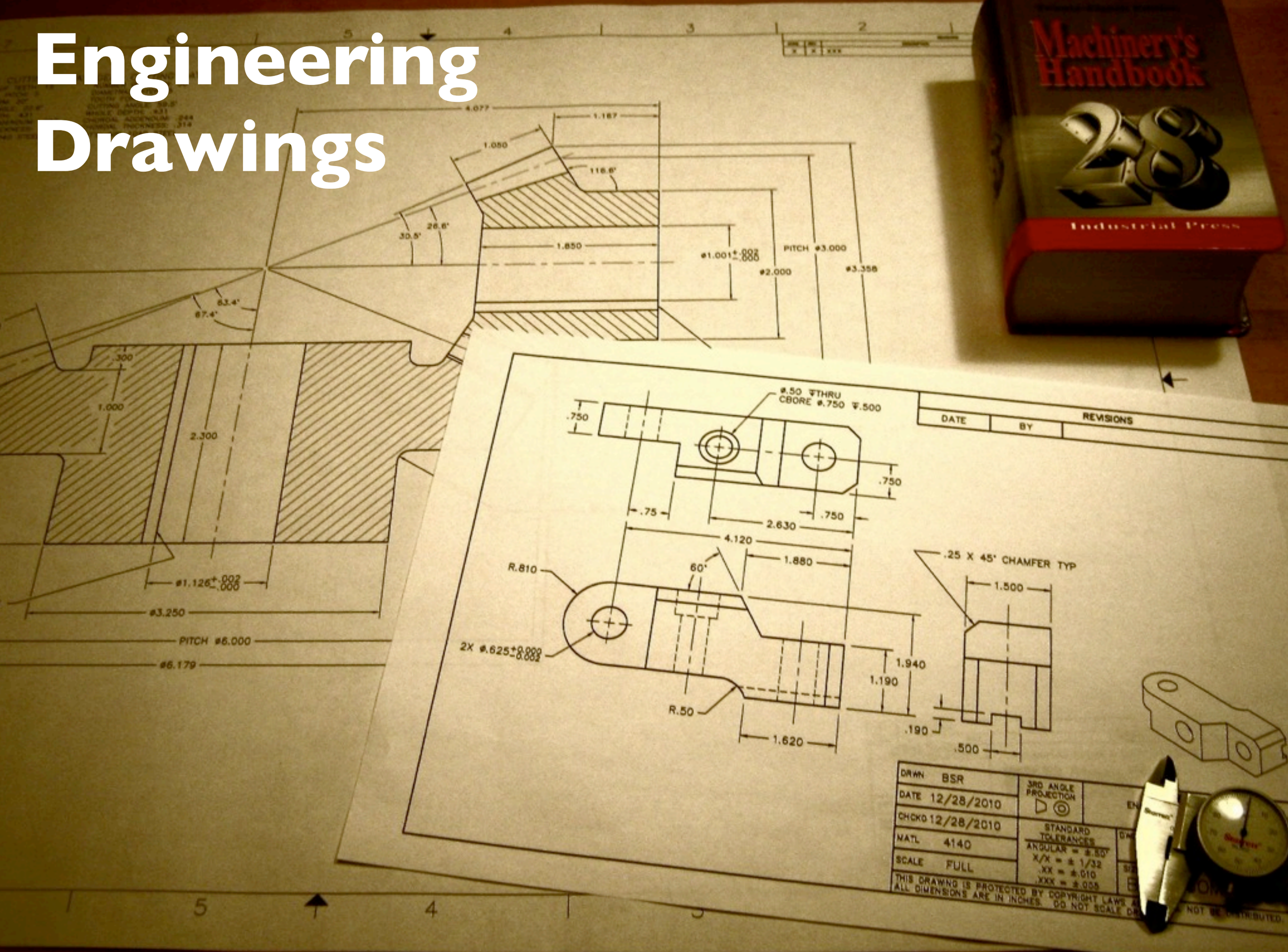
Expectations

The Shop

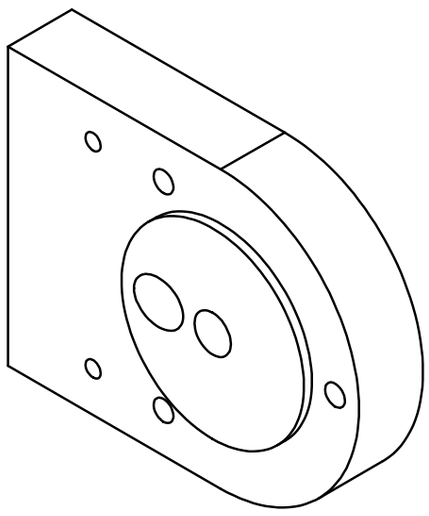
Machine Shop
University of Pennsylvania

- Only work on machinery for which you have been trained
- Never work alone
- Wear safety glasses at all times while inside the fabrication area
- Wear closed-toe shoes or boots
- Remove jewelry
- Wear no excessively loose clothing that could get caught in machinery
- Tie back long hair
- Do not use your cellphone or headphones while operating machinery
- Have a clear frame of mind (no intoxication, no excessive sleep deprivation)
- Dispose of any chemical waste in proper containers
- No food or drink are permitted in the shop area
- Ask for help if you are unsure of something
- Keep all work surfaces clean and dry
- Clean, reset, and organize equipment after use
- Report all broken/damaged/worn tools to a member of the lab staff
- Complete a 5-10 minute shop job (issued at the discretion of the on-duty staff person) before leaving
- Work to ensure the safety of yourself and others
- Any injuries must be reported immediately via an injury incident report

Engineering Drawings



Isometric View



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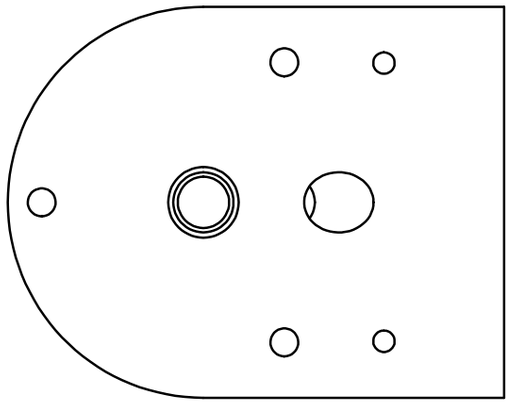
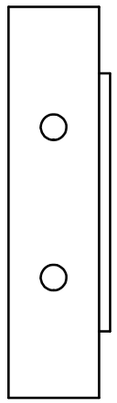
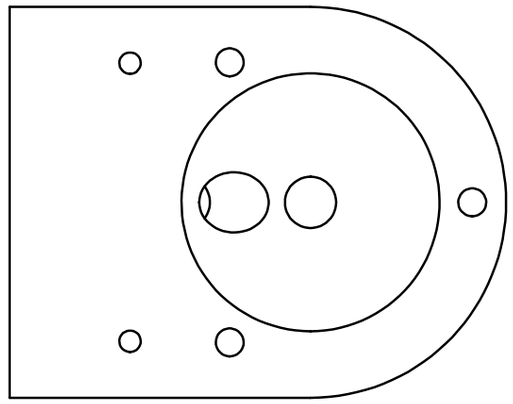
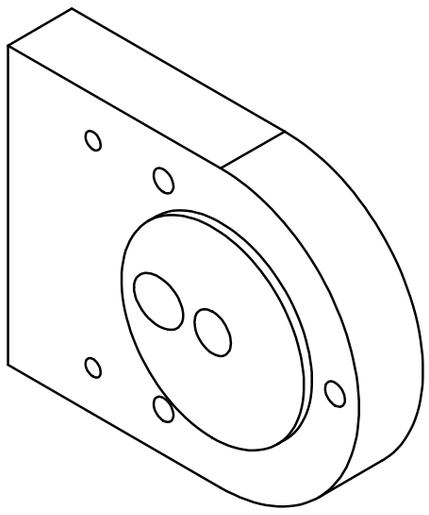
Orthographic Projections

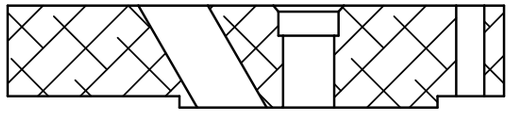




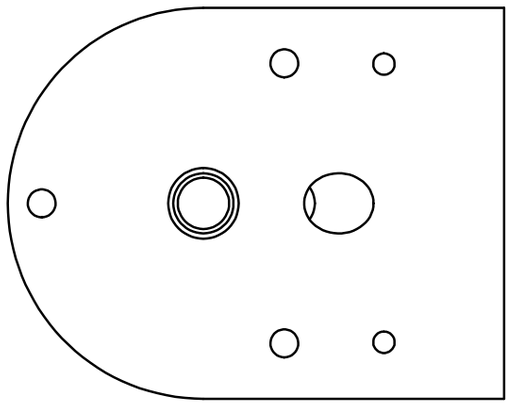


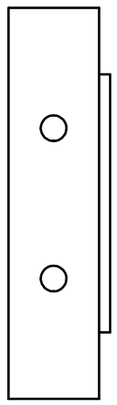


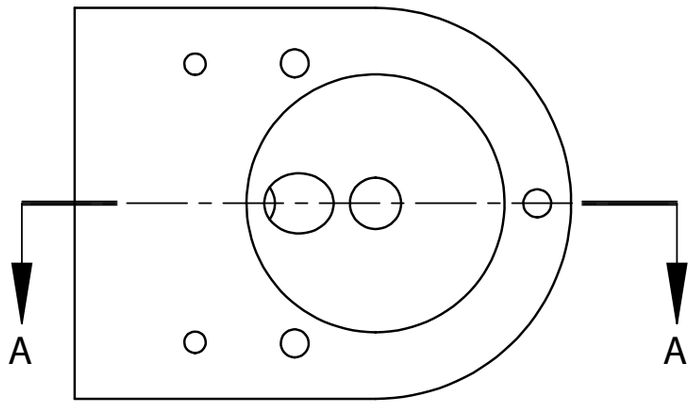
Section View

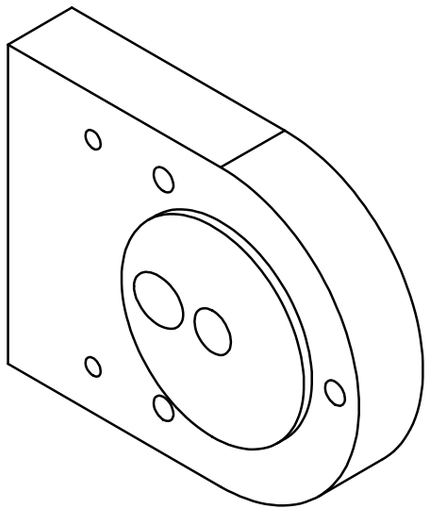


SECTION A-A









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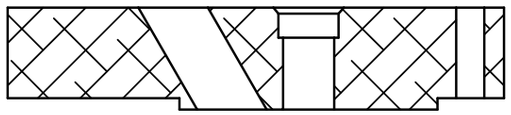
Hole Centers



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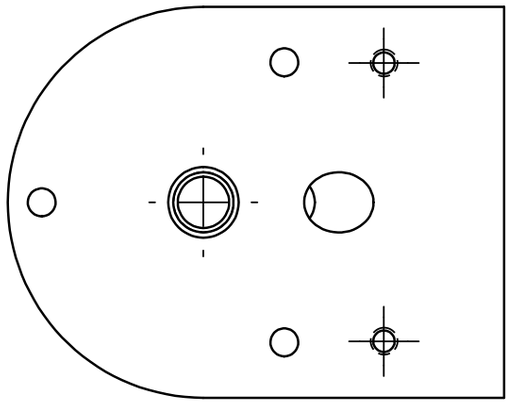
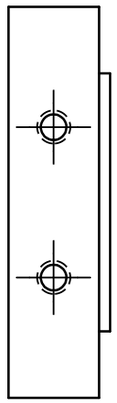
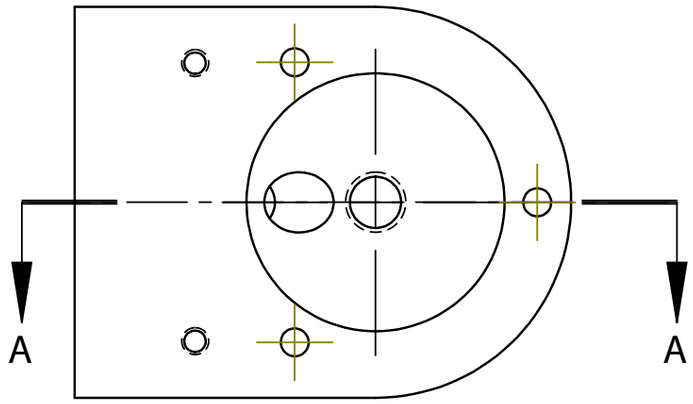
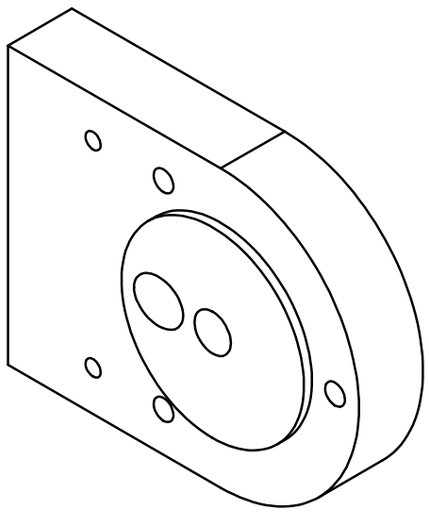
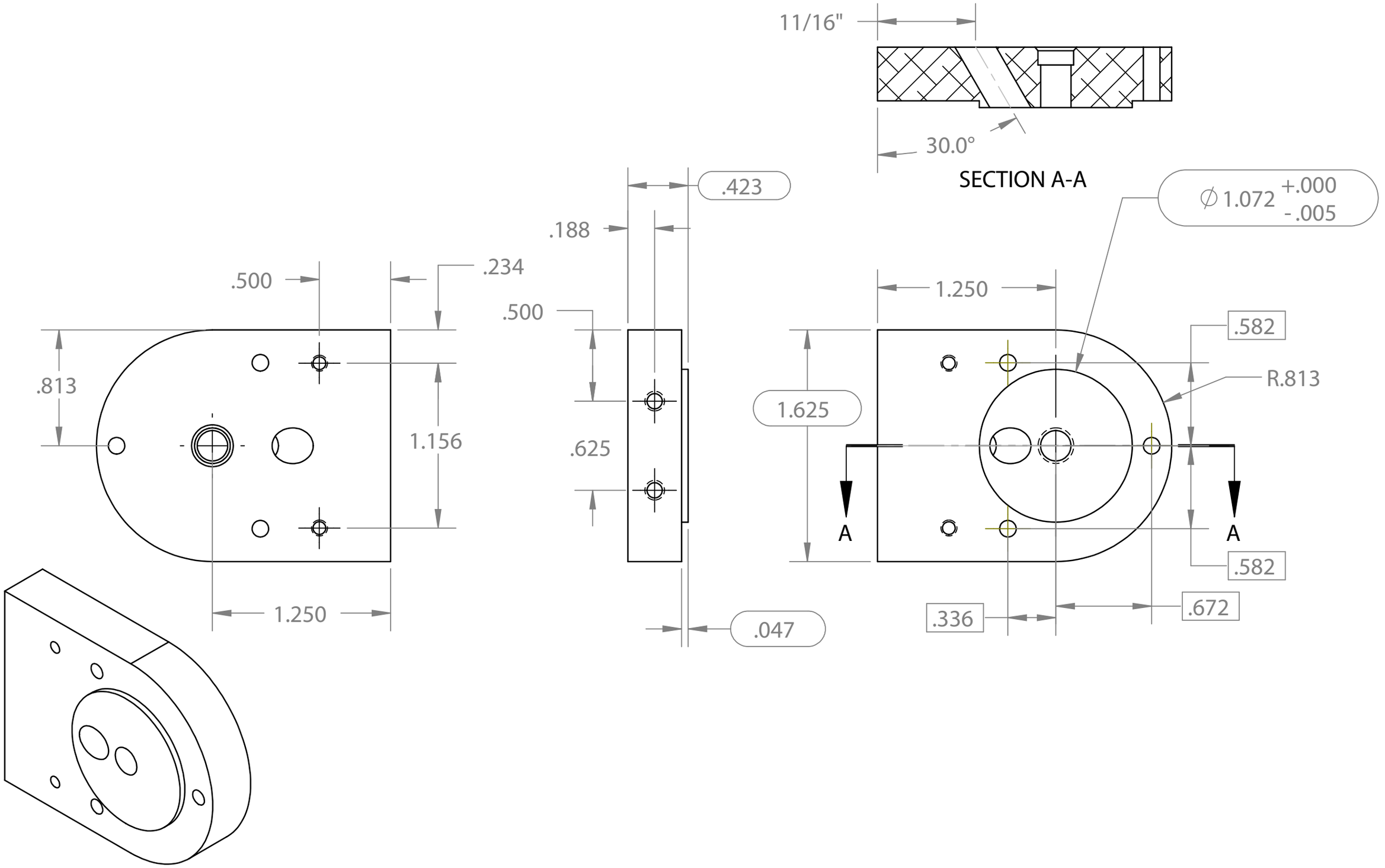








Dimensions



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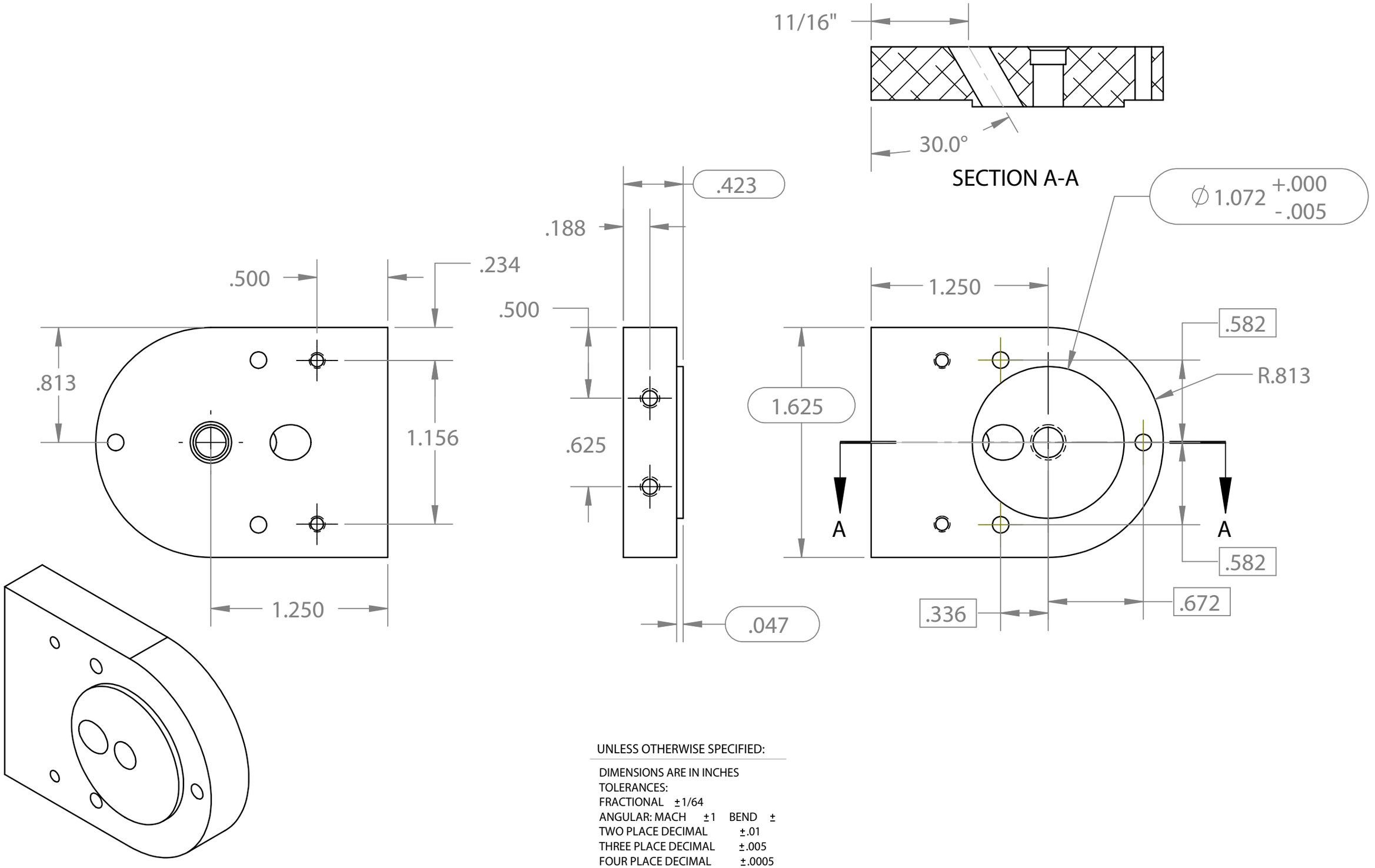
Tolerances

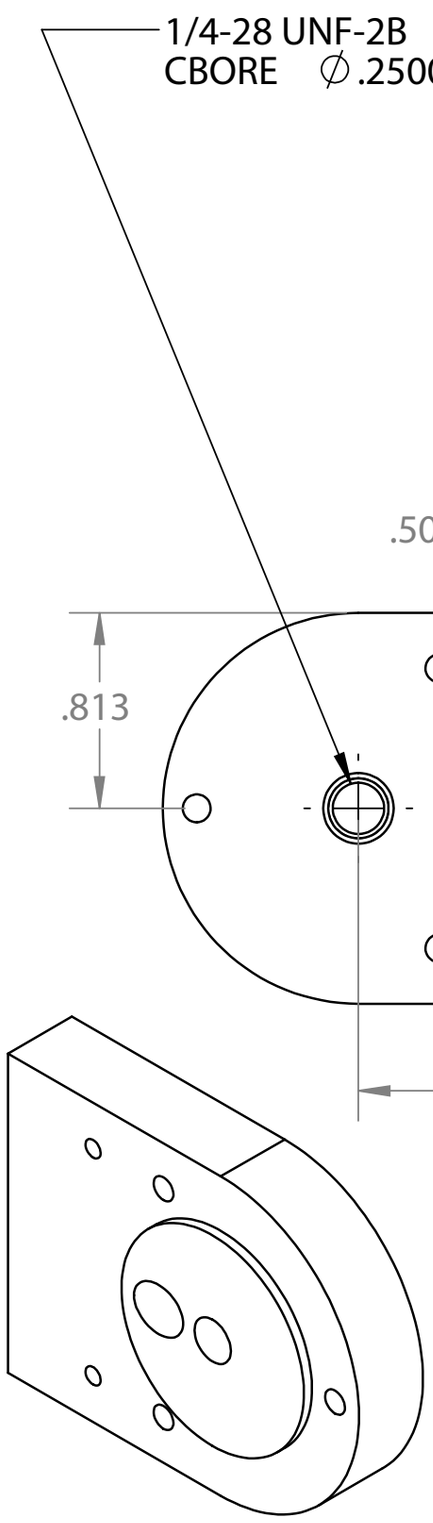


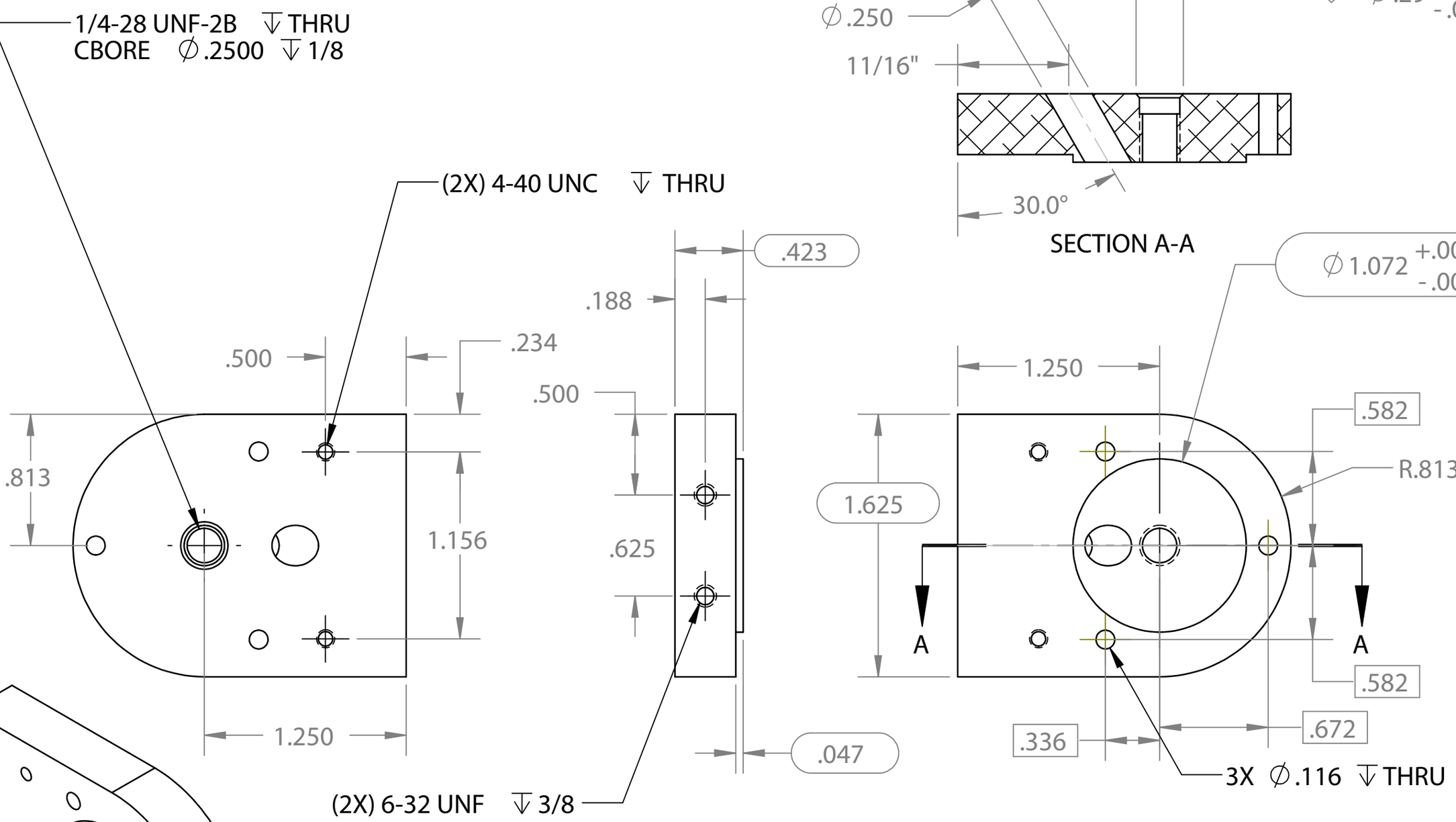
UNLESS OTHERWISE SPECIFIED:

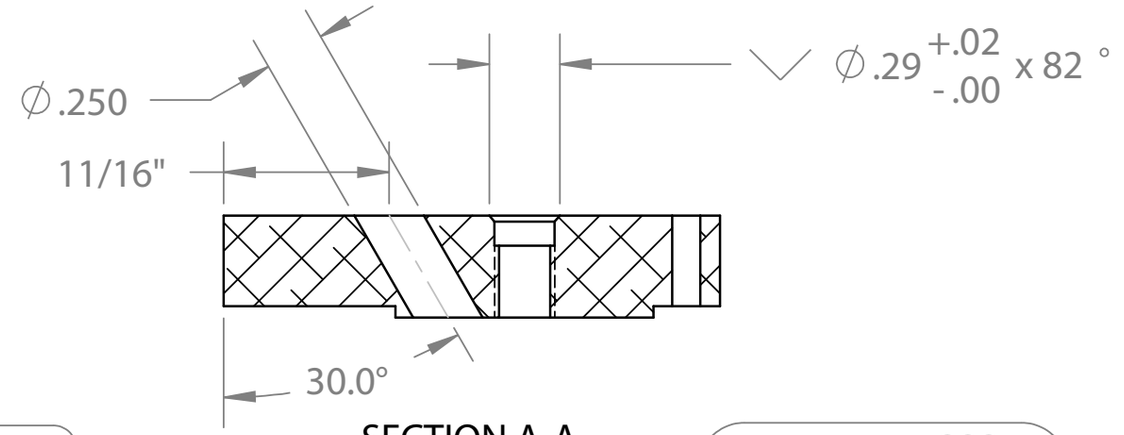
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±1/64
ANGULAR: MACH ±1 BEND ±
TWO PLACE DECIMAL ±.01
THREE PLACE DECIMAL ±.005
FOUR PLACE DECIMAL ±.0005

5 4 3 2 1

Hole Callouts







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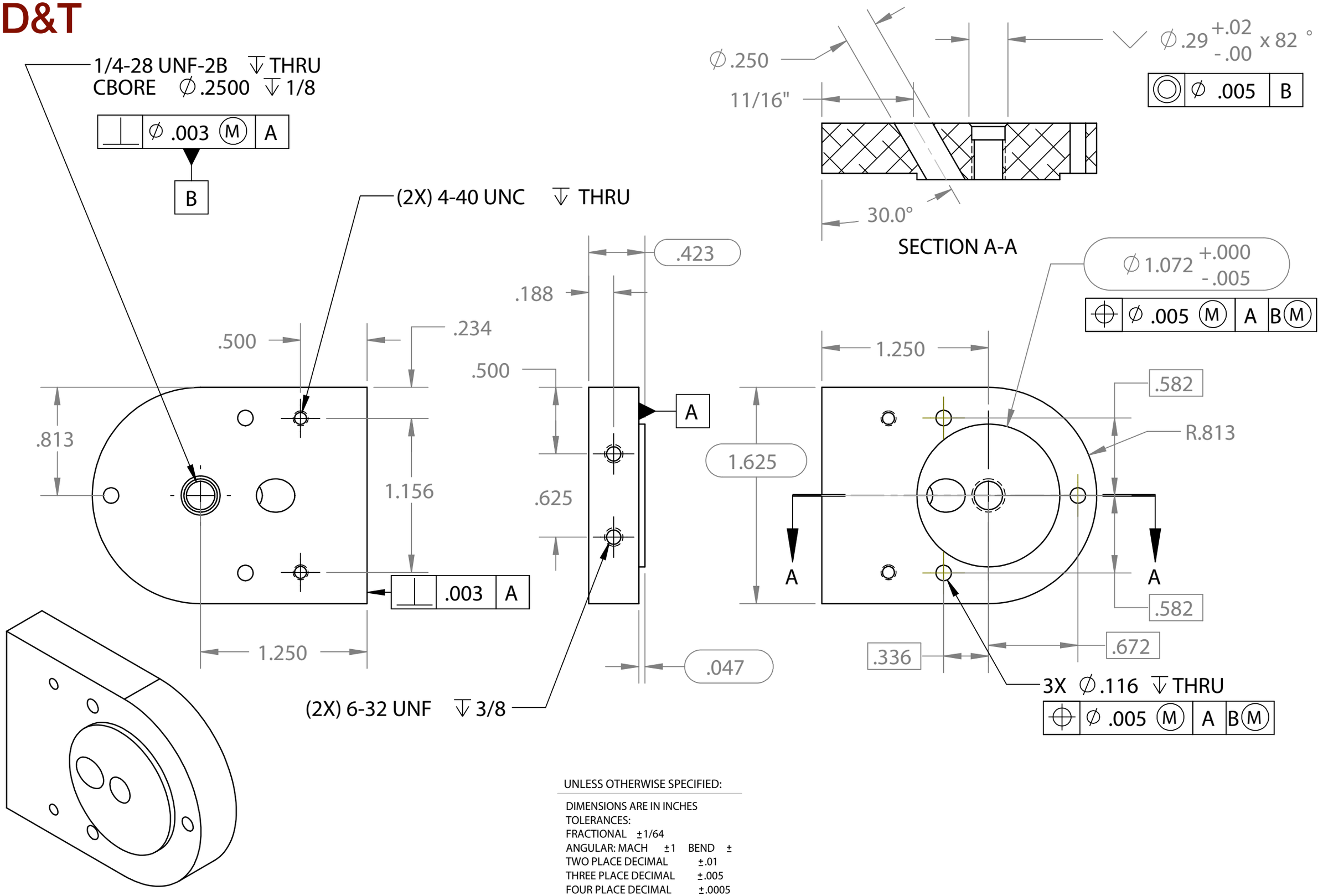
GD&T



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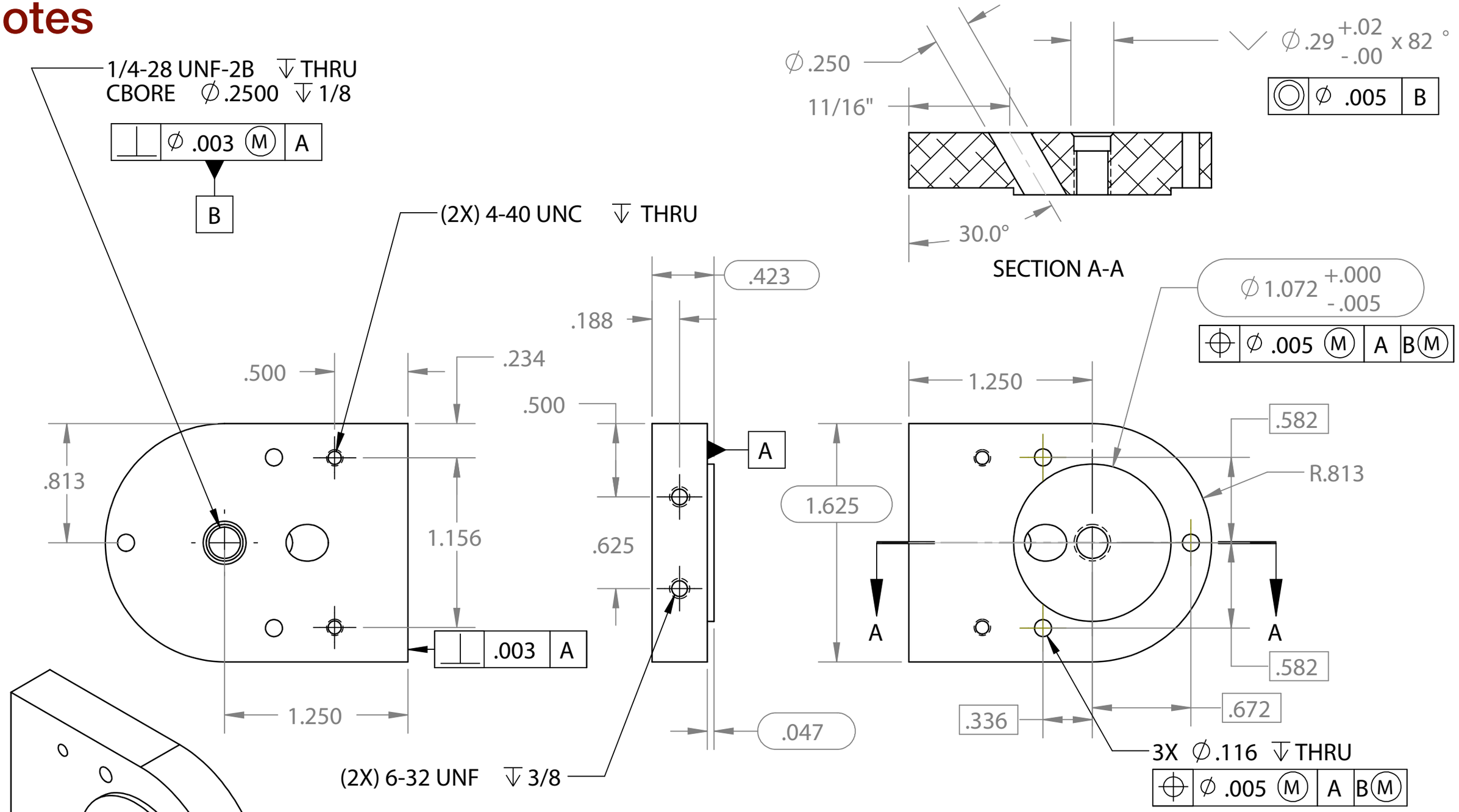
Notes



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INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL
AL - 6061 T6

FINISH
NONE

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	GJ	9/1/11
CHECKED	GJ	9/1/11
ENG APPR.	JF	9/7/11
MFG APPR.		
Q.A.		

COMMENTS:
BREAK ALL EDGES AND SHARP CORNERS.

TITLE:

Mounting Block

SIZE	DWG. NO.	REV
A	201-01	A
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

5 4 3 2 1