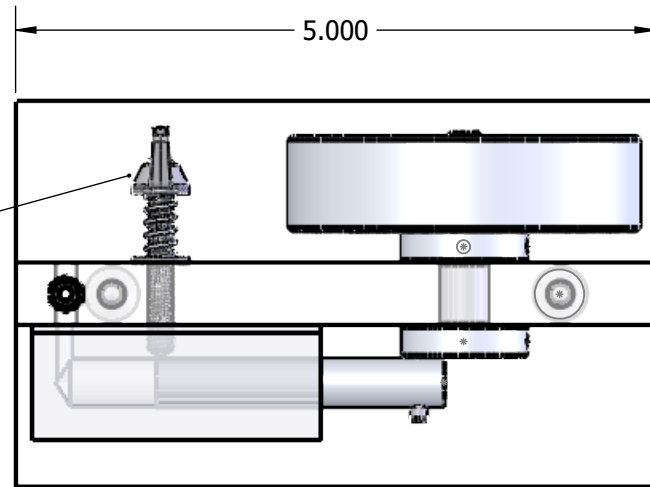
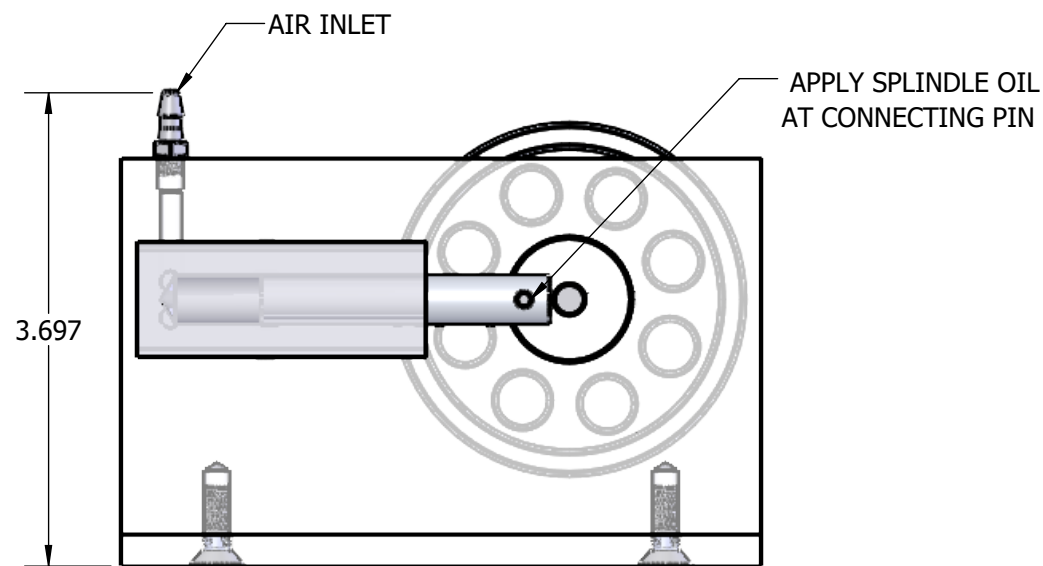


REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	10/23/2024

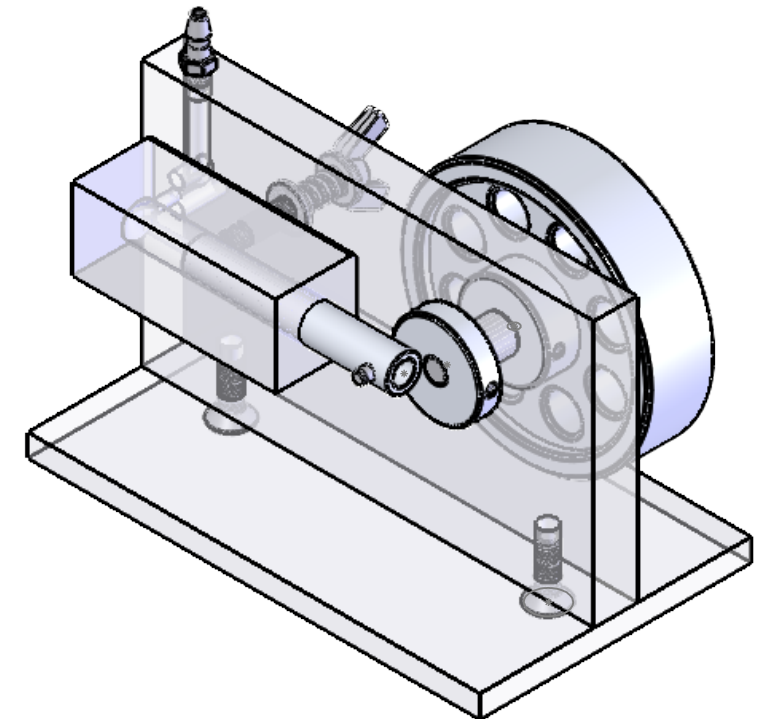
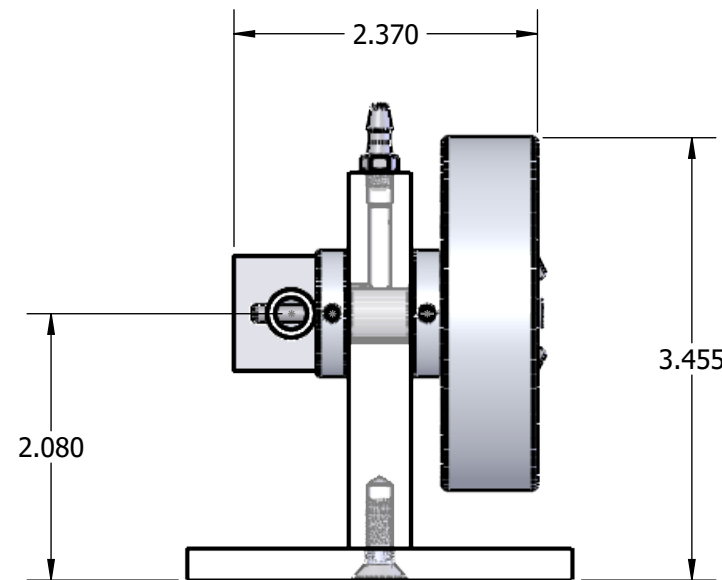
USE WINGNUT TO CONTROL THE TENSION OF CYLINDER  
\*THE GREATER THE TENSION THE GREATER THE FRICTION



PISTON FULLY RETRACTED  
PLAN VIEW



PISTON FULLY RETRACTED  
ELEVATION VIEW (FRONT)



**PROPRIETARY AND CONFIDENTIAL**

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**TOLERANCES:**

X.X ±0.1  
X.XX ±0.010  
X.XXX ±0.005  
X.X° ±1°

**UNLESS OTHERWISE SPECIFIED:**

DRAWING UNITS: INCHES  
INTERPRET DRAWING PER ASME Y14.100  
INTERPRET DIMENSIONS PER ASME Y14.5M

**MATERIAL:**

SEE BILL OF MATERIALS

**FINISH:**

NOT APPLICABLE

**DRAWN:**

JULIA ABOUD

**CHECKER:**

**MANUFACTURING ENGINEER:**

**DATE:**

10/23/24

**DATE:**

**DATE:**



UNIVERSITY OF COLORADO  
1111 ENGINEERING DRIVE  
BOULDER, CO 80309-0427  
MCEN 1025

**DESCRIPTION:**

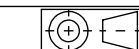
WOBLER ENGINE ASSEMBLY

**PART NUMBER:**

1025WE0

**REV**

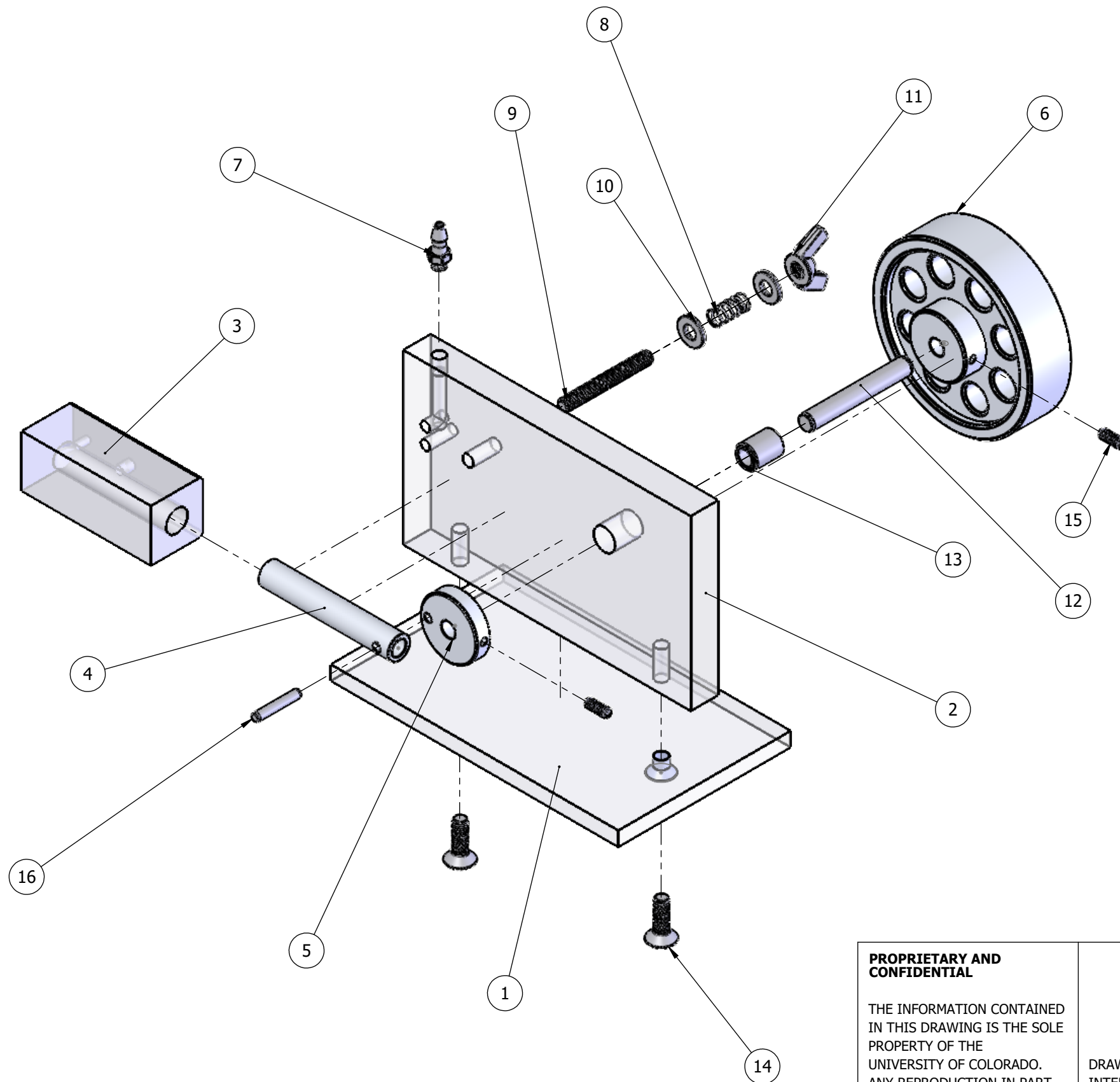
A



SIZE: B

SHEET: 1 of 2

### WOBLER ENGINE TOP LEVEL BOM



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1025WE1	ACRYLIC BASE PLATE	1
2	1025WE2	POLYCARBONATE VALVE PLATE	1
3	1025WE3	ACRYLIC CYLINDER	1
4	1025WE4	ALUMINUM PISTON	1
5	1025WE5	ALUMINUM CRANKDISK	1
6	1025WE6	ALUMINUM FLYWHEEL	1
7	5463K127	PLASTIC BARBED TUBE FITTING FOR AIR AND WATER	1
8	9657K269	COMPRESSION SPRING	1
9	91565A851	LOW-STRENGTH STEEL THREADED ROD	1
10	92916A345	BRASS WASHER	2
11	92771A511	BRASS WING NUT	1
12	90145A548	18-8 STAINLESS STEEL DOWEL PIN	1
13	6389K113	LIGHT DUTY DRY-RUNNING NYLON SLEEVE BEARING	1
14	92210A303	18-8 STAINLESS STEEL HEX DRIVE FLAT HEAD SCREW	2
15	91375A146	ALLOY STEEL CUP-POINT SET SCREW	2
16	90145A473	18-8 Stainless Steel Dowel Pin	1

**PROPRIETARY AND CONFIDENTIAL**

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TOLERANCES:  
 X.X ±0.1  
 X.XX ±0.010  
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 X.X° ±1°

UNLESS OTHERWISE SPECIFIED:  
 DRAWING UNITS: INCHES  
 INTERPRET DRAWING PER ASME Y14.100  
 INTERPRET DIMENSIONS PER ASME Y14.5M

MATERIAL:  
 SEE BILL OF MATERIALS

FINISH:  
 NOT APPLICABLE

DRAWN:  
 JULIA ABOUD

CHECKER:

MANUFACTURING ENGINEER:

DATE:  
 10/23/24

DATE:

DATE:

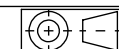


UNIVERSITY OF COLORADO  
 1111 ENGINEERING DRIVE  
 BOULDER, CO 80309-0427  
 MCEN 1025

DESCRIPTION:  
 WOBLER ENGINE ASSEMBLY

PART NUMBER:  
 1025WE0

REV  
 A



SIZE: B

SHEET: 2 of 2