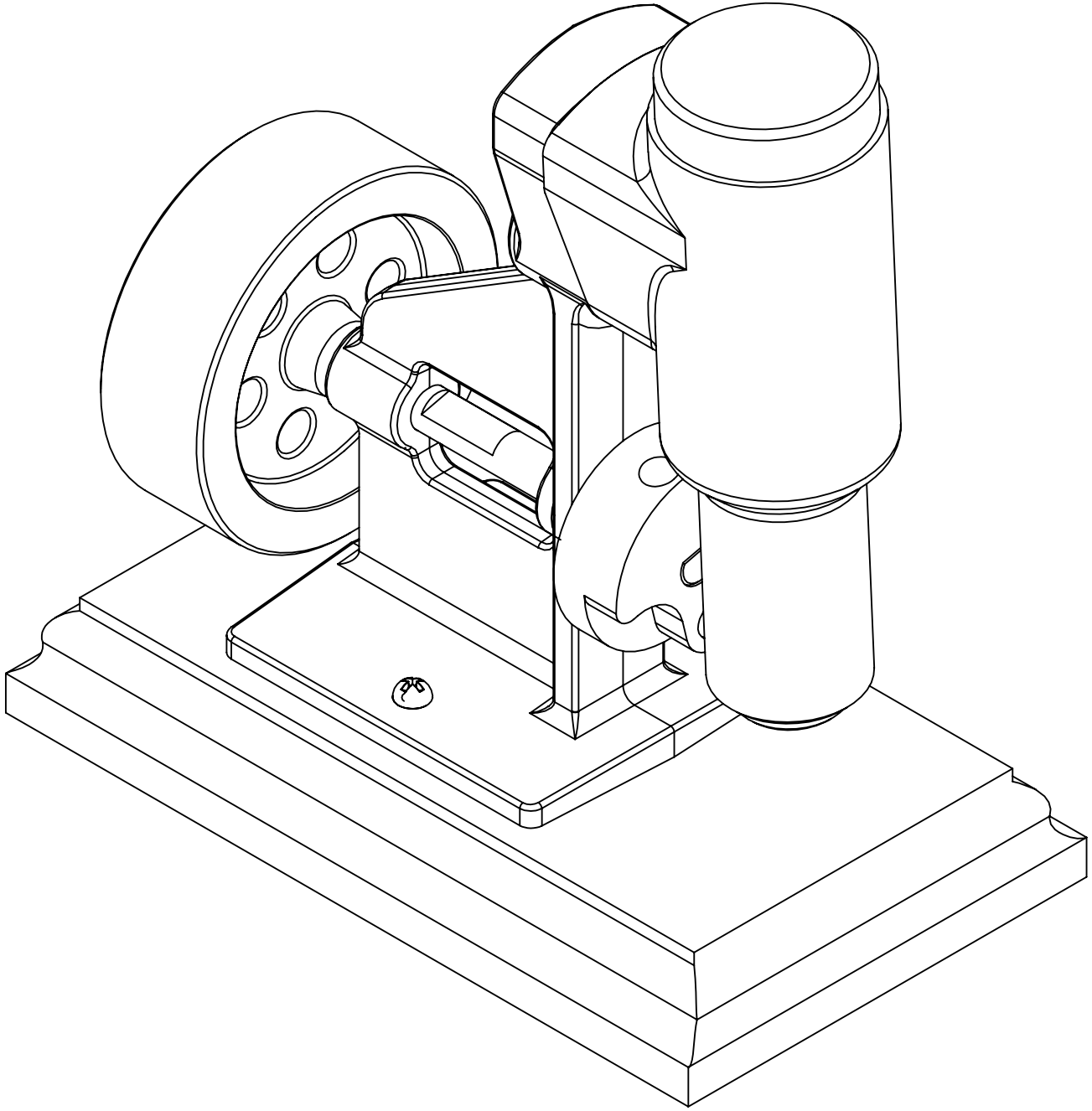
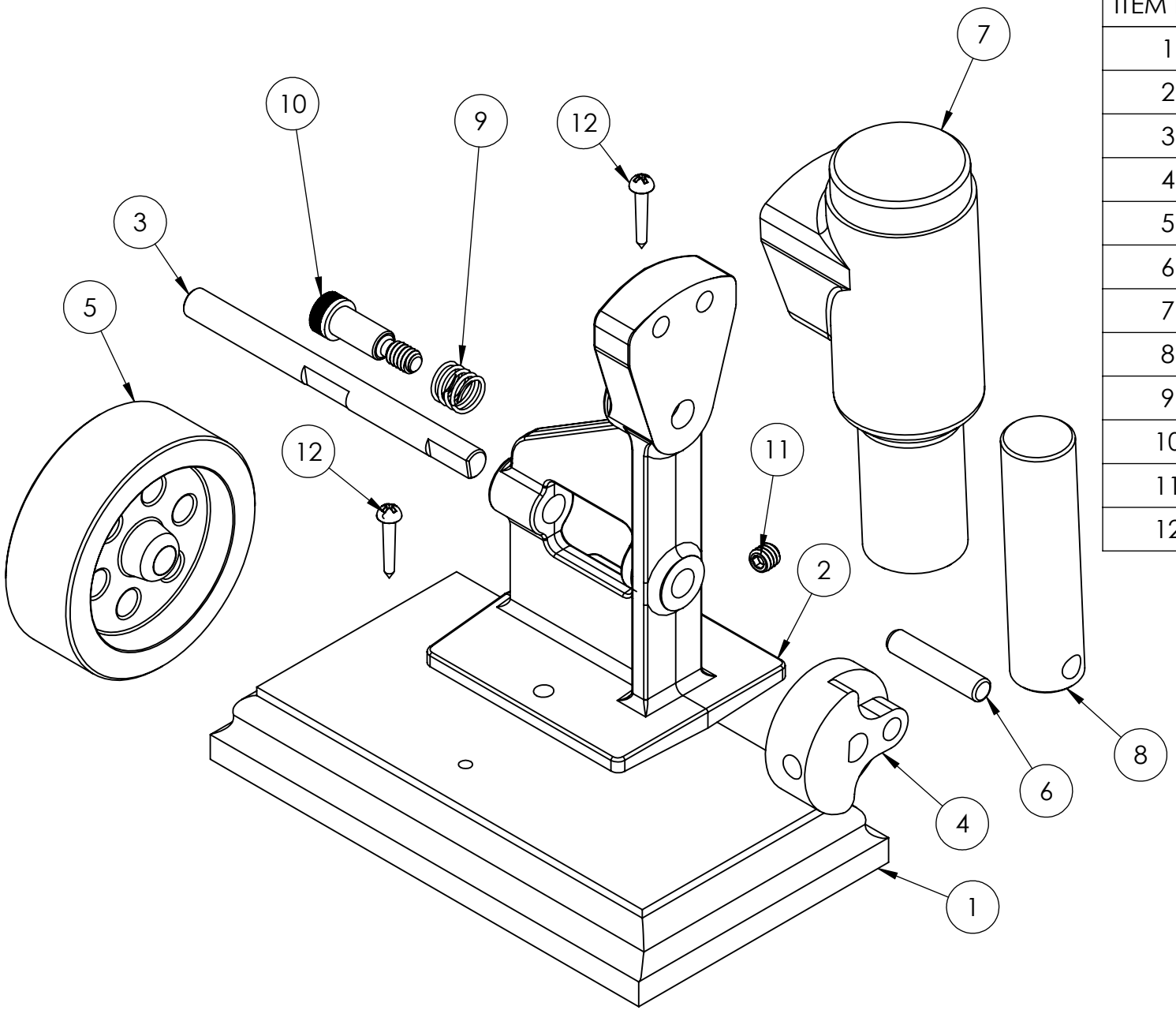


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ± .1 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005	INTERPRET DRAWING PER ASME Y14.5 2009	CAL POLY Manufacturing Engineering	MATERIAL: N/A	TITLE: IME AIR MOTOR ASSEMBLY			
			DATE: 08-13-19	DRAWN BY: TRIAN GEORGEOU	SHEET 1 OF 9	SCALE: 1:4	REV B / SIZE A



ITEM NO.	DESCRIPTION	QTY.
1	BASE	1
2	FRAME	1
3	MAIN SHAFT	1
4	CRANK DISK	1
5	FLYWHEEL	1
6	DOWEL PIN	1
7	CYLINDER	1
8	PISTON	1
9	SPRING	1
10	SHOULDER BOLT	1
11	SET SCREW	1
12	WOOD SCREW	2

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
ONE PLACE DECIMAL ± .1
TWO PLACE DECIMAL ± .01
THREE PLACE DECIMAL ± .005

INTERPRET DRAWING PER ASME Y14.5 2009

CAL POLY Manufacturing Engineering

MATERIAL: N/A

TITLE: AIR MOTOR EXPLODED ASSEMBLY DRAWING

DATE: 12-19-18

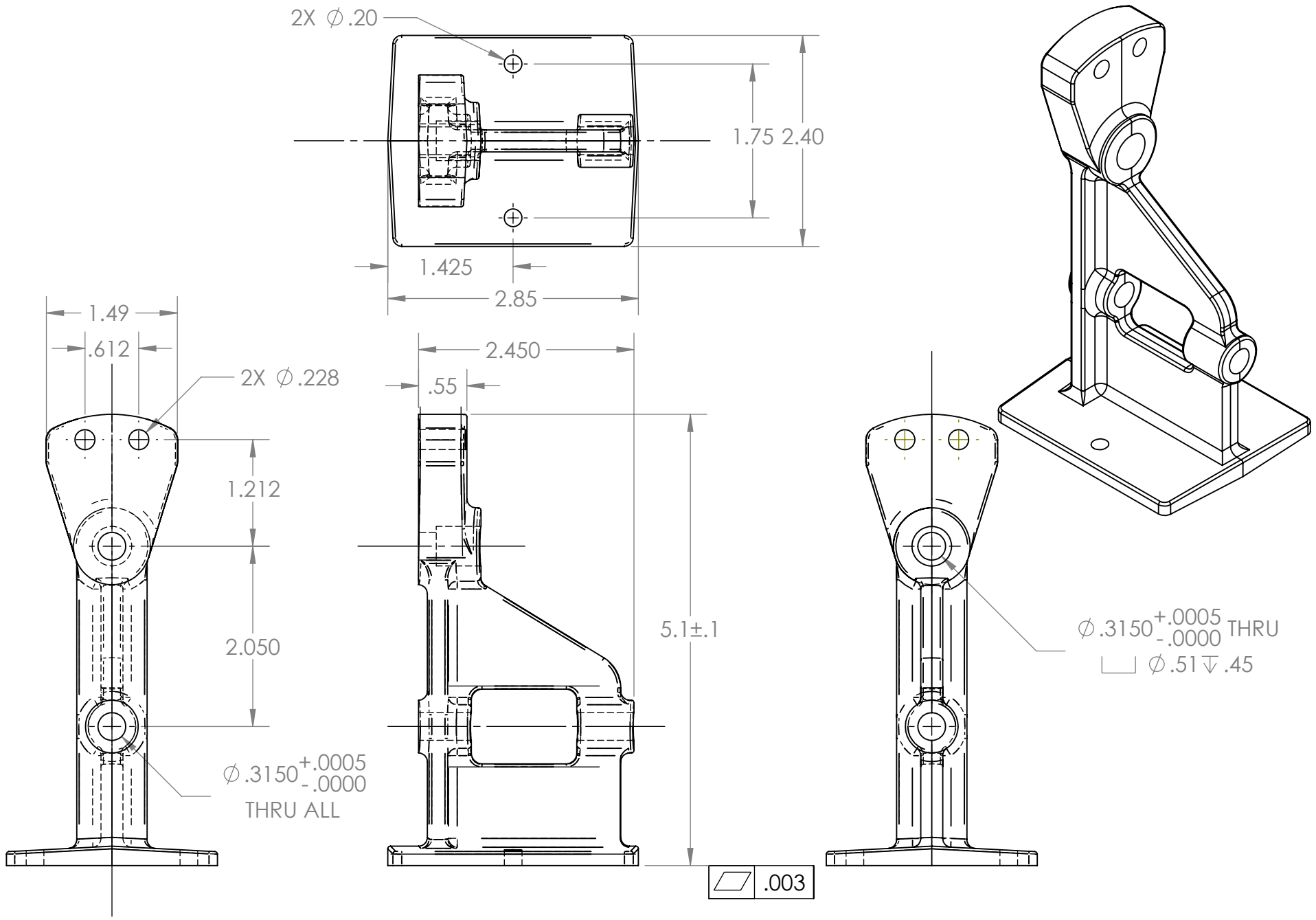
DRAWN BY: TRIAN GEORGEOU

SHEET 2 OF 9

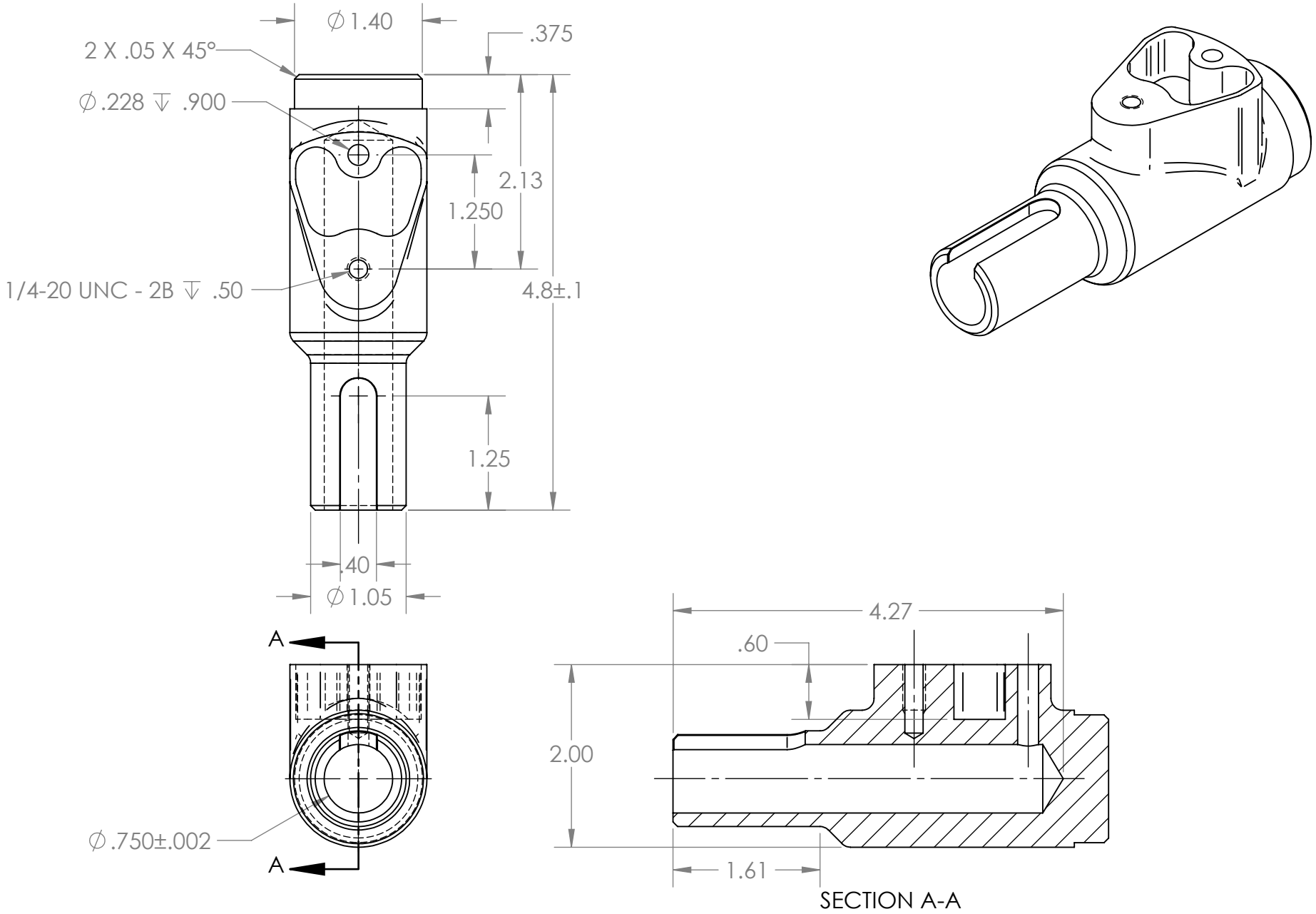
SCALE: 1:4

REV B

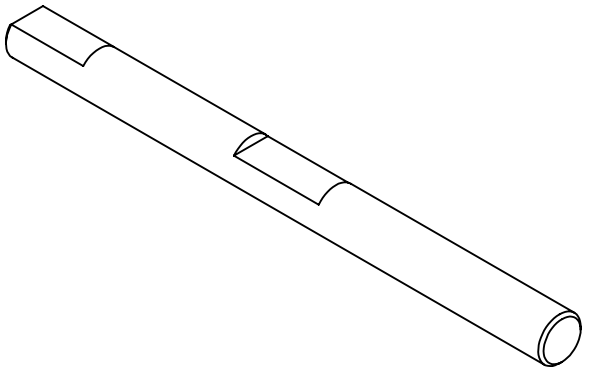
SIZE A

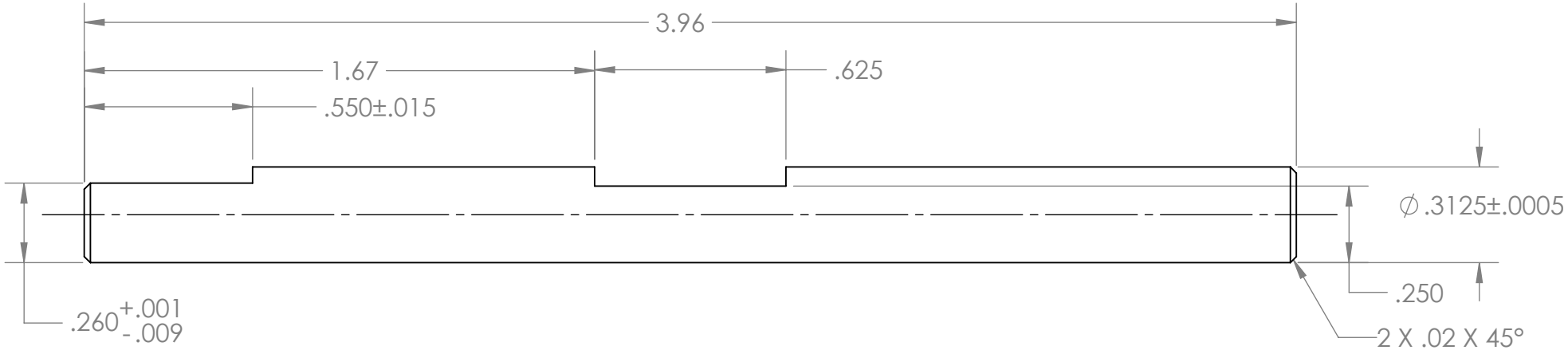


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ± .1 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005	INTERPRET DRAWING PER ASME Y14.5 2009	CAL POLY Manufacturing Engineering	MATERIAL: A356 ALUMINUM	TITLE: IME AIR MOTOR FRAME			
		DATE: 08-13-19	DRAWN BY: TRIAN GEORGEOU	SHEET 3 OF 9	SCALE: 1:2	REV B	SIZE A

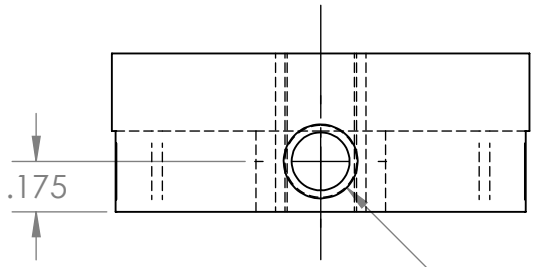


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ± .1 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005	INTERPRET DRAWING PER ASME Y14.5 2009	CAL POLY Manufacturing Engineering	MATERIAL: A356 ALUMINUM	TITLE: IME AIR MOTOR CYLINDER			
			DATE: 08-13-19	DRAWN BY: TRIAN GEORGEOU	SHEET 4 OF 9	SCALE: 1:2	REV B / SIZE A

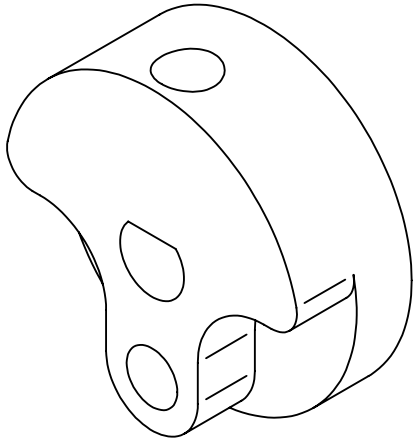


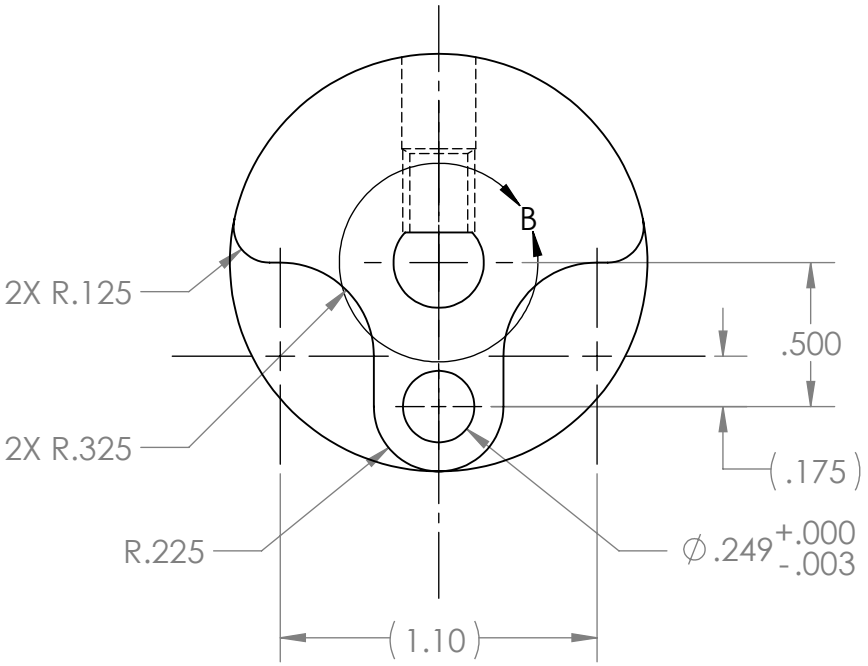


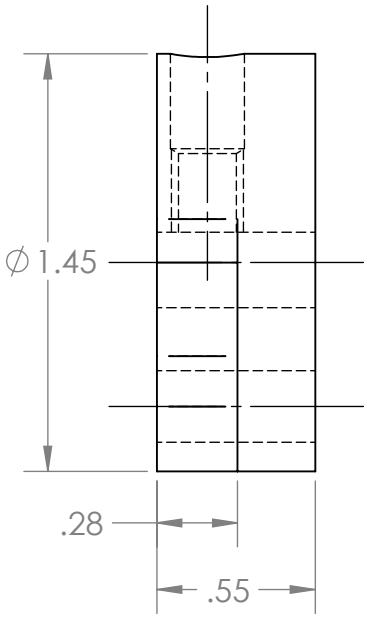
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ± .1 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005	INTERPRET DRAWING PER ASME Y14.5 2009	CAL POLY Manufacturing Engineering	MATERIAL: W1 TOOL STEEL	TITLE: IME AIR MOTOR MAINSHAFT			
			DATE: 08-13-19	DRAWN BY: TRIAN GEORGEOU	SHEET 5 OF 9	SCALE: 1:2	REV B / SIZE A

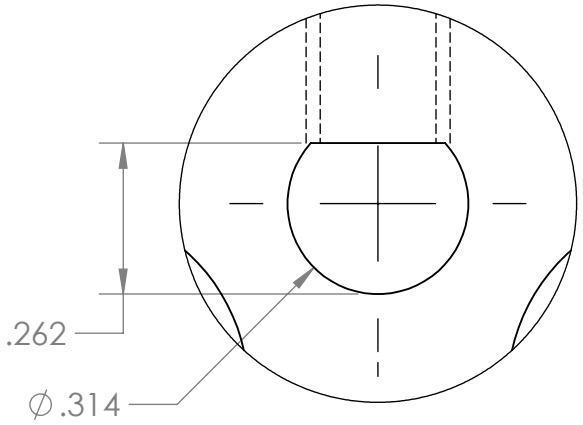


1/4-20 UNC 2B
⌴ ⌀ .257 ↧ .33



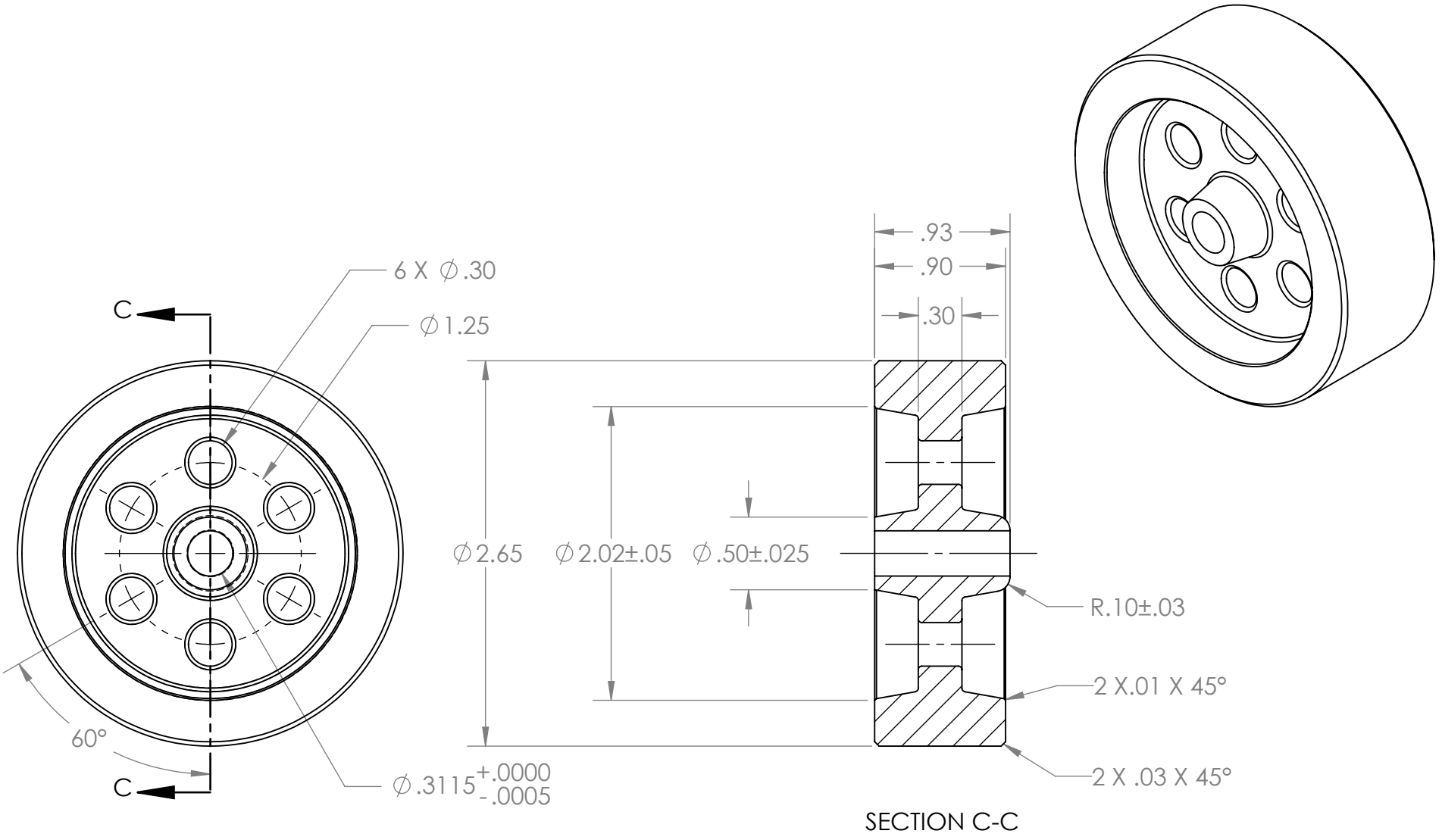




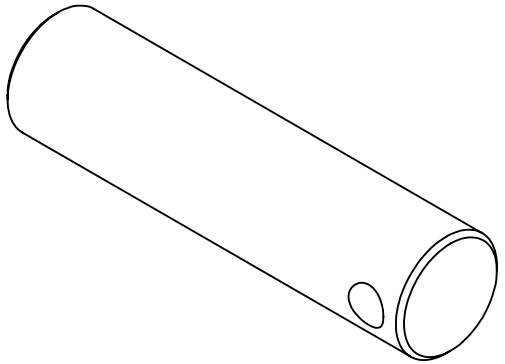


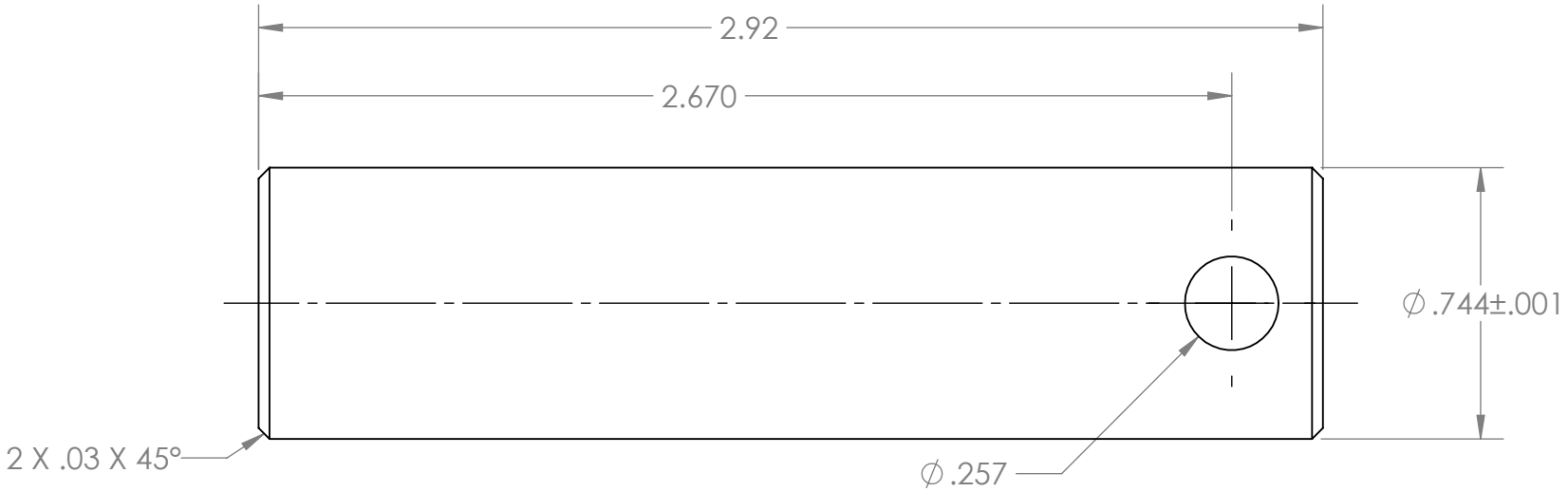
DETAIL B
SCALE 3 : 1

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ± .1 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005	INTERPRET DRAWING PER ASME Y14.5 2009	CAL POLY Manufacturing Engineering	MATERIAL: BRASS	TITLE: IME AIR MOTOR CRANK DISK			
			DATE: 08-13-19	DRAWN BY: TRIAN GEORGEOU	SHEET 6 OF 9	SCALE: 3:2	REV B / SIZE A

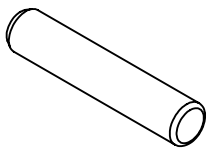


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ± .1 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005	INTERPRET DRAWING PER ASME Y14.5 2009	CAL POLY Manufacturing Engineering	MATERIAL: ZA-8 ZINC	TITLE: IME AIR MOTOR FLYWHEEL			
			DATE: 08-13-19	DRAWN BY: TRIAN GEORGEOU	SHEET 7 OF 9	SCALE: 1:2	REV B / SIZE A

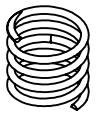




UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ± .1 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005	INTERPRET DRAWING PER ASME Y14.5 2009	CAL POLY Manufacturing Engineering	MATERIAL: DELRIN	TITLE: IME AIR MOTOR PISTON			
			DATE: 08-13-19	DRAWN BY: TRIAN GEORGEOU	SHEET 8 OF 9	SCALE: 1:1	REV B / SIZE A



.2500" X 1.25" STEEL DOWEL PIN
SUPPLIER: MSC
PART #: 06024129
COST: $.24 / PC



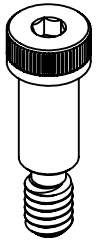
.313 X 3/4" X .063 COMPRESSION SPRING
SUPPLIER: MSC
PART #:



1/4-20 X .25" FLAT POINT SET SCREW
1/8" HEX SOCKET DRIVE
SUPPLIER: MSC
PART #: 02317626
COST: $.22 / PC

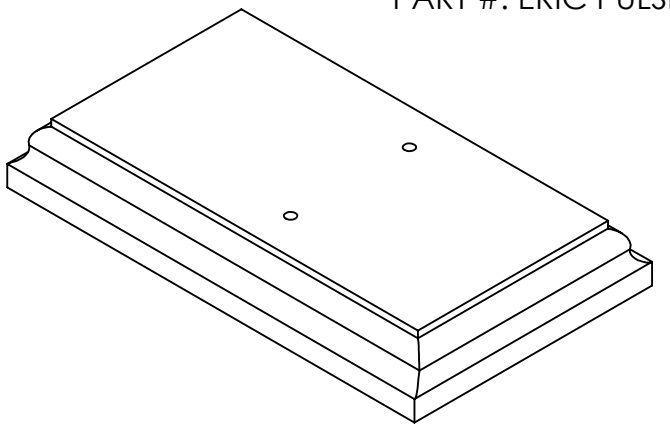


1#6 X 5/8" STAINLESS PHILLIPSPAN SCREW
SUPPLIER: MSC
PART #:



.3125 X 5/8" X 1/4-20 SHOULDER BOLT
SUPPLIER: MSC
PART #:05651062
COST: $.94 / PC

PINE WOOD BASE
SUPPLIER: BONDERSON SHOP
PART #: ERIC PULSE



SCALE 1:2

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ONE PLACE DECIMAL ± .1 TWO PLACE DECIMAL ± .01 THREE PLACE DECIMAL ± .005	INTERPRET DRAWING PER ASME Y14.5 2009	CAL POLY Manufacturing Engineering	MATERIAL: N/A	TITLE: IME AIR MOTOR STANDARD PARTS			
			DATE: 08-13-19	DRAWN BY: TRIAN GEORGEOU	SHEET 9 OF 9	SCALE: 4:1	REV B / SIZE A