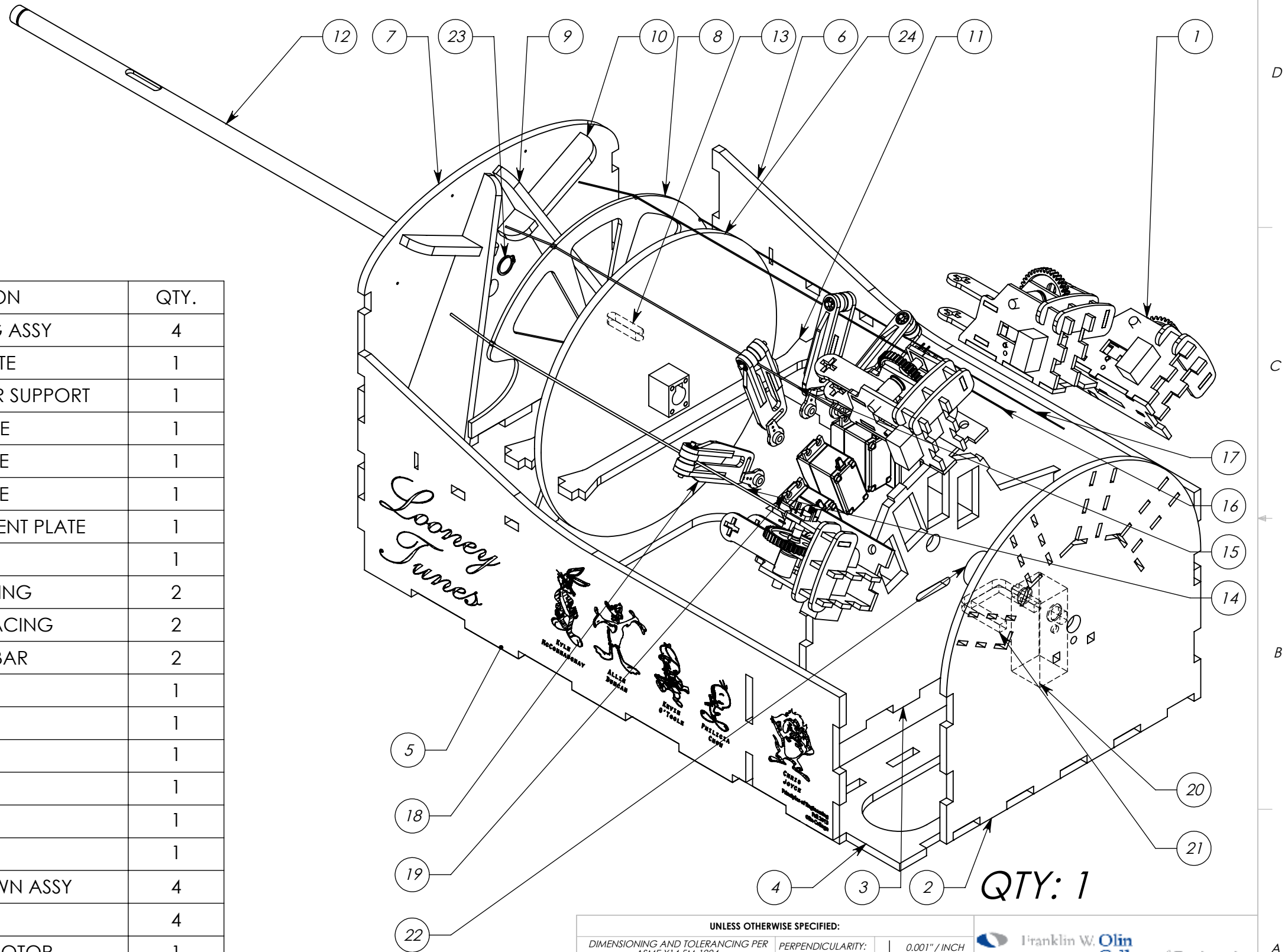








GLUE MATING WOODEN SURFACES TOGETHER

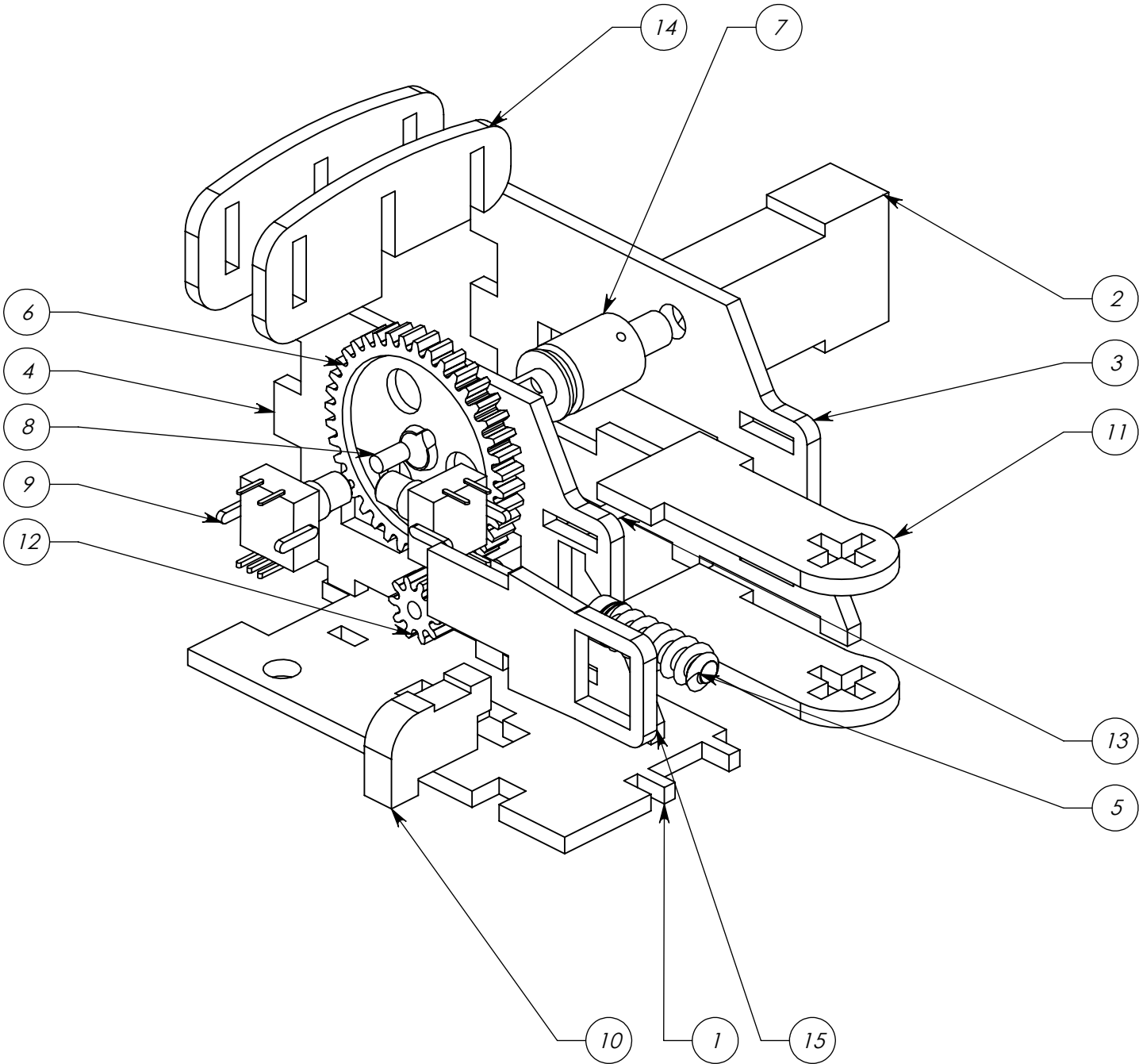
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LT3-A001	SINGLE STRING ASSY	4
2	LT3-P017	BACK PLATE	1
3	LT3-P018	MIDDLE TENSIONER SUPPORT	1
4	LT3-P019	BASEPLATE	1
5	LT3-P020	SIDE PLATE	1
6	LT3-P020	SIDE PLATE	1
7	LT3-P023	STRING ATTACHMENT PLATE	1
8	LT3-P024	BRIDGE	1
9	LT3-P037	MAIN BRACING	2
10	LT3-P038	AUXILIARY BRACING	2
11	LT3-P039	SPREADER BAR	2
12	LT3-P025	SHAFT	1
13	LT3-P026	KEY	1
14	lt2-astring^LT3-A000	A-STRING	1
15	lt2-dstring^LT3-A000	D-STRING	1
16	lt2-estring^LT3-A000	E-STRING	1
17	lt2-gstring^LT3-A000	G-STRING	1
18	LT3-A002	STRING PULLDOWN ASSY	4
19	LT3-P033	SERVO	4
20	LT3-P040	MAIN SHAFT MOTOR	1
21	LT3-P042	MOTOR RETAINER	1
22	LT3-P043	SHAFT & MOTOR INTERFACE	1
23	97633A130_grv	0.25" RETAINING RING	1
24	LT3-A003	BOW ASSY	1



UNLESS OTHERWISE SPECIFIED:				 Franklin W. Olin College of Engineering			
DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.		PERPENDICULARITY:	 0.001" / INCH		TITLE: LOONEY TUNES ASSEMBLY		
DIMENSIONS ARE IN INCHES.		CONCENTRICITY:	 0.002" T.I.R.				
DE-BURR AND BREAK ALL SHARP EDGES .003 MIN.		PARALLELISM:	 0.001" / INCH				
TOLERANCES ARE: <div>X.XX = ±0.01 X.XXX = ±0.005 X.XXXX = ±0.001 ANGLES: ±0.5°</div>		FLATNESS:	 0.001" / INCH				
		ROUGHNESS:	 125		SIZE DWG. NO. B LT3-A000 REV L		
NOTICE THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.			INIT.	DATE			
		ENGINEER	CMJ	12/11/15			
		DRAWN	CMJ	12/15/13			
		CHECKED	-	-	SCALE: 1:3 DO NOT SCALE PRINT SHEET 1 OF 1		

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LT3-P002	BASEPLATE	1
2	LT3-P001	MOTOR	1
3	LT3-P006	Default	1
4	LT3-P006	SIDE PANEL WITH ENCODER MOUNT	1
5	LT3-P008	WORM	1
6	LT3-P011	40 TOOTH GEAR	1
7	LT3-P010	SHAFT	1
8	LT3-P021	CIRCULAR KEY	1
9	LT3-P030	ENCODER	2
10	LT3-P031	ENCODER_SUPPORT	1
11	LT3-P034	PULLDOWN GUIDE	2
12	LT3-P036	10 TOOTH GEAR	1
13	LT3-P012	TENSIONER SHAFT	1
14	LT3-P044	SECOND ENCODER SUPPORT	2
15	LT3-P045	SECOND ENCODER MOUNT	1

GLUE MATING
WOODEN
SURFACES
TOGETHER

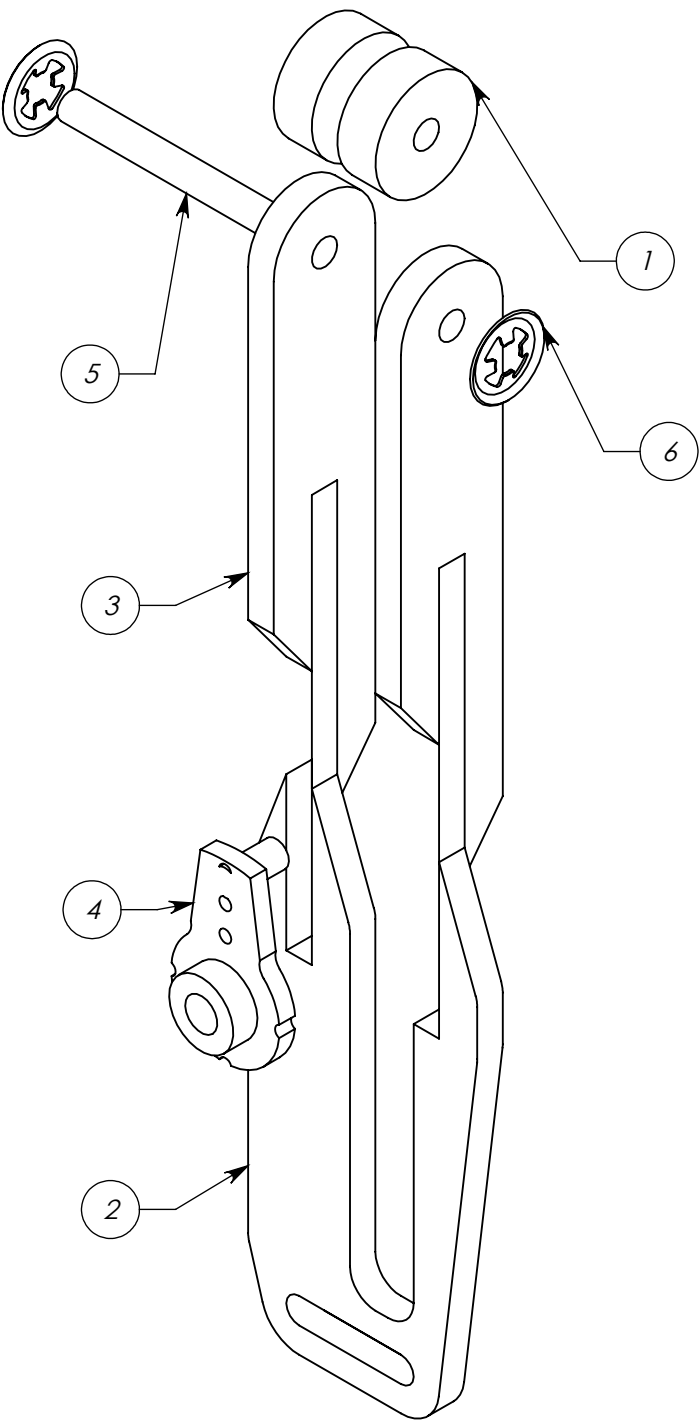


QTY: 4

UNLESS OTHERWISE SPECIFIED:				FRANKLIN W. OLIN College of Engineering			
DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.		PERPENDICULARITY:	0.001" / INCH	TITLE: STRING TENSIONING ASSEMBLY			
DIMENSIONS ARE IN INCHES.		CONCENTRICITY:	0.002" T.I.R.				
DE-BURR AND BREAK ALL SHARP EDGES .003 MIN.		PARALLELISM:	0.001" / INCH				
TOLERANCES ARE:		FLATNESS:	0.001" / INCH	SIZE B			
		ROUGHNESS:	125				
NOTICE THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.		INIT.	DATE	SIZE	DWG. NO.	REV	
		ENGINEER	CMJ	12/01/13	LT3-A001	G	
		DRAWN	CMJ	12/15/13			
		CHECKED	-	-	SCALE: 1:1	DO NOT SCALE PRINT	SHEET 1 OF 1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LT3-P027	IDLER PULLEY	1
2	LT3-P028	SCOTCH YOKE	1
3	LT3-P032	STRING PULLDOWN TOP HALF	2
4	LT3-P035	MODIFIED SERVO HORN	1
5	LT3-P047	1/8"x1" DOWEL PIN	1
6	LT3-P046	1/8" SELF-LOCKING RETAINING RING	2

GLUE MATING
WOODEN
SURFACES
TOGETHER

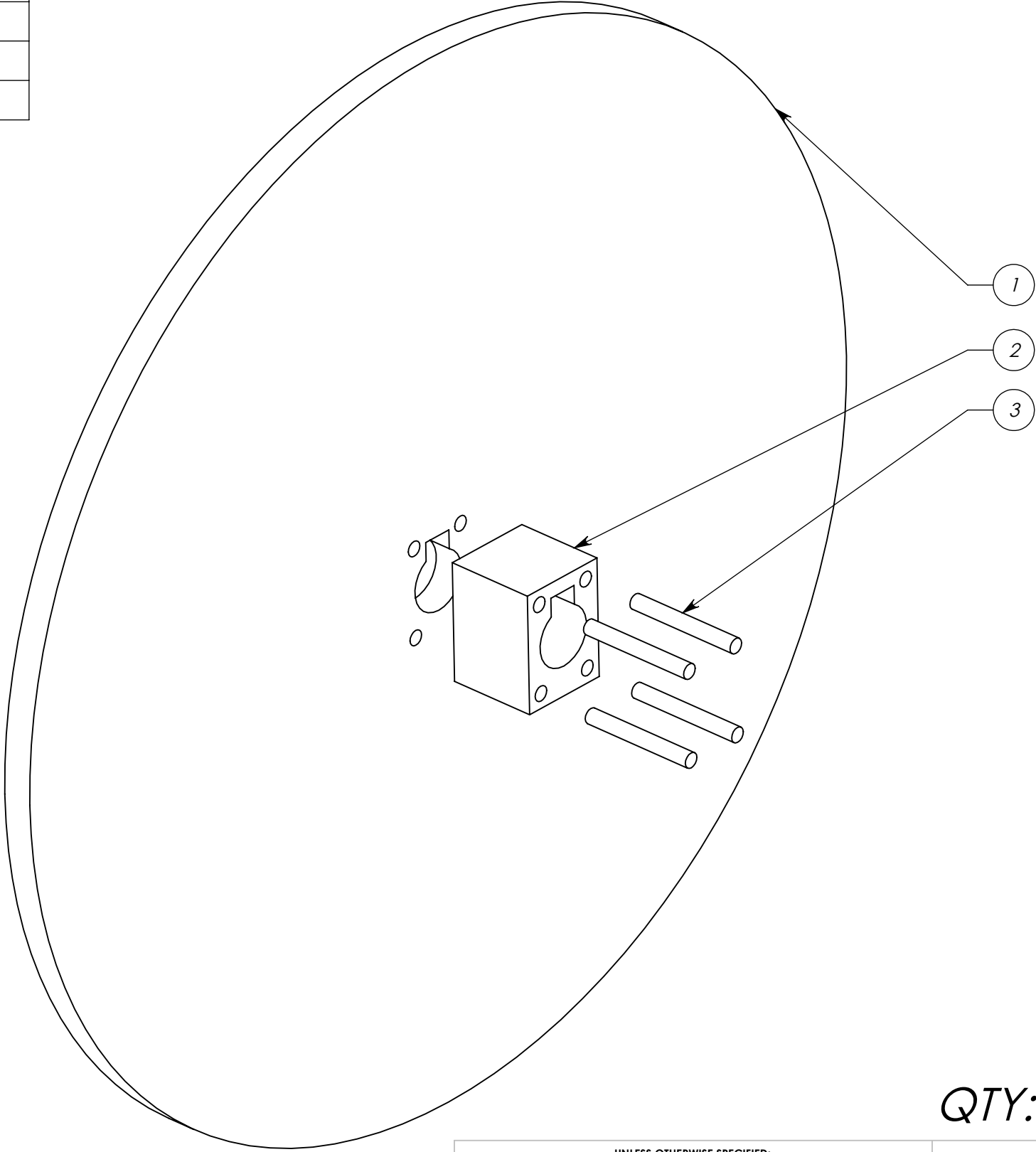


QTY: 4







UNLESS OTHERWISE SPECIFIED:				Franklin W. Olin College of Engineering		
DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.		PERPENDICULARITY:	\perp 0.001" / INCH	TITLE: STRING PULLDOWN ASSEMBLY		
DIMENSIONS ARE IN INCHES.		CONCENTRICITY:	\odot 0.002" T.I.R.			
DE-BURR AND BREAK ALL SHARP EDGES .003 MIN.		PARALLELISM:	// 0.001" / INCH	SIZE B		
TOLERANCES ARE: X.XX = ± 0.01 X.XXX = ± 0.005 X.XXXX = ± 0.001 ANGLES: $\pm 0.5^\circ$		FLATNESS:	\square 0.001" / INCH			
NOTICE THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.		ROUGHNESS:	125 $\sqrt{\text{ }}$	DWG. NO. LT3-A002		
		ENGINEER	INIT. DATE			
		DRAWN	CMJ 12/01/13			
		CHECKED	- -	REV B		
				SCALE: 3:2 DO NOT SCALE PRINT SHEET 1 OF 1		

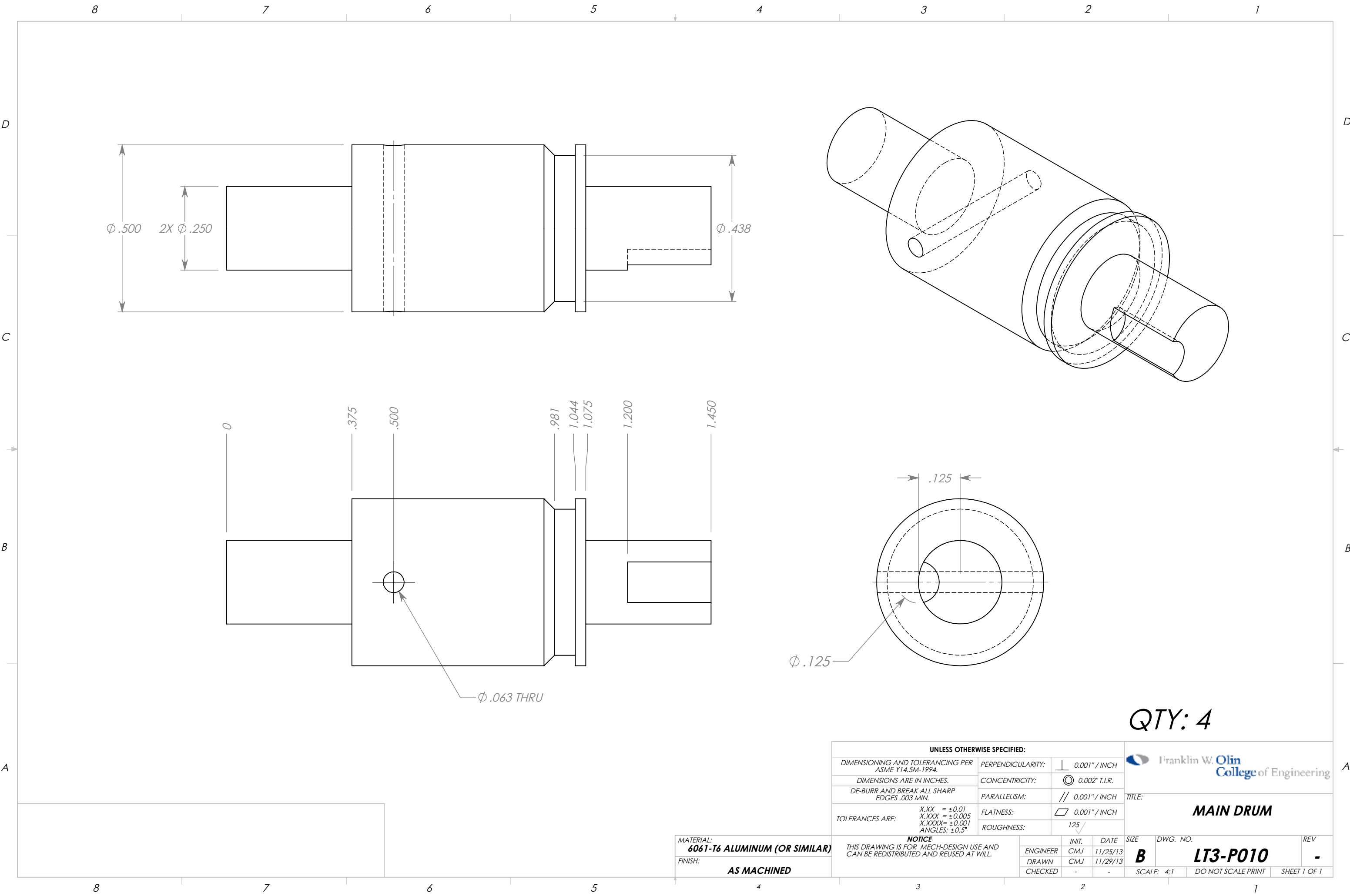
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	LT3-P013	BOW WHEEL	1
2	LT3-P041	HUB	1
3	LT3-P047	1/8"x1" DOWEL PIN	4

EPOXY MATING
DELFIN SURFACES



QTY: 1

UNLESS OTHERWISE SPECIFIED:									
DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.		PERPENDICULARITY:						 0.001" / INCH	
DIMENSIONS ARE IN INCHES.		CONCENTRICITY:						 0.002" T.I.R.	
DE-BURR AND BREAK ALL SHARP EDGES .003 MIN.		PARALLELISM:						 0.001" / INCH	
TOLERANCES ARE: X.XX = ±0.01 X.XXX = ±0.005 X.XXXX= ±0.001 ANGLES: ±0.5°		FLATNESS:		 0.001" / INCH		TITLE: BOW ASSEMBLY			
		ROUGHNESS:		125 					
NOTICE THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.					INIT.	DATE	SIZE	DWG. NO.	REV
				ENGINEER	EAD	12/13/13	B	LT3-A003	A
				DRAWN	CMJ	12/15/13			
				CHECKED	-	-			



QTY: 4



MAIN DRUM

MATERIAL:
6061-T6 ALUMINUM (OR SIMILAR)
FINISH:
AS MACHINED

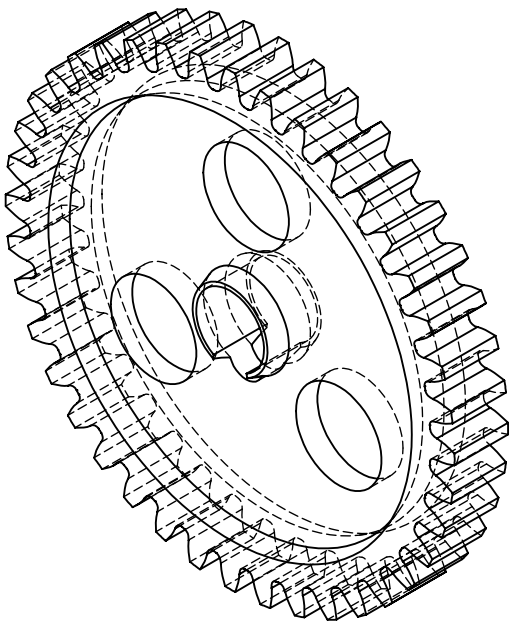
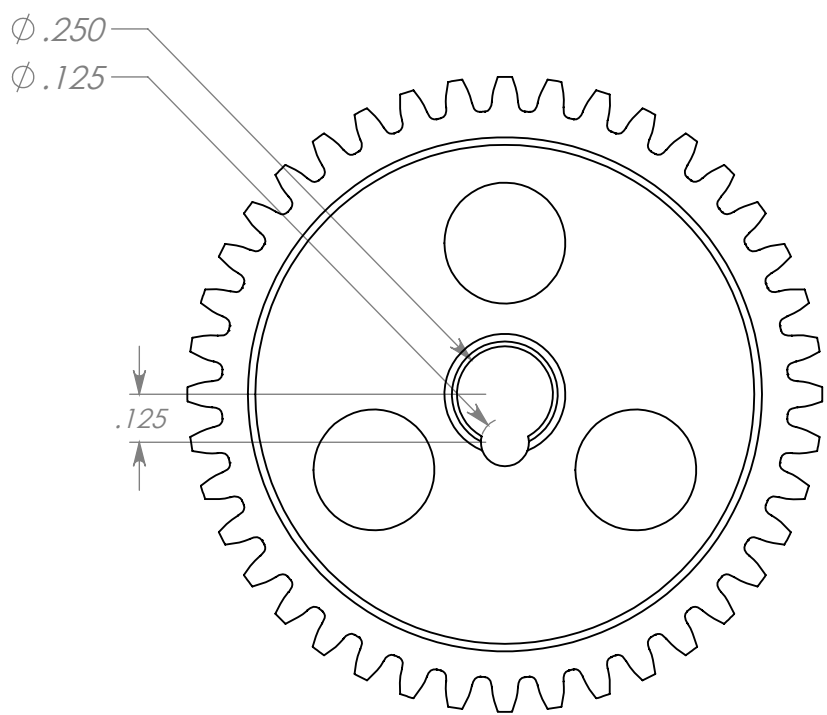
NOTICE
THIS DRAWING IS FOR MECH-DESIGN USE AND
CAN BE REDISTRIBUTED AND REUSED AT WILL.

ENGINEER
DRAWN
CHECKED
INIT.
CMJ
-
DATE
11/25/13
11/29/13
-







SIZE
B
DWG. NO.
LT3-P010
REV
-
SCALE: 4:1
DO NOT SCALE PRINT
SHEET 1 OF 1

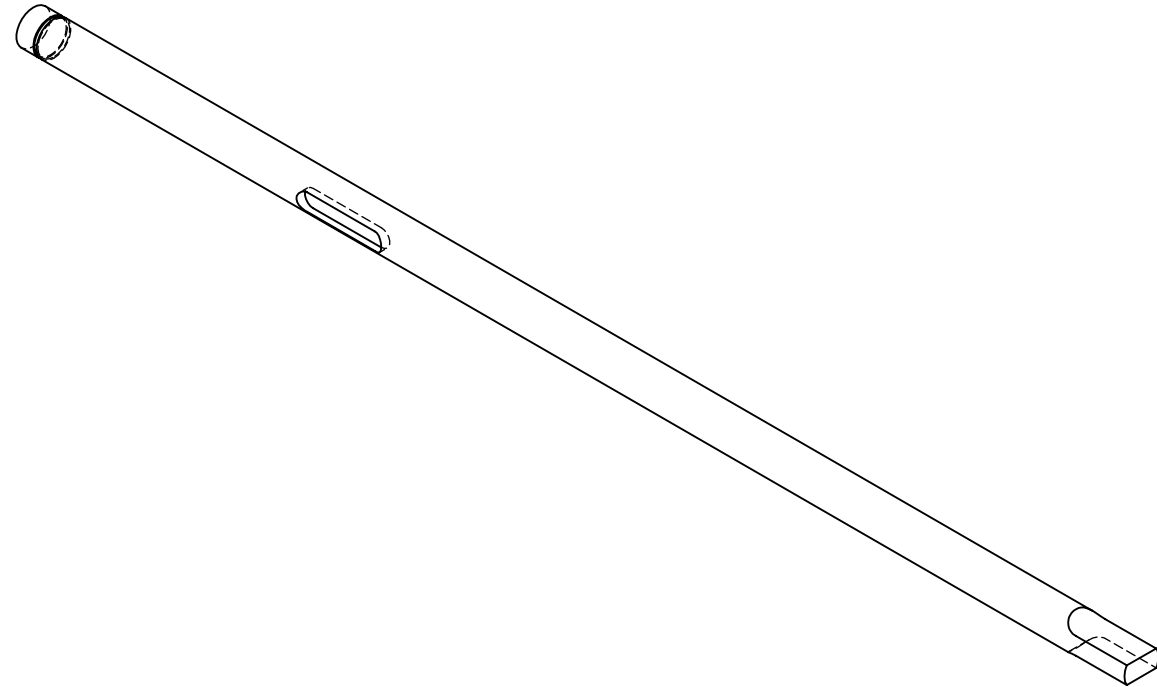
40T MODULE 1
GEAR BLANK

INTERNAL FEATURES
ARE NONCRITICAL



QTY: 4

UNLESS OTHERWISE SPECIFIED:				 Franklin W. Olin College of Engineering					
DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.		PERPENDICULARITY:		 0.001" / INCH		TITLE: 40T GEAR			
DIMENSIONS ARE IN INCHES.		CONCENTRICITY:		 0.002" T.I.R.					
DE-BURR AND BREAK ALL SHARP EDGES .003 MIN.		PARALLELISM:		 0.001" / INCH					
TOLERANCES ARE: X.XX = ±0.01 X.XXX = ±0.005 X.XXXX= ±0.001 ANGLES: ±0.5°		FLATNESS:		 0.001" / INCH					
		ROUGHNESS:		125 					
NOTICE THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.				SIZE		DWG. NO.		REV	
				B		LT3-P011		B	
				SCALE: 2:1		DO NOT SCALE PRINT		SHEET 1 OF 1	









Technical drawing of a shaft with the following dimensions and features:

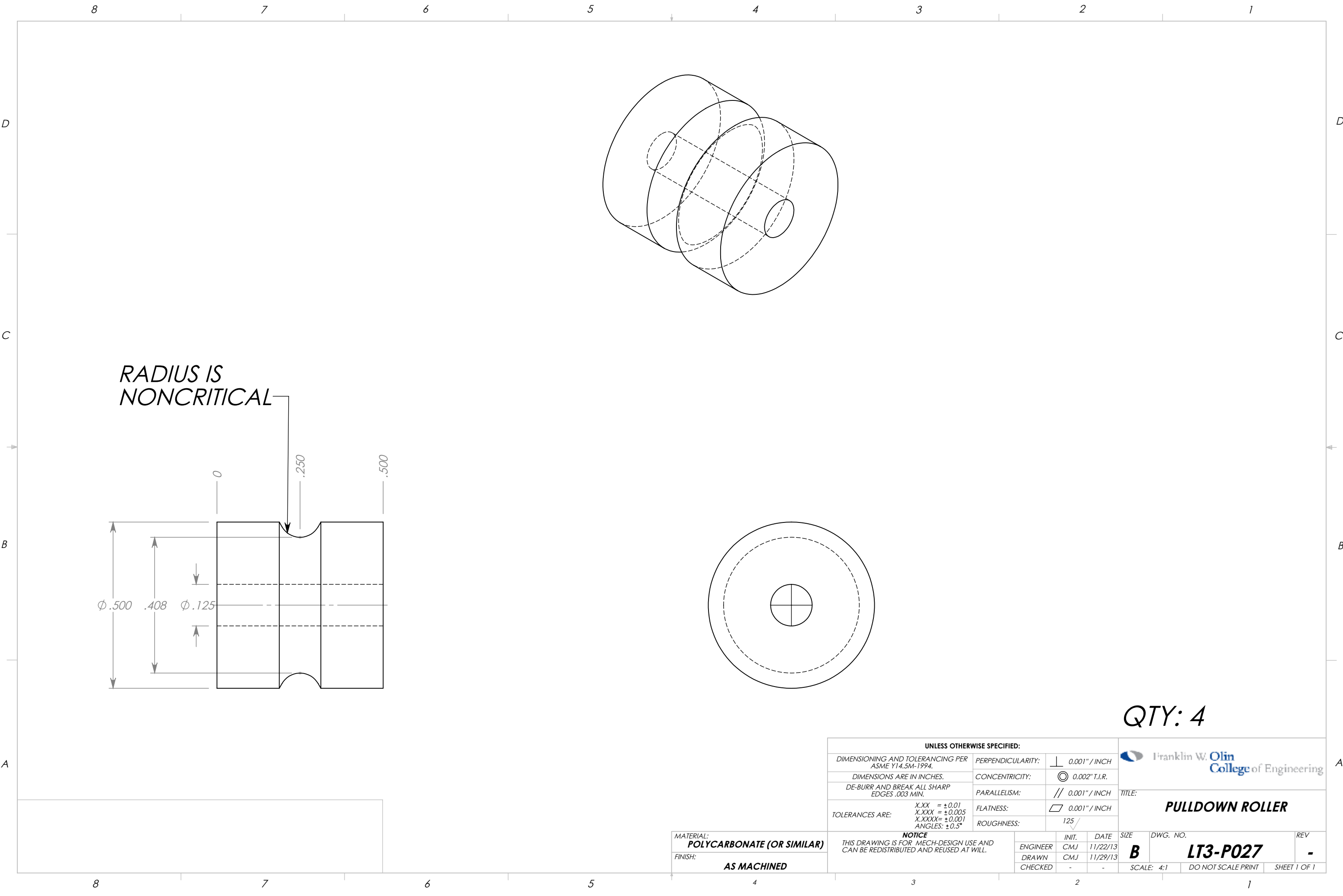
- Section line **A-A** at the left end.
- Dimension $\phi .250$ for the diameter of the first step.
- Dimension 4.250 for the length of the first step.
- Dimension 5.250 for the length of the second step.
- Dimension 15.575 for the length of the third step.
- Dimension 16.325 for the length of the fourth step.
- Dimension $\phi .500$ for the diameter of the fourth step.

*RADIUS IS
NONCRITICAL*—

.125

 Franklin W. Olin
College of Engineering

UNLESS OTHERWISE SPECIFIED:			 Franklin W. Olin College of Engineering			
DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.	PERPENDICULARITY:	 0.001" / INCH	TITLE: MAIN SHAFT			
DIMENSIONS ARE IN INCHES.	CONCENTRICITY:	 0.002" T.I.R.				
DE-BURR AND BREAK ALL SHARP EDGES .003 MIN.	PARALLELISM:	 0.001" / INCH				
TOLERANCES ARE: <div><div>X.XX = ±0.01</div><div>X.XXX = ±0.005</div><div>X.XXXX = ±0.001</div><div>ANGLES: ±0.5°</div></div>	FLATNESS:	 0.001" / INCH				
	ROUGHNESS:	125 				
NOTICE THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.		INIT.	DATE	SIZE	DWG. NO.	REV
	ENGINEER	CMJ	11/23/13	B	LT3-P025	C
	DRAWN	CMJ	11/29/13			
	CHECKED	-	-			
				SCALE: 1:2	DO NOT SCALE PRINT	SHEET 1 OF 1



RADIUS IS
NONCRITICAL

QTY: 4



TITLE: **PULLDOWN ROLLER**

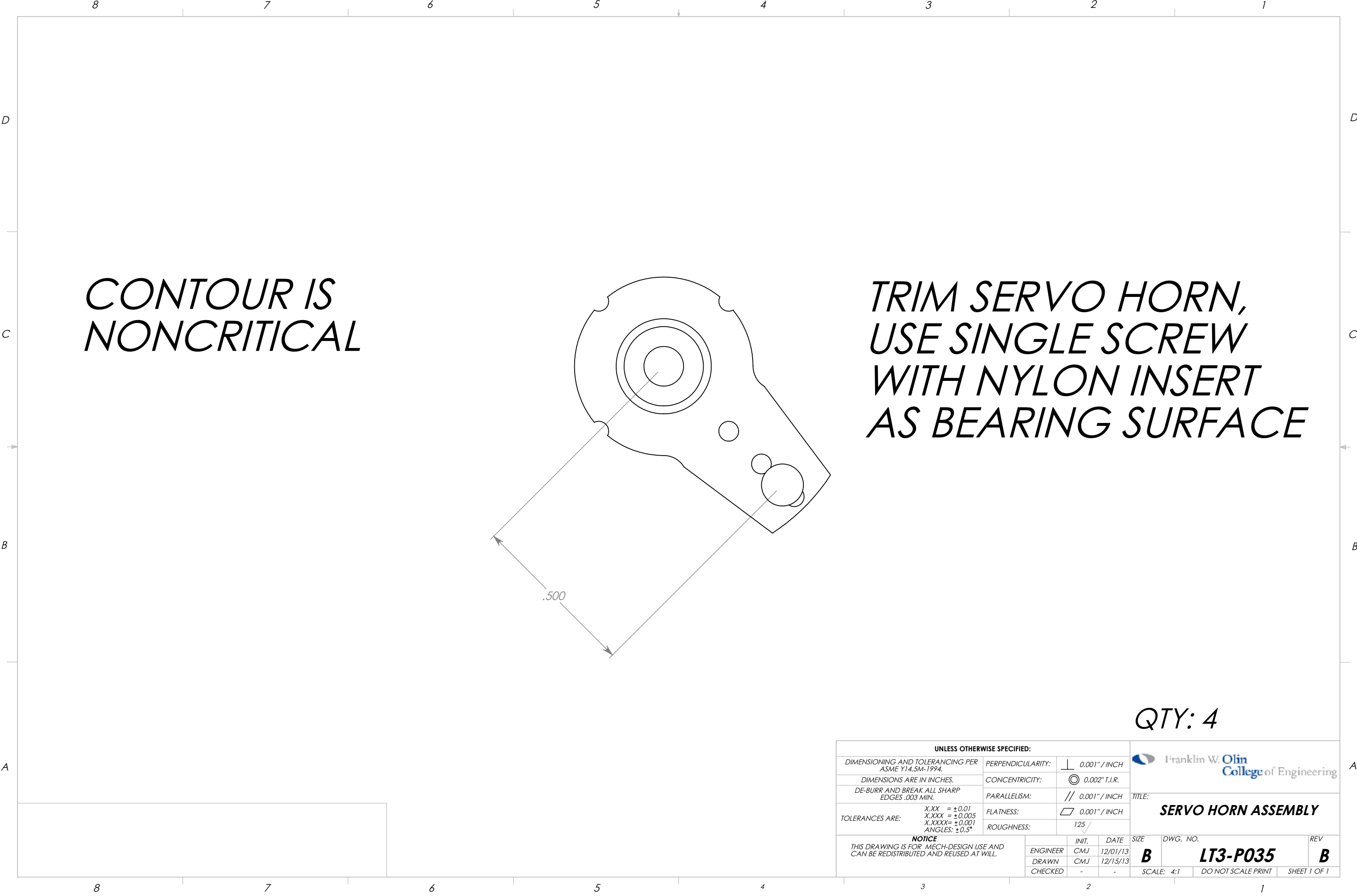
MATERIAL: **POLYCARBONATE (OR SIMILAR)**
FINISH: **AS MACHINED**

UNLESS OTHERWISE SPECIFIED:			
DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.	PERPENDICULARITY:	⊥ 0.001" / INCH	
	CONCENTRICITY:	◎ 0.002" T.I.R.	
DIMENSIONS ARE IN INCHES.	PARALLELISM:	// 0.001" / INCH	
DE-BURR AND BREAK ALL SHARP EDGES .003 MIN.	FLATNESS:	▭ 0.001" / INCH	
TOLERANCES ARE: X.XX = ±0.01 X.XXX = ±0.005 X.XXXX = ±0.001 ANGLES: ±0.5°	ROUGHNESS:	125 √	

NOTICE
THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.

ENGINEER	INIT.	DATE
DRAWN	CMJ	11/22/13
CHECKED	CMJ	11/29/13







SIZE	DWG. NO.	REV
B	LT3-P027	-
SCALE: 4:1	DO NOT SCALE PRINT	SHEET 1 OF 1

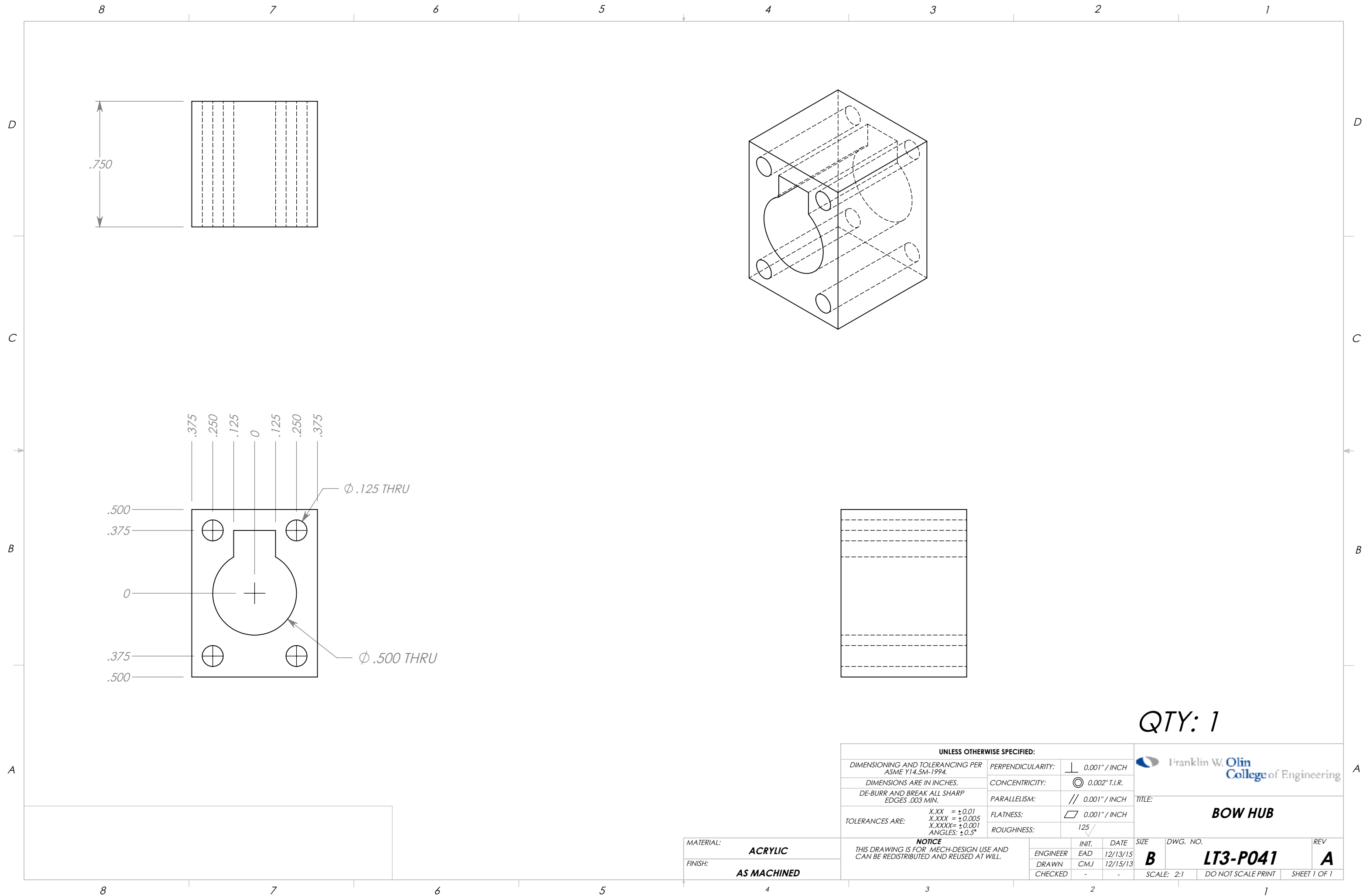


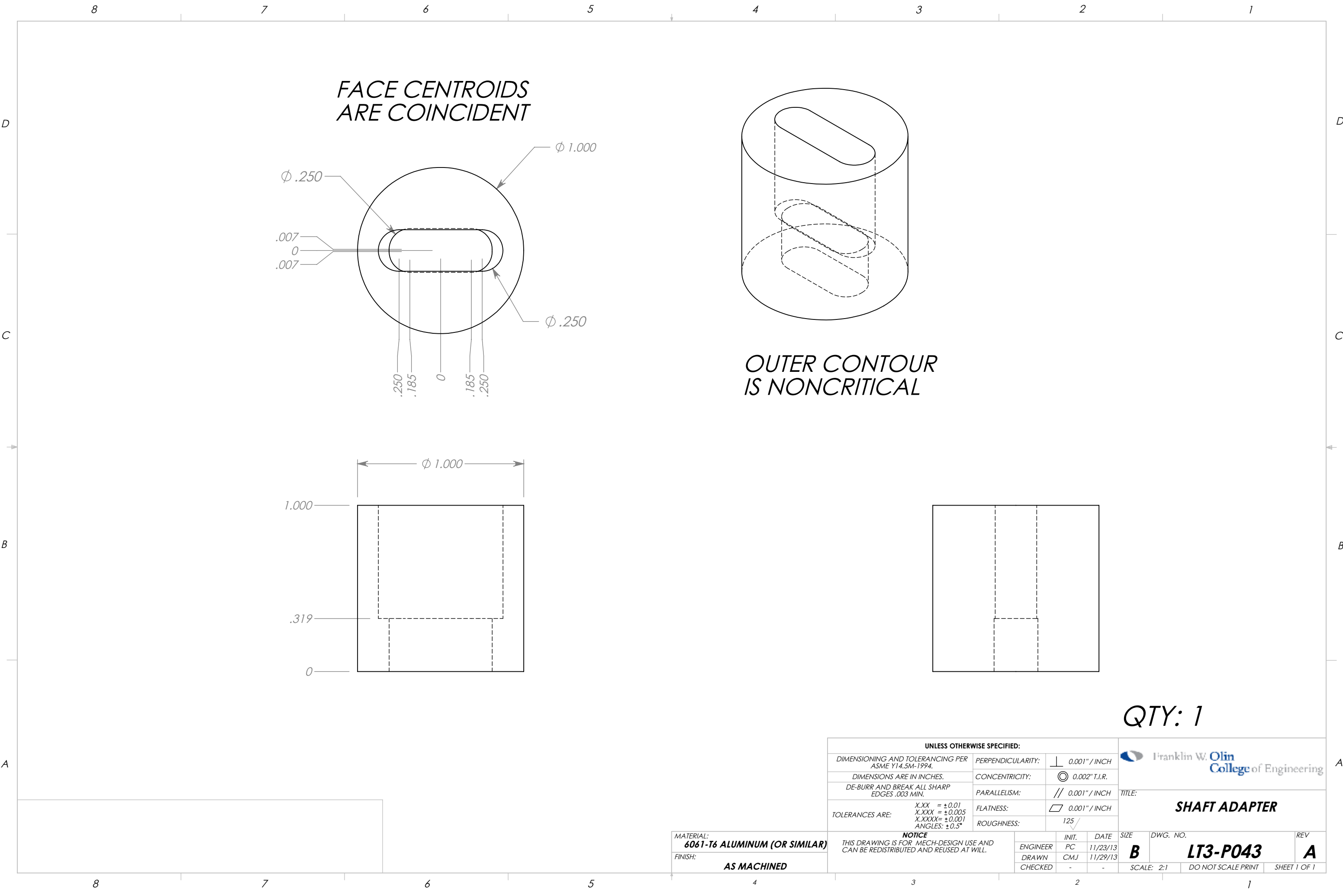
CONTOUR IS
NONCRITICAL

TRIM SERVO HORN,
USE SINGLE SCREW
WITH NYLON INSERT
AS BEARING SURFACE

QTY: 4

UNLESS OTHERWISE SPECIFIED:				 Franklin W. Olin College of Engineering						
DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.		PERPENDICULARITY:		 0.001" / INCH		TITLE: SERVO HORN ASSEMBLY				
DIMENSIONS ARE IN INCHES.		CONCENTRICITY:		 0.002" T.I.R.						
DE-BURR AND BREAK ALL SHARP EDGES .003 MIN.		PARALLELISM:		 0.001" / INCH						
TOLERANCES ARE: X.XX = ±0.01 X.XXX = ±0.005 X.XXXX= ±0.001 ANGLES: ±0.5°		FLATNESS:		 0.001" / INCH						
		ROUGHNESS:		125 						
NOTICE THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.						SIZE	DWG. NO.	REV		
						B	LT3-P035	B		
				ENGINEER					CMJ	12/01/13
				DRAWN					CMJ	12/15/13
				CHECKED	-	-	SCALE: 4:1	DO NOT SCALE PRINT	SHEET 1 OF 1	





FACE CENTROIDS
ARE COINCIDENT

OUTER CONTOUR
IS NONCRITICAL

QTY: 1



TITLE: **SHAFT ADAPTER**

MATERIAL: 6061-T6 ALUMINUM (OR SIMILAR)		NOTICE THIS DRAWING IS FOR MECH-DESIGN USE AND CAN BE REDISTRIBUTED AND REUSED AT WILL.		INIT.	DATE	SIZE	DWG. NO.		REV
FINISH: AS MACHINED			ENGINEER	PC	11/23/13	B	LT3-P043		A
			DRAWN	CMJ	11/29/13				
			CHECKED	-	-				