



05.01.2007

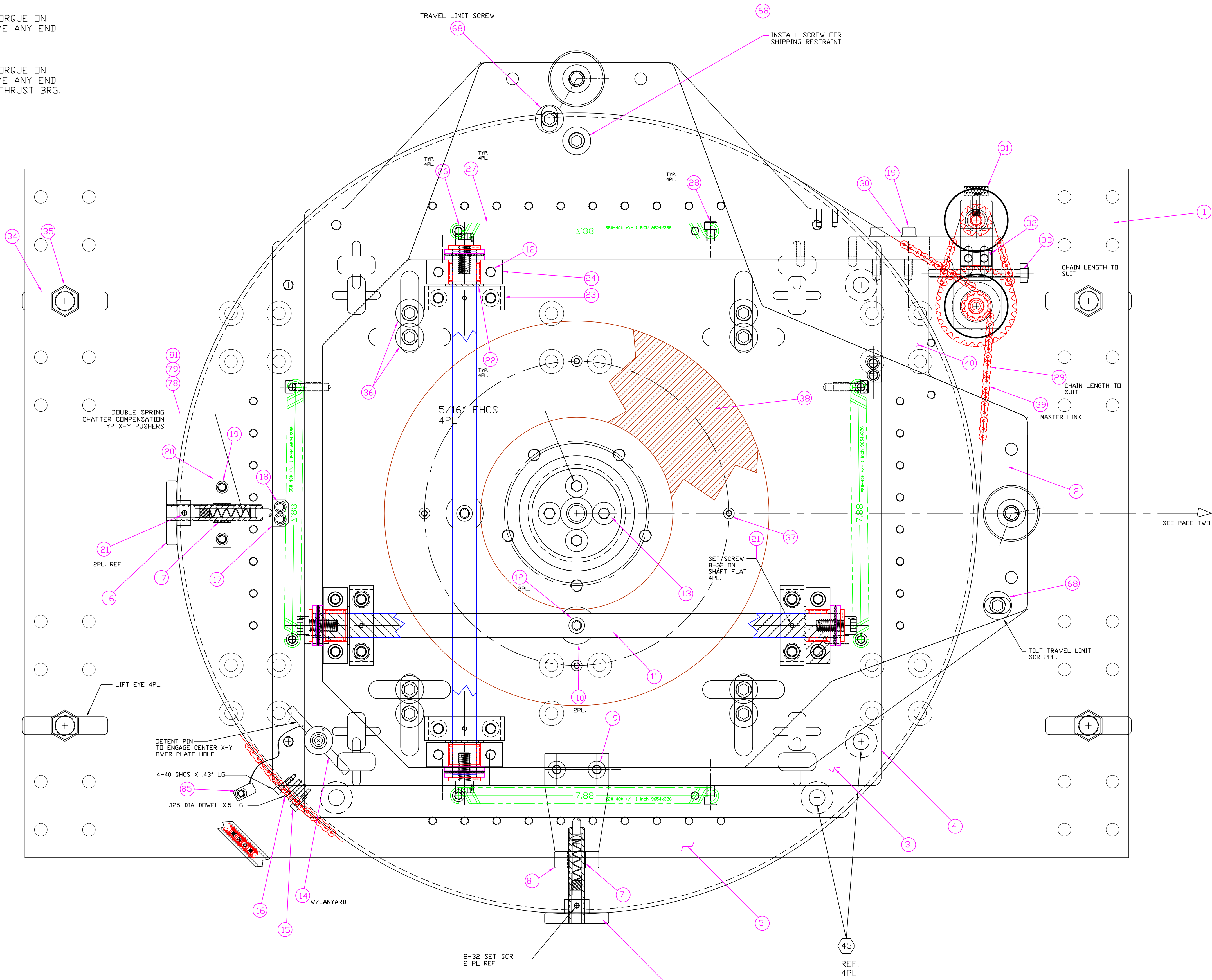
NOTES: (UNLESS OTHERWISE SPECIFIED)

1. PLATING AT STEVES PLATING
BURBANK

2. USE ONLY LIGHT TORQUE ON
SCREW #76 TO REMOVE ANY END
PLAY

3. USE ONLY LIGHT TORQUE ON
SCREW #65 TO REMOVE ANY END
PLAY AND PRE-LOAD THRUST BRG.

REV	DATE	DN #	DRAWING TREE #
A	2-18-96	LIGD-E060004-00	



ITEM NO.	REQ. QUANTITY	SPARE QTY	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
40	1			DWG # D050449-A	ROLL PLATE QUAD FIXTURE	
39	2			MCM #6264K2	25-S.S. CONNECTOR LINK	MCMaster CARR
38	1			MCM #1544T3	12\"/>	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DATE	NAME	LIGO		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
TOLERANCES:	XX ±	2-16-96	KEM	SYSTEM	LHD /LLO	TCS	
XXX ±				SUB-SYSTEM		NONE	
ANGULAR ±				NEXT ASSY			
MATERIAL				PART NAME	QUAD SUS FIXTURE ASSEMBLY		
FINISH				SIZE	D	DWG. NO.	D060145-A
				SCALE		REV	

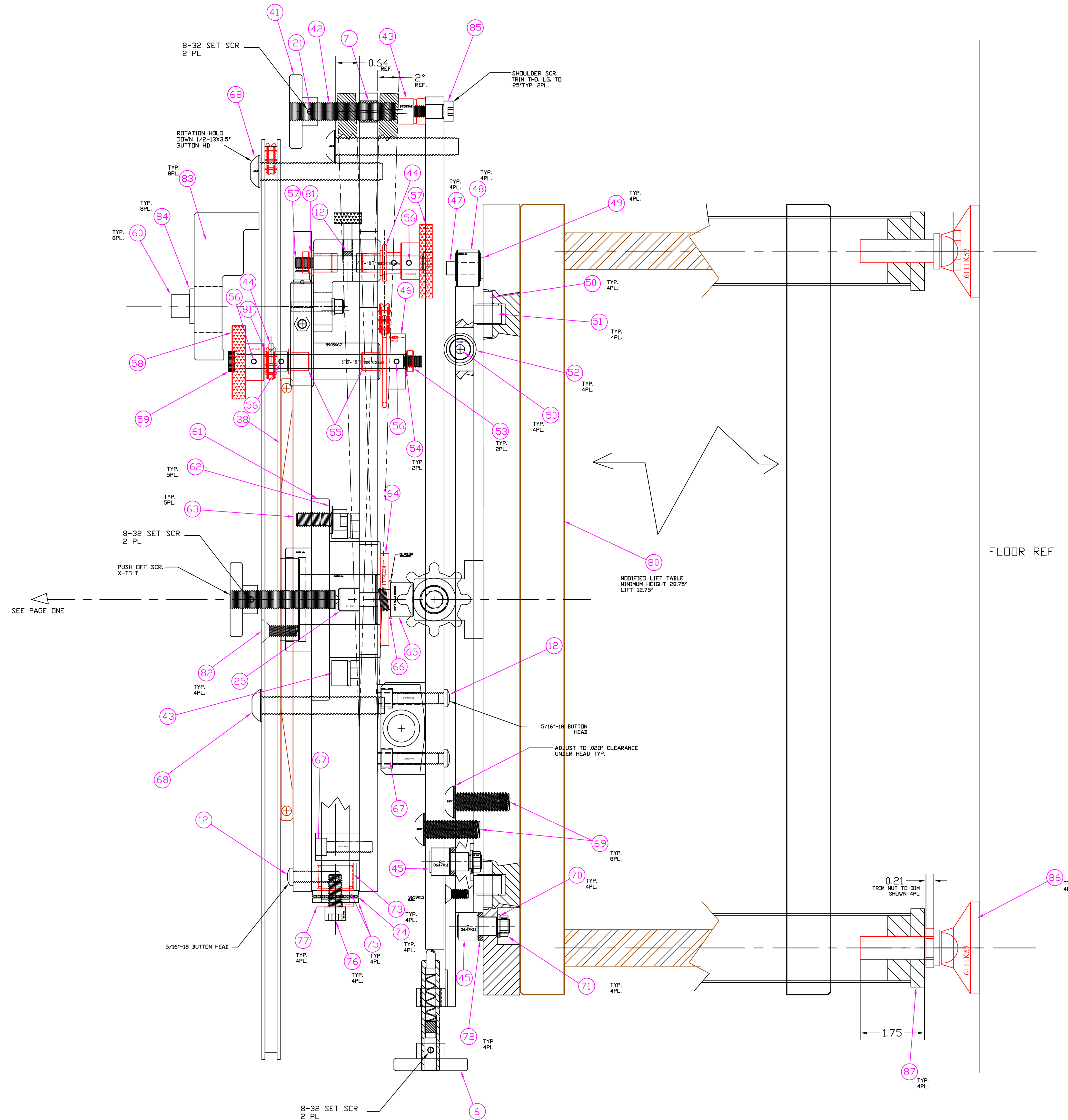
SHEET ONE OF TWO

TOP VIEW

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. SEE SHEET ONE.

REV.	DATE	BY	APP.	DRAWING TREE #
A	2-16-06	KEM		



SIDE VIEW

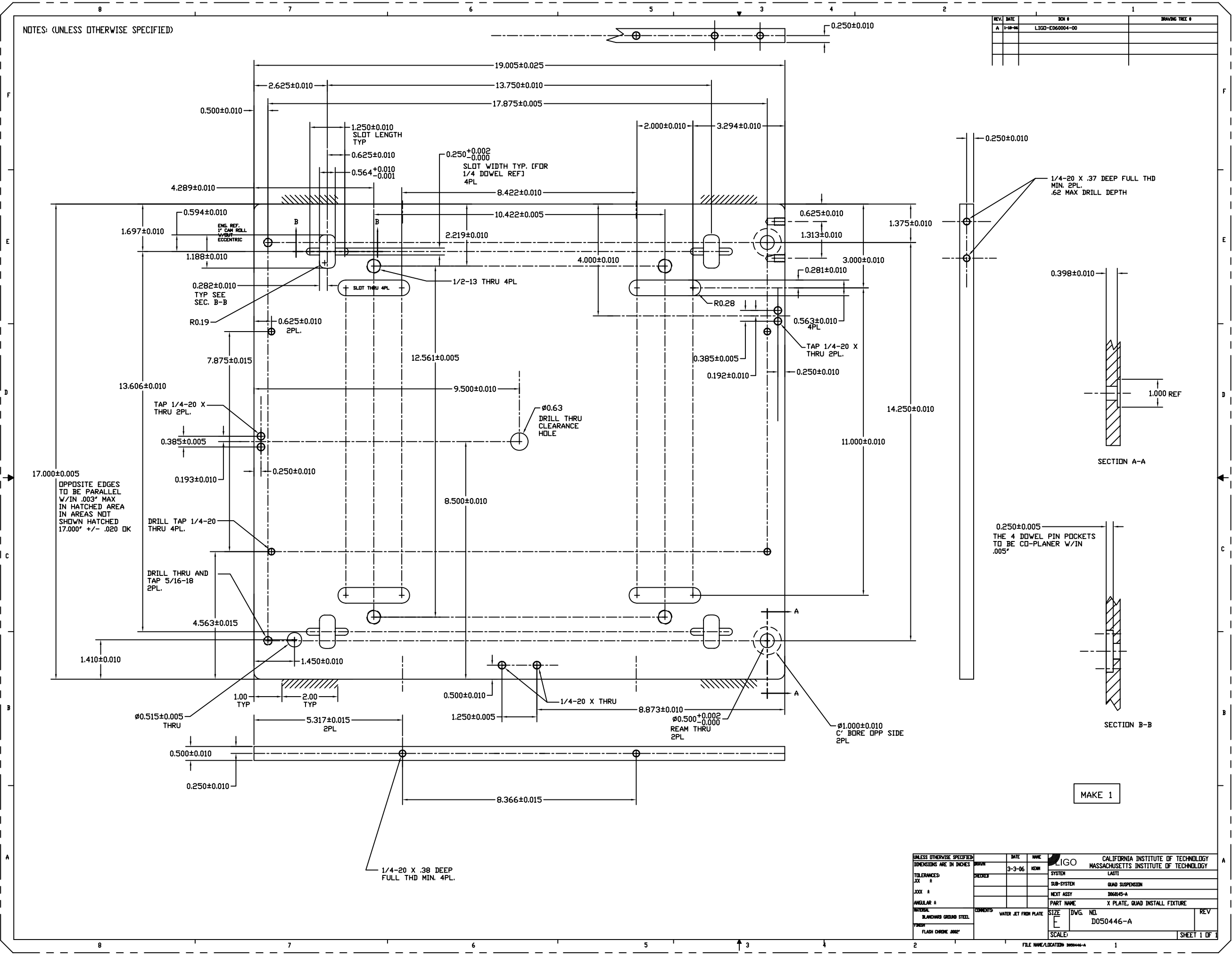
SHEET TWO OF TWO

ITEM NO.	REQ. QUANTITY	SPARE QUANTITY	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
87	4			#D060168-A	TABLE FOOT PAD	
86	4			MCM #6111K57	LEVELING FOOT	MCMaster CARR
85	1			MCM #91306A343	10-24 X .50"LG BUTTON HD.	MCMaster CARR
84	8			MCM #98370A013	.28"ID X .5"OD X .07"THK WASHER	MCMaster CARR
83	8			DWG #D060066-A	DOG CLAMP	
82	4			MCM #91263A575	5/16-18 X 1.0"LG. FLAT HD SCR.	MCMaster CARR
81	2			MCM #9657K231	25"OD SPRING	MCMaster CARR
80	1				24" X 36" LIFT TABLE MODIFIED	W.W. GRANGER
79	2			MCM #9657K65	SPRING PLUNGER [USE PARTS]	MCMaster CARR
78	2			MCM #3126A121	SPRING PLUNGER [USE PARTS]	MCMaster CARR
77	4			MCM #98370A021	3/8"ID X1.0"OD X.13"THK WASHER	MCMaster CARR
76	4			MCM #93705A622	SHCS S.S. 3/8-16 X .75"LG.	MCMaster CARR
75	8			MCM #5909K59	.75"ID X 1.25"OD X.126"THK WASHER	MCMaster CARR
74	4			MCM #5909K33	.75"ID X1.25"OD X.14"THK THRUST BRG.	MCMaster CARR
73	4			MCM #5905K67	.75"ID X 1.0"OD NEEDLE BRG.	MCMaster CARR
72	4			MCM #98126A837	.5"ID X .75" OD X 1.25" THK	MCMaster CARR
71	4			MCM #93839A815	3/8-24 HEX NUT	MCMaster CARR
70	4			MCM #98126A736	WASHER .37"ID X .62" OD X.06" THK	MCMaster CARR
69	8			MCM #91306A437	SHCS 1/2-13 X 1.5"LG.	MCMaster CARR
68	1			MCM #92949A724	BUTTON HS S.S. 1/2-13 X3"LG	MCMaster CARR
67	8			MCM #91274A248	SHCS 5/16-18 X1.25" LG.	MCMaster CARR
66	1			MCM #91114A035	LOCK WASHER-TOOTH STYLE	MCMaster CARR
65	1			MCM #91251A796	5/8-11 X 1.25"LG SHCS	MCMaster CARR
64	1			MCM #91117A234	5/8"ID X 2.5"OD .25"THK WASHER	MCMaster CARR
63	5			MCM #91205A624	3/8-16 X1"LG. SHCS	MCMaster CARR
62	5			MCM #98029A046	3/8"ID X 1"OD X.10"THK WASHER	MCMaster CARR
61	1			DYNAPAK #WH513115	5 BOLT FRONT WHEEL HUB	ZINC AUTO PARTS 91-94 MUSTANG
60	8			MCM #92196A552	1/4-20 S.S. SHCS X 2.5"LG	MCMaster CARR
59	8			D060069-A	LONG SHAFT SCREW MOD.	MCMaster CARR
58	1			#D060013-A	ROTATION KNOB MOD SHORT C'BORE	MCMaster CARR
57	1			#D060010-A	ROTATION KNOB MOD LONG C'BORE	MCMaster CARR
56	5			MCM #92373A215	5/32"DIA X .75"LG ROLL PIN	MCMaster CARR
55	4			MCM #7815K19	3/8"ID FLANGE BRG.	MCMaster CARR
54	2			MCM #90089A325	5/16"ID S.S. WASHER	MCMaster CARR
53	2			MCM #94252A706	5/16-18 S.S. HEX NUT	MCMaster CARR
52	4			MCM 6831K42	7/8" ODX.56"WX.25"ID CAM ROLL	MCMaster CARR
51	4			MCM #6831K41	3/4" ODX.56"WX.25"ID CAM ROLL	MCMaster CARR
50	8			MCM #98381A544	1/4"DIA X 1.25" LG DDWEL	MCMaster CARR
49	4			MCM #90313A206	WASHER .33"ID X .63"OD X .06"THK	MCMaster CARR
48	4			MCM #6831K43	CAM ROLLER 1" DIA	MCMaster CARR
47	4			92196A585	5/16-18 S.S. SHCS X 1.25"LG	MCMaster CARR
46	1			#D060015-A	LARGE SPROCKET MODIFICATION	MCMaster CARR
45	4			MCM #3647K11	ECCENTRIC CAM ROLL .75"OD	MCMaster CARR
44	2			DWG. # D060016-A	MCM #2737T3 11-T #25 SPROCKET	MCMaster CARR
43	4			MCM #8958A2	S.S. STOP	MCMaster CARR
42	2			#TST-0510 X 3-SB	1/2-13 X3"LG. BALL END SCR.	FAIRLANE CORP 1-586-494-6000
41	2			#D060077-A	S.S. KNOB MOD MCM #6020K42	MCMaster CARR

UNLESS OTHERWISE SPECIFIED		DATE	NAME	PARTS LIST	
DIMENSIONS ARE IN INCHES		BRAWN	2-16-06	KEM	LIGO
TOLERANCES:		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY			
XX ±		SYSTEM LHO /LLO			
XXX ±		SUB-SYSTEM TCS			
ANGULAR ±		NEXT ASSY NONE			
INTERIAL		PART NAME QUAD SUS FIXTURE ASSEMBLY			
FINISH		SCALE: D	DWG. NO. D060145-A	REV	

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV	DATE	BY	CHKD	DWG. NO.	DRAWING TITLE
A	3-3-06			D050446-00	



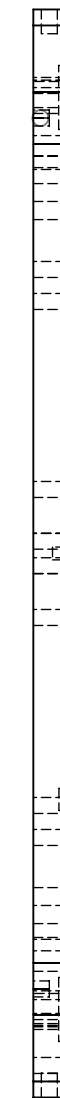
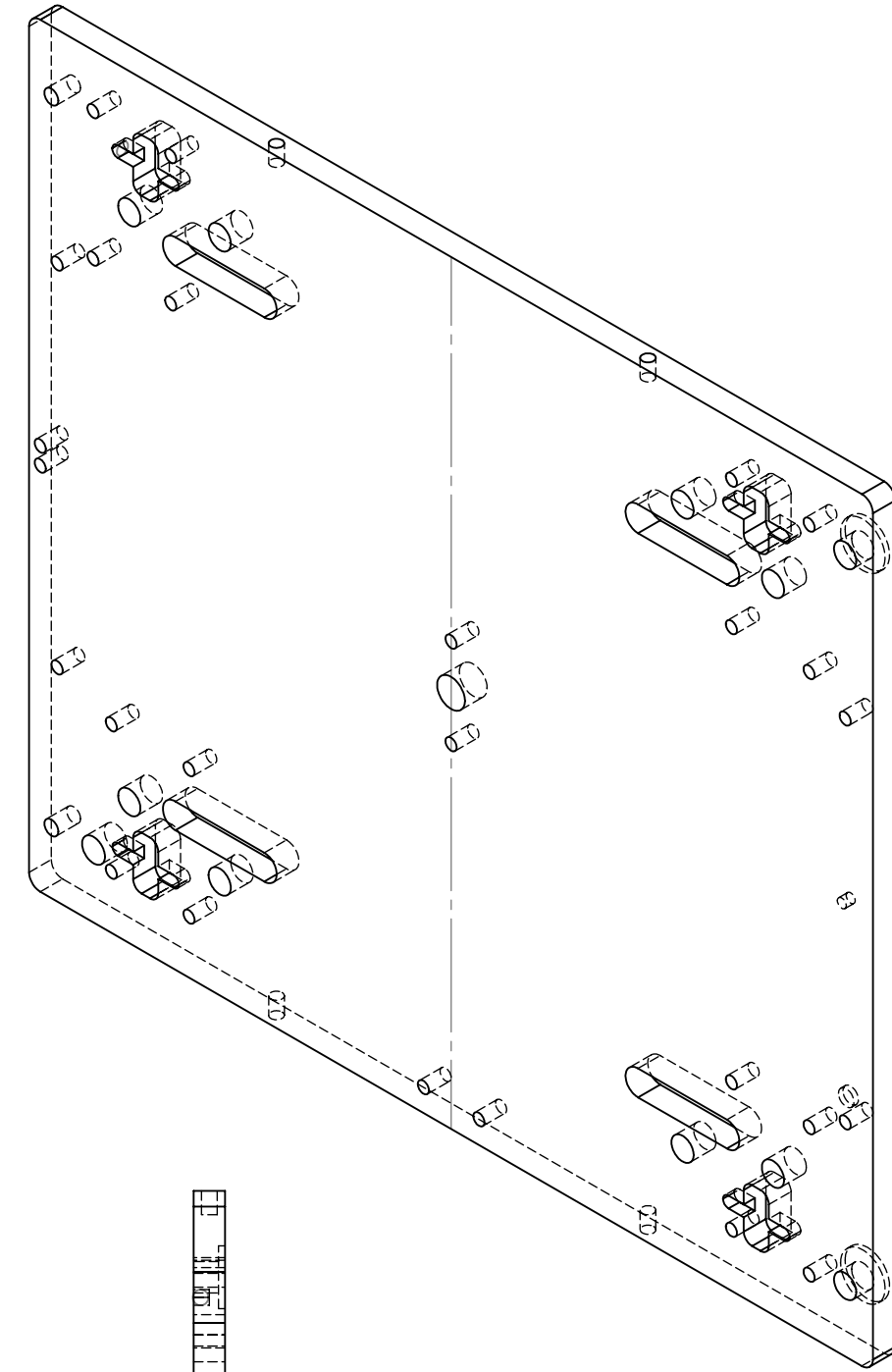
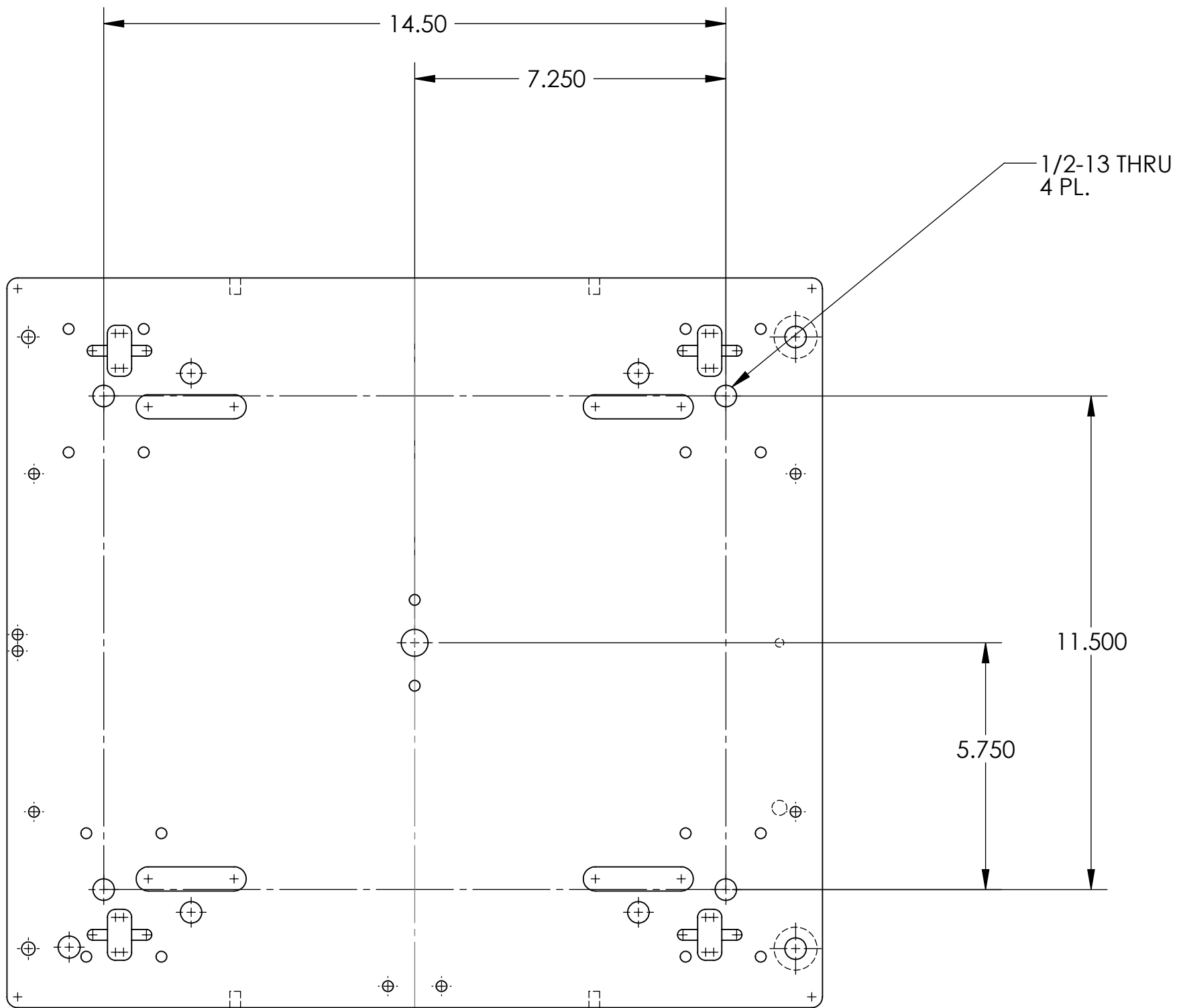
OPPOSITE EDGES TO BE PARALLEL W/IN .003" MAX IN HATCHED AREA IN AREAS NOT SHOWN HATCHED 17.000" +/- .020 OK

0.250±0.005 THE 4 DOWEL PIN POCKETS TO BE CO-PLANAR W/IN .005"

MAKE 1

UNLESS OTHERWISE SPECIFIED		DATE	NAME	LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
DIMENSIONS ARE IN INCHES		3-3-06	KEVIN	SYSTEM	LASTI
TOLERANCES:				SUB-SYSTEM	QUAD SUSPENSION
XXX ±				NEXT ASSY	D06045-A
ANGULAR ±				PART NAME	X PLATE, QUAD INSTALL FIXTURE
MATERIAL	BLANKHARD GRIND STEEL	COMMENTS	WATER JET FROM PLATE	SIZE	DWG. NO. D050446-A
FINISH	FLASH CHROME 2000			SCALE	REV
					SHEET 1 OF 1

FILE NAME/LOCATION: D050446-A



MODIFY EXISTING PLATE

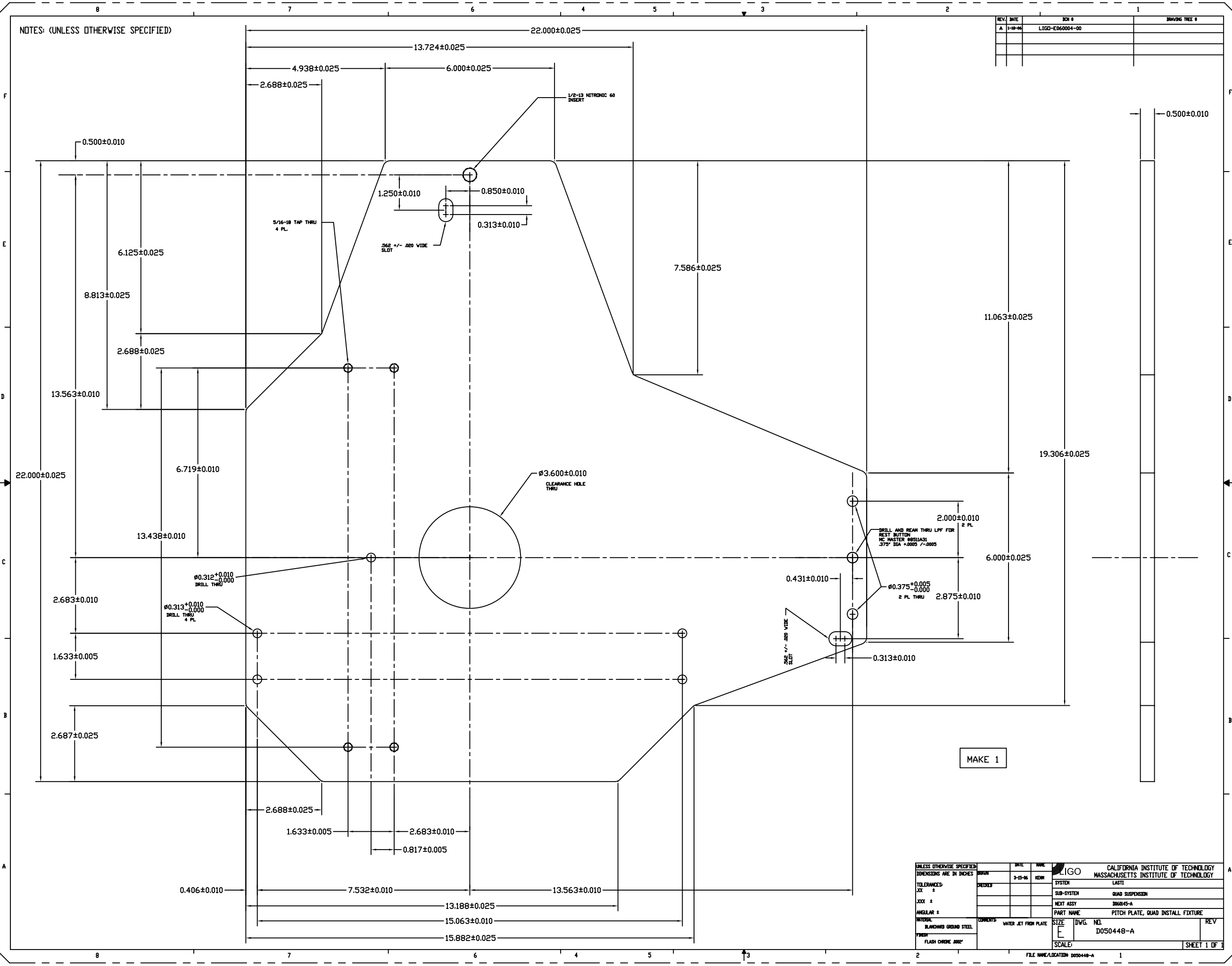
PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES		DRAWN	
TOLERANCES:		CHECKED	
FRACTIONAL ±		ENG APPR.	
ANGULAR: MACH ± BEND ±		MFG APPR.	
TWO PLACE DECIMAL ±		Q.A.	
THREE PLACE DECIMAL ±		COMMENTS:	
INTERPRET GEOMETRIC TOLERANCING PER:			
MATERIAL			
NEXT ASSY	USED ON		
FINISH			
32			
APPLICATION			
DO NOT SCALE DRAWING			

SIZE	DWG. NO.	REV
TITLE:		
αplate-SLDPROO		
SCALE: 1:4	WEIGHT: 43.69	SHEET 1 OF 1

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV	DATE	BY	CHKD	APPV	DESCRIPTION
A	1-18-86				LIGD-E060004-00

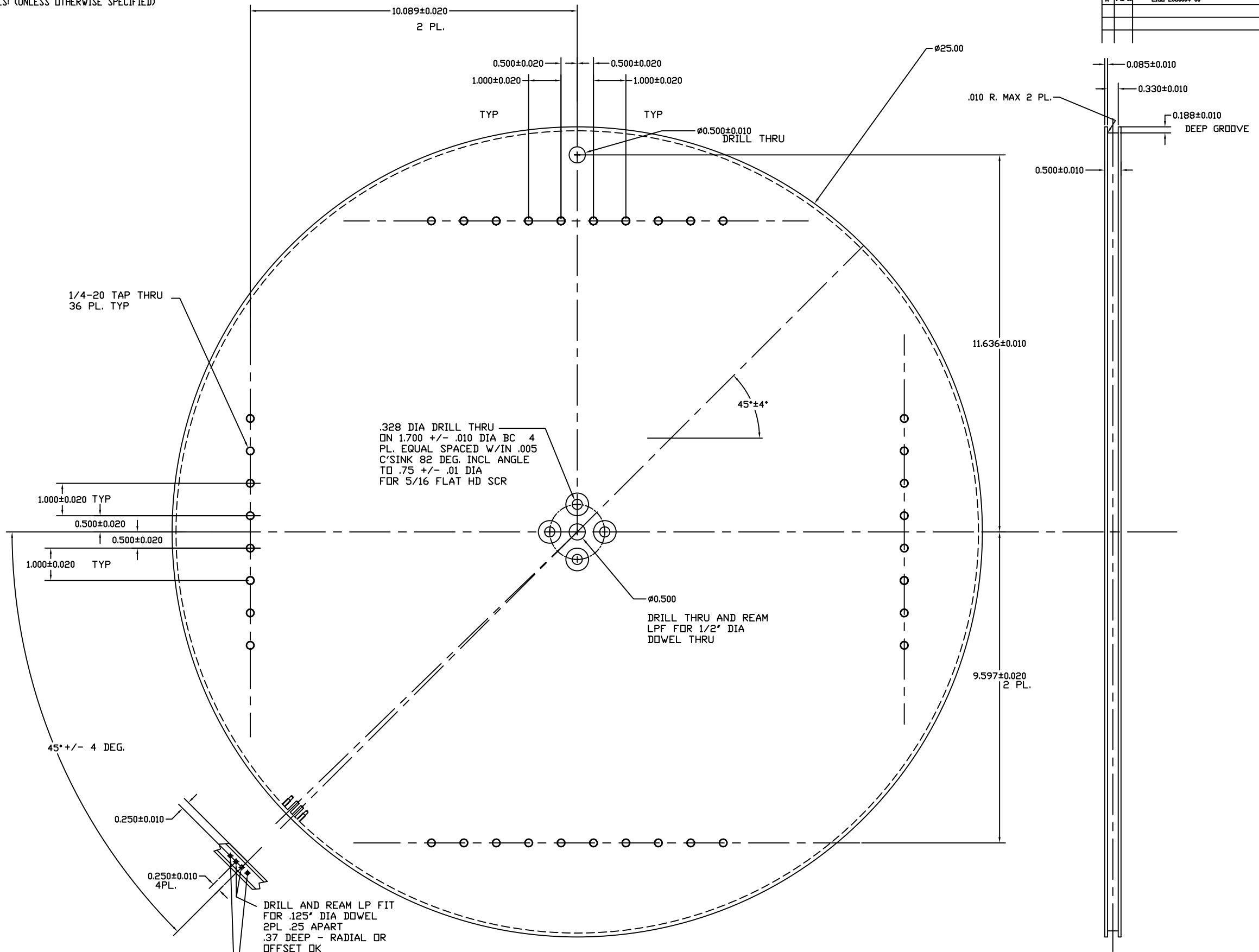


MAKE 1

UNLESS OTHERWISE SPECIFIED		DATE	BY	CHKD	APPV	DESCRIPTION
DIMENSIONS ARE IN INCHES		9-15-86	HEW			LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY
TOLERANCES:						SYSTEM LASTI
XXX ±						SUB-SYSTEM QUAD SUSPENSION
XXX ±						NEXT ASSY D06045-A
ANGULAR ±						PART NAME PITCH PLATE, QUAD INSTALL FIXTURE
MATERIAL: BLANKHARD GRIND STEEL	COMMENTS: WATER JET FROM PLATE	SIZE	DWG. NO.	REV		
FINISH: FLASH CHROME .002"		E	D050448-A			
		SCALE:				SHEET 1 OF 1

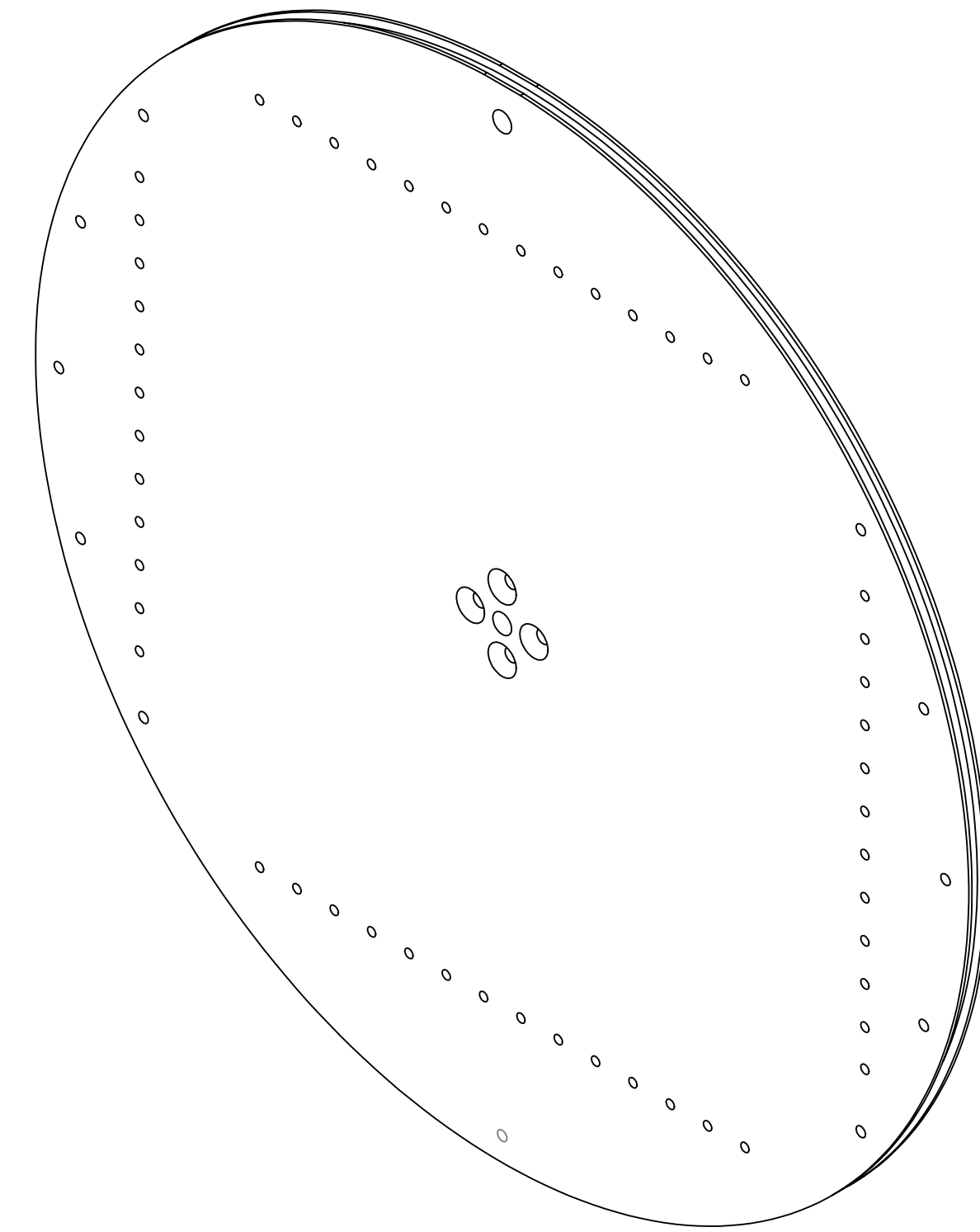
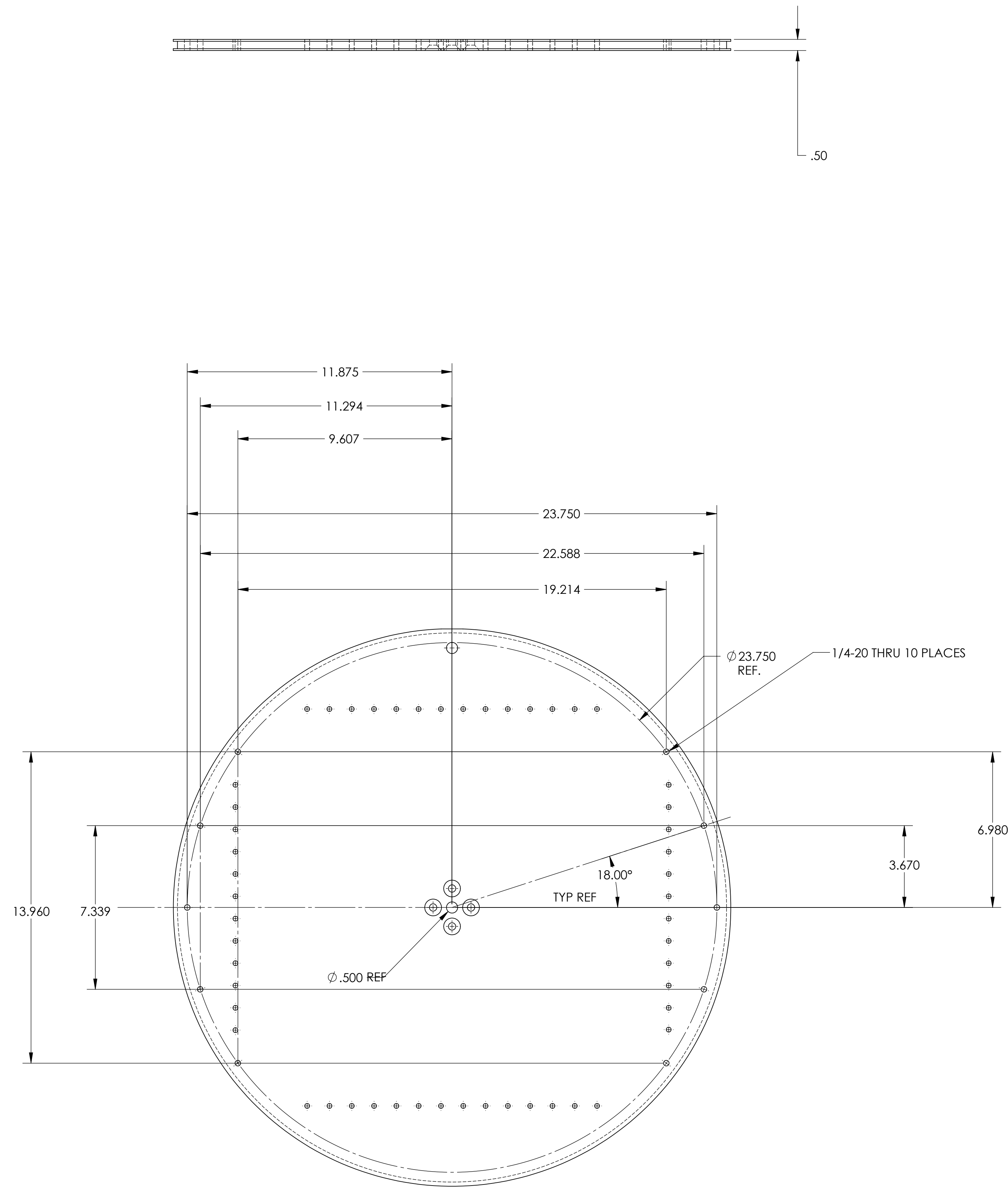
NOTES: (UNLESS OTHERWISE SPECIFIED)

REV	DATE	BY	CHKD	APPV	DESCRIPTION
A	1-28-96				LIGO-E060004-00



MAKE 1

UNLESS OTHERWISE SPECIFIED		DATE	BY	CHKD	APPV	DESCRIPTION
DIMENSIONS ARE IN INCHES		9-25-96				LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY
TOLERANCES:						SYSTEM LASTI
XXX ±						SUB-SYSTEM SUS
XXX ±						NEXT ASSY 386045-A
ANGULAR ±						PART NAME ROTARY PLATE, QUAD INSTALL FIXTURE
MATERIAL:	BLANK GRND STEEL	COMMENTS:	WATER JET FROM PLATE	SIZE	DWG. NO.	REV
TREATMENT:	FLASH CHROME .002"			E	D050450-A	
				SCALE:		SHEET 1 OF 1



ADD 1/4-20 TAP HOLES TO EXISTING PLATE AS SHOWN

PROPRIETARY AND CONFIDENTIAL
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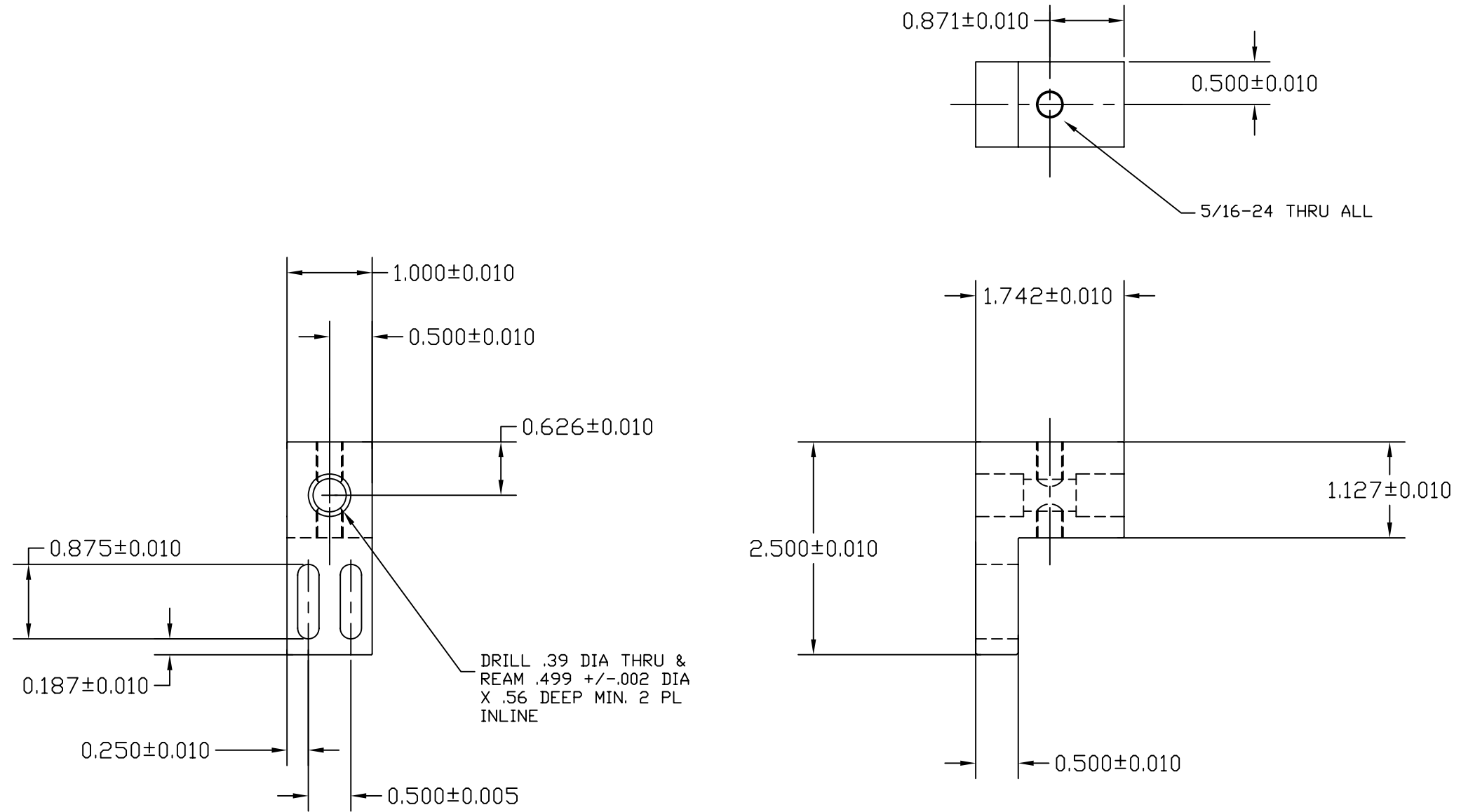
UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DRAWN			
CHECKED			
ENG APPR.			
MFG APPR.			
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.	
MATERIAL		COMMENTS:	
NEXT ASSY	USED ON	FINISH	
APPLICATION			

TITLE:	
SIZE DWG. NO.	REV
ROUND PLATE	00
SCALE: 1:4 WEIGHT:	SHEET 1 OF 1

D ROUND PLATE 00

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCH #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	



ITEM NO.	REQ. QUANTITY	SPARE	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	1/6/06	KENN
TOLERANCES:				LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY		
XX ± .01				MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
XXX ± .005				SYSTEM LASTI		
ANGULAR ± 3 DEG				SUB-SYSTEM QUAD SUSPENSION		
MATERIAL				NEXT ASSY D060145-A		
6061 T-6 AL.				PART NAME LARGE SPROCKET BRACKET		
FINISH				SIZE	DWG. NO.	REV
N/A				C	D060001-A	
				SCALE:		SHEET 1 OF 1

NOTES: (UNLESS OTHERWISE SPECIFIED)

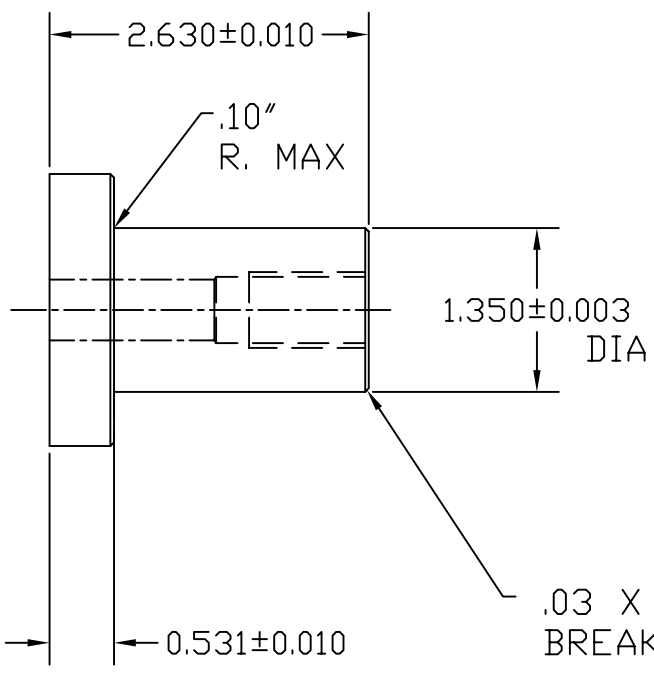
REV.	DATE	DCH #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

5/16-18 TAP THRU
ON 1.700 +/- .010 DIA
BC 4 PL. EQUAL
SPACED W/IN .005

Ø0.500
DRILL THRU AND REAM
LPF FOR 1/2" DIA
DOWEL .62" DEEP MIN.

Ø2.240±0.010

5/8-11 TAP
.87 DEEP FULL
THD MIN.



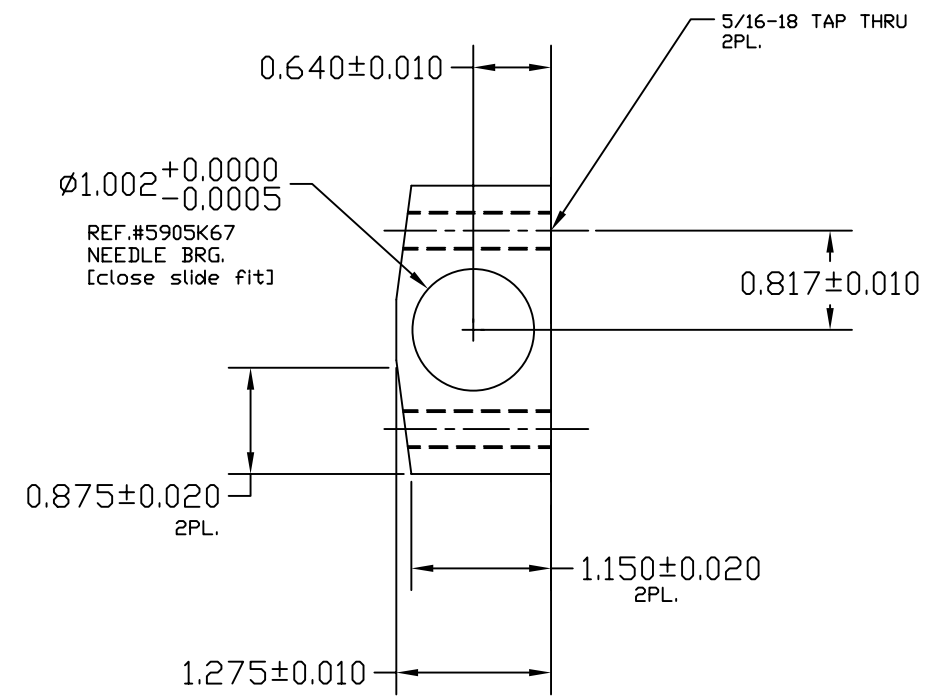
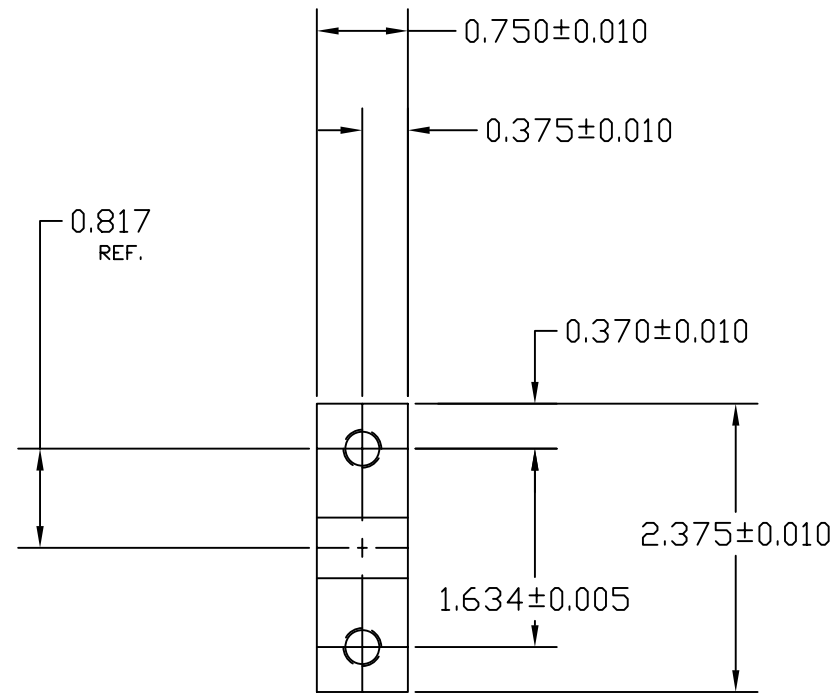
.03 X 45 DEG
BREAK EDGE 2PL

MAKE 1

ITEM NO.	REQ. QUANTITY	SPARE	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	1/11/06	KENN
TOLERANCES: .01				CHECKED		
XX ±						
XXX ± .005						
ANGULAR: 3 DEG						
MATERIAL				COMMENTS:		
303 S. S.						
FINISH						
N/A				SIZE	DWG. NO.	REV
				C	D060002-A	
				SCALE:		SHEET 1 OF 1

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCH #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

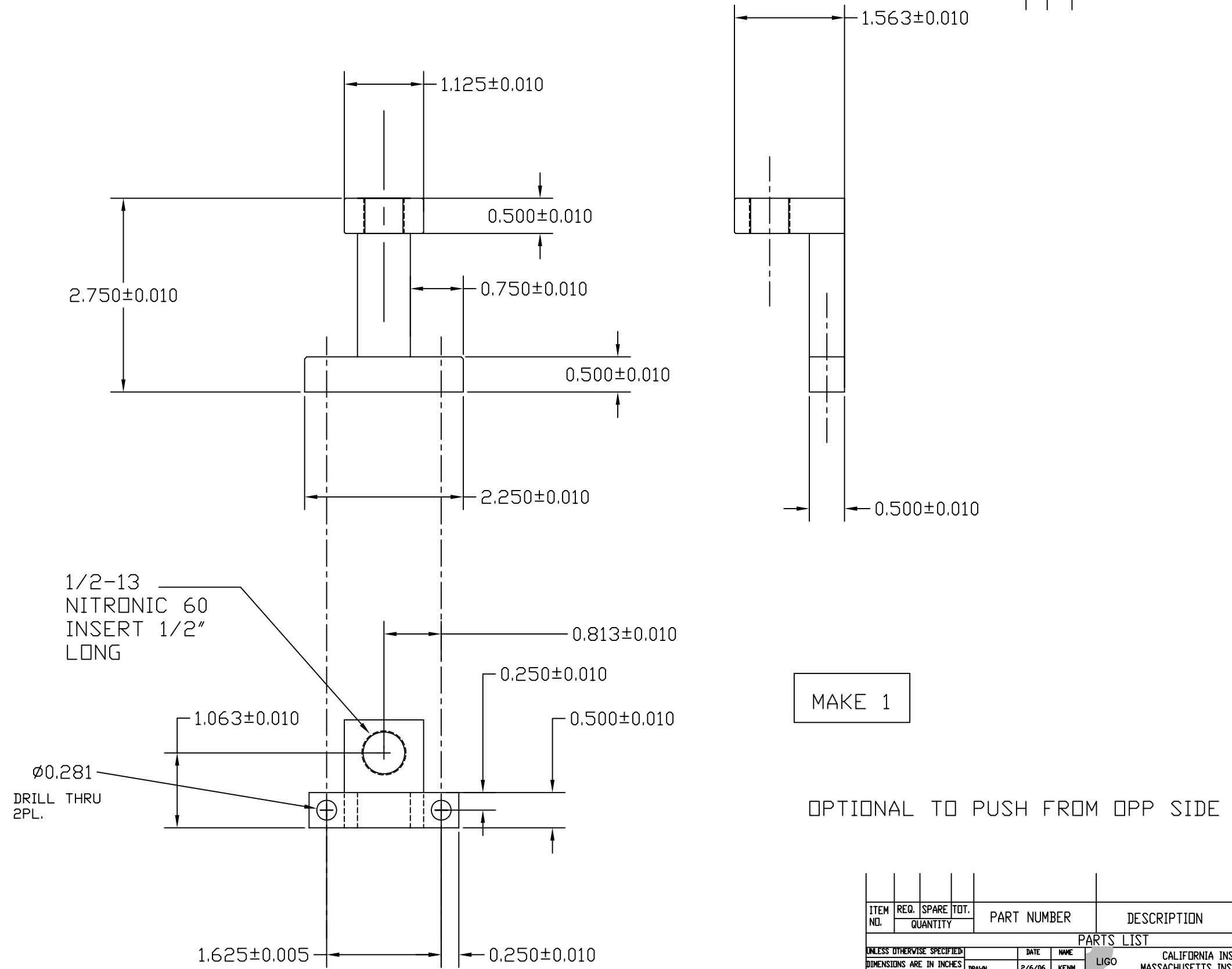


QTY 4

ITEM NO.	REQ. QUANTITY	SPARE	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	1/6/06	KENN
TOLERANCES:				CHECKED		
XX ± .01						
XXX ± .005						
ANGULAR ± 3 DEG						
MATERIAL				COMMENTS:		
303 stainless						
FINISH						
N/A				SIZE	DWG. NO.	REV
				C	D060003-A	
				SCALE:		SHEET 1 OF 1

NOTES: (UNLESS OTHERWISE SPECIFIED)

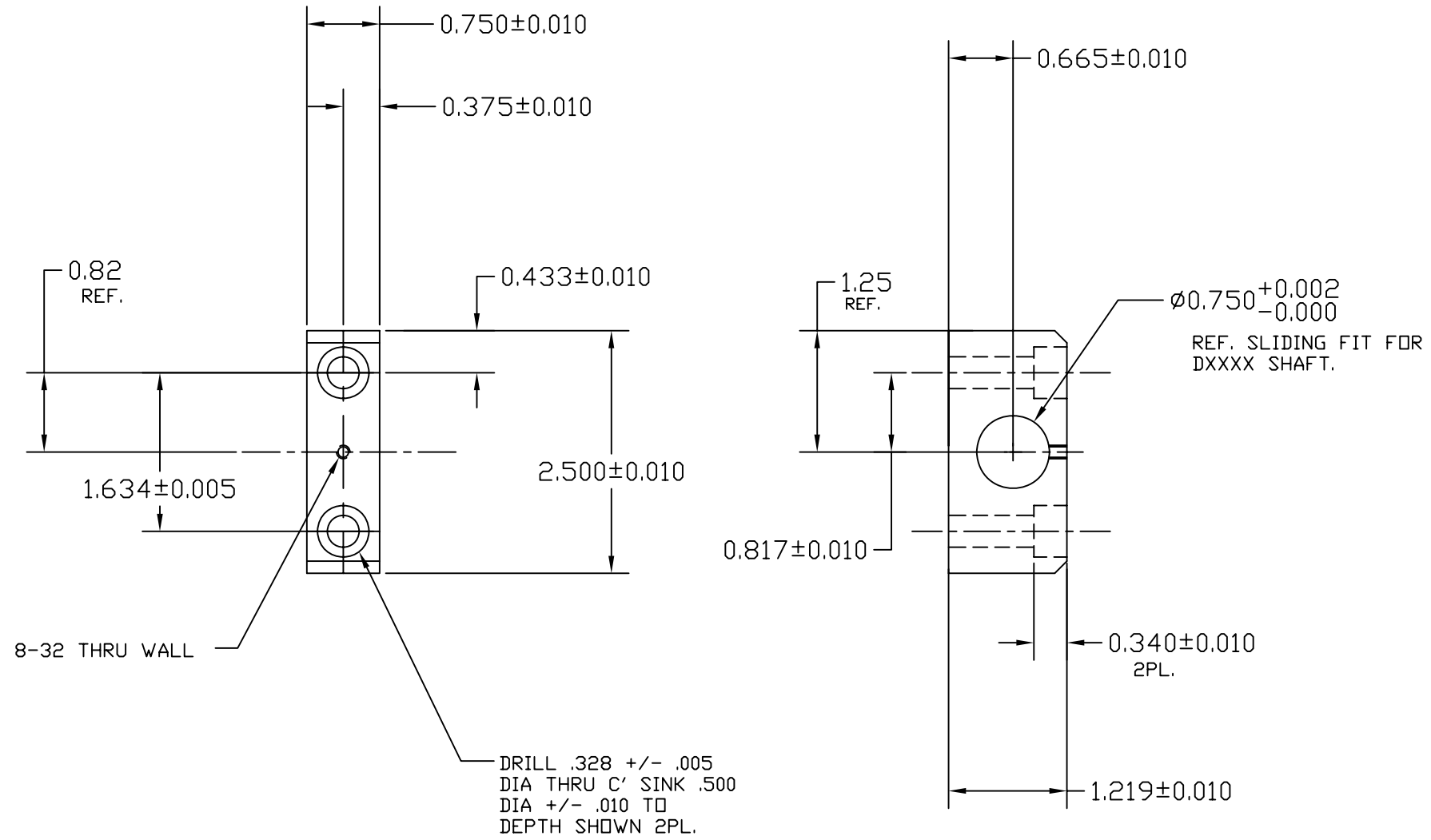
REV.	DATE	DCH #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	



ITEM NO.	REQ. QUANTITY	SPARE	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	2/6/06	KENN
TOLERANCES:				LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY		
XX ± .01				MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
XXX ± .005				SYSTEM LASTI		
ANGULAR ± 3 DEG				SUB-SYSTEM QUAD SUSPENSION		
MATERIAL				NEXT ASSY D060145-A		
ALUM 6061 T-6				PART NAME Y-PLATE ADJUSTMENT BRACKET		
FINISH N/A				COMMENTS:	SIZE DWG. NO.	REV
					C D060005-A	
				SCALE:		SHEET 1 OF 1

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCH #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

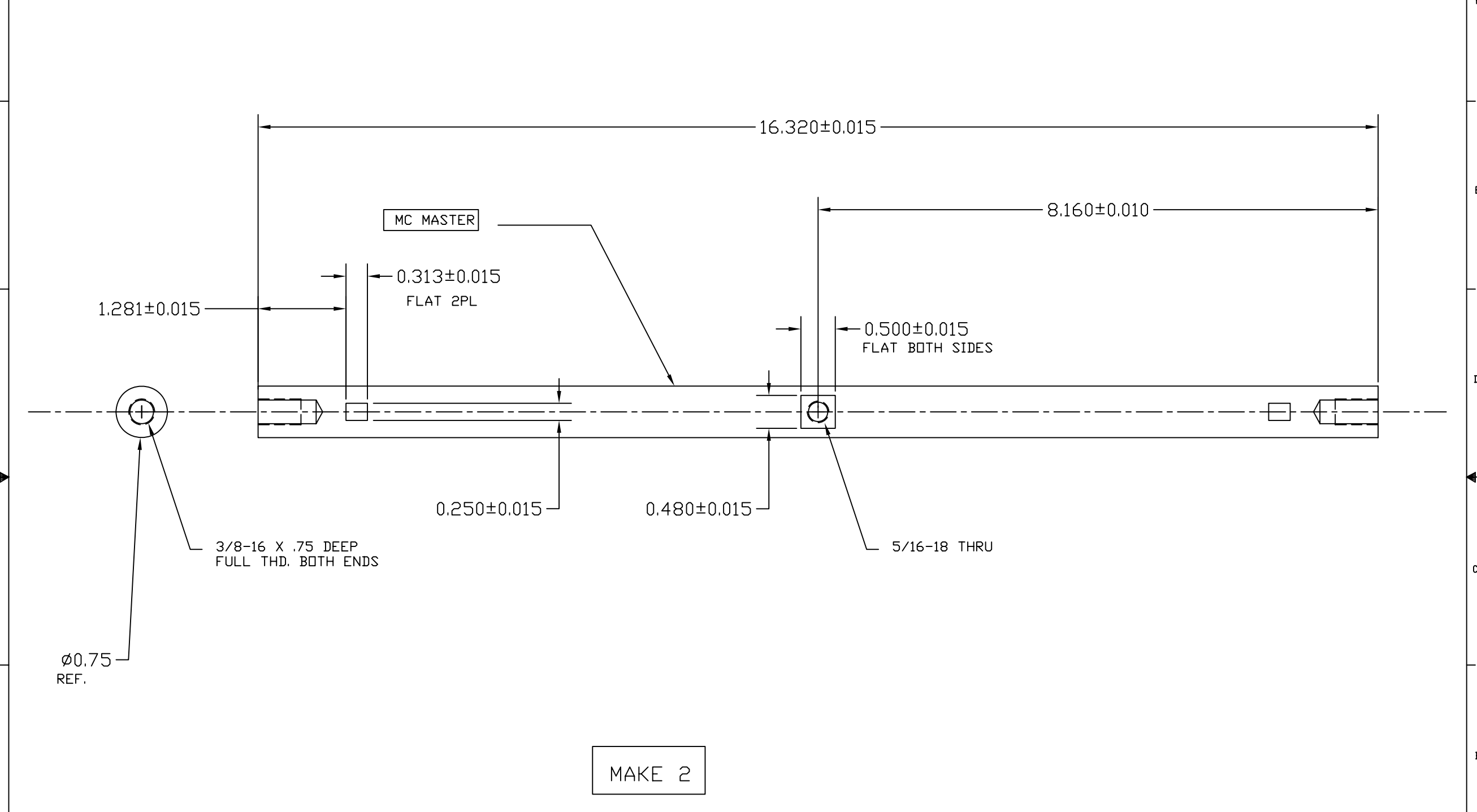


QTY 4

ITEM NO.	REQ. QUANTITY	SPARE	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	1/6/06	KENN
TOLERANCES:				CHECKED		
XX ± .01						
XXX ± .005						
ANGULAR ± 3 DEG						
MATERIAL				COMMENTS:		
303 stainless						
FINISH						
N/A				SCALE:		
					SIZE DWG. NO.	REV
					C	D060006-A
					SCALE:	SHEET 1 OF 1

NOTES: (UNLESS OTHERWISE SPECIFIED)

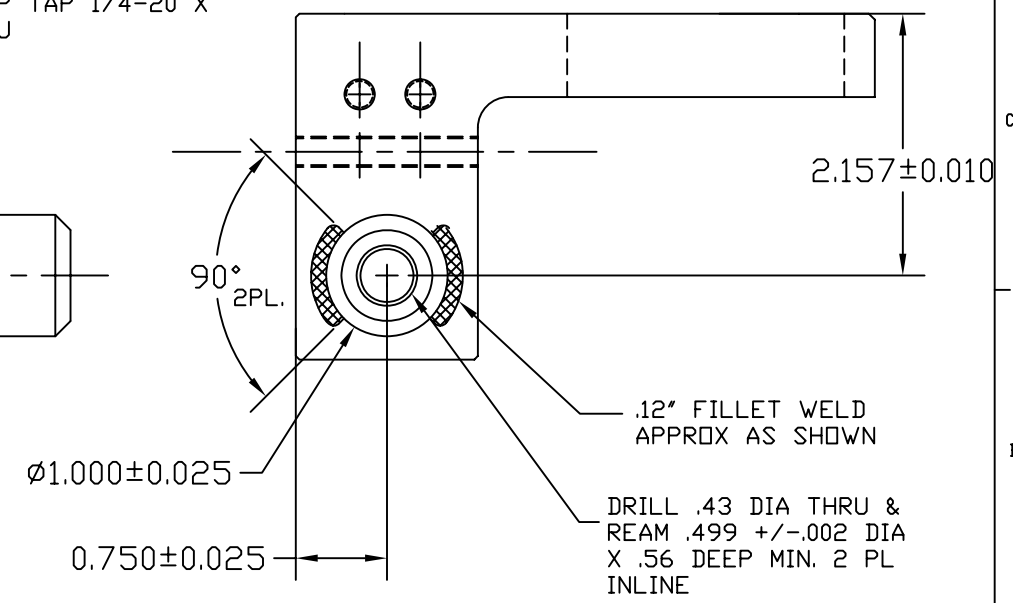
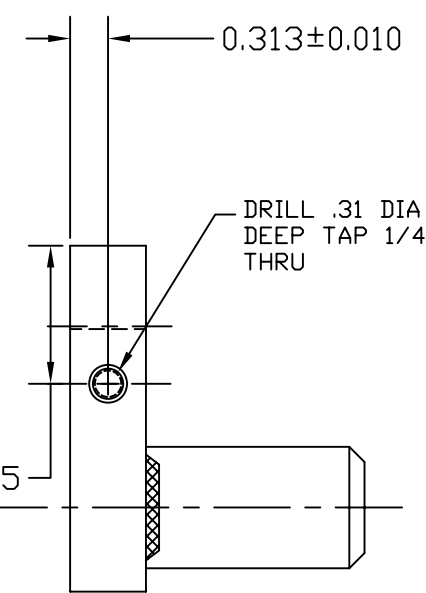
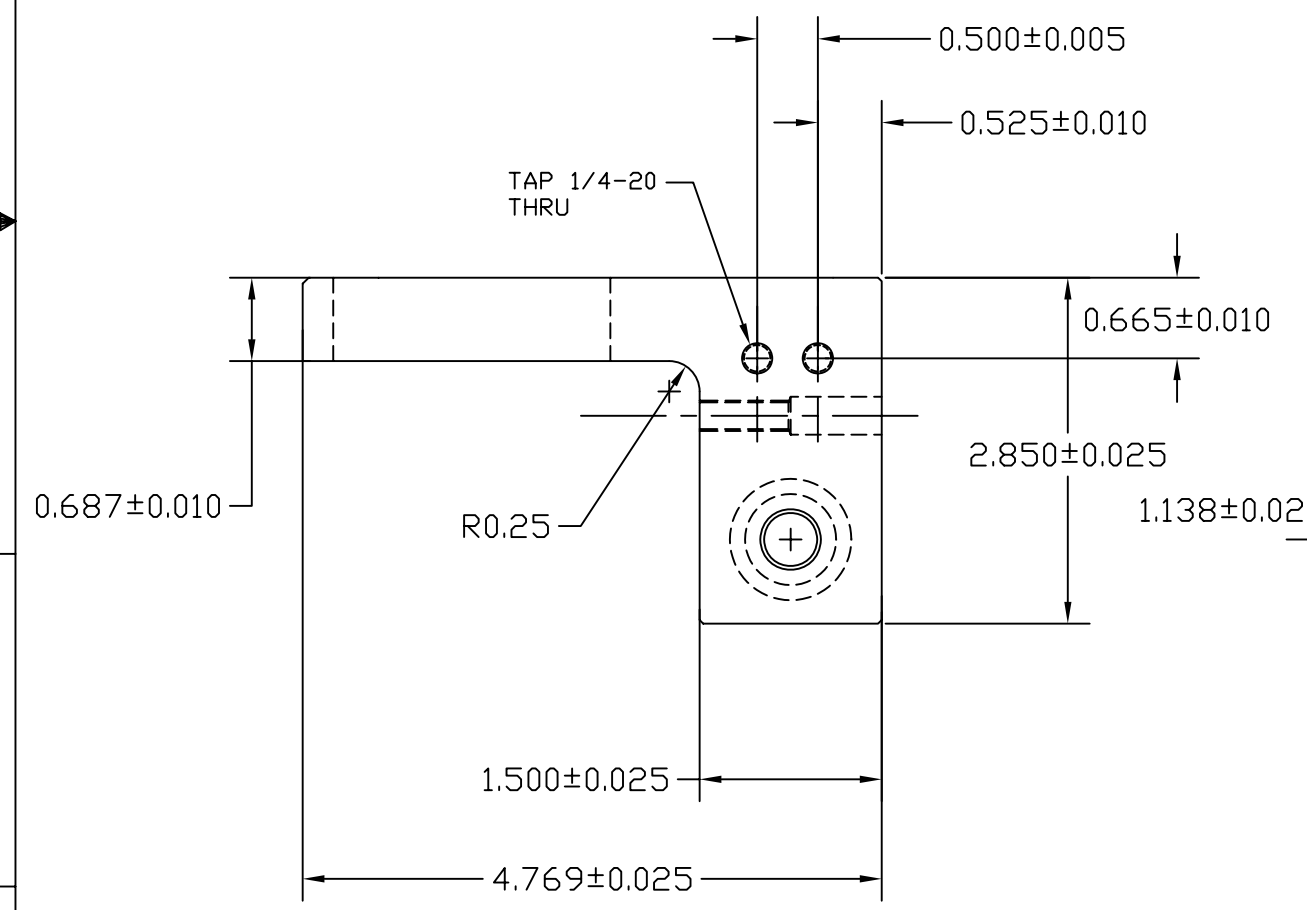
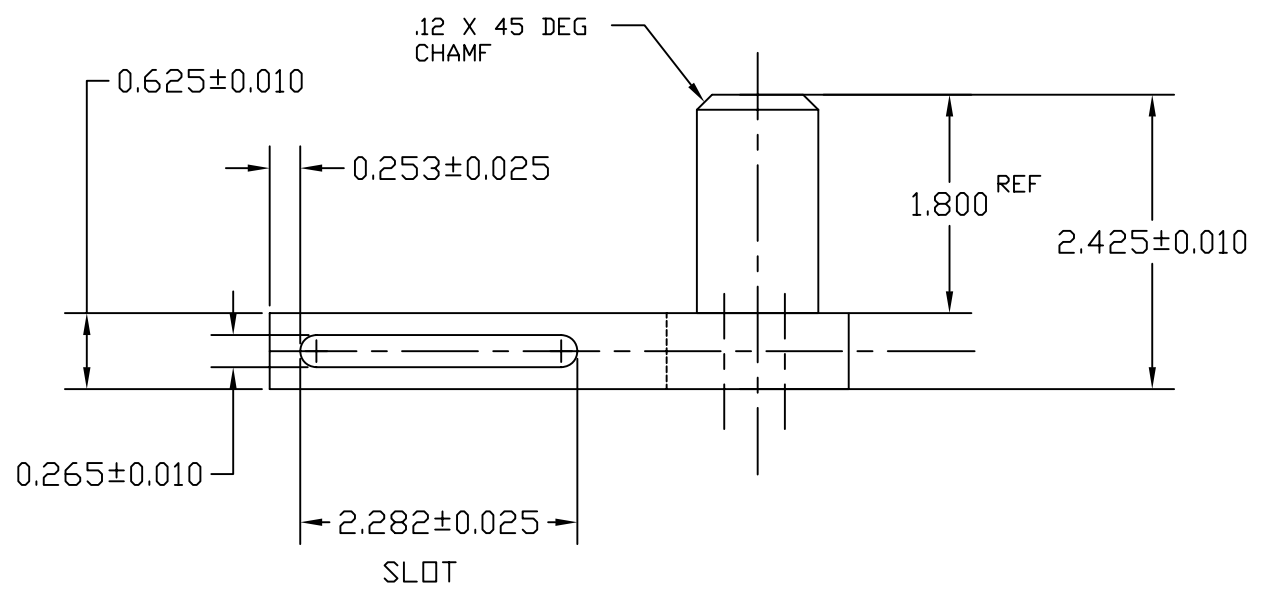
REV.	DATE	DCH #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	



ITEM NO.	REQ. QUANTITY	SPARE	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	1/11/06	KENN
TOLERANCES:				LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
XX ± .01				SYSTEM LASTI		
XXX ± .005				SUB-SYSTEM QUAD SUSPENSION		
ANGULAR ± 3 DEG				NEXT ASSY D060145-A		
MATERIAL: MCMASTER 6061K44				PART NAME TILT AXIS SHAFT		
FINISH: N/A				COMMENTS:	SIZE DWG. NO. D060007-A	REV
				SCALE:	SHEET 1 OF 1	

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCH #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

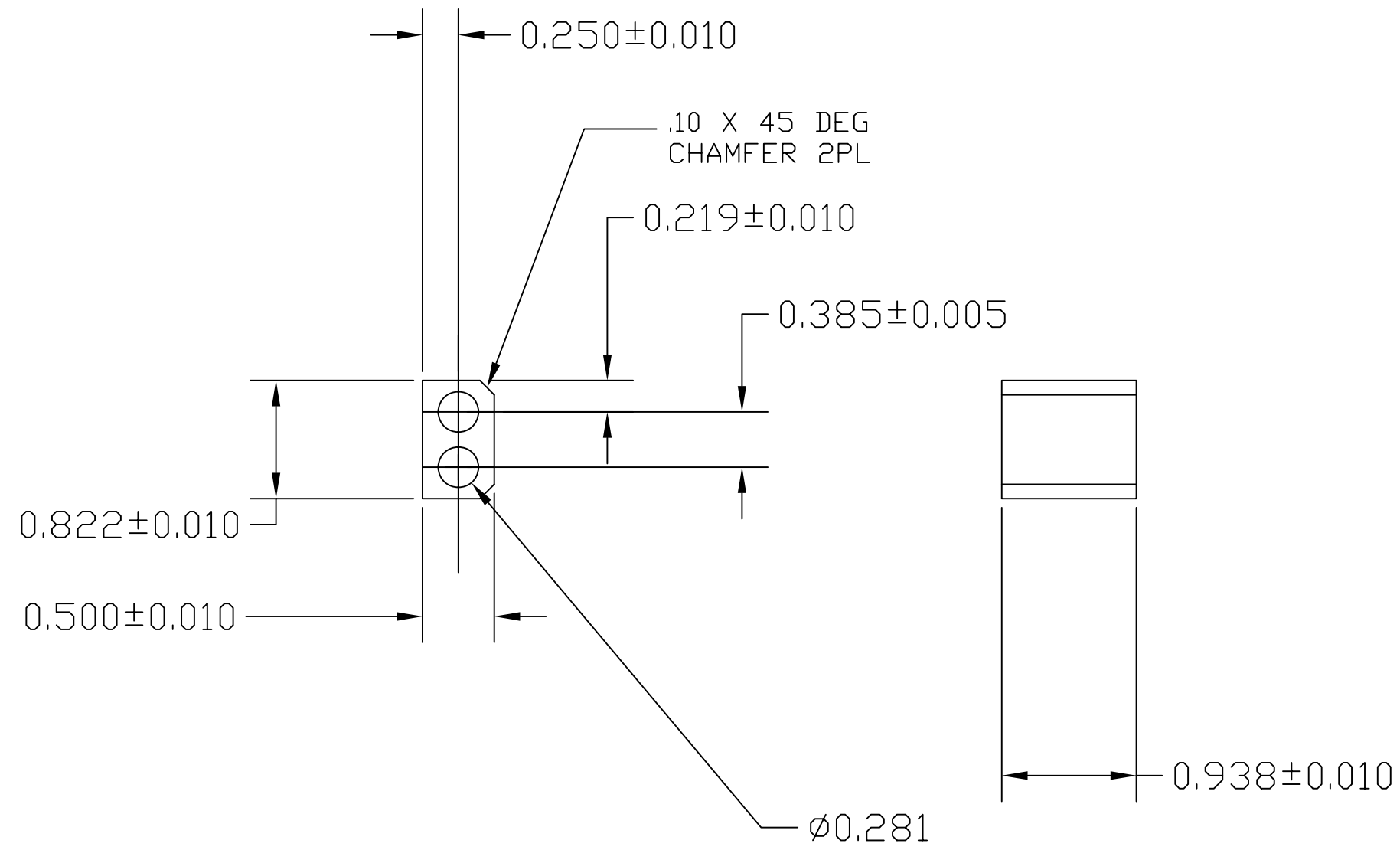


MAKE 1

ITEM NO.	REQ. QUANTITY	SPARE QUANTITY	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	1/11/06	KENN
TOLERANCES:				CHECKED		
XX ± .01						
XXX ± .005						
ANGULAR: 3 DEG						
MATERIAL: ALUM 6061				COMMENTS:		
FINISH: N/A						
				SIZE	DWG. NO.	REV
				C	D060008-A	
				SCALE:		SHEET 1 OF 1

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

NOTES: (UNLESS OTHERWISE SPECIFIED)



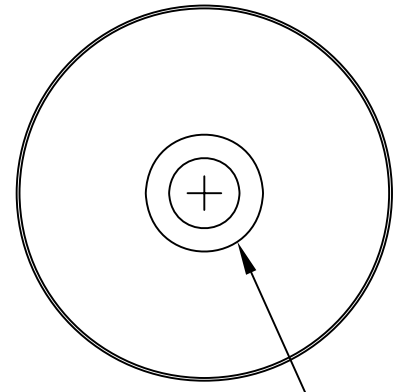
DRILL THRU
2PL.

MAKE 2

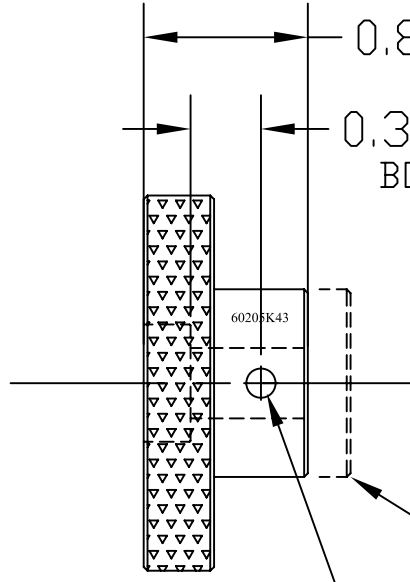
ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER	
PARTS LIST							
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
DIMENSIONS ARE IN INCHES				DRAWN	1/11/06		KENM
TOLERANCES:				CHECKED			
.XX±:							
.XXX±:							
ANGULAR±:							
MATERIAL				COMMENTS:		PART NAME	
303/304 STAINLESS						X-PLATE ADJUSTER FOOT	
FINISH						SIZE DWG. NO.	
N/A						B D060009-A	
						REV	
				SCALE:		SHEET 1 OF 1	

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

NOTES: (UNLESS OTHERWISE SPECIFIED)



C'BORE .625+/- .015 DIA
X .250+/- .010 DEEP



0.875±0.015

0.375±0.015
BOTTOM OF C'BORE REF.

MAKE 1

TRIM TO LENGTH SHOWN

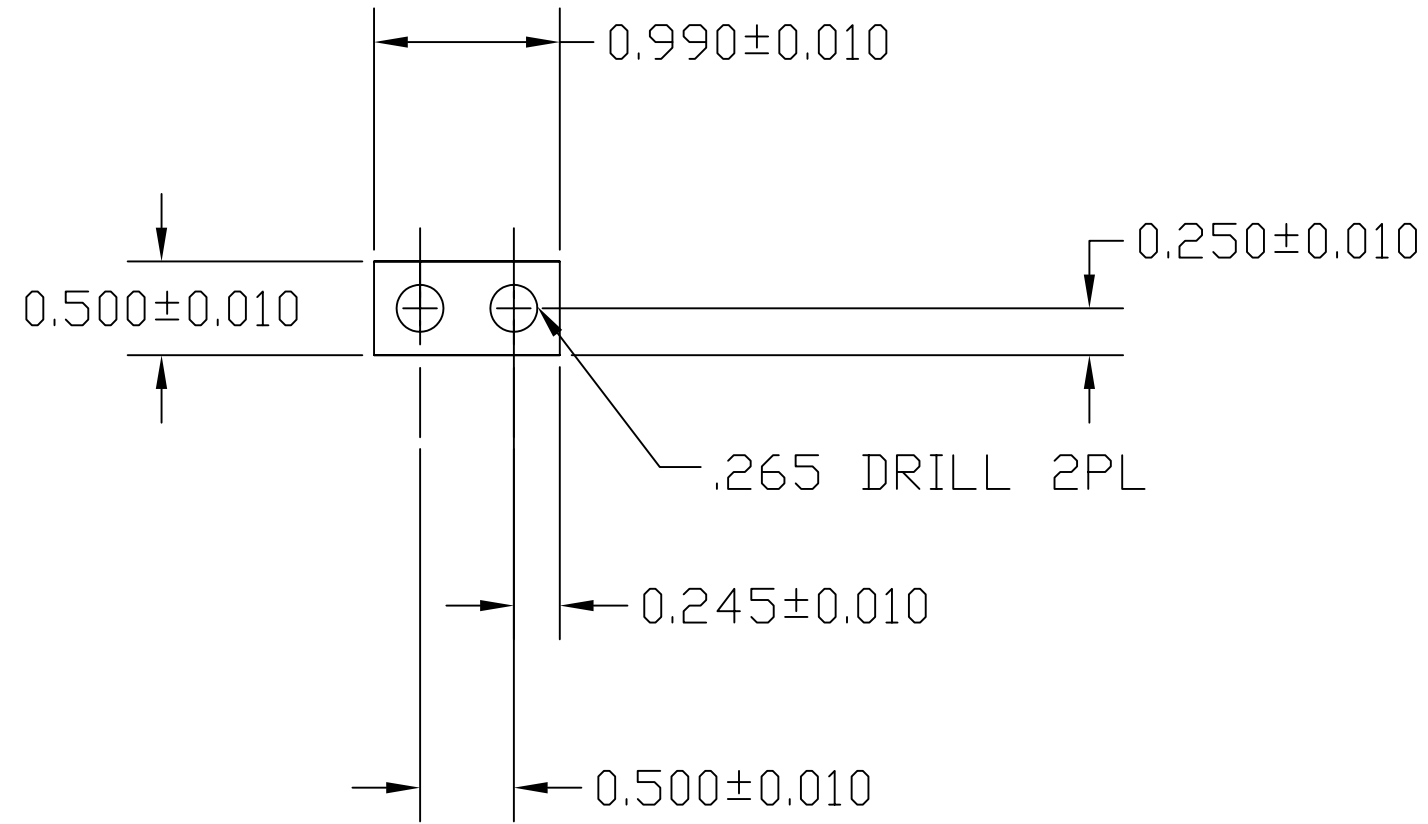
DRILL AND REAM LPF FOR
.156 DIA ROLL PIN THRU
BOTH WALLS INLINE

see assembly for
adjacent part short
screw shaft

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER	
PARTS LIST							
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
DIMENSIONS ARE IN INCHES				DRAWN	2/11/06		KENM
TOLERANCES:				CHECKED			
.XX±							
.XXX±							
ANGULAR±							
MATERIAL				COMMENTS:		SYSTEM	
MCMaster #60205K43						SUB-SYSTEM	
303 stainless w/.37						NEXT ASSY	
hole thru						PART NAME	
FINISH						SIZE	
N/A						DWG. NO.	
						REV	
						SCALE:	
						SHEET 1 OF 1	

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	



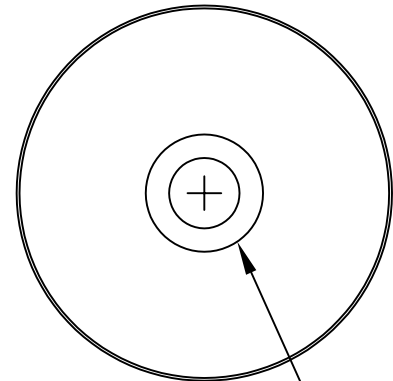
$.09/.12$ THK

MAKE 1

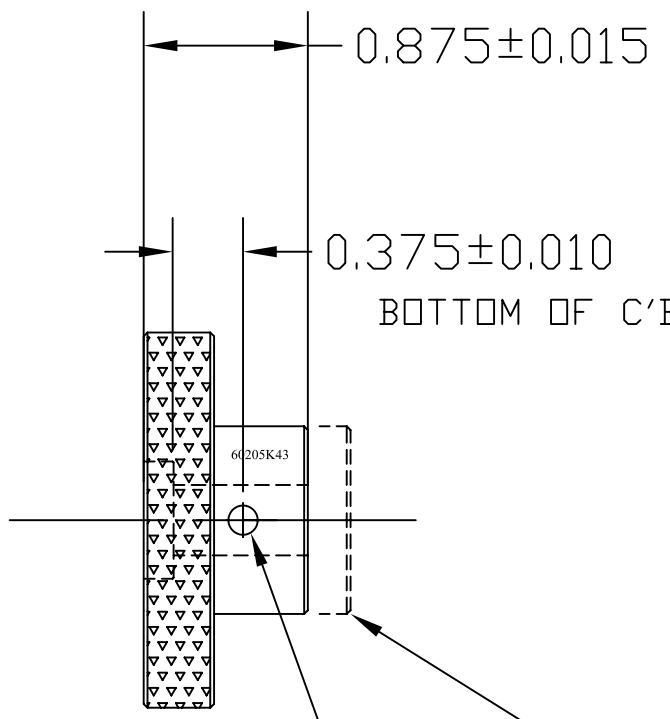
ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER	
PARTS LIST							
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
DIMENSIONS ARE IN INCHES				DRAWN	1/11/06		KENM
TOLERANCES:				CHECKED			
.XX±:							
.XXX±:							
ANGULAR±:							
MATERIAL				COMMENTS:		SYSTEM LASTI SUB-SYSTEM QUAD SUSPENSION NEXT ASSY D060145-A PART NAME WASHER PLATE	
303/304 STAINLESS STL						SIZE DWG. NO. D060011-A REV	
FINISH N/A						SCALE: SHEET 1 OF 1	

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

NOTES: (UNLESS OTHERWISE SPECIFIED)



C'BORE .625+/- .015 DIA
X .160+/- .010 DEEP



0.875±0.015

0.375±0.010

BOTTOM OF C'BORE REF.

60205K43

MAKE 1

TRIM TO LENGTH SHOWN

DRILL AND REAM LPF FOR
.156 DIA ROLL PIN THRU
BOTH WALLS INLINE

see assembly for
adjacent part long screw
shaft

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES				DATE	NAME	LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY
TOLERANCES: .XX±: .XXX±: ANGULAR±:				2/11/06	KENM	
MATERIAL MCMaster #60205K43 303 stainless w/.37 hole thru				COMMENTS:		SYSTEM LASTI
FINISH N/A						SUB-SYSTEM QUAD SUSPENSION
						NEXT ASSY D060145-A
						PART NAME ROTATION KNOB MOD SHORT C'BORE
				SIZE B	DWG. NO. D060013-A	REV
				SCALE:		SHEET 1 OF 1

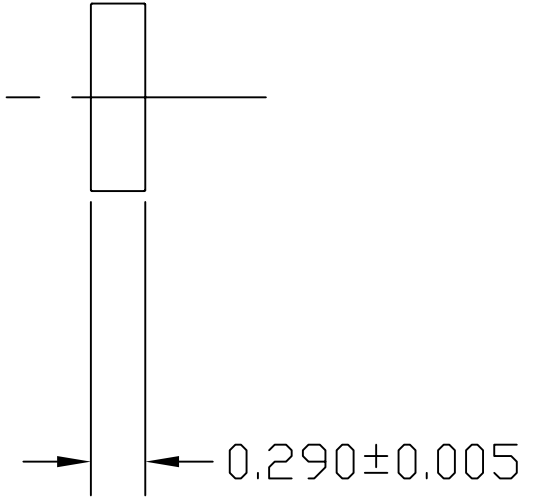
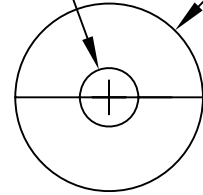
8 7 6 5 4 3 2 1

NOTES: (UNLESS OTHERWISE SPECIFIED)


REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	

$\varnothing 0.313 \pm 0.005$

$\varnothing 1.000 \pm 0.010$



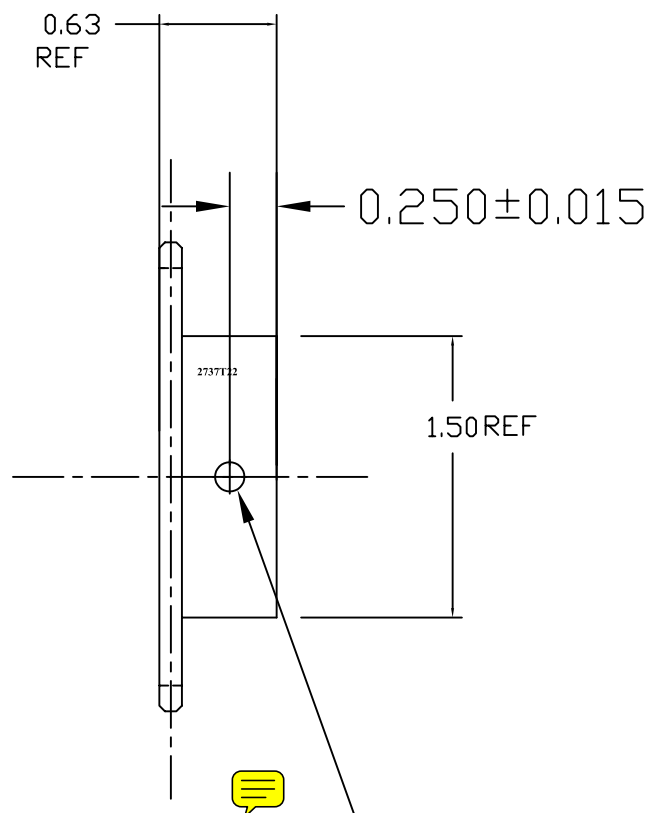
MAKE 2

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER
UNLESS OTHERWISE SPECIFIED:						
DIMENSIONS ARE IN INCHES				DATE	NAME	 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY
TOLERANCES:				DRAWN	KENM	
.XX±:				CHECKED		
.XXX±:						
ANGULAR:±						SYSTEM LASTI
MATERIAL				COMMENTS:		SUB-SYSTEM QUAD SUSPENSION
6061-T6						NEXT ASSY D060145-A
FINISH						PART NAME SHAFT SPACER PLATE
N/A						SIZE DWG. NO. D060014-A REV
						SCALE: SHEET 1 OF 1

8 7 6 5 4 3 2 1 FILE NAME/LOCATION: D060014-A

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

NOTES: (UNLESS OTHERWISE SPECIFIED)



MAKE 1

DRILL AND REAM LPF FOR
.156 DIA ROLL THRU BOTH
WALLS

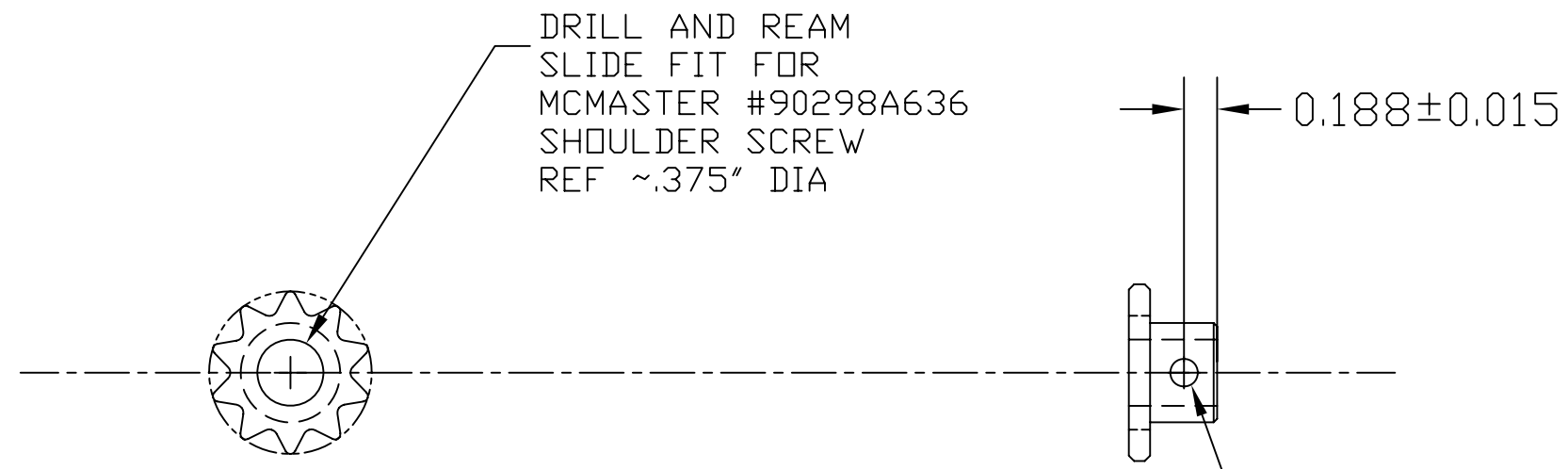
[center in one of the
existing set screw holes]

see assembly for
adjacent part

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER	
PARTS LIST							
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
DIMENSIONS ARE IN INCHES				DRAWN	2/11/06		KENM
TOLERANCES:				CHECKED			
.XX±:							
.XXX±:							
ANGULAR±:							
MATERIAL				COMMENTS:		SYSTEM	
MCMASTER SPROCKET						SUB-SYSTEM	
#2737T22						NEXT ASSY	
FINISH						PART NAME	
N/A						LARGE SPROCKET MODIFICATION	
				SIZE	DWG. NO.	REV	
				B	D060015-A		
				SCALE:	SHEET 1 OF 1		

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

NOTES: (UNLESS OTHERWISE SPECIFIED)




DRILL AND REAM
SLIDE FIT FOR
MCMASTER #90298A636
SHOULDER SCREW
REF ~.375" DIA

0.188±0.015

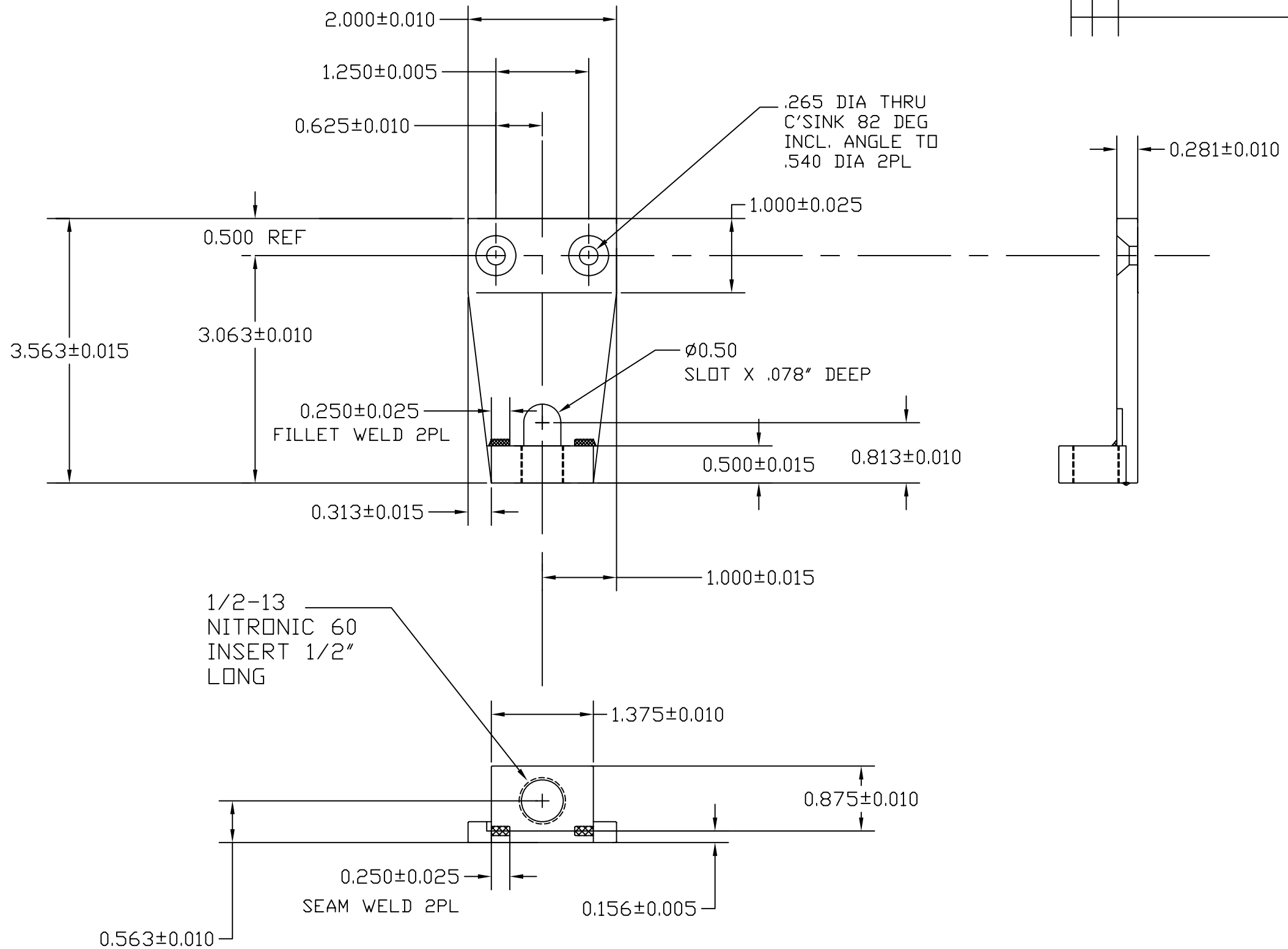
MATCH DRILL AND REAM
LPF FOR .156 DIA ROLL PIN
THRU ALL [center in
existing set screw hole]
see assembly for
adjacent part

MAKE 2

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER	
PARTS LIST							
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
DIMENSIONS ARE IN INCHES				DRAWN	2/11/06		KENM
TOLERANCES:				CHECKED			
.XX±:							
.XXX±:							
ANGULAR±:							
MATERIAL				COMMENTS:		SYSTEM	
MCMASTER SPROCKET						LASTI	
#2737T22						SUB-SYSTEM	
FINISH						QUAD SUSPENSION	
N/A						NEXT ASSY	
						D060145-A	
						PART NAME	
						SMALL SPROCKET MODIFICATION	
SIZE		DWG. NO.		REV			
B		D060016-A					
SCALE:		FILE NAME/LOCATION:			SHEET 1 OF 1		
		D060016-A					

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCH #	DRAWING TREE #
A	1-18-06	LIGO-E060004-00	

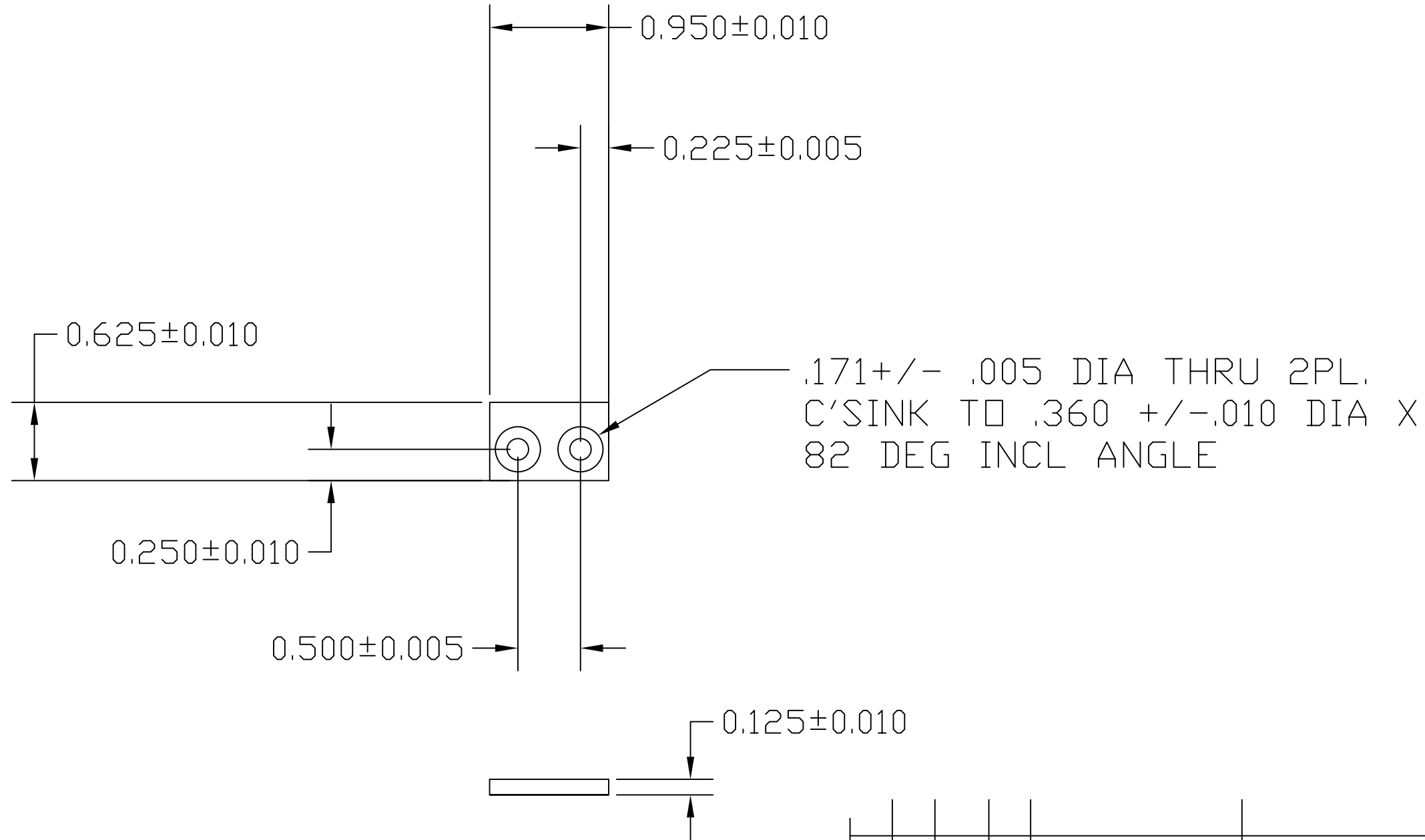


MAKE 1


ITEM NO.	REQ. QUANTITY	SPARE QUANTITY	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	2/6/06	KENN
TOLERANCES:				CHECKED		
XX ± .01						
XXX ± .005						
ANGULAR ± 3 DEG						
MATERIAL				COMMENTS:		
303/304 STAINLESS				SIZE	DWG. NO.	REV
FINISH				C	D060017-A	
N/A				SCALE:		SHEET 1 OF 1

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	

NOTES: (UNLESS OTHERWISE SPECIFIED)

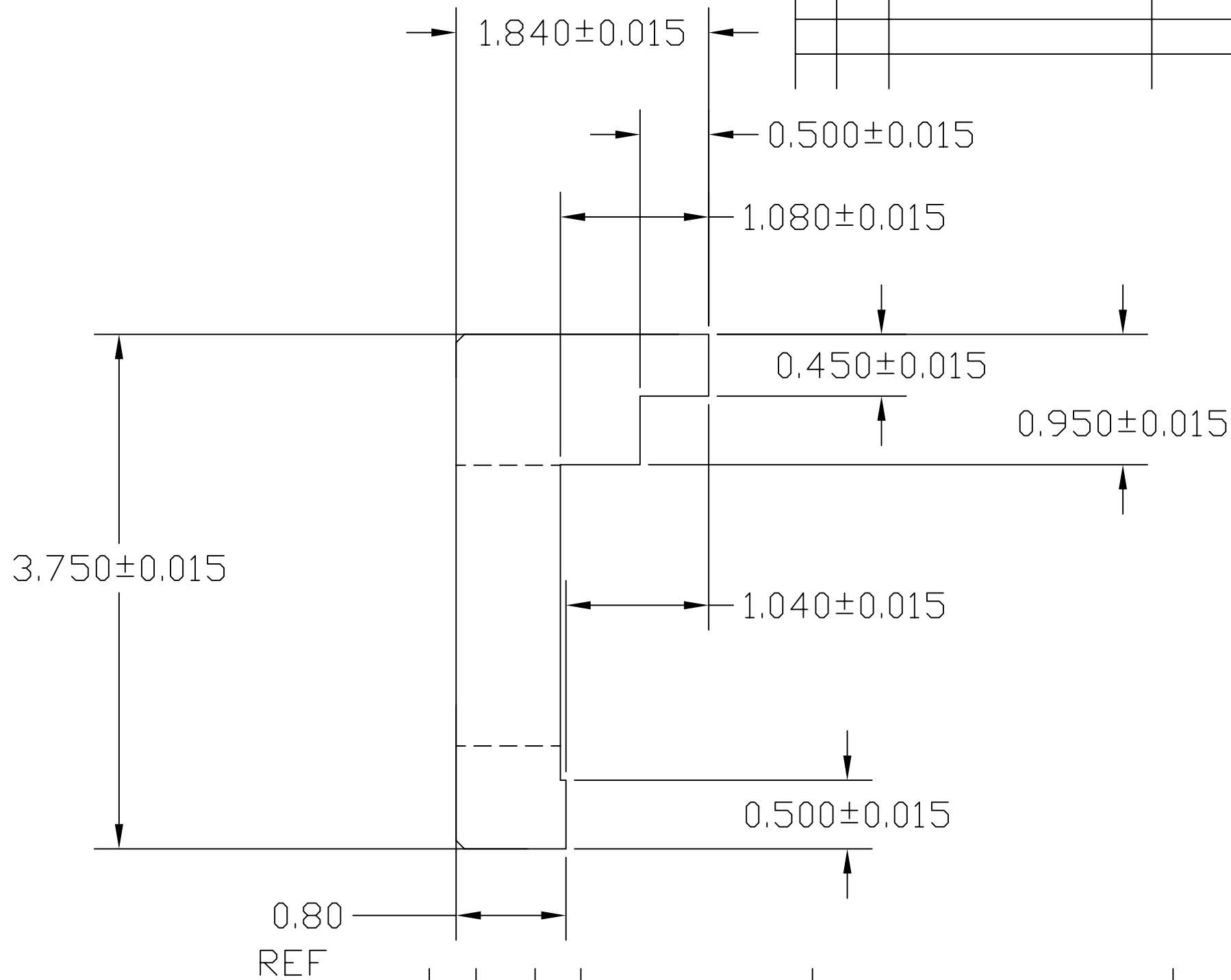
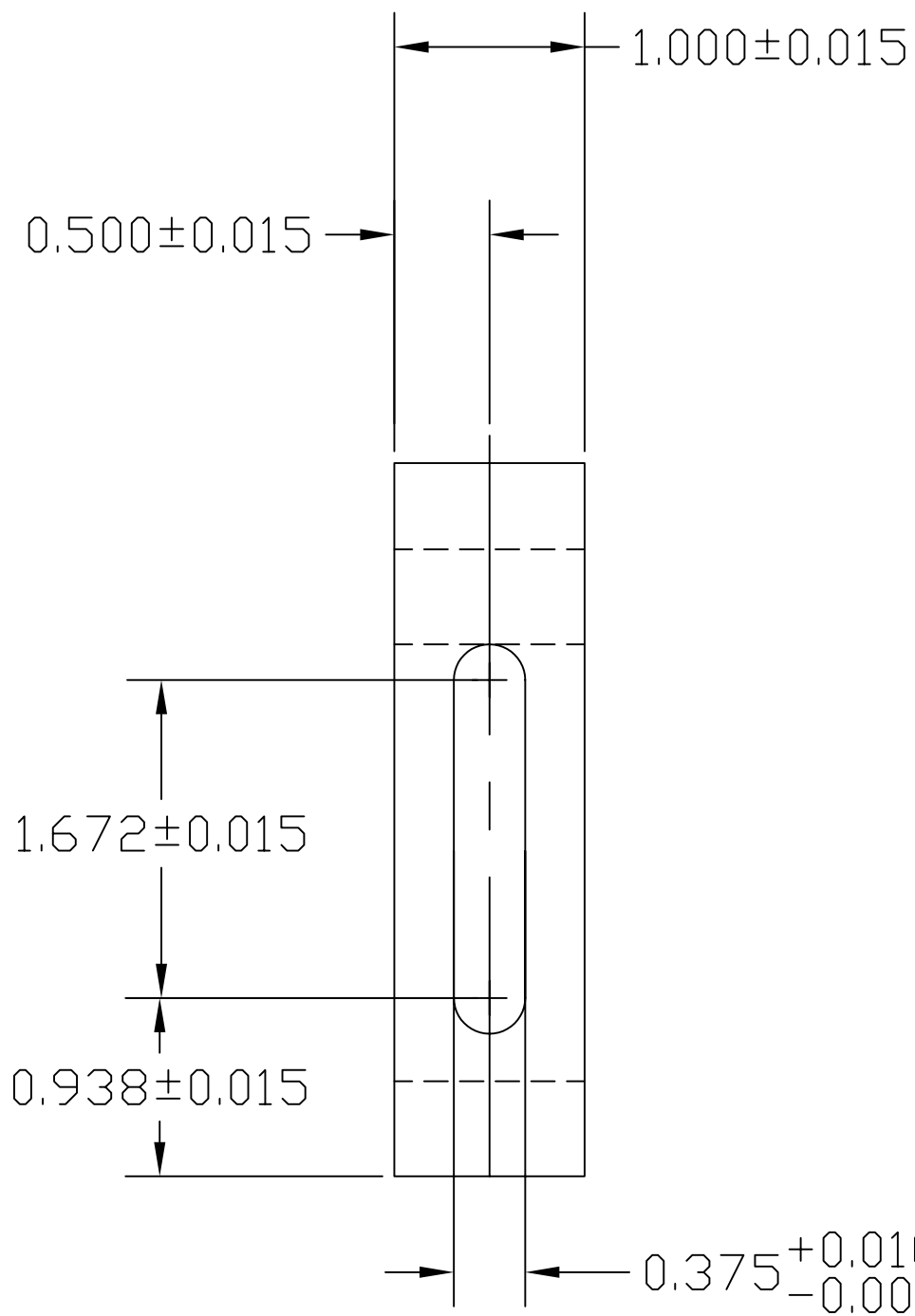


MAKE 1

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES				DATE	NAME	 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY
TOLERANCES: .XX±: .XXX±: ANGULAR±:				DRAWN	KENM	
MATERIAL				CHECKED		
FINISH						
303/304 SS				COMMENTS:		SYSTEM LASTI SUB-SYSTEM QUAD SUSPENSION NEXT ASSY D060145-A PART NAME Y-PUSH PLATE
N/A				SIZE	DWG. NO.	REV
				B	D060047-A	
				SCALE:		SHEET 1 OF 1

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	

NOTES: (UNLESS OTHERWISE SPECIFIED)



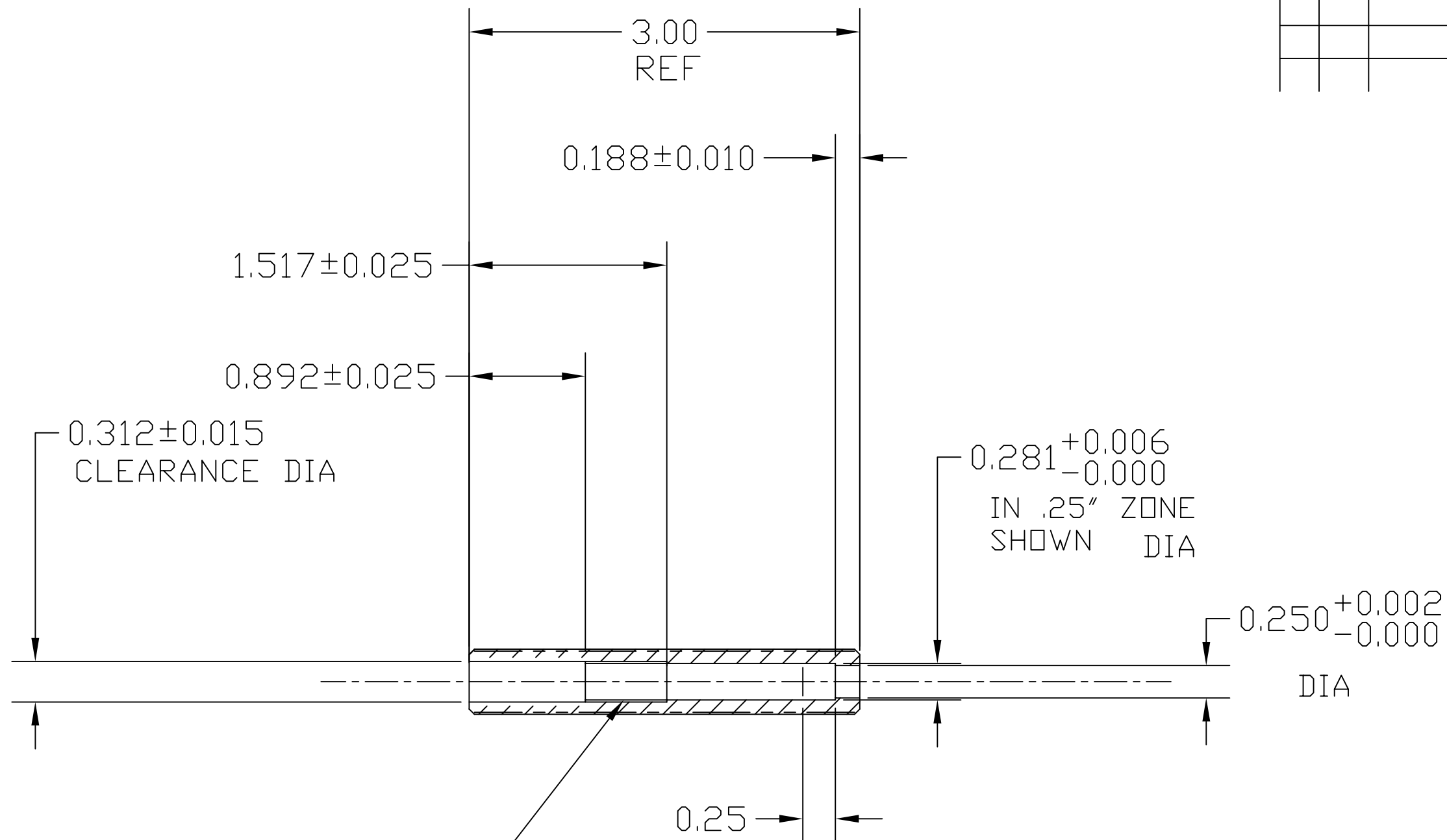
BREAK EDGES TYP.

MAKE 8

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	3/1/06	KENM
TOLERANCES:				CHECKED		
.XX±:						
.XXX±:						
ANGULAR±:						
MATERIAL				COMMENTS:		
303 SS						
FINISH						
N/A						
			SYSTEM	CALIFORNIA INSTITUTE OF TECHNOLOGY		
			SUB-SYSTEM	MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
			NEXT ASSY	LASTI		
			PART NAME	QUAD SUSPENSION		
			SIZE	D060145-A		
			DWG. NO.	PART NAME FIXTURE DOG CALMP		
			REV	D060066-A		
			SCALE:	SHEET 1 OF 1		

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	



5/16-18 THD

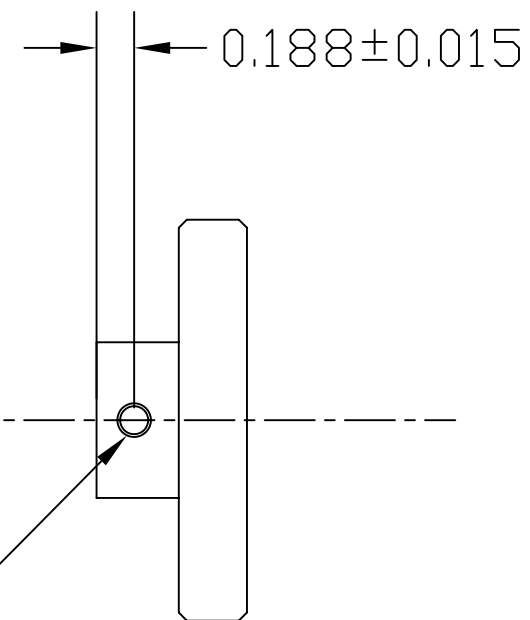
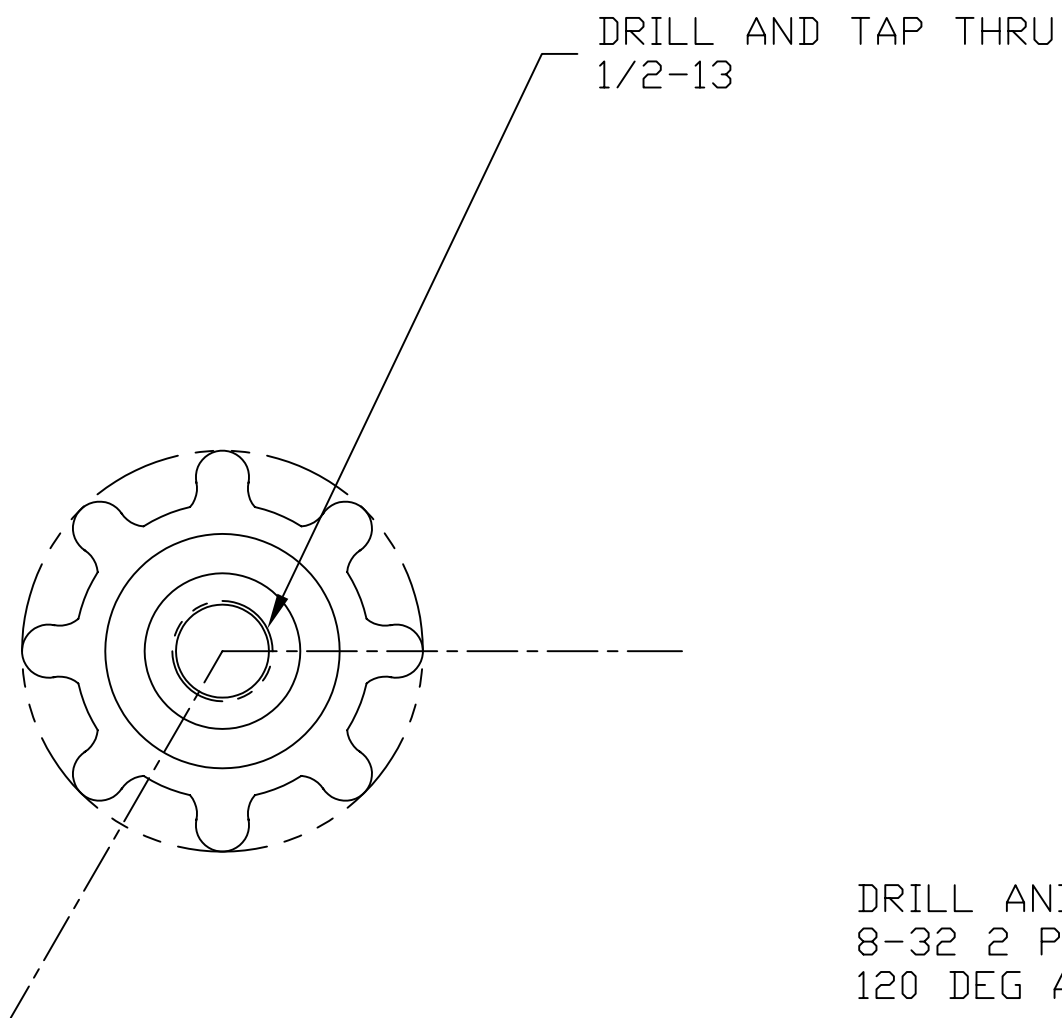
BREAK EDGES TYP.

MAKE 2

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	3/1/06	KENM
TOLERANCES:				CHECKED		
.XX±:						
.XXX±:						
ANGULAR±:						
MATERIAL				COMMENTS:		
1/2-13 S. STEEL THD ROD				LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
FINISH				SYSTEM LASTI		
N/A				SUB-SYSTEM QUAD SUSPENSION		
				NEXT ASSY D060145-A		
				PART NAME PUSHER SCREW MODIFICATION		
SIZE		DWG. NO.		REV		
B		D060067-A				
SCALE:		SHEET 1 OF 1				

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	

NOTES: (UNLESS OTHERWISE SPECIFIED)



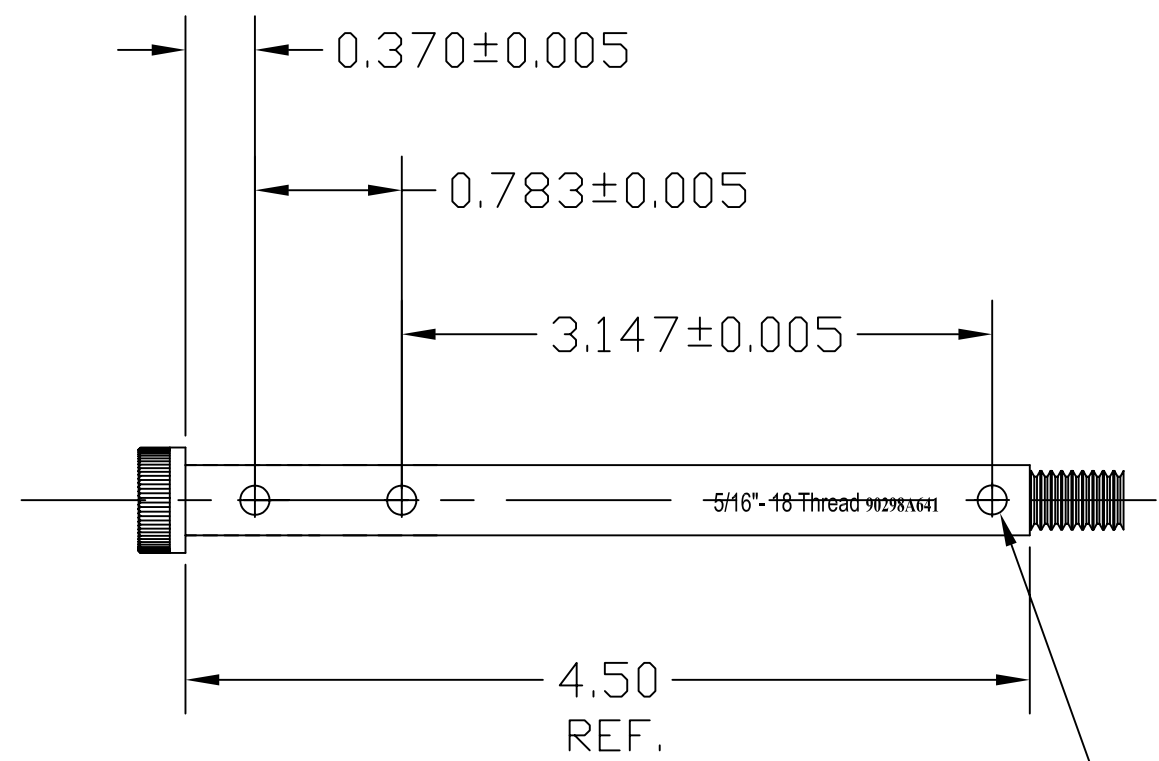
BREAK EDGES TYP.

MAKE 2

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	
DIMENSIONS ARE IN INCHES				DRAWN	3/1/06	KENM
TOLERANCES:				CHECKED		
.XX±:						
.XXX±:						
ANGULAR±:						
MATERIAL				COMMENTS:		
MC MASTER ALUM KNOB						
FINISH						
N/A						
LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY						
SYSTEM LASTI						
SUB-SYSTEM QUAD SUSPENSION						
NEXT ASSY D060145-A						
PART NAME X-Y PUSHER SCREW KNOB MOD						
SIZE	DWG. NO.				REV	
B	D060068-A					
SCALE:					SHEET 1 OF 1	

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	

NOTES: (UNLESS OTHERWISE SPECIFIED)



DRILL AND REAM LPF FOR .156 DIA ROLL PIN THRU 3 PL.

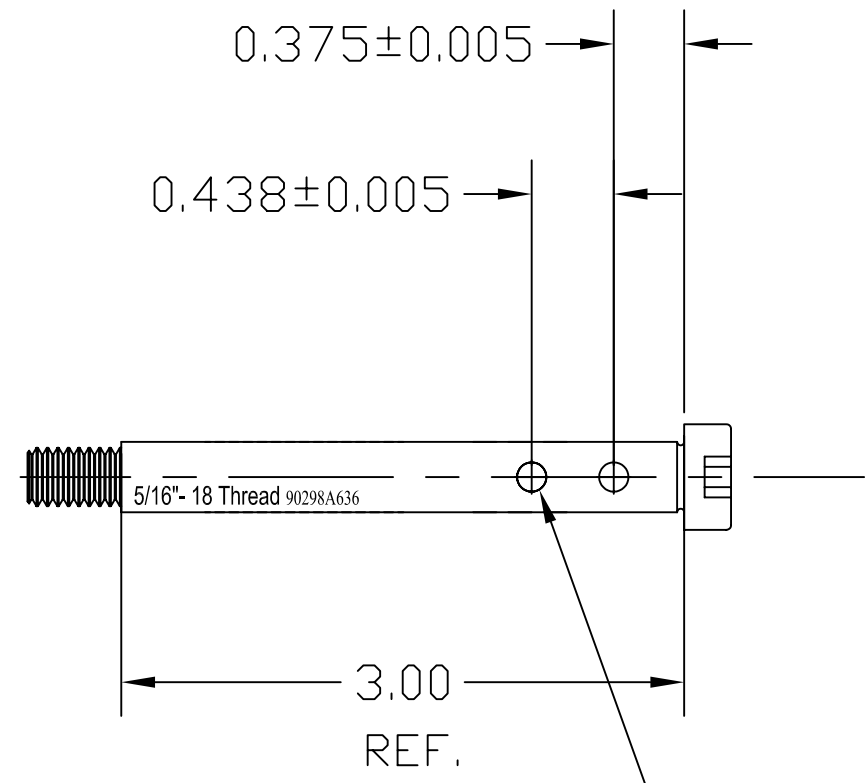
see assembly for adjacent part long screw shaft

MAKE 1

ITEM NO.	REQ. QUANTITY	SPARE	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER	
PARTS LIST							
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES				DATE	NAME	CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
TOLERANCES: .XX±: .XXX±: ANGULAR±:				DRAWN	2/11/06		KENM
MATERIAL				CHECKED			
FINISH							
MC MASTER PART				COMMENTS:		SYSTEM LASTI SUB-SYSTEM QUAD SUSPENSION NEXT ASSY D060145-A PART NAME LONG SHAFT SCREW MOD	
N/A				SIZE	DWG. NO.	REV	
				B	D060069-A		
				SCALE:	SHEET 1 OF 1		

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	


NOTES: (UNLESS OTHERWISE SPECIFIED)



DRILL AND REAM LPF FOR .156 DIA ROLL PIN THRU 2 PL.

see assembly for adjacent part long screw shaft

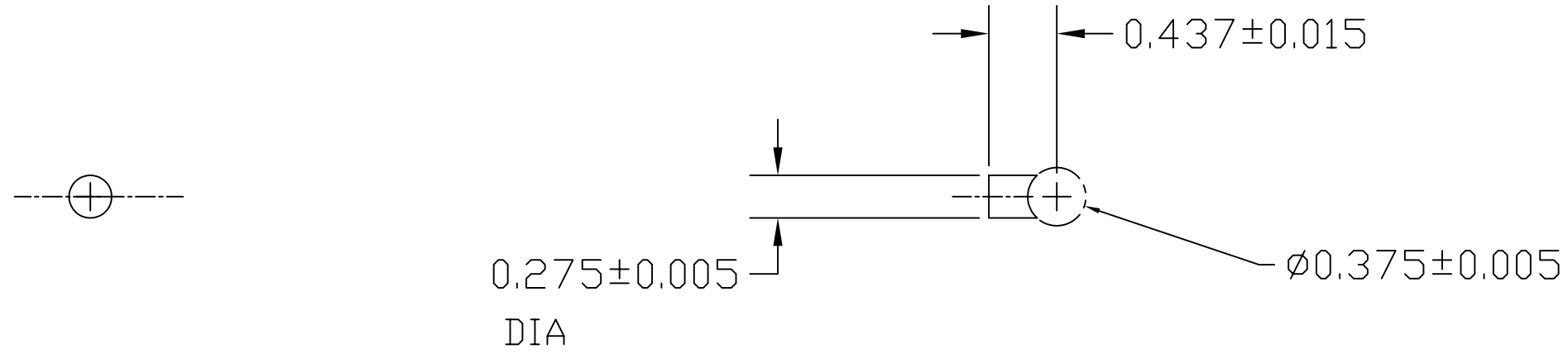
MAKE 1

ITEM NO.	REQ. QUANTITY	SPARE	TOT. QUANTITY	PART NUMBER	DESCRIPTION	SUPPLIER	
PARTS LIST							
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
DIMENSIONS ARE IN INCHES				DRAWN	2/11/06		KENM
TOLERANCES:				CHECKED			
.XX±							
.XXX±							
ANGULAR±							
MATERIAL				COMMENTS:		SYSTEM	
MC MASTER PART						SUB-SYSTEM	
FINISH						NEXT ASSY	
N/A						PART NAME	
						SHORT SHAFT SCREW MOD	
						SIZE	
						DWG. NO.	
						D060070-A	
						REV	
						SCALE:	
						SHEET 1 OF 1	


8 7 6 5 4 3 2 1

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	



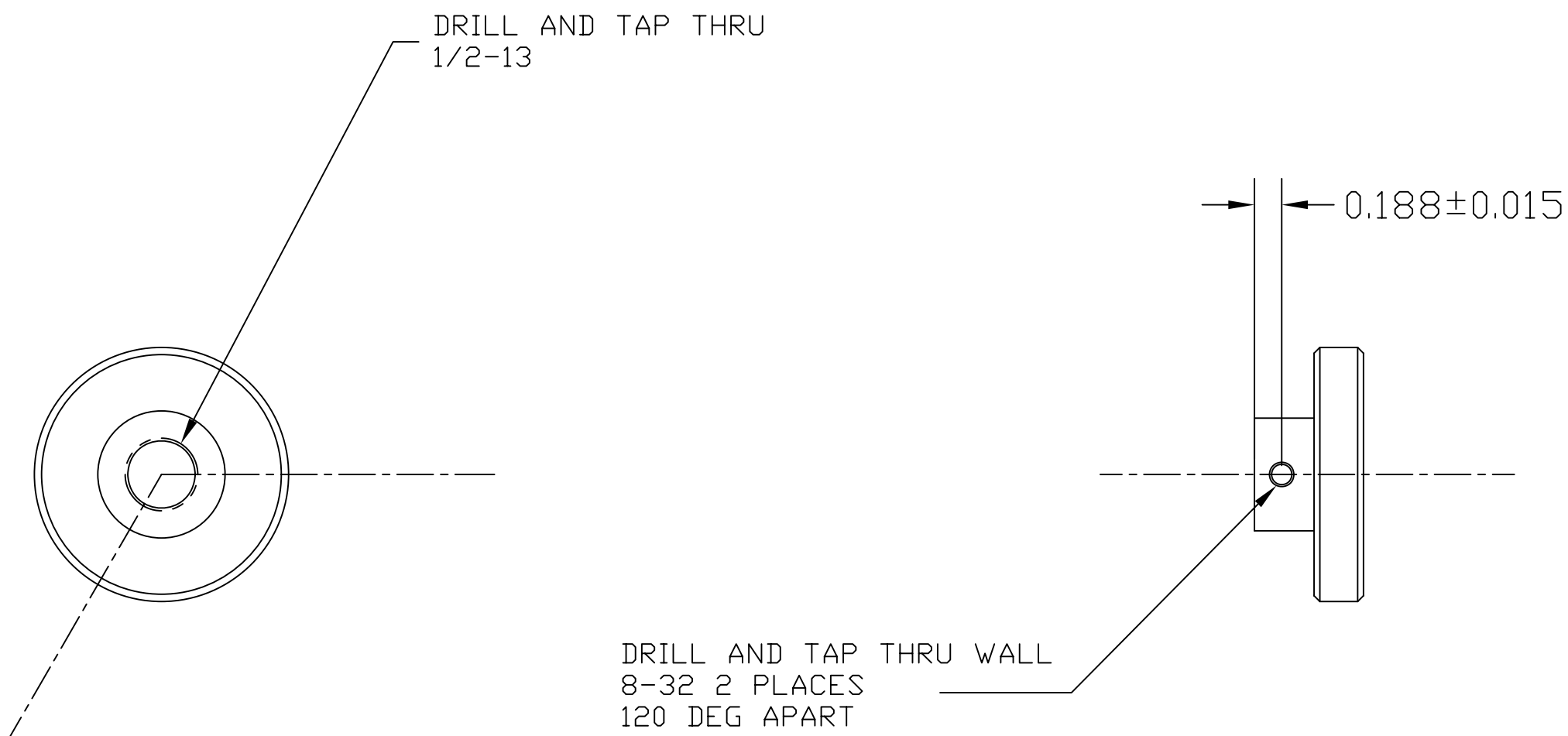
MAKE 1

ITEM NO.	REQ. QUANTITY	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER	
PARTS LIST							
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES				DATE	NAME	 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
TOLERANCES: .XX±: .XXX±: ANGULAR±:				DRAWN	2/11/06		KENM
MATERIAL BRONZE				CHECKED			
FINISH N/A				COMMENTS:			
SYSTEM						LASTI	
SUB-SYSTEM						QUAD SUSPENSION	
NEXT ASSY						D060145-A	
PART NAME						BRAKE PLUG	
SIZE		DWG. NO.		REV			
B		D060071-A					
SCALE:						SHEET 1 OF 1	

8 7 6 5 4 3 2 1 FILE NAME/LOCATION: D060071-A

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	



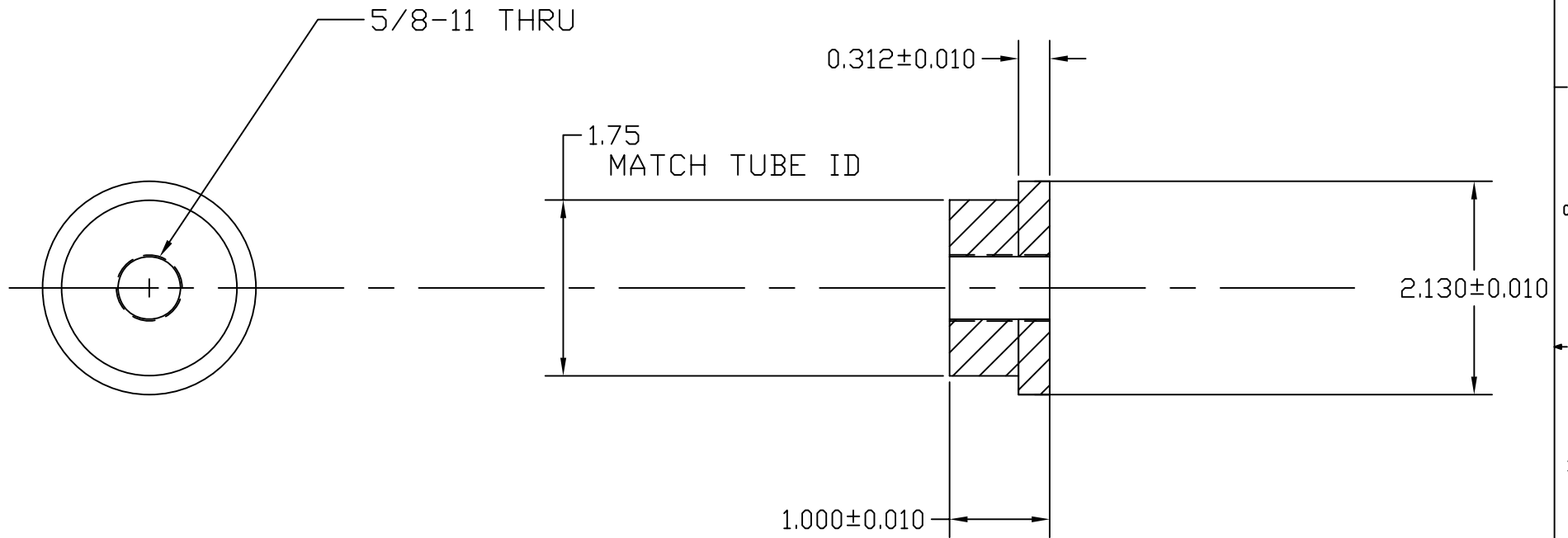
BREAK EDGES TYP.

MAKE 2

ITEM NO.	REQ.	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED:				DATE	NAME	LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY
DIMENSIONS ARE IN INCHES				DRAWN	3/1/06	
TOLERANCES:				CHECKED		SYSTEM LASTI
.XX±:						SUB-SYSTEM QUAD SUSPENSION
.XXX±:						NEXT ASSY D060145-A
ANGULAR±:						PART NAME X-Y TILT SCREW KNOB MOD
MATERIAL MC MASTER ALUM KNOB 60205K42				COMMENTS:		SIZE DWG. NO. D060077-A
FINISH N/A						REV
SCALE:						SHEET 1 OF 1

NOTES: (UNLESS OTHERWISE SPECIFIED)

REV.	DATE	DCN #	DRAWING TREE #
A	1-18-06	E060004-00-D	



BREAK EDGES TYP.

MAKE 4

ITEM NO.	REQ. QUANTITY	SPARE	TOT.	PART NUMBER	DESCRIPTION	SUPPLIER
PARTS LIST						
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES				DATE	NAME	LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY
TOLERANCES: .XX± .XXX± ANGULAR±				DRAWN	3/1/06	KENN
MATERIAL: MILD STEEL				CHECKED		SYSTEM LASTI
FINISH: N/A				COMMENTS:		SUB-SYSTEM QUAD SUSPENSION
						NEXT ASSY NA
						PART NAME: TABLE LEVELING FOOT PAD
				SIZE	DWG. NO.	REV
				B	D060168-A	
				SCALE:	SHEET 1 OF 1	