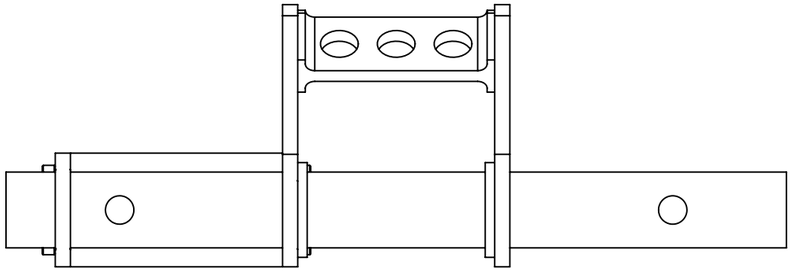
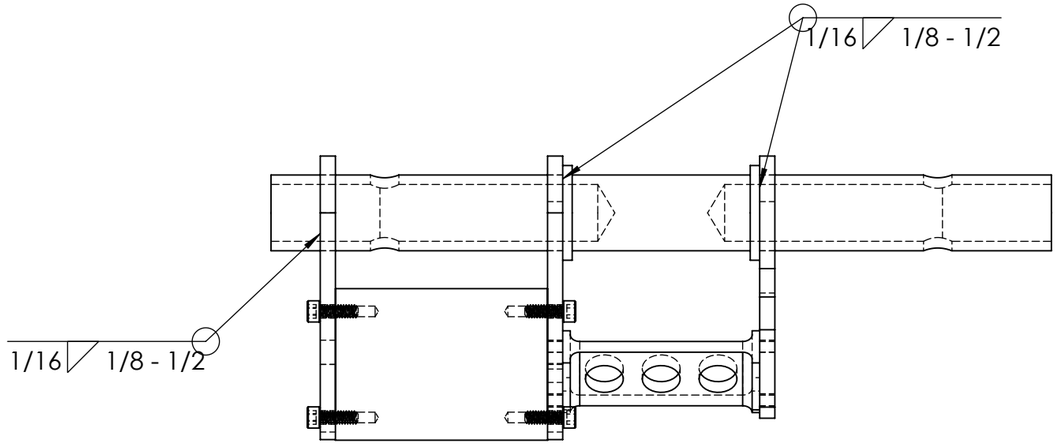
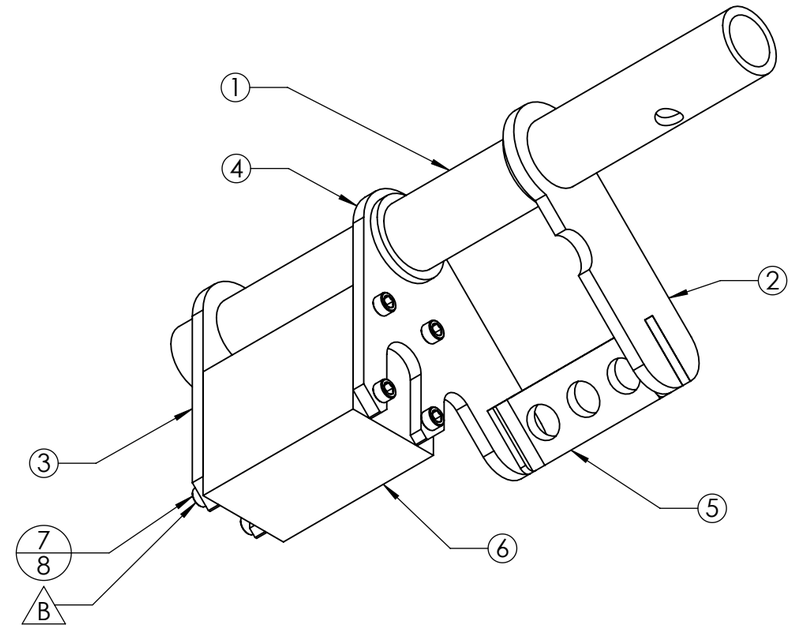
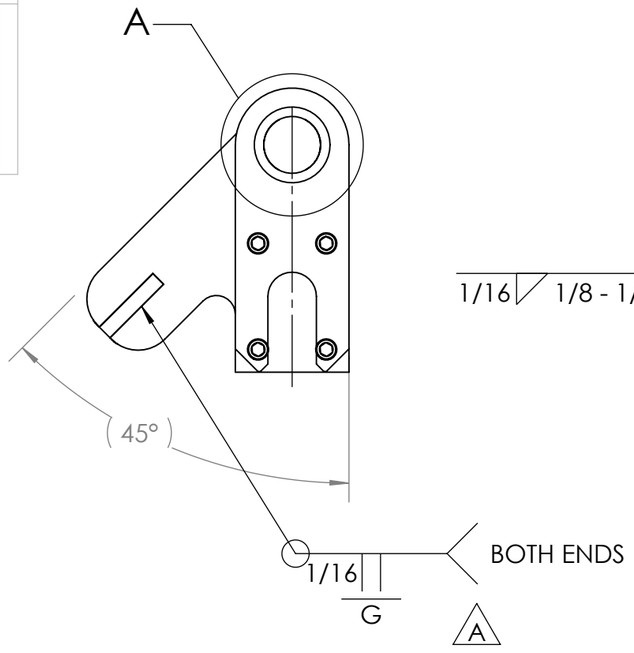
REVISIONS				
	INITIAL RELEASE		X/XX/01	J.E.

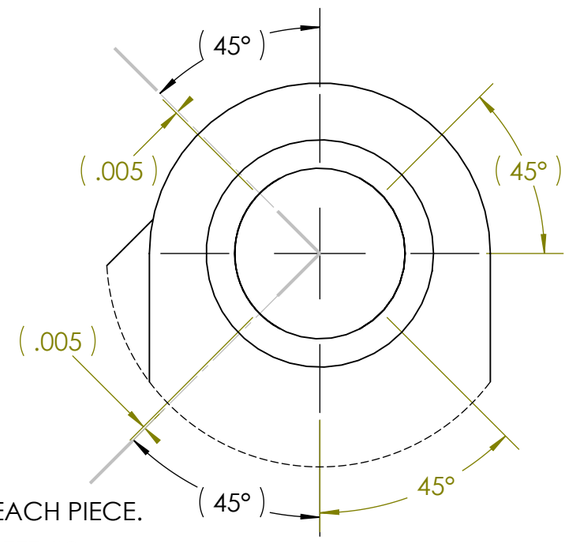
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	CHG WELD CALL-OUT ADD SHEET 2 of 3	5/9/2012	J.E.
C3	B	ADDED #2-56 Soc Hd Cap Screws (8ea.)	2/13/2015	J.E.











DETAIL A
SCALE 3 : 1
CLOCKING BOTH ENDS

9. Q.C. (INSPECTION) REPORT REQUIRED FOR EACH PIECE.
8. FABRICATION ORDER SHEET #1, SHEET #2, SHEET #3
7. PROJECT LIBRARY:\900739.LRAUV\Project.Drawings\ Project.ME.Dwgs\LRAUV\Tail section\CS Linkage

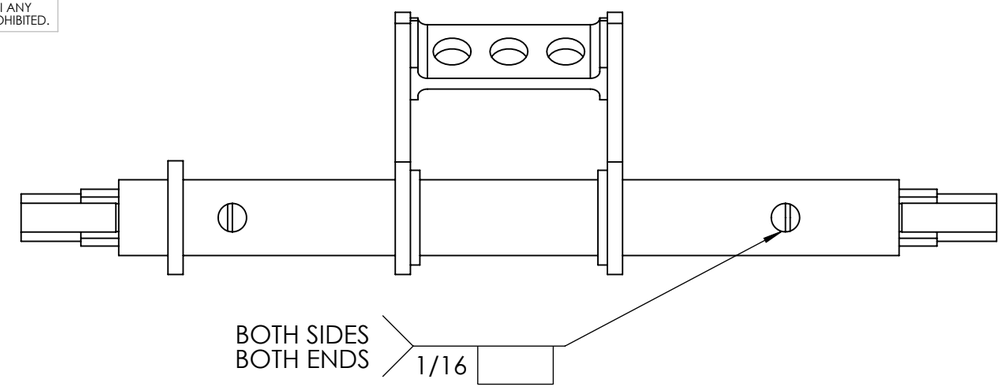
NOTES: (CONT. FROM TITLE BLOCK)

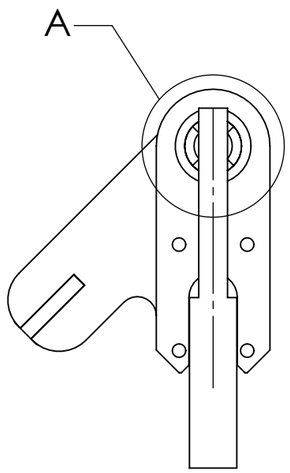
ITEM NO.	Build/QTY.	Part_Number	DESCRIPTION	Revision	Vendor	MATERIAL
7	8	92185A077	#2-56x 1/4 Soc Hd Cap		McMaster-Carr	AISI 316
6	1	P-200733-09	CS-Link_Weld Jig	A	MBARI	Aluminum 6061-T6
5	1	P-200728-09	Bell Crank Bridge		MBARI	6AL-4V Titanium
4	1	P-200727-09	Rudder Crank Plate		MBARI	6AL-4V Titanium
3	1	P-200729-09	CS-Crank Plate		MBARI	6AL-4V Titanium
2	1	P-200730-09	Bell Crank Plate	A	MBARI	6AL-4V Titanium
1	1	P-200715-09	CS Connector Sleeve		MBARI	6AL-4V Titanium

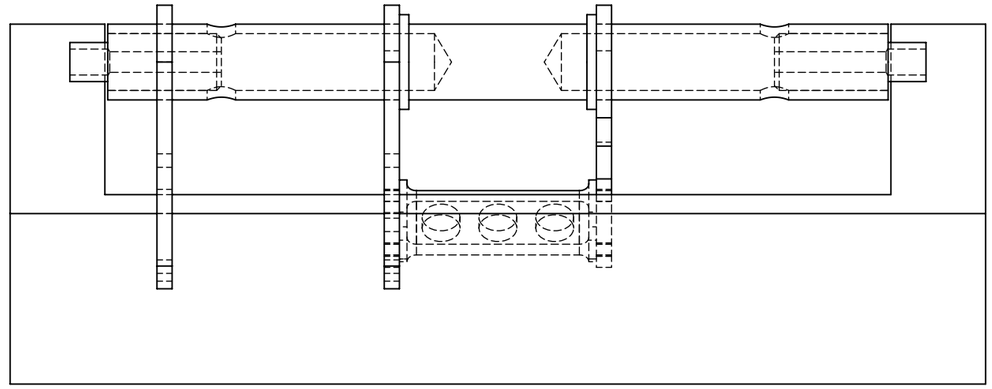
BILL OF MATERIALS

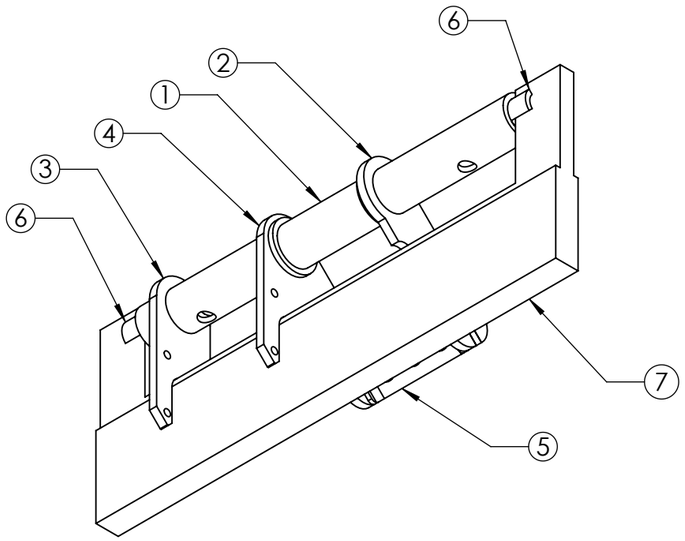
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS	DATE	Monterey Bay Aquarium Research Institute
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN	J. ERICKSON 5/11/09	MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700
Shop Foreman		1. DIMENSIONS ARE IN INCHES				ENGINEER	J. ERICKSON 5/11/09	
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED	B.H. 5/13/09	
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.				PROJECT NO.	900739	TETHYS - LRAUV
NEXT ASSY Description	NEXT ASSY Number	4. MACHINED FILLET RADII .0150-.030.				PROJECT	LRAUV	Rudder Crank WELDMENT
	A-200502-08	5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005						SIZE B / DWG. NO. A-200732-09.DWG / REV. B
Application		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.				WEIGHT	0.266 lb.	SCALE 1:2 / CAD FILE: MECH ENG ON TORNADO / SHEET 1 OF 3
		DO NOT SCALE DRAWING						

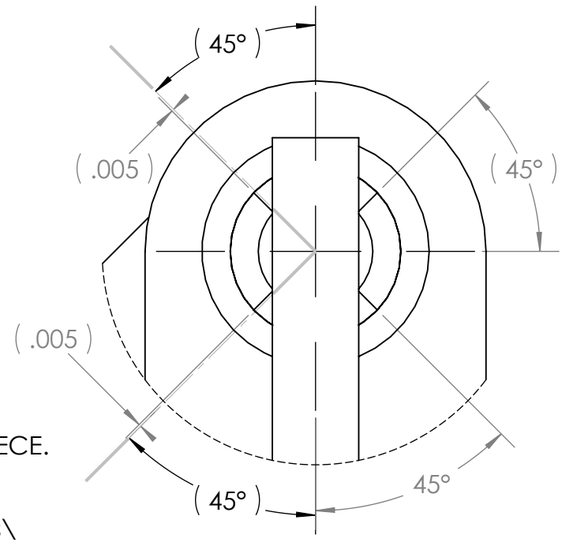
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.











DETAIL A
SCALE 3 : 1

9. Q.C. (INSPECTION) REPORT REQUIRED FOR EACH PIECE.
8. FABRICATION ORDER SHEET #1, SHEET #2, SHEET #3
7. PROJECT LIBRARY:\900739.LRAUV\Project.Drawings\ Project.ME.Dwgs\LRAUV\Tail section\CS Linkage

NOTES: (CONT. FROM TITLE BLOCK)

ITEM NO.	Build2/QTY.	Part_Number	DESCRIPTION	Revision	Vendor	MATERIAL
7	1	P-201337-12	Dog End Welding Jig		MBARI	316 SS
6	2	P-200494-08	Bell Crank F-Dog Link	A	MBARI	6AL-4V Titanium
5	1	P-200728-09	Bell Crank Bridge		MBARI	6AL-4V Titanium
4	1	P-200727-09	Rudder Crank Plate		MBARI	6AL-4V Titanium
3	1	P-200729-09	CS-Crank Plate		MBARI	6AL-4V Titanium
2	1	P-200730-09	Bell Crank Plate	A	MBARI	6AL-4V Titanium
1	1	P-200715-09	CS Connector Sleeve		MBARI	6AL-4V Titanium

BILL OF MATERIALS

Shop / Q.C.		NEXT ASSY Description	NEXT ASSY Number
Inspector			
Shop Foreman			A-200502-08
Engineer		Application	

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:

1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°

1. DIMENSIONS ARE IN INCHES
2. DIMENSION LIMITS HELD AFTER PLATING.
3. REMOVE BURRS AND SHARP EDGES .015 MAX.
4. MACHINED FILLET RADII .0150-.030.
5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .OO5
6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.

DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN J. ERICKSON	5/11/09
ENGINEER J. ERICKSON	5/11/09
CHECKED	
PROJECT NO.	900739
PROJECT	LRAUV
WEIGHT	0.282 lb.

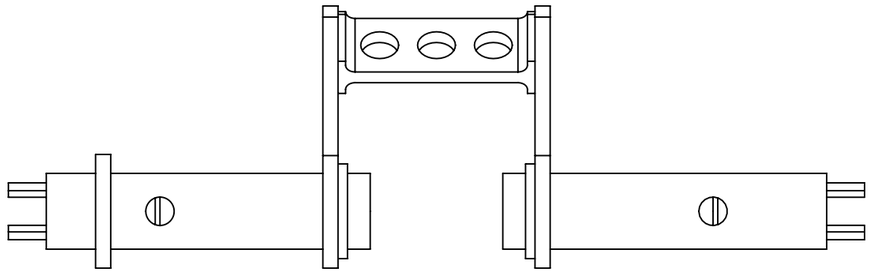
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

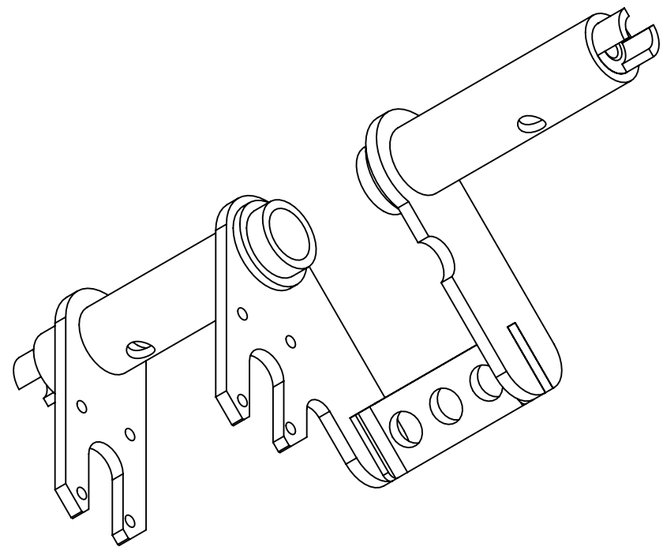
TETHYS - LRAUV
Rudder Crank WELDMENT 2

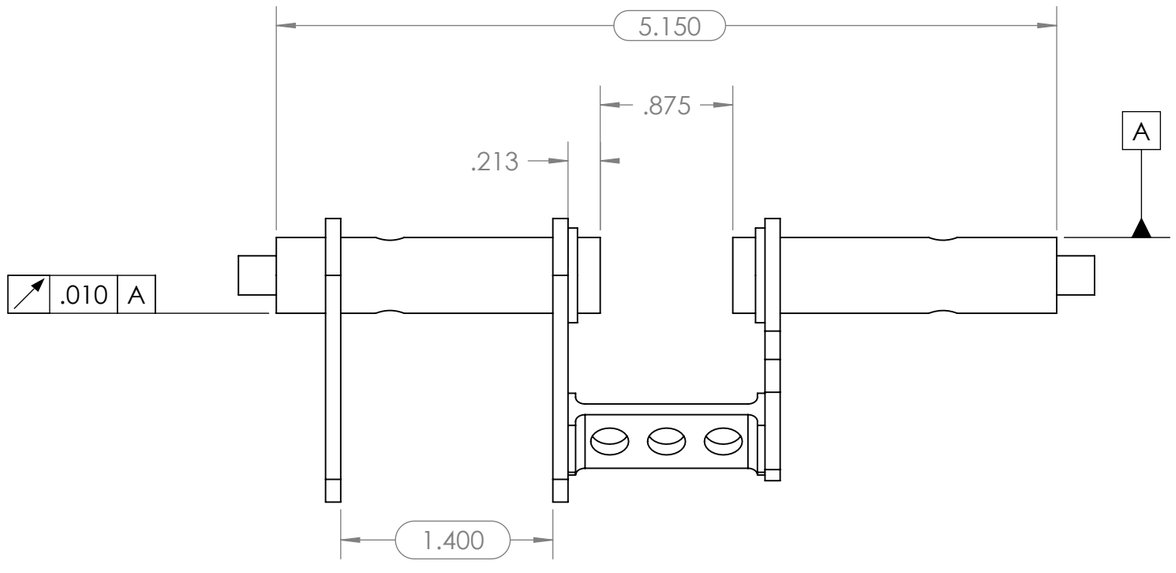
SIZE	DWG. NO.	REV.
B	A-200732-09.DWG	B

SCALE 1:2 | CAD FILE: MECH ENG ON TORNADO | SHEET 2 OF 3

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.







WATER WEIGHT =0.123265

10. Q.C. (INSPECTION) REPORT REQUIRED FOR EACH PIECE.
9. FINISH MACHINE AFTER WELDING. DIMENSIONS AS NOTED.
8. FABRICATION ORDER SHEET #1, SHEET #2, SHEET #3
7. PROJECT LIBRARY:\900739.LRAUV\Project.Drawings\Project.ME.Dwgs\LRAUV\Tail section\CS Linkage

NOTES: (CONT. FROM TITLE BLOCK)

ITEM NO.	QTY.	Part_Number	DESCRIPTION	Revision	Vendor	MATERIAL
6	2	P-200494-08	Bell Crank F-Dog Link	A	MBARI	6AL-4V Titanium
5	1	P-200728-09	Bell Crank Bridge		MBARI	6AL-4V Titanium
4	1	P-200727-09	Rudder Crank Plate		MBARI	6AL-4V Titanium
3	1	P-200729-09	CS-Crank Plate		MBARI	6AL-4V Titanium
2	1	P-200730-09	Bell Crank Plate	A	MBARI	6AL-4V Titanium
1	1	P-200715-09	CS Connector Sleeve		MBARI	6AL-4V Titanium

BILL OF MATERIALS

Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS	DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN J. ERICKSON	5/11/09
Shop Foreman		1. DIMENSIONS ARE IN INCHES				ENGINEER J. ERICKSON	5/11/09
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.				CHECKED B.H.	5/13/09
NEXT ASSY Description	NEXT ASSY Number	3. REMOVE BURRS AND SHARP EDGES .015 MAX.				PROJECT NO.	900739
	A-200502-08	4. MACHINED FILLET RADII .0150-.030.				PROJECT	LRAUV
Application		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005				WEIGHT	0.159 lb.
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.					
		DO NOT SCALE DRAWING					

Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700

TETHYS - LRAUV
Rudder Crank FINISH MACHINING

SIZE	DWG. NO.	REV.
B	A-200732-09.DWG	B
SCALE 1:2	CAD FILE: MECH ENG ON TORNADO	SHEET 3 OF 3