



FORMAL DRAWING TREE REFERENCE DOCUMENT

TITLE: **aLIGO TCS Ring Heater replacement Fixture Assembly**
for Prototype Design Review

DOCUMENT CONTROL **E1100656 -v1**
RELATED DOC. CHANGE NO.: E1100655 -v1

CONTAINING ASSEMBLY: D1003193 -v3

AUTHOR: M. JACOBSON
DATE: 4-Oct-11

PURPOSE: This document is the formal reference for necessary revisions of each child of the stated assemblies, and the total necessary quantities for all items.

DCN	NOTES	Level	INDENTURE CHART	QUANTITY				DWG TREE REF. NO.	MATERIAL	DCC No.	TYPE [config.]	NAME	TYPE	SOURCE	REV.
				REQ'd	SPARE	TOT.	UNITS								
No.		0													
		1			1	1	EA	E1100656-v1	-	D1003193	-01 -02	VIEWPORT ENCLOSURE ASSY, H2 CO2P	TopAssy	MTS	v3
		1			1	1	EA		-	D1003194	- -	PRIMARY FLANGE VIEWPORT ASSY	ASSY	MTS	v2
E1100655-v1		2			1	1	EA	Al 6061	D1003209	- -	-	CLAMPING FLANGE, CO2P VP ENCLOSURE	PRT	MTS	v2
		2			2	1	EA	PEEK or TEFLON	D1100495	- -	-	WASHER, CLAMP RING	PRT	MTS	v2
	II-VI	2			1	1	EA	ZnSe	D1100439	- -	-	ZnSe VIEWPORT, 3 IN OD, 0.5 IN THICK, 60° WEDGE	PRT	MTS	v1
	HEREAUS	2			1	1	EA	FUSED SILICA	D1100540	- -	-	aLIGO TCS 0.5 IN THICK OPTICAL WINDOW	PRT	MTS	v1
		2			1	1	EA	SSTL	D1003196	- -	-	aLIGO TCS 10-IN CUSTOM VP FLANGE	PRT	MTS	v2
		2			4	1	EA	VITON	D080631	- -	-	ORING, 3 IN VIEWPORTS	PRT	MTS	v3
	EBARA CF-10 HW KIT	2			1	1	EA	STL	KNP-800-12	- -	-	12-PT BOLT, 5/16-24 UNC-2A X 2.25 +WASHER, QTY 48 +NUTPLATES	HW	OTS	
	UC COMPONENTS	2			12	3	EA	18-8 SS, Ag PLT	C-1016-NA	- -	-	SHCS 10-32 UNF-2A X 1 IN LONG	HW	OTS	
E1100655-v1		1			1	1	EA	-	D1003204	-01 -02	-	VP ENCLOSURE FRONT COVER ASSY, CO2P	ASSY	MTS	v3
E1100655-v1		2			1	1	EA	Al 6061	D1003206	-01 -02	-	VP ENCLOSURE FRONT WALL, FIXED	PRT	MTS	v3
		2			1	1	EA	-	D1100493	- -	-	TCS 0.25 IN THICK ZnSe WINDOW CLAM SHELL ASSY	ASSY	MTS	v1
		3			1	1	EA	VITON	D080631	- -	-	ORING, 3 IN VIEWPORTS	PRT	MTS	v3
E1100655-v1		3			1	1	EA	Al 6061	D1003208	- -	-	MOUNTING PLATE, CO2P VP COVER	PRT	MTS	v1
E1100655-v1		3			1	1	EA	Al 6061	D1100250	- -	-	MOUNTING PLATE COVER REAR, CO2P VP COVER	PRT	MTS	v1
	II-VI	3			1	1	EA	ZnSe	D1100485	- -	-	ZnSe VIEWPORT, 3 IN OD, 0.25 IN THICK, 60° WEDGE	PRT	MTS	v1
		3			1	1	EA	PEEK or TEFLON	D1100495	- -	-	WASHER, CLAMP RING	PRT	MTS	v2
		3			1	1	EA	D1100496	- -	-	VIEWPORT THERMOCOUPLE	HW	OTS		
	UC COMPONENTS	3			4	1	EA	18-8 SSSL	C-610-N	- -	-	SHCS 6-32 UNC-2A X .625 IN LONG	HW	OTS	
		2			1	1	EA	-	D1100494	- -	-	TCS 0.25 IN THICK OPTICAL WINDOW CLAM SHELL ASSY	ASSY	MTS	v2
	HEREAUS	3			1	1	EA	FUSED SILICA	D1100539	- -	-	aLIGO TCS 0.25 IN THICK OPTICAL WINDOW	PRT	MTS	v2
		3			1	1	EA	VITON	D080631	- -	-	ORING, 3 IN VIEWPORTS	PRT	MTS	v3
E1100655-v1		3			1	1	EA	Al 6061	D1003208	- -	-	MOUNTING PLATE, CO2P VP COVER	PRT	MTS	v1
E1100655-v1		3			1	1	EA	Al 6061	D1100250	- -	-	MOUNTING PLATE COVER REAR, CO2P VP COVER	PRT	MTS	v1
		3			1	1	EA	PEEK or TEFLON	D1100495	- -	-	WASHER, CLAMP RING	PRT	MTS	v2
	UC COMPONENTS	3			4	1	EA	18-8 SSSL	C-610-N	- -	-	SHCS 6-32 UNC-2A X .625 IN LONG	HW	OTS	
		2			4	1	EA	VITON	D080631	- -	-	ORING, 3 IN VIEWPORTS	PRT	MTS	v3
E1100655-v1		2			2	2	EA	Al 6061	D1100413	- -	-	STRESS RELIEF BAR	PRT	MTS	v1
	UC COMPONENTS	2			16	4	EA	18-8 SSSL	C-607-N	- -	-	SHCS 6-32 UNC-2A X .4375 LONG	HW	OTS	
	UC COMPONENTS	2			4	2	EA	18-8 SSSL	C-605-N	- -	-	SHCS 6-32 UNC-2A X .3125 LONG	HW	OTS	
		2			16	4	EA	18-8 SSSL	C-608-N	- -	-	SHCS 6-32 UNC-2A X .5 LONG	HW	OTS	
		2			8	2	EA	18-8 SSSL	C-1824-N	- -	-	SHCS .3125-18 X 1.5 LONG	HW	OTS	
		1			1	1	EA	-	D1003210	-01 -02	-	VP ENCLOSURE SIDE OPTOMECH ASSY, CO2P	ASSY	MTS	v2
E1100655-v1		2			1	1	EA	Al 6061	D1003213	-01 -02	-	SIDE OPTOMECH WALL, CO2P VP ENCLOSURE	PRT	MTS	v2
	MSC	2			2	2	EA	NBR	79311791	- -	-	GROMMET, 1 IN ID X 1.75 IN OD, .1875 IN GROVE, MS35489-81	HW	OTS	
	UC COMPONENTS	2			26	4	EA	18-8 SSSL	C-608-N	- -	-	SHCS 6-32 UNC-2A X .5 LONG	HW	OTS	
E1100655-v1		1			1	1	EA	Al 6061	D1003214	-01 -02	-	VP ENCLOSURE TOP WALL, CO2P	PRT	MTS	v2
		1			1	1	EA	-	D1003215	- -	-	VP ENCLOSURE SIDE COVER ASSY, CO2P	ASSY	MTS	v1
E1100655-v1		2			1	1	EA	Al 6061	D1003216	- -	-	SIDE COVER WALL, CO2P VP ENCLOSURE	PRT	MTS	v1
	MSC	2			1	1	EA	Zn PLT STL	32845752	- -	-	6.5 IN X 1.75 IN DOOR PULL, Zn PLATED STEEL	HW	OTS	
	UC COMPONENTS	2			4	1	EA	18-8 SSSL	FA-810-N	- -	-	FSHCS, 8-32 X .625 LONG	HW	OTS	
	UC COMPONENTS	2			4	1	EA	18-8 SSSL	WF-08	- -	-	FLAT WASHER, 8-32	HW	OTS	
	UC COMPONENTS	2			4	1	EA	18-8 SSSL	N-832	- -	-	HEX NUT, 8-32	HW	OTS	
	MSC	2			12	3	EA	18-8 SSSL	41852401	- -	-	CAPTIVE SHCS 8-32 X .1875 THD X .50 LONG	HW	OTS	
		1			1	1	EA	-	D1003217	-01 -02	-	VP ENCLOSURE BACK COVER ASSY, CO2P	ASSY	MTS	v1
E1100655-v1		2			1	1	EA	Al 6061	D1003218	- -	-	BACK WALL, CO2P VP ENCLOSURE	PRT	MTS	v1
	MSC	2			1	1	EA	Zn PLT STL	32845752	- -	-	6.5 IN X 1.75 IN DOOR PULL, Zn PLATED STEEL	HW	OTS	
	UC COMPONENTS	2			8	2	EA	18-8 SSSL	FA-810-N	- -	-	FSHCS, 8-32 X .625 LONG	HW	OTS	
	UC COMPONENTS	2			8	2	EA	18-8 SSSL	WF-08	- -	-	FLAT WASHER, 8-32	HW	OTS	
	UC COMPONENTS	2			8	2	EA	18-8 SSSL	N-832	- -	-	HEX NUT, 8-32	HW	OTS	
	MSC	2			16	4	EA	18-8 SSSL	41852401	- -	-	CAPTIVE SHCS 8-32 X .1875 THD X .50 LONG	HW	OTS	
E1100655-v1		1			1	1	EA	Al 6061	D1003219	- -	-	MOUNTING ROD, SIDE-TO-BACK COVERS	PRT	MTS	v1
	UC COMPONENTS	1			2	2	EA	18-8 SSSL	C-608-N	- -	-	SHCS 6-32 UNC-2A X .5 LONG	HW	OTS	
		1			1	1	EA	-	D1003221	-01 -02	-	VP ENCLOSURE LOWER WALL ASSY, CO2P	ASSY	MTS	v3
E1100655-v1		2			1	1	EA	Al 6061	D1003220	-01 -02	-	BOTTOM WALL, CO2P VP ENCLOSURE	PRT	MTS	v2
E1100655-v1		2			1	1	EA	304 SSSL	D1003222	- -	-	PERISCOPE INTERFACE FLANGE, FEMALE	PRT	MTS	v1
	UC COMPONENTS	2			8	2	EA	18-8 SSSL	WF-25	- -	-	FLAT WASHER, 1/4 IN	HW	OTS	
	UC COMPONENTS	2			8	2	EA	18-8 SSSL	C-2010-N	- -	-	SHCS 1/4-20 UNC-2A X .625 LONG	HW	OTS	
	UC COMPONENTS	2			4	2	EA	18-8 SSSL	WF-08	- -	-	FLAT WASHER, 8-32	HW	OTS	
	UC COMPONENTS	2			4	2	EA	18-8 SSSL	C-810-N	- -	-	SHCS 8-32 UNC-2A X .625 LONG	HW	OTS	
	UC COMPONENTS	2			2	2	EA	18-8 SSSL	C-608-N	- -	-	SHCS 6-32 UNC-2A X .5 LONG	HW	OTS	
		1			1	1	EA	-	D1101145	-01 -02	-	TCS H2 CO2P TOP PERISCOPE MOUNT ASSY	ASSY	MTS	v1
E1100655-v1		2			1	1	EA	Al 6061	D1101144	-01 -02	-	H2 CO2P TOP PERISCOPE FIXTURE	PRT	MTS	v2
		2			1	1	EA	-	SL101.6N-P2A12	- -	-	MIRROR MOUNT ASSY	ASSY	MTS	
	NEWPORT	3			1	1	EA	STL	Q1048496	- -	-	CUSTOM MIRROR MOUNT, MICROCONTROLLE	PRT	OTS	
	EDMUND OPTICS	3			1	1	EA	ZERODUR, Al PLT	D1100453	- -	-	ENHANCED ALUMINUM MIRROR, 4 IN DIA	PRT	MTS	v1
	UC COMPONENTS	2			4	2	EA	A2 SSSL	MC-616-N	- -	-	SHCS M6 X 16	HW	OTS	
	UC COMPONENTS	2			4	2	EA	A2 SSSL	MLW-06	- -	-	WASHER, SPLIT LOCK, M6	HW	OTS	
	UC COMPONENTS	2			8	2	EA	A2 SSSL	MC-516-N	- -	-	SHCS M5 X 16	HW	OTS	
	UC COMPONENTS	2			8	2	EA	A2 SSSL	MLW-05	- -	-	WASHER, SPLIT LOCK, M5	HW	OTS	
	UC COMPONENTS	2			2	2	EA	18-8 SSSL	SHCV-4420	- -	-	SH SHOULDER 8-32 X .375 LONG	HW	OTS	
		1			1	1	EA	-	D1101235	- -	-	VIEWPORT CAMERA MIRROR ASSY	ASSY	MTS	v2
E1100655-v1		2			1	1	EA	Al 6061	D1101547	- -	-	H2 VIEWPORT CAMERA MIRROR FIXTURE	PRT	MTS	v1
		2			1	1	EA	Al 6061	U200-AC3K	- -	-	3-AXIS MIRROR MOUNT, 2 IN	PRT	MTS	v1
	EDMUND OPTICS	2			1	1	EA	ZERODUR, Al PLT	D1101256	- -	-	ENHANCED ALUMINUM MIRROR, 2 IN DIA	PRT	MTS	v1
	UC COMPONENTS	2			6	2	EA	18-8 SSSL	C-806-N	- -	-	SHCS 8-32 UNC-2A X .375 LONG	HW	OTS	
	UC COMPONENTS	2			4	1	EA	18-8 SSSL	C-808-N	- -	-	SHCS 8-32 UNC-2A X .5 LONG	HW	OTS	
		2			4	1	EA	18-8 SSSL	WF-08	- -	-	FLAT WASHER, 8-32	HW	OTS	