



## FORMAL DRAWING TREE REFERENCE DOCUMENT

TITLE: aLIGO TCS UHV H2 CO2 MIRROR ASSEMBLIES  
for ProductionDOCUMENT CONTROL NO.: E1000884 -v2  
RELATED DOC. CHANGE NO.: E1000883 -v2CONTAINING ASSEMBLIES: D1001742 -v3  
D1002431 -v3  
D1100293 -v1AUTHOR: M. JACOBSON  
DATE: 18-Feb-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.	NAME	TYPE	SOURCE	REV.
				REQ'd	SPARE	TOT.	UNITS							
No.														
E1000883	<b>BSC7 = mirror of BSC8</b>	0			1	0	1	EA	E1000884	D1001742	<b>aLIGO TCS CO2P SYS STEERING OPTICS ASSY, H2, BSC7</b>	TopAssy	MTS	v3
	KUGLER	1			1	0	1	EA		D1001727	TCS H2IN-VAC MIRROR (212 IN, Au-COATED Cu)	PRT	MTS	v2
	HELICOIL	2			8	1	9	EA		N60 TYPE 1185	NITRONIC-60, #8-32, 2-1/2 D, .410 LONG, SIZE 2CN	HW	OTS	
		1			2	0	2	EA		SSTL D1002313	TCS UHV FINE ADJUST PIVOT ROD	PRT	MTS	v2
		1			1	0	1	EA		AI 6061 D1002312	TCS UHV AZ FINE ADJUST PIVOT PLATE, BSC7	PRT	MTS	v2
	HELICOIL	2			2	1	3	EA		N60 TYPE 1191	NITRONIC-60, #10-32, 2 D, .380 LONG, SIZE 3CN	HW	OTS	
		1			1	0	1	EA		AI 6061 D1002311	TCS UHV EL FINE ADJUST PIVOT PLATE	PRT	MTS	v2
	HELICOIL	2			1	1	2	EA		N60 TYPE 1191	NITRONIC-60, #10-32, 2 D, .380 LONG, SIZE 3CN	HW	OTS	
	UC COMPONENTS	1			4	1	5	EA		SSTL Ag PLT C-822-A	VENTED, Ag PLATED SS SHCS #8-32 X 1-3/8 LONG	HW	OTS	
	UC COMPONENTS	1			4	1	5	EA		SSTL Ag PLT C-816-A	VENTED, Ag PLATED SS SHCS #8-32 X 1 LONG	HW	OTS	
	UC COMPONENTS	1			8	2	10	EA		SSTL WFFV-08	VENTED FLAT WASHER #8	HW	OTS	
	UC COMPONENTS	1			5	1	6	EA		SSTL SHCV-4436	VENTED HEX HD 1.5IN SHOULDER SHC #10-32	HW	OTS	
	UC COMPONENTS	1			27	3	30	EA		SSTL Ag PLT WFFV-25	VENTED FLAT WASHER, 0.26 ID	HW	OTS	
		1			1	0	1	EA		SSTL D1002287	TCS UHV BRACKET (LONG SIDE), BSC7	PRT	MTS	v3
	HELICOIL	2			1	1	2	EA		N60 TYPE 1191	NITRONIC-60, #10-32, 2-1/2 D, .475 LONG, SIZE 3CN	HW	OTS	
		1			1	0	1	EA		SSTL D1003315	TCS UHV BRACKET, SHORT SIDE, BSC7	PRT	MTS	v3
	HELICOIL	2			1	1	2	EA		N60 TYPE 1191	NITRONIC-60, #10-32, 2-1/2 D, .475 LONG, SIZE 3CN	HW	OTS	
		1			1	0	1	EA		AI D1002317	TCS UHV LONG SUPPORT, BSC7 & BSC8	PRT	MTS	v3
		1			1	0	1	EA		AI D1002327	TCS UHV SHORT SUPPORT, BSC7 & BSC8	PRT	MTS	v3
	aLIGO SYS procurement	1			2	1	3	EA		VITON D1003328	TCS UHV H2 ASSEMBLY INTERFACE DAMPER	PRT	MTS	v1
		1			1	0	1	EA		AI D1002333	TCS UHV BACK BRACE, BSC7 & BSC8	PRT	MTS	v3
		1			1	0	1	EA		SSTL D1002334	TCS UHV COARSE ADJUST PIVOT ROD	PRT	MTS	v2
	UC COMPONENTS	1			6	1	7	EA		SSTL C-2024-N	SS SHCS 1/4-20 X 1.5 LONG	HW	OTS	
	UC COMPONENTS	1			6	1	7	EA		SSTL Ag PLT N-2520-A	SS NUT, HEX HD, 1/4-20, SILVER PLATED	HW	OTS	
	UC COMPONENTS	1			6	1	7	EA		SSTL NJ-2520	SS HEX JAM NUT, 1/4-20	HW	OTS	
E1000883	<b>BSC8 = mirror of BSC7</b>	0			1	0	1	EA	E1000884	D1002431	<b>aLIGO TCS CO2P SYS STEERING OPTICS ASSY, H2, BSC8</b>	TopAssy	MTS	v3
	KUGLER	1			1	0	1	EA		D1001727	TCS H2IN-VAC MIRROR (212 IN, Au-COATED Cu)	PRT	MTS	v2
	HELICOIL	2			8	1	9	EA		N60 TYPE 1185	NITRONIC-60, #8-32, 2-1/2 D, .410 LONG, SIZE 2CN	HW	OTS	
		1			2	0	2	EA		SSTL D1002313	TCS UHV FINE ADJUST PIVOT ROD	PRT	MTS	v2
		1			1	0	1	EA		AI 6061 D1002455	TCS UHV AZ FINE ADJUST PIVOT PLATE, BSC8	PRT	MTS	v2
	HELICOIL	2			2	1	3	EA		N60 TYPE 1191	NITRONIC-60, #10-32, 2 D, .380 LONG, SIZE 3CN	HW	OTS	
		1			1	0	1	EA		AI 6061 D1002311	TCS UHV EL FINE ADJUST PIVOT PLATE	PRT	MTS	v2
	HELICOIL	2			1	1	2	EA		N60 TYPE 1191	NITRONIC-60, #10-32, 2 D, .380 LONG, SIZE 3CN	HW	OTS	
	UC COMPONENTS	1			4	1	5	EA		SSTL Ag PLT C-822-A	VENTED, Ag PLATED SS SHCS #8-32 X 1-3/8 LONG	HW	OTS	
	UC COMPONENTS	1			4	1	5	EA		SSTL Ag PLT C-816-A	VENTED, Ag PLATED SS SHCS #8-32 X 1 LONG	HW	OTS	
	UC COMPONENTS	1			8	2	10	EA		SSTL WFFV-08	VENTED FLAT WASHER #8	HW	OTS	
	UC COMPONENTS	1			5	1	6	EA		SSTL SHCV-4436	VENTED HEX HD 1.5IN SHOULDER SHC #10-32	HW	OTS	
	UC COMPONENTS	1			27	3	30	EA		SSTL Ag PLT WFFV-25	VENTED FLAT WASHER, 0.26 ID	HW	OTS	
		1			1	0	1	EA		SSTL D1002454	TCS UHV BRACKET (LONG SIDE), BSC8	PRT	MTS	v2
	HELICOIL	2			1	1	2	EA		N60 TYPE 1191	NITRONIC-60, #10-32, 2-1/2 D, .475 LONG, SIZE 3CN	HW	OTS	
		1			1	0	1	EA		SSTL D1002453	TCS UHV BRACKET, SHORT SIDE, BSC8	PRT	MTS	v2
	HELICOIL	2			1	1	2	EA		N60 TYPE 1191	NITRONIC-60, #10-32, 2-1/2 D, .475 LONG, SIZE 3CN	HW	OTS	
		1			1	0	1	EA		AI D1002317	TCS UHV LONG SUPPORT, BSC7 & BSC8	PRT	MTS	v3
		1			1	0	1	EA		AI D1002327	TCS UHV SHORT SUPPORT, BSC7 & BSC8	PRT	MTS	v3
	Viton, SYS procurement	1			2	1	3	EA		VITON D1003328	TCS UHV H2 ASSEMBLY INTERFACE DAMPER	PRT	MTS	v1
		1			1	0	1	EA		AI D1002333	TCS UHV BACK BRACE, BSC7 & BSC8	PRT	MTS	v3
		1			1	0	1	EA		SSTL D1002334	TCS UHV COARSE ADJUST PIVOT ROD	PRT	MTS	v2
	UC COMPONENTS	1			6	1	7	EA		SSTL C-2024-N	SS SHCS 1/4-20 X 1.5 LONG	HW	OTS	
	UC COMPONENTS	1			6	1	7	EA		SSTL Ag PLT N-2520-A	SS NUT, HEX HD, 1/4-20, SILVER PLATED	HW	OTS	
	UC COMPONENTS	1			6	1	7	EA		SSTL NJ-2520	SS HEX JAM NUT, 1/4-20	HW	OTS	
E1000883	<b>for either BSC7 or BSC8</b>	0			1	0	1	EA	E1000884	D1100293	<b>aLIGO TCS TEMPLATE, H2 UHV CO2P MIRROR ASSY</b>	TopAssy	MTS	v1
		1			1	0	1	EA		D1100263	aLIGO TCS FIXTURE, H2 UHV MIRROR ASSY	ASSY	MTS	v2
		2			1	0	1	EA		6061 alloy D1100265	aLIGO TCS FIXTURE BASE PLATE, H2 STEERING MIRROR ASSY	PRT	MTS	v2
		2			2	0	2	EA		6061 alloy D1100266	aLIGO TCS FIXTURE TALL SUPPORT GUSSET	PRT	MTS	v2
		2			2	0	2	EA		6061 alloy D1100267	aLIGO TCS FIXTURE SHORT SUPPORT GUSSET	PRT	MTS	v2
		2			4	0	4	EA		6061 alloy D1100285	aLIGO TCS FIXTURE RETAINER	PRT	MTS	v2
	HOME DEPOT	2			2	2	4	EA		SSTL [N/A]	HANDLE, 5 IN	PRT	OTS	
	UC COMPONENTS	3			8	2	10	EA		18-8 SSTL FA-808-N	FHSCS 8-32 X 1/2 LONG, 18-8 SSTL	HW	OTS	
	UC COMPONENTS	3			8	2	10	EA		18-8 SSTL C-806-N	SHCS 8-32 UNC-2A X 3/8 LONG, 18-8 SSTL	HW	OTS	
	UC COMPONENTS	3			8	2	10	EA		18-8 SSTL WF-08	FLAT WASHER, #8, NAS 620-C8 OR EQUIVALENT	HW	OTS	
	UC COMPONENTS	3			8	2	10	EA		18-8 SSTL FA-812-N	FHSCS 8-32 X 3/4 LONG, 18-8 SSTL	HW	OTS	
	UC COMPONENTS	3			8	2	10	EA		18-8 SSTL N-832	HEX NUT, 8-32	HW	OTS	
	McMASTER-CARR PN	3			8	2	10	EA		18-8 SSTL 96659A103	FLAT WASHER, #8, MS 15795 OR EQUIVALENT	HW	OTS	
		1			2	0	2	EA		6061 alloy D1100300	aLIGO TCS INTERFACE TEMPLATE	PRT	MTS	v2
		1			1	0	1	EA		6061 alloy D1100297	aLIGO TCS LONG BASE TEMPLATE	PRT	MTS	v2
		1			1	0	1	EA		6061 alloy D1100296	aLIGO TCS SHORT BASE TEMPLATE	PRT	MTS	v2
		1			1	0	1	EA		6061 alloy D1100298	aLIGO TCS TEMPLATE BRACE	PRT	MTS	v1
		1			1	0	1	EA		6061 alloy D1100295	aLIGO TCS FIXTURE TEMPLATE BRACE	PRT	MTS	v2
		1			2	0	2	EA		6061 alloy D1100294	aLIGO TCS FIXTURE TEMPLATE	PRT	MTS	v1
	UC COMPONENTS	2			6	2	8	EA		18-8 SSTL C-2008-N	SHCS 1/4-20 UNC-2A X 0.5 LONG	HW	OTS	
	UC COMPONENTS	2			6	2	8	EA		18-8 SSTL C-2012-N	SHCS 1/4-20 UNC-2A X 0.75 LONG	HW	OTS	
	MCMaster P/N	2			12	4	16	EA		18-8 SSTL 96659A106	FLAT WASHER, 1/4 IN, 5/8 OD, MS 15795 OR EQUIV	HW	OTS	
	MCMaster P/N	2			4	2	6	EA		18-8 SSTL 97365A170	PULL-OUT DOWEL PIN, 1/4 IN, FLAT VENT, 2.5 IN LONG	HW	OTS	