

NOTES CONTINUED:

1. SEE PAGE 2 PARTS FOR BALANCE
D1102250 / D1102252 / D1200098 VIEW UPPER RIGHT PG.2
2. RESTRAINT CHAINS ON EARTHQUAKE RESTRAINT (ITEM 2)
3. ADDITIONAL OPTICAL ALIGNMENT TOOLING NOT SHOWN
4. LIGO-**E1200811** - additional tooling for alignment of the telescope
5. D1100807 - is a 'Bosch Frame' used for initial setup
6. **E1201012 Assembly and Installation Document, references the tooling and use.**

REV	DATE	DCN #	BOM #	DRAWING TREE #
v1	02 SEP 2011	E1100351	E1100706	E1100735
V2	8-10-12	TO FOLLOW	TO FOLLOW	E1200793
v3	11-28-12	to follow	-	-
v4	4-10-13	to follow	to follow	E1200793
v5	7-9-13	to follow	to follow	E1200793

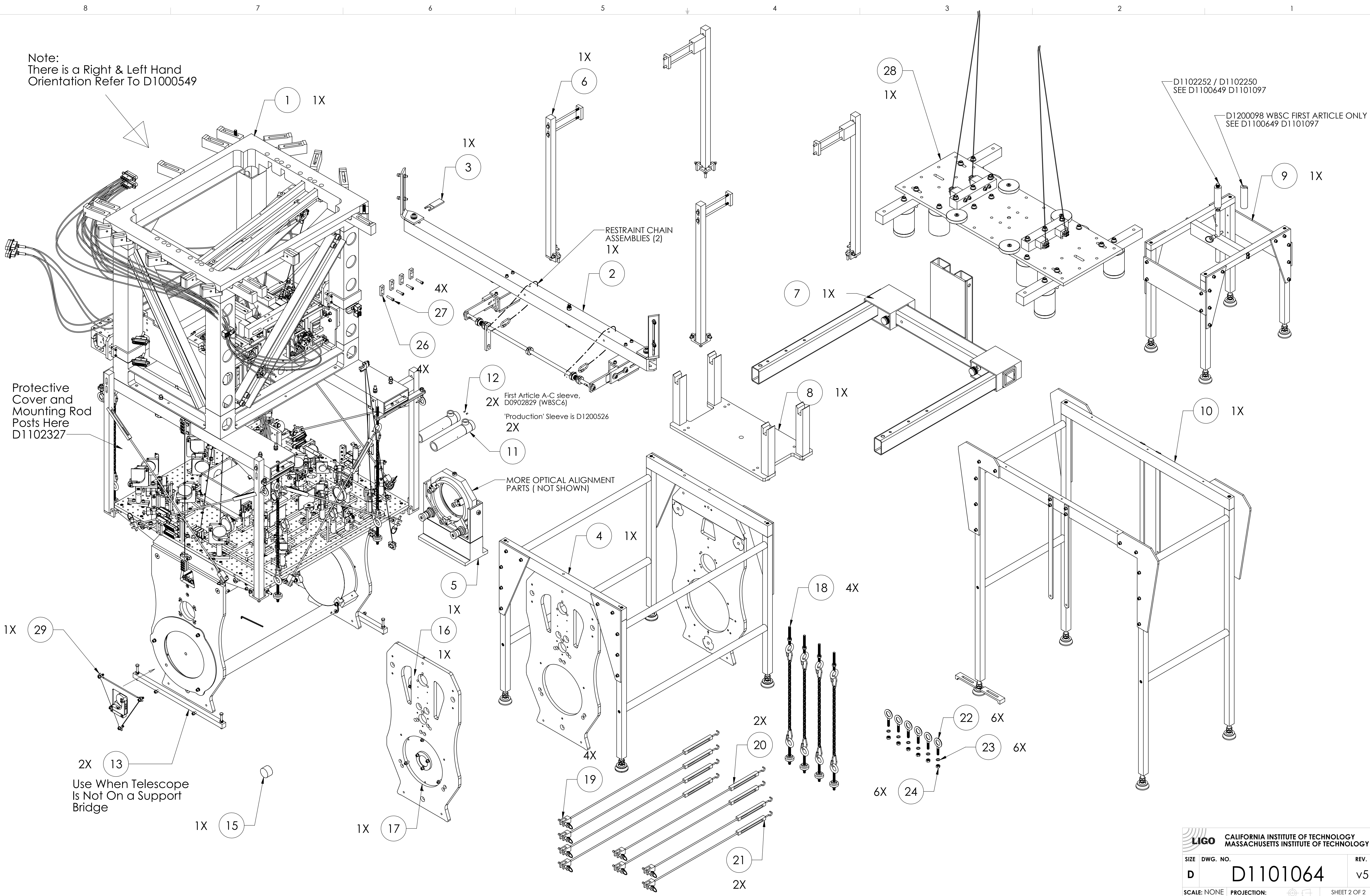
ITEM NO	PART NUMBER	REV	DESCRIPTION	MATERIAL	REQ	SPARE	TOTAL
29	D1200565		αLIGO TMS tele input end mirror tool	N/A	1		1
28	D1002097		αLIGO_TMS_TEST_MASS_ASEM	--	1		1
27	92200A542 (McM-Carr) or equiv per MS16995-52		SCREW, SOCKET HEAD CAP, 1/4-20 UNC-2A X 1 LONG	300 SSSL	4	2	6
26	D1101757	v1	αLIGO TMS UPPER SUS WIRE ADJUSTER	6061-T6 Al	4	-	4
25	D1101575	v1	αLIGO ALLEN WRENCH, FOR TMS VERT.-HOR. SCREW	Alloy Steel	1	-	1
24	D1100989	v1	NICKEL-COPPER ALLOY 400 .312-18 HEX NUT, MODIFIED	NICKEL-COPPER ALLOY 400	6	4	10
23	96861A700 (McM-Carr) or equiv		VENTED FLAT WASHER .328 ID, .562 OD, .032 TH	18-8 SSSL	6	4	10
22	33045T72 (McM-Carr) or equiv		EYEBOLT, NON-SHOULDERED, 780# 5/16-18 X 1.88" THREAD	304 SSSL	6	-	6
21	D1101506	v1	αLIGO TMS TELE SAFETY SUPPORT TURNBUCKLE ASSY, SIDE, SHORT	N/A	2	-	2
20	D1101559	v1	αLIGO TMS TELE SAFETY SUPPORT TURNBUCKLE ASSY, SIDE, LONG	N/A	2	-	2
19	D1101565	v1	αLIGO TMS TELE SAFETY SUPPORT TURNBUCKLE ASSY, FRONT	N/A	4	-	4
18	D1001891	v1	αLIGO TMS VERTICLE SEISMIC SAFETY STOP ASSEMBLY	N/A	4	1	5
17	D1101361	v1	TMS TOOLING TELESCOPE I-P ALIGNMENT MIRROR ASSEMBLY	N/A	1	1	2
16	D1101487	v1	TMS TOOLING TELESCOPE O-P ALIGNMENT MIRROR ASSEMBLY	N/A	1	1	2
15	D1100728	v1	TMS TELESCOPE DUMMY SECONDARY MIRROR	6061-T6 Al	1	1	2
14	D1100729	v1	TMS TELESCOPE MIRROR GAUGE ROD (NOT USED)	6061-T6 Al	1	1	2
13	D1100933	v1	TMS TELESCOPE BENCH SUPPORT ASSEMBLY	N/A	4	1	5
12	92778A071 (McM-Carr) or equiv		SCREW, SOCKET SET, OVAL POINT, #6-32 UNC X 0.25 LONG	300 SSSL	2	2	4
11	D-271 (Davidson Optronics)		AUTOCOLLIMATOR	N/A	2	-	2
10	D1100531	v1	αLIGO TMS OPTICAL TABLE SUPPORT BRIDGE ASSY	N/A	1	-	1
9	D1100649	v1	αLIGO TMS TELE-OPT TABLE BALANCE BRIDGE ASSY	N/A	1	-	1
8	D1100841	v1	αLIGO TMS TELE-OPT TABLE INSTALL TOOL ASSY	N/A	1	-	1
7	D1100886	v1	MODIFIED GENIE LIFT FORKS	N/A	1	-	1
6	D1100613	v1	αLIGO TMS TELESCOPE ASSEMBLY ALIGNMENT STABILIZATION TOOL	N/A	1	-	1
5	D1101510	v1	αLIGO TMS TELE ALIGNMENT 6in MIRROR MOUNT ASSY	N/A	1	-	1
4	D1100460	v1	αLIGO TMS TELE ALIGNMENT SUPPORT BRIDGE ASSY	N/A	1	-	1
3	D1101486	v1	αLIGO TMS EARTHQUAKE STOP TOOLING GAUGE	6061-T6 Al	1	-	1
2	D1001781	v2	αLIGO TMS SEISMIC SAFETY STOP STRUCTURE	N/A	1	-	1
1	D0900419	v1	AdvLIGO SUS BSC6-H2, XYZ Local CSm for ETM Tel Assy	N/A	1	-	1

PARTS LIST

DIMENSIONS ARE IN INCHES TOLERANCES: .XX ± .XXX ± ANGULAR ± °		NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED) 1. INTERPRET DRAWING PER ASME Y14.5-1994. 2. REMOVE ALL SHARP EDGES-.005-.015. FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATELY R.02 FOR SHEET METAL PARTS. 3. DO NOT SCALE FROM DRAWING. 4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER-SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.		 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME αLIGO TMS First Article (WBSC6) and Production Install and Setup Tooling	
MATERIAL N/A		FINISH N/A μinch		NEXT ASSY N/A		DESIGNER K. MAILAND 09 JUN 2011 DRAFTER C. CONLEY 02 SEP 2011 CHECKER SEE DCN 8-10-12 APPROVAL SEE DCN	
				SYSTEM ADVANCED LIGO		SUB-SYSTEM AOS	
				SIZE D		DWG. NO. D1101064	
				SCALE: NONE		PROJECTION:	
				SHEET 1 OF 2		REV. v5	

D:\1064-αLIGO TMS First Article Installation and Tooling - PART FDM REV. X024 - DRAWING FDM REV. X018

Note:
There is a Right & Left Hand
Orientation Refer To D1000549



D1101064.dwg This First Article Illustration and Tooling, PART FDM REV. X024, DRAWING FDM REV. X018