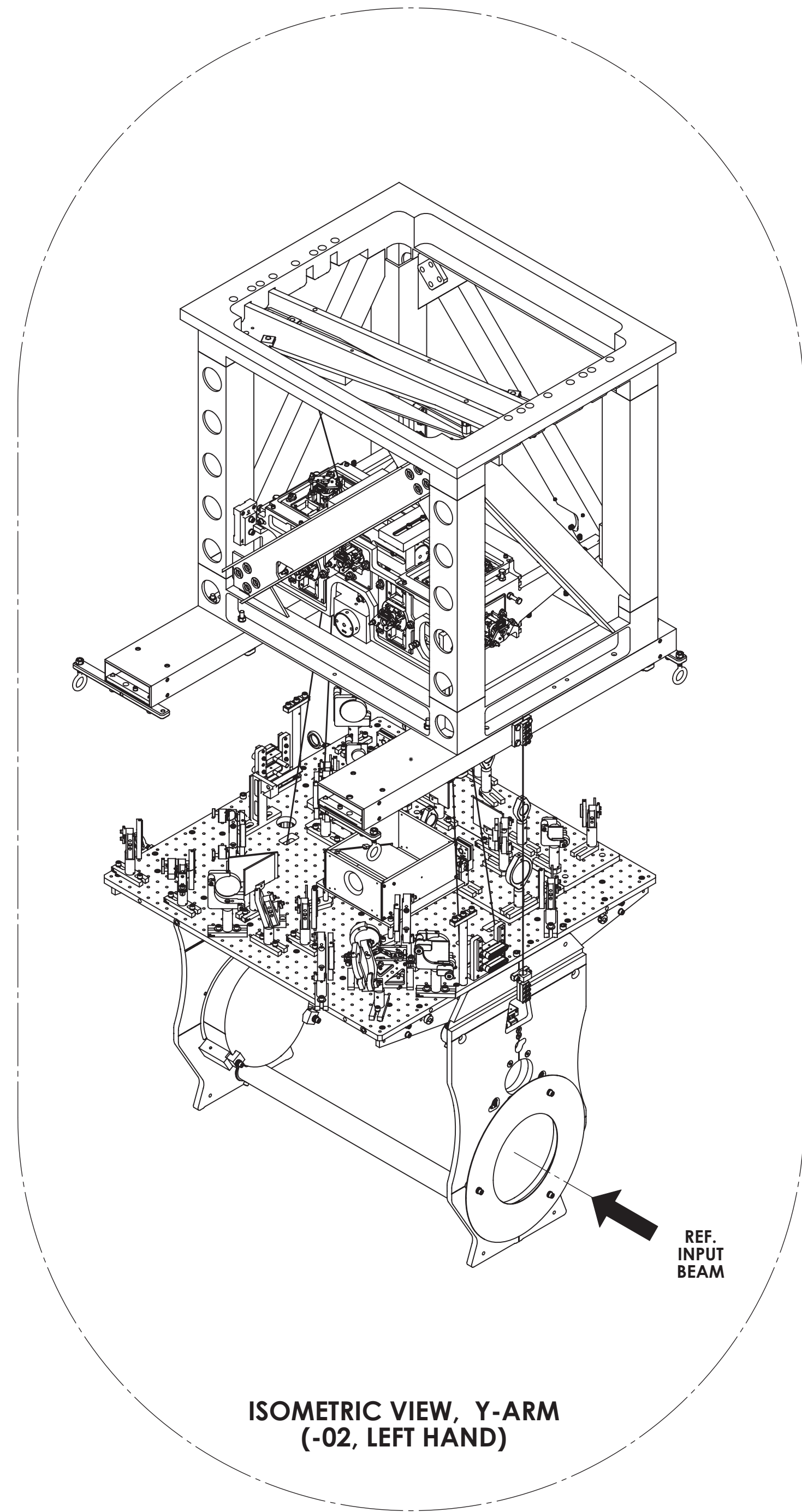


REV.	DATE	DCN #	DRAWING TREE #
v1	11 NOV 2011	E1100351	E1100593-v1
v5	19 JUL 2013	E13000609-x0	-
-	-	-	-

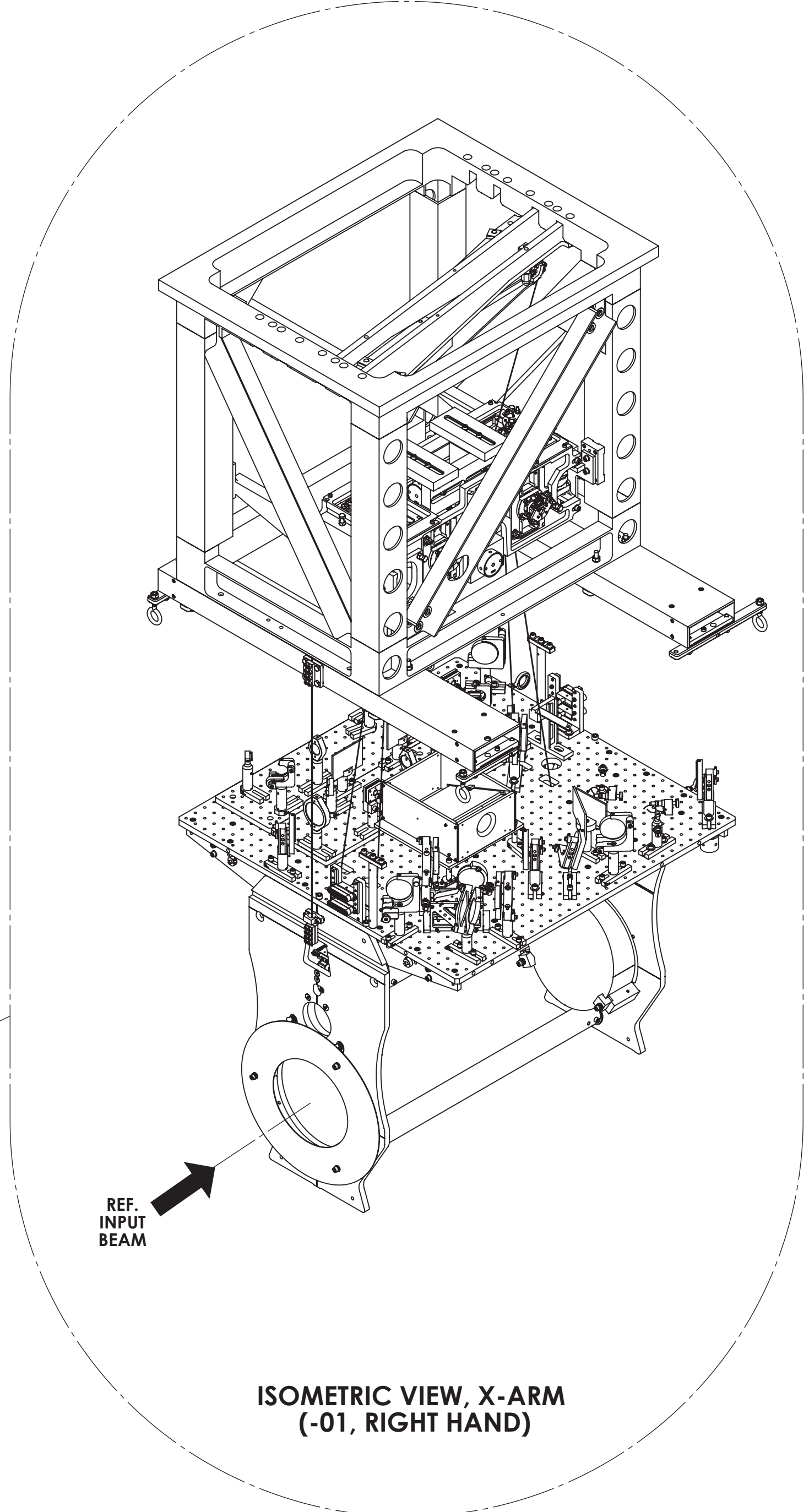
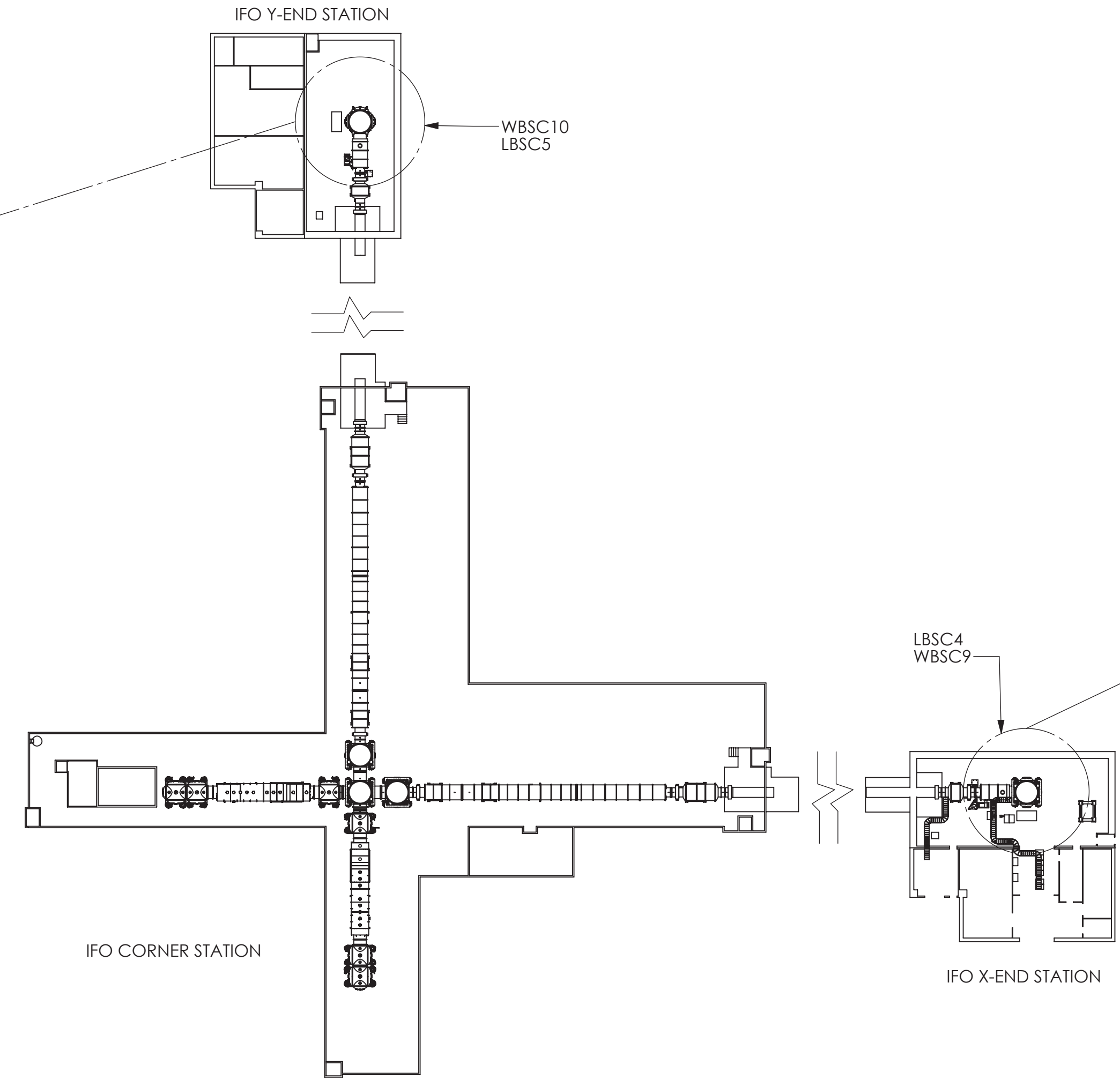
APPLICATION BLOCK	
PART NUMBER	'USED ON'
D0901880-01	WBSC10, LBSC5
D0901880-02	WBSC9, LBSC4

TMS REFERENCE DOCUMENTATION

- FOR SERVICE OF ETM AND TRANSPORT OF CARTRIDGE ASSEMBLY, REFER TO D1101307
- REFER TO LIGO D1101064 FOR TMS INSTALL AND SETUP TOOLING.
- REFER TO LIGO E12001012 FOR TMS ASSEMBLY AND INSTALLATION PROCEDURE.
- FOR TMS SWING STOP ASSEMBLY DETAILS, REFER TO D1300248.



**ISOMETRIC VIEW, Y-ARM
(-02, LEFT HAND)**



**ISOMETRIC VIEW, X-ARM
(-01, RIGHT HAND)**

- NOTES CONTINUED:
- BAG OR WRAP AND TAG ASSEMBLY WITH DRAWING NUMBER, REVISION, TYPE, AND SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY.
EXAMPLE (TAG): DXXXXXX-VY, TYPE -04, S/N 001
 - APPROXIMATE WEIGHT: 190.8 Kg.
 - BEFORE REMOVING OR DISINGAGING THE NOTED SPRING STOP FOR INSTALLATION OF ITEM (8), BLOCK THE SPRING WITH A STRONG METAL OBJECT FOR ADEQUATE SAFETY.
 - THIS ASSEMBLY HAS 4 CONFIGURATIONS, DESIGNATED AS ASSEMBLIES -01 THRU -04. -03 IS WBSC5 & -04 IS FIRST ARTICLE. FOR -03 & -04 DETAILS, SEE LIGO D0901880-v3.

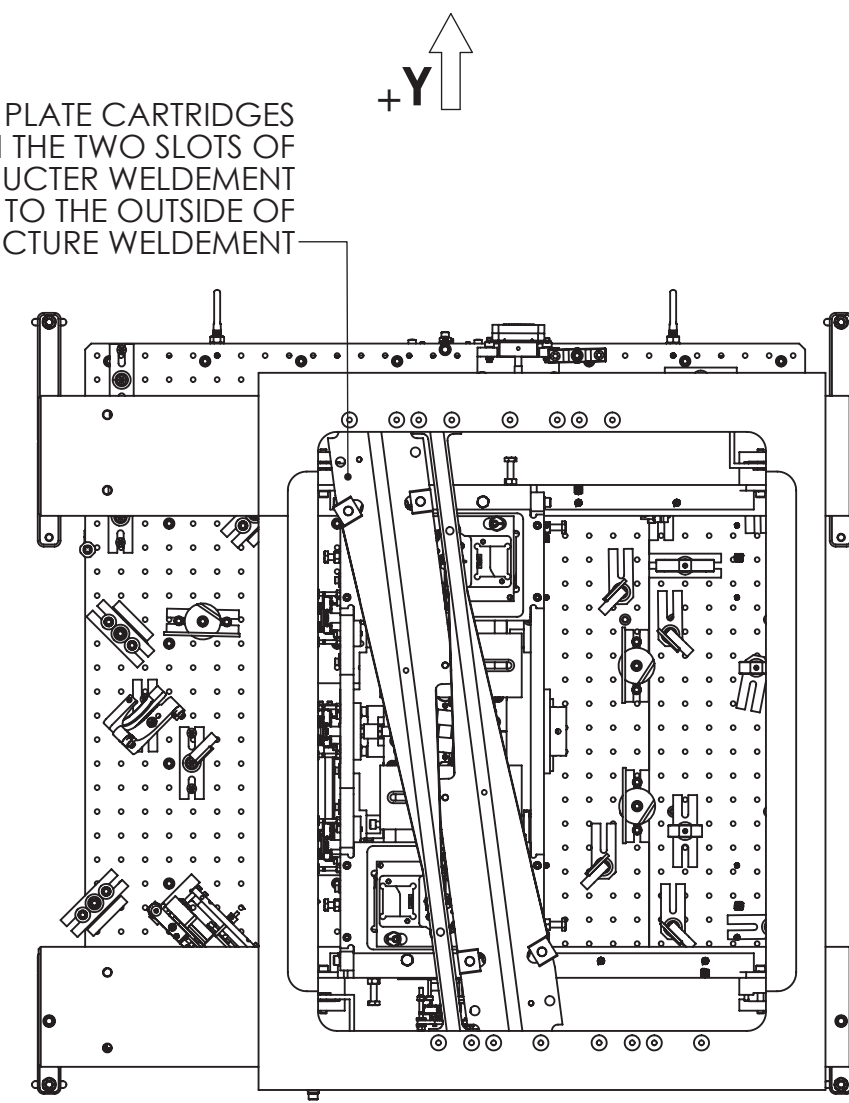
ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	-01/QTY.	-02/QTY.
8	D1200989	ALIGO CAPTIVE SCREW ASSEMBLY, TELE WIRE CLAMP	N/A	8	8
7	D1100827	ALIGO TMS VERTICAL SAFETY WIRE ASSEMBLY	N/A	1	1
6	D1101163	ALIGO TMS TELESCOPE SUSPENSION WIRE ASSEMBLY	N/A	2	2
5	D1101130-02	ALIGO TMS TELESCOPE SAFETY SUPPORT BEAM ASSEMBLY, LEFT	N/A	-	1
4	D1101130-01	ALIGO TMS TELESCOPE SAFETY SUPPORT BEAM ASSEMBLY, RIGHT	N/A	1	-
3	D1000549-01	ALIGO UPPER INTERMEDIATE MASS TOP ASSEMBLY	N/A	1	1
2	D1002460-03	ALIGO TMS TELESCOPE ASSEMBLY, Y-ARM	N/A	-	1
1	D1002460-01	ALIGO TMS TELESCOPE ASSEMBLY, X-ARM	N/A	1	-

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME		aLIGO AOS TRANSMISSION MONITOR SYSTEM	
MATERIAL		FINISH		SYSTEM		SUB-SYSTEM	
N/A		N/A μinch		ADVANCED LIGO		AOS	
NEXT ASSY		PART NUMBER		DESIGNER		DATE	
D0900435, D0900436, D0902163, D0902168		D0901880		K. MAILAND		19 NOV 2009	
DRAWN		CHECKER		DRAFTER		DATE	
SEE DCN		SEE DCN		C. CONLEY		11 NOV 2011	
APPROVAL		SCALE: 1:1		CHECKER		PROJECTION:	
SEE DCN		SEE DCN		SEE DCN		SEE DCN	
PARTS LIST		DWG. NO.		REV.		SHEET 1 OF 4	
D		D0901880		v5			

-02, Y-ARM

-01, X-ARM

TOP STAGE PLATE CARTRIDGES
INSTALLED IN THE TWO SLOTS OF
THE UPPER STRUCTURE WELDEMENT
WHICH ARE NEAREST TO THE OUTSIDE OF
THE UPPER STRUCTURE WELDEMENT

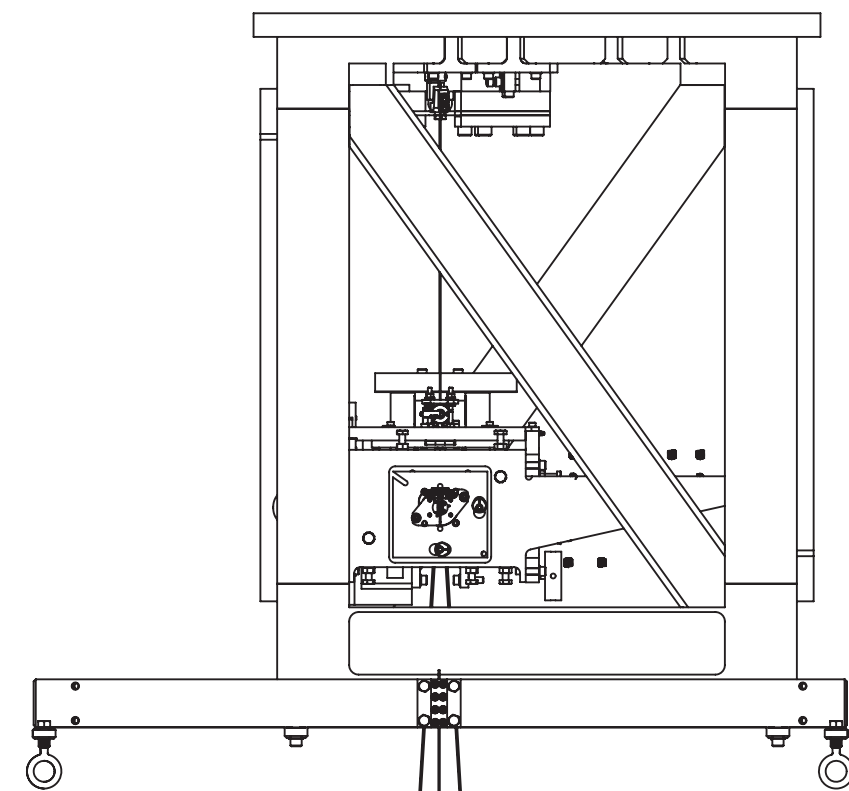
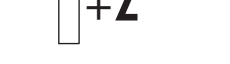


TOP VIEW
NOTE: UPPER WELDEMENT
ROTATED

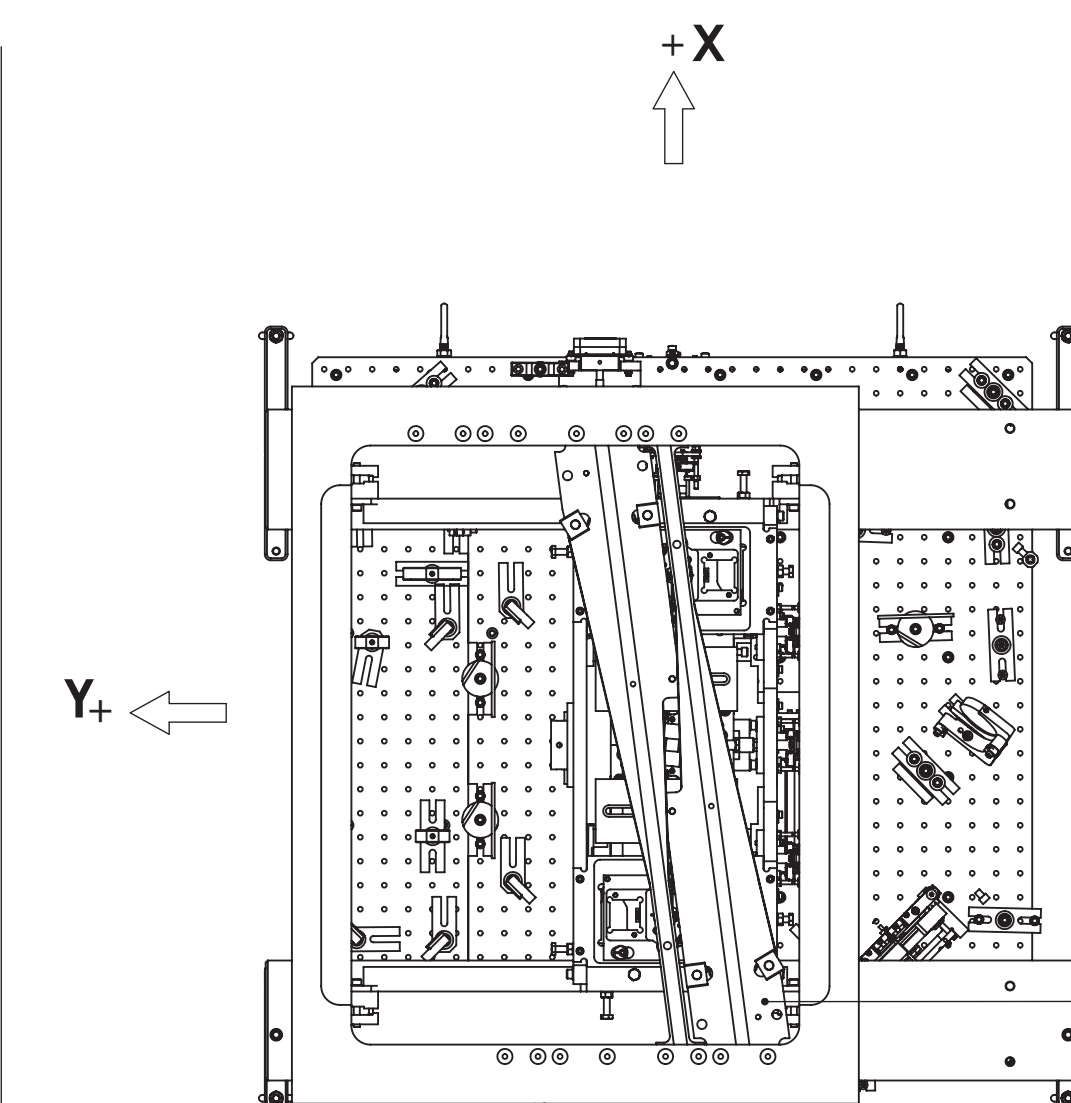


180

WRT -01



FRONT VIEW, Y-ARM
(-02, LEFT HAND)

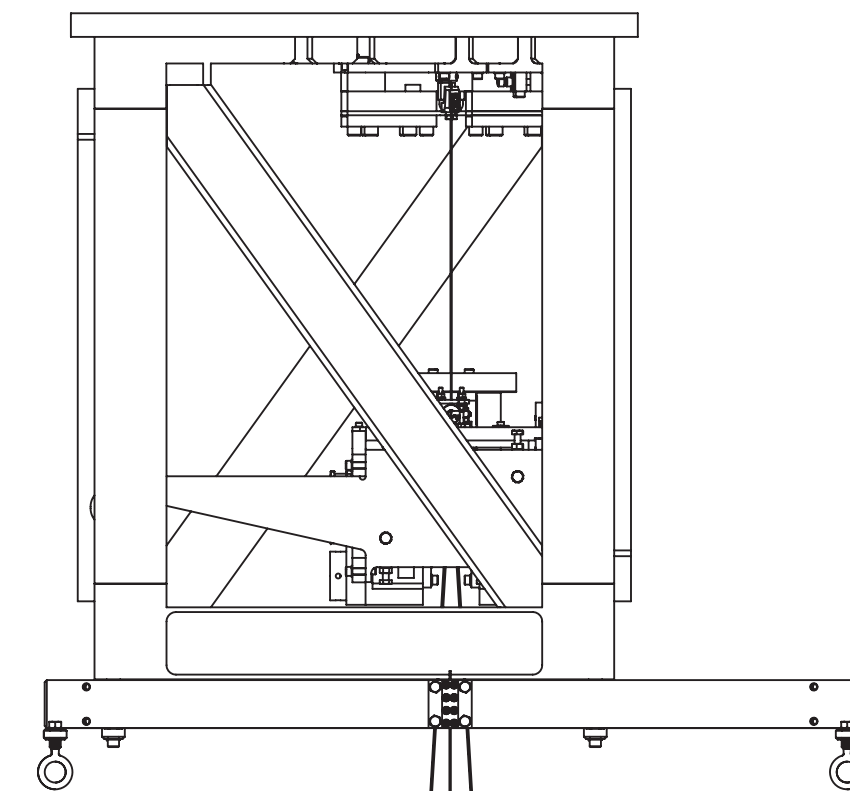


TOP VIEW
NOTE: UPPER WELDEMENT
ROTATED



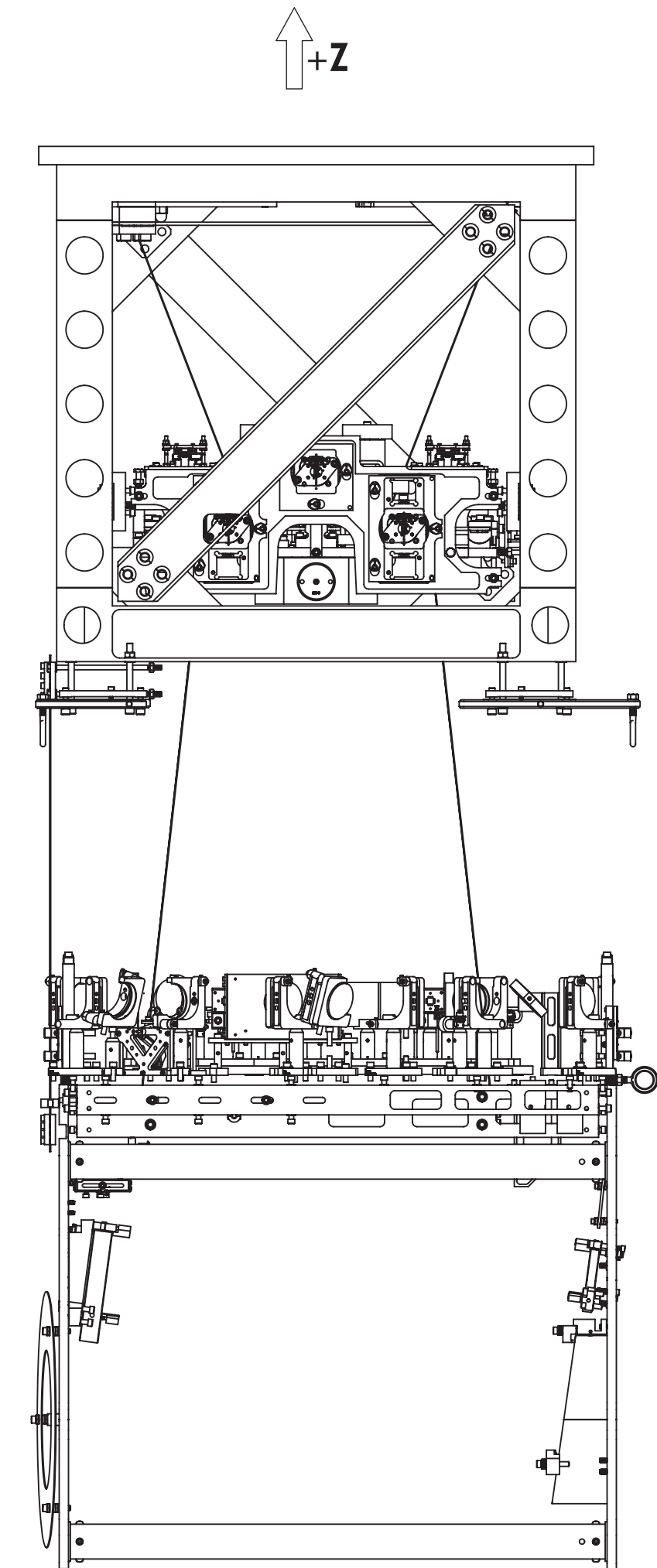
180

WRT -02

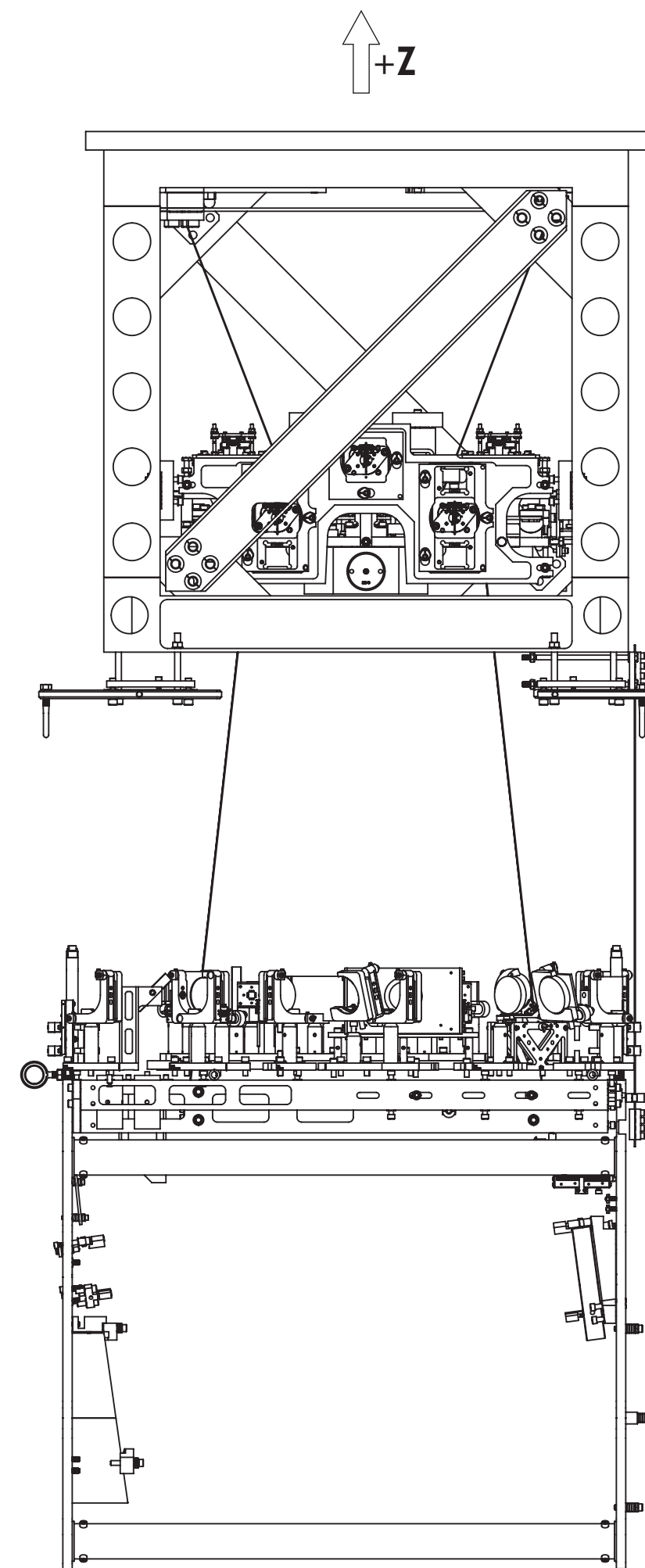


FRONT VIEW, X-ARM
(-01, RIGHT HAND)

TOP STAGE PLATE CARTRIDGES
INSTALLED IN THE TWO SLOTS OF
THE UPPER STRUCTURE WELDEMENT
WHICH ARE NEAREST TO THE OUTSIDE OF
THE UPPER STRUCTURE WELDEMENT



RIGHT SIDE VIEW

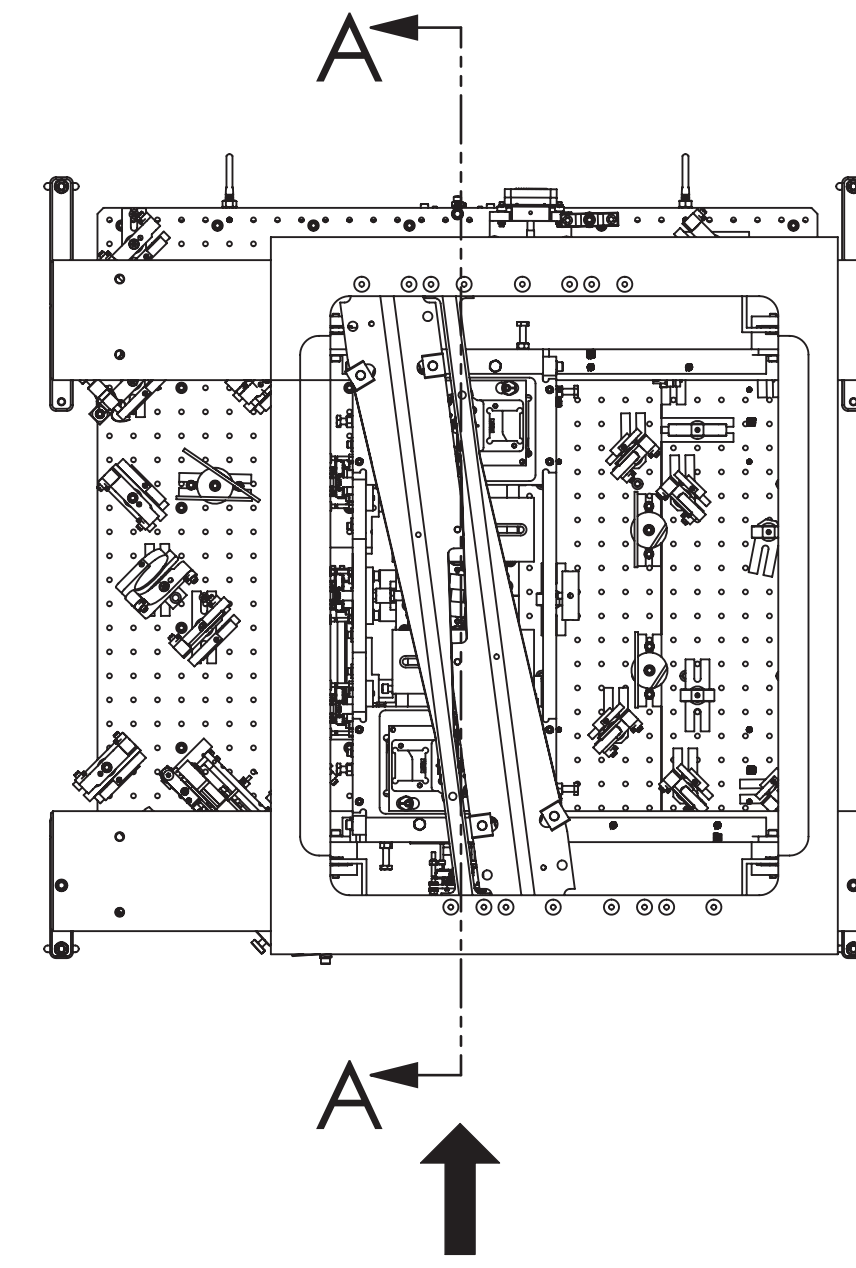


LEFT SIDE VIEW

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
D D0901880	v5
SCALE: NONE PROJECTION:	SHEET 2 OF 4

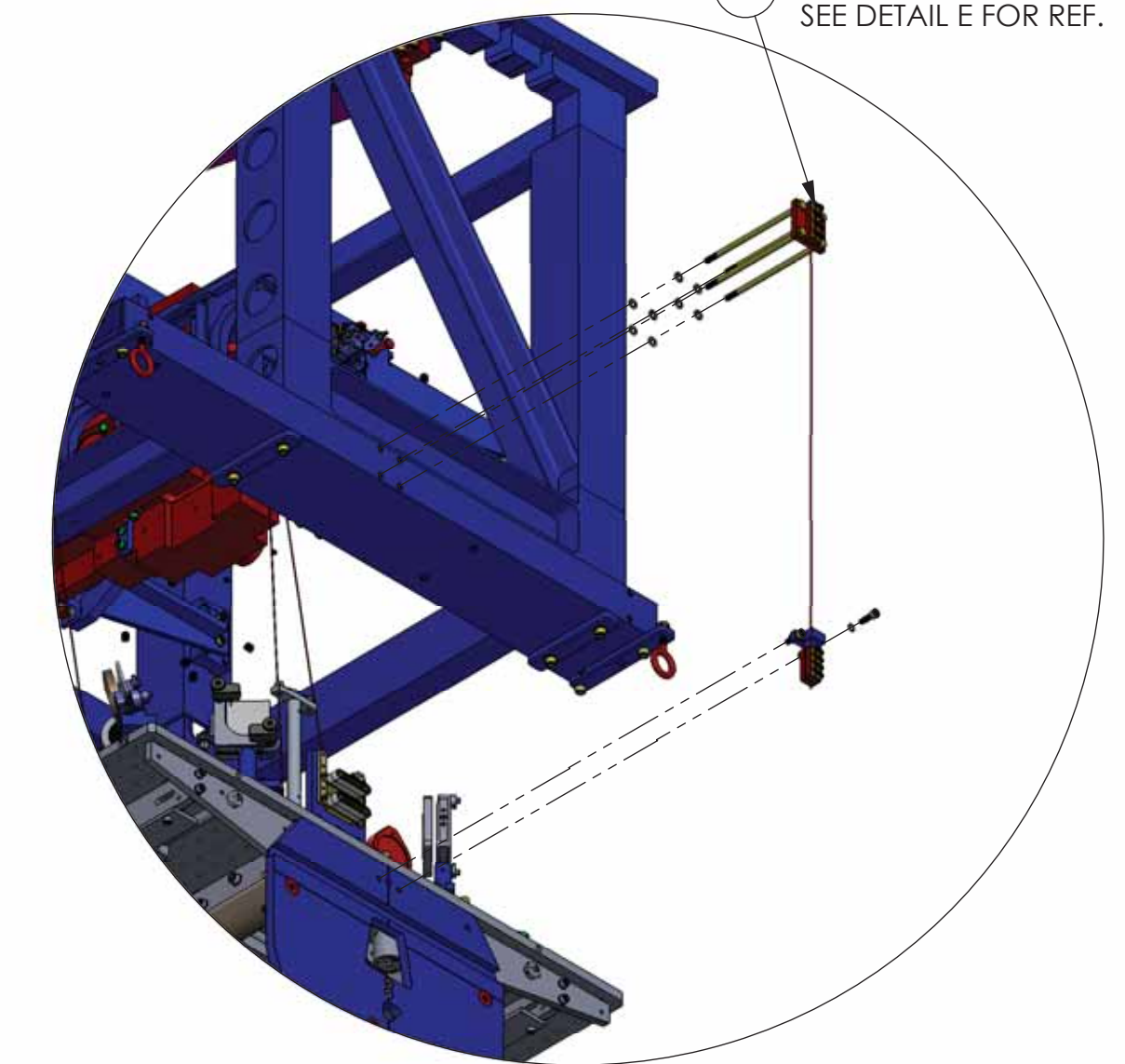
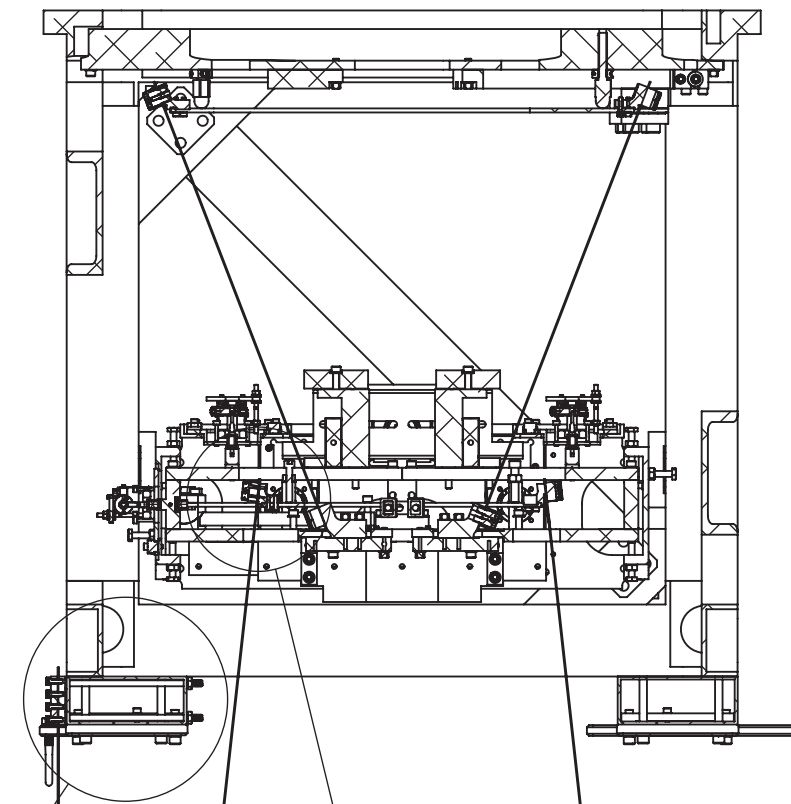
DD901880_AOS_EIN TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY, PART FDM REV. X-472, DRAWING FDM REV. X-032

-02, Y-ARM

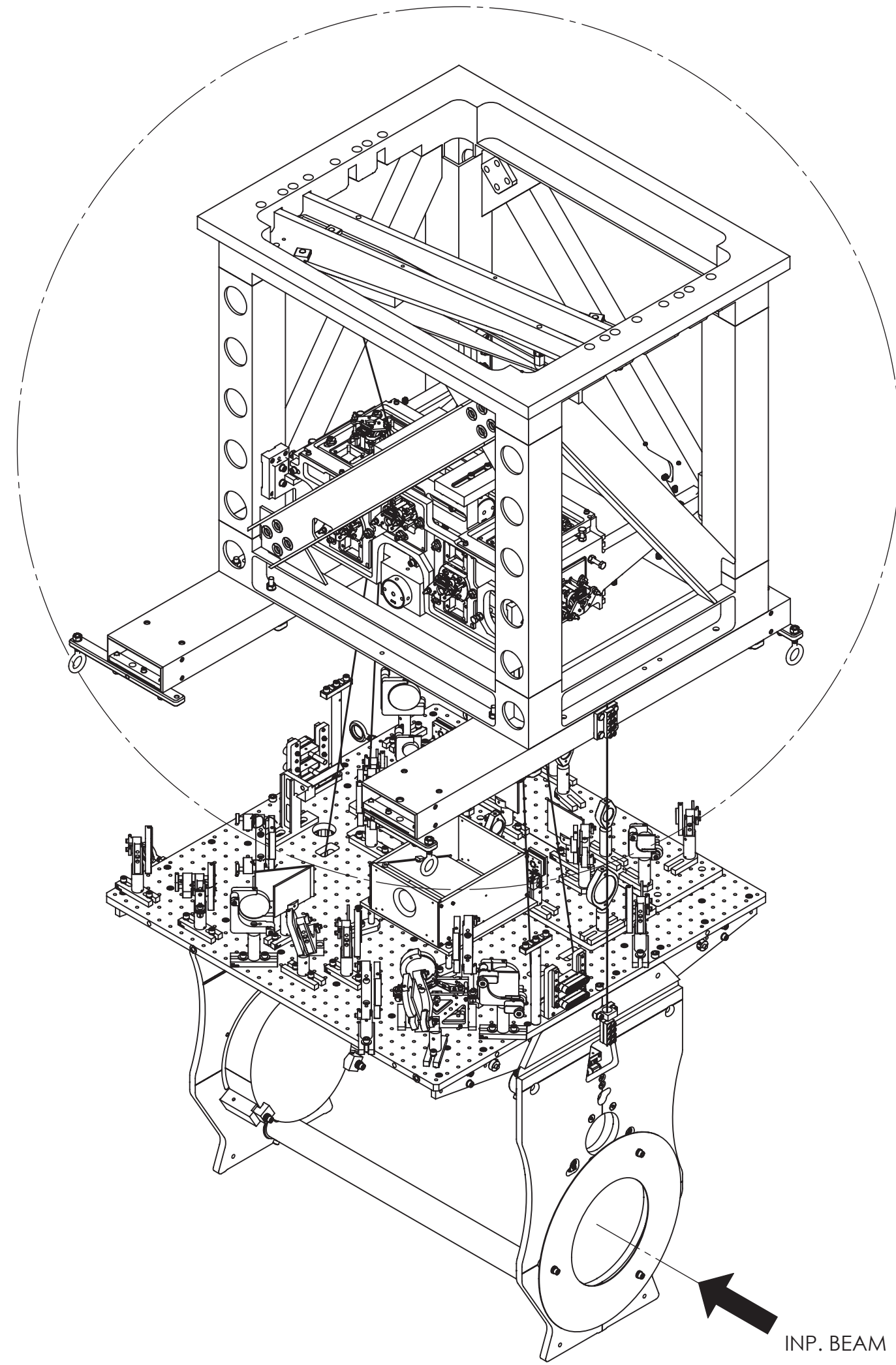


INP. BEAM
**TOP VIEW, Y-ARM
 (-02, LEFT HAND)**

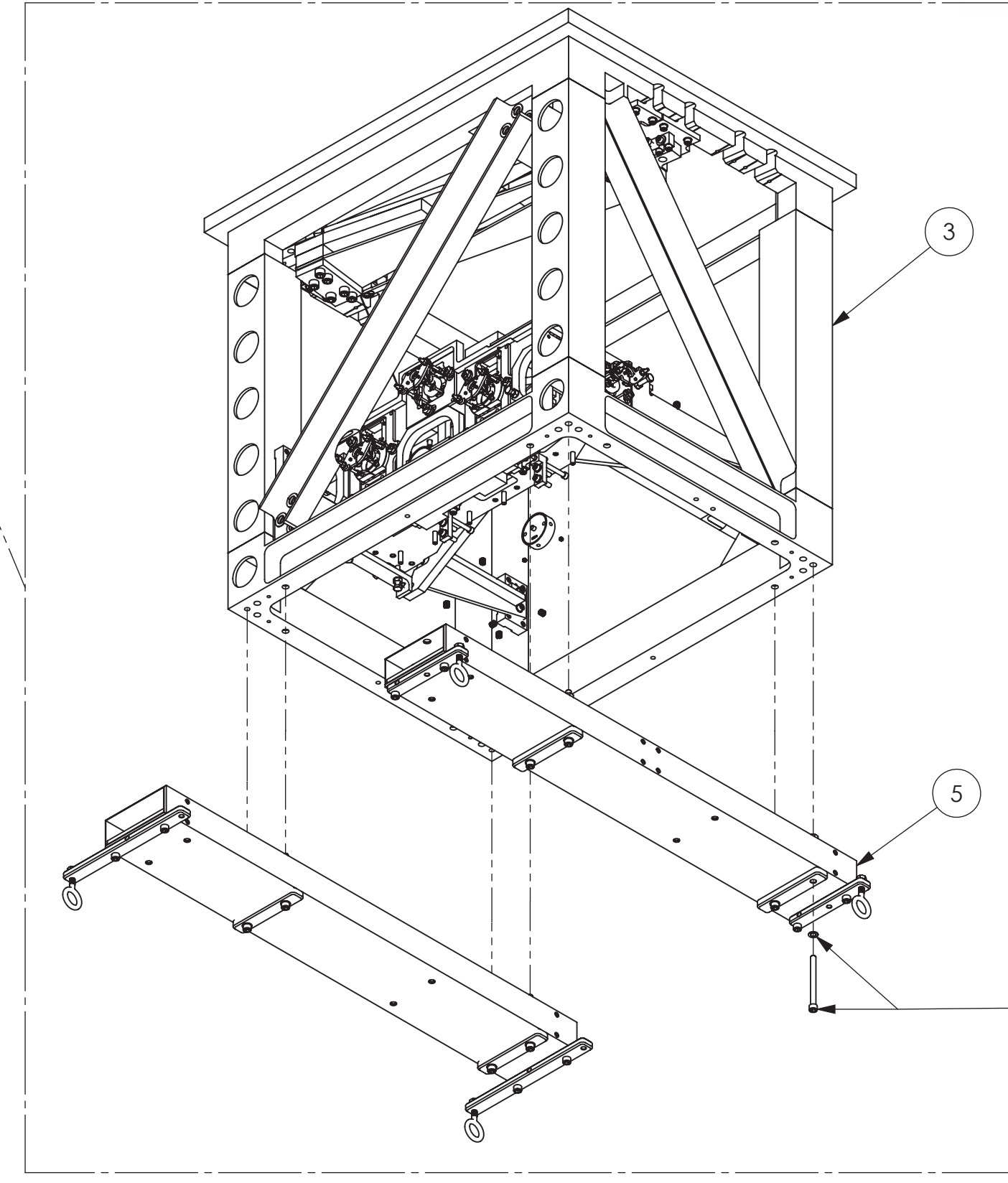
**SECTION A-A
 (ROTATED 90 DEGREES CW)**



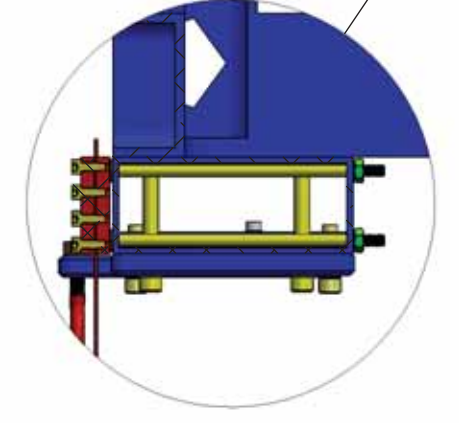
7 ALL MT. HARDWARE SUPPLIED W/ ITEM NO. 7 SEE DETAIL E FOR REF.



**ISOMETRIC VIEW, Y-ARM
 (-02, LEFT HAND)**

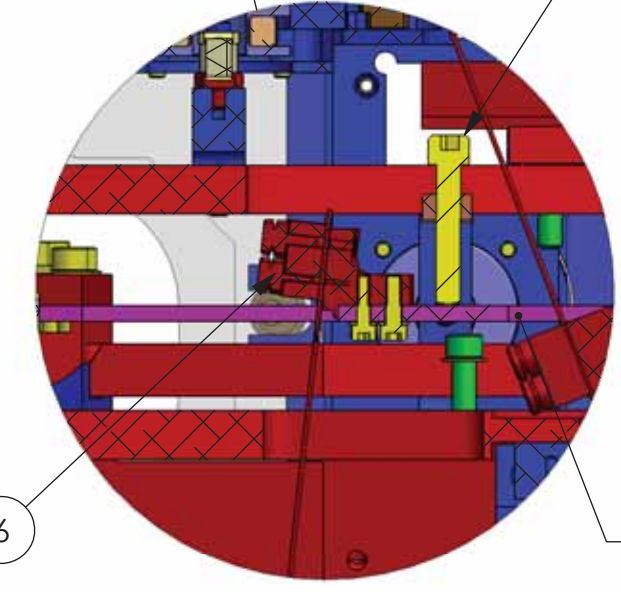


**ISOMETRIC VIEW, Y-ARM
 (-02, LEFT HAND)
 UNDERSIDE**



DETAIL E

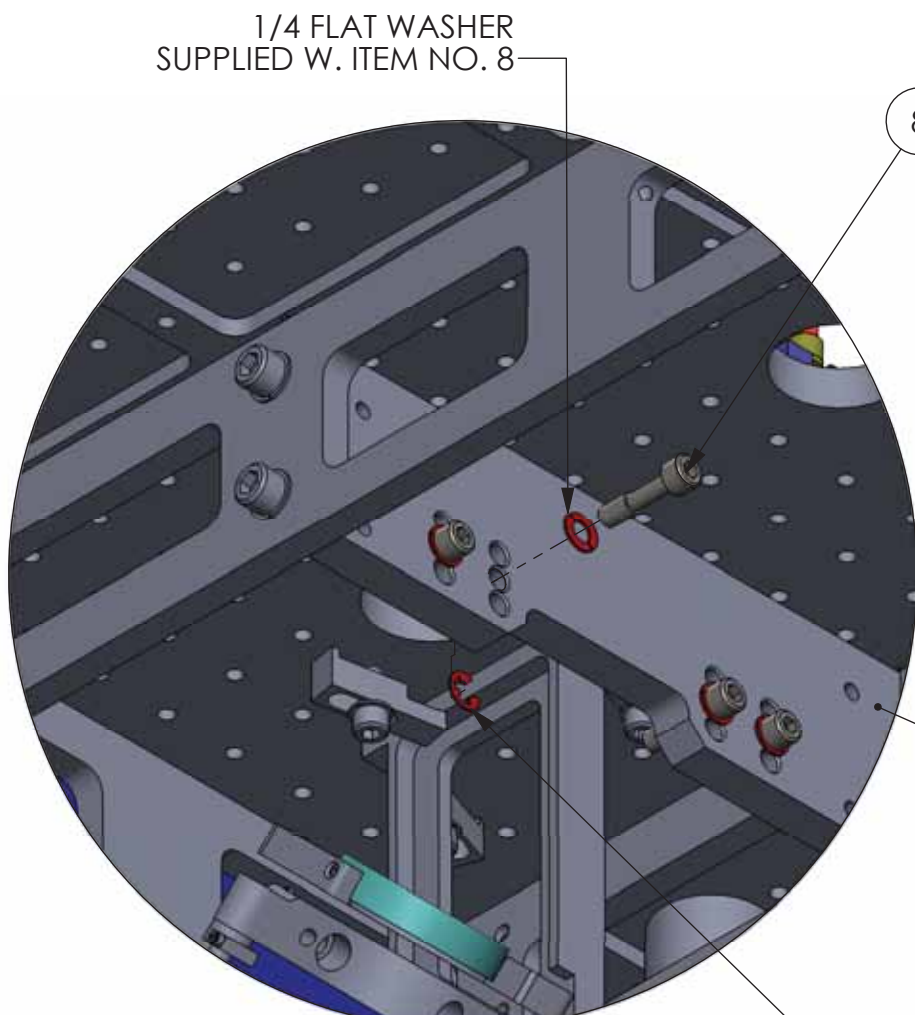
MT. HARDWARE SUPPLIED W/ 2X ITEM NO. 6



DETAIL B

SPRING STOP PART OF ITEM 3

BLADE SPRING PART OF ITEM 3

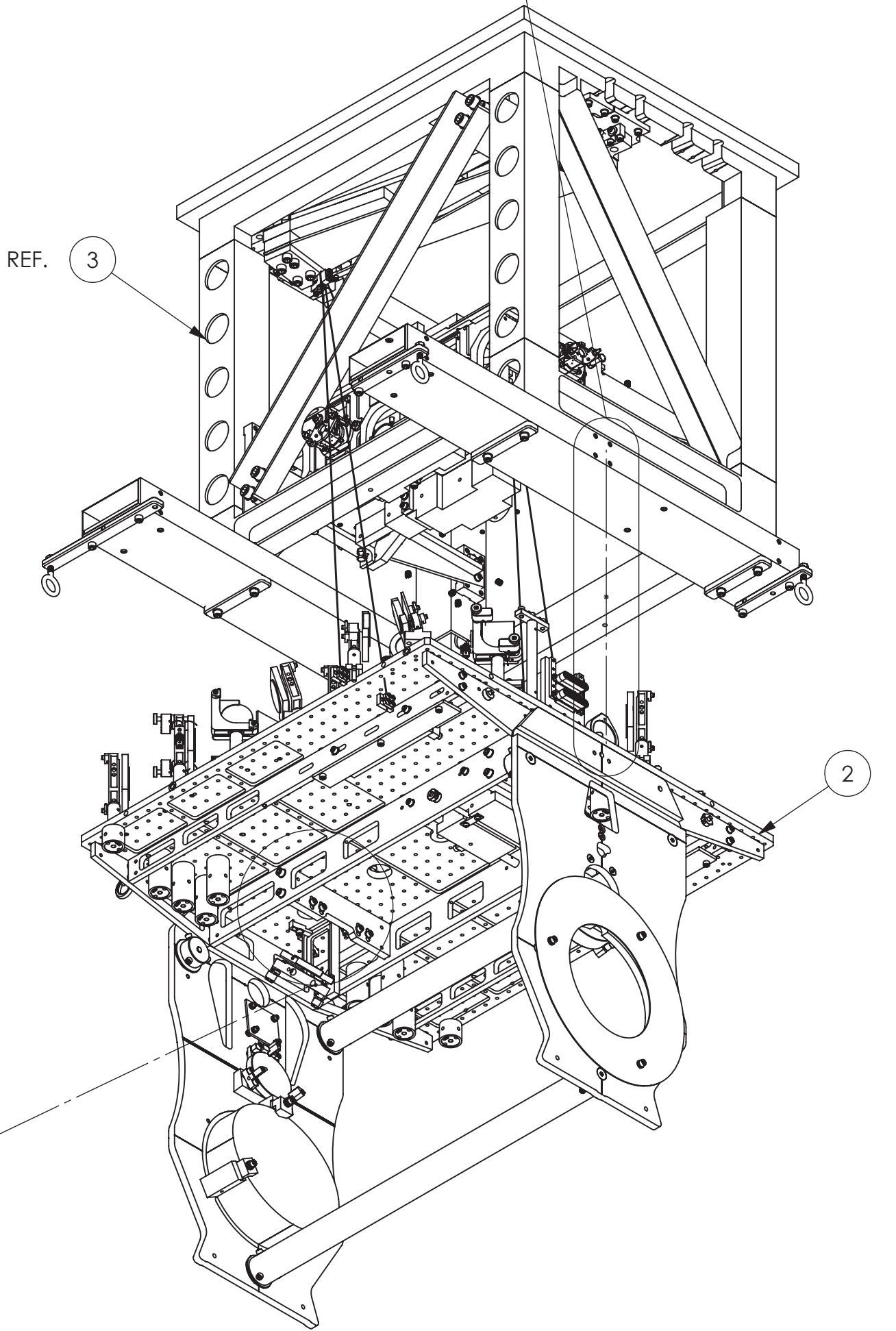


1/4 FLAT WASHER SUPPLIED W. ITEM NO. 8

8 4X 2 PL.

2 REF.

RETAINING RING SUPPLIED W. ITEM NO. 8

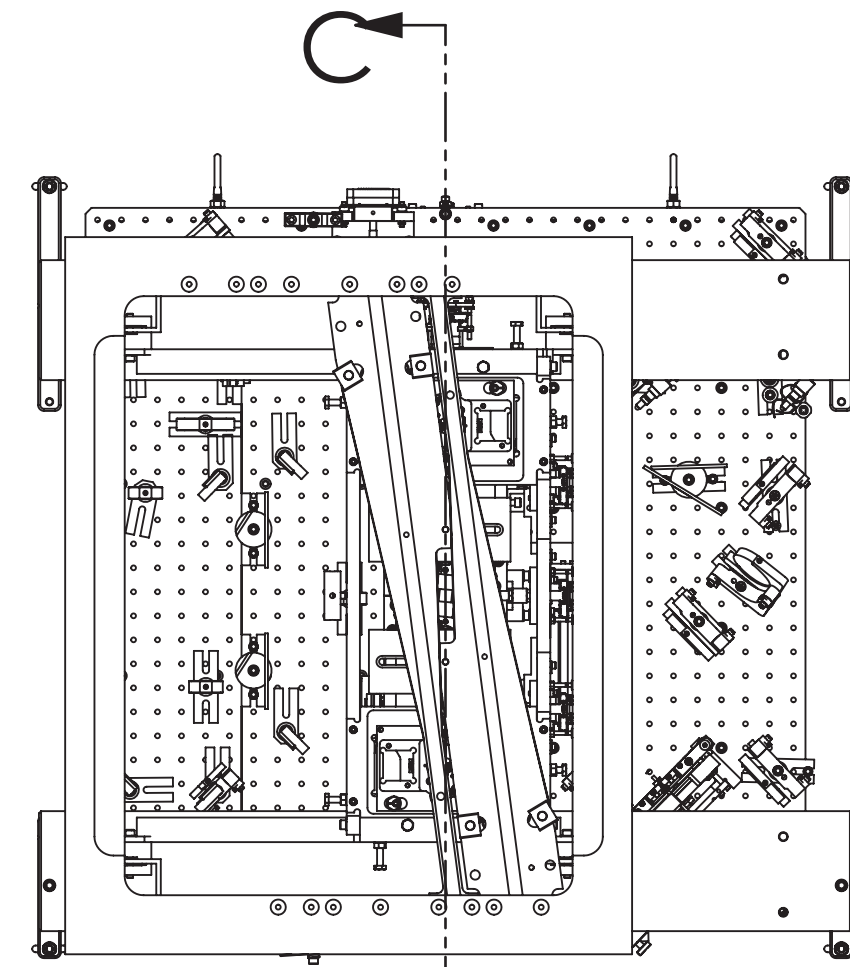


**ISOMETRIC VIEW, Y-ARM
 (-02, LEFT HAND)
 UNDERSIDE**

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
D D0901880	v5
SCALE: NONE	PROJECTION:
SHEET 3 OF 4	

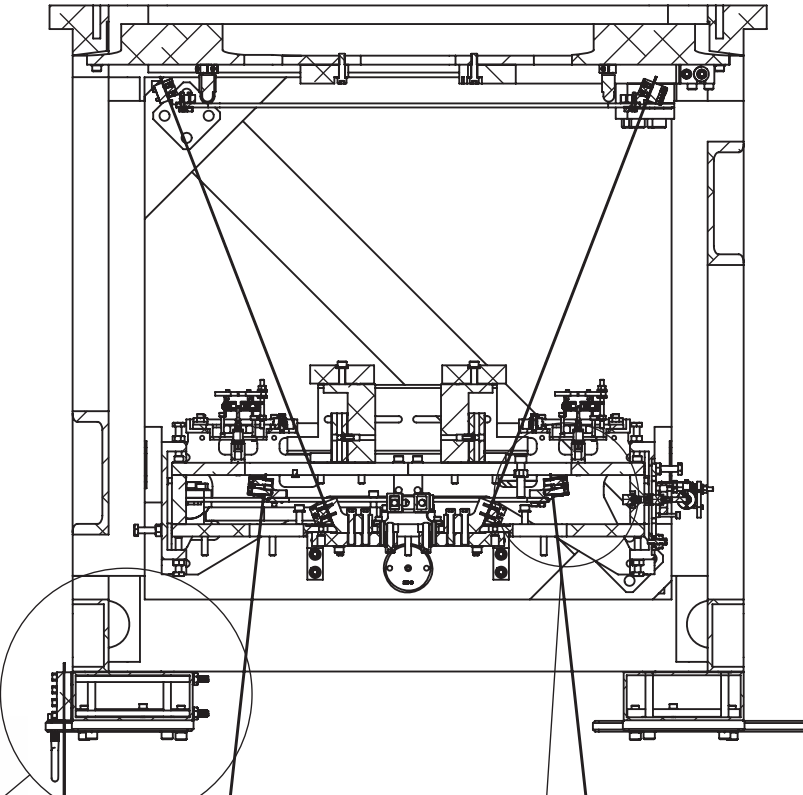
D0901880_AOS_EIN TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY PART FROM REV. X-472 DRAWING FROM REV. X-032

-01, X-ARM

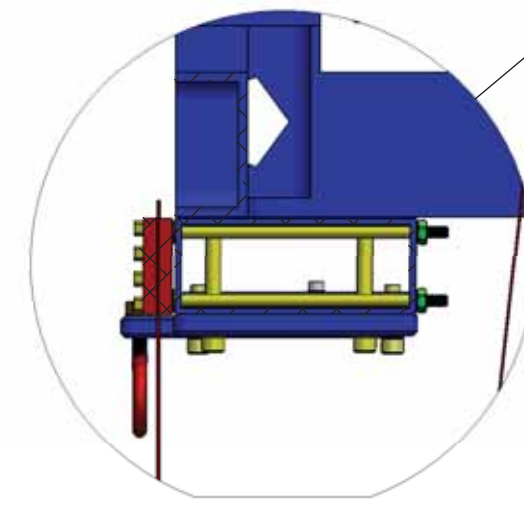
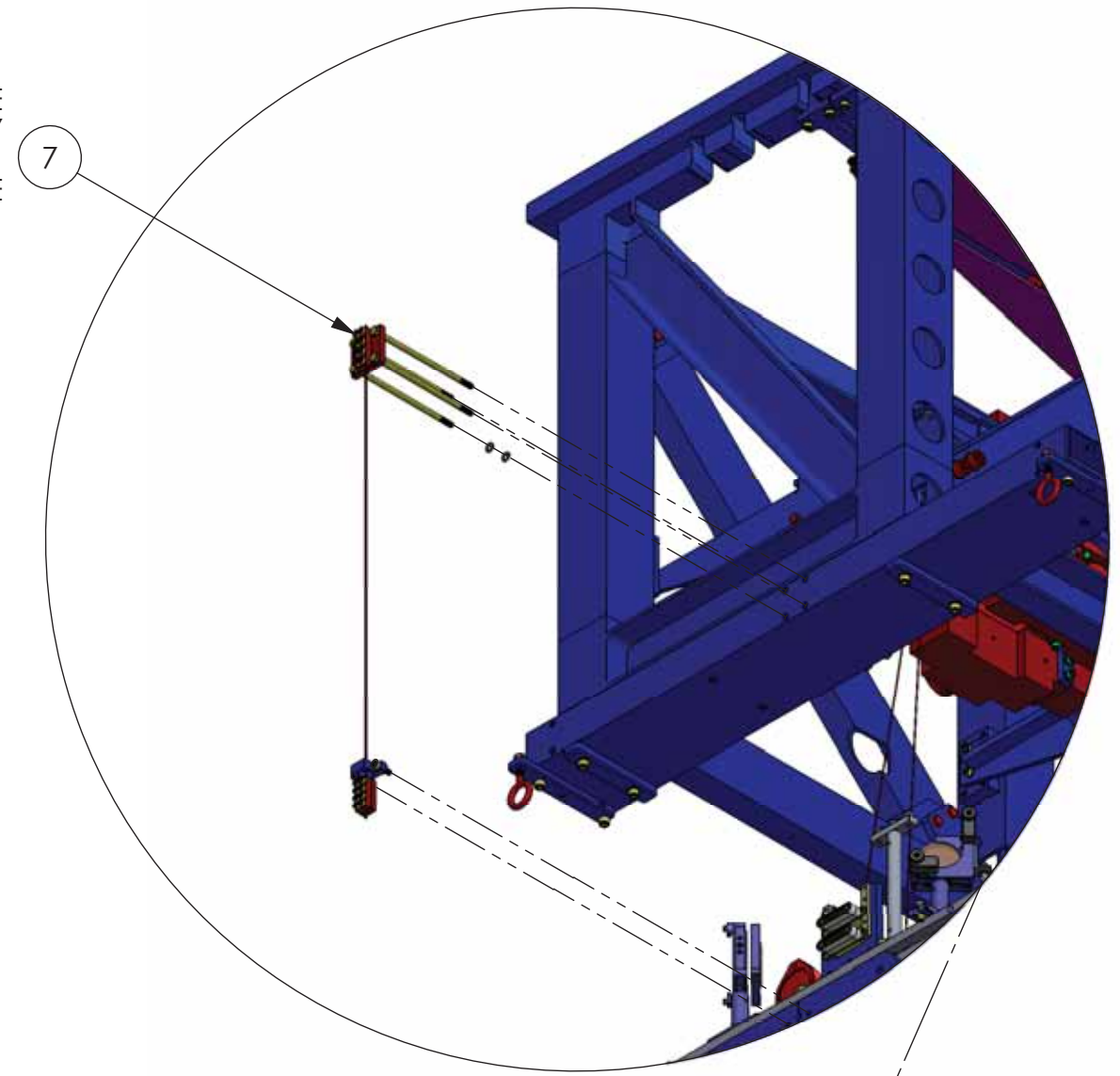


INP. BEAM
**TOP VIEW, X-ARM
 (-01, RIGHT HAND)**

SECTION C-C



ALL MT. HARDWARE
 SUPPLIED W/ ITEM NO. 7
 SEE DETAIL 'D'
 FOR REFERENCE

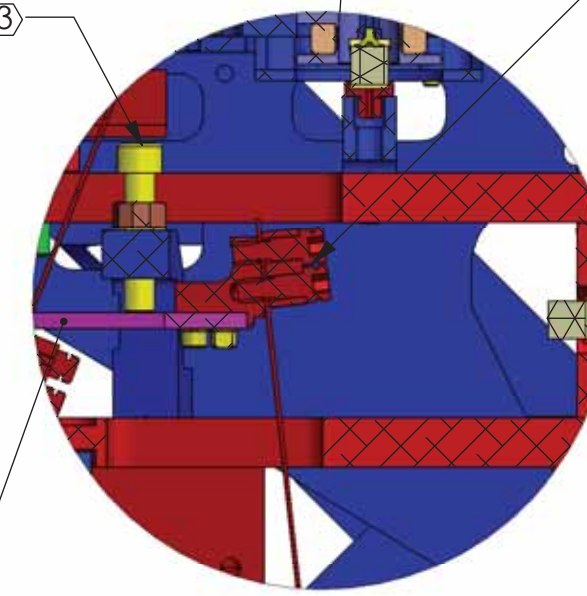


DETAIL D

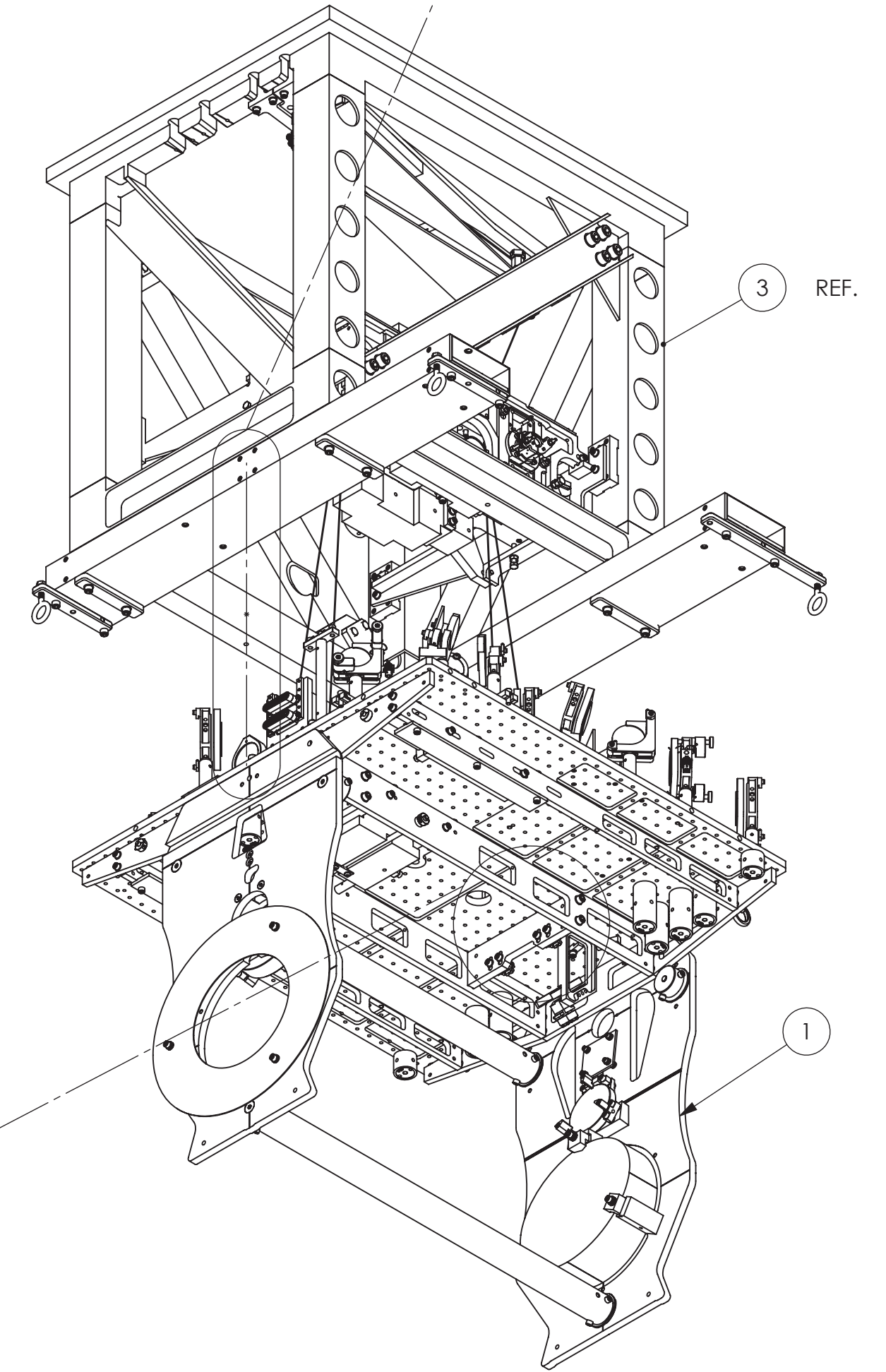
SPRING STOP
 PART OF ITEM 3

BLADE SPRING
 PART OF ITEM 3

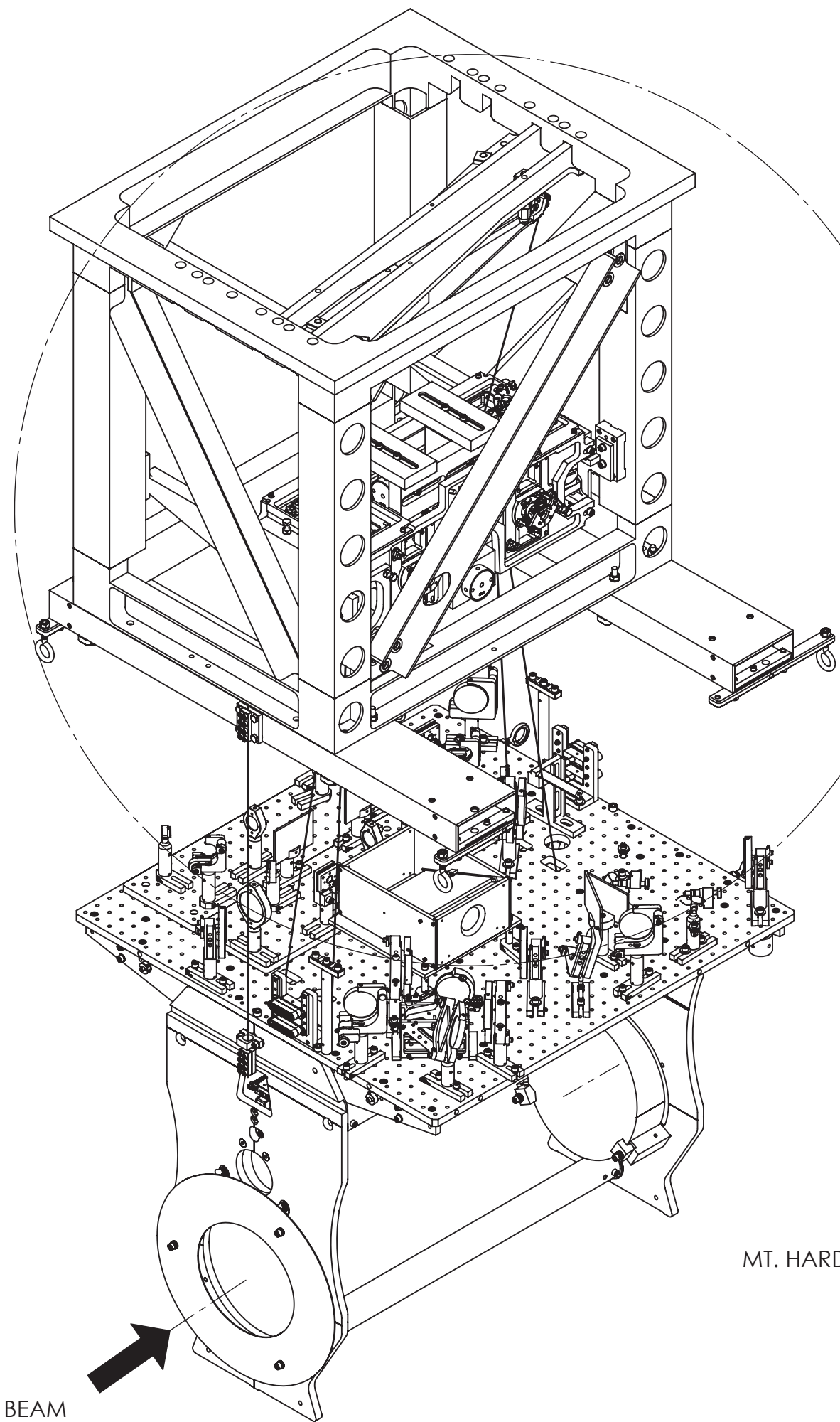
MT. HARDWARE
 SUPPLIED W/
 ITEM NO. 6
 2X



DETAIL C



**ISOMETRIC VIEW, Y-ARM
 (-01, RIGHT HAND)
 UNDERSIDE**



MT. HARDWARE SUPPLIED
 W. ITEM 4

INP. BEAM

**ISOMETRIC VIEW, X-ARM
 (-01, RIGHT HAND)**

**ISOMETRIC VIEW, X-ARM
 (-01, RIGHT HAND)
 UNDERSIDE**

4X
 2 PL.
 8

1/4 FLAT WASHER
 SUPPLIED W. ITEM NO. 8

RETAINING RING
 SUPPLIED W. ITEM NO. 8

1 REF.

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
D D0901880	v5
SCALE: NONE PROJECTION:	SHEET 4 OF 4

DD901880_AOS EMI TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY PART FROM REV. X-472 DRAWING FROM REV. X-032