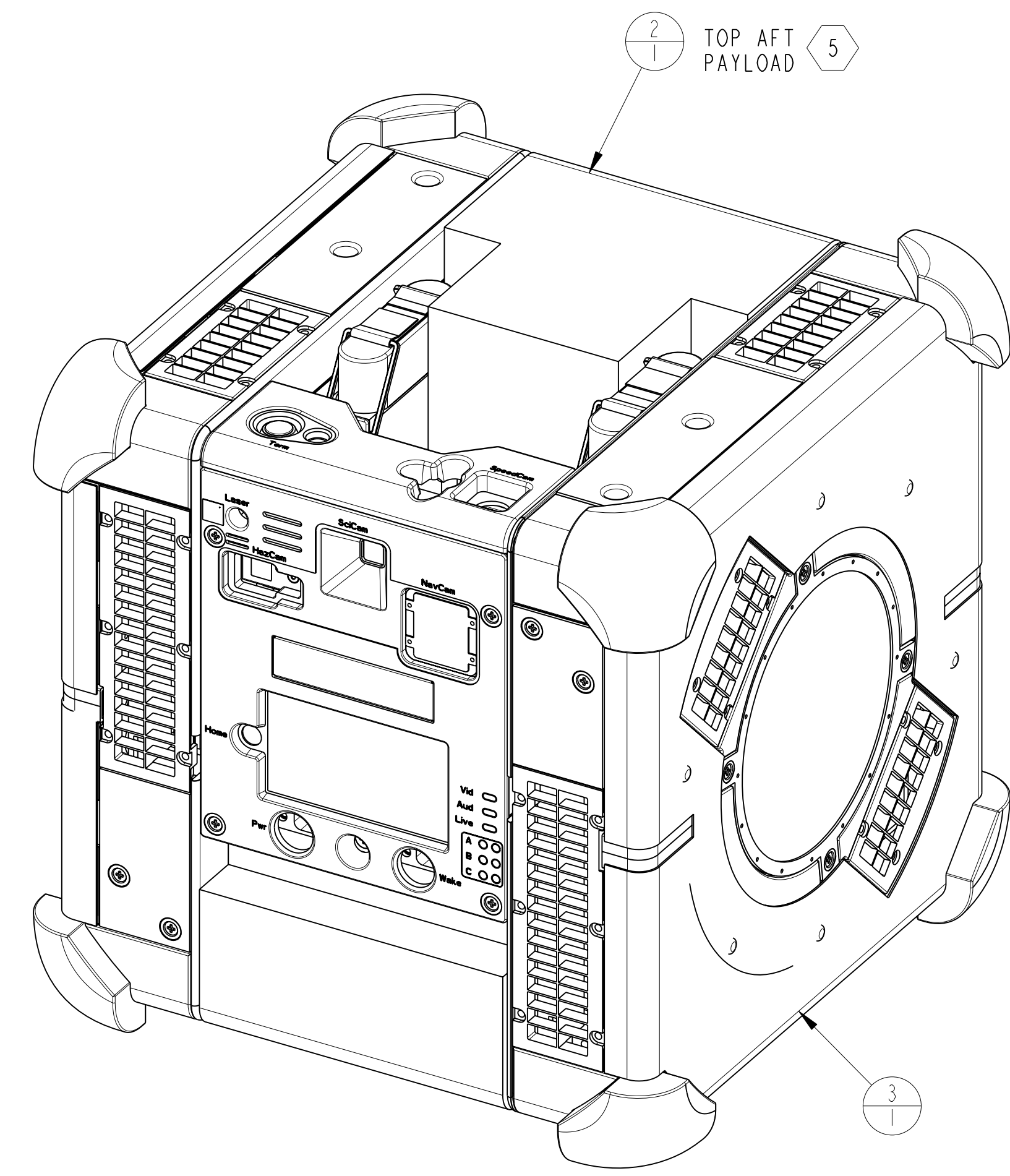
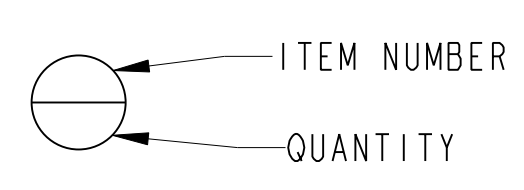


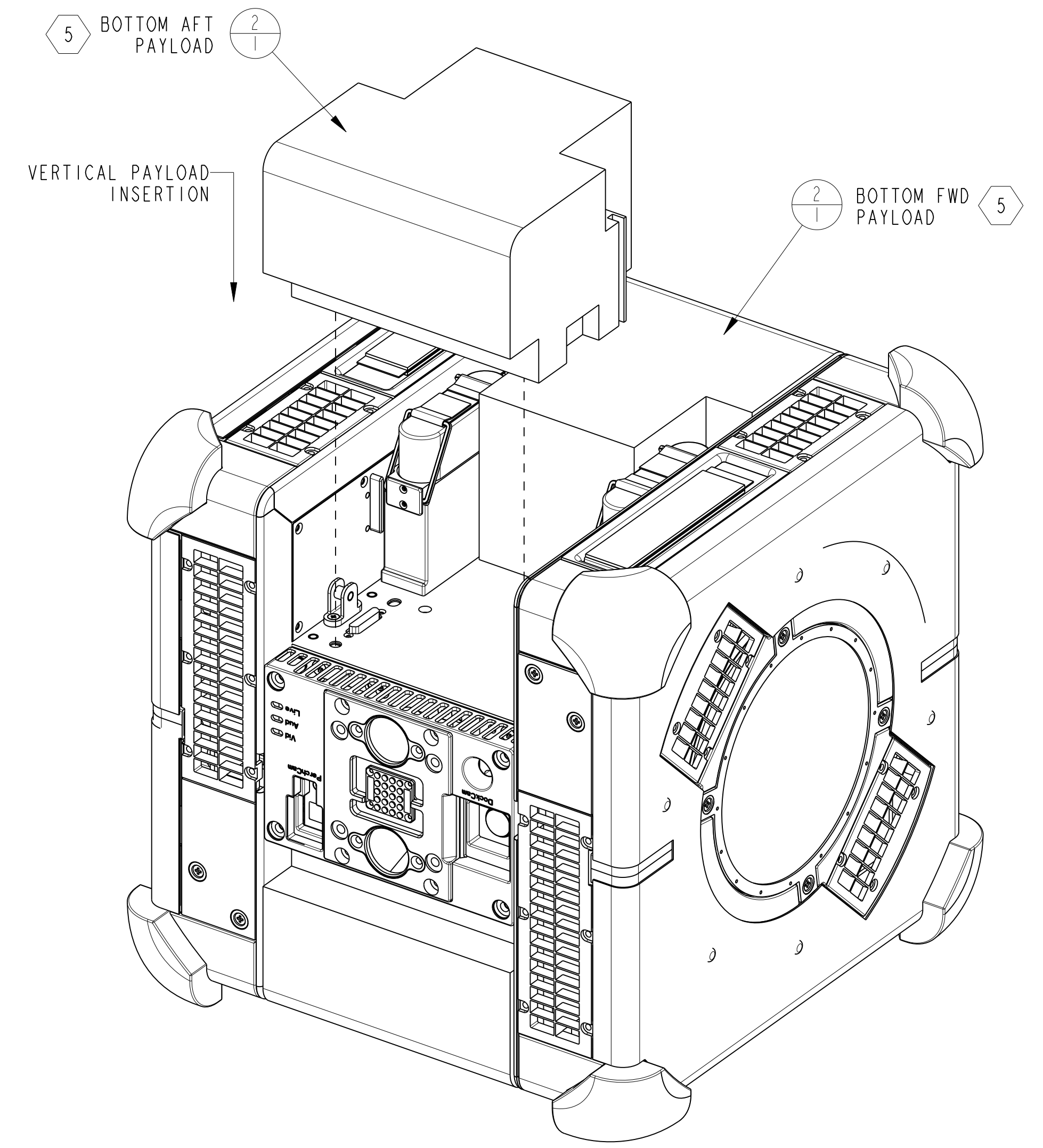
DRAWING NUMBER		SHEET		REV	
A 9SP-1500-M501		1		A	
REVISIONS					
REV	DESCRIPTION			DATE	APPROVAL
A	INITIAL RELEASE			8/29/2017	ETD

NOTES: UNLESS OTHERWISE SPECIFIED

- INTERPRET DRAWING PER ASME Y14.100-2004. INTERPRET DIMENSIONS AND TOLERANCES IAW ASME Y14.5-2009.
- THE CREO MASTER CAD MODEL FOR THIS PDF DRAWING IS LOCATED ON THE WINDCHILL SERVER IN CODE R (BLDG N213) UNDER THE PROJECT NAME "ASTROBEE". CHANGES TO THIS DRAWING MUST BE MADE BY MODIFYING THIS MASTER MODEL. FOR ASSISTANCE, CONTACT THE BUILDING N213 INFORMATION TECHNOLOGY GROUP AT EXTENSION 4-2013.
- THE LATEST PDF VERSION OF THIS DRAWING IS LOCATED ON THE AMES RESEARCH CENTER'S SVN DATABASE (https://babelfish.arc.nasa.gov/svn/freelyer_docs/Mechanical/OfficialDrawings/). ANY CHANGES TO THIS DRAWING SHALL BE DOCUMENTED ON THIS WEB SITE. CONTACT HUGO SANCHEZ AT 650-604-4721 FOR ASSISTANCE.
- FREE FLYER COORDINATE SYSTEM ORIGIN IS LOCATED AT THE GEOMETRIC CENTER OF THE FREE FLYER.
- STANDARD PAYLOAD VOLUME (PART A9SP-1500-M501-2) IS MAXIMUM VOLUME FOR EACH DESCRIBED PAYLOAD BAY. LARGER PAYLOADS ARE POSSIBLE BY COMBINING THE TWO BOTTOM PAYLOAD BAYS OR INCLUDING THE AVAILABLE TOP FORWARD VOLUME SHOWN.
- PAYLOAD RAILS (2X PER BAY) CAN BE USED FOR INITIAL ALIGNMENT DURING PAYLOADS INSERTION. RAILS PROVIDE LATCHING MOMENT REACTION WHEN USING QUICK RELEASE ATTACHMENT METHOD DETAILED IN NOTE 8. CORRESPONDING PAYLOAD SLOTS SHOULD BE 0.175" WIDE TO ALLOW FINAL ALIGNMENT FROM PAYLOAD CONNECTOR ALIGNMENT HOLE AND SLOTS (SEE NOTE 7).
- PAYLOAD CONNECTOR ALIGNMENT HOLE AND SLOTS SHALL BE USED FOR FINAL AND ACCURATE ALIGNMENT OF PAYLOAD CONNECTOR. ALIGNMENT IS PROVIDED WHEN PAYLOADS INCORPORATE TWO PINS: ONE PIN MATES WITH ALIGNMENT HOLE AND ONE PIN MATES WITH ONE OF THE THREE ALIGNMENT SLOTS. USE STANDARD 3/16" (0.1875") DIA. PIN. PIN SHALL NOT EXTEND MORE THAN 0.3" INTO FREE FLYER.
- STANDARD QUICK RELEASE (NO TOOL) ATTACHMENT METHOD USES CONNECTOR ALIGNMENT FEATURES (HOLE AND SLOTS DETAILED IN NOTE 7) AND 2X QUICK RELEASE CLEVIS INDICATED. SEE DRAWING A9SP-1500-M562 FOR STANDARD QUICK RELEASE PAYLOAD DESIGN.
- STANDARD CAPTIVE FASTENER ATTACHMENT METHOD USES CONNECTOR ALIGNMENT FEATURES (HOLE AND SLOTS DETAILED IN NOTE 7) AND UP TO 4X #8-32 HOLES INDICATED. SEE DRAWING A9SP-1500-M572 FOR STANDARD CAPTIVE FASTENER PAYLOAD DESIGN. FASTENERS SHALL NOT EXTEND MORE THAN 0.3" INTO FREE FLYER. STANDARD FASTENER TORQUE IS 8.0 IN-LBS.
- PAYLOAD COORDINATE SYSTEM ORIGIN IS LOCATED ON THE BOTTOM SURFACE CENTERLINE ALIGNED WITH THE FREEFLYER X-AXIS ORGIN AS SHOWN. AXES ORIENTATION IS AS SHOWN.
- LEGEND FOR ASSEMBLY COMPONENT BALLOON CALLOUTS:



TOP FWD PICTORIAL VIEW
FOR REFERENCE ONLY



BOTTOM AFT PICTORIAL VIEW
FOR REFERENCE ONLY

QTY REQ'D PER ASSY	CAGE CODE	PART OR IDENTIFYING NO.	DESCRIPTION/NOMENCLATURE	MATERIAL SPECIFICATION	SHEET ZONE	ITEM NO.
		A9SP-1500-M130-1	ASTROBEE FF			3
		A9SP-1500-M501-2	STANDARD PAYLOAD VOLUME			2
		A9SP-1500-M501-1	PAYLOAD ICD			1

DRAWING REVISION

THIS DRAWING SUPERCEDES ALL PREVIOUS VERSIONS & REVISIONS

REVISION LETTER: **A**

DATE: _____

SIGNATURE: _____

PRINTED COPIES OF THIS DRAWING ARE UNCONTROLLED. VERIFY THIS REVISION IS THE LATEST PRIOR TO FABRICATION/ASSEMBLY

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES. ALL DIMENSIONS AND TOLERANCES APPLY AFTER SURFACE TREATMENT.		PRELIMINARY RELEASE DATE		DRAWN		DATE	
TOLERANCE UNLESS OTHERWISE SPECIFIED		DRILLED HOLE TOLERANCES		INITIAL RELEASE	DATE	CHECKED	DATE
FRACTIONAL ± /		DIAMETER TOLERANCE		LATEST REVISION	DATE	DESIGNED	DATE
.X ± 0.03		.000-.125 +.005-.001		PROJECT MGR	DATE	STRESS	DATE
.XX ± 0.01		.126-.500 +.010-.002		SUPERVISOR	DATE	MATERIAL	DATE
.XXX ± 0.005		.501-1.000 +.015-.002		REQUESTOR	DATE	O.A.	DATE
ANGULAR ± 0.5		1.001-2.000 +.030-.003					
DIAMETER ON SAME AXIS TOTAL RUN OUT .005		OVER 2.000 +.060-.005					
-1	NO.	NEXT ASSEMBLY APPLICATION	ALL MACHINED SURFACES TO BE	63	✓	DO NOT SCALE DRAWING	

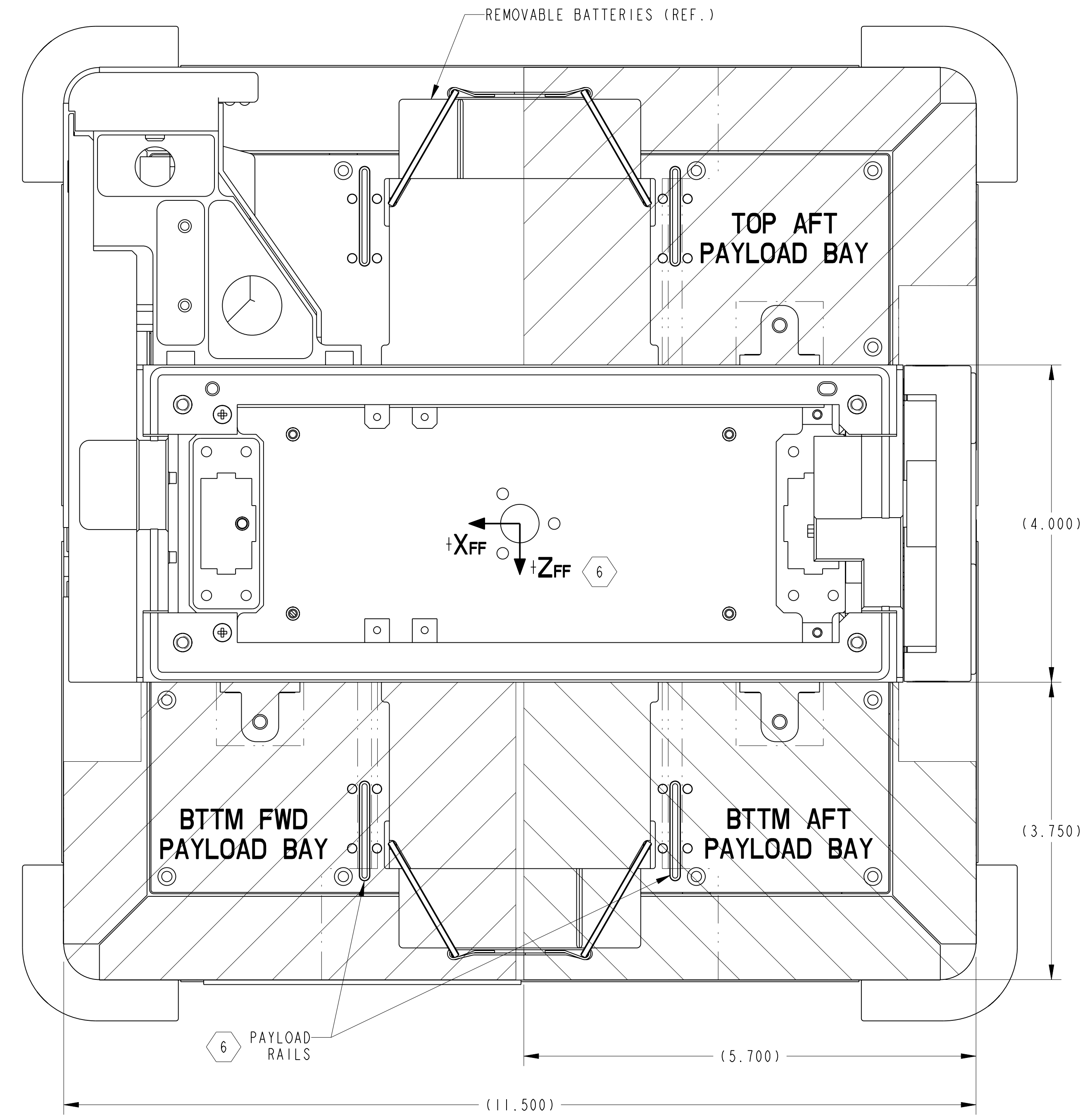
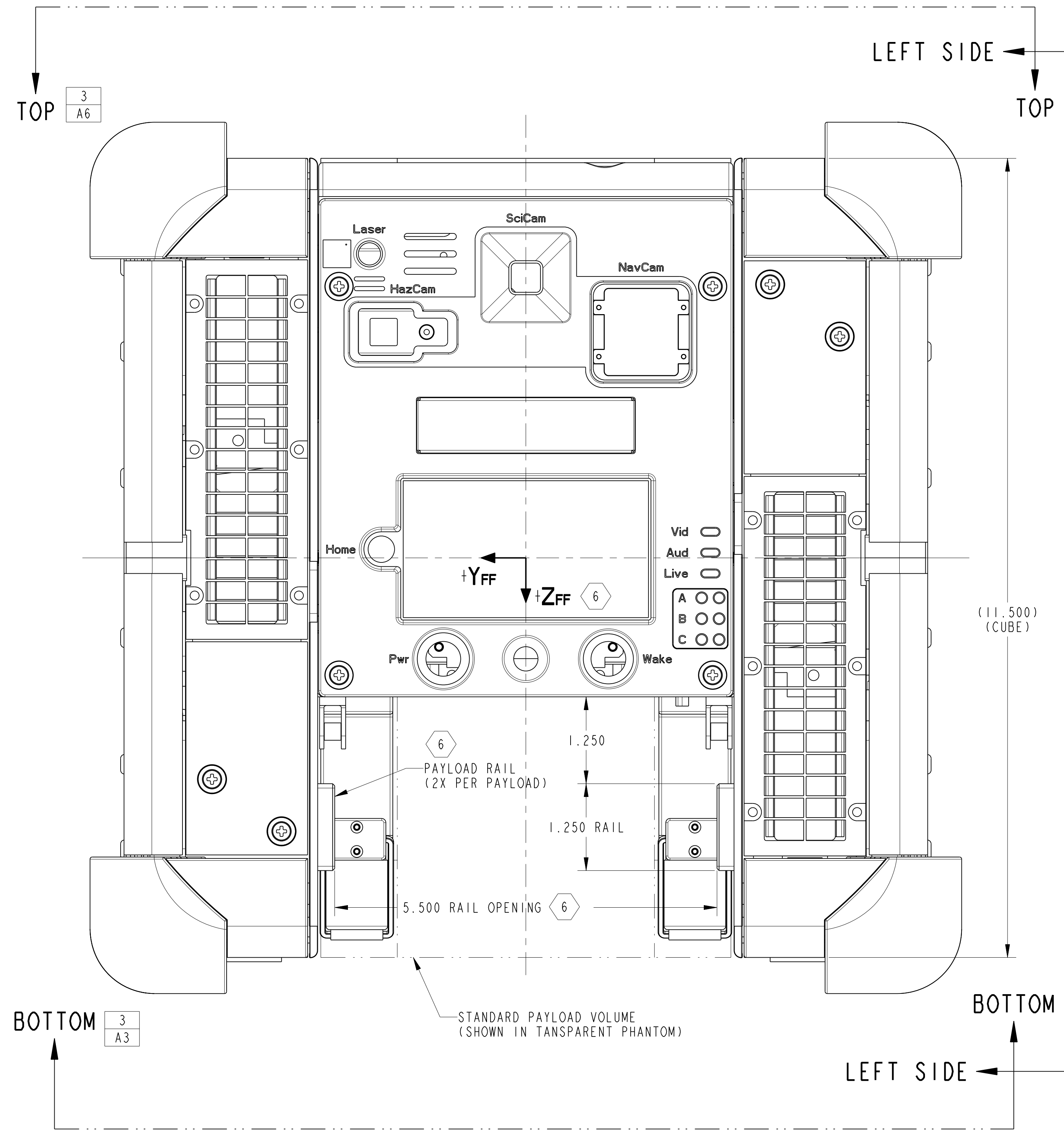
Ames Research Center
Moffett Field, California 94035-1000

PAYLOAD ICD
ASTROBEE

SIZE: D 25307 CAGE CODE: A 9SP-1500-M501 REV: A

SCALE: 1/2 INDEX DATE: SHEET 1 OF 4

PROJ: DRAWING FILE NAME: 9SP-1500-M501 WC REV: A.9



DRAWING REVISION

THIS DRAWING SUPERCEDES ALL PREVIOUS VERSIONS & REVISIONS

REVISION LETTER: A
 DATE:
 SIGNATURE: _____

FRONT VIEW

PRINTED COPIES OF THIS DRAWING ARE UNCONTROLLED. VERIFY THIS REVISION IS THE LATEST PRIOR TO FABRICATION/ASSEMBLY

LEFT SIDE VIEW
 LEFT PROPULSION SYSTEM REMOVED

SEE SHEET ONE FOR REVISIONS			
SIZE: D	CAGE CODE: 25307	PROJECT: A 9SP-1500-M501	REV: A
SCALE: 1/3	INDEX DATE:	SHEET: 2	OF: 4
PROJECT DRAWING FILE NAME: 9SP-1500-M501		WC REV: A.9	

7 3X .195 ± .005 X .26 ± .01 SLOTS
SLOTS ARE RADIALLY ORIENTED FROM
PAYLOAD CONN. ALIGNMENT HOLE

Ø .195 ± .005 THRU
PAYLOAD CONNECTOR ALIGNMENT HOLE

4X #8-32 X .246 LG. FREE
RUNNING HELICOIL

QUICK RELEASE CLEVIS
(2X PER PAYLOAD)

5 STANDARD PAYLOAD VOLUME
SHOWN IN PHANTOM (SEE SHT 4)

TOP AFT PAYLOAD CONNECTOR
(GLENAIR M83513/03-E03N)

(1.005) CLEVIS

(5.185) CLEVIS
OPENING

PAYLOAD ALIGNMENT
RAILS (2X)

TOP AFT
PAYLOAD BAY

+YFF
+XFF

3.828 BATTERY OPENING

(90.0°)

Term

SpeedCam

6.000 BAY OPENING

TOP VIEW 2
D8

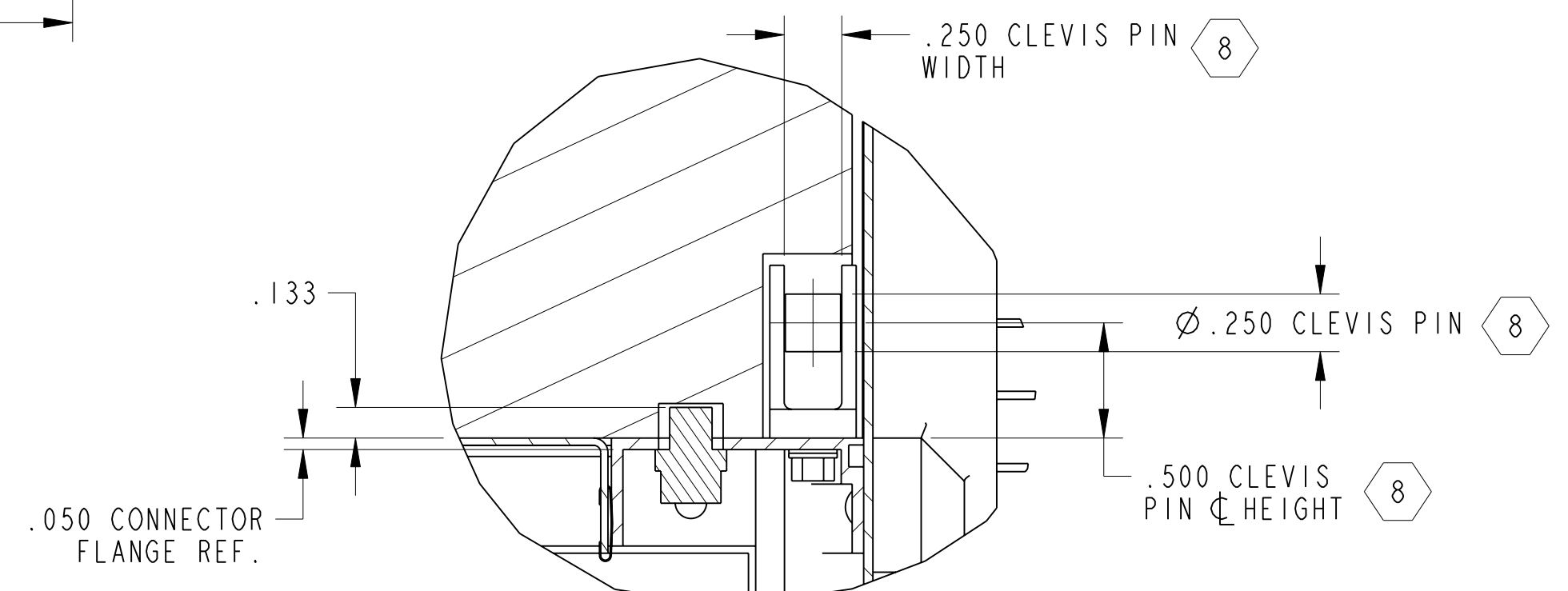
BTTM FWD PAYLOAD CONNECTOR
(GLENAIR M83513/03-E03N)

BTTM FWD
PAYLOAD BAY

BTTM AFT
PAYLOAD BAY

BTTM FWD PAYLOAD CONNECTOR
(GLENAIR M83513/03-E03N)

BOTTOM VIEW 2
A8



SECTION A-A 3
SCALE 3/2 D6

DRAWING REVISION

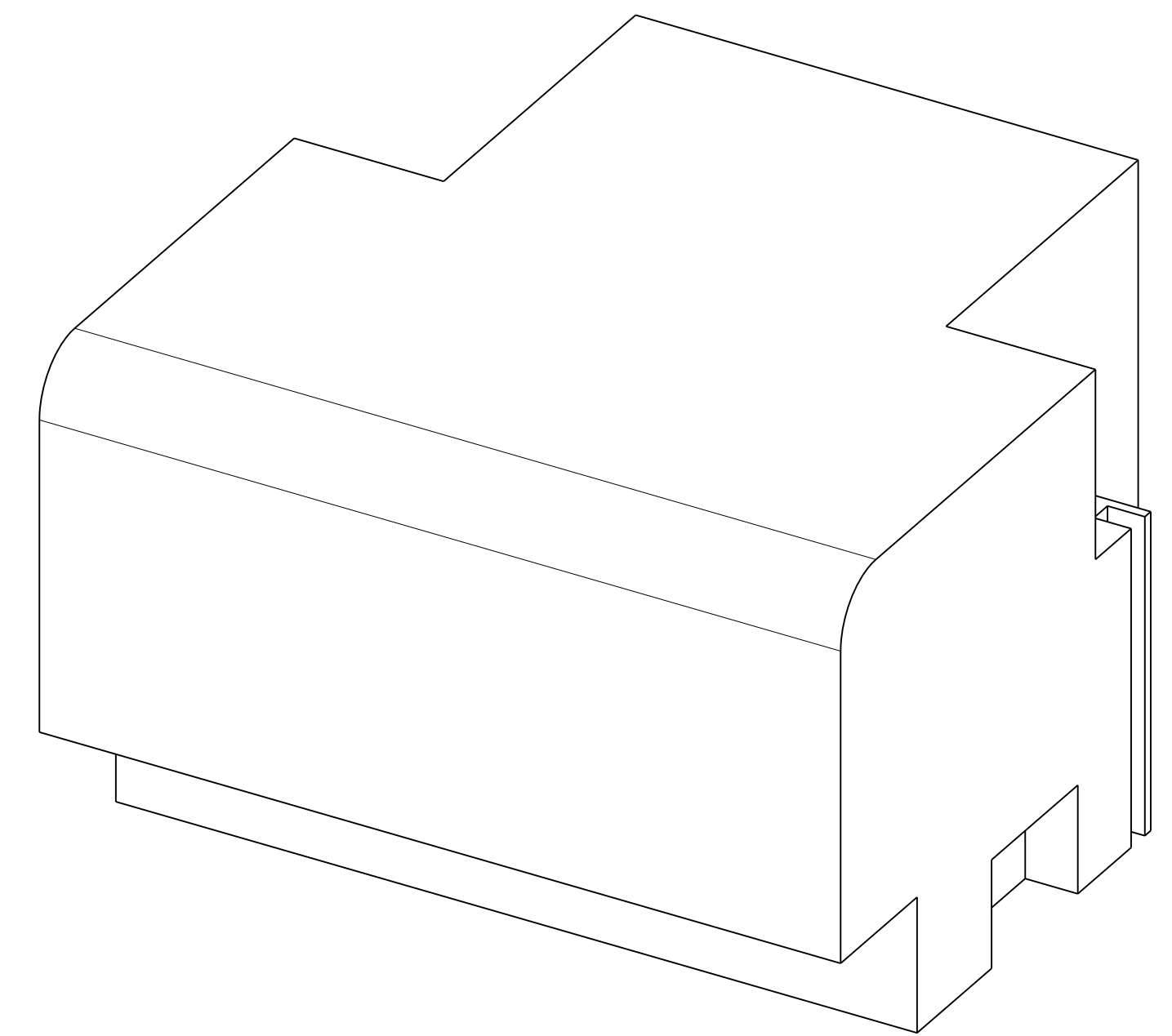
THIS DRAWING SUPERCEDES ALL
PREVIOUS VERSIONS & REVISIONS

REVISION LETTER: A
DATE:
SIGNATURE: _____

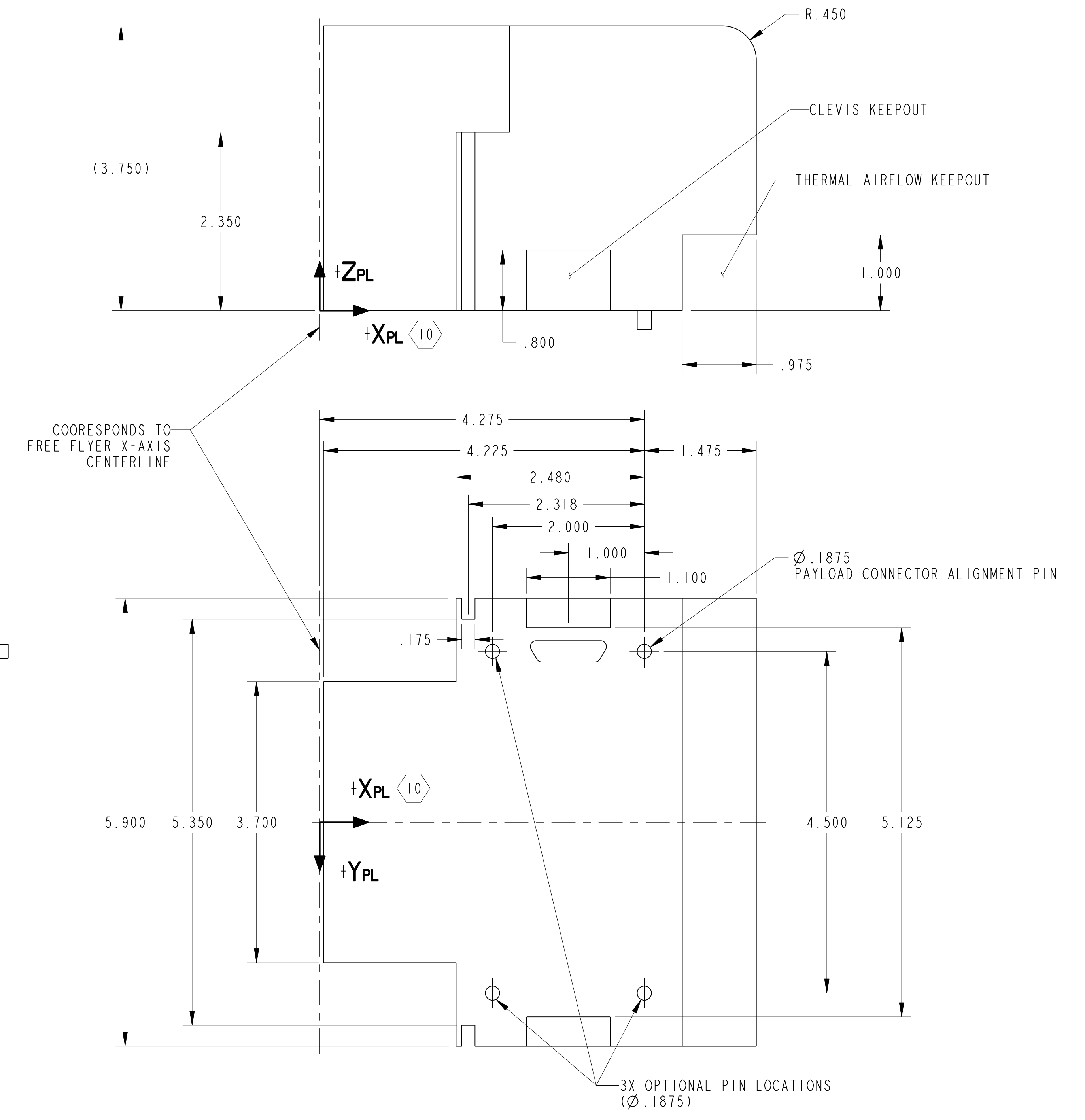
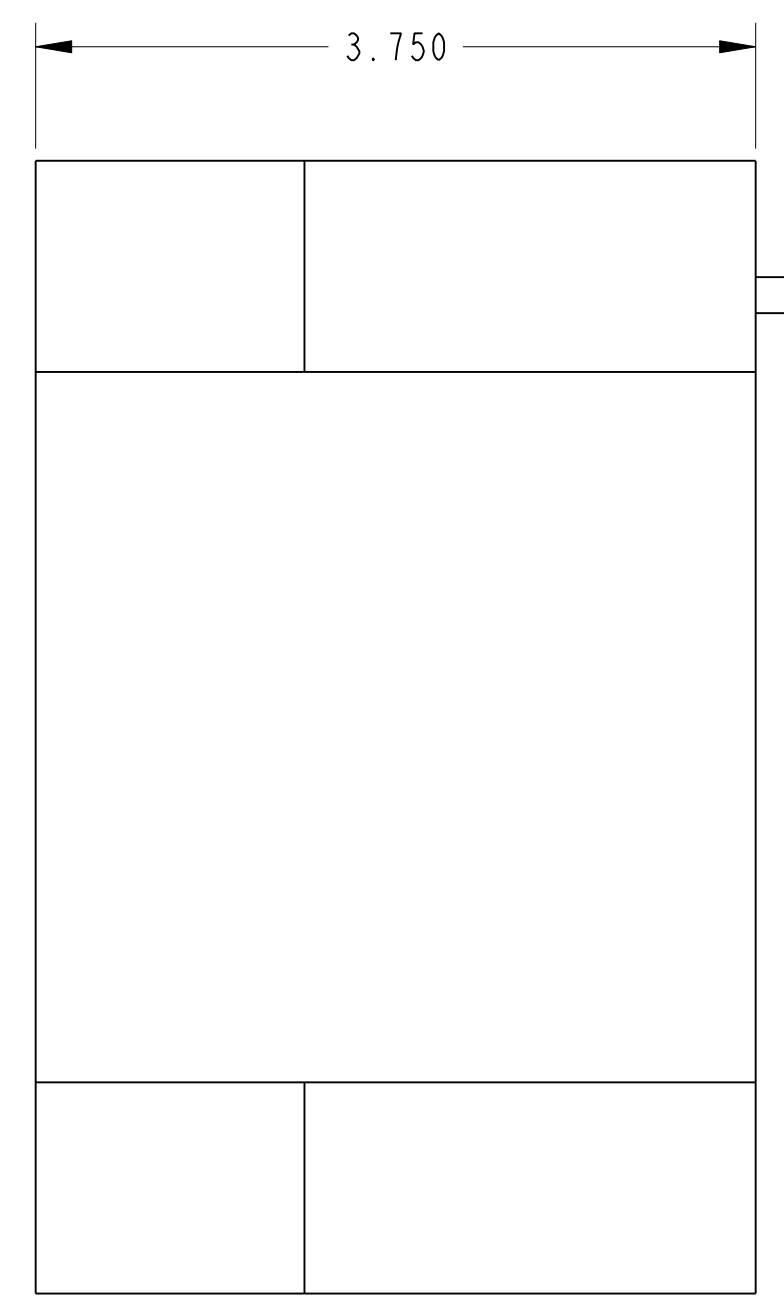
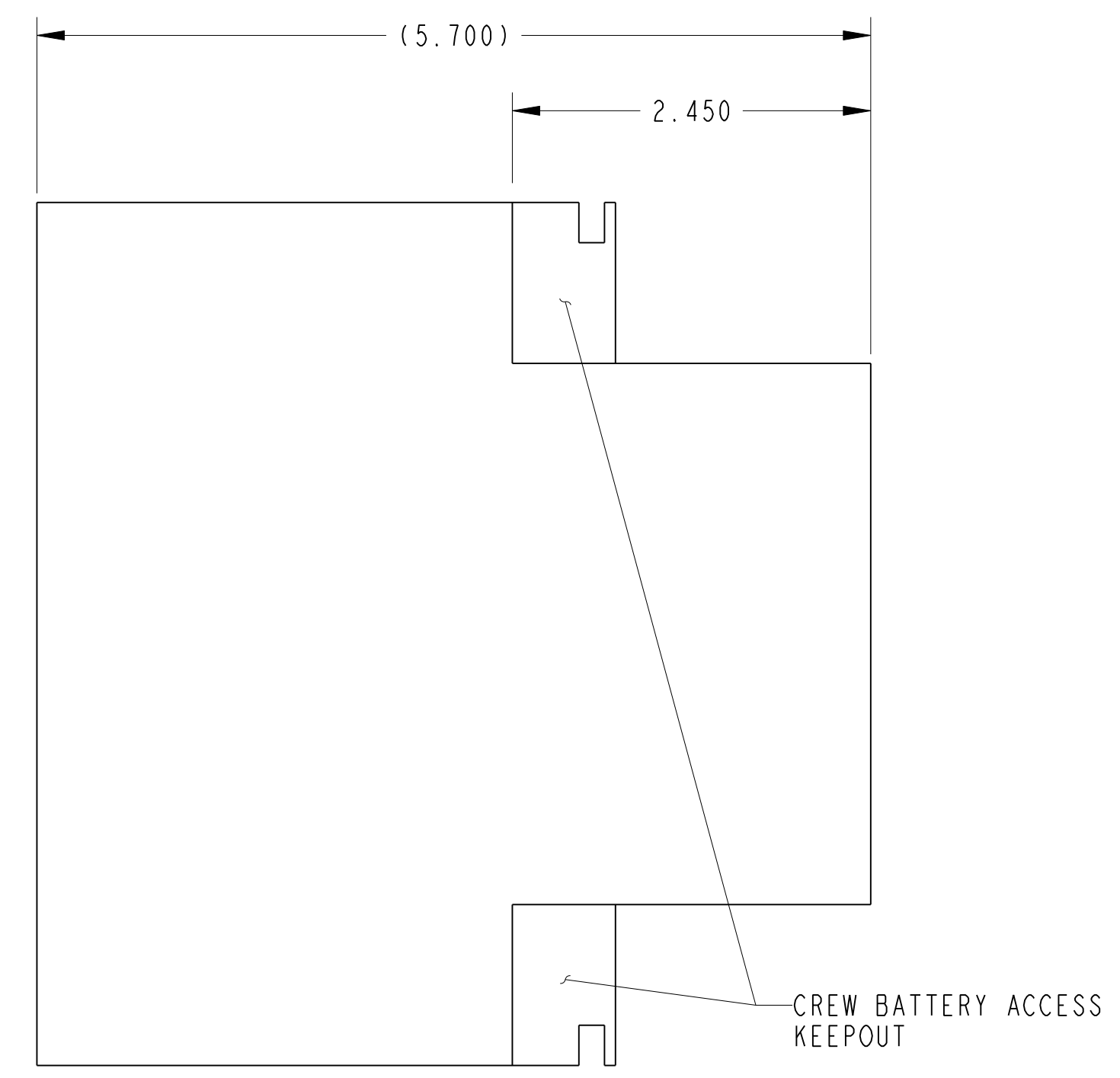
PRINTED COPIES OF THIS DRAWING
ARE UNCONTROLLED. VERIFY THIS
REVISION IS THE LATEST PRIOR TO
FABRICATION/ASSEMBLY

SEE SHEET ONE FOR REVISIONS

SIZE	CAGE CODE	REV
D	25307	A
SCALE	INDEX DATE	SHEET 3 OF 4
1/1		



PICTORIAL VIEW
FOR REFERENCE ONLY



5 2 STANDARD PAYLOAD VOLUME

DRAWING REVISION

THIS DRAWING SUPERCEDES ALL PREVIOUS VERSIONS & REVISIONS

REVISION LETTER: A
DATE: _____
SIGNATURE: _____

PRINTED COPIES OF THIS DRAWING ARE UNCONTROLLED. VERIFY THIS REVISION IS THE LATEST PRIOR TO FABRICATION/ASSEMBLY

SEE SHEET ONE FOR REVISIONS			
SIZE	CAGE CODE	REV	
D	25307	A	9SP-1500-M501
SCALE	INDEX DATE	SHEET	REV
1/1		4	4