

Upgrade Procedure, xx09 MK2

Approval:

Approving Authority	Signature	Date
Darren Manning	Signature on file. 	2/8/11
Michael Needham	Signature on file. 	2/8/11

Revision History

Revision	Description of Change	Date
A	Initial release	07-21-2010
B	Updated drawings and text	02-08-2011

Upgrade Procedure, xx09 MK2

1.1. Upgrade Procedure, xx09 MK2 electronics

Upgrading an 09 Pedestal to MK2 electronics can be accomplished using the 132196 Upgrade Kit and the following procedure. Please read this entire procedure before beginning work.

1.1.1. Inventory the 132196 Upgrade Kit

Refer to the upgrade kit Bills Of Materials (BOM) at the end of this procedure. Make sure that you inventory the BOM for the 132624-1 BALANCE WEIGHTS, xx09, MK2 that is included in the upgrade kit.




1.1.2. Tools Required:

- Screw Driver, Flat Blade, Small (1/8" blade)
- Screw Driver, Phillips, Small (#1)
- Diagonal Cutters
- Wrench, Open End, 5/16" (8mm)
- Wrench, Open End, 10mm
- Wrench, Open End, 7/16" (11mm)
- Wrench, Allen, 3/16" (5mm)
- Lint free cloth with a small amount of acetone
- Felt tip marker

1.1.3. Cautions and Warnings

Dangerous voltages exist on the antenna pedestal, assure that power is secured at the antenna pedestal breaker BEFORE commencing work.

While working inside the radome be cautious of pinch hazards in the area of the azimuth chain, the elevation belt and the cross-level belt.

	WARNING: <i>Electrical Hazard – Dangerous AC Voltages exist on the pedestal. Secure power at the Antenna Pedestal Breaker Box. Observe proper safety precautions when working on the antenna pedestal inside the radome.</i>
	CAUTION - PINCH HAZARD: <i>Use extreme caution when your fingers are near the chain drive system of this antenna, even when antenna power is turned OFF. Do not put your fingers in between the chain and either sprocket.</i>
	CAUTION - PINCH HAZARD: <i>Use extreme caution when your fingers are near the belt drive systems of this antenna, even when antenna power is turned OFF. Do not put your fingers in between the belt and either sprocket.</i>

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1.1.4. Overview of the Upgrade

In very simple terms, you will:

- Remove the current Pedestal Control Unit (PCU), replace it with the MK2 PCU, Install a short harness adapter and re-connect the cables.
- Remove the GPS antenna (BNC type) and replace it with the new GPS antenna (RJ-11 type),
- Replace the mini coaxes while replacing the cable ties, and terminate the coaxes at both ends.
- Remove the current Motor Driver Enclosure (MDE), replace it with the MK2 MDE and re-connect the cables.

1.1.5. BUC Power Supply

Please note that you will **NOT** relocate your existing BUC Power Supply during this procedure.

1.1.6. Changing the PCU

Use the following procedure for upgrading your current PCU with a MK2 PCU.



**Current
PCU**

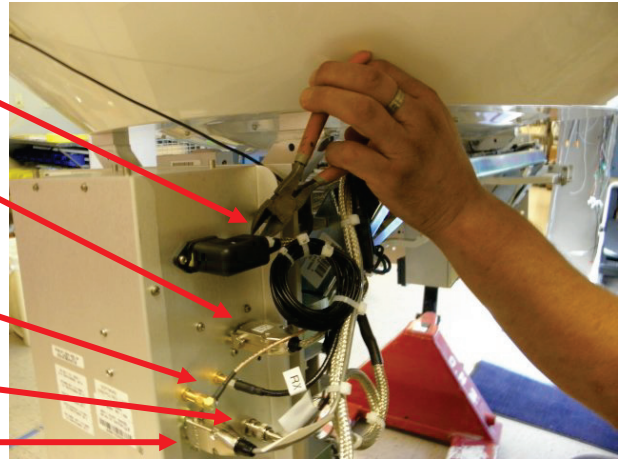
VS



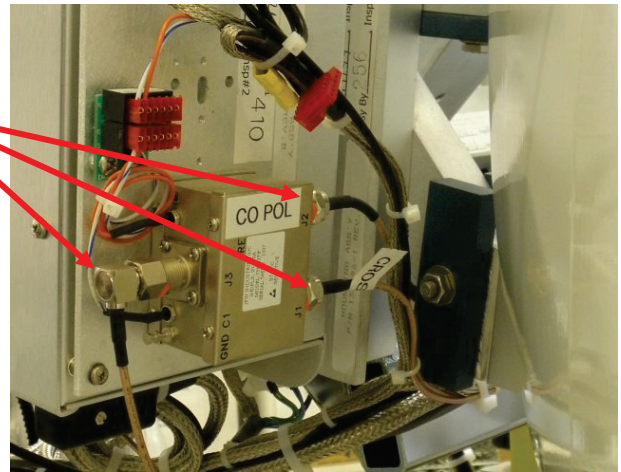
MK2 PCU

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1. Using the cutters, cut the large cable tie on the power cord connector and disconnect the power cord.
2. Using the small flat blade screwdriver, remove the PCU M&C connector.
3. Using the 5/16" (8mm) open end wrench remove the two coax cables.
4. Remove the GPS (BNC) cable.
5. Using the small flat blade screwdriver, remove the motor control connector.



6. Remove the coax cables from the switch assembly mounted on the PCU. These coaxes will not be re-used.

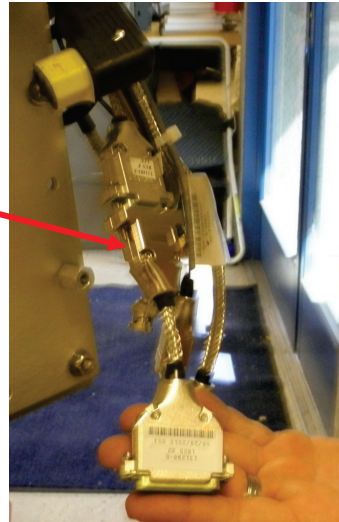


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7. Using the 3/16" (5mm) Allen wrench remove the 4 cap head screws that mount the PCU to the side pan. Retain these for later use.



8. Install the 131298-5 adapter pigtail to the 121485 feed harness (removed from the "Polang" port of the current PCU). Assure that the retaining screws are tightened into the harness connector



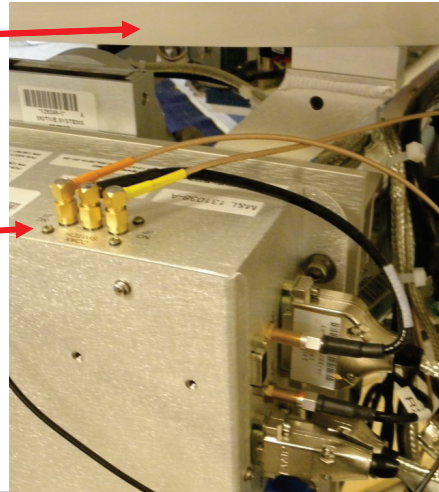
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Back of dish

9. Apply Loctite 242 to the four cap head screws removed in the previous step.

3 SMA connectors

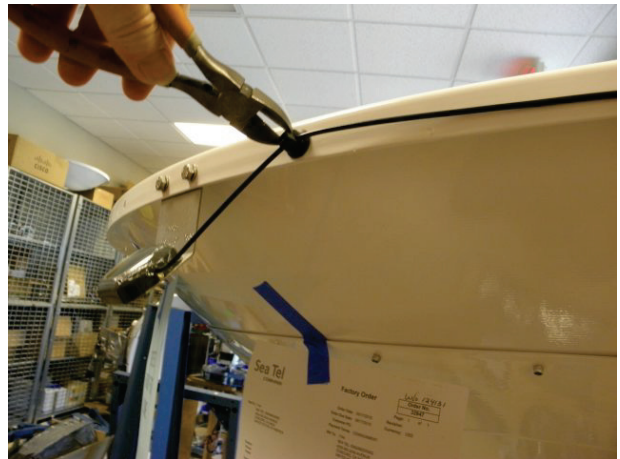
10. Mount the MK2 PCU using the four cap head screws. With the dish up at zenith (90° elevation) the PCU will be mounted with the 3 SMA connectors up toward the back of the dish (as shown).



1.1.7. Changing the GPS

Use the following procedure to change the GPS antenna with the new GPS antenna that is used with the MK2 PCU.

1. Using diagonal cutters, cut the three ties along the edge of the dish and any ties that join the GPS cable to the other harnesses at the PCU.

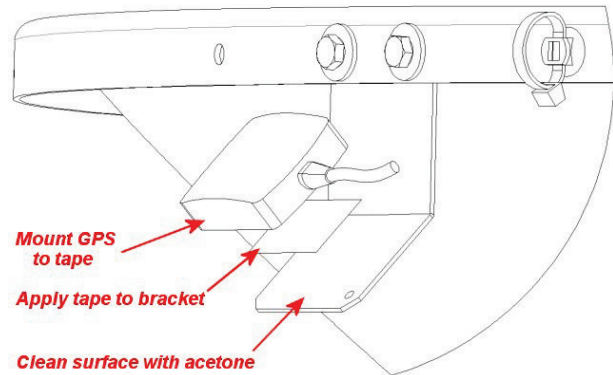


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2. Remove the two Phillips screws that mount the existing GPS to its bracket.



3. Clean the upper surface of the bracket thoroughly with a lint free cloth and acetone solvent.
4. Apply the sticky side of the double stick tape (124077-5 provided in the upgrade kit) to the bracket.
5. Peel the paper off of the tape to expose the second sticky side and mount the new GPS to the tape with the cable toward the cable tie buttons.
6. Insert new 7" ties into the buttons and secure the GPS cable along the edge of the dish toward the PCU.

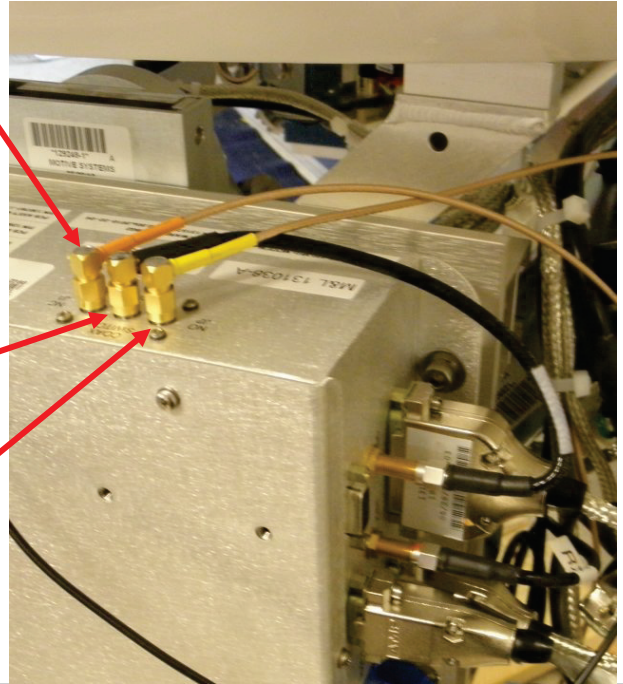


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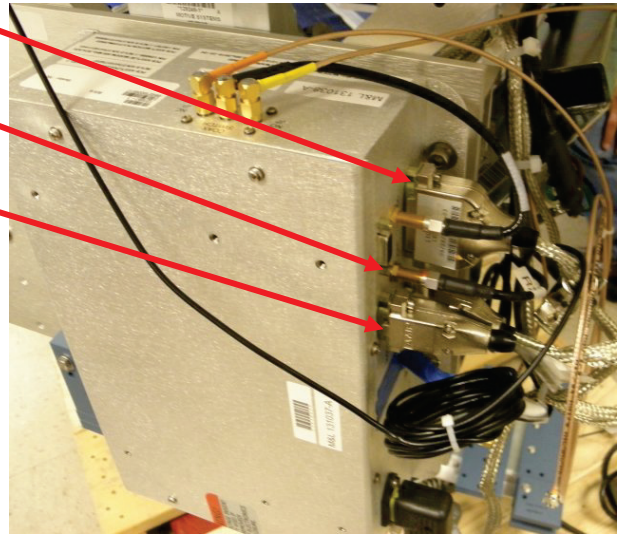
1.1.8. MK2 PCU connections

Connect all the cables to the MK2 PCU.

1. Connect the Orange mini coax (this is the Cross-Pol coax which will route to the LNB on the feed) SMA connector to the "NC J1" port on the MK2 PCU.
2. Install the 113303-10 black jumper coax from the "COM J3" port on the MK2 PCU to the "L-Band" port on the MK2 PCU
3. Connect the Yellow mini coax (this is the Co-Pol coax which will route to opposite side of the antenna and connect to the Co-Pol LNB OR be terminated with an F bullet and tied in place near the BUC) SMA connector to the "NO J2" port on the MK2 PCU.

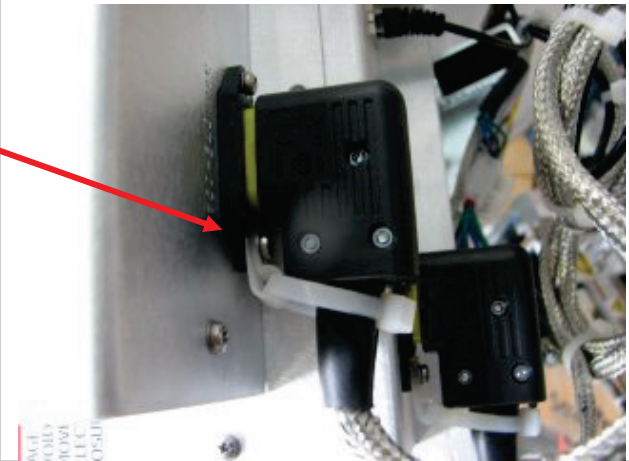


4. Install adapter pigtail to the "Feed" port on the MK2 PCU.
5. Install the "RX" coax to the "Rotary Joint" port on the MK2 PCU.
6. Install the "RF M&C" cable to the "RF M&C" port on the MK2 PCU. If your harness has a female M&C connector, you will need to install the 9-pin gender changer (in the upgrade kit), to enable you to plug the harness into the RF M&C port.

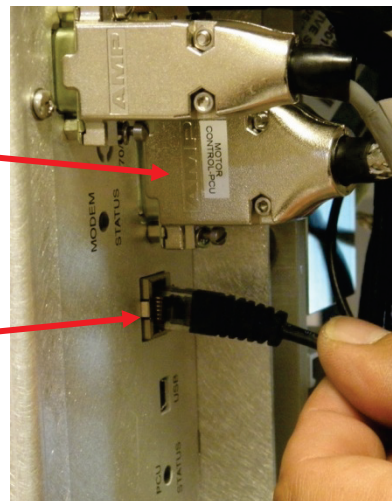


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7. Install the power cable into the power receptacle and install a 7" cable tie through the P-clamp and around the cable to prevent it from loosening during vibration.



8. Install the Motor Drive to the MDE harness to the "Motor Control" port on the PCU.
9. Coil the excess GPS cable length and use a cable tie to bind the coil.
10. Plug the GPS cable into the "GPS" port on the MK2 PCU.



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1.1.9. Routing the Cross-Pol and Co-Pol coaxes

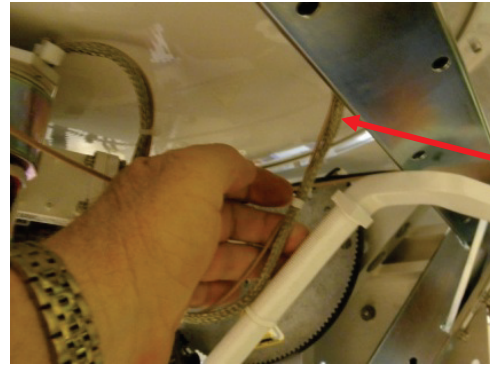
Route, and terminate, the Cross-Pol and Co-Pol coaxes.

1. Route the Orange and Yellow coaxes to the bridge with the other harness cables while omitting the Cross-Pol and Co-Pol coaxes (both have black shrink tubing at the connectors). Cut several ties, remove the previous Cross-Pol and Co-Pol coaxes and tie the Orange and Yellow coaxes into the harness using the same tie points.



Cable Ties

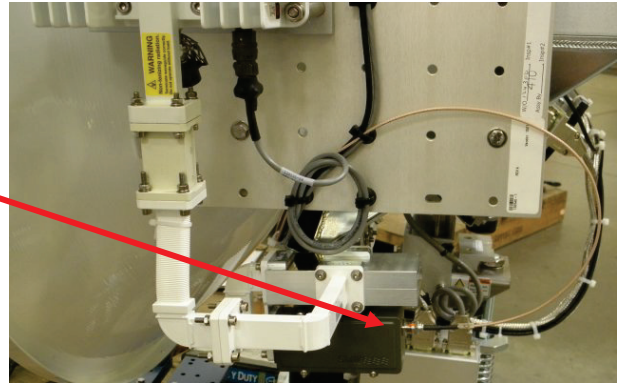
2. The Orange coax will route off of the bridge with the feed harness and will be connected to the Cross-Pol LNB.
3. Replace 4" cable ties to join the Cross-Pol coax to the Feed harness.



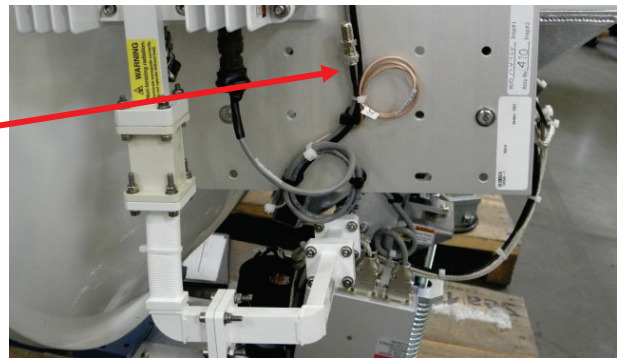
Feed harness routes off of the bridge near the waveguide

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4. Continue cutting and replacing the ties to finish routing the Yellow coax across the remainder of the bridge.
5. If your system includes a waveguide diplexer and Co-Pol LNB, route the Yellow coax to the LNB and tie the coax at several convenient points.



6. If your system does NOT include a Co-Pol LNB, coil and tie the Yellow coax near the BUC and install the F bullet to prevent it from shorting out.



7. At the PCU, tie all of the cables neatly together.

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1.1.10. Replacing the Motor Driver Enclosure (MDE)

The following procedure for replacing the MDE.

1. Remove and mark the 5 connectors, one at a time, using the small flat blade screwdriver and the felt tip marker.

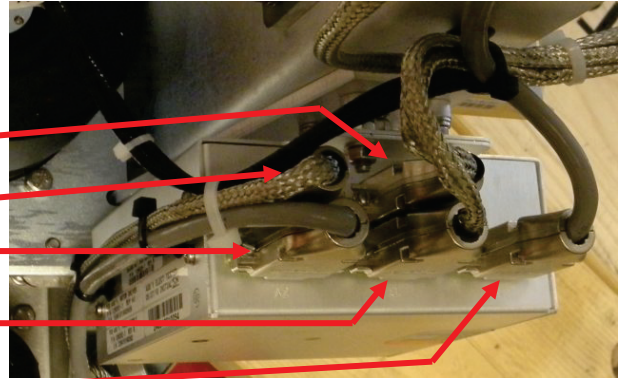
Drive - Motor Control Drive from the PCU.

Home – Home Flag Sensor

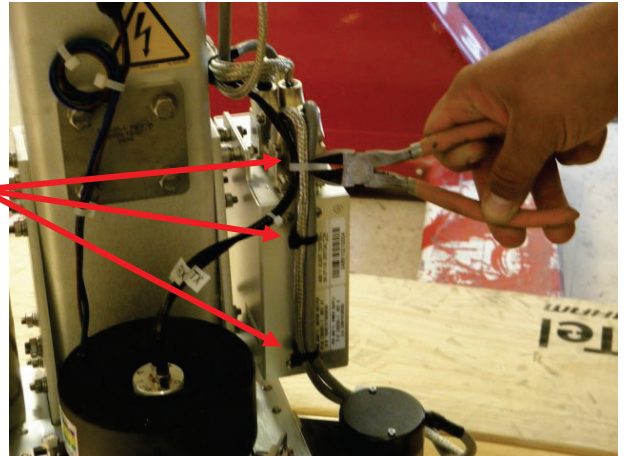
AZ – Azimuth Motor

EL – Elevation Motor

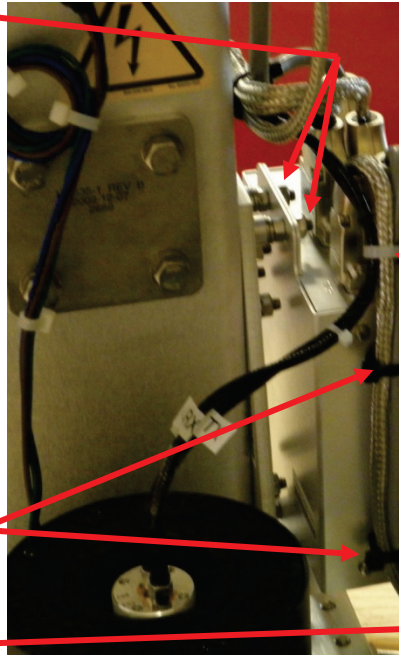
CL – Cross-Level Motor




2. Cut the three ties on the side of the MDE.



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<ol style="list-style-type: none">3. Using the 10mm open end wrench, remove the 4 10mm nuts (two on top and two on the bottom of the MDE) that mount the MDE to the pedestal.4. Remove the original MDE.5. Apply loctite 242 to the four threaded mounting bolts and mount the MK2 MDE using the four nuts removed in the previous step.6. Reinstall the 5 connectors, one at a time, using the small flat blade screwdriver to secure the retainer screws.7. Install two 122782 push-in cable ties by pressing the pointed end into the vacant holes on the side of the MDE and secure the home and AZ cables to the MDE.8. Install a 7" cable tie to secure the TX & RX coaxes to the Home & AZ cables.	
<ol style="list-style-type: none">9. Trim the excess length off of ALL cable ties installed during this upgrade.	

1.1.11. Check PCU connections

	<p>WARNING: Verify that the “Service” and “USB” ports on the MK2 PCU are VACANT prior to applying AC power to the antenna.</p>
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1.1.12. Standard weight configurations

Change the course counter balance weight configuration:

1. Find the course balance weight kit for your specific model-dash number in the table below.
2. Remove the weights shown on the current configuration drawing. Combine these weights together with the counter weights provided in this upgrade kit.
3. Install the weights shown on the MK2 configuration drawing to course balance your upgraded antenna..

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Coarse balance configuration drawings

Description	CURRENT Configuration	MK2 Configuration
BALANCE WEIGHT KIT, EL & CL, 4009-11	130621-1	131921-1
BALANCE WEIGHT KIT, EL & CL, 4009-17	130338-1	131922-1
BALANCE WEIGHT KIT, EL & CL, 4009-23	130586-1	See Next row
BALANCE WEIGHT KIT, EL & CL, 4009-33	130548-1	
BALANCE WEIGHT POSITIONS, 4009-23/33 MK2 UPGRADE		134094-1
BALANCE WEIGHT KIT, EL & CL, 5009-11	130157-1	132412-1
BALANCE WEIGHT KIT, EL & CL, 5009-17	129993-1	131795-1
BALANCE WEIGHT KIT, EL & CL, 5009-23	130375-1	See Next row
BALANCE WEIGHT KIT, EL & CL, 5009-33	130376-1	
BALANCE WEIGHT POSITIONS, 5009-23/33 MK2 UPGRADE		TBD
BALANCE WEIGHT KIT, EL & CL, 6009-11	130664-1	131965-1
BALANCE WEIGHT KIT, EL & CL, 6009-17	130654-1	131966-1
BALANCE WEIGHT KIT, EL & CL, 6009-23	130608-1	See Next row
BALANCE WEIGHT KIT, EL & CL, 6009-33	130295-1	
BALANCE WEIGHT POSITIONS, 4009-23/33 MK2 UPGRADE		TBD

1.1.13. Antenna Initialization

Turn the pedestal power supply ON. The brakes on the Elevation and Cross-Level motors will release. A brake release power supply control circuit supplies 24 VDC to the brakes initially (5-10 seconds) and then reduces the voltage to 12VDC. The PCU will initialize the stabilized portion of the mass to be level with the horizon and at a prescribed Azimuth and Elevation angles in the specific sequence of steps listed below.

Initialization is completed in the following phases, each phase must complete correctly for the antenna to operate properly (post-initialization). Observe the Initialization of the antenna pedestal.

Step 1. Elevation axis activates - Input from the Elevation sensor is used to drive the Elevation of the equipment frame to 45.0 degrees in elevation.

Step 2. Cross-Level axis activates - Input from the Cross-Level sensor is used to drive Cross-Level of the equipment frame to bring it to level (this results in the tilt of the Cross-Level Beam being level).

Step 3. Azimuth axis activates - Antenna drives CW in azimuth until the "Home Flag" signal is produced. This signal is produced by a Proximity sensor in close proximity to a metal tab. After a short period of time (a total of approximately 1-2 Minutes after power is initially applied to the antenna), the PCU will report its model setting and software version number to the Antenna Control Unit (ACU).

This completes the phases of initialization. At this time the antenna elevation should be at 45.0 degrees and Relative azimuth should be at home flag (proximity sensor at the trailing edge of the metal tab in the azimuth assembly).

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If any of these steps fail, or the ACU reports model "xx09", re-configure the PCU as described in the Maintenance section of the Dealer Technical Manual. If initialization still fails, this indicates a drive or sensor problem, refer to the Troubleshooting section.

1.1.14. Balancing the Antenna

The antenna and equipment frame are balanced at the factory however, after disassembly for shipping or maintenance, balance adjustment may be necessary. The elevation and cross-level motors have a brake mechanism built into them, therefore, **power** must be ON to release the brakes and **DishScan and antenna drive** must be OFF to balance the antenna. . **Do NOT remove any of the drive belts.** Balancing is accomplished by adding or removing balance trim weights at strategic locations to keep the antenna from falling forward/backward or side to side. The antenna system is not pendulous so 'balanced' is defined as the antenna remaining at rest when left in any position.

The "REMOTE BALANCE" parameter (located at the end of the Remote Parameters after REMOTE TILT) of the ACU. When enabled, Remote Balance Mode temporarily turns DishScan, Azimuth, Elevation and Cross-Level drive OFF. This function is required when trying to balance antenna systems that have built-in brakes on the elevation and cross-level motors.

Assure that Antenna power is ON and that the antenna has completed initialization.

At the ACU:

From the ACU - REMOTE BALANCE parameter: Enable balance mode (refer to your ACU manual). The screen should now display "REMOTE BALANCE ON".

At the Antenna:

At the Antenna: Balance the antenna with the elevation near horizon (referred to as front to back balance) **by adding, or subtracting, small counter-weights.**

Then balance Cross Level axis (referred to as left-right balance) **by moving existing counter-weights from the left to the right or from the right to the left.** Always move weight from one location on the equipment frame to the same location on the opposite side of the equipment frame (ie from the top left of the reflector mounting frame to the top right of the reflector mounting frame). Do NOT add counter-weight during this step.

Last, balance the antenna with the elevation pointed at, or near, zenith (referred to as top to bottom balance) **by moving existing counter-weights from the top to the bottom or from the bottom to the top.** Always move weight from one location on the equipment frame to the same location on the opposite side of the equipment frame (ie from the top left of the reflector mounting frame to the bottom left of the reflector mounting frame). Do NOT add counter-weight during this step.

When completed, the antenna will stay at any position it is pointed in for at least 5 minutes (with no ship motion).

Do NOT cycle antenna power to re-Initialize the antenna. Return to the ACU, which is still in REMOTE BALANCE mode, and press ENTER to exit Remote Balance Mode. When you exit Balance Mode the antenna will be re-initialized, which turns DishScan, Azimuth, Elevation and Cross-Level drive ON.

1.1.15. Fine Balance and Monitoring Motor Drive Torque

The DacRemP **DISPTC** graph chart provides a means for monitoring torque commands required for each motor for diagnostic purposes and verifying antenna balance. By observing each trace, the required drive of the antenna via the motor driver PCB may be established.

To view the Torque Commands, select the graph chart.

This chart displays the Torque Command errors for each axis via three traces, CL (Cross Level), LV (Elevation), and AZ (Azimuth), at a fixed 0.195amps/vertical division.

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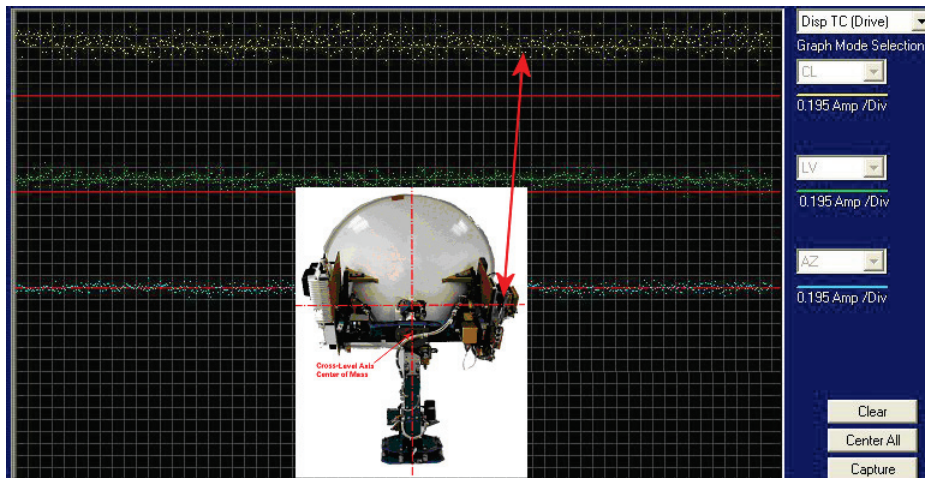
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A normal trace display will be ± 1 divisions from the red reference line while under calm sea conditions and with DishScan Drive turned off. See example below

The Cross Level display will decrease (plots below red line) as the antenna requires drive to the left and increase (plots above red line) as the antenna requires to the right.

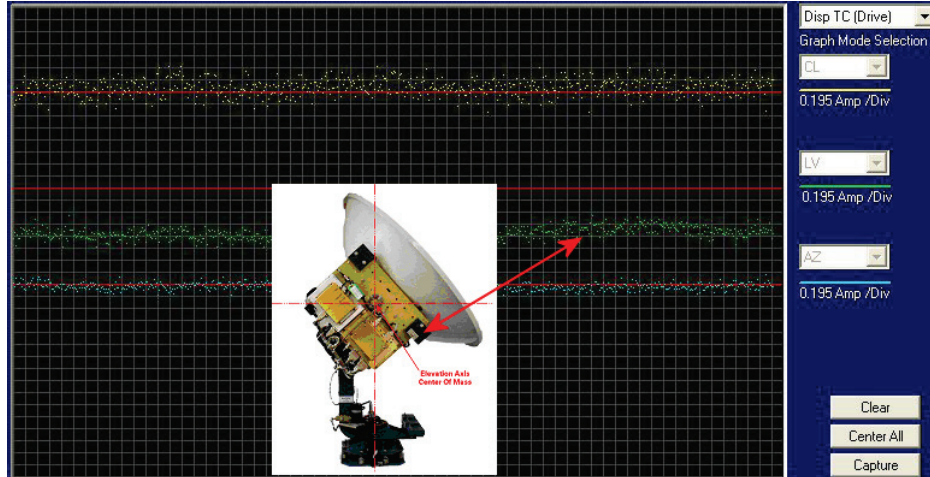
Example: The antenna pictured in the screen capture below is imbalanced so that it is “Right Heavy”. The CL trace is plotting above the red reference line (indicating that drive CCW is required to maintain a 90° Cross-Level position).



The Level display should decrease (plots below red line) as the antenna requires drive forward (Up in elevation) and increase (plots above red line) as the antenna requires drive back (Down in elevation).

Example: The antenna pictured in the screen capture below is imbalanced so that it is “Front Heavy”. The LV trace is plotting above the red line (indicating that drive CW is required to maintain the Current elevation position).

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The Azimuth display should decrease (plots below red line) as the antenna is driven CCW and increase (plots above red line) as the antenna is rotated CW.

1.1.16. **Testing the Antenna**

Conduct the Functional Testing as described in the 131118 Series 09 Scheduled Inspections Record manual.

If all functional tests are satisfactory, return to normal operations.

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	131057-1	B	ENCLOSURE ASS'Y, PCU, 09G2, 3 CH, 232	
2	1 EA	131227-1	B	ENCLOSURE ASS'Y, MOTOR DRIVER, 09G2	
3	1 EA	131381-1	B	GPS ANTENNA, SERIAL, AAA001005-G, NAV	
5	1 EA	131298-5	X2	HARNESS ASS'Y, REFLECTOR, 09 UPGRADE	
6	1 EA	113303-10	U	CABLE ASS'Y, SMA 90 - SMA (M), 8 IN	
7	1 EA	128001-60ORG	A1	CABLE ASS'Y, RG-179 COAX, F(M) TO SMA	
8	1 EA	128001-60YEL	A1	CABLE ASS'Y, RG-179 COAX, F(M) TO SMA	
9	1 EA	132624-1	A	UPGRADE KIT, BALANCE WEIGHTS, XX09, M	
10	10 EA	119801-012	B	CABLE TIE, NYLON, 4 IN, NATURAL	
11	25 EA	119801-019	B	CABLE TIE, NYLON, 7.5 IN, NATURAL	
12	1 EA	117319-4	E	LOCTITE PRODUCTS, 242 THREADLOCKER, .	
13	1 EA	117319-30	E	LOCTITE PRODUCTS, 2760 THREADLOCKER,	
14	1 IN	124077-5	B	TAPE, 3M VHB #4991, SYNTHETIC ADHESIV	
15	6 EA	122782		CABLE TIE, HOLDER, .281 DIA PUSH MOUN	
16	1 EA	122976-1	A	DB 9 SLIM-LINE GENDER CHANGER, MALE T	
18	1 EA	109391	A	ADAPTER, F(F)-F(F) (BULLET), 0.84 IN	
19	1 EA	132622	A	PROCEDURE, UPGRADE, XX09 MK2	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>UPGRADE KIT, XX09, MK2</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 2	DRAWING NUMBER 132196-1	REV B1

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	6 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
2	1 EA	108519-1	G	WEIGHT, TRIM 4.0 OZ	
3	1 EA	108519-3	G	WEIGHT, TRIM 6.0 OZ	
4	2 EA	115420-2	G	TRIM WEIGHT, 10 X 3 X 3/8 IN	
10	1 EA	126279-3	A2	NUT, 1 5/8 UNISTRUT, 1/4-20, W/SPRING	
50	1 EA	114586-537		SCREW, HEX HD, 1/4-20 x 3/4, S.S.	
51	1 EA	114586-538		SCREW, HEX HD, 1/4-20 x 1, S.S.	
52	2 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
53	1 EA	114586-545		SCREW, HEX HD, 1/4-20 x 2-1/2, S.S.	
54	1 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
58	7 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	1 EA	114583-029		NUT, HEX, 1/4-20, S.S.	
60	1 EA	132622	A	PROCEDURE, UPGRADE, XX09 MK2	REFERENCE ONLY

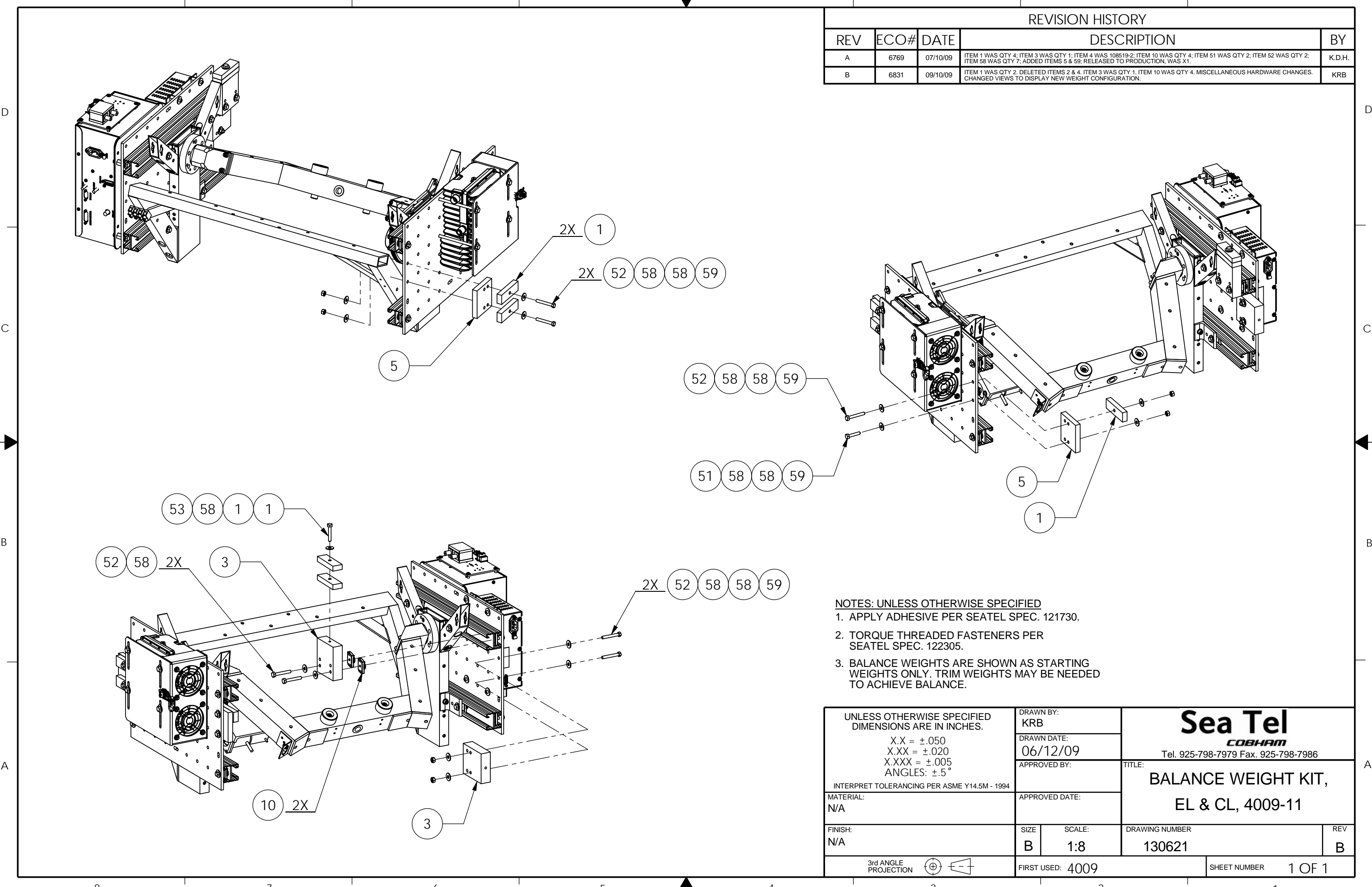
<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>UPGRADE KIT, BALANCE WEIGHTS, XX09, MK2</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 132624-1	REV A

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	5 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
3	2 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
5	2 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
10	2 EA	126279-3	A2	NUT, 1 5/8 UNISTRUT, 1/4-20, W/SPRING	
51	1 EA	114586-540		SCREW, HEX HD, 1/4-20 x 1-1/4, S.S.	
52	7 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
53	1 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
58	15 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	6 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1>Sea Tel</h1> <p><i>COBHAM</i></p>				
BALANCE WEIGHT KIT, EL & CL, 4009-11				
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REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6769	07/10/09	ITEM 1 WAS QTY 4; ITEM 3 WAS QTY 1; ITEM 4 WAS 108519-2; ITEM 10 WAS QTY 4; ITEM 51 WAS QTY 2; ITEM 52 WAS QTY 2; ITEM 58 WAS QTY 7; ADDED ITEMS 5 & 59; RELEASED TO PRODUCTION, WAS X1.	K.D.H.
B	6831	09/10/09	ITEM 1 WAS QTY 2. DELETED ITEMS 2 & 4. ITEM 3 WAS QTY 1. ITEM 10 WAS QTY 4. MISCELLANEOUS HARDWARE CHANGES. CHANGED VIEWS TO DISPLAY NEW WEIGHT CONFIGURATION.	KRB



- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.

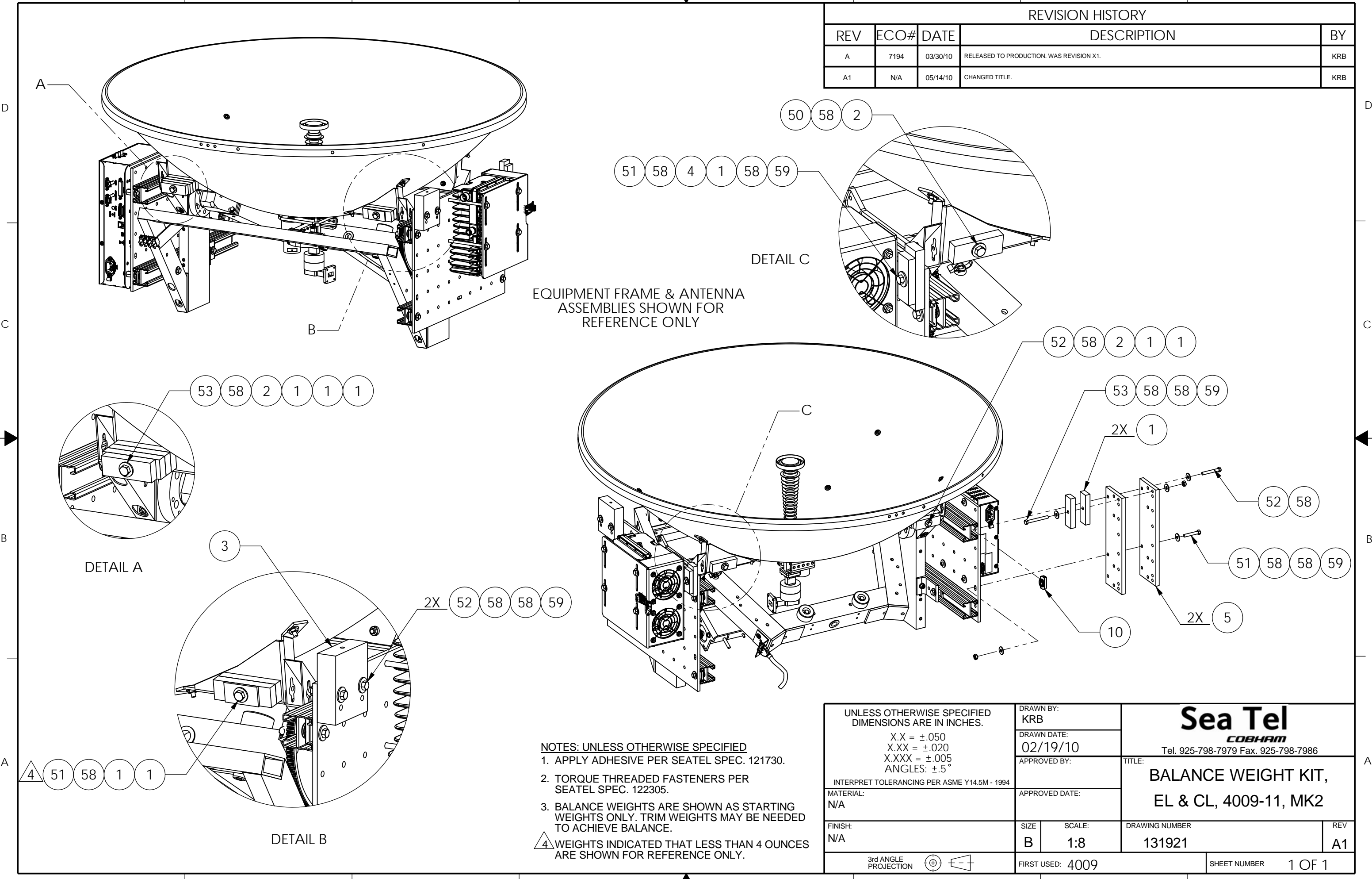
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°		DRAWN BY: KRB		 Tel. 925-798-7979 Fax. 925-798-7986	
INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN DATE: 06/12/09			
MATERIAL: N/A		APPROVED BY:		TITLE: BALANCE WEIGHT KIT, EL & CL, 4009-11	
FINISH: N/A		APPROVED DATE:		DRAWING NUMBER: 130621	
3rd ANGLE PROJECTION		SIZE: B	SCALE: 1:8	FIRST USED: 4009	REV: B
				SHEET NUMBER	1 OF 1

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	10 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
2	3 EA	108519-3	G	WEIGHT, TRIM 6.0 OZ	
3	1 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
4	1 EA	108519-1	G	WEIGHT, TRIM 4.0 OZ	
5	2 EA	115420-2	G	TRIM WEIGHT, 10 X 3 X 3/8 IN	
10	1 EA	126279-3	A2	NUT, 1 5/8 UNISTRUT, 1/4-20, W/SPRING	
50	1 EA	114586-538		SCREW, HEX HD, 1/4-20 x 1, S.S.	
51	3 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
52	4 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
53	2 EA	114586-544		SCREW, HEX HD, 1/4-20 x 2-1/4, S.S.	
58	15 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	5 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 4009-11, MK2</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 131921-1	REV A1

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	7194	03/30/10	RELEASED TO PRODUCTION. WAS REVISION X1.	KRB
A1	N/A	05/14/10	CHANGED TITLE.	KRB



EQUIPMENT FRAME & ANTENNA ASSEMBLIES SHOWN FOR REFERENCE ONLY

- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.
 4. WEIGHTS INDICATED THAT LESS THAN 4 OUNCES ARE SHOWN FOR REFERENCE ONLY.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°		DRAWN BY: KRB		 Tel. 925-798-7979 Fax. 925-798-7986	
INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN DATE: 02/19/10			
MATERIAL: N/A		APPROVED BY:		TITLE: BALANCE WEIGHT KIT, EL & CL, 4009-11, MK2	
FINISH: N/A		APPROVED DATE:		DRAWING NUMBER 131921	
3rd ANGLE PROJECTION		SIZE: B	SCALE: 1:8	FIRST USED: 4009	REV A1
				SHEET NUMBER	1 OF 1

SINGLE LEVEL MFG BILL OF MATERIAL

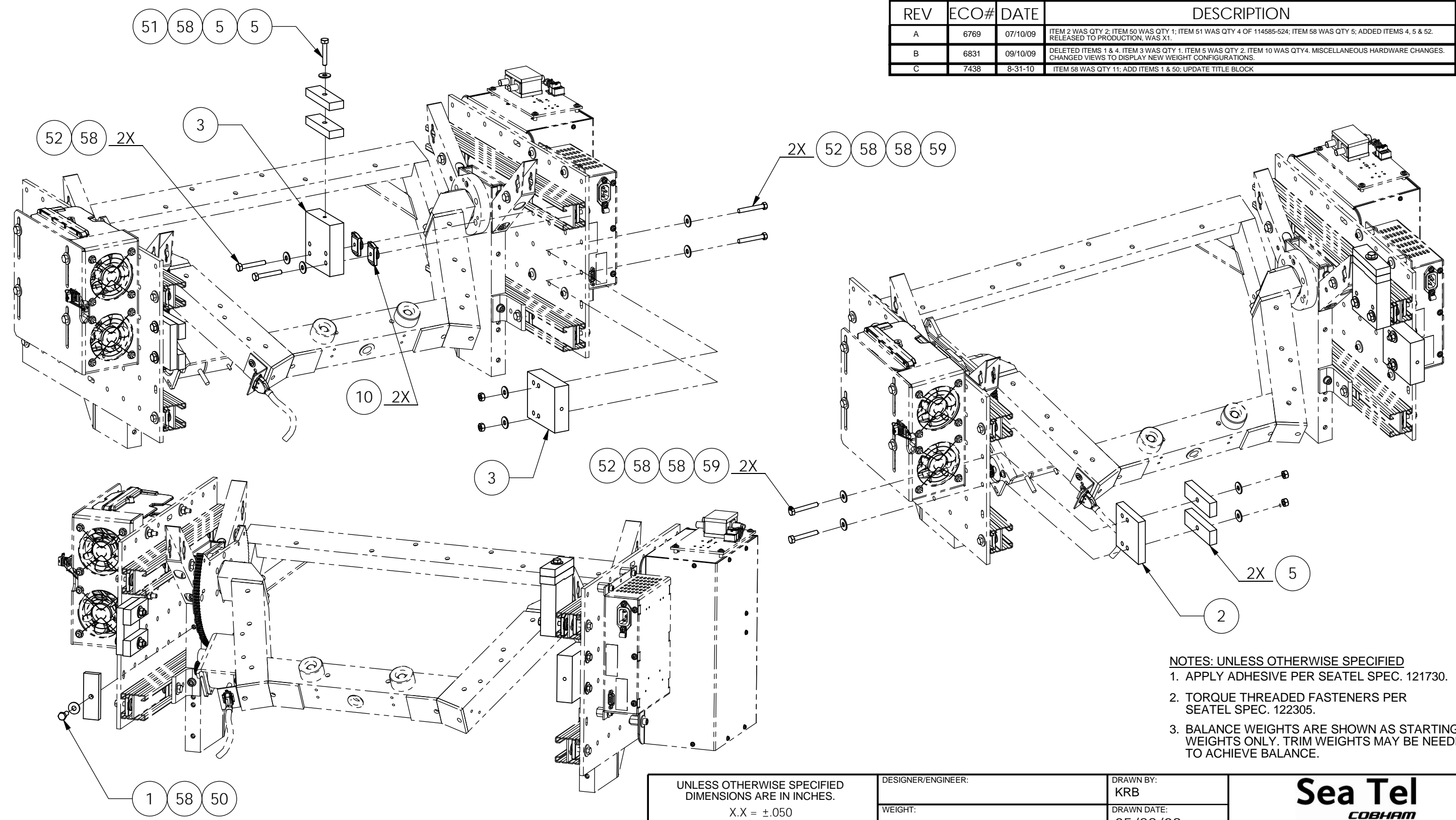
FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	108519-2	G	WEIGHT, TRIM 5.0 OZ	
2	1 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
3	2 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
5	4 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
10	2 EA	126279-3	A2	NUT, 1 5/8 UNISTRUT, 1/4-20, W/SPRING	
50	1 EA	114586-537		SCREW, HEX HD, 1/4-20 x 3/4, S.S.	
51	1 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
52	6 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
58	12 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	4 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1>Sea Tel</h1> <p><i>COBHAM</i></p>				
BALANCE WEIGHT KIT, EL & CL, 4009-17				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130338-1	REV C

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6769	07/10/09	ITEM 2 WAS QTY 2; ITEM 50 WAS QTY 1; ITEM 51 WAS QTY 4 OF 114585-524; ITEM 58 WAS QTY 5; ADDED ITEMS 4, 5 & 52. RELEASED TO PRODUCTION, WAS X1.	K.D.H.
B	6831	09/10/09	DELETED ITEMS 1 & 4. ITEM 3 WAS QTY 1. ITEM 5 WAS QTY 2. ITEM 10 WAS QTY 4. MISCELLANEOUS HARDWARE CHANGES. CHANGED VIEWS TO DISPLAY NEW WEIGHT CONFIGURATIONS.	KRB
C	7438	8-31-10	ITEM 58 WAS QTY 11; ADD ITEMS 1 & 50; UPDATE TITLE BLOCK	K.D.H.

D
C
B
A

D
C
B
A



- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
 X.X = ±.050
 X.XX = ±.020
 X.XXX = ±.005
 ANGLES: ±.5°
 INTERPRET TOLERANCING PER ASME Y14.5 - 2009

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DESIGNER/ENGINEER:	DRAWN BY: KRB	
WEIGHT:	DRAWN DATE: 05/28/09	
MATERIAL: N/A	APPROVED BY:	
FINISH: N/A	APPROVED DATE:	
SURFACE ROUGHNESS:	SIZE: B	SCALE: 1:6
FIRST USED: 4009		

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COBHAM
 Tel. 925-798-7979 Fax. 925-798-7986

TITLE:
**BALANCE WEIGHT KIT,
 EL & CL, 4009-17**

DRAWING NUMBER 130338	REV C
SHEET NUMBER 1 OF 1	



8 7 6 5 4 3 2 1

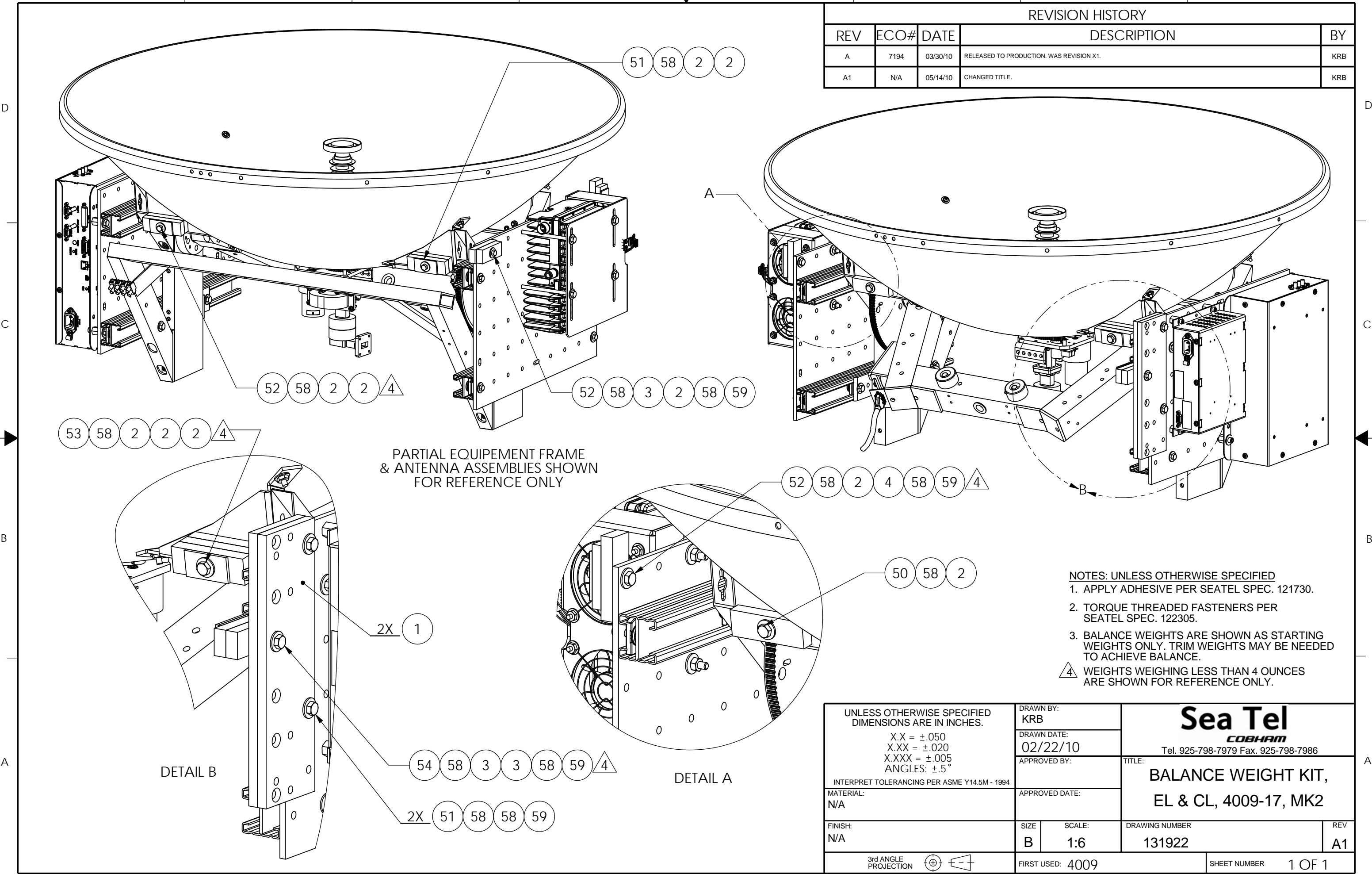
8 7 6 5 4 3 2 1

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	2 EA	115420-2	G	TRIM WEIGHT, 10 X 3 X 3/8 IN	
2	10 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
3	3 EA	108519-3	G	WEIGHT, TRIM 6.0 OZ	
4	1 EA	108519-1	G	WEIGHT, TRIM 4.0 OZ	
50	1 EA	114586-538		SCREW, HEX HD, 1/4-20 x 1, S.S.	
51	3 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
52	3 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
53	1 EA	114586-543		SCREW, HEX HD, 1/4-20 x 2, S.S.	
54	1 EA	114586-545		SCREW, HEX HD, 1/4-20 x 2-1/2, S.S.	
58	14 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	5 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 4009-17, MK2</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 131922-1	REV A1

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	7194	03/30/10	RELEASED TO PRODUCTION. WAS REVISION X1.	KRB
A1	N/A	05/14/10	CHANGED TITLE.	KRB



- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.
 4. WEIGHTS WEIGHING LESS THAN 4 OUNCES ARE SHOWN FOR REFERENCE ONLY.

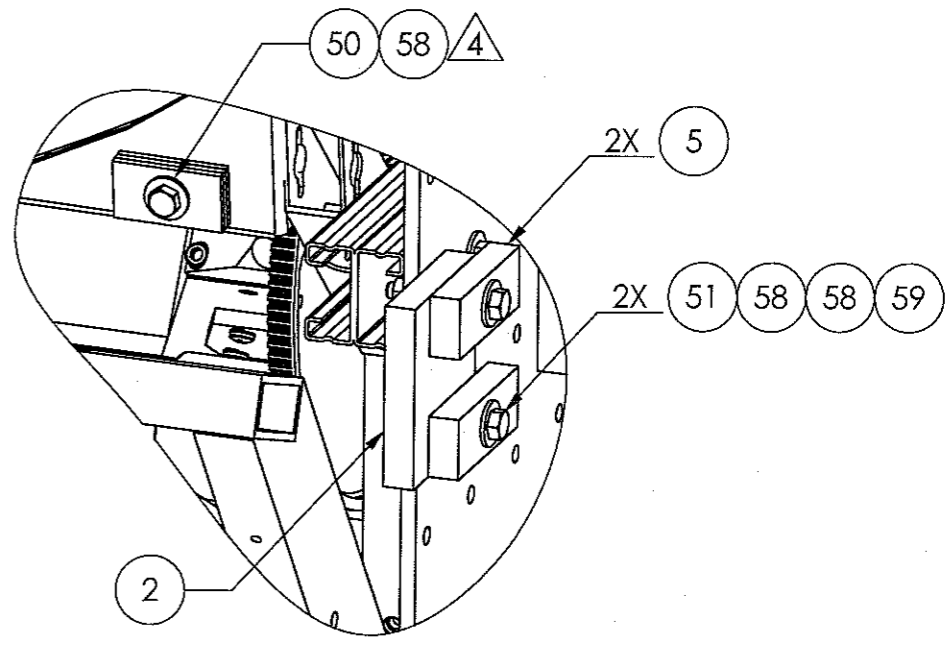
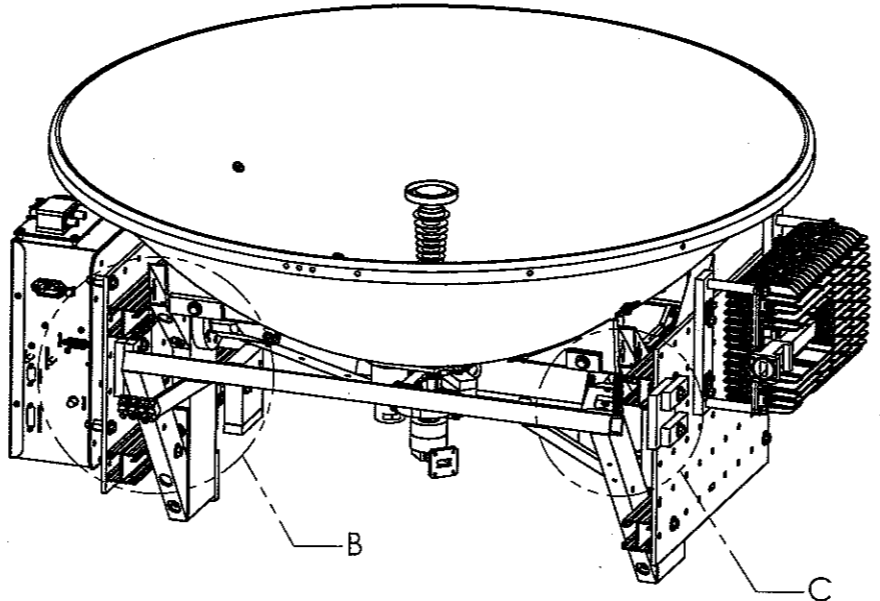
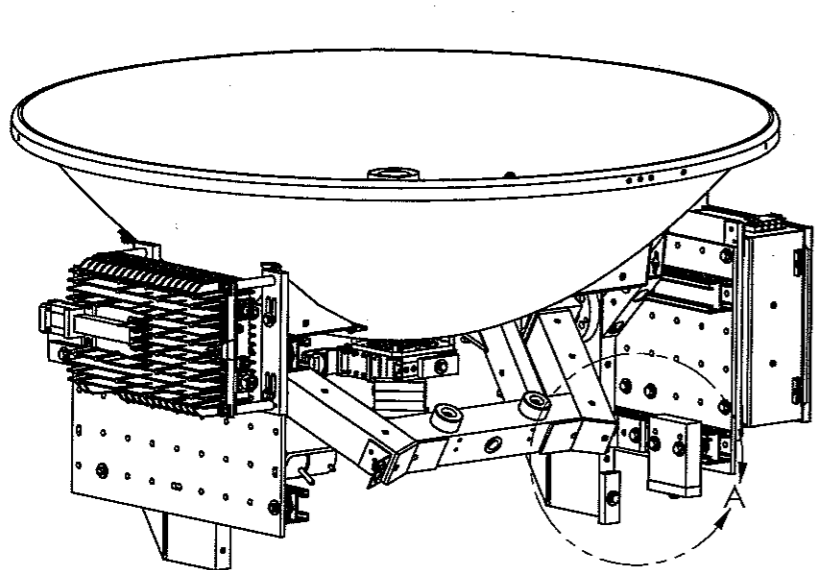
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°		DRAWN BY: KRB		 Tel. 925-798-7979 Fax. 925-798-7986	
INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN DATE: 02/22/10			
MATERIAL: N/A		APPROVED BY:		TITLE: BALANCE WEIGHT KIT, EL & CL, 4009-17, MK2	
FINISH: N/A		APPROVED DATE:		DRAWING NUMBER 131922	
3rd ANGLE PROJECTION		SIZE B	SCALE: 1:6	FIRST USED: 4009	REV A1
				SHEET NUMBER	1 OF 1

SINGLE LEVEL MFG BILL OF MATERIAL

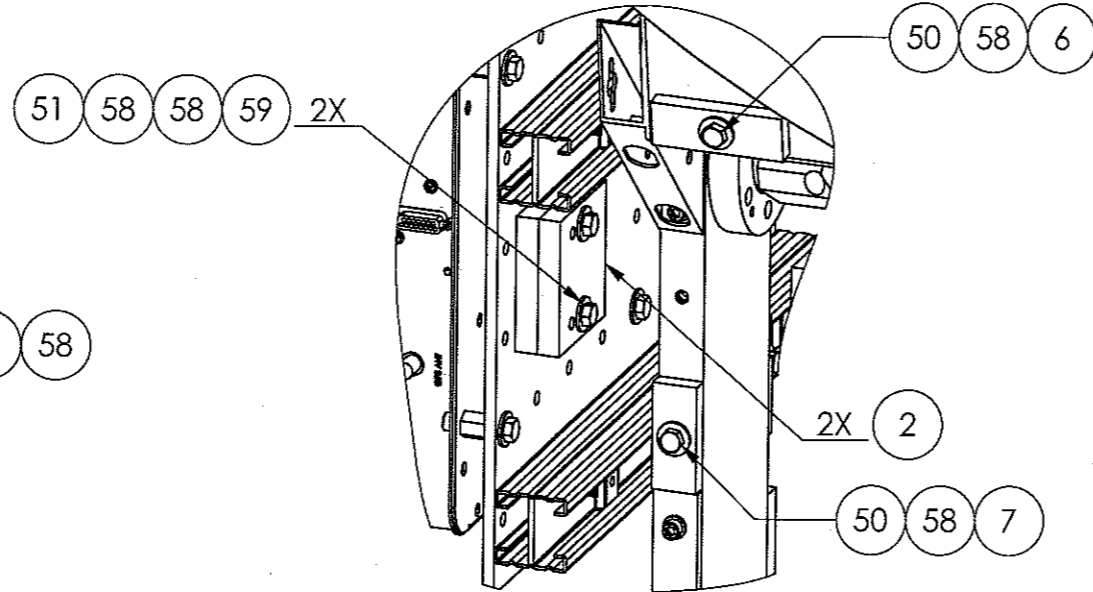
FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
2	3 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
4	1 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
5	3 EA	108519-3	G	WEIGHT, TRIM 6.0 OZ	
6	1 EA	108519-2	G	WEIGHT, TRIM 5.0 OZ	
7	1 EA	108519-1	G	WEIGHT, TRIM 4.0 OZ	
10	2 EA	126279-3	A2	NUT, 1 5/8 UNISTRUT, 1/4-20, W/SPRING	
50	5 EA	114586-537		SCREW, HEX HD, 1/4-20 x 3/4, S.S.	
51	6 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
58	14 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	4 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 4009-23</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130586-1	REV A

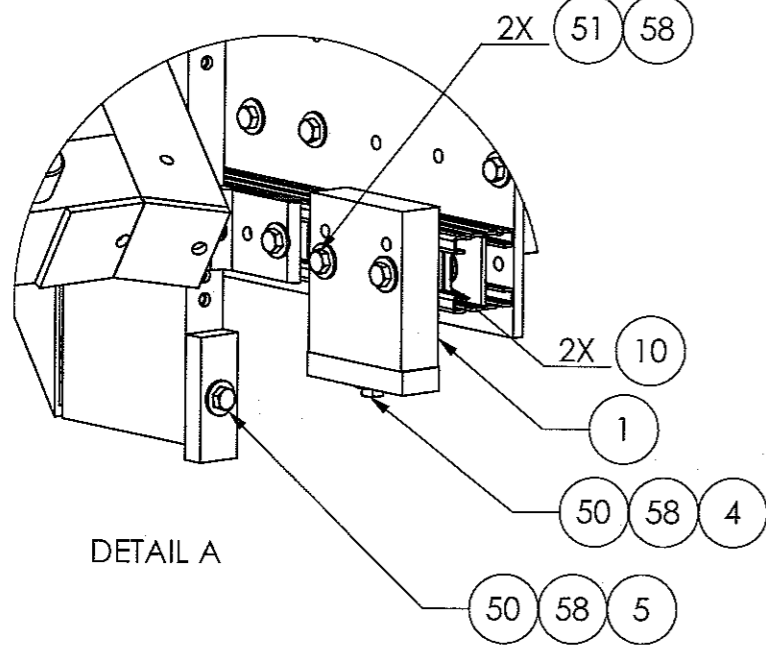
REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6771	07/09/09	RELEASE TO PRODUCTION, NO PRIOR REVISION.	KRB



DETAIL C



DETAIL B
(BRIDGE NOT SHOWN FOR CLARITY)



DETAIL A

- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.
 4. WEIGHTS INDICATED ARE LESS THAN 4 OUNCES AND ARE SHOWN FOR REFERENCE ONLY.

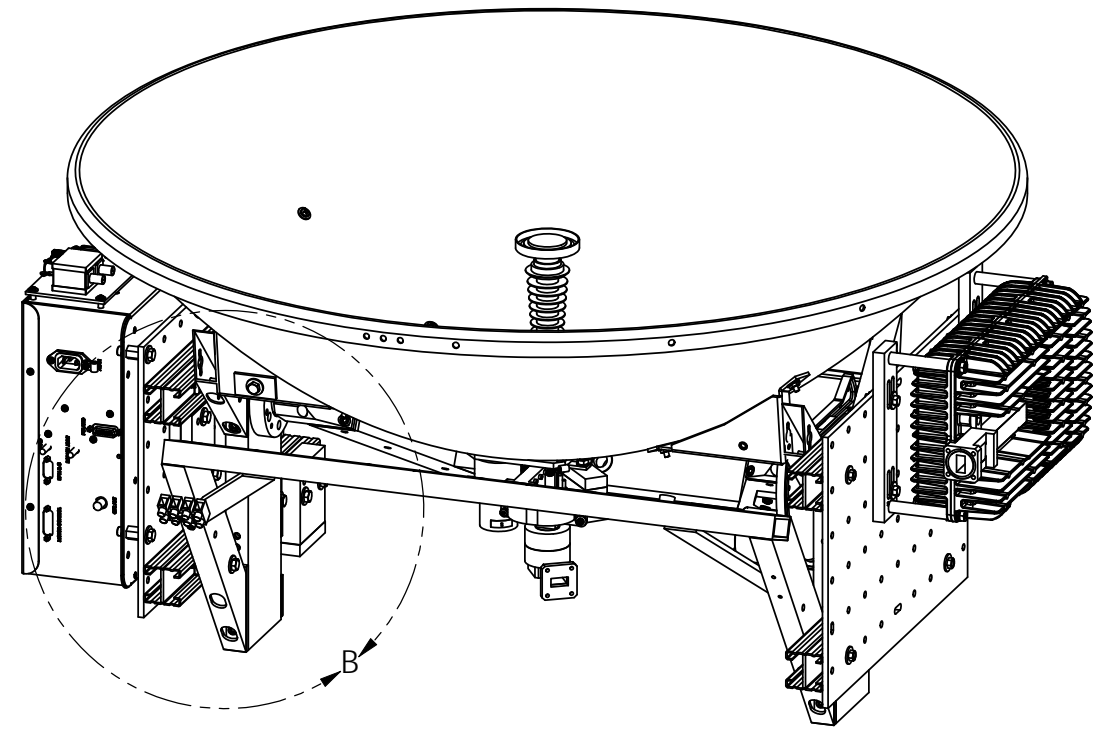
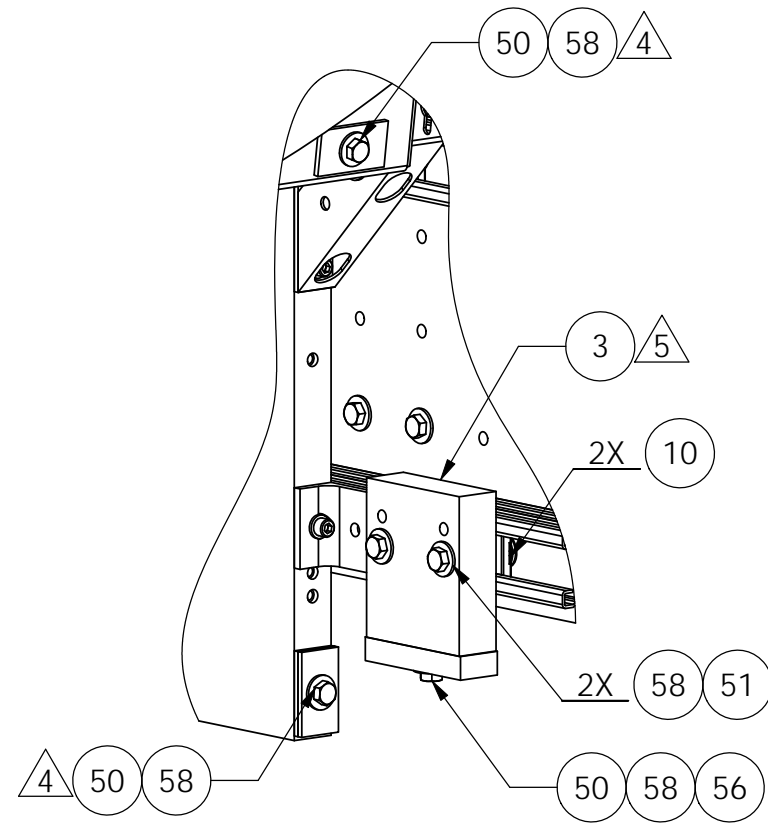
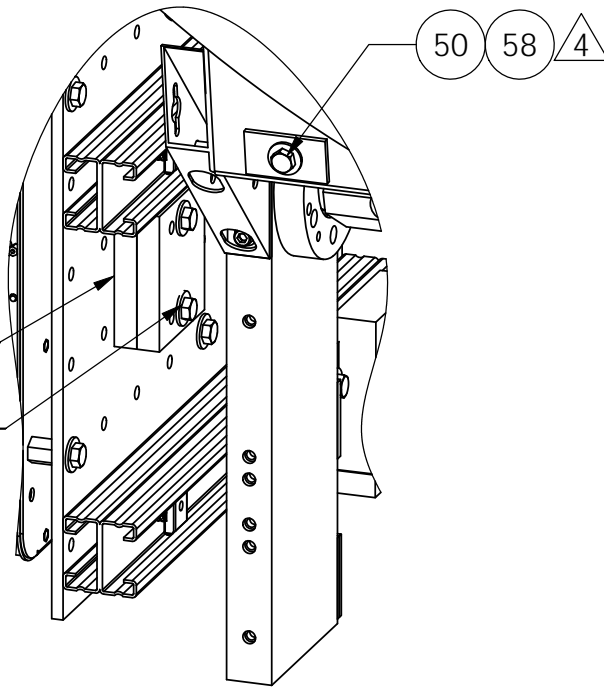
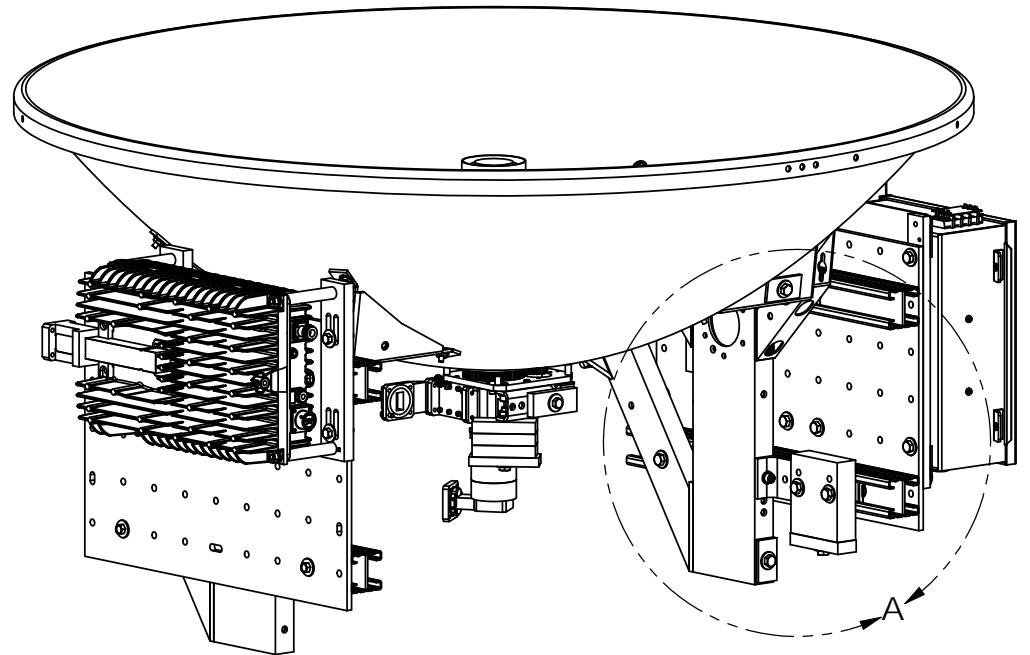
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°		DRAWN BY: KRB		<h1>Sea Tel</h1> <p>COBHAM</p> <p>Tel. 925-798-7979 Fax. 925-798-7986</p>	
INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN DATE: 06/23/09			
MATERIAL: N/A		APPROVED BY: <i>[Signature]</i>		TITLE: BALANCE WEIGHT KIT, EL & CL, 4009-23	
FINISH: N/A		APPROVED DATE: 7/10/09		DRAWING NUMBER: 130586	
3rd ANGLE PROJECTION		SIZE: B		SCALE: 1:10	
		FIRST USED: 4009		REV: A	
				SHEET NUMBER: 1 OF 1	

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
2	2 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
3	1 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
6	1 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
10	2 EA	126279-3	A2	NUT, 1 5/8 UNISTRUT, 1/4-20, W/SPRING	
50	4 EA	114586-537		SCREW, HEX HD, 1/4-20 x 3/4, S.S.	
51	4 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
58	10 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	2 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 4009-33</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130548-1	REV A1

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6771	07/08/09	RELEASED TO PRODUCTION. NO PRIOR REVISION.	KRB
A1	6854	09/11/09	REPOSITIONED WEIGHTS WITHIN ASSEMBLY. ADDED NOTE 5.	KRB



DETAIL B
(BRIDGE NOT SHOWN FOR CLARITY)

DETAIL A
(LEVEL BEAM NOT SHOWN FOR CLARITY)

- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.
- ⚠️ WEIGHTS INDICATED ARE LESS THAN 4 OUNCES AND ARE SHOWN FOR REFERENCE ONLY.
- ⚠️ ABUT INDICATED WEIGHT TO SSPA BRACKET WHEN INSTALLING ON EQUIPMENT FRAME.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5° INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN BY: KRB		<h1>Sea Tel</h1> <p>COBHAM</p> <p>Tel. 925-798-7979 Fax. 925-798-7986</p>	
MATERIAL: N/A		DRAWN DATE: 07/09/09			
FINISH: N/A		APPROVED BY:		TITLE: BALANCE WEIGHT KIT, EL & CL, 4009-33	
3rd ANGLE PROJECTION		SIZE: B	SCALE: 1:8	DRAWING NUMBER: 130548	REV: A1
FIRST USED: 4009				SHEET NUMBER: 1 OF 1	

Upgrade Procedure, xx09 MK2

134094-1

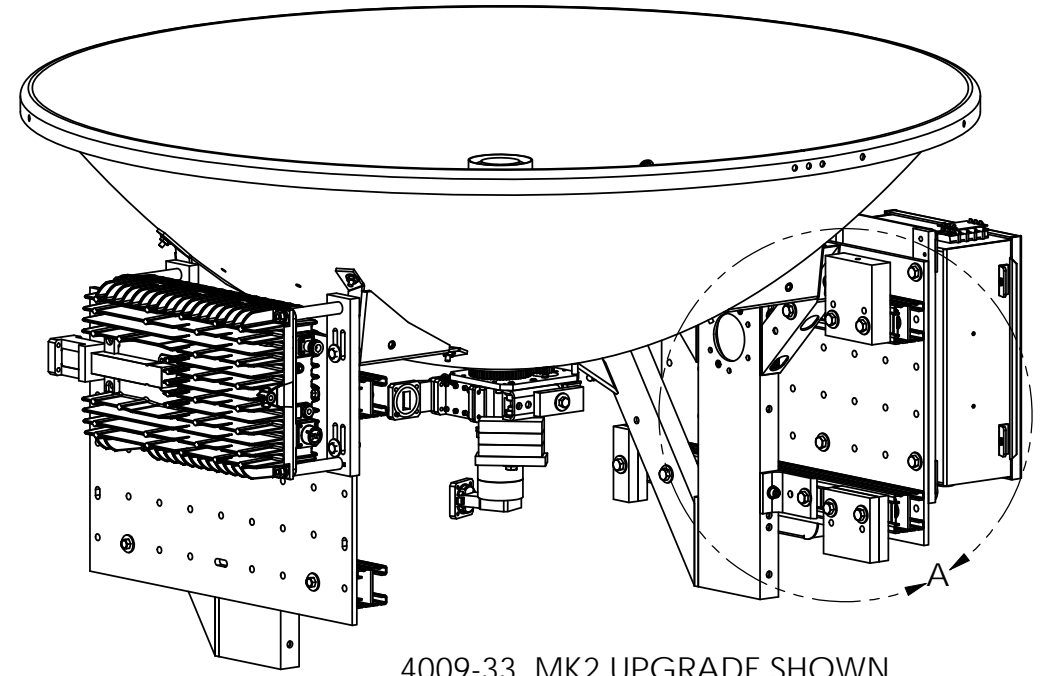
BALANCE WEIGHT POSITIONS, 4009-23/33 MK2 UPGRADE

Refer to BOM 132624-1 UPGRADE KIT, BALANCE WEIGHTS, XX09, MK2

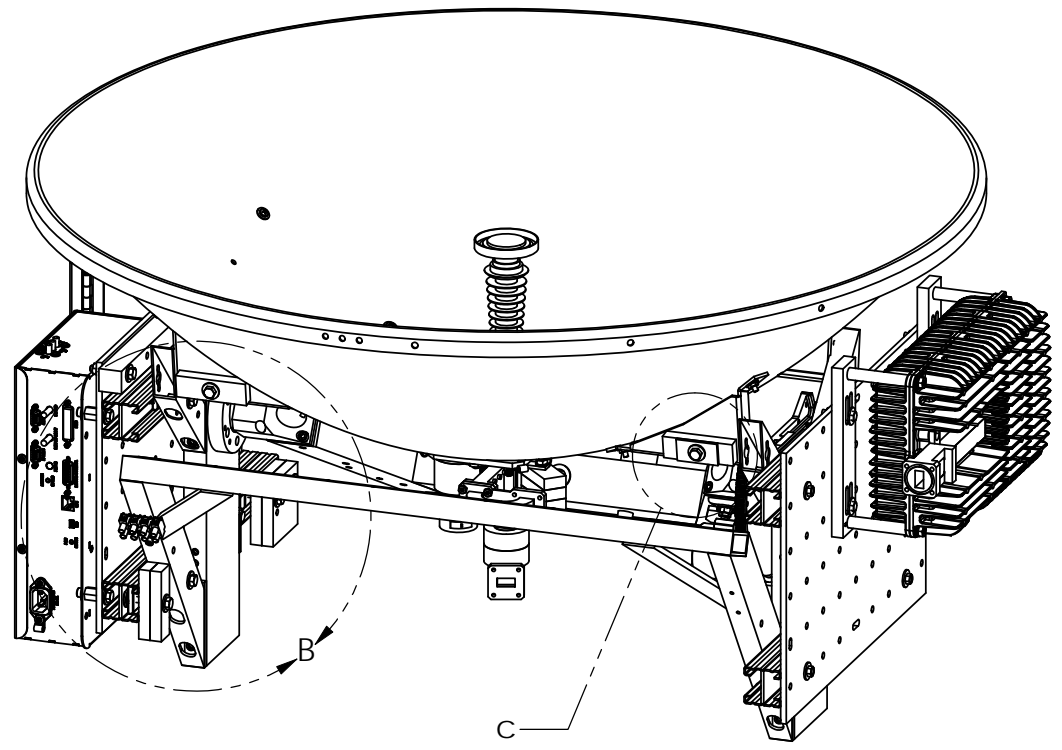
Page 32 of 64	Sea Tel <i>COBHAM</i>	Document No 132622 Rev B
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8 7 6 5 4 3 2 1

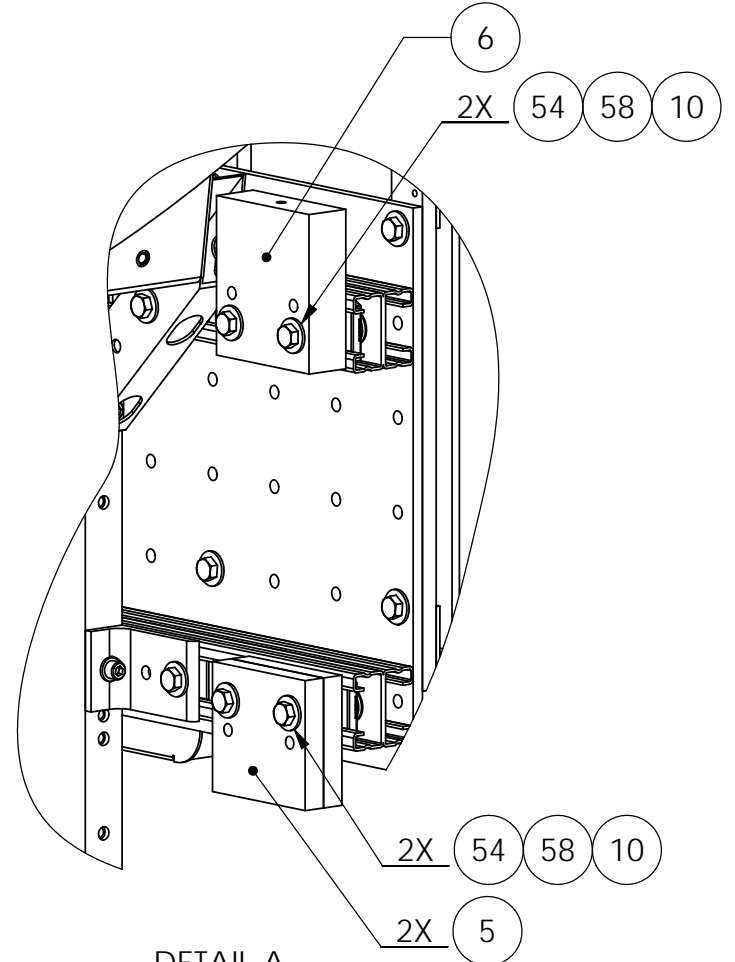
REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	8332	02/04/11	RELEASED TO PRODUCTION. NO PRIOR REVISION.	KRB



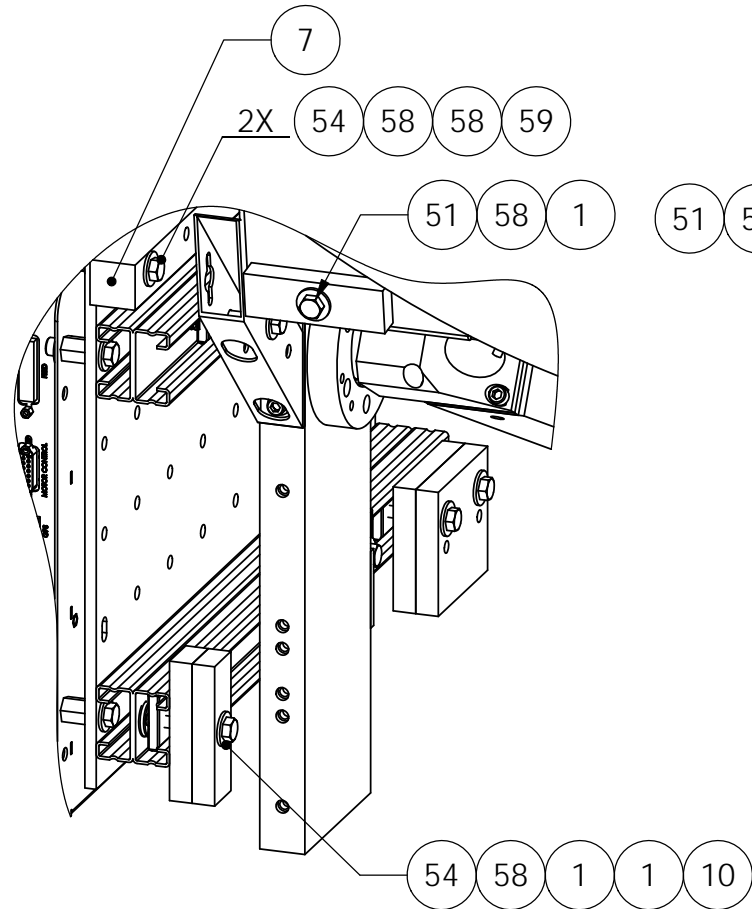
4009-33, MK2 UPGRADE SHOWN



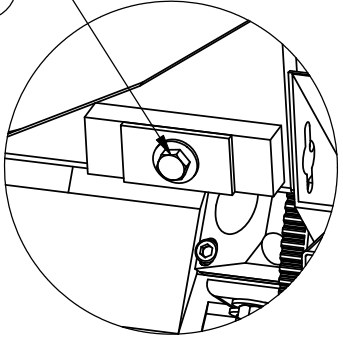
4009-33, MK2 UPGRADE SHOWN



DETAIL A
(LEVEL BEAM NOT SHOWN FOR CLARITY)



DETAIL B
(BRIDGE NOT SHOWN FOR CLARITY)



DETAIL C

- NOTES: UNLESS OTHERWISE SPECIFIED
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.
 4. DRAWING IS FOR REFERENCE ONLY. FOR BUBBLE I.D. PART IDENTIFICATION, REFER TO BOM 132624-1.

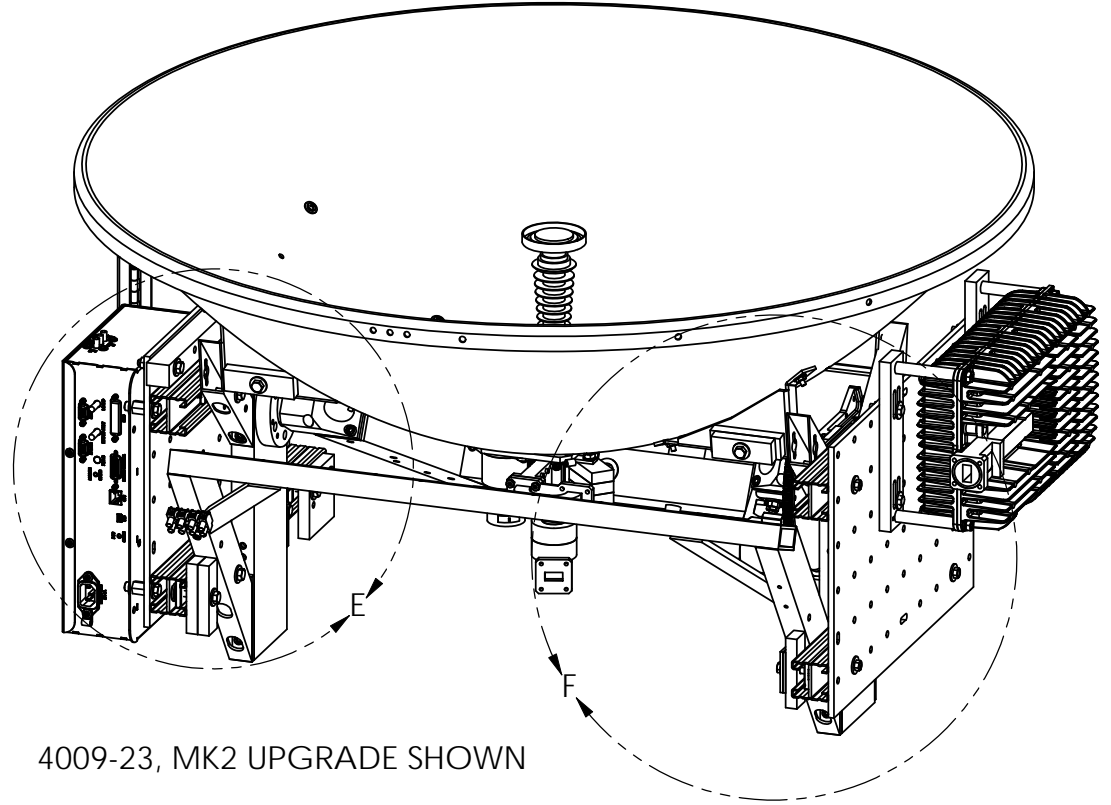
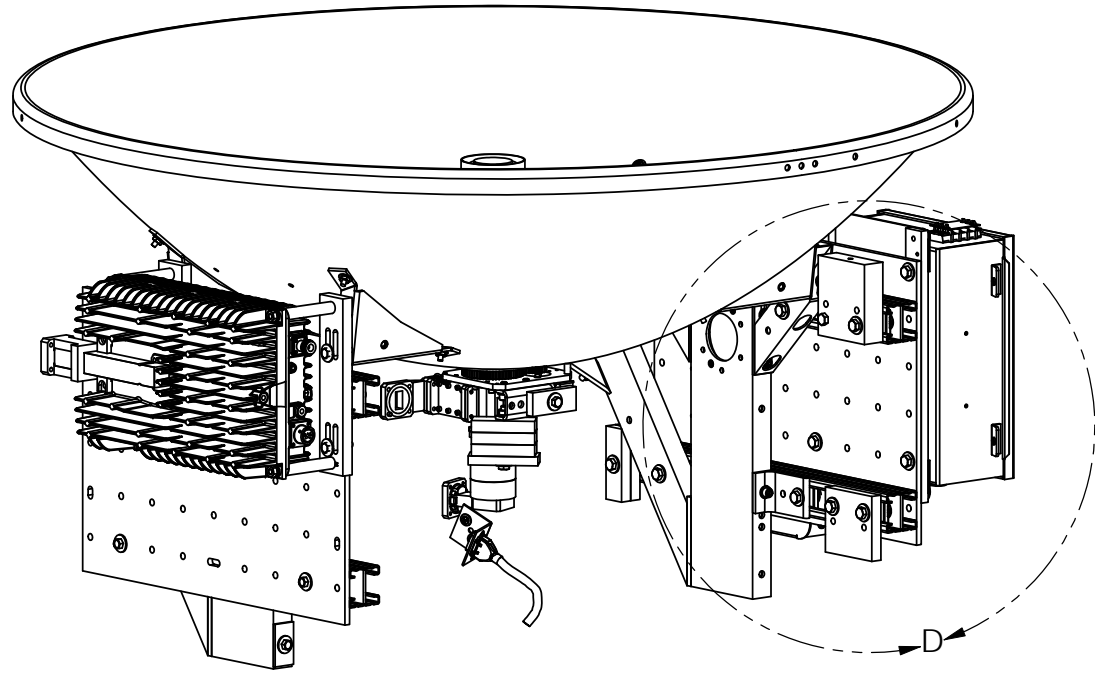
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°		DRAWN BY: KRB		<h1>Sea Tel</h1> <p>COBHAM</p> <p>Tel. 925-798-7979 Fax. 925-798-7986</p>	
INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN DATE: 02/04/11			
MATERIAL: N/A		APPROVED BY:		TITLE: BALANCE WEIGHT POSITIONS	
FINISH: N/A		APPROVED DATE:		4009-23/33 MK2 UPGRADE	
3rd ANGLE PROJECTION		SIZE: B	SCALE: 1:8	DRAWING NUMBER: 134094	REV: A
FIRST USED: 4009				SHEET NUMBER 1 OF 2	

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

D

D



4009-23, MK2 UPGRADE SHOWN

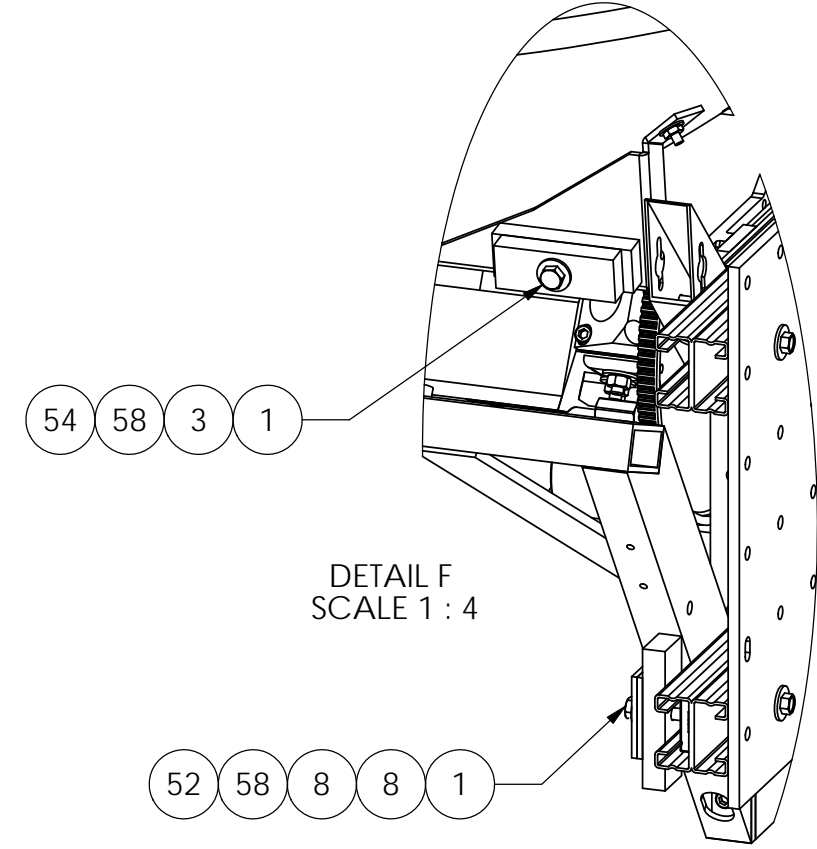
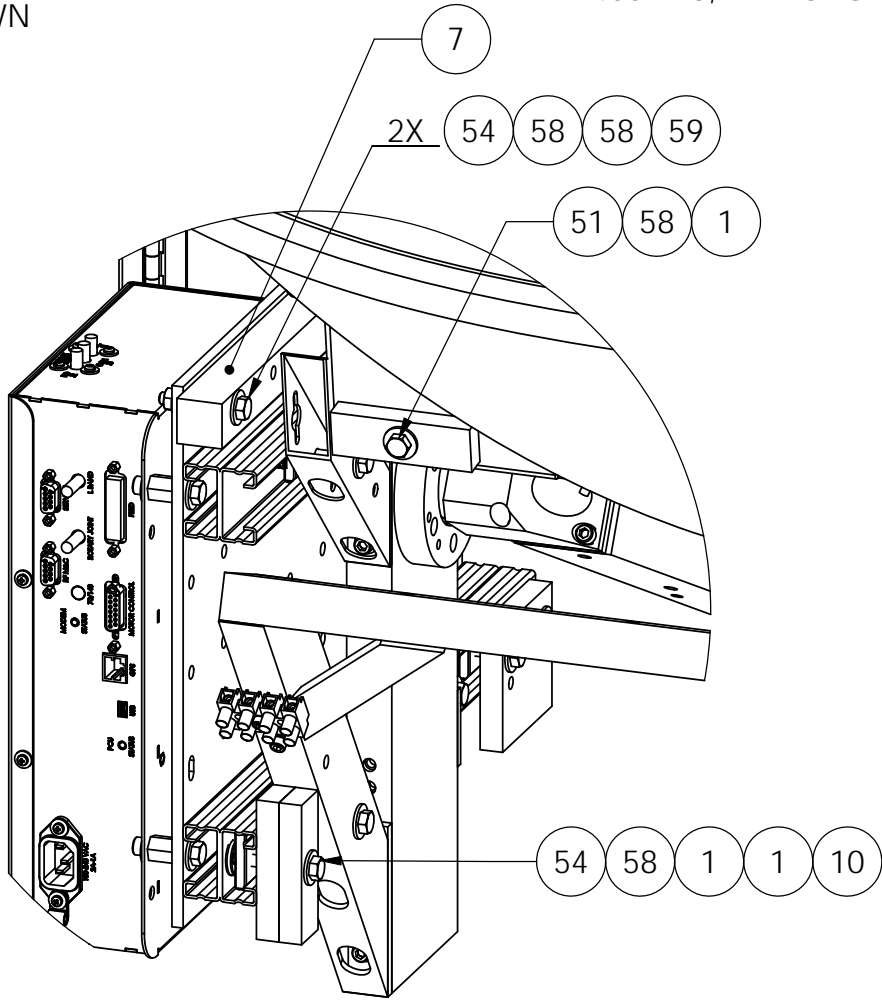
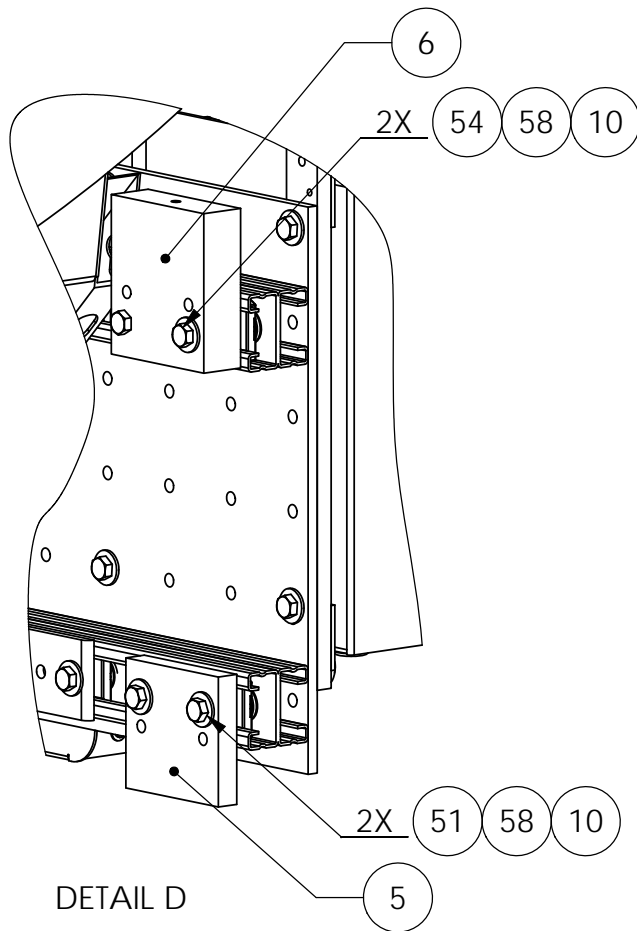
4009-23, MK2 UPGRADE SHOWN

C

C

B

B



DETAIL D

DETAIL E

DETAIL F
SCALE 1:4

A

A

SIZE	SCALE:	DRAWING NUMBER	REV
B	1:8	134094	A
		SHEET NUMBER	2 OF 2

8 7 6 5 4 3 2 1

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	126026	B	AZ COUNTER WEIGHT MOD	
2	2 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
3	2 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
50	4 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
51	2 EA	114586-546		SCREW, HEX HD, 1/4-20 x 2-3/4, S.S.	
58	12 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	6 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 5009-11</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130157-1	REV X1

Upgrade Procedure, xx09 MK2

DWG Pg 1 - NOT AVAILABLE YET

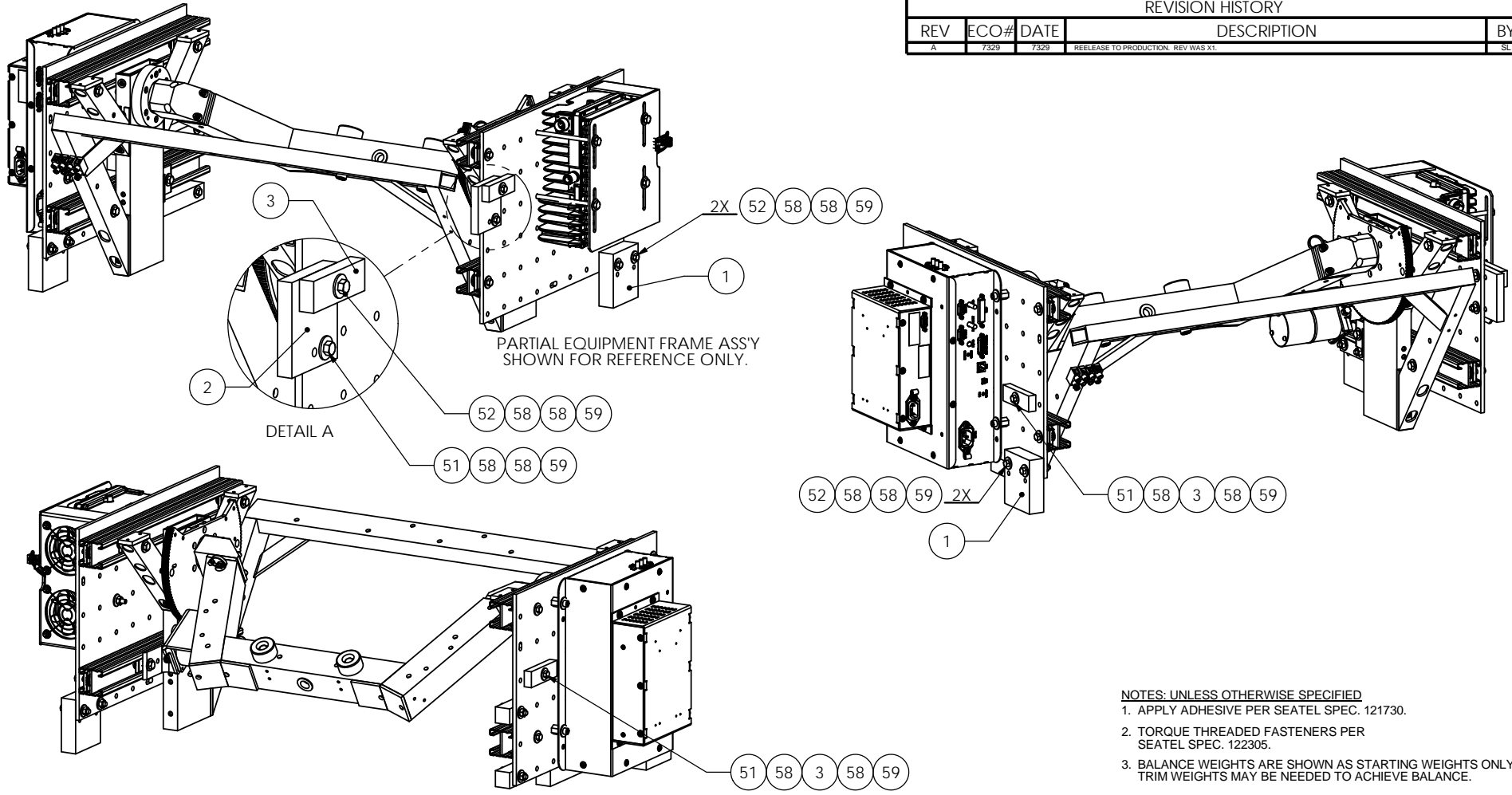
Page 36 of 64	Sea Tel <i>COBHAM</i>	Document No 132622 Rev B
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SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	2 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
2	1 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
3	3 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
51	3 EA	114586-540		SCREW, HEX HD, 1/4-20 x 1-1/4, S.S.	
52	5 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
58	16 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	8 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 5009-11, MK2</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 132412-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	7329	7329	RELEASE TO PRODUCTION. REV WAS X1.	SL



- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.

<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.</p> <p>X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°</p> <p>INTERPRET TOLERANCING PER ASME Y14.5 - 2009</p> <p>This drawing and specifications are the property of Cobham PLC. Neither this document, the information, or the specifications disclosed shall be reproduced or transferred in whole or in part for any purpose without the specific written authorization of Cobham PLC. This restriction is applicable regardless of the source from which the document is obtained. Any violation of this policy is a violation of the Trade Secrets Act and subject to prosecution to the fullest extent of the law.</p>	DESIGNER/ENGINEER:	DRAWN BY:	<h1>Sea Tel</h1> <p>COBHAM</p> <p>Tel. 925-798-7979 Fax. 925-798-7986</p>		
	WEIGHT:	KRB			
	MATERIAL:	N/A	DRAWN DATE:	TITLE: BALANCE WEIGHT KIT, EL & CL, 5009-11, MK2	
	FINISH:	N/A	06/03/10		
SURFACE ROUGHNESS:		APPROVED BY:	DRAWING NUMBER 132412		
		APPROVED DATE:			
3rd ANGLE PROJECTION		SIZE:	SCALE:	REV	
		B	1:6	A	
		FIRST USED: 5009	SHEET NUMBER 1 OF 1		

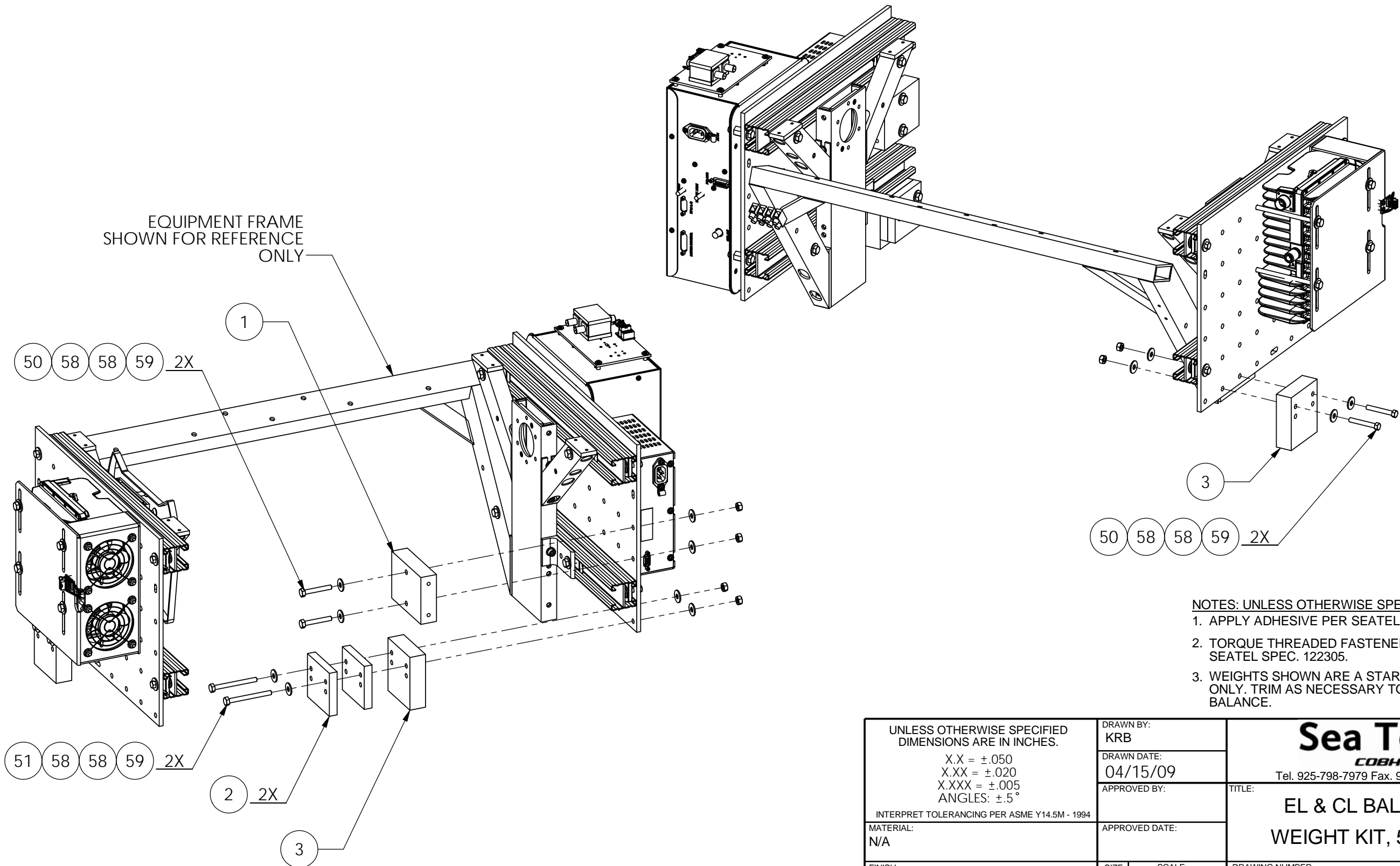
SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	126026	B	AZ COUNTER WEIGHT MOD	
2	2 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
3	2 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
50	4 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
51	2 EA	114586-546		SCREW, HEX HD, 1/4-20 x 2-3/4, S.S.	
58	12 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	6 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 5009-17</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 129993-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	N/A	04/15/09	RELEASE TO PRODUCTION, NO PRIOR REVISION.	KRB

EQUIPMENT FRAME
SHOWN FOR REFERENCE
ONLY



- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. WEIGHTS SHOWN ARE A STARTING POINT ONLY. TRIM AS NECESSARY TO ACHIEVE BALANCE.

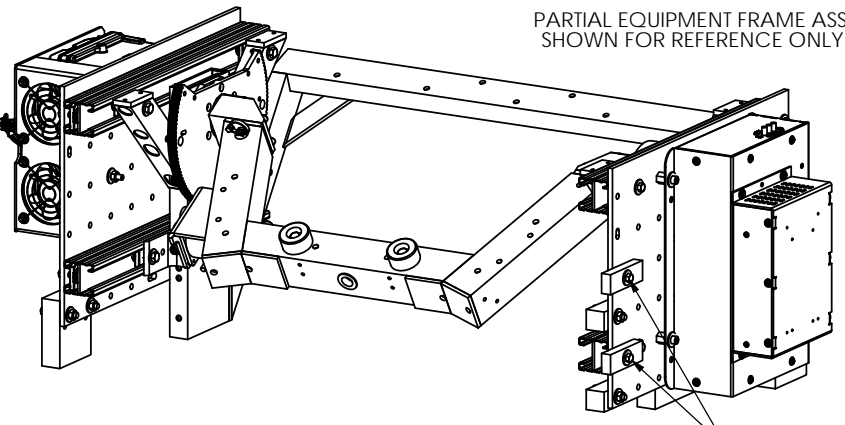
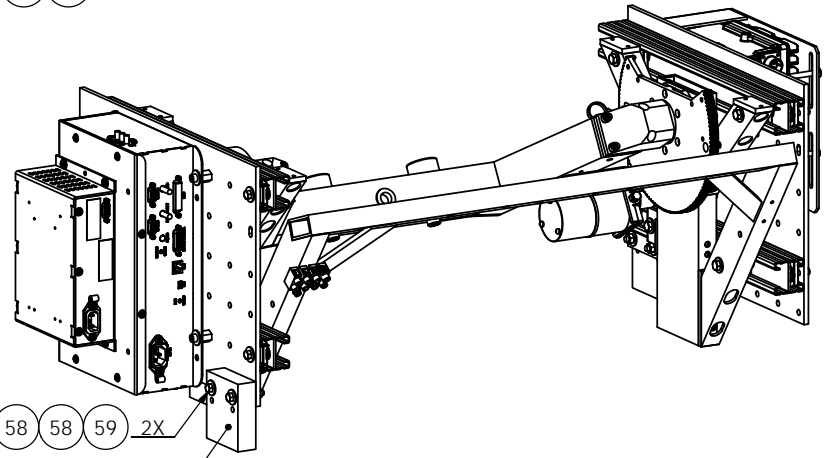
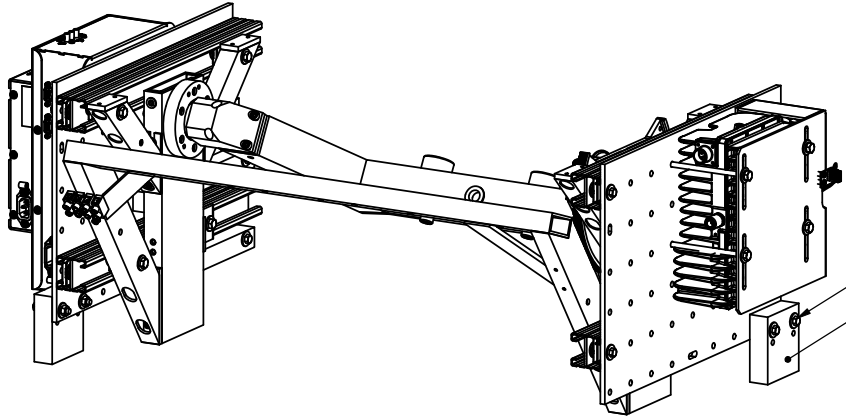
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5° INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN BY: KRB		<h1>Sea Tel</h1> <p>COBHAM</p> <p>Tel. 925-798-7979 Fax. 925-798-7986</p>	
MATERIAL: N/A		DRAWN DATE: 04/15/09			
FINISH: N/A		APPROVED BY:		TITLE: EL & CL BALANCE WEIGHT KIT, 5009-17	
3rd ANGLE PROJECTION		SIZE: B	SCALE: 1:6	DRAWING NUMBER: 129993	REV: A
FIRST USED: XX09				SHEET NUMBER 1 OF 1	

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	2 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
2	2 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
51	2 EA	114586-540		SCREW, HEX HD, 1/4-20 x 1-1/4, S.S.	
52	4 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
58	12 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	6 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 5009-17, MK2</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 131795-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	7329	08-24-10	RELEASE TO PRODUCTION. REV WAS X1.	SL



PARTIAL EQUIPMENT FRAME ASS'Y SHOWN FOR REFERENCE ONLY.

- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.

<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.</p> <p>X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°</p> <p>INTERPRET TOLERANCING PER ASME Y14.5 - 2009</p> <p>This drawing and specifications are the property of Cobham PLC. Neither this document, the information, or the specifications disclosed shall be reproduced or transferred in whole or in part for any purpose without the specific written authorization of Cobham PLC. This restriction is applicable regardless of the source from which the document is obtained. Any violation of this policy is a violation of the Trade Secrets Act and subject to prosecution to the fullest extent of the law.</p>	DESIGNER/ENGINEER:	DRAWN BY: KRB	<p>Sea Tel COBHAM Tel. 925-798-7979 Fax. 925-798-7986</p>	
	WEIGHT:	DRAWN DATE: 06/03/10		
	MATERIAL: N/A	APPROVED BY:	TITLE: BALANCE WEIGHT KIT EL & CL, 5009-17, MK2	
	FINISH: N/A	APPROVED DATE:	DRAWING NUMBER 131795	REV A
SURFACE ROUGHNESS:	SIZE B	SCALE: 1:6	FIRST USED: 5009	SHEET NUMBER 1 OF 1



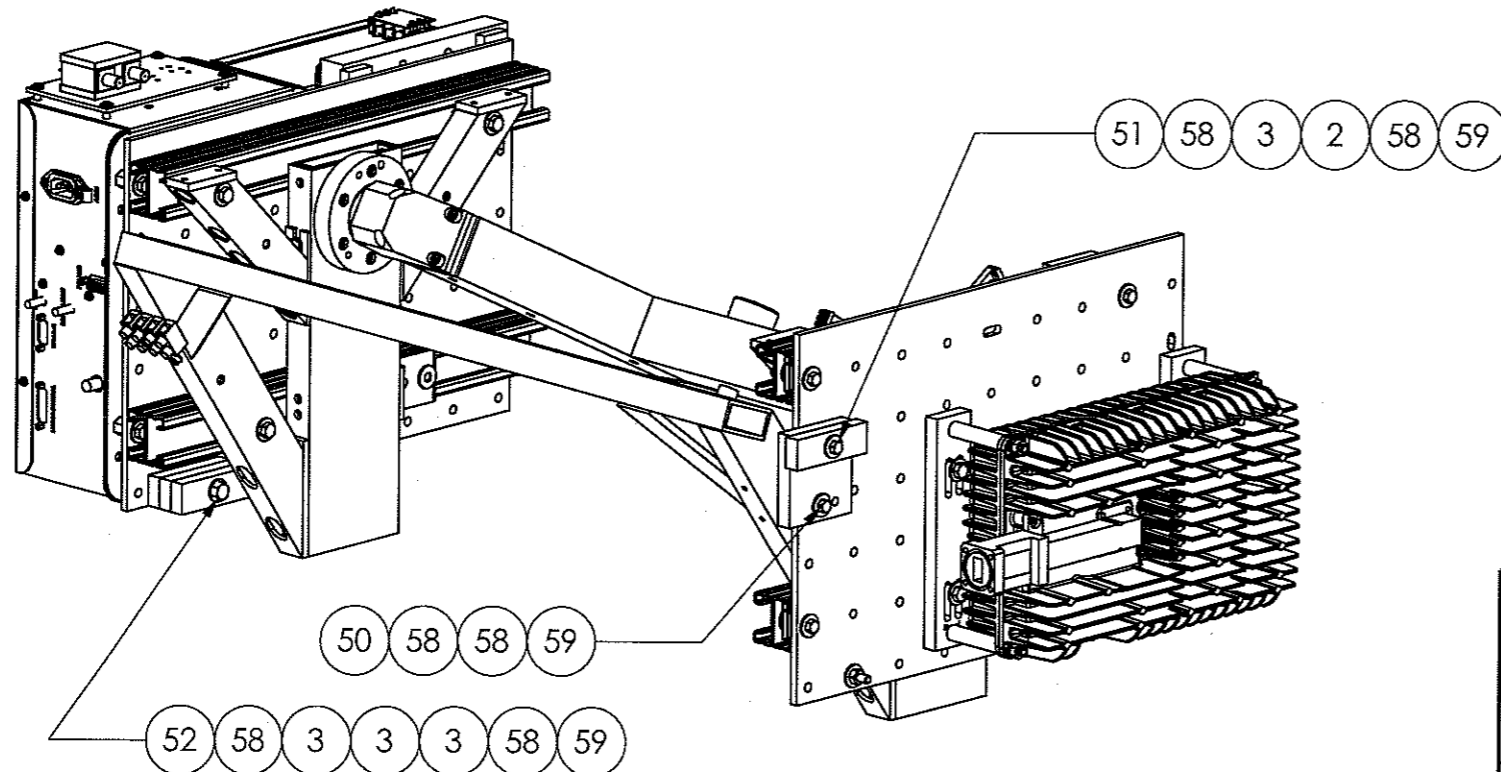
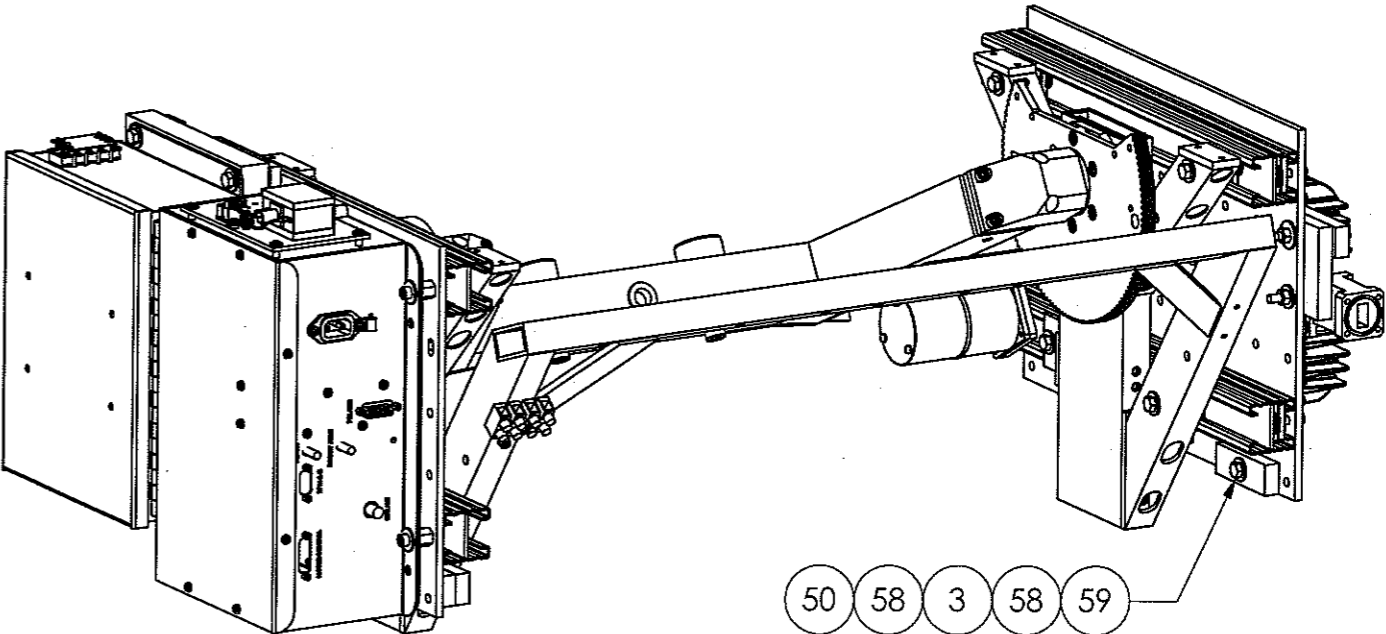
SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
2	1 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
3	5 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
50	2 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
51	2 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
52	1 EA	114586-544		SCREW, HEX HD, 1/4-20 x 2-1/4, S.S.	
58	8 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	4 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 5009-23</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130375-1	REV A1

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6768	07/07/09	RELEASED TO PRODUCTION, NO PRIOR REVISION.	KRB
A1	N/A	07/22/09	ADDED MISSING HARDWARE & BALLOONS TO DRAWING.	KRB

PARTIAL EQUIPMENT FRAME & MOUNTING ASSEMBLIES SHOWN FOR REFERENCE ONLY.



- NOTES: UNLESS OTHERWISE SPECIFIED
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. WEIGHTS SHOWN ARE FOR A STARTING POINT ONLY. ADD TRIM WEIGHTS AS NEEDED TO ACHIEVE BALANCE AT FINAL INSTALL.

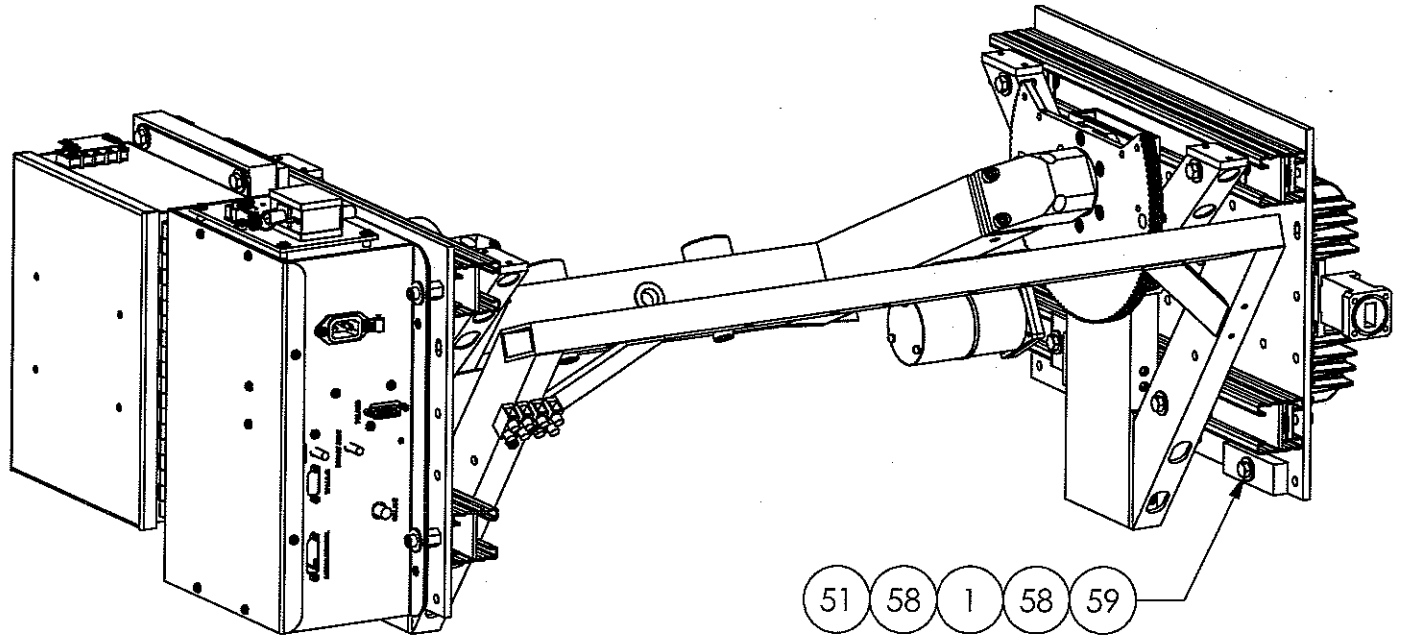
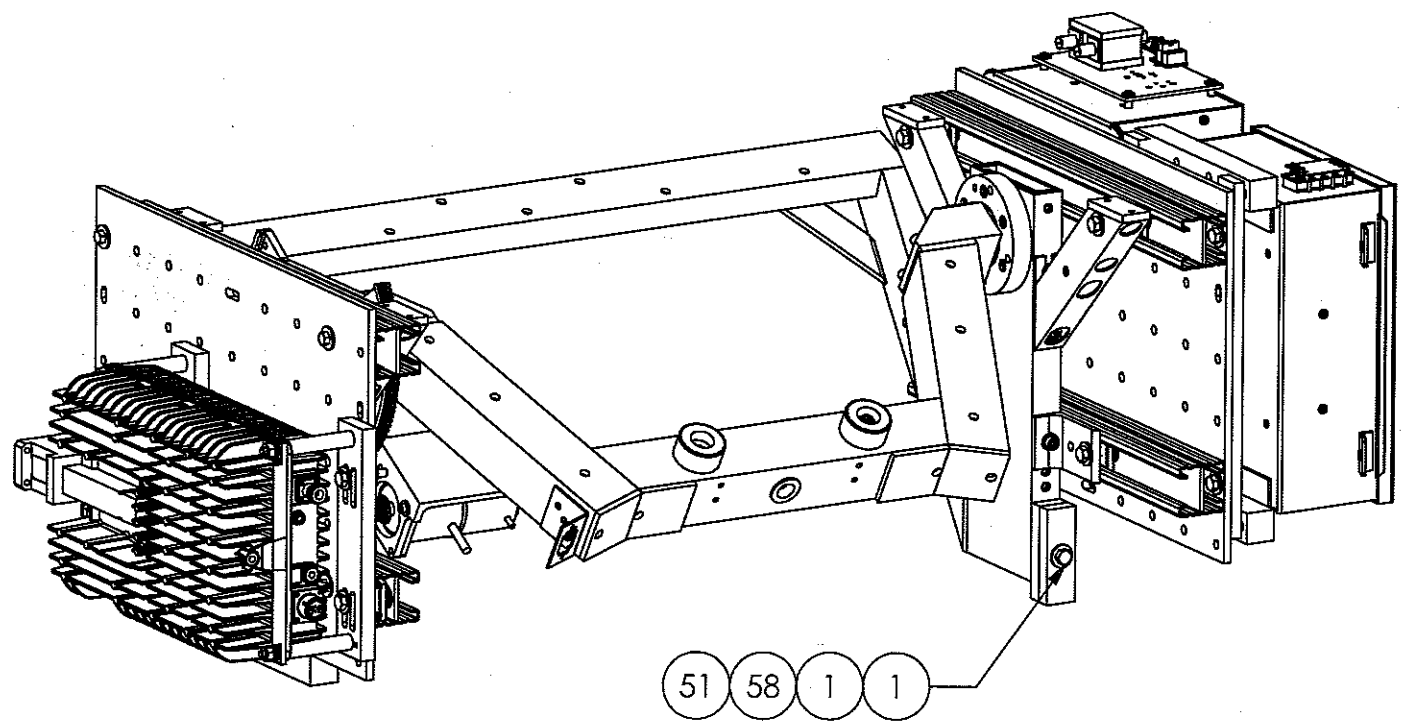
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5° INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN BY: KRB		 Tel. 925-798-7979 Fax. 925-798-7986	
MATERIAL: N/A		DRAWN DATE: 07/08/09			
FINISH: N/A		APPROVED BY: <i>[Signature]</i> 07/22/09		TITLE: BALANCE WEIGHT KIT EL & CL, 5009-23	
SIZE: B		SCALE: 1:6		DRAWING NUMBER: 130375	
3rd ANGLE PROJECTION		FIRST USED: 5009		REV: A1	
				SHEET NUMBER 1 OF 1	

SINGLE LEVEL MFG BILL OF MATERIAL

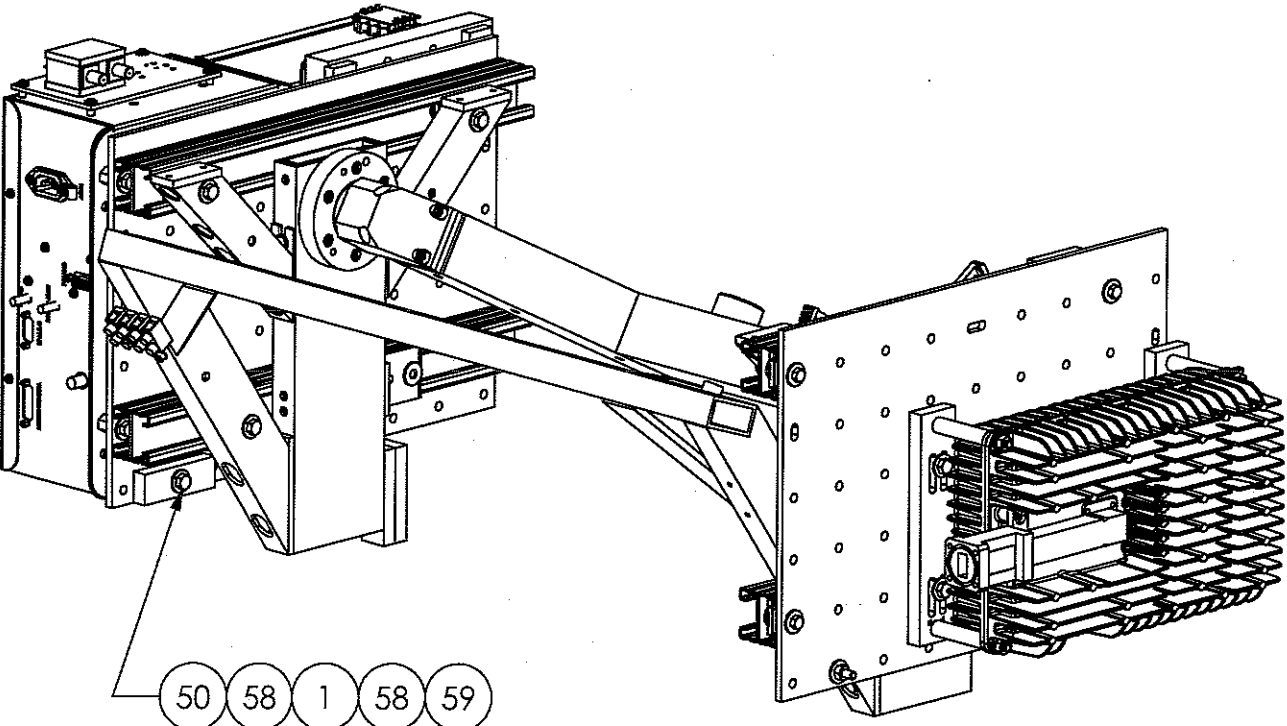
FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	4 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
50	1 EA	114586-540		SCREW, HEX HD, 1/4-20 x 1-1/4, S.S.	
51	2 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
58	5 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	2 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 5009-33</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130376-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6768	07/07/09	RELEASED TO PRODUCTION, NO PRIOR REVISION.	KRB



PARTIAL EQUIPMENT FRAME & MOUNTING ASSEMBLIES SHOWN FOR REFERENCE ONLY.



- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. WEIGHTS SHOWN ARE FOR A STARTING POINT ONLY. ADD TRIM WEIGHTS AS NEEDED TO ACHIEVE BALANCE AT FINAL INSTALL.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5° INTERPRET TOLERANCING PER ASME Y14.5M - 1994	DRAWN BY: KRB	Sea Tel <i>COBHAM</i> Tel. 925-798-7979 Fax. 925-798-7986
	DRAWN DATE: 07/08/09	
MATERIAL: N/A	APPROVED BY: <i>[Signature]</i>	TITLE: BALANCE WEIGHT KIT EL & CL, 5009-33
FINISH: N/A	APPROVED DATE: 07/09/09	DRAWING NUMBER: 130376
3rd ANGLE PROJECTION	SIZE: B	SCALE: 1:6
	FIRST USED: 5009	DRAWING NUMBER: 130376
		REV: A
		SHEET NUMBER: 1 OF 1

Upgrade Procedure, xx09 MK2

BALANCE WEIGHT POSITIONS, 5009-23/33 MK2 UPGRADE - NOT AVAILABLE YET

Refer to BOM 132624-1 UPGRADE KIT, BALANCE WEIGHTS, XX09, MK2

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Upgrade Procedure, xx09 MK2

DWG Pg 1 - NOT AVAILABLE YET

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Upgrade Procedure, xx09 MK2

DWG Pg 1 - NOT AVAILABLE YET

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SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	108894-2	G1	WEIGHT, TRIM, 3/8 X 3 X 10, 3.19 LBS	
2	3 EA	108894-3	G1	WEIGHT, TRIM, 1/2 X 3 X 10, 4.25 LBS	
3	1 EA	108894-4	G1	WEIGHT, TRIM, 1/4 X 3 X 10, 2.12 LBS	
4	1 EA	108519-1	G	WEIGHT, TRIM 4.0 OZ	
5	2 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
50	4 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
51	2 EA	114586-543		SCREW, HEX HD, 1/4-20 x 2, S.S.	
58	12 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	6 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1>Sea Tel</h1> <p><i>COBHAM</i></p>				
BALANCE WEIGHT KIT, EL & CL, 6009-11				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130664-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6770	07/20/09	RELEASED TO PRODUCTION, WAS REVISION X1.	KRB

D

D

C

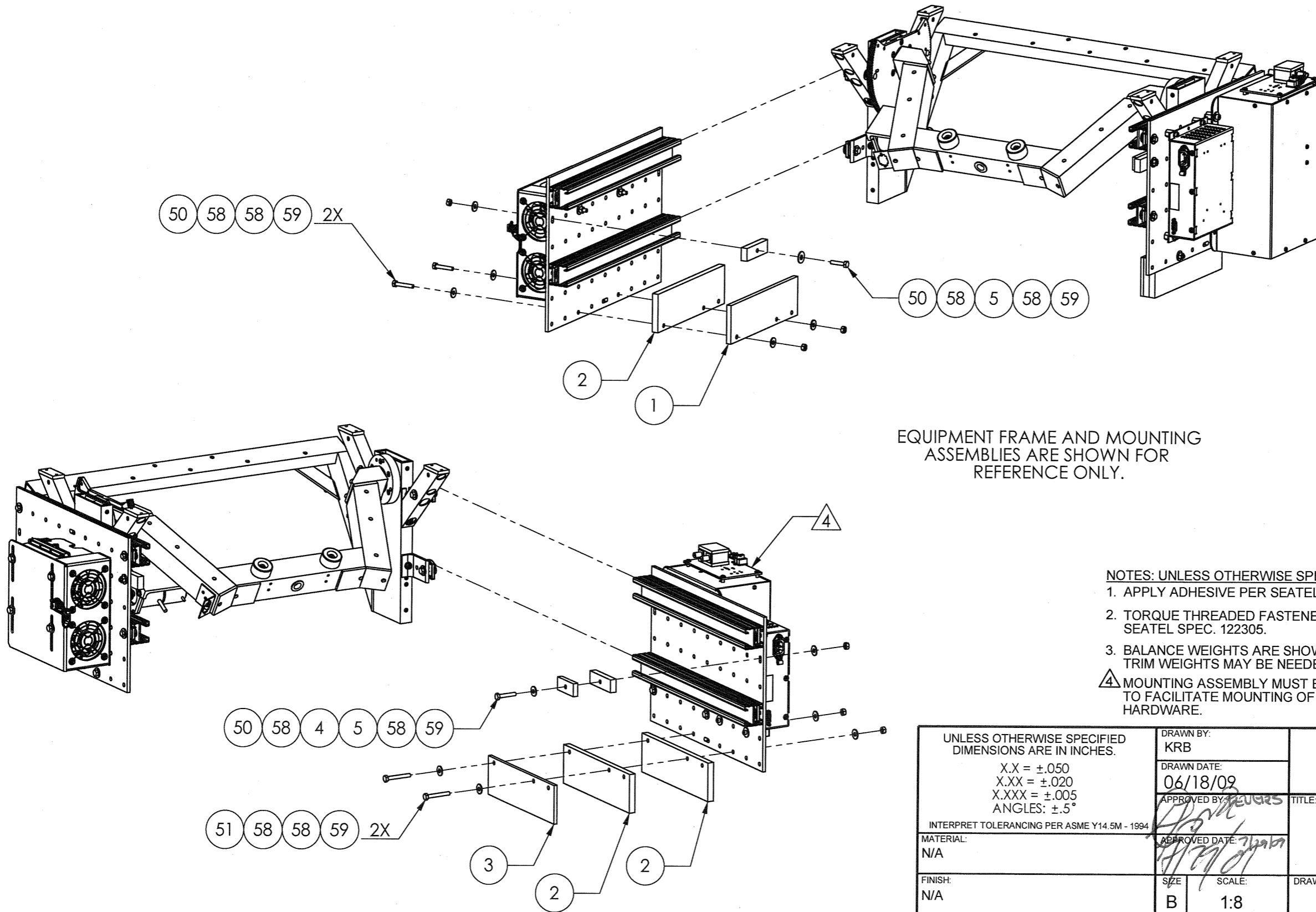
C

B

B

A

A



EQUIPMENT FRAME AND MOUNTING ASSEMBLIES ARE SHOWN FOR REFERENCE ONLY.

- NOTES: UNLESS OTHERWISE SPECIFIED
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.
 4. MOUNTING ASSEMBLY MUST BE TEMPORARILY REPOSITIONED TO FACILITATE MOUNTING OF WEIGHTS WITH INDICATED HARDWARE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°	DRAWN BY: KRB		Sea Tel COBHAM Tel. 925-798-7979 Fax. 925-798-7986	
	DRAWN DATE: 06/18/09			
MATERIAL: N/A	APPROVED BY: <i>[Signature]</i>		TITLE: BALANCE WEIGHT KIT EL & CL, 6009-11	
	APPROVED DATE: <i>[Signature]</i>		DRAWING NUMBER: 130664	
FINISH: N/A	SIZE: B	SCALE: 1:8	DRAWING NUMBER: 130664	REV: A
3rd ANGLE PROJECTION			FIRST USED: 6009	SHEET NUMBER 1 OF 1

8

7

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5

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3

2

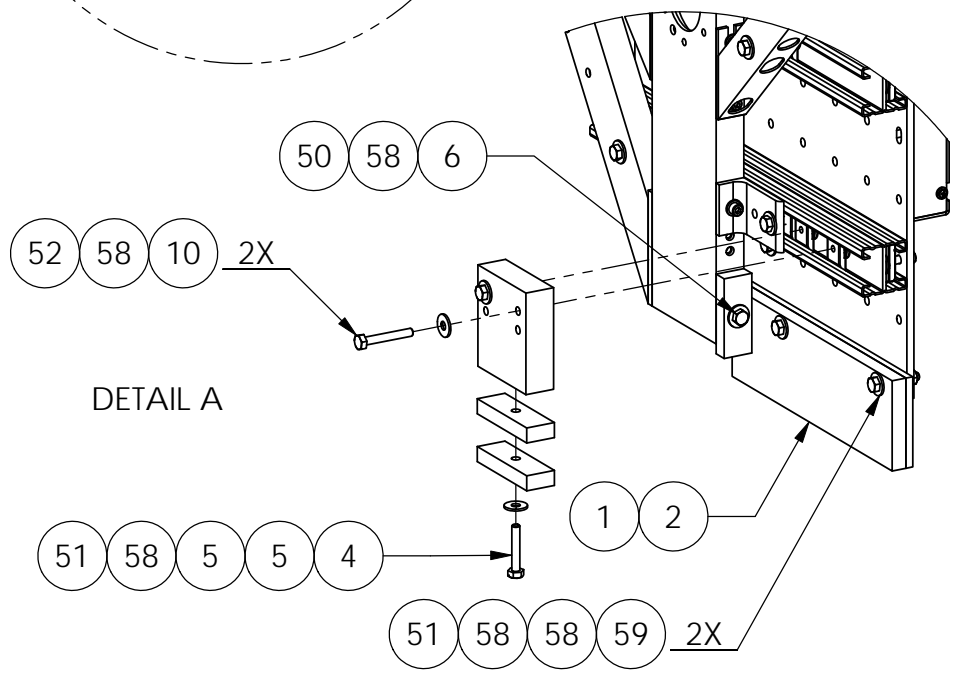
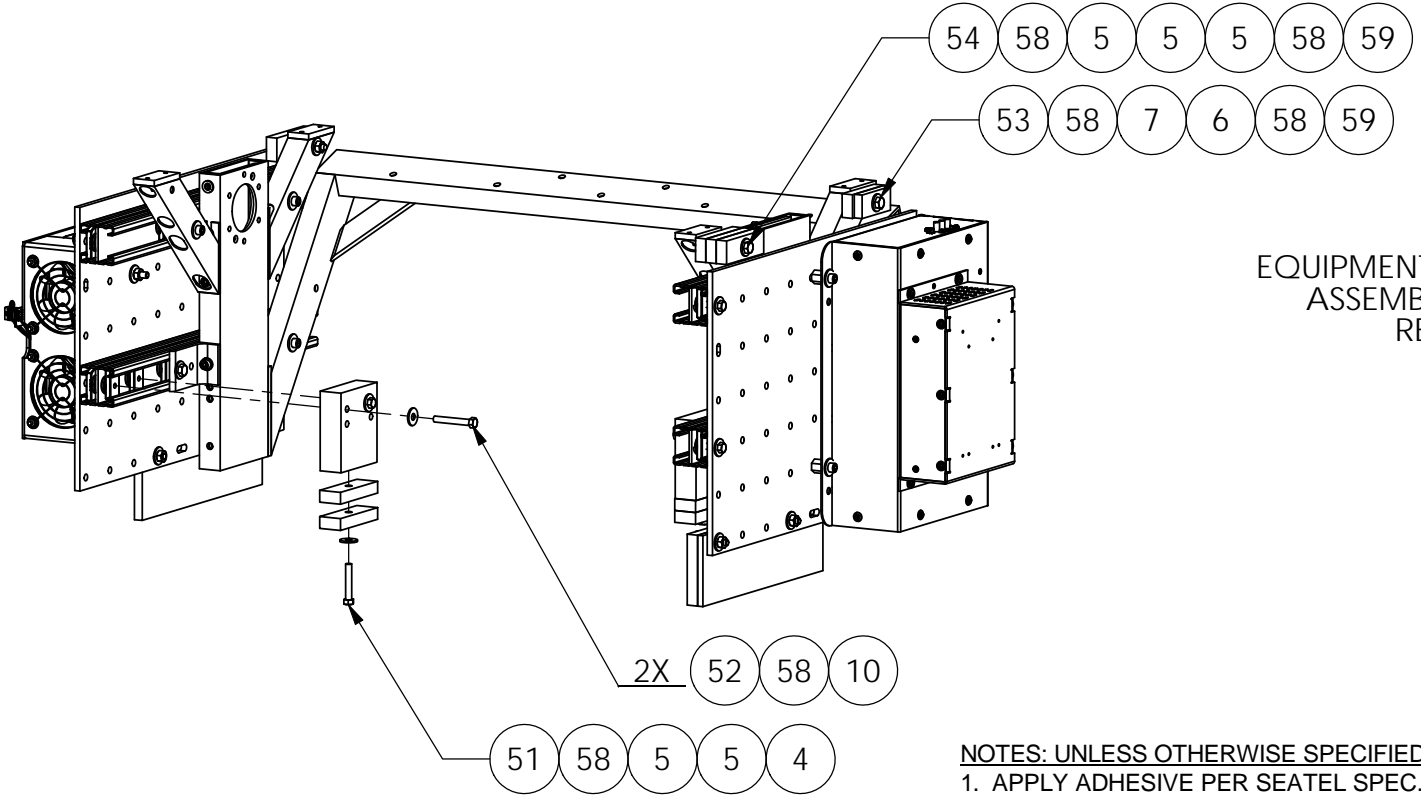
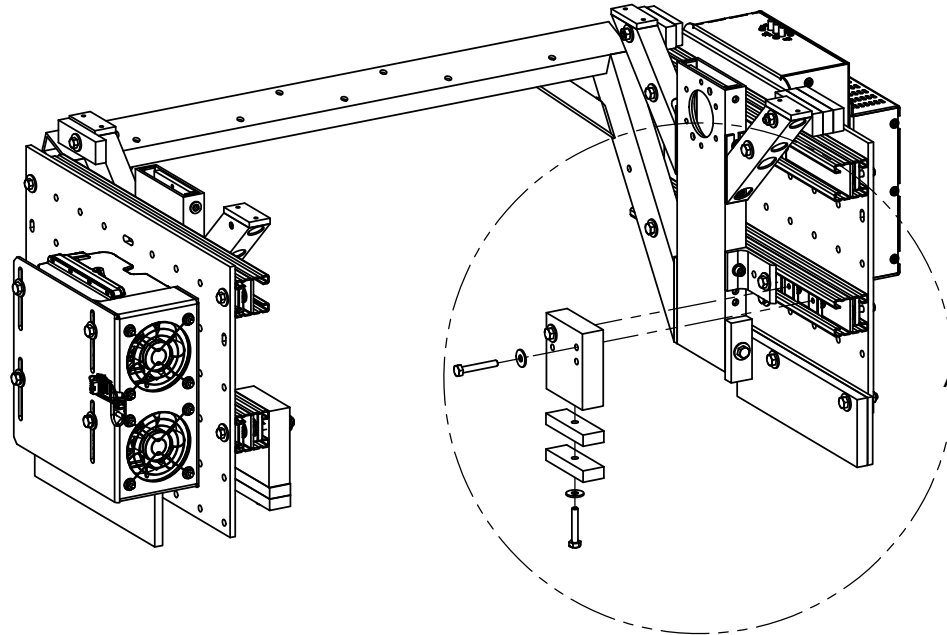
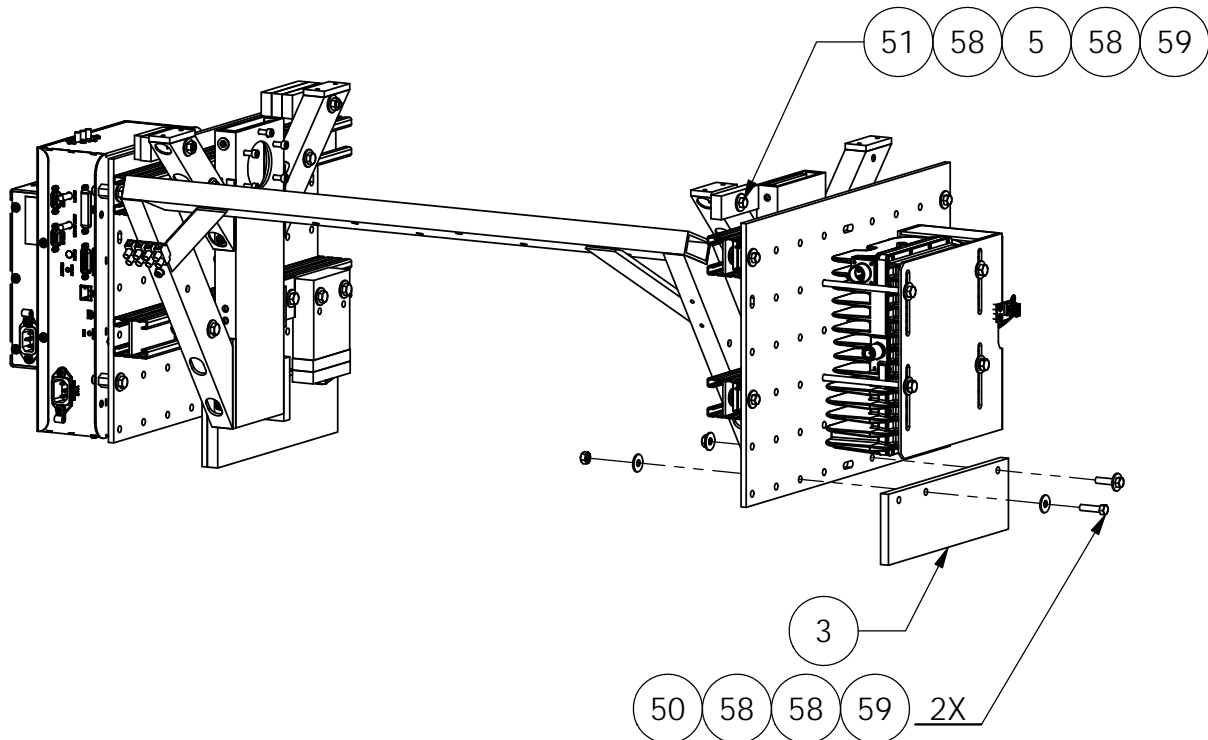
1

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	108894-3	G1	WEIGHT, TRIM, 1/2 X 3 X 10, 4.25 LBS	
2	1 EA	108894-4	G1	WEIGHT, TRIM, 1/4 X 3 X 10, 2.12 LBS	
3	1 EA	108894-2	G1	WEIGHT, TRIM, 3/8 X 3 X 10, 3.19 LBS	
4	2 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
5	8 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
6	2 EA	108519-3	G	WEIGHT, TRIM 6.0 OZ	
7	1 EA	108519-1	G	WEIGHT, TRIM 4.0 OZ	
10	4 EA	126279-3	A2	NUT, 1 5/8 UNISTRUT, 1/4-20, W/SPRING	
50	3 EA	114586-538		SCREW, HEX HD, 1/4-20 x 1, S.S.	
51	5 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
52	4 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
53	1 EA	114586-544		SCREW, HEX HD, 1/4-20 x 2-1/4, S.S.	
54	1 EA	114586-547		SCREW, HEX HD, 1/4-20 x 3, S.S.	
58	21 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	7 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

Sea Tel				
COBHAM				
BALANCE WEIGHT KIT, EL & CL, 6009-11, MK2				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 2	DRAWING NUMBER 131965-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	7252	05/10/10	RELEASED TO PRODUCTION. WAS REVISION X1.	KRB



EQUIPMENT FRAME AND MOUNTING ASSEMBLIES ARE SHOWN FOR REFERENCE ONLY.

- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.

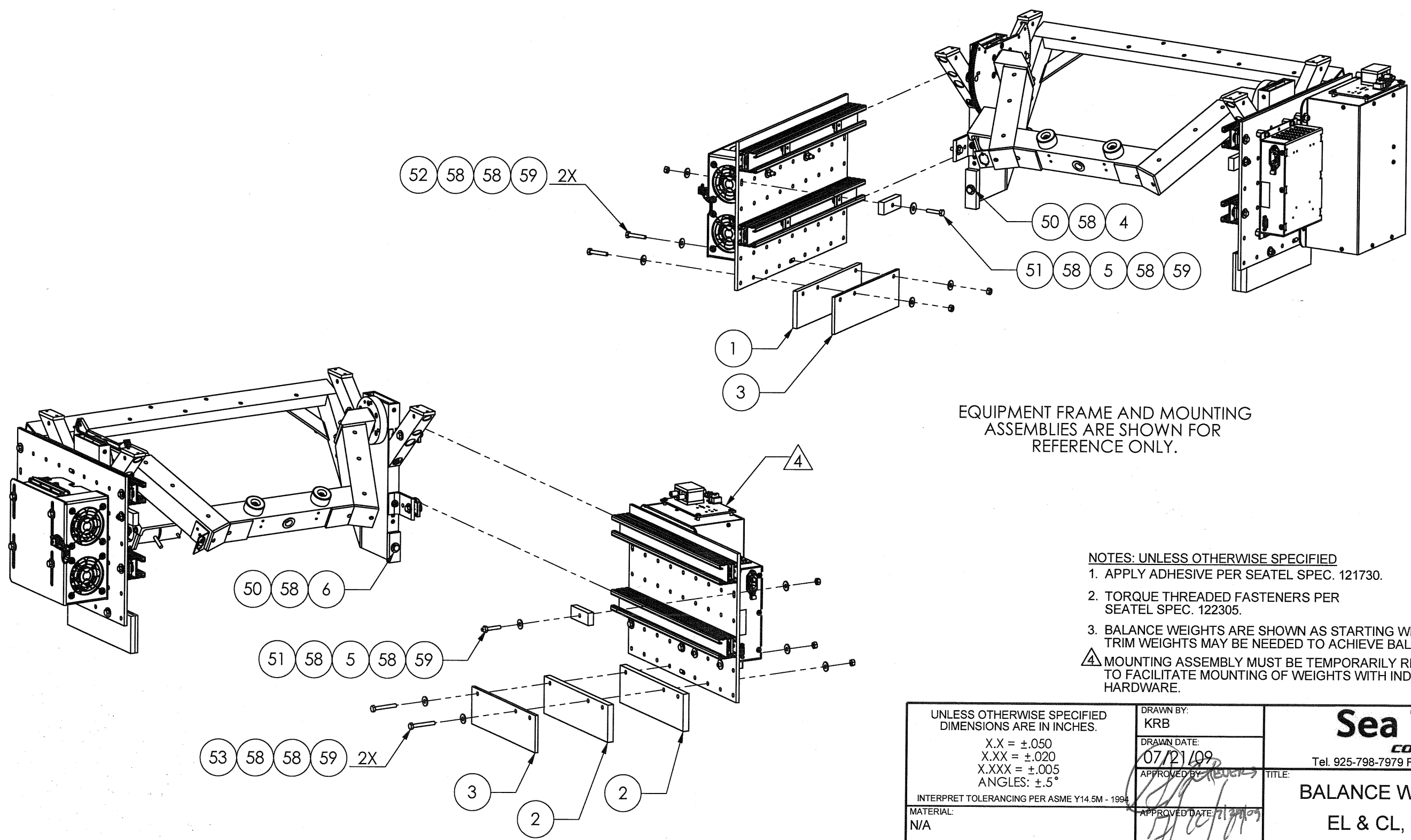
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°		DRAWN BY: KRB		Sea Tel <i>COBHAM</i> Tel. 925-798-7979 Fax. 925-798-7986	
INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN DATE: 04/13/10			
MATERIAL: N/A		APPROVED BY:		TITLE: BALANCE WEIGHT KIT	
FINISH: N/A		APPROVED DATE:		EL & CL, 6009-11, MK2	
3rd ANGLE PROJECTION		SIZE: B	SCALE: 1:8	DRAWING NUMBER: 131965	REV: A
FIRST USED: 6009				SHEET NUMBER: 1 OF 1	

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	108894-2	G1	WEIGHT, TRIM, 3/8 X 3 X 10, 3.19 LBS	
2	2 EA	108894-3	G1	WEIGHT, TRIM, 1/2 X 3 X 10, 4.25 LBS	
3	2 EA	108894-4	G1	WEIGHT, TRIM, 1/4 X 3 X 10, 2.12 LBS	
4	1 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
5	2 EA	108519-3	G	WEIGHT, TRIM 6.0 OZ	
6	1 EA	108519-1	G	WEIGHT, TRIM 4.0 OZ	
50	2 EA	114586-538		SCREW, HEX HD, 1/4-20 x 1, S.S.	
51	2 EA	114586-540		SCREW, HEX HD, 1/4-20 x 1-1/4, S.S.	
52	2 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
53	2 EA	114586-543		SCREW, HEX HD, 1/4-20 x 2, S.S.	
58	14 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	6 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 6009-17</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130654-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6770	07/20/09	RELEASED TO PRODUCTION. WAS REVISION X1. ITEM 1 WAS 126026. ITEM 2 WAS 112573-2. ITEM 3 WAS 118560. ADDED ITEMS 4 THRU 6. MISCELLANEOUS HARDWARE CHANGES.	KRB



EQUIPMENT FRAME AND MOUNTING ASSEMBLIES ARE SHOWN FOR REFERENCE ONLY.

- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.
- △** MOUNTING ASSEMBLY MUST BE TEMPORARILY REPOSITIONED TO FACILITATE MOUNTING OF WEIGHTS WITH INDICATED HARDWARE.

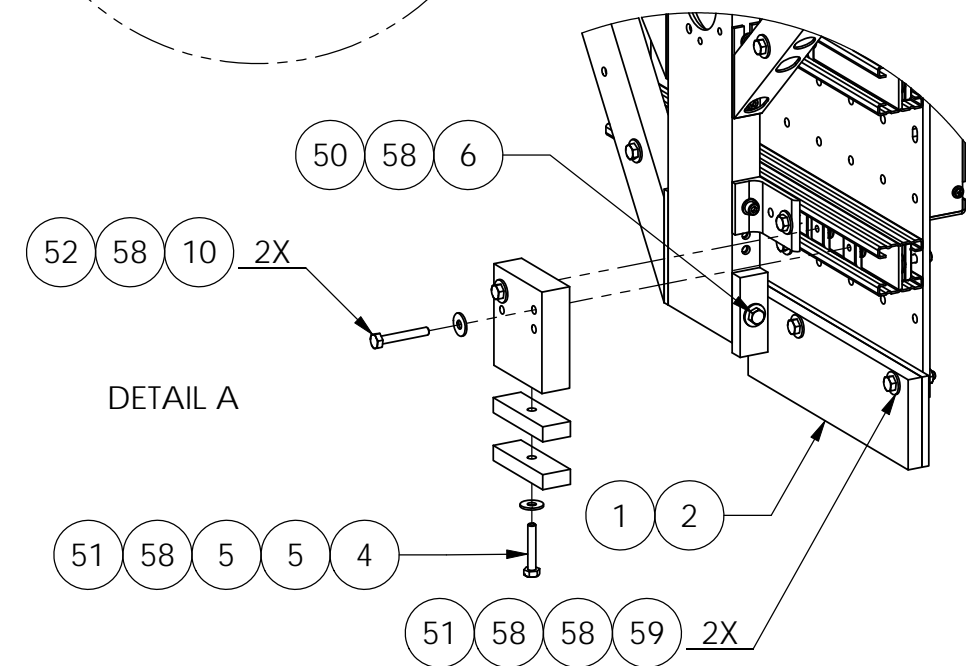
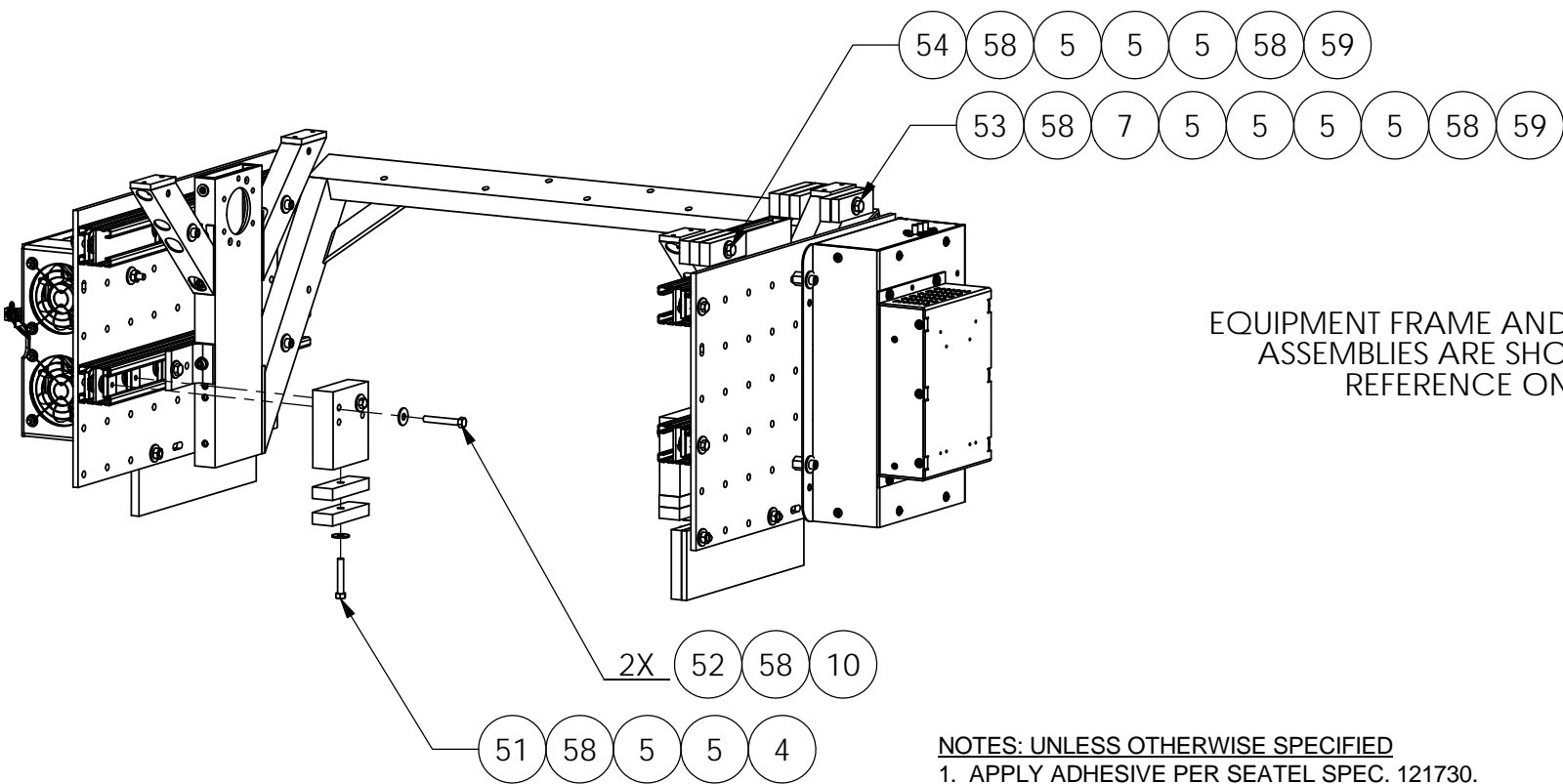
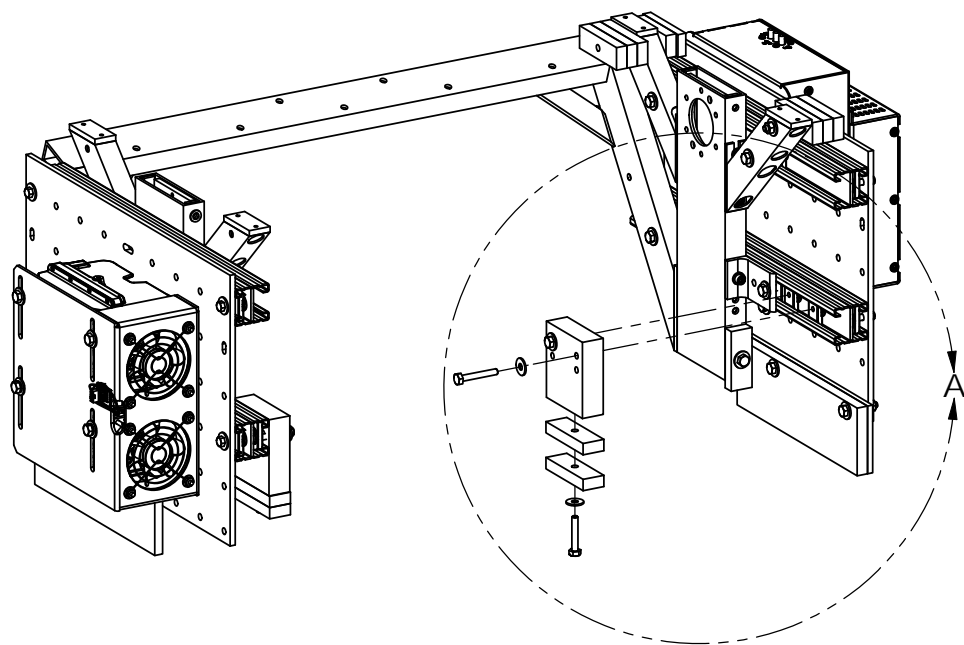
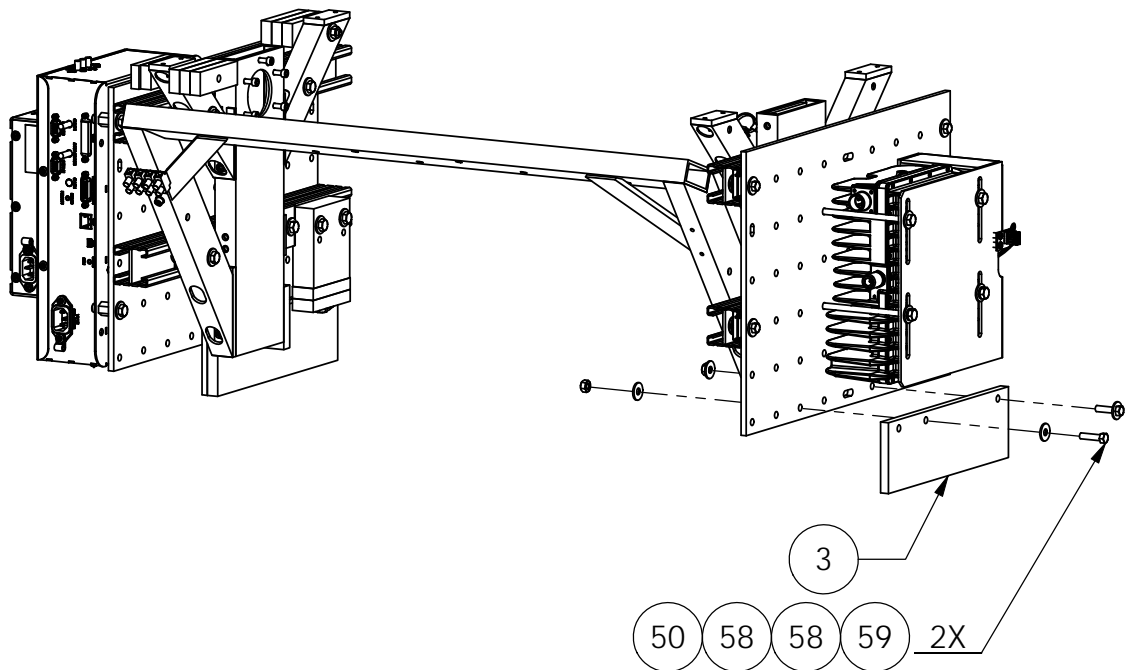
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5° INTERPRET TOLERANCING PER ASME Y14.5M - 1994	DRAWN BY: KRB	Sea Tel COBHAM Tel. 925-798-7979 Fax. 925-798-7986
	DRAWN DATE: 07/21/09	
MATERIAL: N/A	APPROVED BY: <i>[Signature]</i>	TITLE: BALANCE WEIGHT KIT EL & CL, 6009-17
FINISH: N/A	APPROVED DATE: 7/21/09	DRAWING NUMBER: 130654
3rd ANGLE PROJECTION	SIZE: B	SCALE: 1:8
FIRST USED: 6009	DRAWING NUMBER: 130654	REV: A
	SHEET NUMBER: 1 OF 1	

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	1 EA	108894-3	G1	WEIGHT, TRIM, 1/2 X 3 X 10, 4.25 LBS	
2	1 EA	108894-4	G1	WEIGHT, TRIM, 1/4 X 3 X 10, 2.12 LBS	
3	1 EA	108894-2	G1	WEIGHT, TRIM, 3/8 X 3 X 10, 3.19 LBS	
4	2 EA	118560	C	WEIGHT, TRIM, 1 x 3.38 x 3, 2.8 LBS	
5	11 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
6	1 EA	108519-3	G	WEIGHT, TRIM 6.0 OZ	
7	1 EA	108519-2	G	WEIGHT, TRIM 5.0 OZ	
10	4 EA	126279-3	A2	NUT, 1 5/8 UNISTRUT, 1/4-20, W/SPRING	
50	3 EA	114586-538		SCREW, HEX HD, 1/4-20 x 1, S.S.	
51	4 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
52	4 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
53	1 EA	114586-550		SCREW, HEX HD, 1/4-20 x 3-3/4, S.S.	
54	1 EA	114586-547		SCREW, HEX HD, 1/4-20 x 3, S.S.	
58	19 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	6 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 6009-17, MK2</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 2	DRAWING NUMBER 131966-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	7252	05/10/10	RELEASED TO PRODUCTION. WAS REVISION X1.	KRB



EQUIPMENT FRAME AND MOUNTING ASSEMBLIES ARE SHOWN FOR REFERENCE ONLY.

- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.

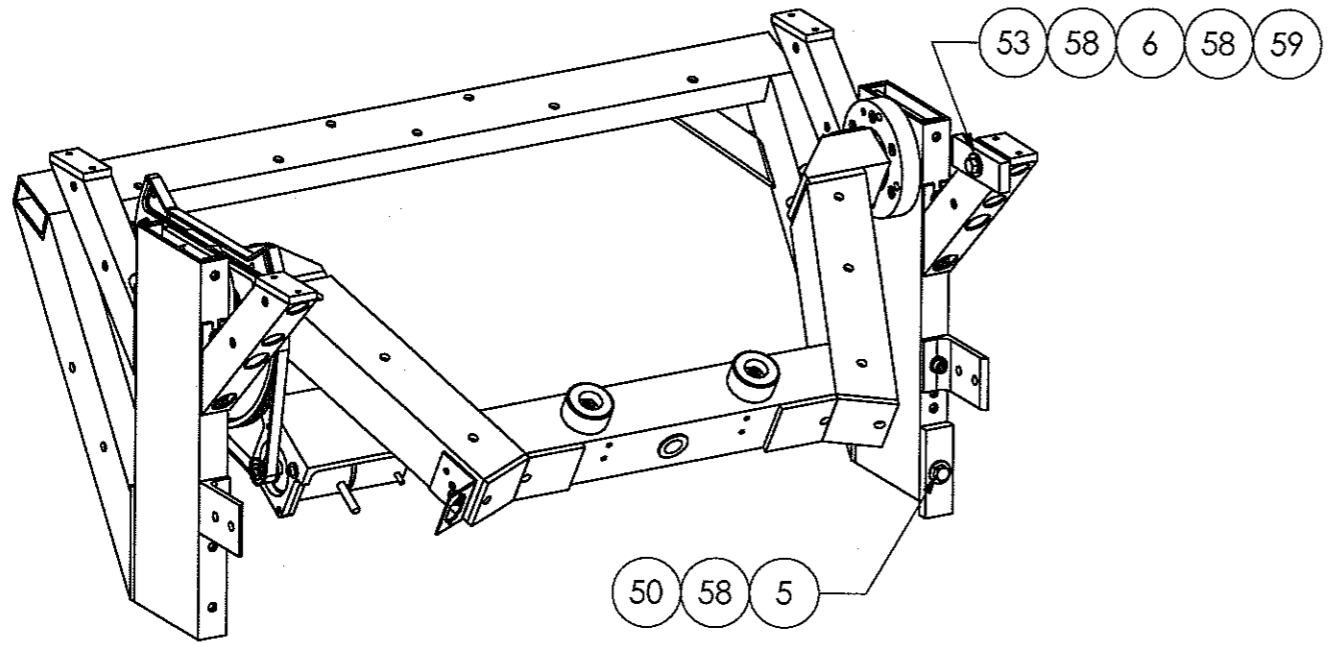
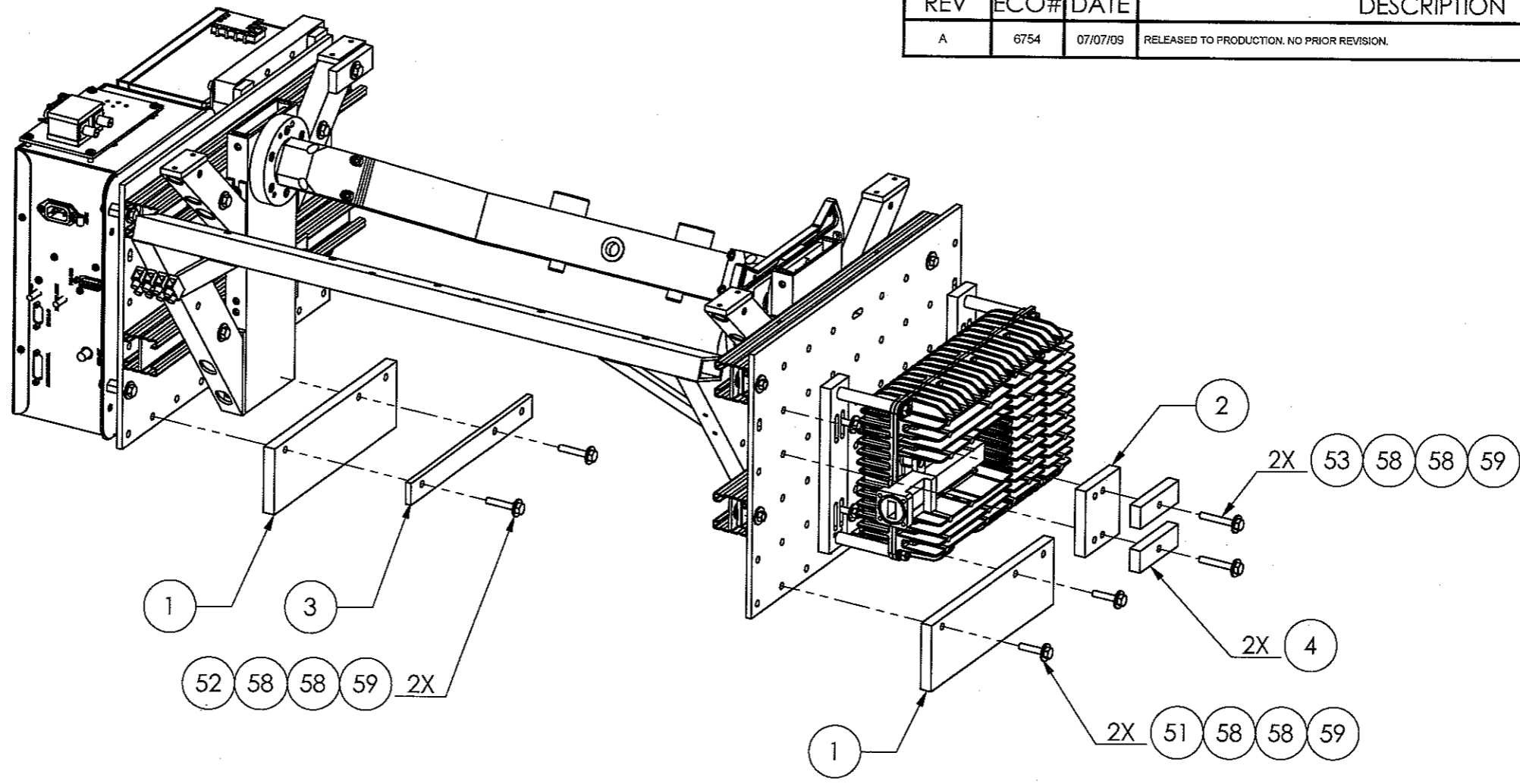
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°		DRAWN BY: KRB		Sea Tel <i>COBHAM</i> Tel. 925-798-7979 Fax. 925-798-7986	
INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN DATE: 04/16/10			
MATERIAL: N/A		APPROVED BY:		TITLE: BALANCE WEIGHT KIT EL & CL, 6009-17, MK2	
FINISH: N/A		APPROVED DATE:		DRAWING NUMBER 131966	
3rd ANGLE PROJECTION		SIZE B	SCALE: 1:8	FIRST USED: 6009	REV A
				SHEET NUMBER	1 OF 1

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	2 EA	108894-3	G1	WEIGHT, TRIM, 1/2 X 3 X 10, 4.25 LBS	
2	1 EA	112573-2	C	WEIGHT, TRIM, 1/2 x 2.75 x 3, 1.17 LB	
3	1 EA	108894-1	G1	WEIGHT, TRIM, 1/4 X 1 X 10, .71 LBS	
4	2 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
5	1 EA	108519-2	G	WEIGHT, TRIM 5.0 OZ	
6	1 EA	108519-1	G	WEIGHT, TRIM 4.0 OZ	
50	1 EA	114586-556		SCREW, HEX HD, 1/4-20 x 7/8, S.S.	
51	2 EA	114586-540		SCREW, HEX HD, 1/4-20 x 1-1/4, S.S.	
52	2 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
53	3 EA	114586-542		SCREW, HEX HD, 1/4-20 x 1-3/4, S.S.	
58	15 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	6 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 6009-23</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130608-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6754	07/07/09	RELEASED TO PRODUCTION. NO PRIOR REVISION.	KRB



- NOTES: UNLESS OTHERWISE SPECIFIED
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.

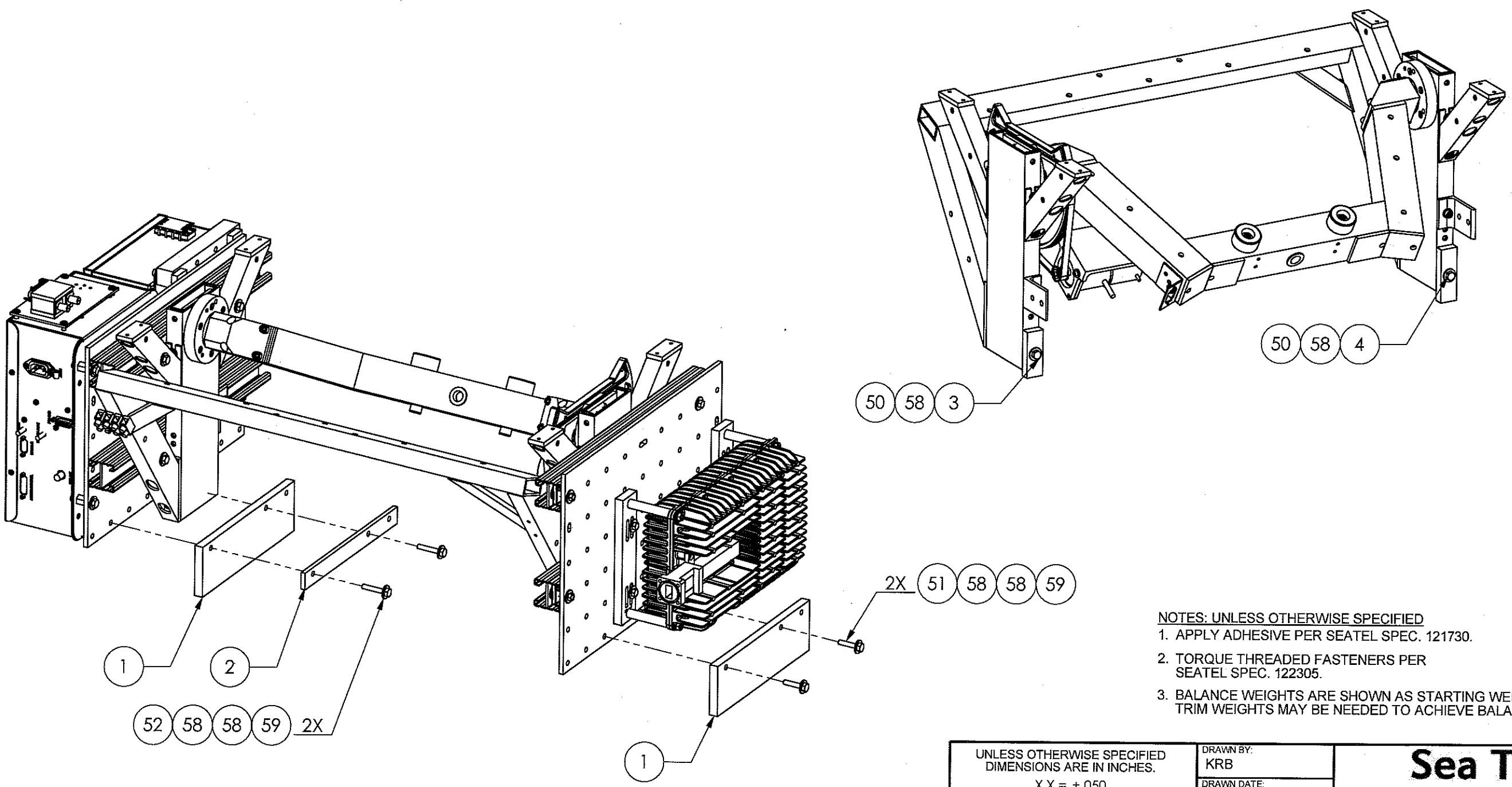
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5°		DRAWN BY: KRB		<h1>Sea Tel</h1> <p>COBHAM</p> <p>Tel. 925-798-7979 Fax. 925-798-7986</p>	
INTERPRET TOLERANCING PER ASME Y14.5M - 1994		DRAWN DATE: 07/08/09			
MATERIAL: N/A		APPROVED BY: <i>[Signature]</i>		TITLE: BALANCE WEIGHT KIT EL & CL, 6009-23	
FINISH: N/A		APPROVED DATE: 7/9/9		DRAWING NUMBER: 130608	
3rd ANGLE PROJECTION		SIZE: B		SCALE: 1:6	
FIRST USED: 6009-23				REV: A	
SHEET NUMBER: 1 OF 1					

SINGLE LEVEL MFG BILL OF MATERIAL

FIND	QTY	PART NO	REV	DESCRIPTION	REFERENCE DESIGNATOR
1	2 EA	108894-3	G1	WEIGHT, TRIM, 1/2 X 3 X 10, 4.25 LBS	
2	1 EA	108894-1	G1	WEIGHT, TRIM, 1/4 X 1 X 10, .71 LBS	
3	1 EA	108519-3	G	WEIGHT, TRIM 6.0 OZ	
4	1 EA	108519-4	G	WEIGHT, TRIM 7.0 OZ	
50	2 EA	114586-556		SCREW, HEX HD, 1/4-20 x 7/8, S.S.	
51	2 EA	114586-540		SCREW, HEX HD, 1/4-20 x 1-1/4, S.S.	
52	2 EA	114586-541		SCREW, HEX HD, 1/4-20 x 1-1/2, S.S.	
58	10 EA	114580-029		WASHER, FLAT, 1/4, S.S.	
59	4 EA	114583-029		NUT, HEX, 1/4-20, S.S.	

<h1 style="margin: 0;">Sea Tel</h1> <p style="margin: 0;"><i>COBHAM</i></p>				
<p>BALANCE WEIGHT KIT, EL & CL, 6009-33</p>				
PROD FAMILY COMMON	EFF. DATE 2/8/2011	SHT 1 OF 1	DRAWING NUMBER 130295-1	REV A

REVISION HISTORY				
REV	ECO#	DATE	DESCRIPTION	BY
A	6754	07/07/09	RELEASED TO PRODUCTION. NO PRIOR REVISION.	KRB



- NOTES: UNLESS OTHERWISE SPECIFIED**
1. APPLY ADHESIVE PER SEATEL SPEC. 121730.
 2. TORQUE THREADED FASTENERS PER SEATEL SPEC. 122305.
 3. BALANCE WEIGHTS ARE SHOWN AS STARTING WEIGHTS ONLY. TRIM WEIGHTS MAY BE NEEDED TO ACHIEVE BALANCE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. X.X = ±.050 X.XX = ±.020 X.XXX = ±.005 ANGLES: ±.5° INTERPRET TOLERANCING PER ASME Y14.5M - 1994	DRAWN BY: KRB	<h1>Sea Tel</h1> <p>COBHAM Tel. 925-798-7979 Fax. 925-798-7986</p>	
	DRAWN DATE: 07/07/09		
MATERIAL: N/A	APPROVED BY: <i>[Signature]</i>	DRAWING NUMBER: 130295	REV: A
FINISH: N/A	APPROVED DATE: 07/18/09	SCALE: 1:6	FIRST USED: 6009-33
3rd ANGLE PROJECTION	SHEET NUMBER: 1 OF 1		

Upgrade Procedure, xx09 MK2

BALANCE WEIGHT POSITIONS, 6009-23/33 MK2 UPGRADE - NOT AVAILABLE YET

Refer to BOM 132624-1 UPGRADE KIT, BALANCE WEIGHTS, XX09, MK2

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Upgrade Procedure, xx09 MK2

DWG Pg 1 - NOT AVAILABLE YET

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Upgrade Procedure, xx09 MK2

DWG Pg 1 - NOT AVAILABLE YET

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