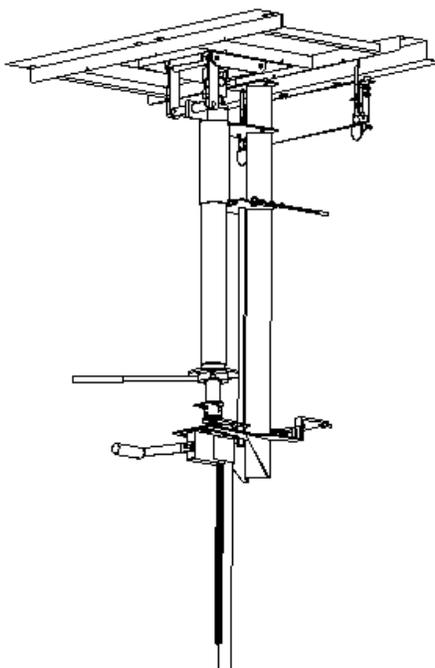




**AMERICAN SIGNAL COMPANY**

# AimStar®



# Solar Aiming System

Document #: MAN00000070

Revision: C

Date: 1-20-16

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## I. Revision Information

Rev.	Date	Author	Description	Page
A	7-7-2008	<b>Price R. Potter</b>	Original release	
B	11-9-2011	<b>Price R. Potter</b>	Change TM to R behind AimStar	all
C	1-19-16	<b>Price R. Potter</b>	Revise Latch Holddown design	5-15



# 1.0 Introduction

The information contained in this manual describes the AimStar® Solar Aiming System operation procedures used with the American Signal Company Portable Variable Message Signs (VMS). This Option can be installed on the model 33x and 33xC Trailers, as well as the model 432 and 465 Advantage Series Trailers. In addition, each of these configurations can be fitted with either two 80W Solar Panels or with two 130W Solar Panels. The Option P/Ns for these models are:

Option P/N	Description
<b>For 33x Trailers:</b>	
OPT30065098	AimStar® Solar Assy, 130W (2x) 331/332
OPT30065098-2	AimStar® Solar Assy, 130W (2x) 333
OPT30065098-3	AimStar® Solar Assy, 80W (2x) 331/332
OPT30065098-4	AimStar® Solar Assy, 80W (2x) 333
OPT30065098-8	AimStar® Solar Assy, 80W (2x) 33xC
<b>For x32 Advantage Trailers:</b>	
OPT30065098-1	AimStar® Solar Assy, 130W (2x) Adv
OPT30065098-5	AimStar® Solar Assy, 80W (2x) Adv

## 2.0 Travel/Storage Position

1. Place Jack Handle in downward position.
2. Ensure Solar Lift Tube Bar is mostly perpendicular to Sign Case (oriented toward Fender).
3. Align Slots in Solar Rack Angle with Mast Adjustable Draw Latch, insert hook into slot and clamp Latch down (see Figure 2). After pulling Latch down, insure locking tab has been engaged. Repeat same latching procedure on other side of Solar Rack Assembly.



**BOTH RH & LH LATCHES MUST BE SECURED & LOCKING TAB ENGAGED BEFORE TOWING THE TRAILER.**



4. Insert Solar Lock Pin in any hole in Lower Standoff Plate (see Figure 4).

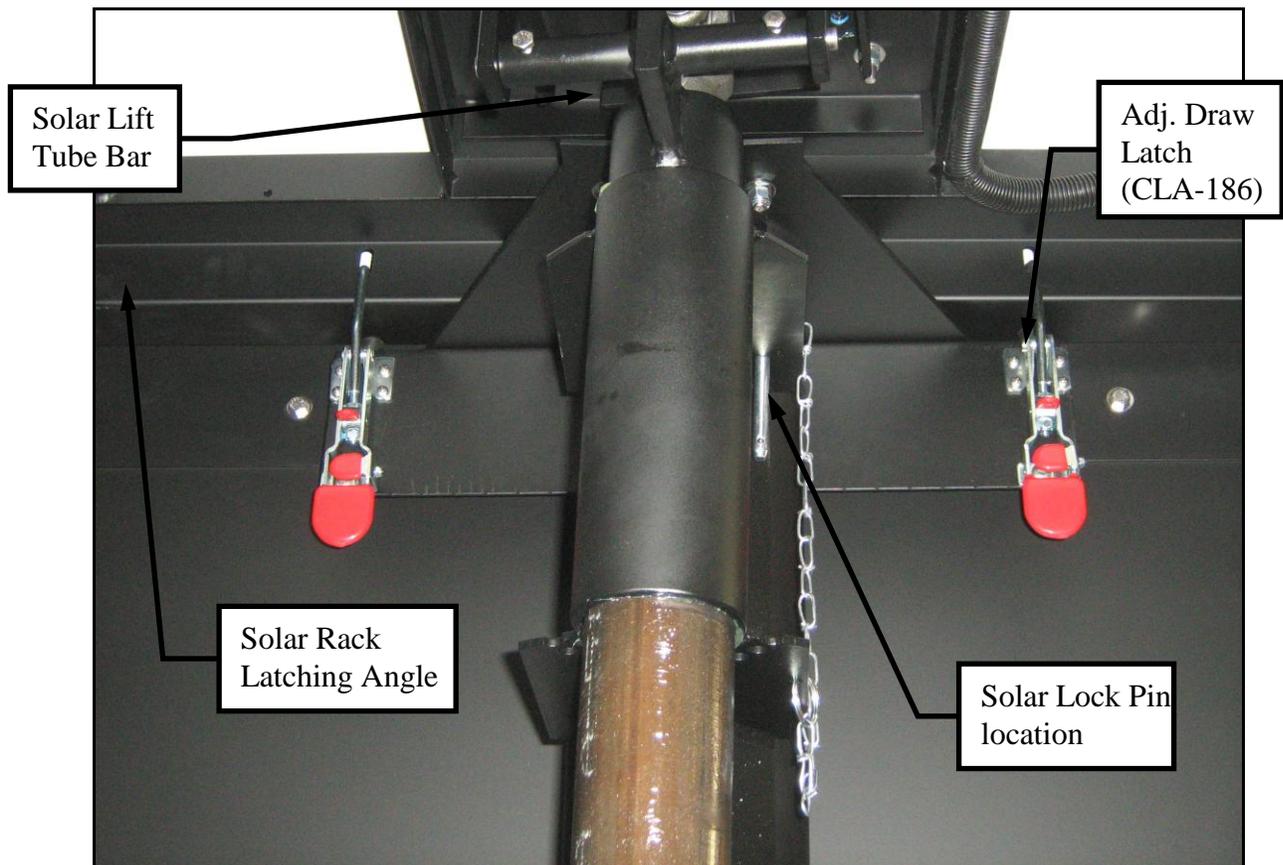


Figure 1. – Travel Position

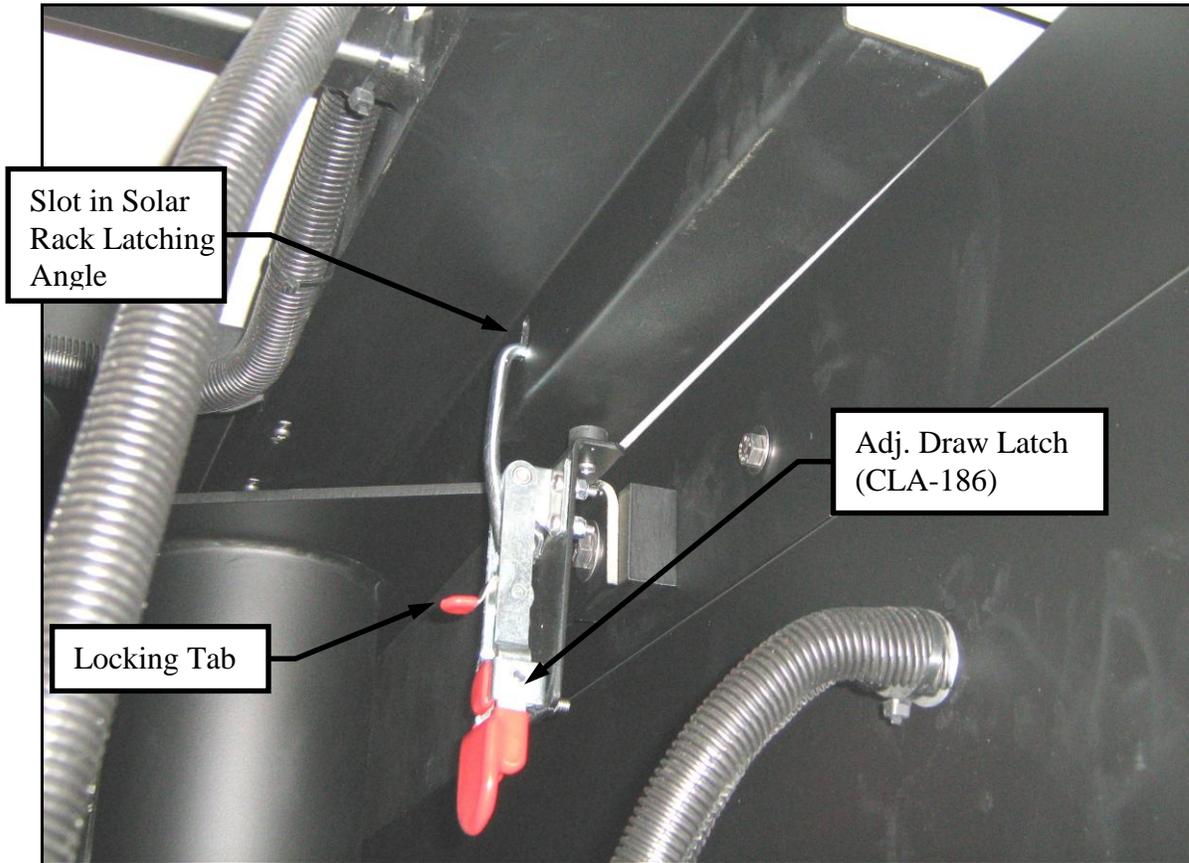


Figure 2. – Travel Hold down components (RH side shown)

## 3.0 Operating Position

### 3.1 Raising AimStar® Solar Panels

1. Unlock and unlatch RH & LH Adjustable Draw Latches and remove hook from slots.
2. Insert Panel Rotation Handle into any of four horizontal holes in Aiming Collar (see Figure 3 & Figure 4).
3. Crank Jack Handle up while holding Panel Rotation Handle to hold Solar Panels in position.

 **HOLD PANEL ROTATION HANDLE STEADY DURING RAISING OPERATION.** 

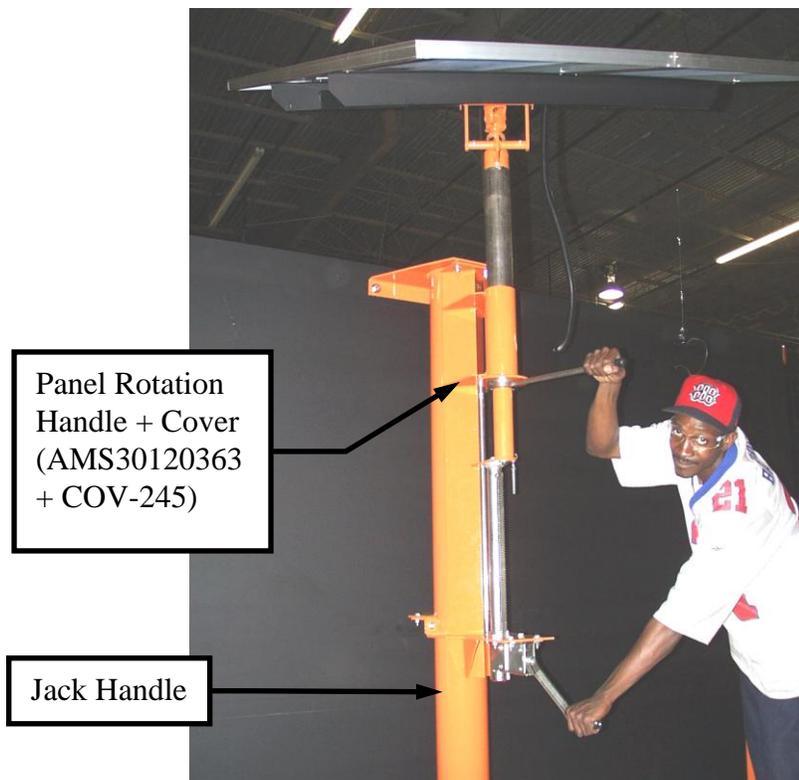


Figure 3. – Raised Position

4. Raise Solar Panels until Aiming Plate is almost contacting Lower Standoff Plate (see Figure 4).
5. Using Panel Rotation Handle orient Solar Panels to desired position towards sun.
6. Align hole in Aiming Plate with corresponding hole in Lower Standoff Plate, raise until Plates contact and insert Solar Aiming Lock Pin.
7. Remove Panel Rotation Handle and store in Pedestal.

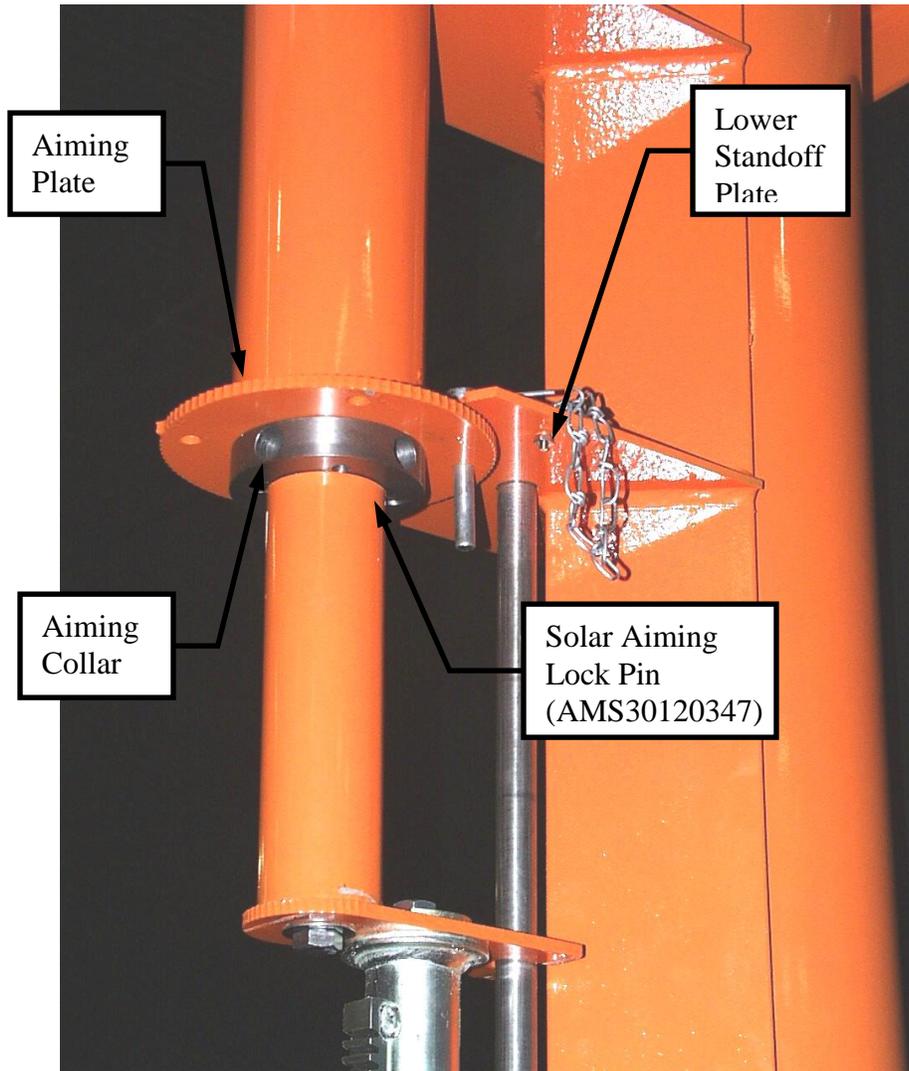


Figure 4. – AimStar® components



### 3.2 Orienting/Realigning AimStar® Solar Panels

1. Remove Solar Aiming Lock Pin.
2. Insert Panel Rotation Handle into any of four horizontal holes in Aiming Collar.
3. Using Panel Rotation Handle orient Solar Panels to new position towards sun.
4. Align hole in Aiming Plate with corresponding hole in Lower Standoff Plate and insert Solar Aiming Lock Pin.
5. Remove Panel Rotation Handle and store in Pedestal.

### 3.3 Lowering/Securing AimStar® Solar Panels

1. Remove Solar Aiming Lock Pin.
2. Ensure Solar Lift Tube Bar is perpendicular to Sign Case (oriented toward Fender).
3. Crank Jack Handle down while holding Panel Rotation Handle to hold Solar Panels in position.

 **HOLD PANEL ROTATION HANDLE STEADY  
DURING LOWERING OPERATION.** 

4. Remove Panel Rotation Handle and store in Pedestal.
5. Put AimStar® System in Travel/Storage position (see Section 2.0)



## 4.0 Mechanical Assembly Drawings

The AimStar® assembly for both the 80W & 130W 33x Advantage Trailers consists of a Solar Rack Assembly coupled with a specific Solar Panel. The Solar Rack Assembly drawings for these models are:

- AMS30125065 Solar Rack Assembly, AimStar® Long 33x
  - NOTE: Not shown in this Manual
- AMS30125066 Solar Rack Assembly, AimStar® 80W 33x

(See Section 5.0 for P/Ns of Solar Panels)



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4.1 Solar Rack Assembly, AimStar® 80W 33x (30125066)

**NOTES:**

1. NEXT LEVEL ASSY: 09T3006098
2. QTY PER NEXT LEVEL ASSY: 1
3. USE SCREW INCLUDED WITH JACK (JAC-100) TO ATTACH ITEM 18 (TORQUE ANY)
4. 80W SOLAR PANELS (CEL-120) NOT INCLUDED IN THIS BOM, BUT ARE PART OF THE TOP-LEVEL OPTION DOCUMENTATION.
5. SOLAR PANELS SHOULD CLEAR TOP OF SIGN CASE BY APPROX. 0.89".
6. ITEMS 47 THRU 53 (SOLAR BACK WIND) NOT SHOWN
7. FOR T-333 ONLY: ADD SPACERS (30120639) BETWEEN SOLAR RACK LATCH BRACKETS (30120546) AND SIGN CASE. USE 1/4-20 x 2-1/4" HEX BOLTS (DOL-272) AS MOUNTING HARDWARE.
8. ATTACH LATCH CAUTION DECAL (DEC-385) ON SIGN CASE, APPROX. MID-WAY UP AND NEAR THE AIMSTAR JACK CRANK HANDLE.

ITEM	PARTS	DESCRIPTION	QTY	UNITS
1	AMRS072034-2	PANEL MOUNT WELDER END JAW 3/8"	1	EA
2	PM06000010	SNGL 45° 10A *10 *14	2	EA
3	CH04000010	CHAM. 2018 DOUBLE LOCK COIL	1	FT
4	AMRS072047	PHI ANVISO	1	EA
5	AMRS072044-1	BRACKET 3/8 D BENT FOR REV. A	1	EA
6	BC10000040	BOUL. 3/8 X 1/4 HEX SS	10	EA
7	WAS00000390	WASHER 3/8 PLAT SS	28	EA
8	NUT00000096	NUT 3/8 B81818 INCOX 2NC	14	EA
9	AMRS072029	LOCK ACTUATOR END ASST LONG	1	EA
10	AMRS072044	SOLAR LATCH TUBE W/DRIFT CONG	1	EA
11	AMRS072046	PLATE ANVISO REV. A	1	EA
12	AMRS072048	COLLAR ANVISO REV. B	1	EA
13	PM06000006	PHI BALL SWT DIA 1/4 1/2 LONG	2	EA
14	BC10000035	BOUL. 5/16 X 1/4 DIA 1/2 DIA 2IN	2	EA
15	AMRS072042	LJANT DRNG LOW W/DRIFT	1	EA
16	PM06000010	PHI DOWEL 1/2 DIA X 2 LONG	4	EA
17	BC10000010	BOUL. 1/2 X 1/2 HEX HEAD SS	4	EA
18	AMRS072047	PHI TORQUE REV. A	1	EA
19	BC10000036	BOUL. 1/2 X 1/2 DIA 1/2	1	EA
20	WAS00000400	WASHER 1/2 PLAT RND SS	1	EA
21	WAS00000400	WASHER 1/2 PLAT SS 1/2 DIA 1 1/4	1	EA
22	WAS00000400	WASHER 1/2 PLAT 2NC RND X 20	1	EA
23	AMRS072048	BOUL TORQUE	1	EA
24	PM06000020	PHI ROLL 1/4 DIA X 1/2 LONG	4	EA
25	PM06000010	PHI SW 1/2 1/4 DIA W/DRIFT	1	EA
26	JAC06000100	JACK TORQUE WOOD END W/DRIFT 2M	1	EA
27	AMRS072043	HANDLE PANEL MOUNT	1	EA
28	CO09000006	COVER HANDLE 098 UNV BLKX	1	EA
29	AMRS072041-1	COLLAR W/DRIFT REV. A	1	EA
30	BUS00000045	BRUSHING ANVISO BRUSHER WASHER	4	EA
31	WAS00000405	WASHER 1/2 PLAT 2NC SIE 1 ANVISO	1	EA
32	NUT00000045	NUT 3/8 B81818 INCOX 2NC 098 S	1	EA
33	AMRS072042	SPACER LOCKOUT COLLAR TOP REV. C	1	EA
34	BC10000040	BOUL. 3/8 X 1/4 HEX SS	4	EA
35	AMRS072046	SOLAR RACK WELDER END 2 SOLAR PANELS	1	EA
36	BC10000010	BOUL. 1/2 X 1/4 DIA PHL SS	4	EA
37	WAS00000200	WASHER 1/4 DIA 1/2 DIA 1/2	4	EA
38	NUT00000010	NUT 1/4 DIA 1/2 DIA 1/2	2	EA
39	BC10000040	BOUL. 3/8 X 1/4 HEX SS	2	EA
40	WAS00000200	WASHER 3/8 DIA 1/2 DIA 1/2	4	EA
41	NUT00000040	NUT 3/8 16 HEX 2NC	2	EA
42	SC09000010	SCREW 1/2 X 1/2 2NC 3/16 DIA 1/2	8	EA
43	SC09000010	SCREW 1/2 X 1/2 PHL 1/2 PHL SS	2	EA
44	WAS00000190	WASHER PH SPRT RND SS	10	EA
45	NUT00000010	NUT 1/2 X 1/2 2NC	10	EA
46	BUM00000100	SPACER 5/4 DIA 1/4 H 1/2 THD R/B	2	EA
47	CL04000016	CLAMP TORQUE ADJ 1/2 DIA 1/2 DIA 1/2	2	EA
48	AMRS072047	ANVISO CLAMP BRACKET	1	EA
49	WAS00001026	WAVE 100A TELEWAVE YELLOW	2	EA
50	WAS00001027	WAVE 100A TELEWAVE GRAY	2	EA
51	TE09000022	TECHNICAL 0980 870 510 DIVISION TEL	8	EA
52	CON00000010	CONNECTOR 1/2 X 20 2NC 0.016 IN DIA	2	EA

**OVERALL ASSEMBLY:** T-33X

**NEXT LEVEL ASSEMBLY:** AIMSTAR OPTION

**THIS ASSEMBLY:** SOLAR RACK ASSY, AIMSTAR 80W 33X

**DATE:** 9/18/13 **PAGE:** 1 OF 4 **SCALE:** NONE

**REV. DATE:** 11/20/15 **REV. BY:** KKK

**ADD DEC-385 & NOTE**

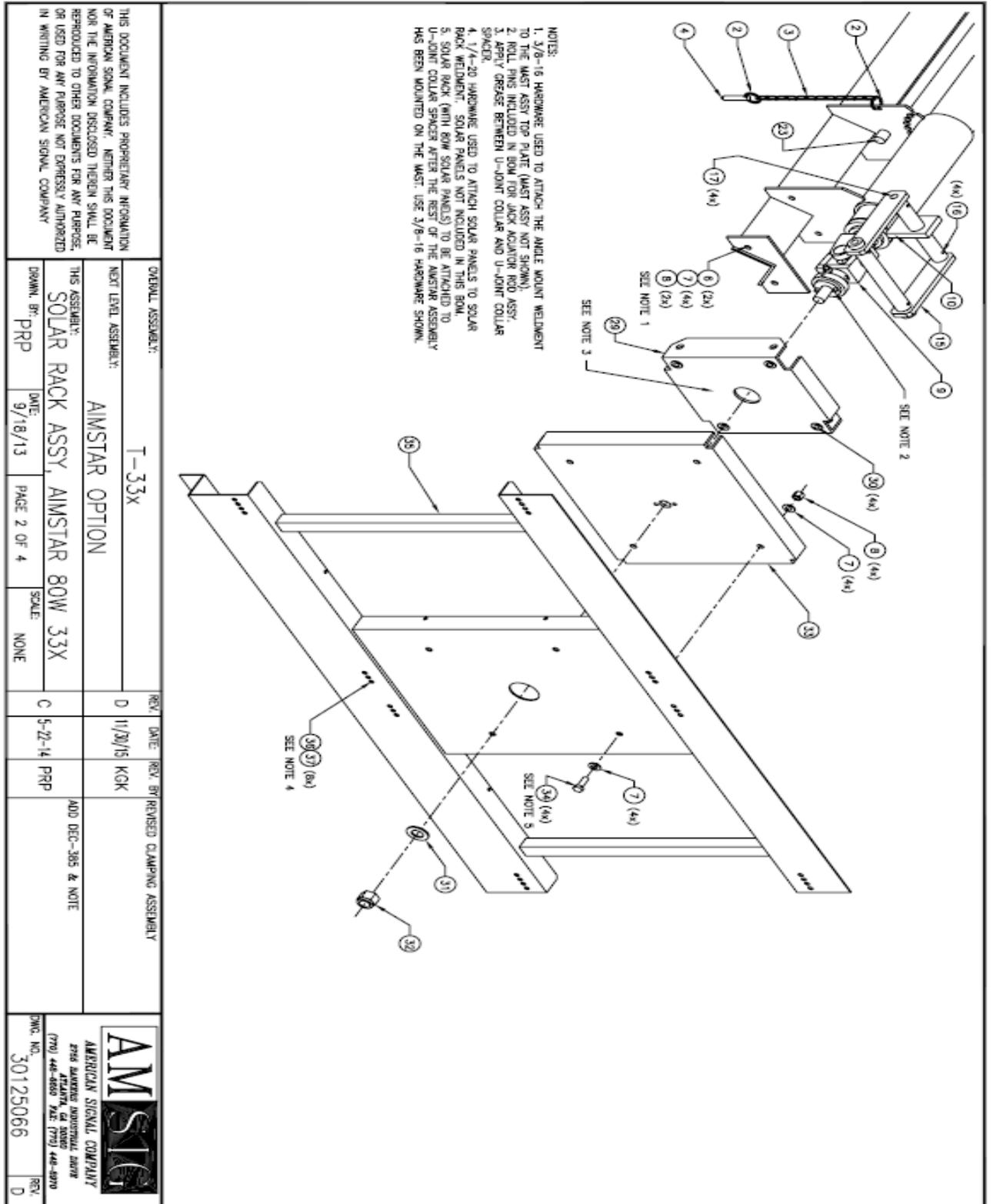
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**DWG. NO.:** 30125066 **REV.:** D



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4.1 Solar Rack Assembly, AimStar® Long 33x (30125066, pg 2)

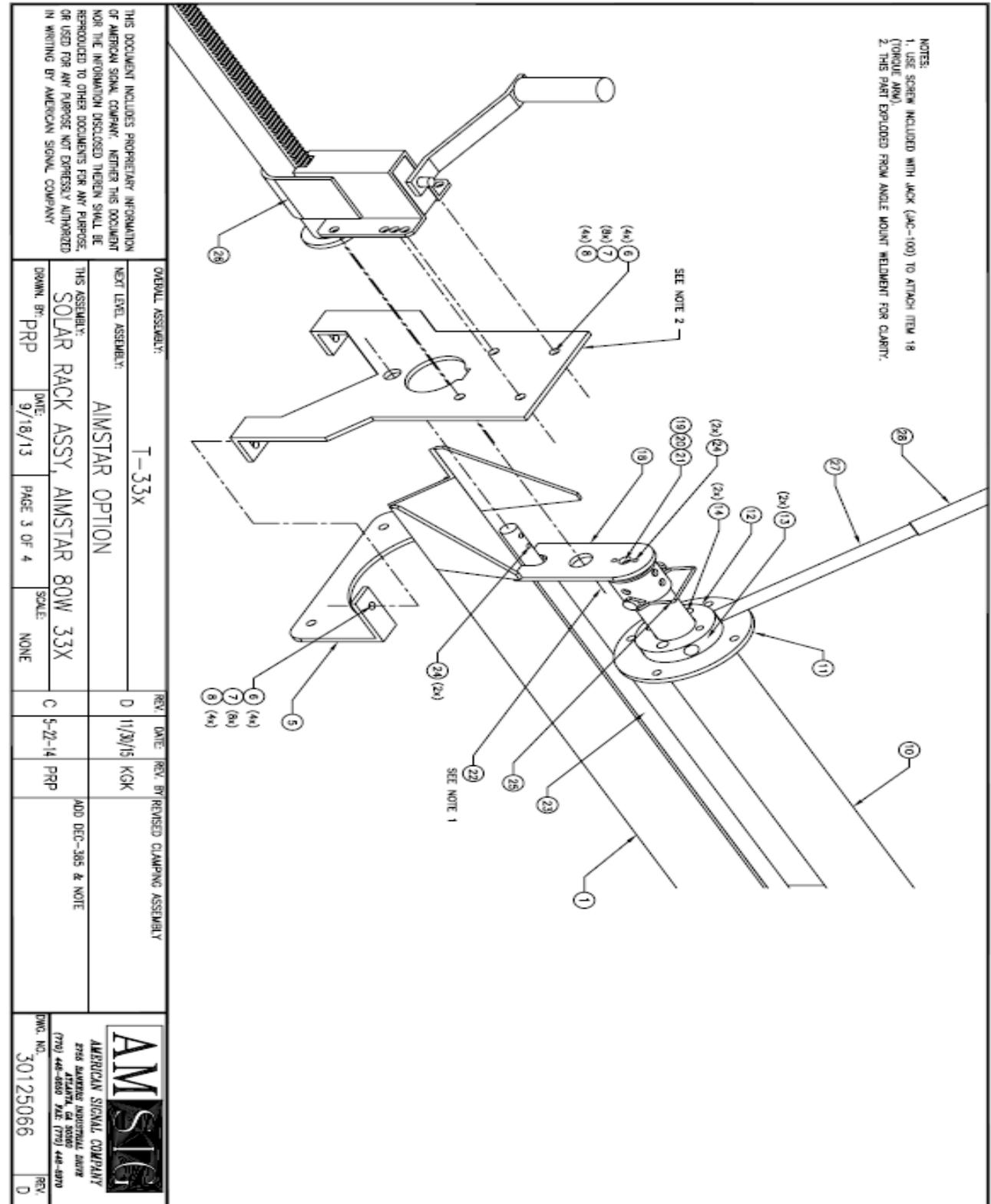


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NEXT LEVEL ASSEMBLY: <b>AIMSTAR OPTION</b>		D	11/20/15	KOK			
THIS ASSEMBLY: <b>SOLAR RACK ASSY, AIMSTAR 80W 33X</b>		C	5-22-14	PRP	ADD DEC-385 & NOTE		
DRAWN BY: PRP	DATE: 9/18/13	PAGE 2 OF 4	SCALE: NONE				
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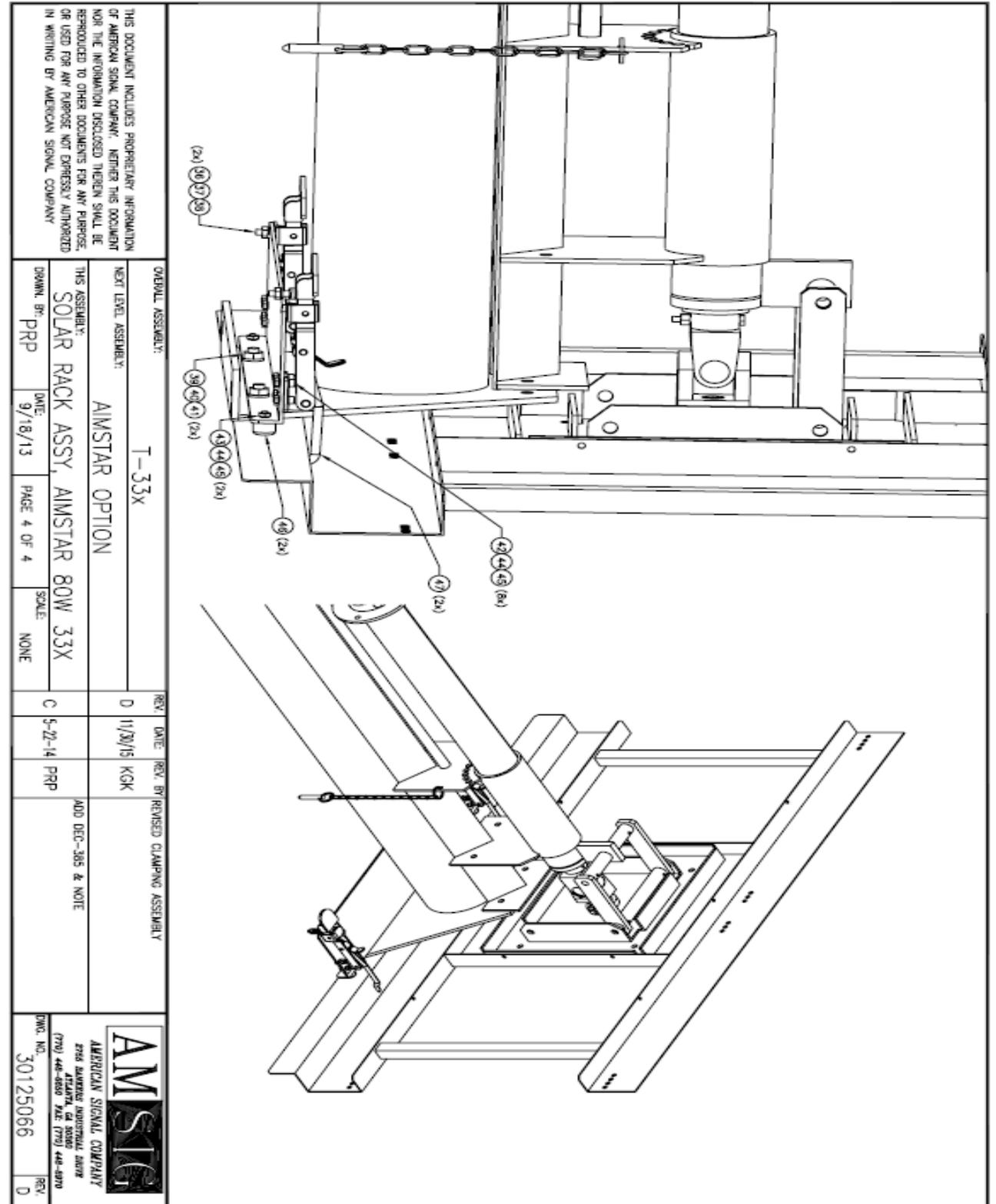
4.1 Solar Rack Assembly, AimStar® Long x32 Adv (30125066, page 3)





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4.1 Solar Rack Assembly, AimStar® Long x32 Adv (30125066, pg 4)





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## 5.0 Spare Parts List

AmSig P/N	Description
CEL-101	Cell, Solar 130W @ 17.2V
CEL-120	Cell, Solar 80W @ 17.2V
AMS30120363	Handle, Panel Rotate
COV00000245	Cover, Handle Grip Vinyl
AMS30120347	Pin, Aiming
CLA00000186	Clamp, Toggle Adj J Pull Dbl Lock

(See drawings in Section 4.0 for P/Ns of miscellaneous mechanical components)