

Model 2023 Crossarm



User's Manual



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INTRODUCTION

The Micro Response and Standard Response Wind Sensors are designed for use as sets of wind speed and wind direction sensors. To properly install the sensors as a set, the Model 2023 Crossarm is recommended. The Crossarm provides a stable, easy-to-use mounting platform for the wind sensors. Mounting pins with keyed orientation pins allow easy removal and reinstallation of the sensors without loss of orientation.

The simple design and construction of the Crossarm facilitates its assembly and installation of the wind sensors.

ASSEMBLY & INSTALLATION

This instrument is thoroughly inspected at the factory and is ready for immediate assembly and installation. Please refer to the return authorization card included in the packing box if damage has occurred. Also, notify All Weather Inc.

The Crossarm is designed to be mounted onto a $\frac{3}{4}$ " pipe mast or a boom nipple with an outside diameter of 1.0". Two U-bolts fasten the Crossarm to the mast.

- 1 Attach the Crossarm to the crossarm mount using the two $\frac{3}{8}$ " x 2" bolts. Install the washers and nuts. Make certain that the crossarm mount is perpendicular to the crossarm before tightening. Tighten the bolts and nuts while holding the crossarm mount to the crossarm.
- 2 Install the sensor mounts at each end of the Crossarm using the $\frac{5}{16}$ " x $1\frac{3}{4}$ " bolts. Install the washers, and leave the bolts finger-tight to allow for later angular adjustment.
- 3 Install the Crossarm onto the mast, making sure that there is sufficient clearance between the Crossarm and any guy wires, cables, etc. attached to the mast.
- 4 A dowel is located on each sensor mount that fits into a guide hole in the base of each of the sensors. On the wind vane, the guide hole is located on the same side as the North mark, and is aligned with this mark. To allow mounting of the wind vane at either end of the Crossarm, it can be installed with both sensor mounts oriented toward North. The sensor mounts are secured with $\frac{5}{16}$ " diameter bolts and lock washers. These bolts may remain loose until the vane is installed and precisely oriented to North. Remember, however, to securely fasten all hardware before leaving the equipment.
- 5 With the sensor mount bolt loosened, the sensor mount will rotate when the sensor body is turned. In this way, once the wind vane is aligned to North, the sensor mount will remain aligned to North once the bolt is tightened. The sensor can then be removed and replaced without loss of orientation. *Note: Loosening the two Crossarm U-bolts will cause the orientation to be lost. These U-bolts should only be loosened for removal of the Crossarm.*

Remember: it is not necessary to loosen the Crossarm sensor mounts when removing the sensors for repair or replacement. Loosen only the allen head screws on the sensor base to remove the sensor from the Crossarm.

MAINTENANCE

Other than routine checks for excessive corrosion, the Crossarm requires no maintenance.

Occasional lubrication of the nuts and bolt threads may be required in order to remove the Crossarm or to reorient the sensors after the system has been in

service for some time. All Weather Inc. recommends that a silicon-based lubricant be used. Beeswax is recommended as a lubricant for the sensor mounts to allow easy installation and removal of the sensors.

WARRANTY

Unless specified otherwise, All Weather Inc. (the Company) warrants its products to be free from defects in material and workmanship under normal use and service for one year from date of shipment, subject to the following conditions:

- (a) The obligation of the Company under this warranty is limited to repairing or replacing items or parts which have been returned to the Company and which upon examination are disclosed, to the Company's satisfaction, to have been defective in material or workmanship at time of manufacture.
- (b) The claimant shall pay the cost of shipping any part or instrument to the Company. If the Company determines the part to be defective in material or workmanship, the Company shall prepay the cost of shipping the repaired instrument to the claimant. Under no circumstances will the Company reimburse claimant for cost incurred in removing and/or reinstalling replacement parts.
- (c) This warranty shall not apply to any Company products which have been subjected to misuse, negligence or accident.
- (d) This warranty and the Company's obligation thereunder is in lieu of all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, consequential damages and all other obligations or liabilities.

No other person or organization is authorized to give any other warranty or to assume any additional obligation on the Company's behalf, unless made in writing and signed by an authorized officer of the Company.

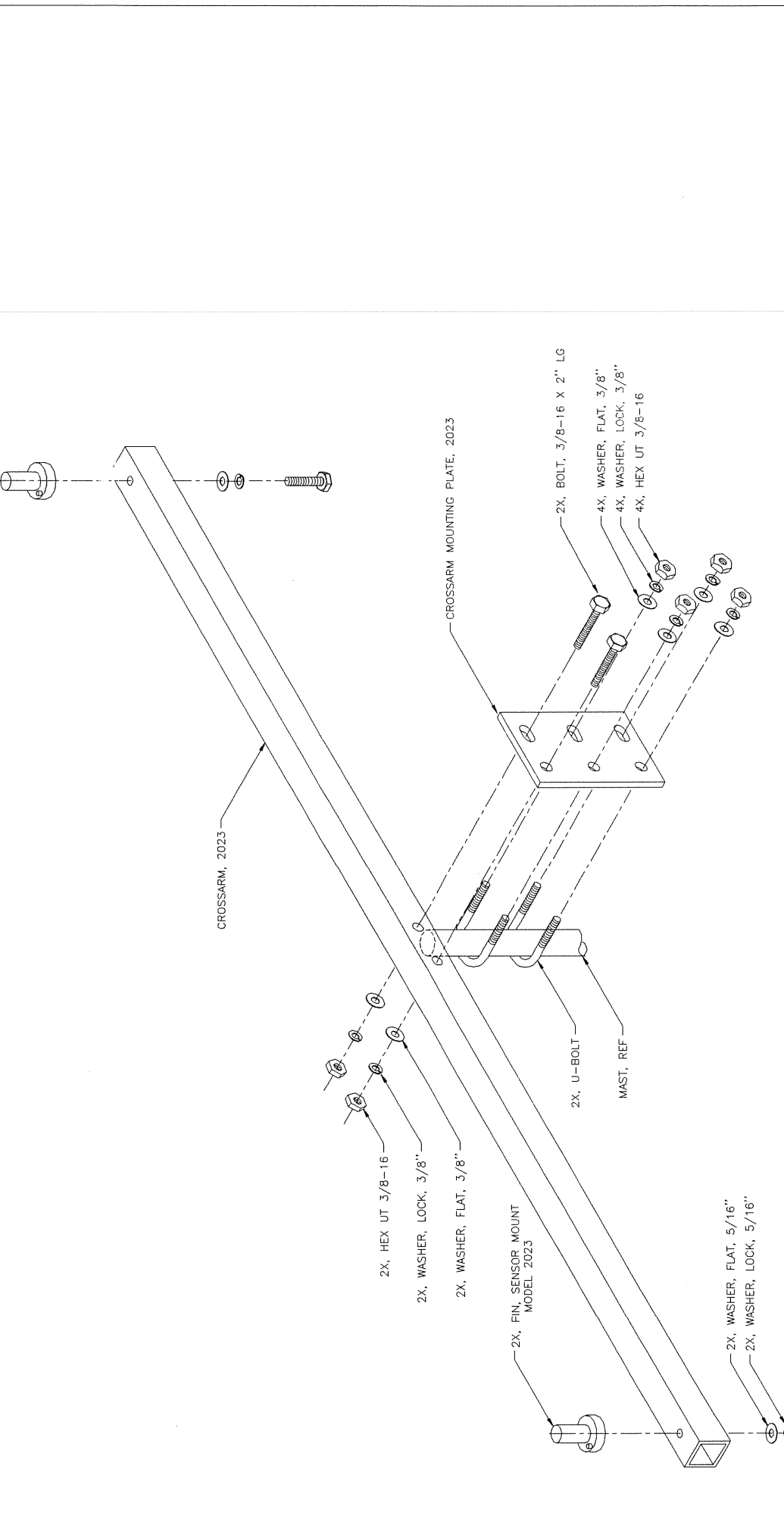
SPECIFICATIONS

<i>Mounting</i>	3/4" pipe or 1" O.D. tubing
<i>Materials</i>	
<i>Crossarm</i>	Clear anodized aluminum 1 1/4" square tubing
<i>Sensor Mounts</i>	Clear anodized machined aluminum
<i>Tower Mount</i>	Zinc-plated low-carbon steel
<i>Tower Mounting Hardware</i>	Zinc-plated low-carbon steel
<i>Sensor Mounting Hardware</i>	Stainless steel
<i>Size</i>	1 1/4" x 1 1/4" x 48" long
<i>Weight/Shipping</i>	3.5 lbs./5 lbs. (1.6 kg/2.3 kg)

DRAWINGS AND PARTS LIST

The following pages include drawings and a parts list to assist in installation, use, and maintenance of this sensor.

REV	ECN	DESCRIPTION	DATE	APPROVED
A	14557	INITIAL RELEASE		



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES AND DECIMAL ANGLES ARE IN DEGREES. DIMENSIONS TO UNLESS OTHERWISE SPECIFIED: DO NOT SCALE DRAWING.	APPROVE THE FOLLOWING DOCUMENTS WHEN CHANGING THIS DOCUMENT:	APPROVED BY:	DATE
MATL		PAM ADOTMAN	19DEC95
FINISH		REVISOR:	
TREATMENT		CHECKED BY:	
		DESIGN ENGINEER:	
		PROJECT MANAGER:	
		APPROVALS	

EXCEPT AS MAY OTHERWISE BE SPECIFIED BY CONTRACT, THIS DOCUMENT AND THE DATA DISCLOSED HEREIN AND HEREWITH, IS NOT TO BE USED, REPRODUCED OR DISCLOSED, IN WHOLE OR IN PART, TO ANYONE WITHOUT THE WRITTEN PERMISSION OF QUALIMETRICS, INC.

INSTALLATION DRAWING, CROSSARM ASSEMBLY, MODEL 2023

DRAWING NO. D 2023-007

SCALE NONE

RELEASE DATE

SHEET 1 OF 1

07/22/98 35
4.28.3

** QUALIMETRICS, INC. **
BILL OF MATERIAL INQUIRY - 2023

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1:28 PM (R070IZ)

LINE NO	RUN/ SET UP	COMPONENT	QTY EACH	UOM
10		ECN ENGR CHANGE NUMBER 4557 LAST BOM CHANGE AS OF 09FEB96	.0000	EA
20		2023-001 MANUAL USERS 2023	1.0000	EA
30		M104868 TUBE CROSSARM FAB'D 2023 IT-1	1.0000	EA
40		M104867 PLATE CROSSARM MOUNTING 2023 IT-2	1.0000	EA
50		M104866 PIN SENSOR MOUNT 202X 203X IT-3	2.0000	EA
60		M009583 NUT HEX .375-16 SS .56HX .33TK IT-4	6.0000	EA
70		T723176 WASHER FLAT .375 SS .88OD .05T IT-5	6.0000	EA
80		M009035 WASHER LOCK .375 SS SPLIT IT-6	6.0000	EA
90		M012069 BOLT .312-18 X1.750 HEX SS IT-7	2.0000	EA
100		M009082 WASHER FLAT .312 SS .75OD .08T 4301	2.0000	EA
110		M009065 WASHER LOCK .312 SS SPLIT IT-8	2.0000	EA
120		M408345 U-BOLT 3/8 X1-1/4 ID X2-1/4 L	2.0000	EA
130		M012029 BOLT .375-16 X2.000 HEX CAD	2.0000	EA

(PART NO) =A4\$ OR A4\$(1,3) = "ALL"

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LINE NO	RUN/ SET UP	COMPONENT	QTY EACH	UOM
9005	.0000 .0000	MATERIALS MANAGEMENT	4.0000	EA



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ECN 4557
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