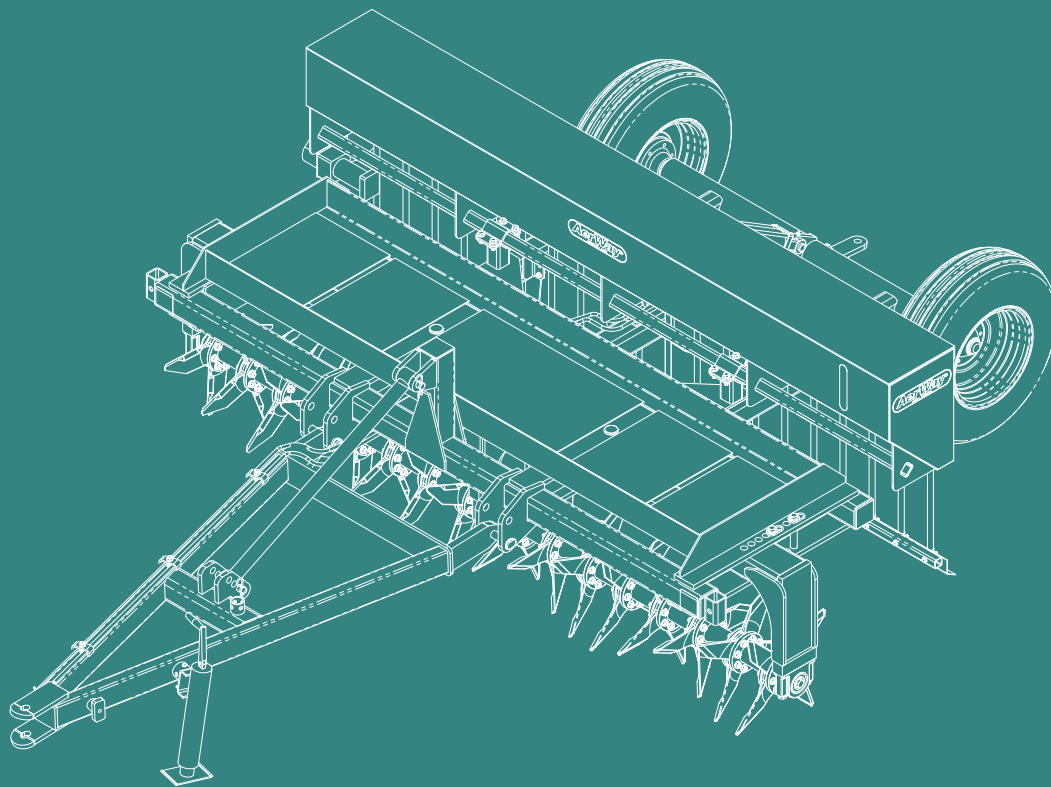




AWATS TOPDRESS SEEDER

OWNER / OPERATOR MANUAL



XL-AW75653 Rev C





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Introduction

Dear Customer: Welcome to the **AerWay** family.

The AerWay is designed, manufactured and sold by the SAF-HOLLAND Group of Companies. The SAF-HOLLAND Group is a world wide organization with manufacturing facilities in North America, and around the globe.

Farmers on every continent in the world now benefit from the patented AerWay's unique ability to shatter the soil vertically and horizontally as it twists its way through the ground.

The SAF-Holland Group welcomes you to the worldwide AerWay family of satisfied users.

Your new AerWay is designed to meet your agricultural conservation tillage and aeration requirements. Its ease of operation and low maintenance requirements will give you many years of trouble free operation.

Make certain that you **read and understand** the important instructions for assembly, adjustments, operation and maintenance contained in this manual. If there are any instructions that you do not fully understand, contact either your dealer or SAF-HOLLAND personnel for clarification prior to using the unit.

When in need of replacement parts, please inform your AerWay dealer of the model and serial number of your AerWay. The serial number is stamped on the top surface of the cross tube on the main frame.

Regular preventative maintenance will keep your AerWay in proper operating condition, and provide you with many years of reliable, trouble free service.

Should you require further clarification or assistance, please contact your local AerWay dealer or one of the AerWay information locations listed on the page 17.

DEALER RESPONSIBILITY

Before putting a new implement into service, the dealer must review and instruct the customer on all items listed on the Pre-Delivery Inspection and Warranty Registration Form (XL-AW-N-68676-A). This includes instructions on the components and safe operation of the machine. **Both the dealer and owner must sign the form** to certify that the list was completed and to verify the sale and in-service date for the machine. This information is important in the event of a Warranty Claim within the applicable warranty term, where the in-service date and valid proof of purchase information will be required. Compliance to this request will help identify and expedite the claim process.

The Dealer must return a signed copy of the Pre-Delivery Inspection and Warranty Registration Form (XL-AW-N-68676-A) to SAF-HOLLAND to ensure that pre-delivery obligations have been met.


Warranty Process

In the event of a potential warranty claim, be sure to identify and record the AerWay Model Number (example: AWST150-ALX3-CCT) and Serial Number (example: 92 09 365 0001). The end user or servicing dealer should complete the Customer Service Request form (XL-AW-N-74971-A), shipped with this manual, and Fax or Mail a copy to your nearest SAF-HOLLAND/AerWay location listed on page 17.

SAF-HOLLAND's policy is to review all warranty claims and applicable information prior to the processing of that claim. If parts are required to be returned to a SAF-Holland location for inspection and analysis, a return number will be assigned. This number must be identified on the part(s) and the shipping paper work. Claims will be resolved in a timely manner, once all information is provided and the parts or product have been inspected.

If replacement part(s) or product is required immediately, contact your local AerWay dealer or one of the four AerWay SAF-HOLLAND locations listed on page 2. The part(s) or product will be expedited to the end user and invoiced. If the warranty claim is accepted, the account will be credited accordingly.

Serial Number Logic


MODEL NUMBER SERIAL NUMBER
AWST150-ALX3-CCT **PP YY DDD NNNN**

PP - Plant:	Norwich, Ontario, Canada	-	92
YY - Year:		2009	- 09
		2010	- 10
DDD - Day of Year:	Jan 15	-	015
	Dec 31	-	365 (<i>non leap year</i>)
NNNN - Sequential number	<i>(Generated each day starting at 0001)</i>		

AerWay Warranty

SAF-HOLLAND warranties all AerWay products manufactured by it, when properly applied and installed, to be free from defects in material and workmanship under normal use and service for a period of one (1) year from the date of manufacture.

This warranty is void with respect to any product which has been altered from its manufactured condition, such as intentional modification, accident, corrosion, misuse, failure to provide necessary and reasonable maintenance and is exclusive of normal wear. This warranty does not cover tire wear or breakage due to unfavorable soil conditions.

If any AerWay or AerWay component part is found to have a defect in material or workmanship, SAF-HOLLAND will cover the cost to repair or replace the product or part. SAF-HOLLAND will provide a reasonable allowance for removal, and repair or replacement, and will provide parts or reimbursement at the acquisition cost, provided that this does not exceed the suggested amount.

All product or parts covered by this warranty must be made available to SAF-HOLLAND and/or returned for review and evaluation. Authorization from SAF-HOLLAND must be obtained prior to returning any product or parts, with freight charges prepaid.

SAF-HOLLAND shall not be liable, in any event, for proximate, consequential, special or other damages, including, but not limited to, damages for loss of production, loss of profit, loss of opportunity, or injury to persons or property arising out of any breach of this warranty.

This warranty does not suggest nor imply suitability for any particular application, nor expected life span of the product in any particular way.

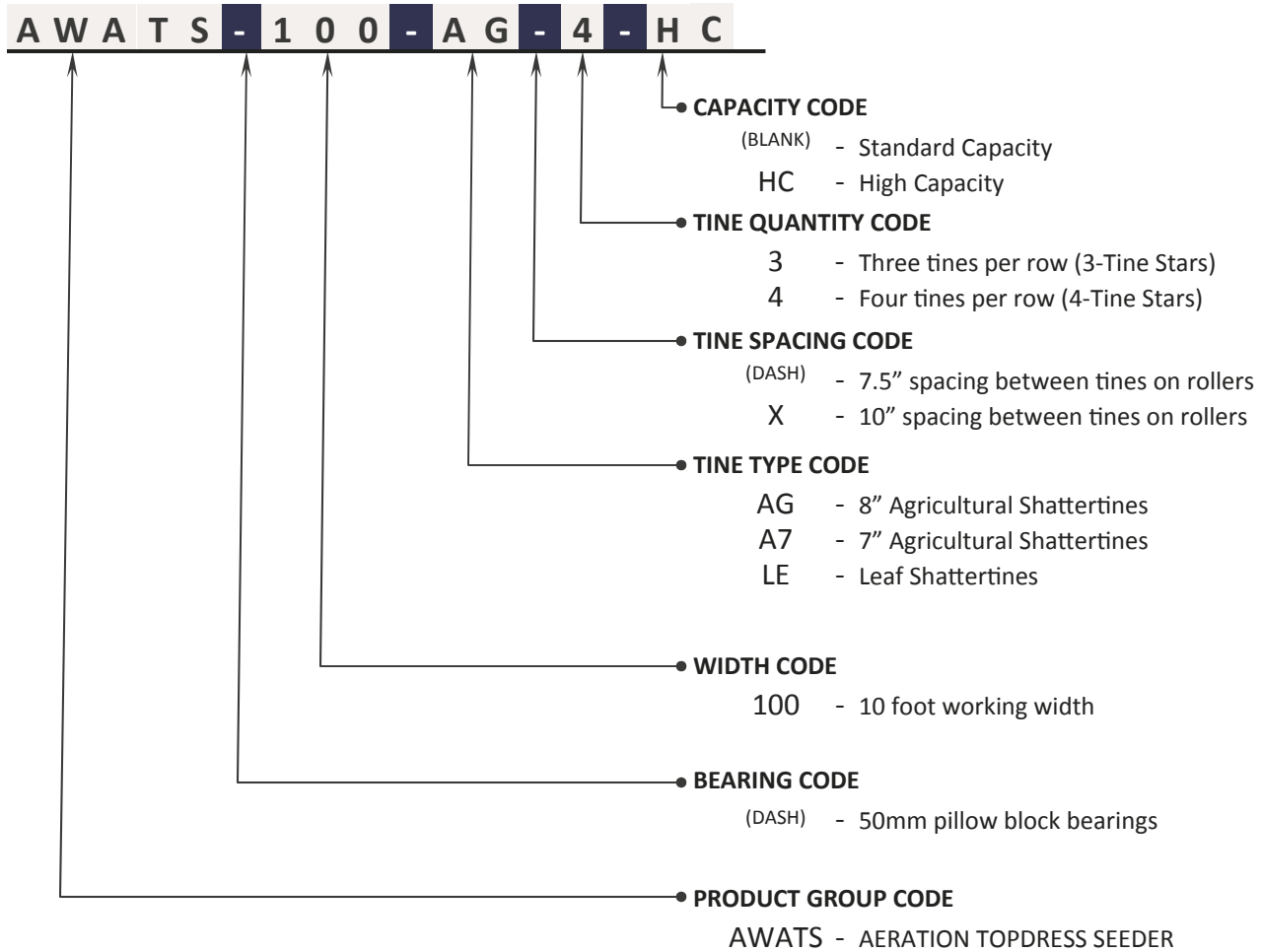
THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER IMPLIED WARRANTY ARISING BY STATUE, COURSE OF DEALINGS OR USAGE OF TRADE, EXTENDING BEYOND THAT SET FORTH ABOVE.

Protect your Investment! Remember to return your Warranty Registration Card.

Please fill in the important information below:

USER NAME:	
SERIAL NUMBER:	
MODEL NUMBER:	
DATE OF PUR-	

Part Number Logic



Operator Safety Instructions


WORK SAFELY – FOLLOW THESE RULES!

A careful operator is the best insurance against an Accident.

 **CAUTION:** before operating any equipment, read and understand this manual

1. Do not wear loose fitting clothing that may catch on moving parts
2. Use extreme care when making adjustments
3. Always use the proper tools or equipment for the job at hand.
4. When working under or around the AerWay, ensure the frame and tines are supported safely and securely.
5. Ensure that all tools, parts and maintenance equipment are clear of the AerWay after servicing
6. Extreme caution should be exercised when operating close to ditches, fence or on hillsides.

 **CAUTION:** Turn off all machinery.

 **DANGER:** AerWay tines are sharp and, if carelessly handled or improperly used, can cause serious injury or death.

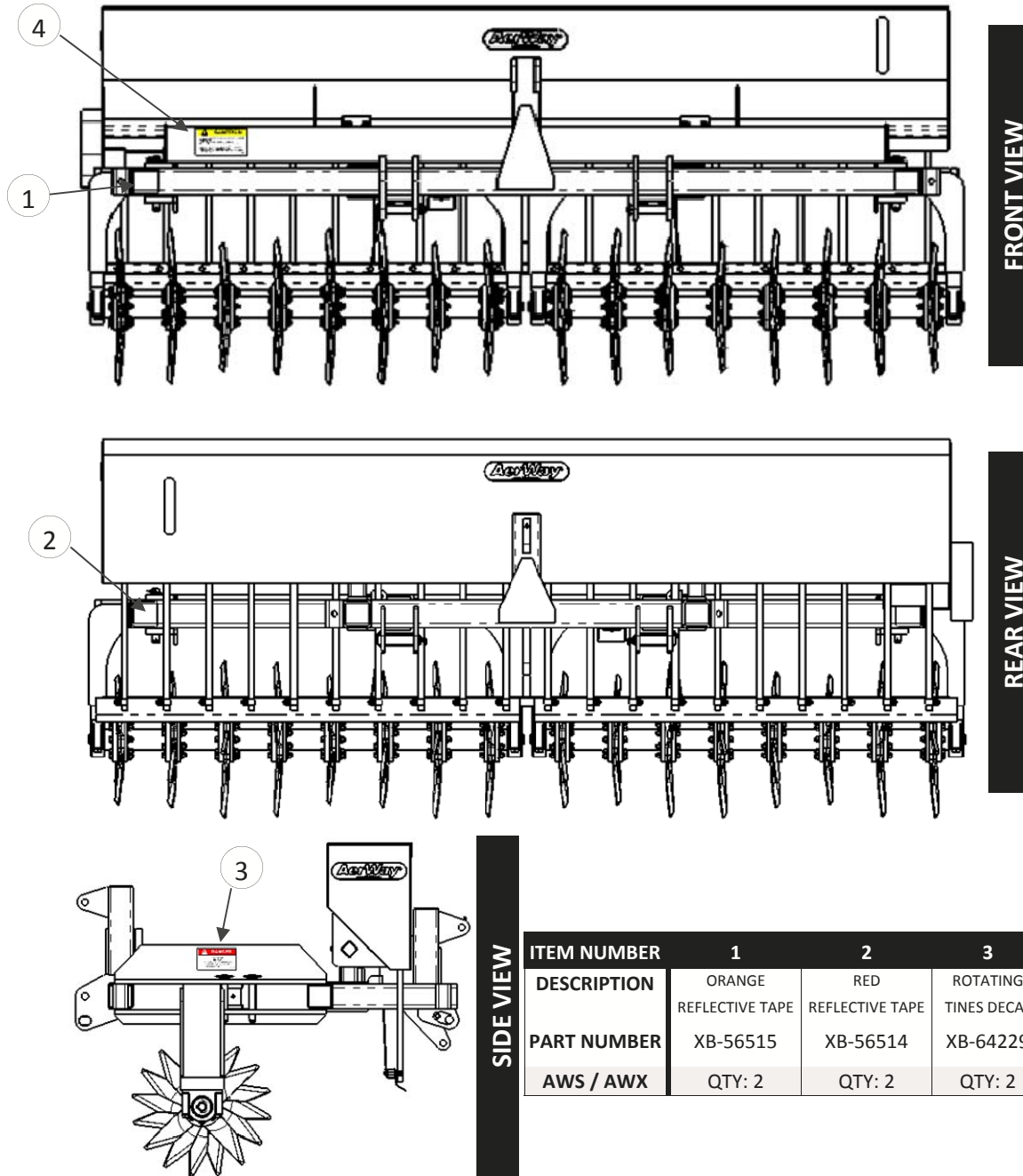
7. No riders should be permitted on the tractor. Never allow anyone to ride on the AerWay implement at any time.
8. Do not attempt to remove obstructions or clear debris while the AerWay is in motion.
9. Hands, feet, clothing and other objects must be kept away from all moving parts.
10. Warning and information signs posted provide important information for safe operation; they should not be removed.
11. Observe the safety instructions given by the manufacturer of other equipment attached.
12. Work only with safe access, e.g. Holders and Hook on Ladders.
13. When not in use the AerWay 3-Point model should have the jacklegs extended down and pinned with the safety clip pins engaged. This will prevent the implement from tipping when detached from the tractor.

SAFETY INSTRUCTIONS FOR TRANSPORTATION

14. For pull type units, always place the AerWay in the “**transport position**” when moving extended distances. (Engage manual transport lock if so equipped.)
15. The tractor used, for proper transportation, should be equal in size and horsepower to the unit used for field operations.
16. Travel at a reasonable speed. This will allow the operator to maintain complete control of the tractor and implement at all times. Do not exceed 15 mph (24 km/h).
17. AerWay transporters are only intended for off road operation.

Safety and Warning Decals

- These decals must be installed and kept visible and legible.
- Failure to install decals or painting over them could result in unsafe operation.



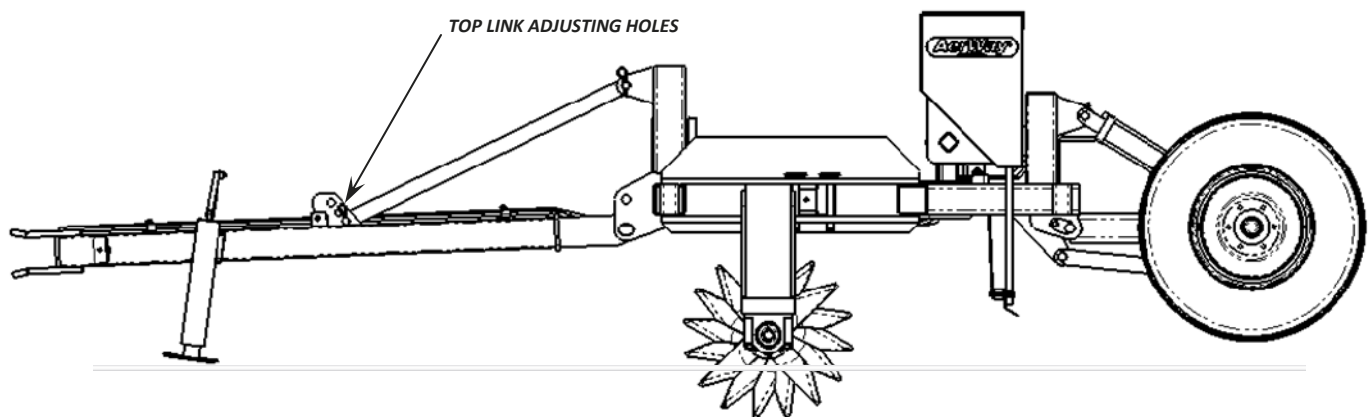
ITEM NUMBER	1	2	3	4
DESCRIPTION	ORANGE REFLECTIVE TAPE	RED REFLECTIVE TAPE	ROTATING TINES DECAL	CAUTION DECAL
PART NUMBER	XB-56515	XB-56514	XB-64229	XB-64228
AWS / AWX	QTY: 2	QTY: 2	QTY: 2	QTY: 1

Operating Instructions

1. Completely retract support legs after lifting the AerWay using the tractor hydraulic system.
2. Lower the AerWay to the ground to engage the tines into the ground. Add ballast to the weight tray of the AerWay until the desired depth of tine penetration into the ground is achieved. The soil type, moisture content and the amount of compaction present will determine the amount of the ballast weight required. Maximum **700** pounds per foot of AerWay width.
3. The weight used as ballast must be properly fitted and secured to the frame.
4. With the tines engaged into the ground at full working depth; adjust the top link position until the AerWay frame is parallel to the ground.
5. Excessive stony conditions could result in tine and roller damage. In this case it may be necessary to reduce the ballast.
6. Drive the tractor at speeds which are safe (tractor stability & steering ability is maintained) and comfortable.

! **CAUTION:** Excessive tractor speed or radical operation when turning can endanger vehicle operation and operator safety.

7. Severely compacted traffic areas may have to be aerated several times.
8. For more aggressive cultivation, adjust the rollers to a more aggressive swing angle. There are five positions to choose from to suit your individual requirements. Never operate your AerWay with different swing angle settings on the LH and RH swing arms.



Recommended Maintenance

ROLLER BEARING MAINTENANCE AND LUBRICATION

The AWATS line of machines come equipped with permanently lubricated bearings which require no additional lubrication or maintenance.

Wheel Bearings in Lift Assembly should be disassembled and bearings packed with grease once a year. The hubs come with factory installed grease fittings for greasing the hub through out the season. For aggressive conditions grease should be liberally put in the hubs so contamination will not reach the bearings. This should be completed at every usage for aggressive conditions.

PIVOT POINT MAINTENANCE

Grease all pivot points on the AerWay at the end of each day. Be sure to operate mechanism after greasing to allow grease to reach around the pin area. All pins should be removed once a year and grease applied to pin to prevent premature corrosion. This is a good time to also inspect pins and holes for wear and replace as necessary.

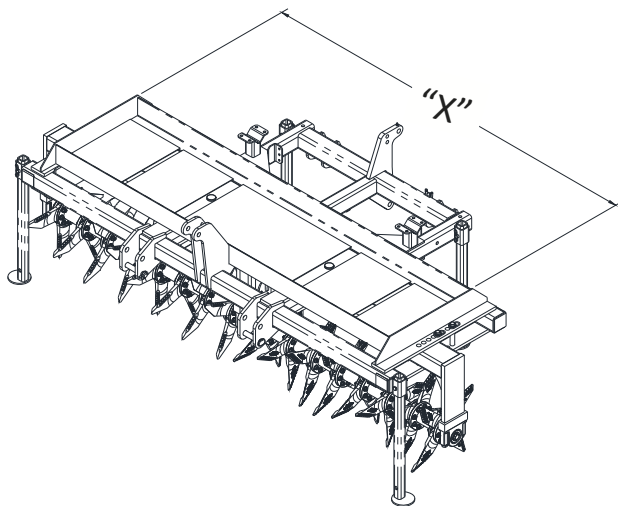
TINE MAINTENANCE AND REPLACEMENT INSTRUCTIONS

Inspect tines for signs of excessive wear or breakage prior to operation. Re-torque tine bolts to 90 ft-lbs plus a half turn, after 10 hours of operation from initial start-up. Verify torque on the tine bolts after every 30 hours of operation and adjust if required.

If tines are worn excessively, damaged or broken, replace them as quickly as possible to ensure the proper and efficient operation of the AerWay implement. Refer to pages 12 and 13 for further instructions.

AWATS Concrete Ballasting

AWM AerWay Ballasting					
PULL TYPE AERWAYS					
MODEL NUMBER	AW-BLK550-02 QUANTITY	AW-BLK750-02 QUANTITY	TOTAL BLOCK WEIGHT	GROSS WEIGHT	WEIGHT PER FOOT
AWATS-100-AG-4	-	5 x 750 lbs	3750 lbs	7000 lbs	700 lbs
AWATS-100-AG-4-HC	-	5 x 750 lbs	3750 lbs	7000 lbs	700 lbs



AWATS-100*	"X" 26.00" Five 750 lb Blocks
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⇒ **AW-BLK550-02: 550 lb ballast block**
15" Wide · 20" High · 24" Deep



⇒ **AW-BLK750-02: 750 lb ballast block**
20" Wide · 20" High · 24" Deep

AWATS Specs

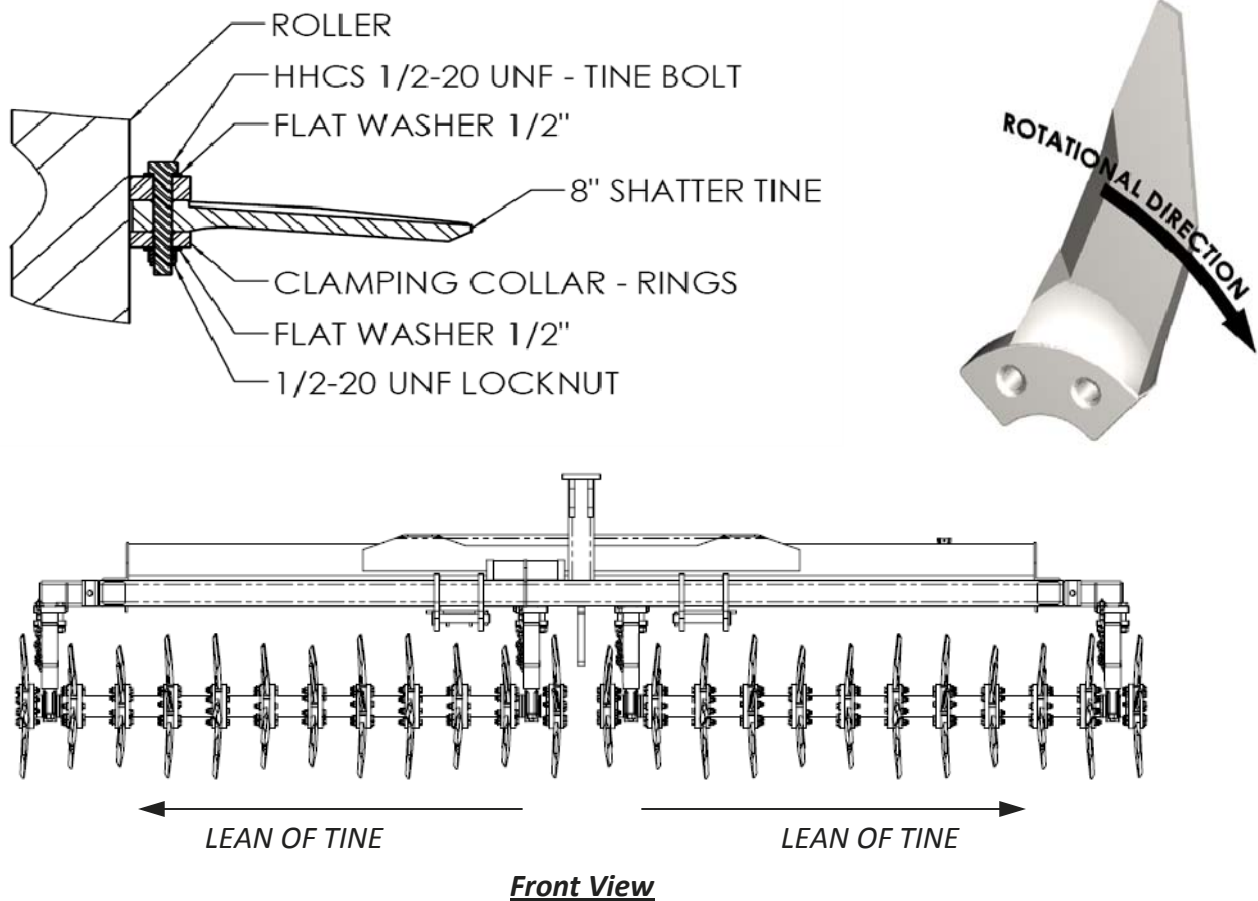
AWATS AerWay Specifications					
PULL TYPE AERWAYS					
MODEL NUMBER	WORKING WIDTH	OVERALL WIDTH	TINE QTY	MACHINE WEIGHT	HORSEPOWER REQUIRED*
AWATS-100-AG-4	10'	10.5' (126")	64	2450 lbs	60-100
AWATS-100-AG-4-HC	10'	10.5' (126")	64	2450 lbs	60-100

**HORSEPOWER REQUIREMENTS (6-10 HP/FT) MAY VARY DEPENDING ON FIELD CONDITIONS*

AWATS AerWay Rollers					
8" SHATTERTINES					
MODEL NUMBER	LH ROLLER ASSEMBLY	RH ROLLER ASSEMBLY	# OF ROWS PER ROLLER	# OF TINES PER ROW	OVERALL ROLLER LENGTH
AWATS-100-AG-4	XA-74873-01	XA-74873-02	8	4	60"
AWATS-100-AG-4-HC	XA-74873-01	XA-74873-02	8	4	60"

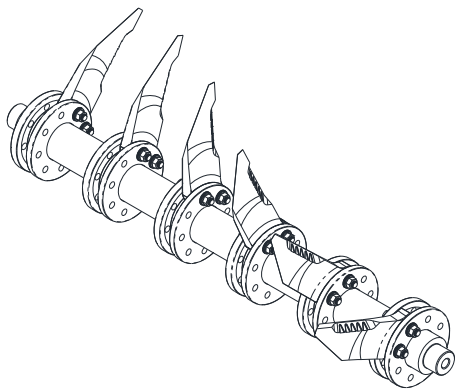
Shattertine Replacement

- Ensure that rings are not bent and bolt holes are not elongated.
 - Always clean all mating surfaces free of dirt and contamination.
1. Assemble the roller as shown below with the tine between the clamping rings with washers under the bolt head and nut.
 2. Install the tines in the orientation shown below. Note: **The stamp "AerWay"** on the tine will be pointing **towards the outside** of the AerWay. See the diagram below.
 3. The mounting rings are indexed around the roller shaft so the tines appear in a spiral pattern when viewed from the end of the roller. Be sure to make note of the pattern on each roller before removing the old tines and to install the new tines in that same pattern. Refer to page 13 for details.
 4. Torque the locknut to 90 Ft-Lbs then continue turning nut an additional $\frac{1}{2}$ turn.

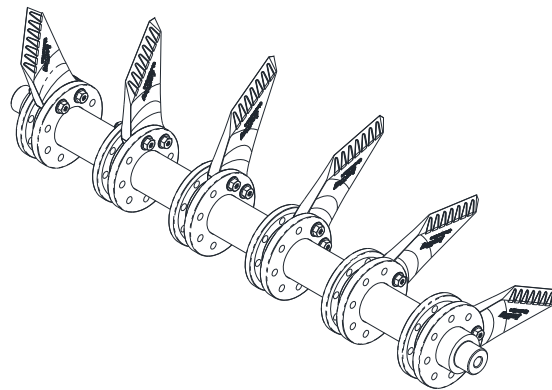


Shattertine Replacement- Helix

- Ensure that rings are not bent and bolt holes are not elongated.
 - Always clean all mating surfaces free of dirt and contamination.
1. The Tines are indexed around the roller shaft so they appear in a spiral pattern or helix when viewed from the end of the roller. The direction of this helix is essential to the proper function of your AerWay. Be sure to make note of the pattern on each roller before removing the old tines and to install the new tines in that same pattern as shown below.
 2. Once the proper helix has been established for one tine per row, mount the remaining tines ensuring the tines in each row are equally spaced around the rings. There may be un-used holes in each ring depending upon how many tines per star are used.
 3. Refer to Pages 11 for the required roller for each location on your AerWay .

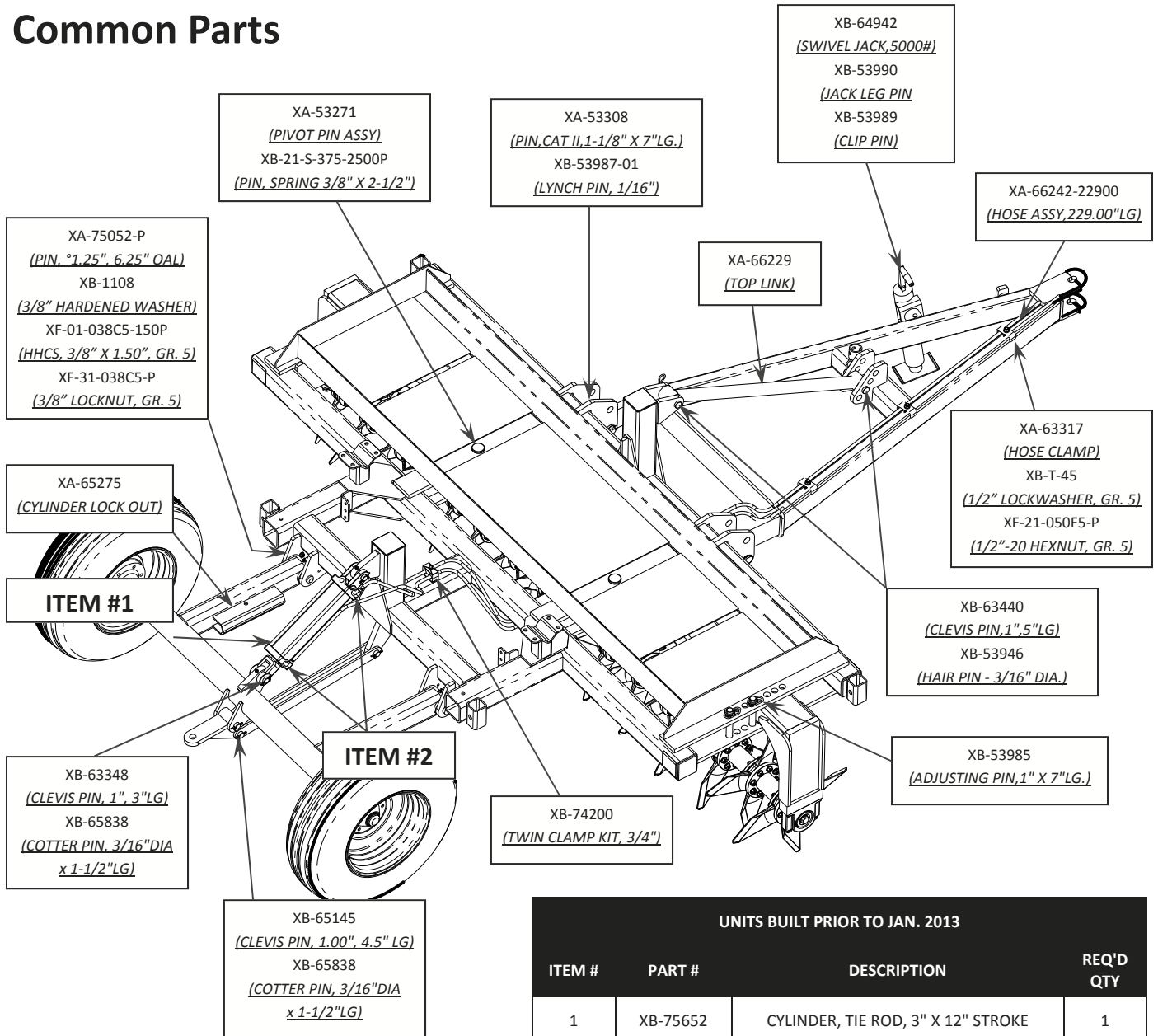


"-02" Roller (XA-75455-02 Tine, RH Helix)



"-01" Roller (XA-75455-01 Tine, LH Helix)

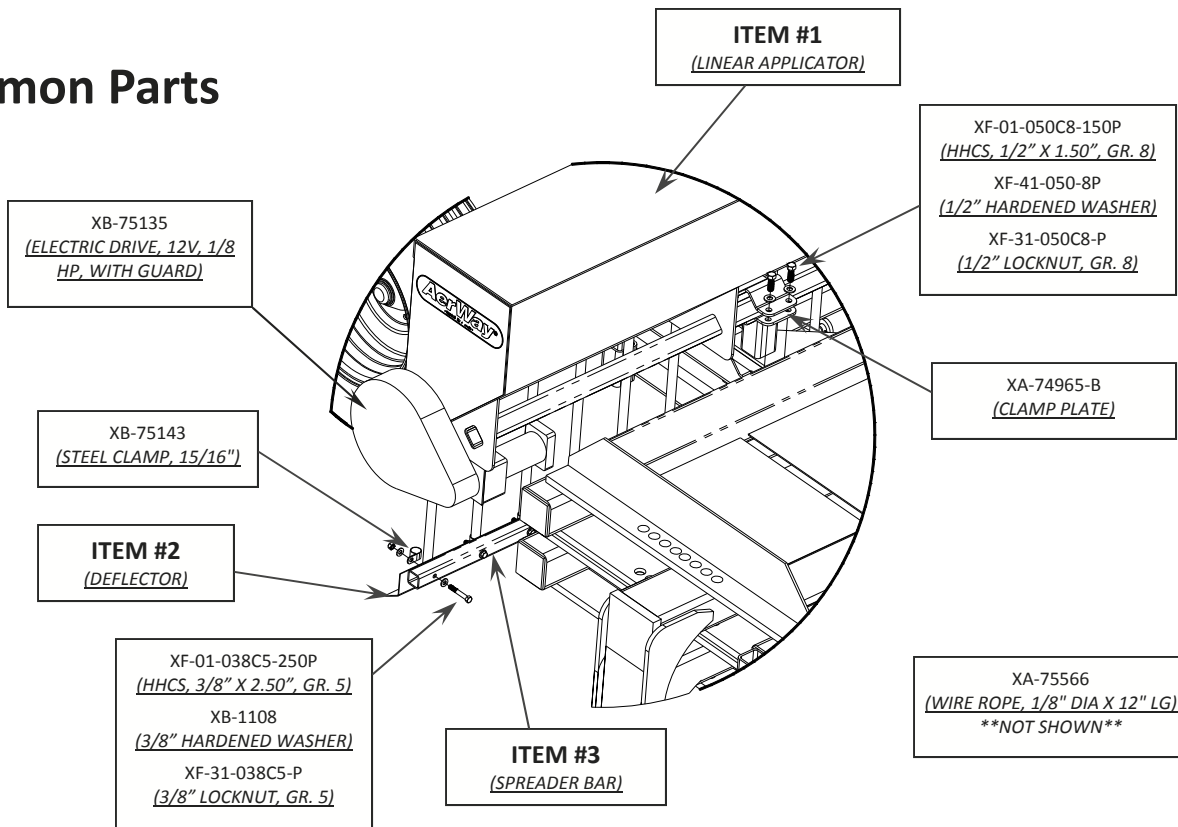
Common Parts



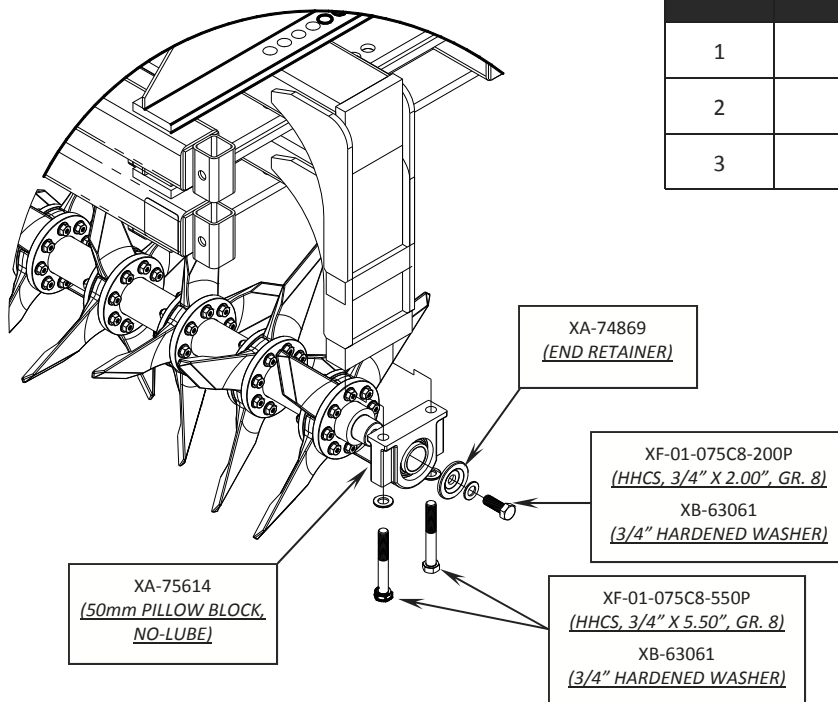
UNITS BUILT PRIOR TO JAN. 2013			
ITEM #	PART #	DESCRIPTION	REQ'D QTY
1	XB-75652	CYLINDER, TIE ROD, 3" X 12" STROKE	1
2	XB-56005	ELBOW, MALE, -8 NPTF, -6JIC	2

UNITS BUILT AFTER TO JAN. 2013			
ITEM #	PART #	DESCRIPTION	REQ'D QTY
1	XB-65272	CYLINDER HYDRAULIC, 3" X 12" STROKE	1
2	XB-56252	ELBOW, MALE, -8 O.R.B., -6JIC	2

Common Parts



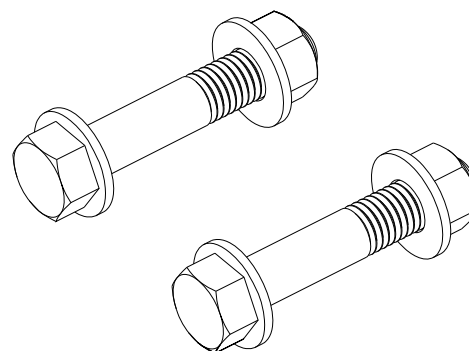
ITEM #	AWATS-100-AG-4	AWATS-100-AG-4-HC
1	XB-75119	XB-76342
2	XA-75136-04	XA-76336-01
3	XA-75061-04	XA-76335-01



Torque Chart

SAE GRADE 8 COARSE THREAD				SAE GRADE 8 FINE THREAD			
SIZE	CLAMP LOAD	PLAIN	PLATED	SIZE	CLAMP LOAD	PLAIN	PLATED
1/4 - 20 (.250)	2,850	12 ft. lbs.	9 ft. lbs.	1/4 - 28 (.250)	3,263	14 ft. lbs.	10 ft. lbs.
5/16 - 18 (.3125)	4,725	25 ft. lbs.	18 ft. lbs.	5/16 - 24 (.3125)	5,113	27 ft. lbs.	20 ft. lbs.
3/8 - 16 (.375)	6,975	44 ft. lbs.	33 ft. lbs.	3/8 - 24 (.375)	7,875	49 ft. lbs.	37 ft. lbs.
7/16 - 14 (.4375)	9,600	70 ft. lbs.	52 ft. lbs.	7/16 - 20 (.4375)	10,650	78 ft. lbs.	58 ft. lbs.
1/2 - 13 (.500)	12,750	106 ft. lbs.	80 ft. lbs.	1/2 - 20 (.500)	14,400	120 ft. lbs.	90 ft. lbs.
9/16 - 12 (.5625)	16,350	153 ft. lbs.	115 ft. lbs.	9/16 - 18 (.5625)	18,300	172 ft. lbs.	129 ft. lbs.
5/8 - 11 (.625)	20,325	212 ft. lbs.	159 fl. lbs.	5/8 - 18 (.625)	23,025	240 ft. lbs.	180 ft. lbs.
3/4 - 10 (.750)	30,075	376 ft. lbs.	282 ft. lbs.	3/4 - 16 (.750)	33,600	420 ft. lbs.	315 ft. lbs.
7/8 - 9 (.875)	41,550	606 ft. lbs.	454 ft. lbs.	7/8 - 9 (.875)	45,825	668 ft. lbs.	501 ft. lbs.
1 - 8 (1.000)	54,525	909 ft. lbs.	682 ft. lbs.	1 - 12 (1.000)	59,700	995 ft. lbs.	746 ft. lbs.
1-1/8 - 7 (1.125)	68,700	1288 ft. lbs.	966 ft. lbs.	1 - 14 (1.000)	61,125	1019 ft. lbs.	764 ft. lbs.
1-1/4 - 7 (1.250)	87,225	1817 ft. lbs.	1363 ft. lbs.	1-1/8 - 12 (1.125)	77,025	1444 ft. lbs.	1083 ft. lbs.
1-3/8 - 6 (1.375)	103,950	2382 ft. lbs.	1787 fl. lbs.	1-1/4 - 12 (1.250)	96,600	2012 ft. lbs.	1509 ft. lbs.
1-1/2 - 6 (1.500)	126,450	3161 ft. lbs.	2371 ft. lbs.	1-3/8 - 12 (1.375)	118,350	2712 ft. lbs.	2034 ft. lbs.
				1-1/2 - 12 (1.500)	142,275	3557 ft. lbs.	2668 ft. lbs.

SAE GRADE 5 COARSE THREAD				SAE GRADE 5 FINE THREAD			
SIZE	CLAMP LOAD	PLAIN	PLATED	SIZE	CLAMP LOAD	PLAIN	PLATED
1/4 - 20 (.250)	2,025	8 ft. lbs.	6 ft. lbs.	1/4 - 28 (.250)	2,325	10 ft. lbs.	7 ft. lbs.
5/16 - 18 (.3125)	3,338	17 ft. lbs.	13 ft. lbs.	5/16 - 24 (.3125)	3,675	19 ft. lbs.	14 ft. lbs.
3/8 - 16 (.375)	4,950	31 ft. lbs.	23 ft. lbs.	3/8 - 24 (.375)	5,588	35 ft. lbs.	26 ft. lbs.
7/16 - 14 (.4375)	6,788	50 ft. lbs.	37 ft. lbs.	7/16 - 20 (.4375)	7,575	55 ft. lbs.	41 ft. lbs.
1/2 - 13 (.500)	9,075	76 ft. lbs.	57 ft. lbs.	1/2 - 20 (.500)	10,200	85 ft. lbs.	64 ft. lbs.
9/16 - 12 (.5625)	11,625	109 ft. lbs.	82 ft. lbs.	9/16 - 18 (.5625)	12,975	122 ft. lbs.	91 ft. lbs.
5/8 - 11 (.625)	14,400	150 ft. lbs.	112 ft. lbs.	5/8 - 18 (.625)	16,350	170 ft. lbs.	128 ft. lbs.
3/4 - 10 (.750)	21,300	266 ft. lbs.	200 ft. lbs.	3/4 - 16 (.750)	23,775	297 ft. lbs.	223 ft. lbs.
7/8 - 9 (.875)	29,475	430 ft. lbs.	322 ft. lbs.	7/8 - 14 (.875)	32,475	474 ft. lbs.	355 ft. lbs.
1 - 8 (1.000)	38,625	644 ft. lbs.	483 ft. lbs.	1 - 12 (1.000)	42,300	70 ft. lbs.	529 ft. lbs.
1-1/8 - 7 (1.125)	42,375	794 ft. lbs.	596 ft. lbs.	1 - 14 (1.000)	32,275	721 ft. lbs.	541 ft. lbs.
1-1/4 - 7 (1.250)	53,775	1120 ft. lbs.	840 ft. lbs.	1-1/8 - 12 (1.125)	47,475	890 ft. lbs.	668 ft. lbs.
1-3/8 - 6 (1.375)	64,125	1470 ft. lbs.	1102 ft. lbs.	1-1/4 - 12 (1.250)	59,550	1241 ft. lbs.	930 ft. lbs.
1-1/2 - 6 (1.500)	78,000	1950 ft. lbs.	1462 ft. lbs.	1-3/8 - 12 (1.375)	72,975	1672 ft. lbs.	1254 ft. lbs.
				1-1/2 - 12 (1.500)	87,750	2194 ft. lbs.	1645 ft. lbs.



SAF-HOLLAND Companies



1-800-457-8310

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SAF-HOLLAND USA Inc. - Texas Facility
1301 Martinez Lane, Wylie, Texas 75098
Tel: 1-800-457-8310

AerWay Attachments

The following optional attachments are available:

- **AK-75742**, HARROW CARRIER KIT (CAN BE USED WITH AW-CH11-3 CHAIN HARROW)
- **AK-75743**, TOOLBAR, 6"x4"x10ft, AWATS-100
- **AW-BLK550-02**, 550# CEMENT BLOCK (CAN HOLD SIX—3300#)
- **AW-BLK750-02**, 750# CEMENT BLOCK (CAN HOLD FIVE—3750#)



AWATS TOPDRESS SEEDER MANUAL

XL-AW75653 Rev C