



Parts & Service  
Operators

# 60" & 78" AER 8 Aerifier

Serial#: AER60-005  
AER78-005

July 2012

**Product Support:**

**Hwy 55 & Poplar Ave; Cameron WI 54822**

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## Accessories

## Reference

Thank you for purchasing a **Smithco** product.

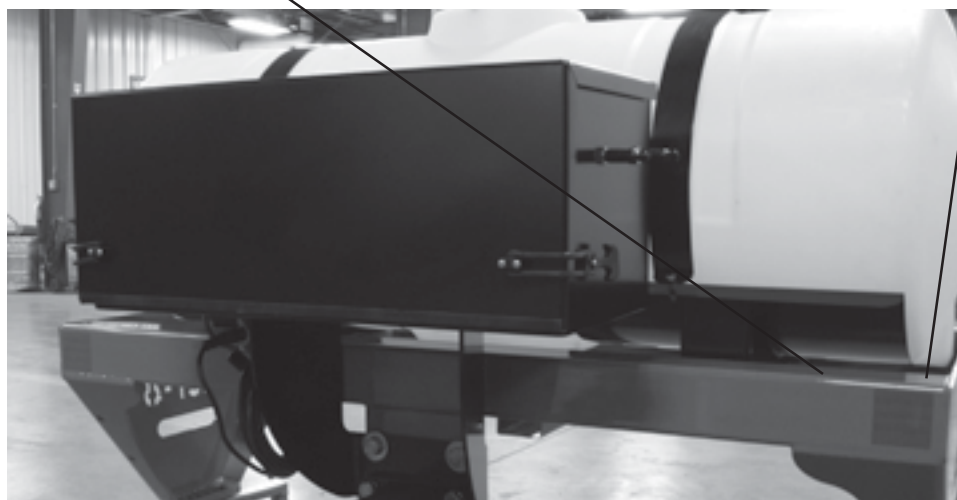
Read this manual and all other manuals pertaining to the Aer-8 Aerifier carefully as they contain safety, operating, assembly and maintenance instructions. Failure to do so could result in personal injury or equipment damage.

Keep manuals in a safe place after operator and maintenance personnel have read them. Right and left sides are from the operator's seat, facing forward.

All **Smithco** machines have a Serial Number and Model Number. Both numbers are needed when ordering parts. The serial number plate on the Aer-8 is located on the left top main frame.

For easy access record your Serial and Model numbers here.

<b>SMITHCO</b>		DATE OF MFG.
WAYNE, PENNSYLVANIA 19087 USA		<input type="text"/>
610-688-4009 Fax 610-688-6069		
SERIAL NO.	kW/hp	
<input type="text"/>	<input type="text"/>	
MODEL NO.	kg/lb	
<input type="text"/>	<input type="text"/>	



Information needed when ordering replacement parts:

1. Model Number of machine
2. Serial Number of machine
3. Name and Part Number of part
4. Quantity of parts

## SAFE PRACTICES

1. It is your responsibility to read this manual and all publications associated with this machine.
2. Never allow anyone to operate or service the machine or its attachments without proper training and instructions. Never allow minors to operate any equipment.
3. Learn the proper use of the machine, the location and purpose of all the controls before you operate the equipment. Working with unfamiliar equipment can lead to accidents.
4. Wear all the necessary Personal Protective Equipment (PPE) to protect our head, eyes, ears, hands and feet. Operate the machine only in daylight or in good artificial light.
5. Inspect the area where the equipment will be used. Beware of overhead obstructions and underground obstacles. Stay alert for hidden hazards.
6. Never operate equipment that is not in perfect working order or without decals, guards, shields, or other protective devices in place.
7. Never disconnect or bypass any switch.
8. When working around the tines, frame **must be** supported.
9. Never use your hands to search for oil leaks. Hydraulic fluid under pressure can penetrate the skin and cause serious injury.
10. This machine demands your attention. To prevent loss of control or tipping of the vehicle:
  - A. Use extra caution in backing up the vehicle. Ensure area is clear.
  - B. Do not stop or start suddenly on any slope.
  - C. Reduce speed on slopes and in sharp turns. Use caution when changing directions on slopes.
  - D. Stay alert for holes in the terrain and other hidden hazards.
  - E. Operate equipment up and down slopes, never across the face.
  - F. Before unhitching, lower jack stands and secure pins.
11. Before leaving operator's position for any reason:
  - A. Disengage all drives.
  - B. Lower all attachments to the ground.
  - C. Shut engine off and remove the ignition key.
12. Keep hands, feet and clothing away from moving parts. Wait for all movement to stop before you clean, adjust or service the machine.
13. Keep the area of operation clear of all bystanders.
14. Never carry passengers.
15. Use parts and materials supplied by **Smithco** only. Do not modify any function or part.
16. Avoid sharp turns. Watch the tires of the tractor while turning to make sure they do not contact the tongue of the Aer-8.
17. Shut down power source before attempting to unclog any part of the machine.
18. Know where and how deep all gas, water and electrical lines are buried.

***These machines are intended for professional maintenance on golf courses, sports turf, and any other area maintained turf and related trails, paths and lots. No guaranty as to the suitability for any task is expressed or implied.***

## SPECIFICATIONS FOR AER-8

WEIGHTS AND DIMENSIONS	60"	78"
Length	46" (117 cm)	
Width	63" (1637 cm)	81" (205 cm)
Height	55" (140 cm)	
Weight	790 lb (358 kg)	
Weight (with transport frame)	Empty - 1225 lb (556 kg) Full - 2085 lb (946 kg)	1475 lb (668 kg) 2330 lb (1056 kg)
TIRES & WHEELS	Two 18 x 9.5 x 8 ( 20 psi (1.4 bar))	
BATTERY <b>(Not Included)</b>	Automotive type 24F-12 Volt	
BCI Group	Size 24	
Cold Cranking Amps	900 minimum	
Ground Terminal Polarity	Negative (-)	
Maximum Length	10.25" (26 cm)	
Maximum Width	6.88" (17 cm)	
Maximum Height	10" (25 cm)	
FLUID CAPACITY		
Hydraulic Fluid	1.25 Gal (4.3 liter)	
TOW VEHICLE		
	For 3-Point on 60" must be able to support 1350lb (613 kg)	
	For 3-Point on 78" must be able to support 1850lb (839 kg)	
	Minimum drawbar power of 20 HP (15 kW)	
	Heavy Duty Vehicle with 4 wheel brakes	
	Capable of 825 lb (374 kg) tongue weight.	

## ACCESSORIES

### TINE REEL ASSEMBLIES FOR REPLACING ENTIRE TINE REEL ASSEMBLY

60"	78"	
AER8-60R601	AER8-78R781	Turf Quake Fracture Tine Reel Assembly 5" Spacing
AER8-60R602	AER8-78R782	Turf Quake Fracture Tine Reel Assembly 7.5" Spacing
AER8-60R603	AER8-78R783	All Star Sport Field Tine Reel Assembly 5" Spacing
AER8-60R604	AER8-78R784	All Star Sport Field Tine Reel Assembly 7.5" Spacing
AER8-60R605	AER8-78R785	Aerfine Thin Blade Tine Reel Assembly 3" Spacing
AER8-60R606	AER8-78R786	Aerfine Thin Blade Tine Reel Assembly 5" Spacing
AER8-60R607	AER8-78R787	Coring Tine Reel Assembly
AER8-610	AER8-710	Rear Roller Assembly

### COMMON ACCESSORIES

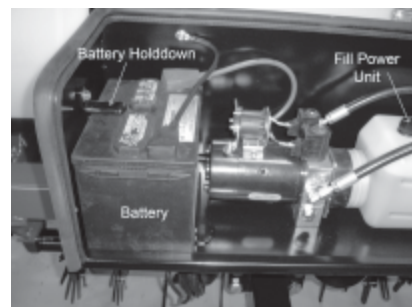
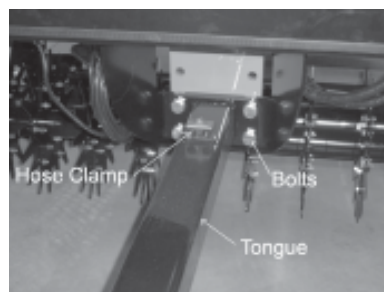
AER8-001	Transport Frame Assembly (must also select Aer8-002 or Aer8-003)
AER8-002	Electric/ Hydraulic Lift Assembly for Aer8-001 (Battery not included)
AER8-003	Hydraulic Hose Kit for Aer8-001

## SETUP

The Aerifier arrives from **Smithco** banded on a pallet.

1. Tow vehicle with 3-point hitch will be needed to transport the Aerifier.
2. If transport package is ordered the tongue hitch will need to be installed.
3. Remove tongue from pallet. Install the tongue and place jack in upright position.
4. Crank the jack up so you can hook to tow vehicle.
5. Check the tire pressure. 20 psi (1.4 bar).
6. Check hydraulic fluid level in tank on tow vehicle or the electric/hydraulic lift system if purchased.
7. Machine should be greased before starting. See Maintenance part of manual.
8. Read operating instructions before starting.
9. If using electrical /hydraulic lift system, battery must be installed. (Battery not included)

Use Automotive type 24F-12 Volt



### 3-POINT HITCH ATTACHMENT



**WARNING** Excessive weight in the ballast tank on the 3-point hitch models will result in the loss of tow vehicle stability and steering capability. If this occurs front counter balancing on the tow vehicle or Aer8-001 Transport Frame Assembly must be installed. Maximum ballast weight is 200 lbs. per ft. of machine width.

1. The Aer-8 must be able to "float". The tractor must be equipped with a "float" position on the lower link arms. The "float" position will allow the tines to "float" upwards when an obstruction such as a rock is contacted. This will reduce tine damage.
2. The Aer-8 must be held in an upright and level position by the jack legs prior to hitching to a tractor.
3. Back up the tractor until the lower arm ball joints are inside the frame lift brackets.
4. Install the proper class link pins and quick pins to hold both arms to the frame.
5. Attach the upper 3-point arm between the center tabs on the frame and hold in place with the proper class link pin and lynch pin.
6. Once attached to the 3-point, adjust the lower arms so there is no excessive sway.



**DANGER** Tines are sharp. Keep hands and feet away from reel.

7. Lift the Aer-8 hydraulically and then retract the jack legs.
8. Lower the Aer-8 hydraulically to the ground and adjust the upper 3-point arm until the Aer-8 column is perpendicular to the ground.
9. From the rear of the aerifier, add water to the ballast tank until the full depth of the tine penetration is reached. The amount of water used is determined by soil type, moisture content and amount of compaction present.





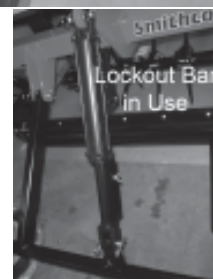
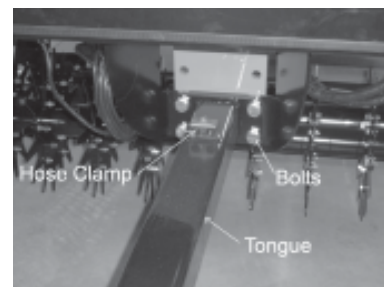
If the combined weight of the Aer-8 and full ballast exceeds the hydraulic lift capacity of the tow vehicles 3-point hitch, then an Aer8-001 Transport Frame Assembly must be installed.

#### TRANSPORT ASSEMBLY ATTACHMENT

#### NOTE:

If you purchased a Aer8-001 Transport frame Assembly with your base Aer-8 Aerator it will come installed with the exception of the tongue.

1. Use the supplied bolts to install the tongue to the frame. There are 6 holes to bolt the tongue to. Use 4 holes that best support your tow vehicle.
2. Install tongue with hose clamp on the top. Place swivel jack in the upright position to supply support to the tongue until you have hooked it up to your tow vehicle.
3. Check tire pressure of the tires (20 psi (1.4 bar)).
4. Hook the rear cylinder if not already done. There is a cylinder lockout attached to the rear pivot arm. This is a security guard used when the cylinder needs to be extended for a long period of time, such as maintenance. Placed over the cylinder rod when it is fully extended and pin in place. When not in use return to rear pivot arm.

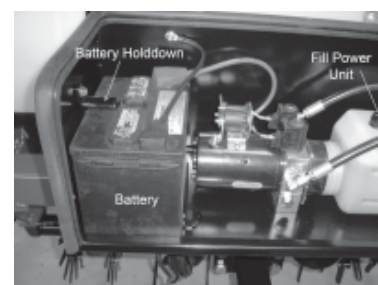


#### ELECTRIC/HYDRAULIC LIFT SYSTEM

#### NOTE:

If you purchased a Aer8-002 Electric/hydraulic Lift System with your base Aer-8 Aerator it will come installed. Battery not included.

1. Install an Automotive type 24F-12 Volt battery into the Motor Box and secure with the battery hold-down.
2. Fill the power unit with approximately 1.25 gallons (4,73 l) of Universal Trans-Draulic Oil.
3. Hydraulic fittings and hoses should be attached to the cylinder. If not, short hose to the top port and long hose goes to the bottom port.
4. Route the hoses through the trough below the ballast tank, secure in the hose clamps on the top of the tongue.



## SET UP

### HYDRAULIC HOSE KIT

**NOTE:** If you purchased a Aer8-003 Hose Kit with your base Aer-8 Aerator it will come un-installed. Quick Couplers from hose to tow vehicle are not included.

1. You will have to supply your own quick couplers to attach hydraulic hoses to your tow vehicle.
2. Hydraulic fittings and hoses should be attached to the cylinder. If not, connect one end of hoses to the cylinder.
3. Route the hoses through the trough below the ballast tank, secure in the hose clamp on the top of the tongue.
4. Connect opposite end to the tow vehicle with quick couplers (not provided).







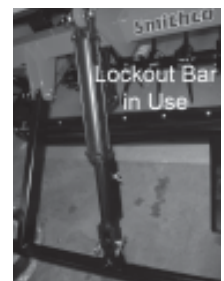
In excessive stony conditions reduce operating speed.

1. Attach Aer-8 to tow vehicle.
2. Fill ballast tank.
3. Check for any leaks before heading to turf.
4. Lower Aer-8 into the ground so tine penetrate the soil to desired depth.
5. Drive the tow vehicle at speeds that are safe.
6. **Do Not** make sharp turns with the tines in the ground. Lift Aer-8 out of the ground when making sharp turns.
7. Compacted areas may have to be aerated more than once.
8. When Aer-8 is not in use, remove jack pins, extend legs to maximum extension, replace jack pins.



## CYLINDER LOCKOUT BAR

There is a cylinder lockout attached to the rear pivot arm. This is a security guard used when the cylinder needs to be extended for a long period of time, such as for maintenance. Placed over the cylinder rod when it is fully extended and pin in place. When not in use return to rear pivot arm for storage.



## MAINTENANCE



Before servicing or making adjustments to machine, stop engine on tow vehicle and remove key from ignition. Securely prop Aer-8 on jack stands.

### NOTE:

Use all procedures and parts prescribed by the manufacturer.

Before operating this machine, become familiar with all controls and functions of this unit and the tow vehicle. Also complete all maintenance requirements and read all safety warnings. By knowing both machines thoroughly, how it operates and by doing the prescribed maintenance steps, you can expect relatively trouble-free operation for years to come.

#### TOW VEHICLE

You will need a heavy duty vehicle with 4 wheel brakes and 3-point hitch. 3-point is standard on Aer-8 Aerifier.

**Transport Frame Assembly** requires a clevis hitch and a  $\frac{3}{4}$  diameter by 4" pin with some type of lock. Tow vehicle must be capable of 825 lb tongue weight.

#### DAILY CHECKLIST

1. Check engine oil level in tow vehicle. Add as needed. **DO NOT OVERFILL.**
2. Check aerifier for loose or missing nuts, bolts, screws, etc., and tighten or replace as needed..
3. Check that all tines are in good condition.
4. Grease bearings daily after each use.

If transport frame assembly is installed:

5. Check hydraulic hoses for any leaks or loose connections.
6. Check tire pressure. 20 psi (1.4 bar)
7. Check electrical system for loose connections or frayed wiring, including battery cables. Replace any faulty equipment or tighten if loose.

#### OPERATION SAFETY

1. Before operation check to see that reel is rotating properly.
2. 3-point lift arms of tow vehicle must **not be** locked, but in floating position.
3. Always lift tines completely out of the soil before making sharp turns.
4. Do not aerate during extended periods of dry periods without irrigation.
5. When not in use, remove the jack pin and extend the legs to maximum extension, reinsert the jack pin and secure with a clip. Always use jack stands for safe storage.

#### LUBRICATION

Use No. 2 General Purpose Lithium Base Grease and lubricate **DAILY.** The Aerifier has 2 grease fittings, one on each pillow block on each side of the reel. When inserting grease, be careful not to ruin the seal, if this happens, replace the seal at once. Be sure to wipe grease fitting clean before injecting grease. Give only one or two pumps of grease at each lubrication.

## WHEEL MOUNTING PROCEDURE

1. Set park brake on tow vehicle. Turn machine off and remove key.
2. Block one of the other wheels.
3. Loosen nuts slightly on wheel to be removed.
4. Jack up machine being careful not to damage underside of machine.
5. Remove nuts, remove wheel.
5. Place new wheel on hub lining up bolt holes.
6. Torque nuts to 64-74 ft/lb (87-100Nm) using a cross pattern. Retorque after first 10 hours and every 200 hours thereafter.
7. Lower machine to ground and remove blocks and jack.

## TIRE PRESSURE

Caution must be used when inflating a low tire to recommended pressure. Over inflating can cause tires to explode. Tires on the machine should be 20 psi (1.4 bar). Improper inflation will reduce tire life considerably.

## SERVICE INTERVALS

### Before each Use:

Lubricate all bearings on reel. Use No. 2 General Purpose Lithium Base Grease.

Check tow vehicle fluid levels.

Check fluid level in power unit. Use Universal Trans-Draulic Oil.

### After Each Use:

Check all tines for any cracks or breakage..

Inspect hydraulic system for leaks or damage.

Check for loose or missing hardware.

### After 10 hours:

Check tines for wear.

Retorque tine bolts to 80ft lbs.

Lubricate all grease fittings

### After 50 hours:

Check wheel lug nuts torque to 64-74 ft/lb (87-100Nm).

Inspect tires - Check air pressure 20 psi

Retorque tine bolts to 80ft lbs.

### After 125 hours:

Lubricate wheel bearings.

### After 250 Hours:

Drain oil and fill power unit with approximately 1.25 gallons (4,73 l) Universal Trans-Draulic Oil.

Tire - Torque nuts to 64-74 ft/lb (87-100Nm) using a cross pattern.



## MAINTENANCE

### HILLSIDE OPERATION

Do NOT stop or start suddenly on any slope. Be especially cautious when changing direction. Do NOT operate on slopes greater than 20°.

### BATTERY

Batteries normally produce explosive gases which can cause personal injury. Do not allow flames, sparks or any ignited object to come near the battery. When charging or working near battery, always shield your eyes and always provide proper ventilation.

Battery cable should be disconnected before using "Fast Charge".

Charge battery at 15 amps for 10 minutes or 7 amps for 30 minutes. Do not exceed the recommended charging rate. If electrolyte starts boiling over, decrease charging.

Always remove grounded (-) battery clamp first and replace it last. Avoid hazards by:

1. Filling batteries in well-ventilated areas.
2. Wear eye protection and rubber gloves.
3. Avoid breathing fumes when electrolyte is added.
4. Avoid spilling or dripping electrolyte.

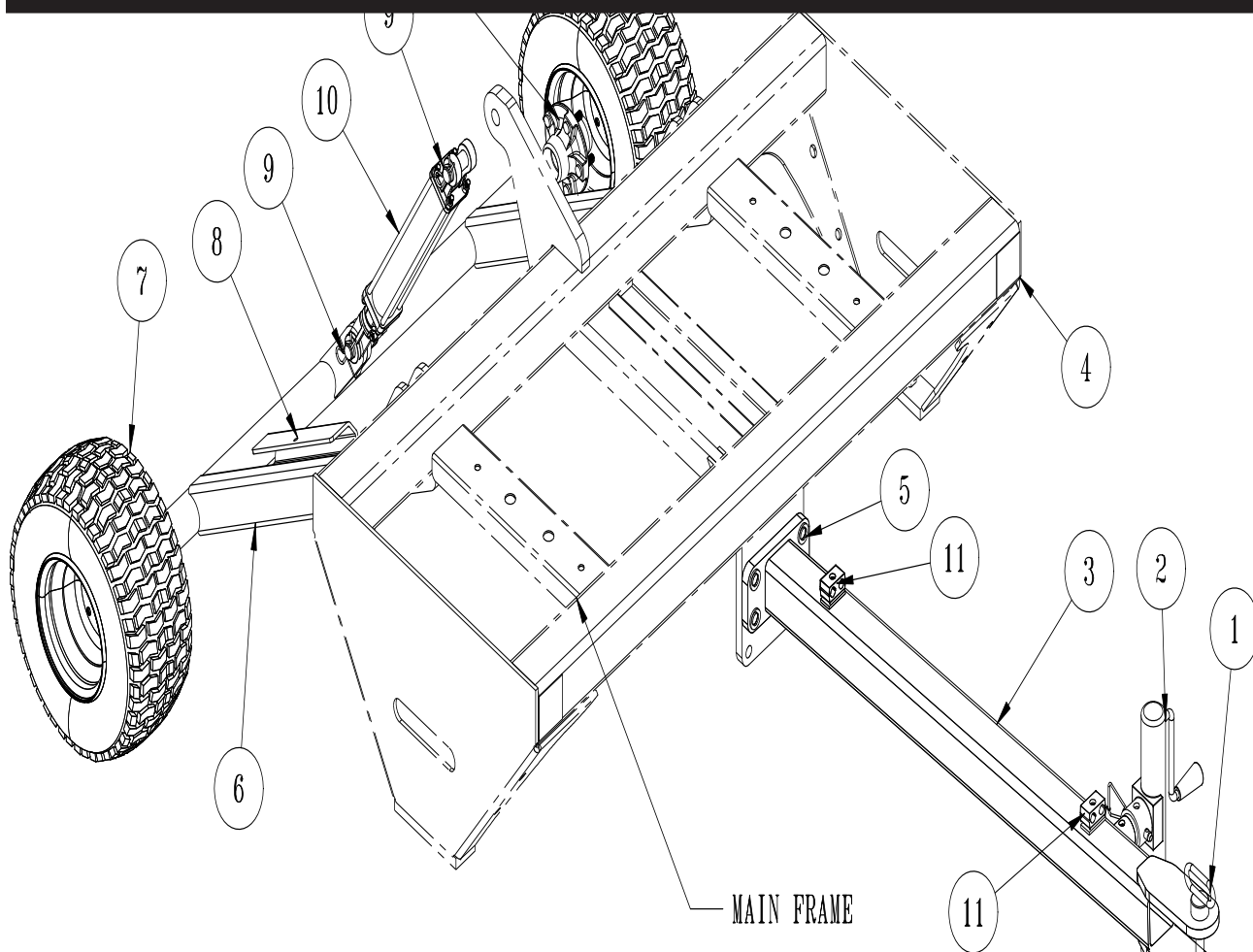


**WARNING**

**Battery Electrolyte is an acidic solution and should be handled with care. If electrolyte is splashed on any part of your body, flush all contact areas immediately with liberal amounts of water. Get medical attention immediately.**

1. Before storing clean machine thoroughly.
2. Check bolts and nuts, tighten as necessary.
3. Make all repairs that are needed and remove any debris.
4. Store in a clean and dry area.
5. Make sure reel is on level ground.
6. Lower all 4 jack stands if Transport Assembly is not installed. Secure pins.
7. If transport Assembly is installed lower front jack stands and the trailer hitch on the tongue. Secure pins.
8. If roller is installed, it will act as the rear jacks. Lower roller to the lowest position then lower front jacks. Secure pins.
8. Only after Aer-8 is securely placed on a level surface should you remove from the tow vehicle.

## AER8-001 HYDRAULIC TRANSPORT FRAME

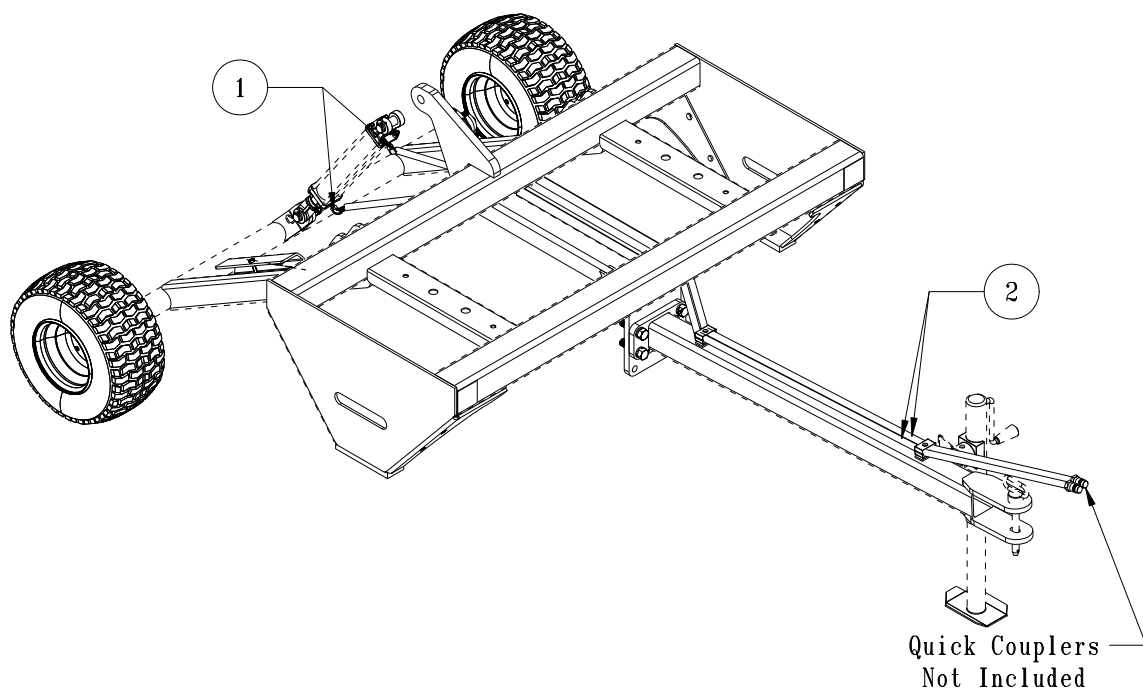


## AER8-001 HYDRAULIC TRANSPORT FRAME

REF#	PART#	DESCRIPTION	QUANTITY
1	74-257	Hitch Pin	1
2	78-240	Trailer Jack	1
3	74-241	Tongue	1
4	74-156	Decal, reflector	4
5	HB-34-10-300	Bolt 3/4 -10 x 3	4
	HMB-34-10	Machine Bushing 3/4 x 10GA	4
	HNTL-34-10	Lock Nut 3/4-10	4
6	74-244	Axle	1
7	60-130	Tire and Wheel	2
	60-130-01	Tire, 18 x 9.5 x 8	2
	60-130-02	Wheel	2
8	74-254	Cylinder Stop	1
	HB-38-16-275	Bolt 3/8 -16 x 2-3/4	1
	HNW-38-16	Wing nut 3/8-16	1
9	HCP-100-400	Clevis pin 1 x 4	2
	HP-316-200	Cotter pin 3/16 x 2	2
10	78-225	Hydraulic Cylinder	1
	18-168	3/8 Straight Thread Elbow	2
11	13-652	Hose Clamp (part of tongue)	2

Must use AER8-002 Electric/Hydraulic Lift or AER8-003 Hydraulic Hose kit

*AER8-003 HYDRAULIC HOSE KIT*

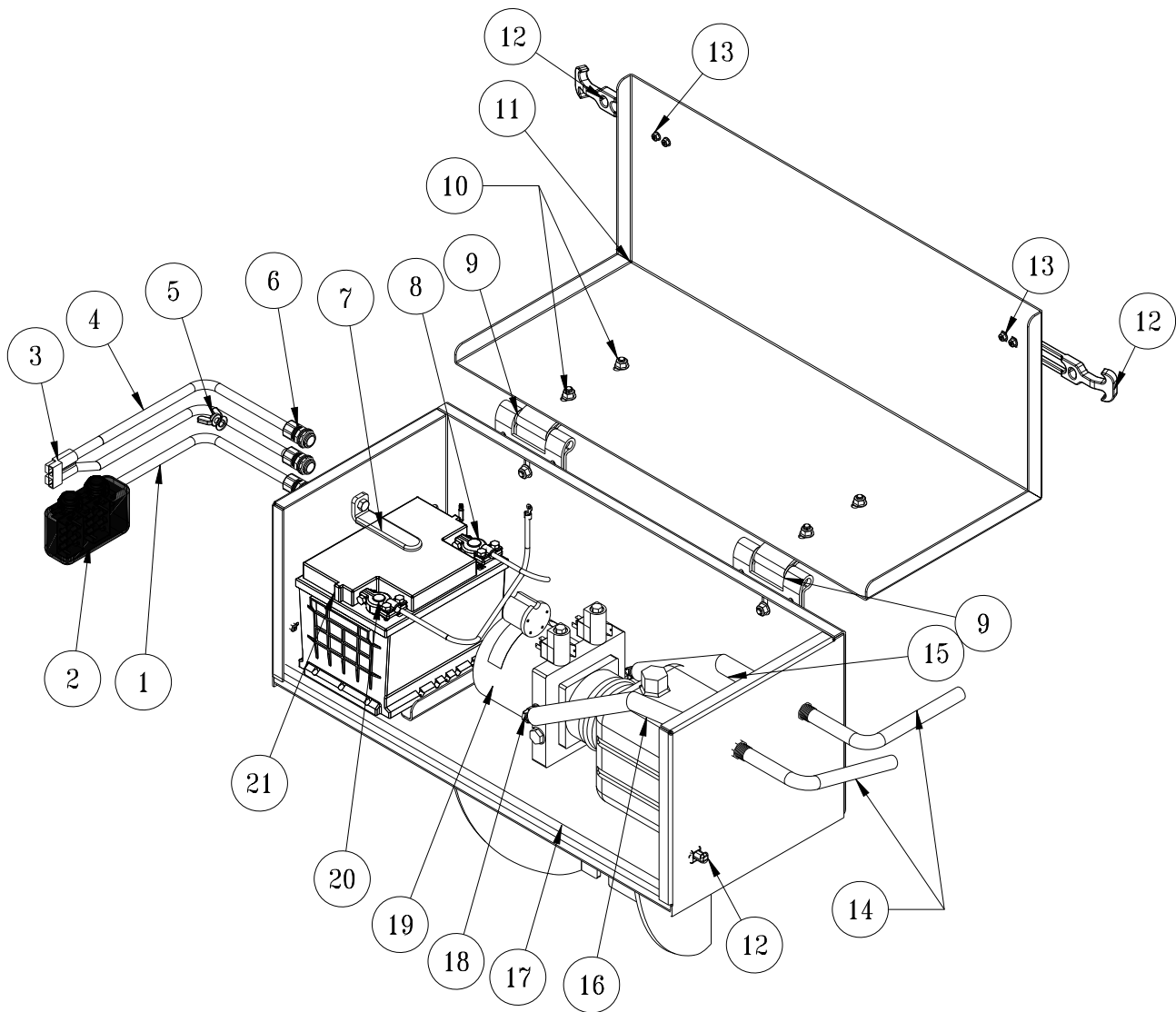


*AER8-003 HYDRAULIC HOSE KIT*

REF#	PART#	DESCRIPTION	QUANTITY
1	18-168	$\frac{3}{8}$ Straight Thread Elbow (come with AER8-001)	2
2	74-246	Hydraulic Hose - 22'	2

**Quick Couplers are not included.  
AER-001 Hydraulic Transport Kit Required.**

# AER8-002 ELECTRIC/HYDRAULIC LIFT SYSTEM

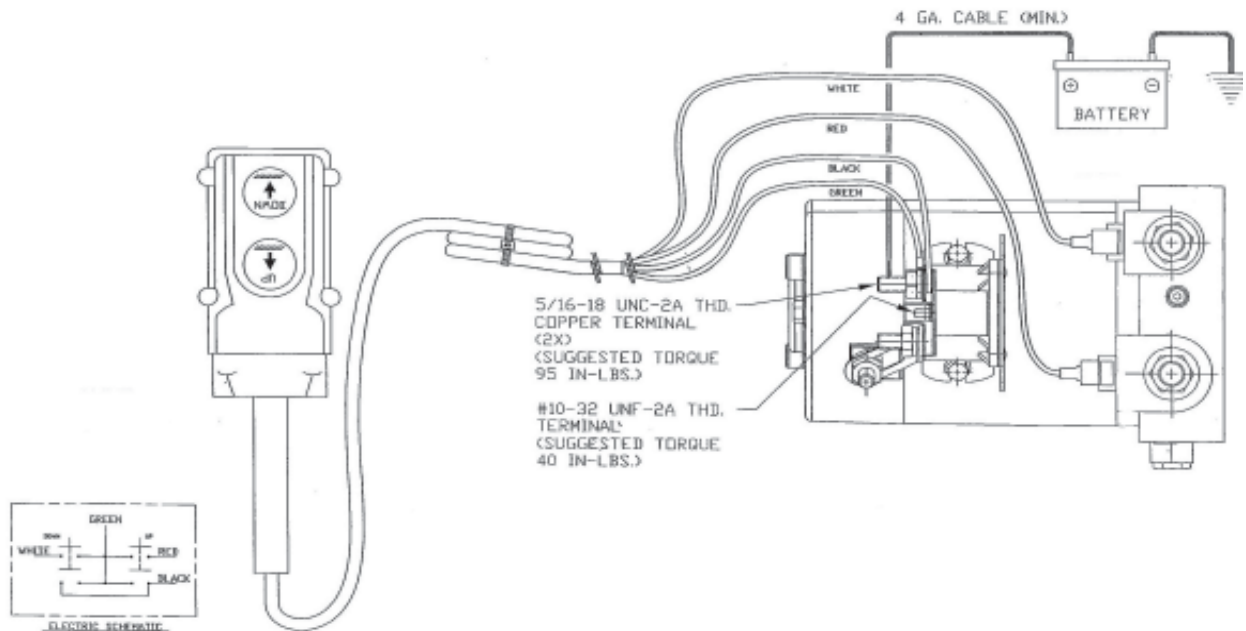


Parts

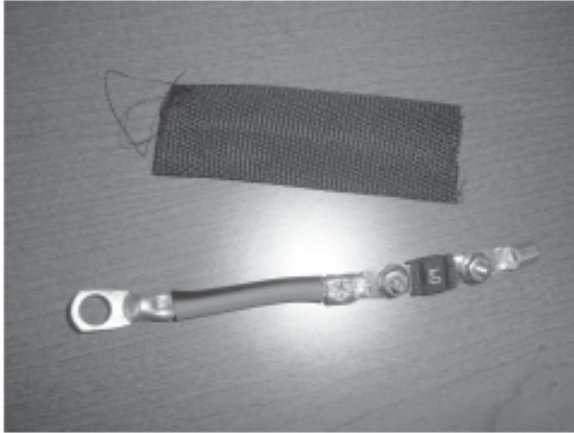


# AER8-002 ELECTRIC/HYDRAULIC LIFT SYSTEM

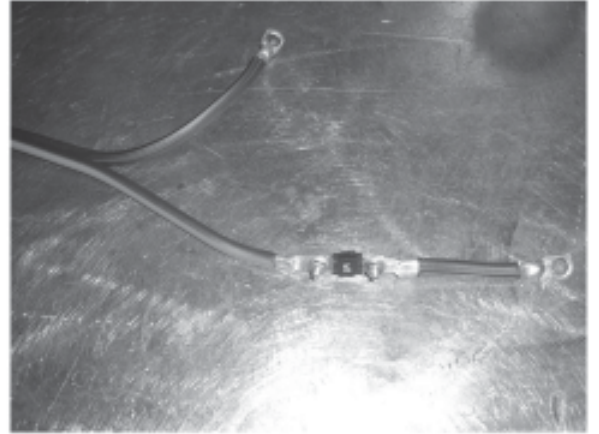
REF#	PART#	DESCRIPTION	QUANTITY
1	74-274	15' Parallel Cable System	1
2	18-446-01	Remote Switch	1
3	74-271	Multi-Pole Power Connector	1
4	74-275	8' Parallel Cable System	1
5	HNW-38-16	Wing Nut $\frac{3}{8}$ - 16	1
	HW-38	Washer $\frac{3}{8}$	1
	HWL-38	Lock Washer $\frac{3}{8}$	1
6	18-445	Cord Connectors	1
7	74-234	Battery Hold Down	1
	15-020	Grip	1
	HB-38-16-100	Bolt $\frac{3}{8}$ - 16 x 1	1
8	22-055	Battery Cable Red	1
9	74-231	Hinge	2
10	HB-516-18-075	Bolt $\frac{5}{16}$ - 18 x $\frac{3}{4}$	6
	HNFL-516-18	Flange Lock Nut $\frac{5}{16}$ - 18	6
11	74-248	Motor Box Cover	1
	8947-31	Trim Seal 31"	2
	25-277	Decal, Warning	1
	25-373	Decal, 7" Smithco Star	1
12	15-437	Latch	2
13	HSM-10-32-112	Machine Screw #10-32 x $1\frac{1}{8}$	6
	HNFL-10-32	Flange Lock Nut # 10 - 32	6
14	74-232	Hose - 72"	2
15	74-230	Hose - 17"	1
16	74-229	Hose - 16"	1
	8947-74	Trim Seal 74"	1
17	74-233	Motor Box	1
18	18-168	$\frac{3}{8}$ Straight Thread Elbow	2
19	18-446	Power Unit	1
20	76-327	Battery Cable - Black	1
21	Not Included	Battery - Automotive type 24F-12 Volt	1



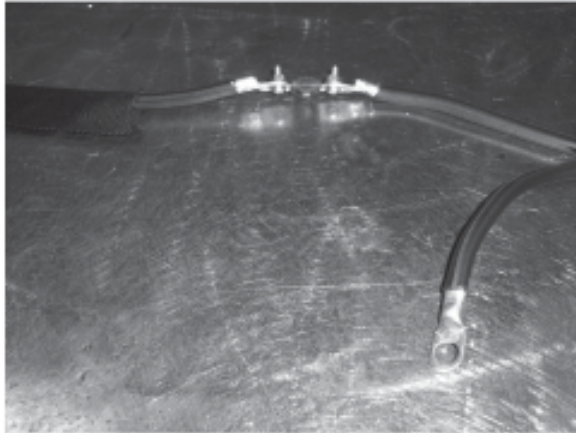
## AER 8 Charging Harness



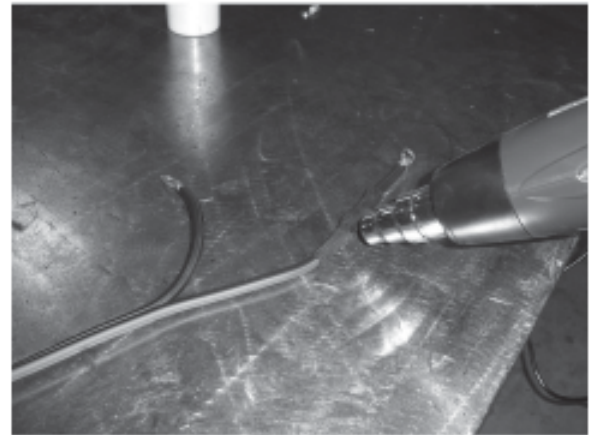
Use a 3" piece of red/black power wire. Add 2 standard eyelets to each end. Place a MIDI High AMP Fuse 60A on one end, then add another eyelet.



Hook the "open" eyelet onto the red/ black part of the 8' Parallel cable. Add another eyelet to the black part of the Parallel cable.



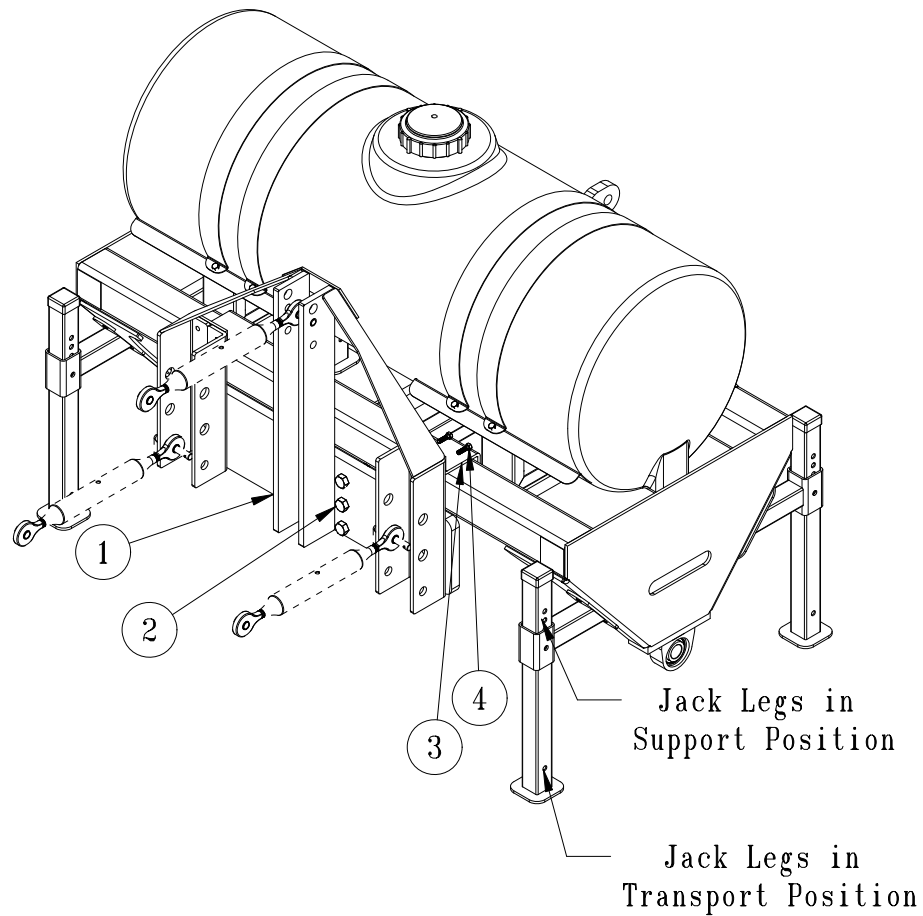
Slide a 5" piece of heat shrink over the fuse connection.



Using a heat gun, heat the heat shrink on.

1. Route charging wire from hitch to battery. Leave enough wire at the hitch so it won't pull while turning.
2. Zip tie wire out of the way of moving parts, pinch points and hot areas.
3. Cut cable to length and crimp ring terminal to black wire and fuse link assembly to red/black wire.
4. Cover with heat shrink.
5. Connect black wire to Negative (-) battery terminal and red/black wire to positive (+) battery terminal.

## 3-POINT HITCH DRAWING

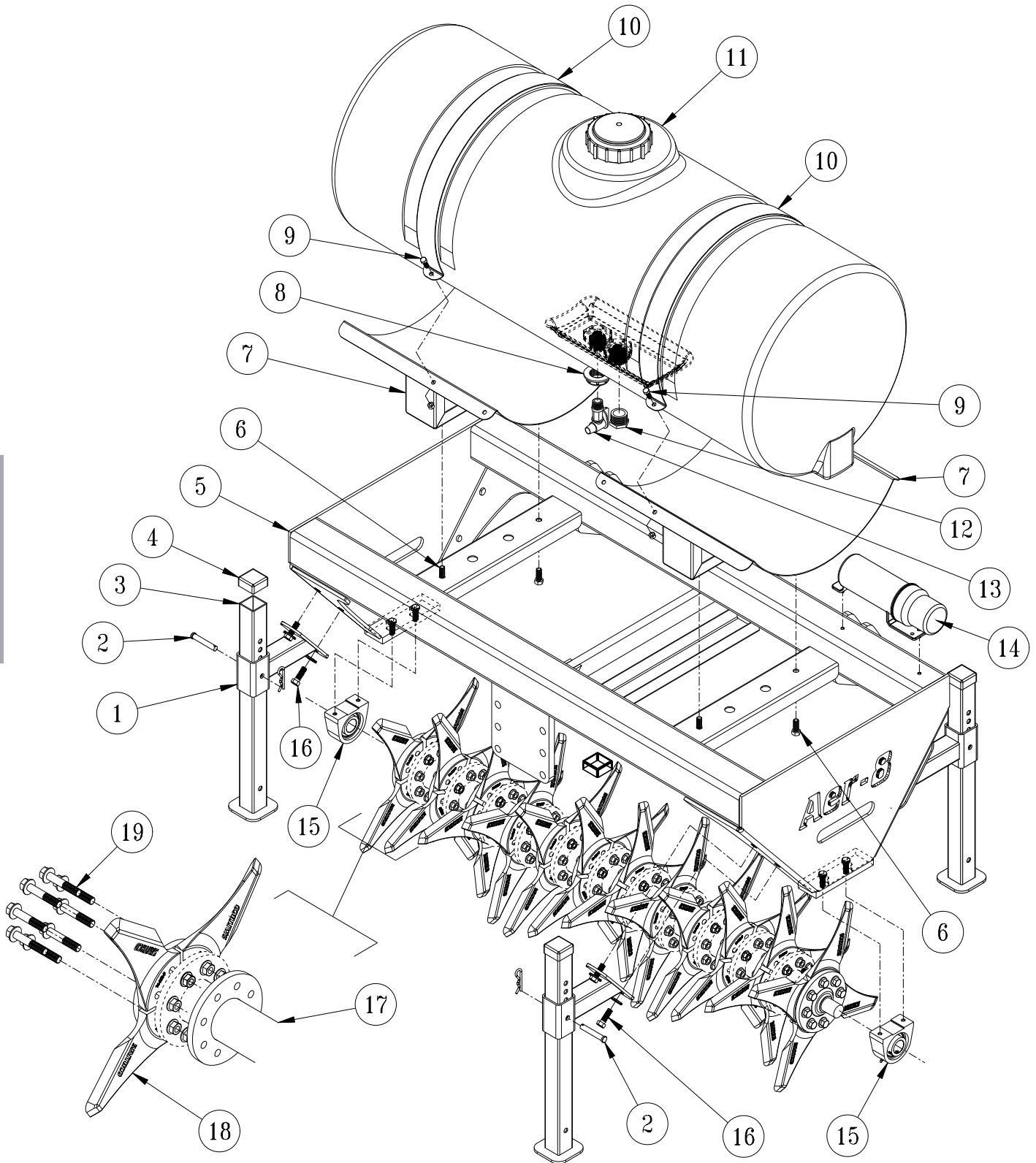


Parts

## 3-POINT HITCH PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-279	3-Point Hitch Frame	1
2	HB-34-10-300	Bolt $\frac{3}{4}$ - 10 x 3	6
	HMB-34-10	Machine Bushing $\frac{3}{4}$ x 10GA	6
	HNTL-34-10	Lock Nut $\frac{3}{4}$ - 10	6
3	74-282	Mount Brackets	2
4	HB-38-16-125	Bolt $\frac{3}{8}$ - 16 x $1\frac{1}{4}$	4
	HNTL-38-16	Lock Nut $\frac{3}{8}$ - 16	4

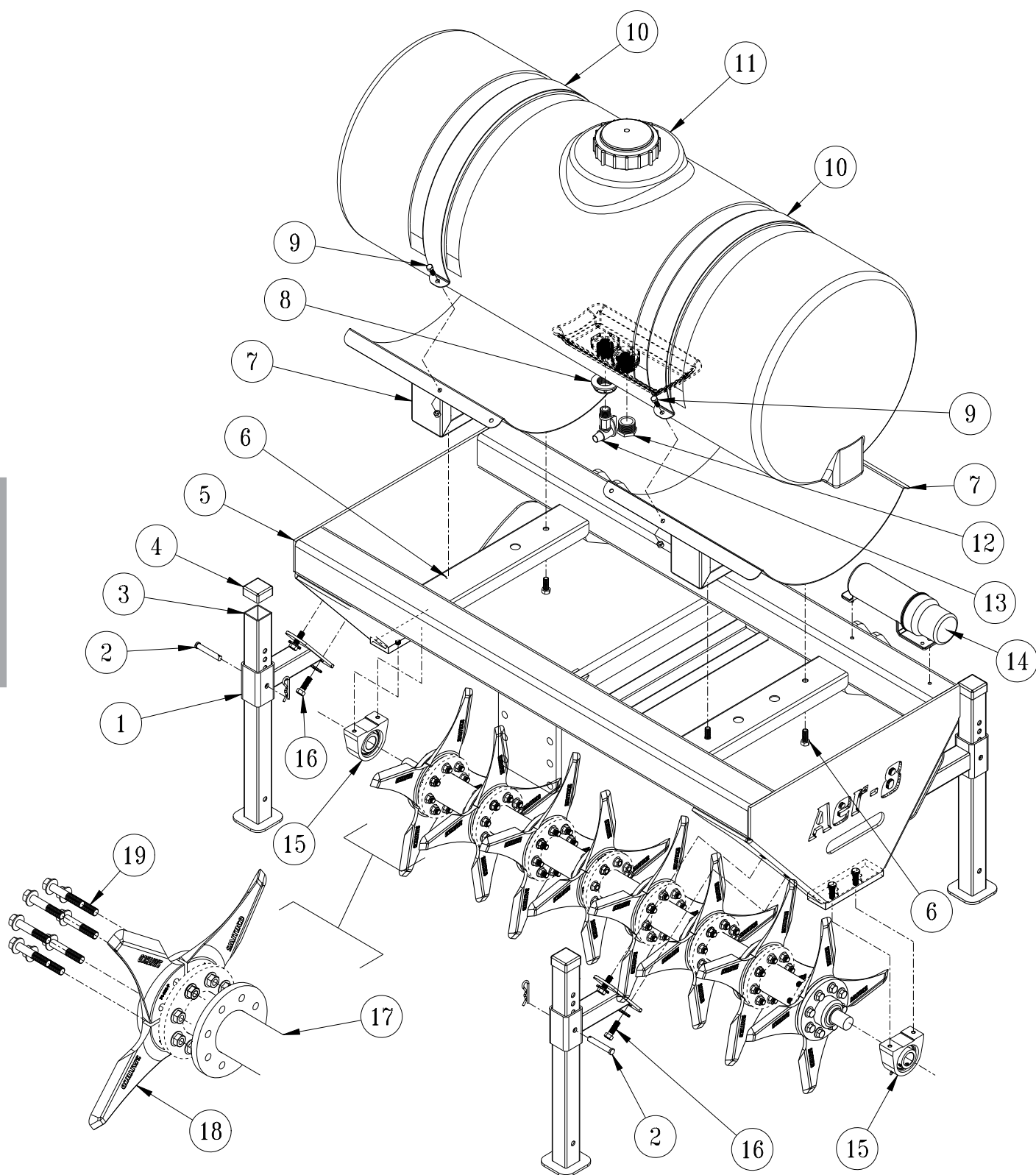
# AER-8 "TURFQUAKE" 5" SPACING DRAWING



## AER-8 "TURF QUAKE" 5" SPACING PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-228	Kick Stand Mount	4
2	HCP-12-300	Clevis Pin, $\frac{1}{2} \times 3$	4
	HHP-177	Bridge Pin, $.177 \times 3\frac{3}{4}$	4
3	74-227	Kickstand Leg	4
4	16-557	Square Cap	4
5	74-245	Mainframe, 60"	1
	74-280	Mainframe, 78"	1
	74-157	Decal, Aer-8	2
6	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	4
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	4
7	74-243	Tank Carrier	2
8	16-150	Double Thread Fitting	1
9	HB-38-16-275	Hex Bolt, $\frac{3}{8} - 13 \times 2\frac{1}{4}$	4
	HNTL-38-16	Lock Nut, $\frac{3}{8} - 16$	4
10	74-242	Tank Strap	2
11	74-211	100 Gal. Tank	1
12	10-389	Plug, $1\frac{1}{4}$	1
13	16-960	Spigot	1
14	74-213	Bearing	2
	HB-12-13-175	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{3}{4}$	4
	HW-12	Flat Washer, $\frac{1}{2}$	4
	HWL-12	Lock Washer, $\frac{1}{2}$	4
15	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	8
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	8
<b>60" AER8-601</b>			
16*	74-277	60" Knife Reel, 5" Spacing	1
17*	74-259	"Turf Quake" Fracture Tine	48
18*	74-266	UNF Flange Bolt	96
	74-267	UNF Flange Nut	96
*	AER8-60R601	60" Turf Quake 5" Reel Assembly	
<b>78" AER8-781</b>			
16**	74-288	78" Knife Reel, 5" Spacing	1
17**	74-259	"Turf Quake" Fracture Tine	60
18**	74-266	UNF Flange Bolt	120
	74-267	UNF Flange Nut	120
**	AER8-78R781	78" Turf Quake 5" Reel Assembly	

# AER-8 "TURFQUAKE" 7½" SPACING DRAWING

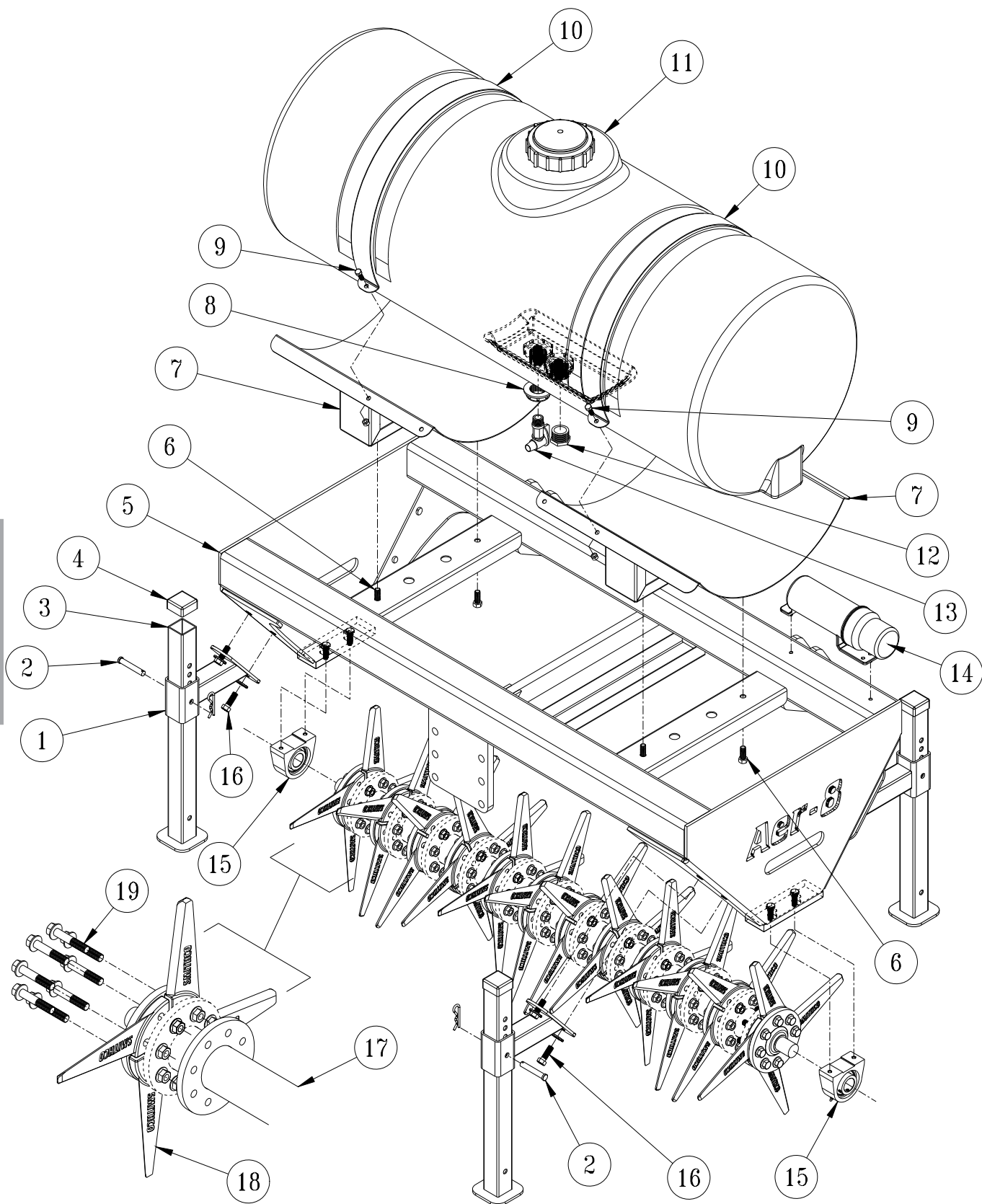




## AER-8 "TURF QUAKE" 7½" SPACING PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-228	Kickstand Mount	4
2	HCP-12-300	Clevis Pin, ½ x 3	4
	HHP-177	Bridge Pin, .177 x 3¾	4
3	74-227	Kickstand Leg	4
4	16-557	Square Cap	4
5	74-245	Mainframe, 60"	1
	74-280	Mainframe, 78"	1
	74-157	Decal, Aer-8	2
6	HB-12-13-125	Hex Bolt, ½ - 13 x 1¼	4
	HNFL-12-13	Flange Lock Nut, ½ - 13	4
7	74-243	Tank Carrier	2
8	16-150	Double Thread Fitting	1
9	HB-38-16-275	Hex Bolt, ¾ - 13 x 2¼	4
	HNTL-38-16	Lock Nut, ¾ - 16	4
10	74-242	Tank Strap	2
11	74-211	100 Gal. Tank	1
12	10-389	Plug, 1¼	1
13	16-960	Spigot	1
14	74-213	Bearing	2
	HB-12-13-175	Hex Bolt, ½ - 13 x 1¾	4
	HW-12	Flat Washer, ½	4
	HWL-12	Lock Washer, ½	4
15	HB-12-13-125	Hex Bolt, ½ - 13 x 1¼	8
	HNFL-12-13	Flange Lock Nut, ½ - 13	8
<b>60" AER8-602</b>			
16*	74-263	60" Knife Reel, 7½" Spacing	1
17*	74-259	"Turf Quake" Fracture Tine	32
18*	74-266	UNF Flange Bolt	64
	74-267	UNF Flange Nut	64
*	AER8-60R602	60" Turf Quake 7.5" Reel Assembly	
<b>78" AER8-782</b>			
16**	74-289	78" Knife Reel, 7½" Spacing	1
17**	74-259	"Turf Quake" Fracture Tine	40
18**	74-266	UNF Flange Bolt	80
	74-267	UNF Flange Nut	80
**	AER8-78R782	78" Turf Quake 7.5" Reel Assembly	

# AER-8 "ALL STAR" 5" SPACING DRAWING



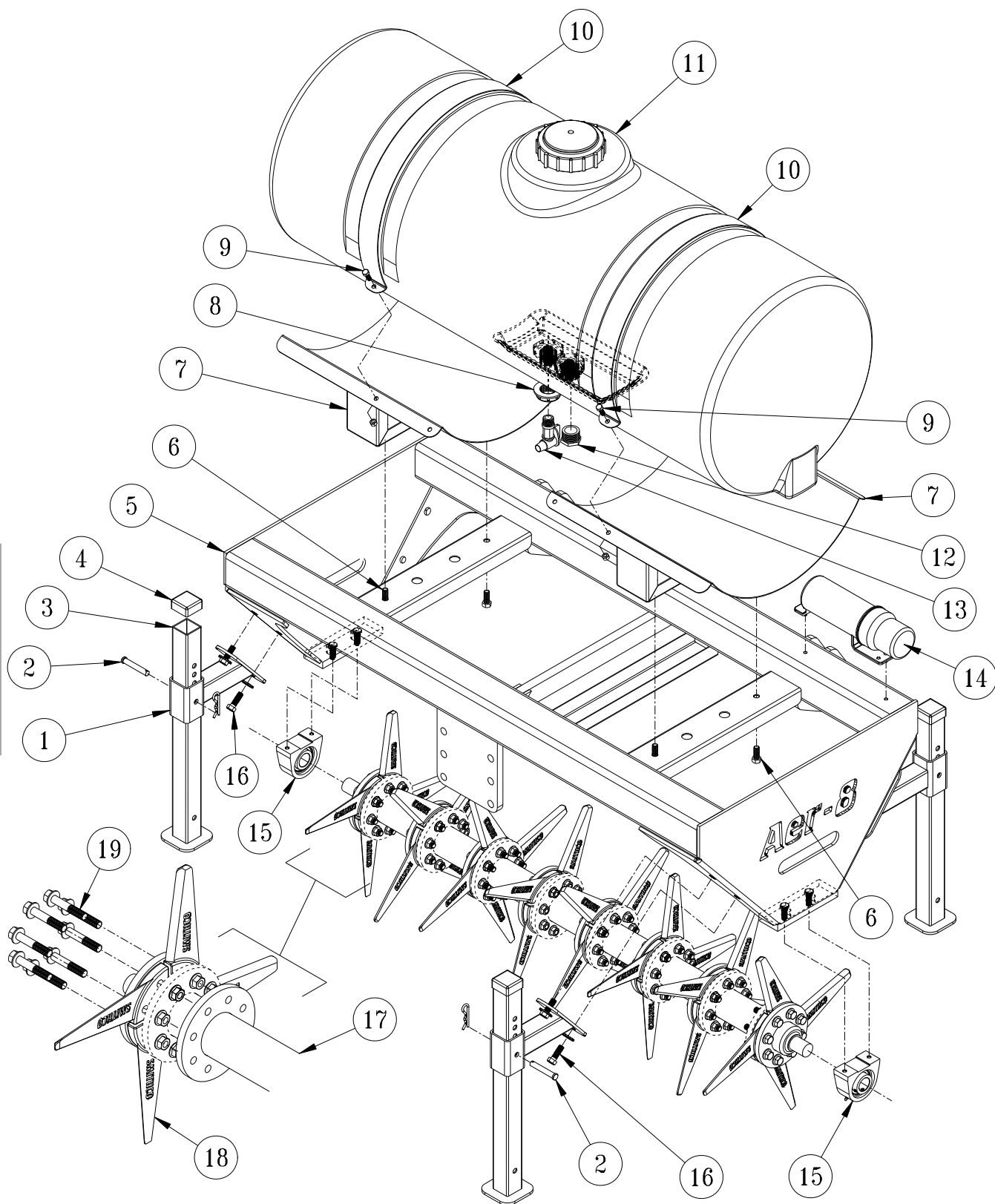


## AER-8 "ALL STAR" 5" SPACING PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-228	Kickstand Mount	4
2	HCP-12-300	Clevis Pin, $\frac{1}{2} \times 3$	4
	HHP-177	Bridge Pin, $.177 \times 3\frac{3}{4}$	4
3	74-227	Kickstand Leg	4
4	16-557	Square Cap	4
5	74-245	Mainframe, 60"	1
	74-280	Mainframe, 78"	1
	74-157	Decal, Aer-8	2
6	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	4
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	4
7	74-243	Tank Carrier	2
8	16-150	Double Thread Fitting	1
9	HB-38-16-275	Hex Bolt, $\frac{3}{8} - 13 \times 2\frac{1}{4}$	4
	HNTL-38-16	Lock Nut, $\frac{3}{8} - 16$	4
10	74-242	Tank Strap	2
11	74-211	100 Gal. Tank	1
12	10-389	Plug, $1\frac{1}{4}$	1
13	16-960	Spigot	1
14	74-213	Bearing	2
	HB-12-13-175	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{3}{4}$	4
	HW-12	Flat Washer, $\frac{1}{2}$	4
	HWL-12	Lock Washer, $\frac{1}{2}$	4
15	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	8
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	8
<b>60" AER8-603</b>			
16*	74-277	60" Knife Reel, 5" Spacing	1
17*	74-258	"All Star" Sport Tine	48
18*	74-266	UNF Flange Bolt	96
	74-267	UNF Flange Nut	96
*	AER8-60R603	60" All Star 5" Reel Assembly	
<b>78" AER8-783</b>			
16**	74-288	78" Knife Reel, 5" Spacing	1
17**	74-258	"All Star" Sport Tine	60
18**	74-266	UNF Flange Bolt	120
	74-267	UNF Flange Nut	120
**	AER8-78R783	78" All Star 5" Reel Assembly	

# AER-8 "ALL STAR" 7½" SPACING DRAWING

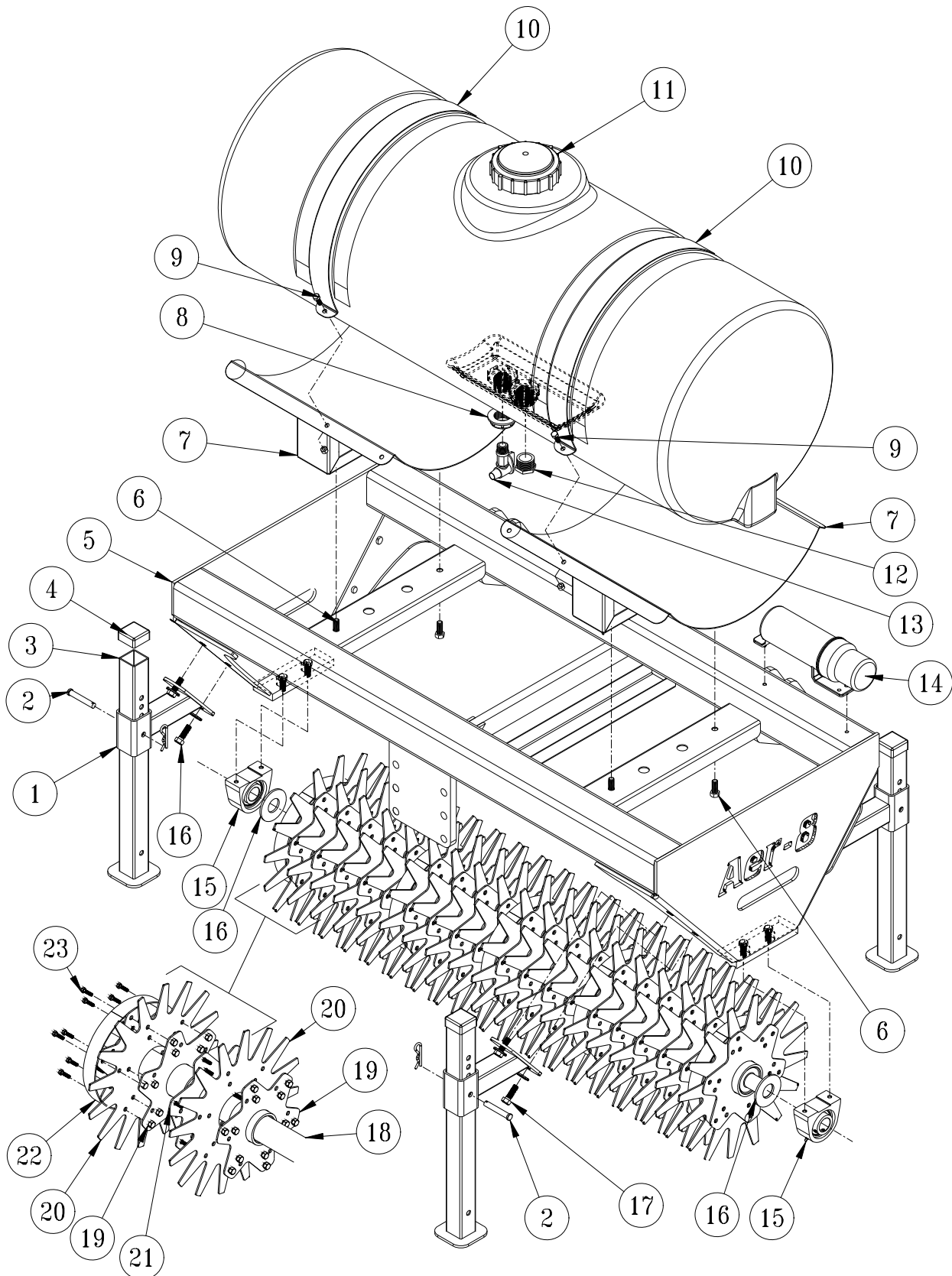
Parts



## AER-8 "ALL STAR" 7½" SPACING PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-228	Kickstand Mount	4
2	HCP-12-300	Clevis Pin, ½ x 3	4
	HHP-177	Bridge Pin, .177 x 3¾	4
3	74-227	Kickstand Leg	4
4	16-557	Square Cap	4
5	74-245	Mainframe, 60"	1
	74-280	Mainframe, 78"	1
	74-157	Decal, Aer-8	2
6	HB-12-13-125	Hex Bolt, ½ - 13 x 1¼	4
	HNFL-12-13	Flange Lock Nut, ½ - 13	4
7	74-243	Tank Carrier	2
8	16-150	Double Thread Fitting	1
9	HB-38-16-275	Hex Bolt, ¾ - 13 x 2¼	4
	HNTL-38-16	Lock Nut, ¾ - 16	4
10	74-242	Tank Strap	2
11	74-211	100 Gal. Tank	1
12	10-389	Plug, 1¼	1
13	16-960	Spigot	1
14	74-213	Bearing	2
	HB-12-13-175	Hex Bolt, ½ - 13 x 1¾	4
	HW-12	Flat Washer, ½	4
	HWL-12	Lock Washer, ½	4
15	HB-12-13-125	Hex Bolt, ½ - 13 x 1¼	8
	HNFL-12-13	Flange Lock Nut, ½ - 13	8
<b>60" AER8-604</b>			
16*	74-263	60" Knife Reel, 5" Spacing	1
17*	74-258	"All Star" Sport Tine	32
18*	74-266	UNF Flange Bolt	64
	74-267	UNF Flange Nut	64
*	AER8-60R604	60" All Star 7.5" Reel Assembly	
<b>78" AER8-784</b>			
16**	74-289	78" Knife Reel, 5" Spacing	1
17**	74-258	"All Star" Sport Tine	40
18**	74-266	UNF Flange Bolt	80
	74-267	UNF Flange Nut	80
**	AER8-78R784	78" All Star 7.5" Reel Assembly	

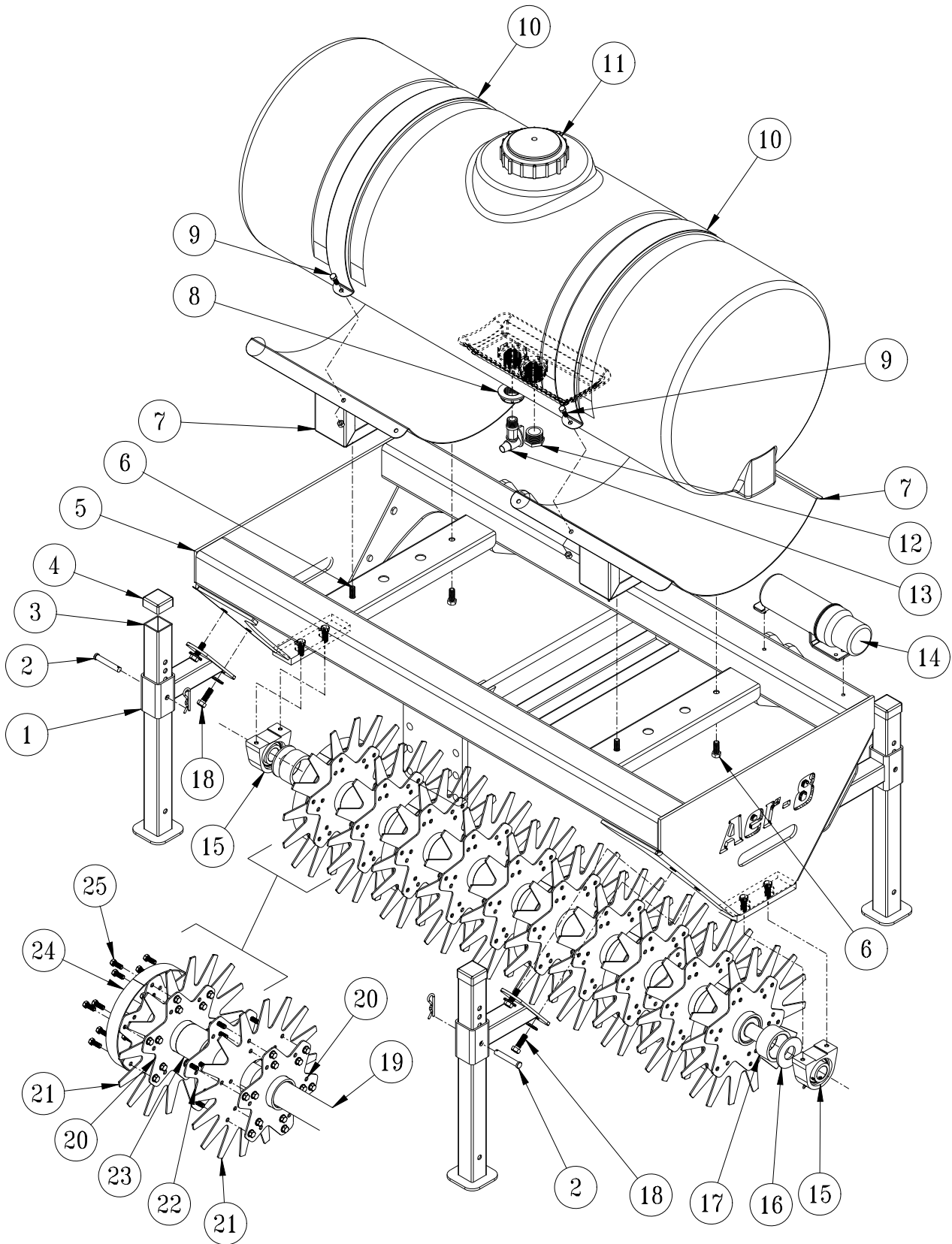
# AER-8 "AERFINE" 3" SPACING DRAWING



## AER-8 "AERFINE" 3" SPACING PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-228	Kickstand Mount	4
2	HCP-12-300	Clevis Pin, $\frac{1}{2} \times 3$	4
	HHP-177	Bridge Pin, $.177 \times 3\frac{3}{4}$	4
3	74-227	Kickstand Leg	4
4	16-557	Square Cap	4
5	74-245	Mainframe, 60"	1
	74-280	Mainframe, 78"	1
	74-157	Decal, Aer-8	2
6	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	4
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	4
7	74-243	Tank Carrier	2
8	16-150	Double Thread Fitting	1
9	HB-38-16-275	Hex Bolt, $\frac{3}{8} - 16 \times 2\frac{1}{4}$	4
	HNTL-38-16	Lock Nut, $\frac{3}{8} - 16$	4
10	74-242	Tank Strap	2
11	74-211	100 Gal. Tank	1
12	10-389	Plug, $1\frac{1}{4}$	1
13	16-960	Spigot	1
14	74-213	Bearing	2
	HB-12-13-175	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{3}{4}$	4
	HW-12	Flat Washer, $\frac{1}{2}$	4
	HWL-12	Lock Washer, $\frac{1}{2}$	4
15	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	8
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	8
22	74-215	Shaft Flange	2
<b>60" AER8-605</b>			
16*	74-239	60" Core/Fine Shaft	1
17*	74-251	Core Tine Wheel	19
18*	74-265	"Aerfine" Ultra-Fine Blade	19
19*	74-264	Plate	14
20*	74-269	Depth Spacer	5
21*	HB-38-16-100	Bolt, $\frac{3}{8} - 16 \times 1$	228
	HNFL-38-16	Flange Lock Nut, $\frac{3}{8} - 16$	228
*	AER8-60R605	60" Aerfine 3" Reel Assembly	
<b>78" AER8-785</b>			
16**	74-262	78" Core/Fine Shaft	1
17**	74-251	Core Tine Wheel	25
18**	74-265	"Aerfine" Ultra-Fine Blade	25
19**	74-264	Plate	19
20**	74-269	Depth Spacer	6
21**	HB-38-16-100	Bolt, $\frac{3}{8} - 16 \times 1$	300
	HNFL-38-16	Flange Lock Nut, $\frac{3}{8} - 16$	300
**	AER8-78R785	78" Aerfine 3" Reel Assembly	

# AER-8 "AERFINE" 5" SPACING DRAWING

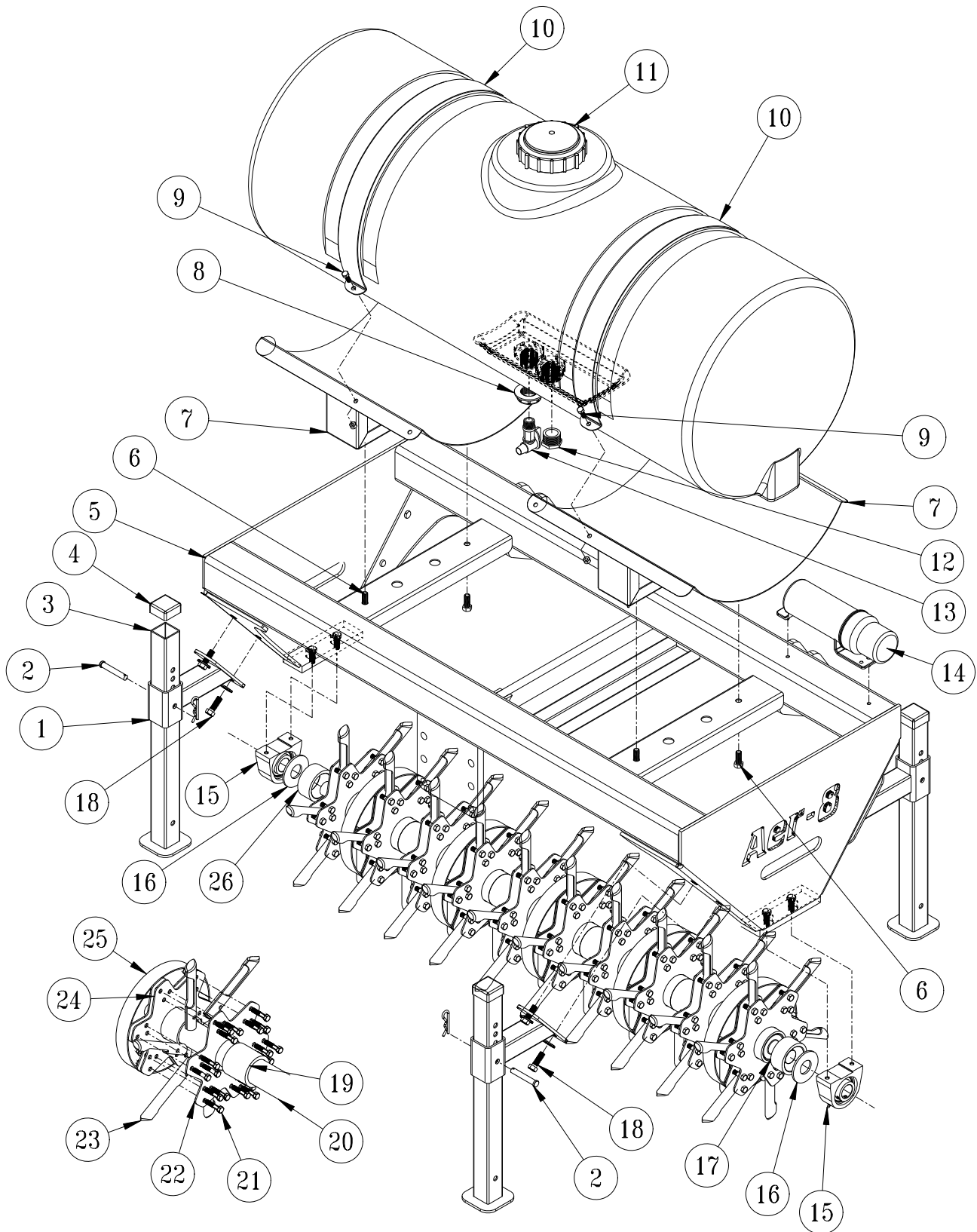


## AER-8 "AERFINE" 5" SPACING PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-228	Kickstand Mount	4
2	HCP-12-300	Clevis Pin, $\frac{1}{2} \times 3$	4
	HHP-177	Bridge Pin, $.177 \times 3\frac{3}{4}$	4
3	74-227	Kickstand Leg	4
4	16-557	Square Cap	4
5	74-245	Mainframe, 60"	1
	74-280	Mainframe, 78"	1
	74-157	Decal, Aer-8	2
6	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	4
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	4
7	74-243	Tank Carrier	2
8	16-150	Double Thread Fitting	1
9	HB-38-16-275	Hex Bolt, $\frac{3}{8} - 16 \times 2\frac{1}{4}$	4
	HNTL-38-16	Lock Nut, $\frac{3}{8} - 16$	4
10	74-242	Tank Strap	2
11	74-211	100 Gal. Tank	1
12	10-389	Plug, $1\frac{1}{4}$	1
13	16-960	Spigot	1
14	74-213	Bearing	2
	HB-12-13-175	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{3}{4}$	4
	HW-12	Flat Washer, $\frac{1}{2}$	4
	HWL-12	Lock Washer, $\frac{1}{2}$	4
15	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	8
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	8
<b>60" AER8-606</b>			
16*	74-239	60" Core/Fine Shaft	1
17*	74-251	Core Tine Wheel	10
18*	74-265	"Aerfine" Ultra-Fine Blade	10
19*	74-264	Plate	5
20*	74-240	Spacer Tube	9
21*	74-269	Depth Spacer	5
22*	HB-38-16-100	Bolt, $\frac{3}{8} - 16 \times 1$	120
	HNFL-38-16	Flange Lock Nut, $\frac{3}{8} - 16$	120
23	74-215	Shaft Flange	2
24	74-281	$1\frac{1}{2}$ " Spacer	2
*	AER8-60R606	60" Aerfine 5" Reel Assembly	
<b>78" AER8-786</b>			
16**	74-262	78" Core/Fine Shaft	1
17**	74-251	Core Tine Wheel	15
18**	74-265	"Aerfine" Ultra-Fine Blade	15
19**	74-264	Plate	9
20**	74-240	Spacer Tube	14
21**	74-269	Depth Spacer	6
22**	HB-38-16-100	Bolt, $\frac{3}{8} - 16 \times 1$	270
	HNFL-38-16	Flange Lock Nut, $\frac{3}{8} - 16$	270
23	74-215	Shaft Flange	2
24	74-283	$\frac{1}{2}$ " Spacer	2
**	AER8-78R786	78" Aerfine 5" Reel Assembly	



# AER-8 CORING TINES DRAWING

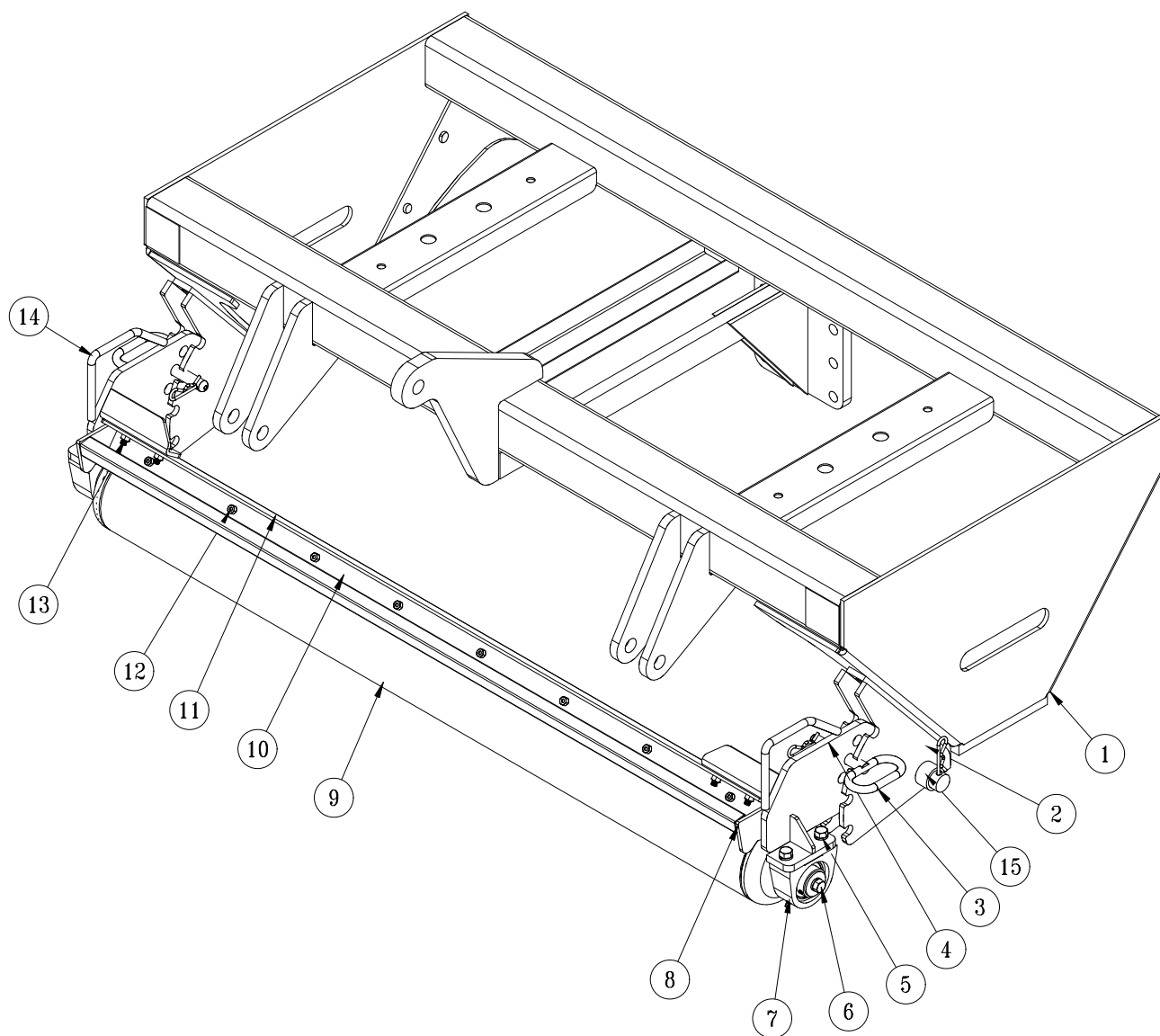




# AER-8 CORING TINES PARTSLIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-228	Kickstand Mount	4
2	HCP-12-300	Clevis Pin, $\frac{1}{2} \times 3$	4
	HHP-177	Bridge Pin, $.177 \times 3\frac{3}{4}$	4
3	74-227	Kickstand Leg	4
4	16-557	Square Cap	4
5	74-245	Mainframe, 60"	1
	74-280	Mainframe, 78"	1
	74-157	Decal, Aer-8	2
6	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	4
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	4
7	74-243	Tank Carrier	2
8	16-150	Double Thread Fitting	1
9	HB-38-16-275	Hex Bolt, $\frac{3}{8} - 16 \times 2\frac{1}{4}$	4
	HNTL-38-16	Lock Nut, $\frac{3}{8} - 16$	4
10	74-242	Tank Strap	2
11	74-211	100 Gal. Tank	1
12	10-389	Plug, $1\frac{1}{4}$	1
13	16-960	Spigot	1
14	74-213	Bearing	2
	HB-12-13-175	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{3}{4}$	4
	HW-12	Flat Washer, $\frac{1}{2}$	4
	HWL-12	Lock Washer, $\frac{1}{2}$	4
15	74-215	Shaft Flange	2
16	HB-12-13-125	Hex Bolt, $\frac{1}{2} - 13 \times 1\frac{1}{4}$	8
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2} - 13$	8
<b>60" AER8-607</b>			
17*	74-239	60" Core/Fine Shaft	1
18*	74-240	Spacer Tube	9
19*	HB-38-16-175	Bolt, $\frac{3}{8} - 16 \times 1\frac{3}{4}$	180
	HNFL-38-16	Flange Lock Nut, $\frac{3}{8} - 16$	180
20*	74-264	Plate	10
21*	74-225	Coring Tine	60
22*	74-251	Core Tine Wheel	10
23	74-281	$1\frac{1}{2}$ " Spacer	2
24*	74-269	Depth Spacer	5
*	AER8-60R607	60" Coring Tine Reel Assembly	
<b>78" AER8-787</b>			
17**	74-262	78" Core/Fine Shaft	1
18**	74-240	Spacer Tube	14
19**	HB-38-16-175	Bolt, $\frac{3}{8} - 16 \times 1\frac{3}{4}$	270
	HNFL-38-16	Flange Lock Nut, $\frac{3}{8} - 16$	270
20**	74-264	Plate	9
21**	74-225	Coring Tine	90
22**	74-251	Core Tine Wheel	15
23	74-283	$\frac{1}{2}$ " Spacer	2
24**	74-269	Depth Spacer	6
**	AER8-78R787	78" Coring Tine Reel Assembly	

## REAR ROLLER DRAWING



Parts

## REAR ROLLER PARTS LIST

REF#	PART#	DESCRIPTION	QUANTITY
1	74-245	Mainframe, 60"	1
	74-280	Mainframe, 78"	1
2	74-247	Adjustment Bracket	2
	HB-12-13-125	Hex Bolt, $\frac{1}{2}$ - 13 x $1\frac{1}{4}$	8
	HNFL-12-13	Flange Lock Nut, $\frac{1}{2}$ - 13	8
3	7-029	Hitch Pin	2
4	74-249	RH Roller Bracket	1
	HG-14-28-180	Grease Fitting	1
5	HB-12-13-175	Bolt, $\frac{1}{2}$ - 13 x $1\frac{3}{4}$	4
6	HB-12-13-125	Bolt, $\frac{1}{2}$ - 13 x $1\frac{1}{4}$	2
	HW-58	Washer, $\frac{5}{8}$	2
7	74-213	Bearing	2
13	HB-38-16-125	Bolt, $\frac{3}{8}$ - 16 x $1\frac{1}{4}$	4
	HNTL-38-16	Lock Nut, $\frac{3}{8}$ - 16	4
14	74-250	LH Roller Bracket	1
	HG-14-28-180	Grease Fitting	1
15	74-278	Spacer	2
<b>60" AER8-610</b>			
8	74-261	60" Scraper Bar	1
9	74-260	60" Roller	1
10	74-256	60" Scraper	1
11	74-255	60" Scraper Strap	1
12	HBC-516-18-100	Carriage Bolt, $\frac{5}{16}$ - 18 x 1	8
	HNTL-516-18	Lock Nut, $\frac{5}{16}$ - 18	8
<b>78" AER8-710</b>			
8	74-286	78" Scraper Bar	1
9	74-287	78" Roller	1
10	74-285	78" Scraper	1
11	74-284	78" Scraper Strap	1
12	HBC-516-18-100	Carriage Bolt, $\frac{5}{16}$ - 18 x 1	10
	HNTL-516-18	Lock Nut, $\frac{5}{16}$ - 18	10

## DECAL LIST

74-156	Decal, Reflector	4 corners of main frame
74-157	Decal, Aer-8	Main Frame Sides
74-210	Decal Hang Tag	Aer 8-002
76-305	Decal, Rotating Parts	Reel Housing

## QUICK REFERENCE

<b>BATTERY (NOT SUPPLIED)</b>	<b>AUTOMOTIVE TYPE 24F-12 VOLT</b>
<b>HYDRAULIC FLUID</b>	<b>HYDRAULIC FLUID 1.25 GAL (4.3 LITER)</b>

# The Smithco Commercial Products Two-Year Limited Warranty

Smithco, Inc. (Smithco) warrants your 2007 or newer Smithco Commercial Product ("Product") purchased after January 1, 2007, to be free from defects in materials or workmanship for the period of time listed below. Where a warrantable condition exists, Smithco will repair the Product at no cost to you including diagnosis, labor (at the Smithco standard labor rate, subject to the Smithco flat rate schedule), and parts.

## Warranty Duration is:

- (1) Two years, 1500 operational hours\* from the date of delivery to the original purchaser or three years from the date of original manufacturer of the product, whichever occurs first. (\*Products equipped with hour meter).
- (2) Products used in rental situations are covered for 90 days from date of delivery to original user/ renter.

## Owner Responsibilities:

As the Product owner, you are responsible for required maintenance and adjustments stated in your Owner's Manual. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim. **You are particularly responsible to train all present and future operators of this product on the safe operation of this product at your location.**

## Instructions for Obtaining Warranty Service:

You are responsible for notifying the Authorized Smithco Products Distributor from whom you purchased the Product as soon as you believe a warrantable condition exists and not later than 30 days from discovery of the condition.

If you need help locating an Authorized Smithco Distributor, or if you have questions regarding your warranty rights or responsibilities, you may contact us at:

Smithco Product Support Department  
200 W Poplar PO Box 487  
Cameron, Wisconsin 54822

Telephone: 1-800-891-9435

E-Mail: [ProductSupport@smithco.com](mailto:ProductSupport@smithco.com)

## Maintenance Parts:

Parts scheduled for replacement as required maintenance ("Maintenance Parts"), are warranted for the period of time up to the scheduled replacement time for that part.

### Items/Conditions Not Covered:



Not all product failures or malfunctions that occur during the warranty period are defects in materials or workman-ship. The items/conditions listed below are not covered by this warranty:



Product failures which result from the use of non-Smithco replacement parts, or from installation and use of add-on, modified, or unapproved accessories are not covered.



Product failures which result from failure to perform required maintenance and/or adjustments are not covered.



Product failures that result from operating the Product in an abusive, negligent or reckless manner are not covered.



This warranty does not apply to parts subject to consumption through use, unless found to be defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to: blades, tines, teeth, scarifiers, rakes, plates, wear plates, castor wheels, tires, batteries, filters, belts, nozzles, etc.



This warranty does not apply to failures caused by out-side influence. Items considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved coolants, lubricants, additives, or chemicals, etc.



This warranty does not apply to normal “wear and tear” items. Normal “Wear and Tear” includes, but is not limited to, damage to seats due to wear or abrasion, worn painted surfaces, scratched decals or windows, etc.



Smithco may require the return of failed parts or components in order to determine the validity of any warranty claim.



Smithco will not be obligated to replace components of other manufacturers if inspection by the original component manufacturer indicates that failure was due to normal wear and tear, expected consumption through use or improper care or service.

### **Other Legal Disclaimers:**

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**Wayne, PA 19087**

