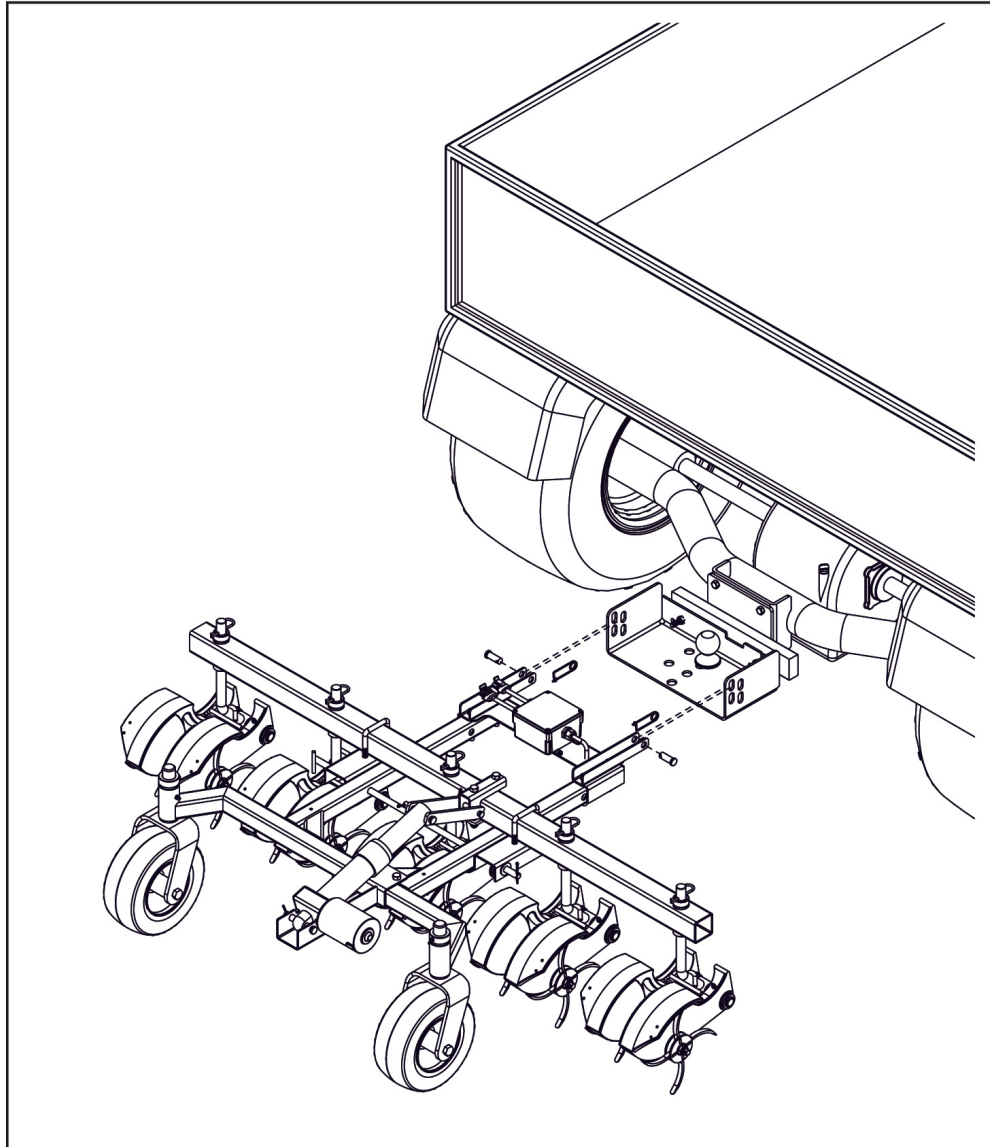


Operator's Manual



WARNING

READ AND UNDERSTAND THE OPERATOR'S MANUAL COMPLETELY BEFORE USING THIS ATTACHMENT. ASSEMBLE, TEST AND USE ONLY IN ACCORDANCE WITH THE OPERATOR'S MANUAL INSTRUCTIONS.



1	Introduction.....	4
1.1	....Application.....	4
1.2	....Navigating This Manual.....	4
1.3	....Operation References/Terminology.....	4
1.4	....Owner Assistance.....	5
1.5	....Model Identification.....	5
1.6	....Further Assistance.....	6
2	Assembly and Set-up.....	7
2.1	....Frame Assembly Parts.....	7
2.2	....Caster Head Assembly Parts.....	9
2.3	....Tools Required.....	10
2.4	....Power Unit Requirements.....	10
2.5	....Unpacking Your Attachment.....	10
2.6	....Torque Requirements.....	10
2.7	....General Assembly.....	10
2.8	....Stabilizer Frame to Tow Tongues Assembly.....	11
2.9	....Pivot Arms, Actuator Mount and Relay Box Assembly.....	11
2.10	....Wheels to Yokes Assembly.....	11
2.11	....Caster Bar to Top Mount Assembly.....	12
2.12	....Connect Actuator.....	12
2.13	....Aerator Heads Assembly.....	12
3	Operation Instructions.....	13
3.1	....Before Operation.....	13
3.2	....Operator Safety.....	13
3.3	....Operation.....	14
4	Attachment Instructions.....	15
5	Mounting Instructions.....	15
5.1	....Mount Hitch to Tow Vehicle.....	15
5.2	....Connecting Power Wire to Vehicle Battery.....	16
5.3	....Connecting Aerator to Hitch.....	16
5.4	....Connecting Battery Harness to Relay Box Figure 1-9.....	16

6	Dismounting Instructions	16
6.1	.... <i>Removing Hooker Aerator</i>	16
7	Storage Instructions	17
7.1	.... <i>Storing Your Hooker Aerator</i>	17
8	Transporting Instructions.....	17
8.1	.... <i>Transporting Your Hooker Aerator</i>	17
9	Field Use Set-up and Instructions.....	17
9.1	.... <i>Field Preparation Hooker Aerator</i>	17
10	Maintenance Instructions.....	18
10.1	.. <i>General</i>	18
10.2	.. <i>Daily Maintenance</i>	18
10.3	.. <i>Seasonal Maintenance</i>	18
11	Specifications Figure 1-10.....	19
12	Warranty	20

1 Introduction

JRCO takes pride in its attachments and have designed and engineered quality, commercial built attachments designed to help you efficiently and effectively be more productive at tasks.

1.1 Application

The JRCO Hooker Aerator, used for years as a front-mount attachment for landscape aeration, is now available in a 60" tow-behind version. The 5-head tow-behind is ideal for Utility vehicles, tractors, and ZTR mowers and is extremely maneuverable.

The soft-plug style of aeration is ideal for lawns, sports fields, golf fairways or anywhere true plug aeration is needed, without the messy compacted core clean-up of a hollow tine aerator. The JRCO Hooker Aerator is many times faster than tradition hollow tine aerators, and is low maintenance with few moving parts and no engine.

The tines pierce deep into the soil, hooking and lifting loose plugs of dirt that disperse on the surface, spreading nutrients over the surface. Use it in combination with over-seeding for renovating distressed or diseased turf. Holes are approximately ½" wide by 1-1/4" long and up to 3" deep. Soil volume removed is comparable with a 5/8" hollow tine core.

The Hooker tow-behind aerator comes complete with a two-point hitch, rigid frame and swiveling caster wheels that allow the aerator to tractor directly behind the tow vehicle and prevents jackknifing when backing up. The aerator caster heads swivel, allowing them to turn while aerating. The six floating rotor heads lift independently over rocks and other obstacles, while the other heads continue to aerate. An electric actuator lifts the heads into the transport position.

1.2 Navigating This Manual

1. Use this manual to help familiarize yourself with safety, assembly, operation, adjustments, troubleshooting, maintenance, specifications and warranty information. It is very important that you read this manual and follow the instructions to ensure safe operation of the attachment.
2. Please visit www.jrcoinc.com for updated information.

1.3 Operation References/Terminology

References throughout this manual referred to as "Right" or "Left" are determined by being seated face-forward on Mower/UTV and facing the direction the unit will operate while in use.

1.4 Owner Assistance

Please complete the Warranty/Product Registration at the time of purchase. You will need fill out and send in a warranty card with your new unit, or you may visit our website www.jrcoinc.com and complete our online registration form. We require this information so we can keep you update to date with any important information about your attachment and provide you with the best customer service possible.

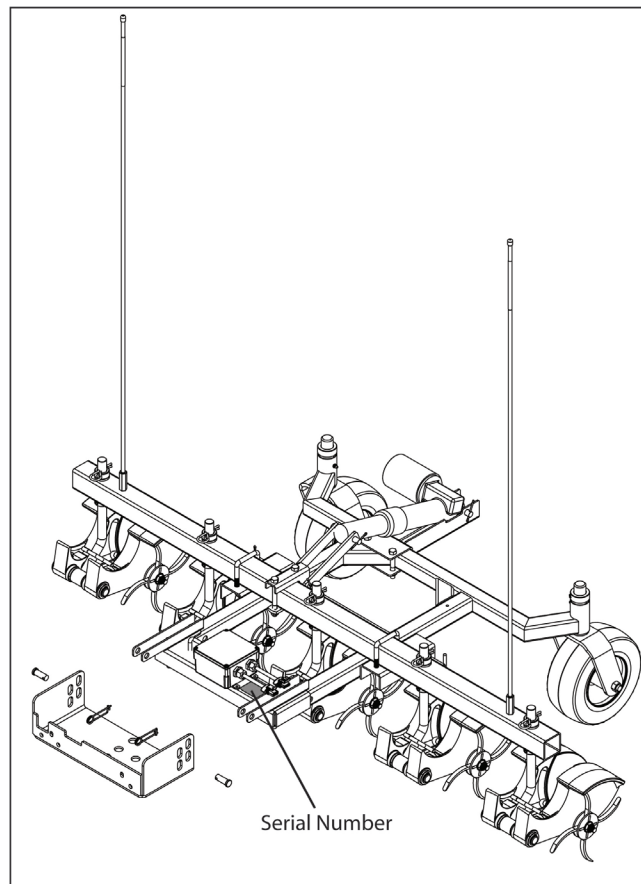
The parts and components used on your JRCO Attachment have been specifically engineered for JRCO Attachments and should only be replaced with JRCO parts. Contact your local JRCO Dealer for replacement parts or contact our customer service department for assistance in parts, locating your local servicing dealer and more. Your local dealer is equipped and trained to handle service and repair for your attachment.

1.5 Model Identification

Please fill in your model and serial number below for future reference. This will help assist in prompt service when ordering parts and service for your local JRCO Dealer.

Model No. _____ 755 _____ Serial No. _____

Refer to the image below for location of your serial number plate:



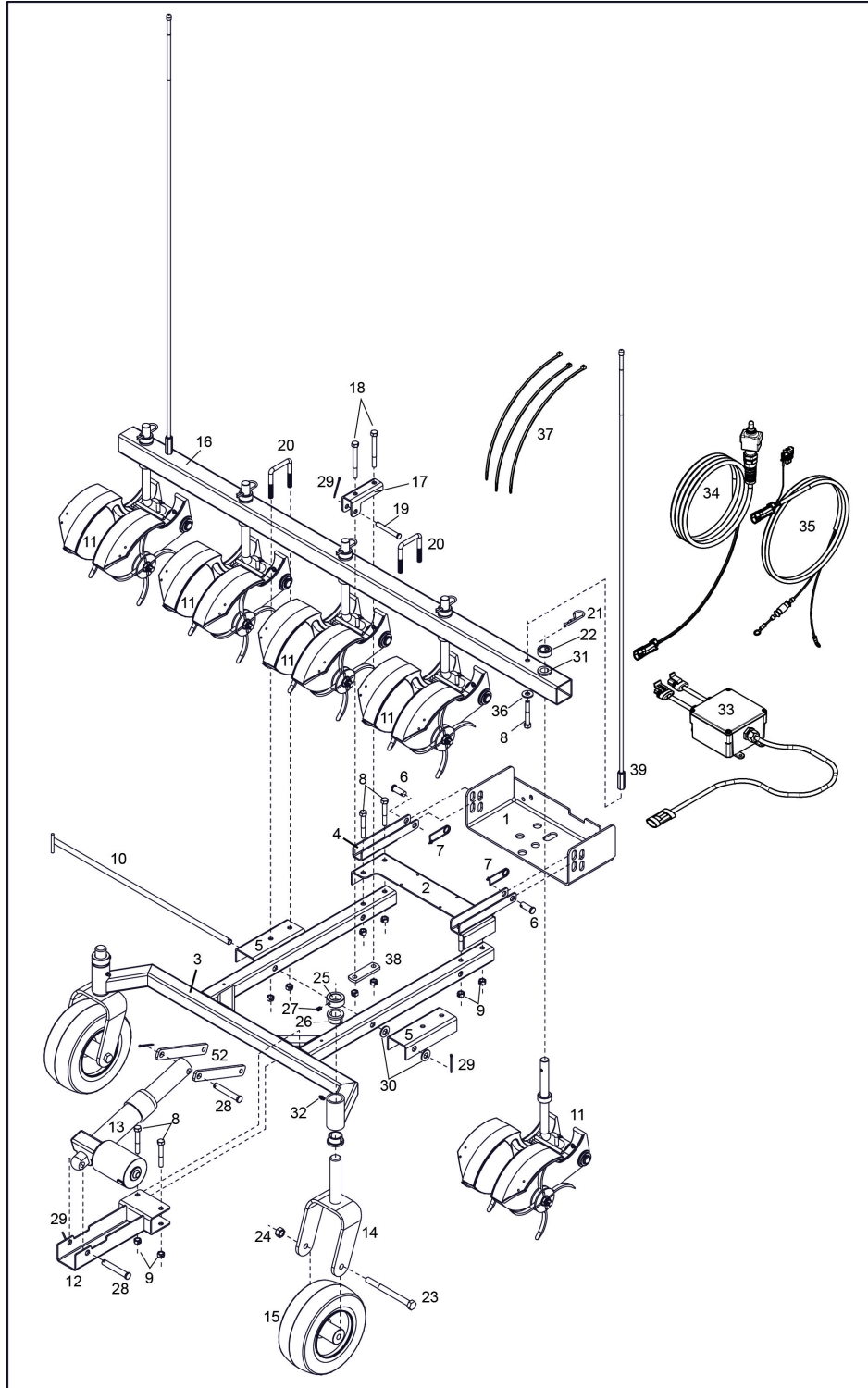
1.6 Further Assistance

Your dealer and all of us at JRCO want you to be pleased with your attachment. Should you require further assistance or have questions regarding your attachment, please contact your local dealer where you purchased your attachment. If you are unable to satisfy your needs by your local dealer, please contact us at:

JRCO
20195 South Diamond Lake Road, STE 100
Rogers, MN 55374
800-966-8442
info@jrcoinc.com
www.jrcoinc.com

2 Assembly and Set-up

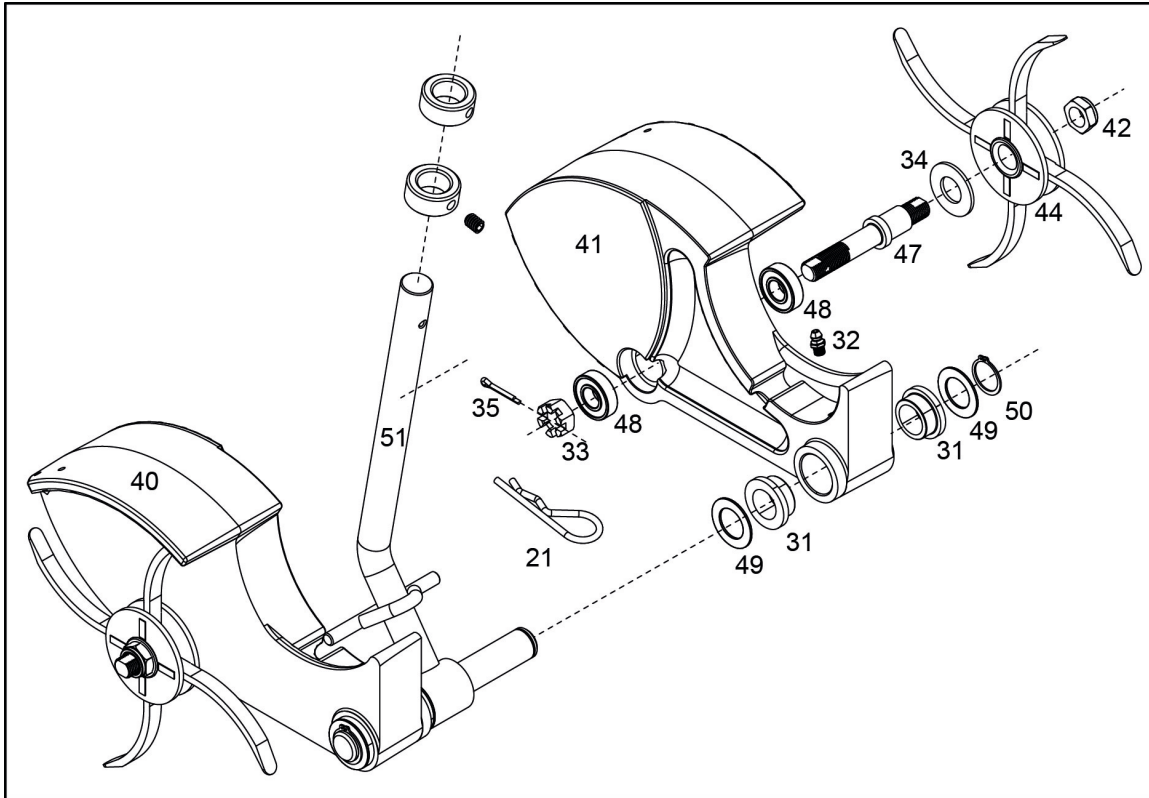
2.1 Frame Assembly Parts



Ref	Part No.	Description	Qty
1	5016.JRC	Box Hitch	1
2	7805-2.JRC	Stabilizer Frame	1
3	8281.JRC	Frame Assembly	1
4	7883.JRC	Tow Tongue	2
5	7803-1.JRC	Pivot Arm	2
6	4003.JRC	Clevis Pin, ½ x 1 ¼"	2
7	4009.JRC	Safety Clip	2
8	7278.JRC	HH Bolt, 3/8 x 2 ½"	8
9	4236.JRC	2-way locknut, 3/8-16	12
10	7806-1.JRC	Pivot Rod 5/8"	1
11	7842-3.JRC	Aerator Head Assembly	5
12	7809-2.JRC	Actuator Mount	1
13	7833-2.JRC	Actuator	1
14	7914.JRC	Yoke	2
15	7867.JRC	Wheel, 9 x 3.5 x 4	2
16	7844-2.JRC	Caster bar Assembly	1
17	7808.JRC	Top Pivot	1
18	7308.JRC	HH Bolt, 3/8 x 3 ½"	2
19	4684.JRC	Clevis Pin, 3/8 x 2 ¾"	1
20	7811.JRC	U-bolt, 3/8-16 x 2 x 2 ¾"	2
21	3045.JRC	Hairpin cotter	5

Ref	Part No.	Description	Qty
22	7828.JRC	Shaft Collar, ¾"	10
23	8093.JRC	HH Bolt, 1/2 x 5 ½"	2
24	4233.JRC	2-way locknut, ½-13	2
25	7915.JRC	Shaft Collar, 1"	2
26	7583-1.JRC	Flange bushing, 1"	4
27	7281.JRC	Set screw, 5/16-18 x ¼"	7
28	8272.JRC	Clevis pin ½ x 3	2
29	7251.JRC	Cotter pin, 1/8 x 1 ½	3
30	3047.JRC	Washer, 5/8" SAE	4
31	7873.JRC	Flange bushing, ¾"	30
32	7816.JRC	Grease Fitting	12
33	8275.JRC	Relay box	1
34	8276.JRC	Switch Harness	1
35	8277.JRC	Battery Harness	1
		Fuse AGC-30	1
36	4247.JRC	Flatwasher, 3/8"	2
37	7243.JRC	Cable Tie, 11"	12
38	4671-3.JRC	Clamp Bar 3.3"	1
39	7906.JRC	Sight Flag	2
52	7947.JRC	Actuator Link	2

2.2 Caster Head Assembly Parts



Ref	Part No.	Description	Qty/Unit	Qty/Head
31	7873.JRC	Flange bushing, 3/4"	30	4
32	7816.JRC	Grease fitting	12	2
33	8288.JRC	Castle Nut, 1/2-20	10	2
34	3047.JRC	SAE Flat washer, 5/8"	10	2
35	7846.JRC	Cotter Pin, 1/8 x 3/4"	10	2
40	7904R.JRC	Casting, Right	5	1
41	7904L.JRC	Casting, Left	5	1
42	7908.JRC	Nylon Locknut, 1/2-20	10	4
43	8268.JRC	Spanner, .5 id	10	2
44	7860.JRC	Tine Rotor	10	2
45	7865.JRC	Washer, 1/2 x .062	20	4
46	8269.JRC	Snap Ring, 1/2" External	10	2
47	8267.JRC	Axle	10	2
48	8270.JRC	Bearing, 1 1/8 x 5/16 x 1/2	20	4
49	7818.JRC	Machine bushing, 3/4"	20	4
50	7942.JRC	Snap Ring, 3/4" External	20	4
51	7823-1.JRC	Caster Pin	5	1



2.3 Tools Required

- Socket Wrench: 9/16"
- Open or Box Wrench: 7/16", 9/16", and 3/4"
- Combination Square
- Pliers
- Grease gun

2.4 Power Unit Requirements

The Hooker Soft-Plug Aerator is designed to be attached to a JRCO 2-point hitch on, large zero turn mowers, and utility vehicles.

2.5 Unpacking Your Attachment

	CAUTION	
	<p>Sharp edges</p> <p>Heavy</p> <p>Pinch point</p>	

Your Hooker Aerator will ship in 2 boxes. Carefully set the boxes on a flat working area. Carefully unbox the attachment and verify that all fasteners and components are included. (see packaging list on page 8)

2.6 Torque Requirements

Please reference the Torque Chart below for correct values when assembling your attachment.

3/8"	Bolts and Nuts	30 ft.-lbs.
1/4"	Bolts and Nuts	8 ft.-lbs.

2.7 General Assembly

This attachment is shipped partially assembled. If purchased from a JRCO Dealer, the dealership may assist in assembly of attachment. Review all safety and assembly instructions in this manual before assembly.

2.8 Stabilizer Frame to Tow Tongues Assembly

Refer to Figure 1-1

1. Align holes in stabilizer frame. Tow tongue and aerator frame.
2. Secure with four 3/8-16 x 2 1/2" hex bolts and two-way locknuts.

2.9 Pivot Arms, Actuator Mount and Relay Box Assembly

Refer to Figure 1-2

1. Insert pivot rod through two pivot arms and aerator frame using 1/2" SAE flatwashers on each side of the pivot arms.
2. Slide actuator mount onto the back of the aerator frame and align the right mount hole with the triangular hole at the right of the frame. Secure with two 3/8-16 x 2 1/2" hex head bolts and 3/8 tow-way locknuts.
3. Attach the relay box to the stabilizer frame using four 10-24 x 1/2" pan head Philips machine screws. Put long cord through the rectangular hole in the stabilizer frame and route the cable along the underside of the right hand frame leg. Secure with cable ties.

2.10 Wheels to Yokes Assembly

Refer to Figure 1-3

1. Use 1/2-13 x 5 1/2" hex head bolt and 1/2-13 two-way locknut to install wheel in each yoke.
2. Slide yoke through flange bushings in aerator frame and secure with 1" shaft collar.

NOTE: Do not overtighten. Wheels should spin freely in yoke.

3. Fill spindle housing with all-purpose grease.

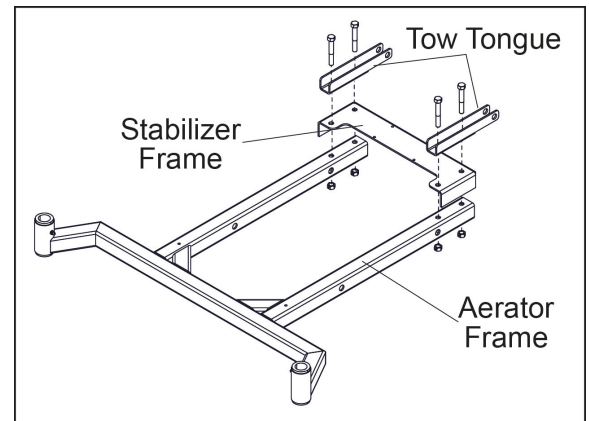


Figure 1-1

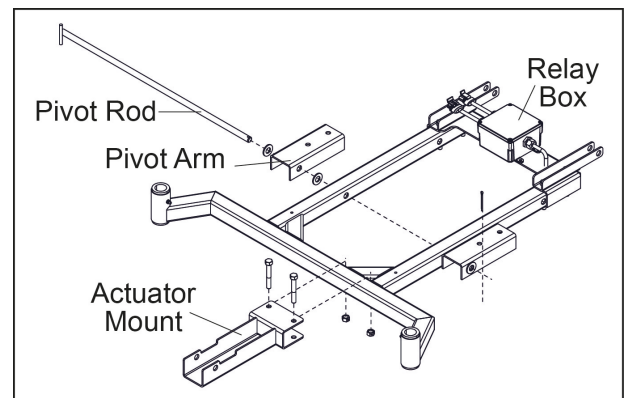


Figure 1-2

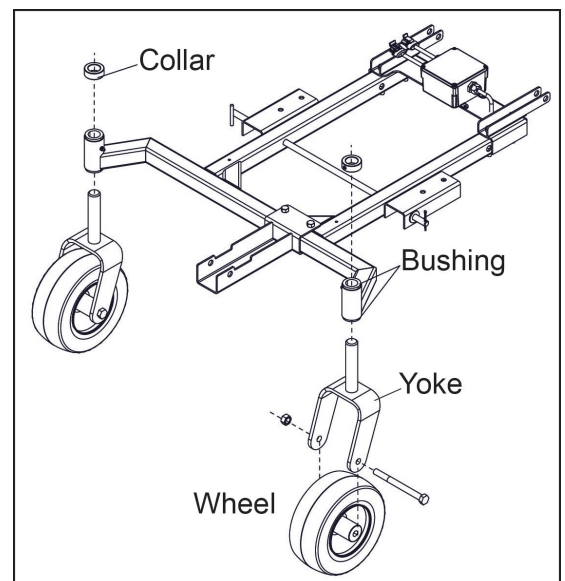


Figure 1-3

2.11 Caster Bar to Top Mount Assembly

Refer to Figure 1-4

1. Center the caster bar over aerator frame and pivot arms.
2. Use two 3/8-16 x 2 3/4 square u-bolts and 3/8-16 two-way locknuts to install caster bar.
3. Attach actuator top pivot to caster bar using two 3/8-16 x 3 1/2" hex head bolts, a 3.3" clamp bar and 3/8 two-way locknuts as shown.

NOTE: Do not tighten at this time. It will be tightened when aligned with the actuator.

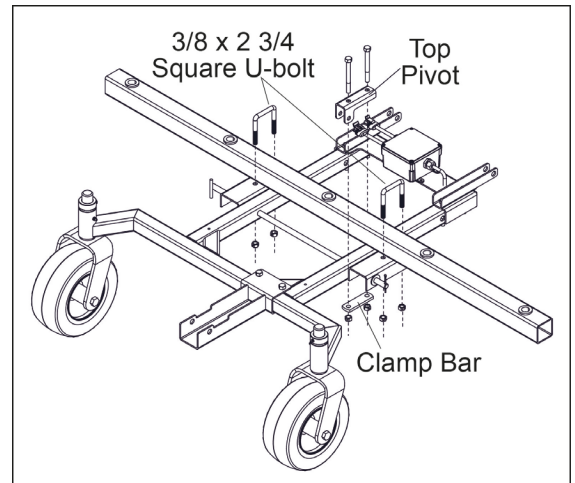


Figure 1-4

2.12 Connect Actuator

Refer to Figure 1-5

1. Fully extend the actuator. Place actuator into actuator mount with the motor to the right as shown. Insert a 1/2 x 3" clevis pin through the actuator and secure with a 1/8 x 1 1/4" cotter pin.
2. Install two actuator link plates between the actuator and top pivot. Attach the actuator end with a 1/2 x 3" clevis pin and cotter and the top pivot end with a 3/8 x 2 3/4" clevis pin and cotter.
3. Center the top pivot and tighten. Connect power wire from relay box to the actuator plug.

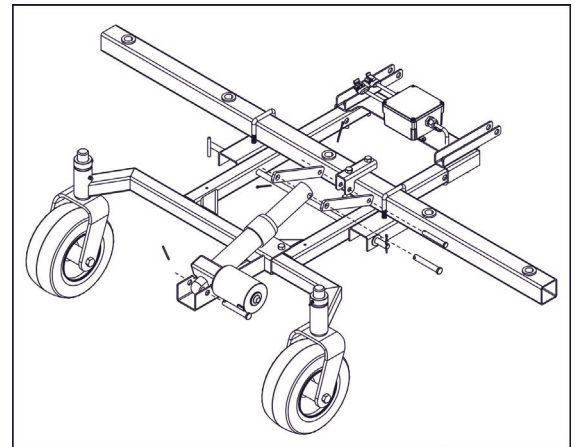


Figure 1-5

2.13 Aerator Heads Assembly

Refer to Figure 1-6

1. Retract the actuator and pivot the bar into the transport position. Slide each aerator head assembly into the aerator bar, place a 3/4" shaft collar over the stem and secure with a hairpin cotter. Adjust the lower shaft collar to the bottom of the caster bar and tighten the set screw.

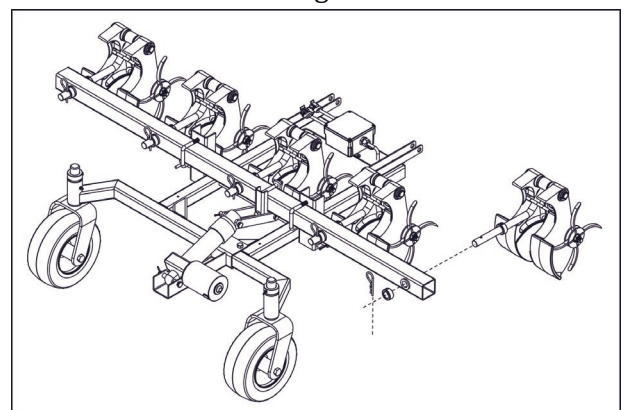


Figure 1-6



3 Operation Instructions

3.1 Before Operation

Safety, hazard and accident prevention is essential. You must use awareness, concern, and proper training when operating and utilizing this attachment. You must NOT use this attachment without reading and understanding the Operator's Manual. Make sure the operator has completed and understands the contents of this manual before operation. Refer to the chart below for key areas and ensure they are understood:

- Hills
- Obstacles
- Children

3.2 Operator Safety



	CAUTION	
	<ul style="list-style-type: none"> • Know the Aerator's controls and how to stop quickly. READ THE OWNER'S MANUAL. • Shut off the engine before attaching, adjusting or disconnecting the Hooker Aerator. • Reduce speed on uneven ground. • DO NOT operate the Hooker Aerator on concrete or asphalt surfaces. • DO NOT ride or stand on aerator. • Keep all bolts and nuts tightened. • Check and replace broken parts before operating the mower and aerator. • Watch mower speeds. Do not operate the Hooker Aerator at a speed that is too fast for maintain safe control. Do not go too fast for conditions. • Do not operate the Hooker Aerator on slopes steeper than 30 degrees. • Be careful when lowering the aerator to the ground. Keep feet clear of the tines when lowering the cater heads. • Wear safety glasses for protection against flying dirt and debris. • DO NOT allow others, including children and pets, in the area while operating the Hooker Aerator • For added Hooker Aerator stability and to prevent loss of control of when using Hooker Aerator: Aerate up and down the face of slopes – never across the face of any slope. Do drive at reduced speeds on uneven ground and when turning corners. 	

3.3 Operation

Now you should have read your Operator's Manual and properly attached your Hooker Aerator.

Using the Hooker Aerator is simple, but there are things you need to consider before use. If you are using the attachment in an area that has large stumps, rocks, debris, exposed electrical or gas lines or foreign material that could cause damage to the attachment should be marked. You will want to avoid any sizable objects to avoid damage or injury. Mark location of sprinkler heads and irrigation control boxes and avoid.

Now that you know where you are going to use your Hooker Aerator and have taken the necessary precautions surveying the area, you are ready to begin use. Begin by ensuring your attachment is in

	<p>DANGER</p>	
	<p>DO NOT work over any area that has exposed electrical wiring or gas lines.</p> <p>Making contact with electrical wiring or gas lines/pipes can cause serious injury or death.</p> <p>Watch mower speed. Do not go too fast for the conditions. If ground is rough, reduce speed. Wear safety glasses and protection against flying dirt and debris.</p> <p>Use care when lowering Caster heads into the aeration position. Keep feet and hands clear!</p>	

field ready position.

To operate the aerator, lower the caster heads fully to the ground while moving forward. As you move forward, the caster heads will move into the aeration position.

NOTE: Ensure that the actuator is in the fully extended position and the caster bar is resting fully on the support frame. Failure to do this may result in the caster pins not being in the correct, vertical position and maneuverability will suffer.

1. The caster heads will swivel and track with the turning of the mower. The heads must be raised before backing up.
2. Straighten the track of the aerator heads some-what before lifting the caster bar to the transport position. If the heads are lifted while they are turned, it will put extra load on the lifting actuator and may result in a blown fuse.
3. Lift the aerator heads before reversing the mower to prevent tearing the turfgrass.







Figure 1-7

4 Attachment Instructions

1. Use the Hooker Aerator for its intended purposes only. Never use it to carry, push, pull or drag any object other than its intended purpose.
2. Misuse can lead to damage of the attachment.
3. Do not exceed speeds of 12 mph.
4. Mark and avoid obstacles including sprinkler heads

5 Mounting Instructions

	DANGER	
	<ul style="list-style-type: none"> • A Crush Hazard exists when mounting attachment to mount bar. Do Not allow anyone to stand between tractor and attachment while mounting. 	
	CAUTION	
	<ul style="list-style-type: none"> • Always make sure the clevis pins are secure before operation. • Always make sure the parking brake is engaged on mower/UTV, engine is turned OFF and key is removed before mounting the attachment. • Ensure power unit is shut off and parking brake is engaged. Attach Hooker Aerator securely with clevis pins. 	

5.1 Mount Hitch to Tow Vehicle

1. Position hitch so clevis pin slots are approximately 11 inches from ground and slots are vertical.
2. Attach hitch to vehicle framework or drawbar using hardware such as a hitch ball, or 3/4" bolt and hardware to prevent twisting.

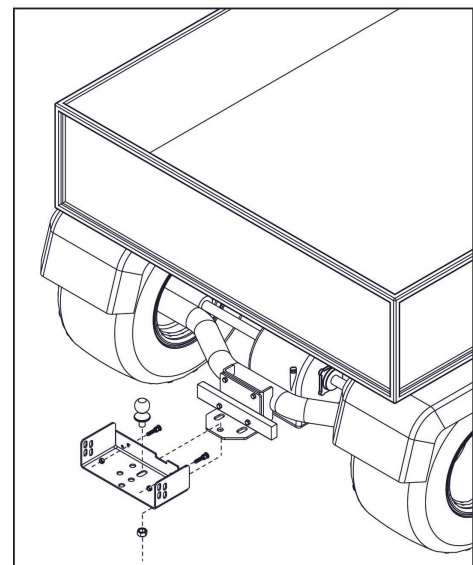


Figure 1-8

5.2 Connecting Power Wire to Vehicle Battery

Refer to figure 1-9

1. Connect supplied battery wire directly to battery terminals.
Route batter cable, back to hitch, along vehicle frame, safely away from pinch points and rotating parts, and secure with cable ties.

5.3 Connecting Aerator to Hitch

Refer to figure 1-10

1. Align the tow tongues with the slots in the hitch. Choose the slots that will keep the aerator level. Attach with clevis pins and safety clips.

5.4 Connecting Battery Harness to Relay Box

1. Plug the battery harness and switch harness into the relay box. Route the switch harness up to the vehicle operator. Secure with cable ties and hook and loop ties.

6 Dismounting Instructions

6.1 Removing Hooker Aerator

To remove Hooker Aerator, follow these steps:

1. Park Hooker Aerator and Mower/UTV on a solid level surface. Engage parking brake and shut engine off and remove key.
2. Ensure feet are clear from beneath the attachment. Remove clevis pins. With a strong grip, lower attachment to ground.
3. Replace clevis pins to avoid lost or misplaced pins.
4. Be sure attachment is clear of Mower/UTV before moving power unit away from attachment.

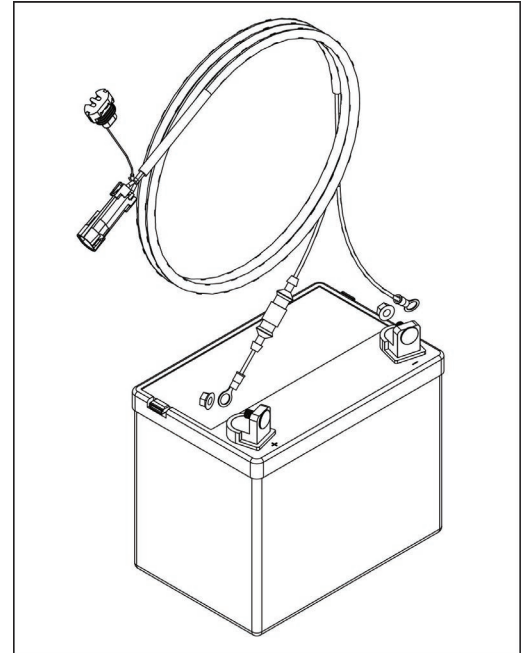


Figure 1-9

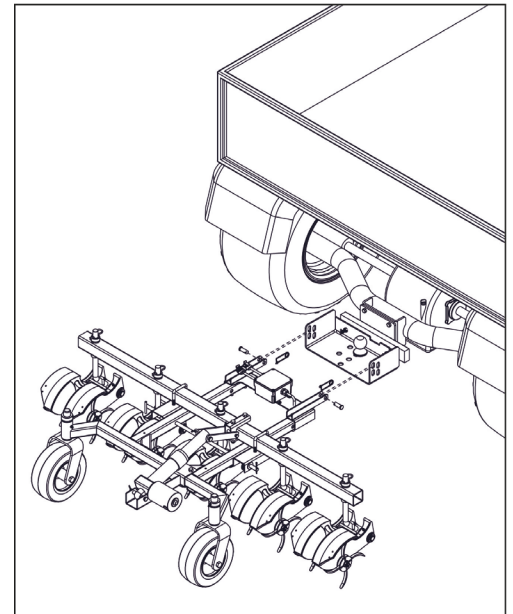


Figure 1-10

7 Storage Instructions



7.1 Storing Your Hooker Aerator

Ensure your attachment is clear of debris, inspect for damage or repairs needed and service as necessary before storage. This will ensure the attachment is ready for use the next time it's in the field and ensure repairs are not accidentally forgotten or overlooked.

1. Carefully clear all dirt, grease and debris that may be on your Hooker Aerator.
2. When finished cleaning dirt and debris, wash the surfaces thoroughly with a garden hose.
3. Repaint parts where paint is worn or chipped to prevent rust from forming. A coating of oil may also be applied to minimize oxidation.
4. Replaced all damaged or missing decals.
5. Store Hooker Aerators indoors if possible. Inside storage will reduce maintenance and extend life of attachment.
6. Inspect for loose or worn parts and adjust or replace as needed.

8 Transporting Instructions

8.1 Transporting Your Hooker Aerator

	DANGER	
	<ul style="list-style-type: none"> • Failure to secure aerator can cause equipment damage or personal injury • Secure both aerator and power unit to trailer 	

Transporting with aerator in down position

1. Lower the caster heads to the floor when trailering the aerator to take the weight off the actuator.
2. Fully secure to trailer with ratchet strap.

9 Field Use Set-up and Instructions

- The following procedures should be carried out by the operator. Other persons should be cleared of the area.

9.1 Field Preparation Hooker Aerator

1. Ensure your Hooker Aerator is level front to rear.
2. Fully lower aerator heads. Do not aerate with heads partially covered.

10 Maintenance Instructions

10.1 General

Proper servicing and adjustment is key to extending the life of your attachment. Carefully inspect and routinely maintenance to avoid costly downtime and repairs. Check all bolts and nuts after using for several hours to ensure they are secure. Replace any worn, damaged or missing safety labels. The parts on your JRCO Hooker Aerator have been designed specifically for your attachment and should be replaced with genuine parts from your local JRCO Dealer. Do not alter the equipment in any way.

10.2 Daily Maintenance

Clean, inspect, service and repair any necessary parts that are necessary. This will ensure it is ready for use the next time mounted.

1. Check for missing bolts and/or nuts and replace if necessary. Inspect for any loose bolts and tighten as needed.
2. The tines should be cleaned immediately after operation.
3. Replace all damaged or missing decals.
4. Repaint areas where paint is worn or scratched to prevent rust.
5. Check tines for wear and bearings for looseness. Replace tine rotors if the tines have worn to less than 2 ½ inches long.
6. Add grease to each of the fittings at the front of each casting, wheels and spindles.

10.3 Seasonal Maintenance

1. Spray caster pins and flange bushings with a silicone lubricant.
2. Replace the battery harness fuse as necessary with an AGC-30 or equivalent only.

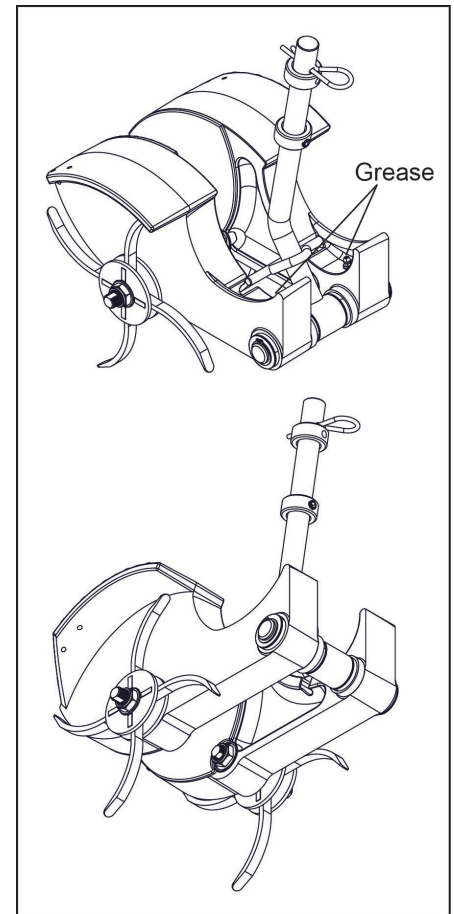


Figure 1-11

11 Specifications

Approximate Shipping Weight	270 lbs.
Aeration Width	60"
Aeration Pattern	5" x 6"
Hole Size	½" wide x 1.25" long, up to 3" dep
Tines	3/8" wide x 3" long hardened high carbon alloy steel
Productivity	1.5 acres per hour @ 5 mph (66,000 sq. ft. per hour)
Dimensions	61" x 39" x 16"

12 Warranty



20195 South Diamond Lake Road, Suite 100 • Rogers, MN 55374
Toll-Free: 800-966-8442 • Website: jrcoinc.com • Email: info@jrcoinc.com

Dear Valued Customer:

The Jrco Attachment you just purchased is built with the finest material and craftsmanship. Use this attachment properly and enjoy the benefits from its high performance. By purchasing a Jrco Attachment, you show a desire for quality and durability. Like all mechanical equipment this unit requires a due amount of care. Treat this unit like the high-quality piece of machinery it is. Neglect and improper handling may impair its performance and is not covered by this limited warranty.

Thoroughly read the instructions and understand the operation before using your product. Always contact Jrco Product Support at 1-800-966-8442 prior to having any service or warranty work performed, as some services performed by parties other than Jrco approved service centers may void this warranty. This limited parts warranty is in lieu of any other warranty expressed or implied, written or oral and Jrco assumes no other responsibility or liability outside that expressed within this limited warranty.

Limited Parts Warranty for Jrco Attachment:

	Consumer Parts Warranty Period	Commercial Parts Warranty Period
Weldments	1 year from date of purchase by user	1 year from date of purchase by user
Electric Motor, Pump & Speed Controller	90 days from date of purchase by user	90 days from date of purchase by user
Wear Parts	Jrco shall not warrant normal wear items. High impact wear related components such as, but not limited to standard retention hardware for wear items, tines and tine assemblies, seals, seal shields, grease fitting, bearings, bushings tires and wheel assemblies. Routine maintenance items such as lubricants, adjustments, tune ups, and damage from operation with loose hardware are not covered under limited warranty.	
Engines	The engine warranty is covered under the terms and conditions as outlined by the engine manufactures warranty contained herein and is the sole responsibility of the engine manufacturer. Normal engine maintenance such as spark plugs, oil changes, air filters, adjustments, fuel system cleaning and obstruction due to build up is not covered by this Jrco limited warranty.	

“Consumer use” means personal residential household use by a consumer. **“Commercial use”** means all other uses, including, but not limited to, use for commercial, income producing or rental purposes or when purchased by a business.

This limited parts warranty applies to the original purchaser of the equipment (verification of purchase, in the form of a receipt, is the responsibility of the buyer), is non-transferable, and covers parts. Parts will be replaced at no charge, except when the equipment has failed due to lack of proper maintenance. If a part is no longer available, the part may be replaced with a similar part of equal function. Any misuse, abuse, alteration or improper installation or operations will void warranty. Determining whether a part is to be replaced or repaired is the sole decision of Jrco. Jrco will not provide for replacement of complete products due to defective parts. Any labor costs incurred due to replacement or repair of items is the responsibility of the buyer and not covered under warranty. Transportation costs to and from service center and/or service calls are the responsibility of the customer.

This limited warranty specifically excludes the following; failure of parts due to damage caused by accident, fire, flood, windstorm, acts of God, applications not approved by Jrco in writing, corrosion caused by chemicals, use of replacement parts which do not conform to manufacturer’s specifications, damage related to rodent and/or insect infestation and damage caused by vandalism. Additional exclusions: loss of running time, inconvenience, loss of income, or loss of use, including any implied warranty of merchantability of fitness for a specific use. Also, outdoor power equipment needs periodic parts and service to perform well, and this limited warranty does not cover instances when normal use has exhausted the life of a component or the engine.

This limited warranty does not cover any personal injury or damage to surrounding property caused by failure of any part, misuse or inability to use the product. Alteration of the product, including safety features, shall void this limited warranty.