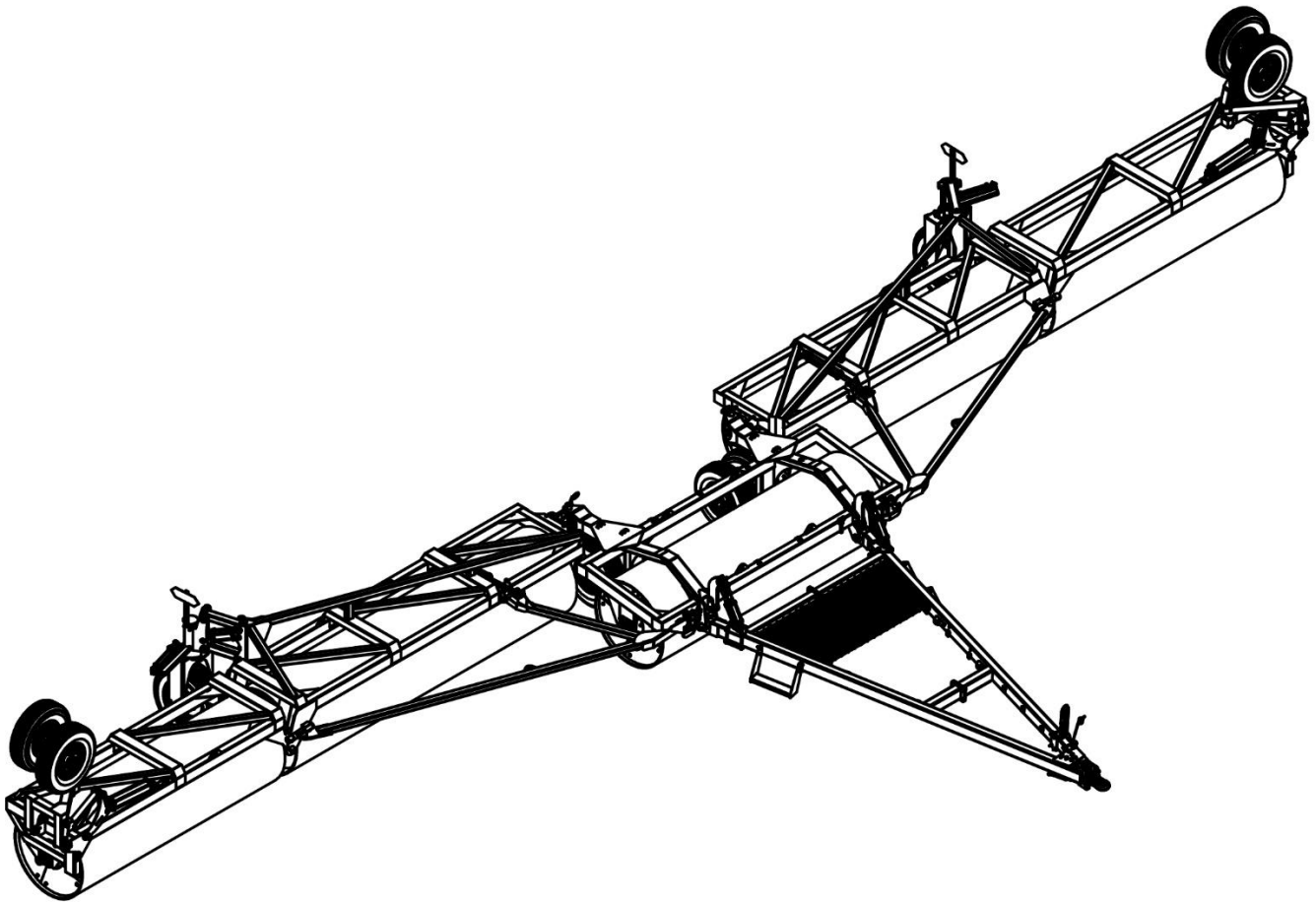


AG SHIELD

OPERATOR'S MANUAL



Land Roller 5 section (62 – 70 Ft)

Ag Shield Manufacturing
Box 9, Benito, Manitoba R0L 0C0
Phone 800-561-0132 or 204-539-2000
Fax 204-539-2130
www.agshield.com
E-mail address office@agshield.com

Printed in Canada

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AG SHIELD LTD.

BOX 9, BENITO, MANITOBA CANADA R0L 0C0

Phone 1-800-561-0132 or 204-539-2000 Fax 204-539-2130

www.agshield.com

E-mail: office@agshield.com

Warranty Registration Form - Warranty registration must be filled out by the dealer at the time of delivery, and emailed, faxed, or mailed to Ag Shield within 10 days of customer invoice to validate warranty.

Machine type-e.g. Recon, Land Roller	Model - e.g., 400 or 12- 46- 3	Delivery Date
Serial Number e.g. 1815125	Size - e.g. 7 ft or 46 ft	Options
Additional Serial Number e.g. 1415103	Size - e.g. 7 ft or 46 ft	Options

Customer Name	Phone Number
Mailing Address	City
State / Province	Country
Postal Zip code	Email Address for service & updates- required

☐

enter X

Customer agrees that the equipment was complete with all parts in good working order except as noted below, that the customer has received the owner's handbook, and the customer has been thoroughly instructed in the use of it. Customer agrees that they have been instructed in the care, adjustments, the safe operation of the machine, and the applicable warranty policy. Max lo dot the tires has been identified.

Dealer Name	Phone Number
Mailing Address	City
State / Province	Country
Postal Zip Code	Email Address for service & updates- required

☐

enter X

Dealer agrees to have thoroughly instructed the customer on the above described equipment, including the contents of the Owner's Handbook, equipment care, adjustments, safe operation, and applicable warranty policy.

Signature: _____

Date: _____

1. INSPECTION

PRE-DELIVERY INSPECTION CHECK LIST

General

- ☐ Remove wrapping and wash unit, removing all road debris. (Road salt, mud, snow, etc)
- ☐ Inspect paint, decals and general appearance of unit.
- ☐ Verify that the owner's manual is in the manual storage tube.
- ☐ Verify "SLOW MOVING VEHICLE" sign (SMV) is on unit.
- ☐ Verify that the jack is with the unit and function properly.
- ☐ Check wheel bolts for proper torque, proper wheel size and all tires are the same make.
- ☐ Check for proper tire pressure (PSI)
- ☐ Verify that locking pins are in place.
- ☐ Lubricate all components as per operator's manual recommendation.
- ☐ Check that all bolts and fasteners are at the proper torque specifications.
- ☐ Check locking collars and set screws for proper torque.
- ☐ Verify operation of lights.
- ☐ Verify the unit moves "IN" and "OUT" of transport without binding.

Hydraulics

- ☐ Ensure that all hydraulic hoses and lines are routed properly and secured.
- ☐ Verify that all hydraulic fittings / hoses are secure and there are no oil leaks.
- ☐ Inspect all cylinders for leakage and the cylinder shaft for rust, pits, or scratches.
- ☐ Verify operation of all hydraulic functions – Cycle hydraulic cylinders to remove air from the system.

Delivery

- ☐ Verify that the customer is aware of warning decals and proper jack placement for transport.
- ☐ Verify that the customer is aware of proper operation and transportation of the unit.
- ☐ Verify that the customer has received an operator's manual.
- ☐ Explain all maintenance and service intervals to the customer (From operations manual).
- ☐ Advise the customer of grease locations and maintenance schedules.
- ☐ Level the unit per operator's manual and instruct the customer on proper procedures.

Date: _____ Signature of Technician who performed the inspection: _____

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3.INTRODUCTION AND SIGN-OFF FORM

Congratulations! on your choice of an Ag Shield Land Roller. This equipment has been designed and manufactured to meet the needs of the discerning farmers and contractors, and rental agencies.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are as seen from the tractor driver's seat and facing in the normal direction of travel.

Ag Shield follows the general safety standards specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Ag Shield Land Roller must read and clearly understand ALL Safety, Operating, and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Review this information annually before season start-up. Make these reviews of safety and operation a standard practice for all of your equipment. An untrained operator is **not qualified** to operate this machine.

A sign off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understood the information in the Operators Handbook and have been instructed in the operation of the equipment.

SIGN-OFF FORM

DATE	OPERATORS SIGNATURE	EMPLOYERS SIGNATURE

4. SPECIFICATIONS

AG SHIELD LAND ROLLER

5 SECTION

SPECIFICATIONS



Standard Equipment

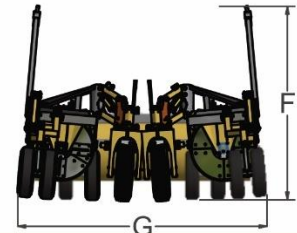
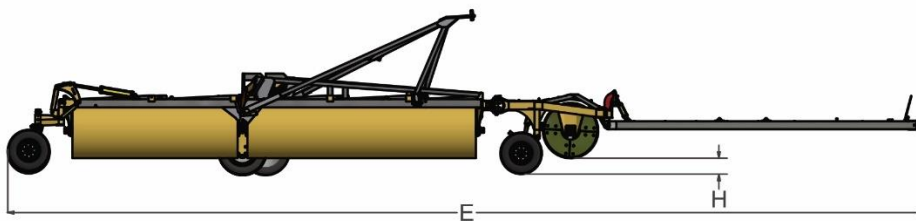
42" Diameter Drum
5/8" Thick Drum (min .610")
2 1/2" Ball Bearings
#213 Ductile Iron Bearing Flanges
Replaceable 2 1/2" 1045 Drum Shafts
Hwy Speed Rated Hub & Spindles
235/80R16 10 ply Radial Tires
Tandem Hydraulic Folding Rear Wheels
Patented Diagonal Brace Arm
Hydraulic Floating Hitch
Sealed Drum Ends
Clearance Lights
Acre Meter

Optional Equipment

7/8" Extreme Duty Drum (21mm thick)
Comes with:
235/80R16 14 ply Radial Tires
2 1/2" Double Row Spherical Roller Bearings
Forged Bearing Housings
Adds 108 Lbs per ft

Water Fill Kit, add 575 Lbs per ft
Roller Barrel Mud Scraper

Model	12-62-5	12-66-5	12-70-5
Working Width	62'	66'	70'
Number Of Drum Segments	5	5	5
Drum Width Configuration	12' 13' 11'6" 14'6" 10'6"	14' 13' 11'6" 14'6" 12'6"	16' 13' 11'6" 14'6" 14'6"
Drum Diameter	42"	42"	42"
Standard Heavy Duty Drum Thickness	5/8" (min .600)	5/8" (min .600)	5/8" (min .600)
Optional Extreme Duty Thickness	7/8" (min 21mm)	7/8" (min 21mm)	7/8" (min 21mm)
Drum Overlap	3", None	3", None	3", None
Drum Width - Center	11'6"	11'6"	11'6"
Drum Width - Inner Wings	13' LH 14'6" RH	13' LH 14'6" RH	13' LH 14'6" RH
Drum With - Outer Wings	12' LH 10'6" RH	14' LH 12'6" RH	16' LH 14'6" RH
Drum Bearings (Heavy Duty)	2 1/2" Ball	2 1/2" Ball	2 1/2" Ball
Drum Bearings (Extreme Duty)	2 1/2" Double Spherical	2 1/2" Double Spherical	2 1/2" Double Spherical
Drum Shaft (Replaceable)	2 1/2"	2 1/2"	2 1/2"
Transport Width	12'6"	12'6"	12'6"
Transport Length	58'	60'	62'
Transport Height	124"	124"	124"
Working Weight (Heavy Duty)	28,210 lbs	30,030 lbs	31,850 lbs
Weight per ft	455 lbs/ft	455 lbs/ft	455 lbs/ft
Hitch Pole Construction	6 x 3 x .250	6 x 3 x .250	6 x 3 x .250
Center Frame Construction	6 x 4 x .250	6 x 4 x .250	6 x 4 x .250
Wing Frame Construction	6 x 4 x .250	6 x 4 x .250	6 x 4 x .250
Wing Pins	1 3/4" Hardened w Chrome	1 3/4" Hardened w Chrome	1 3/4" Hardened w Chrome
Diagonal Brace Arm Construction	3 x 3 x .250, 1" plate	3 x 3 x .250, 1" plate	3 x 3 x .250, 1" plate
Hydraulics - Hydraulic Hitch	2x 3" x 6", 1 3/8" shaft	2x 3" x 6", 1 3/8" shaft	2x 3" x 6", 1 3/8" shaft
Hydraulics - Center Raise	2x 3" x 10", 1 3/8" shaft	2x 3" x 10", 1 3/8" shaft	2x 3" x 10", 1 3/8" shaft
Hydraulics - Mid Raise	2x 3 1/2" x 6", 1 3/8" shaft	2x 3 1/2" x 6", 1 3/8" shaft	2x 3 1/2" x 6", 1 3/8" shaft
Hydraulics - Outer Wing Raise	2x 4" x 20", 1 3/4" shaft	2x 4" x 20", 1 3/4" shaft	2x 4" x 20", 1 3/4" shaft
Hydraulics - Diagonal Arm Lock	2x 2" x 20", 1 1/8" shaft	2x 2" x 20", 1 1/8" shaft	2x 2" x 20", 1 1/8" shaft
Hydraulics - Wheel Turn	2x 2" x 10", 1 1/8" shaft	2x 2" x 10", 1 1/8" shaft	2x 2" x 10", 1 1/8" shaft
Tires (Center Frame)	235/80R16, 10 ply	235/80R16, 10 ply	235/80R16, 10 ply
Tires (Outer Wing)	235/80R16, 10 ply	235/80R16, 10 ply	235/80R16, 10 ply
Tires (Mid Wing)			
Tires (Extreme duty)	235/80R16, 14ply	235/80R16, 14ply	235/80R16, 14ply
Extreme Duty Drum	7/8" (min 21mm)	7/8" (min 21mm)	7/8" (min 21mm)
Extreme Duty Additional Wt/FT	108 lbs	108 lbs	108 lbs
Floating Hitch	Std (Hydraulic)	Std (Hydraulic)	Std (Hydraulic)
Mud Scraper	optional	optional	optional
Water Fill Kit	optional	optional	optional
Safety Lights	Std	Std	Std



5. SAFETY

SAFETY ALERT SYMBOL

This Safety Alert symbol means:
ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert symbol identifies important safety messages on the Ag Shield Land Roller and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.



3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

- DANGER** - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components, which for functional purposes, cannot be guarded.
- WARNING** - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.
- CAUTION** - Indicates a potentially hazardous situation that, if not avoided, could result in minor injury. It may also be used to alert against unsafe practices.

5.1. SAFETY OVERVIEW

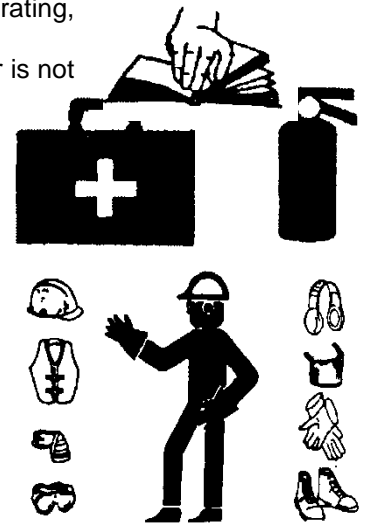
YOU are responsible for the **SAFE** operation and maintenance of your Ag Shield Land Roller. **YOU** must ensure that you and everyone who is going to operate, maintain or work around the Land Roller be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the Land Roller.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Land Roller owners must give operating instructions to operators or employees before allowing them to operate the Land Roller, and at least annually thereafter per OSHA regulation 1928.57.
- The most important safety device on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Think **SAFETY!** Work **SAFELY!**

5.2. GENERAL SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, adjusting or transporting the Land Roller.
2. Only trained competent persons shall operate the Land Roller. An untrained operator is not qualified to operate the machine.
3. Have a first-aid kit available for use should the need arise and know how to use it.
4. Have a fire extinguisher available for use should the need arise and know how to use it.
5. Do not allow riders.
6. Wear appropriate protective gear. This list includes but is not limited to:
 - a. A hard hat
 - b. Protective shoes with slip resistant soles
 - c. Protective glasses or goggles
 - d. Heavy gloves
 - e. Hearing protection
7. Stop the engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
8. Review safety related items with all personnel annually.

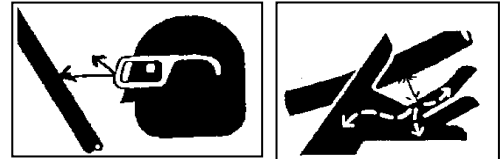


5.3. MAINTENANCE SAFETY

1. Review the Operators Manual and all safety items before working with, maintaining or operating the Land Roller.
2. Stop the tractor engine, place all controls in neutral, set park brake, remove ignition key, wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Before applying pressure to a hydraulic system, make sure all components are tight and that steel lines, hoses and couplings are not damaged.
4. Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.
5. Keep hands, feet, clothing and hair away from all moving and/or rotating parts.
6. Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
7. Place stands or blocks under the frame before working beneath the machine.

5.4. HYDRAULIC SAFETY

- 1) Always place all tractor hydraulic controls in the off position before dismounting.
- 2) Make sure that all components in the hydraulic system are kept in good condition and are clean.
- 3) Replace any worn, cut, abraded, flattened or crimped hoses and steel lines.
- 4) Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tape, clamps or cements. The hydraulic system operates under extremely high-pressure. Such repairs can fail suddenly and create a hazardous and unsafe condition.
- 5) Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.
- 6) If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.



5.5. STORAGE SAFETY

1. Store unit in an area away from human activity.
2. Do not permit children to play on or around the stored Land Roller.
3. Store in a lower position so persons cannot be injured, or property cannot be damaged by mechanical failure.

5.6. TRANSPORT SAFETY

1. Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when operating the Land Roller in the field and/or on the road.
2. Check with local authorities regarding machinery transport on public roads. Obey all applicable laws and regulations.
3. Always travel at a safe speed. Use caution when making corners or meeting traffic.
4. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic. Daybreak and dusk are particularly dangerous and pilot vehicles are recommended.
5. Ensure that the Land Roller is hitched positively to the towing vehicle. Always use a safety chain between the machine and the tractor.
6. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder, if permitted by law.
7. Always use hazard warning flashers on the Land Roller when transporting unless prohibited by law.
8. Install cylinder stops/transport lock brackets and close valves in hydraulic lines before transporting or working under the frame.
9. It is recommended that only 3/4 tonne or larger capacity trucks be used for towing on the road. This size of truck plus careful driving will provide recommended stability and control when towing.

5.7. TIRE SAFETY

1. Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion, which may result in serious injury or death.
2. Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.
3. Have a qualified tire dealer or repair service perform required tire maintenance.
4. Operate the tires at the pressures, loads, and speeds suggested by the manufacturer.
5. Operate the tires at the pressures, loads, and speeds suggested by the manufacturer.

5.8. IN FIELD OPERATION

1. Read and understand the Operator's Manual and all safety signs before using.
2. Lower machine to the ground, place all controls in neutral, stop engine, set park brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Keep hands, feet, hair and clothing away from all moving and/or rotating parts
4. Be familiar with all potential hazards: trees, rocks, ditches, gullies, etc. Plan your route to avoid hazards. Keep Land Roller width in mind when maneuvering to avoid obstacles.
5. Fasten seatbelt.
6. Max speed of 10 km/hr (6 MPH).
7. Be aware of sharp turns/jackknifing.
8. Be aware of surroundings and blind spots when reversing.
9. DO NOT exceed max hitch weight capabilities of your tractor.
10. Attach safety chains.
11. Make certain the tractor pin fits hitch perfectly.
12. Do not allow riders on the Land Roller or tractor during operation or transporting.
13. Clear the area of all bystanders, especially children, before starting.
14. Stay away from all frames and components when folding or extending. Keep others away.
15. Before applying pressure to the hydraulic system, make sure all components are tight and that steel lines, hoses and couplings are not damaged.
16. Review safety instructions annually

5.9. SAFETY DECALS

The various safety decals, and their locations on the equipment are shown in the illustrations to follow. Good safety practices require familiarizing yourself with the decals. Read the warning messages, and note the area, or specific function related to that area, that the decal highlights. If safety decals have been damaged, removed, become illegible, or replacement parts do not have the decal; new ones must be applied. Safety decals are available from your authorized dealer. Ag Shield reserves the right to update safety decals without notice. Safety decals may not be to scale or exactly as shown.



6. Setup from Shipping Mode

6.1. TRUCK SHIPPING

There are many variations to truck shipping Refer to instructions delivered with your shipment
Items required or preferred for setup

1. Forklift rated 6000 pounds or more.
2. Tractor with hydraulic system to raise and lower the machine, as required.
3. Hand tools

Examples of the four (4) point hitch lift setup



6.2. TOWED OUT SHIPPING

Towed out units should be field ready, Follow the inspection instructions included in this manual.

7.MAINTENANCE

General

- Repack the wheel hubs after the first 500 travel miles; then yearly thereafter.
- Visually inspect the wheel bolts for tightness each day. (See torque Specifications)

Every 10 hours (Daily)

- Grease all pivot points

Every 100 hours (Monthly)

- Visually inspect hydraulic hoses & fittings for leaks or damage.
- Inspect lighting system and electrical harness for damage.

Annually (or every 300 hours)

- Inspect wheel bearings / hubs and grease.
- Grease roller bearings.
- Check wheel bolts and re-torque.
- Check tire pressure, follow tire manufactures inflation recommendations.
- Visually inspect unit for loose, worn, or damaged components.
-

8. OPERATIONS



DANGER

WATCH FOR PEDESTRIAN TRAFFIC- Rollers will always win and pedestrians will lose the battle with a Land Roller.

8.1. EASIFOLD - FOLDING FROM ROAD TO FIELD.

EasiFold is the standard Ag Shield configuration where each Center wheel is rotated 25 degrees by a hydraulic cylinder, and the operator must then **back up the whole unit** to have the wings fold out behind the center section to the field position.

There are 2-3 hydraulic circuits on all Ag Shield: Land Rollers:

- A. This first circuit (**WHITE / GREEN COLOUR**) hereafter on “Lever 1” that turns the wheels so that a backing up motion will move the Land Roller wings to field position.
 - B. The second circuit (**RED AND BLUE COLOUR**) (Lever2) that raises or lowers the center and outer wheels for road transport and is teed together with the diagonal arm locking function, the hydraulic hitch locking cylinder.
1. Chose a reasonably level location with no bystanders or small children in the vicinity.
 2. Operate the whole unit in a forward direction until the wings are trailing out behind the center section at an equal and perpendicular angle to the center section.



FIGURE 1 WINGS TRAILING DIRECTLY BEHIND & STARTING TO UNFOLD

3. Operate Lever 2 to raise the rollers up ALL the Way to top to allow transport locks to be removed.
4. If so equipped, use lever 3 to raise the leveling blade to the highest position.
5. Set parking brake, place tractor transmission in Neutral, leave the tractor cab tractor.

6. Remove the road transport locks from front floating hitch cylinders.

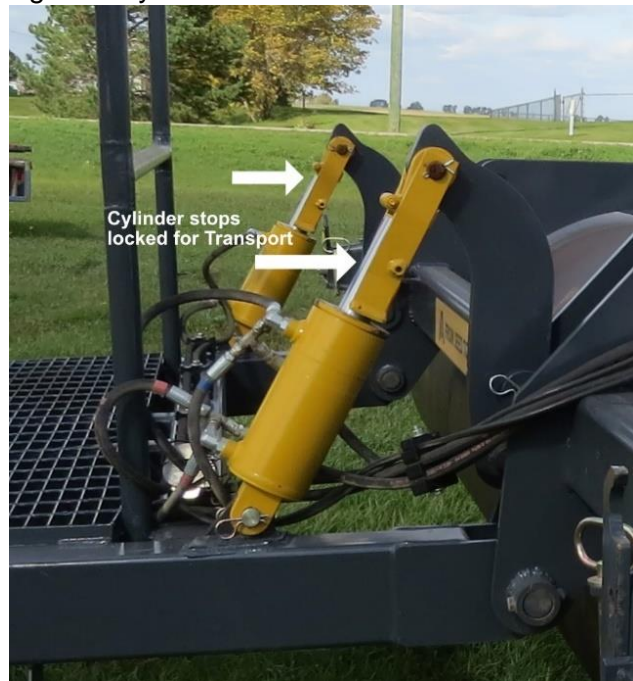


FIGURE 2 CYLINDER LOCKS FOR FLOATING HITCH

7. Remove the Floating Hitch pins and place them into their holders.
8. Unlock the hydraulic valve for the Diagonal Pull Arm

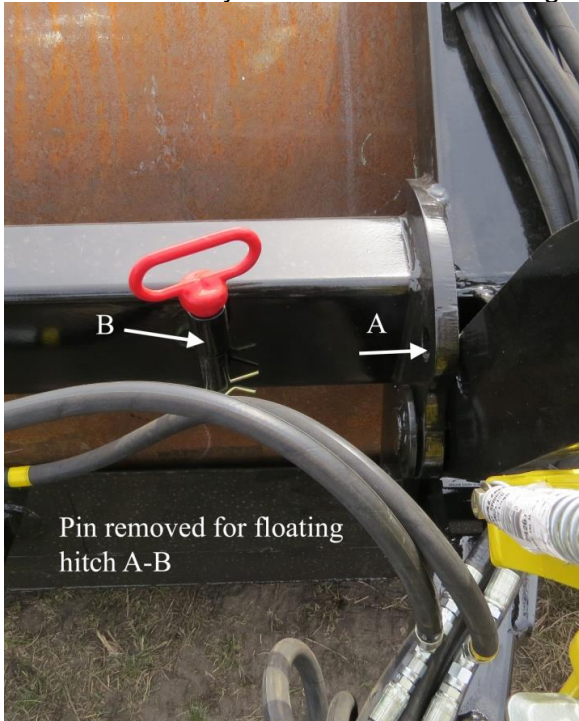


FIGURE 3 FLOATING HITCH PIN REMOVED & HYD VALVE FOR DIAG ARM

9. Unlock the Yellow Rear Transport From Pin A to B
10. Unlock the Center Transport Tire Lift and Turn Circuit Hydraulic Valves.

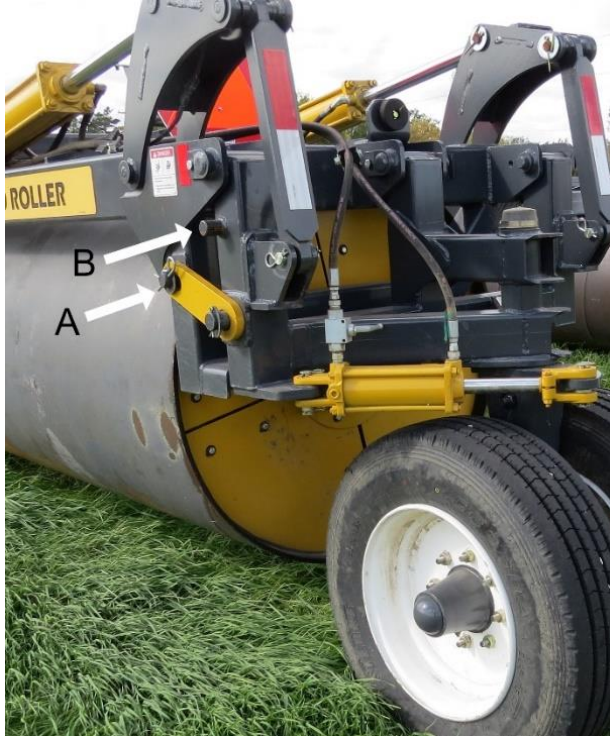


FIGURE 4 REAR TRANSPORT LOCK & CENTER HYD VALVE

11. Remove the Yellow cylinder locks on the center section wheels, both LH and RH.



FIGURE 5 CENTER WHEELS UNLOCKED

12. Repeat Steps 6 Through 11 on the RH side of the machine
13. Enter tractor cab, Slowly begin to back up
14. Operate lever 1 to rotate the outer wheels to Approx 25 degrees on the cylinder.
15. Carefully back up the unit until the wings are running parallel with the center section DO NOT CONTINUE TO BACK UP IF ONE WING IS NOT SQUARE. as wheel and frame damage will result. Instead pull ahead and get the 2 wings to be similar then attempt again.
16. Once the machine begins to fold, continue so until the wings come around to the front of the machine.
17. Move lever 2 to lower the rollers to the ground and raise the wheels completely up into field operation position.
18. Observe that the diagonal pulling arms are fully rotated into the slots on front corner of both ends of the center section.
19. Observe that the front floating hitch cylinder has moved to fully retracted position. The hitch is free to float as the roller follows ground contours.
20. Operate lever 2 to turn the center wheels to field position.
21. Set parking brake, place transmission in neutral, exit the cab.

Normally the locking pins that hold diagonal arms into the slots on front of frame are not required. The diagonal pulling arms will stay in the slots during field work. However, if your tractor hydraulics and field conditions combine to have the diagonal pulling arm rise out of the slots while travelling across the field, now is the time to install the retaining pins above the diagonal pulling bar.



FIGURE 6 PIN FOR DIAGONAL PULL ARM IN LOCKED POSITION

Maximum speed selection depends upon field conditions. Mellow fields with corn root balls and few 8-inch diameter stones may be rolled at 5-8 mph. even less if there are a lot of larger square cornered stones protruding out of the ground. If there are a lot of 8-inch diameter stones, **speeds above 7 mph may dent the rollers.**

8.2. “EASIFOLD” FOLDING FROM FIELD TO ROAD PROCEDURE

1. Choose a reasonably level location with no bystanders or children in the vicinity.
2. Move lever 1 to confirm that the outer wheels are rotated to the road position.
3. If so equipped use lever 3 to raise the leveling blade to the highest position.
4. If diagonal pull arm locks were inserted, set parking brake, place tractor transmission in Neutral, leave the tractor cab tractor, remove the diagonal arm lock pins.
5. Enter tractor cab.
6. Operate Lever 2 to raise the rollers up ALL the Way to top to allow transport locks to be engaged.
7. Observe that the diagonal pull arms have risen to road position.
8. Observe that the front floating hitch cylinder has been fully extended.
9. Set parking brake, place tractor transmission in Neutral, leave the tractor cab tractor,
10. Engage the road transport locks on the front hitch
11. Install the floating hitch pins for transport



FIGURE 7 TRANSPORT LOCKS FOR HITCH

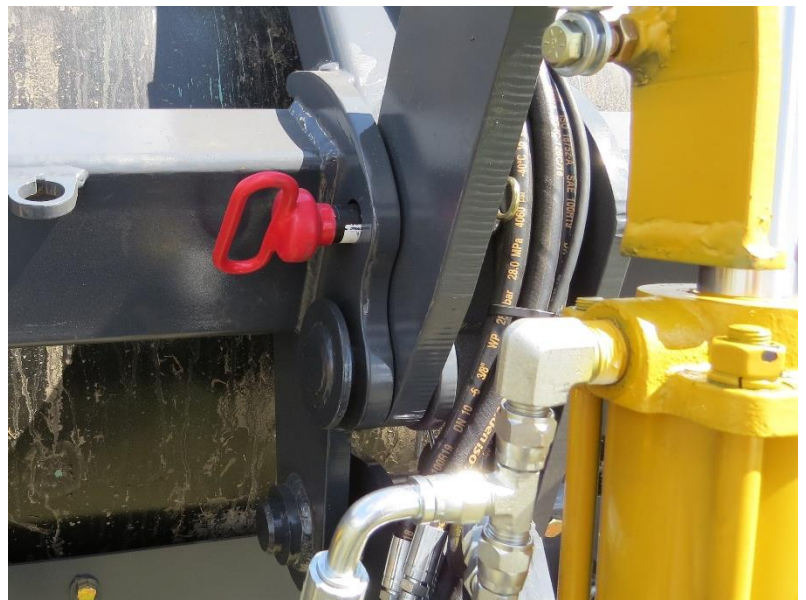


FIGURE 8 FLOATING HITCH PINS LOCKED

12. Move the diagonal arm hydraulic valve into the locked position.
13. Place the outer wheel yellow lock back onto pin A



FIGURE 9 DIAGONAL ARM LOCKED



FIGURE 10 OUTER WHEEL LOCKED IN TRANSPORT

14. Move the Center Wing wheel hydraulic valve to the locked position.

15. Move the center wheel transport locks to the locked position



Repeat Steps 10 through 15 on the RH side of the machine.

16. Enter the cab.

17. Drive forward, observing that the wings trail in behind the center section to the normal 12.5-foot-wide transport width. Continue to next location.

9.PARTS LIST

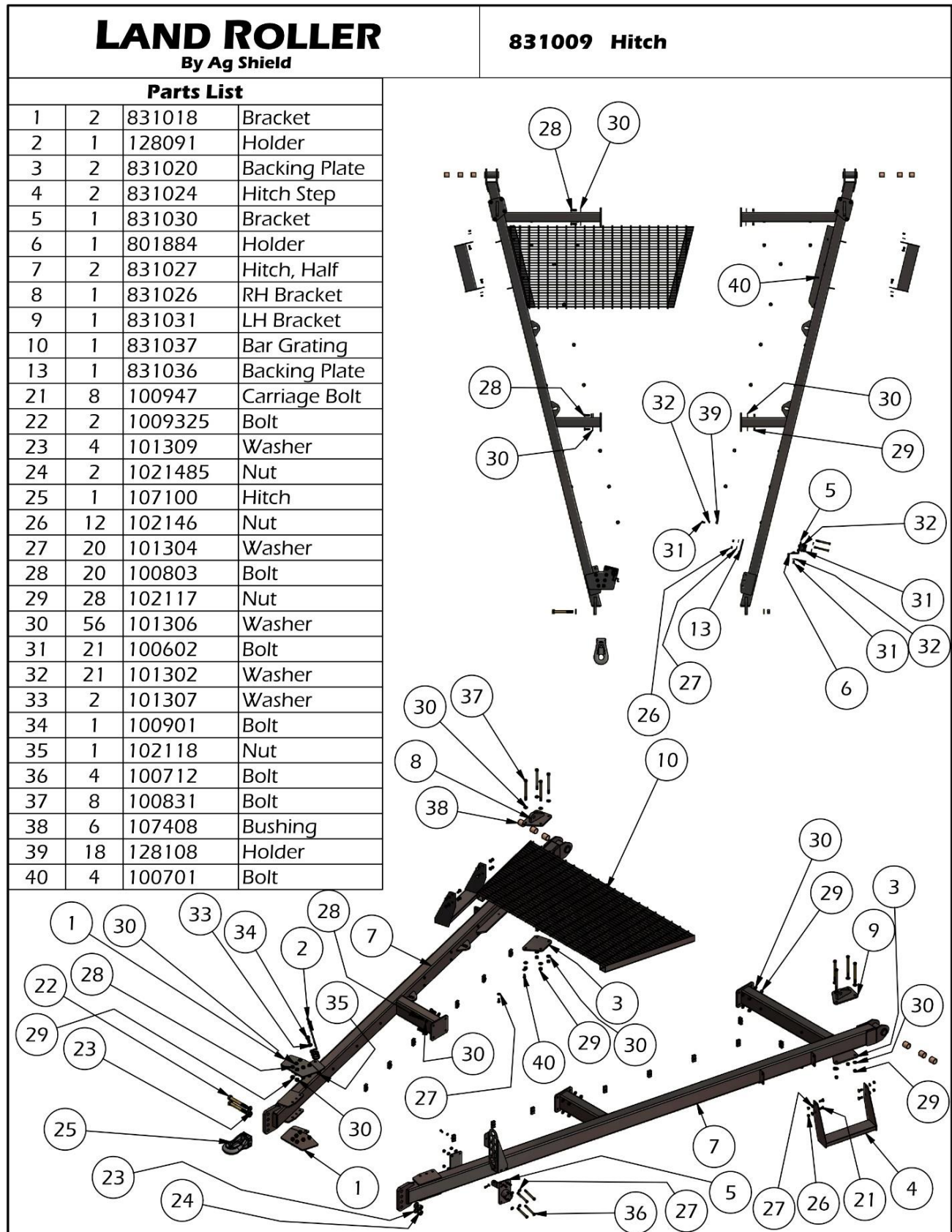
9.1. CENTER SECTION

LAND ROLLER By Ag Shield				801737 Center Section			
Parts List							
1	2	800999	Bearing				
2	1	800106	Shaft				
3	1	803248	Shaft				
4	2	114438	Bushing				
5	2	117342	Cylinder				
6	2	800285	Lock				
7	1	801703	Frame				
8	1	800110	Barrel				
9	2	802086	Bushing				
10	2	104516	Pin				
12	2	105639	Zerk				
16	2	800406	Pin				
20	2	800426	Pin				
23	2	101127	Washer				
24	2	101128	Washer				
25	2	804115	Lock				
26	2	804111	Pin				
27	4	113986	Tire & Wheel				
28	4	113686	Hub				
29	2	800540	Arm				
30	2	104517	Pin				
33	11	800472	Clamp				
35	2	804667	Wear Plate				
36	2	804670	Wear Plate				
37	4	100947	Bolt				
44	1	106010	Acre Meter				
45	32	113655	Lugnut				
46	8	102146	Nut				
47	12	101304	Washer				
48	25	101302	Washer				
49	45	100602	Bolt				
51	8	102117	Nut				
52	16	101306	Washer				
53	8	100814	Bolt				
54	2	102123	Nut				
55	4	100707	Bolt				
56	6	100604	Bolt				
57	2	808262	Cover				
58	8	808263	Cover				
59	32	101405	Washe				
60	2	117324	Pin				
61	4	104099	Hairpin				
62	2	113952	Spring				
63	2	100606	Bolt				
Parts List				64	4	104907	Cotter Pin
				65	2	100614	Bolt

9.2. CENTER ASSEMBLY

LAND ROLLER <small>By Ag Shield</small>				800062 62Ft Complete
Parts List				
1	16	117324	Pin	
2	2	800280	Wheel Lock	
3	2	800426	Pin	
4	4	117339	Cylinder	
5	1	801737	Center Section	
6	2	808150	Knuckle	
7	32	104099	Hairpin	
8	4	801935	Pin	
9	1	831009	Hitch	
10	2	851148	Pin	
11	2	113952	Spring	
12	2	100602	Bolt	
13	6	100606	Bolt	
14	12	101302	Washer	
15	44	101304	Washer	
16	22	102146	Nut	
17	6	100706	Bolt	

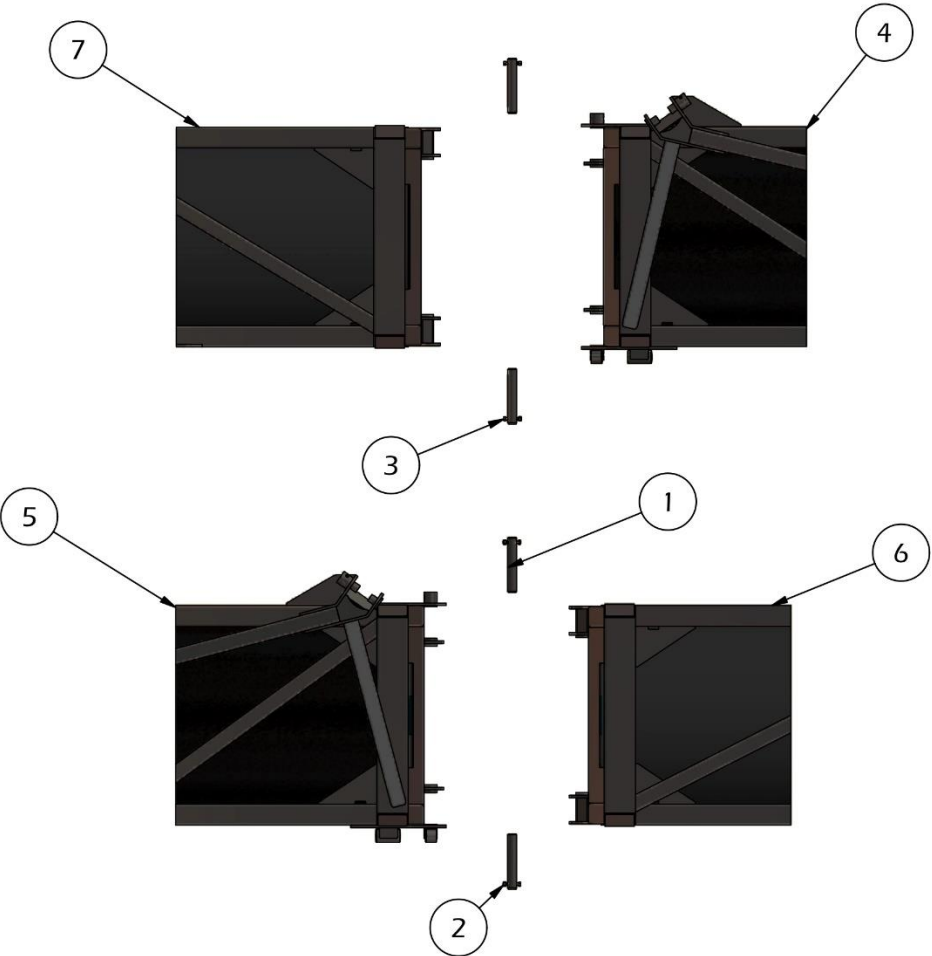
9.3. FRONT HITCH



9.4. WING CONNECTION

LAND ROLLER
By Ag Shield

Wing Connection




Parts List			
1	6	851148	Pin
2	24	102146	Nut
3	8	100705	Bolt
4	1	802006A1	RH Inner Wing
5	1	801355A1	LH Inner Wing
6	1	801728A1	LH Outer Wing
7	1	801726A1	RH Outer Wing

9.5. LH INNER WING



9.6. RH INNER WING

LAND ROLLER By Ag Shield	RH Inner Wing Assembly
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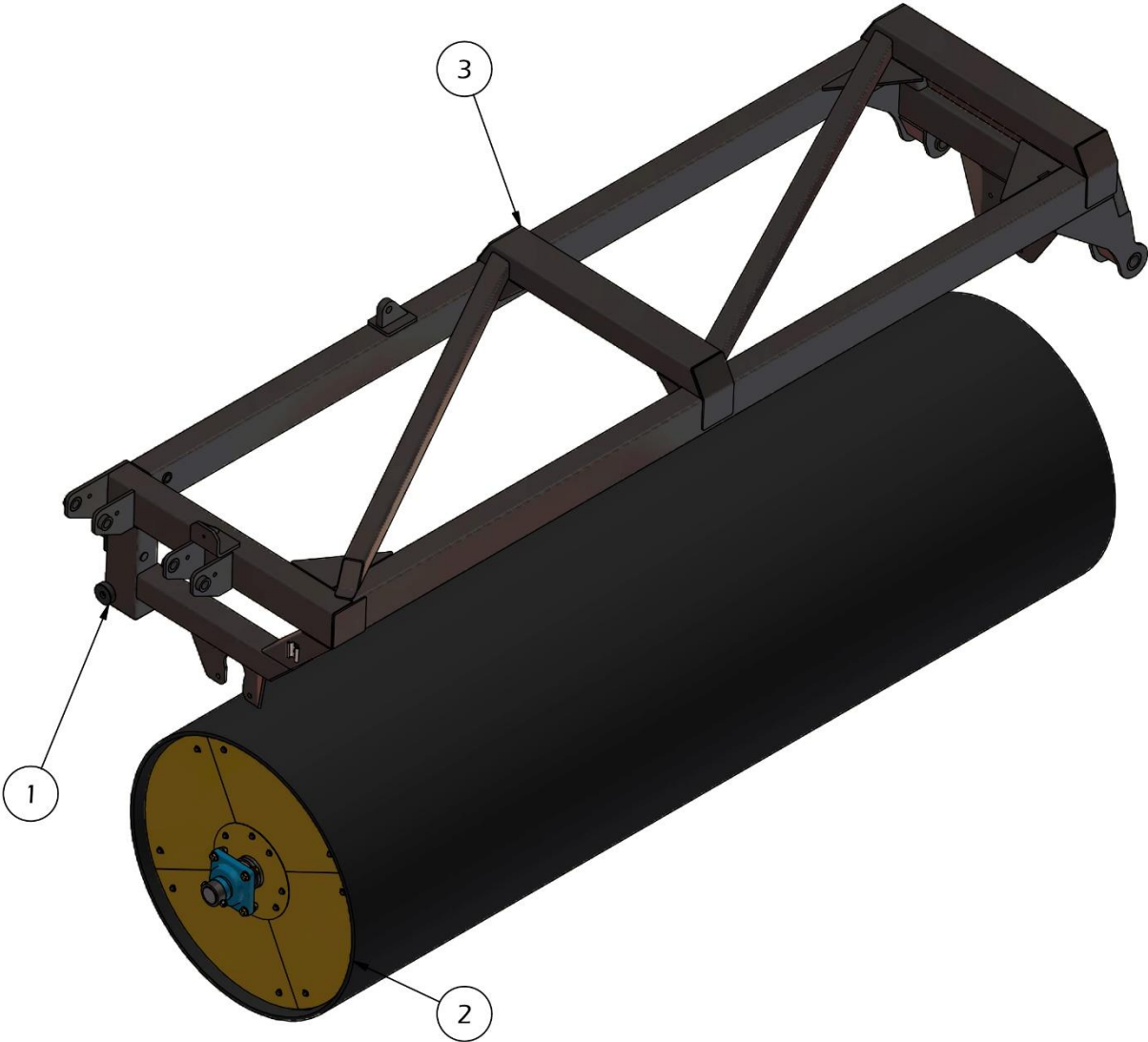
Parts List			
1	1	802025	Barrel
2	1	802021A1	RH Inner Wing Frame

9.7. LH OUTER WING

LAND ROLLER

By Ag Shield

LH Outer Wing Assembly



Parts List			
1	1	800153	Stopper
2	1	801735	Barrel
3	1	801729A1	LH Outer Wing Frame

9.8. RH OUTER WING

<div data-bbox="282 226 678 310" data-label="Section-Header"><p>LAND ROLLER By Ag Shield</p></div>	<div data-bbox="849 247 1230 289" data-label="Section-Header"><p>RH Outer Wing Assembly</p></div>
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A 3D exploded view of the RH Outer Wing Assembly. The assembly consists of three main components: 1. The RH Outer Wing Frame (part 801727A1), a dark grey metal structure with a triangular bracing pattern. 2. The Barrel (part 801724), a large black cylindrical roller with a yellowish-brown end plate featuring a central blue hub. 3. The Stopper (part 800153), a small black pin-like component. Callout lines with circled numbers 1, 2, and 3 point to the frame, barrel, and stopper respectively.

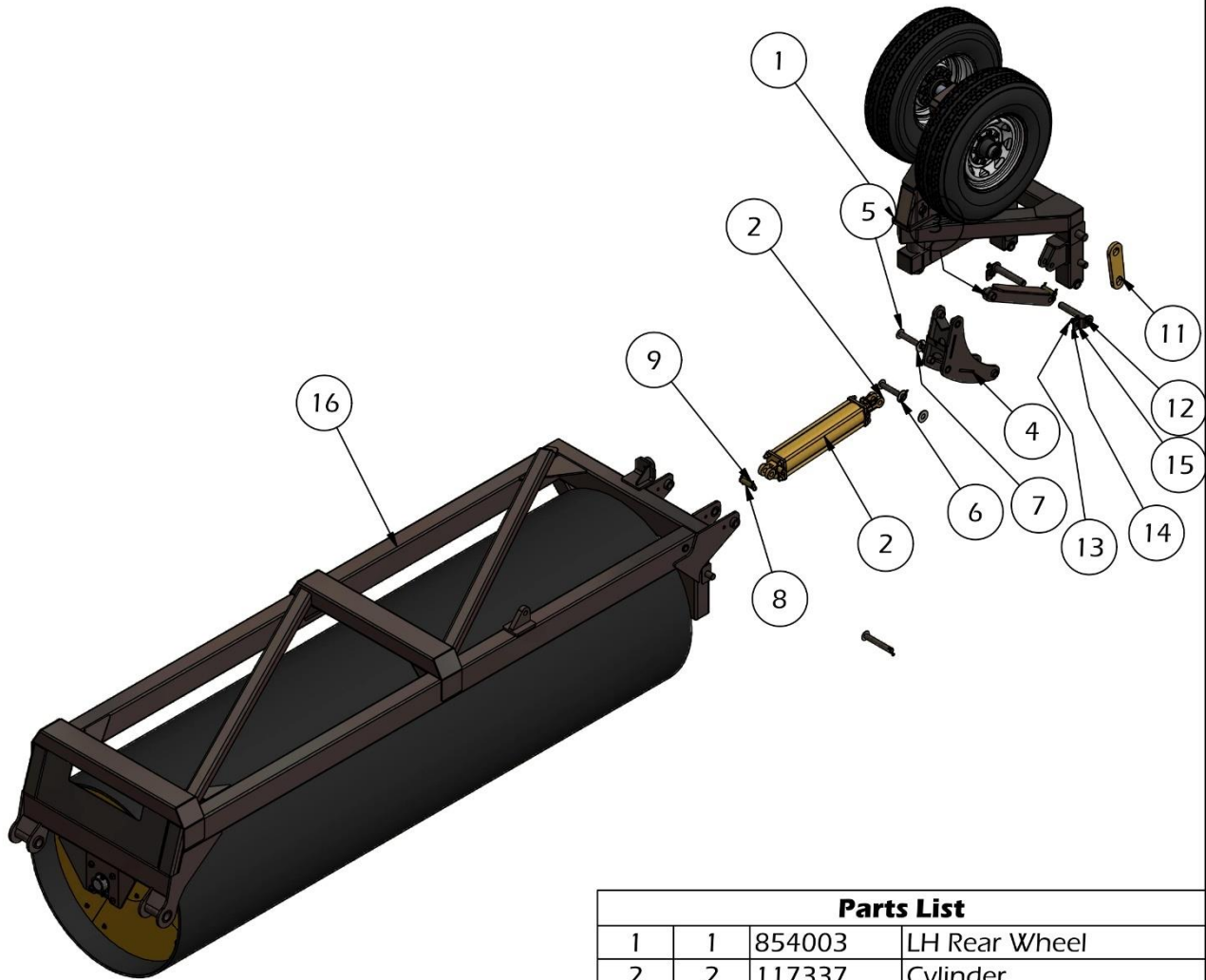
Parts List			
1	1	801727A1	RH Outer Wing Frame
2	1	801724	Barrel
3	1	800153	Stopper

9.9. LH OUTER WHEEL

LAND ROLLER

By Ag Shield

LH Outer Wheel



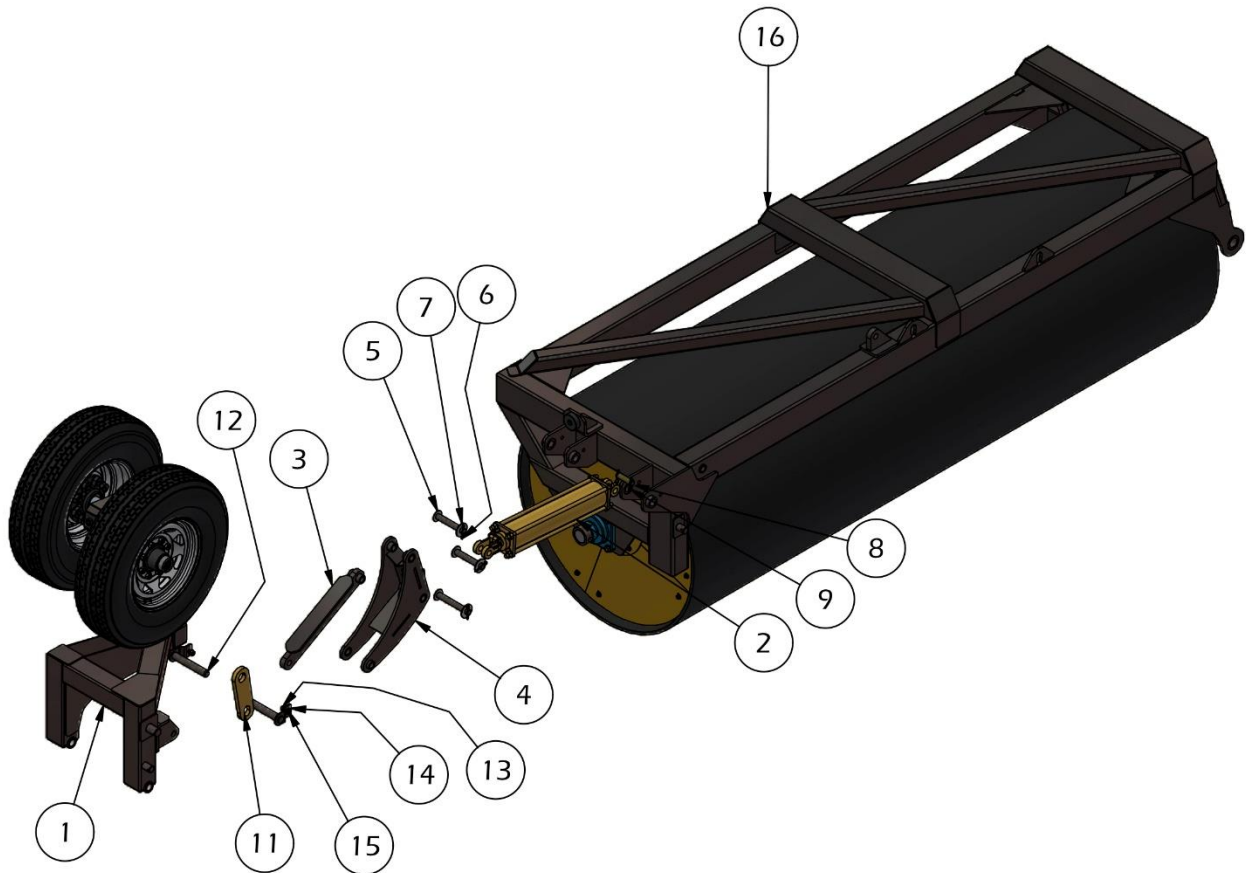
Parts List

1	1	854003	LH Rear Wheel
2	2	117337	Cylinder
3	2	800485	Link
4	2	801600	T-Link
5	4	800415	Pin
6	12	104907	Cotter Pin
7	6	101110	Washer
8	9	117324	Pin
9	18	104099	Hairpin
10	4	801927	Pin
11	2	808242	Lock Bar
12	4	811091	Pin
13	24	102146	Nut
14	32	101304	Washer
15	4	100702	Bolt
16	1	801728A1	LH Outer Wing

9.10. RH OUTER WHEEL

LAND ROLLER By Ag Shield

RH Outer Wheel



Parts List

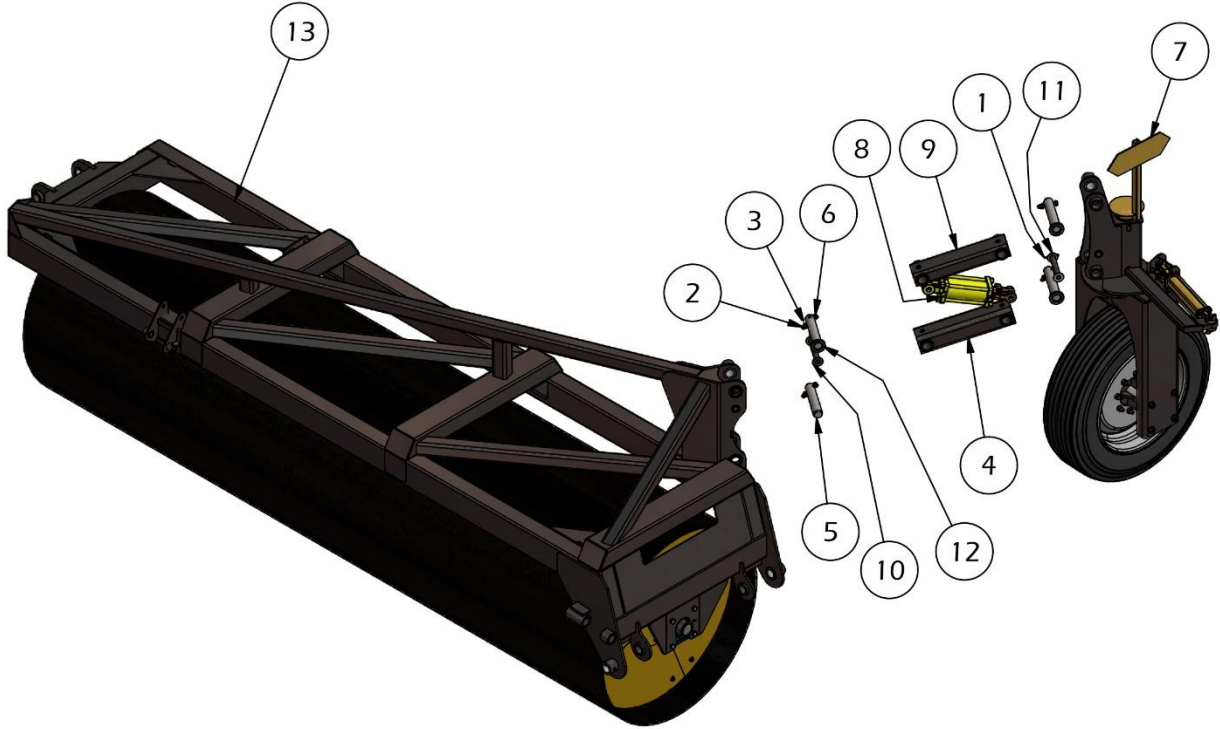
1	1	854002	RH Rear Wheel Frame
2	2	117337	Cylinder
3	2	800485	Link
4	2	801600	T-Link
5	4	800415	Pin
6	12	104907	Cotter Pin
7	6	101110	Washer
8	9	117324	Pin
9	18	104099	Hairpin
10	4	801927	Pin
11	2	808242	Lock Bar
12	4	811091	Pin
13	24	102146	Nut
14	32	101304	Washer
15	4	100702	Bolt
16	1	801726A1	RH Outer Wing

9.11. LH INNER WHEEL

LAND ROLLER

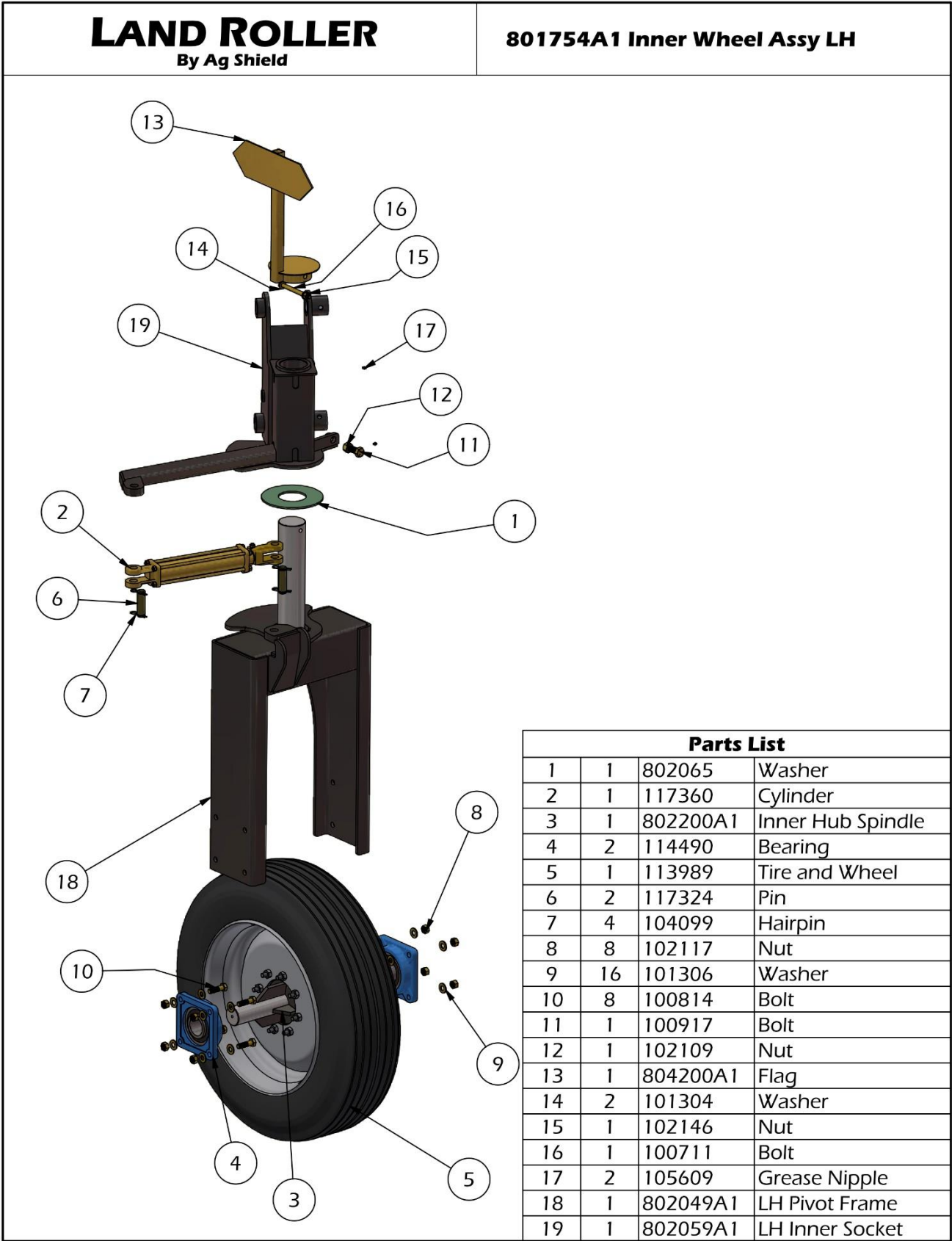
By Ag Shield

LH Inner Wheel



Parts List			
1	12	104907	Cotter Pin
2	24	102146	Nut
3	32	101304	Washer
4	2	801420A1	Inner Wheel Parallel Arm
5	2	853023	Pin
6	12	100706	Bolt
7	1	801754A1	Inner Wheel Assy LH
8	2	117365	Cylinder
9	2	801707A1	Inner Wheel Parallel Arm
10	2	800431A1	Pin
11	4	101309	Washer
12	6	853024	Pin
13	1	801355A1	LH Inner Wing

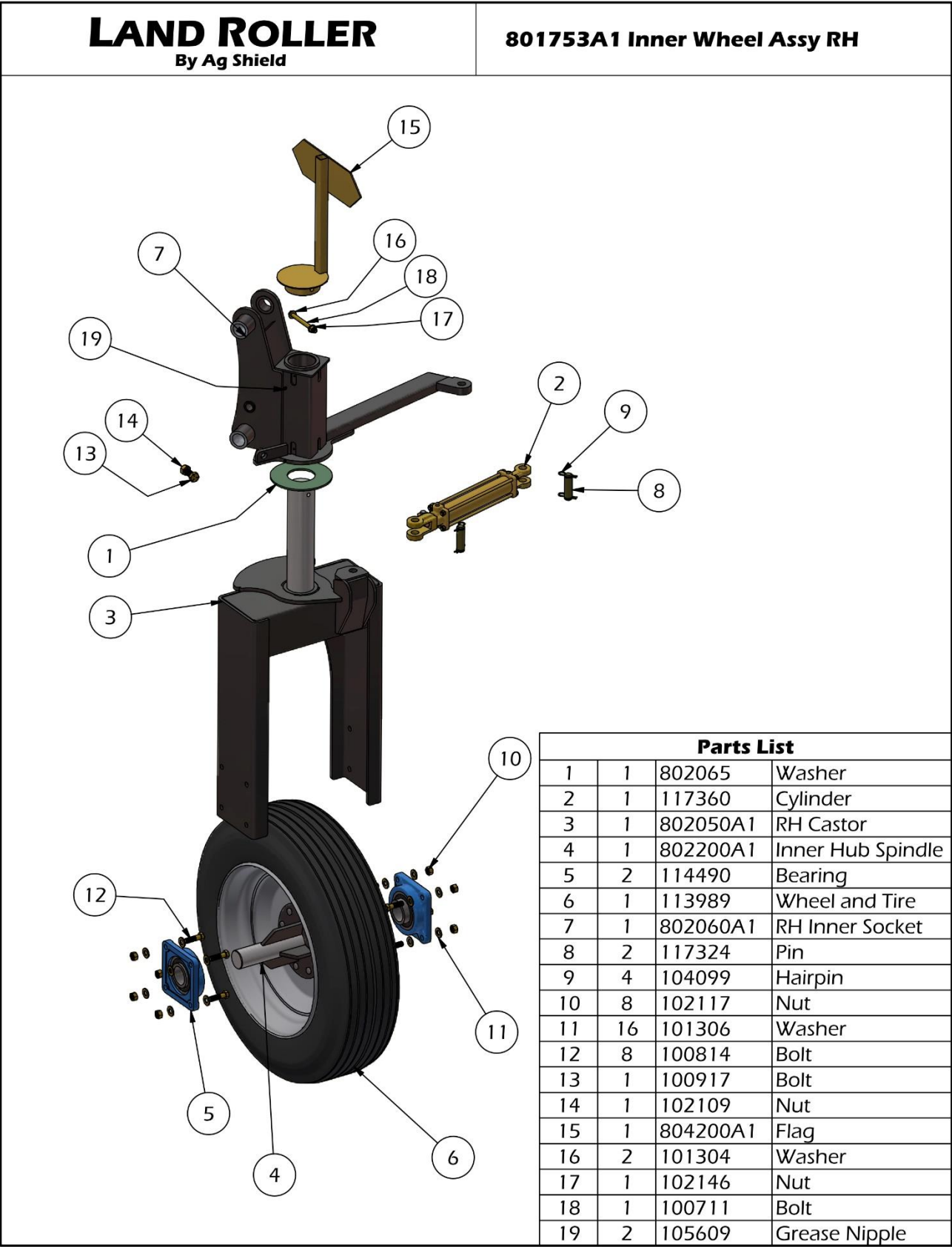
9.12. LH INNER WHEEL ASSEMBLY



9.13. RH INNER WHEEL

LAND ROLLER By Ag Shield		RH Inner Wheel	
Parts List			
1	12	104907	Cotter Pin
2	24	102146	Nut
3	32	101304	Washer
4	2	801420A1	Inner Wheel Parallel Arm
5	2	853023	Pin
6	12	100706	Bolt
7	2	117365	Cylinder
8	2	801707A1	Inner Wheel Parallel Arm
9	2	800431A1	Pin
10	4	101309	Washer
11	6	853024	Pin
12	1	802006A1	RH Inner Wing
13	1	801753A1	Inner Wheel Assy RH

9.14. RH INNER WHEEL ASSEMBLY



9.15. LH REAR WHEEL ASSEMBLY

LAND ROLLER
By Ag Shield

854003 LH Rear Wheel Assy

Exploded view diagram of the LH Rear Wheel Assembly. The diagram shows a main frame with a pivot point (1) and a castor arm (2). A series of bushings (3, 5), washers (4, 6), and a lock plate (8) are shown being assembled onto the pivot. A bolt (7) is shown passing through the assembly. The castor arm (2) is shown with two wheels attached.

Parts List			
1	1	853020	Rear Upper Pivot LH
2	1	854001	Rear Castor
3	4	107403	Bushing
4	1	101127	Washer
5	2	107402	Bushing
6	2	101116	Washer
7	2	100703	Bolt
8	1	853022A1	Lock Plate

9.16. RH REAR WHEEL ASSEMBLY

LAND ROLLER
By Ag Shield

854002 RH Rear Wheel Assy

Exploded view diagram of the RH Rear Wheel Assembly. The diagram shows the main frame (2) with various mounting points. A rear castor (1) is shown below the frame. A bushing (3) is shown at the top of the frame. A washer (4) and a bushing (5) are shown near the castor. A washer (6) and a bolt (7) are shown at the top of the frame. A lock plate (8) is shown at the bottom of the frame.

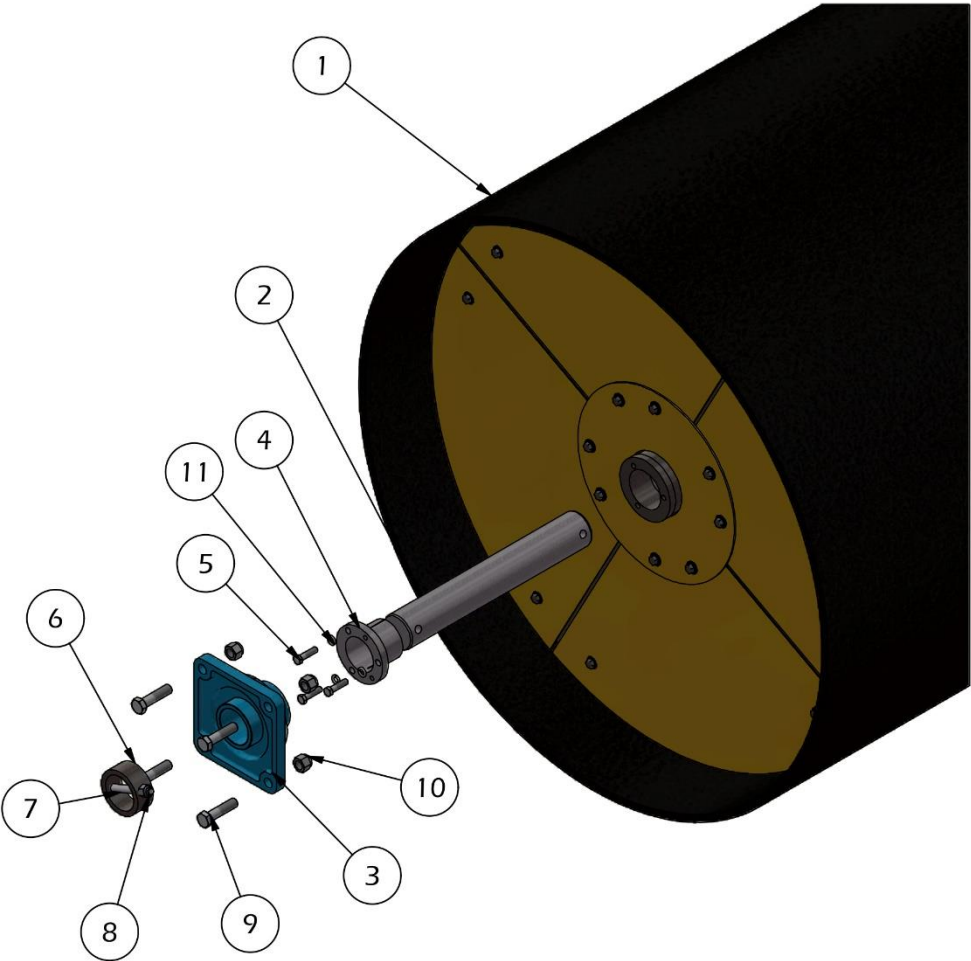
Parts List			
1	1	854001	Rear Castor
2	1	853021	Rear Upper Pivot RH
3	4	107403	Bushing
4	1	101127	Washer
5	2	107402	Bushing
6	2	101116	Washer
7	2	100703	Bolt
8	1	853022A1	Lock Plate

9.17. INNER BEARING ASSEMBLY

LAND ROLLER

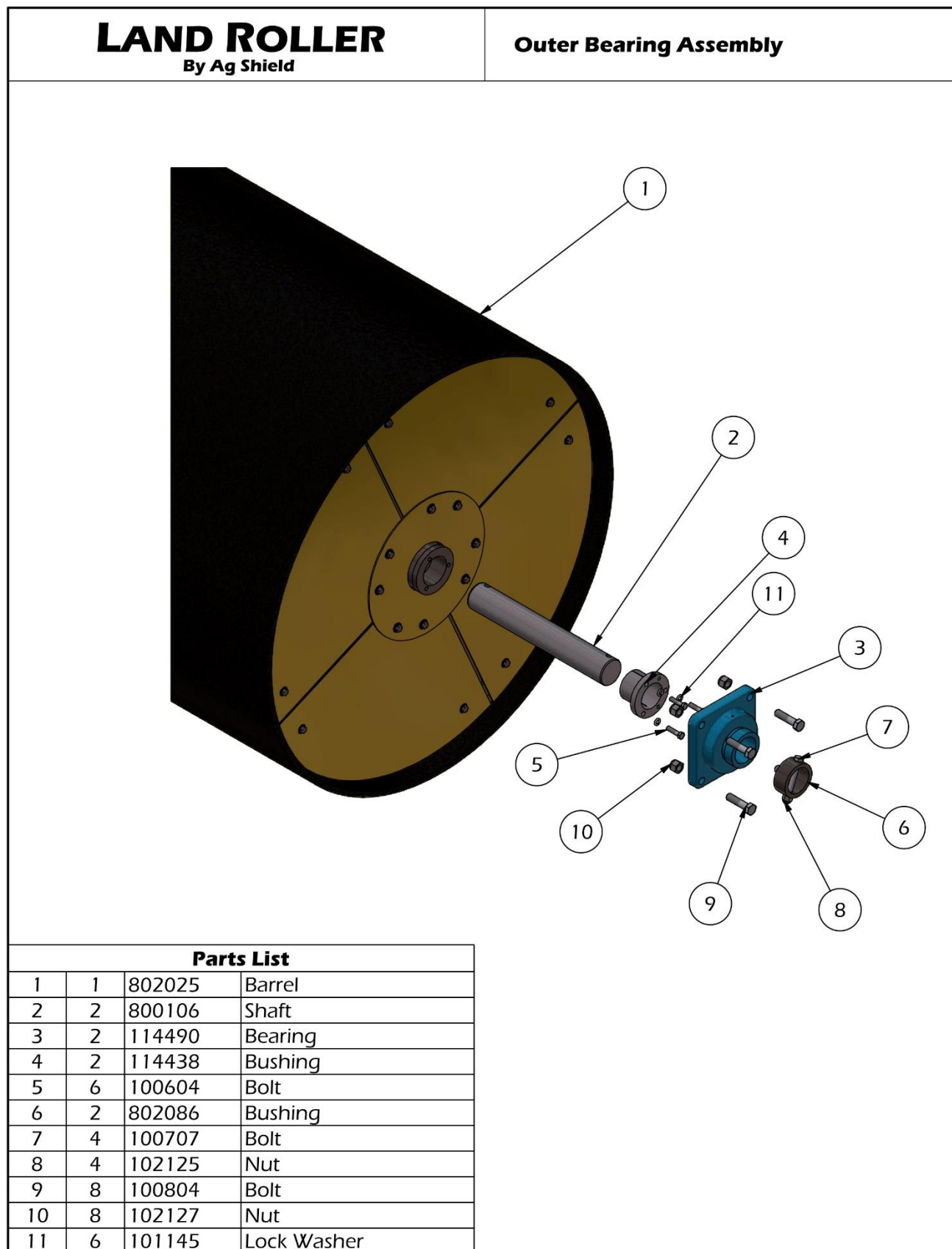
By Ag Shield

Inner Bearing Assembly



Parts List			
1	1	802025	Barrel
2	2	800106	Shaft
3	2	114490	Bearing
4	2	114438	Bushing
5	6	100604	Bolt
6	2	802086	Bushing
7	4	100707	Bolt
8	4	102125	Nut
9	8	100804	Bolt
10	8	102127	Nut
11	6	101145	Lock Washer

9.18. OUTER BEARING ASSEMBLY

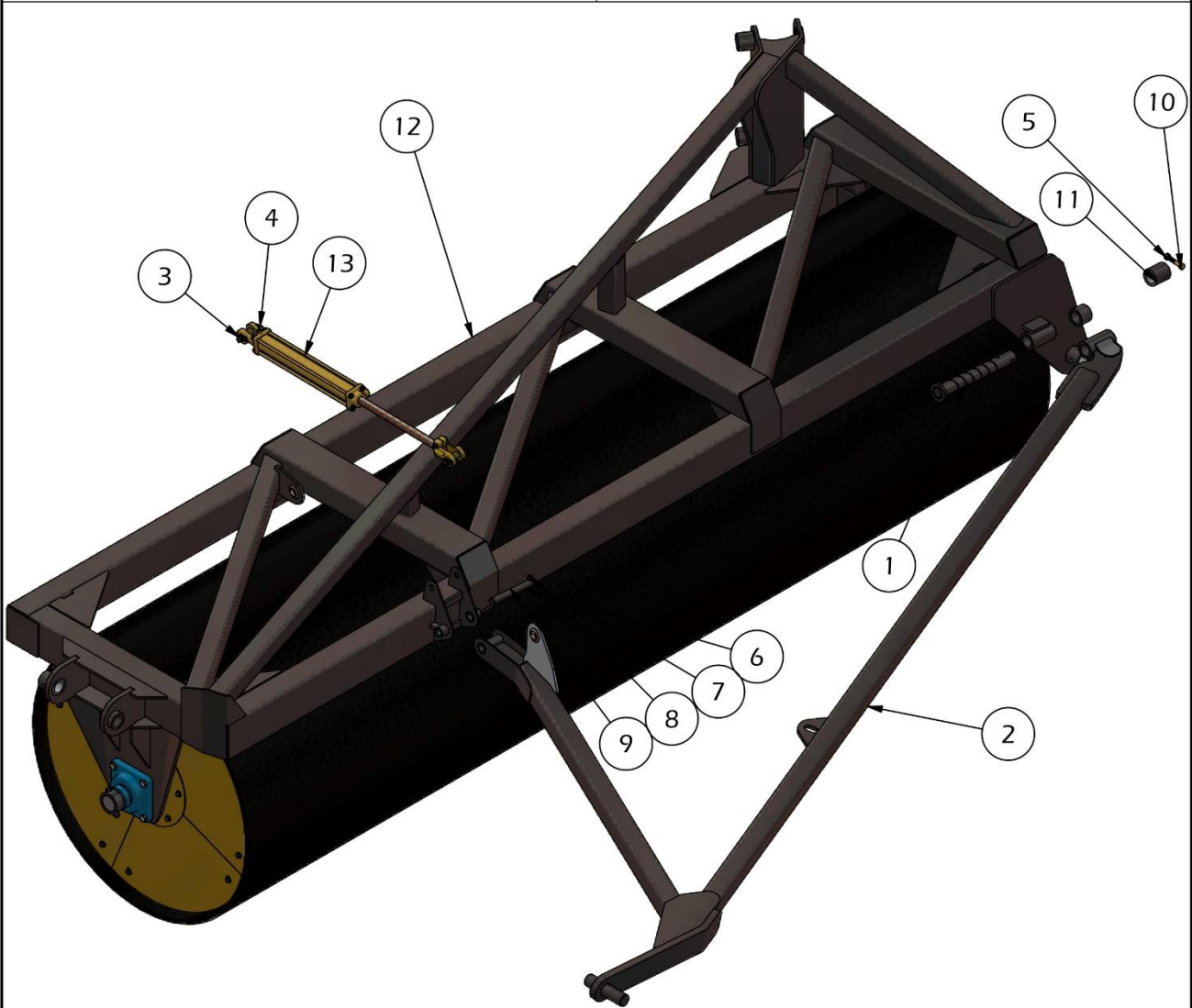


9.19. LH PULL ARM

LAND ROLLER

By Ag Shield

LH Pull Arm



Parts List			
1	6	801935	Pin
2	1	804192A1	Pull Arm
3	9	117324	Pin
4	18	104099	Hairpin
5	24	102146	Nut
6	2	100606	Bolt
7	4	101302	Washer
8	2	102123	Nut
9	2	801812A1	Pin
10	8	100705	Bolt
11	2	851144	Bushing
12	1	801355A1	LH Inner Wing
13	2	117354	Cylinder

9.20. RH PULL ARM

LAND ROLLER
By Ag Shield

RH Pull arm

Exploded view diagram of the RH Pull Arm assembly. The diagram shows the pull arm (2) connecting to the roller frame (1) and the inner wing (12). Various pins, bolts, washers, and a cylinder are shown in their assembly positions, labeled with circled numbers 1 through 13.

Parts List			
1	6	801935	Pin
2	1	804193A1	Pull Arm
3	9	117324	Pin
4	18	104099	Hairpin
5	24	102146	Nut
6	2	100606	Bolt
7	4	101302	Washer
8	2	102123	Nut
9	2	801812A1	Pin
10	8	100705	Bolt
11	2	851144	Bushing
12	1	802006A1	RH Inner Wing
13	2	117354	Cylinder

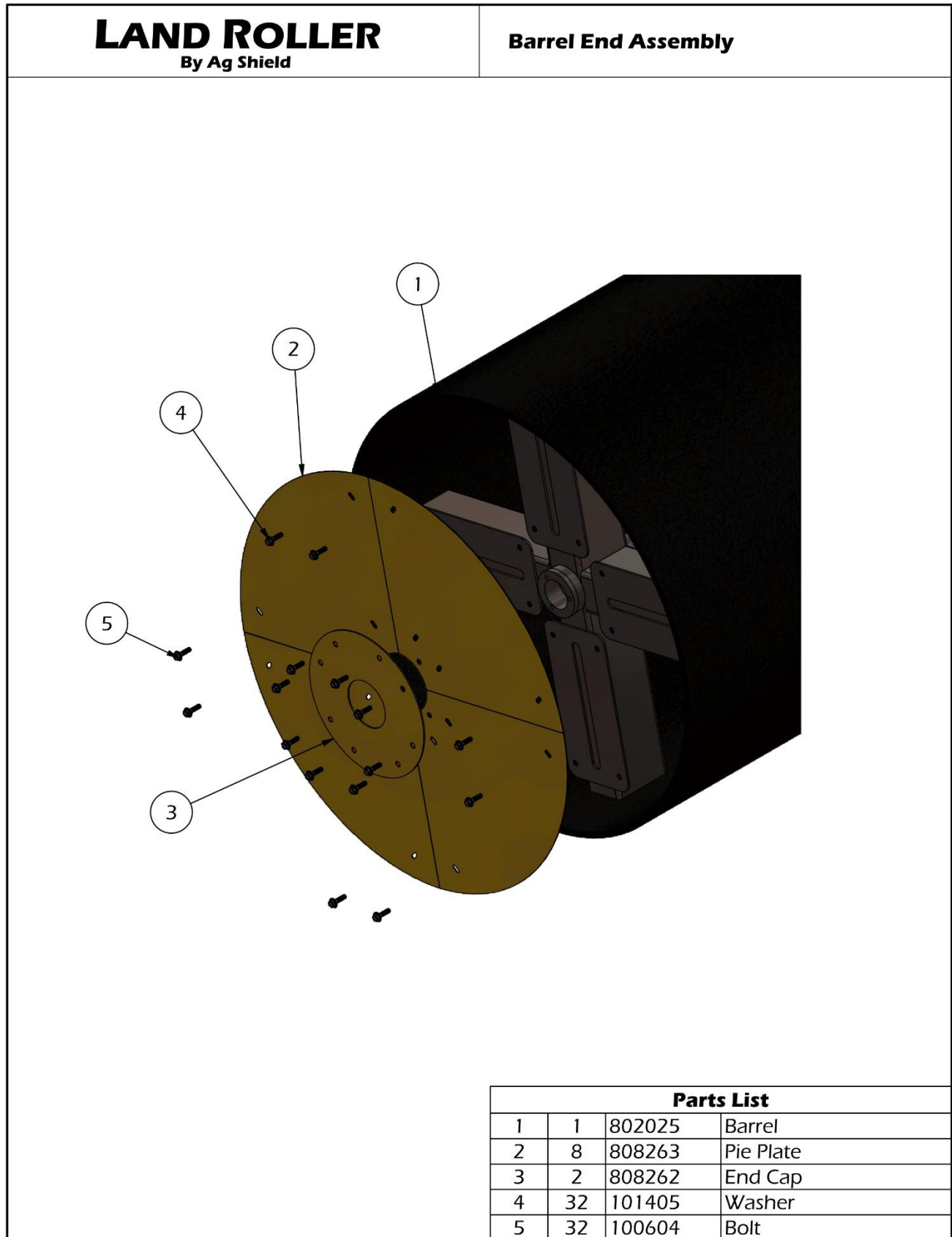
9.21. REAR CASTOR ASSEMBLY

LAND ROLLER
By Ag Shield

854001 Rear Castor Assembly

Parts List			
1	1	853001	Walking Castor
2	2	853006	Rear Castor Walker
3	1	853007	Shaft
4	2	853008	Spindle
5	2	100914	Bolt
6	2	101307	Washer
7	3	102118	Nut
8	1	853009	Shaft
9	1	100903	Bolt
10	2	113686	Hub Assembly
11	2	113986	Tire and Wheel
12	1	808246	Washer

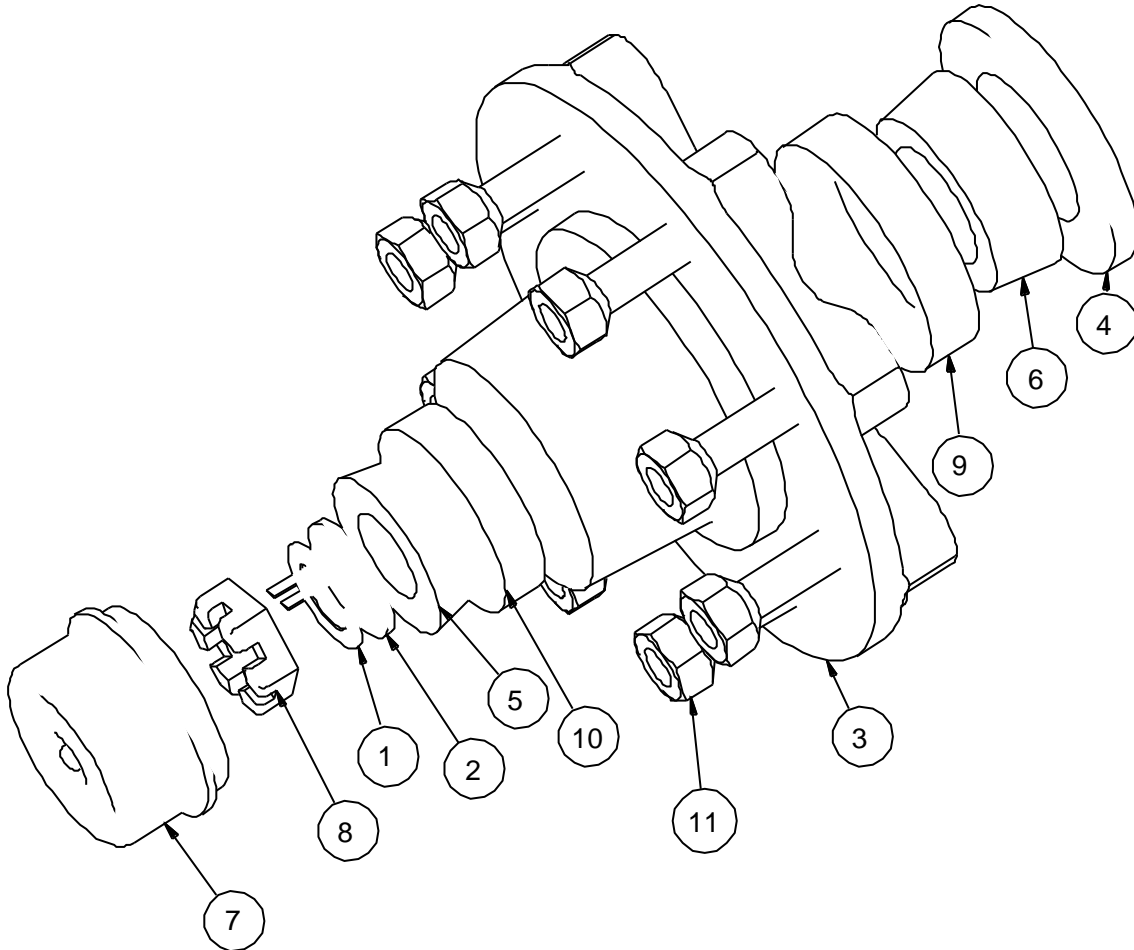
9.22. BARREL END ASSEMBLY



9.23. BOLT HUB ASSEMBLY113686

113686 hub assy 8 bolt 3500 pound hwy

with cup cones caps nut washers



1	1	1136975 washer locking castle nut hub
2	1	1136965 flat washer 1 ID x 1.7OD flat side on hole x .115th
3	1	113686 hub 8 bolt 6 5 bc 3500lb
4	1	113698 plug rubber
5	1	113694 bearing 14125A 3500M 1.25in
6	1	113695 bearing 25580 3500M 1.25in
7	1	113697 grease cap 2.72 OD x 1.53 hg
8	1	1136795 nut castle 1 -14 UNS
9	1	1136955 cup inner 3500M 8 bolt assy 100-2162
10	1	1136945 cup outer 3500M 8 bolt assy 100-2158
11	8	113655 wheel nut 9 16 nf wb40

9.24. HYDRAULIC SCHEMATIC 5 SECTION 62 FT BOOM

800022 Hyd Lift & Fold Circuit - 62ft - 5 Section no Powerfold

TRANSPORT POSITION = RED

FIELD POSITION = BLUE

PIVOT TO FOLD CIRCUIT = GREEN

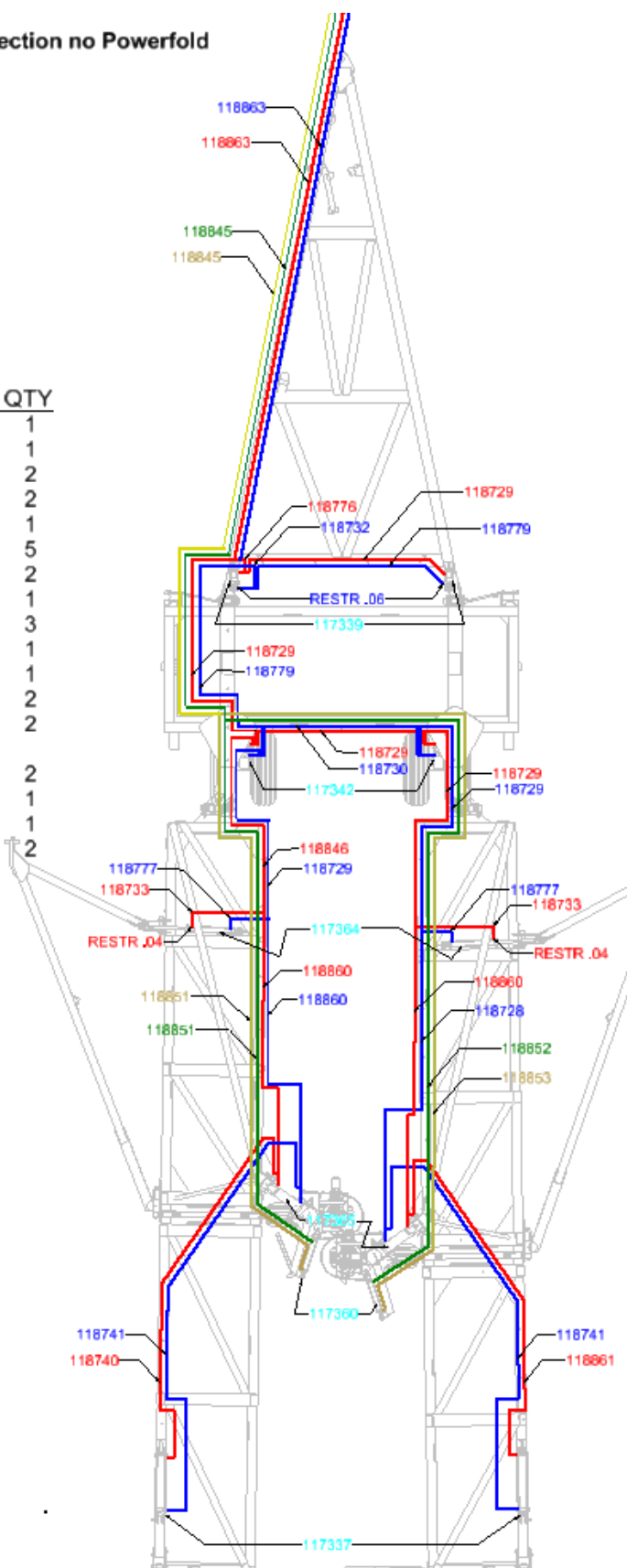
PIVOT TO TRANSPORT CIRCUIT = YELLOW

Hydraulic Hoses

Part	Size	Lgth	End Crimps	QTY
118776	3/8 hose	20"	06JICF x 06JICF	1
118732	3/8 hose	26"	06JICF x 06JICF	1
118777	3/8 hose	35"	06JICF x 06JICF	2
118733	3/8 hose	42"	06JICF x 06JICF	2
118846	3/8 hose	73"	06JICF x 06JICF	1
118729	3/8 hose	90"	06JICF x 06JICF	5
118779	3/8 hose	100"	06JICF x 06JICF	2
118730	3/8 hose	112"	06JICF x 06JICF	1
118860	3/8 hose	142"	06JICF x 06JICF	3
118740	3/8 hose	164"	06JICF x 06JICF	1
118861	3/8 hose	170"	06JICF x 06JICF	1
118741	3/8 hose	195"	06JICF x 06JICF	2
118863	3/8 hose	290"	06JICF x 08MPT	2
118851	1/2 hose	240"	08JICF x 08JICF	2
118852	1/2 hose	348"	08JICF x 08JICF	1
118853	1/2 hose	360"	08JICF x 08JICF	1
118845	1/2 hose	368"	08JICF x 08MPT	2








Hydraulic Cylinders

Part #	Bore	Stroke	QTY
117360	2"	10"	2
117365	3 1/2"	6"	2
117339	3"	6"	2
117364	2"	16"	2
117337	4"	20"	2
117342	3"	10"	2



10. Bolt Grade Chart

Bolt Grade Chart

Specification	Material	Size Range (inches)	Min. Proof Strength (psi)	Min. Tensile Strength (psi)	Min. Yield Strength (psi)	Grade Identification Marking
Grade 1	Low or Medium Carbon Steel	1/4 to 1-1/2	33,000	60,000	36,000	
Grade 2		1/4 to 3/4 7/8 to 1-1/2	55,000 33,000	74,000 60,000	57,000 36,000	
Grade 5	Medium Carbon Steel: Quenched and Tempered	1/4 to 1 1-1/8 to 1-1/2	85,000 74,000	120,000 105,000	92,000 81,000	
A325		1/2 to 1 1-1/8 to 1-1/2	85,000 74,000	120,000 115,000	109,000 99,000	
Grade BC	Medium Carbon Alloy Steel: Quenched and Tempered	1/4 to 2-1/2 2-1/2 to 4	105,000 95,000	125,000 115,000	109,000 99,000	
Grade BD		1/4 to 2-1/2 2-1/2 to 4	120,000 105,000	150,000 140,000	130,000 115,000	
Grade 8		1/4 to 1-1/2	120,000	150,000	130,000	
Grade 8.2	Low Carbon Boron Steel: Quenched and Tempered	1/2 to 1-1/2	120,000	150,000	130,000	

11. Bolt Torque Chart

Bolt Torque Chart

Nominal Thread Size	Grade 2		Grade 5		Grade 8	
	Clamping Load	Tightening Torque	Clamping Load	Tightening Torque	Clamping Load	Tightening Torque
Coarse Thread						
1/4-20	1,300 lbs	65 in-lbs	2,000 lbs	100 in-lbs	2,850 lbs	143 in-lbs
5/16-18	2,150 lbs	134 in-lbs	3,350 lbs	210 in-lbs	4,700 lbs	305 in-lbs
3/8-16	3,200 lbs	20 ft-lbs	4,950 lbs	31 ft-lbs	6,950 lbs	44 ft-lbs
7/16-14	4,400 lbs	30 ft-lbs	6,800 lbs	50 ft-lbs	9,600 lbs	70 ft-lbs
1/2-13	5,850 lbs	49 ft-lbs	9,050 lbs	75 ft-lbs	12,800 lbs	107 ft-lbs
9/16-12	7,500 lbs	70 ft-lbs	11,600 lbs	109 ft-lbs	16,400 lbs	154 ft-lbs
5/8-11	9,300 lbs	97 ft-lbs	14,500 lbs	151 ft-lbs	20,300 lbs	211 ft-lbs
3/4-10	13,800 lbs	173 ft-lbs	21,300 lbs	266 ft-lbs	30,100 lbs	376 ft-lbs
7/8-9	11,425 lbs	166 ft-lbs	29,435 lbs	430 ft-lbs	41,550 lbs	606 ft-lbs
1-8	15,000 lbs	250 ft-lbs	38,600 lbs	640 ft-lbs	54,540 lbs	900 ft-lbs
Fine Thread						
1/4-28	1,500 lbs	75 in-lbs	2,300 lbs	115 in-lbs	3,250 lbs	163 in-lbs
5/16-24	2,400 lbs	150 in-lbs	3,700 lbs	230 in-lbs	5,200 lbs	325 in-lbs
3/8-24	3,600 lbs	23 ft-lbs	5,600 lbs	35 ft-lbs	7,900 lbs	50 ft-lbs
7/16-20	4,900 lbs	36 ft-lbs	7,550 lbs	55 ft-lbs	10,700 lbs	78 ft-lbs
1/2-20	6,600 lbs	55 ft-lbs	10,200 lbs	85 ft-lbs	14,400 lbs	120 ft-lbs
9/16-18	8,400 lbs	79 ft-lbs	13,000 lbs	112 ft-lbs	18,300 lbs	172 ft-lbs
5/8-18	10,600 lbs	110 ft-lbs	16,300 lbs	170 ft-lbs	23,000 lbs	240 ft-lbs
3/4-16	15,400 lbs	193 ft-lbs	23,800 lbs	298 ft-lbs	33,600 lbs	420 ft-lbs
7/8-14	12,610 lbs	184 ft-lbs	32,480 lbs	473 ft-lbs	45,855 lbs	668 ft-lbs

12.WARRANTY

1. Ag Shield Manufacturing warrants each new Ag Shield Land Roller to be free from factory defects in material and workmanship under normal use and service, when set up and operated in accordance with factory instructions for one year from the date of delivery to the original purchaser.
2. Ag Shield's obligation under this warranty is limited to the supplying of parts to replace those which are defective due to factory workmanship or material.
3. Your Ag Shield Dealer is responsible for providing warranty labour. Credit for required labour is specifically agreed to on an individual case basis.
4. The warranty is void on any unit which has been tampered with, or modified in any way not authorized in writing by the factory.
5. This warranty is void on any unit which is subject to misuse, negligence or accident, or which has had the serial number tampered or removed.
6. A "Warranty Claim Form" (sample at end of handbook) must be submitted to Ag Shield with returned parts in order for parts to be considered for warranty examination.
7. A warranty registration page from the front of this manual must be returned to the factory in order to qualify for warranty examination.
8. All returned parts must be sent to the factory freight prepaid, and warranty parts will be returned to you freight collect.
9. Replacement parts shipped pending receipt of parts for examination will be invoiced, and remain on your account until such time as examination indicates that a credit for those parts be issued or that payment is due.
10. Parts not returned for warranty examination within 30 days must be paid for at that time. Ag Shield will immediately reimburse any cash paid for items that are later determined defective.
11. Warranty terms and conditions are subject to provincial and state legislation.



AG SHIELD LTD.

BOX 9, BENITO, MANITOBA CANADA R0L 0C0
 Phone 1-800-561-0132 or 204-539-2000 Fax 204-539-2130

www.agshield.com E-mail: sales@agshield.com

WARRANTY CLAIM FORM

Dealer			End User			
Address			Address			
City	State/Prov.		Zip/Postal	City	State/Prov.	Zip/Postal
Date of Sale	Date Failed		Repair Date	Acres/Hours	Model	Serial Number
Labour Hours	Labour Rate	Labour Amount		Parts Must Be Returned To Benito		
Quantity Item	Part #	Description	Price Each	Total Price	Describe The Cause Of Failure And Corrective Action Taken	Approve /Reject
I certify that the information is accurate and That the parts were replaced on the machine			PARTS		Date Parts Rec'd	Rec'd By
			LABOUR		Items To Suppliers	
			TOTAL			

SHADED AREAS AG SHIELD USE ONLY – PLEASE ADD DETAILS FOR ITEM NUMBER ON BACK

ITEM _____

ITEM _____
