

40" PLUG AERATOR



Instruction & Assembly

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

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GENERAL WARNINGS

READ and UNDERSTAND this manual completely before using 40" Plug Aerator.

Operator must read and understand all safety and warning information, operating instructions, maintenance and storage instructions before operating this equipment. Failure to properly operate and maintain the plug aerator could result in serious injury to the operator or bystanders.

Operation Warnings

- Do not at any time carry passengers, sit or stand on the aerator.
- Do not allow children to play on, stand upon or climb on the aerator.
- Always inspect the aerator before using to assure it is in good working condition.
- Replace or repair damaged or worn parts immediately.
- Always check and tighten hardware and assembled parts before operation.
- Do not exceed equipment maximum tray load capacity of 100lb.
- Avoid large holes and ditches when operating the equipment.
- Be careful when operating the aerator on steep grades (hill).
- ALWAYS operate at reduce speed in rough terrain, along creeks, ditches and on hillsides.
- Do not operate close to creeks, ditches and public highways.
- To avoid personal injury and/or equipment damage **DO NOT EXCEED 5MPH.**
- Always use caution when loading and unloading extra weight on the tray.
- Only tow with recommended vehicles (Lawn/Garden Tractors and ATVs).
- Always refer to the vehicle owner's manual for proper towing.
- Aerator is not designed to be used with zero-turn mowers.
- Always secure and lock plug aerator to the vehicle hitch before operating.

Crush and Cut Hazards

- Always keep hands and feet clear from moving parts while operating the equipment.
- Always clear and keep work area clean when operating.
- Always wear safety gear, eye protection, gloves and work boots when operating the aerator.

WARNING

The warnings, cautions, and instructions outlined in this instruction manual cannot cover all possible conditions or situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product and must be supplied by the operator.






PROP 65 WARNING

This product contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

Assembly Is Required

This product requires assembly before use. See "Assembly" section for instructions. Because of the weight and/or size of the 40" plug aerator, it is recommended that another adult be present to assist with the assembly. **INSPECT ALL COMPONENTS** closely upon receipt to make sure no components are missing or damaged.

Hazard Signal Word Definitions

	<p>This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</p>
	<p>DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</p>
	<p>WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p>CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</p>
	<p>CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.</p>

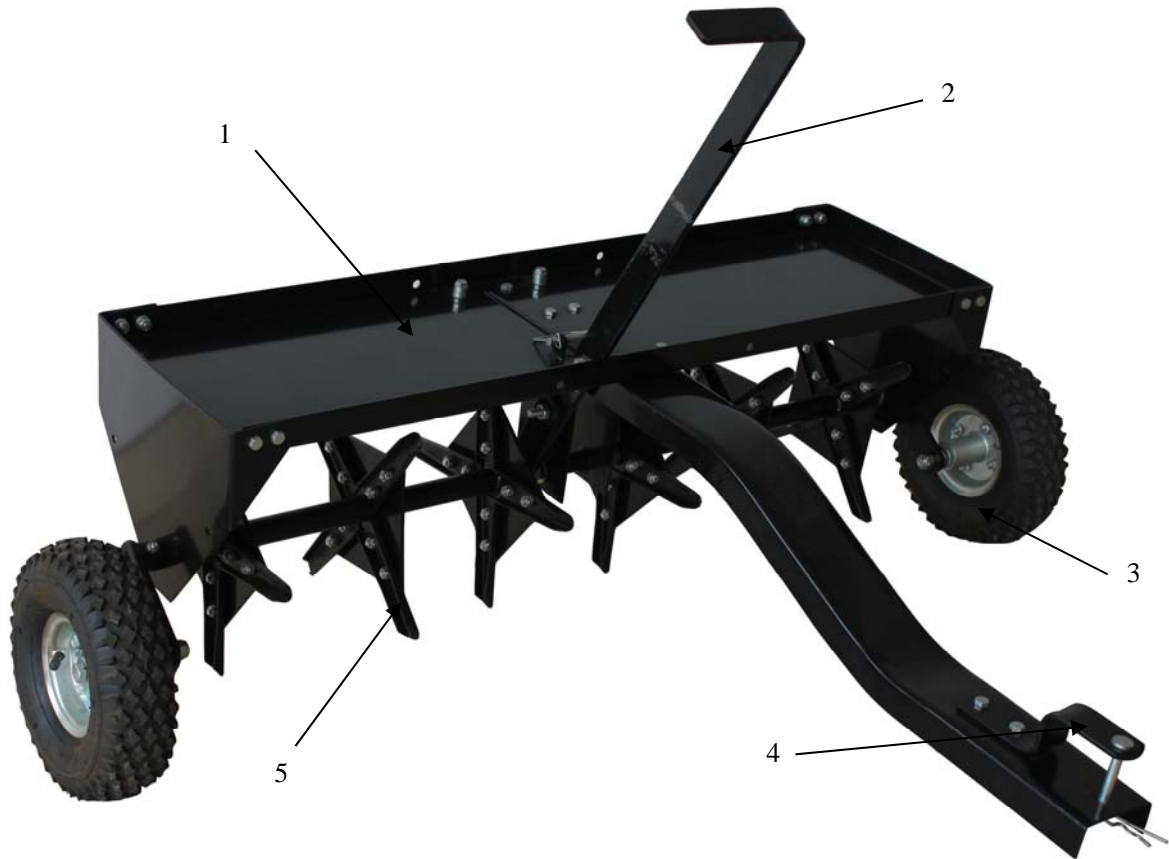
ABOUT YOUR 40" PLUG AERATOR

This 40" plug aerator has a roughed steel construction and is designed to remove soil plugs up to 3" long, allowing for compact soil to be loosen. Plug aerators promote a health lawn by opening up the ground to allow water, air and nutrients to reach your lawns root system. It is ideal for heavy-traffic areas (playgrounds and sports fields) and burned out, drought-damaged lawns. A plug aerator effects will last longer than a spike aerator because of size of hole it creates. The 40" plug aerator features a fully enclosed weight tray to increase the penetration depth. Never exceed the tray's rated loaded capacity of 100lbs when operating the aerator.

Technical specifications on the 40" plug aerator are provided in the "Specifications" section of this manual.

Controls and Features Identification

Read this owner's manual before operating the equipment. Familiarize yourself with the location and function of the controls and features. Save this manual for future reference.



- 1) **Aerator Tray** – Do not exceed maximum load capacity 100lb.
- 2) **Lift Handle** – Positions plug spikes up or down.
- 3) **Tires / Wheel** – Do not exceed the recommended rate 25 PSI.
- 4) **Hitch** – Pin-type design use only with approve vehicles.
- 5) **Plug Spikes** – Pulls small soil plugs from the ground.



CAUTION

Read and follow all instructions for assembly and operation. Failure to properly assemble this equipment could result in serious injury to the user or bystanders, or cause equipment damage.

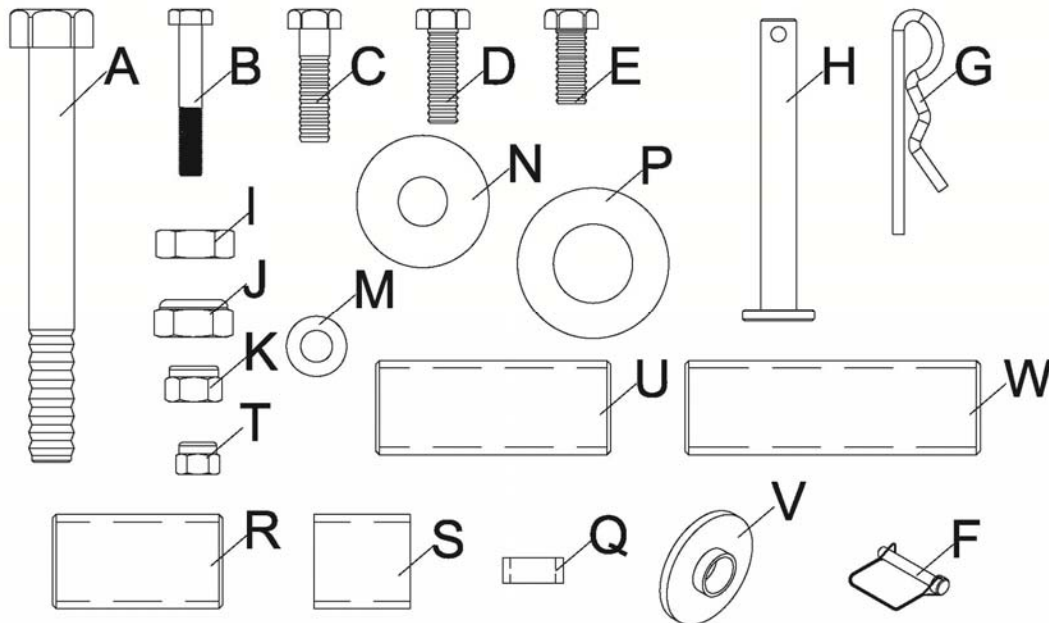
PLUG AERATOR COMPONENT PARTS AND ASSEMBLY

Take all parts out of the shipping crate and inspect components to ensure there are no missing pieces before starting to assemble the plug aerator follow steps 1 through 11.

TOOLS REQUIRED

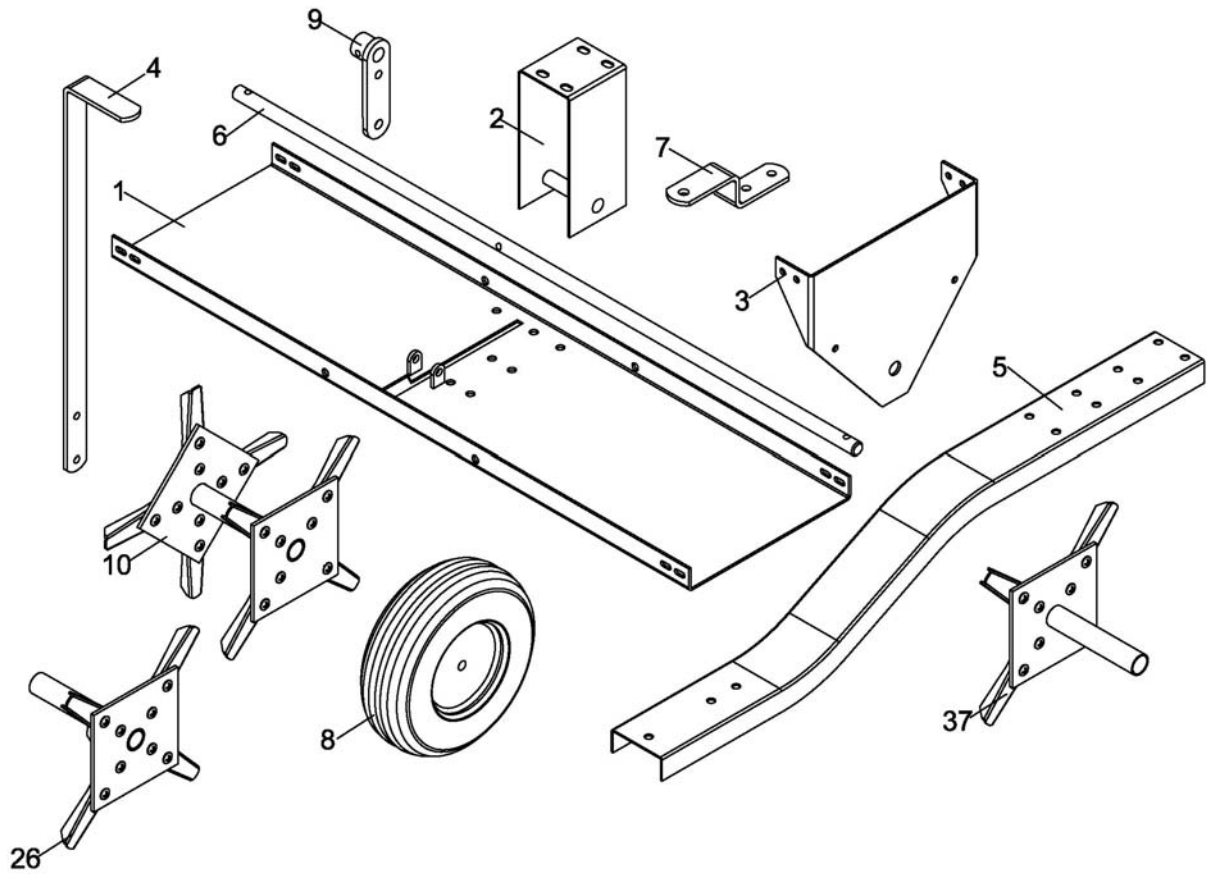
- Rubber or Wooden Hammer
- 7 /16", 1/2" & 3 /4" Wrenches
- Adjustable Wrench
- Pliers

Component and Hardware Parts



Ref#	Description	Qty	Ref#	Description	Qty
A	Hex Bolt M12x110	2	M	Flat Washer Ø8	12
B	Hex Bolt M6x40	3	N	Big Flat Washer Ø12	4
C	Hex Bolt M8x30	6	P	Flat Washer Ø20	4
D	Hex Bolt M8x25	8	Q	1 /4" Spacer	8
E	Hex Bolt M8x20	8	R	1.61" Spacer	1
F	Lock Pin	1	S	0.79" Spacer	1
G	R Pin	1	T	Lock Nut M6	3
H	Hitch Pin	1	U	2.36" Long Spacer	1
I	Hex Nut M12	2	V	Shoulder Spacer	1
J	Lock Nut M12	2	W	2.76" Long Spacer	1
K	Lock Nut M8	22			

Component and Hardware Parts



Ref#	Description	Qty	Ref#	Description	Qty
1	Tray	1	7	Hitch Bracket	1
2	Middle Brace	1	8	Pneumatic Wheel	2
3	End Plate	2	9	Wheel Bracket	3
4	Lift Handle	1	10	Double Plug Spool	2
5	Tongue	1	26	Single Plug Spool (Left)	1
6	Axle Shaft	1	37	Single Plug Spool (Right)	1

Note: you may have extra nuts & bolts when finished.

Assembly Instructions

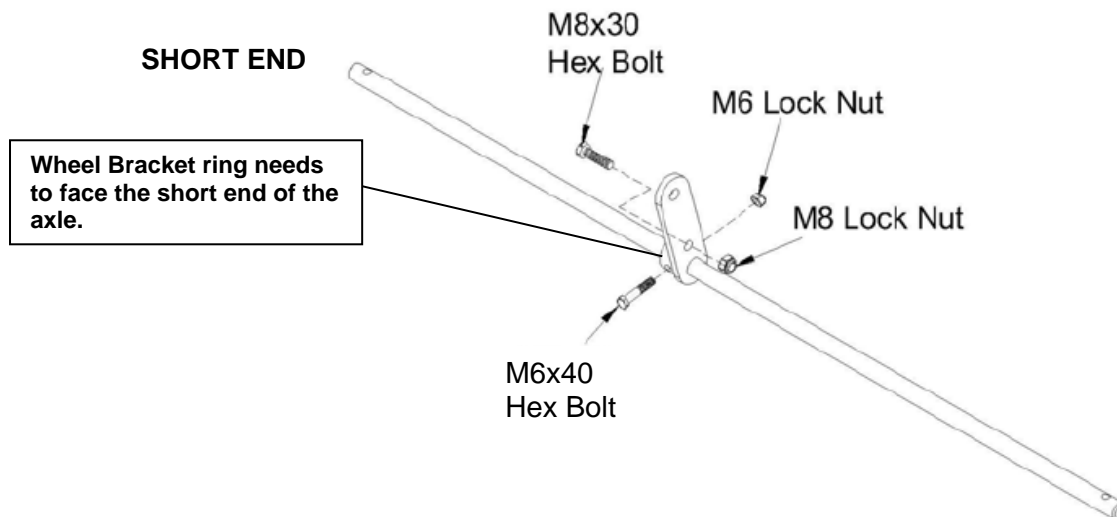


CAUTION

When assembling or using the aerator exercise caution at all times, the plug spikes are sharp and may result in serious injury to the user or bystanders.

STEP 1: Attach Wheel Bracket to the Axle Shaft

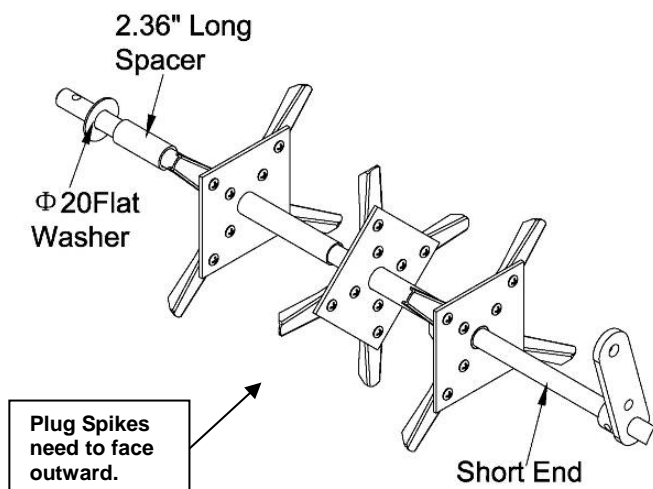
1. Slide the wheel bracket (9) over the axle shaft (6) and position over the center axle hole using M6x40 hex bolt (B) and loosely tighten the M6 lock nut (T).
2. On the short side of the axle shaft insert M8x30 hex bolt (C) into the bottom hole on the wheel bracket (9) and loosely tighten the M8 lock nut (K).



Step 2: Short Side Axle Shaft Assembly

1. Assembly all of the items below onto the short side of the axle shaft in the following order (A through D). Make sure the plug spikes face outward.

- A. Double Plug Spool (10)
- B. Single Plug Spool (Right) (37)
- C. 2.36" Spacer (U)
- D. \varnothing 20 Flat Washer (P)



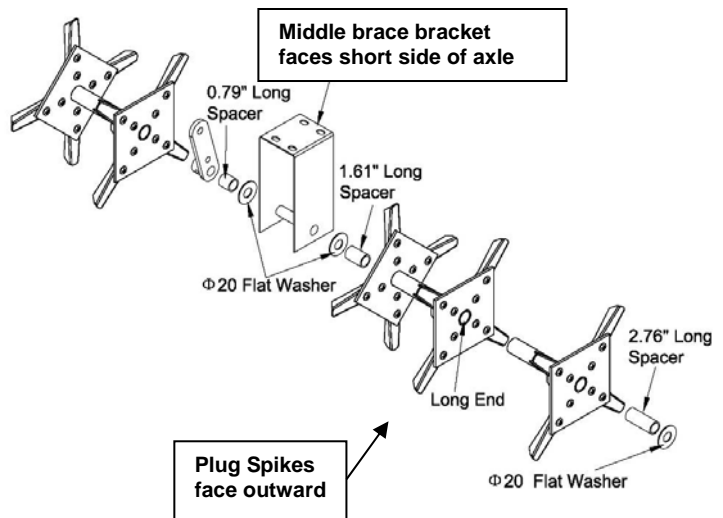
⚠ CAUTION

Before assembling the long side of the axle shaft, refer to the drawing below for the correct placement and direction of the middle brace bracket and plug spikes. Failure to follow these instructions will result in improper assembly.

STEP 3: Long Side Axle Shaft Assemble

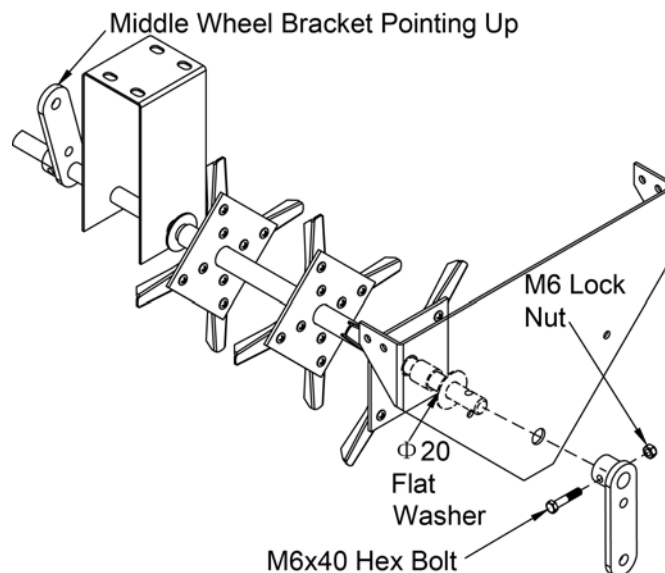
1. Assembly on the long side of the axle the items listed below in the following order (A through I).

- A. 0.79" Spacer (S)
- B. Ø20 Flat Washer (P)
- C. Middle Brace (2)
- D. Ø20 Flat Washer (P)
- E. 1.61" Spacer (R)
- F. Double Plug Spool (10)
- G. Single Plug Spool (Left) (26)
- H. 2.76" Spacer (W)
- I. Ø20 Flat Washer (P)



STEP 4: Attach End Plates & Wheel Bracket

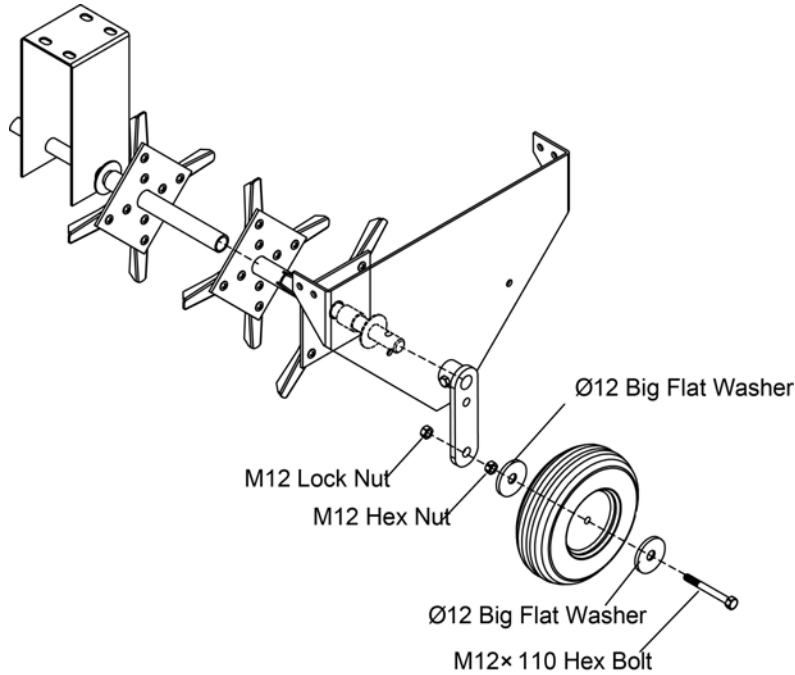
1. Attach end plate (3) using Ø20 flat washer (P) and wheel bracket (9).
2. Rotate the wheel bracket (9) on the axle so it is pointing upward.
3. Fasten wheel bracket (9) to axle shaft using M6x40 hex bolt (B) and M6 lock nut (T) and tighten all hardware.
4. Repeat steps 1-3 for the other side and tighten all hardware.



STEP 5: Wheel Assembly

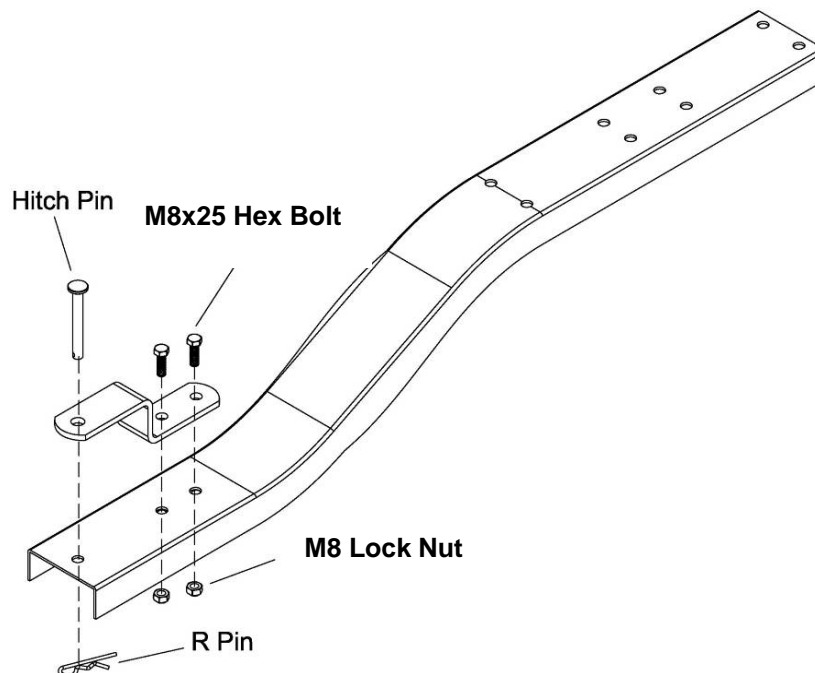
1. Insert M12x110 hex bolt (A) through the wheel (8).
2. Put two washers Ø12 big flat washer (N) on each side of wheel and the M12 hex nut (I) on the end and tight, then loosen the hex nut (I) a 1 / 2 turn.
3. Slide wheel assembled through wheel bracket (9) and fasten with M12 lock nut (J).
4. Repeat steps 1-3 for the other side and tighten all hardware.

NOTE: Make sure the both wheels spin freely after assembly.



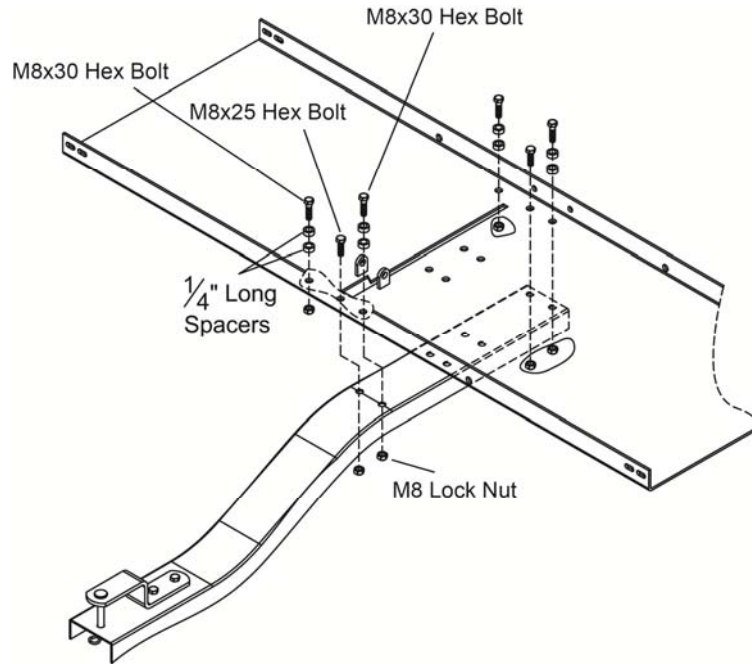
STEP 6: Attach Hitch Bracket & Hitch Pin

1. Attach hitch bracket (7) to the tongue (5) using M8x25 hex bolt (D) and M8 lock nut (K).
2. Insert hitch pin (H) through hitch bracket (7) and secure tongue (5) with R Pin (G) and fully tighten all hardware.



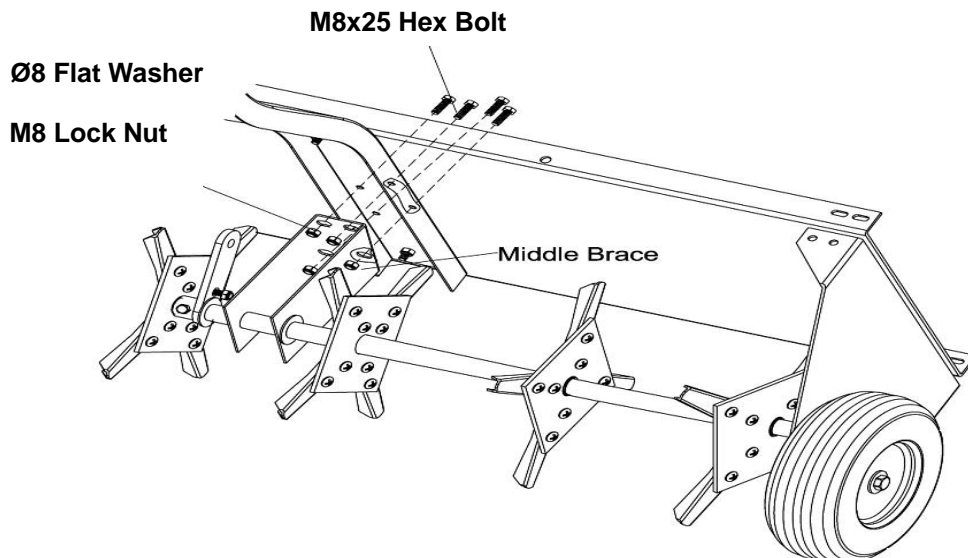
STEP 7: Attach Tongue Assembly to Top Tray

1. Attach the tongue assembly to the top tray (1) with the open slot facing forward.
2. Right side of tongue (5) attach using M8x30 hex bolt (C), two 1/4" Spacers (Q) per hex bolt (C), and tighten with M8 lock nut (K).
3. Front center hole attach using M8x25 hex bolt (D) and secure with M8 lock nut (K). **DO NOT USE SPACERS ON CENTER HOLE.**
4. Outer left side of tongue (5) attach using M8x30 hex bolt (C), two 1/4" spacers (Q) per bolt, and tighten with M8 lock nut (K)
5. Tighten all hardware.



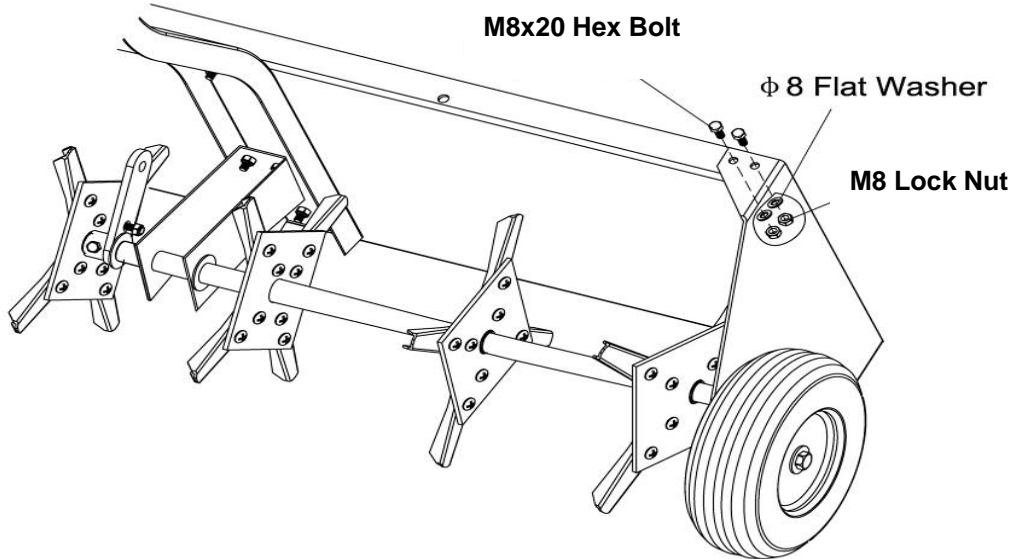
STEP 8: Attach Middle Brace

1. Position the tray (1) between both end plates (3) by leaning the top tray into the end plates.
2. Temporarily attach right end plate (3) to the top tray (1) using two M8x20 hex bolts (E).
3. Swing middle brace bracket (2) into position and fasten to top tray using M8x25 hex bolts (D), Ø8 flat washer (M) and loosely secure with M8 lock nut (K).



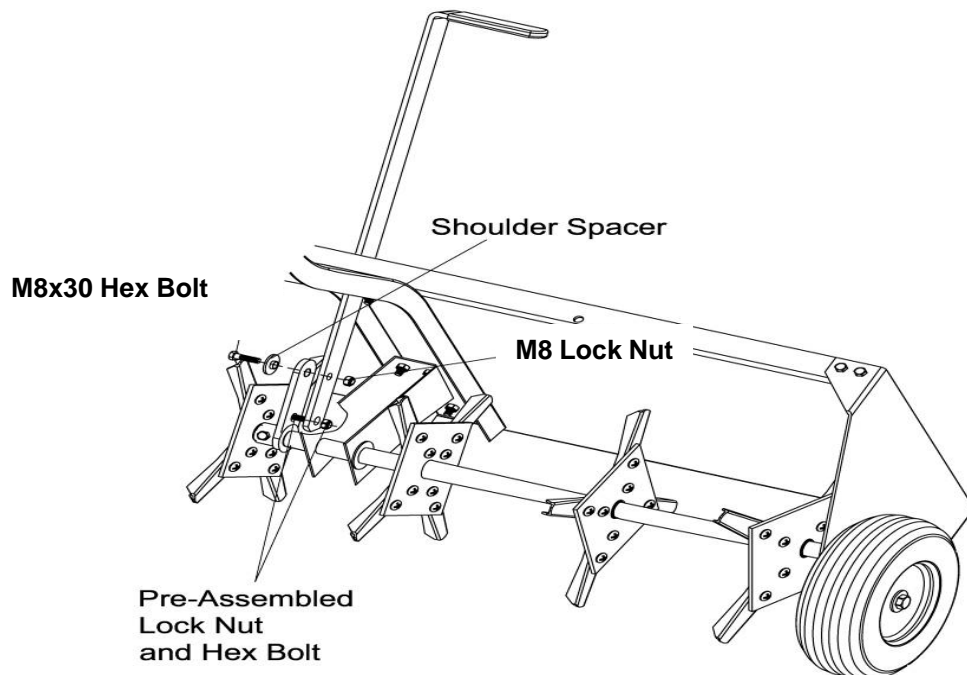
STEP 9: Secure Tray

1. Attach both end plates (3) to the tray (1) using M8x20 hex bolt (E), Ø8" flat washer (M) and secure with M8 lock nut (K) each corner. Each corner has two 2 connections.
2. Repeat the Steps for each corner.
3. Loosely tighten all hardware until **STEP 11**.



STEP 10: Attach Lift Handle

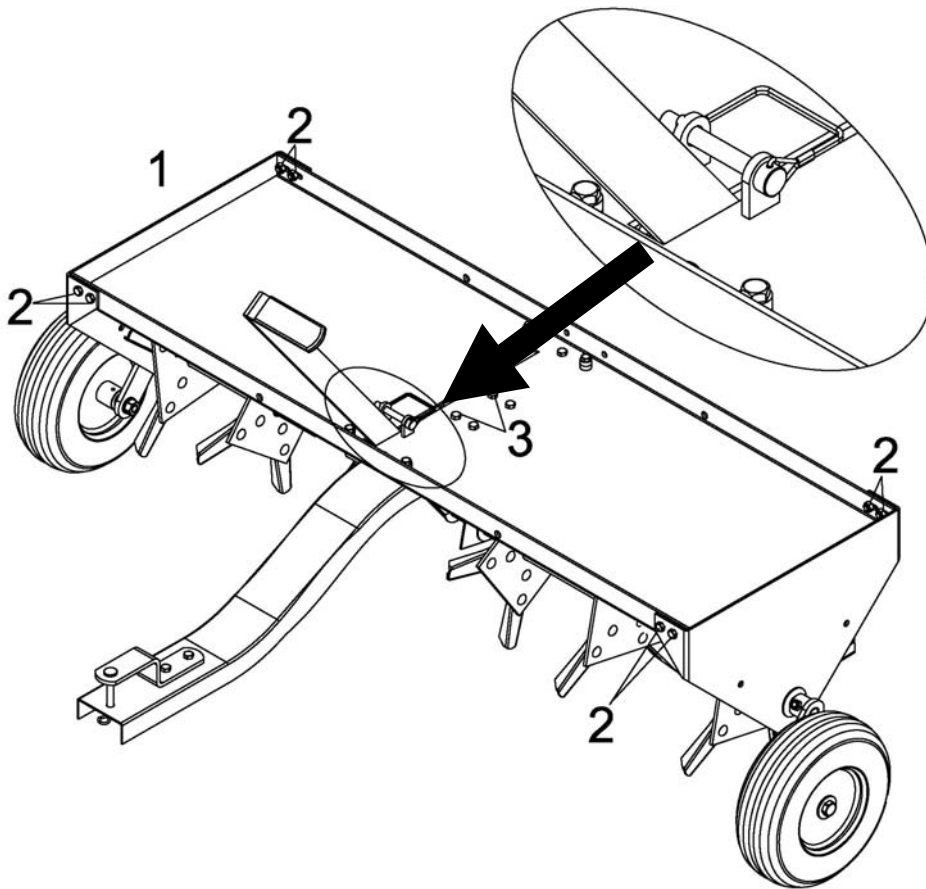
1. Place lift handle (4) through large tray slot and attach handle to the wheel bracket (9), bottom small hole using the M8x30 hex bolt (C) and M8 lock nut (K). Previously assembled in Step 2.
2. In the upper large hole attach the lift handle (4) using the M8x30 hex bolt (C), shoulder spacer (V) and secure with M8 lock nut (K).



STEP11: Adjust Lift Handle & Tighten Connections

1. Place the aerator right side up, lock lift handle (4) in the offset position at the front of the tray slot.
2. Perform the following to correct lift handle (4) alignment with the tray slot opening.
 - Adjust the tray (1) from side to side until the lift handle (4) rests against the front right side (viewed from rear) of the tray slot (offset).
 - Straighten the end plates (3) and then tighten the eight bolts on each corner of the tray, making sure the lift handle (4) still rests against the right side of the tray slot (offset).
 - Straighten the middle brace (2) and tighten the two bolts which fasten it to the tongue.
3. You will need some force to position the lift handle (4) into position when lowering the aerator.
4. Make sure all hardware is tight before operating the plug aerator.

NOTE: BEHIND THE LIFT ARM on the top tray is a place for a locking pin. Slide the locking pin through the holes with the aerator in the upright position. The safety lock keeps the aerator from dropping down while it is being towed and not in use. This will prevent damage to plug spikes.



Operation Instructions

WARNING

Before operating or using the plug aerator, review the instructions below and safety information. Failure to follow these instructions may result in property damage or injury to the operator or bystanders.

IMPORTANT:

Aerating is pulling small soil plugs up to three inches in length from the soil to create small reservoirs that will bring oxygen, fertilizer and water down to the roots. For best aerating results follow the soil/lawn preparation and operating aerator procedures.

SOIL AND LAWN PREPARATION

1. Remove large and small debris from work area.
2. If the ground is hard and dry, it is recommended the ground be sprinkled or watered for one or two hours prior to aerating.
3. If the ground is wet or muddy **DO NOT** attempt to aerate.
4. Mow lawn and remove loose clippings before aerating.

USING YOUR PLUG AERATOR

1. DO NOT at any time carry passengers sit or stand on the aerator.
2. Only tow with recommended vehicles (Lawn/Garden Tractors and ATVs).
3. Refer to the vehicle owner's manual for proper safety and towing instructions.
4. Always secure and lock the aerator to the vehicle hitch before operating.
5. Start vehicle engine with the controls in neutral position, put throttle at the slowest engine speed. Put transmission in low gear first and lower the aerator, allowing plug spikes to enter the ground. Increase the speed as work conditions permit.
6. Vehicle braking and stability may be affected with the attachment of this equipment.
7. Never exceed 5mph when towing the aerator.
8. Aerate in the straightest line as possible making overlapping passes to increase the plug spike point pattern.
9. DO NOT make sharp turns that may cause the vehicles tires to rub against the aerator.
10. Avoid extremely sharp turns with plug spikes engaged to prevent damage to lawn.
11. DO NOT cross over walks or drives without raising the aerator to the transport position.
12. On sloped lawns, always aerate in an up and down direction. DO NOT attempt to aerate across the slope always go in an up and down direction.
13. Always use caution when backing the aerator to avoid "jack-knifing". Always back up in a straight line.
14. DO NOT exceed tray load capacity of 100lbs.
15. To increase the depth of plug spike penetration extra weight may be add to the tray (Max. 100lb) use either bags of sand or concrete blocks. Always secured the weight to tray with ties or straps fastened to the front and rear of the tray. The ties or straps cannot become entangled on rotating parts.

CAUTION

To avoid and prevent injury always dismount from approved vehicle to raise or lower aerator when extra weight has been added to the tray.

Maintenance and Storage



WARNING

Improper maintenance and storage of the plug aerator may void your warranty.

MAINTENANCE

- Rinse/dry inside and outside of the aerator after each use.
- Before operating make sure the tires have the RECOMMENDED TIRE PRESSURE 25 PSI.
- Regularly grease axle and wheel bearing area or when needed.
- Periodically check all fasteners for tightness.
- Annually clean and lightly lubricate spool assemblies and shaft or when needed.
- Use a glossy enamel spray paint to touch up scratched or worn painted metal surfaces.
- Plug spikes periodically need to be sharpened with a small grinder to maintain good penetration. Spools should be removed to sharpen the points. Always follow the original angle and contour of the points when grinding.
- Never exceed tray load capacity rating of 100lbs it will damage the plug aerator.

IMPORTANT:

If a part needs replacement, only use parts that meet the manufacturer's specifications. Replacement parts that do not meet specifications may result in a safety hazard or poor operations.

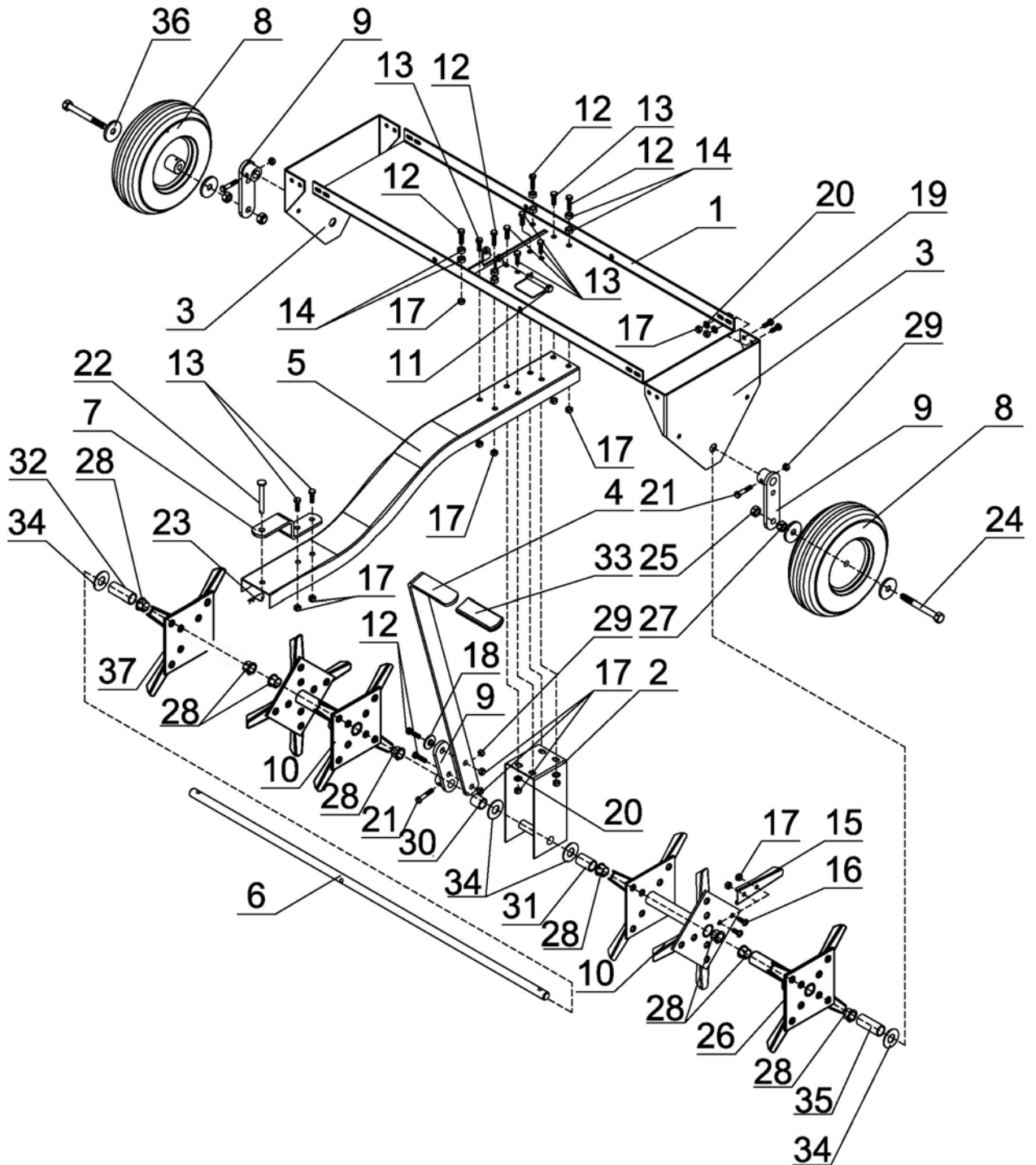
STORAGE

- Never allow the extra weight to remain on the aerator for extended periods of time.
- Before storing make sure the aerator is clean and dry for years of trouble free service.
- Lightly lubricate all aerator surfaces and moving parts to prevent rust.
- Store indoors or protected area during severe weather and winter months.

Specifications

Tray Load Capacity	100lb
Construction	Steel
Overall Dimensions	56.5" x 42.5"x34.9"
Working Width	40"
Number of Plug Spikes	24
Max. Aeration Depth.....	3"
Plug Spike Diameter.....	5/8"
Wheel Type	Pneumatic
Wheel Size	10.5" x 4"
Tire Pressure (PSI).....	25
Hitch Type	Pin Style
Unit Weight.....	81.5lb

Parts Drawing & Parts List



Parts Drawing & Parts List

Ref#	Drawing No.	Description	Qty
1	N101-10000	Tray	1
2	N101-30000	Middle Brace	1
3	N101-00001	End Plate	2
4	N100-00007	Lift Handle	1
5	N101-00005	Hitch Tongue	1
6	N101-00002-DY	Axle Shaft	1
7	N100-00014	Hitch Bracket	1
8	N100-40000	Wheel	2
9	N100-20000	Wheel Bracket	3
10	N100-30000	Double Plug Spool	2
11	T400-40000-DX	Lock Pin	1
12	9102-08030-DX	Hex Bolt M8x30	6
13	9102-08025-DX	Hex Bolt M8x25	8
14	N100-00015-DX	1/4" Spacer	8
15	N100-00016	Knife Tool	24
16	9114-08020-DX	Carriage Bolt M8x20	48
17	9206-08000-DX	Lock Nut M8	70
18	N100-00006-DX	Shoulder Spacer	1
19	9102-08020-DX	Hex Bolt M8x20	8
20	9102-08020-DX	Flat Washer Ø8	12
21	9101-06040-DX	Hex Bolt M6x40	3
22	N100-00013-DX	Hitch Pin	1
23	N021-00004-DX	R Pin	1
24	9102-12110-DX	Hex Bolt M12x110	2
25	9206-12000-DX	Lock Nut M12	2
26	N101-20000	Single Plug Spool (Left)	1
27	9201-12000-DX	Hex Nut M12	2
28	N100-00004	Split Plastic Bearing	8
29	9206-06000-DX	Lock Nut M6	3
30	N101-00003-DX	0.79" Spacer	1
31	N10T-00001-DX	1.61" Spacer	1
32	N100-00009-DX	2.36" Spacer	1
33	N100-00008	Handle Grip	1
34	9301-20000-DX	Flat Washer Ø20	4
35	N101-00004-DX	2.76" Spacer	1
36	T200-10011-DX	Big Flat Washer Ø12	4
37	N101-20000	Single Plug Spool (Right)	1

Limited Warranty

Warranty

For one year from the date of purchase YTL International will replace for the original purchaser, or repair the plug aerator. The warranty will not apply to any unit which was not assembled correctly, misused, overloaded or which has been used or operated contrary to our instructions, or which has been repaired or altered by anyone other than an authorized representative.

Warranty Exclusions

This warranty does not cover cosmetic defects such as paint, decals or wear items such as tires. This warranty will not cover failures or problems due to acts of God, or events or forces beyond the control of the manufacturer.

Normal Wear Exclusion

The aerator needs periodic service to perform well. This warranty does not cover repair when normal use has exhausted the life of a part or the equipment as a whole.

Installation, Use and Maintenance Exclusion

This warranty will not apply to parts and/or labor if the aerator has been misused, neglected, involved in an accident, abused, loaded beyond its limits, modified or assembled incorrectly. Normal maintenance is not covered under this warranty.

Limits of Implied Warranty and Consequential Damage Exclusion

YTL International disclaims any obligation to cover any loss of time, use of this product, freight, or any incidental or consequential claim by anyone from using this aerator. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR.

An exchange unit will be subject to the original warranty. The length of the warranty governing the exchanged unit will have the date as the purchase date of the original unit. This warranty gives you certain legal rights which may change from state to state. Your state may also have other rights you may be entitled to that are not listed within this warranty.

Contact Information

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