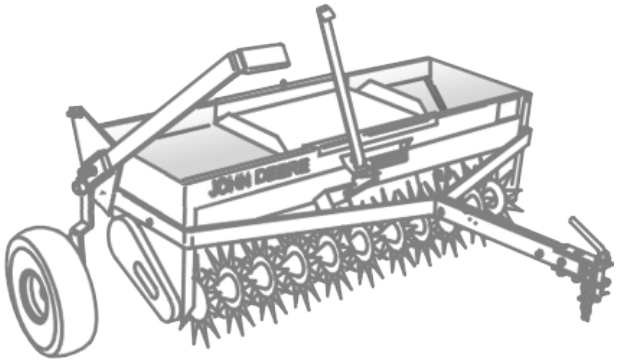
40” Aerator-Spreader



AS-400JD

This product was manufactured by Brinly-Hardy Co., a John Deere Licensee, located at 3230 Industrial Pkwy, Jeffersonville, IN 47130. If you have any questions or concerns with the assembly, installation or operation of this attachment see your local John Deere Dealer or call Brinly-Hardy Co. at 866-218-8622 for assistance.

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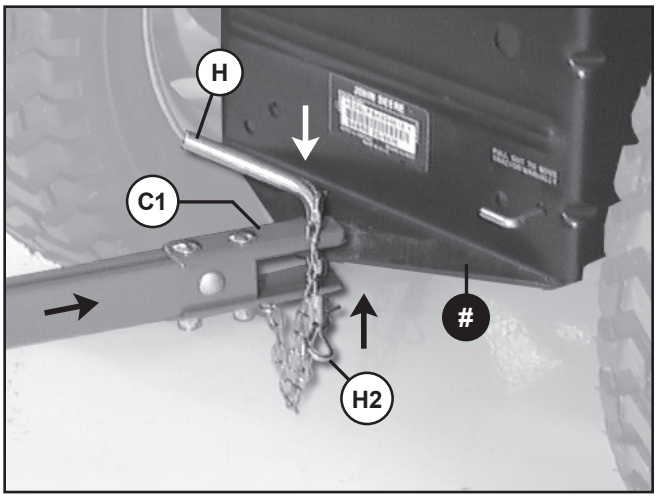
Installing / Removing

Installing

1. Park tractor safely.
   (See Parking Safely in the SAFETY section.)
2. Place the attachment behind the tractor.



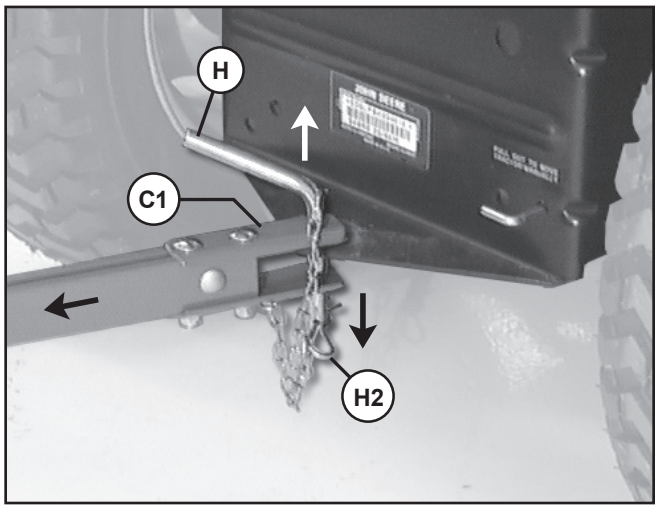
3. Place clevis (**C1**) onto tractor hitch plate (**#**). Align the hitch pin holes.
4. Install hitch pin (**H**) through holes in clevis (**C1**) & hitch plate (**#**).
5. Secure spring locking pin (**H2**) through hole in hitch pin (**H**).

Removing

1. Park tractor safely.
   (See Parking Safely in the SAFETY section.)

> **CAUTION: Avoid Injury!** Do not attempt to disconnect attachment from tractor with weight or spreading material remaining in the unit. Attachment could become unstable causing injury.

2. Remove all weight and/or material from attachment.



3. Remove spring locking pin (**H2**).
4. Remove hitch pin (**H**).
5. Move attachment off tractor hitch plate.
6. Install hitch pin (**H**) and spring locking pin (**H2**) to clevis (**C1**) for storage.

When to Use the Aerator-Spreader

The aerator-spreader will actively penetrate soil, allowing much needed air, water and nutrients to enter the lawn. It will also relieve soil compaction and can be used to spread seed or fertilizer while aerating.

A moderate soil moisture content is important to proper operation of the aerator-spreader. Penetration will not occur in extremely dry soil, and very wet conditions will cause the unit to “bog down,” possibly causing lawn damage.

Use the aerator-spreader only on an established lawn, never on newly laid sod. The aerator-spreader should not be used when lawn conditions are too wet or too dry.

TO DETERMINE CONDITION:
Dig a small amount of your soil about 76 mm (3 in.) deep.

Too Dry: If soil appears powdery and brittle**,** it is too dry. Wait until a later date, after a rainfall.

If soil is too dry, the aerator tines will not penetrate properly.

Too Wet: If soil appears damp, attempt to roll a small amount into a ball in the palm of your hand. If it forms a ball, the soil is too wet. Ideally, the soil should fall apart.
Wait until the soil is more dry.

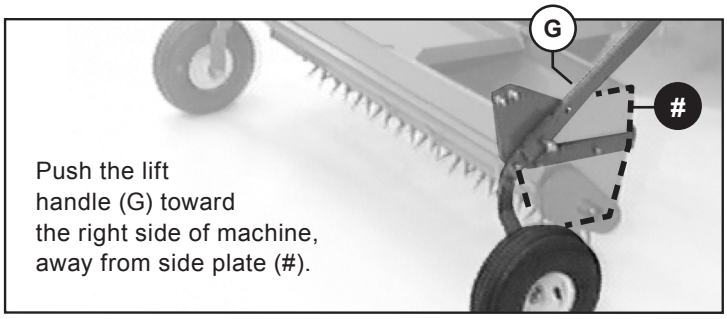
If the soil is too wet, the aerator tines will penetrate too deep and your tractor could lose traction, causing lawn damage.

Selecting the Operating Positions

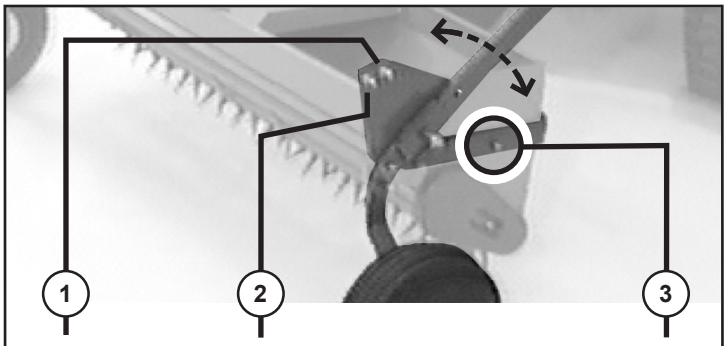
CAUTION: Avoid Injury! Do not operate lift handle unless attachment is installed to tractor.

Lift handle is under tension when using ballast in weight tray. *Use caution when moving handle into different positions.*

Keep hands and feet away from tines when lowering to the ground.

1. Park tractor safely.
   (See Parking Safely in the SAFETY section).
2. Attach aerator-spreader to tractor.
3. 

Push the lift handle (G) toward the right side of machine, away from side plate (#).
4. Move handle forward or rearward to engage lock pin into desired position:

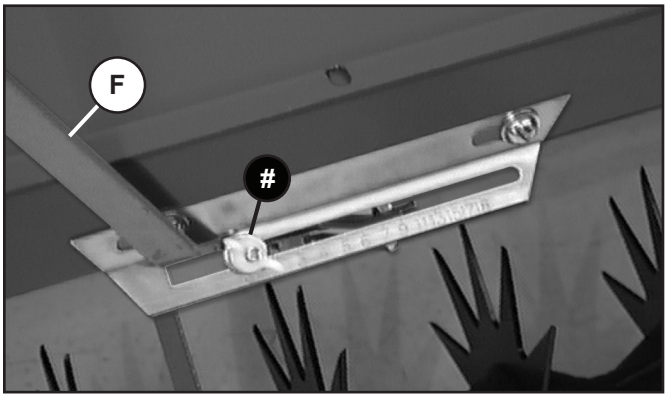


Operate High
Use middle lock pin for minimum tine penetration.

Operate Low
Use rear lock pin for maximum tine penetration.

Transport
Use front lock pin to raise tines so unit can be towed without tines contacting the ground.

Using the Flow Control



Open / Close Hopper

Move flow control lever (**F**) to the left and knock into V-notch on calibration plate to shut off material flow. Unlock lever to open hopper and allow material flow.

Adjust Flow Rate

1. Determine the correct flow rate setting for your spreading application.
2. Loosen flow control adjustment stop (**#**).
3. Slide adjustment stop to desired flow rate setting.
4. Tighten the adjustment stop.
5. Unlock the flow control lever. It will open the hopper to the pre-set flow rate setting.

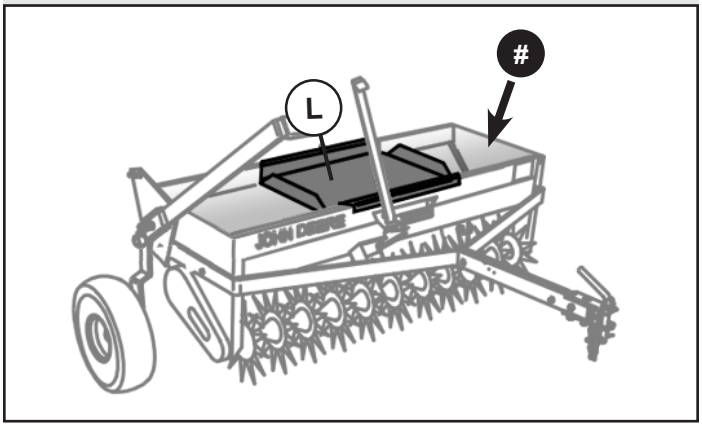
Using the Weight Tray and Hopper

CAUTION: Avoid Injury! Never add weight to tray or material to hopper unless attachment is install to tractor.

1. Install aerator-spreader to tractor.
2. Place lift handle in front hole for transport position.

IMPORTANT: Avoid damage!

Never exceed the total weight capacity of 68 kg (150 lb) or the individual weight capacities of the weight tray and hopper. *See chart below.*



3. Add sand bags, concrete blocks, or other type of weight to weight tray (**L**). *See chart below for weight limitations.*
4. If necessary, secure weight in tray using straps.
5. Fill hopper (**#**) with desired material. *See chart below for weight limitations.*

Weight Capacity Chart

Example Combinations

	A	B	C	D	E
Weight Tray	45 kg (100 lb) **Max.**	45 kg (100 lb) **Max.**	34 kg (75 lb)	23 kg (50 lb)	0 kg (0 lb)
Hopper	0 kg (0 lb)	23 kg (50 lb)	34 kg (75 lb)	45 kg (100 lb) **Max.**	45 kg (100 lb) **Max.**
Total Weight	= 45 kg (100 lb)	= 68 kg (150 lb)	= 68 kg (150 lb) **Max.**	= 68 kg (150 lb)	= 45 kg (100 lb)

NOTE: Never exceed a maximum combined weight of 150 lbs (68 kgs).

Checking the Tine and Spreader Operation

Operation of the tines will vary with soil type, condition, and amount of weight in weight tray. Make sure soil conditions are appropriate for operation. Do not exceed the weight tray capacity to try and improve penetration in overly dry conditions.

- Aeration tines must be in the lowered position in order for the aerator-spreader to operate. Agitator is driven off of the aerator tines.
- Test operation of the tines and spreader by driving the tractor forward about 3 m (10 ft). Observe the operation. Check for uniform hole pattern, depth, and spread.
- Add or remove weight if needed to obtain proper aeration results. Adjust ground speed and/or flow control setting to achieve proper spreading results.
- Fertilizer application rates can be affected by humidity and the amount of moisture in the material. Poor spreading results can occur if the material has been allowed to become wet or packed in the hopper.
- Avoid stopping unit with flow control in open position, material will continue to flow through hopper opening. If fertilizer is deposited too heavily in a small area, soak down thoroughly with a garden hose to prevent burning of lawn.
- Periodically check the tines. Remove any debris build up that might restrict or cause damage to the tines.

Determine the Flow Control Setting

NOTE: Fertilizer application rates as provided are affected by humidity and moisture content of the material. Minor setting adjustments may be necessary to compensate for these conditions.

APPLICATION RATE CHART

Material Type	Average Recommended Usage	Flow Control Setting
Kentucky Bluegrass Seed	0.49 kg / 100 m2 (1 lb / 1,000 sq ft)	4
Rye Seed	0.96 kg / 100 m2 (2 lb / 1,000 sq ft)	7
Tall Lawn and #31 Fescue	1.44 kg / 100 m2 (3 lb / 1,000 sq ft)	12
10-10-10 Fertilizer	22.7 kg / 500 m2 (50 lb / 5,000 sq ft)	9
10-18-10 Fertilizer (Winter Green 2-Way)	27.2 kg / 2,000 m2 (60 lb / 20,000 sq ft)	5

Determining the Flow Control Setting

(Alternative Method - Continues with Chart on Page 20).

To determine required setting for materials not listed on the APPLICATION RATE CHART, proceed using the following Metric or English example:

METRIC APPLICATIONS

1. Determine from material bag, the amount of material to be spread over a designated area. *Example: The contents of this bag, 11 kg, will cover 465 m2.*
2. Determine the amount of material required to cover 10 m2 as follows:
   - Add one zero to the bag weight. *Example: 110 kg.*
   - Divide this number by the number of square meters on the bag. *Example: 110 divided by 465 = 0.24 kg of material for 10 m2.*

     To convert this weight to grams, multiply by 1000 (1000 g /kg). *Example: 0.24 kg x 1000 = 240 grams.*
3. Determine approximate Flow Control Setting by using the following ALTERNATIVE FLOW CONTROL SETTING CHART showing type of material to spread.
4. Measure a distance of 10 m in your yard. This is the distance your 40 in. spreader must travel in order to cover 10 m2.
5. Set spreader flow control at the approximate flow control setting.
6. Place 2.3 kg of material in hopper. Weigh the material before and after spreading 10 m2 to determine amount of material used.
7. Move unit to measured area, lower the aerator tines, and open the flow control lever. Drive the 10 m2 course, stop unit, and close the flow control lever.
8. Remove and weigh remaining material. Subtract this weight from 2.3 kg to determine material used. If too much material is used, set Flow Control ONE number LOWER and try again. If too little material is used, set Flow Control ONE number HIGHER and try again.
9. After determining proper setting always record the type of material and the setting for future use.

ENGLISH APPLICATIONS

1. Determine from material bag, the amount of material to be spread over a designated area. *Example: The contents of this bag, 25 lb, will cover 5000 sq ft.*
2. Determine the amount of material required to cover 100 sq ft as follows:
   - Add two zeros to the bag weight. *Example: 2500 lb.*
   - Divide this number by the number of square feet on the bag. *Example: 2500 divided by 5000 = 0.5 lb of material for 100 sq ft.*

     To convert this weight to ounces, multiply by 16 (16 oz/lb). *Example: 0.5 lb x 16 = 8 oz.*
3. Determine approximate Flow Control Setting by using the following ALTERNATIVE FLOW CONTROL SETTING CHART showing type of material to spread.
4. Measure off a distance of 30 ft in your yard. This is the distance your 40 in. spreader must travel in order to cover 10 m2.
5. Set spreader flow control at the approximate flow control setting.
6. Place 2.3 kg of material in hopper. Weigh the material before and after spreading 10 m2 to determine amount of material used.
7. Move unit to measured area, lower the aerator tines, and open the flow control lever. Drive the 10 m2 course, stop unit, and close the flow control lever.
8. Remove and weigh remaining material. Subtract this weight from 2.3 kg to determine material used.

IF TOO MUCH MATERIAL IS USED, set the Flow Control ONE number LOWER and try again.	**IF TOO LITTLE MATERIAL IS USED,** set the Flow Control ONE number HIGHER and try again.

9. After determining proper setting always record the type of material and the setting for future use.

Determining the Flow Control Setting

(Alternative Method, Continued).

APPLICATION FLOW CONTROL SETTING CHART

Material Coarseness	Approximate Coverage	Approximate Flow Control Setting
Large Seeds (#31 Fescue, etc.)	0.15 kg / 10 m2 (0.3 lb / 100 sq ft)	12
	0.24 kg / 10 m2 (0.5 lb / 100 sq ft)	16
	0.34 kg / 10 m2 (0.7 lb / 100 sq ft)	19
Medium Seeds (Rye, etc.)	0.10 kg / 10 m2 (0.2 lb / 100 sq ft)	7
	0.19 kg / 10 m2 (0.4 lb / 100 sq ft)	11
	0.29 kg / 10 m2 (0.6 lb / 100 sq ft)	14
Fine Seeds (Bluegrass, Lawn Fescue, etc.)	0.50 kg / 10 m2 (0.1 lb / 100 sq ft)	4
	0.10 kg / 10 m2 (0.2 lb / 100 sq ft)	4-1/2
	0.15 kg / 10 m2 (0.3 lb / 100 sq ft)	5
Very Coarse Fertilizers (Large, heavy pellets and granules)	0.24 kg / 10 m2 (0.5 lb / 100 sq ft)	9
	0.49 kg / 10 m2 (1.0 lb / 100 sq ft)	12
	0.73 kg / 10 m2 (1.5 lb / 100 sq ft)	15
Medium Coarse Fertilizers (Pellets and granules)	0.24 kg / 10 m2 (0.5 lb / 100 sq ft)	7
	0.49 kg / 10 m2 (1.0 lb / 100 sq ft)	10
	0.73 kg / 10 m2 (1.5 lb / 100 sq ft)	13
Light Fertilizers (Nitrogen, etc.)	0.05 kg / 10 m2 (0.1 lb / 100 sq ft)	3-1/2
	0.10 kg / 10 m2 (0.2 lb / 100 sq ft)	4-1/2
	0.15 kg / 10 m2 (0.3 lb / 100 sq ft)	5-1/2

Operation

Checking Tractor Ground Speed

Check ground speed in an open area.

- Measure a test area that is 30.5 m (100 ft) in length.
- Operate the tractor at wide open throttle.
  Operate tractor at a low speed and drive the tractor the test distance. *Record the time needed to travel that distance.*
- Make three passes, recording the time for each pass.
  The average time should be 14 to 23 seconds to achieve the recommended operating speed range:

	4.8 km/h (3 mph)	**8 km/h** (5 mph)
Average travel time for the test distance	23 seconds	14 seconds

- Adjust speed accordingly to achieve the recommended speed range.

Checking the Tine Operation

Operation of the tines will vary with soil type, condition, and amount of weight in weight tray. Make sure soil conditions are appropriate for operation. Do not exceed the weight tray capacity to try and improve penetration in overly dry conditions.

- Test operation of the tines by driving the tractor forward about 3m (10 ft). Observe the operation. Check for uniform hole pattern and depth.
- Add, remove, or distribute the weight better to obtain proper results.
- Periodically, check the tines. Remove any debris build up that might restrict or cause damage to the tines.

Operating Aerator-Spreader

CAUTION: Avoid Injury! Keep hands and feet away from all moving parts. Never carry riders.

IMPORTANT: AVOID DAMAGE!
NEVER EXCEED THE MAXIMUM CAPACITIES:

Weight Tray 45 kg (100 lb)	Weight Tray 34 kg (75 lb)	Hopper 45 kg (100 lb)
**Max. with an empty hopper*	+ Hopper 34 kg (75 lbs)	**Max. with an empty Weight Tray*

- Engage wheels to transport position when crossing concrete or asphalt surfaces.
- Always back carefully in a straight line to avoid jackknifing the attachment.
- Periodically remove debris build up that can restrict or damage the tines.

1. Park tractor safely.
   (See Parking Safely in the SAFETY section.)
2. Install aerator-spreader to tractor.
3. Place unit in transport position.
4. Add recommended weight to weight tray.
   NOTE: Do not fill hopper and transport over long distances without dropping material. This will result in packing the material, causing poor or erratic discharge. Fill hopper only at operation site.
5. Drive to work area for filling of hopper.
6. Park tractor safely.
7. Lock the flow control lever in the closed position.
8. Set the flow control rate to proper setting.
9. Fill hopper with material to be spread.
   Break up all lumps while filling.
10. Place unit in desired operating position.
11. Start machine.
12. Drive tractor forward and unlock the flow control lever to begin aerating and spreading.
13. Tow aerator-spreader at 5 to 8 km/hr (3 to 5 mph) for safe and effective operation.
14. Check for uniform hole pattern and depth. Close the flow control lever and park tractor safely before making any adjustments.

Maintenance / Storage

CAUTION: Avoid Injury! *Aerator tines are extremely sharp.*
Wear gloves and handle with care. Shield sharp parts during any service work and storage or removal.

Servicing the Attachment

- To prevent or eliminate rust on tines or plugging spoons, apply a light oil on them after each use.
- For rust appearing on any part of your attachment, sand lightly and coat with enamel.
- Apply a drop of lubricating oil to each nylon / tine bearing assembly, axles, and working areas of the plugging spoons before each use.
- Periodically check the aerating tines or plugging spoons.Remove any debris that might build up and restrict their action.
- Periodically check tightness of all fasteners.
- Be sure to remove all unused fertilizers from hopper immediately after use and clean with water to prevent corrosion.

Storing the Attachment

1. Park tractor safely. *(See Parking Safely in the SAFETY section).*
2. Remove all weight and material from attachment.
3. Remove attachment from tractor.
4. Wash attachment thoroughly. *Allow to dry completely.*
5. Replace all worn, damaged, or missing parts.
6. Sand any rusted areas lightly and paint with enamel.
7. Lubricate moving parts.
8. Apply a light coverage of oil to all tines to prevent rust.
9. Reduce air pressure in tires.
10. Store attachment in a dry area with tines against wall or floor to avoid accidental contact.
11. Block up attachment off the ground to prevent contact with moisture and take weight of the tires.
12. Place a waterproof cover over the attachment if it must be stored outside.

Removing the Attachment from Storage

1. Wash the attachment if necessary. *Allow to dry completely.*
2. Inspect tires for deterioration.
3. Inflate tires to proper pressure.
4. Make sure all parts are in place and hardware is secure.

Quality

John Deere Quality
Continues with Quality Service

John Deere provides a process to handle your questions or problems, should they arise, to ensure that product quality continues with quality parts and service support.

Follow the steps below to get answers to any questions you may have about your product.

1. Refer to your attachment and machine operator manuals.
2. In North America or Canada, call Brinly-Hardy Co. Customer Service at 1-866-218-8622 and provide product serial number (if available) and model number.

Notes:

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