

# Heavy Duty Material Spreader

Operation and Maintenance Manual



101110, 101115



888-376-7027 | [BlueDiamondAttachments.com](http://BlueDiamondAttachments.com)

Register your  
**WARRANTY**  
within 30 days  
of purchase



BD-092

# Introduction: Owner Information

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Thank you for your decision to purchase a Blue Diamond® Material Spreader. To ensure maximum performance of your equipment, it is mandatory that you thoroughly study the Operator's manual and follow the recommendations. Proper operation and maintenance are essential to maximize equipment life and prevent personal injury.

Operate and maintain this equipment in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and /or laws. Follow all on-product labeling and instructions.

Make sure that all personnel have read this Operator's Manual and thoroughly understand safe and correct operating, installation and maintenance procedures.

Blue Diamond is continually working to improve its products. Blue Diamond reserves the right to make any improvements or changes as deemed practical and possible without incurring any responsibility or obligation to make any changes or additions to equipment sold previously.

Although great care has been taken to ensure the accuracy of this publication, Blue Diamond makes no warranty or guarantee of any kind, written or expressed, implied or otherwise with regard to the information contained within this manual. Blue Diamond assumes no responsibility for any errors that may appear in this manual and shall not be liable under any circumstances for incidental, consequential or punitive damages in connection with, or arising from the use of this manual.

Keep this manual available for frequent reference. All new operators or owners must review the manual before using the equipment and annually thereafter. Contact your Blue Diamond Attachments Dealer for assistance, information, or additional copies of the manual. Contact [www.bluediamondattachments.com](http://www.bluediamondattachments.com) or call 888-376-7027 for a complete list of dealers in your area.

## Serial Number Location:

Please record attachment information in the space provided for future reference.



Figure 1

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Dealer Name: \_\_\_\_\_

Dealer Number: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

The serial number plate is located on the right hand side on the front of the mount plate.

Always use your serial number when requesting information or when ordering parts.

**NOTE:** The directions left, right, front and rear, as mentioned throughout this manual, are as viewed from the operator's position.

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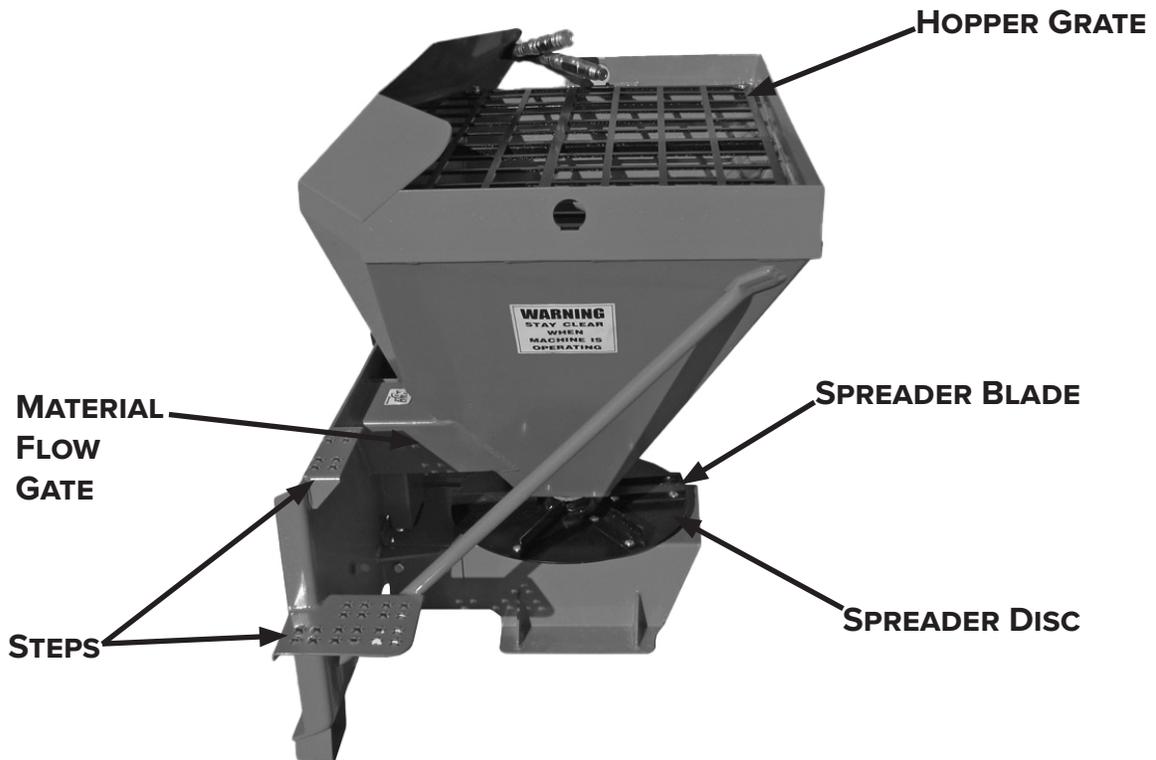
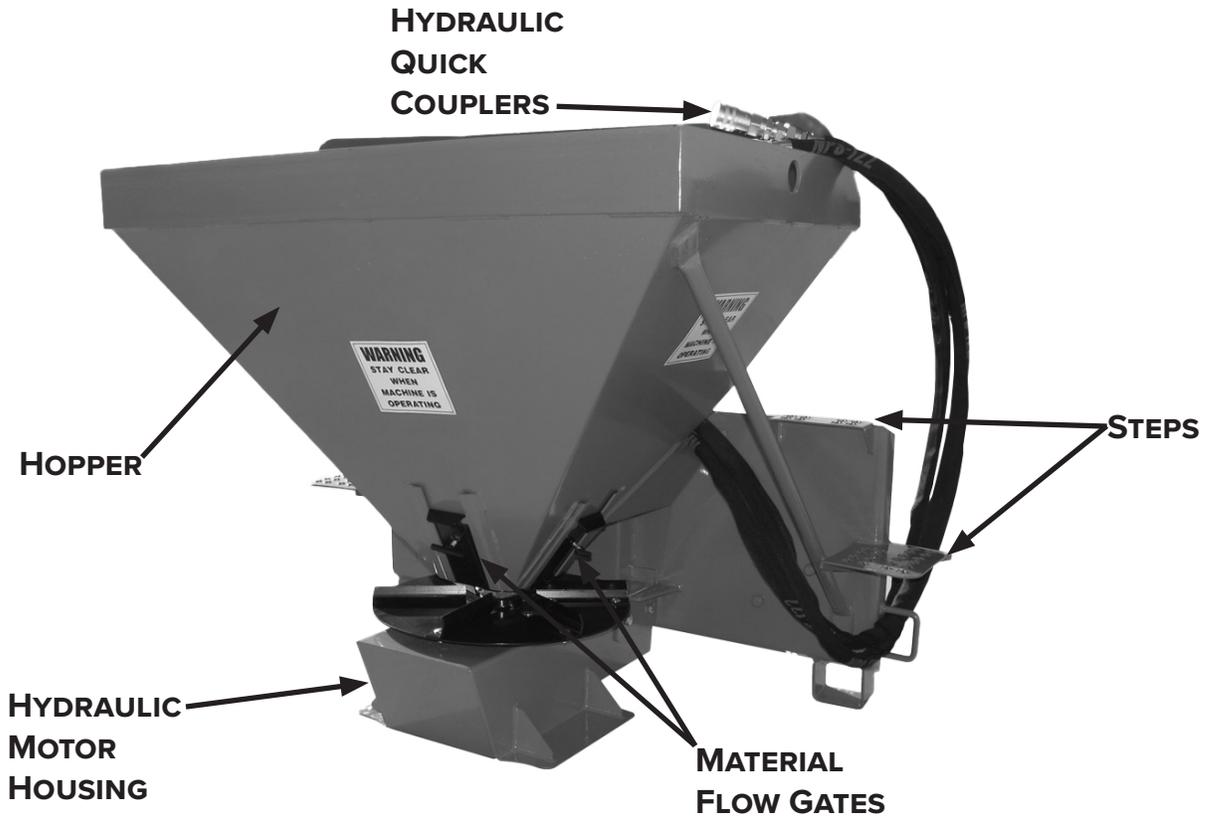
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# 1. Introduction

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## 1.1 Attachment Identification



# 1. Introduction

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## 1.2 *Features and Accessories*

### **Standard Items**

- Hydraulically Operated
- Hopper Grate
- Agitator
- Material Flow Gates (adjustable); 3X 101110, 4X 101115
- Spread Pattern (adjustable)
- Self Loading Hopper with Cutting Edge

### **Options**

- Sidewalk Skirt Kit

## 2. Safety

### 2.1 Safety Information

This section covers recommended safety instructions, along with other general recommendations and specific machine safety precautions that should be read thoroughly before operating the machine.



The signal word **DANGER** on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.



The signal word **WARNING** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



The signal word **CAUTION** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



The signal word **IMPORTANT** identifies procedures which must be followed to avoid damage to the machine.

Be certain all equipment operators are aware of the dangers indicated by safety decals applied to the equipment, and be certain they follow all safety decal instructions. Contact your authorized Distributor, Dealer Parts Department or Blue Diamond® for safety decal replacement.

Do not modify the material spreader in any way. Unauthorized modification may impair the function and/or safety of the components and systems and could affect the life of the equipment, possibly invalidating the warranty coverage.

Blue Diamond® cannot anticipate every possible circumstance that may involve a potential hazard. The warnings in this owner's manual are not all inclusive.

### 2.2 Owner's Responsibility

Operate and maintain the material spreader in a safe manner and in accordance with all applicable local, state, and federal codes, regulations, and/or laws.

Make sure that all personnel have read this owner's manual, and thoroughly understand safe and correct installation, operation, and maintenance procedures.

Provide the operating instructions to any operator before allowing him or her to operate the machine.

Fulfill all warranty obligations so as to not void the warranties. The warranty policy located on page 37 outlines the warranty policy of Blue Diamond® Attachments.

- Do not allow anyone to operate the machine until he or she has read the owner's manual and is completely familiar with all safety precautions.
- Do not allow inexperienced persons unfamiliar with the machine, or unfamiliar with safe operating and maintenance procedures for the equipment to operate or maintain the machine.

## 2. Safety

- Do not allow persons under the influence of alcohol, medications, or other drugs that can impair judgment to operate or maintain the machine.
- Wear safety glasses, gloves, hearing protection, and other protective clothing whenever required.
- Before you service the material spreader, remove the key from the machine and place a Do Not Operate tag on the machine or remove the material spreader from the machine.
- Do not replace components or parts with other than factory-recommended service parts. To do so may decrease the effectiveness and/or the safety of the machine.
- Do not modify the material spreader in any way. Unauthorized modification can result in serious injury or death and may impair the function and life of the material spreader.
- Never operate the machine in an enclosed area. Proper ventilation is required under all circumstances.
- Have a first-aid kit available for use should the need arise and train personnel and operators on proper use of the kit.
- Review safety related items annually with all personnel who will be operating, using, or maintaining the material spreader.



### WARNING



#### AVOID SERIOUS INJURY OR DEATH

Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause injury or death.



### WARNING



These are general safety considerations. Additional precautions may be necessary to operate your equipment in a safe manner. Be certain you are operating your equipment in accordance with all safety codes, OSHA rules and regulations, insurance requirements; and local, state, and federal laws.

Failure to comply with the following messages could result in death or serious injury.

- Use care when climbing on frame to prevent slipping or falling.
- Install and secure all guards before operating.
- Be aware of all pinch points on the machine and keep clear.
- Do not wear loose hanging clothing. These precautions will help prevent you from becoming caught in the moving parts or on levers and latches on the machine.
- Keep all bystanders away from the machine when loading or unloading is being done.
- Watch for adequate overhead clearance when operating the machine.
- Stay away from overhead power lines. Electrocutation can occur without direct contact.
- Never attempt to clear obstructions or objects from the material spreader while the machine is running.
- Stop engine, remove ignition key, and wait for all moving parts to stop before servicing, repairing, adjusting, or loading.
- Escaping hydraulic fluid under pressure can have sufficient force to penetrate skin, causing serious injury. NEVER check for leaks by using any part of your body to feel for escaping fluid.

## 2. Safety

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### 2.3 Decal Replacement

- Keep all safety signs and reflectors clean and legible at all times.
- Replace safety signs and reflectors that are missing or have become illegible.
- Replaced parts that displayed a safety sign, must also display the current sign.
- Contact your authorized Distributor, Dealer Parts Department, or Blue Diamond® for safety decal replacement.

### 2.4 Operator Requirements

- Fasten seat belt securely. Always wear a seat belt while operating this machine.
- Stop the machine and engage the parking brake. Install blocks in front of and behind the rear tires of the machine. Install blocks underneath and support the equipment securely before working under raised equipment.
- Keep bystanders clear of moving parts and the work area. Keep children away.
- Use increased caution on slopes and near banks and ditches to prevent overturning.
- When transporting the equipment or operating in a public area, use the flashing warning lights and beacon (if equipped) and follow all local regulations.
- Operate this equipment with a machine equipped with an approved Roll-Over Protective Structure (ROPS). Always wear seat belt when the ROPS is up. Serious injury or death could result from falling off the machine.

- Before leaving the operator's position:
  1. Always park on a flat level surface.
  2. Place all controls in neutral.
  3. Engage the parking brake.
  4. Stop engine.
  5. Wait for all moving parts to stop.
- Carry passengers only in designated seating areas. Never allow riders on the machine or equipment. Falling off can result in serious injury or death.
- Start the equipment only when properly seated in the operator's seat. Starting a machine while in gear can result in serious injury or death.
- Operate the machine and equipment from the operator's position only.
- Do not leave the machine running when the operator's position is unattended.
- The parking brake must be engaged before leaving the operator's seat. Roll away can occur because the transmission may not prevent machine movement.

### 2.5 Battery Safety

Failure to comply with the following messages could result in death or serious injury.

- DO NOT make sparks or use an open flame near the battery.
- Wear safety glasses when working near batteries.
- When disconnecting battery terminals, remove the Negative (—) cable first; then remove the Positive (+). When connecting cables, connect the Positive (+) first, then connect the Negative (—).
- Disconnect the battery ground cable before servicing any part of the electrical system.

## 2. Safety

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- Disconnect the battery (both terminals) before welding on any part of the machine. Failure to do so may cause damage to sensitive electrical components.
- **BATTERY ACID CAUSES SEVERE BURNS.**  
Batteries contain sulfuric acid. Avoid contact with skin, eyes, or clothing.  
Antidote:  
EXTERNAL — flush with water.  
INTERNAL — drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call physician immediately.  
EYES — flush with water for 15 minutes and get prompt medical attention.  
**BATTERIES PRODUCE EXPLOSIVE GASES.**  
Keep sparks, flame, and cigarettes away.  
Ventilate when charging or using in enclosed space. Always shield eyes when working near batteries.  
**KEEP OUT OF REACH OF CHILDREN.**
- When working around batteries, remember that all of the exposed metal parts are “live.” Never lay a metal object across the terminals because a spark, short circuit, explosion, or personal injury may result.
- Battery posts, terminals, and related accessories contain lead and lead compounds.  
**Wash hands after handling.**

### 2.6 Hydraulic Safety

Failure to comply with the following messages could result in death or serious injury.

- Relieve system pressure before repairing, adjusting, or disconnecting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.
- Consult physician immediately if skin penetration occurs.

### 2.7 Fire Prevention

#### Maintenance

The machine and some equipment have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine, exhaust system, and hydraulic system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.

Flammable debris must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard.

All fuels, most lubricants, and some coolant mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

#### Operation

Do not use the equipment where exhaust, arcs, sparks, or hot components can contact flammable material, explosive dust, or gases.

#### Electrical

Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged parts or wires that are loose or frayed.

Battery gas can explode and cause serious injury. Do not jump start or charge a frozen or damaged battery. Keep any open flames or sparks away from batteries. Do not smoke in battery charging area.

## 2. Safety

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### Hydraulic System

Check hydraulic tubes, hoses, and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed, have adequate support, and secured clamps. Tighten or replace any parts that show leakage.

Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.

### Fueling

Stop the engine and let it cool before adding fuel. No smoking! Do not refuel a machine near open flames or sparks. Fill the fuel tank outdoors.

### Starting

Do not use ether or starting fluids on any engine that has glow plugs. These starting aids can cause explosion and injure you or bystanders.

Use the procedure in the Operation & Maintenance Manual for connecting the battery and for jump starting.

### Welding and Grinding

Always clean the equipment, disconnect the battery, and disconnect the wiring before welding. See Section 2.5 Battery Safety on page 8. Cover rubber hoses, battery, and all other flammable parts. Keep a fire extinguisher near the equipment when welding.

Have good ventilation when grinding or welding painted parts. Wear dust mask when grinding painted parts. Toxic dust or gas can be produced.

Dust generated from repairing nonmetallic parts can be flammable or explosive. Repair such components in a well ventilated area way from open flames or sparks.

### Fire Extinguishers

Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instruction plate.

## 3. Operation

### 3.1 Inspection

#### Material Spreader Mounting Frame

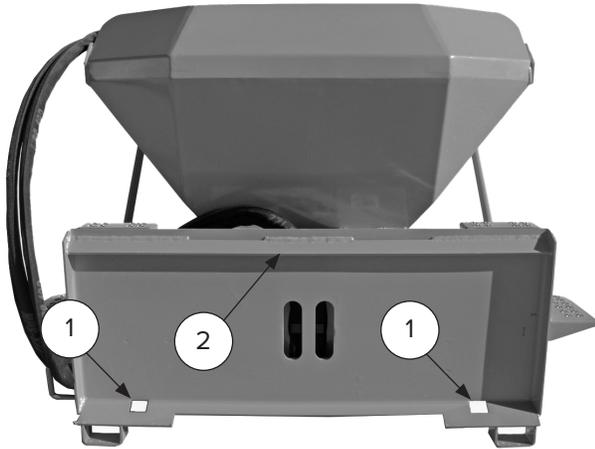


Figure 2

Inspect the material spreader wedge mounts (Item 1), mounting flange (Item 2) [Figure 2] and all welds on the material spreader mounting frame for wear or damage each time the material spreader is removed from the machine.

#### Material Spreader Delivery System

1. Inspect the spreader disc and spreader fins for wear or damage. Make sure all hardware is tight.
2. Inspect all hopper gates that they are free of debris or blockage, and can be opened, closed, and locked at the desired settings.
3. Inspect the agitator wheel and fingers for wear or damage. Check that the agitator pins are secure with keeper pin.

Repair or replace worn or damaged parts (See Section 4.3 Maintenance Items on page 21).

#### Machine Requirements

The material spreader requires a machine with 12–25 GPM auxiliary hydraulic capacity (higher flow will provide a larger spread pattern).

It is recommended to operate the material spreader at 20 GPM continuous, with 25 GPM max flow. Refer to your machine operator manual to operate with standard flow settings.

### 3.2 Setup

#### Material Spreader Gate Adjustment

The material spreader model 101110 has three material flow gates. By adjusting the gates, you can regulate the flow of material to the spreader fins.

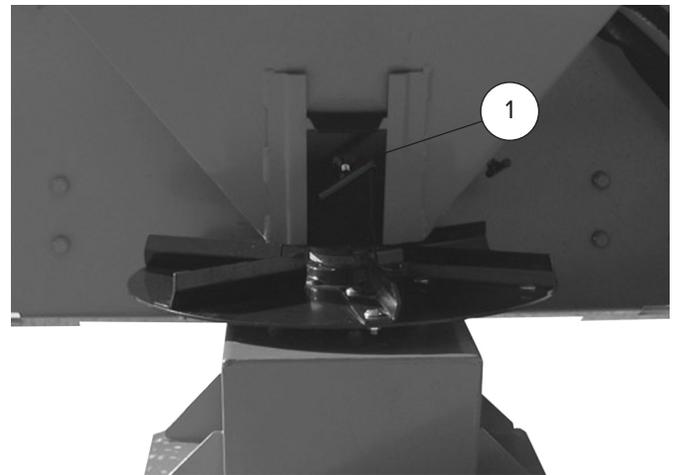


Figure 3

Loosen the gate retainer (Item 1) [Figure 3].

### 3. Operation

#### 3.2 Setup Cont'd

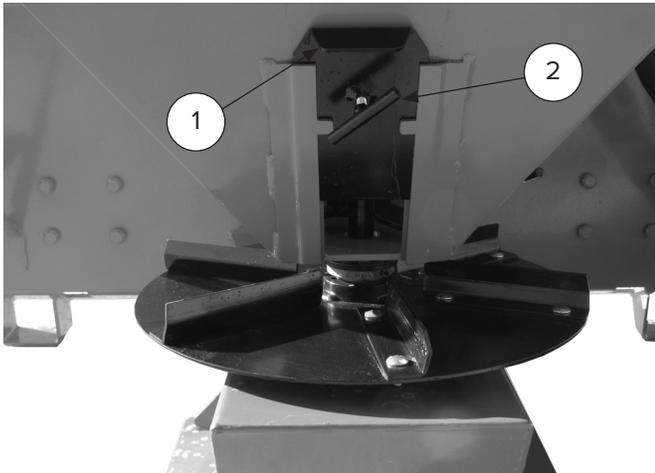


Figure 4

Slide the gate (Item 1) up to allow material to flow out of hopper. When the gate opening is adjusted to desired height for material flow, lock the gate retainer (Item 2) [Figure 4].

Repeat gate adjustment on all material flow gates.

**NOTE:** Material flow gates must be adjusted evenly for a uniform spread pattern.

#### Entering and Exiting the Operator's Position



**AVOID SERIOUS INJURY OR DEATH**

Operators are injured and killed by moving parts when not entering or exiting the machine safely. (See the machine's Operation Manual for the correct procedure).

#### Entering



- Always maintain a three-point contact with ground, steps, grab handles, and safety tread when entering or exiting machine.
- Always face the machine when entering or exiting.

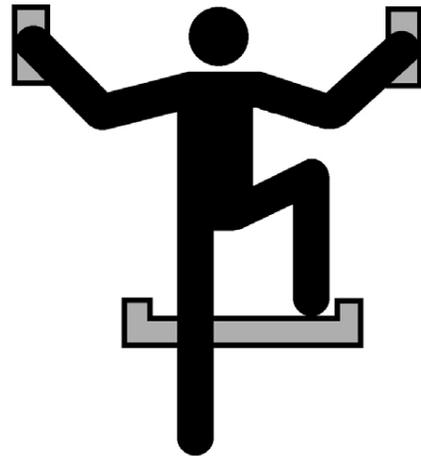


Figure 5

Enter the machine [Figure 5] and move to the operating position.

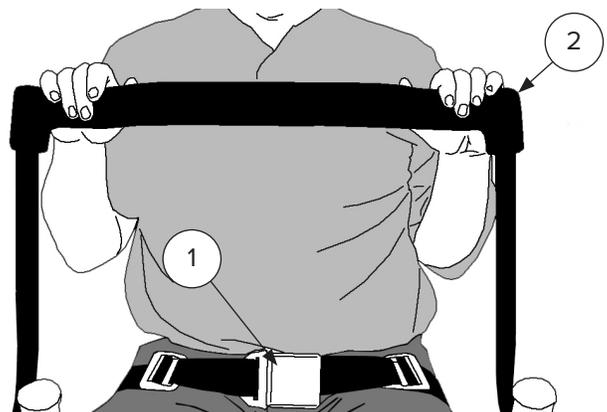


Figure 6

Fasten the seat belt (Item 1) [Figure 6] and adjust the buckle so the buckle is centered between your hips.

### 3. Operation

Lower the seat bar (Item 2) [Figure 6] (if equipped) and engage parking brake.

Place all controls in neutral position.

See the machine's Operation Manual for detailed information on operating the machine.

#### Exiting

 **WARNING** 

**AVOID SERIOUS INJURY OR DEATH**

Before you exit the operating position:

- Lower the lift arms and put the material spreader flat on the ground.
- Always keep your feet on the pedals or footrests and hands on the controls.
- Move all controls until they are LOCKED or in the NEUTRAL position.
- Engage the parking brake, stop the engine, and remove the key.

**SEE THE MACHINE'S OPERATION MANUAL FOR MORE INFORMATION.**

Park the machine on a flat level surface.

Lower the machine lift arm and put the material spreader flat on the ground.

Engage the parking brake and stop the engine.

Remove the key.

Wait for all moving parts to stop.

Release seat belt.

Exit the machine. (See the machine's Operation Manual for the correct procedure.)

#### Material Spreader Installation

**NOTE:** Refer to your machine's Operation Manual for information on properly operating and installing attachments to your machine.

**NOTE:** Verify your machine's load capacity and that your machine is capable of carrying the material spreader fully loaded.

 **WARNING** 

**AVOID SERIOUS INJURY OR DEATH**

Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause serious injury or death.

 **WARNING** 

**AVOID SERIOUS INJURY OR DEATH**

While operating the machine:

- Always keep seat belt fastened.
- Safety seat bar lowered (if equipped).
- Always keep your feet on the pedals or footrests and hands on the controls.

 **WARNING** 



**CRUSH HAZARD**

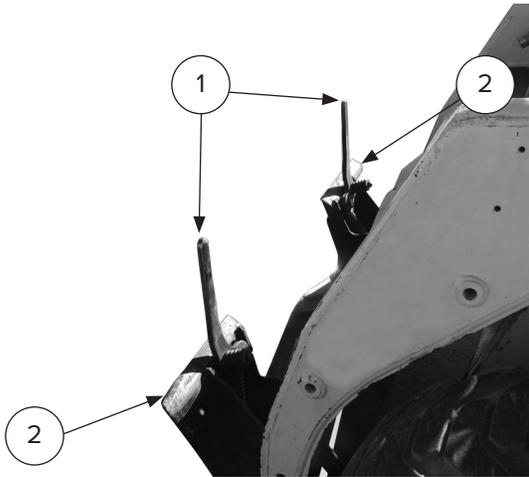
**Before moving the machine, look in all directions and make sure no bystanders are in the work area. Do not allow anyone between the machine and the material spreader when approaching the material spreader for connecting. Clear the area of bystanders in case the material spreader tips forward or comes off the machine mounting frame while attaching the material spreader.**

## 3. Operation

### 3.2 Setup Cont'd

**NOTE:** Only one style of mounting frame is shown, others are similar. See machine operator manual for specific mounting frame (coupler) operation.

Always inspect the machine's mounting frame and the material spreader's mounting frame before installation. (See the machine's Operation Manual). See section 3.1 Material Spreader Mounting Frame on page 11.



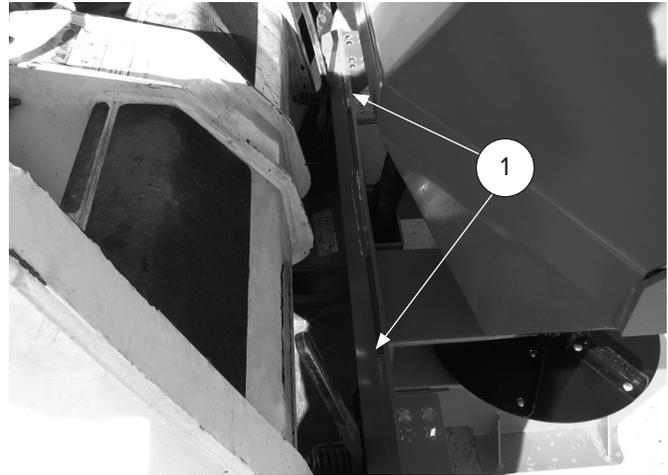
**Figure 7**

Fully raise the attachment locking levers (Item 1) [Figure 7].

Enter the machine (See Entering and Exiting the Operator's Position on page 12).

Fasten the seat belt, start the engine, and release the parking brake.

Lower the machine's lift arms and tilt the machine's mounting frame forward (Item 2) [Figure 7]



**Figure 8**

Drive the machine slowly forward until the top edge of the machine's mounting frame (Item 2) [Figure 7] is completely under the top flange (Item 1) [Figure 8] of the material spreader's mounting frame.

Raise and tilt the machine's mounting frame back until the material spreader is slightly off the ground. Stop engine and exit the machine (See Entering and Exiting the Operator's Position on page 12).



## WARNING



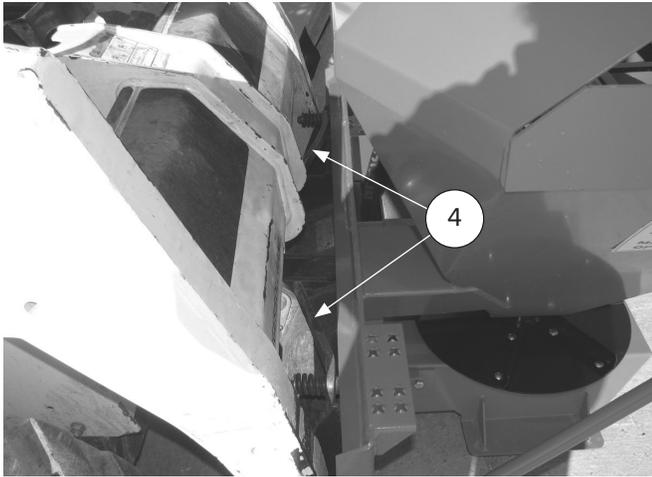
### AVOID SERIOUS INJURY OR DEATH

Before you exit the machine:

- Lower the lift arms and put the material spreader flat on the ground.
- Stop the engine and engage the parking brake.
- Always keep your feet on the pedals or footrests and hands on the controls.
- Move all controls until they are LOCKED or in the NEUTRAL position.

**SEE THE MACHINE'S OPERATION MANUAL FOR MORE INFORMATION.**

### 3. Operation



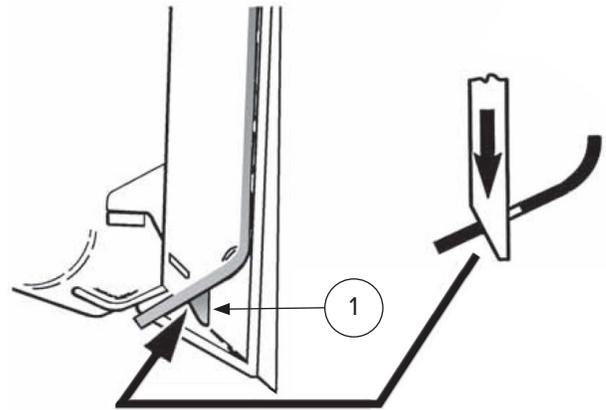
**Figure 9**

Push the attachment locking levers (Item 1) [Figure 9] down until the levers are fully engaged in the locked position. (See machine's operation manual for correct procedure — manual lock shown, others may be different.)

Verify that the top edge of the machine's mounting frame is completely under the top flange of the material spreader mounting frame (Item 1) [Figure 8] is centered and setting level from side to side.



The machine's mounting wedges must extend through the holes in the material spreader mounting frame. Attachment locking levers must be fully lowered and locked. The material spreader can come off if the wedges are not secured.



**Figure 10**

The machine's mounting wedges must extend through the holes (Item 1) [Figure 10] in the material spreader mounting frame, to securely fasten the material spreader to the attachment mounting plate.

Visually inspect that the mounting wedges are securely fastened into the material spreader mounting frame.

## 3. Operation

### 3.2 Setup Cont'd

#### Hydraulic Couplers



### WARNING



#### AVOID BURNS

Hydraulic fluid, fluid tubes, fittings, and quick couplers can get hot when running the machine and attachments. Be careful when connecting and disconnecting quick couplers.



### IMPORTANT



- Thoroughly clean the quick couplers before making connections. Dirt can quickly damage the system.
- Contain and dispose of any oil leakage. See local, state, and federal regulations for the correct disposal.



### WARNING



#### AVOID INJURY OR DEATH

Hydraulic fluid under pressure can penetrate skin or eyes, causing serious injury or death. Fluid leaks under pressure may not be visible. Wear safety glasses and use a piece of cardboard to find leaks. Do not use your hands. If fluid enters the skin or eyes, seek immediate medical attention from a physician familiar with this injury.

**NOTE:** Refer to your machine's Operation Manual for proper hydraulic quick coupler installation on your machine.

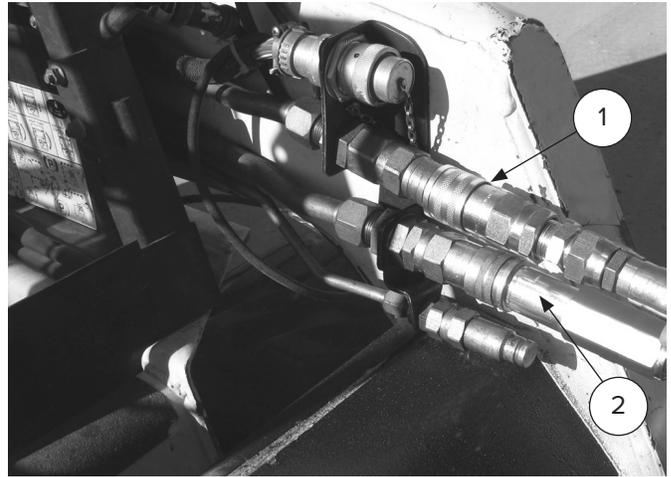


Figure 11

#### Connecting Hydraulic Couplers

Remove any dirt or debris from the surface of both the male and female couplers, and from the outside diameter of the male coupler. Visually check the couplers for corroding, cracking, damage, or excessive wear. If any of these conditions exist, replace the coupler(s).

Install the material spreader male coupler (Item 1) [Figure 11] into the female coupler. Pull on the coupler connection to verify that the male and female couplers are securely fastened.

**NOTE:** Make sure the quick couplers are fully engaged. If the quick couplers do not fully engage, check to see that the couplers are the same size and type.

**NOTE:** Set the machine auxiliary hydraulic control to continuous standard flow when using the material spreader.

## 3. Operation

### Disconnecting Hydraulic Couplers

Relieve hydraulic pressure. (See the machine's Operation Manual for correct procedure).

Push the couplers together and retract the sleeve on the female coupler until the couplers disconnect.

## 3.3 Operation

### Loading the Material Spreader Hopper

The material spreader hopper can be loaded manually.



#### WARNING



##### AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

### Loading the Material Spreader With the Machine



#### WARNING



##### AVOID INJURY OR DEATH

- Use Material Spreader only on approved machines.
- Do not overload.
- Carry load low to prevent tipping hazard and loss of visibility.

**NOTE:** If the material spreader has a sidewalk skirt kit installed, it is recommended to load the material spreader manually or remove the sidewalk skirt kit to prevent damage to the sidewalk skirt.



Figure 12

Raise the machine's lift arms and tilt the material spreader forward. Drive the machine forward into the material [Figure 12].



Figure 13

While moving forward, tilt the material spreader back and lower the lift arms, filling the material spreader hopper [Figure 13].

## 3. Operation

### 3.3 Operation Cont'd

#### Operating the Material Spreader

Adjust the material spreader material gates. (See section 3.2 Setup on page 11.



#### WARNING



##### AVOID INJURY OR DEATH

- Rotating attachment can cause serious injury or death. Keep away when machine is in operation.



#### WARNING



##### AVOID INJURY OR DEATH

- Flying objects from material spreader disc can cause serious injury or death.
- Never operate the material spreader when other persons are in the work area.
- Objects can be thrown up to 35 feet (10 m).

Use the standard flow setting on your machine auxiliary hydraulics with recommended engine RPM for 15 — 20 GPM continuous flow, 25 GPM max flow. DO NOT use high engine RPM or a high flow hydraulic setting on the machine to achieve a wider spread pattern.



Figure 14

Raise the material spreader to a minimum of 20 in. (508 mm) off the ground and adjust the material spreader level to the ground [Figure 14].



#### WARNING



##### AVOID INJURY OR DEATH

Avoid tipping or rollover of the machine and material spreader. Refer to your machine's Operation Manual for proper operation of your machine.



#### IMPORTANT



When engaging or disengaging the material spreader hydraulics, the machine must be idle. Hydraulic motor damage will occur if this procedure is not followed, voiding warranty.

To start rotation of the material spreader disc, engage the machine's auxiliary hydraulics while moving forward (see the machine's Operation Manual for correct procedure).

Increase or decrease engine RPM to adjust the spread pattern to desired coverage. See section 7.3 Performance on page 35 for approximate spread pattern.

**NOTE:** When spreading has been completed, always empty the hopper of material.

**NOTE:** Thoroughly wash, clean, and dry the material spreader after each use or when changing material types being spread.

### 3. Operation

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#### Operating the Material Spreader with the Sidewalk Skirt Kit

To install the sidewalk skirt kit, see section 5.1 Sidewalk Skirt Kit Installation on page 28.



**Figure 15**

The sidewalk skirt kit (Item 1) [Figure 15] is recommended for spreading material on sidewalks or when a narrow spread pattern is required.

Raise the material spreader to a minimum of 20 in. (508 mm) off the ground and adjust the material spreader level to the ground.

**NOTE:** See section 7.2 Sidewalk Kit 101110 and 101115 on page 34 for spread widths with the sidewalk skirt kit installed.

## 4. Maintenance

### 4.1 Maintenance Safety



#### WARNING



##### AVOID INJURY OR DEATH

Never operate the machine in a closed building. Proper ventilation is required when operating the machine under all circumstances.

- Always keep the work area clean and dry.
- Always use personal protection devices such as eye, hand, and hearing protection when performing any service or maintenance.
- A fire extinguisher and first aid kit should be readily accessible while performing maintenance on this machine.
- Before working or doing maintenance on the material spreader, apply the parking brake, shut off the engine, and remove the key or remove the material spreader from the machine.
- Never work under machine or equipment unless the machine or equipment is blocked or supported securely.
- Never operate the machine in a closed building. Proper ventilation is required under all circumstances.
- Disconnect the battery (both terminals) before welding on any part of the machine. Failure to do so may cause damage to electrical components.
- When working around batteries, remember that all of the exposed metal parts are “live”. Never lay a metal object across the terminals because a spark, short circuit, explosion, or personal injury may result.
- Battery posts, terminals, and related accessories contain lead and lead compounds. **Wash hands after handling.**

- When replacement parts are necessary, genuine factory replacement parts must be used to restore your equipment to original specifications. Blue Diamond® will not be responsible for injuries or damage caused by use of unapproved parts and / or accessories.
- When completing service or maintenance on this machine, make sure all shields and guards are installed before placing the machine into service.

### 4.2 General Maintenance

To ensure efficient operation, inspect, lubricate, and make necessary adjustments and repairs at regular intervals. Keep good maintenance records and adequately clean your machine after each use.

Proper maintenance is important. Follow all maintenance instructions and schedules included in this section.

Inspect the following:

- All components and hardware to ensure equipment is secure and thoroughly tightened.
- Frame and all welds for cracks or damage.
- Hopper and all welds for cracks or damage.
- Agitator, spreader fins, and spreader disc for damage or wear.
- Check that all material flow gates can be opened, closed, and locked at desired position.
- Check the hydraulic motor for leaks.
- Visually check the hydraulic hoses and quick couplers for corroding, cracking, damage, or excessive wear.
- Machine’s decals for damage.

**NOTE:** Repair or replace any damaged parts.

## 4. Maintenance

### 4.3 Maintenance Items

**NOTE:** Thoroughly wash, clean, and dry the material spreader before servicing or inspection of material spreader components.



#### WARNING



##### AVOID INJURY OR DEATH

Stop the engine and disconnect the auxiliary hydraulic hose quick couplers before performing maintenance on the material spreader.



#### WARNING



##### AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

#### Spreader Disc

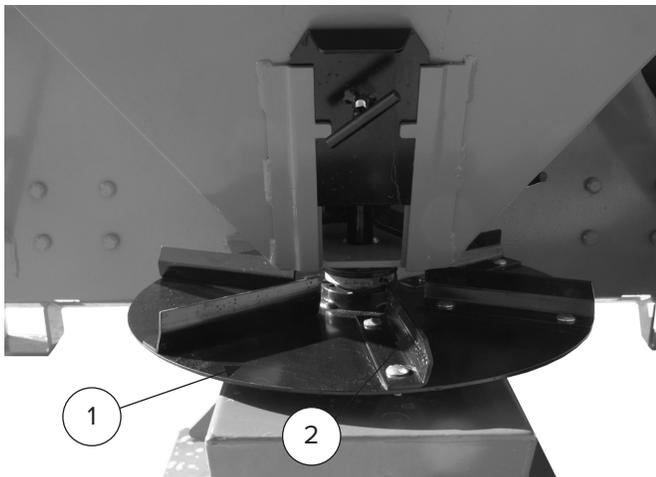


Figure 16

Inspect the material spreader disc (Item 1) and spreader fins (Item 2) [Figure 16] for wear or damage. Make sure all hardware is tight.

Replace any worn or damaged parts.

Blue Diamond® Attachments

#### Hopper Gates

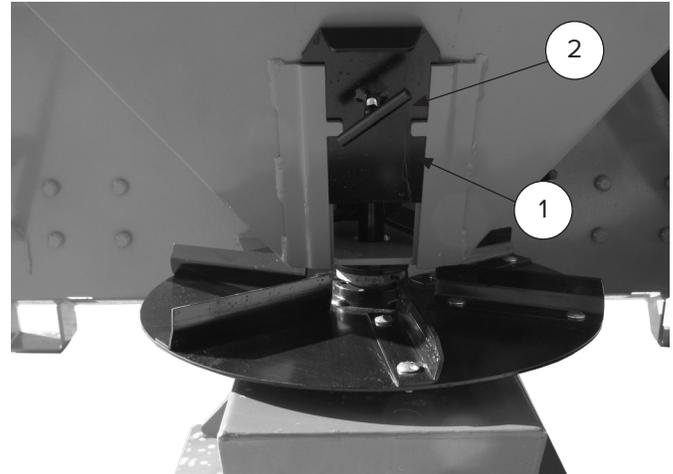


Figure 17

Make sure all hopper gates (Item 1) can be fully opened and closed. Gate retainers (Item 2) [Figure 17] are operational and gates can be locked at desired settings.

#### Agitator

Remove the hopper grate. See section “Hopper Grate” on page 22.

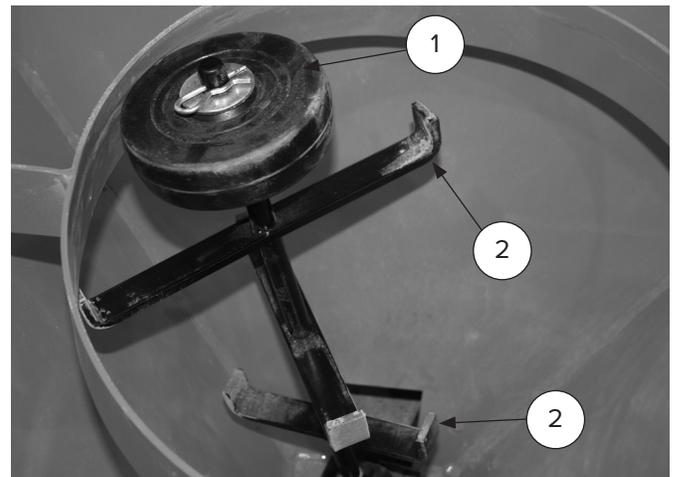


Figure 18

Inspect the agitator wheel (Item 1) and agitator fingers (Item 2) [Figure 18] for wear or damage.

Replace any worn or damaged parts.

## 4. Maintenance

### 4.4 Removal and Installation

#### Hopper Grate

##### Removal



Figure 19

Remove the six bolts (Item 1) [Figure 19] that secure the grate to the hopper.

Remove the hopper grate (Item 2) [Figure 19].

##### Installation

Position the grate on the hopper. Install and tighten the six bolts.

#### Agitator Wheel

##### Removal

Remove the hopper grate. See section “Hopper Grate” on page 22.

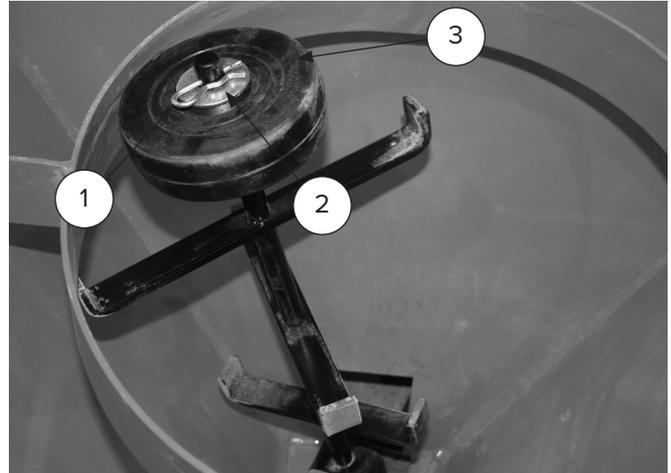


Figure 20

Remove retaining clip (Item 1), washer (Item 2), and agitator wheel (Item 3) [Figure 20].

##### Installation

Install agitator wheel, washer, and retaining clip.

## 4. Maintenance

### Agitator

#### Removal

Remove the hopper grate. See “Hopper Grate” on page 22.

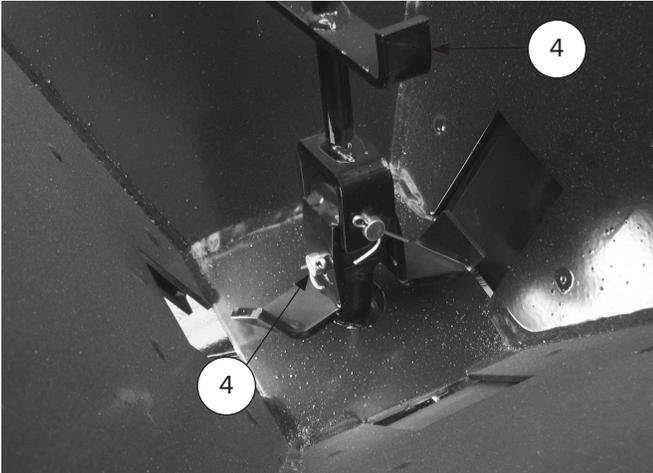


Figure 21

Remove the lower clevis pin (Item 1) [Figure 21] at the base of the agitator.

Remove agitator (Item 2) [Figure 21] from the auger drive shaft.

#### Installation

Install the agitator on the auger drive shaft. Install the lower clevis pin with new retainer pin.

### Hydraulic Motor Housing

#### Removal

Remove the hopper grate. See “Hopper Grate” on page 22.

Remove the agitator. See “Agitator” on page 23.

**NOTE:** Remove the material spreader from the machine.



Figure 22

Install chains and a lifting device to the material spreader [Figure 22].



Figure 23

Lift the material spreader off the floor [Figure 23].

## 4. Maintenance

### 4.4 Removal and Installation Cont'd

#### Hydraulic Motor Housing (Cont'd)

##### Removal Cont'd



Figure 24

Lower the material spreader to the floor [Figure 24].

**NOTE:** Block and support the material spreader as necessary.



### WARNING



#### AVOID INJURY OR DEATH

Never work on or under equipment, unless the equipment is blocked and supported securely.

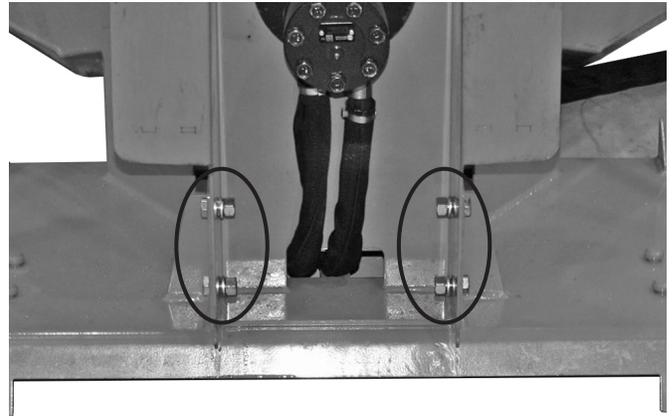


Figure 25

Remove the four nuts and bolts seen circled in Figure 25

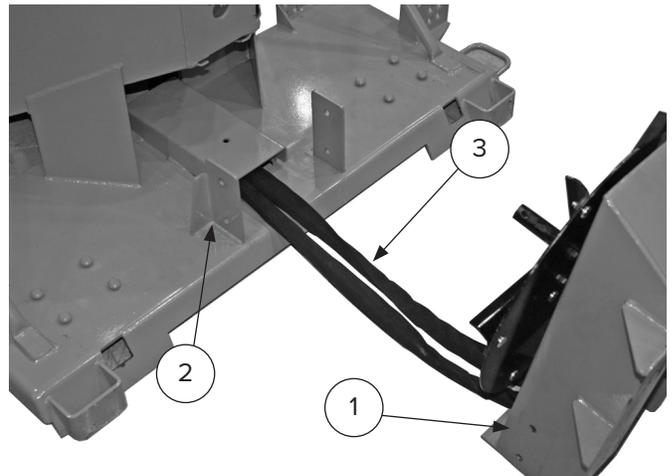


Figure 26

Pull the motor housing (Item 1) away from the frame (Item 2) and pull the hydraulic hoses (Item 3) [Figure 26] through the frame.

#### Installation

Route the hydraulic hoses through the frame. Align the motor housing to the frame. Install the four bolts, nuts, and tighten.

## 4. Maintenance

### Spreader Disc

#### Removal

Remove the hydraulic motor housing. See “Hydraulic Motor Housing” on page 23.

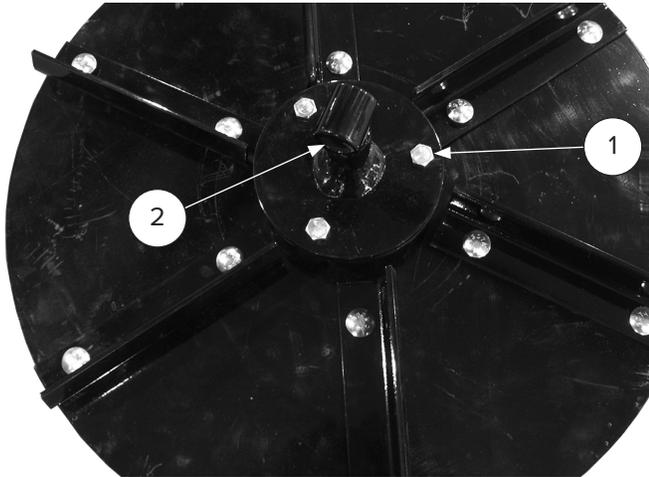


Figure 27

Remove three bolts (Item 1) and the auger drive shaft (Item 2) [Figure 27].

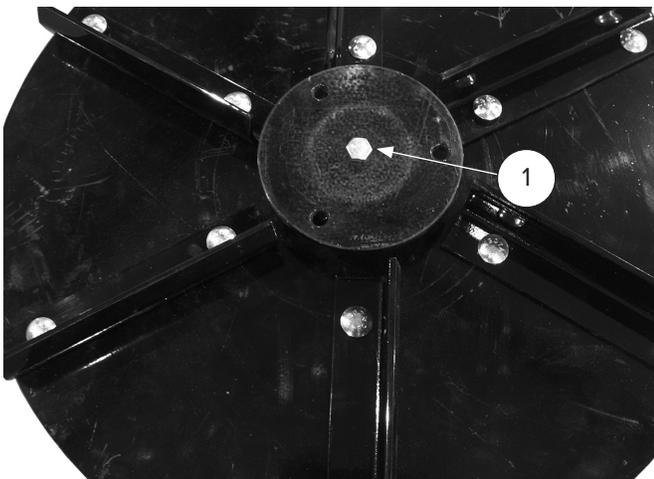


Figure 28

Remove spreader disc retention bolt (Item 1) [Figure 28] from spreader disc motor shaft (not shown).

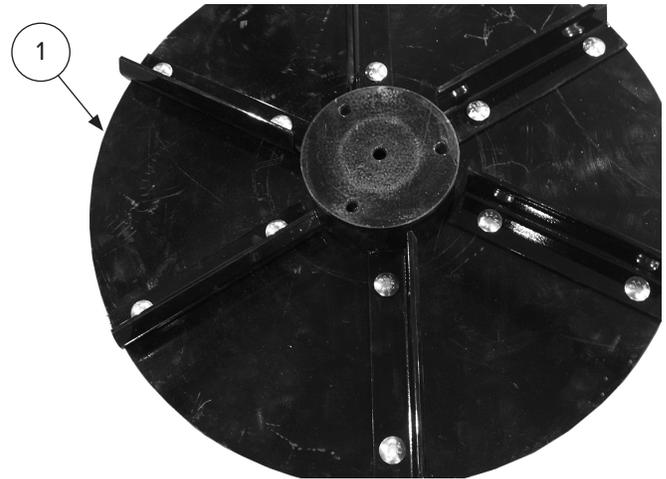


Figure 29

Remove the spreader disc (Item 1) [Figure 29] from the motor shaft (not shown).

#### Installation

Install the spreader disc over the motor shaft with 1/4 x 1” key (not shown). Use anti-seize on motor shaft and key.

Install spreader disc retention bolt (Item 1) [Figure 28] through spreader disc retention flange and into motor shaft. Use blue loctite on bolt threads.

Install the auger drive shaft (Item 2) onto the spreader disc retention flange. Install the three bolts (Item 1) [Figure 27] and tighten.

## 4. Maintenance

### 4.4 Removal and Installation Cont'd

#### Hydraulic Motor

##### Removal

Remove the spreader disc. See section “Spreader Disc on page 25.

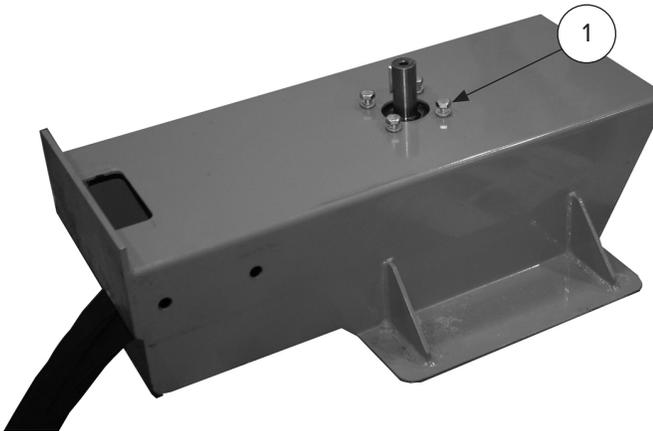


Figure 30

Remove the four motor bolts (Item 1) [Figure 30] and remove the hydraulic motor with spacer plate from the motor housing.

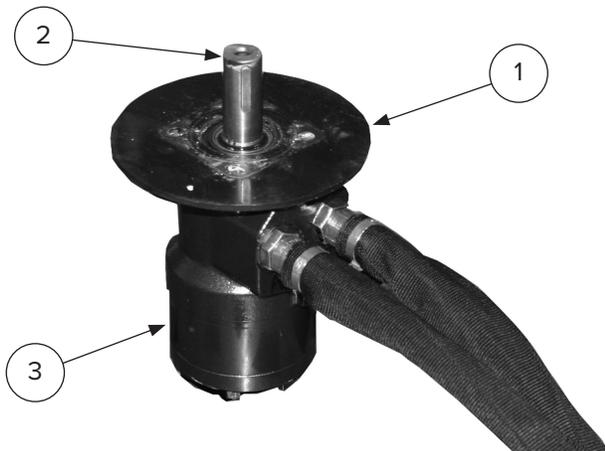


Figure 31

Remove the motor spacer plate (Item 1) from the motor shaft (Item 2) and hydraulic motor (Item 3) [Figure 31].

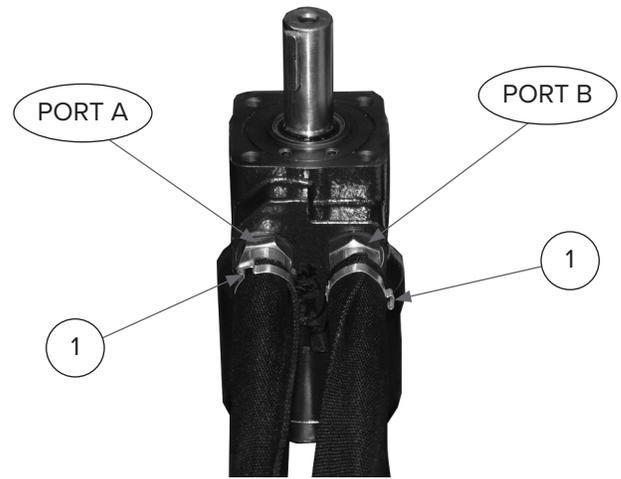


Figure 32

Remove the hydraulic hoses (Item 1) [Figure 32].

**NOTE:** Mark the hydraulic hoses before removal for proper installation.

##### Installation

Connect the hydraulic hoses to the hydraulic motor and tighten.

**NOTE:** Pressure hose (with male coupler for most machines) should go to motor port A for correct rotation. Check your machine's Operator Manual for pressure line with continuous flow setting.

Install the spacer plate (Item 1) over the hydraulic motor shaft (Item 2) [Figure 31]

Install the hydraulic motor with spacer plate onto the housing and install the four motor bolts (Item 1) [Figure 30] with blue Loctite. Tighten bolts to 25 – 28 ft.-lb. (34 - 38 N•m) torque.

## 4. Maintenance

---

### 4.5 Storage and Return to Service

#### Storage

After the season's use or when the material spreader will not be in use for a period of time, thoroughly wash the material spreader. Make sure the hopper, agitator, spreader fins, and all components are clean and free of debris or material. Make sure the material spreader is thoroughly dry.

- Make sure all covers, guards, and shields are installed.
- Inspect all components and hardware to ensure everything is secure and thoroughly tightened.
- Inspect the frame and all welds for cracks or damage.
- Lubricate the material flow gate slides, agitator, and spreader disc with a coat of vegetable oil.
- Inspect the machine's decals for damage.
- Inspect optional equipment (if equipped).
- Place the material spreader in a dry protected shelter.

**NOTE:** Replace or repair any damaged parts, components, or decals.

#### Return to Service

After the machine has been in storage, it is necessary to follow a list of items to return the machine to service.

- Make sure all covers, guards, and shields are in place.
- Inspect the machine's decals for damage.
- Operate the machine and check for proper operation.

## 5. Options

### 5.1 Optional Equipment

#### Sidewalk Skirt Kit Installation

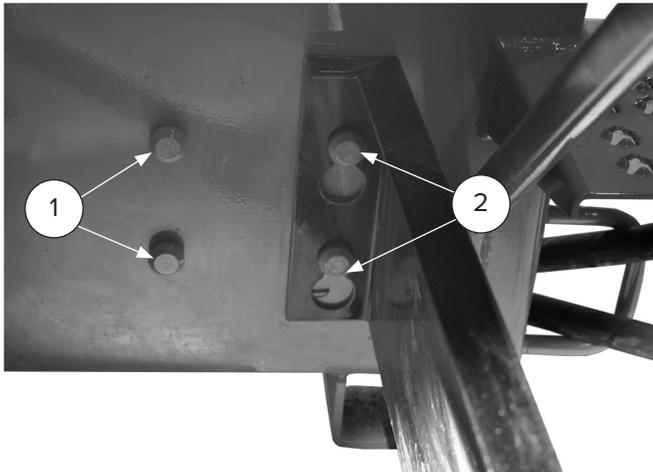


Figure 33

Install the left and right sidewalk skirt deflectors on the inside pegs (Item 1) for a 29 in. (737 mm) spread width or the outside pegs (Item 2) [Figure 33] for a 37 in. (940 mm) spread width.

#### Outside Peg Installation



Figure 34

Install the two bolts (circled in Figure 34) through both the left and right deflectors. Install and tighten the two nuts to 25 – 28 ft.-lb (34 – 38 N•m) torque.

#### Inside Peg Installation

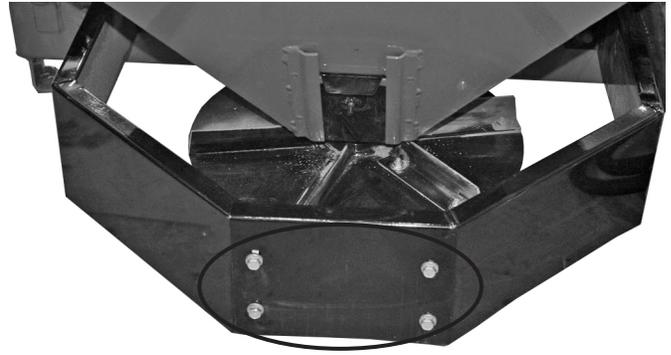
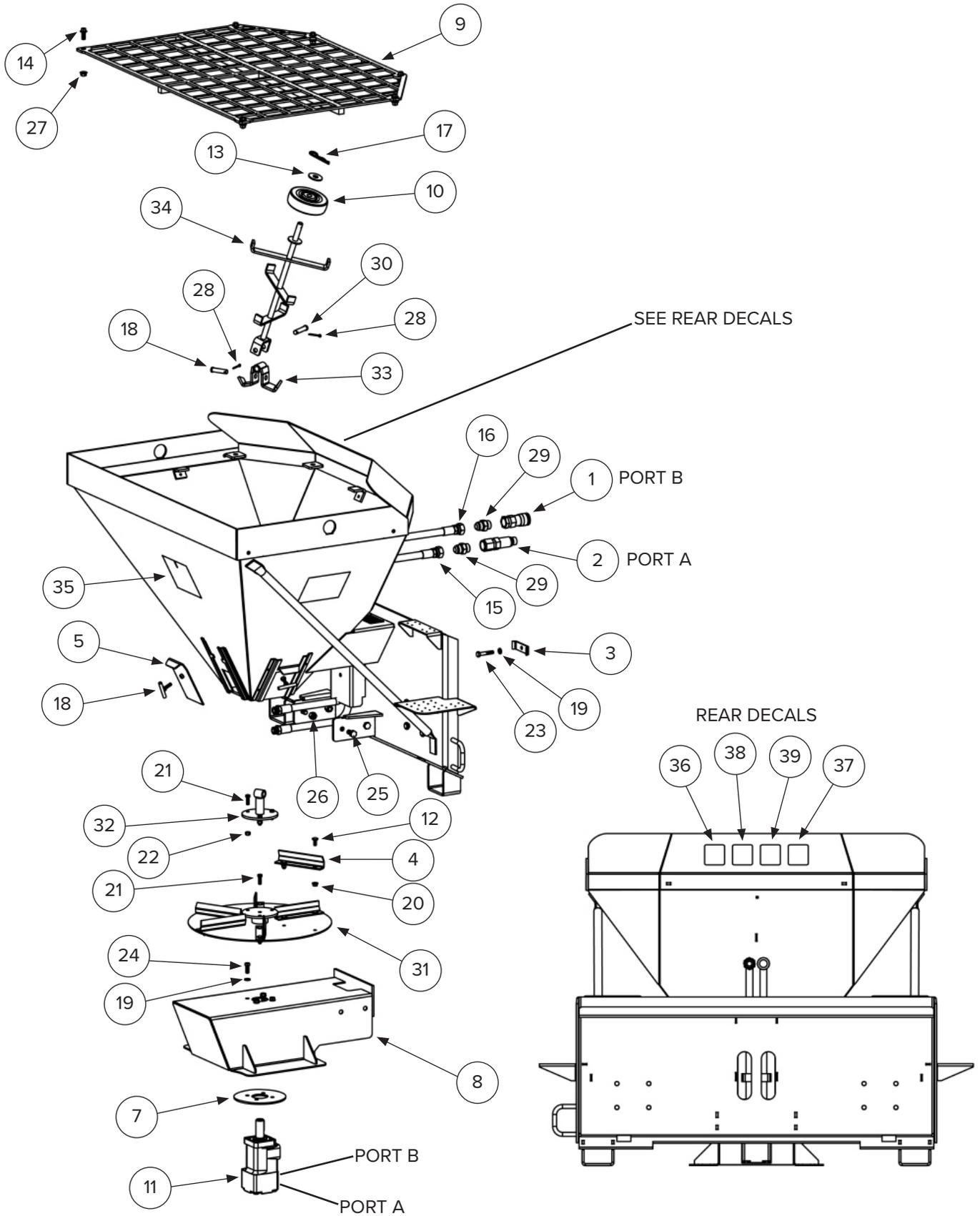


Figure 35

Install the four bolts (circled in Figure 35) through both the right and left deflectors. Install and tighten the four nuts to 25 – 28 ft.-lb. (34 - 38 N•m) torque.

# 6. Parts

## 6.1 Material Spreader Parts



## 6. Parts

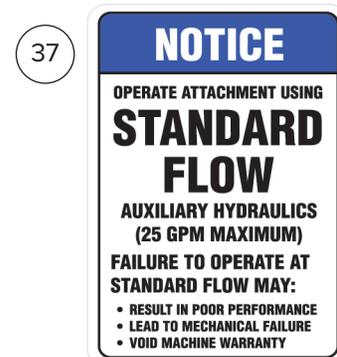
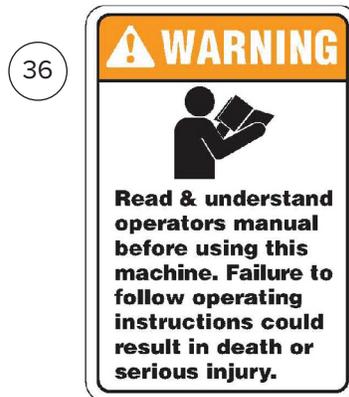
### 6.1 Material Spreader Parts Cont'd

ITEM	PART NUMBER	DESCRIPTION	101110 QTY	101115 QTY
1	224078	Female Hyd. Coupler 1/2	1	1
2	224079	Male Hyd. Coupler 1/2	1	1
3	201076	Hose Clamp	1	1
4	201077	Spreader Fin For 8 Ft Model	6	—
	201535	Spreader Fin For 18 Ft Model	—	6
5	201505	Gate	3	4
6	201520	Gate "T", Handle	3	4
7	201078	Spacer	1	1
8	201079	Motor Mount Weldment For 8 Ft Model	1	—
	201115	Motor Mount Weldment For 18 Ft Model	—	1
9	201080	Grate Weldment For 8 Ft Model	1	—
	201081	Grate Weldment For 18 Ft Model	—	1
10	201027	5" Rubber Wheel	1	1
11	201082	Hydraulic Motor For 8 Ft Model	1	—
	201550	Hydraulic Motor For 18 Ft Model	—	1
12	201532	Bolt, 5/16unc x 3/4 CRG HD Zinc	12	12
13	299846	Washer Flat Fender 5/8"	1	2
14	201072	Bolt 3/8-16UNC X 1.00" Hex Flg Hd Zinc	6	6
15	201083	Hyd Hose 1/2 X 104	1	—
	201084	Hyd Hose 1/2 X 114	—	1
16	201085	Hyd Hose 1/2 X 107	1	—
	201086	Hyd Hose 1/2 X 117	—	1
17	201071	Hair Pin, 9/64 X 2 Zinc	1	1
18	201075	Clevis Pin 1/2 X 2.00" STL Zinc	1	1
19	299825	Lockwasher, 3/8" Helical Spr., Zinc	5	5
20	299561	Nut, 5/16"-18 Serrated Flange	12	12
21	299317	Bolt 5/16-18unc X 1" Hex Z Gr5	4	4
22	299620	Nut, 5/16-18 Nylock	3	3
23	299328	Bolt, 3/8-16unc X 2" Hex Hd, Zinc	1	1
24	299423	Bolt, 3/8-16unc X 1" Hex Hd, Zinc	4	4
25	299431	Bolt, 1/2-13unc X 1" Hex Hd, Zinc	4	4
26	299618	Nut, 1/2-13 Nylock	4	4
27	299562	Nut, 3/8-16 UNC Hex Flg Serrated, Zinc	6	6

## 6. Parts

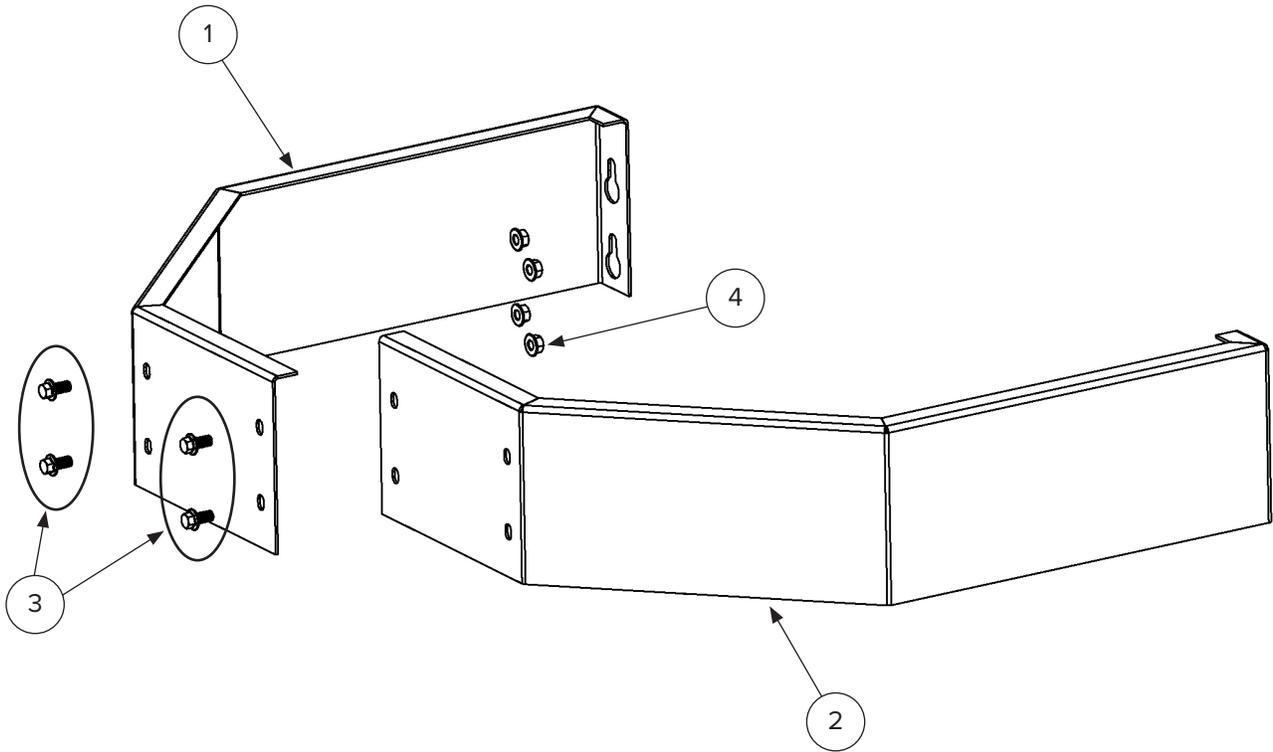
### 6.1 Material Spreader Parts Cont'd

ITEM	PART NUMBER	DESCRIPTION	10110 QTY	10115 QTY
28	201074	Cotter Pin 1/8 X 1.25" Stl Zinc	2	2
29	295010-M12JIC-M12ORB	Hyd. Fitting, 12mj X 12mb, Str	2	2
30	201087	Clevis Pin 1/2" X 2-12" Zn	1	—
	201073	Clevin Pin 1/2" X 3-12" Zn	—	1
31	201088	Spreader Disc Weldment Small	1	—
	201530	Spreader Disc Weldment, Large	—	1
32	201023	Auger Drive Weldment	1	1
33	201089	Agitator Weldment Bottom Small	1	—
	201022	Agitator Weldment Bottom Large	—	1
34	201090	Agitator Weldment Top Small	1	—
	201026	Agitator Weldment Top Large	—	1
35	201091	Decal - Warning Stay Clear	3	3
36	219395	Decal, Warning, Read Manual	1	1
37	201092	Decal - Standard Flow	1	1
38	201093	Decal - Warning Agitator	1	1
39	201094	Decal - Warning Spreader Throw	1	1



## 6. Parts

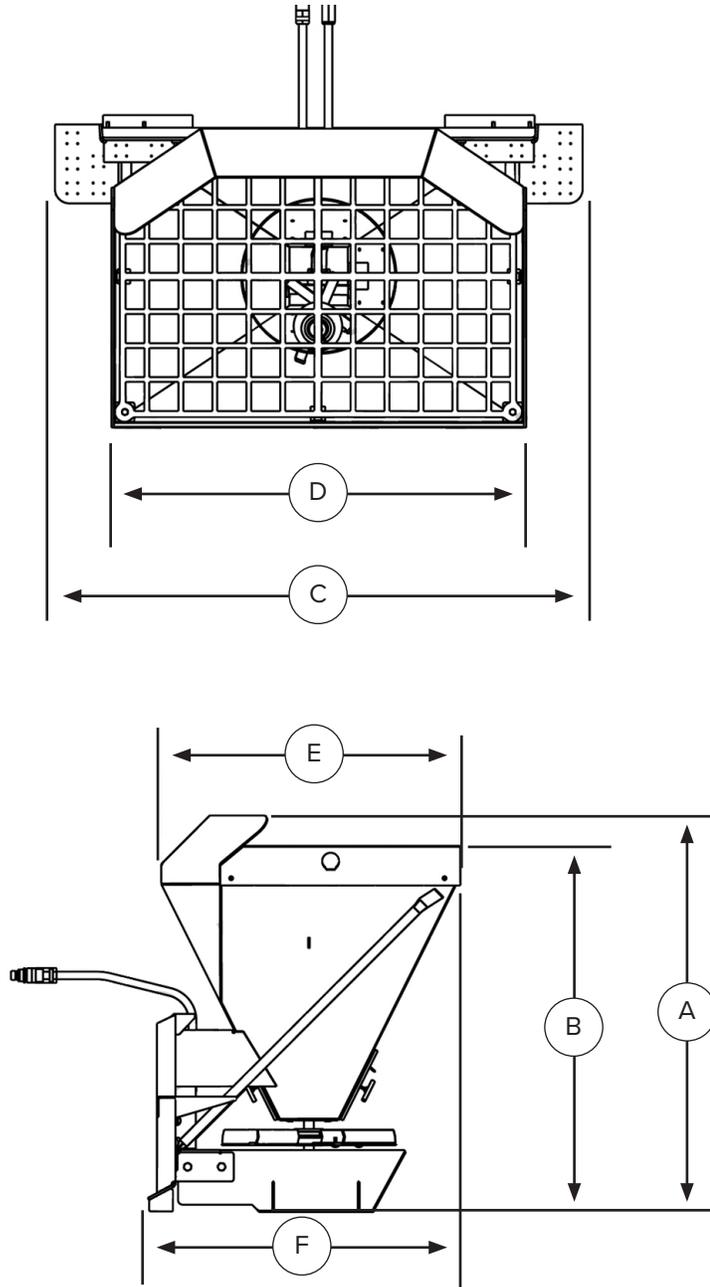
### 6.2 Sidewalk Kit Parts 101110 & 101115



ITEM	PART NUMBER	DESCRIPTION	101110 QTY	101115 QTY
1	201095	Right Deflector For 8 Ft Model	1	1
	201096	Right Deflector For 18 Ft Model	—	1
2	201097	Left Deflector For 8 Ft Model	1	—
	201098	Left Deflector For 18 Ft Model	—	1
3	201099	Bolt 3/8 X 3/4 Flange	4	4
4	299562	Nut, 3/8-16unc Hex Flg Serrated, Zinc	4	4

## 7. Specifications

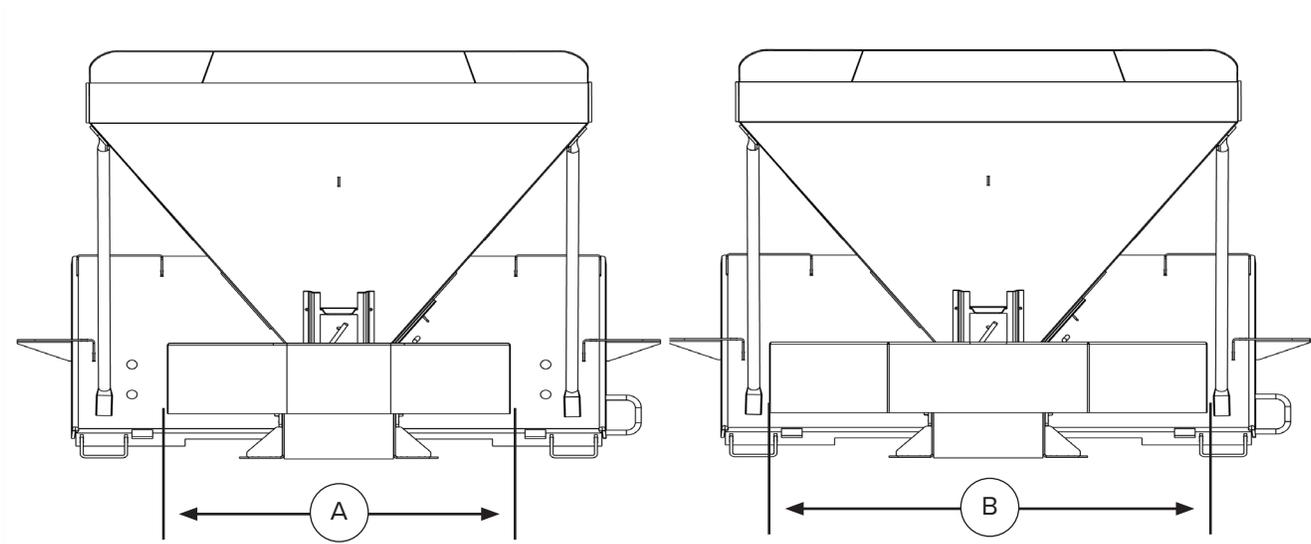
### 7.1 Material Spreader 101110 & 101115 Dimensions



ITEM	DESCRIPTION	101110	101115
A	Overall Height	40.89 in. (1039 mm)	45.38 in. (1153 mm)
B	Hopper Height	37.74 in. (959 mm)	42.25 in. (1073 mm)
C	Overall Width	54.41 in. (1382 mm)	54.45 in. (1382 mm)
D	Hopper Width	42.76 in. (1086 mm)	50.75 in. (1289 mm)
E	Hopper Length	30.84 in. (784 mm)	43.31 in. (1100 mm)
F	Overall Length	32.08 in. (813 mm)	44.61 in. (1133 mm)
—	Overall Weight (empty)	415 lb. (188 kg)	750 lb (340 kg)
—	Overall Weight (gross)	1,455 lb. (660 kg)	3,090 lb. (1,402 kg)
—	Hopper Capacity	8 cu. ft. (227 L)	18 cu. ft. (510 L)

## 7. Specifications

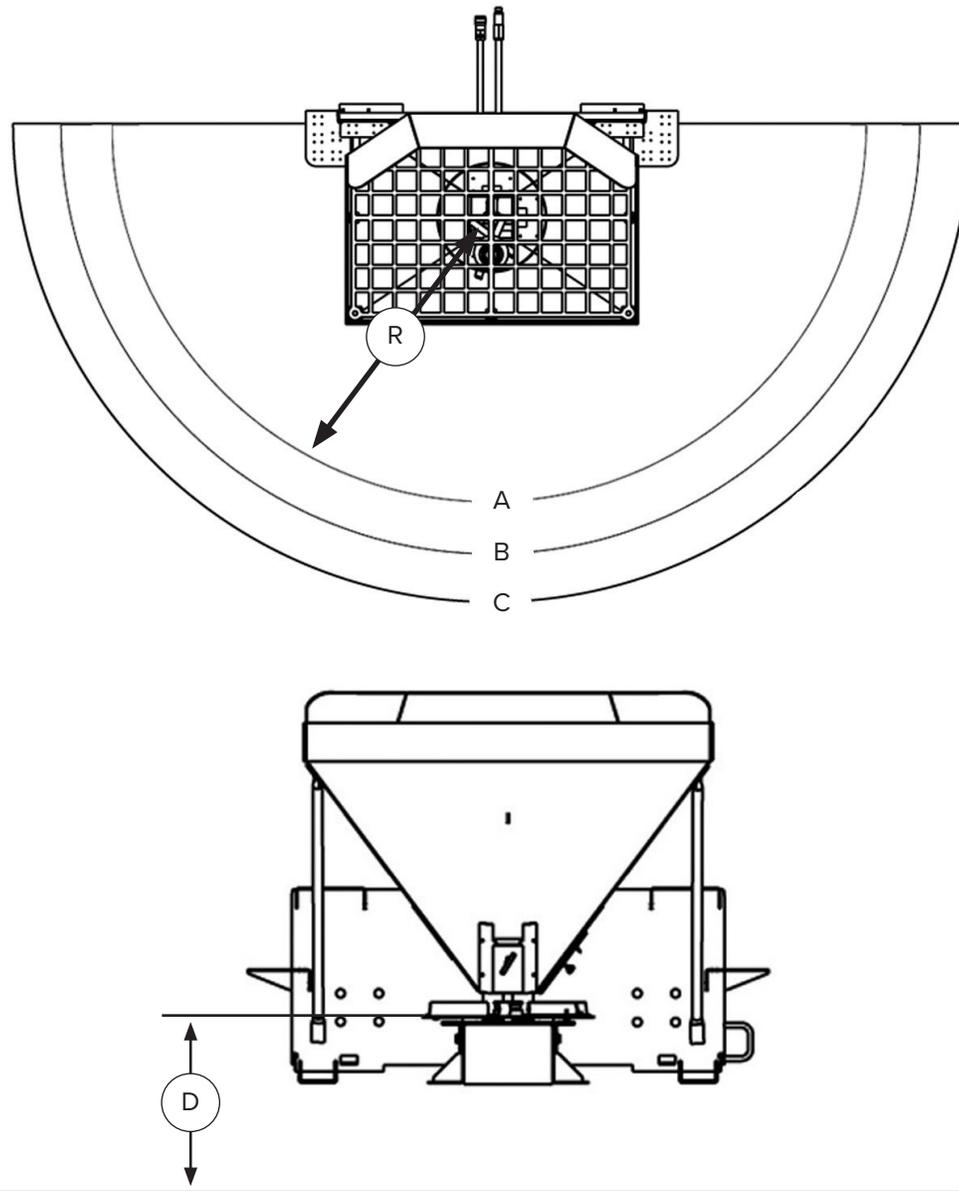
### 7.2 Sidewalk Kit 101110 & 101115 Dimensions



ITEM	DESCRIPTION	SPREAD WIDTH
A	Spreader Width with Sidewalk Kit on Inside Pegs	29 in. (736 mm)
B	Spreader Width with Sidewalk Kit on Outside Pegs	37 in. (940 mm)

## 7. Specifications

### 7.3 Performance



ITEM	DESCRIPTION	SPREAD RADIUS (R)
A	Engine Speed at 1500 RPM	9.2 ft. (2.8 m)
B	Engine Speed at 2000 RPM	11.3 ft. (3.4 m)
C	Engine Speed at 2500 RPM	14.2 ft. (4.3 m)
D	Distance Between the Ground and the Spreader	20 in. (508 mm)

**NOTE:** Spread width may vary depending upon the machine the material spreader is installed on. Refer to machine's Operator Manual for continuous flow setting and standard flow rating. For best results operate the material spreader with 20 GPM continuous flow. DO NOT operate at the machine with high flow hydraulics or more than 25 GPM maximum hydraulic flow.

## 7. Specifications

### 7.4 Torque Specifications

#### Standard Hardware and Lock Nuts

BOLT TYPE	SAE GRADE 5		SAE GRADE 8		LOCK NUTS			
	Nominal Size	Plated or Unplated Silver	Plated W/ ZnCr Gold	Plated or Unplated Silver	Plated W/ ZnCr Gold	Plated or Unplated Silver	Plated W/ ZnCr Gold	W/ Grade 5 Bolt
1/4	55 in / lb (6.2 N•m)	72 in / lb (8.1 N•m)	86 in / lb (9.7 N•m)	112 in / lb (12.6 N•m)	121 in / lb (13.6 N•m)	157 in / lb (17.7 N•m)	61 in / lb (6.9 N•m)	86 in / lb (9.8 N•m)
5/16	115 in / lb (13 N•m)	149 in / lb (17 N•m)	178 in / lb (20 N•m)	229 in / lb (26 N•m)	250 in / lb (28 N•m)	325 in / lb (37 N•m)	125 in / lb (14 N•m)	176 in / lb (20 N•m)
3/8	17 ft / lb (23 N•m)	22 ft / lb (30 N•m)	26 ft / lb (35 N•m)	34 ft / lb (46 N•m)	37 ft / lb (50 N•m)	48 ft / lb (65 N•m)	19 ft / lb (26 N•m)	26 ft / lb (35 N•m)
7/16	27 ft / lb (37 N•m)	35 ft / lb (47 N•m)	42 ft / lb (57 N•m)	54 ft / lb (73 N•m)	59 ft / lb (80 N•m)	77 ft / lb (104 N•m)	30 ft / lb (41 N•m)	42 ft / lb (57 N•m)
1/2	42 ft / lb (57 N•m)	54 ft / lb (73 N•m)	64 ft / lb (87 N•m)	83 ft / lb (113 N•m)	91 ft / lb (123 N•m)	117 ft / lb (159 N•m)	45 ft / lb (61 N•m)	64 ft / lb (88 N•m)
9/16	60 ft / lb (81 N•m)	77 ft / lb (104 N•m)	92 ft / lb (125 N•m)	120 ft / lb (163 N•m)	130 ft / lb (176 N•m)	169 ft / lb (229 N•m)	65 ft / lb (88 N•m)	92 ft / lb (125 N•m)
5/8	83 ft / lb (112 N•m)	107 ft / lb (145 N•m)	128 ft / lb (174 N•m)	165 ft / lb (224 N•m)	180 ft / lb (244 N•m)	233 ft / lb (316 N•m)	90 ft / lb (122 N•m)	127 ft / lb (172 N•m)
3/4	146 ft / lb (198 N•m)	189 ft / lb (256 N•m)	226 ft / lb (306 N•m)	293 ft / lb (397 N•m)	319 ft / lb (432 N•m)	413 ft / lb (560 N•m)	160 ft / lb (217 N•m)	226 ft / lb (306 N•m)
7/8	142 ft / lb (193 N•m)	183 ft / lb (248 N•m)	365 ft / lb (495 N•m)	473 ft / lb (641 N•m)	515 ft / lb (698 N•m)	667 ft / lb (904 N•m)	258 ft / lb (350 N•m)	364 ft / lb (494 N•m)
1	213 ft / lb (289 N•m)	275 ft / lb (373 N•m)	547 ft / lb (742 N•m)	708 ft / lb (960 N•m)	773 ft / lb (1048 N•m)	1000 ft / lb (1356 N•m)	386 ft / lb (523 N•m)	545 ft / lb (739 N•m)



## Warranty

### MANUFACTURER'S LIMITED WARRANTY

BLUE DIAMOND® ATTACHMENTS, a manufacturer of quality attachments, warrants new BLUE DIAMOND® ATTACHMENTS products and/or attachments at the time of delivery to the original purchaser, to be free from defects in material and workmanship when properly set up and operated in accordance with the recommendations set forth by BLUE DIAMOND® ATTACHMENTS, LLC.

BLUE DIAMOND® ATTACHMENTS liability for any defect with respect to accepted goods shall be limited to repairing the goods at a BLUE DIAMOND® ATTACHMENTS designated location or at an authorized dealer location, or replacing them, as BLUE DIAMOND® ATTACHMENTS shall elect. The above shall be in accordance with BLUE DIAMOND® ATTACHMENTS warranty adjustment policies. BLUE DIAMOND® ATTACHMENTS obligation shall terminate twelve (12) months for the Material Spreader after the delivery of the goods to original purchaser.

This warranty shall not apply to any machine or attachment which shall have been repaired or altered outside the BLUE DIAMOND® ATTACHMENTS factory or authorized BLUE DIAMOND® ATTACHMENTS dealership or in any way so as in BLUE DIAMOND® ATTACHMENTS judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident beyond the company recommended machine rated capacity.

### WARRANTY CLAIM

To submit a warranty claim, a claim must be filed with BLUE DIAMOND® ATTACHMENTS before work is performed. The BLUE DIAMOND® PRODUCT SUPPORT TEAM will advise repairs and applicable parts exchanges. Tampering with the failed part may void the warranty. This warranty does not include freight or delivery charges incurred when returning machinery for servicing. Dealer mileage, service calls, and pickup/delivery charges are the customers' responsibility.

### EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, BLUE DIAMOND® ATTACHMENTS makes no representation or warranty of any kind, expressed or implied, AND MAKES NO WARRANTY OF MERCHANTABILITY IN RESPECT TO ITS MACHINERY AND/OR ATTACHMENTS ARE FIT FOR ANY PARTICULAR PURPOSE. BLUE DIAMOND® ATTACHMENTS shall not be liable for incidental or consequential damages for any breach or warranty, including but not limited to inconvenience, rental of replacement equipment, loss of profits or other commercial loss. Upon purchase, the buyer assumes all liability for all personal injury and property resulting from the handling, possession, or use of the goods by the buyer.

No agent, employee, or representative of BLUE DIAMOND® ATTACHMENTS has any authority to bind BLUE DIAMOND® ATTACHMENTS to any affirmation, representation, or warranty concerning its machinery and/or attachments except as specifically set forth herein.

This warranty policy supersedes any previous documents.

**NOTE:** Blue Diamond® Attachments is a trademark of BLUE DIAMOND® ATTACHMENTS



**QUALITY | DEPENDABILITY | INTEGRITY**

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