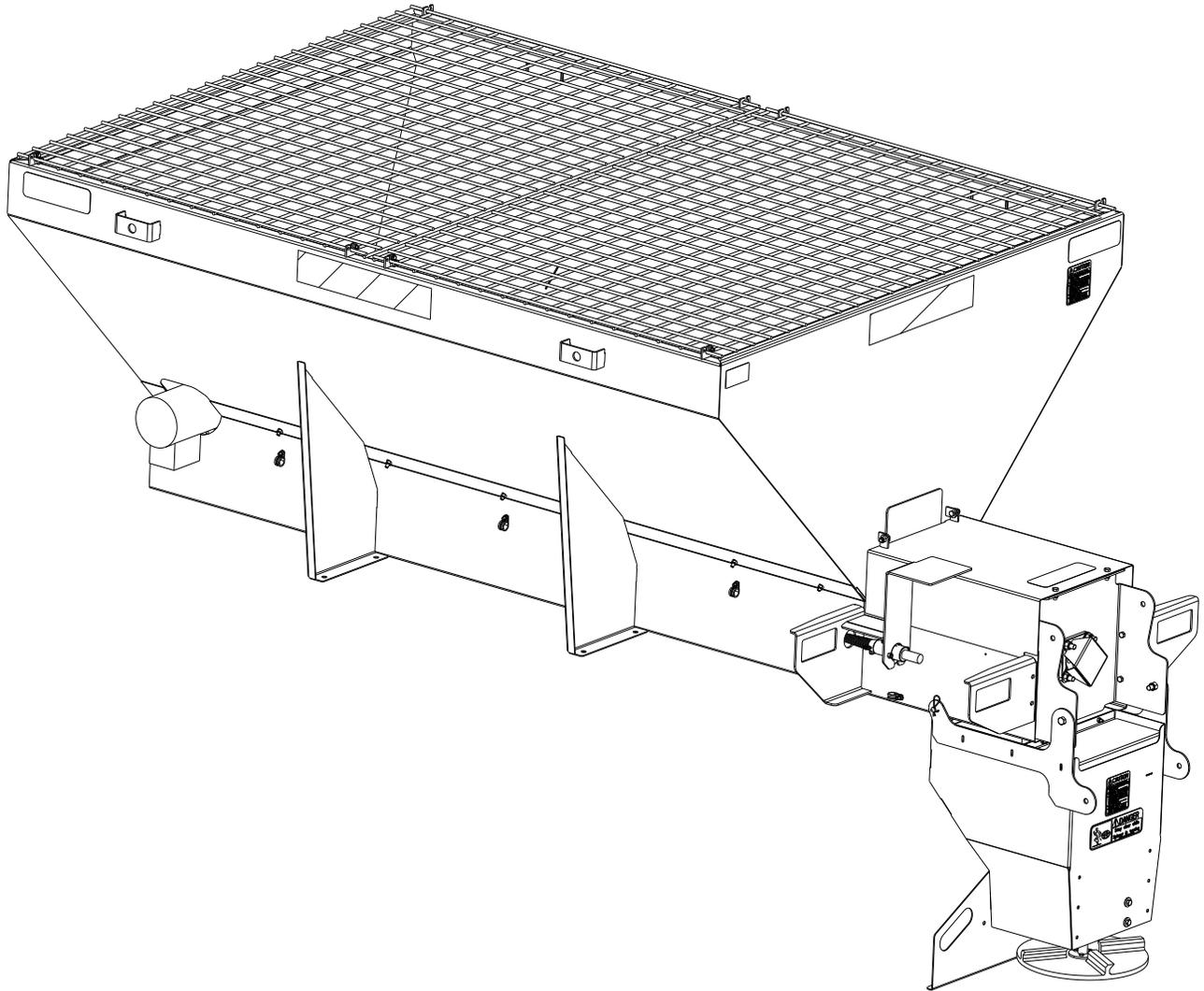


# MDV-A ELECTRIC SPREADER SERIES



# SWENSON

**INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL  
MDV-A ELECTRIC SERIES**

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**NOTICE: INSTRUCTIONAL MATERIAL AND PARTS LISTS INCLUDED IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE.**

## SAFETY

**THE BEST SAFETY  
DEVICE IS A  
CAREFUL OPERATOR!**

### SAFETY ALERT SYMBOL



THIS SYMBOL MEANS **ATTENTION!**  
**BECOME ALERT!**  
**YOUR SAFETY IS INVOLVED!**  
PLEASE READ AND UNDERSTAND COMPLETELY BEFORE DOING!

### SAFE EQUIPMENT INSTALLERS and OPERATORS ALWAYS:

**TURN OFF ALL POWER BEFORE PERFORMING ANY SERVICE OPERATIONS**



- FOLLOW RECOMMENDED OPERATING PROCEDURES.
- KEEP EQUIPMENT IN SAFE OPERATING CONDITION AT ALL TIMES.
- RECOGNIZE AND AVOID HAZARDS WHILE OPERATING, SERVICING AND MAINTAINING EQUIPMENT.

SAFETY DECALS



DANGER SPINNER 04049-044-00



DANGER AUGER 04049-121-00



CAUTION 04049-045-00



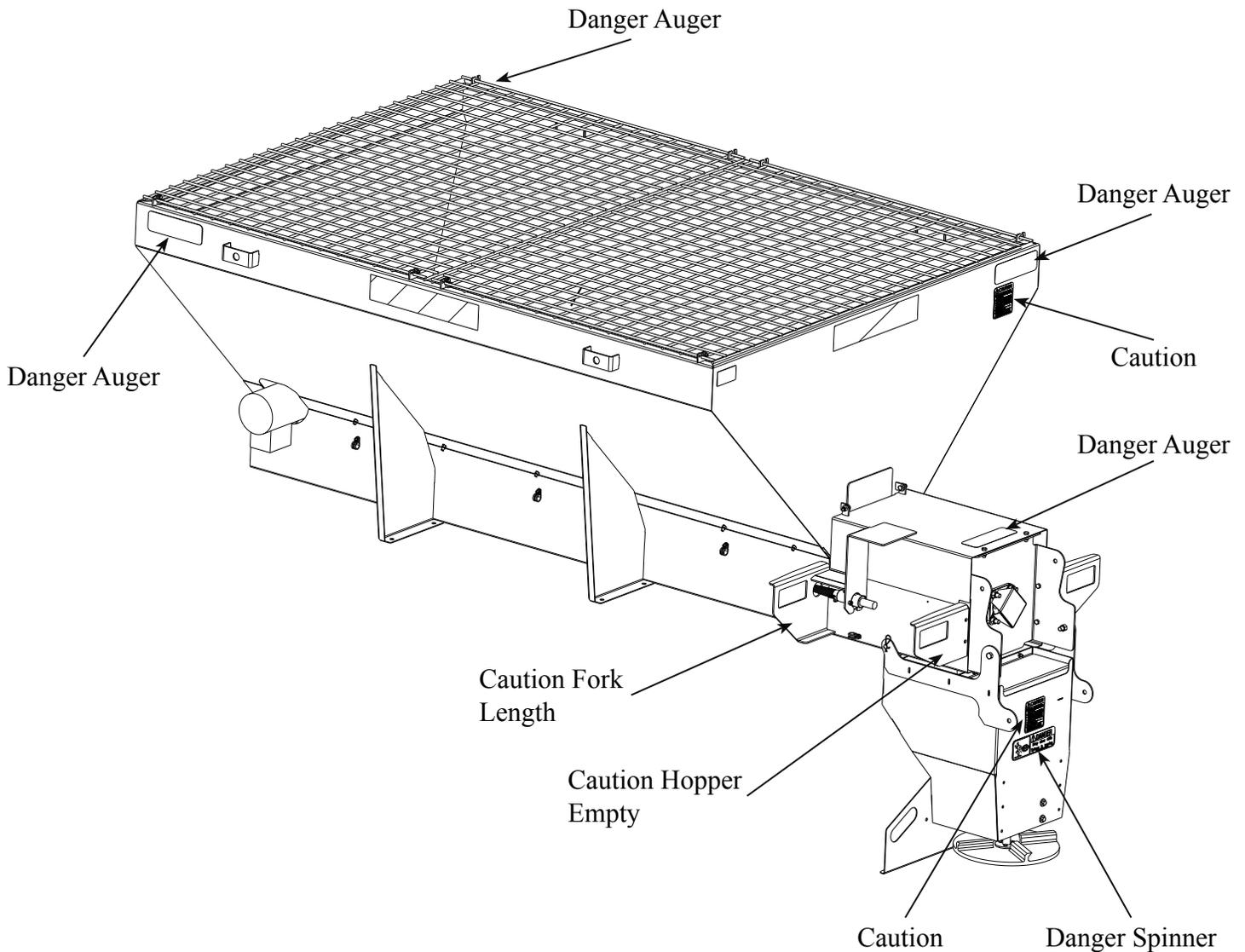
CAUTION HOPPER EMPTY  
04049-408-00



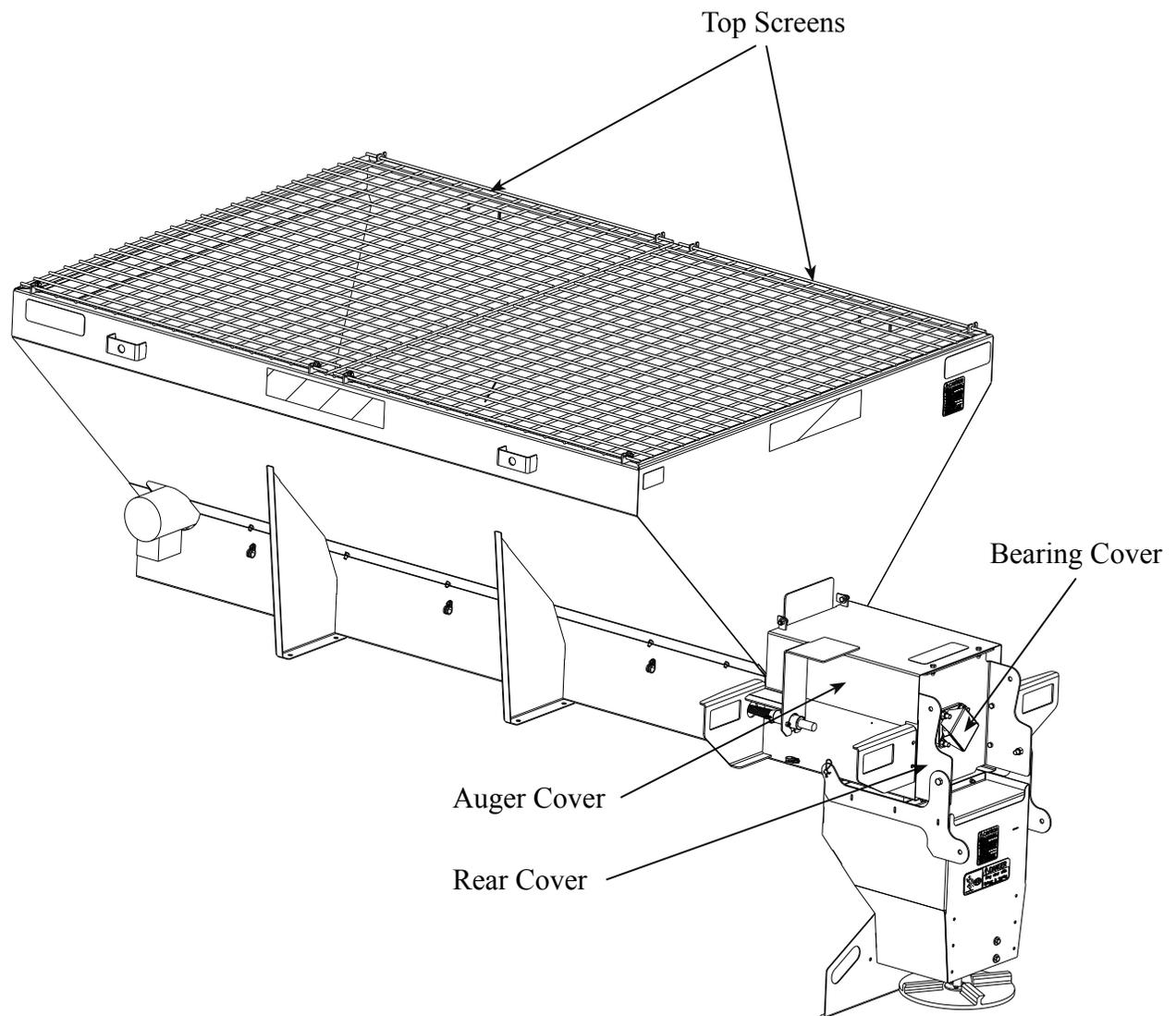
CAUTION FORK LENGTH  
04049-409-00

## SAFETY DECALS

These safety decals are used to alert you of potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death. All safety decals must remain in their original positions as shown. Any safety decal that has been defaced or is otherwise unreadable must be replaced BEFORE spreader is returned to operation.



**SAFETY GUARDS & COVERS**



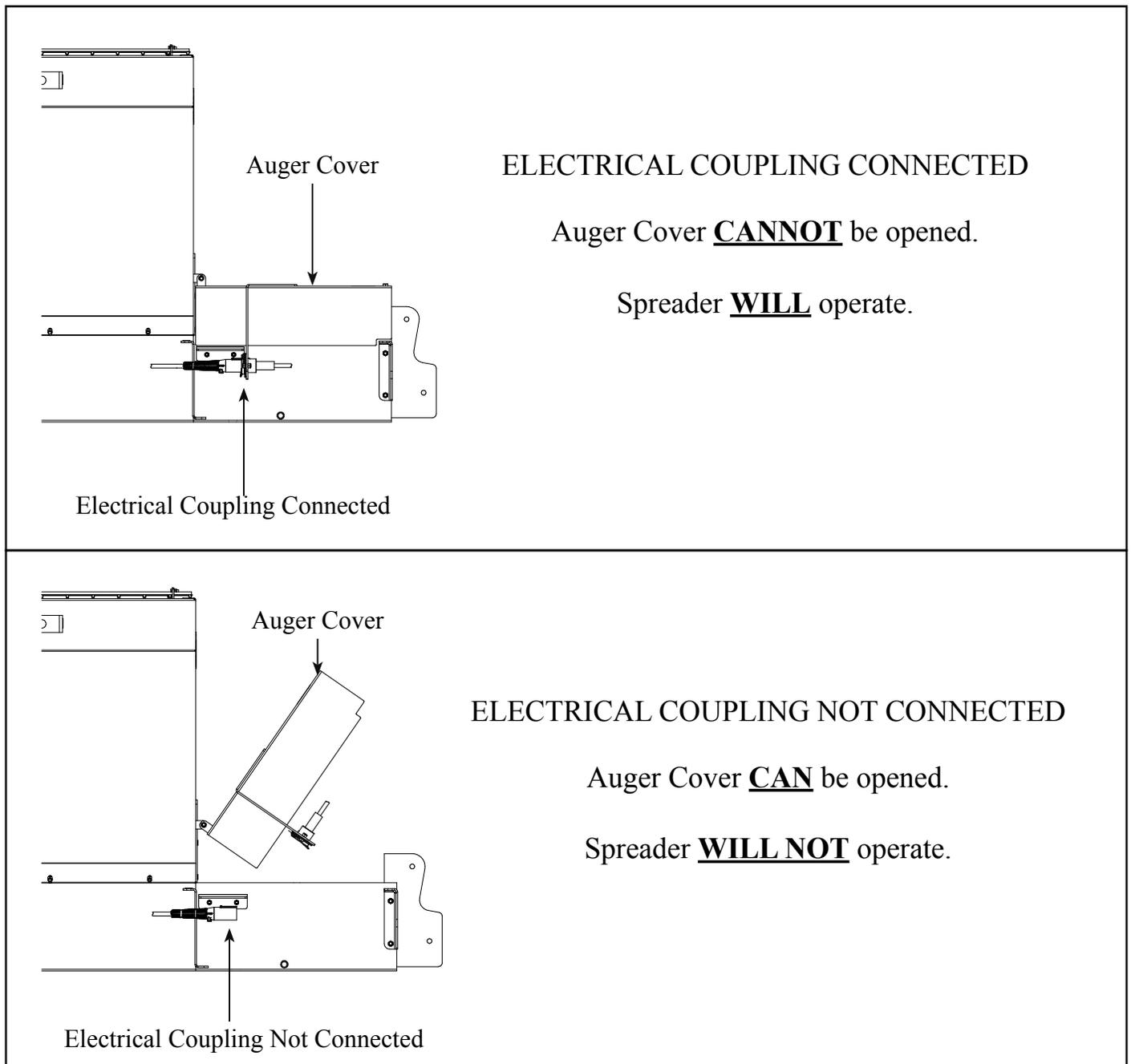
**WARNING**

To prevent serious personal injury or death all safety guards/covers must be securely fastened in the proper location while equipment is operating or capable of being operated.

## SAFETY INTERLOCK

### NOTICE!

The MDV spreader is equipped with a Safety Interlock device. This device must be disconnected before the Auger Cover can be opened exposing the auger. This device physically disconnects all electric power from the auger drive motor to prevent accidental bodily injury or death. This Safety Interlock device must not be altered in any way from it's original intent as shown and must be maintained so as to operate according to the original intent as shown.



## INSTALLATION AND ASSEMBLY INSTRUCTIONS



### WARNING!

**READ AND UNDERSTAND ALL OF THE INSTRUCTIONS BEFORE BEGINNING INSTALLATION.**

### INSTALLATION INSTRUCTIONS

The MDV Spreader can be mounted and stored as a single unit. The MDV Spreader will mount on most class 4 (15,000 GVW) and larger trucks.



### CAUTION!

**BEFORE BEGINNING VERIFY THAT THIS MOUNTING METHOD IS ACCEPTABLE TO THE VEHICLE MANUFACTURER.**



### CAUTION!

**BEFORE BEGINNING INSTALLATION OF THIS SPREADER, DISCONNECT THE VEHICLE'S NEGATIVE BATTERY CABLE.**

### DO NOT OVERLOAD THE VEHICLE

It is quite possible to overload the vehicle by improperly mounting or overloading the spreader. This could result in dangerous stability and braking problems. Always consult and follow the vehicle manufacturer's instructions.



### WARNING!

**THE SPREADER MUST BE SECURELY FASTENED TO THE VEHICLE. FAILURE TO PROPERLY RESTRAIN THE UNIT COULD PERMIT THE UNIT TO BREAK FREE FROM THE TRUCK AND CREATE THE POTENTIAL FOR A LIFE THREATENING ACCIDENT.**

1. Place the spreader in the bed of the truck with the discharge to the rear of the truck. Center the spreader(side to side) in the truck.

2. Attach or lower spinner assembly.



### WARNING!

**ENSURE THE SPREADER CANNOT TIP WHEN THE SPINNER ASSEMBLY IS ATTACHED OR LOWERED.**

3. Position the spreader in the truck bed, just short of making contact with the rear most part of the truck bed, bumper, pintle hook etc. Bolt the unit to the truck using a minimum of four (4) 1/2" Grade 5 bolts and corresponding washers and locknuts. The spreader is designed to sit flat on the bed of the truck.



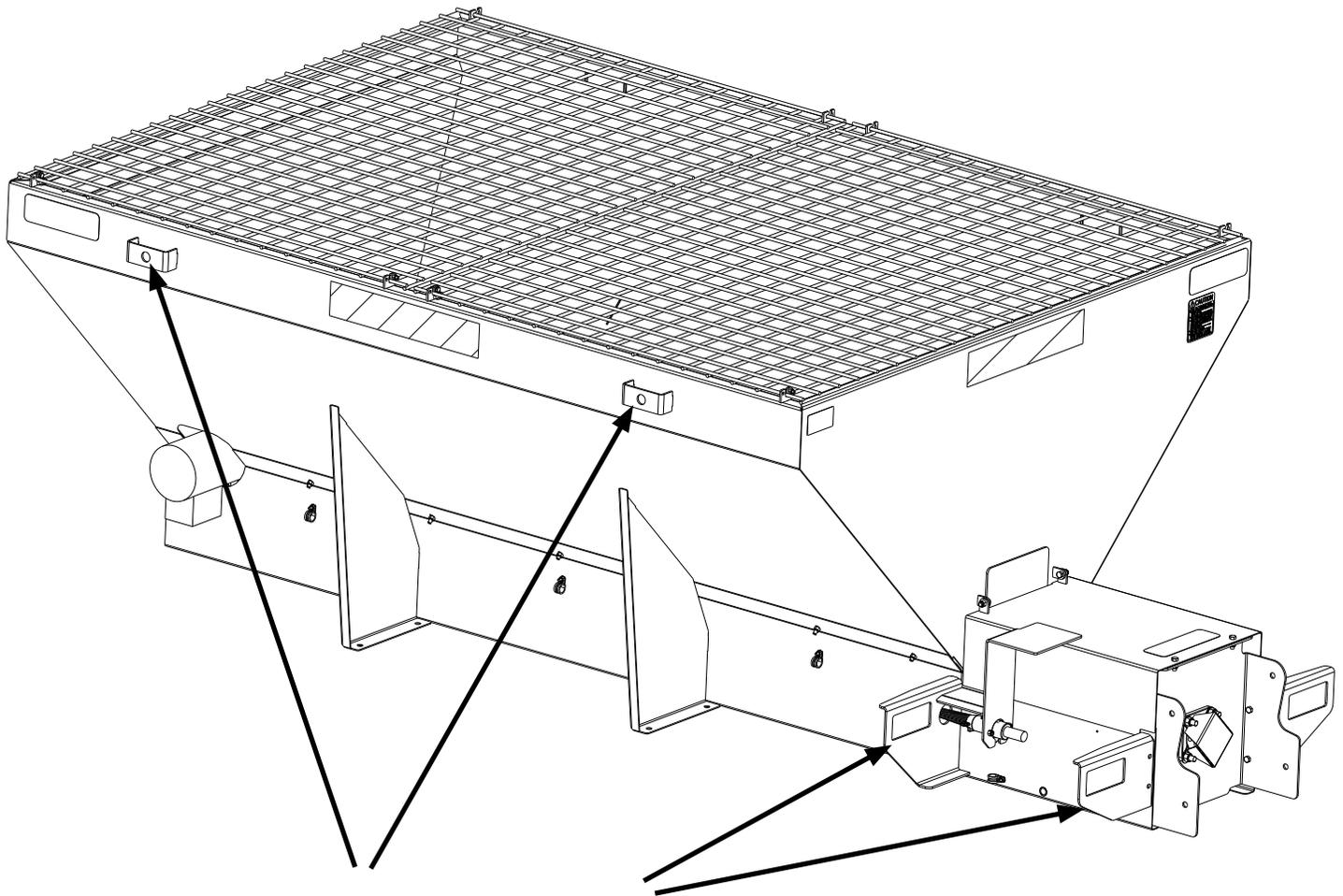
### CAUTION!

**DO NOT SUPPORT THE SPREADER BY THE BODY JACKS ALONE! SPREADER IS NOT DESIGNED FOR CHASSIS MOUNT APPLICATIONS.**

4. Attach the hold down straps to the hold down brackets on each corner of the hopper. Locate and drill four .531(17/32") diameter holes for eyebolts in the truck bed. Straps must be positioned at opposing angles so that the spreader cannot slide forward or rearward. Assemble ratchet strap to eye bolts. Tighten hold downs evenly. Do not overtighten straps as damage will result to the spreader or the truck.

**Note: If vehicle is equipped with sufficient tiedown locations, they may be used in place of the eyebolts.**

INSTALLATION AND ASSEMBLY INSTRUCTIONS



The spreader can be lifted from overhead by using the four (4) hold down / lifting brackets on the sides of the spreader. Spreader can also be lifted from the rear by using the forklift brackets.



**WARNING!**

**FORKS MUST EXTEND A MINIMUM OF FOUR (4) INCHES PAST THE FRONT FORKLIFT BRACKETS WHEN LIFTING.**



**WARNING!**

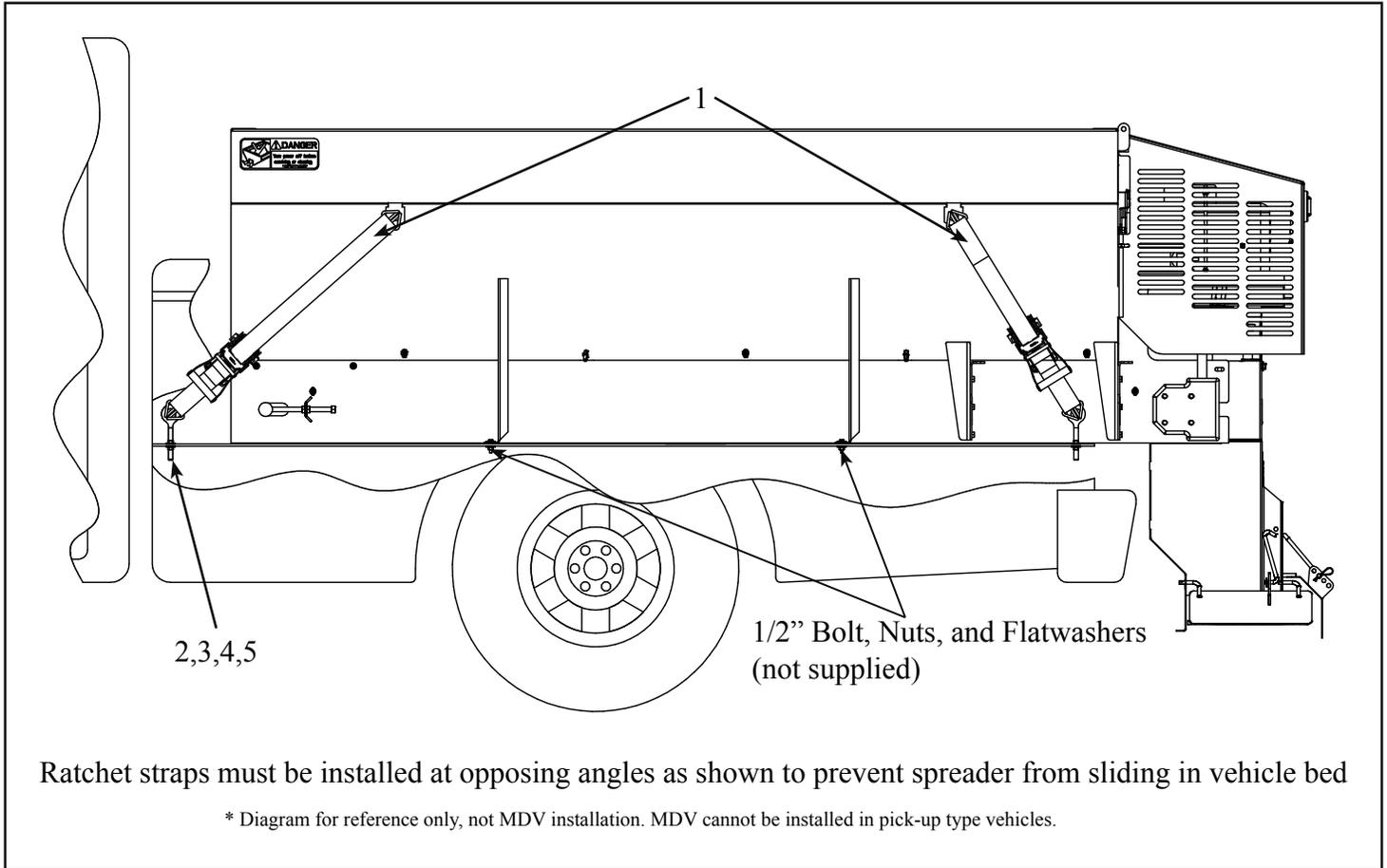
**NEVER ATTEMPT TO LIFT A SPREADER WITH MATERIAL IN THE HOPPER**



**WARNING!**

**ALWAYS USE SUFFICIENTLY RATED CHAIN WITH SAFETY HOOKS WHEN LIFTING SPREADER.**

**INSTALLATION AND ASSEMBLY INSTRUCTIONS**



**NOTE:** If truck is equipped with sufficient tie downs, they may be used in place of eyebolts.

**OPTIONAL HOLD DOWN KIT  
00002-306-00**

<u>item</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
1	04068-038-00	4	Ratchet/Strap
2	04048-504-02	4	Bolt, 1/2" Eye
3	04003-804-06	4	Locknut, 1/2-13 Nylon Insert
4	04003-801-11	4	Nut, 12-13 Hex
5	04004-002-16	8	Flatwasher, 3/4"

## INSTALLATION AND ASSEMBLY INSTRUCTIONS

**⚠ WARNING!**

---

**OVERLOADING VEHICLE MAY RESULT IN AN ACCIDENT OR DAMAGE. DO NOT EXCEED WEIGHT RATINGS OF VEHICLE.**

### Determining Vehicle Payload

It is necessary to calculate the available material payload to prevent overloading the vehicle. Overloading the vehicle can create dangerous stability and braking problems. Always consult and follow vehicle manufacturer's weight ratings and mounting instructions.

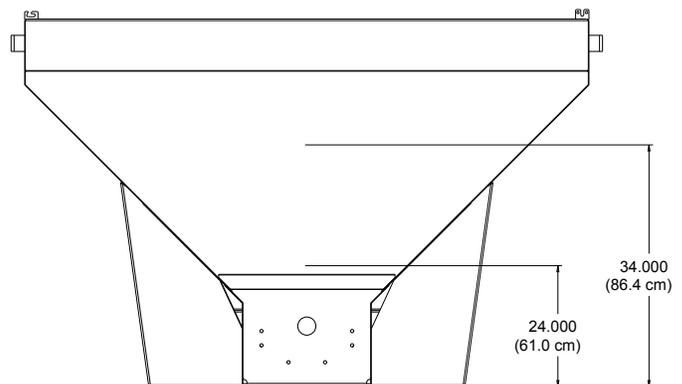
1. Mount complete spreader and any optional equipment on vehicle.
2. Attach all additional equipment onto vehicle such as snow plow, hitch, etc that will be used when spreader is mounted on vehicle.
3. Fill fuel tanks.
4. With normal operator(s) inside of vehicle, weigh vehicle to obtain the Gross Vehicle Weight (GVW).
5. Obtain Gross Vehicle Weight Rating (GVWR), Front Gross Axle Weight Rating (FGAWR), and Rear Gross Axle Weight Rating (RGAWR) from the driver's door jam or from the vehicle manufacturer.
6. Subtract the GVW from the GVWR to obtain the available material payload.
7. Divide the payload by the material density (see Material Density Chart) to determine the maximum volume of material that can be carried by the vehicle.
8. Refer to the Hopper Capacity Chart to determine the recommended level to fill the hopper to obtain the desired payload.

9. Load spreader with material to the calculated height.
10. Weigh vehicle to verify vehicle does not exceed the GVWR, FGAWR, or RGAWR.
11. Repeat the procedure for each type of material to be used.

MATERIAL DENSITY CHART

Material	Density (lbs. per cubic yard)	Material	Density (kg per M <sup>3</sup> )
Fine Salt - Dry	1,350	Fine Salt - Dry	612
Coarse Salt - Dry	1,215	Coarse Salt - Dry	551
Coarse Sand - Dry	2,700	Coarse Sand - Dry	1,225
Coarse Sand - Wet	3,240	Coarse Sand - Wet	1,470

HOPPER CAPACITY



Volume at Specified Height (Cu. Yds.)			
Spreader	Full	34"	24"
MDV-A 8'	3.00	1.90	0.87
MDV-A 9'	4.00	2.15	0.98
MDV-A 10'	4.50	2.41	1.10

Volume at Specified Height (M <sup>3</sup> )			
Spreader	Full	34"	24"
MDV-A 8'	2.29	1.45	0.67
MDV-A 9'	3.06	1.64	0.75
MDV-A 10'	3.44	1.84	0.84

## SPREADER ELECTRICAL INSTALLATION



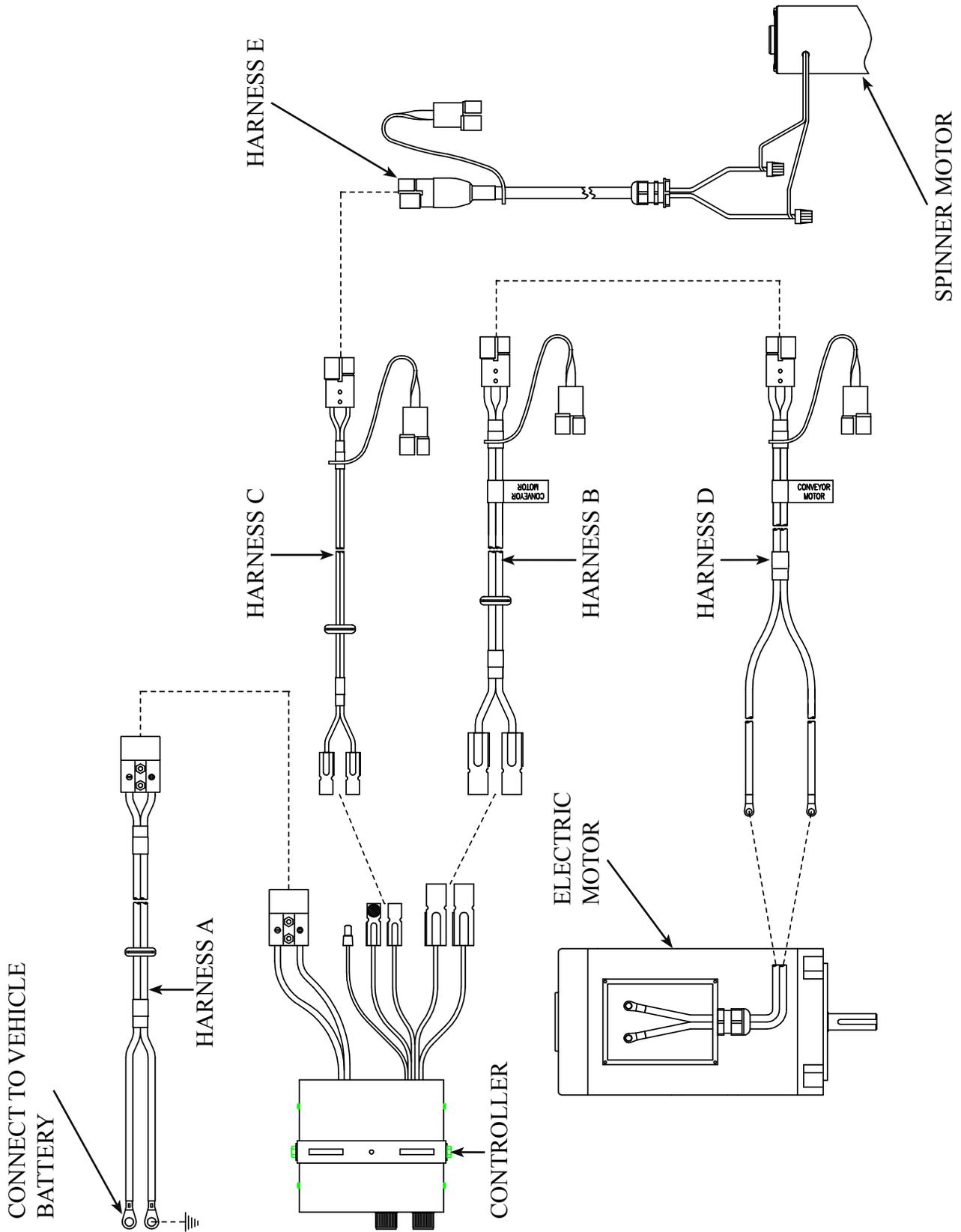
### CAUTION!

**BEFORE BEGINNING INSTALLATION OF THIS SPREADER, DISCONNECT THE VEHICLE'S NEGATIVE BATTERY CABLE.**

### INSTALLATION INSTRUCTIONS

1. Disconnect vehicle's negative battery cable.
2. Locate a dry location inside the cab of vehicle to mount controller. Ensure location does not interfere with safe vehicle operation. Consult vehicle manufacturer for proper locations that will not interfere with passenger SRS systems.
3. Locate opening in the vehicle firewall or floorboard to allow harnesses to pass through. If no opening is available it may be necessary to drill a hole.
4. Route harness A from the vehicle battery into cab and connect to controller. NOTE: Do not connect to vehicle battery at this time.
5. Route Harnesses B & C from rear bumper area into cab and connect to controller. Molded plug on harnesses B & C should be mounted to a solid location at rear of vehicle to assist with connecting / disconnecting harnesses.
6. Ensure all harnesses are secured to vehicle adequately and will not be damaged by sharp edges, moving parts, hot surfaces, etc. Harnesses can be secured with cable clamps, nylon ties, etc.
7. Connect harness D (RED plug) to harness B at rear of vehicle. Connect harness E (Black plug) to harness C at rear of vehicle.
7. Controller is internally fused and does not require an in line circuit breaker. If desired a 100 amp circuit breaker (not supplied) can be installed near vehicle battery. Circuit breaker should be of the manual reset type. NOTE: If additional circuit breaker is installed an additional jumper wire will need to be installed between the circuit breaker and vehicle battery. This jumper should be a minimum of 6 gauge automotive battery cable.
8. With controller in the OFF position connect RED cable on harness A to positive terminal of vehicle battery. Connect BLACK cable to negative terminal on vehicle battery. NOTE: Cables on harness A must be connected directly to the vehicle battery, chassis grounding is not acceptable.

# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL MDV-A ELECTRIC SERIES



## OPERATING INSTRUCTIONS

### Dual Electric Variable Speed Controller

#### OVERVIEW

Dual Electric Variable Speed Controller allows each electric motor to be independently controlled. Controller consists of the following functions: on/off, dual variable speed control, and a blast feature.

#### OPERATION

When controller ON/OFF switch is in the “OFF” position, the controller has no functions and spreader will not operate. When ON/OFF switch is in the “ON” position, the controller functions are able to be used and spreader can operated. When controller is on green LED lights will illuminate over variable speed dials.

#### AUTO-BLAST FEATURE

Each time the controller is turned on, the auto-blast feature will start automatically. The auto-blast feature will automatically increase the speed of both electric motors to setting “8” for three seconds. After three seconds the electric motor speeds will return to speed as set on the dials. The auto-blast feature is intended to clear any material jams that may have occurred due to transporting the spreader.

#### VARIABLE SPEED SETTINGS

Controller is equipped with dual variable speed dials, one each for the conveyor and spinner electric motors. Variable speed dials have setting of 0 – 10 with setting 10 being full speed. NOTE: depending upon the weight of material on the conveyor or spinner, electric motors may not operate at lower dial settings.

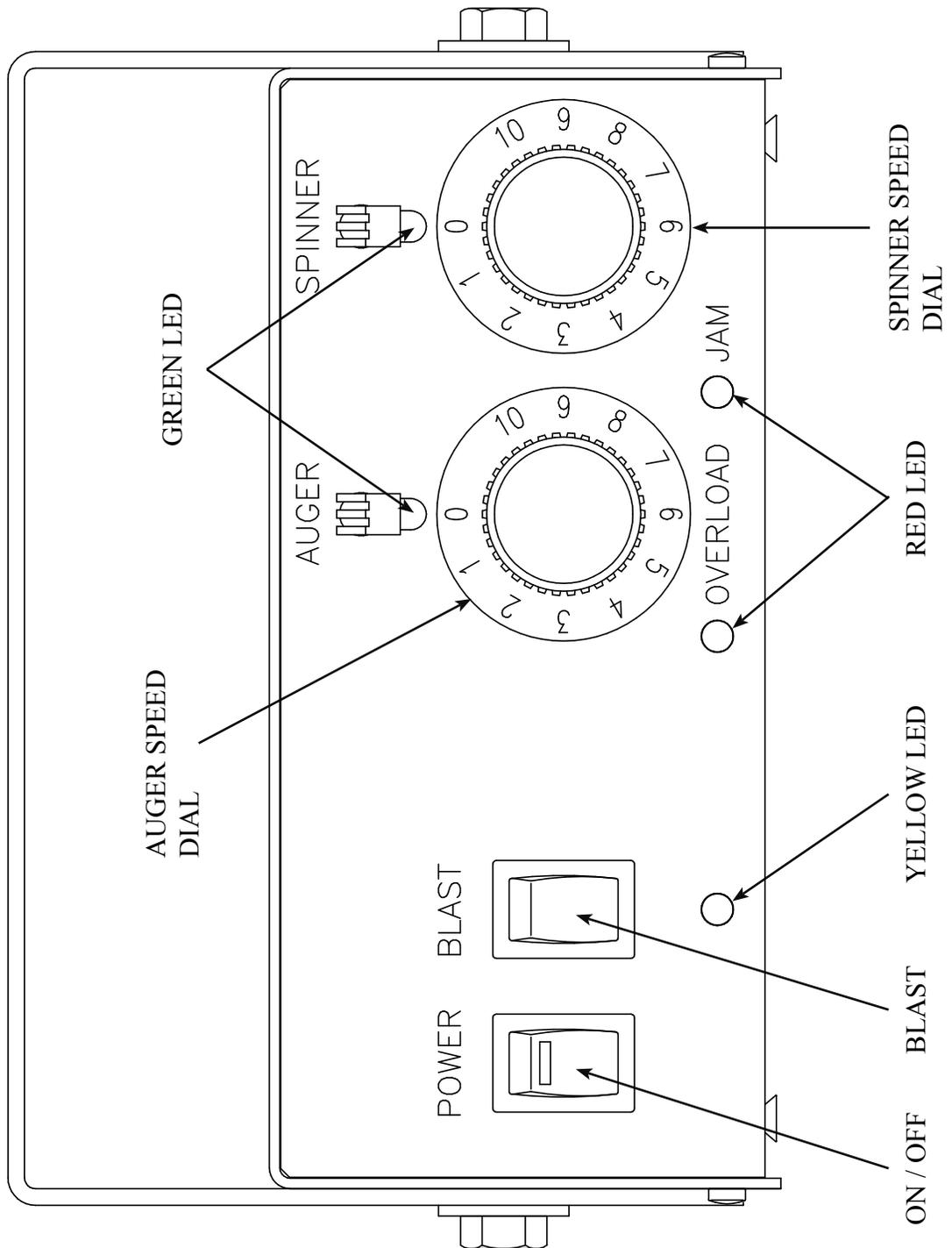
#### BLAST FEATURE

Controller is also equipped with a blast feature. The blast feature allows for momentary high output spreading. When the BLAST button is depressed, conveyor and spinner speeds will automatically increase to setting “8” and the yellow LED will light. When the BLAST button is released, auger and spinner will return to the speed set on variable speed dials.

#### JAM / OVERLOAD MODE

Controller is equipped with a jam and overload feature. When amperage required by electric motors exceeds the safe level the controller will enter the overload function. The overload function will reduce the amperage to a safe level. Overload mode can be identified by the illumination of the red flashing LED marked OVERLOAD. If overload function is unable to clear obstruction, controller will enter the jam mode which will be indicated by the illumination of the red LED marked JAM. When controller enters the jam mode, all functions of the controller will stop to protect electrical system from damage. Once the obstruction is cleared the controller will need to be switched off and then back on to clear jam mode before operation can resume.

OPERATING INSTRUCTIONS



## OPERATING INSTRUCTIONS

### Filling Hopper

The hopper should only be filled with clean, dry, free flowing salt, sand, or salt/sand mix. Commercial bagged ice melt materials may be used. Spreader is not designed to spread ag lime, gravel, rock, cinders, or any other aggregate materials. Only fill the hopper with the top screen installed to prevent foreign objects or frozen clumps of material from entering the hopper and damaging the conveyor system. Do not leave unused material inside of hopper when not in use. Do not let material freeze inside of hopper.

### Gearbox

Never apply torque to output shaft of gearbox. Gearbox is designed to only accept torque from the input shaft.

### Swing-up Spinner

Do not transport spreader with the spinner in the up position.

### Regulating amount of material being spread

The amount of material being spread depends upon the auger speed and feed gate plate setting. A slower auger speed and lowering the feed gate plate will decrease the amount of material being spread. A faster auger speed and raising the feed gate plate will increase the amount of material being spread.

### To adjust the auger speed

The auger electric motor speed can be adjusted by turning the auger dial up or down. With setting “0” on the controller being low or no speed and setting “10” the fastest speed.

### Adjusting Feedgate Plate

The MDV spreader is equipped with a three position feed gate plate to regulate amount of material that is discharged from spreader. The feed gate plate can be raised or lowered by removing four bolts and nuts and reinstalling in the desired position.

### Regulating the spread pattern

The spread pattern is the width and direction of material spread. The width of the spread pattern can be regulated by increasing or decreasing the spinner disc speed. The direction of the spread pattern can be regulated by adjusting the external baffles on the spinner assembly.

### To adjust the spread pattern width

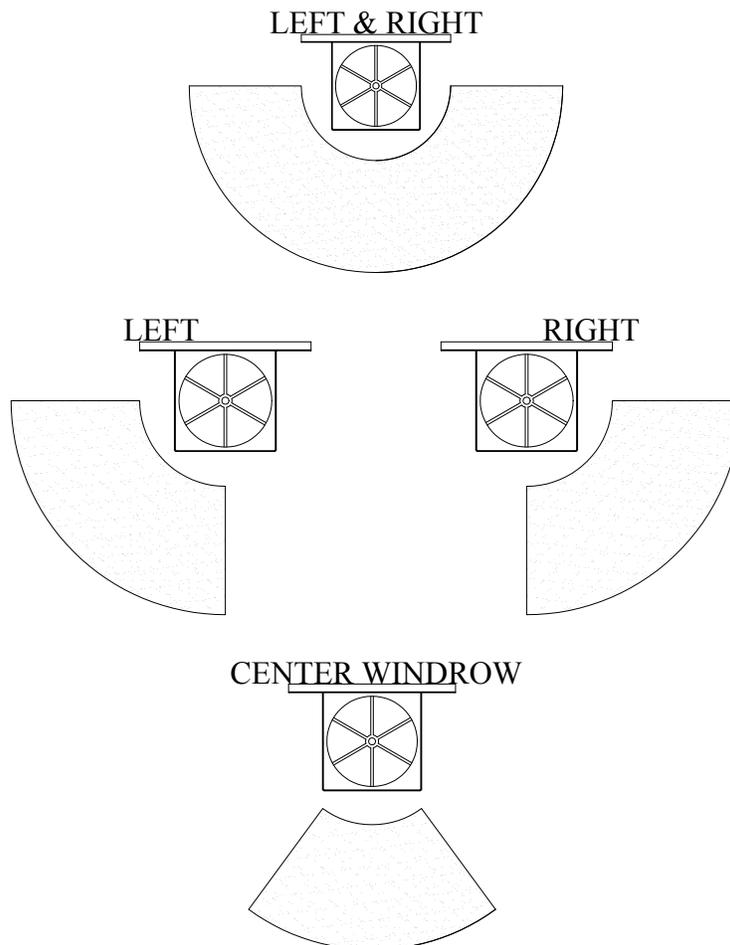
The spinner electric motor speed can be adjusted by turning the spinner dial up or down. With setting “0” on the controller being low or no speed and setting “10” the fastest speed.

## OPERATING INSTRUCTIONS

### Adjusting the spread pattern direction

The spread pattern direction can be regulated by adjusting the external spinner baffles on the spinner assembly.

DESIRED SPREAD PATTERN	EXTERNAL BAFFLE SETTING
LEFT & RIGHT	LH - Up
	Center - Up
	RH - Up
LEFT	LH - Up
	Center - Up
	RH - Down
RIGHT	LH - Down
	Center - Up
	RH - Up
CENTER WINDROW	LH - Down
	Center - Down
	RH - Down



## OPERATING INSTRUCTIONS

### CONTROLLER OPERATING INSTRUCTIONS

1. Fill hopper with salt, sand, or salt sand mix.
2. Turn power switch on controller to the on position, auger and spinner will automatically run for 3 to 10 seconds. Green lights over speed dials on the controller will illuminate.
3. Turn spinner adjustment knob to desired setting.
4. Turn auger adjustment knob to desired setting.
5. If at any time a heavier application of material is desired for a short period of time press and hold the blast button. When the blast button is released, the control will return to the previous settings.
6. To stop spreading turn power switch off.

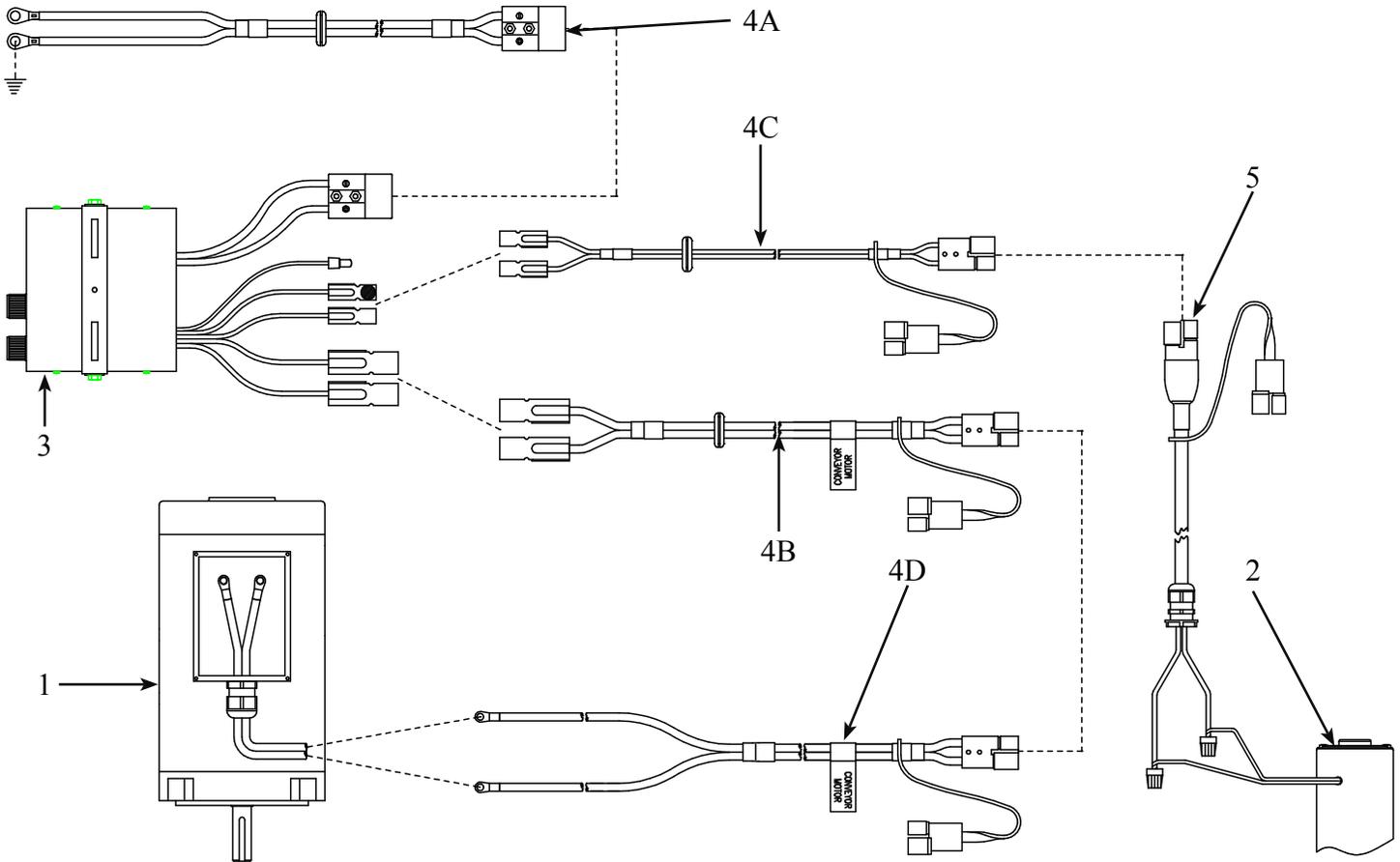
### Notes

1. Each time the power switch is turned on, the controller will enter the autoblast function for 3 seconds. This feature is programmed into the controller, and cannot be changed or disabled.
2. The conveyor and spinner settings must be set high enough to overcome the current material load on the auger and spinner. If spreader will not run, select a higher setting on the control knobs until the desired rate is achieved. The material load on the auger and spinner changes frequently, so periodic re-adjustment of the auger and spinner settings may be necessary.
3. If spreader encounters an overload situation, the controller will decrease the voltage being supplied to the electric motors for a set period of time, if the current being used by the electric motors does not return to a safe level the controller will enter the JAM mode and shut down. An overload situation can be identified by the by the illumination of the flashing red “overload” light.
4. If spreader encounters a jam situation the controller will automatically shut off to protect the equipment. A jam situation can be identified by the illumination of the red “jam “light. If spreader shuts off due to a jam situation, shut off the power to spreader, undo the safety interlock connection and manually clear the jam.
5. Spreader is designed to spread clean, dry, high quality, free flowing bagged, or bulk rock salt, course sand, or salt/sand mixture.

# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL

## MDV-A ELECTRIC SERIES

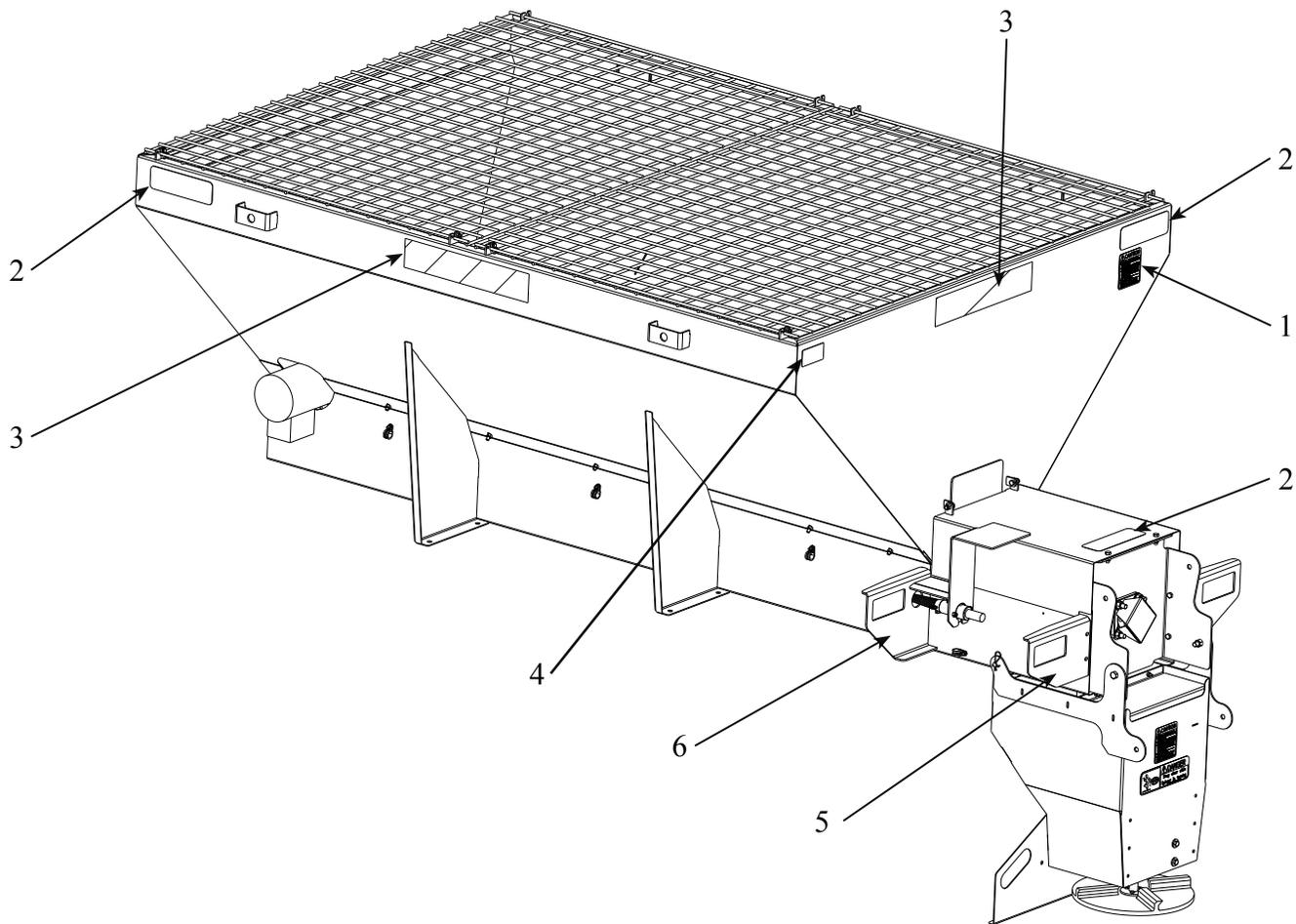
### PARTS



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	04150-050-00	MOTOR, AUGER	1
2	04150-052-00	MOTOR, SPINNER	1
3	04623-008-00	CONTROLLER	1
4	04616-118-00	KIT, HARNESS (A,B,C,D)	1
5	04616-129-00	HARNESS, SPINNER	1
N/S	00122-420-03	BRACKET, ELECT. CONN.	2
N/S	04003-002-24	BOLT, 5/16 X 1 HH SS	4
N/S	04003-804-29	LOCKNUT, 5/16" SS	4
N/S	04003-070-03	SCREW, 10-32 X 1 SS	4
N/S	04003-804-27	LOCKNUT, 10-32 SS	4
N/S	04004-002-53	FLATWASHER, #10 SS	4

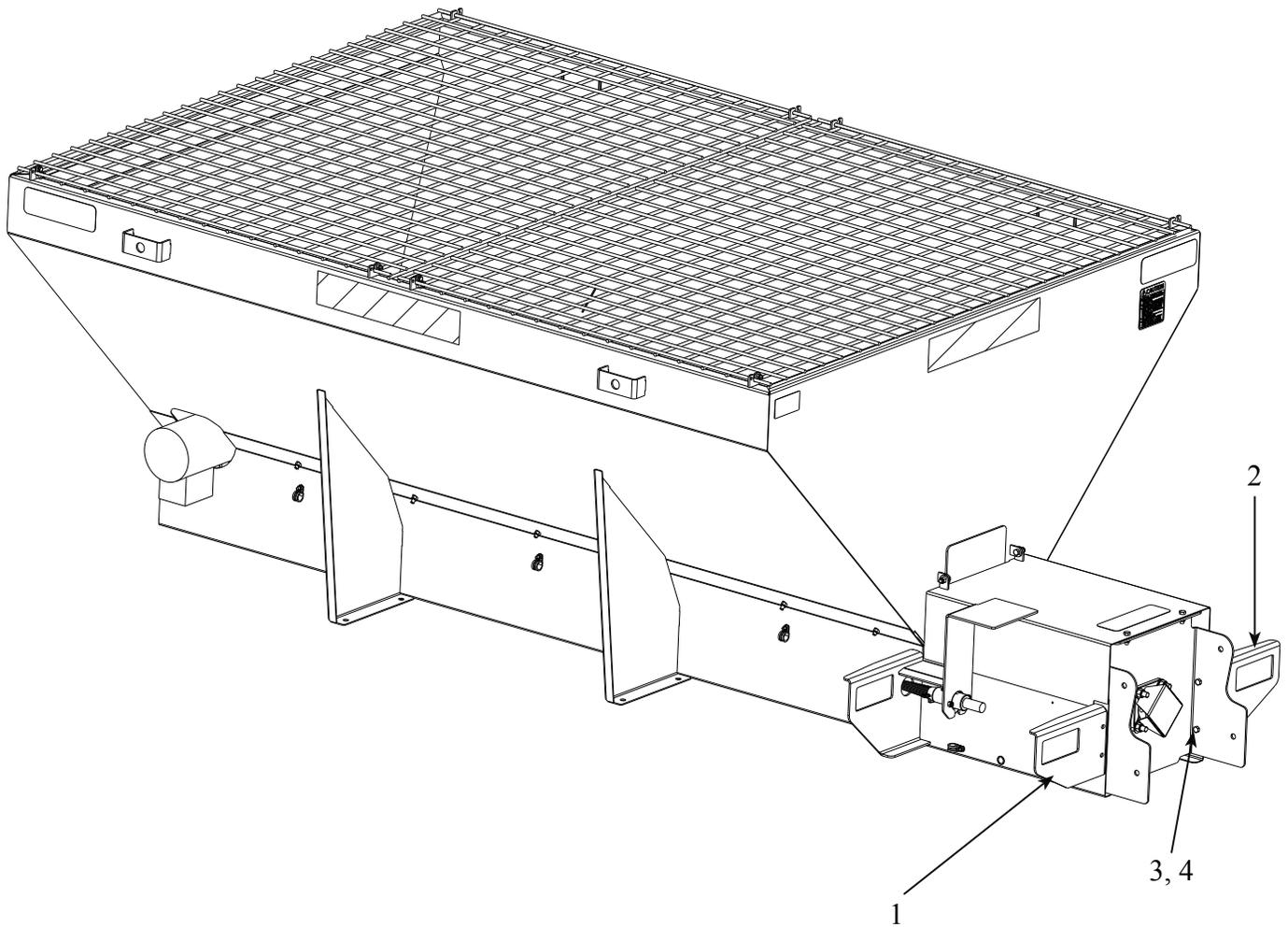
# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL MDV-A ELECTRIC SERIES

## PARTS



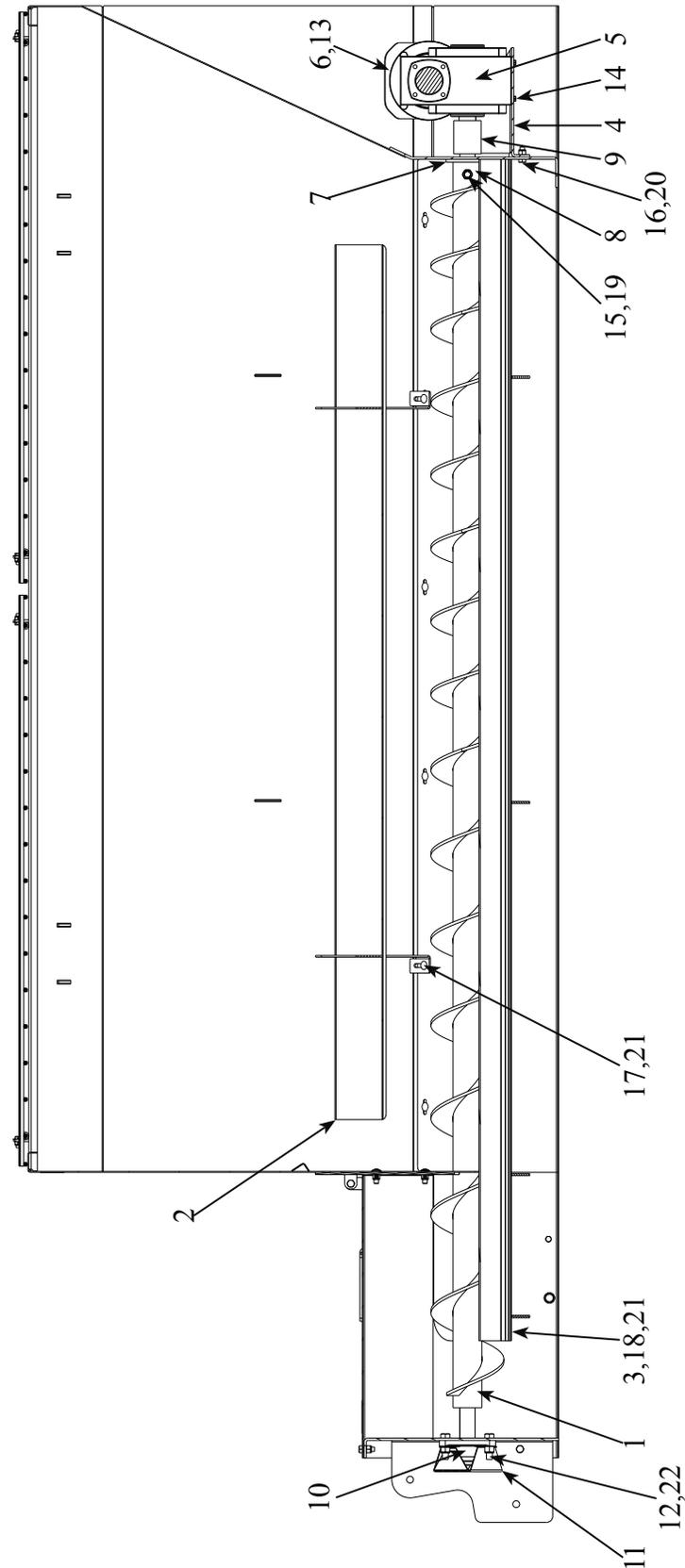
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	04049-045-00	DECAL, CAUTION	1
2	04049-121-00	DECAL, DANGER	4
3	04049-002-00	DECAL, SWENSON	3
4	04049-165-00	DECAL, SERIAL TAG	1
5	04049-408-00	DECAL, CAUTION UNLOADED	2
6	04049-409-00	DECAL, CAUTION FORK LENGTH	2

**PARTS**



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	00122-177-01	BRACKET, FORKLIFT LH	1
2	00122-180-01	BRACKET, FORKLIFT RH	1
3	04003-003-03 04003-003-20	BOLT, 3/8" X 1" BOLT, 3/8" X 1" SS	6
4	04003-804-02 04003-804-08	NUT, 3/8" VINYL LOCK NUT, 3/8" VINYL LOCK SS	6

PARTS



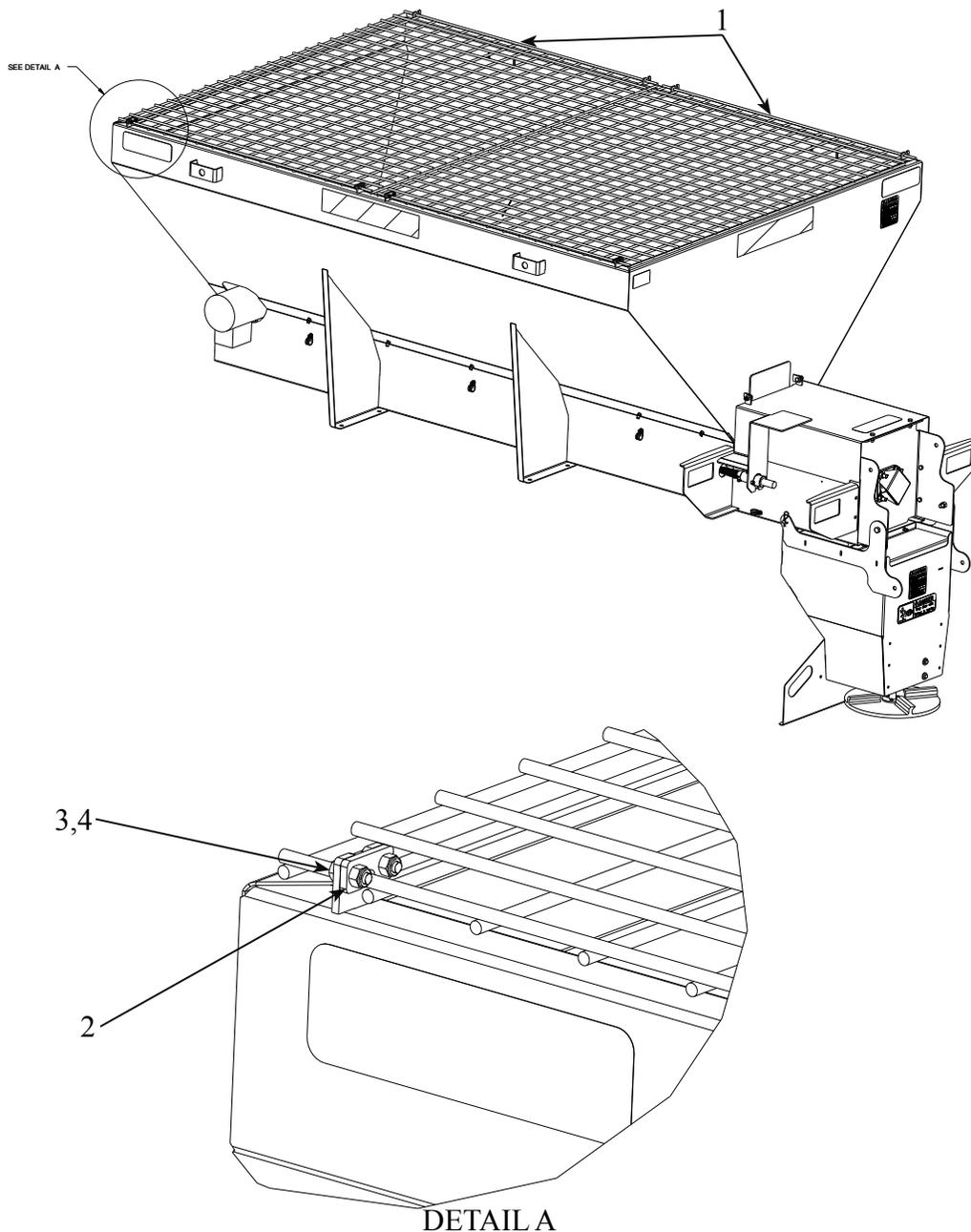
**INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL  
MDV-A ELECTRIC SERIES**

**PARTS**

ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	00123-720-08	WELD, AUGER 8'	1
	00123-720-09	WELD AUGER 9'	
	00123-720-10	WELD AUGER 10'	
2	00115-113-01	WELD, INVERTED VEE 8' CS	1
	00115-113-03	WELD, INVERTED VEE 8' SS	
	00115-112-01	WELD, INVERTED VEE 9/10' CS	
	00115-112-04	WELD, INVERTED VEE 9/10' SS	
3	00123-664-01	FLOOR, AUGER 8' CS	1
	00123-664-03	FLOOR, AUGER 8' SS	
	00124-360-04	FLOOR, AUGER 9' CS	
	00124-360-06	FLOOR, AUGER 9' SS	
	00122-257-04	FLOOR, AUGER 10' CS	
	00122-257-06	FLOOR, AUGER 10' SS	
4	00123-743-01	FORM, GEARBOX MTG BRACKET CS	1
	00123-743-03	FORM, GEARBOX MTG BRACKET SS	
5	04132-153-00	GEARBOX, 87:1	1
6	04150-050-00	MOTOR, 1/2 HP	1
7	04622-072-00	WASHER, THRUST	1
8	00106-321-00	INSERT, AUGER	1
9	00123-768-00	WELD, AUGER ADAPTER	1
10	04080-003-00	BEARING, 1-1/4"	1
11	00124-366-01	GUARD, BEARING CS	1
	00124-366-03	GUARD, BEARING SS	
12	04003-005-35	BOLT, 1/2" X 1-3/4"	4
	04003-005-26	BOLT, 1/2" X 1-3/4" SS	
13	04003-003-04	BOLT, 3/8" X 1-1/4"	4
	04003-003-26	BOLT, 3/8" X 1-1/4" SS	
14	04003-189-04	BOLT, M10-1.5 X 20	4
15	04003-005-44	BOLT, 1/2" X 3 GR 8	1
16	04003-003-03	BOLT, 3/8" X 1"	6
	04003-003-20	BOLT, 3/8" X 1" SS	
17	04003-032-04	BOLT, 5/16" X 1" CAR. BOLT SS	4
18	04003-032-06	BOLT, 5/16" X 3/4" CAR. BOLT SS	A/R
19	04003-804-06	LOCKNUT, 1/2" TOP	1
20	04003-804-02	LOCKNUT, 3/8" VINYL	A/R
	04003-804-08	LOCKNUT, 3/8" VINYL SS	
21	04003-804-01	LOCKNUT, 5/16" VINYL	A/R
	04003-804-29	LOCKNUT, 5/16" VINYL SS	
22	04003-804-06	LOCKNUT, 1/2" VINYL	4
	04003-804-07	LOCKNUT, 1/2" VINYL SS	

# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL MDV-A ELECTRIC SERIES

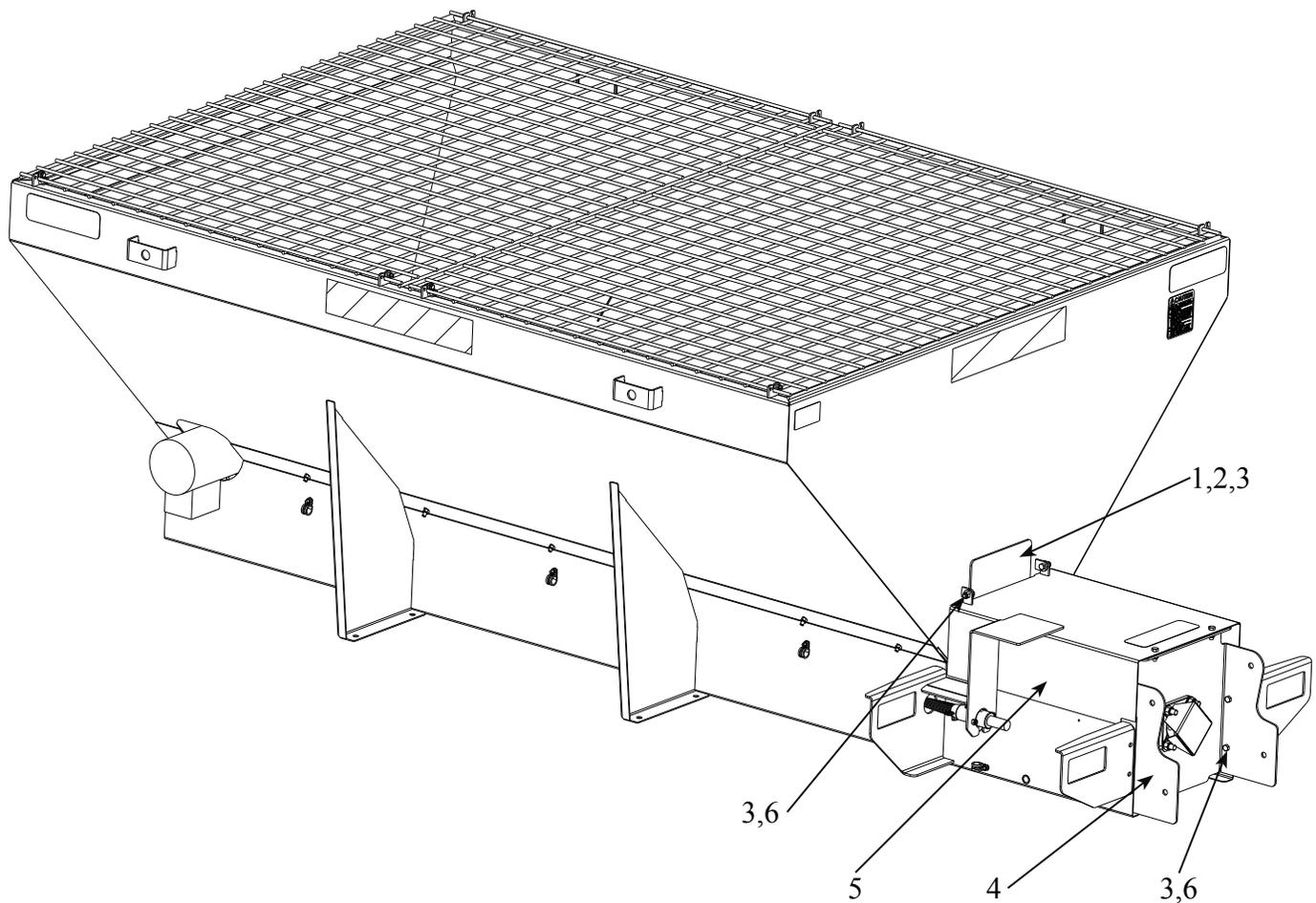
## PARTS



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	00123-787-01	SCREEN, 4'	A/R
	00123-787-03	SCREEN, 5'	
2	00124-367-01	CLIP, SCREEN	4
	00124-367-03	CLIP, SCREEN SS	
3	04003-001-11	BOLT, 1/4" X 3/4" HH	4
4	04003-804-21	LOCKNUT, 1/4" VINYL	4

# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL MDV-A ELECTRIC SERIES

## PARTS



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	00123-665-01	PLATE, FEEDGATE CS	1
	00123-665-03	PLATE, FEEDGATE SS	
2	04003-033-02	BOLT, 3/8" X 1" CAR.	4
	04003-033-03	BOLT, 3/8" X 1" CAR. SS	
3	04003-804-02	LOCKNUT, 3/8" VINYL	4
	04003-804-08	LOCKNUT, 3/8" VINYL SS	
4	00123-666-01	PLATE, REAR	1
	00123-666-03	PLATE, REAR SS	
5	00123-754-01	COVER, AUGER	1
	00123-754-03	COVER, AUGER	
6	04003-003-03	BOLT, 3/8" X 1" HH	8
	04003-003-20	BOLT. 3/8" X 1" HH SS	



# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL

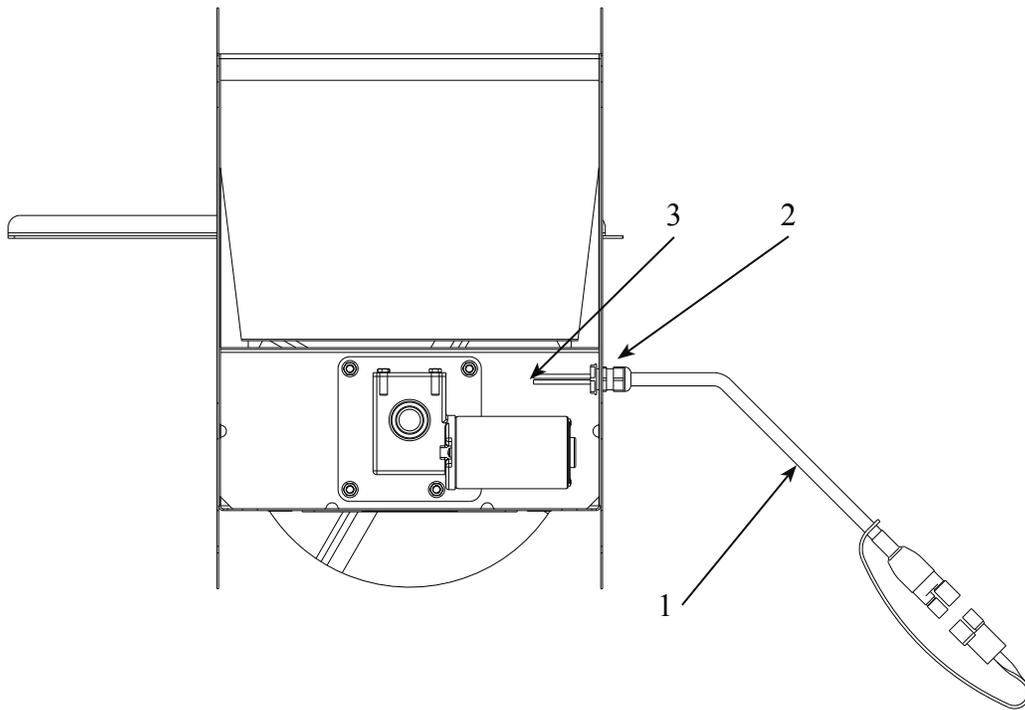
## MDV-A ELECTRIC SERIES

### PARTS

ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
	00123-670-01	Y, SPINNER ASSEMBLY CS	
	00123-670-03	Y, SPINNER ASSEMBLY SS	
1	00123-671-01 00123-671-03	WELD, SPINNER FRAME CS WELD, SPINNER FRAME SS	1
2	00123-452-01 00123-452-03	PLATE, MOTOR ADAPTER CS PLATE MOTOR ADAPTER SS	1
3	04150-052-00	MOTOR, SPINNER	1
4	04622-094-00	DISC, SPINNER	1
5	04016-004-01	PIN, ROLL	1
6	00123-639-01 00123-639-03	BRACKET, BEARING CS BRACKET, BEARING SS	1
7	00123-453-01 00123-453-03	COVER, MOTOR CS COVER, MOTOR SS	1
8	04049-045-00	DECAL, CAUTION	1
9	04049-044-00	DECAL, DANGER	1
10	04049-416-00	DECAL, SWING UP	1
11	04093-021-00	TRIM, VINYL	A/R
12	04004-001-05 04004-001-19	LOCKWASHER, 1/4" LOCKWASHER, 1/4" SS	4
13	04003-001-01 04003-001-34	BOLT, 1/4" X 1/2" BOLT, 1/4" X 1/2" SS	4
14	04003-002-02 04003-002-23	BOLT, 5/16" X 3/4" BOLT, 5/16" X 3/4" SS	4
15	04003-804-01 04003-804-20	LOCKNUT, 5/16" VINYL LOCKNUT, 5/16" VINYL SS	4
16	04003-001-08 04003-001-17	BOLT, 1/4" X 1-1/4" BOLT, 1/4" X 1-1/4" SS	3
17	04004-002-39	FLATWASHER, 1/4"	3
18	04003-804-04 04003-804-21	LOCKNUT, 1/4" VINYL LOCKNUT, 1/4" VINYL SS	5
19	04004-002-08 04004-002-20	FLATWASHER, 3/8" FLATWASHER, 3/8" SS	6
20	04004-001-07 04004-001-14	LOCKWASHER, 3/8" LOCKWASHER, 3/8" SS	2
21	04003-003-03 04003-003-20	BOLT, 3/8" X 1" BOLT, 3/8" X 1" SS	4
22	04003-804-02 04003-804-08	LOCKNUT, 3/8" VINYL LOCKNUT, 3/8" VINYL SS	2
23	04003-001-02 04003-001-11	BOLT, 1/4" X 3/4" BOLT, 1/4" X 3/4" SS	2
	00123-673-01	Y, SPINNER SHAFT	
25	00123-674-01	SHAFT, WELD	1
26	04080-079-00	BEARING, 1"	1
27	04004-008-01	WASHER, FLAT RUBBER	1

INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL  
MDV-A ELECTRIC SERIES

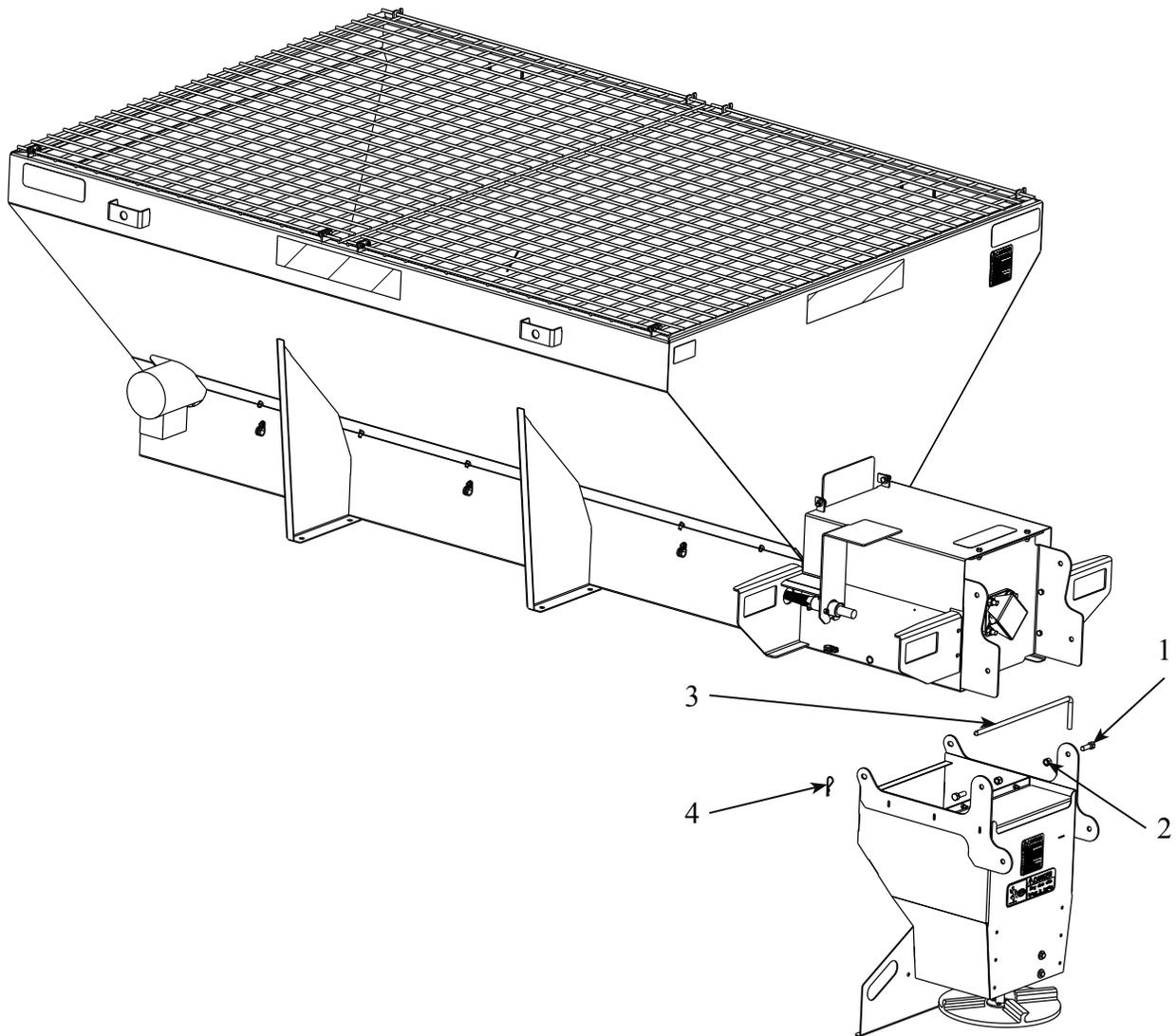
PARTS



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	04616-129-00	HARNESS	1
2	04611-059-00	BUSHING, STRAIN RELIEF	1
3	04638-093-00	NUT, WIRE	2

# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL MDV-A ELECTRIC SERIES

## PARTS



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	04003-005-02 04003-005-23	BOLT, 1/2" X 1-1/4" BOLT, 1/2" X 1-1/4" SS	2
2	04003-804-06 04003-804-07	LOCKNUT, 1/2" VINYL LOCKNUT, 1/2" VINYL SS	2
3	00119-329-02	ROD, SPINNER	1
4	04011-001-02 04011-001-04	KEEPER, HAIRPIN KEEPER, HAIRPIN SS	1

## TROUBLESHOOTING

<b>GENERAL TROUBLESHOOTING</b>		
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Conveyor does not operate	Variable speed controller not functioning properly	See variable speed controller troubleshooting
	Auger is jammed by a foreign object, or frozen material	Inspect Auger for obstruction and remove
	Damaged gearbox	Inspect and repair gearbox
	Electric motor defective	Replace electric motor
	Safety Interlock not connected or damaged	Inspect safety interlock and connect or repair
	Shaft key missing from gearbox/auger coupling	Inspect for missing key and replace
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Conveyor operates erratically	Shaft key missing from gearbox/auger coupler	Inspect for missing key and replace
	Electric motor defective	Replace electric motor
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Noisy operation	Bent auger	Replace auger
	Bearings need lubrication	Lubricate bearings
	Foreign object in conveyor	Remove object
	Faulty bearing	Replace bearing
	Spinner disc unbalanced	Remove material from spinner disc
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Material not exiting discharge chute	Conveyor discharge clogged	Clear material from discharge
	Material bridging inside hopper	Use free flowing material
	Inverted Vee not installed	Install inverted Vee
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Spinner disc not turning	Electric motor faulty	Replace electric motor
	Spinner disc jammed	Clear jam from spinner disc
	Variable speed controller not functioning properly	See variable speed controller troubleshooting
	Roll pin missing	Inspect and replace pin

## TROUBLESHOOTING

<b>VARIABLE SPEED CONTROLLER TROUBLESHOOTING</b>		
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Controller has no power	Controller not turned ON	Move on/off switch to on
	Power supply harness connections loose or corroded	Clean and tighten power supply harness connections
	Controller internal fuse blown	Replace internal fuse
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Controller has power but conveyor does not operate	Conveyor harness is not connected to controller	Connect conveyor harness to controller
	Conveyor harness connection at rear bumper is loose or corroded	Clean and reconnect conveyor harness connection
	Conveyor harness connections at electric motor are loose or corroded	Clean and tighten conveyor harness connections
	Conveyor speed setting is set too low	Adjust conveyor speed to a higher setting
	Controller internal fuse blown	Replace fuse
	Conveyor harness damaged	Replace conveyor harness
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Controller has power but spinner does not operate	Spinner harness is not connected to controller	Connect spinner harness to controller
	Spinner harness connection at rear bumper is loose or corroded	Clean and reconnect spinner harness connection
	Spinner harness connections at electric motor are loose or corroded	Tighten or replace spinner harness wire nuts
	Spinner speed setting is set too low	Adjust Spinner speed to a higher setting
	Controller internal fuse blown	Replace fuse
	Spinner harness damaged	Replace spinner harness
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Conveyor operates erratically	Loose or corroded conveyor harness connections	Clean and tighten harness connections
	Conveyor speed setting is set too low	Adjust conveyor speed to a higher setting
	Defective electric motor	Replace electric motor
	Conveyor harness damaged	Replace conveyor harness
<b>Condition</b>	<b>Possible Cause</b>	<b>Correction</b>
Spinner operates erratically	Loose or corroded spinner harness connections	Clean and tighten harness connections
	Spinner speed setting is set too low	Adjust spinner speed to a higher setting
	Defective electric motor	Replace electric motor
	Spinner harness damaged	Replace spinner harness

## MAINTENANCE

Regular maintenance is the key to your spreader operating efficiently and trouble free. Below you will find the recommended maintenance information for regular service. Sustained heavy operation may call for more frequent service. Material spreading subjects a vehicle to exceptionally rugged use. As a result, it is very important to inspect and bring the spreader and vehicle up to maximum operating conditions. Inspection should be made of both the vehicle and spreader prior to the winter season and each use.

### Pre-Season Maintenance

Scheduled vehicle maintenance should be performed as recommended by the manufacturer.

### Vehicle Maintenance

Don't forget that in addition to keeping equipment in order:

1. Keep windshield wipers, heaters and lights working.
2. Use emergency flashing lights for increased visibility and safety.
3. Equip vehicle with tire chains where necessary.
4. Provide operators with protective clothing and gloves for handling snow melting chemicals.

### Vehicle Electrical System

For maximum efficiency, the vehicle supporting the spreader must be properly serviced. The system should consist of at least dual batteries and a high amp alternator. Be sure to check regularly:

1. Battery terminal to assure they're tight and free of corrosion.
2. Electrical connections, to assure they're tight and corrosion free.
3. Batteries must be in top operating condition.
4. Alternator and regulator, to assure maximum electrical output.

### Spreader

Prior to the start of the winter season the pre-season maintenance should be performed to ensure the spreader operates reliably. Follow the maintenance schedule for service recommendations. Don't forget to also do the following:

1. Verify spreader is securely attached to vehicle.
2. Inspect Spreader for loose, missing, or damaged parts, guards, or hardware.
3. Repaint any rusty parts.
4. All moving parts are free and not corroded.
5. Test run empty spreader before filling with material.

### General Maintenance

**Inspection:** Before and after each use, spreader should be inspected for loose, missing, or damaged mounting hardware, parts, or safety guards. Spreader should also be inspected to ensure it is securely attached to vehicle.

**Cleaning:** Empty all material from spreader after each snow or ice event. Wash entire spreader with soap and warm water paying special attention to the Safety Interlock. Do not clean spreader with any corrosive chemicals or products that contain chlorides or ammonium. Any commercially available salt neutralizer may be applied.

**Gearbox Oil Level:** Check the gearbox oil level every 10 hours of operation or monthly. Gearbox should be filled until oil reaches oil level plug. Oil should be flushed prior to start of season and replaced with an EP 85 W 140 gear type lubricant. Spinner gearbox is lifetime sealed and does not require any maintenance.

**Electrical System:** Electrical system should be inspected for loose connections and corrosion every 10 hours of operation or weekly. Dielectric grease should be applied to all electrical connections.

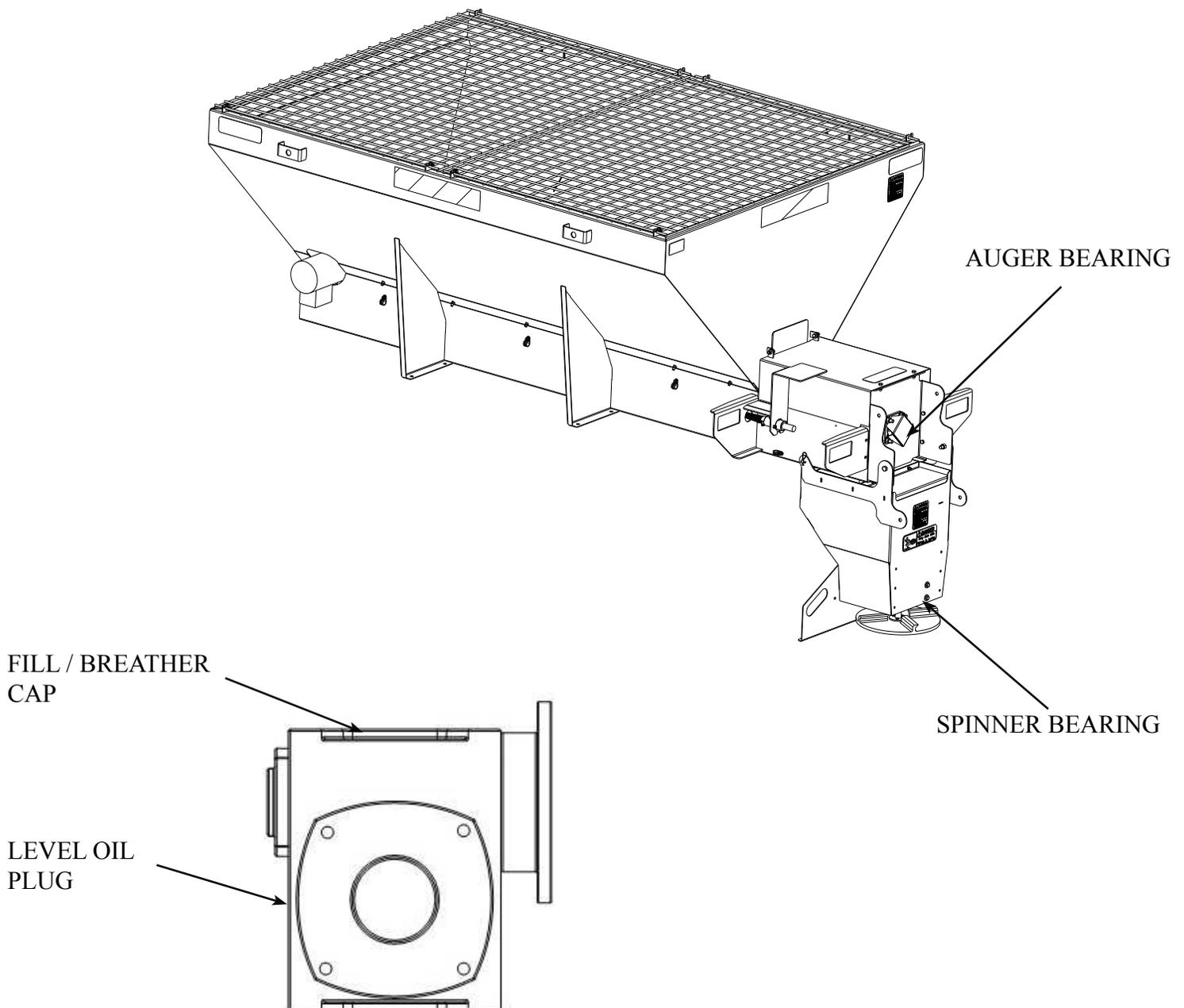
**Lubrication:** After every 10 hours of operation or weekly, lubricate auger shaft and spinner shaft bearing with high quality chassis grease.

## MAINTENANCE

### Post Season Maintenance & Storage

At the end of the winter season, perform the post-season maintenance as listed in the maintenance service schedule to prevent costly repairs at the start of the next season. Also don't forget to:

1. Empty and thoroughly wash entire spreader with warm soap and water.
2. Spreader may be treated with any commercial salt neutralizer.
3. Lubricate bearings.
4. Oil or paint any rusty parts or surfaces.
5. To prevent corrosion, never store spreader directly on the ground.



# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL MDV-A ELECTRIC SERIES

## MAINTENANCE

<b>Maintenance Service Schedule</b>					
MAINTENANCE TASK TO BE COMPLETED	Pre-Season	Daily	10 Hours or Weekly	40 Hours or Monthly	Post-Season
Inspect spreader for loose, missing, or damaged parts or hardware	X	X			X
Verify spreader is securely attached to vehicle	X	X			
Inspect electrical connections and apply dielectric grease to connections	X		X		X
Adjust drag chain tension & chain wiper position	X			X	
Check gearbox oil level	X		X		
Inspect & clean gearbox breather	X		X		
Grease gearbox input shaft bearing	X			X	X
Flush and refill gearbox oil	X				
Lubricate drag chain	X		X		X
Adjust v-belt & roller chain tension	X			X	
Lubricate roller chain	X		X		X
Grease idler, drive shaft, and spinner shaft bearings	X		X		X
Oil or paint rusty surfaces	X				X
Replace wireless remote transmitter battery	X				
Clutch maintenance	X				X
Check Hydraulic Fluid Level	X	X			
Replace hydraulic filter	X			X	
Flush and refill hydraulic reservoir	X				
Engine Maintenance	As required per engine manufacturer				

# INSTALLATION, OPERATING INSTRUCTION AND PARTS MANUAL MDV-A ELECTRIC SERIES

## WARRANTY / SERIAL TAG



Dealers have the responsibility of calling to the attention of their customers the following warranty prior to acceptance of an order from that customer for any SWENSON® product.

### WARRANTY

#### WHAT THIS WARRANTY COVERS

Swenson Spreader LLC (hereinafter "Swenson") is committed to assuring Customer satisfaction with the Spreader (hereinafter "Product"). Swenson warrants to the original owner (hereinafter "Purchaser") of the Product to be free from defects in material and workmanship for the following term: Swenson warrants ALL PARTS AND ASSEMBLIES to be free from defects in material and workmanship for a period of one year from the date of purchase. Installation of the Product must be in accordance with Swenson's instructions. This warranty extends to the Purchaser and may not be assigned without the prior written approval of Swenson; except a distributor may assign this warranty to the first titled owner of the Product.

If a Product has a defect in material or workmanship covered by the warranty, Swenson will (at our option) either replace or repair said part. Swenson's has sole discretion as to repair of defects covered by this warranty, or replacement of the Product. Swenson's responsibilities as described herein shall not exceed the amount of the purchase of the Product.

#### WHAT THIS WARRANTY DOES NOT COVER

Swenson's warranty does not extend to Product which have been misused, abused, improperly installed, repaired with non-genuine Swenson parts, improperly cared for, if materials such as lava rock or cinders are used, or for which payment has not been made. The warranty is void if repairs or alterations to the Product are made by unauthorized persons, or the Product serial numbers have been altered or defaced.

All gasoline engines and hydraulic pumps are warranted by their manufacturer and not by Swenson Spreader LLC. Electrical or hydraulic components are not to be disassembled without the express written permission of Swenson Spreader LLC.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SWENSON'S MAXIMUM OBLIGATION AND LIABILITY UNDER THIS WARRANTY SHALL BE LIMITED TO AN AMOUNT EQUAL TO THE PRESENT PURCHASE PRICE FOR THE SWENSON PRODUCT. SWENSON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER DIRECT OR INDIRECT, INCIDENTAL, CONSEQUENTIAL OR OTHERWISE ARISING OUT OF BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages.

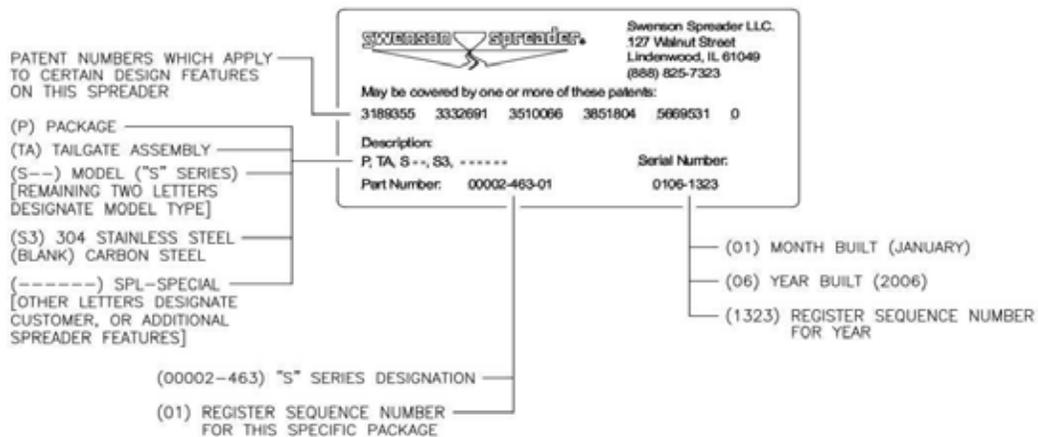
Defective parts returned to Swenson Spreader LLC must be accompanied by the following information:

RGA # \_\_\_\_\_  
 Spreader Model \_\_\_\_\_  
 Serial Number \_\_\_\_\_  
 Date Installed \_\_\_\_\_  
 Where Purchased \_\_\_\_\_

Purchaser accepts these terms and warranty limitations unless product is returned within fifteen days for full refund of purchase price.

Effective 4/15/05

### EXPLANATION OF SERIAL NUMBER DECAL



# **SWENSON**



**SWENSON PRODUCTS LLC  
P.O. BOX 127  
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**IMPORTANT  
INFORMATION  
ENCLOSED**