

LIGHT TRUCK ELECTRIC MATERIAL SPREADER

MODELS 635 & 835

OPERATOR'S MANUAL

DO NOT USE OR OPERATE THIS EQUIPMENT UNTIL THIS MANUAL HAS BEEN READ AND THOROUGHLY UNDERSTOOD

PART NUMBER 79203321 Rev. B

TABLE OF CONTENTS

79203321 Rev. B	4/17	Hiniker/79203321RevB
TO THE PURCHASER		
SAFETY		
Sander Control Box		5
Spread Control		6
Spread Pattern		6
Gate Adjustment		7
		7
Storage		
General		9
Chain Tension		
Spinner Clean Out		
TROUBLE SHOOTING		
INSTALLATION INSTRUCTION	IS	
SPECIFICATIONS		
WARRANTY		

TO THE PURCHASER

This product is designed and manufactured to give years of dependable service, when properly maintained and used for the purpose for which it is intended. Never allow anyone to operate this equipment until they fully understand the complete contents of this manual. It is the responsibility of owners who do not operate this equipment to ensure the operator is properly instructed and understands the contents of this manual. It is also the owner's responsibility to ensure that anyone operating this equipment is mentally and physically capable of so doing.

Important information is contained in this manual to help ensure safe and efficient operation.

If you have any questions about this manual, or the equipment discussed herein, contact your Hiniker dealer.

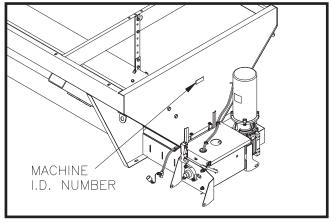
This is the safety alert symbol. It alerts an operator to information concerning personal safety. Always observe and heed these instructions, otherwise death, or serious injury can result!

All references to LEFT or RIGHT mean viewing the spreader from the rear and facing the truck.

This Operator's manual is shipped with this equipment. Contact your Hiniker dealer for additional copies.

Always obtain original Hiniker service parts. Substitute parts could adversely affect equipment performance and warranty.

Check that your dealer has forwarded the Hiniker delivery report copy and the machine serial number to maintain maximum service and warranty benefits. This does not put you on any mailing list and information thereon is not available to others. Your spreader's identification number plate is at the location shown below.



DWG. NO. 6723

Record the following information for later reference when obtaining service parts:
Purchase Date
Purchaser's Name
Dealer's Name
Machine Serial No

This is the safety alert symbol. It alerts an operator to information concerning personal safety. Always observe and heed these instructions, otherwise death or serious injury can result!

Operator safety is a principle concern in equipment design and distribution. However, many accidents occur because a few seconds of thought, and a more careful approach to handling, were ignored.

Accidents can be avoided by knowing and following the precautions cited in this manual.

GENERAL SAFETY

- Read this manual thoroughly. Make sure the operator understands it and knows how to operate this equipment safely. This equipment can kill or injure an untrained or careless operator and bystanders. If you sell this equipment, ensure the new owner acknowledges receipt of this manual.
- 2. Make sure all safety guards are securely mounted in place before operating this spreader.
- 3. Do not attempt to handle or service this equipment, or direct others to do the same, unless you know how to do it safely and have the proper tools for the job.
- 4. Keep hands, feet, hair, and clothing away from moving parts. Flying material can cause bodily injury. Wear eye protection.
- 5. Do not alter the equipment to the extent of compromising safety or performance.
- 6. Material to be spread can be dangerous. Improper selection, application, use or handling may be a hazard to persons, vehicle or other property. Follow instructions and precautions given by the material manufacturer.
- 7. Do not over-load your vehicle beyond payload limits. If there are any questions, contact the vehicle manufacturer.
- 8. Do not use side extensions on your spreader to increase salt storage capacity. Using side extensions may damage hopper and cause injury to personnel.
- 9. Do not drive motor vehicle with spinner unlatched. Make sure spinner is fully engaged in its working position or damage to your spreader or spinner may occur.

- 10. Make sure the spreader is securely fastened to the vehicle in accordance with this manual.
- 11. Do not operate a spreader in need of maintenance or repair.

BEFORE OPERATION

- 1. Discipline yourself to visually check for worn, damaged or cracked parts before starting use. Replace these with genuine Hiniker parts.
- 2. Check all controls and operating functions of the machine in a safe area before starting to work.
- 3. Do not lubricate, adjust or clean the machine while it is running. After making adjustments, check machine thoroughly for loose parts, hardware and tools.
- 4. Always disconnect wiring harness before removing or replacing any electrical components.

DURING OPERATION

- 1. Drive carefully and always wear seat belts when operating a motor vehicle. Braking distance may be increased and handling characteristics impaired due to extra weight of spreader.
- 2. Ensure everyone is clear of the machine, especially away from blind areas of the operator, before starting or operating this equipment.
- 3. Stay out of hopper when conveyor power source is engaged. If machine becomes blocked, do not attempt to remove blockage until machine has been shut off and conveyor and spinner movement have stopped.

Use a shovel or other long-handled tool to reach inside the hopper. Never attempt to break up material inside the hopper with hands or feet.

- 4. Do not ride in any part of spreader while vehicle is in motion.
- 5. Set the brakes and stop the truck's engine before adjusting or servicing your spreader.

AFTER OPERATION

- 1. Inspect the spreader for components that have become excessively worn or damaged and must be repaired or replaced.
- 2. Develop a regular maintenance schedule to ensure safe, dependable spreader operation.

OPERATING PROCEDURES

GENERAL INFORMATION

Hiniker spreaders are capable of dispersing a variety of dry materials for control of ice on roadways, walkways and parking lots.

Vehicle load carrying capacity limits the maximum load that can be safely transported, which could be less than the volumetric capacity of the spreader. Check the vehicle's load rating certification sticker and DO NOT overload the vehicle beyond its Gross Vehicle Weight Rating (GVWR) or its Gross Axle Weight Rating (GAWR). Spreaders are recommended to be mounted on trucks over 8,500 lb. GVWR.

An alternator rated for 135 amps or higher is recommended.

Use the following tables to calculate vehicle payload when material is loaded in the spreader.

VOLUMETRIC CAPACITY: (Cubic Yards, Approx.)

	LEVEL	HEAPED
Standard 8' Box	1.8	2.27
Standard 6 1/2' Box	1.5	1.84

WEIGHT: (Pounds, Approx.)

8' SS Standard Box	515
6 1/2' SS Standard Box	467
Short Spinner Kit	70
Long Spinner Kit	80

MATERIAL WEIGHTS: (Pounds Per Cubic Yard, Approx)

Very Coarse Rock Salt	950
Coarse Rock Salt	1,215
Coarse Sand - Dry	2,565
Coarse Sand - Wet	3,240

Calculate total material weight by multiplying pounds per cubic yard by cubic yards of material.

Local, state and federal regulations may require flashing lights, center high mounted stop light, or other additional equipment for operation on public roadways. It is the owners responsibility to know and follow laws as they apply in his area.

Always examine spreader for worn or damaged components prior to operation. During operation, listen for unusual noise from spreader that might indicate component failure. Never run a machine in need of repair.

Start spreader for a short period of time before loading material to test for proper function of moving parts.

After loading, run spreader in an isolated area, clear of people, to become familiar with the controls and to verify the correct spread pattern.

WARNING: Stop conveyor and set vehicle parking brake before leaving the vehicle to make adjustments.

If loading hopper the night before an impending snowfall or ice storm, park spreader indoors, if possible, to help prevent freeze-up of material before morning.

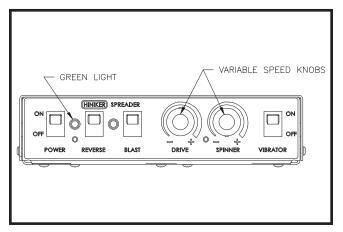
If conveyor does not move because of dense material or a material jam, remove all material from hopper.

If material in hopper freezes, move spreader into a warm area to thaw.

To prevent material from freezing, do not store material in spreader.

SANDER CONTROL BOX

A Hiniker controller is equipped with variable material feed and spinner speed, reverse, blast and a switch for the optional vibrator. Both variable speed knobs are clearly marked with full counterclockwise(CCW) being minimum speed/power and full clockwise (CW) being maximum speed/power.



DWG. NO. 6738

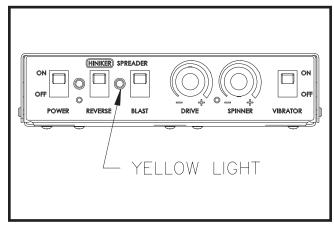
To turn on controller set variable speed knobs for material feed and spinner to desired speed. Push power button to ON position. Green light next to power switch will come on. A Hiniker controller will start drive motor for a few seconds at full power to clear any jams or partially frozen material and then it will slow to desired speed. An operator can then adjust power as necessary. Spinner motor will start at operator's preset speed.

An optional vibrator will help keep a steady flow of material onto spinner. It also slightly increases rate at which material is applied because a vibrator helps to put maximum amount of material onto conveying mechanism. This switch is recommended to be on when hopper is getting close to empty.

A reverse button is provided for material feed only. This feature is to help clear material feed drive jams/faults only. Spinner will not go into reverse as this feature is not designed to clear spinner jams/faults.

If controller faults because of a material feed drive jam, reverse button can be pushed to clear fault or held to try and clear jam. When button is held, material feed drive system moves in reverse for as long as button is held. Once reverse button is released material feed drive system will attempt to resume going forward automatically.

Blast feature is used for slippery spots that need excess salt/sand. When blast button is held down material feed drive system runs at full power applying maximum amount of material. Once button is released blast feature will stop, and normal preset application will resume.





A Hiniker controller has safety features built into controller to protect electronic components. When a potential damaging occurrence happens controller stops both motors (fault). A yellow light on controller will light up or blink when potentially damaging situations are present.

When a yellow light stays lit continuously there are two possible problems:

- 1. Material feed drive motor is drawing too many amps. This occurs when drive system is jammed or frozen.
- 2. Controller temperature is too high. This happens when controller is putting out near maximum power for an extended period of time or controller is set near the heater.

6 Operating Procedures

If light goes out when reverse switch is pushed and material feed drive motor starts running again, drive system was drawing too many amps and a jam is/was present.

If light remains on when reverse button is pushed then it is a temperature fault and the controller is too hot. Controller then will not function and needs to be turned off and back on. If controller is still too hot light will come back on because of temperature fault. A controller then should be turned off for an extended period and allowed to cool down in temperature.

When motors stop and yellow light is blinking, spinner has faulted and controller needs to be turned off and problem investigated. Once jam is removed controller can be turned on again.

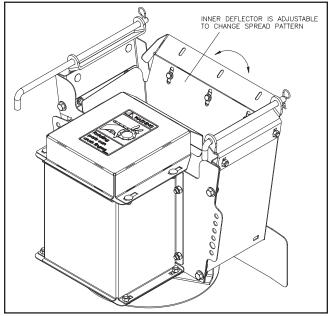
SPREAD CONTROL

Hiniker spread pattern and thickness of material is controlled by (4) variables:

- Drive Motor Speed: A faster drive motor speed will deliver more material to the spinner.
- Truck Speed: The slower a truck travels, the more material covers the ground.
- Spinner Motor Speed: A faster spinner motor speed will produce a a wider spread pattern producing a thinner material cover.
- Gate Setting: A higher gate setting allows more material to the spinner.

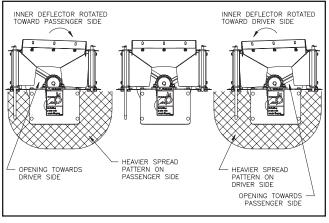
SPREAD PATTERN

Hiniker spinner assemblies have inner deflectors that can be rotated or slid to achieve many different spread patterns.



DWG. NO. 7432

Inner spinner deflector can be rotated left and right and slid in and out.

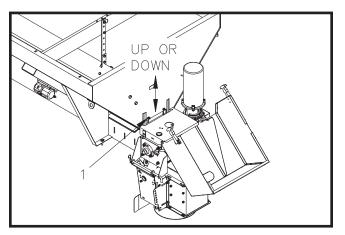


DWG. NO. 7434

Typically if a inner deflector is rotated so the opening favors the drivers side more material is thrown to the passenger side of the vehicle. If an inner deflector is rotated so the opening is towards the passenger side more material is thrown to the drivers side.

GATE ADJUSTMENT

A spreader gate can be adjusted by loosening (2) nuts (item 1) at rear of the spreader. Set gate to desired height and retighten nuts.

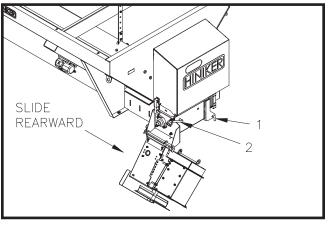


DWG. NO. 6724

SWING AWAY CHUTE

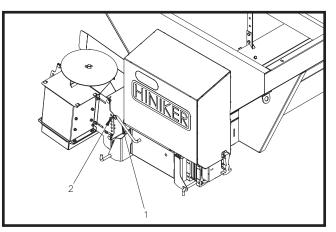
Hiniker spreaders are equipped with a swing away chute making cleaning of the hopper and storage much easier.

CAUTION: Swing away chute is for clean out and storage only. Do not drive motor vehicle with swing away chute open or not fully engaged in its working position.



DWG. NO. 6725

To utilize this option pull pin (arrow 1) and allow chute to swing open. Unplug spinner electrical connector. Slide chute rearward about 2 1/2 inches. Pull hair pin cotter from formed rod (arrow 2).



DWG. NO. 6726

Rotate chute assembly approximately 180 degrees. Insert provided pin (arrow 1) into hole (arrow 2) on body of spinner. Insert hair pin cotter into pin hole to hold chute in position. Hiniker wants to remind customers that swing up position is only for storage and clean out purposes.

Do not drive motor vehicle with spinner in swing up position. Before driving motor vehicle, return spinner into its working position.

STORAGE

Store spreader in a cool dry protected area when it will not be used for an extended period of time. Never attempt to remove spreader with material in hopper. Perform the following maintenance procedures at end of season to ensure machine remains in good operating condition.

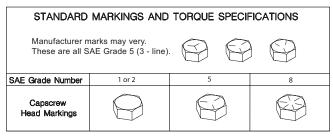
- Unload hopper completely and wash spreader to flush out any remaining material to prevent material buildup. Do not pressure wash motor or electrical components or damage will occur.
- 2. Disconnect and remove controller from spreader. Store in a cool dry place. Summer temperatures and climate could damage circuit boards and void warranty.
- 3. Apply a light coat of dielectric grease to all electrical terminals, and cap or tape loose terminals to prevent damage or corrosion.
- 4. Inspect for worn or damaged components. Repair or replace as needed.
- 5. Grease all bearings. Grease points are identified in Maintenance & Service section of this manual.
- 6. Oil conveyor and roller chains.
- 7. Clean out spinner electrical motor cavity by removing bottom sheet metal cover.

MAINTENANCE & SERVICE PROCEDURES

Dependable spreader operation is a result of following good maintenance procedures. Inspect your spreader frequently to ensure that all parts are working smoothly, and develop a schedule for maintenance at required intervals.

GENERAL

Always disconnect power from wiring harness before servicing or replacing any electrical components. Prior to operation of a new spreader, or one that has been stored, inspect all hardware and verify proper torque on all bolts and nuts in accordance with the recommended torque specifications.



DWG. NO. 1935

TABLE 1 RECOMMENDED TORQUE VALUES FOR INCH FASTENERS (ZINC COATING & LUBRICATED)**				
Nominal Size	SAE 5 120,000 psi Min Tensile Str Ibf - ft		150,0 Min Ter	E 8 00 psi nsile Str - ft
	Dry	Lubricated	Dry	Lubricated
1/4-20	8	6	12	9
5/16-18	17	13	25	18
3/8-16	30	23	45	35
1/2-13	75	55	110	80
5/8-11	150	110	220	170

** MACHINE DESIGN FASTENER AND JOINT REFERENCE ISSUE

SET SCREW SEATING TORQUE

Socket Head	Torque InIbs. (Ft-Ibs)	Torque N-m
#8	20 (1.6)	2.25
#10	36 (3)	4
1/4	87 (7.25)	9.8
5/16	165 (13.5)	18.6
Square Head		
#10	100 (8.8)	11.3
1/4	212 (17.7)	24
5/16	420 (35)	47.5

Loose bolts can cause hole elongation and part failure resulting in dangerous operating conditions and equipment breakdown.

Check all hardware periodically during operation and keep tightened to specified torques. Replace worn bolts and locknuts with Grade 5 bolts and equivalent type B or F locknuts. Type B locknuts are plain hex; type F locknuts are flanged hex.

Apply a light coat of dielectric grease to all electrical connectors to prevent corrosion of contacts when connectors are unplugged, and to make connecting and disconnecting plugs easier.

Remove all material from hopper and wash salt and dirt off spreader before storage. Do not pressure wash motor or electrical components or damage will occur.

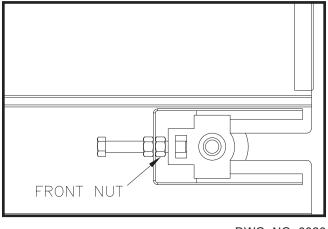
Never leave material in hopper for extended period of time. Material may freeze and seriously damage spreader.

Controller is not serviceable. If controller does not function a new one must be purchased.

CHAIN TENSION

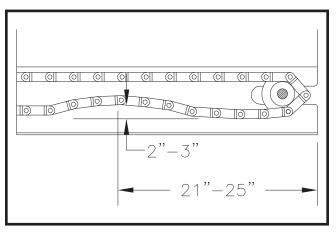
Before each season, and periodically during season, verify spinner sprocket set screws are tight and roller chain is properly tensioned.

CAUTION: Over-tightening roller chain will draw more power and may damage bearings on motor and/ or spinner shaft. Over-tightening will also shorten life of roller chain and sprockets.



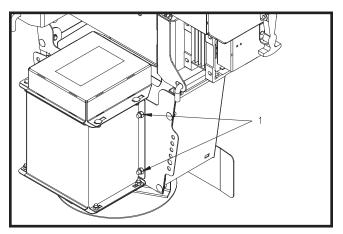
DWG. NO. 6026

When tightening conveyor chain, adjust both sides an equal amount to equalize load on chain. Loosen front nut, then turn adjustment bolt to take up the slack.



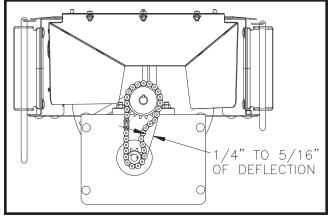
DWG. NO. 6596

Retighten front nut after chain is adjusted. A properly tensioned chain can be pulled up 2-3 inches about 24 inches from back of spreader side rails. A chain that is too tight will draw more power and cause excess stress on drive components.



DWG. NO. 6727

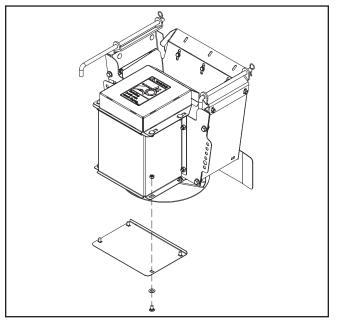
To adjust tension on spinner chain, loosen four nuts at location 1. Slide entire motor assembly away from spinner shaft (toward left side of machine) and retighten nuts.



DWG. NO. 6639

Correct chain tension allows 1/4" to 5/16" deflection midway between sprockets.

SPINNER CLEAN OUT



DWG. NO. 7433

Every season clean out spinner motor cavity by removing sheet metal cover. Remove debris and salt residue from around motor.

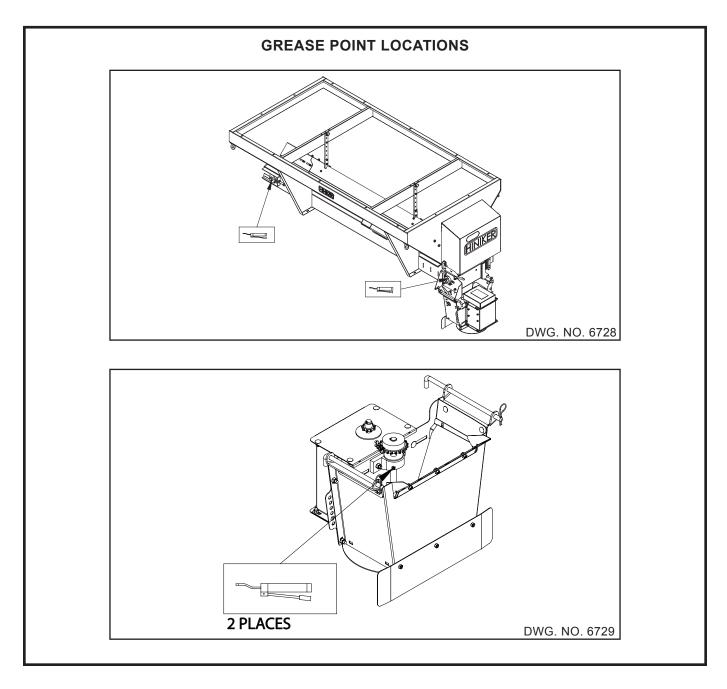
LUBRICATION

CAUTION: Do not lubricate, adjust, or clean machine while it is running. Death or serious injury can result.

Prior to operation of a new machine, or one that has been stored, grease all bearing points with a high quality SAE multi-purpose grease and oil roller chains.

Throughout season, grease idler and drive shaft bearings at weekly intervals and oil roller chains periodically. Grease spinner bearings weekly during months of operation. **NOTE:** Over-greasing may cause seal damage to bearings. Use only one pump of grease per fitting.

Grease machine in accordance with drawings below.



TROUBLE SHOOTING

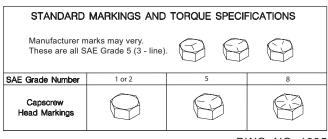
- Preliminary Checks:Be sure all electrical connections are tight and clean.Be sure nothing is jammed in hopper or spinner.

PROBLEM	POSSIBLE CAUSE	REMEDY
No power to cab Power switched to ON position No illumination of indicator light	Controller plug is loose	Check plug connection at cab control
	Blown fuse	Replace fuse
	Faulty battery	Check battery voltage should be between 13 - 15 Volts with vehicle running
	Vehicle wiring harness damaged between battery and controller	Repair/Replace damaged wires or harness as required.
Control Dial does not change speed Controller does not function	Malfunctioning cab control	Replace controller
	Wiring harness is damaged or has a short between cab control and spreader	Check plug connections at cab controller and spreader motors
Controller/Material feed motor does not operate Indicator light (yellow light) illumi- nated constantly	Material feed jam	Remove obstruction
	Frozen material	Thaw material
	Controller overheated	Turn off controller let cool and turn on again
Controller/Spinner motor does not operate Indicator light (yellow light) illuminated blinking	Spinner jam	Remove obstruction
Spinner Motor does not turn (Material feed motor is running)	Obstruction preventing rotation	Remove obstruction
	Sprocket loose on spinner shaft	Tighten set screw of sprocket
	Loose chain	Check and tighten chain
	Spinner bearings are dry or seized	Grease or replace bearings

14 Trouble Shooting

PROBLEM	POSSIBLE CAUSE	REMEDY
Material feed Motor does not turn (Spinner motor is running)	Obstruction preventing rotation	Remove obstruction
	Gearbox is damaged	Replace gearbox if output shaft does not turn when motor runs/ tries running
	Material feed chain is loose/dam- aged	Adjust material feed chain ten- sion or replace
	Material feed bearings are seized or damaged	Grease or replace bearings
Motor doesn't run	Loose electrical connections	Check/tighten all connections
	Jammed material feed/spinner	Remove obstruction
	Motor seized	Replace motor
Material not flowing from hopper	Wet or Frozen material	Replace with Dry material
	Material feed jammed	Remove obstruction
	Material bridge	Remove bridge

INSTALLATION INSTRUCTIONS



DWG. NO. 1935

TABLE 1 RECOMMENDED TORQUE VALUES FOR INCH FASTENERS (ZINC COATING & LUBRICATED)**				
Nominal Size	SAE 5 120,000 psi Min Tensile Str Ibf - ft		SAE 8 150,000 psi Min Tensile Str Ibf - ft	
	Dry	Lubricated	Dry	Lubricated
1/4-20	8	6	12	9
5/16-18	17	13	25	18
3/8-16	30	23	45	35
1/2-13	75	55	110	80
5/8-11	150	110	220	170

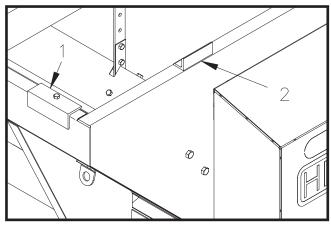
** MACHINE DESIGN FASTENER AND JOINT REFERENCE ISSUE

SET SCREW SEATING TORQUE

Socket Head	Torque InIbs. (Ft-Ibs)	Torque N-m
#8	20 (1.6)	2.25
#10	36 (3)	4
1/4	87 (7.25)	9.8
5/16	165 (13.5)	18.6
Square Head		
#10	100 (8.8)	11.3
1/4	212 (17.7)	24
5/16	420 (35)	47.5

MOUNTING THE SPREADER

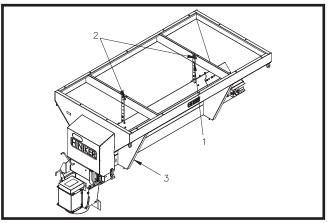
1. Remove tailgate from truck according to instructions from vehicle manufacturer.



DWG. NO. 6734

2. Remove shipping brackets from hopper top (arrow 1 & 2).

WARNING: Never attempt to lift a spreader with material in hopper. Lifting device must be adequately rated to lift a payload equal to or greater than spreader weight. See "Specifications" section for proper spreader weight.



DWG. NO. 6730

- 3. Loosen bolts (arrow 1) and rotate inverted V so it is vertical.
- 4. Lift spreader by hooking slots (arrow 2) in hopper cross members.
- Center spreader on truck with rear rails extending behind furthest point of interference (back of the truck, bumper, trailer hitch, etc.) Verify rear legs (arrow 3) of spreader rest securely on bed of truck.

16 Installation Instructions

Place lumber as needed between back of truck cab and front of spreader to help hold sander in position and protect truck from damage due to shifting of spreader.

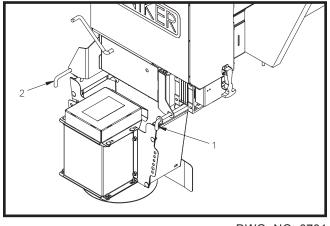
For conveyor sanders placing lumber under spreader center and side gussets will help with removal of excess material that accumulates under the spreader.

Attach sander to truck bed using 3/8" hardware through each slot in sanders (4) legs. Ratchet tie-down straps must be used to secure spreaders (4) tie down eyes located at each corner of spreader to vehicles factory installed anchor points.

Ratchet tie down straps must be used to properly secure hopper to vehicle. Do not use cam buckle or other forms of straps where adequate tension to secure hopper against load shifting cannot be achieved.

NOTE: Inspect hold-downs and tie down straps periodically for wear or loosening, and retighten or repair as required.

Do not add side extensions to the spreader hopper. Hopper damage may occur.



CHUTE ASSEMBLY

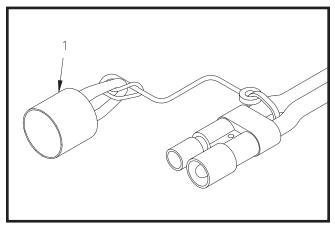
DWG. NO. 6731

1. Attach chute assembly to spreader by inserting pins through clevis and chute hinge at locations 1 and 2.

CONTROL BOX AND VEHICLE WIRING INSTALLATION

Locate parts box that was shipped with spreader. This contains a complete wiring harness and all electrical controller components.

To insure good performance of your spreader, check condition of trucks electrical system. Using a voltmeter, check alternator and battery voltage. With engine running and headlights and heater fan on good voltage reading should fall between 13.0 and 15.3 volts. If reading falls out of this range, check and adjust your electrical system.



DWG. NO. 6737

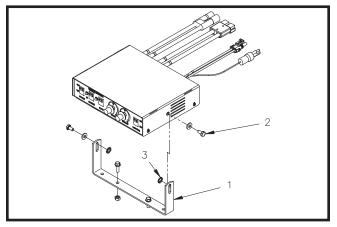
Use provided nylon lanyards and zip ties to attach dust caps (arrow 1) to drive motor cable ends. Refer to drawing 6624 for dust cap locations.

Refer to drawing 6624. Layout a wiring path for spreader wiring harness. Connect wiring harness connectors to their mating connectors on drive motor, spinner motor, and vibrator. Drill all necessary holes or use existing ones to pass connectors into truck cab. Attach harness to truck frame. Do not route wiring harness near exhaust system, harness may melt and short electrical system. Mount controller mounting bracket in a convenient location in truck cab. Do not mount controller directly in front of heater vents, this will raise temperature of controller significantly and may cause damage to your spreader controller.

CAUTION: Do not install controller in deployment path of an air bag. Refer to vehicle manufacturers manual for air bag deployment areas.

Refer to drawing 6732. Assemble controller onto controller mounting bracket (arrow 1) using the $1/4 \times 1/2$ cap screws (arrow 2).

Assemble a flat washer on outside of bracket and a external tooth lock washer between controller and mounting bracket (arrow 3).



DWG. NO. 6732

Attach mating connectors between the wiring harness and cab controller.

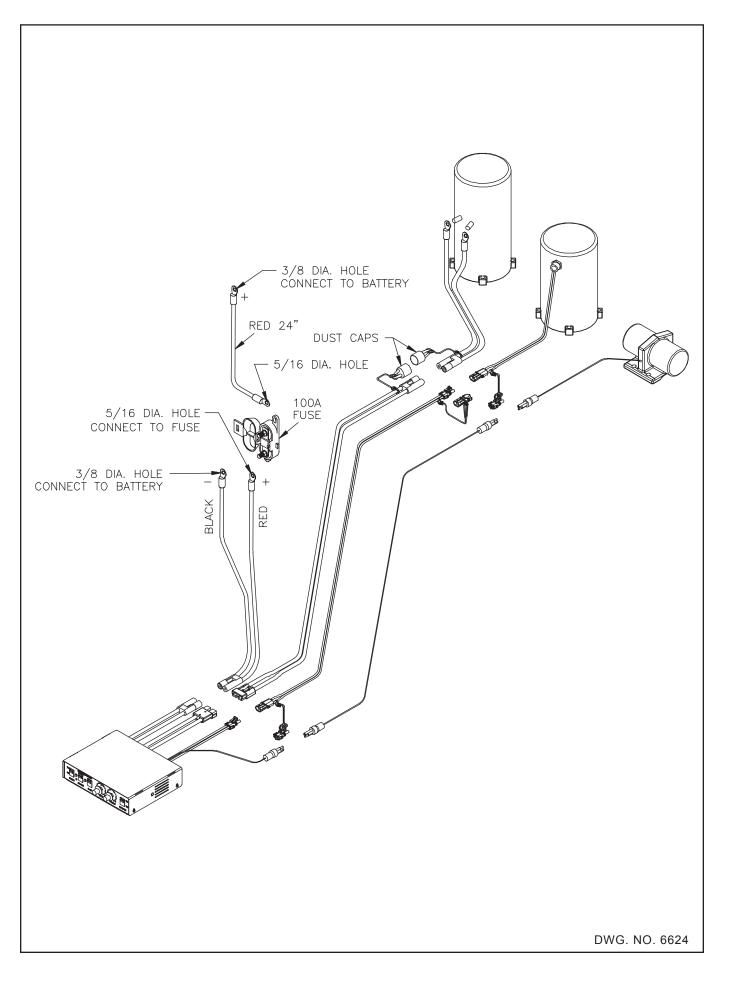
CAUTION: Make sure power switch on controller is off before connecting power cable.

Layout a path for power cable in the truck's engine compartment. Drill a hole in firewall or use an existing one to pass wiring harness. It is recommended to pass power cable from inside of cab to battery due to large high amperage connector. Do not route close to exhaust system, harness may melt and short electrical system. Mount fuse holder in a convenient location. Remove nuts on fuse holder assembly and insert 100 amp fuse.

Refer to drawing 6624. Connect black lead to battery ground (-) terminal. Red (red stripe) is attached to fuse holder assembly. Connect a 24" red wire from fuse assembly to positive (+) post of battery.

Connect power cable to controller.

Push on/off button on controller to check for power. When power has been confirmed turn power off, electrical installation is complete. Refer to "Operating Procedures Section" for more information on controller function.



SPECIFICATIONS

DIMENSIONS:	(835) 8 FT. HOPPER	(635) 6 1/2 FT. HOPPER	
Length Inside	95 3/8 In.	77 3/8 In.	
Length Overall	115 In.	97 In.	
Width	50 1/2 In.	50 1/2 In.	
Height	32 1/4 In	32 1/4 In.	
CAPACITY: Cubic Yards			
Level	1.8	1.5	
Heaped	2.27	1.84	
Weight: Model Hopper Only	515 lbs. (Approximately)	467 lbs. (Approximately)	
CONVEYOR:			
Trough Width:	13 Inches		
Flight Bars:	3/16" x 3/4" on 11 9/16 Inch Centers		
Model 635 & 835 Electric Drive			
Drive Motor	3/4 HP DC	Electric Motor	
SPINNER:			
Spinner Motor	1/3 HP DC Electric Motor		
Disc Diameter:	12 Inches		
Shaft Diameter:	3/4 Inch		
Spreader Pattern	6 - 30 Feet		
ELECTRICAL COMPONENTS:			
Fuse	100 AMP Bussman BK/AMG-100		

NOTES:		

HINIKER WARRANTY

HINIKER SPREADER LIMITED WARRANTY

The only warranty Hiniker Company (Hiniker) gives and the only warranty that any Hiniker dealer is authorized to give on behalf of Hiniker is as follows: (NO EMPLOYEE OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY.)

Hiniker warrants to the original purchaser of a Hiniker spreader that Hiniker will repair or replace any defects in material and workmanship that occur within two years from date of retail delivery except the following items: Hiniker warrants that it will repair or replace any defects in materials or workmanship with respect to the paint finish, any accessories, and service parts and components for a period of one year from date of retail delivery.

Hiniker's obligation and liability under this warranty is expressly limited to repairing or replacing, at Hiniker's option, at an authorized Hiniker dealer location, the defective parts at no charge to the original purchaser. HINIKER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED AND MAKES NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE.

HINIKER'S OBLIGATION UNDER THIS WARRANTY SHALL NOT INCLUDE ANY TRANSPORTATION CHARGES TO OR FROM THE AUTHORIZED HINIKER DEALER LOCATION OR ANY LIABILITY FOR INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGE OR DAMAGES OF ANY KIND FOR LOST PROFITS OR DELAY. If requested by Hiniker, products or parts for which a warranty claim is made are to be returned freight prepaid to our factory. Any improper use, operation beyond rated capacity, substitution of parts not approved by Hiniker Company, or any alteration or repair in such manner as in our judgment affects the product materially and adversely shall void this warranty.

Hiniker reserves the right to make improvements or changes to any of it's products without notice. Such improvements or changes shall not trigger any obligation by Hiniker to update, modify or change any products previously sold by Hiniker.

HINIKER does not warrant the following:

- 1. Used products.
- 2. Any product that has been repaired, modified or altered in a way not approved by Hiniker Company.
- 3. Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow Operators Manual Instructions, misuse, lack of proper protection during storage, or accident.
- 4. Parts replacement and service necessitated by normal wear or maintenance including, but not limited to, conveyor chain, roller chain, bearings, and spinner disc.
- 5. Paint finish damage caused by normal wear.

Hiniker does not assume any liability for any damage to a motor vehicle resulting from the attachment or use of a Hiniker spreader. Compliance with applicable motor vehicle regulations is the responsibility of the installer. Attachment of a Hiniker spreader to a motor vehicle is at the risk of the purchaser.

It is the responsibility of the original spreader purchaser to verify the original date of purchase.

A DELIVERY REPORT FORM must be filled out and received by Hiniker with 30 days of retail delivery at the address below to initiate the warranty coverage.

HINIKER COMPANY 58766 240th St. P.O. Box 3407 MANKATO, MN 56002-3407 PHONE (507) 625-6621 -- FAX (507) 625-5883 www.hiniker.com