



LIGHT TRUCK STAINLESS STEEL MATERIAL SPREADER

MODEL 822 (8' ENGINE - MECHANICAL DRIVE)

MODEL 622 (6 1/2' ENGINE - MECHANICAL DRIVE)

OPERATOR'S MANUAL

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

PART NUMBER 79202233 Rev. A

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79202233 Rev. A

3/05

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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!

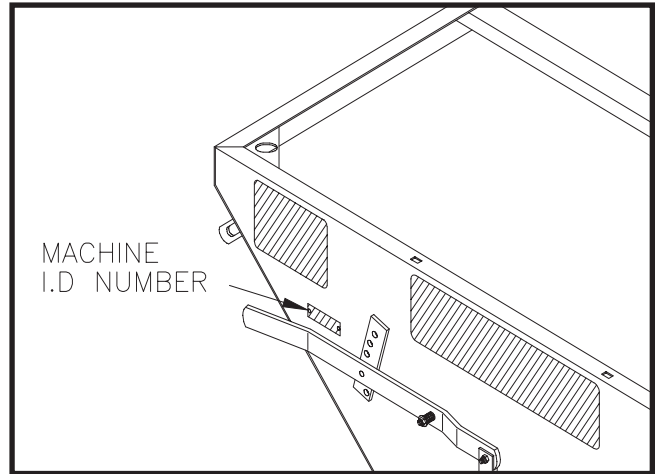
All references to LEFT or RIGHT mean viewing the spreader from the rear and facing the truck.

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. 3693

Record the following information for later reference when obtaining service parts:

Purchase Date _____

Purchaser's Name _____

Dealer's Name _____

Machine Serial No. _____

SAFETY



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

1. 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. Keep all shields and guards in place. For better viewing, some photos may show a safety shield open or removed. Never operate this spreader without safety shields installed.
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.

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.

DURING OPERATION

1. Drive carefully and always wear seat belts when operating a motor vehicle.
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.

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	1.78	2.27
8' Box w/12" Side Ext.	3.10	3.59
Standard 6 1/2' Box	1.45	1.84
6 1/2' Box w/12" Side Ext.	2.52	2.92

WEIGHT: (Pounds, Approx.)

8' Standard Box	613
Standard 6 1/2' Box	547
Short Spinner Kit	49
Long Spinner Kit	64
Hinged Hopper Grids, 8' Box	80
Hinged Hopper Grids, 6 1/2' Box	70
12" Side Extensions, 8' Box	160
12" Side Extensions, 6 1/2' Box	149
Adjustable Inverted "V", 8' Box	26
Adjustable Inverted "V", 6 1/2' Box	20

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

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

After loading, run the spreader in an isolated area, clear of people, to become familiar with the controls and to verify the correct spread pattern. Adjust deflectors on the discharge chute to achieve the desired spread.

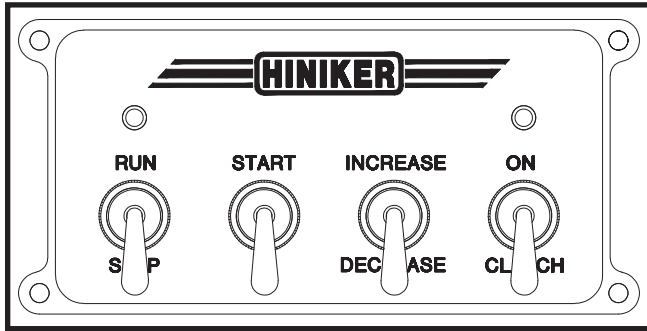


WARNING: Stop the conveyor and set the vehicle parking brake before leaving the vehicle to make adjustments.

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

MODEL 822 and MODEL 622 Mechanical Drive

The spreader cab control consists of a power/kill switch, a start switch, a throttle speed control switch, and a clutch on/off switch.



DWG NO. 3184

Before starting the engine, check that the clutch switch is in the OFF position.

To start the engine, first turn the power switch to RUN, then hold the throttle control switch at INCREASE for 3 seconds to choke the engine. Hold the start switch at START until the engine is running.

IMPORTANT: Do not hold the start switch for longer than 15 seconds at a time when attempting to start the engine. Allow the starter motor to cool for 2 minutes between attempts.

Once the engine has started, move the throttle control switch to DECREASE until the engine runs at the desired speed.

IMPORTANT: Prolonged operation of the engine at full or partial choke may cause premature engine wear or failure due to gasoline - diluted oil or fouled spark plug.

The engine can also be started by using the recoil starter with the power switch in the RUN position.



CAUTION: If the battery has been removed and machine is to be hand started, be sure the positive cable (red) at the battery end has the terminal taped to prevent sparking to ground when the engine is running.

The electric clutch can be engaged or disengaged at any engine speed. However, since engagement time and torque is almost instantaneous, to prevent premature spinner chain failure and chain tension loss, it is recommended that the electric clutch be engaged at the lowest possible engine speed without killing the engine.

Burnishing the clutch is necessary to achieve rated torque capacity. New clutches and clutches that have not been used for a long time, should be burnished before full load operation by the following procedure:

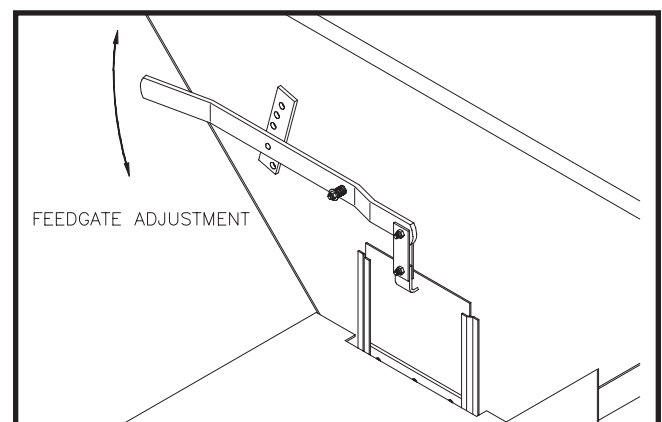
1. Run at 50% throttle.
2. Engage and disengage the clutch 5 times. (10 seconds on/10 seconds off).
3. Increase to 75% throttle.
4. Engage and disengage the clutch 5 times. (10 seconds on/10 seconds off).

Disengage the clutch and move the power switch to the STOP position when done using the spreader.

SPREAD CONTROL

Thickness of material cover is controlled by four variables:

1. Feedgate Setting:
Raising or lowering the feedgate will increase or decrease the amount of material delivered to the spinner for any given conveyor speed. Gate openings range from 0" to 4 1/2".

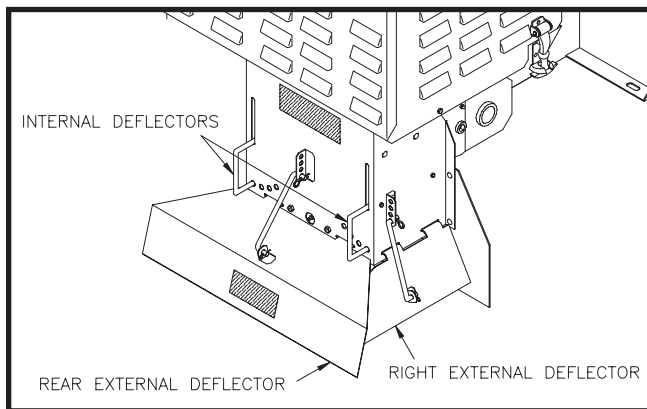


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2. **Conveyor Speed:**
A faster conveyor speed will deliver more material to the spinner.
3. **Truck Speed:**
The slower the vehicle travels, the more material covers the ground.
4. **Width of Spread:**
A wide spread pattern produces a thinner material cover.

Spread width and direction of spread are controlled by two variables:

1. **Spinner Speed (determined by conveyor speed):**
A faster spinner speed produces a wider pattern.
2. **Deflector Positions:**
In general, the two internal deflectors control the amount of material delivered to either side of the spread pattern, the three external deflectors control the size of the spread.



DWG NO. 3695A

Adjusting either of the internal deflectors inward will result in more material to the same side. For instance, moving the LH deflector inward will spread more material to the LH side of the pattern.

Raising any of the three external deflectors at the bottom of the discharge chute will produce a wider, thinner distribution of material to that same side. Adjust the various speeds and settings one at a time to produce the desired spread pattern.

STORAGE

Store the spreader in a dry protected area when it will not be used for an extended period of time. Perform the following maintenance procedures at the end of the season to ensure that the machine remains in good operating condition.

1. Disconnect and remove the battery from the spreader. Apply a light coat of dielectric grease to all electrical terminals, and cap or tape loose terminals to prevent damage or corrosion.
2. Wash the spreader to flush out any remaining material.
3. Inspect for worn or damaged components. Repair or replace as needed.
4. Grease all bearings. Grease points are identified in the Maintenance & Service section of this manual.
5. Oil conveyor and roller chains.

Maintain the spreader engine according to the Briggs & Stratton owner's manual that is shipped with the spreader. Engine warranty is described in the Briggs & Stratton manual.

If service or repair is required, contact an authorized Briggs & Stratton service center. The service center will ask for the model, type and code number of the engine.

Locate the nearest service center in the "Yellow Pages" or use the dealer locator at www.briggsandstratton.com.

MAINTENANCE & SERVICE PROCEDURES

Dependable spreader operation is the 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

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.

GRADE 5 TYPE B & F LOCKNUT TORQUES

Diameter	Ft.-lbs.	N-m
1/4"	6-10	8-13
5/16"	13-18	17-25
3/8"	23-33	31-44
7/16"	38-54	51-73
1/2"	58-82	79-112
5/8"	117-165	158-223
3/4"	206-292	280-396

SET SCREW SEATING TORQUE

Socket Head	Torque In.-lbs. (Ft.-lbs)	Torque N-m
#8	20 (1.6)	2.25
#10	36 (3)	4
1/4	87 (7.25)	9.8
5/16	16.5 (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.

Fill electrical connectors with dielectric grease to prevent corrosion of contacts when the connectors are unplugged, and to make connecting and disconnecting plugs easier.

Wash salt and dirt off the spreader before storage.

Maintain the spreader engine according to the Briggs & Stratton owner's manual that is shipped with the spreader. Engine warranty is described in the Briggs & Stratton manual.

If service or repair is required, contact an authorized Briggs & Stratton service center. The service center will ask for the model, type and code number of the engine.

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CHAIN TENSION

Tighten the conveyor chain periodically to compensate for the chain stretching. Adjust both sides the same amount to equalize the load on the chain.

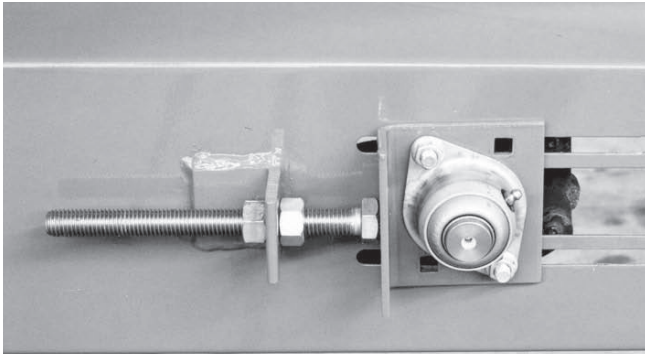


PHOTO NO. 4021

Loosen the rear nut, then turn the adjustment bolt to take up the slack. Tighten the rear nut after the chain is adjusted. A properly tensioned chain can be pushed up 1-3 inches about 24 inches from the back of the spreader side rails.

Adjust tension in the roller chain between the gear box and the spinner shaft by loosening the four nuts holding the spinner bearings and sliding the spinner shaft.



PHOTO NO. 2791

Be sure the spinner shaft is vertical before retightening hardware.

Tighten the engine drive chain by loosening the four nuts holding the engine plate, then sliding the entire engine assembly. Retighten nuts to secure the engine plate.

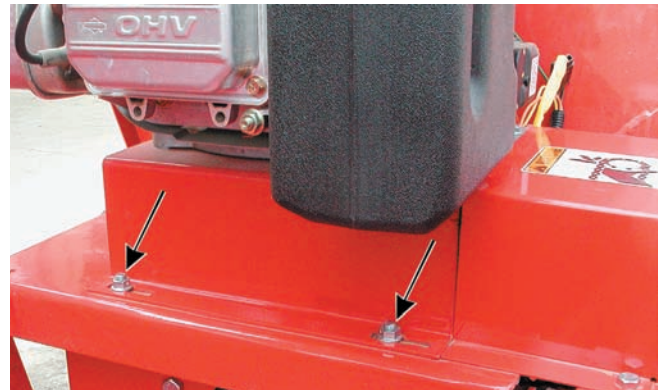
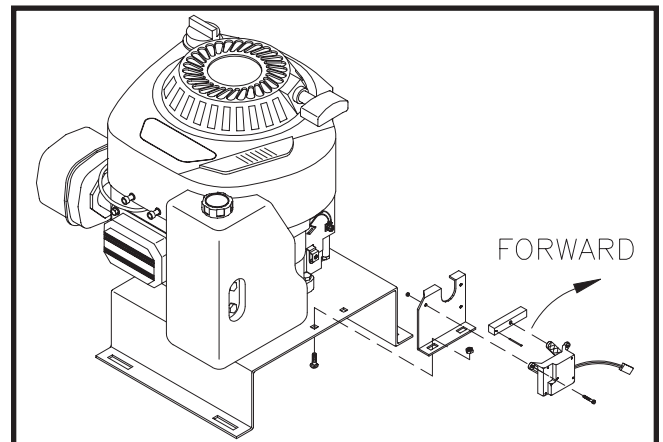


PHOTO NO. 2788

THROTTLE CONTROL ACTUATOR

Reassemble the throttle actuator as follows:



DWG NO. 5398

1. Assemble the actuator on the bracket.
2. Advance the actuator arm forward with a 9V battery until the arm is stopped by the bracket.
3. Place the plastic block on the actuator arm and loosely bolt the bracket on the engine plate.
4. Slide the governor control rack on the engine fully ahead, then pin to the plastic block.
5. Fully tighten the bracket to the engine plate.
6. Cycle the actuator to verify that the arm is stopped by the bracket, not by the engine mechanism.

LUBRICATION



CAUTION: Do not lubricate, adjust or clean the 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 the roller chains.

Throughout the season, grease bearings at about 10 hour intervals and oil roller chains often.

NOTE: Over-greasing may cause seal damage to bearings. Use only one pump of grease per fitting.

Replace gear box oil annually with SAE 90 gear lubricant. Prevent debris from entering the gear box by cleaning dirt from plug area and wiping plugs prior to reinstallation.

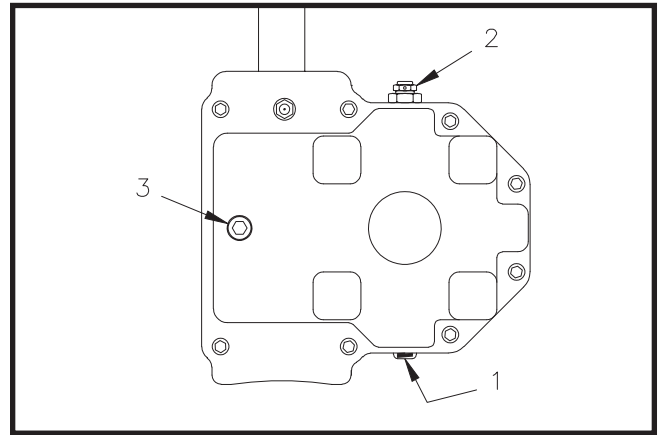
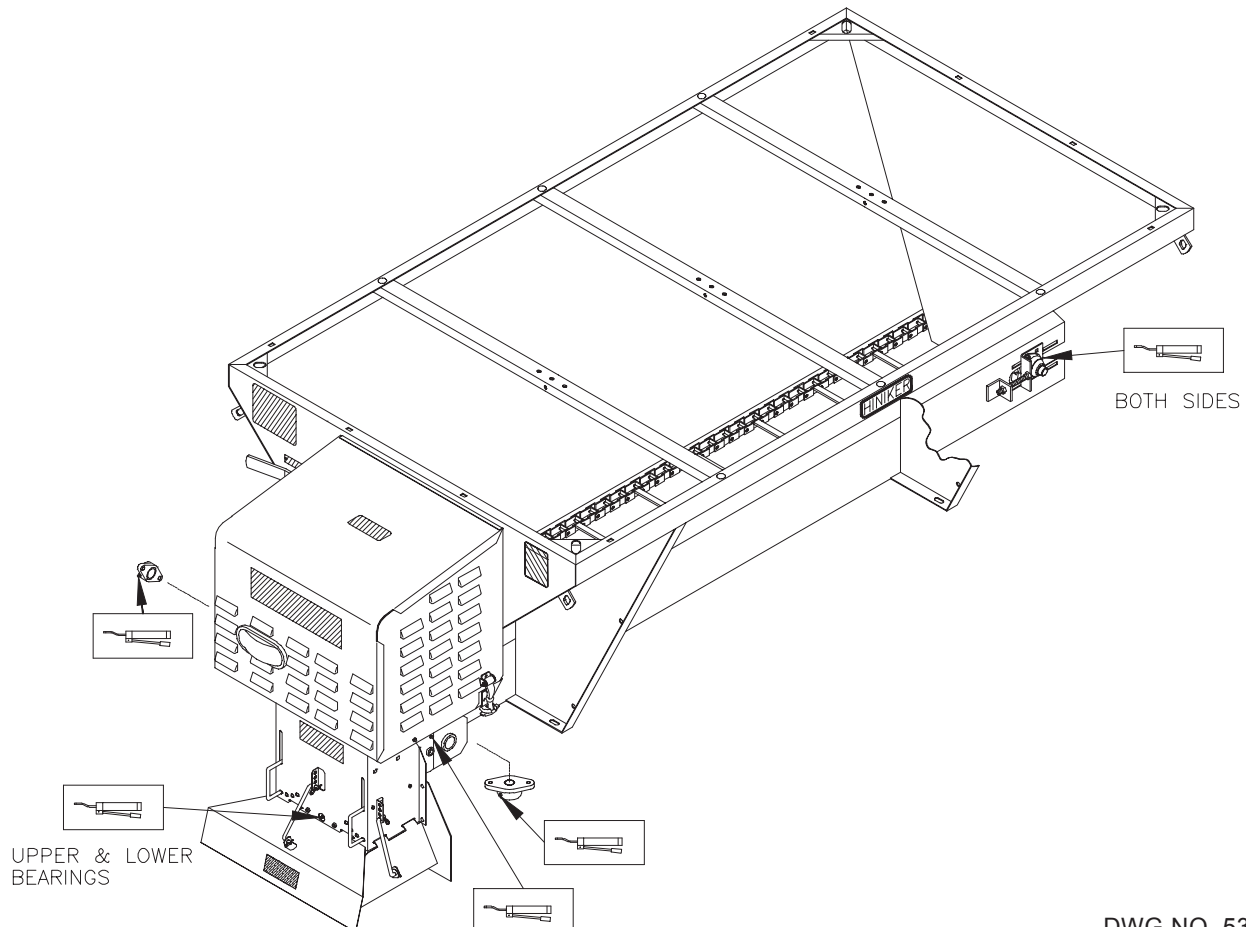


PHOTO NO. 5101

Remove the drain plug at location 1 to drain old oil into a 2 pint or larger container and discard. Reinstall the drain plug and remove the breather at location 2 and the oil level plug at location 3. Fill the gearbox through the breather port until oil appears at the level port. Capacity is about 2 pints. Reinstall the oil level plug and the breather.

GREASE POINT LOCATIONS



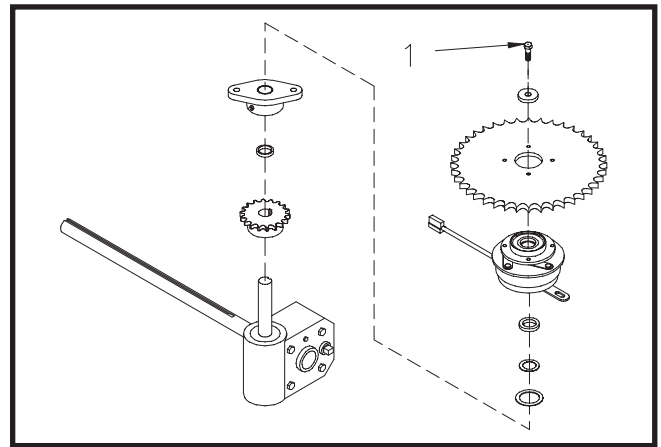
DWG NO. 5394

ELECTRIC CLUTCH

The following procedures are recommended to maximize the life of the electric clutch:

- Remove and clean the electric clutch at the end of the snow season.
- After cleaning the clutch, coat both mating surfaces with oil or light grease.
- Remove oil and grease before using the clutch the following season.

The bolt at location 1 is factory retained with anaerobic threadlock. If removing or replacing this bolt, purchase a new bolt with threadlock from your Hiniker dealer, or apply commercially available threadlock, i.e. Loctite 242 (blue) or Perma-Lok HM118 (red), to a standard 7/16-20 UNF x 1 1/4" Grade 5 hex bolt before reassembly. Torque to 50 LB.-FT.



DWG NO. 5089

When servicing worn clutch components, the rotor and armature must be replaced as a pair.

TROUBLESHOOTING CLUTCH PROBLEMS

A. Symptom: Clutch will not Engage

PROBLEM	POSSIBLE CAUSES
- Low voltage supply	- Defective battery - Faulty charging system - Bad wiring or connectors
- Zero voltage	- Broken lead wire - Open clutch coil, check coil resistance - Faulty switch

B. Symptom: Noisy Clutch

PROBLEM	POSSIBLE CAUSES
- Failed bearing	- Loose mounting - Operating Temperature above 250° F - Bearing Preloaded Axially
- Adapter plate rattles against antirotation pin	- Some noise is normal: to reduce noise level, isolate antirotation pin from frame with rubber.

C. Symptom: Clutch Slips

PROBLEM	POSSIBLE CAUSES
- Low voltage supply	- Defective battery - Faulty charging system - Bad wiring or connectors
- Contaminated friction surfaces	- Oil or grease on clutch
- Clutch loose on shaft	- Loose mounting bolt - Mounting bolt too long and bottoms in shaft before clamping clutch - Mounting washer too thin and deforms when bolt is tightened
- Clutch not mounted square	- Mounting shoulder not square - Clutch integral key hitting end of keyway - Chamfer too small on spacer
- Broken rivet joints	- Loose mounting - Replace clutch

INSTALLATION INSTRUCTIONS

GRADE 5 TYPE B & F LOCKNUT TORQUES

Diameter	Ft.-lbs.	N-m
1/4"	6-10	8-13
5/16"	13-18	17-25
3/8"	23-33	31-44
7/16"	38-54	51-73
1/2"	58-82	79-112
5/8"	117-165	158-223
3/4"	206-292	280-396

SET SCREW SEATING TORQUE

Socket Head	Torque In.-lbs. (Ft.-lbs)	Torque N-m
#8	20 (1.6)	2.25
#10	36 (3)	4
1/4	87 (7.25)	9.8
5/16	16.5 (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 the tailgate from the truck according to instructions from the vehicle manufacturer.



WARNING: Never attempt to lift a spreader with material in the hopper. Verify that the lifting device is capable of handling at least 1,000 LB. loads before trying to lift the spreader.

2. Lift the spreader by hooking all four slots at the corners of the hopper. Balance points will vary between the two models.

3. Center the spreader on the truck with the rear rails extending about 12 inches behind the furthest point of interference (back of the truck, bumper, trailer hitch, etc.)

Place a 6" X 6" piece of lumber between the back of the truck cab and the front of the spreader to protect the truck from damage due to shifting of the spreader.

Some operators may prefer to install the spreader on wooden framework to elevate the machine for easier cleanout of material that accumulates beneath the spreader.

4. Secure the spreader and any wooden framework to the truck with 1/2 inch hardware through the holes in the bottom of the side gussets.
5. Use tie-down chains to secure the spreader to the truck through the tabs at each corner of the hopper.

Additional holes in the side gussets are also available for attaching the spreader to the vehicle.

NOTE: Inspect hold-down hardware periodically, and retighten as required.

CHUTE ASSEMBLY

1. Carefully lift the chute assembly onto the two shoulder bolts installed at the back of the spreader.
2. Use (4) four 5/16 inch X 1/2 inch carriage bolts and locknuts to fasten the chute to the spreader.
3. Loosen the nuts holding the spinner shaft bearings to the chute and slide the shaft toward the gearbox.

Verify that the sprocket on the spinner shaft is in line with the sprocket on the gear box input shaft before installing roller chain around the two sprockets.

Slide the spinner shaft away from the gear-box to tighten the chain. Check that the spinner shaft is vertical before retightening the bearing hardware.

BATTERY INSTALLATION



WARNING: A charging battery emits explosive gases when touched by a spark or flame. Cover the top of the battery with electrically non-conductive material to keep sparks away from battery gases.

- Never lay tools or equipment across the battery posts. The resulting shock could cause personal injury or damage to equipment.
- Always disconnect the battery before removing or replacing electrical components.
- Avoid contact with battery acid. Acid can seriously burn eyes and skin, and can burn holes in clothing.

Select a top terminal 12-volt battery with a minimum rating of 400 cold cranking amps for installation in the battery box. The location of the positive post should be at the right rear of the box as viewed from the left side of the unit.

Fasten the red battery cable from the engine assembly to the positive (+) terminal of the battery. Fasten the black cable to the negative (-) battery terminal.

Secure the battery box to the spreader with hold-down bands after the power cables are connected to the battery.

INSTALLATION OF CAB CONTROL & ELECTRICAL WIRING

Use the bracket and hardware provided to mount the cab control box at a convenient location for the operator.

Connect the 23 foot long extension cable to the 7-conductor plug from the engine wiring harness and route the cable along the LH side of the hopper.

Determine the best location for running the extension cable into the truck cab. If a hole must be drilled to pass the cable through the cab wall, protect wires from sharp edges around the hole with a grommet.

Connect the cab control box cable to the extension cable for operation of the spreader.

CENTER HIGH MOUNTED STOP LIGHT

Center High-Mounted Stop Lights (CHMSL) are required by federal law on 1994 and newer vehicles. A CHMSL is located at the rear of the machine. It must be connected to the vehicle lighting wiring before using the spreader.

Table 1 lists the common locations for tapping into the brake signal. This is only a partial list and may not represent your vehicle. Consult your vehicle dealership on the proper location to connect the stop light.

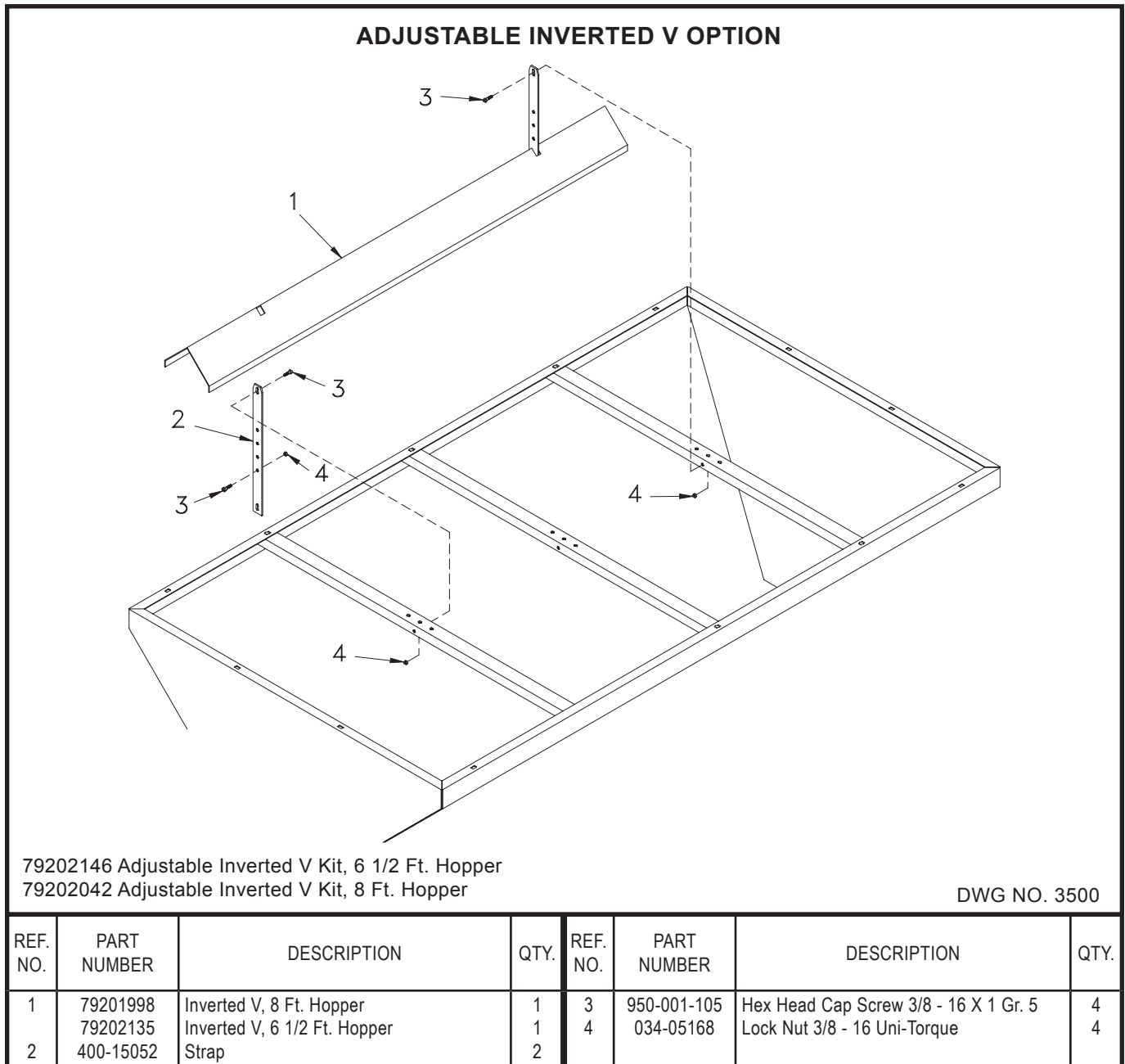
The light is sealed and, if needed, must be replaced as an assembly. To install, locate the vehicle lighting feed wire for the CHMSL and connect it to the Red wire on the light. Connect the light's white wire to a good VEHICLE ground. Grounding the light to the hopper assembly may not be adequate.

Hiniker Company will not be responsible for damage resulting from the improper connection of the CHMSL.

TABLE 1: BRAKE SIGNAL WIRE TAPPING LOCATIONS ON VARIOUS VEHICLES

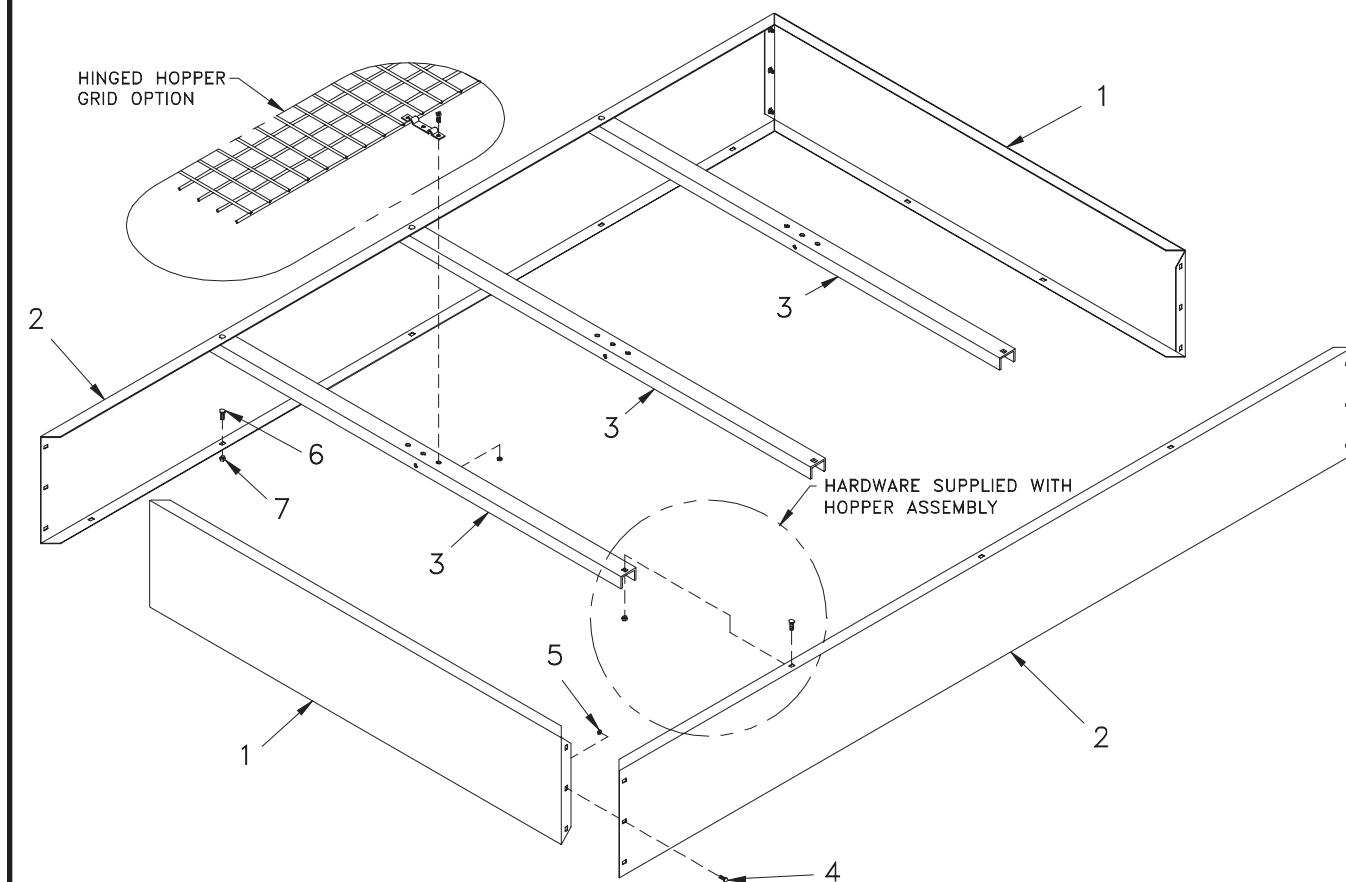
MAKE	MODEL	INSTALLATION <i>* Based on information supplied by vehicle manufacturers. Subject to change without notices</i>
Ford Series Super Duty	1999 & Newer	Dark blue wire in 7 blunt cut wire harness at left rear of frame.
Ford F-Series	1994-1998	Light green wire (#511) going into a white connector on the left front wheel housing.
Ford F-Series	1992 & 1993	Four-way trailer style connector under the dash in the cab.
Ford F-Series	1991 & Previous	Wire under the dash carrying the signal from the brake pedal switch.
Chevrolet/GMC	1999 & Newer	Light blue wire in trailer harness.
Chevrolet/GMC	1994-1998	Solid yellow or white wire routed along the drivers side frame rail. Labeled as "Center High-Mounted Stop Lamp Feed".
Chevrolet/GMC	1993 & Previous	Wire under the dash carrying the signal from the brake pedal switch.
Dodge	2003 & Newer	White w/tan stripe wire at rear of left frame member
Dodge	1995-2002	White w/pink or tan stripe in Gray 4 way connector below the master cylinder or blunt cut wire marked CHMSL at rear of frame.
All other Domestic Trucks		Wire under the dash carrying the signal from the brake pedal switch.

OPTIONAL EQUIPMENT



- Temporarily remove one end cross channel from the hopper assembly and place the inverted V member inside the hopper. Reinstall the cross channel that was removed.
- Fasten the two straps to the two end cross channels, as shown in the illustration, with 3/8" X 1" hex bolts and locknuts. Fully tighten hardware when the straps hang straight down.
- Carefully lift the inverted V member onto the two straps and support its weight while installing 3/8" X 1" hex bolts and lock nuts at the desired V height. Release the inverted V member to rest on bolts and nuts. Height of the inverted V is adjustable by fastening hardware through different holes in the straps.

12" SIDE EXTENSION OPTION



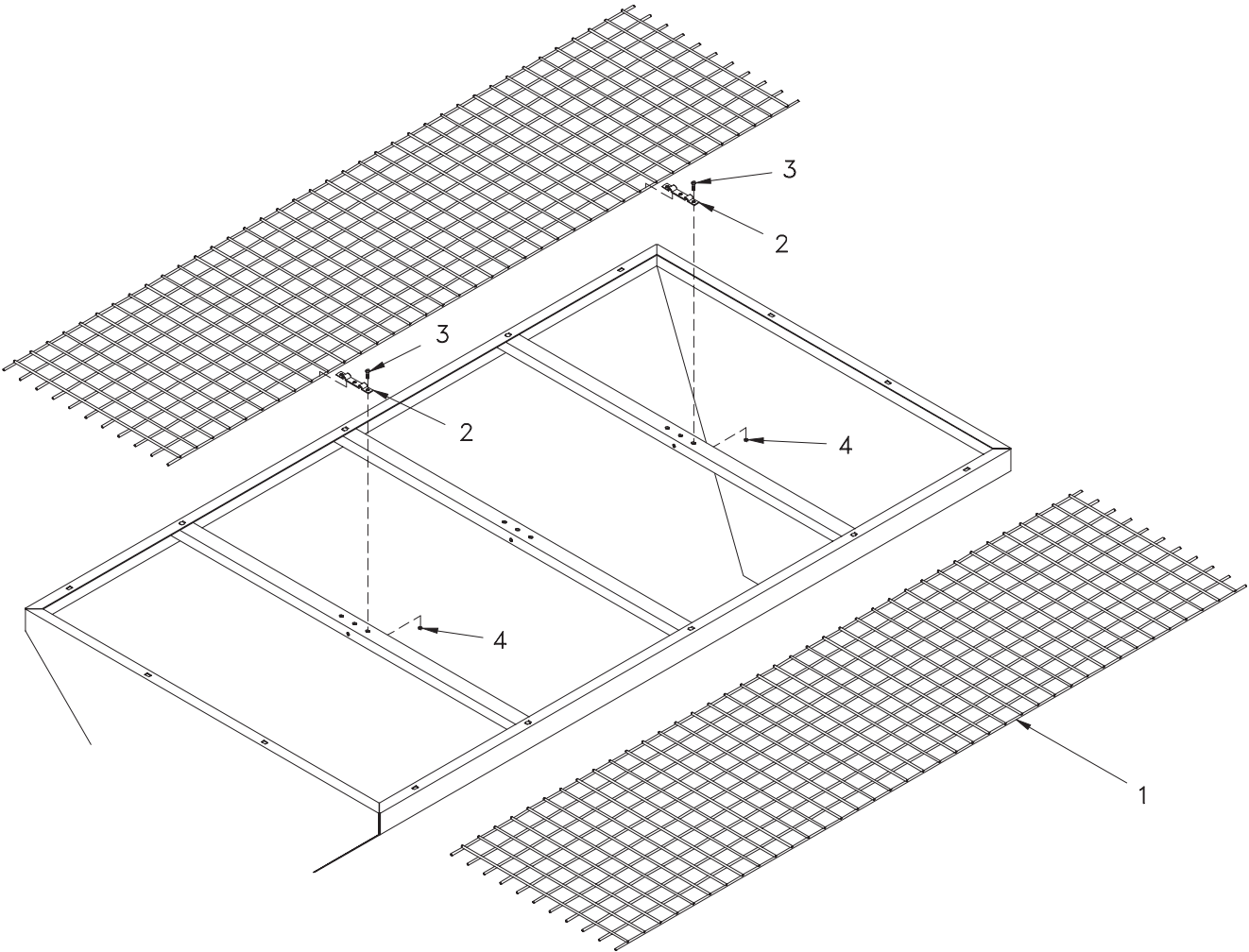
79202144 12" Side Extension Kit, 6 1/2 Ft. Hopper
 79202018 12" Side Extension Kit, 8 Ft. Hopper

DWG NO. 3499

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79202014	12" Extension Panel	2	4	950-003-060	Carriage Bolt 5/16 - 18 X 5/8 Gr. 5	12
2	79202013	12" Extension Panel, 8 Ft. Hopper	2	5	951-005-036	Lock Nut 5/16 - 18 Mac Lock	12
	79202133	12" Extension Panel, 6 1/2 Ft. Hopper	2	6	030-16067	Carriage Bolt 3/8 - 16 X 3/4 Gr. 5	14
3	79202016	Channel	3	7	951-005-003	Lock Nut 3/8 - 16 Mac Lock	14

- Loosely assemble short extension panels on the front and back of the hopper body with 3/8" X 3/4" carriage bolts and lock nuts supplied.
- Loosely assemble long extension panels on hopper body with 3/8" X 3/4" carriage bolts and lock nuts. Re-use the six bolts and nuts that fasten the cross channels in the hopper assembly. Loosely fasten corners of extension panels to one another with 5/16" X 5/8" carriage bolts and lock nuts.
- Loosely install three cross channels from the extension kit between long panels with 3/8" X 3/4" carriage bolts and lock nuts.
- Fully tighten all hardware.

HINGED HOPPER GRIDS OPTION



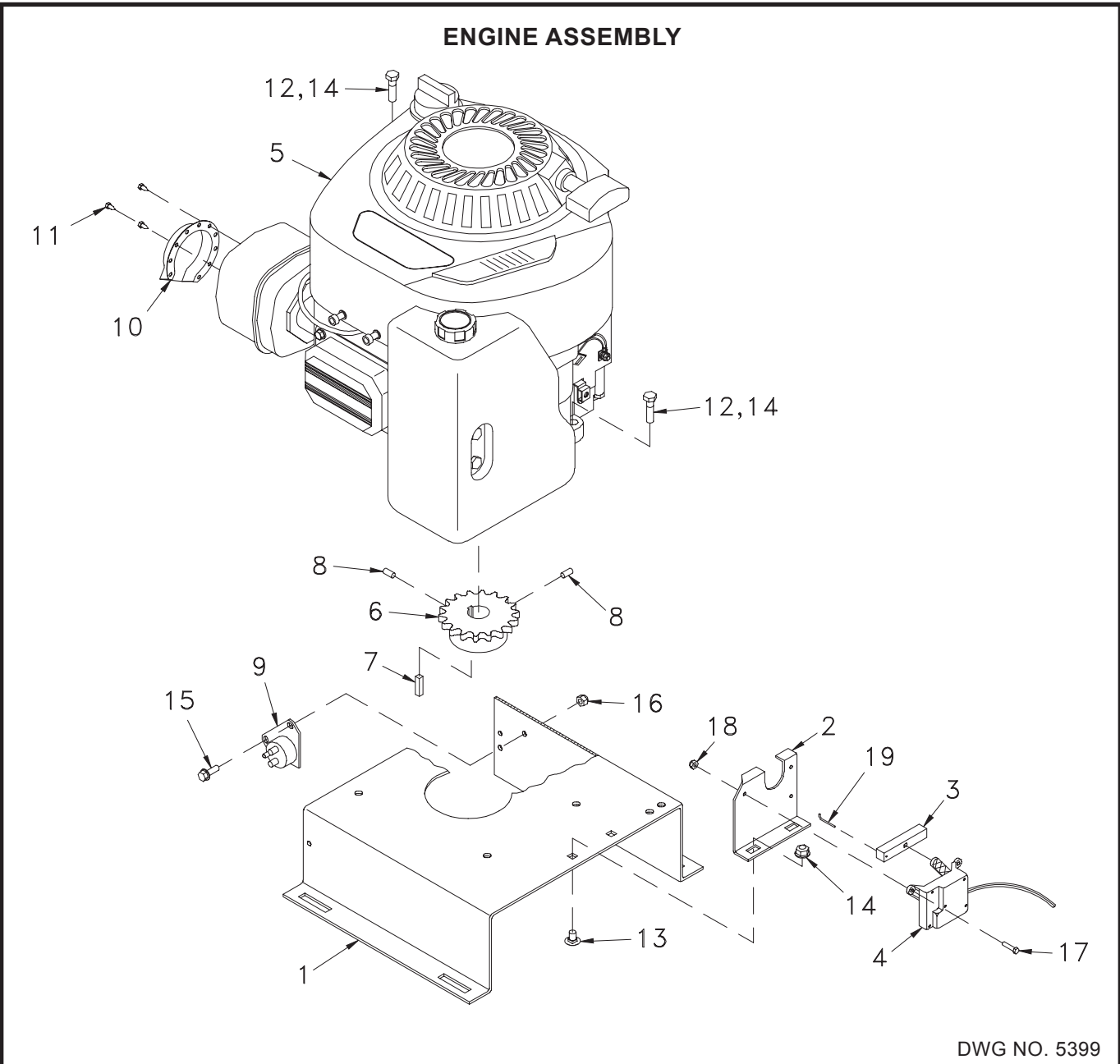
79202142 Hinged Hopper Grids Kit, 6 1/2 Ft. Hopper
79202011 Hinged Hopper Grids Kit, 8 Ft. Hopper

DWG NO. 3501

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79202008	Screen, 8 Ft. Hopper	2	3	950-001-113	Hex Head Cap Screw 5/16 - 18 X 3/4 Gr. 5	6
2	79202136	Screen, 6 1/2 Ft. Hopper	2	4	951-005-036	Lock Nut 5/16 - 18 Mac Lock	6
	79202009	Screen Holdown	2				

1. Place the two screens on the hopper so that the long rods of the screens are on the bottom and short rods are on top.
2. Center the screens length-wise on the hopper and secure to hopper cross channels with two screen holdowns and 5/16" bolts and lock nuts.

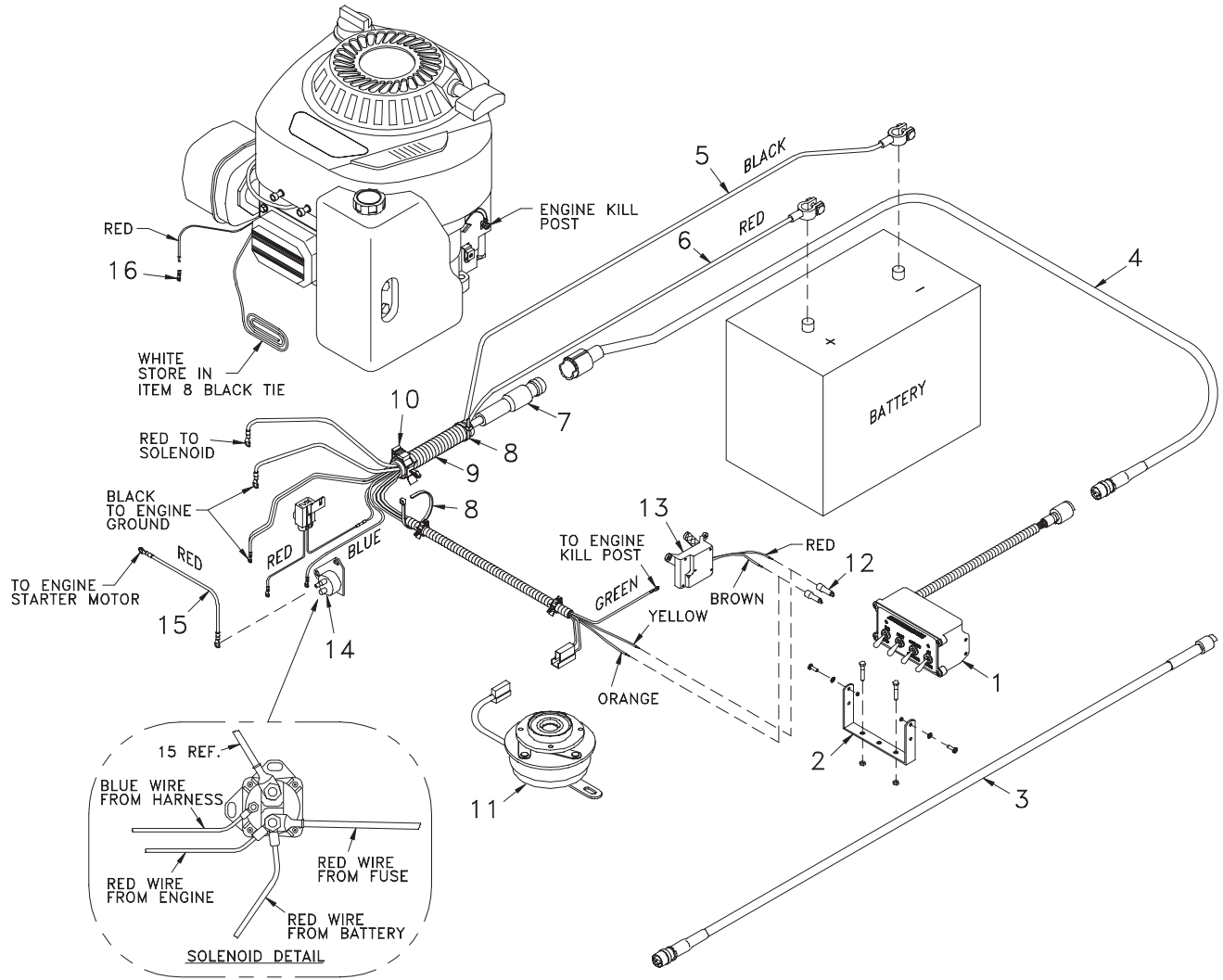
PARTS BREAKDOWN



DWG NO. 5399

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79202196	Engine Mount Plate	1	11	950-005-027	Self-Tapping Screw #8-18 X 3/8 Type AB	3
2	79201997	Throttle Control Bracket	1	12	950-001-200	Hex Head Cap Screw 5/16-18 X 1 1/4 Gr. 5	4
3	79201996	Throttle Control Arm	1	13	950-003-002	Carriage Bolt 5/16-18 X 1/2 Gr. 5	2
4	79202007	Throttle Control Actuator	1	14	951-005-036	Lock Nut 5/16-18 Mac Lock	6
5	50000514	Engine 10.5 HP	1	15	950-002-003	Whiz Bolt 1/4-20 X 3/4	2
6	50205013	Sprocket 12 Tooth, #40	1	16	060954	Lock Nut 1/4-20 Nylon Insert	2
7	702-53004	Straight Key 1/4 X 1	1	17	950-004-031	Machine Screw #8-32 X 3/4	3
8	950-008-015	Socket Head Set Screw 1/4-20 X 1/4	2	18	951-003-011	Lock Nut #8-32 Nylon Insert	3
9	79202084	Starter Solenoid	1	19	79201995	Pin	1
10	79202130	Muffler Deflector	1				

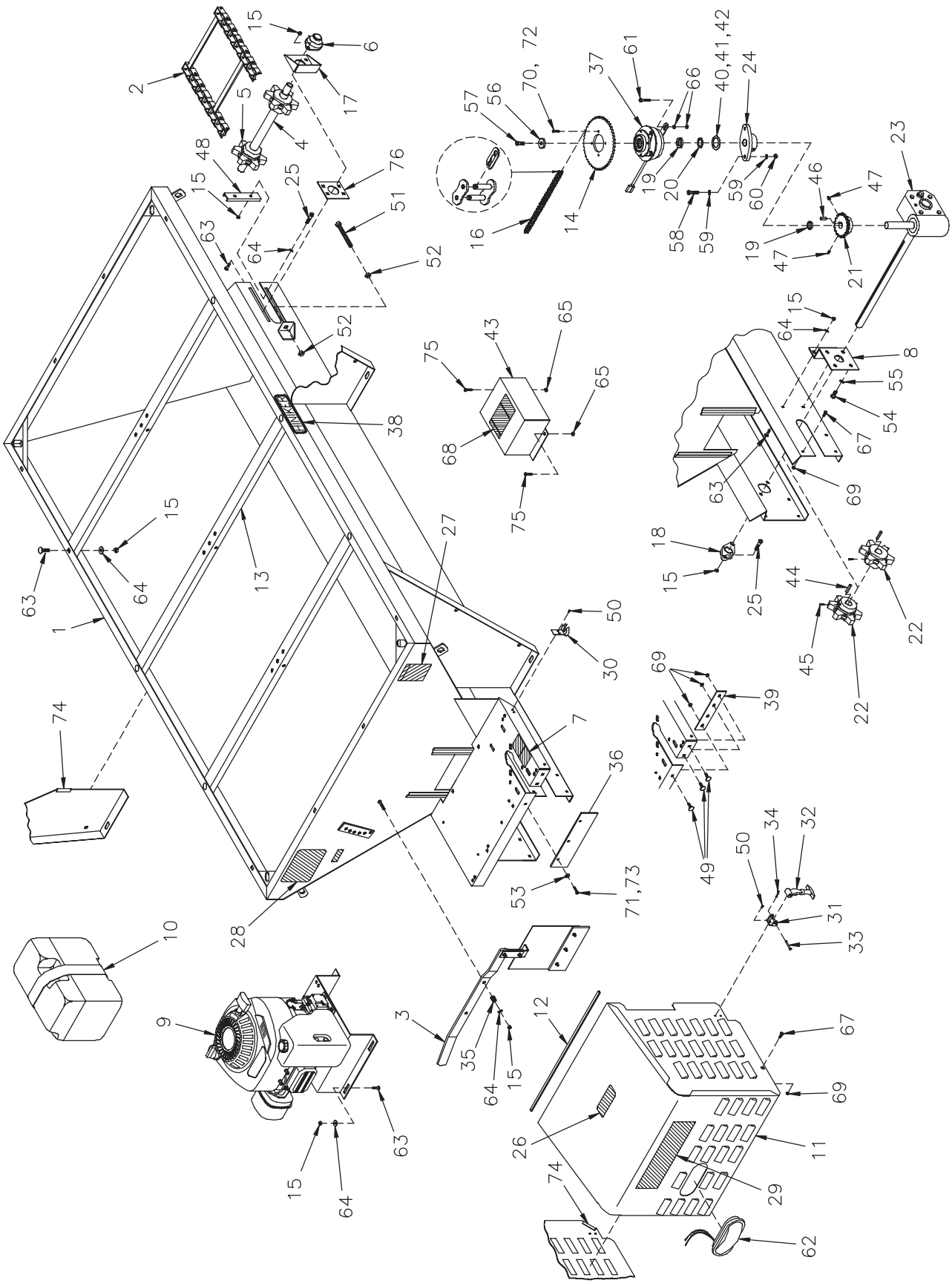
ELECTRICAL ASSEMBLY



DWG NO. 5397

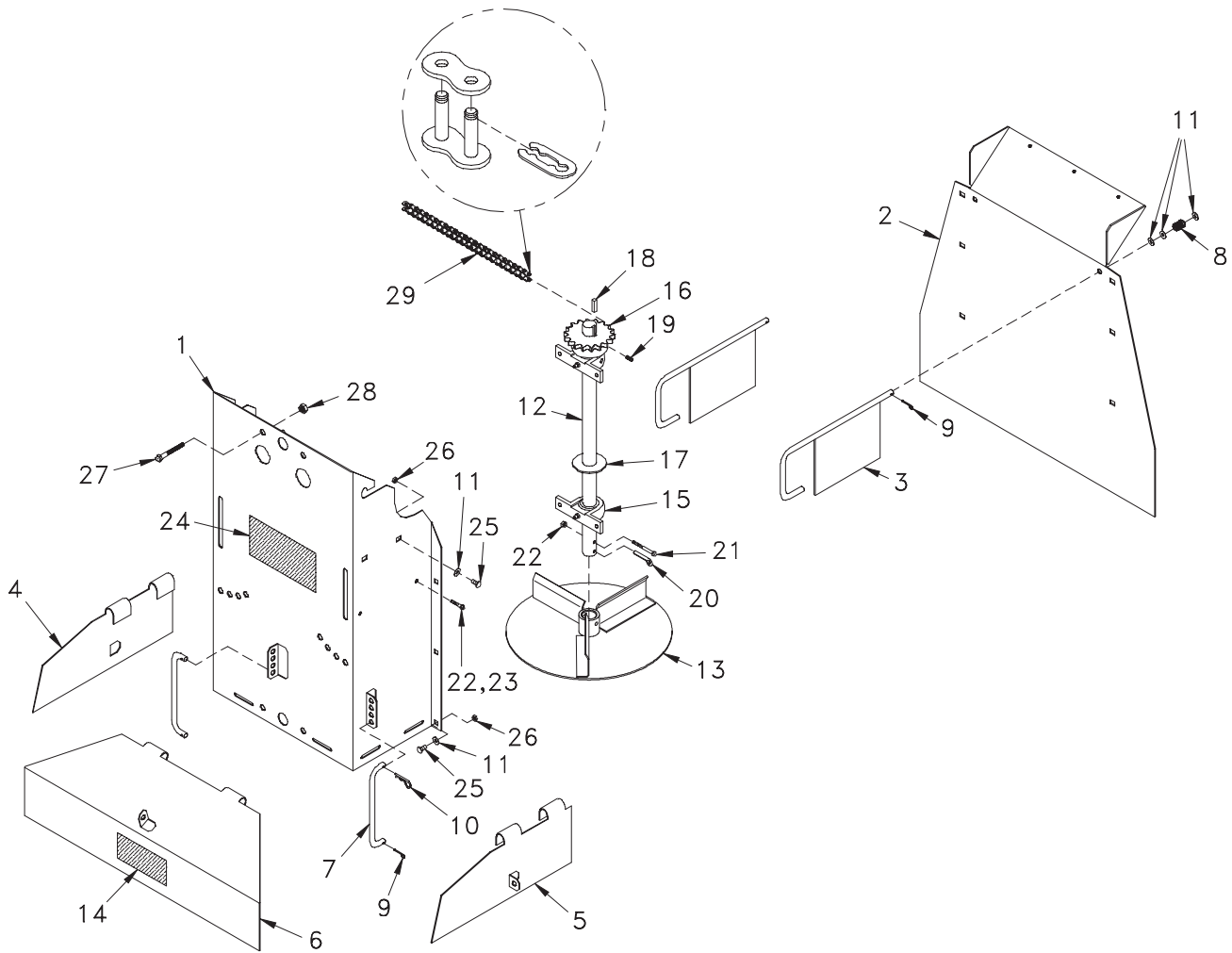
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	36112004	Sander Control Box Assembly	1	9	39104305	Corrugated Split Loom 3/4 inch	6"
2	79201729	Control Box Bracket Kit	1	10	39104307	Rosebud Clip, 3/4 inch	1
3	38812017	5 Ft. Console Extension	1	11	80302146	Electric Clutch Assembly	1
4	38812016	Cable, Console to Engine, 23 Ft.	1	12	38601009	Closed End Splice Terminal	2
5	38812018	Battery Cable, Negative	1	13	79202007	Throttle Control Actuator	1
6	38812020	Battery Cable, Positive	1	14	79202084	Starter Solenoid	1
7	38812015	Engine Compartment Harness Assembly	1	15	38812019	Wire, Solenoid To Starter	1
8	367-001-014	8" Cable Tie	2	16	300-14002	Terminal Ring, 5/16"	1

HOPPER ASSEMBLY



REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79202159	Hopper Weldment, 8'	1	39	79202165	Strap	1
	79202201	Hopper Weldment, 6 1/2'	1	40	952-004-046	Machine Bushing 1 X 1 1/2 X .075	A/R
2	50400113	Apron Chain, 8' Hopper (See Page 25)	1	41	952-004-052	Machine Bushing 1 1/32 X 1 1/2 X .048	A/R
	50400115	Apron Chain, 6 1/2' Hopper (See Page 25)	1	42	952-004-050	Machine Bushing 1 1/32 X 1 1/2 X .134	A/R
3	79202005	Feedgate Assembly (See Page 24)	1	43	79202003	Sprocket Cover	1
4	79202002	Front Shaft Weldment	1	44	702-53006	Strait Key 1/4 X 1 1/2	2
5	79202001	Sprocket 6T, 1 1/4 Bore	1	45	031-23020	Socket Head Set Screw 1/4-20 X 3/4	2
6	60005056	Flange Bearing 1"	2	46	702-53004	Straight Key 1/4 X 1	1
7	79202023	Danger Decal	1	47	031-23016	Socket Head Set Screw 1/4-20 X 3/8	2
8	79202160	Gearbox Mount Bracket	1	48	79202118	Rear Support	2
9	79202234	Engine Assembly (See Page 18)	1	49	950-003-060	Carriage Bolt 5/16-18 X 5/8 Gr. 5	3
10	79202048	Battery Box	1	50	109953	Pop Rivet 3/16 X 1/4	8
11	79202230	Engine Cover Weld	1	51	950-001-313	Hex Head Cap Screw 5/8-11 X 4 1/2 Full Thread SS	2
12	79202030	Engine Cover Top Trim	1				
13	79202016	Channel	3	52	061937	Hex Nut 5/8-11 Stainless Steel	4
14	50404509	Sprocket 48T #40	1	53	952-002-015	Flat Washer 1/4 Stainless Steel	3
15	951-003-013	Locknut 3/8-16 Nylon Insert SS	23	54	950-001-231	Hex Head Cap Screw 1/2-13 X 1" Gr. 5	4
16	50400112	Roller Chain #40	1	55	952-001-004	Lockwasher, 1/2 inch	4
17	79202164	Front Bearing Plate	2	56	79201171	Washer 15/32 X 1 1/2 X 1/4	1
18	600-03028	Flange Bearing 1 1/4"	1	57	950-001-300	Hex Head Cap Screw 7/16-20 X 1 1/4 Nylon Patch	1
19	79201172	Clutch Spacer	2				
20	79201375	Snap Ring (Included with Gearbox)	1	58	950-001-094	Hex Head Cap Screw 7/16-14 X 1 1/2 Gr. 5	2
21	50205017	Sprocket #40 15 T	1	59	952-002-004	Flat Washer 7/16 inch	4
22	503-54001	Sprocket 6T	2	60	951-005-081	Locknut 7/16-14 Uni-Torque	2
23	51700215	Gearbox	1	61	950-001-108	Hex Head Cap Screw 3/8-16 X 1 1/2 Gr. 5	1
24	60005055	Bearing 1" 2 Bolt	1	62	79202089	Brake Light Assembly (See Page 25)	1
25	950-001-286	Hex Head Cap Screw 3/8-16 X 1" SS	6	63	950-003-067	Carriage Bolt 3/8-16 X 1" SS	16
26	715-04016	Decal - No Step	1	64	952-002-013	Flat Washer 3/8 SS	17
27	71504138	Decal, Warning	1	65	951-005-003	Mac Lock Nut 3/8-16	2
28	71504147	Decal, Caution	1	66	951-001-005	Hex Nut 3/8-16	2
29	71505163	Decal, Hiniker	1	67	950-006-002	Shoulder Bolt 5/16-18 X 5/8, 1/2 X 5/32	4
30	720-02123	Clevis Bracket	2	68	79202022	Decal, Warning	1
31	720-02125	Base Bracket Hood Latch	2	69	951-005-036	Mac Locknut 5/16-18	7
32	720-02126	Rubber Latch	2	70	031-06005	Hex Head Cap Screw 1/4-20 X 7/8 Gr. 5	4
33	720-02127	Hood Latch Pin	2	71	950-001-289	Hex Head Cap Screw 1/4-20 X 1" SS	3
34	720-02128	Hood Latch Cotter Pin	2	72	951-005-083	Locknut 1/4-20 UNC Flexloc	4
35	725-02018	Spring	1	73	061605	Locknut 1/4-20 Nylon Insert SS	3
36	79201694	Apron Chain Wiper	1	74	79202031	Trim 2 1/2"	3
37	80302146	Electric Clutch Assembly	1	75	031-06102	Hex Head Cap Screw 3/8-16 X 5/8 Gr. 5	2
38	81004136	Decal, Hiniker	2	76	79202215	Shim Plate	2

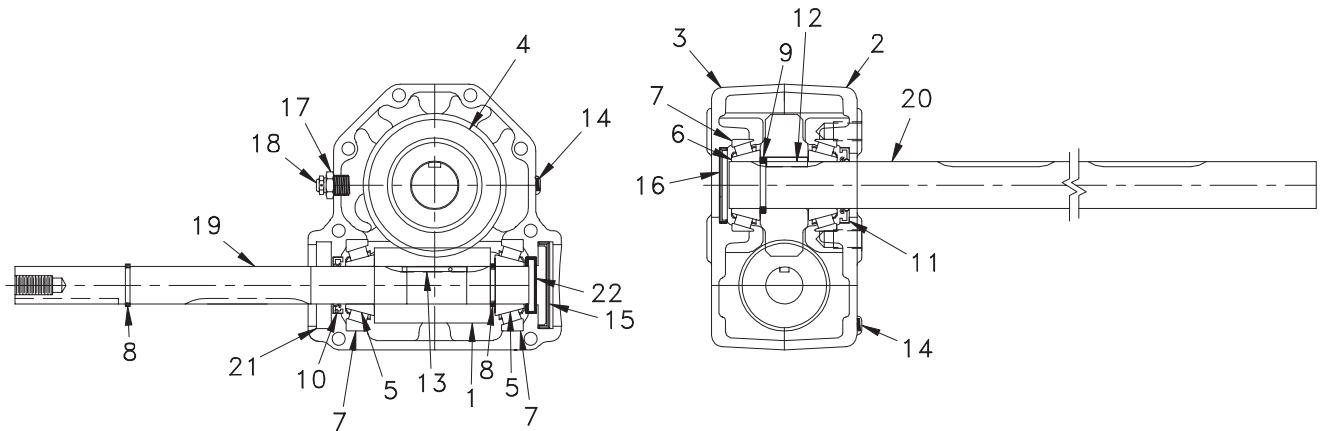
DISCHARGE CHUTE ASSEMBLY



DWG NO. 5088

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79202198	Long Discharge Chute	1	16	50205013	Sprocket 12 Tooth, #40	1
	79202191	Short Discharge Chute	1	17	79202075	Bearing Shield	1
2	79202197	Long Front Chute	1	18	702-53004	Straight Key 1/4 X 1"	1
	79202192	Short Front Chute	1	19	031-23014	Socket Head Set Screw 1/4-20 X 1/4	2
3	79202210	Deflector Weldment	2	20	035-42064	Cotter Pin 1/4 X 1 1/2	1
4	79202193	LH Side Deflector	1	21	950-001-315	Hex Head Cap Screw 1/4-20 X 2, SS	1
5	79202194	RH Side Deflector	1	22	061605	Lock Nut 1/4-20 X 2 Nylon Insert, SS	5
6	79202195	Rear Deflector	1	23	950-001-289	Hex Head Cap Screw 1/4-20 X 1", SS	4
7	79202056	Adjustment Rod	3	24	715-04124	Warning Decal	1
8	725-02018	Compression Spring	2	25	950-003-077	Carriage Bolt 5/16-18 X 5/8, SS (Long Spinner Kit)	10
9	701-35103	Cotter Pin 3/32 X 5/8 inch	5		950-003-077	Carriage Bolt 5/16-18 X 5/8, SS (Short Spinner Kit)	8
10	953-005-005	Hair Pin Cotter	3		951-002-011	Lock Nut 5/16-18 Whiz Lock (Long Spinner Kit)	10
11	952-002-013	Standard Flat Washer, 3/8 inch, SS (Long Spinner Kit)	16		951-002-011	Lock Nut 5/16-18 Whiz Lock (Short Spinner Kit)	8
	952-002-013	Standard Flat Washer, 3/8 inch, SS (Short Spinner Kit)	14				
12	79202064	Long Spinner Shaft	1				
	79202074	Short Spinner Shaft	1	27	061924	Hex Head Cap Screw 1/2-13 X 1 1/4, SS	4
13	79202206	Spinner Disc Weldment	1	28	951-003-012	Lock Nut 1/2-13 Nylon Insert, SS	4
14	715-04017	Warning Decal	1	29	50400010	Roller Chain #40	1
15	60004018	Pillow Block Bearing 1"	2				

GEARBOX ASSEMBLY



51700215 Gearbox

DWG NO. 3178

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79201406	Worm Gear (Right Hand)	1	14	79201412	Pipe Plug	4
2	79201404	Casting (Tapped Holes)	1	15	79201413	End Plug (Input Shaft)	1
3	79201405	Casting (Thru Holes)	1	16	79201414	End Plug (Output Shaft)	1
4	79201407	Worm Gear (Left Hand)	1	17	79201415	Bushing (1/4" NPT to 1/8" NPT)	1
5	203-99005	Bearing Cone (1.000 I.D.)	2	18	203-50308	Pressure Relief (5 PSI)	1
6	203-99007	Bearing Cone (1.250 I.D.)	2	19	79201913	Input Shaft w/Snap Ring (1" Dia)	1
7	203-99006	Bearing Cup	4	20	79201715	Output Shaft (1 1/4" Dia)	1
8	79201375	Retaining Ring 1"	2	21	79201912	Dust Cover	1
9	79201408	Retaining Ring 1 1/4"	1	22	79202108	End Cap	1
10	79201377	Seal 1"	1		79201713	Grease Zerk (Not Shown)	1
11	79201409	Seal 1 1/4"	1		950-004-067	Socket Head Cap Screw 5/16-18 X 1 1/2 (Not Shown)	4
12	79201410	Output Key (1/4" Square)	1		950-004-068	Socket Head Cap Screw 5/16-18 X 1 3/4 (Not Shown)	4
13	79201411	Input Key (1/4" Square)	1				

FEEDGATE ASSEMBLY

79202005 Feedgate Assembly

DWG NO. 3666

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79201656	Lever Weldment	1	6	031-10157	Machine Screw 1/4-20 X 3/4	3
2	79201657	Feedgate Weldment	1	7	951-005-051	Lock Nut 3/8-16, 2-Way	2
3	79202004	Feedgate Wiper	1	8	951-001-003	Hex Nut 1/4-20	3
4	100-13156	Feedgate Linkage	2	9	952-001-001	Lock Washer, 1/4 inch	3
5	950-001-105	Hex Head Cap Screw 3/8-16 X 1 Gr. 5	2	10	952-002-011	Flat Washer, 1/4 inch	3

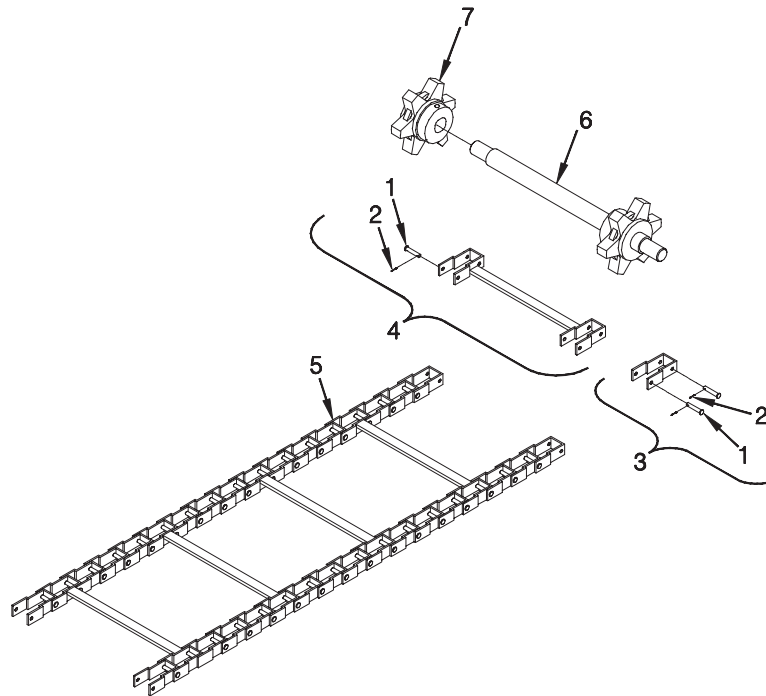
TIE DOWN KIT

792-00803 Truck Hold Down Kit

DWG NO. 2693

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	720-04007	Turn Buckle	1	2	720-00007	Eyebolt Stake Pocket	1

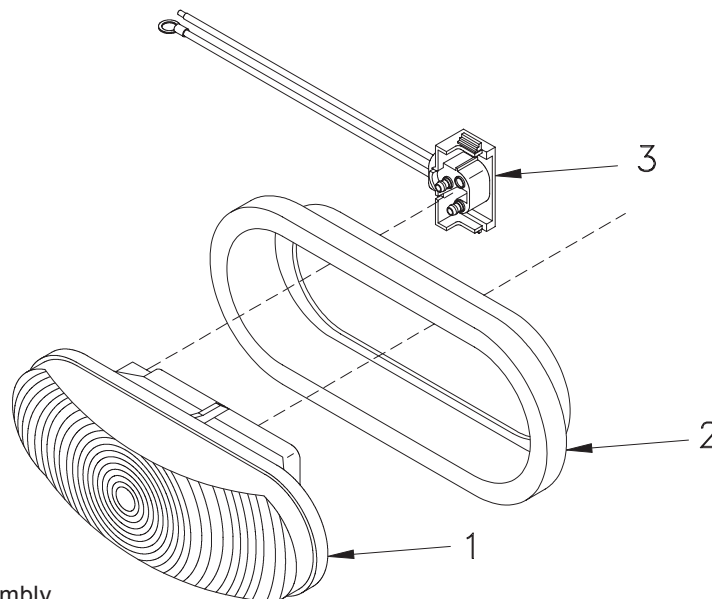
FRONT SHAFT & APRON CHAIN



DWG NO. 3673

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	000-28670	Coupler Link Pin	A/R	5	50400113	Apron Chain Assembly, 8 Ft. Hopper	1
2	953-001-016	Cotter Pin, 1/8 X 1/2 Long	A/R		50400115	Apron Chain Assembly, 6 1/2 Ft. Hopper	1
3	000-28666	Chain Link with Pins (Repair Only)	A/R	6	79202002	Front Shaft Weldment	1
4	401-00279	Slat with Welded Links & Pins (Repair Only)	A/R	7	79202001	Sprocket 6 Tooth, 1 1/4" Bore	1

BRAKE LIGHT ASSEMBLY



79202089 Brake Light Assembly

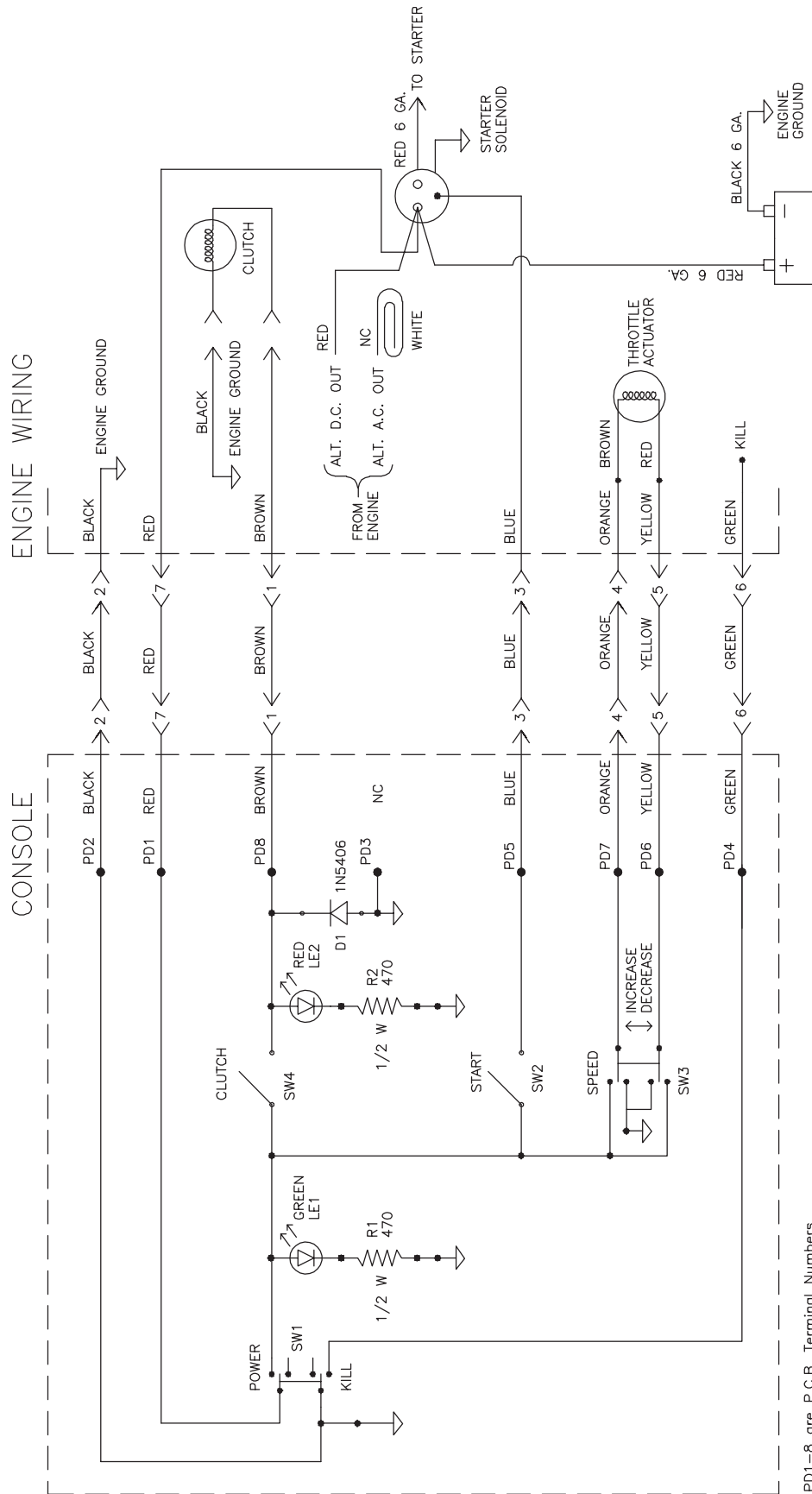
DWG NO. 3674

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79202091	Lamp	1	3	79202093	Plug	1
2	79202092	Grommet	1		79202089	Brake Light Assembly	1

SPECIFICATIONS

DIMENSIONS:	8 FT. HOPPER	6 1/2 FT. HOPPER
Length Inside	96 In.	78 In.
Length Overall	116 In.	98 In.
Width	54 In.	54 In.
Height	33 1/2 In	33 1/2 In.
CAPACITY: Cubic Yards		
Level	1.78	1.45
Heaped	2.27	1.84
With 12" Extensions, Level	3.10	2.52
With 12" Extensions, Heaped	3.59	2.92
Weight: Model 822 Hopper Only	613 lbs. (Approx.)	
Weight: Model 622 Hopper Only		547 lbs. (Approx.)
CONVEYOR:		
Trough Width: 14 Inches		
Flight Bars: 1/4" X 3/4" on 9 1/4 Inch Centers		
MODEL 822 & 622: 8' & 6 1/2' Engine - Mechanical Drive		
10.5 HP Air Cooled 4 Cycle OHV Gasoline Engine		
12 Volt Electric Starter with Alternator		
3 Quart Fuel Tank		
Electric Throttle Control		
1600 RPM to 3600 RPM		
Electric Clutch Rated @ 105 Ft-lbs Torque		
80:1 Gear Reduction		
SPINNER:		
Disc Diameter: 12 Inches		
Shaft Diameter: 1 Inch		

ELECTRICAL SCHEMATIC



NOTES: _____

[illegible]

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 purchase. **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 its 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. The engine. (The engine warranty is the responsibility of the engine manufacturer.)
2. Used products.
3. Any product that has been repaired, modified or altered in a way not approved by Hiniker Company.
4. 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.
5. Parts replacement and service necessitated by normal wear or maintenance including, but not limited to, conveyor chain, drive chain, bearings and spinner disc.
6. Paint finish damage caused by normal wear.

Hiniker does not assume any liability for any damage to a motor vehicles 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.

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