1-739 R1 NOVEMBER 2009

MDV TM SPREADER SERIES



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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:



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.







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

INSTALLATION AND ASSEMBLY INSTRUCTIONS



CAUTION!

READ ALL OF THE INSTALLATION INSTRUCTIONS BEFORE STARTING.

INSTALLATION INSTRUCTIONS:

The Meyer MDV $^{\text{TM}}$ Spreader can be mounted and stored as a single unit. The Meyer MDV $^{\text{TM}}$ Spreader will mount on most 15,000 to 20,000 GVW and larger trucks.



WARNING!

THE SPREADER UNIT 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 A POTENTIAL FOR A LIFE THREATING ACCIDENT.

NOTE: TRANSPORTATION OF SPREADER MUST BE DONE WITH SPINNER IN THE DOWN POSITION. DAMAGE MAY OCCUR IF TRANSPORTED IN RAISED POSITION.

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 truck manufacturer's instructions.



WARNING!

BEFORE BEGINNING ANY INSTALLATION ON THIS UNIT, DISCONNECT THE SPREADER BATTERY NEGATIVE CABLE IF ALREADY INSTALLED.

1. Place the spreader in the rear of the truck with the engine/motor to the rear of the truck. Center the spreader(side to side) in the truck.



CAUTION!

INSURE THAT THE SPREADER CANNOT TIP WHEN THE SPINNER ASSEMBLY IS ATTACHED.

- 2. Attach or lower spinner assembly.
- 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, supported by the longitudinal sides.

<u>DO NOT SUPPORT THE SPREADER BY THE BODY</u>
<u>JACKS ALONE!</u> UNIT IS <u>NOT</u> DESIGNED FOR CHASSIS MOUNT APPLICATIONS!



CAUTION!

DO NOT LEAVE UNUSED MATERIAL IN HOPPER.

4. Material could freeze causing the unit to not function correctly. Hopper should be emptied and cleaned after each use.

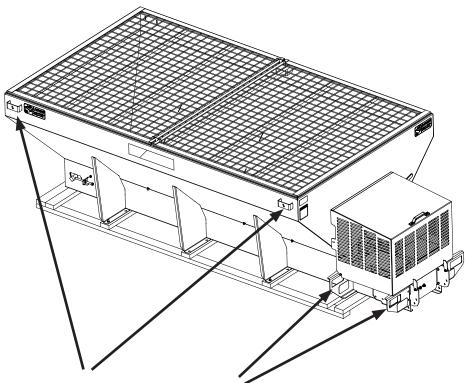


CAUTION!

BEFORE STARTING, VERIFY THAT THIS MOUNTING METHOD IS ACCEPTABLE TO THE VEHICLE MANUFACTURER.

5. Attach the hold down at each corner of the hopper as shown on page 5. 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, damage will result to the spreader or the truck.

Note: If truck is equipped with sufficient tie downs, they may be used in place of eyebolt.



To install and remove spreader from truck, lift by using the four (4) hold down supports on the sides of the spreader or fork lift pockets.



WARNING!

DO NOT ATTEMPT TO LIFT SPREADER BY THE CENTER LIFT OR CORNER LIFT HOOKS WITH MATERIAL IN THE SPREADER.



WARNING!

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

INSTALLATION AND ASSEMBLY INSTRUCTIONS OPTIONAL HOLD DOWN KIT

62562



^{*} Photo for hold down reference only, not MDV installation. MDV cannot be installed in pick-up type vehicles.

<u>tem</u>	art Number	Qty.	<u>Description</u>
1	62602	4	Ratchet/Strap
N/S	62807	4	Bolt, 1/2" Eye
N/S	20307	4	Locknut, 1/2-13 Nylon Insert ZP
N/S	62604	4	Nut, 12-13 Hex ZP
N/S	62605	8	Flat washer, 3/4" U.S.S. ZP

N/S = NOT SHOWN

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

INSTALLATION INSTRUCTIONS HYDRAULIC CONTROLS



WARNING!

LEAKING HIGH PRESSURE FLUIDS CAN INJECT THEMSELVES UNDER THE SKIN OF PERSONS NEAR A LEAK, CREATING GRAVE MEDICAL RISKS. TAKE CARE TO AVOID EXPOSURE TO HIGH PRESSURE FLUIDS.

- 1. Hydraulic components should be kept as clean as possible during assembly operations.
- Galvanized pipe and pipe fittings must not be used because flaking of galvanizing material can cause damage to major hydraulic components.
- A pipe joint sealant, compatible with hydraulic oil, must be applied to all NPT fittings. Teflon tape is not recommended. Do not apply pipe joint sealant to ORB or JIC fittings.
- 4. Hose should be protected where severe wear may be caused by vibration or sliding movement.
- Long runs of hose should be supported by tie wiring or clamping.
- Pressure and return hoses, connected to hydraulic motors, may be reversed for proper motor rotation. Spinner rotates in a clockwise direction when looking down from top.

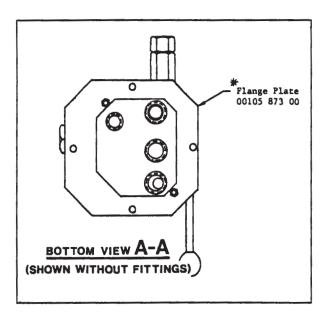
- Use hose manufacturers recommendations for fitting reusable hose ends.
- 8. Hydraulic pumps must be mounted so shaft rotates in direction of arrow.
- 9. Locate reservoir as close to pump as possible. It may be installed on truck frame or truck box.
- Hydraulic return line filter is screwed directly onto reservoir with cartridge down. Oil must flow through filter in direction of arrow on filter.
- 11. Install the quick connect couplings so that when disconnected, there is a male and female on the truck as well as on the spreader. This way hoses will always be hooked up properly, and hose ends can be coupled together when spreader is in storage to prevent system contamination.
- 12. See page 9 for valve assembly.
- 13. Operate hydraulic system for several minutes to warm up. Check all connections for leaks.
- 14. After running, refill reservoir to three-fourths full.

CONTROL AND HYDRAULIC SYSTEM SPECIFICATION

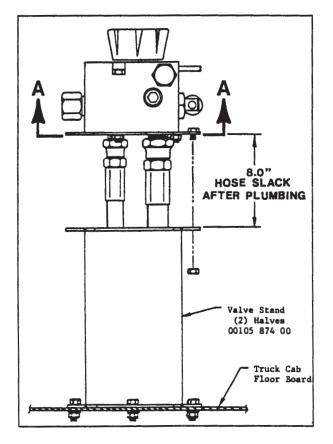
Hydraulic Oil	wear, oxidation and foam inhibitors.
*Oil Filter	10 Micron Element Return Line Filter
*Relief Valve Setting	1500 PSI
*Oil Flow	0 - 10 GPM - With single flow valve connect conveyor and spinner in series.
*Oil Flow	0 - 15 GPM - With dual flow valve connect separate pressure line to conveyor and spinner motor.

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INSTALLATION INSTRUCTIONS DUAL FLOW VALVE/STAND



- 1. IMPORTANT: A pipe joint sealant compatible with hydraulic oil must be applied to all NPT fittings. Teflon Tape Sealant Is Not Recommended. Do not apply pipe joint sealant to ORB or JIC fittings.
- 2. Hose ends connected to flow valve must be of the "swivel", type.
- 3. CAUTION: Over tightening of the fittings in flow valve may cause damage to valve body.
- 4. Approximately 8" of hose slack must be realized between the flow valve and valve stand after the flow valve has been completely plumbed. If this condition does not exist after the plumbing has been completed, removal of valve will require hoses to be removed at opposite end of valve.



- 5. Assembly of valve on stand.
 - A. Cut a 5" x 5" square opening in floor board of truck where the valve stand is to be located.
 - B. Bolt valve stand halves together forming a, box over the 5" x 5" square opening. NOTE: When bolting valve stand halves in place, make sure holes in flanges align with holes in flange plate.*
 - C. Bolt flange plate to VALVE (Use (2) 1/4" X 3" bolts, lockwashers, etc.)
 - D. Insert hoses through floor opening and valve stand and connect appropriate hoses (see instruction #1 thru #4) to flow valve.
 - E. Bolt flange plate to valve stand flanges.

(SEE PAGE XX PARTS LIST)

INSTALLATION INSTRUCTIONS CENTER HIGH MOUNT STOP LAMP (CHMSL)



WARNING!

FEDERAL MOTOR VEHICLE SAFETY STAN-DARDS REQUIRE ALL TRUCKS, BUSES AND MULTIPURPOSE PASSENGER VEHICLES MANUFACTURED ON OR AFTER 5/1/1993, WITH A GROSS VEHICLE WEIGHT RATING (GVWR) OF 10,000 LBS. OR LESS AND OVERALL WIDTH LESS THAN 80" BE EQUIPPED WITH A CENTER HIGH MOUNT STOP LAMP.

NOTE: If the original equipment CHMSL is obscured, an auxiliary CHMSL must be installed to bring the vehicle back into compliance with Federal Regulations.

ELECTRICAL CONNECTIONS FOR AUXILIARY CHMSL:

 Use high quality butt connectors and shrink wrap on all electrical splice connections. Wire should be routed and secured to protect against abrasion, sharp edges, and excessive movement. It is highly recommended that wiring be placed in convoluted tubing and secured with tie wraps.

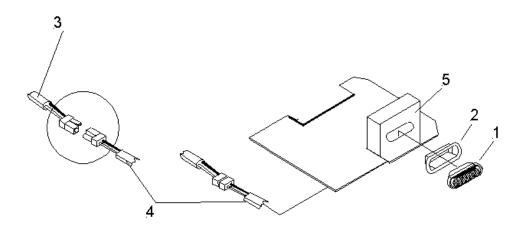
- When drilling holes, any bare metal should be coated with a rust preventative; use appropriate size grommets and seal hole with appropriate sealant.
- 3. Allow for normal movement/twisting between cab and chassis/pickup box when routing wires.
- 4. When spreader is removed from the truck, the **OEM CHMSL** must be reconnected.



WARNING!

CONSULT THE TRUCK MANUFACTURER FOR AN APPROVED METHOD OF CONNECTING AN AUXILIARY CHMSL TO A PARTICULAR TRUCK WHICH IS TO CARRY THE SPREADER. METHODS VARY WITH TRUCK MODELS, OPTIONAL EQUIPMENT AND YEARS OF MANUFACTURER.

IMPROPER CONNECTIONS COULD RESULT IN A VARIETY OF PROBLEMS AFFECTING CRITICAL SYSTEMS SUCH AS BRAKING, ELECTRICAL AND EMISSION! DON'T GUESS!



<u>ltem</u>	Part Number	Qty.	<u>Description</u>
1	62714	1	Lamp, Stop
2	62715	1	Grommet, Mounting
3	62738	1	Cable, Stop Lamp Power (Truck)
4	62364	1	Cable, Light Power (Hopper)
5	63155	1	Forming, Rear Stop Light Bracket

INSTALLATION INSTRUCTIONS ELECTRIC THROTTLE CONTROLS

(FACTORY INSTALLED ACTUATORS)



WARNING!

BEFORE BEGINNING ANY INSTALLATION ON THIS UNIT, DISCONNECT THE SPREADER BATTERY NEGATIVE CABLE (IF ALREADY INSTALLED).

- Spreaders with factory installed throttle controls do not require installer hookup to the engine. The actuator has been installed and tested at the factory.
- 2. Remove the engine shroud and securely place it on the ground.
- 3. The throttle actuator cable plugs into the in-cab control panel after being routed from the cab of the vehicle to the rear of the mounted spreader.
- Select a suitable location in the cab of the vehicle to mount the spreader control box. (Do not mount at this time.)



WARNING!

CONSULT VEHICLE MANUFACTURER FOR ACCEPTABLE MOUNTING. THE CONTROL BOX COULD INTERFERE WITH THE AIR BAG(S) AND THE OTHER FUNCTIONS OF THE OCCUPANT PROTECTIVE SYSTEMS, SUCH AS KNEE BOLSTERS!

- After the location of the control panel is determined, the cable must be routed to the front of the spreader, securing as needed. Allow enough cable for the control panel to be mounted in the cab.
- 6. The routed cable must be clear of all moving or hot parts on the spreader or the vehicle. Secure the cable with the ties provided. Excess cable must be coiled up and secured. Apply dielectric grease to all connections for protection from the salt spreading environment.
- 7. Mount the control panel (with the screws supplied).
- 8. For a permanent cable mount, a mounting bracket is supplied.

- It is recommended that a 12 volt battery with 40 ampere hour rating be installed for winter use.
 The battery hold downs furnished will accept any 2SM series battery.
- 10. Attach the positive battery cable (each end should have a red rubber boot) to the positive terminal on the solenoid and to the terminal of the battery. Make sure these protective boots are covering the positive terminal post on the battery and on the solenoid.



WARNING!

USE SAFETY GLASSES OR OTHER FACE PROTECTION AGAINST POSSIBLE BATTERY EXPLOSION. DO NOT SMOKE AND AVOID OTHER SOURCES OF IGNITION.

- Connect the negative battery terminal to the engine mounting bolt for proper grounding. When finished, make sure all wires are away from hot or moving parts and replace engine shroud.
- 12. Plug cable from spreader into socket mounted on truck.



WARNING!

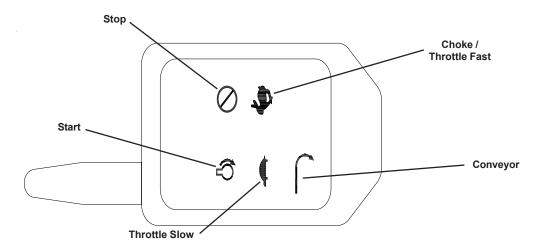
NEVER OPERATE MACHINE WITH ENGINE SHROUD REMOVED. NEVER CLIMB INTO THE HOPPER WHILE THE ENGINE IS OPERATING OR CAPABLE OF BEING OPERATED. SERIOUS INJURY OR DEATH MIGHT OCCUR.

NOTE: Read and fully understand the owners manual supplied by the engine manufacturer before operating this equipment. Not doing so, endangers your safety and the warranty of the engine.

SPREADER OPERATION

Wireless Throttle Control Button Functions

(Sequence of Operations)



A. ON/Off System power activated (ready to

start). Spreader engine not running. Spreader conveyor is not engaged.

B. START (Engine Only)

Open fuel shut off valve on engine. Choke (Cold engine.) Hold down for 5 seconds to move the throttle actuator to the choke position.

NOTE: Choking a warm engine may not be necessary.

START Hold down button until engine

starts.

TURTLE Decreases throttle speed - adjust

as engine warms up. Will stop the

choke function.

RABBIT Increases throttle speed.

C. TO ENGAGE SPREADER CONVEYOR

CONVEYOR Push CONVEYOR switch only after

you are sure no one is in the hopper

or near the spinner!

D. TO CONTROL CONVEYOR SPEED

RABBIT Hold RABBIT to increase speed.

Note <u>DO NOT</u> hold switch in <u>HI</u> position

after the desired RPM is achieved or you will choke and/or stall the

engine.

TURTLE Hold TURTLE to decrease speed.

E. TO DISENGAGE SPREADER CONVEYOR

CONVEYOR Push conveyor button.

F. TO TURN ENGINE OFF (With or without conveyor running).

TURTLE Push throttle slow button to

reduce setting to idle (this prevents engine flooding and hard starting).

STOP Push STOP button and hold

5 seconds.

NOTE: OFF can be pushed at anytime during spreader operation to cut power to the unit; however, you should normally use steps under F above.

- G. Do not attempt to start the engine with the conveyor engaged.
- H. Close fuel shut off valve on engine if unit is to be transported while not running.



- As with all power equipment, safety is the number one concern.
- Do not operate this equipment until you fully understand how it functions.
- 3. Before starting engine, be sure that no one is near the rear of the unit and that no one is inside the unit!
- 4. Do not start the engine or engage the conveyor (which is interconnected to the spinner) until everyone is clear from moving parts and flying material from the spinner.

Swenson Spreader Wireless Controller

The wireless controller is a compact unit with two parts. One part is the **Base Unit (Receiver)** and the other part is the **Transmitter (Hand Held Controller)**. The Transmitter is used to send a corresponding signal to the Base Unit to act as a remote switching device.

Set-up and Operation

The Swenson Wireless Controller comes factory programmed. That means matching the Base Unit to the Transmitter has been done by Swenson Spreader. This gives a matched (1 of 16 million combinations @ 418MHz) interface between the Transmitter and Base Unit. See Figures 1 & 2 for Transmitter button assignments. On the 8 button Swenson Spreader Transmitter, all (8) buttons are used when programming. When programming is completed, only (5) buttons are functional (Buttons #1, #3, #4, #5, & #6) (see Fig. 1).

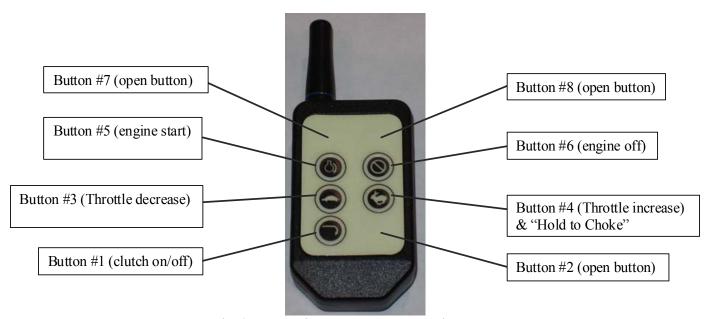


Fig. 1: Transmitter Front Button Assignments



Fig. 2: Transmitter Back Button Assignments

Programming "red" LED

"LEARN" Button
("black" press button)

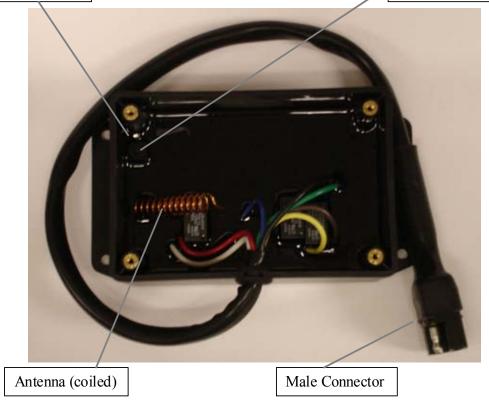


Fig. 3: Base Unit layout (Figure shown without Base Unit Cover)

Programming/Reprogramming the Transmitter and the Base Unit:

Tools needed: A small "phillips" screwdriver and a small diameter pin (paper clip). Instructions to program Transmitter and Base Unit:

- 1. Remove (4) screws and cover on Base Unit.
- 2. Power-up the Base Unit. Connect a 12V power source to the spreader 12V battery terminals and plug the engine wire harness to the Base Unit wire harness (see Male Connector in Fig. 3). <u>DO NOT DISCONNECT THE BATTERY TERMINALS</u> from the 12V source when engine is running.
- 3. On the backside of the Transmitter depress the "<u>ADD</u>" button (see Fig. 2) using a small pin or paper clip You will see a "blue" LED start to blink (for approximately 15-17 seconds).
- 4. On the front side of the Transmitter press all (8) buttons (see Fig. 1). There is no certain order to press the buttons. Firmly press each button, separately. Perform this step before the 15-17 seconds are up (before "blue" LED stops blinking). The Transmitter is now programmed and has created its own 1 in 16 million address. Once the "blue" LED stops blinking, this step is completed.
- 5. On the Base Unit (see Fig. 3) press the black "<u>LEARN</u>" button. The "red" LED will start to blink (for approximately 15-17 seconds).
- 6. On the front side of the Transmitter you only need to press Button #1 (clutch on/off), once. Perform this step before the 15-17 seconds are up (before "red" LED stops blinking). The base unit has now recognized the Transmitters unique 1 in 16 million address. Once the "red" LED stops blinking, this step is completed.
- 7. Verify the (5) functional buttons (Buttons #1, #3, #4, #5, & #6) on the Transmitter are working with the Spreader Unit by pressing each button, individually (the Base Unit "red" LED will flash when a Transmitter button is pressed). If Transmitter buttons are not working, repeat steps 3 8 or see the Trouble shooting directions.
- 8. When Transmitter buttons are functioning properly, re-assemble the Cover on the Base Unit with the (4) screws. Your Swenson Wireless Controller is now ready to use!

Transmitter Battery Replacement

The Transmitter uses a standard CR2032 lithium button cell battery. In normal use it will provide 1 to 2 years of operation. To replace the Transmitter battery, gently press and slide the battery cover off. Remove the battery by sliding (NOT lifting) it out from underneath the retainer (see Fig. 4). Observe the battery polarity when replacing ("+" showing face up). Notes:

- 1. If the battery looses power or is removed the Transmitter and Base Unit may need to be reprogrammed (see reprogramming Transmitter and Base Unit instructions). Check Transmitter functional buttons to verify if reprogramming is necessary.
- 2. When removing lithium battery, please use caution to slide not lift the battery from the controller! If excess force is used to remove the battery (example: lifting the battery with a small screw driver) the solder connections from the battery clip to the circuit board could be pried loose. This action is not covered under warranty.

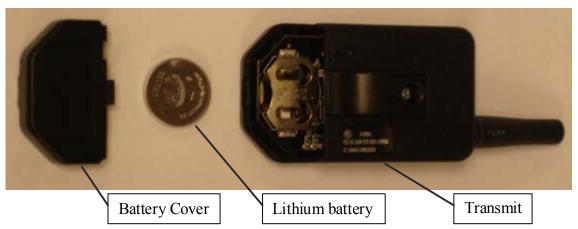


Fig. 4: Back of Transmitter with back cover and battery removed

Other Considerations

- 1. **Powering off the engine will not automatically power off the Clutch** (engagement of conveyor/spinner). If clutch remains engaged, after engine is turned off, it could lead to a slow electrical drain on the 12V battery.
- 2. **If an unregulated voltage** (example: sparking the battery cable terminal to the 12V battery post.) **is sent to the Base Unit it could erase the Base Unit programming.** The remote may show signs of no longer working with the Base Unit. Reprogramming will be required. When 14Amps are supplied the Base Unit circuit board is designed to shut off. See additional trouble shooting comments.
- 3. Only one transmitter at a time can be activated within a reception area. Only one carrier of a particular frequency may occupy the same airspace at a given time. This means that if two transmitters are activated in the same area at the same time the signals will interfere and the decoder on the receiver will not see a valid transmission and the wireless controller will not function.
- 4. **Multiple Transmitters** can be programmed to (1) Base Unit.
- 5. To verify the Base Unit is receiving a signal from the Transmitter. Press a button on the Transmitter "red" LED on the Base Unit will light-up.
- 6. Swenson Spreader, LLC has no control over the intended usage of this product. Because of that Swenson Spreader, LLC offers no written or expressed liability as to how this product is used. Swenson Spreader, LLC recommends that these units are intended for OFF ROAD USE ONLY!

TROUBLE SHOOTING

1. <u>To verify the Transmitter and Base Unit are working together:</u> Once the base unit has power the "red" LED will come on when the Transmitter buttons are depressed (Cover of Base Unit will need to be removed to see "red" LED). If the "red" LED does not come on, the Base Unit is NOT getting a signal from the Transmitter.

Possible Solutions:

- A. Reprogramming the Transmitter and Base Unit might be required.
- B. Base Unit might not be functioning properly (see Base Unit trouble shooting below).
- C. Transmitter might not be functioning properly. (see Transmitter trouble shooting below).
- 2. <u>Base Unit Programming Lose:</u> If an unregulated voltage (spark) is sent to the Base Unit from a power source the Base Unit could lose its programming. The voltage spike will not damage the Base Unit or Transmitter. Unregulated voltage could generate from the following:
 - Connecting battery cables to a 12V battery source.
 - Jump starting the 12V battery.
 - Charging the 12V battery.
 - Pull-starting the engine.

Possible Solutions:

- A. Reprogramming the Transmitter and Base Unit may be required.
- B. Base Unit might be damaged, a new Base Unit & Transmitter will need to be ordered.
- 3. <u>Base Unit does not function properly:</u> (example: "red" LED will not light up when "<u>LEARN</u>" button is depressed on Base Unit).

Possible Solutions:

- A. Check/verify voltage of 12V is being supplied by the 12V battery. Lower voltages than 12V will not allow the Base Unit to function properly.
- B. Confirm all wires on engine wire harness are secure and properly connected.
- C. Base Unit could be damaged, a new Base Unit & Transmitter will need to be ordered.
- 4. <u>Transmitter does not have power:</u> (example: "blue" LED will not light up when "<u>ADD</u>" button is depressed on Transmitter).

Possible Solutions:

- A. Verify tool diameter (example: paperclip) to depress Transmitter "<u>ADD</u>" button is small enough to enter the "<u>ADD</u>" button hole.
- B. Verify the lithium button cell battery polarity is correct ("+" will be facing up).
- C. If the Transmitter is 1-2 years old, check the lithium battery voltage with a meter or replace the battery as needed (CR2032 lithium button cell battery).
- D. Transmitter could be damaged, a new Transmitter will need to be ordered.

5. General troubleshooting:

- A. Try to Program/reprogram the Transmitter and Base Unit.
- B. Verify the Ground wires (all wires) are secure.
- C. Check connections to the components that the unit is trying to operate using a voltmeter.

WARNING

- 1. Disconnecting 12V Battery Cables/Terminals:
 - A. DO NOT DISCONNECT THE BATTERY (CABLES/TERMINALS) WHEN THE ENGINE IS RUNNING. This could disable or permanently damage the Base Unit.

For further technical assistance please contact Swenson Spreader, LLC at (888) 825-7323 or visit us at meyerproducts.com to download updated Wireless Controller Instructions.

SPREADER OPERATION - LOADING

This manual covers vehicles which have been recommended for carrying the hopper spreader. Please see your local dealer for proper vehicle applications.



WARNING!

OVERLOADING COULD RESULT IN AN ACCI-DENT OR DAMAGE. DO NOT EXCEED GVWR OR GAWR AS FOUND ON THE DRIVER-SIDE CORNERPOST OF VEHICLE.



CAUTION!

READ AND ADHERE TO MANUFACTURER'S ICE CONTROL PACKAGE LABELING INCLUDING MATERIAL SAFETY DATA SHEET REQUIREMENTS.

DETERMINING VEHICLE PAYLOAD

- Install spreader and optional equipment according to the instructions.
- 2. Install or attach any other equipment that will be on the vehicle while the spreader will be in use (step bumper, trailer hitch, snowplows, etc.). Fill gas tanks.

- Obtain the Gross Vehicle Weight Rating (GVWR), Front Gross Axle Weight Rating (FGAWR), and Rear Gross Axle Weight Rating (RGAWR) from the certification label located inside the driver-side door jam.
- 4. With the occupants in the truck for normal spreader operation, weigh the vehicle to obtain gross vehicle weight (GVW).
- 5. Subtract the GVW from the GVWR to determine the available material payload.
- Obtain the weight per cubic yard (lb./cu. yd.) of the desired material. Divide the weight into the payload to determine the maximum volume of material that can be carried.
- Compare the maximum volume to determine the maximum height of the material in the hopper spreader.
- Fill hopper with the material to the calculated height. Reweigh vehicle with occupants and verify the GVW, Front Gross Axle Weight, and Rear Gross Axle Weight are less than the vehicle's ratings.
- 9. Repeat steps 7 and 8 for each type of material.

Material Weights (Reference Only)

Material	Density (lb. per cubic yd.)
Salt (78lbs cu.ft.) - Dry	2,106
Coarse Sand - Dry	2,700
Course Sand - Wet	3,375

SPREADER OPERATION - SPREAD PATTERN

GAS ENGINE DRIVE

A. Start engine and allow engine to warm-up to operating tempeture and engage the clutch. The amount of material spread, depends on engine speed and gate opening. Decreasing RPM and/or gate height will decrease amount spread. The inverse also holds true. Notice that the electric clutch can be engaged or disengaged at any time and at any engine RPM. 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 RPM without stalling the engine.

NOTE: If the truck is to be driven for an extended period of time while the spreader is not operating, it is RECOMMENDED the gas be turned off at the fuel tank shut-off valve to prevent the carburetor from over filling with fuel.



WARNING!

ALWAYS STAND AT A SAFE DISTANCE AWAY FROM THE SPINNER WHILE OPERATING. ALWAYS WEAR EYE PROTECTION WHEN OUTSIDE OF THE TRUCK CAB WHILE SPREADER IS RUNNING.

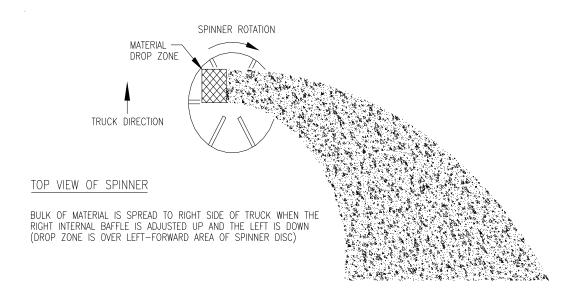
- B. Spread pattern / width depends on baffle settings (Gas Engine / Hydraulic Drive 4ft-30ft.)
 - 1. Internal baffle adjustments will move the spread pattern to the right or left.
 - 2. External baffle adjustments will block spreading to the rear, right or left side.



CAUTION!

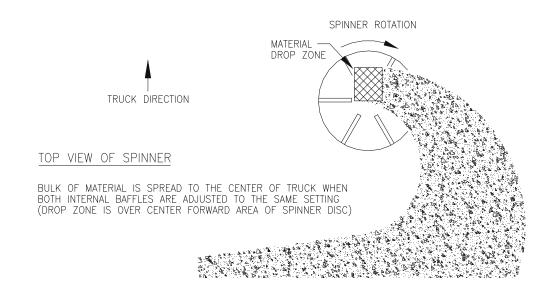
DO NOT LEAVE UNUSED MATERIAL IN HOPPER.

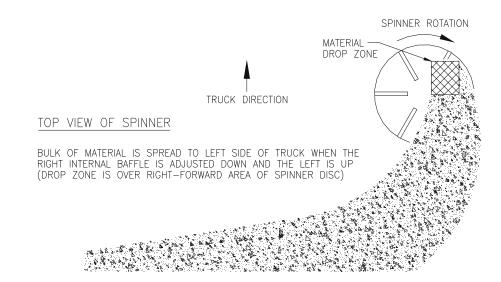
C. Material could freeze causing the unit to not function correctly. Hopper should be emptied and cleaned after each use.



SPREADER OPERATION - SPREAD PATTERN

(Continued)





SPREADER OPERATON - MAINTENANCE



WARNING!

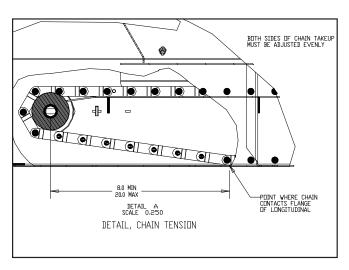
DO NOT ATTEMPT TO LIFT SPREADER BY THE CENTER LIFT OR CORNER LIFT HOOKS WITH MATERIAL IN THE SPREADER.



WARNING!

BEFORE BEGINNING ANY MAINTENANCE ON SPREADER, DISCONNECT SPREADER BATTERY LEADS.

- Grease idler bearings on idler shaft take-up assembly, outboard bearing on gearbox output shaft, and spinner bearings every ten hours of operation.
- Grease input shaft bearing on gearbox every fifty hours of operation. CAUTION! Over greasing may cause seal damage. The gearbox must be filled to oil level plug with SAE 90 gear type lubricant. Keep breather plug clean.
- 3. Drag chain slack on V-boxes should be checked periodically and taken up if distance between center line of front sprocket and point where chain contacts lower flange on longitudinal is less than eight (8) inches. CAUTION! Over tightening conveyor chain can cause serious drive train problems. Above distance must not exceed twenty (20) inches.



- If the spreader is equipped with a gasoline engine, it should be maintained per engine manufacturer's instruction. (Instructions and parts book is enclosed.
- V-belt/Chain tension must be maintained. The V-belt/Chain can be adjusted by loosening motor hold-down bolts and sliding motor as required.

To adjust chain tension on spinner shaft, loosen the 8 bearing bolts on the rear vertical plates and slide spinner shafts as required. Make sure the spinner shaft is straight up and down before re tightening.

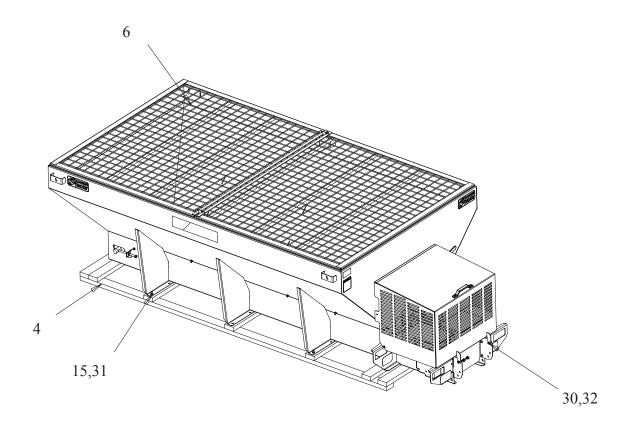
CAUTION! Overtightening may damage gearbox.

- 6. Oil drive chains before each use.
- 7. Spreader should be emptyed and cleaned after each use. Material could freeze causing the unit to not function correctly.
- 8. If chain becomes stuck or "frozen" to the floor to the point where the drive system cannot pull the load, never attempt to free chain using a pipe wrench or any other tool on the output shaft. The gearbox is designed to accept torque from input shaft only. Trying to turn output shaft will strip the gears, thus voiding the warranty.
- 9. To minimize problems and extend the life of the drive system, the following is highly recommended.
 - a. Before loading spreader, make sure the drag chain is free (not stuck or "frozen" to the floor). If the drag chain is stuck, this can cause the drive system to burn up.

OFF-SEASON STORAGE:

- Grease all bearings, oil drag chain and roller chains.
- 2. Raise spinner and remove spreader from truck.

MIDV PARTS LISTING

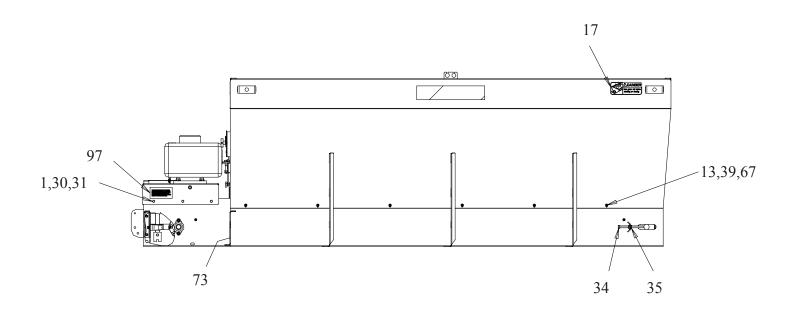


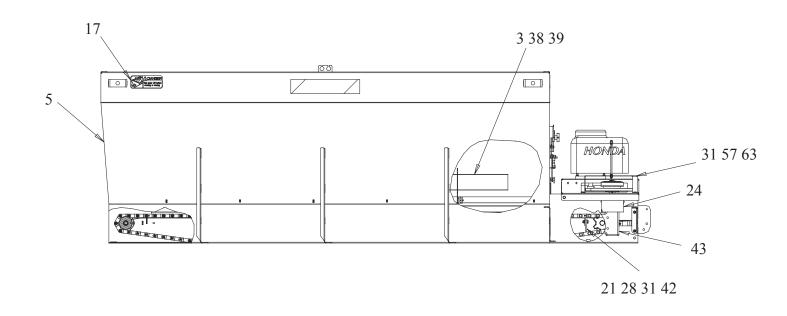
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
6	SEE CHART BELOW		
4	64139	SKID, SHIPPING 8 FOOT	1
	64140	SKID, SHIPPING 9 FOOT	
	64141	SKID,SHIPPING 10 FOOT	
15	62657	BOLT, 3/8-16 X 4" CA SS	4
30	63558	BOLT, 3/8-16 X 1" HH Zp	8
*	62697	BOLT, 3/8-16 X 1" HH SS	
31	62611	NUT, 3/8" SER. FLANGE Zp	25
*	62743	NUT, 3/8" SER.FLANGE SS	
32	20305	LOCK NUT, 3/8-16 NL Zp	4
*	62696	LOCK NUT, 3/8-16 NL SS SP	

^{*} STAINLESS STEEL SPREADER ONLY

SCREEN SIZE TABLE

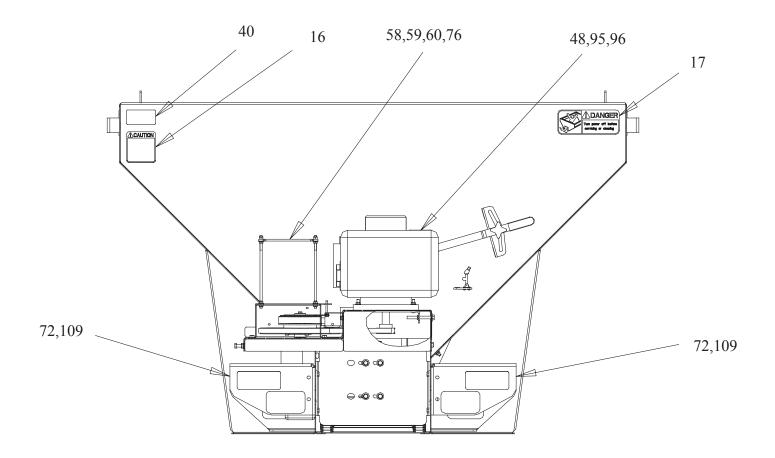
HOPPER LENGTH	SCREEN PART NUMBER - DESCRIPTION	QTY
8 FOOT	64197 - 4 FOOT SCREEN	2
9 FOOT	64198 - 5 FOOT SCREEN	1
	64197 - 4 FOOT SCREEN	1
10 FOOT	64198 - 5 FOOT SCREEN	2





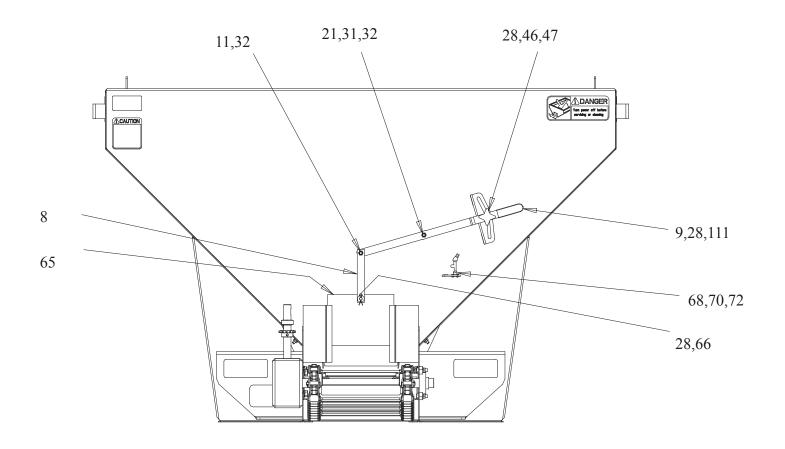
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	64142	WELD, ENGINE PLATE, Est 12g CS	1
*	64143	WELD, ENGINE PLATE, Est 12g SS	
3	62298	WELD, INVERTED "V" 8 ft. CS	1
	62296	WELD, INVERTED "V" 9 ft. CS	
	62294	WELD, INVERTED "V" 10 ft. CS	
*	64144	WELD, INVERTED "V" 8 ft. S2	
*	64145	WELD, INVERTED "V" 9 ft. S2	
*	64146	WELD, INVERTED "V" 10 ft. S2	
5	64147	WELD, HOPPER MDV 8 ft. CS	1
	64148	WELD, HOPPER MDV 9 ft. CS	
	64149	WELD, HOPPER MDV 10 ft. CS	
*	64150	WELD, HOPPER MDV 8 ft. S2	
*	64151	WELD, HOPPER MDV 9 ft. S2	
*	64152	WELD, HOPPER MDV 10 ft. S2	
13	64153	FORM, CONVEYOR FLOOR, 8 ft. 12g CS	1
	64154	FORM, CONVEYOR FLOOR, 9 ft. 12g CS	
	64155	FORM, CONVEYOR FLOOR, 10 ft. 12g CS	
*	64156	FORM, CONVEYOR FLOOR, 8 ft. 12g S2	
*	65157	FORM, CONVEYOR FLOOR, 9 ft. 12 g S2	
*	64158	FORM, CONVEYOR FLOOR, 10 ft. 12g S2	
17	64159	DECAL, DANGER, CONVEYOR	3
21	20066	BOLT, 3/8-16 X 1-1/4 Hh G5 Zp	13
*	62695	BOLT, 3/8-16 X 1-1/4" Hh SS	
24	64160	GUARD, CHAIN POLY	1
28	20353	FLAT WASHER 3/8" U.S.S. Zp	9
*	22230	FLAT WASHER 3/8" U.S.S. SS	
30	63558	BOLT, 3/8-16 X 1" Hh CS	8
*	62697	BOLT, 3/8-16 X 1" Hh SS	
31	62611	NUT, 3/8-16 SER. FLANGE Zp	25
*	62743	NUT, 3/8-16 FLANGE SS	
34	62304	WELD, TAKE-UP BOLT	2
35	62336	NUT, 1/2-13 Hj SS	4
38	63175	BOLT, 5/16-18 X 1 " CA SS	4
39	63310	NUT, 5/16-18 SER. FLANGE	
42	62354	WIPER, CHAIN	1
43	63177	SUB-ASSEMBLY, GEARBOX	1
57	64161	FORM, BATTERY PLATE 12g CS	1
*	64162	FORM, BATTERY PLATE 12g S2	<u> </u>
63	63267	BOLT, 3/8-16 X 3/4" Hh G5 Zp	4
*	63205	BOLT, 3/8-16 X 3/4" Hh SS	
67	62640	BOLT, 5/16-18 x 3/4" CA SS	10
73	63848	DECAL, CAUTION 4" MIN.	2
97	62644	DECAL, ENGINE, WARRANTY	1

^{*} STAINLESS STEEL SPREADER ONLY



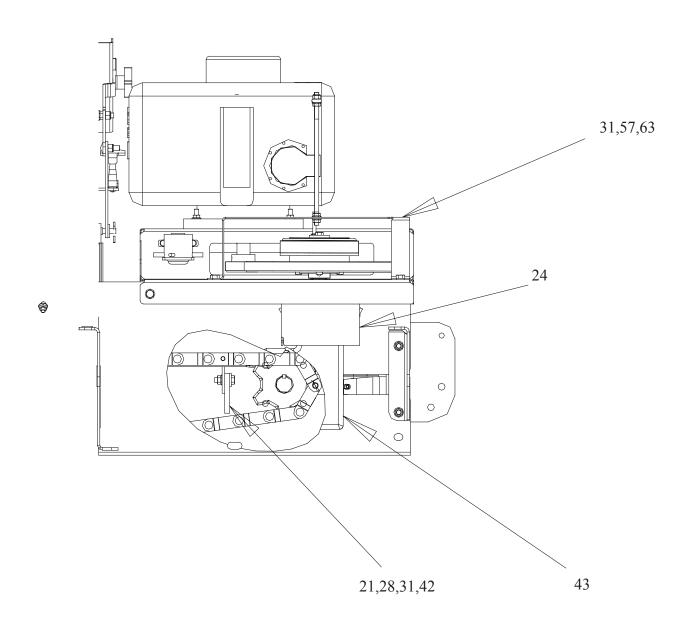
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
16	62007	DECAL, CAUTION	1
17	62009	DECAL, DANGER, CONVEYOR	3
40	63571	DECAL, SERIAL	1
48	64066	ENGINE, 10.5 HP B&S	1
**	63171	ENGINE, 11 Hp HONDA W/ DECALS	
58	61206	ROD, BATTERY	2
59	62767	HOLD DOWN, BATTERY	1
60	62628	LOCK NUT, 5/16-18 N1 Zp	2
*	64163	LOCK NUT 5/16-18 NL SS	
72	63847	DECAL, CAUTION, UNLOADED	2
76	63304	NUT, 5/16-18 SER. FLANGE, Zp	11
*	63310	NUT, 5/16-18 SER. FLANGE SS	
95	626643	DECAL, FUEL SHUTOFF	1
96	62768	DECAL, GASOLINE ONLY	1
109	63842	BRACKET, FORK, REAR, RH	2

STAINLESS STEEL SPREADER ONLY HONDA MODELS ONLY



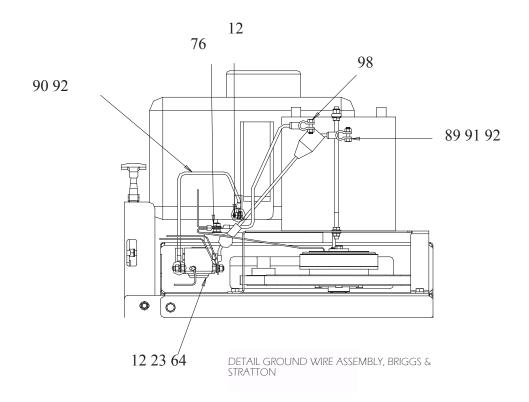
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
8	62270	BAR, PIVOT 7g Cs	1
*	63817	BAR, PIVOT 7g S2	
9	63294	FORM, FEED GATE HANDLE, 7g Cs	1
*	63828	FROM, FEED GATE HANDLE, 7g S2	
11	62615	BOLT, 3/8-16 X 1-1/4" Ca G5 Zp	1
*	62813	BOLT, 3/8-16 X 1-1/4" Ca SS	
21	20066	BOLT, 3/8-16 X 1-1/4" Hh G5 Zp	13
*	62695	BOLT, 3/8-16 X 1-1/4" Hh SS	
28	20353	FLAT WASHER, 3/8" U.S.S. Zp	9
*	22230	FLAT WASHER 3/8" U.S.S. SS	
31	62611	NUT, 3/8-16 SER FLANGE Zp	25
*	62743	NUT, 3/8-16 SER FLANGE SS	
32	20305	LOCK NUT, 3/8-16 NL Zp	4
*	62696	LOCK NUT, 3/8-16 NI Zp	
46	63417	BOLT, 3/8-16 X 3/4" CA SS SHTNK	1
47	61169	KNOB, HAND	1
65	62281	WELD, FEED GATE 7g Cs	1
*	63822	WELD, FEED GATE 7g SS	
66	62691	PIN, 1/8" X 1" COTTER SS	1
68	63141	HANDLE, RUBBER "T"	1
70	63157	RIVET, 1/8" X 3/8" BLIND	4
72	63847	DECAL, CAUTION UNLOADED	2
111	64164	COVER, FEED GATE HANDLE,	1

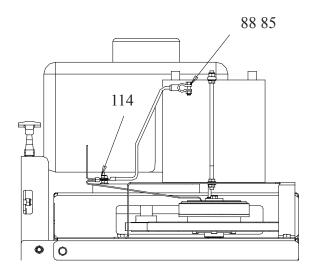
^{*} STAINLESS STEEL SPREADER ONLY



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
21	20066	BOLT, 3/8-16 x 1 1/4" Hh	13
*	62695	BOLT, 3/8-16 X 1 1/4" Hh SS	
24	64160	GUARD, CHAIN, POLY	1
28	20353	FLAT WASHER 3/8" U.S.S. Zp	9
*	22230	FLAT WASHER 3/8' U.S.S. SS	
31	62611	NUT, 3/8-16 FLANGE CS	25
*	62743	NUT, 3/8-16 FLANGE SS	
42	62354	WIPER, CHAIN	1
43	63177	SUB-ASSEMBLY, GEARBOX	1
57	64161	FORM, BATTERY PLATE, 12g Cs	1
*	64162	FORM, BATTERY PLATE, 12g S2	
63	63267	BOLT, 3/8-16 X 3/4" Hh G5 Zp	4
*	63205	BOLT, 3/8 - 16 X 3/4" HH SS	

^{*} STAINLESS STEEL SPREADER ONLY





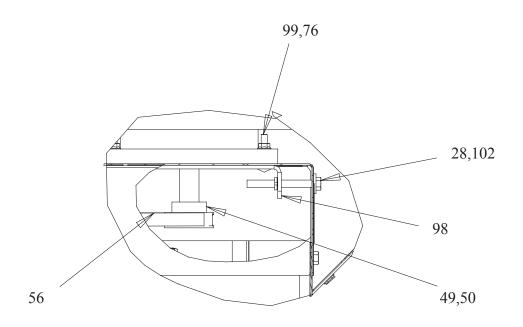
DETAIL GROUND WIRE ASSEMBLY, hONDA

ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
12	62187	NUT, 1/4-20 SER FLANGE CS	3
*	62690	NUT, 1/4-20 SER FLANGE SS	
23	63188	CHAIN ROLLER #40-55 PITCHES	1
64 +	61179	SOLENOID, GROUNDED	1
76 / 114	63304	NUT, 5/16-18 SER FLANGE Zp	11 / 9
*	62641	NUT, 5/16-18 SER FLANGE SS	
85 **	64165	DECAL, BATTERY WARNING	1
88	62040	CABLE, BATTERY, BLACK	1
89	63130	CABLE, BATTERY, RED	1
90	63753	CABLE, STARTER, RED	1
91	63125	BOOT, BATTERY CABLE,	1
92	63884	BOOT, ALT. CABLE	3
98	64166	WELD, ADAPTER, Cs	1
*	64068	WELD, ADAPTER, S2	

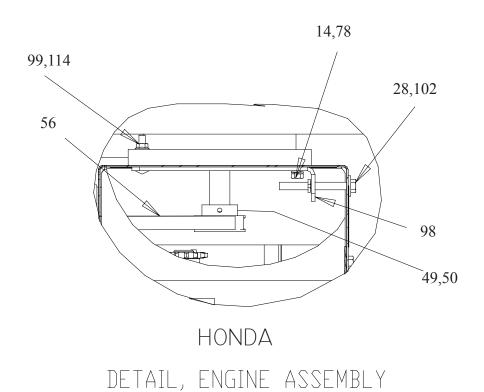
^{*} STAINLESS STEEL SPREADER ONLY

^{**} HONDA MODELS ONLY

⁺ BRIGGS AND STRATTON MODELS ONLY



DETAIL, ENGINE ASSEMBLY



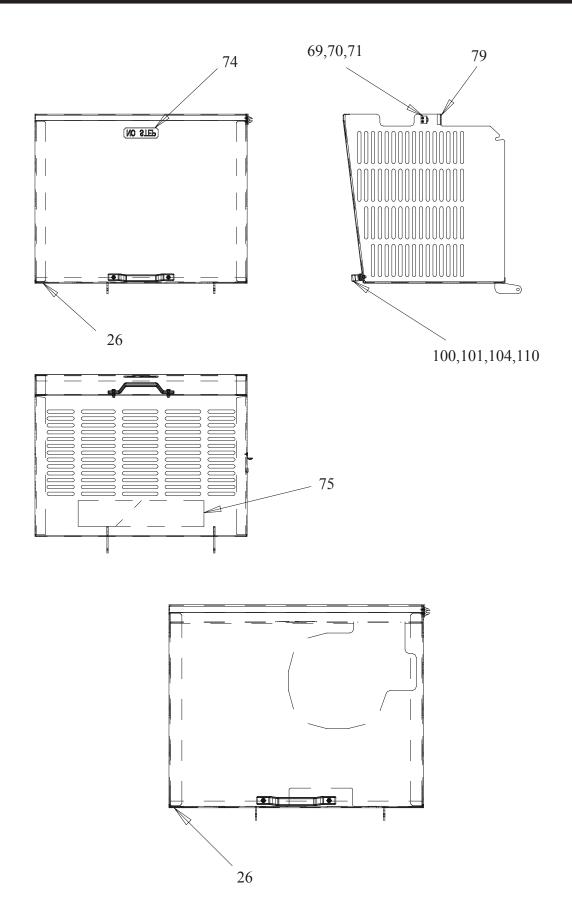
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ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
14 **	20326	LOCK WASHER, 5/16 MED SPLIT Zp	2
***	63309	LOCK WASHER 5/16 MED SPLIT SS	
28	20353	FLAT WASHER 3/8" U.S.S. Zp	9
*	22230	FLAT WASHER 3/8" U.S.S. SS	
49	61196	KEY, 1/4" SQ. X 1"	1
50	61177	PULLEY, DRIVER	1
56	62940	V-BELT, Bx - 46	1
76/114	63304	NUT, 5/16-18 SER FLANGE, Zp	11
*	62641	NUT, 5/16-18 SER FLANGE, SS	
78 **	63303	NUT 1/4-20 FLANGE SS	1
98	64166	WELD, ADAPTER, CS	1
*	64068	WELD, ADAPTER, S2	
99	62630	BOLT, 5/16-18 X 1-3/4" CA G5 Zp	4
*	64069	BOLT, 5/16-18 X 1-3/4' CA STD Nk	
102	62631	BOLT, 3/8-16 X 3 1/2" Hh G5 Zp	1
*	63342	BOLT, 3/8-16 X 3-1/2" Hh SS	
107	64169	BOLT, 1/4 - 20 X 2" Hh Ss TAP	1

^{*} STAINLESS STEEL SPREADER ONLY

^{**} HONDA MODELS ONLY

^{***} STAINLESS STEEL HONDA MODELS ONLY

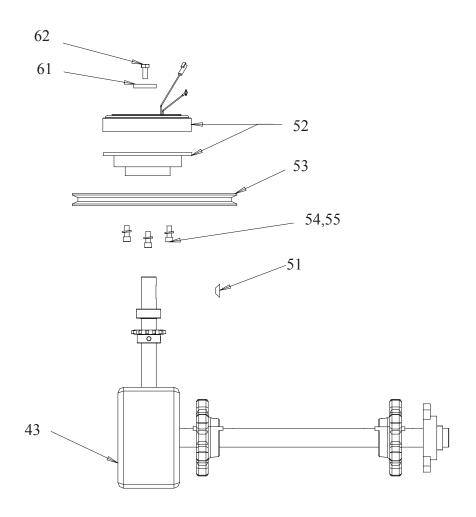


ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
26	64170	WELD, MDV B&S SHROUD, CS	1
*	64171	WELD, MDV B&S SHROUD, S2	
**	64172	WELD, MDV HONDA SHROUD, CS	
***	64173	WELD, MDV HONDA SHROUD, S2	
70	64092	RIVET, 1/8 X 3/8" BLIND	4
71	63158	FLAT WASHER, #6 Zp	4
74	64080	DECAL, CAUTION, 4" MIN	2
75	62497	DECAL, SWENSON - BLACK	3
79	04093-021-00	TRIM, VINYL	1.25
100	62619	BOLT, 1/4-20 X 1" Hh G5 Zp	2
*	62772	BOLT, 1/4-20 X 1" Hh SS	
101	64077	HANDLE, GRAB, PLASTIC	1
104	64174	LOCK NUT, 1/4-20 NI Zp	2
*	64079	LOCK NUT 1/4-20 Nl Zp	
110	21253	FLAT WASHER 1/4" S.A.E. Zp	2
*	63587	FLAT WASHER 1/4" S.A.E. SS	

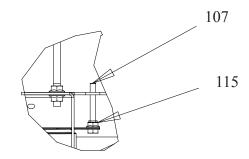
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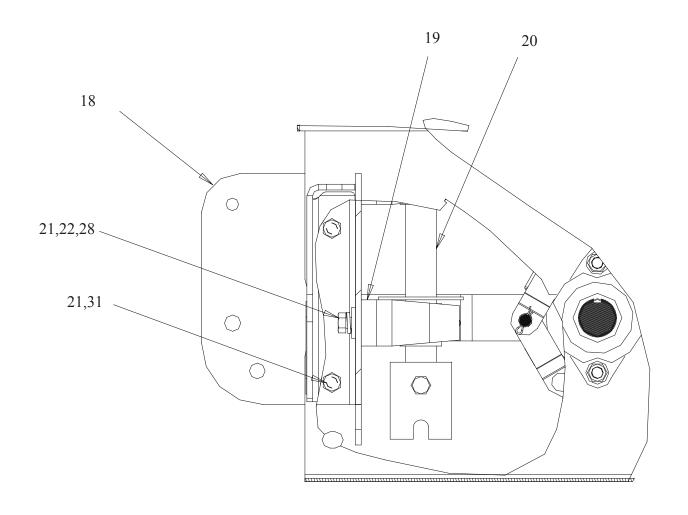
DETAIL, CLUTCH ASSEMBLY



DETAIL, CLUTCH RETAINER

ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
43	63177	SUB-ASSEMBLY, GEARBOX	1
51	61201	KEY, 1/4" SQ. 7/8" WOODRUFF	1
52	61167	CLUTCH, ELECTRIC	1
53	61161	PULLEY, DRIVEN,	1
54	20362	LOCK WASHER, 5/16" Zp	3
55	62634	SCREW, 5/16" X 5/8" Sh CAP	3
61	63103	WASHER, CLUTCH RETAINER	1
62	62763	BOLT, 5/16-18 X 3/4" Hh	1
107	64169	BOLT, 1/4-20 X 2" TAP SS	1
115	62690	NUT, 1/4-20 SER FLANGE SS	1

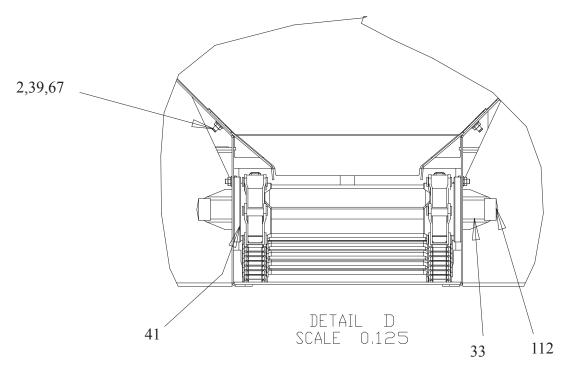
^{*} STAINLESS STEEL SPREADER ONLY



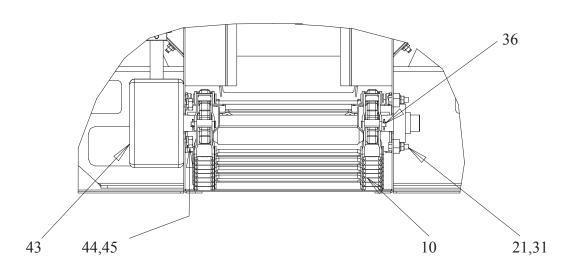
DETAIL, REAR PLATE ASSEMBLY

ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
18	64175	FORM, REAR PLATE Cs	1
*	64074	FORM, REAR PLATE S2	
19	62684	BLOCK, SPACER	2
20	64083	SUB ASSEMBLY , SPINNER DRIVE SHAFT	1
21	20066	BOLT, 3/8-16 X 1-1/4" Hh G5 Zp	13
*	62695	BOLT, 3/8-16 X 1-1/4" Hh SS	
22	20327	LOCK WASHER, 3/8" MED SPLIT Zp	4
*	63206	LOCK WASHER, 3/8" MED SPLIT SS	
28	20353	FLAT WASHER, 3/8" U.S.S. Zp	9
*	22230	FLAT WASHER 3/8" U.S.S. SS	
31	62611	NUT, 3/8-16 SER FLANGE Zp	25
*	62743	NUT, 3/8-16 SER FLANGE SS	

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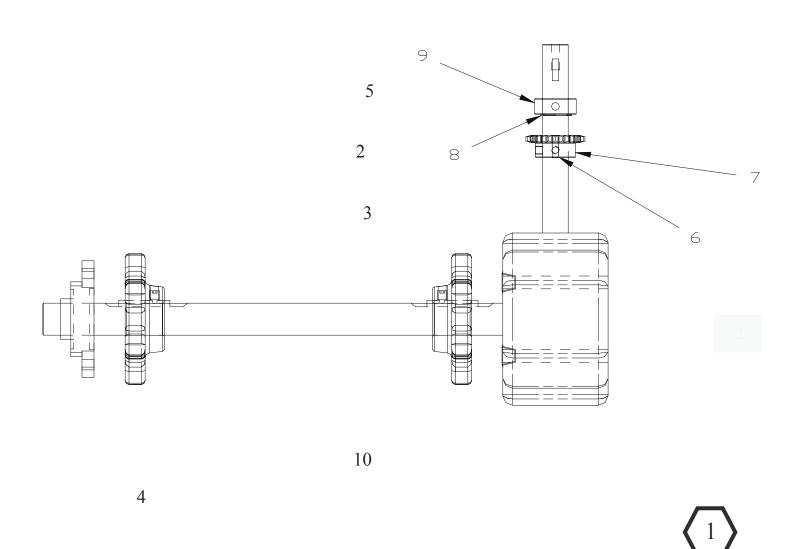
DETAIL, IDLER ASSEMBLY



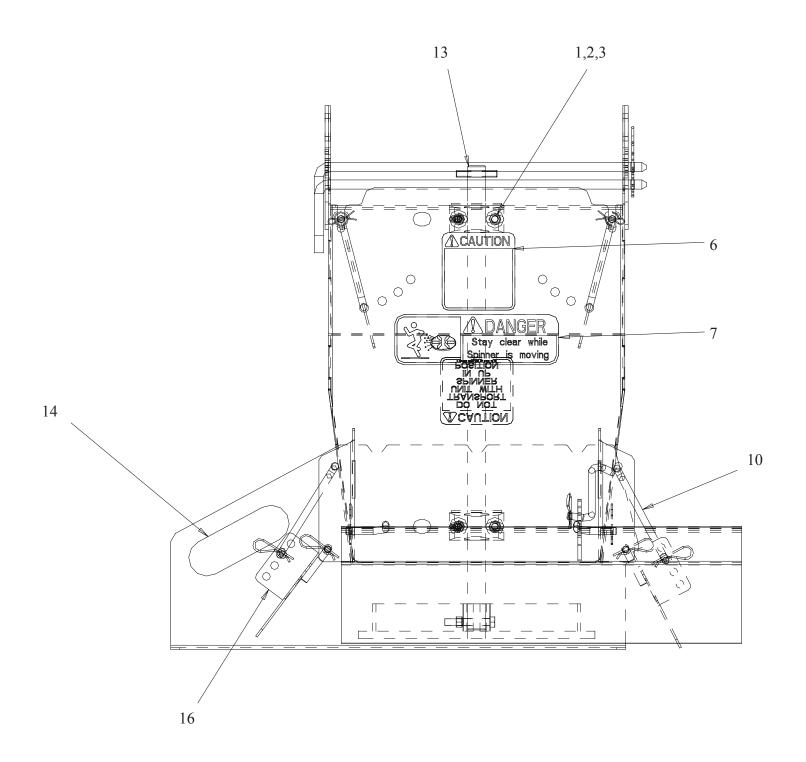
DETAIL, GEARBOX ASSEMBLY

ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
2	64176	FORM, CHAIN SHIELD, 8 ft. CS	2
	64177	FORM, CHAIN SHIELD, 9 ft. CS	
	64178	FORM, CHAIN SHIELD, 10 ft. CS	
*	64179	FORM, CHAIN SHIELD, 8 ft. S2	
	64188	FORM, CHAIN SHIELD, 9 ft. S2	
	64189	FORM, CHAIN SHIELD, 10 ft. S2	
10	63733	WELD, DRAG CHAIN, MDV 8 ft.	1
	63734	WELD, DRAG CHAIN, MDV 9 ft.	
	63735	WELD, DRAG CHAIN, MDV 10 ft.	
21	20066	BOLT, 3/8 - 16 1-1/4" Hh G5 Zp	4
*	62695	BOLT, 3/8 - 16 1-1/4" Hh SS	
31	62611	NUT, 3/8-16 SER FLANGE Zp	25
*	62743	NUT, 3/8-16 SER FLANGE SS	
33	64062	SHAFT, IDLER	1
36	61174	PIN, CONNECTOR W/COTTER	1
39	62641	NUT, 5/16-18 SER FLANGE SS	14
41	64063	ROLLER, POLY	2
43	63177	SUB-ASSEMBLY, GEARBOX	1
44	20329	LOCK WASHER, 1/2" MED SPLIT Zp	4
*	62770	LOCK WASHER, 1/2" MED SPLIT SS	
45	62617	BOLT, 1/2-13 X 3/4' TAP Hh G5 Zp	4
*	62750	BOLT, 1/2-13 X 3/4' TAP Hh SS	
67	62640	BOLT, 5/16-18 X 3/4" CA SS	10
112	64064	CAP, IDLER	2

^{*} STAINLESS STEEL SPREADER ONLY

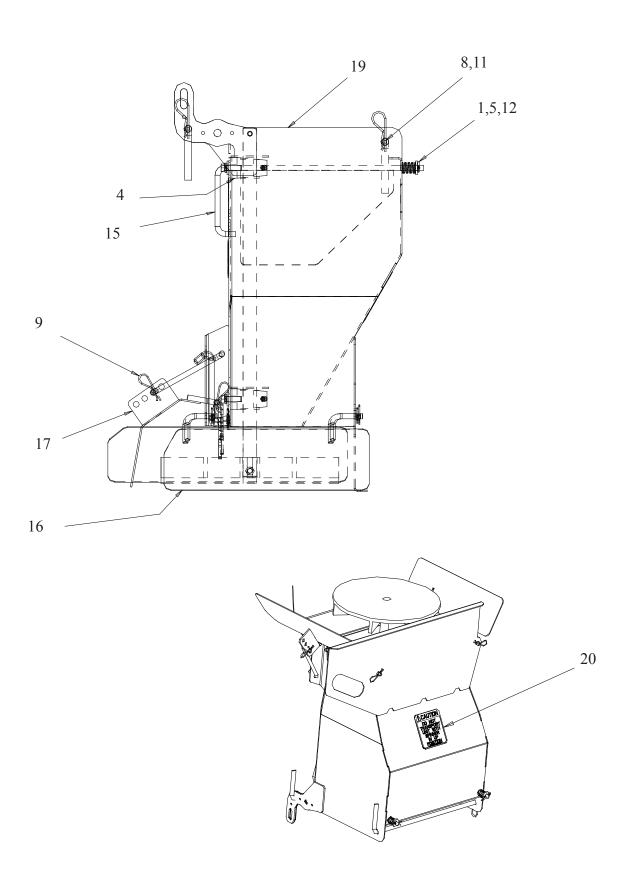


ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	63177	SUB-ASSEMBLY, GEARBOX	1
ITEM	PART NUMBER	GEARBOX PART DESCRIPTION	
2	63123	SET SCREW, 3/8-16 X 3/8" AH	2
3	62000	KEY, STRAIGHT, 1/4" SQ.	2
4	61163	BEARING, 1-1/4"	1
5	63129	PLUG, 1/4' NPT (Co 4)	1
6	61201	KEY, 1/4" x 7/8" woodruff	1
7	63685	SPROCKET, 40B13-A BORE	1
8	61202	RING, SNAP	1
9	62769	COLLAR, SET 1"	1
10	63100	SPROCKET, MACHINED	2



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	63409	FLAT WASHER, 3/8" SS	6
2	63206	LOCK WASHER, 3/8" SS	4
3	62695	BOLT, 3/8-16 X 1-1/4" SS	4
6	62006	DECAL, DANGER SPINNER	1
7	62007	DECAL, CAUTION	1
10	62313	BAR, LINK, S3	3
13	63767	SUB-ASSY, SWING-UP SHAFT	1
14	63128	TRIM, VINYL	1.25 ft.
16	63214	WELD, SPNR BAFFLE, LH-Ehpv CS	1
*	63910	WELD, SPNR BAFFLE, LH-Ehpv S2	

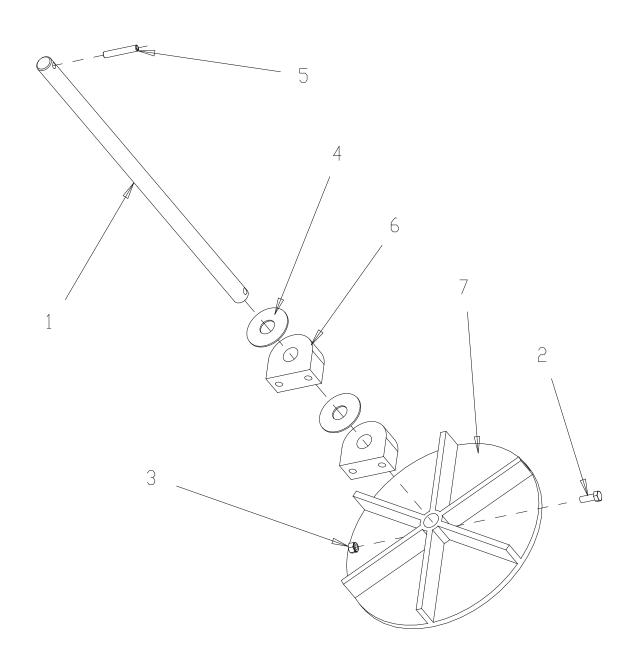
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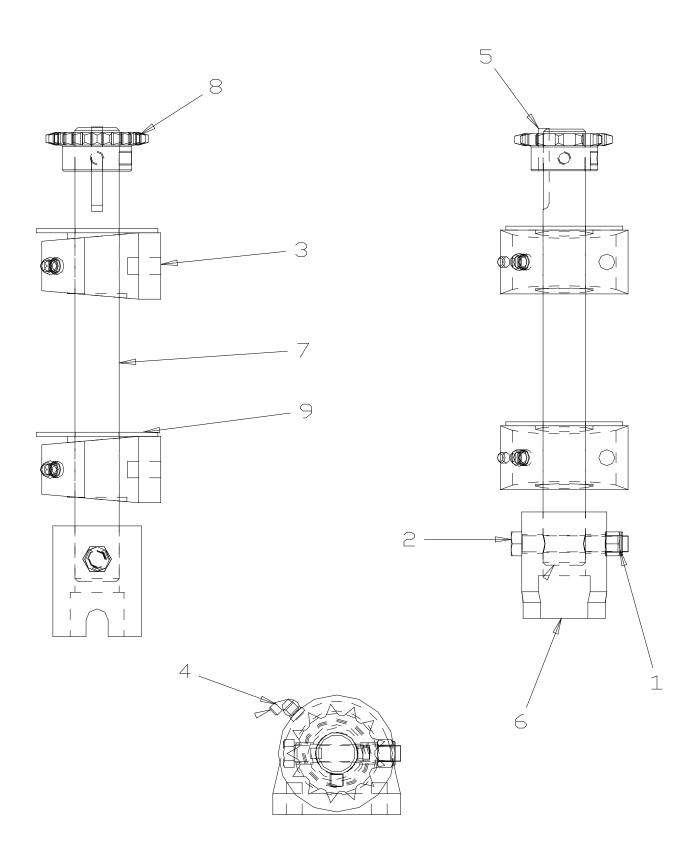
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ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	63409	FLAT WASHER, 3/8" SS	6
4	62684	SPACER, UHMW	2
5	62691	PIN, 1/8" X 1" COTTER SS	2
8	63193	KEEPER, HAIRPIN LG SS	2
9	63091	KEEPER, HAIRPIN SM SS	9
11	63145	ROD, SPINNER MOUNT	2
12	62358	SPRING, COMPRESSION	2
15	63211	WELD, INTERNAL BAFFLE Ehpv CS	2
*	64180	WELD, INTERNAL BAFFLE Ehpv S2	
16	63214	WELD, SPNR BAFFLE, LH Ehpv CS	1
*	63910	WELD, SPNR BAFFLE, LH Ehpv S2	
17	63216	WELD, SPNR BAFFLE REAR Ehpv CS	1
*	639112	WELD, SPNR BAFFLE REAR Ehpv S2	
19	64181	WELD, SPINNER FRAME CS	1
*	64182	WELD, SPINNER FRAME S2	
20	64183	DECAL, SWING UP SPINNER	1

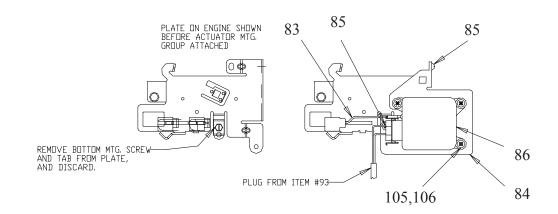
* STAINLESS STEEL SPREADER ONLY

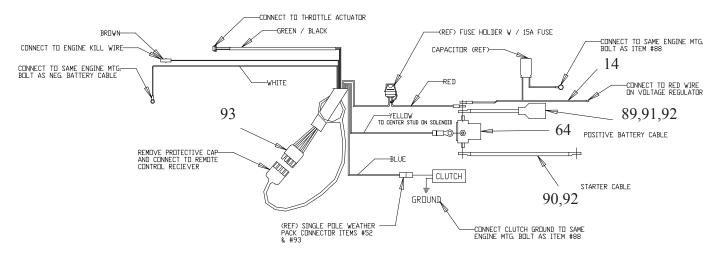


ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	63768	SHAFT, SPINNER DRIVE	1
2	62198	BOLT, 3/8-16 X 2-1/2" Hh SS	1
3	63199	LOCK NUT 3/8-16 TOP LOCK SS	1
4	63143	FLAT WASHER, RUBBER	2
5	63200	PIN, 3/8" X 2-1/4" ROLL	1
6	62356	BEARING, 1" TAPPED BASE	2
7	62146	DISC, POLY SPINNER 13"	1



ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
1	62696	LOCK NUT 3/8-16 NI SS	1
2	20068	BOLT, 3/8-16 2-1/2" Hh Zp	1
3	62356	BEARING, 1" TAPPED BASE	2
4	62988	FITTING, ZERK, 90 deg.	2
5	61196	KEY, STRAIGHT, 1/4" SQ.	1
6	63142	SHAFT, COUPLING POLY	1
7	64184	SHAFT, SPINNER, DRIVE	1
8	63685	SPROCKET, 40B13-A" BORE	1
9	64185	FLAT WASHER, RUBBER	2





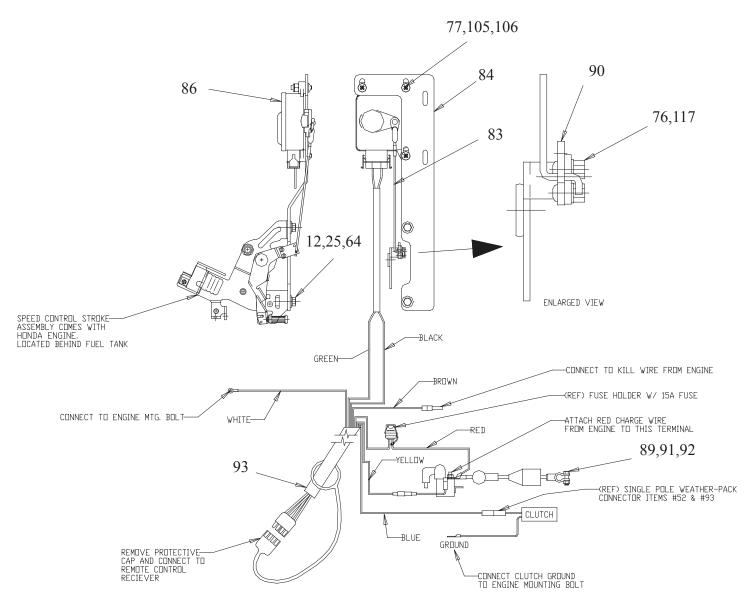
DETAIL, WIRING & THROTTLE ASSEMBLY SCALE 0.500

ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
14+	64984	HARNESS, B&S W/ CAPACITOR	1
64 +	64167	SOLENOID, GROUNDED	1
83 +	62648	LINKAGE, THROTTLE, B&S	1
84 +	62645	BRACKET, ACTUATOR, B&S	1
85 +	62646	SCREW, 10-32 X 5/16" PPH	2
86	63165	ACTUATOR, 12 V	1
89	63130	CABLE, BATTERY RED	1
90	63753	CABLE, STARTER RED	1
91	63125	BOOT, BATTERY RED	1
92	62106	BOOT, ALT CABLE	3
93	64086	CABLE, SPREADER CONTROL	1
105	64086	SCREW, 8-32 X 3/4" PR SS	3
106	64186	LOCK NUT, 8-32 NYLON SS	3

- * STAINLESS STEEL SPREADER ONLY
- + BRIGGS AND STRATTON ONLY

THROTTLE ACTUATOR ADJUSTMENT

- 1. LOOSEN THREE MOUNTING SCREWS AND NUTS ON THROTTLE ACTUATOR.
- 2. USING SPREADER CONTROL, MOVE THROTTLE ACTUATOR TO FULL CHOKE POSITION (RABBIT).
- 3. SLIDE ACTUATOR IN CORRECT DIRECTION (RIGHT) UNITIL ENGINE LINKAGE HAS MOVED TO FULL CHOKE. DO NOT PUT EXCESSIVE FORCE ON LINKAGE ROD.
- 4. TIGHTEN THREE MOUNTING SCREWS AND NUTS.
- 5. TEST RUN ENGINE FOR FULL CHOKE ENGAGEMENT.



DETAIL, WIRING & THROTTLE ASSEMBLY SCALE .375

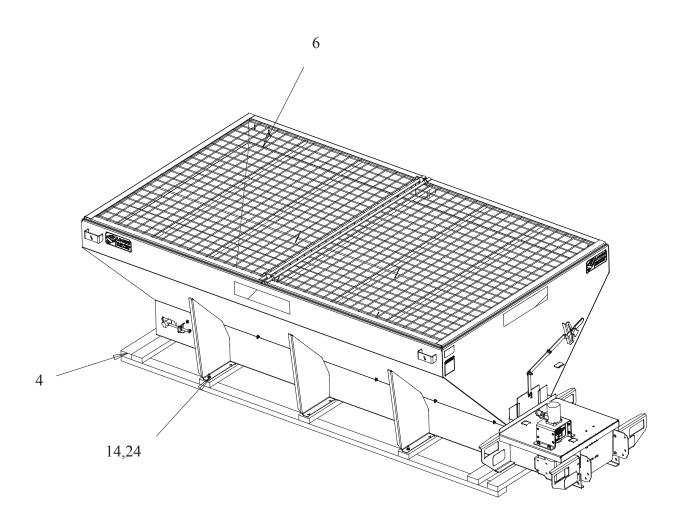
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
12 **	62799	BOLT, M5 X 12 Hh SS	2
25 **	62800	LOCK WASHER, #10 MED. SPLIT, SS	2
64 **	62801	FLAT WASHER, #10, SS	2
76 **	63121	SCREW, 2-56 X 3/8 SR SS	2
77 **	62651	FLAT WASHER #8 SS	3
83 **	62720	LINKAGE, BOSCH ACTUATOR/HONDA	1
84 **	62718	BRACKET, ACTUATOR, Mtg. BOS/HONDA	1
86	63165	ACTUATOR, 12v	1
90 **	62719	LEVER, EXTENSION, HONDA THROTTLE	1
91	63125	BOOT, BATTERY, CABLE, STRAIGHT	1
92	63884	BOOT, ALTERNATOR, CABLE	1
93	64086	CABLE, SPREADER CONTROL	1
117 **	63122	LOCK NUT, 2-56 NI	2

^{*} STAINLESS STEEL SPREADER ONLY

THROTTLE ACTUATOR ADJUSTMENT HONDA

- 1. LOOSEN TWO LOWER MOUNTING BOLTS ON THROTTLE ACTUATOR BRACKET.
- 2. USING SPREADER CONTROL, MOVE THROTTLE ACTUATOR TO FULL CHOKE POSITION (RABBIT).
- 3. SLIDE ACTUATOR BRACKET IN CORRECT DIRECTION (UP FOR HONDA) UNTIL ENGINE HAS MOVED TO FULL CHOKE.
- 4. TIGHTEN TWO MOUNTING BOLTS.
- 5. TEST RUN ENGINE FOR FULL CHOKE ENGAGEMENT.

^{**} HONDA MODELS ONLY

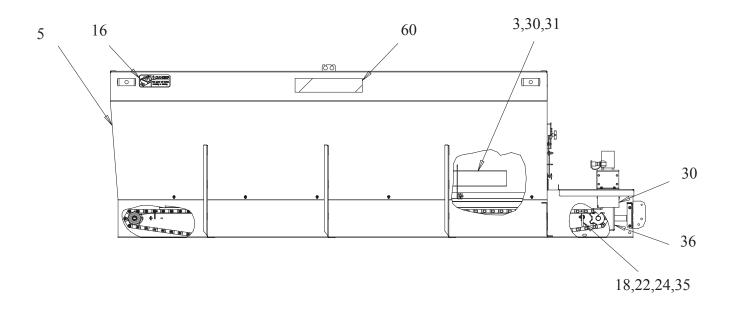


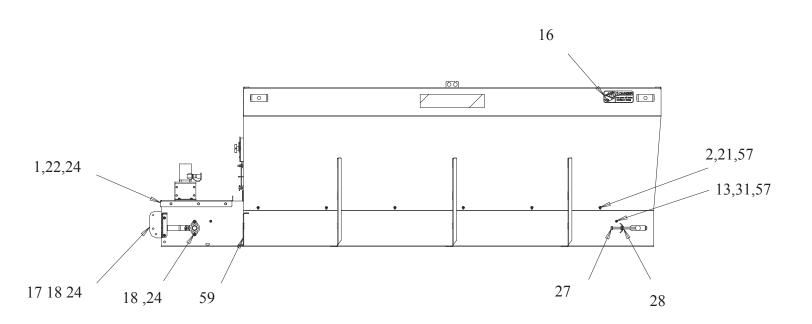
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
6	SEE CHART BELOW		
4	64139	SKID, SHIPPING 8 FOOT	1
	64140	SKID, SHIPPING 9 FOOT	
	64141	SKID,SHIPPING 10 FOOT	
14	62657	BOLT, 3/8-16" X 4" CA SS	4
24	62611	NUT, 3/8-16 SER. FLANGE Zp	23
*	62743	NUT, 3/8-16 SER. FLANGE SS	

^{*} STAINLESS STEEL SPREADER ONLY

SCREEN SIZE TABLE

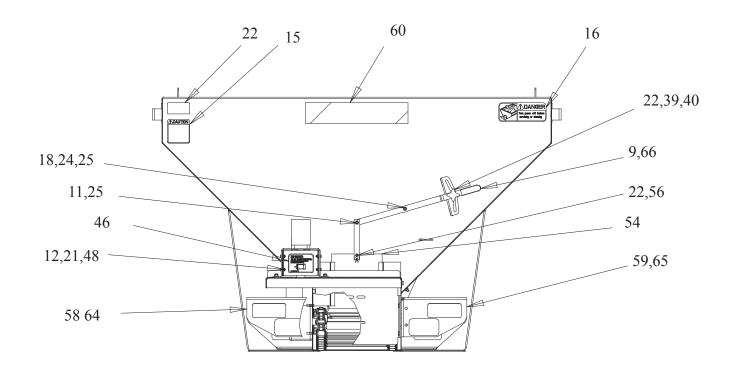
HOPPER LENGTH	SCREEN PART NUMBER/DESCRIPTION	QTY
8 FOOT	64197 / 4 FOOT SCREEN	2
9 FOOT	64198 / 5 FOOT SCREEN	1
	64197 / 4 FOOT SCREEN	1
10 FOOT	64198 / 5 FOOT SCREEN	2





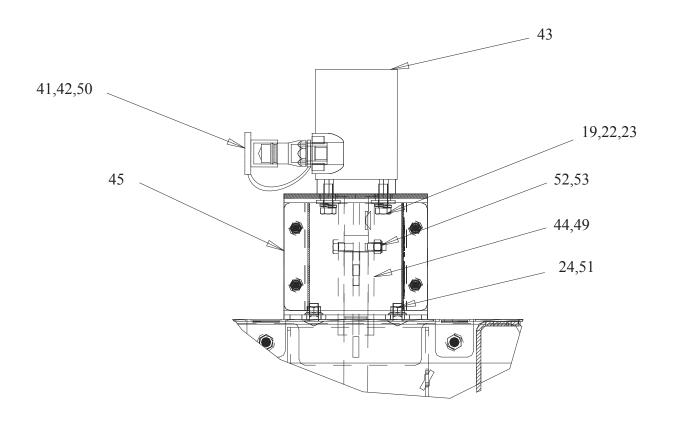
ITEM	PART NUMBER	PRODUCT DESCRIPTION QT	
1	64186	WELD, MOTOR PLATE, HYD CS	1
*	64187	WELD, MOTOR PLATE, HYD, S2	
2	64176	FORM, CHAIN SHIELD, 8 ft CS	
	64177	FORM, CHAIN SHIELD, 9 ft. CS	
	64178	FORM, CHAIN SHIELD, 10 ft. CS	
*	64179	FORM, CHAIN SHIELD, 8 ft. S2	
*	64188	FORM, CHAIN SHIELD, 9 ft. S2	
*	64189	FORM, CHAIN SHIELD, 10 ft. S2	
3	62298	WELD, INVERTED "V" 8 ft. CS	1
	62296	WELD, INVERTED "V" 9 ft. CS	
	62294	WELD, INVERTED "V" 10 ft. CS	
*	64144	WELD, INVERTED "V" 8 ft. S2	
*	64145	WELD, INVERTED "V" 9 ft. S2	
*	64146	WELD, INVERTED "V" 10 ft. S2	
5	64147	WELD, HOPPER MDV 8 ft. CS	1
	64148	WELD, HOPPER MDV 9 ft. CS	
	64149	WELD, HOPPER MDV 10 ft. CS	
*	64150	WELD, HOPPER MDV 8 ft. S2	
*	64151	WELD, HOPPER MDV 9 ft. S2	
*	64152	WELD, HOPPER MDV 10 ft. S2	
13	64153	FORM, CONVEYOR FLOOR, 8 ft. 12g CS	1
	64154	FORM, CONVEYOR FLOOR, 9 ft. 12g CS	
	64155	FORM, CONVEYOR FLOOR, 10 ft. 12g CS	
*	64156	FORM, CONVEYOR FLOOR, 8 ft. 12g S2	
*	64157	FORM, CONVEYOR FLOOR, 9 ft. 12 g S2	
*	64158	FORM, CONVEYOR FLOOR, 10 ft. 12g S2	
16	62009	DECAL, DANGER, CONVEYOR	3
17	64175	FORM, REAR PLATE, CS	1
*	64074	FORM, REAR PLATE, S2	
18	20066	BOLT, 3/8-16 X 1-1/4 Hh G5 Zp	9
*	62695	BOLT, 3/8-16 X 1-1/4" Hh SS	
21	20003	BOLT, 1/4-20 X 3/4" Hh G5 Zp	8
*	62189	BOLT, 1/4-20 X 3/4" Hh SS	
22	20353	FLAT WASHER 3/8" U.S.S. Zp	8
*	22230	FLAT WASHER 3/8" U.S.S. SS	
24	62611	NUT, 3/8-16 SER. FLANGE Zp	23
*	62743	NUT, 3/8-16 SER. FLANGE SS	
27	62304	WELD, TAKE-UP BOLT	2
28	62336	NUT, 1/2-13 Hj SS	4
30	63175	BOLT, 5/16-18 X 1 " CA SS	4
31	63310	NUT, 5/16-18 FLANGE SS	14
35	62354	WIPER, CHAIN	1
36	63177	SUB-ASSEMBLY, GEARBOX	1
57	62640	BOLT, 5/16-18 x 3/4" CA SS 10	
59	63848	DECAL, CAUTION 4" MIN.	2
60	62497	DECAL, SWENSON, BLACK 1	

^{*} STAINLESS STEEL SPREADER ONLY



ITEM	PART NUMBER	PRODUCT DESCRIPTION Q		
9	63294	FORM, HANDLE, FEED GATE, 7 g CS 1		
*	63828	FORM, HANDLE, FEED GATE, 7 g S2		
11	62615	BOLT, 3/8-16 X 1-1/4" CA G5 Zp	1	
*	62813	BOLT, 3/8-16 X 1-1/4" CA G5 SS		
12	62187	NUT, 1/4-20 SER. FLANGE Zp	8	
*	62690	NUT, 1/4-20 SER. FLANGE SS		
15	62007	DECAL, CAUTION	1	
16	62009	DECAL, DANGER, CONVEYOR	3	
18	20066	BOLT, 3/8-16 X 1-1/4" Hh G5 Zp	9	
*	62695	BOLT, 3/8-16 X 1-1/4" Hh SS		
21	20003	BOLT, 1/4-20 X 3/4" Hh G5 Zp	8	
*	62189	BOLT, 1/4-20 X 3/4 Hh SS		
22	20353	FLAT WASHER, 3/8" U.S.S. Zp	8	
*	22230	FLAT WASHER, 3/8" U.S.S. SS		
24	62611	NUT, 3/8-16 SER. FLANGE Zp 23		
*	62743	NUT, 3/8-16 SER FLANGE SS		
25	20305	LOCK NUT, 3/8-16 NI Zp 2		
*	62696	LOCK NUT, 3/8-16 NI SS		
39	63417	BOLT, 3/8-16 X 3/4" CA SHTNK	1	
40	61169	KNOB, HAND	1	
46	62572	DECAL, MOTOR	1	
54	62281	WELD, FEED GATE, 7g CS	1	
*	64190	WELD, FEED GATE, 7g S2		
56	62691	PIN, 1/8" X 1" COTTER SS	1	
58	63847	DECAL, CAUTION, UNLOADED	2	
60	62497	DECAL, SWENSON-BLACK	3	
64	63840	PLATE, BRKT FORK, REAR, LH, 7g CS	2	
65	63842	PLATE, BRKT FORK, REAR, RH 7g CS	2	
66	64164	COVER, FEED GATE HANDLE	1	

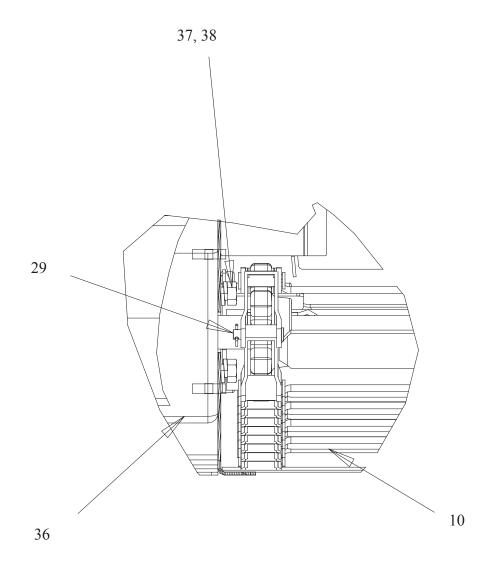
^{*} STAINLESS STEEL SPREADER ONLY



DETAIL, HYDRAULIC MOTOR ASSEMBLY

ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY	
19	20327	LOCK WASHER, 3/8" MED SPLIT Zp	4	
*	63206	LOCK WASHER, 3/8" MED SPLIT SS		
22	20353	FLAT WASHER, 3/8" U.S.S. Zp	8	
*	22230	FLAT WASHER 3/8" U.S.S. SS		
23	63558	BOLT, 3/8-16 X 1" Hh G5 Zp	10	
*	62697	BOLT, 3/8-16 1" Hh SS		
24	62754	NUT 3/8-16 SER. FLANGE Zp	23	
*	62743	NUT, 3/8-16 SER. FLANGE SS		
41	62592	QUICK DISCONNECT, 1/2" MALE	1	
42	62599	NIPPLE, 1/2" X CLOSE SCH 40	1	
43	60324	MOTOR, HYDRAULIC (3cid)	1	
44	61201	KEY, 1/4" x 7/8" woodruff	1	
45	64191	FORM, MOTOR MTG BRKT CS	1	
*	64073	FORM, MOTOR MTG BRKT S2		
47	62339	BUSHING, SPACER, SS	4	
49	62073	COUPLING, SHAFT	1	
50	62594	CAP, DUST 1/2"	1	
51	62594	BOLT, 3/8-16 X 3/4" CA G5 Zp	4	
*	63994	BOLT, 3/8-16 X 3/4" CA SS		
52	62746	BOLT, 5/16-18 X 2" Hh G5 Zp	1	
*	63308	BOLT, 5/16-18 X 2" Hh SS		
53	64192	LOCK NUT, 5/16-18 N1 Zp	1	
*	62628	LOCK NUT, 5/16-18 NI SS		

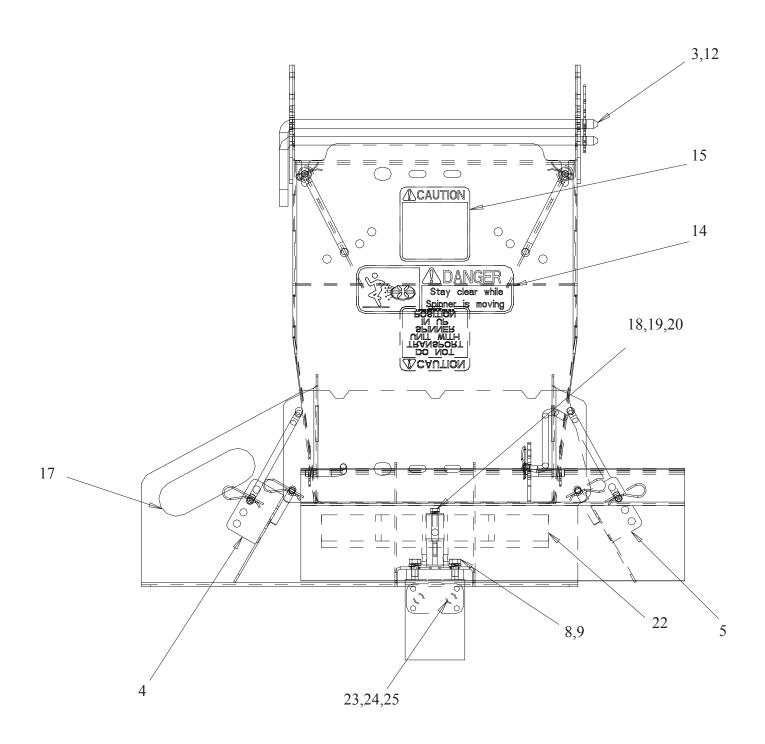
* STAINLESS STEEL SPREADER ONLY



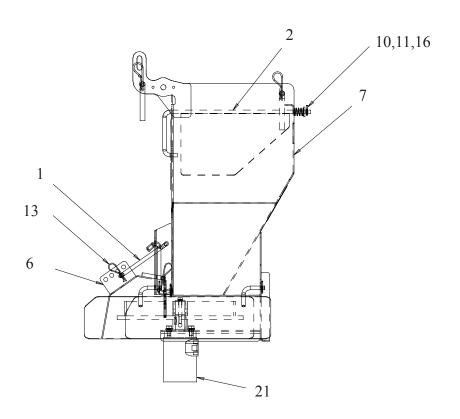
DETAIL, GEARBOX ASSEMBLY

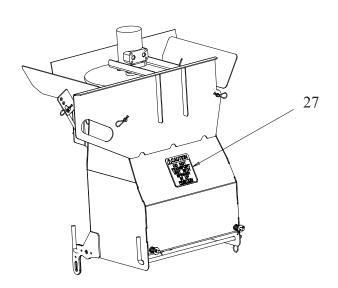
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
10	63733	WELD, DRAG CHAIN, MDV 8 ft.	1
	63734	WELD, DRAG CHAIN, MDV 9 ft.	
	63735	WELD, DRAG CHAIN, MDV 10 ft.	
29	61174	PIN, CONNECTOR W/ COTTER	1
36	63177	SUB-ASSEMBLY, GEARBOX	1
37	20329	LOCK WASHER, 1/2" MED SPLIT Zp	4
*	62770	LOCK WASHER, 1/2" MED SPLIT SS	
38	62617	BOLT, 1/2-13 X 3/4" TAP Hh G5 Zp	4
*	62750	BOLT, 1/2-13 X 3/4" TAP Hh SS	

^{*} STAINLESS STEEL SPREADER ONLY



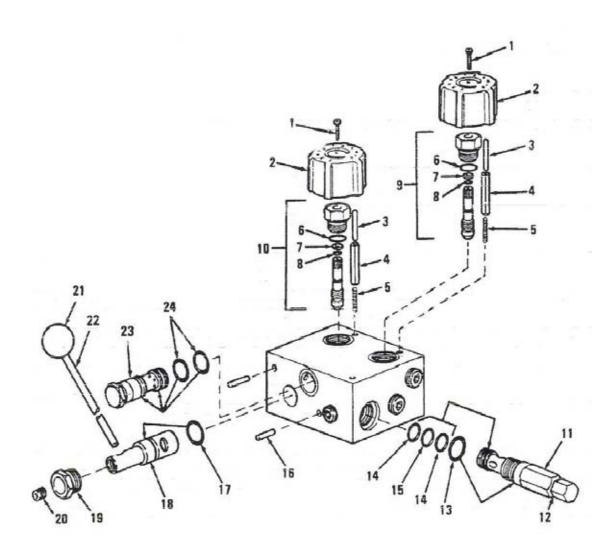
ITEM	PART NUMBER	PRODUCT DESCRIPTION	QTY
3	64193	ROD, SPINNER, MTG S3	2
4	63214	WELD, LH SPINNER BAFFLE, CS	1
*	63910	WELD, LH SPINNER BAFFLE, S2	
5	63215	WELD, RH SPINNER BAFFLE, CS	1
*	63911	WELD, RH SPINNER BAFFLE, S2	
8	62697	BOLT, 3/8-16 X 3/4" Hh SS	4
9	64194	LOCK WASHER, 3/8" SS	4
12	63193	KEEPER, HAIRPIN LG SS	2
14	62006	DECAL, DANGER	1
15	62007	DECAL, CAUTION	1
17	63128	TRIM, VINYL	1.25 ft.
18	63210	FLAT WASHER, 1/4" SPECIAL SS	1
19	62810	LOCK WASHER, 1/4" SS	1
20	63204	BOLT, 1/4-20 X 2-1/2" Hh SS	1
22	63209	DISC, SPINNER, 13"	1
23	63346	HOSE, 1/2" X 60 HYD.	1
24	62591	QUICK DISCONNECT, 1/2" FEMALE	1
25	62593	PLUG, DUST	1





ITEM	PART NUMBER	PRODUCT DESCRIPTION QTY	
1	62313	BAR, LINK S3 3	
2	63211	WELD, INTERNAL BAFFLE, CS	2
*	64180	WELD, INTERNAL BAFFLE, S2	2
6	63216	WELD, REAR SPINNER BAFFLE, CS	1
*	63912	WELD, REAR SPINNER BAFFLE, S2	1
7	64195	WELD, SPINNER FRAME, HYD, CS	1
*	64196	WELD, SPINNER FRAME, HYD, S2	1
10	22230	FLAT WASHER, 3/8" SS	2
11	62691	PIN, 1/8" X 1" COTTER, SS	2
13	63091	KEEPER, HAIRPIN SM SS	9
16	62358	SPRING, COMPRESSION	2
21	60324	MOTOR, HYDRAULIC	1
27	64183	DECAL, SWING-UP SPINNER	1





PARTS LIST FOR DUAL HYDRAULIC FLOW CONTROL VALVE

(62213)

<u>Item</u>	Part Number	<u>Qty</u>	<u>Description</u>	
1A	62014		Detent Repair Kit	(Consists of 1, 2, 3, 4 & 5)
1B	62099		Kit, Seal for item #9 & 10	(Consists of 6, 7 & 8)
1D	62394		Kit, Seal	42 44 45 47 22 8 24)
			(Consists of items 6, 7, 8, 12,	13, 14, 15, 17, 23 & 24)
1	62383	2	Screw	
2	62014	2	Handknob	
3	62384	2	Dowel Pin	
4	62385	2	Roll Pin	
5	62386	2	Spring	
6		2	O-Ring	
7		2	Back-up, Teflon	
8		2	O-Ring, Vitron	
9	63769	1	Auger Adj. Assy 7 GPM	
	63770	1	Auger Adj. Assy 10 GPM	
	62387	1	Auger Adj. Assy 15 GPM	
	63473	1	Auger Adj. Assy 20 GPM	
	63474	1	Auger Adj. Assy 25 GPM	
	63475	1	Auger Adj. Assy 30 GPM	
10	63476	1	Spinner Adj. Assy 5 GPM	
	62388	1	Spinner Adj. Assy 7 GPM	
	63477	1	Spinner Adj. Assy 10 GPM	
11	62389	1	Relief Cartridge	
12		1	Gasket	
13		1	O-Ring, Vitron	
14		2	Ring, Back-up, Teflon	
15		1	O-Ring, Vitron	
16	63478	2	Roll Pin	
17		1	O-Ring (Dump Stem)	
18	63479	1	Stem (Not Available - Can no	longer service)
19	63347	1	Plug	,
20	62390	1	Setscrew	
21	62391	1	Handknob	
22	62392	1	Handle	
23		1	Bypass Assy.	
24		2	O-Ring, Vitron	
		_	- g,	

PARTS LIST FOR DUAL HYDRAULIC FLOW CONTROL VALVE (62501)

(see page 72 for Drawing)

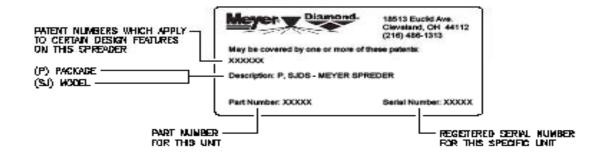
<u>Item</u>	Part Number	<u>Qty</u>	<u>Description</u>
1	63102	2	Valve Stand (Upright)
2	63101	1	Flange Plate
3	63480	2	Bolt, 1/4" x 3" HH
4	62619	8	Bolt, 1/4" x 1" HH
5	62478	10	Nut, 1/4" HH
6	20325	10	Lock Washer, 1/4"

NAME PLATE INFORMATION

- When ordering parts or requesting information or assistance, always include the information listed below.
- The Model Number and Serial Number for the Spreader are shown on the name plate.
- The space below is provided as a convenient place to record these numbers; just fill in the blanks.

MODEL MUNIEER
SERVAL NUMBER
DATE PURCHASED
DEALER PURCHASED FROM
DEALER'S SERVICE DEPARTMENT PHONE NUMBER

EXPLANATION OF SERIAL NUMBER DECAL



2\00111\0011-388-0064F0

CALLYOUR AUTHORIZED MEYER PRODUCTS DEALER FOR PARTS AND SERVICE MEYER PRODUCTS (216) 486-1313 FAX (216) 486-9775

email: warranty@meyerproducts.com

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

SPREADER ONE YEAR WARRANTY

Meyer Products ("Meyer") warrants to the original purchaser only that it will repair, or, at the sole option of Meyer, replace any part of the new Meyer covered product which proves to be defective in workmanship or material under normal use for a period of one year from the date of delivery to the original purchaser. This warranty is not transferable or assignable. The original purchaser's sole and exclusive remedy against Meyer and Meyer's sole obligation for any and all claims, whether for breach of contract, warranty, tort (including negligence) or otherwise shall be limited to providing, through its Distributor/Sub Distributor network, all labor and or parts necessary to correct such defects free of charge. Any cost incurred in returning the product to the Distributor/Sub-Distributor is the responsibility of the original purchaser.

The gasoline engine used in this product is covered by its own warranty as provided by the engine manufacturer. A copy of this warranty is included with the engine.

EXCLUSIONS

THIS WARRANTY DOES NOT COVER PAINT, EXCEPT EXPENDABLE PARTS SUCH AS PINS, SPREADER FINS, AND OTHER NORMAL WEAR ITEMS. MEYER SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM ANY CLAIMS ARISING HEREUNDER, OR FOR DAMAGES RESULTING FROM LACK OF NECESSARY MAINTENANCE, OR FROM MISUSE, ACTS OF GOD, ALTERATION OF A MEYER PLOW, SPREADER OR PART, OR FROM USE OF PARTS OR HYDRAULIC FLUID NOT SUPPLIED BY MEYER. USE OF THE MEYER SNOWPLOW, SPREADER FOR ANY PURPOSE OTHER THAN PLOWING SNOW OR SPREADING APPROVED MATERIAL ARE EXAMPLES OF AN ABUSE AND MISUSE.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

WARRANTY SERVICE

In order to obtain service under this warranty, the original purchaser must return the Meyer claimed defective product to the Distributor/Sub-Distributor from whom the product was purchased or to any authorized Meyer Distributor/Sub-Distributor, transportation and freight charges prepaid. Only Meyer Distributor/Sub-Distributors are authorized to perform the obligations under these warranties.

GENERAL

It is the responsibility of the original purchaser to establish the warranty period by verifying the original delivery date. A bill of sale, cancelled check or some other appropriate payment record may be kept for that purpose. It is recommended, but not required, that the consumer verify the original delivery date by immediately returning the attached Warranty Registration Card. No person is authorized to change this warranty or to create any warranty other than that set forth herein. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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E-Mail advertising@meyerproducts.com



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IMPORTANT INFORMATION ENCLOSED