

INSTALLATION and OPERATING INSTRUCTION MANUAL LPV ELECTRIC DRIVE SERIES SPREADERS



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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

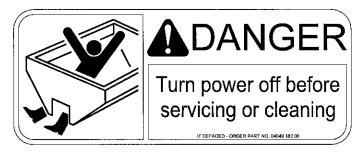
- FOLLOW RECOMMENDED OPERATING PROCEDURES.
- KEEP EQUIPMENT IN SAFE OPERATING CONDITION AT ALL TIMES.
- RECOGNIZE AND AVOID HAZARDS WHILE OPERATING, SERVICING AND MAINTAINING EQUIPMENT.



- 1. KEEP ALL SHIELDS IN PLACE
- 2. MAKE CERTAIN EVERYONE IS CLEAR BEFORE STARTING MACHINE OR MOVING VEHICLE.
- 3. KEEP HANDS, FEET, AND CLOTHING AWAY FROM ALL POWER DRIVEN PARTS.
- 4. DISENGAGE PTO, SHUT OFF HYDRAULIC VALVE, AND SET PARKING BRAKE BEFORE LEAVING OPERATORS POSITION. MAKE SURE ALL MOVEMENT HAS STOPPED BEFORE SERVICING, UNCLOGGING, OR CLEANING MACHINE.
- 5. USE FLASHING LIGHTS WHEN OPERATING MACHINE.
- MAKE SURE MACHINE IS SOLIDLY SUPPORTED
 WHEN IT IS BEING MOUNTED, DISMOUNTED,
 OR STORED.

IF DEFACED - ORDER PART NO. 04049 045 00





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

INSTALLATION AND ASSEMBLY INSTRUCTIONS

INSTALLATION INSTRUCTIONS:

The LPV Spreader can be mounted and stored as a single unit. The LPV Spreader will mount on most 1/2-ton thru heavy-duty pickup trucks.



CAUTION!

READ ALL OF THE INSTALLATION INSTRUCTIONS BEFORE STARTING.



CAUTION!

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



WARNING!

BEFORE BEGINNING ANY INSTALLATION ON THIS UNIT, DISCONNECT THE VEHICLES NEGA-TIVE BATTERY CABLE(S).



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 THREATENING ACCIDENT.

The spreader is designed to sit flat on the bed of the truck, supported by the longitudinals/sides. DO NOT SUPPORT THE SPREADER BY THE BODY JACKS ALONE! UNIT IS NOT DESIGNED FOR CHASSIS MOUNT APPLICATIONS!

DO NOT OVERLOAD THE VEHICLE

It is 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.

SPREADER INSTALLATION:

- 1. Place the spreader in the rear of the truck with the motor to the rear of the truck. Center the spreader (side to side) in the truck.
- 2. Position the spreader in the truck, just short of making contact with the rearmost part of the truck bed, bumper, pintle hook etc (Approx 18"). Bolt the unit to the truck using a minimum of four (4) 1/2" Grade 5 bolts and washers and locknuts.
- 3. 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 over tighten, 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.

SPINNER INSTALLATION:

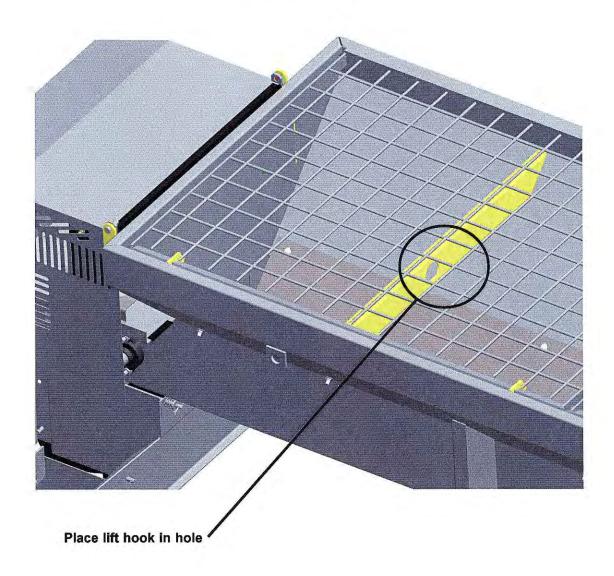


A CAUTION!

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

- 4. Raise engine shroud, position spinner assembly so that front is on the rear longitudinals. lift backplate to mate-up with bottom of engine mounting plate and sides of longitudinals, attach with provided hardware.
- 5. Attach spinner disc to spinner shaft with bolt and nylon locknut porvided. Attach spinner baffles to spinner frame using flatwashers and cotter pins provided.
- 6. Install roller chain between gearbox and spinner shaft. Align Sprockets on gearbox and spinner shaft with each other. Adjust roller chain tension by loosening all 4 spinner shaft bearing bolts on the rear panel and adjusting position of spinner shaft assembly (do not adjust too tight), re-tighten all 4 spinner shaft bearing bolts (spinner shaft must be straight up and down).

INSTALLATION AND ASSEMBLY INSTRUCTIONS CENTER LIFT



- 1. Center lift hook should be used for lifting spreader to install or remove from truck.
- 2. Do not lift spreader with material in hopper.



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

INSTALLATION AND ASSEMBLY INSTRUCTIONS

(62562)



PARTS LIST HOLD DOWN KIT (OPTIONAL)

<u>ltem</u>	Part Number	Qty.	<u>Description</u>
1	62602	4	Ratchet/Strap (Optional)
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	Flatwasher, 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 **GAS ENGINE - ELECTRIC THROTTLE CONTROLS**

(FACTORY INSTALLED ACTUATORS)



WARNING!

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



WARNING!

BEFORE BEGINNING ANY INSTALLATION ON THIS UNIT, DISCONNECT THE VEHICLES **NEGATIVE BATTERY CABLE.**



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.

Wiring:

All cables must be clear of all moving and hot parts on the vehicle and spreader. Excess cable must be coiled up and secured.

Throttle Actuators:

Spreaders with factory installed throttle control actuator. The actuator has been preset and tested at the factory. (Do Not Adjust.)

Control Cable Installation:

- 1. Raise the spreader engine shroud.
- Route and secure the throttle actuator control cable from rear of spreader into the vehicle cab. Allow enough cable for connecting to the control panel and the spreader.
- 3. Select a suitable location in the cab of the vehicle and mount the spreader control box with hardware provided. (Do not connect control cable.)



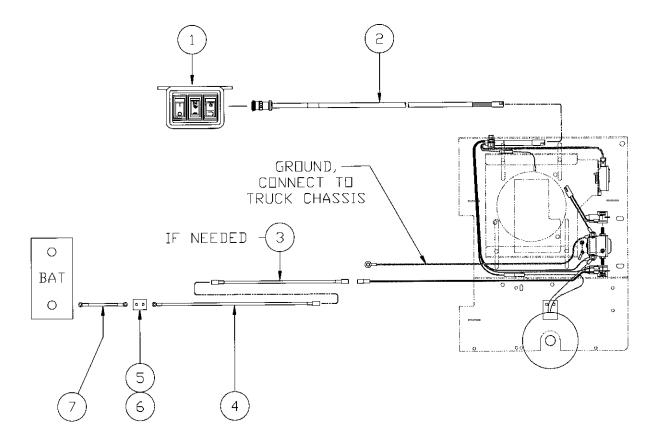
WARNING!

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

Remote Battery Cable Installation:

- 1. In vehicle's engine compartment, mount circuit breaker (63580) within 24" of vehicle's battery using #10-24 self-tapping screws (63581).
- 2. Place circuit breaker boot (63582) over circuit breaker.
- 3. Attach remote battery wire (63251) topost of circuit breaker.
- 4. Route and secure remote battery wire to rear of vehicle.use remote battery wire extension (63252) if needed. Be sure to keep away from hot and/or moving parts.
- 5. Clean area for attaching chassis ground. Attach ground wire (62944) from solenoid mounting bolt on spreader to chassis ground using 1/4-20 bolt (62772), flatwasher (63587), and nut (62690).
- 6. Connect circuit breaker to battery using battery jumper wire (63589).
- 7. Push top of circuit breaker boot over terminals to prevent possible grounding.
- 8. Close the spreader engine shroud.
- 9. Plug control cable from spreader into control panel socket mounted in truck cab.

INSTALLATION INSTRUCTIONS WIRING - GAS ENGINE DRIVE



<u>Item</u>	Part#	<u>Qtv</u>	<u>Description</u>
1	62334	1	Assy, Control Panel
2	63167	1	Cable, Control, Truck, LPV-PV-MDV
3	63252	1	Wire, Remote Battery, Ext (60")
4	63251	1	Wire, Remote Battery (180")
5	63580	1	Circuit Breaker
6	63582	1	Boot, Circuit Breaker
7	63589	1	Wire, battery Jumper
N/S	62772	1	Bolt, 1/4-20 x 1 HH SS
N/S	63587	1	Flatwasher, 1/4 SS
N/S	62690	1	Nut, 1/4-20 Ser Flange SS
N/S	63581	4	Screw, #10-24 x 1/2 hwh Teks/3

INSTALLATION INSTRUCTIONS WIRING ELECTRIC DRIVE SPREADERS



WARNING!

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



WARNING!

BEFORE BEGINNING ANY INSTALLATION ON THIS UNIT, DISCONNECT THE VEHICLES NEGA-**TIVE BATTERY CABLE(S).**

POWER REQUIREMENTS:

MINIMUM:

Trucks Mfg's Snow Plow Package With Hi-Amp (135 amp) Alternator

RECOMMENDED:

Dual Batteries or Dual Alternators.

NOTE:

Use dielectric grease on all electrical connec-

Keep all wires are away from sharp, hot or moving parts.

SPREADER WIRING MOUNTING:

- 1. In engine compartment of truck, find a suitable mounting location for the circuit breaker/relay panel (area should be dry and protected from road splash) within 14" of the main battery. Mount panel with self-tapping screws supplied.
- 2. Attach the 18" long battery cable to the circuit breaker terminal marked BAT. (DO NOT ATTACH TO BATTERY AT THIS TIME)
- 3. At rear of truck, locate the 22ft long truck side wiring harness from rear bumper (plug side to rear) and along the truck frame to the circuit breaker/relay panel in the engine compartment. (Harness is long enough for most compact thru regular full size standard cab/8ft long bed pick-up trucks. For extended and crew cab the optional 5ft extension wiring harness is required.)
- 4. Attach Black (shorter) cable of the truck side wiring harness to a clean location on the trucks frame. Connect Red (longer) cable to the circuit breaker/relay panel. Secure all wiring with wire ties provided. Excess cable must be coiled up and secured.

5. Connect spreader side wiring cable to electric motor. The electric motor is a one directional design, energizing either terminal, motor will turn CW when viewed from the top.

SPREADER CONTROL MOUNTING:



WARNING!

CONSULT VEHICLE MANUFACTURER FOR ACCEPTABLE MOUNTING LOCATIONS.

THE CONTROL SWITCH COULD INTERFERE WITH THE AIR BAG(S) AND THE OTHER FUNC-TIONS OF THE OCCUPANT PROTECTIVE SYS-TEMS, SUCH AS KNEE BOLSTERS!

- 6. Select a suitable location in the cab of the truck to mount the spreader control switch. Drill 1/2" diameter mounting hole for switch. (DO NOT MOUNT SWITCH AT THIS TIME)
- 7. Route 14ga black wire from switch location thru grommeted wire exit in cab's firewall to the circuit breaker/relay panel. Cut wire to size and attach terminals. Connect to switch and relay.
- 8. Using 14ga white wire, cut (2) ground wires to size and attach terminals, (1st) from switch location to ground, (2nd) from relay to ground. Connect wires.
- 9. Using remaining 14ga black wire, cut power wire to size and attach terminals from switch location to trucks fuse panel. Assemble switch and switch quard in mounting hole. Connect wires to switch and a KEY OPERATED circuit on fuse panel. (DO NOT USE A CIRCUIT THAT IS USED FOR AN OCCUPANT SAFTETY SYSTEM)
- 10. With all switches in OFF position, connect the negative battery cable(s) to battery. Plug cable from spreader into socket mounted on truck.
- 11. Close shroud, spreader is now ready for test run.

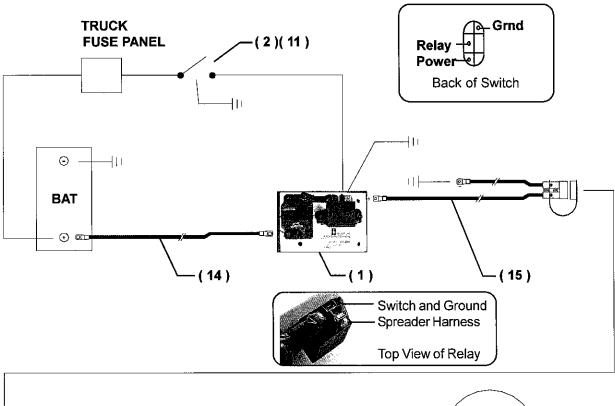
NOTE: SUPPLIED TERMINALS ARE HEAT SEALABLE

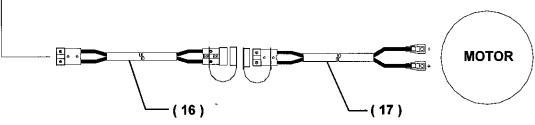


WARNING!

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

INSTALLATION INSTRUCTIONS WIRING ELECTRIC DRIVE SPREADERS





<u>ltem</u>	<u>Part Number</u>	<u>Qty</u>	<u>Description</u>
1	63351	1	Assy, Relay/Circuirt Breaker
1A	63352	1	Breaker, Circuit
1B	63353	1	Relay, 12Vdc, 75Amp
2	63354	1	Switch, On/Off Toggle Lum
N/S	63355	2	Heat Sealed Terminal - Ring
N/S	63356	2	Heat Shrink Terminal - Male Push-on
N/S	63357	6	Heat Shrink Term Female Push-on
N/S	63313	3	Screw, 1/4-14 x 1 hwh Teks/3
N/S	21253	3	Flatwasher, 1/4" S.A.E. Zp
N/S	20325	3	Lockwasher, 1/4" Med Split, Zp.
N/S	62183	8	Tie, Nylon 5 1/2" Std.
N/S	63358	1	Grease, Dielectric, 4 Gram Tube
11	63359	1	Guard, Switch
N/S	62674	15ft	Wire, 14 Ga. Black Insulated
N/S	62673	6ft	Wire, 14 Ga. White Insulated
14	63360	1	Cable, Battery
15	63361	1	Assy, Wiring Harness - Truck Side
16	63362	1	Assy, Wiring Harness - 5ft Extension
17	63363	1	Assy, Wiring Harness - Spreader Side

N/S = Not Shown

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 ACCIDENT 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

- 1. Install spreader and optional equipment according to the instructions.
- 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.

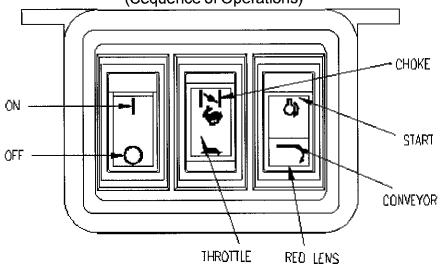
Material Weights (Reference Only)

Material	Density (lb. per cubic yd.)
Salt - Dry	2,025
Coarse Sand - Dry	2,700
Course Sand - Wet	3,375

SPREADER OPERATION

Gas Engine - Electric Throttle Control Panel

(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.

2 On On Switch depressed.

3. 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.

4. START Hold down until engine starts.

5. Turtle Decreases throttle speed - adjust as

engine warms up. Will stop the

choke function.

RABBIT Increases throttle speed.

C. TO ENGAGE SPREADER CONVEYOR

1. Conveyor Push CONVEYOR switch only after you are sure no one is in the hopper or near the spinner! This lights up

the red indicator light, if light does not light, take care to verify that the

light is not malfunctioning.

D. TO CONTROL CONVEYOR SPEED

1. RABBIT Hold RABBIT to increase speed. Note

DO NOT hold switch in HI position after the desired RPM is achieved or

you will choke and/or stall the

engine.

2. TURTLE Hold TURTLE to decrease speed.

E. TO DISENGAGE SPREADER CONVEYOR

1. START Tap START switch momentarily so

that red indicator light goes out. <u>DO NOT</u> fully depress the START switch, only half way is needed. Only the conveyor stops, the engine contin

ues to run.

F. TO TURN ENGINE OFF (With or without conveyor

running).

1. TURTLE Depress LO on throttle control to

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

2. ON/OFF Push OFF position on the ON/Off

switch.

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. (Conveyor switch light will be lit to indicate it is

on.

H. Close fuel shut off valve on engine if

unit is to be transported while not

running.



- 1. As with all power equipment, safety is the number one concern.
- 2. 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.

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.

ELECTRIC DRIVE

B. Start the trucks engine and engage the electric motor. The amount of material spread will depend on feedgate opening. Increasing feedgate height will increase amount of material being spread. Decreasing feedgate height will decrease amount of material being spread.



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.

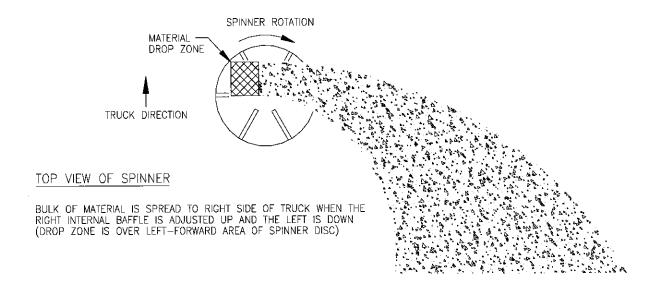
- C. Spread pattern / width depends on baffle settings (Gas Engine / Hydraulic Drive 4ft-30ft.)
 (Electric Drive 4ft-20ft)
 - Internal baffle adjustments will move the spread pattern to the right or left.
 - 2. External baffle adjustments will block spreading to the rear, right or left side.



CAUTION!

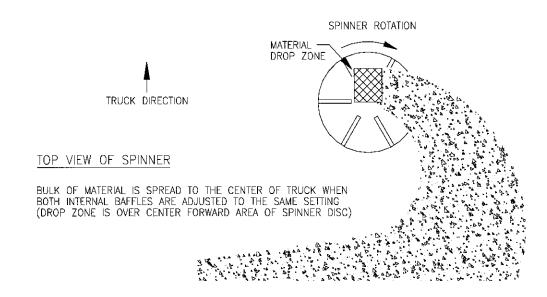
DO NOT LEAVE UNUSED MATERIAL IN HOPPER.

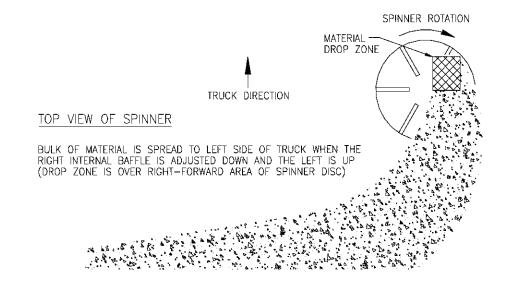
D. Material could freeze causing the unit to not function correctly. Hopper should be emptied and cleaned after each use.



SPREADER OPERATION

(Continued)





SPREADER OPERATION - MAINTENANCE



WARNING!

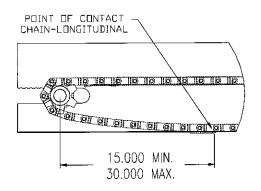
DO NOT ATTEMPT TO LIFT SPREADER BY THE CENTER LIFT OR CORNER LIFT HOOKS WITH MATERIAL IN THE SPREADER.



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 fifteen (15) inches. CAUTION! Over tightening conveyor chain can cause serious drive train problems. Above distance must not exceed thirty (30) inches.



DETAIL - CHAIN TENSION

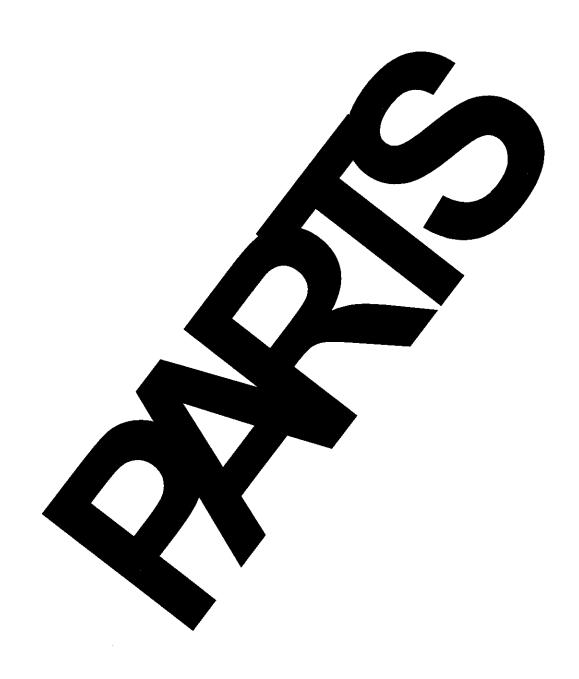
- If the spreader is equipped with a gasoline engine, it should be maintained per engine manufacturer's instruction. (Instructions and parts book is enclosed.
- V-belt/Chain tension must be maintained. The
 V-belt/Chain can be tightened by loosening motor
 hold-down bolts and sliding motor as required.
 Make sure the spinner shaft is straight up and down
 before retightening. Oil drive chains before each use.

CAUTION! Overtightening may damage gearbox.

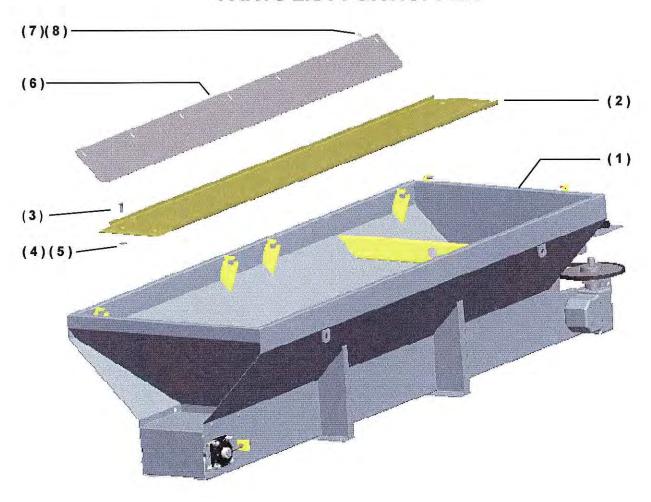
- Spreader should be emptyed and cleaned after each use. Material could freeze causing the unit to not function correctly.
- 8. If chain becomes stuck or "frozen" to the floor to the point where the drive system cannot pull the load, never attempt to free chain using a pipe wrench or any other tool on 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 starting unit, 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:

- 1. Grease all bearings, oil drag chain and roller chains.
- Remove spreader from truck, spinner may remain attached if stored on stands other wise remove spinner also (DO NOT STORE SPREADER ON THE GROUND WITH SPINNER ATTACHED).



PARTS LIST FOR HOPPER

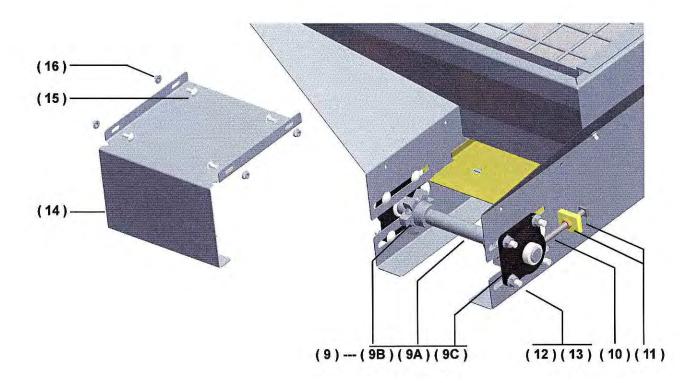


PARTS LIST FOR HOPPER

<u>Item</u>	Carbon Part#	Stainless Part#	<u>Qty</u>	<u>Description</u>
1	63566	63568	1	Weld, 3ft Hopper, LPV
	63567	63569	1	Weld, 4ft Hopper, LPV
	63315	63365	1	Weld, 5ft Hopper, LPV
	63316	63366	1	Weld, 6ft Hopper, LPV
	63317	63367	1	Weld, 7ft Hopper, LPV
		63368	1	Weld, 8ft Hopper, LPV
	63318	03300	1	vveid, oit i loppel, LF v
2	63570	63572	1	Forming, 3ft Floor
	63571	63573	1	Forming, 4ft Floor
	63319	63369	1	Forming, 5ft Floor
	63320	63370	1	Forming, 6ft Floor
	63321	63371	1	Forming, 7ft Floor
	63322	63372	1	Forming, 8ft Floor
	0002Z	00012	•	r ommig, over look
3	62771	62771	4	Screw, 3/8-16 x 1-1/4 Slt FI Hd SS
4	22230	22230	4	Flatwasher, 3/8, SS
5	63348	63348	4	Locknut, 3/8-16 Nyl Ins SS
6	63574	63574	2	Chainshield, 3ft SS
Ü	63575	63575	2	Chainshield, 4ft SS
	63323	63323	2	Chainshield, 5ft SS
			2	Chainshield, 6ft SS
	63324	63324		•
	63325	63325	2	Chainshield, 7ft SS
	63326	63326	2	Chainshield, 8ft SS
7	62640	62640	A/R	Bolt, 5/6-18 x 3/4 Carriage SS
8	62641	62641	A/R	Nut, 5/16-18 Flange SS
N/S	N/A	N/A	N/A	Weld, DragChain 3ft
	N/A	N/A	N/A	Weld, DragChain 4ft
	62622	62622	1	Weld, DragChain 5ft
	62623	62623	1	Weld, DragChain 6ft
	62624	62624	1	Weld, DragChain 7ft
	63327	63327	1	Weld, DragChain 8ft
	00570	00570	4	A Drag Chain 26 BOC
	63578	63578	1	Assy, DragChain 3ft BOC
	63579	63579	1	Assy, DragChain 4ft BOC
	63387	63387	1	Assy, DragChain 5ft BOC
	63389	63389	1	Assy, DragChain 6ft BOC
	63576	63576	1	Assy, DragChain 7ft BOC
	63577	63577	1	Assy, DragChain 8ft BOC
N/S	62625	62625	2	Pin, Connector, DragChain
N/S	62626	62626	2	Pin, Cotter, DragCchain

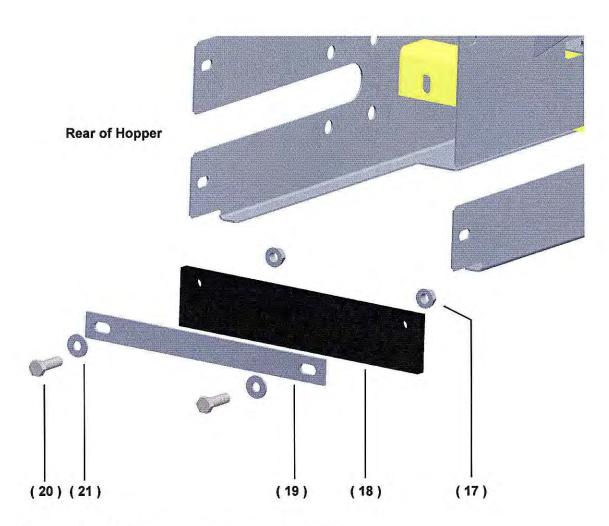
N/S= Not Shown, N/A= Not Available

PARTS LIST FOR FRONT IDLER

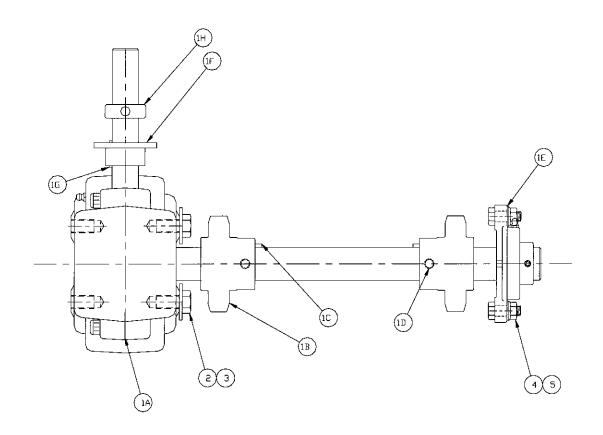


<u>Item</u>	Carbon Part#	Stainless Part#	Qty	<u>Description</u>
9	63328	63328	1	Assy, Idler Shaft
9A	63097	63097	1	Weld, Idler Shaft
9B	63096	63096	1	Sprocket
9C	62355	62355	2	Bearing, 1-1/4
10	61155		2	Setscrew, 1/2-13 x 5 Sq Hd
		62326	2	Bolt, 1/2-13 x 6 SS
11	62408	62336	4	Nut, 1/2-13 Hex Jam
12	63307	63180	8	Bolt, 1/2-13 x 1-1/2 Car, Sht Nk
13	62570	63310	8	Nut, 1/2-13 Ser Flange
14	63329	63329	1	Forming, Conveyor Guard, SS
15	62640	62640	4	Bolt, 5-16 x 3/4 Carriage, SS
16	62641	62641	4	Nut, 5-16 Ser Flange SS

PARTS LIST FOR CHAIN WIPER

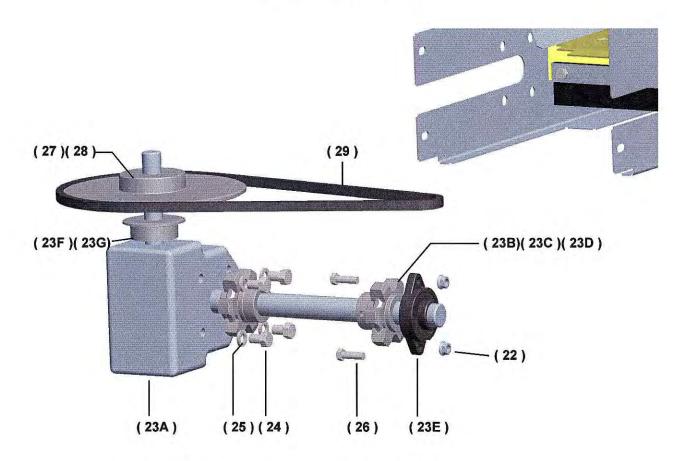


<u>Item</u>	Part Number	Qty.	<u>Description</u>
17	62611	2	Nut, 3/8-16 Ser Flange
	62743	2	Nut, 3/8-16 Ser Flange, SS
18	62613	1	Wiper, Chain
19	62614	1	Bar, Chain Wiper
	63364	1	Bar, Chain Wiper, SS
20	20066	2	Bolt, 3/8-16 x 1-1/4 HH
	62695	2	Bolt, 3/8-16 x 1-1/4 HH SS
21	20353	2	Flatwasher, 3/8
	22230	2	Flatwasher, 3/8 SS



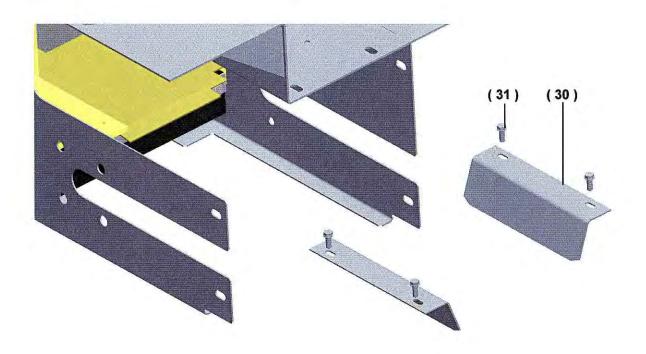
<u>ltem</u>	Carbon Part#	Stainless Part#	<u>Qty</u>	<u>Description</u>
1	62616	62616	1	Assy, Gearbox (W/Sprockets & Bearing)
1A ·	62717	62717	1	Gearbox, 20:1
1B	63095	63095	2	Sprocket, 6T, Keyed
1C	62000	62000	2	Key, 1/4Sq x 2
1D	63332	63332	4	Setscrew, 3/8-16 x 1/4 Al Hd
1E	61163	61163	1	Bearing, 1-1/4
1F	61156	61156	1	Sprocket, 41B13
1G	61196	61196	1	Key, 1/4Sq x 1
1H	62769	62769	1	Collar, Set, 1"
2	62617	62750	4	Bolt, 1/2-13 x 3/4 HH
3	20329	62770	4	Lockwasher, 1/2 Med Split
4	20066	62695	2	Bolt, 3/8-16 x 1-1/4 HH
5	62611	62743	2	Nut, 3/8-16 Ser Flange

PARTS LIST FOR GEARBOX ASSEMBLY ELECTRIC DRIVE



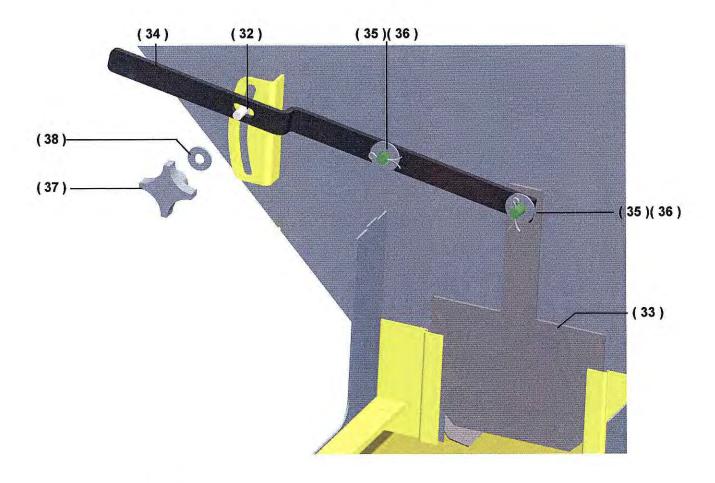
<u>ltem</u>	Part Number	Qty.	<u>Description</u>
22	62611	2	Nut, 3/8-16 Ser Flange
	62743	2	Nut, 3/8-16 Ser Flange, SS
23	63330	1	Assy, Gearbox (W/Sprockets & Bearing)
23A	62717	1	Gearbox, 20:1
23B	63095	2	Sprocket, 6T, Keyed
23C	62000	2	Key, 1/4Sq x 2
23D	63332	4	Setscrew, 3/8-16 x 1/4 Al Hd
23E	61163	1	Bearing, 1-1/4
23F	61157	1	Sprocket, 41B19
23G	61196	1	Key, 1/4Sq x 1
24	62617	4	Bolt, 1/2-13 x 3/4 HH
	62750	4	Bolt, 1/2-13 x 3/4 HH, SS
25	20329	4	Lockwasher, 1/2 Med Split
	62770	4	Lockwasher, 1/2 Med Split, SS
26	20066	2	Bolt, 3/8-16 x 1-1/4 HH
	62695	2	Bolt, 3/8-16 x 1-1/4 HH, SS
27	63333	1	Sprocket, 40B60
28	60421	1	Key, 1/4Sq x 1-1/4
29	63334	1	Chain, Roller W/Connector Link

PARTS LIST FOR REAR SPROCKET SHIELDS



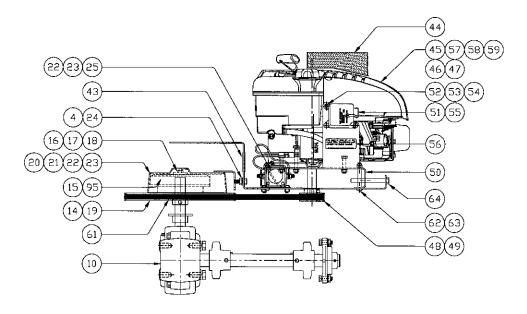
<u>ltem</u>	Part Number	Qty.	<u>Description</u>
30	62662	2	Shield, Sprocket
	63335	2	Shield, Sprocket, SS
31	62667	4	Screw, 1/4-20 x 3/4 HWH Tek/3, SS

PARTS LIST FOR FEEDGATE



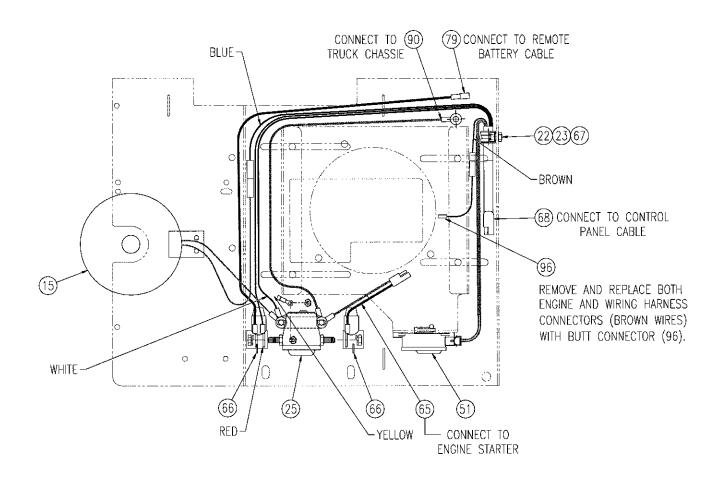
<u>Item</u>	Part Number	Qty.	<u>Description</u>
32	62610	1	Bolt, 3/8-16 x 1 Carriage
	62776	1	Bolt, 3/8-16 x 1 Carriage, SS
33	62620	1	Weld, Feedgate
	63336	1	Weld, Feedgate SS
34	62121	1	Handle, Feedgate
	63337	1	Handle, Feedgate SS
35	61231	2	Pin, 3/32 x 1 Cotter SS
36	62808	2	Flatwasher, 7/16 SS
37	61169	1	Knob, Hand
38	22230	1	Flatwaher, 3/8 SS

LPV - GAS ENGINE DRIVE



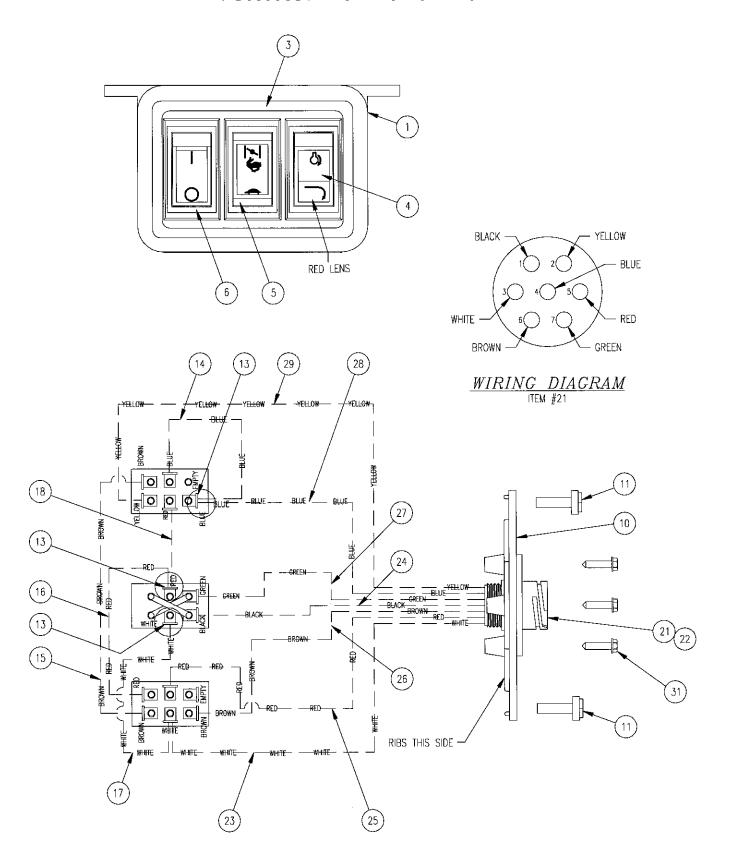
<u>ltem</u>	Carbon Part#	Stainless Part#	<u>Qty</u>	<u>Description</u>
4	62611	62743	1	Nut, 3/8-16 Ser Flange
10	62616	62616	1	Assy, Gearbox 6:1
14	61161	61161	1	Pulley, Driven
15	61167	61167	1	Clutch, Electric
16	20027	62751	1	Bolt, 5/16-18 x 1 HH
17	63103	63103	1	Washer, Clutch Retainer
18	20326	63309	1	Lockwasher, 5/16 Med Split
19	62634	62634	3	Screw, 5/16-18 x 5/8 Soc Cap
20	61168	61168	1	Cover, Clutch
21	62618	62618	1	Bracket, Clutch Retainer
22	62619	62772	4	Bolt, 1/4-20 x 1 HH
23	62187	62690	4	Nut, 1/4-20 Ser Flange
24	63558	62697	1	Bolt, 3/8-16 x 1 HH
25	61179	61179	1	Solenoid
43	62765	62765	1	Grommet, 1-1/4
44	62644	62644	1	Decal, Engine Warranty
45	63010	63010	1	Engine, 6.5hp Brigg & Stratton
46	62937	62937	1	Elbow, 90 Deg (Oil Drain)
47	63559	63559	1	Hose, Drain (Oil Drain)
48	22438	22438	1	Key, 3/16 Sq x 1
49	62938	62938	1	Pulley, Drive
50	63560	63561	1	Plate, Engine Mounting, B&S
51	63165	63165	1	Actuator, 12V
52	62649	62649	3	Screw, #8-32 x 3/4 PH SS
53	62650	62650	3	Locknut, #8-32 Nyl Ins, SS
54	62651	62651	3	Flatwasher, #8, SS
55	63562	63562	1	Linkage, Throttle
56	62643	62643	1	Decal, Fuel Shut Off
57	63563	63249	1	Bolt, 5/16-18 x 2-1/2 HH
58	62764	62773	2	Bolt, 5/16-18 x 1-1/2 HH
59	63304	63310	3	Nut, 5/16-18 Ser Flange
61	62940	62940	1	V-Belt, BX46
62	63564	63565	4	Bolt, 5/16-18 x 3 HH
63	62628	63301	4	LockNut, 5/16-18 Nyl Ins
95	63411	63411	1	Key, 1/4 Sq x 1-1/2
				<u>-</u>

LPV WIRING - GAS ENGINE



<u>ltem</u>	<u>Carbon Part#</u>	Stainless Part#	<u>Qty</u>	<u>Description</u>
15	61167	61167	1	Clutch, Electric
22	62619	62772	3	Bolt, 1/4-20 x 1 HH
23	62187	62690	3	Nut, 1/4-20 Ser Flange
25	61179	61179	1	Solenoid
51	63165	63165	1	Actuator, 12V
65	62941	62941	1	Harness, Starter, 6.5 B&S
66	62106	62106	2	Boot, Battery Cable, Red
67	62652	62652	1	Clamp, Cable, Cushioned
68	63166	63166	1	Cable, Control
79	62943	62943	1	Wire, Remote Battery
90	62944	62944	1	Wire, Ground
96	62188	63557	1	Connector, Butt, 16-14ga

CONTROL BOX - GAS ENGINE



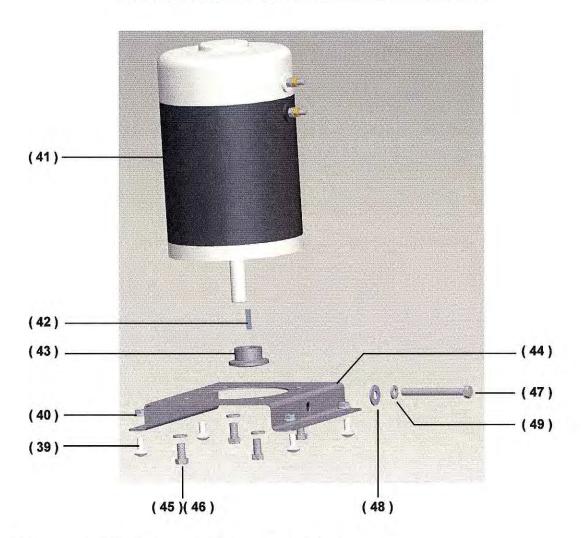
PARTS LIST FOR CONTROL PANEL ASSEMBLY (62334)

<u>ltem</u>	Part Number	Qty.	<u>Description</u>
1	62150	1	Enclosure
3	62670	1	Panel
4	62153	1	Switch, START/CONV
5	62154	1	Switch, Choke HI/LO
6	62155	1	Switch, ON/OFF
10	62158	1	Enclosure, Back Panel
11	62159	4	Screw, #8 x 1/2" SM SLT HWH ZP
13	62156	3	Connector, Double Male/Female
14	62161	1	Jump Wire, 14 Ga., BLUE 3"
15	62162	1	Jump Wire, 14 Ga., BROWN 5.5"
16	62163	1	Jump Wire, 14 Ga., RED 4"
17	62164	1	Jump Wire, 14 GA., WHITE 3"
18	62165	1	Jump Wire, 14 Ga., RED 3"
21	62671	1	Receptical, Sq. Flange
22	62672	7	Connector, Socket, 14 Ga., Tin
23	62673	.333 Ft.	Wire, 14 Ga., White Insulated
24	62674	.333 Ft.	Wire, 14 Ga., Black Insulated
25	62675	.333 Ft.	Wire, 14 Ga., Red Insulated
26	62676	.333 Ft.	Wire, 14 Ga., Brown Insulated
27	62677	.333 Ft.	Wire, 14 Ga., Green Insulated
28	62678	.333 Ft.	Wire, 14 Ga., Blue Insulated
29	62679	.333 Ft.	Wire, 14 Ga., Yellow Insulated
30	62680	7	Terminal Insulated Disc. Female
31	63120	4	Screw, #4-40 x 1/2 Slt Rd HD

NOT SHOWN:

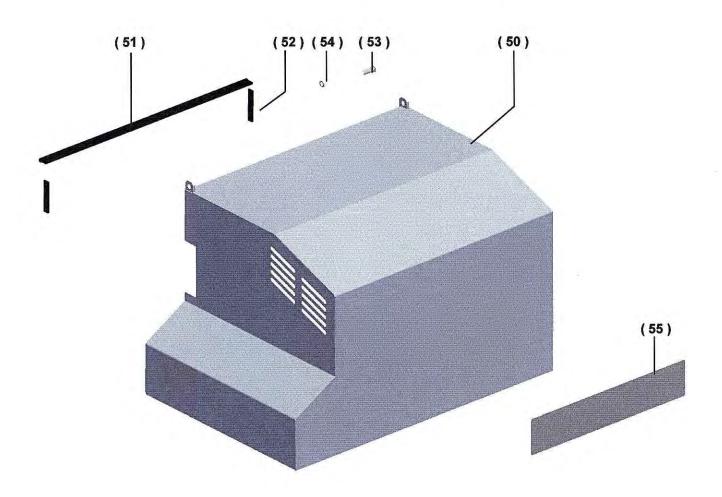
62519 1 Cable, 8 Pin (Front Half)

PARTS LIST FOR ELECTRIC MOTOR



<u>Item</u>	Part Number	Qty.	Description
39	62640	4	Bolt, 5/16-18 x 3/4 Car SS
40	62754	4	Nut, 5/16-18 Ser Flange SS
41	63338	1	Motor, Electric
42	22438	1	Key, 3/16Sq x 1
43	63339	1	Sprocket, 40B11
44	63340	1	Weld, Motor Mounting Plate
	63341	1	Weld, Motor Mounting Plate SS
45	63267	4	Bolt, 3/8-16 x 3/4 HH
	63205	4	Bolt, 3/8-16 x 3/4 HH, SS
46	20327	4	Lockwasher, 3/8 Med Split
	63206	4	Lockwasher, 3/8 Med Split, SS
47	63342	1	Bolt, 3/8-16 x 3-1/2 HH SS
48	22230	1	Flatwasher, 3/8 SS
49	63206	1	Lockwasher, 3/8 Med Split SS

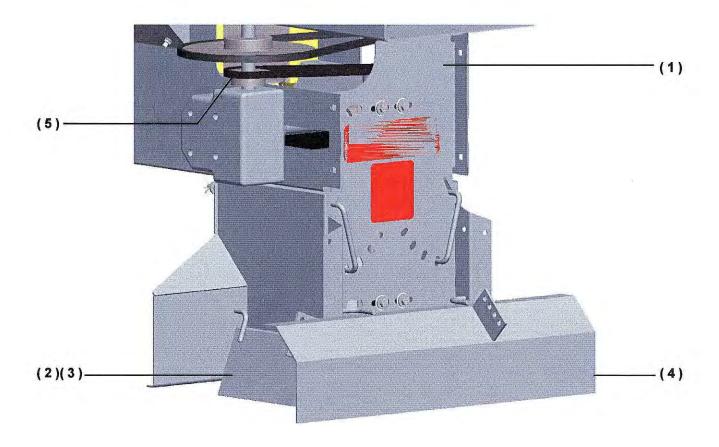
PARTS LIST FOR SHROUD



<u>Item</u>	Part Number	Qty.	<u>Description</u>
50	62636	1	Weld, Shroud
	63343	1	Weld, Shroud, SS
51	62666	1	Trim, Seal
52	63132	A/R	Trim
53	62695	1	Bolt, 3/8-16 x 1-1/4 HH, SS
54	62638	1	Locknut, 3/8-16 Nylon Insert, SS
55	62642	1	Decal, Logo

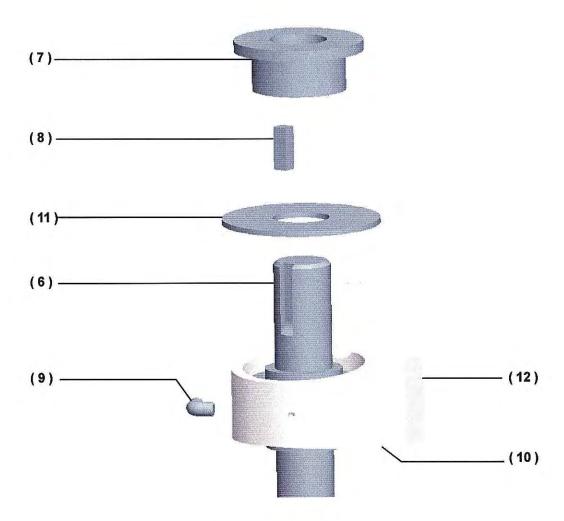
A/R = AS REQUIRED

PARTS LIST FOR SPINNER ASSEMBLY



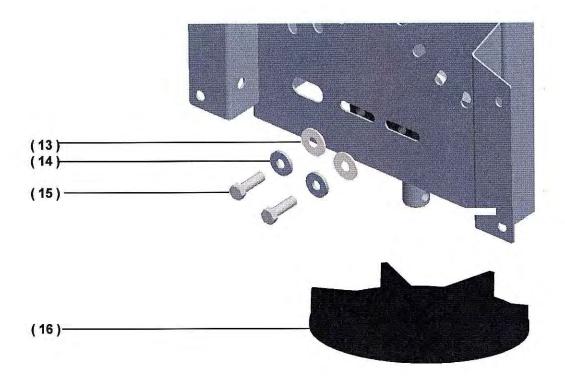
<u>ltem</u>	Part Number	Qty.	<u>Description</u>
1	62682	1	Weld, Spinner Frame
	63344	1	Weld, Spinner Frame SS
2	61182	1	Weld, Baffle RH
	62272	1	Weld, Baffle RH SS
3	61181	1	Weld, Baffle LH
	62273	1	Weld, Baffle LH SS
4	61183	1	Weld, Baffle Rear
	62275	1	Weld, Baffle Rear SS
5	62709	1	Chain, Roller
N/S	62697	6	Bolt, 3/8-16 x 1 HH SS
N/S	62743	6	Nut, 3/8-16 Ser. Flange SS
N/S	62313	3	Bar, Link (Baffle) SS
N/S	61232	9	Keeper, Hairpin Small
N/S	63091	9	Keeper, Hairpin Small, SS
			for the last the state of the survey of the property and the state of

PARTS LIST FOR SPINNER SHAFT



Part Number	Qty.	Description
62985	1	Shaft, Spinner LPV
61156	1	Sprocket, 41B13 (Electric Motor Drive)
61157	1	Sprocket, 41B19 (Gas Engine Drive)
63090	1	Key, 1/4Sq x 3/4
62988	1	Fitting, Zerk 90 Deg.
62356	2	Bearing
63134	2	Washer, Flat, Rubber
62684	2	Block, Spacer, Bearing
	62985 61156 61157 63090 62988 62356 63134	62985 1 61156 1 61157 1 63090 1 62988 1 62356 2 63134 2

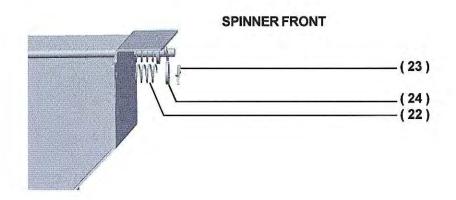
PARTS LIST FOR SPINNER SHAFT

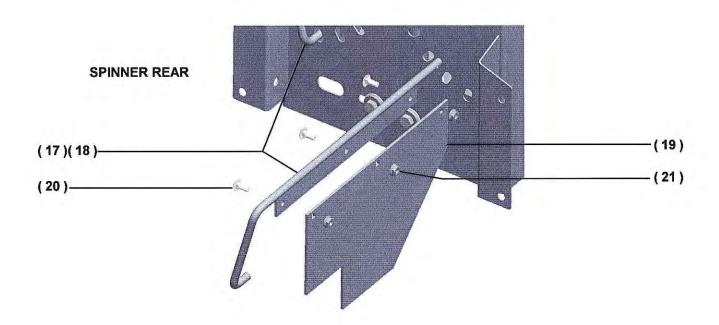


<u>Item</u>	Part Number	Qty.	<u>Description</u>
13	62685	4	Lockwasher, 3/8 Int/Ext TH SS
14	20353	4	Flatwasher, 3/8
	22230	4	Flatwasher, 3/8 SS
15	20066	4	Bolt, 3/8 x 1-1/4 HH
	62695	4	Bolt, 3/8-16 x 1-1/4 HH SS
16	62146	1	Disc, Poly Spinner 13"
N/S	63198	1	Bolt, 3/8-16 x 2-1/2 HH SS
N/S	63348	1	Nut, 3/8-16 Nylon Lock, SS

N/S = Not Shown

PARTS LIST FOR INTERNAL BAFFLE

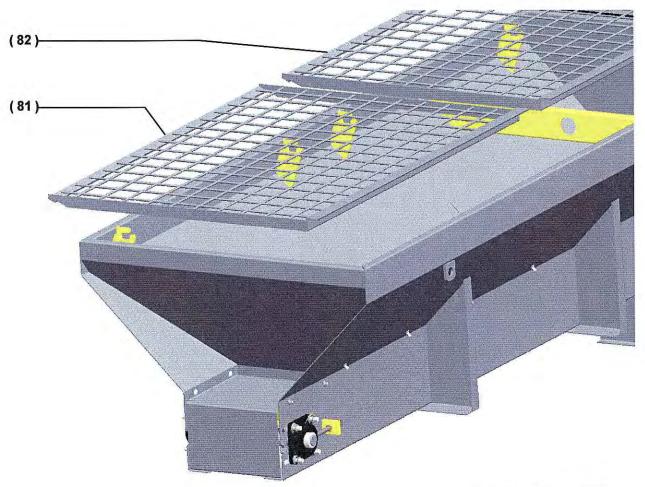




<u>ltem</u>	Part Number	Qty.	<u>Description</u>
17	62333	1	Weld, Handle LH
	62784	1	Weld, Handle LH SS
18	62331	1	Weld, Handle RH
	62781	1	Weld, Handle RH SS
19	62688	2	Plate, Baffle
	63349	2	Plate, Baffle SS
20	62689	6	Bolt, 1/4-20 x 5/8 Carriage SS
21	62690	6	Nut, 1/4-20 Ser. Flange SS
22	62358	2	Spring, Compression
23	62691	2	Pin, 1/8 x 1 Cotter SS
24	20353	2	Flatwasher, 3/8
N/S	63350	1	K, V & PV Safety Decal

N/S = Not Shown

PARTS LIST FOR SCREEN



Part Number	Qty.	<u>Description</u>
63555	A/R	Weld, Screen, 3 ft.
63556	A/R	Weld, Screen, 4 ft.
62663	A/R	Weld, Screen, 5 ft.

8ft	4ft	4ft			
7ft	4ft	3ft			
6ft	3ft	3ft			
5ft	5ft	-			
4ft	4ft	-			
3ft	3ft	-			
Hopper Length	81	82			
SCREENS					

A/R = As Required

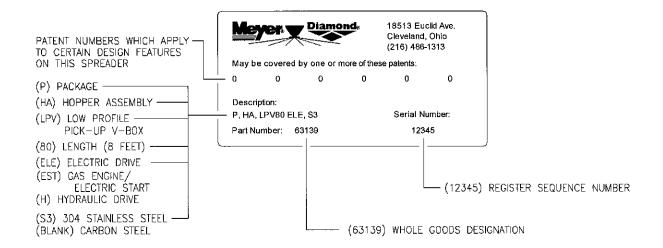
THIS BLAIL

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 No			
Serial No.			
"			
Date Purchased_			
Purchased From _			
Phone No. For Se	rvice		

EXPLANATION OF SERIAL NUMBER DECAL



SPREADER ONE YEAR WARRANTY

MEYER PRODUCTS,LLC ("MEYER") AND DIAMOND EQUIPMENT ("DIAMOND") WARRANTS TO THE ORIGINAL PURCHASER ONLY THAT IT WILL REPAIR, OR, AT THE SOLE OPTION OF MEYER OR DIAMOND, REPLACE ANY PART OF THE NEW MEYER OR DIAMOND 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 OR DIAMOND AND MEYER'S OR DIAMOND'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 OR DIAMOND 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 OR DIAMOND PLOW, SPREADER OR PART, OR FROM USE OF PARTS OR HYDRAULIC FLUID NOT SUPPLIED BY MEYER OR DIAMOND. USE OF THE MEYER OR DIAMOND 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/DIAMOND CLAIMED DEFECTIVE PRODUCT TO THE DISTRIBUTOR/SUBDISTRIBUTOR FROM WHOM THE PRODUCT WAS PURCHASED OR TO ANY AUTHORIZED MEYER OR DIAMOND DISTRIBUTOR/SUB-DISTRIBUTOR, TRANSPORTATION AND FREIGHT CHARGES PREPAID. ONLY MEYER OR DIAMOND 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.

Meyer Products, LLC 18513 Euclid Avenue Cleveland, Ohio 44112 Phone (216) 486-1313 Fax (216) 486-3073 E-Mail advertising@meyerproducts.com

Diamond Equipment 6 Angell Lane Damariscotta, Maine 04543-9801 Phone (207) 563-2226 Fax (207) 563-2229 E-Mail info@diamondplow.com

In order to validate this warranty, please complete this card and mail it.
Name:
Address:
Spreader Medali Sprial No.
Spreader Model: Serial No.:
Installation Date: Purchased From:
37

Postage Required

Meyer Products, LLC 18513 Euclid Avenue Cleveland, Ohio 44112-1084