



Industries, Inc.

Systems that Work!

INSTALLATION-OPERATION-SERVICE MANUAL

**ROLO DUMPER
DD DUMPER
EHD DUMPER**

**Important: READ MANUAL
THOROUGHLY BEFORE
INSTALLING, OPERATING OR
MAINTAINING DUMPER!**

SP Industries, Inc.

2982 Jefferson Rd.
Hopkins, MI 49328

Toll Free: 1-800-592-5959

Fax: 1-269-793-7451

Local : 1-269-793-3232



ENVIRONMENTAL INDUSTRY
ASSOCIATION



WASTE EQUIPMENT
TECHNOLOGY ASSOCIATION

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Safety Notice

SP Industries makes every reasonable effort to produce machines that are safe to operate under normal conditions. It is the responsibility of the machine owner and operator to insure that all safety guidelines are followed and that regular inspections are made to insure that the system is in compliance with all safety regulations that apply. All operators of this machinery must be 18 years of age and trained in the proper use, operation, and safety in accordance with company, manufacturer, and governmental guidelines. All operators of this machinery shall read and fully understand the contents of this manual, and the operation of this equipment, before operating the equipment.

Safe operation begins with the operator and it is the responsibility of the operator to report any conditions that exist that threaten the safe and proper operation of any machinery. Always be aware of your surroundings and never use machinery in any application that is potentially hazardous for the operator or bystanders. Report all hazardous situations to your direct supervisor and lock out and tag out machinery that should not be operated until repairs are made.

Follow all applicable guidelines provided in this manual, by your company and by any governing agency. For more information on current guidelines visit the OSHA website at www.osha.gov and consult your facilities safety director or supervisor.

Warranty Information

All dumpers are covered by our Master Warranty & Product Liability document that was included in the paperwork that was supplied. Normally this information is provided in a packet stored inside the enclosure of the power unit for this equipment. Should you need a new copy, provide your serial number and contact information to SP Industries with a request for the Master Warranty & Product Liability Document. You may contact us via our website at www.sp-industries.com, by phone at (800) 592-5959 or in writing at the address provided on the cover of this document.

Overview

SP Industries warrants its dumper products for up to one year from the date of invoice under normal operation. Components, hydraulics, and electrical are also covered for one year from date of invoice. This warranty is subject to the conditions provided for in the Master Warranty & Product Liability document that was provided at the time of purchase. SP Industries makes no other warranty either expressed or implied for this product. All warranties are void if warranty card provided in the back of this manual is not returned to SP Industries within 30 days after installation of said machinery.

All claims for warranty require pre-authorization by SP Industries. Any parts replaced are subject to inspection prior to reimbursement. For complete detail consult the Master Warranty & Product Liability document included with your equipment or call SP Industries, Inc.

Installation Instructions

All SP Industries, Inc. equipment should always be installed by a trained and approved technician. Be sure to comply with all City, State, and Federal laws that apply to this type of equipment. Please call SP Industries, Inc. if you need to find a dealer or service provider in your area. Failure to provide trained and qualified technicians can result in forfeiture of warranty and damage to your machine.

Never work on any equipment that is not properly Locked Out and Tagged Out!

Before beginning work review the site and measure to be sure that the unit has adequate overhead clearance and will fit into the area chosen. Decide where you will locate the power unit, operator and controls and check to be sure that you have enough hydraulic hose and electrical connections to reach between these items. Be sure that you have sufficient tools including welding equipment, masonry equipment, power tools and hand tools to perform the installation.

Typical Tools Needed

- 1) Fork Lift Truck or Crane. Used to unload and position the equipment.
- 2) Impact Drill and Impact Bit. Used to drill anchor holes to anchor dumper to concrete.
- 3) Welder. May be needed to attach dumper to fixed steel surface, adequate steel decking or to other machinery.
- 4) Hose/Fitting tape for connection to hydraulic and electrical fittings.
- 5) Hand Tools. Various electrical and mechanical tools for connecting hydraulic hoses and completing electrical connections.

Power Lockout and Tag out Guidelines

The following are the General Industry Safety requirements for establishment of a Power Lockout Procedure. It is recommended that you consult the regulations in Standard 29 CFR for "The control of hazardous energy (lockout/Tag out) -1910.147". This standard is available at www.osha.gov or by contacting the OSHA representative in your area. Please consult your companies policy for machinery lockout and tag out procedures.

OSHA requires employers to establish a program, in writing, and utilize procedures for affixing appropriate lockout devices and Tag out devices to energy isolating devices, and to otherwise disable machines or equipment to prevent unexpected energizing, start up or release of stored energy in order to prevent injury.

Energy Control Program

The employer shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, startup or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from all energy sources and rendered inoperative.

A written power lockout procedure shall include but not be limited to the following basic steps:

1. All affected employees shall be trained and authorized to perform lockout/Tag out procedures and service work.
2. All necessary employees shall be trained and authorized for this procedure. Employees shall be instructed in and conform to the following procedures:

Energy Control Program (Continued)

- A. Alert the operator(s) and effected personnel that power is being disconnected. Lockout and Tag out all energy sources.
- B. Before starting repair, service or setup work on engine, motor or power driven equipment, person(s) performing work shall make sure power is disconnected (and any hazardous residual pressure shall be relieved) prior to and during such work. A padlock(s) shall be placed at the point of power disconnect where lockout is required by each person(s) performing work. Individual locks shall be used or an authorized employee of each crew shall be responsible for placing the lock and determining that each crew member is clear before removing the lock, or a supervisor may place a lock for which he has the only key, and assure that all crews are clear before removing the lock. Keys shall be removed at the time of lockout. Before work is started, equipment shall be tested to insure it is inoperable.
- C. No one other than person(s) placing padlock(s) on power lockout shall remove padlock(s) and restore power. (Exception: Supervisor may remove padlock(s) and restore power after a thorough check to make sure that no person will be exposed to danger.)
- D. If it is necessary to work on a machine or installation through a shift change, the padlock(s) of the original employees shall be removed by those employees in the presence of the oncoming shift who will immediately insert their own padlock(s) into the power disconnect. All concerned personnel (operators, repairmen, and supervision) shall be thoroughly informed.
- E. A machine connected to an electrical source by a plug-in cord shall be considered in compliance if the plug is disconnected and tagged, provided that the plug is a legal disconnecting means. Plugs are acceptable as disconnecting means only for portable motors and 100V or less fixed equipment.
- F. All energy stored in the machine shall be released and any moving parts that can cause injury must be secured in a safe manor (such as use of blocking tool) before maintenance can be preformed.

Always be aware of potential hazards and never attempt any action that you would consider dangerous. Safety is your responsibility!

Mounting Instructions

Caution: The dumper unit must be installed level. Failure to level unit may cause serious damage to the unit, void the warranty, and/or create safety hazards. The dumper must be positioned in a manner that will allow for a full swing of the cart without interference. If the dumper is installed and the dumper scoop is impeded by materials while dumping or when returned to loading position or anywhere in between, then damage can occur to the system and void the warranty due to improper usage. Always keep the dumping area clear and clean. Please consult your SP Industries representative should you have any questions about proper installation procedures.

Mounting Instructions

Side Mount

Dumpers with mounting brackets are required to be mounted to the equipment that they feed. Before installing a dumper, be sure that the swing path of the dumper is clear of piping, electrical conduit, beams, ceilings and any other obstructions.

If the equipment to which the dumper is to be mounted is supplied by SP Industries, a mounting panel with studs will be mounted on the equipment. Match up the dumper to the mounting bracket and secure with nuts provided. Check to see that the dumper and equipment are level and aligned properly. If needed, shim the dumper or equipment to insure that alignment and proper leveling has occurred. Once the proper alignment and leveling is set, weld the dumper to the mounting plate attached to the equipment. A continuous weld at all points touching the equipment is necessary to provide the strength needed for the dumper. Failure to properly weld the dumper to the equipment will void your warranty.

For mounting onto previously installed equipment you must first contact the manufacturer of said equipment and obtain written authorization to mount the dumper on to this equipment. Once the authorization is obtained, and/or the proper modifications have been made, you may proceed with installation. Make sure that the dumper is level and is in the proper place to allow clear dumping into/onto the equipment. Tack weld the mounting plate to the equipment. Once tack weld is complete remove bolts and detach dumper from mounting plate. Weld mounting plate to equipment using a continuous weld at all points touching the equipment.

Floor Base Mount

Remote mount dumpers must be anchored securely to a solid foundation adequate to support and hold this equipment secure when fully loaded and in the dumping position. Mounting points will be provided on the dumper and bolt holes will serve as a template for anchor hardware.

SP Industries recommends Anchors with a minimum of one (1) inch diameter and six (6) inches long. If other anchors are used, they each must have a minimum tension strength of 2500 lbs. and shear strength of 3875 lbs.. in concrete.

Position the dumper in the location shown on the installation drawing. Check to be sure that use of the dumper clears all pipes, electrical lines, beams, ceilings and any other obstruction. Level the dumper using shims by placing under anchor feet. **Dumper must be level both front to back and side to side.** Securely anchor dumper to solid secure surface with lag bolts, welding, or both.

Specifics on additional anchoring and positioning may be obtained from SP Industries for each type of dumper or for none standard installations or applications.

Power Unit Mounting Instructions

Floor Mount

Power units can be located on the floor and within 10 feet of the hydraulic hose connections located on the side of your dumper. If you need to place the power unit farther than 10' then you will have to add hydraulic hose or schedule 80 hard piping to make the distance. If the power unit is located more than twenty feet from the equipment, you will need to consult with your SP Industries Representative to determine the proper capacity, diameter of hose, and piping configuration needed for your equipment to operate properly.

Deck Mount

Power units can be mounted on a metal deck. If the unit is mounted in an area where vibration is present then you must secure the power unit to the decking.

Operator Controls Mounting Instructions (For Remote Controls)

Choosing a Location

It is important to choose the proper location for the operating controls to meet ANSI and OSHA safety regulations. Controls must be mounted so that the equipment can be observed while in operation and far enough away that the operator is unable to reach any pinch points or be in the field of motion of the machine. Controls should be mounted a minimum of 42" above the working surface. Controls can be mounted on walls, posts, power units or other nearby equipment as long as there is proper clearance from potential hazards and the surface is permanent. Refer to the published guidelines in OSHA, NEC, and ANSI standards to learn more about proper machine guarding and walking/working surface guarding.

Mounting the Controls

Each control box is equipped with mounting holes in the back of the box. Be sure to mount securely to wall using proper anchors when needed.

Machine Guarding Mounting

Provided Guarding

If ordered, SP Industries will provide additional safe guards for manufactured equipment including but not limited to interlocked gates, doors, screening, and various other specialty guards. Guarding must be installed as indicated on drawings if provided by SP Industries. Guarding shall be designed to meet or exceed all ANSI and OSHA guidelines that are pertaining to this type of equipment. Additional equipment or modifications added must be designed and installed in accordance to ANSI and OSHA guidelines. It is the responsibility of the installer and the equipment owner to be sure that all safety regulations are achieved.

Hydraulic Connection Instructions

Typical Installation

Dumpers are furnished with 10' of hydraulic hose between the power unit and the dumper. If extra length of hose is needed consult your SP Industries Representative for pricing and proper instructions. Additional length may require additional hydraulic capacity and fluid in the system to insure the longevity of your equipment. If designed by SP Industries you may connect the hydraulic hoses to the same power unit as other equipment. It is important to only attach to a system that has been properly engineered and has sufficient capacities and capabilities to handle the extra load. Ask your SP Industries representative for more information.

Check and tighten all factory fittings and hoses. Shipping sometimes causes these connections to loosen. Apply thread sealant tape around all male threads that do not connect to a factory supplied swivel fitting. We do not recommend the use of liquid pipe sealant as seepage into the pump or valve can cause severe damage to the system.

All hard plumbed piping requires schedule 80 pipe and 2,000 p.s.i. pipe fittings. Vibration should be lessened by using hydraulic hose between the cylinder connection and the pipe line, and between the pipe line and the power unit.

All hoses and piping should be configured to not rub against an abrasive or sharp surface. Hoses may "jump" during operation with direction changes and hoses can become worn and cut if not properly installed. Leakage from hoses usually starts in the form of a mist and eventually turns into a steady stream. **An explosion hazard is present if an open flame comes into contact with leaking or spraying hydraulic oil.**

Hydraulic Fluid

Hydraulic fluid is the life blood of your equipment. It is important to be sure that proper levels are maintained to reduce wear and provide your system with adequate lubrication. All SP Industries hydraulic tanks are equipped with a sight gauge to help you to determine the proper level of fluid. The sight gauge should be read only when the cylinders are fully retracted. This is when the cylinders have the least amount of hydraulic fluid. SP Industries recommends a premium grade hydraulic fluid having a viscosity index between 95 to 100 and have a minimum pour factor of -20 degrees. Hydraulic fluid should also contain additives for anti-wear, anti-foam, and water separation.

SP Industries recommends the following fluids for normal operation:

Union 76 Anax AW 150
 Shell Tellus 32
 Mobil D.T. E. 13
 Exxon Nuto H 32

Gulf Harmony 32
 Texaco Rando HD 32
 Standard Industron 44

Important Note:

On reservoir tanks larger than 40 gallons you must remove the temporary shipping plug used to prevent oil leakage during transportation and install the breather cap shipped inside the electrical panel (along with the manuals, schematics, and start keys) before you begin initial start up.

Electrical Connections

Electrical power is customer supplied and requires a fusible disconnect switch. This electrically fused disconnect shall be visible and accessible to the operator of the unit. It is important that you meet all local and national electric codes that are relevant to your facility. SP Industries encourages you to use only licensed and approved electrical contractors to reduce liability and risk of improper wiring or power supply, or initial start up.

Caution: The electrical controls must be connected to the correct power source and voltage (IE: 3 Phase/60Hz, 208, 230, 460). Failure to connect to proper voltage will void your warranty and cause permanent damage to your equipment. Proper voltage is labeled on the control panel and stated on the permanent machine record included with the paperwork found inside the main control box.

If the incoming voltage differs from the voltage stated on the power unit it will be necessary to confirm and change the motor wiring, transformer connections, primary fuses and overloads, and, in some instances, the wire size to adjust the system to the new voltage. For detailed instructions for this change and updated wiring diagrams, contact SP Industries' Customer Service Department for more information.

Extended Height Dumper Chain Adjustment

On Extended Height Dumpers the chain may require occasional adjustment. The purpose of the adjustment is to insure that the scoop is level and the system is properly balanced. Improper adjustment can lead to premature wear and tear on the guide system of the dumper and can reduce the useful life of the equipment. When the scoop is down, equal tension should be on both chains and no more that one-half (1/2) inch of slack should be present. If the chains are not equal, then adjust by loosening the nuts on the tension bolt and adjust the bolt(s) to take up the slack. Be sure to tighten both nuts on the bolt and lock them together. It is important to lock both of these nuts as vibrations can cause movement and misalignment.



Pre Operation Inspection

Before beginning operation walk around the complete system and inspect. Make sure that all access or service panels, doors, and safety gates are closed and in their proper position. Be sure that the equipment is free of obstructions and is not holding any carts, waste, or other materials. The initial running should be with the least amount of load as possible to insure that equipment is operating properly.

Inspect all electrical and hydraulic connections and conduit. Be sure that no hose or cable is located in a potential pinch point area or in contact with sharp edges or abrasive surfaces that could cause damage or premature wear. Inspect the control head, make sure there is not a key in the On/Off switch and the switch is in the off position. Once all checks have been completed you may energize the system at the electrical disconnect box.

Initial Starting Procedure

Prior to using the equipment you must run the system to check for proper motor rotation, then run several times to insure that all electrical and hydraulic connections are properly installed. As you cycle the equipment, observe all piping, hoses, and connections for leakage and securement. If you see any fluid leakage tighten connections or replace hose or piping as needed. If the system operates with a jerky motion, stop the system and tighten all intake connections to the pump from the tank. After smooth cycling is observed, stop the machine in the down position and check the fluid level in the sight gauge. If the sight gauge indicates the reservoir is not full, add an acceptable type of fluid until the gauge indicates the reservoir is full.

Important Note:

Have a qualified electrician check to assure motor rotation is the correct direction before starting the initial test run. Running this machine with the improper motor direction may cause damage and void the warranty.

Final Installation Instructions

After you have completed installation, fill out the Installation Inspection Report located at the end of this manual and return to SP Industries. It is important that this be done by the installer and signed by an agent of the customer. This document must be on file at SP Industries, Inc. to validate the warranty. **Failure to complete and return this document will result in no warranty coverage.** Be sure that the packet of information (manuals, drawings, warranty, work order line sheet, two operation keys, and other important papers) found inside the main control panel is given to or left in a place that the end user can find easily. Contact SP Industries should you have any questions or concerns about this equipment at:

**SP Industries, Inc.
2982 Jefferson Rd.
Hopkins, MI 49328**

Phone: 1-800-592-5959

Fax: 1-269-793-7451

Website: www.sp-industries.com

Operation Instructions

Safety First

Due to the nature of hydraulic equipment and the danger involved from pinch points we recommend that a complete safety inspection be performed prior to each and every use of this equipment. Safety begins with you and it is the responsibility of the equipment owner to provide proper training and protection at the workplace. SP Industries assumes no liability when our equipment is utilized in an application that it was not designed for or when the machine is used improperly. Furthermore, SP Industries is not responsible for training, securing, or operating equipment. We recommend that each operator be familiar with proper standards for safety and operation instructions that are presented by OSHA, ANSI, and your own safety management program or local authority in addition to those presented in this manual.

As the operator of this machinery it is your responsibility to report any and all safety or maintenance issues to your supervisor immediately. **Never operate machinery that you believe to be unsafe.** Lock out and tag out machinery that is unsafe immediately and report to a supervisor. **All operators of this machinery must be 18 years of age or older and have read and understood this manual completely.** It is the owner's responsibility to train and supervise operations of this equipment at all times.

General Operating Instructions

SP Industries, Inc. dumpers are very simple to operate. All dumpers are equipped with a key locked On/Off switch, green start button, sustained manual pressure up/down switch and an emergency stop button. These controls are mounted in the main control panel or on an optional remote control head provided with the machine. To operate the machine, make sure all personnel are clear and unit is safe to operate. Next, insert the key and turn the control system power On. Push the green start button to start the motor. Switch the up/down selector switch to operate the dumper up then down.

This dumper is available with optional automatic operation. Protective panels and interlocked access doors are required and must be installed and operational prior to any automatic operation.

Loading Carts

Carts that are used with our dumpers vary from application to application. Be sure that the cart that you are using is compatible and approved for use in the dumper. All carts should fit completely into the scoop and be secured before the system is activated.

Warning: Dumping carts that are not designed specifically for your dumper can result in injury or damage to personnel and machinery.

Once the cart is properly positioned and secured in the scoop, close all security gates, hook latching bars, attach any safety chains, or position pogo sticks as directed. Pogo Sticks must be in proper alignment holes to insure that cart is held properly. Failure to set pogo stick as prescribed can cause injury to the operator, bystanders, and to equipment.

Operation Instructions

It is the responsibility of the operator to insure that the area around the dumper is secure and free of debris, personnel, and other potential hazards prior to each operation cycle and during each cycle. Controls should be mounted away from the dumper to insure that the operator is clear of the unit prior to operation. Additionally, the operator should have a clear view of the complete dumper area to insure that no personnel or foreign objects can get into the path of the dumper during operation. The operator must also be aware that debris may be ejected from the dumper in the process of dumping and a clear area around the dumper shall always be maintained for safety.

WARNING: Never operate dumper when people or moving objects are in close proximity or when the risk of damage or injury is present.

Operation instructions are provided on a decal with each unit. These instructions should be mounted next to the controls for the unit. Below is a sample of operation instructions for your review. **Your instructions may vary based on the options and type of dumper.**

Manual Operation Instructions

MANUAL DUMPER OPERATION

Caution: All personnel must be clear of the dumper area before operation begins.

Danger: Objects may be ejected from the dumper during the operation.

Important: Only personnel over the age of 18 who have read the operation manual and/or have been instructed in the proper use of this equipment shall operate the dumper and/or compactor.

To operate the system:

1. Open Gate or safety restraining device and Load Cart into Dumper.
2. Close Gate or attach safety restraining device securely.
3. Turn the Keyed Off-On Switch to the "On" Position.
4. Pull the Stop Button out to the neutral position then Press the Green Dumper Start Button.
5. Turn and Hold the Sustained Manual Up/Down selector switch to the Up position until the dumper has reached the fully up position (The cart will stop any time the sustained manual switch is released).
6. When contents have been emptied from the cart, turn and hold the Sustained Manual Up/Down selector switch to the down position and hold till the dumper returns to the fully down position (The cart will stop if sustained manual switch is released).
7. Unhook safety chain or restraining device and remove cart from dumper.

The dumper will stop immediately when the Keyed Off-On Switch is turned to the "Off" position, the Stop Button is pushed or the Up/Down switch is released.

The Red Light will illuminate in the Stop Button while the dumper is running.

WARNING: To prevent personal injury, you must always remove the key when the dumper is not in use.

AUTOMATIC DUMPER OPERATION

Caution: All personnel must be clear of the dumper area before operation begins.

Danger: Objects may be ejected from the dumper during the operation.

Important: Only personnel over the age of 18 who have read the operation manual and/or have been instructed in the proper use of this equipment shall operate the dumper and/or compactor.

To operate the system:

1. Open Door and Load Cart into Dumper.
2. Close Door Securely. (Dumper will not operate unless gate is properly closed)
3. Turn the Keyed Off-On Switch to the "On" Position.
4. Turn the Keyed Auto/Manual switch to Desired Position.
5. For Automatic Operation press Dumper Start Button. When Dumper Returns to the Floor and the System Stops, Open Gate and Remove Cart.
6. For Manual Operation Press Dumper Start Button then turn and hold the Up/Down Switch in the up position until Dumper has dumped load completely. Note: The dumper operation will stop when the button is released.
7. Turn and hold the Up/Down switch to the Down position and hold until Dumper returns to ground. Open Door and Remove Cart.

The dumper will stop immediately when the Keyed Off-On Switch is turned to the "Off" position, the Stop Button is pushed, the Up/Down switch is released, or the interlocked door is opened.

The Red Light will illuminate in the Stop Button while the dumper is running.

WARNING: To prevent personal injury, you must always remove the key when the dumper is not in use.

Maintenance

Each SP Industries machine is engineered to make maintenance and service as simple as possible. Proper lubrication will allow you to get the maximum life out of our machines. SP Industries recommends that you lubricate your equipment after 40 hours of standard operation. In situations that require washdown of equipment, we recommend that you lubricate the machine after every washdown. This will insure that the system runs at peak efficiency and the system life is preserved. In most cases lubrication is done through grease fittings located near the pivot points and on bearings of the machine. On EHD dumpers lubrication of the chain and sprockets should be done after every 120 hours of standard operation or after every washdown. Each lubrication point is labeled for easy identification.

Warning: Leaking or spraying hydraulic fluid may present an explosion hazard. Shutdown equipment immediately and lock-out/tag-out this equipment. Notify supervisor before you proceed.

Operator Inspections

Visual inspections should be done by a trained technician or authorized person on a daily basis to insure that the dumper is free of obstructions, damage, or tampering. Check hoses for leaks, wear due to rubbing, or cracks and other hazards. If you ever see fluid spray from hoses or fittings shut down machinery immediately. Should you discover any leaks, damage, or other problems, notify your supervisor and maintenance staff at once. **Never operate machinery that you believe to be unsafe!**

Check to insure that the dumper is properly secured to the floor, wall, or other acceptable and stable structure or equipment. Bolts should be tight and welds should show no signs of deterioration. Visually inspect bearings and wear surfaces and report any unusual wear or damage.

Maintenance Inspections

Visual inspections should be done to insure that the proper level of hydraulic oil is maintained in the reservoir of the power unit. This can be done by examining the oil sight gauge located on the tank. Be sure to have the dumper in the fully down position so that the hydraulic cylinders are as compressed as possible. If the dumper is extended, the gauge may show a false reading and the risk of adding too much oil is present. If oil is needed, add by removing the fill cap on top of the reservoir and pouring the proper hydraulic oil into the reservoir. The correct types and brands of fluid are listed in the installation instructions on page 6 of this manual.



Lubrication of dumpers is necessary for maximum efficiency and life of the machine. On Rolo type dumpers there are generally six (6) grease type fittings that require greasing after a minimum running time of 40 hours. Depending on your usage more lubrication may be necessary. All fittings should be lubricated after each washdown of the equipment. Lubrication points are labeled by the manufacturer and we recommend that if these labels are worn or loose they should be replaced as soon as possible. Extended Height Dumpers generally have four (4) lubrication points and two (2) chains that require light oil after every 120 hours of operation or after every washdown.

Extended Height Dumpers (EHD) also require inspection of the chain linkage on a regular basis. The chains may stretch and cause the dumper cart attachment to be misaligned during operation. This lack of alignment will lead to premature wearing of the track, bearings, and wheel assemblies. Adjustment of the chains can be done by following the detailed instructions in the installation portion of this manual. See Page 7 for additional instructions.

Maintenance Procedures (Continued)

Filter Maintenance

Each SP Industries Power unit is protected with a in-tank strainer for the hydraulic fluid. Always wear protective gear when working with hazardous liquids. To properly locate this filter see the hydraulic drawing provided with this unit. If you need a new copy of this drawing, contact SP Industries at 1-800-592-5959. SP industries recommends cleaning and inspection of this strainer after the follow service hours:

Initial 84 operating hours

Every 500 operating hours

To clean this strainer we recommend that you soak the strainer in Kerosene or other solvent to loosen the contaminant. Lightly scrub the strainer with a soft bristle paint brush. **Do Not Use A Wire Brush.** Remove embedded contaminant's with clean, dry shop air. Direct the flow of air against the inside of the strainer with a perforated support. Again, wash the strainer in solvent and blow with shop air. Inspect the strainer for damage and holes that can leak dirt into the pump and valve. Replace strainer if damage or holes are present. You may now reinstall the strainer into the hydraulic tank. **Never run the pump with out a strainer in place.**

Troubleshooting

Troubleshooting Guidelines

Safety should always be your primary concern when working with equipment. As you troubleshoot be sure to lock out and tag out power source if exposing hazards in the work place. It may be necessary to block the scoop if the location of the scoop is not in the fully down position. Blocking should be done to insure that you relieve all pressure in the system that could cause injury. This includes hydraulic pressures in hoses and valves. Always test the machine to be sure that power is disconnected and that all of the pressures are relieved.

OSHA requires employers to establish a program, in writing, and utilize procedures for affixing appropriate Lockout devices or Tag out devices to energy isolating devices, and to otherwise disable machines or equipment to prevent unexpected energizing, start up or release of stored energy in order to prevent injury.

If Motor Fails To Start.

- 1). Check that the power disconnect is in the “On” position and proper line voltage is entering the control box.
- 2). The On/Off Switch must be in the “On” position, the Stop Button in the neutral position, and the Start Button must be pushed.
- 3). Check the 2 amp fuse located on the circuit board or control panel.
- 4). Check for proper line voltages going into and out of the transformer.
- 5). Check for tripped overloads on the motor starter.
- 6). Call the factory or an electrician if 1 through 5 above check out, but the motor still fails to start.

Motor Starts, But Dumper Fails To Move

- 1). Check the level of hydraulic fluid in the reservoir. If it is low, add hydraulic fluid until it reaches the proper operating level.
- 2). Check the rotation of the motor. The shaft must rotate in the direction as shown on the arrow decal mounted on the motor housing.
- 3). Check the motor and pump coupling. The motor coupling must be in contact with and turning the pump coupling.
- 4). The Directional Control Valve may be stuck in neutral position or the valve solenoid may be defective. To dislodge the control valve, insert a small rod into the end of the solenoid housing and push in while the motor is running; the dumper should go up or down. If it does not go up or down, the spool may be inoperative.
- 5). Check whether or not the pump is building pressure. If not, it may be defective.
- 6). If there is no pressure, the relief valve spring may be broken. In order to check the spring, unscrew the pressure setting screw until the spring is exposed. If the spring is broken, replace.
- 7). If 1. through 6. fail to resolve this problem, the cylinder may be defective. Contact the factory for further information.

Troubleshooting (Continued)

The Dumper Runs Momentarily, Then Shuts Off. The Starter Heater Overloads Are Tripped And Have To Be Reset

- 1). Check that the incoming voltage is +/- 10% of the motor nameplate.
- 2). Check that one phase of incoming power is not lost (3 phase only).
- 3). Check the overloads for correct sizing.
- 4). Check for hydraulic pump failure.
- 5). Check for viscosity problems with or water in the hydraulic fluid. (Water will cause milky looking fluid)

Dumper Runs Sluggish and Slow.

- 1). Check that the incoming voltage is +/- 10% of the motor nameplate.
- 2). Check that the hydraulic fluid is not bypassing due to a problem in the hydraulic pump, relief valve, cylinder or lines.
- 3). Check hydraulic fluid level and fill if necessary.
- 4). Check that the wrong hydraulic fluid has not been added.
- 5). Check the hydraulic fluid for contamination.

Control Panel Buttons Don't Function As They Should

- 1). Check the push-button contact blocks and/or wiring on contact blocks.
- 2). Check for loose wires inside the control panel.
- 3). Check the relays. They may be loose or faulty.

Control Panel Has A Chattering Or Clicking Sound When The "Start" Button Is Pressed.

- 1). Check that the supply voltage is the same as the wired voltage.
- 2). Check for loose wires inside the control panel.
- 3). Check the relays. They may be loose or faulty.

Dumper Does Not Shut Off When It Returns To The Floor. (Automatic Operation)

- 1). Check that the stop limit switch operating arm is not broken or jammed.
- 2). Check that the stop limit switch is adjusted properly.
- 3). Check the relays. They may be loose or faulty.

If problems still exist call the SP Industries Service Department at 1-800-592-5959



SP Industries, Inc.
2982 Jefferson Rd.
Hopkins, MI 49328

1-800-592-5959

www.sp-industries.com

(fold on dotted line)

From: _____

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Postage
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2982 Jefferson Rd.
Hopkins, MI 49328

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Tape Here

Food Waste System Addendum

AUTOMATIC DUMPER OPERATION (FOOD WASTE SYSTEM)

Important: Only personnel over the age of 18 who have read the operation manual and/or have been instructed in the proper use of this equipment should operate the dumper.

1. The Keyed On/Off Selector Switch in the main control panel must be in the "On" position.
2. The Keyed Auto/Override Selector Switch must be in the "Auto" position.
3. The Emergency Stop Button must be pulled to the out position.
4. Open the safety gate and load the cart into the dumper scoop.
5. Close the safety gate and latch.
6. Push the System Start Button.
7. The dumper will raise the cart. When the dumper reaches the full dump position, the dumper will hold this position for 10 seconds before lowering the empty cart.
8. The dumper will continue to run until:
 - A. The Emergency Stop Button is pushed.
 - B. The dumper scoop has returned to the floor.
 - C. The container is full. The Full Container Light indicates when the container is full.