



Before using this equipment,
study and understand entire
Owner's Manual.

Serial Number _____

38 Special Pump Owner's Manual

HP38 Trailer Mounted
HP38SM Skid Mounted
HP38SS Skid Steer



38 Special Pump
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INTRODUCTION

The 38 Special Pump is a self-contained, portable, robust machine built to deliver grout, mortar, or concrete on the job site. The HP38SS model is ruggedly built and can be transported via skid steer. The HP38SS is powered utilizing the skid steer hydraulics. The HP38SM is mounted on a sturdy frame complete with four outrigger legs and a 37HP Kohler engine. Additionally, the HP38 is equipped with a hitch, a drop leg jack, safety chains, single axle and protected rear lighting. The HP38SM and HP38 units are equipped with a rear-mounted tool box for storage of clamps, tools, and clean out fittings.

On the HP38SM and HP38 models, a 37HP Kohler ECH980 gas engine powers the hydraulic pump, driving a single auger for outstanding pumping capabilities. The 38 Special Pump handles up to 3/8-in. diameter aggregate, including pea gravel, and is ideal for filling block walls. The hopper is equipped with a 3 inch pipe wing nut expanding plug to facilitate quick and efficient cleanup.

The well-designed operator control panel includes pressure gauge, a control panel for speed adjustment and forward and reverse operations, a switch for the optional vibrator motor (available option on HP38SM and HP38 only), and a tiny-tach. The E-Stop is located on the face of the electrical box inside the enclosure and, the hopper grate has a safety switch that shuts the machine down when the grate is lifted.

Before operating the 38 Special Pump, carefully read and understand the information contained in this manual. The manual provides basic guidelines for operator safety, proper operation, and maintenance of the 38 Special Pump. To prevent injury or death, conduct routine maintenance on the 38 Special Pump, do not operate outside of recommended use, and always be aware of the surroundings. Store this manual in the manual canister, mounted on the inside of the engine enclosure, for quick reference of operating, cleaning, and maintenance procedures.

GENERAL INFORMATION





Illustrations throughout this manual are representative and may show details or components that may not be the same as your machine. Continuing machine design improvements may cause changes not included in this manual. The information in this document is subject to change without any prior notice.

ABOUT THIS MANUAL

This manual is provided with the 38 Special Pump to inform the equipment owner/operator how to safely operate the machine and become aware of hazards. It also contains important information regarding set up, operation, maintenance, and repair procedures. It is the responsibility of the equipment owner/operator to make sure anyone who operates this machine understands all safety warnings. If you do not understand any items in this manual, please contact the dealer where this product was purchased or the manufacturer at the number listed throughout this manual. If you have any suggestions about how to make this manual easier to understand, contact the manufacturer. Keep this manual available for reference wherever this piece of equipment is being used and make it available to any operators.

SAFETY INFORMATION

The following safety symbols and signal words will be used throughout this manual and on the product, for your safety and the safety of others, please become familiar with their meaning and heed their warnings.

	This symbol, either used alone or with a signal word, is used to call your attention to instructions involving your safety and/or the safety of others. Failure to follow these instructions will likely result in personal injury or death.
 DANGER	This signal word is used to identify a hazard which, if not avoided, will result in death or serious injury.
 WARNING	This signal word is used to identify a hazard which, if not avoided, could result in death or serious injury.
 CAUTION	This signal word is used to identify a hazard which, if not avoided, could result in minor or moderate injury.
NOTICE	This signal word is used to identify a hazard which, if not avoided, could result in property or equipment damage. It also may be used for special instructions related to performance, maintenance or general items.

To prevent serious injury or death, thoroughly read and understand all aspects of this manual. Ensure safety practices discussed in this chapter are put into practice when operating the 38 Special Pump. This chapter is NOT all-inclusive. It is the responsibility of each operator to abide by all other safety precautions implemented by the company, owner of the equipment, state, federal and local government.

SAFETY PRECAUTIONS

Required Personal Protective Equipment (PPE)

The use of PPE is critical to safe operation and well-being of the operator. The following PPE and information (this list is not all-inclusive) should be used in the safe operation of the 38 Special Pump:

- Jewelry removed (especially necklaces and rings)
- Long hair tied back
- Close-fitting work clothes that do not hinder movement
- Safety glasses with side shields, or goggles
- Hearing protection
- Safety-toed footwear
- Occupational Safety and Health Administration (OSHA)-approved hard hats
- National Institute for Occupational Safety and Health (NIOSH)-approved ventilation masks when dust is present
- Protective gloves
- Rubber boots and rubber gloves when performing clean out procedures



General

- Make sure anyone operating the 38 Special Skid Steer, Skid Mounted, or Trailer Pump is thoroughly familiar and understand its operation. Keep all unauthorized and untrained personnel, especially children, away from the machine.
- For your safety and the safety of others, replace any missing or damaged warning decals by contacting the manufacturer at 1-800-417-9272.
- Never operate machine with the safety grate, guards, or safety devices removed or open. Do not alter any safety guards.
- Be sure any clothing you wear does not have strings, fringes, or other external tightening means that could be caught in moving parts.
- Keep all body parts, clothing, jewelry, and solid objects away from all moving parts.
- Never perform any work on the machine while it is running. Before working on or cleaning the unit, turn the ignition key off and disconnect the negative battery cable.
- Never operate the machine when under the influence of alcohol, drugs, or medications.
- Do not use the 38 Special concrete pump for anything other than its designed purpose of masonry grout, SCC(Self-Consolidating Concrete), small diameter (up to 3/8-in.) media (pea gravel), shotcrete, slurry, and light-weight concrete.
- Mixes with crushed aggregate are not recommended and may cause material separation.
- Stay clear of moving parts while the machine is in operation.
- Operate machine only in a properly vented environment.
- Wear a mask and avoid breathing dust produced while using the machine. Dust may contain crystalline silica and may cause serious health problems.
- Always know the location of nearest fire extinguishers, first aid kit, and phone with first-responder contact numbers in case of emergency.

SAFETY PRECAUTIONS

WARNING

Towing

- Ensure the outrigger legs are pinned and locked in the stowage position before traveling. If the locking device is damaged or worn, it should be repaired immediately and the unit must not be driven until the outrigger legs can be positively locked.
- The 38 Special Pump is supplied with a 2-5/16" ball hitch connection. Verify correct hitch before connecting to the HP38.
- Safety chains must be used with HP38 when unit is in tow.
- Insure tow vehicle and hitch have a rated GCWR, GTW, and tongue weight capacity to handle HP38.
- Always chock wheels of HP38 when not coupled to a tow vehicle.

Model	Empty Weight	Tongue Weight
HP38SS		N/A

Model	Empty Weight	Tongue Weight
HP38SM		N/A

Model	Empty Weight	Tongue Weight
HP38	2234 lbs. (1013 kg)	237 lbs. (107.5 kg)

Model	Tire Size	Tire Pressure
HP38	ST225/75R15	65 psi (245 kPa)

SAFETY PRECAUTIONS

Hydraulic System

- The hydraulic system is under pressure and oil may be hot.
- Always allow the machine to cool completely before performing service.
- Always relieve pressure in the hydraulic system before performing service.
- Always use appropriate safety equipment and clothing to protect exposed skin and eyes from high pressure oil.
- Tighten all connections to proper specifications before applying pressure.
- Never use bare hands to check for leaks. Oil under pressure can penetrate the skin, and can cause gangrene within a few hours if not properly removed. Use a piece of cardboard to check for leaks.
- Inspect all hoses and fittings for signs of damage, wear scrapes, kinks, or cracking. Replace hoses if any of these conditions are found. It is recommended to replace all hydraulic hoses every 5 years.

Electrical System

- Always disconnect the negative (-) before servicing, removing, or installing electrical components.
- Always disconnect the negative terminal first and positive terminal last. Connect positive terminal first and negative terminal last. Use care when dealing with live circuits to prevent arcing. Arcing may result in death or serious injury.
- Use care to prevent arcing when working on live circuits or components. Arcing can cause component damage and may ignite flammable materials.

CAUTION

- Before operation, inspect all hoses, fasteners, bolts, and welds for nicks, cracks, cuts, damage, wear, or looseness before each use. Repair as needed.
- Always wear approved PPE, including glasses, hearing protection, hard hats, and ventilation masks when operating the machine.
- Avoid contact with hot hydraulic oil.
- Allow system to cool before performing any repairs or service, such as adding fuel, oil, or coolant.
- Use only factory authorized parts.
- Used lubricants such as engine oil, hydraulic oil, and hazardous waste must be taken to an authorized disposal or recycling center.
- The 38 Special Pump must be stable before operating the machine. Level the machine if placed on a slope or uneven terrain. Failure to comply may result in personal injury or equipment damage.

California - Proposition 65 Warning

Engine exhaust and some of its constituents, and some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. Some examples of these chemicals are:

Lead from lead based paints - Crystalline silica from bricks -Cement and other masonry products -Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: ALWAYS work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

CONTROLS AND SWITCHES

Pump Control Panel



“Forward” is a maintained switch that will run the rotor / stator pump in the pumping direction, the indicator light will illuminate during operation.
“Reverse” is a spring return position and will allow the pump to reverse whilst the switch is operated. The indicator will illuminate during operation.
The graduated rotary knob controls the speed at which the pump rotates during operation and can be adjusted during operation.

System pressure gauge, reading pressure of the motor system during rotation.



The picture below shows the vibrator motor option. The vibrator switch is located on the fuel tank side of the engine enclosure and operates the vibrator motor mounted on the hinged grate on top of the pumping hopper. This is used to assist grading the material through the grate. Do not operate with engine stopped. Operating the vibrator motor with the engine off will deplete the battery.



CONTROLS AND SWITCHES

Engine Ignition switch and starter switch



In the "RUN" position the ignition is "ON" and the engine ready to run. In the "RUN" position all other switches become operable and the hydraulic cooling fan will operate (not independently switched). Do not leave the switch in the "RUN" position with the engine stopped.

The "START" position is a spring return position. When twisted clockwise it will engage the engine starter. When released it will disengage.

NOTE: The engine has power generation abilities to cover the operation of both the cooling fan and vibrator while running. When not running the battery will drain rapidly. It is strongly advised that all switches be turned OFF when the engine is not running.

Engine Choke lever



Move the lever to the right to operate the choke "ON", left to turn "OFF"

Engine Throttle lever



To increase engine speed slide the lever to the left. To decrease slide the lever to the right.

TOWING

Trailer checks

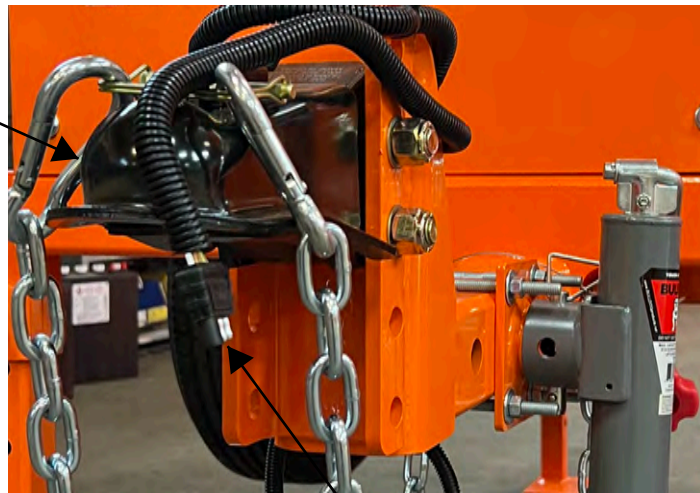
The unit is a highway registered, tow-able machine. It is fitted with DOT approved tires, lights, and 2-5/16" ball coupling hitch.

Ensure ALL parts of the pump and trailer are secured. ALL lids secured. ALL tools, hoses etc. either stowed or secured. Check the correct operation of all lighting.

The single axle is rated @ 3500 LB and does not have brakes. The electrical connections to the tow vehicle are via a standard 4-Pin type connector plug.

The 2-5/16" channel style coupler is bolted to the tongue assembly and must be pinned closed when coupled to the tow vehicle. The hitch can be raised and lowered to suit tow ball height using the different hole positions provide in the tongue assembly.

Channel Style
Coupler



4-Pin connector

It is suggested that the unit be placed as close as is practicably possible to the discharge location so that excessive pumping distances can be avoided, helping to minimize the burden on the machine.

The unit should be leveled using the tongue jack prior to operation of the engine. A slight rise from tongue to pump is acceptable to help with draining the hopper.

PRE-OPERATION CHECKS

Drive system

Engine exhaust and ventilation

The engine fan cowl and the heat exchanger opening must be free of ALL obstructions. The fans must be free to rotate and draw air at all times to ensure that the motor and hydraulic fluid are correctly cooled.



Pay attention to the engine exhaust flow toward the right side of the engine enclosure as it will be hot and contain exhaust fumes.



Prior to operation ALL fluid levels should be checked and be in good order.

DAILY PRE-OPERATION CHECKS

Engine oil level

Check using the dip stick situated at the rear of the engine (looking from the operator controls). Filling is carried out through the filler cap.



Hydraulic fluid

Hydraulic oil level is checked through the sight tube from the outside of the machine.



Filling access is on top of the enclosure located to the rear of the left side



DAILY PRE-OPERATION CHECKS

Hydraulic fluid filling via the filling cap with built in strainer (shown with enclosure top removed).



Fuel level

Fuel level is checked by visually inspecting the tank via the filler opening.

Warning - Do not drain fuel system completely of fuel.

Danger - Do not fill while the engine is running.

Danger - Do not fill while the engine is hot.



View shown with 8 gallon tank. 16 gallon tank available.

DAILY PRE-OPERATION CHECKS

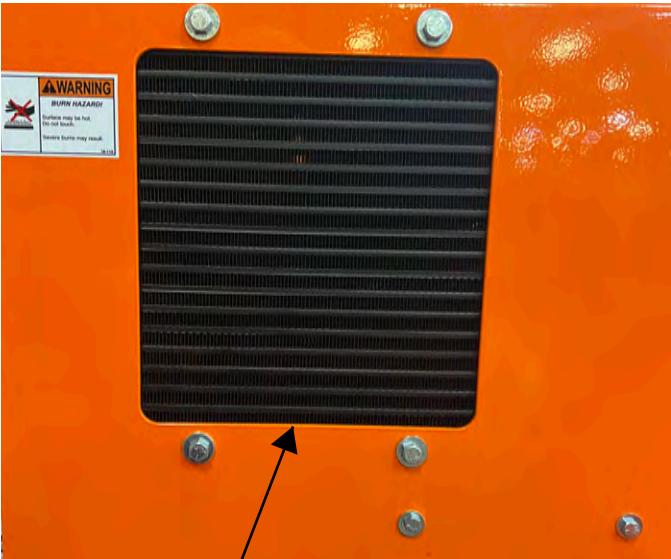
Battery

Check all battery connections for security and being free of corrosion.



Cooling fan

The cooling fan operates whenever the unit is operational. Due to the low volume of hydraulic oil in the system correct operation of the fan is critical. Ensure that the vent and the fan are clear of all obstructions. The cooling fan exhaust is diverted through the top of the enclosure via a heat shroud.



Keep this area clear of dirt and debris.



Heat Shield

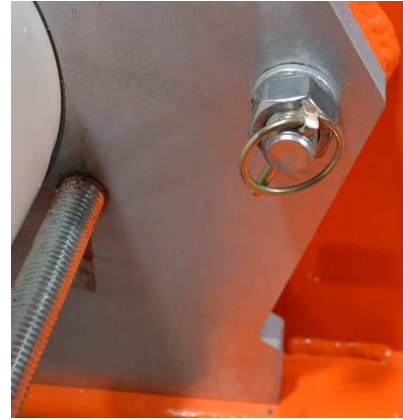
PRE-OPERATION CHECKS

Pumping unit

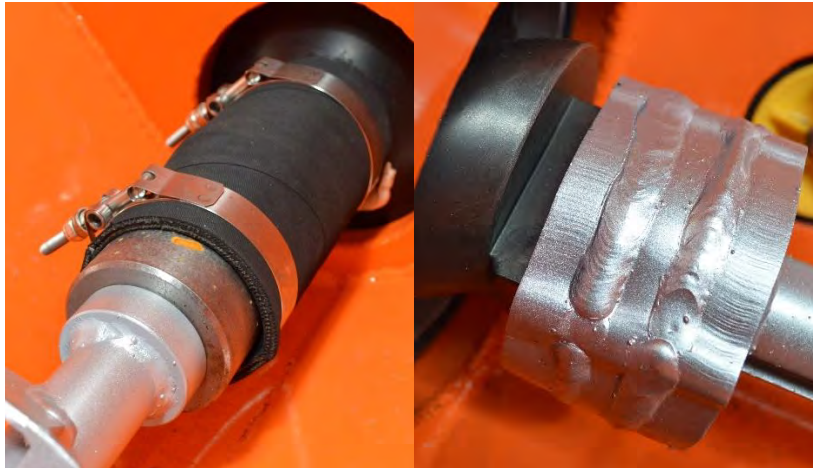
Ensure that the pumping unit is correctly secured to the front of the material hopper and all nuts tight and secure.

Pay attention to the clamp nuts installed either side of the stator unit. Make sure they are tightened and pinned securely.

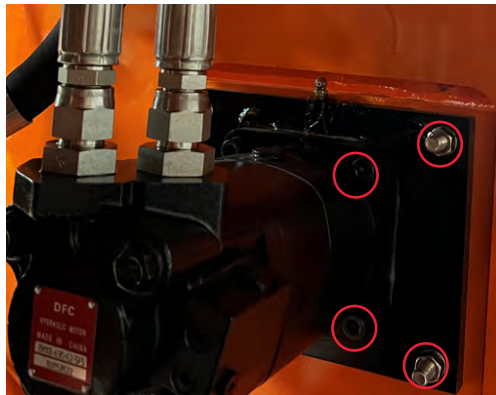
NOTICE! Never run rotor stator dry.



Check that the drive shaft is correctly engaged into the UJ and that the socket is engaged over the head of the rotor.



Check that the fasteners that hold the hydraulic motor to its mounting plate and the plate to the hopper are secure.



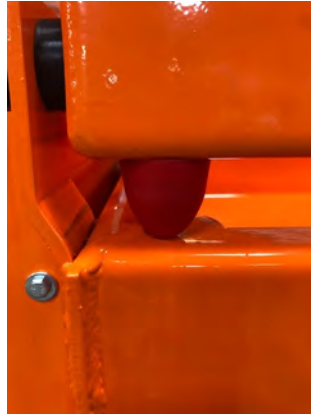
DAILY PRE-OPERATION CHECKS

Check that the vibrator grate is in the lowered position, resting on its rubber “bumper” feet.



Shown with optional vibrator motor.

Rubber / Poly bumper shown.



Ensure that ALL fasteners are present, in good condition and tightened securely prior to any operation.

DAILY PRE-OPERATION CHECKS

!! IMPORTANT PROCEDURE !!

The pre-start pressure test check is a crucial part of pre-operation checks and must be performed daily before pump operations can begin. This test is to ensure the correct operation of the rotor-stator and to prevent unnecessary wear on the rotor-stator.

Daily Pre-operation Pressure Test

- Start the engine and let idle.
- Securely install the pressure test rig on the output flange.
- Shut the ball valve on the pressure test rig.
- Fill the hopper to a water level that is approximately 1" above the inner outlet opening. Add approximately 1 tablespoon of a mild dish soap for every gallon of water. This provides a level of lubrication for the dry rotor and stator making it easier to break free without damage.
- Slowly adjust the throttle lever increasing the engine revs to maximum.
- Set the speed control on the pump control panel to approx. 50%, then push the toggle switch to the "FWD" position and observe the auger rotating inside the hopper in the forward direction. The forward direction can be verified by briefly and quickly opening and closing the ball valve on the pressure test rig to ensure water from the hopper is being pumped out of the unit.
- With the ball valve closed observe the psi indicated on the pressure test rig gauge. 150 psi is the recommended operating range. If the indicated psi is below 150 then adjustments to the stator housing clamp is necessary.

Stator Housing Clamp Adjustment

Step 1: Remove stator cover.

Step 2: With the engine running as described in the previous section loosen the bolts indicated by the number 3. Start at one end and tighten the adjusting bolts as indicated by the number 1 in the picture below. Tighten stator housing bolts evenly to adjust the pressure on the pressure test rig. 1/4 to 1/2 turn each at a time is a good place to start.

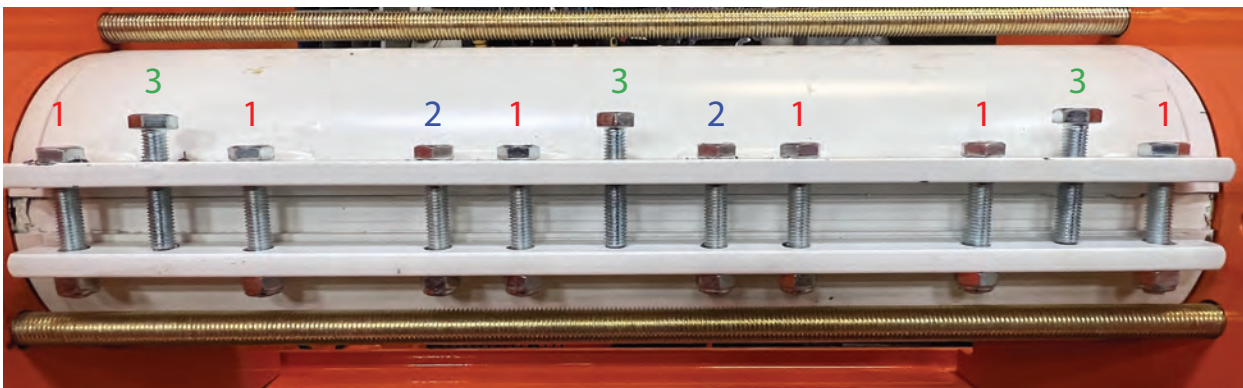
Step 3: Observe the pressure on the gauge. If psi is below 150 then repeat step 1.

NOTE: Nuts and bolts adjusted during step 1 may become loose as they are tightened along the length of the stator housing clamp. These need to be re-tightened (snug) before repeating step 1.

Step 4: Once 150 psi is observed, tighten the bolts indicated by the number 2 in the picture below. These bolts should be made snug before tightening to match step 1.

Step 5: Tighten the bolts as indicated by the number 3 in the picture below. These are set bolts and should be tightened slightly pass snug. This will prevent the stator housing clamp from changing without adding additional pressure.

Do not overtighten adjustment bolts. If the engine is noticed "bogging down" during the adjustment procedure, then the rotor-stator is becoming too tight to operate efficiently. If bogging down is noticed during the adjustment procedure or 150 psi cannot be achieved the rotor-stator needs to be replaced.



DAILY PRE-OPERATION CHECKS

Shut Down

Step 1: Turn off pump and reduce engine RPM to idle for 3-5 minutes.

Step 2: Turn off engine.

Step 3: Open ball valve on test rig to drain. Remove expansion plug to drain hopper.

Step 4: Remove test rig from outlet.

Step 5: Replace expansion plug in hopper.

OPERATIONS

Section 4 – Machine operation

Ensure that the unit is clear of bystanders and other possible hazards before starting.

Startup

Place the engine choke lever in the “ON” position.



i Choke is not required for a warm engine.

Note - slide lever to the right to operate or close the choke. Slide to the left to stop or open the choke.

Throttle / accelerator lever



Ignition / starting key



- Slide the throttle lever to the right to the slowest position. Start the engine using the ignition starter key. Once running, progressively open the choke lever by sliding to the left until the engine runs without hesitation. Let the engine warm up for a few minutes.
- For troubleshooting the engine start up, refer to the engine user manual supplied.

Shut Down

When shutting down, move the switch on the pump control panel to the middle “off” position then slow the engine to idle using the throttle lever sliding to the right. Leave the engine idle for a few minutes prior to turning off using the ignition key set to the “off” position.

OPERATIONS

The vibrator grate / safety cover is used both protect the operator and to assist in the grading of the material passing into the pumping hopper. The grate will prevent items larger in size than the rotor / stator can process. **The vibrator grate must be in the lowered position during operation.** The vibrator grate hinges upwards and swings past vertical to allow for unobstructed access to the hopper.



Shown with optional vibrator motor.

General notes for operation

- Grease drive shaft seal daily with water resistant, corrosion inhibited grease via the grease fitting / Zerk in the motor flange.
- For starting the pump, ensure that the throttle is at maximum and direction control is set to “FWD”.
- Do not let hopper run dry while pump is running.
- To stop machine Move the Pump Control Panel switch to the center position.
- If a hose becomes plugged while pumping, stop the machine, then reverse the driveshaft direction on pump to relieve line pressure using the Pump Control Panel switch set to “REV”.
- Never point a hose towards personnel when pump is working.
- When cleaning the pump, do not remove the safety grate while pump is running. Wash out hopper with water and let it run out of the hose. When the hopper is clean, run foam balls through hose with clean water. Then wipe down with a damp rag.
- Hopper draining can be assisted by the removal of the drain plug from the lower section of the hopper.



- If access is required into the hopper, then turn off the engine before lifting the grate. Pump can be disassembled by removing the clamping nuts facilitating easier clean up.
- The 38 Special Pump is supplied with an adjustable stator. The sleeve can be tightened to bring working pressure back to normal range as the stator wears. This should be done evenly along the length and in small increments. Over-tightening the stator will cause premature wear and heat up material.
- Always check hoses and cords for wear.
- The unit runs at high pressures and temperatures. Use caution when moving or touching parts of the unit.
- Check the condition of the Universal joint seal tube. Look for signs of wear or cuts on the tube.
- Check that all fasteners are all secure.

MAINTENANCE

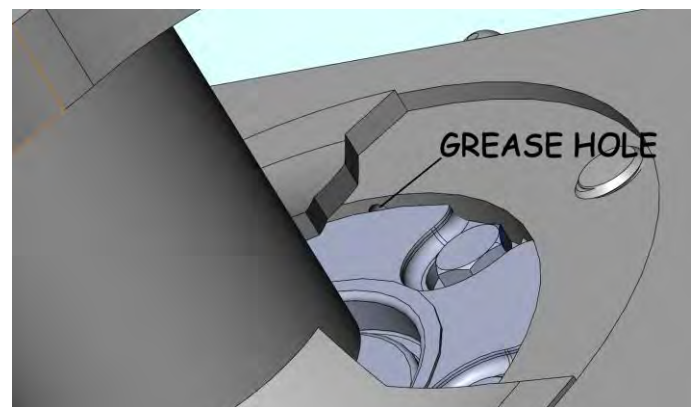
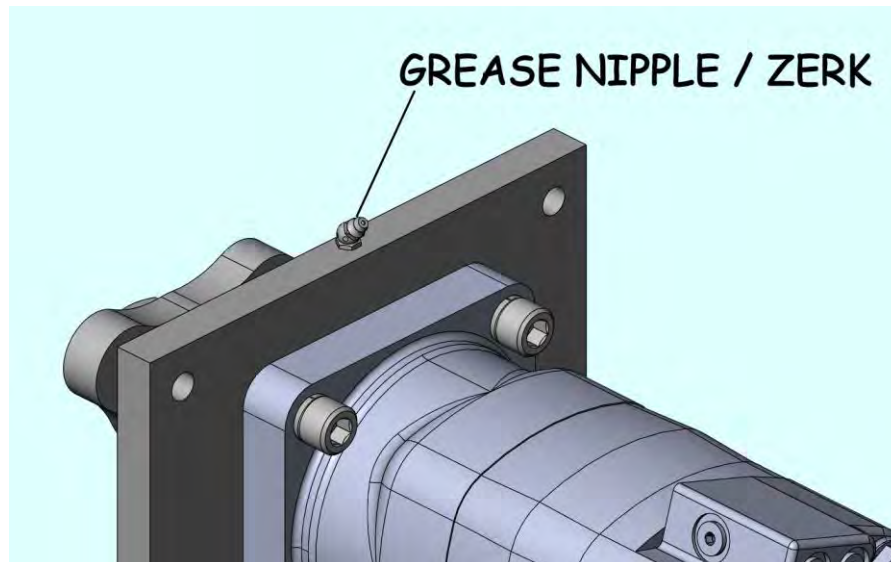
The 38 Special Pump units are very simple to maintain.

The biggest part of maintenance on the unit is cleaning after a job. Failure to clean properly after use will damage seals, paint, and moving parts due to material build up. This causes wear and likely hinder operation and startup next time.

Pay particular attention to the seal between the rotor stator flange and the flange on the front of the hopper. When cleaning also pay attention to the grease seal around the drive / Universal joint, fixed to the drive flange at the rear of the machine.

Seal Greasing

Ensure that the seal between the drive coupling and the motor is greased each day or after each clean down with a water resistant, corrosion inhibiting, extreme pressure grease. Grease until a small amount of grease can be seen “oozing” from around the drive. The illustration shows thunit removed from the hopper but it can be greased when fitted to the hopper.

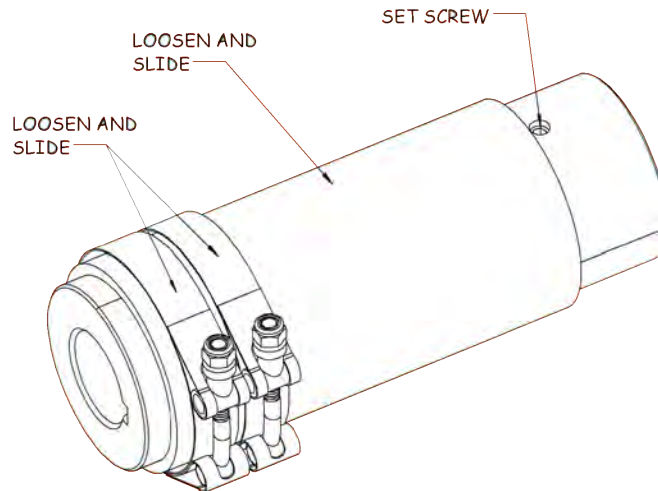


MAINTENANCE

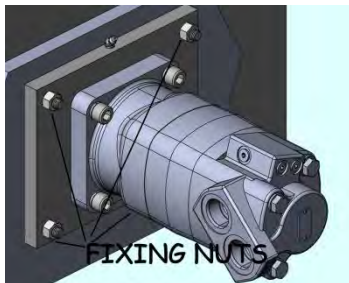
Grease seal replacement and U-Joint (UJ) removal

NOTE - Grease seal replacement has to be carried out with the drive unit removed from the hopper.

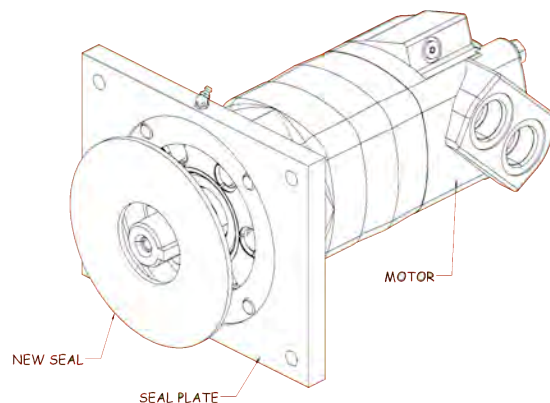
- Remove the pump assembly from the front of the unit.
- Thoroughly clean the driveshaft, the UJ and the seal area inside the hopper.
- Loosen the two band clamps on the UJ seal tube, then slide the seal tube towards the seal / motor until the set screw securing the UJ to the driveshaft is exposed.



- Loosen the set screw and remove the driveshaft from the UJ.
- Slide the seal tube in the opposite direction, towards the driveshaft, until the set screw is exposed in the UJ that secures it to the motor shaft.
- Loosen the set screw.
- Remove the universal Joint.
- Remove the four fixing nuts from the flange plate and withdraw the motor assembly from the hopper rear.

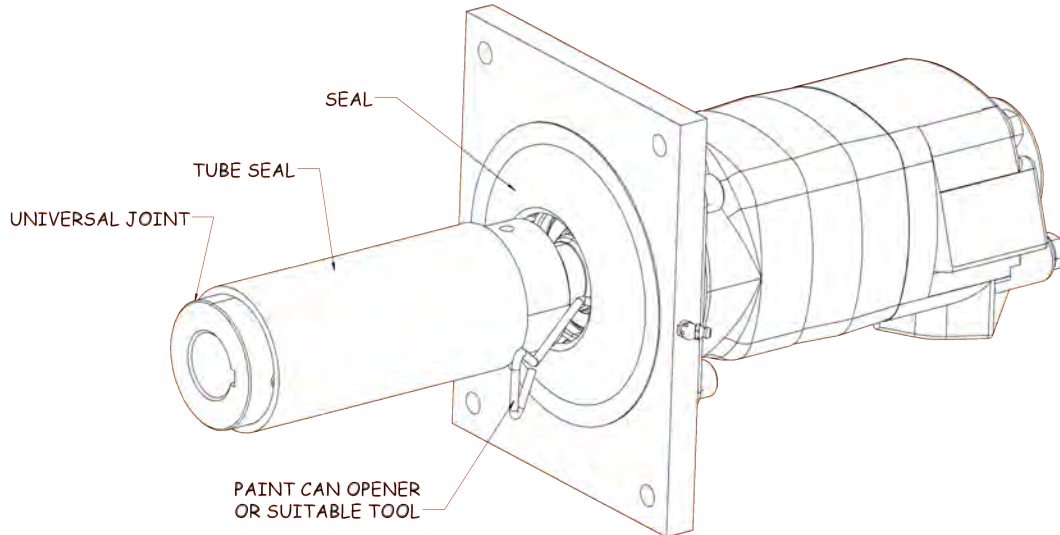


- Remove the rubber seal from the counterbore in the plate.
- Thoroughly clean the seal area and the flange. Ensure that the old contaminated grease is removed.
- Apply some fresh grease to the inner lip and back face of the new seal, then place it into the counter bore in the motor mounting plate. Apply some grease to the outside of the shaft of the motor.



MAINTENANCE

- Assemble the motor and grease seal assembly to the back of the hopper and retain with the four nuts previously removed.
- Slide the universal joint over the motor shaft ensuring that the key is located in both slots. Slide it on until it lightly touches the undeformed seal face, then using a suitable tool (paint can opener) hook the seal over the universal joint and use a circular motion while pushing the joint towards the motor fully assemble the seal lip over the UJ and push the UJ home onto the step on the motor shaft. The action of hooking the seal over the UJ is similar to assembling a tire onto a wheel rim.



- Secure the set screw once more when the UJ is fully assembled. The seal lip will slide over and cover the set screw hole during the re-greasing process later.
- Slide the UJ seal tube back towards the motor until the other set screw that secures the driveshaft is exposed.
- Place the two band clamps over the universal joint, but do not secure yet.
- Pump fresh grease inside the UJ through the driveshaft hole until it is about 2” from the end.
- Assemble the driveshaft complete with key into the UJ until the collar touches the end of the universal joint during which time the grease will be pushed into the coupling and “ooze” from around the seal tube.
- Ensure that the key is fully assembled then lock the set screw to the keyed shaft.
- Slide the seal tube back towards the pump until about 1 1/8” of UJ is exposed, then reassemble the band clamps about 1/2” – 3/4” from the seal tube ends.
- Grease the new seal via the grease fitting on the motor assembly until grease can be seen “oozing” from between the seal lip and the UJ

Note - Grease using a highly water resistant, high corrosion protection, and extreme pressure type grease on a daily basis, or after each time the unit is cleaned down.

Note - The seal needs to be replaced once the seal no longer holds grease, is broken, cracked, or worn to the same diameter as the drive, indicated by a flat appearance instead of deformed when fully greased.

Engine Maintenance

– Please refer to manufacturer’s data for servicing

MAINTENANCE

Hydraulic system Maintenance

– Perform a hydraulic filter and fluid change, in line with the engine service interval schedule. The system should be warm **BUT NOT HOT** when changing the hydraulic fluids to aid in draining .

- Drain the hydraulic oil from the system via the bolt at the base of cyclonic reservoir.



- Remove the hydraulic filter and replace. Take care when unscrewing the filter as the unit and lines will be full of oil.
- Replace the filter with a new one of the same model and tighten per manufacturer’s specifications.



Winterization

Winterizing is required especially for climates likely to freeze. Freezing is mainly a problem for items containing water.

- The engine and hydraulics do not need to be winterized, however, it is recommended that the fuel in the fuel tank be stabilized for extended periods of storage.
- Follow the engine manufacturer’s instructions for extended storage and winterization.

Battery

The battery should be placed on a battery maintainer / float charger to ensure a full state of charge throughout the storage period. Failure to maintain a full state of charge will render the battery depleted / “Flat” when next required. Float chargers / maintainers are available at most automotive stores or online retailers.

ROTOR AND STATOR PUMP ADJUSTMENTS

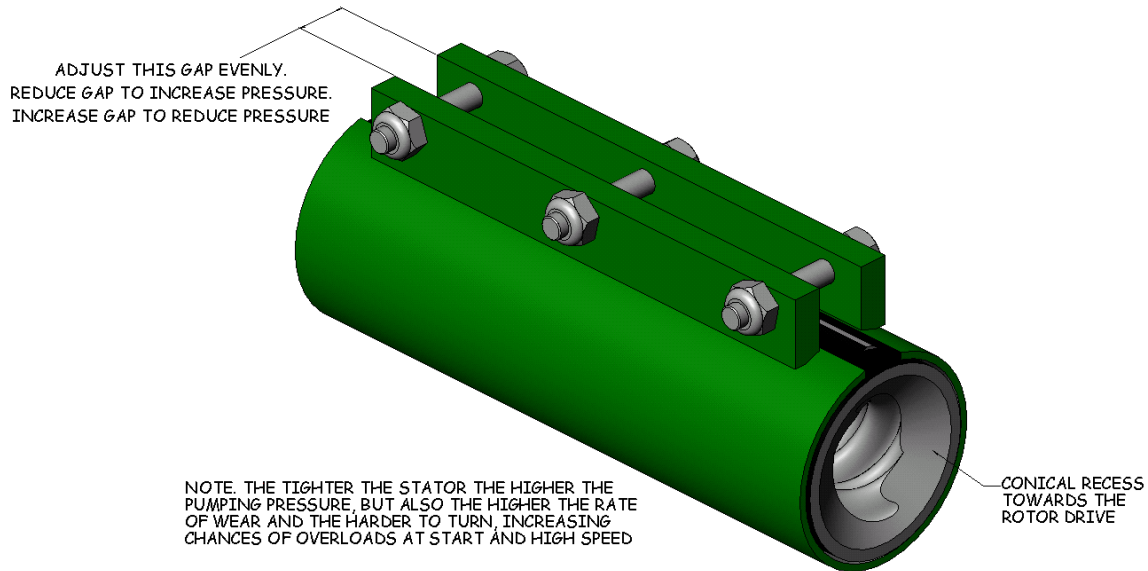
Refer to the Pre Operations Pressure Test Manual for information on adjusting or replacing the rotor-stator.

A **rotor** is the metal corkscrew looking item that **rotates** inside the stator.

A **stator** is the **stationary** part that the rotor rotates inside.

Stator Adjustment / Replacement

The stator allows the tightening of some bolts to squeeze together two flanges, which in turn reduce the diameter of the inside of the stator allowing a tighter fit around the rotor giving renewed ability to produce higher pressures, similar to when the unit was new. The procedure for tightening stator bolts can be found in the ***pre operation pressure test*** manual. Additionally, a step by step procedure for replacing the rotor-stator can be found there as well.



⚠ WARNING

Wear issues

Never run the rotor-stator dry.

A screw pump can only work reliably if there is adequate and appropriate lubrication. The lubricant reduces the friction between the rotor and the stator. If this lubricating film is damaged, high temperatures are reached and the elastomer wears within a very short time. Even if dry running lasts only a few seconds with new parts, the effect resembles that of a wheel spin on a car tire, dramatically affecting length of service.

The use of simple dish soap or specific water based lubricants mixed with water whilst hose cleaning or pump priming can dramatically reduce the negative effects of dry running and help prolong the natural life of the rotor and stator.

Please note - Rotor stator wear is directly related to the amount of work that the unit has to perform. A low-pressure job with a smooth mix will cause less wear than a high-pressure job with smooth mix. A low-pressure job with a course mix will wear more than a low-pressure job with a smooth mix.

The life of a rotor stator combo will need to be determined on a job-by-job basis, being dependent upon the coarseness of the mix and the amount of pressure required.

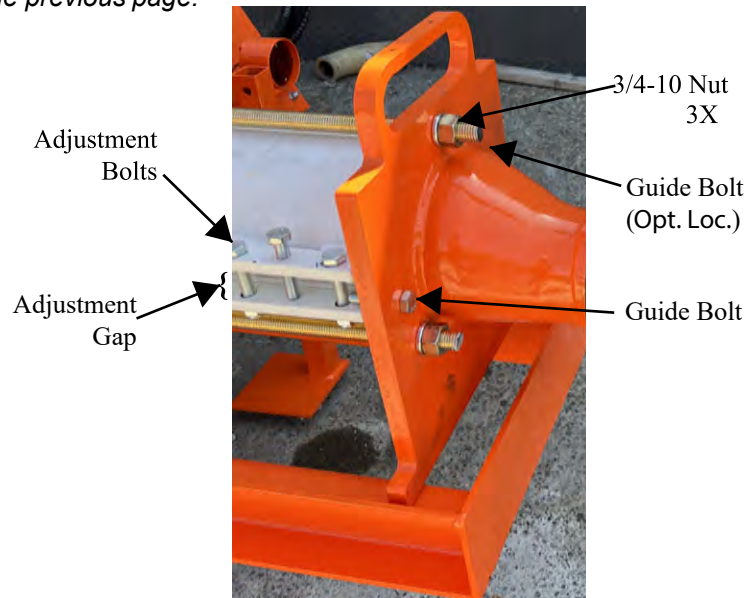
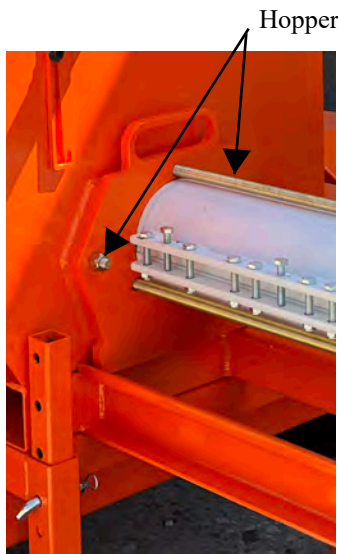
ROTOR-STATOR REPLACEMENT

Rotor-Stator Replacement

- Turn off the engine and tag out the engine.
- Remove the two 3/4-10 bolts that attach the rotor-stator assembly to the hopper.
- Remove the rotor-stator cover.
- Remove the 3/4-10 nuts and washers on the end of each threaded rod (3 places).
- Remove the nozzle end plate welded assembly.
- Remove the worn rotor-stator.
- When installing the new rotor-stator make sure the rotor is aligned with the end of the auger shaft and fully seated against it.
- Replace the nozzle end plate welded assembly carefully aligning it with the 3 threaded rods. Before fully seating the plate assembly against the rotor-stator rotate the rotor-stator until the adjustment gap in the stator housing is aligned with guide bolt in the plate assembly. The guide bolt prevents the stator housing from rotating. **NOTE: The guide bolt can be installed on either side of the welded plate assembly depending on the configuration of the rotor-stator from the manufacturer.**
- Reinstall the nuts on the threaded rods and tighten evenly as much as possible to apply even pressure against the rotor-stator.
- Evenly tighten the adjustment bolts along the stator housing.
- *Reference the pre-operation pressure test guideline on the previous page.*
- Once the hydraulics have been engaged observe the stator housing to see if it has rotated. If any rotation has occurred, then turn off the engine. If the stator housing adjustment flange is resting against the guide bolt, then rotate the flange away from bolt. *The guide bolt should remain approximately in the center of the adjustment gap.*
- Evenly tighten the nuts on the threaded rods to apply more pressure against the stator housing. Once the stator housing no longer rotates the pressure test can begin.

NOTE: It is possible to over-tighten the threaded rods to the point where it flexes the front rotor-stator plate and effects the sealing of the O-ring.

- Refer to the Stator Housing Clamp Adjustment from the previous page.
- Once 150 psi has been reached, continue to let the pump run at 50% with engine revs at max for 20 - 30 minutes. This will allow the stator housing to seat against the hopper and nozzle end plate assembly. During this time continue to monitor the pressure while checking for and tightening hardware that may loosen during this extended test run.
- Refer to Shut Down Procedure on the previous page.



NOTE – DO NOT operate the driveshaft in reverse for periods longer than a few seconds. Reverse is used to break free and to depressurize the pumping hoses in the event of a blockage.

NOTE – DO NOT operate the rotor-stator without either soapy water or material in the pumping hopper. Doing so can cause premature wear and/or damage to the rotor-stator.



Warranty

EZG Manufacturing (“EZG”) warrants its products to be free of defects in material or workmanship that develop under normal use for two years.



Warranty period begins on the IN-SERVICE date (date of purchase by the end user of the product, date placed in service by a rental operator, or date of any utilization). All warranty is based on the following limited warranty terms and conditions, including the disclaimer of implied warranties and consequential damages. **Warranty registration is required to establish the in-service date and for the warranty to become effective.**

EZG Limited Warranty & Limitation of Liability Terms:

1. EZG obligation and liability under this warranty is limited to repairing or replacing parts if, after EZG’s inspection, there is determined to be a defect in material or workmanship. EZG reserves the choice to repair or replace.
2. If EZG chooses to replace the part, it will be at no cost to the customer and will be made available to the EZG Distributor, Dealer, or Rental Center from whom the End User purchased the product.
3. Replacement or repair parts, installed in the product, are warranted only for the remainder of warranty period of the product as though they were the original parts.
4. EZG does not warranty engines. Engine warranty claims should be made directly to an authorized factory service center for the particular engine manufacturer.
5. EZG’s warranty does not cover the normal maintenance of products or its components (such as engine tune-ups and oil & filter changes). The warranty also excludes normal replaceable wear items, i.e. gaskets, wear parts, seals, O-rings, belts, drive chains, clutches, etc. unless such items are deemed to fail due to defective material or workmanship.
6. EZG’s warranty will be void if it is determined that the defect resulted from operator abuse, failure to perform normal maintenance on the product, use of non-manufacturer parts, or failure to follow documented service instructions, alterations or modifications made to the product without the written approval of EZG.
8. EZG will pay shop labor on warranty items at the EZG Shop Labor Rate in existence on the date of the warranty claim. EZG technician will determine the time allowed to complete a repair which will govern the shop labor hours to be allowed.
9. EZG will pay freight on warranty replacement parts at worldwide standard ground rates. No warranty replacement parts will be shipped air freight at the expense of EZG. EZG only pays outbound freight charges when sending warranty replacement parts to the customer via ground service. EZG does not pay any inbound freight. However, if EZG determines this to be a warranted item, EZG will then reimburse the customer for inbound freight at standard ground rates.
10. The EZG WARRANTY POLICY WILL NOT COVER THE FOLLOWING: TAXES; SHOP SUPPLIES; ENVIRONMENTAL SURCHARGES; AIR FREIGHT; TRAVEL TIME; LOSS OF TIME; INCONVENIENCE; LOSS OF RENTAL REVENUE; RENTAL COSTS OF EQUIPMENT USED TO REPLACE THE PRODUCT BEING REPAIRED; LOSS OF USE OF THE PRODUCT; COMMERCIAL LOSS; OR ANY OTHER CHARGES WHATSOEVER OR ANY LIABILITIES FOR DIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGE OR DELAY.
11. EZG MANUFACTURING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED. THIS LIMITED WARRANTY IS IN LIEU OF THE WARRANTY OF MERCHANTABILITY AND FITNESS. THERE ARE NO OTHER WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THIS DOCUMENT.
12. No EZG Manufacturing employee or representative is authorized to change this warranty in any way or grant any other warranty unless such change is made in writing and signed by an officer of EZG Manufacturing.



WARRANTY REGISTRATION IS REQUIRED TO ESTABLISH THE IN-SERVICE DATE AND FOR THE WARRANTY TO BE EFFECTIVE.
(some specialty equipment is exempted, or limitations may apply)

Fax Warranty Registration form to 740-962-2037 or submit online at www.ezgmfg.com by clicking on "Resources" then "Warranty, lastly you can click on the orange "Click Here to Register" button.

WARRANTY REGISTRATION

CONTACT: _____

COMPANY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

TEL: (____) _____ - _____ FAX: (____) _____ - _____ CELL: (____) _____ - _____

EMAIL: _____

PURCHASED FROM: Direct Distributor: _____

PURCHASE DATE: _____ SERIAL NO. _____

PLEASE COMPLETE THIS WARRANTY CARD, AND RETURN VIA MAIL, FAX, OR E-MAIL, WITHIN 30 DAYS OF PURCHASE TO VALIDATE YOUR MANUFACTURER'S WARRANTY FOR ALL EZG MANUFACTURING PRODUCTS.

WARRANTY PROVISIONS OF THIS MACHINE ARE HANDLED DIRECTLY THROUGH THE MANUFACTURER.

EZG MANUFACTURING * 1833 North Riverview Road, Malta, OH 43758 *

PHONE 1-800-417-9272 * Email: warranty@ezgmfg.com * FAX 740-962-2037

Please take a minute to fill out the survey below so that we can better serve our customers.

EZ Survey

1. WHERE DID YOU FIRST HEAR ABOUT EZG MANUFACTURING? (CHECK ONE)

Masonry Magazine Website Newsletter Referral Masonry Construction

Other: _____

2. WHAT INFLUENCED YOU TO BUY? QUALITY PRICE EASY TO USE OTHER

3. WHO IS YOUR SALES REPRESENTATIVE? _____

4. ARE YOU SATISFIED WITH THE CUSTOMER SERVICE YOU RECEIVED? YES NO

Explain: _____

5. WHAT OTHER EZG MANUFACTURING PRODUCTS DO YOU OWN?

6. WOULD YOU LIKE TO BE FEATURED IN OUR NEWSLETTER? YES NO

If yes, where can we reach you and what is the best time?

Comments: _____
