



**WESTERN BLENDED  
PRODUCTS**  
The Plasterer's Standard

## Mobile Power Auger System (MPAS)

A Silo Mixing System designed to improve productivity & efficiency by reducing mixing times by 50% at the job site.

# Mobile Power Auger System (MPAS) Operation Equipment Manual

### Table of Contents

<b>Page 2</b>	Mission Statement.
<b>Page 3</b>	Safety.
	A. General Safety.
<b>Page 4</b>	B. Hydraulics.
	C. Machinery.
	D. Cleaning, Repairs & Equipment Service.
	E. Screws (Augers).
<b>Page 5</b>	Operation Procedures.
	A. Machine Setup.
	B. Basic Operation.
<b>Page 6</b>	Maintenance.
<b>Page 6-8</b>	Troubleshooting.
<b>Page 9</b>	Confirmation of receipt.



## Mission Statement

The Western Blended Products MPAS Silo System was designed with the concept of improving the workplace and product, through environmentally friendly packaging and manufacturer-controlled formulation, without rigorous and problematic lifting of tons of material by hand. The idea was to engineer a machine that would add the capacity of bulk material in lieu of individual bags of material. The Western Blended Products MPAS will hold approximately 140 cubic feet of material. We are confident that this system will perform as intended. However, the dependability of the Western Blended Products MPAS will depend entirely upon the service and care that it receives during daily use. In order to aid you with the proper care of the machine, the operation manual and maintenance schedule will be on the following pages of this Operator Equipment Manual (OEM). The OEM should be read carefully and followed by those who will be responsible for operating the machine. Other pertinent information will be on the following pages to aid the operators/users in maintaining maximum performance of the Western Blended Products MPAS. It should be taken into consideration the nature of your business, that is, the mixing and pumping of cementitious products and aggregates. Water and add mixtures create the most severe conditions under which the machine must operate. It was with these severe conditions that we took into consideration during the designing and selection of various components used for this machine.

We hope your use of the Western Blended Products MPA is an enjoyable and profitable experience.



## Safety.

The following Safety section of this (OEM) Operator Equipment Manual should be read in its entirety by anyone operating or caring for this machine.



**Always remember to Lock Out and Tag Out your machine before performing any service or care to the Western Blended Products MPAS Unit.**

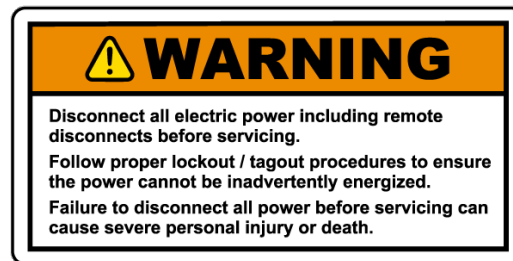
### A. General Safety.

Western Blended Products recommends the following safety rules to be utilized when operating this equipment. Compliance to these safety rules will aid in the prevention of possible damage to the equipment and injury to the operator and or bystanders.

1. Be sure all guards are in place. Never remove a guard for convenience. The manufacturer would not have put them there if they were not necessary.
2. Never operate the machine without the lids in place. Failure to do so is not only a safety hazard, but the possibility of foreign matter falling into the auger can also exist. The result could cause extensive and costly damage to the machine.
3. Never make adjustments or repairs while the machine is running. Adjustments should only be done when the machine power supply has been discharged of any stored energy.
4. Never set up the Western Blended Products MPAS without the ½" steel pads under the legs and centered (pads are on side of machine).
5. Make sure the MPAS unit is on even ground. Uneven ground could result in the machine tipping over.
6. Never operate the hydraulic system in excess of 2000 PSI.
7. Stand clear of the machine at ALL TIMES. Especially while loading bulk materials. Failure to do so may result in personal injury such as cuts and bruises, broken limbs or even death as a result of the possibility of being struck by a bulk bag or loading device.
8. DO NOT reach inside machine discharge area. If necessary to do so, the power supply must be shut off and hydraulic hoses disconnected to eliminate any stored energy. Failure to comply with this safety rule could result in injury or even death if a body member became entangled in the discharge of the machine. Should someone engage the auger control valve.
9. DO NOT enter the machine at any time without de-energizing the hydraulic system. Failure to do so could result in serious injury or even death. If necessary to enter the machine open both lids and wear a dust mask and eye protection. Have a spotter stationed outside or a top the machine as a precaution, should help be needed? The spotter can also prevent anyone from starting the machine.
10. Never remove access doors without first de-energizing the hydraulic system. Failure to perform this function could cause personal injury or even death. This can be caused should someone engage the auger system.
11. Material will flow freely once the access door has been removed. Respirator and eye protection should be worn along with protective clothing. Some material may cause irritation to exposed skin and eyes and possibly cause permanent vision loss.
12. Please use extreme caution when removing access door. The pressure of the material may cause access door panel to strike personnel resulting in serious injury or even death.

## B. Hydraulics.

1. Operator should check that all hydraulic valves are in the neutral or off position before starting generator.
2. Operator should never attempt to connect or disconnect a hydraulic line while hydraulics are engaged and power supply is on. When working on hydraulic system, shut off power supply.
3. The hydraulic relief valve should only be adjusted by qualified personnel of Western Blended Products. Any tampering with this valve may result with catastrophic equipment failure.
4. Daily inspections of hydraulic hoses and air lines. Notify Western Blended Products if any hoses look worn or are leaking. Your machine will need repairs before it can be used correctly and maximum performance can be achieved.
5. Only trained and qualified Western Blended Products personnel can remove and or replace any parts or components on equipment. This is to ensure proper fitting and safety precautions are met per manufacturer specifications.
6. Use caution when filling hydraulic oil reservoir, any spilt hydraulic fluid that makes contact with engine exhaust may cause oil to ignite at high temperatures.



## C. Machinery.

1. Operator must read all warning and caution signs before operating machine.
2. Guards should not be removed while motor or engine is running. Ignition should be in the off-position ignition key removed and hydraulic hose disconnected. When it is necessary to remove any guards.
3. Ensure all guards are in place and secure before starting machine.
4. Operator should never operate machine with worn hoses or loose parts. Only Western Blended Products qualified personnel can make adjustments to hydraulic components.
5. Operating equipment with excessive loads with a continuous pressure above 2000 PSI could cause severe damage to the equipment.
6. It is imperative that all personnel operating or working around or near the machine should wear proper protective equipment to eliminate the risk of irritation from cement dust.
7. Work area should be kept clean and free of debris and clutter to prevent fire hazards and trip hazards.
8. Clothing that is loose or torn should not be worn while operating equipment. Loose clothing can get intertwined in moving parts and cause serious injury or possible death.

## D. Cleaning, Repairs & Equipment Service.

### SECTION 3314 – General Industry Safety Orders

Machinery or equipment equipped with moving parts shall be stopped and power source shut off and de-energized or disengaged if necessary. The movable parts shall be mechanically blocked or locked to prevent inadvertent movement during cleaning, servicing or adjusting operations unless the machinery or equipment must be capable of movement during this period in order to perform the specific task. If so, the operator shall minimize the hazard of movement by providing and requiring the use of extension tools.

## E. Screws (Augers).

Accidents are usually the result of carelessness, in an attempt to prevent any unsafe hazardous conditions. Any person/persons operating the equipment should read and following instructions carefully.

1. Do not walk on conveyor covers or grating to power transmission guards.
2. Poking at material or prodding material in the conveyor (auger) can cause serious injury. If cleaning debris or a jam occurs, shut off power supply and de-energize the hydraulics. Remove keys from ignition and lock out the machine. A spotter should be used to aid in the prevention of someone inadvertently starting machine.
3. Do not place hands or feet in the conveyor opening while machine is operating. Doing this may result in serious injury or loss of limbs or even death.

4. Only use the conveyor (auger) for its intended use. Overloading it may cause damage or failure to machine.
5. Please practice good housekeeping while operating machine.

## Operation Procedures.

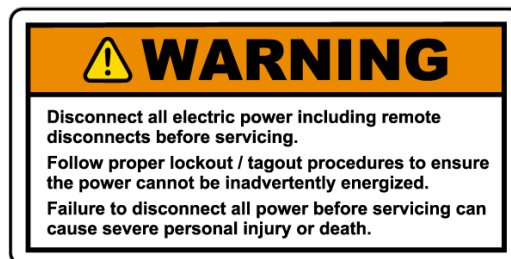
### A. Machine Setup.

The procedure listed below must be followed in setting up machine.

1. An experienced fork lift driver should lift and position the machine
2. The machine should be placed on level ground. The legs should be placed on the ½" metal plates located on the side of the machine. This will ensure better stability of the machine.
3. After machine is in place and stabilized, operator should do a complete walk around of the machine. If anything looks out of place, broken or leaking. Do Not Operate machine.
4. All fluids in generator and air compressor should be checked for proper levels before starting them. If fluid levels are below manufacturers specifications fluid should be added accordingly. Operating machine with improper fluid levels can cause severe damage to the motors and hydraulic system.
5. Once fluids are checked make sure all controls are in neutral. Then start motors and let run for a few minutes to eliminate cold starts, let air compressor build air pressure to 120 psi before use.
6. After motors have warmed up and proper air pressure is obtained. Engage the auger control valve while the machine is still empty and no material has entered yet. This is to make sure hydraulic fluid has filled all the hoses and for the operator to check for any leaks.
7. When the above procedures have been completed the operator should check the top of the machine and make sure the lids are open. One of the openings should have a bag filter on it. The bag filter is to help aid in eliminating excessive dust while filling the hopper.
8. The fill opening should be equipped with a metal grate. This is to ensure that anyone working in this area cannot fall into machine while in operation. This guard must be in place before operating can begin.
9. Now that everything has been checked and the machine is warmed up the operator can begin filling the machine with material. Augers need to be in the off or neutral position for the initial fill of the machine. Once there is material in the hopper the augers control valve can be engaged.
10. While material is coming out of the discharge of the machine make sure it is an adequate amount. If you need more adjust the variable speed dial by the ladder to where the flow is steadily coming out.
11. If material is not flowing after making the adjustment to the variable speed dial. You may have to activate the pneumatic vibrators that are on the sides of the machine to break material free for and even flow. The actuator switch for the vibrators is a round push button located by the variable speed dial.

### B. Basic Operation.

1. The Western Blended Products MPAS is operated by a hydraulic control valve. This valve engages the hydraulic motor mounted on the machine. This valve when engaged turns the augers on and discharging of product will begin.
2. If the control valve fails to operate correctly contact Western Blended Products and a qualified mechanic will need to come out and evaluate the machine and make the necessary repairs.
3. The Western Blended Products MPAS is also equipped with an air compressor. This is what is used to operate the pneumatic vibrators on the sides of the machine. The activation button is located by the ladder on the side of the machine. Air pressure must be at 120 psi before activation can occur.
4. If the activation switch does not engage the vibrators please notify Western Blended Products and a qualified mechanic will come out and evaluate the machine and make the necessary repairs



## Maintenance.

The maintenance required for the Western Blended Products MPAS is relatively quite simple. Keeping a check of the few items mentioned will aid in the machine having a long productive life.

1. A unit check should be done daily on all the gaskets sealing doors and the lids to the hopper. It is of the utmost importance that the hopper is kept leak free. If the hopper leaks, water will get inside the hopper causing the product to set. This can be a costly repair and damage the machine.
2. Visually check all the doors and covers for tears or worn spots.
3. To check the machine for leaks, someone will need to get inside the hopper when it is empty. The lids should be closed, if you see daylight shining through the lids/doors this is where a leak will occur. These should be marked and properly sealed before material is dumped into the hopper.

**DANGER:** If it is necessary to enter the hopper at any time to make repairs or do inspections, please observe the following:

1. DO NOT enter the machine without first disconnecting the hydraulic hoses from the power supply. Failure to do this could result in personal injury such as cuts, broken limbs or even death.
2. If necessary to enter the machine? Lock Out & Tag Out the machine. Then open both lid covers and wear protective equipment i.e. (dust mask, eye protection). Have a second person stationed on top of the machine as a safety precaution should help be needed, also to warn others that someone is inside of the machine.
3. All bearings are accessible through the access door located on the left side of the machine. With the machine empty the access door can be removed to replace bearings or shaft couplings.
4. If need to get inside of the machine to assist in removing bearings or shaft couplings, please follow all safety rules and utilize proper shut down procedures that are listed throughout the Operator Equipment Manual.
5. DO NOT REMOVE ACCESS DOOR WITHOUT FIRST DISCONNECTING HYDRAULIC HOSES FROM THE POWER SUPPLY.
6. Material will free flow when access door is removed. Be sure to wear proper protective equipment when removing door. i.e. (respirator, eye protection and protective clothing are suggested). Some material may irritate skin and eyes and could even cause loss of eye sight.
7. Failure to follow and observe these safety precautions could result in serious injury or even death. Caused by body parts becoming entangled in discharge of the machine if someone engages the control valve.

**CAUTION:** Take caution when removing the access door as material inside hopper will rush out while door is being removed, applying a sudden load on the door which could possibly strike someone causing personal injury such as cuts, bruises, broken limbs or even death. The flange bearings mounted at each end of the machine require greasing every 150 hours of operation. One shot of grease is adequate enough.

## Troubleshooting.

**PROBLEM:** Augers will not turn and excessive hydraulic pressure encountered.

PROBABLE CAUSE: Quick couplers not connected properly.

HOW TO DETERMINE: Check quick coupler connection.

**SOLUTION:** *Re-connect couplers making sure proper connection is made.*

PROBABLE CAUSE: Foreign matter inside hydraulic hose blocking oil flow.

HOW TO DETERMINE: Take quick couplers loose from hose and check for foreign material on back side.

**SOLUTION:** *Clean out coupler and put back on hose.*

PROBABLE CAUSE: Cement set up inside of auger.



HOW TO DETERMINE: Take auger cover off and check for cement chunks, also watch discharge for large pieces of cement as a warning indicator.

**SOLUTION:** *Clean out the cement found, also locate and fix the leak that allowed the water to enter the hopper.*

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PROBABLE CAUSE: Bearing failure.

HOW TO DETERMINE: Inspect bearing for wear and damage.

**SOLUTION:** *If bearing shows signs of excessive wear or damage replace it.*

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PROBABLE CAUSE: Hydraulic Motor locked up with blockage.

HOW TO DETERMINE: Check motor for damage.

**SOLUTION:** *Replace motor or have it rebuilt.*

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PROBABLE CAUSE: Hydraulic valve blockage.

HOW TO DETERMINE: Check valve for restriction.

**SOLUTION:** *Repair valve or replace.*

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**PROBLEM:** Auger will not turn, and hydraulic pressure is within the normal reading.

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PROBABLE CAUSE: Hydraulic motor gears worn out.

HOW TO DETERMINE: Check motor for worn or broken gears.

**SOLUTION:** *Replace or rebuild hydraulic motor.*

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PROBABLE CAUSE: Hydraulic relief valve bypassing.

HOW TO DETERMINE: Change relief valve setting.

**SOLUTION:** *If there is no change in the pressure, replace relief valve.*

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PROBABLE CAUSE: Auger shaft broken.

HOW TO DETERMINE: Gear reducer running and auger not turning.

**SOLUTION:** *Find broken shaft and replace it.*

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**PROBLEM:** Auger slows down.

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PROBABLE CAUSE: Engine not running at full speed.

HOW TO DETERMINE: Check RPM of engine.

**SOLUTION:** *Set RPM of engine to proper RPM's.*

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PROBABLE CAUSE: Hydraulic pump.

HOW TO DETERMINE: Has other operation on unit slowed down?

**SOLUTION:** *Replace or rebuild hydraulic motor on unit.*

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PROBABLE CAUSE: Hydraulic motor wear.

HOW TO DETERMINE: If hydraulic pump is okay check hydraulic motor for wear.

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***SOLUTION: Replace or rebuild hydraulic motor.***

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PROBABLE CAUSE: Bearing starting to fail.

HOW TO DETERMINE: Hydraulic pressure running higher than normal during normal operation. Check for wear on bearing.

***SOLUTION: Replace bearings.***

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PROBABLE CAUSE: Set-up material in auger.

HOW TO DETERMINE: Hydraulic pressure running higher than normal and chunks of set-up material is seen in hopper.

***SOLUTION: Check hopper for chunks of material that has set-up. Remove chunks and find leak and repair.***

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**PROBLEM: Air compressor will not build air pressure.**

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PROBABLE CAUSE: Leaking air lines or fittings.

HOW TO DETERMINE: Use a spray bottle with soapy water in it to spray on air lines and fittings.

***SOLUTION: Remove leaky airline or fitting and replace.***

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PROBABLE CAUSE: Drain valve on air tanks open

HOW TO DETERMINE: Check for air coming out of the air tanks.

***SOLUTION: Close drain valves.***

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PROBABLE CAUSE: Pneumatic vibrator activation switch, leaking.

HOW TO DETERMINE: Check for air leaking around the activation button on switch.

***SOLUTION: Repair leaking line or replace activation switch.***

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**PROBLEM: Vibrators not working.**

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PROBABLE CAUSE: Airline is pinched or broken

HOW TO DETERMINE: Trace airline and look for any pinch points and broken sections.

***SOLUTION: Remove airline from pinched area and repair, if airline is broken replace airline.***

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PROBABLE CAUSE: Vibrator is worn.

HOW TO DETERMINE: Disconnect airline from vibrator and re-connect airline to new vibrator.

***SOLUTION: If new vibrator works, replace the old vibrator.***

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PROBABLE CAUSE: Not enough air pressure to activate vibrators

HOW TO DETERMINE: Check air pressure gauge if pressure is below 60 psi vibrators will not activate.

***SOLUTION: Let air compressor build air pressure to 120 psi for maximum vibrator performance.***

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**Confirmation of receipt.**

I have received the MPAS (OEM) Operator Equipment Manual. I understand and agree that it is my responsibility to read and familiarize myself with all operating, safety and maintenance procedures outlined in this OEM.

By signing this Confirmation of Receipt, my signature certifies that I have read and understand all procedures that are written within this MPAS (OEM). It is also agreed that any repairs for damage or abuse will be at the customer(s) expense. It is also in agreement that no alterations or modifications to MPAS equipment shall be made by the customer(s).

If it has been deemed that the MPAS has been misused or damaged due to customer(s) negligence. Owner of the MPAS equipment has the right to remove equipment any time, if misuse has occurred.

Customer(s) Signature \_\_\_\_\_

Print Name \_\_\_\_\_

Date \_\_\_\_\_