



OPERATOR MANUAL

MODEL: HM1290



HYDRAULIC MIXER

Plaster / Mortar / Fireproofing

A 100% employee-owned American manufacturer



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HM1290

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User Information

Foreword

These instructions include:

- Safety regulations
- Operating instructions
- Maintenance instructions

These instructions have been prepared for operation on the construction site and for the maintenance engineer.

These instructions are intended to simplify operation of the machine and to avoid malfunctions through improper operation.

Observing the maintenance instructions will increase the reliability and service life of the machine when used on the construction site and reduce repair costs and downtimes.

Always keep these instructions at the place of use of the machine.

Only operate the machine as instructed.

Observe the safety regulations as well as the guidelines of the civil engineering trade association. Observe the safety rules for the operation and the pertinent regulations for the prevention of accidents.

Stone Construction Equipment, Inc. is not liable for the function of the machine when used in an improper manner or for other than the intended purpose.

Operating errors, improper maintenance and the use of incorrect operating materials are not covered by the warranty.

The above information does not extend the warranty and liability conditions of business of Stone Construction Equipment, Inc.

Warranty Information

Please enter the following data. This will help expedite any service or warranty work.

1. Machine Type: _____

Machine S/N: _____

2. Engine Type: _____

Engine S/N: _____

3. VIN: _____

4. Purchase Date: _____

5. Dealer/Distributor Information:

Name: _____

Address: _____

Phone #: _____

Fax #: _____

Location of above information:

1. Information on S/N tag.
2. Information on engine tag.
3. Information on S/N tag - if applicable.
4. Date you purchased machine.
5. Dealer machine was purchased from.

Stone Construction Equipment, Inc.
P.O. Box 150, Honeoye, New York 14471
Phone: (800) 888-9926
Fax: (585) 229-2363

Limited Warranty

The Manufacturer warrants that products manufactured shall be free from defects in material and workmanship that develop under normal use for a period of 90 days for concrete vibrators and electric pumps, one year for Rhino®, Bulldog®, WolfPac Rollers™, trowels, Stompers®, saws, forward plates, engine powered pumps, Lift Jockey™, Mortar Buggy™ and 6 months for all other products from the date of shipment. The foregoing shall be the exclusive remedy of the buyer and the exclusive liability of the Manufacturer. Our warranty excludes normal replaceable wear items, i.e. gaskets, wear plates, seals, O-rings, V-belts, drive chains, clutches, etc. Any equipment, part or product which is furnished by the Manufacturer but manufactured by another, bears only the warranty given by such other manufacturer. (The Manufacturer extends the warranty period to "Lifetime" for the drum bearings and seals for the mortar mixers, and agrees to furnish, free of charge, the bearings and seals only upon receipt of the defective parts. The warranty is two years for eccentric bearings on the forward plate compactors, mortar and plaster mixer drums, trowel gearboxes, three years on the Bulldog trench roller microprocessor (ECIB) and five years on the Bulldog trench roller eccentric bearings.) A Warranty Evaluation Form must accompany all defective parts. Warranty is voided by product abuse, alterations, and use of equipment in applications for which it was not intended, use of non-manufacturer parts, or failure to follow documented service instructions. The foregoing warranty is exclusive of all other warranties whether written or oral, expressed or implied. No warranty of merchantability or fitness for a particular purpose shall apply. The agents, dealer and employees of Manufacturer are not authorized to make modification to this warranty, or additional warranties binding on Manufacturer. Therefore, additional statements, whether oral or written, do not constitute warranty and should not be relied upon.

The Manufacturer's sole responsibility for any breach of the foregoing provision of this contract, with respect to any product or part not conforming to the Warranty or the description herein contained, is at its option (a) to repair, replace or refund such product or parts upon the prepaid return thereof to location designated specifically by the Manufacturer. Product returns not shipped prepaid or on an economical transportation basis will be refused (b) as an alternative to the foregoing modes of settlement - the Manufacturer's dealer to repair defective units with reimbursement for expenses, except labor, and be reviewed with the Manufacturer prior to repair. A Warranty Evaluation Form must accompany all warranty claims.

Except as set forth hereinabove and without limitation of the above, there are no warranties or other affirmations which extends beyond the description of the products and the fact hereof, or as to operational efficiency, product reliability or maintainability or compatibility with products furnished by others. In no event whether as a result of breach of contract or warranty or alleged negligence, shall the Manufacturer be liable for special or consequential damages including but not limited to: Loss of profits or revenues, loss of use of the product or any associated product, cost of capital, cost of substitute products, facilities or services or claims of customers.

No claim will be allowed for products lost or damaged in transit. Such claims should be filed with the carrier within fifteen days.

Effective January 2004.

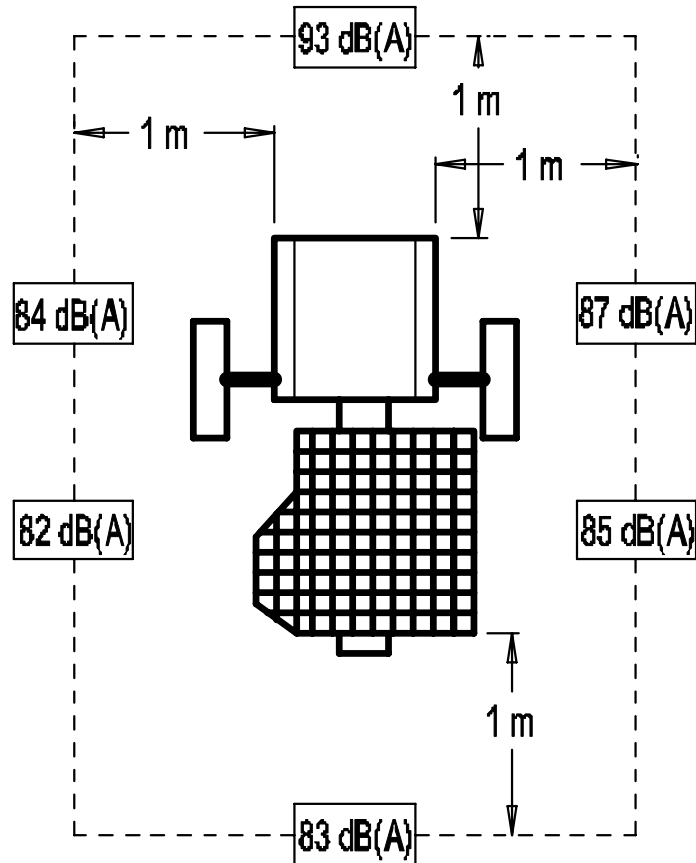
Technical Data

Specifications HM1290

Dimensions		
Operating Wt.	(Gas)	1375 lbs. / 625 Kg
	(Electric)	1398 lbs / 635 Kg
Batch Capacity (Bags)		3-4 bags
Batch Capacity (cu. ft.)		12 cu. ft. / 0.34 cu m
Total Volume		14.8 cu. ft. / 0.42 cu m
L x W x H		85" x 58.5" x 55" / 2159 mm x 1486 mm x 1397 mm
Operating System		
Engine - Honda		13 hp / 9.69 kW
Motor - Baldor		5 hp / 3.73 kW
Hydraulic Oil		Mobil 424 or Equivalent
Tank Capacity		16 gal / 60 l
Heat Exchange Surface		16.1 sq.ft. / 1.5 sq m
Oil Tank Vent		Pressurized
Oil Filter		10 micron/bypass
Oil Line Fittings		O-Ring Face Seal
Drum		
Drum Wrap		1/4" / 6 mm
Drum End - Tow End		1/4" / 6 mm
Drum End - Engine End		5/16" / 8 mm
Pour Lip		7 ga (3/16) (.180)
Drum Lock		Hydraulic
Charge Height		50" / 1.270 mm
Dump Height		22" / 559 mm
Paddles:		
Number		6
Mixing Action		Triple figure 8 speed blend
Mixing Speed		45-52 rpm / 0.75-0.87 Hz
Paddle Shaft		2" square
Blades		Rubber
Frame/Axle:		
Tow Pole		Pintle, pin or 1-7/8 to 2" ball hitch
OD		2.875" / 73 mm
ID		2.469" / 63 mm
Axle - Spring		56" / 1,422 mm Double "U"
Tires		B78 x 13 (25" dia.) (high speed)
Cowl:		14 & 11 Ga, diamond shaped expanded steel vent. panels
Options:	Optional blades recommended for plaster or fire proofing. Curved ends of main blades minimize splashing, and speed mixing action to insure easy cleanups. May be used with or without rubber blades. (plated or non-plated)	

Technical Data

Machine Sound Level



Sound Pressure measurements were taken with Simpson model 886-2 type 2 meter, calibrated 1/31/98 on the 13HP Honda

Test measurements were taken with Quest Tech model VI-100 meter, 1/31/98

Ambient Temperature: 30°F/-1°C













Engine Speed: 56.7 Hz

Test Site: Honeoye, NY USA

Sound Level Meter Setting: dB(a) slow

Technical Data

Operator Controls

PUSH FOR UP					PUSH FOR REVERSE ROTATION
STOP					STOP
PULL TO DUMP					PULL FOR MIXING ROTATION

55498

Technical Data

Decal Identification

PUSH FOR UP			PUSH FOR REVERSE ROTATION
STOP			STOP
PULL TO DUMP			PULL FOR MIXING ROTATION

55498

⚠ WARNING Tow mixer with drum in the upright position. Failure to do so may cause mixer to become unstable at high speed and result in serious injury.

55384

⚠ WARNING Retract cylinder before disconnecting it or any hydraulic line. Failure to do so may result in serious injury.

55383

Health and Safety

Safety Precautions



- Before using this equipment, study the entire owner's manual to become familiar with its operation. Do not allow untrained or unauthorized personnel, especially children, to operate this equipment. Use only factory authorized parts for service.
- When warning decals are destroyed or missing, contact the Manufacturer immediately at 1-800-888-9926 for replacement. For the safety of yourself and others, it is imperative that the following rules are observed. Failure to do so may result in serious injury or death.
- This notation appears before warnings in this manual. It means that the following steps must be carried out to avoid the possibility of personal injury or death. These warnings are intended to help the technician avoid potential hazards encountered in normal service procedures. We strongly recommend the reader take advantage of the information provided to prevent personal injury or injury to others.

Warning - Loose Hardware



- With power off, daily check for loose hardware. Immediately inform your supervisor to have it corrected--Do Not Run the Mixer.

Warning-Handling Fuel



- Transport and handle fuel only when contained in approved safety containers.
- Do not smoke when refueling the mixer or during any other fuel handling operation.
- Do not refuel the mixer with the unit running or while hot.
- If fuel is spilled during refueling, wipe it off from the engine immediately and discard the rag in a safe place.
- Do not operate the equipment if fuel or oil leaks exist – repair immediately.
- Never operate this equipment in an explosive atmosphere.



Warning-Operating



- Never perform any work on the mixer while it is running.
- Before working on the mixer, stop the engine and disconnect the spark plug wire(s) to prevent accidental starting. If electric, unplug motor.
- Keep cowl closed during operation.
- Keep hands, clothing and jewelry away from all moving parts.
- Keep all guards in place, including drum guards.
- Never stick your hands or any solid object into the drum while it is in operation.

Health and Safety

Safety Precautions



Warning-Hot Surfaces

- Avoid contact with hot exhaust system and engines.
- Allow engine to cool before performing any repairs or service.



Warning-Ventilation

- Never operate any gas powered mixer in a poorly ventilated or enclosed area.
- Avoid prolonged breathing of exhaust gases.



Warning-Hydraulic Fluids

- Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury.
- Hydraulic fluid escaping under pressure from a very small hole can be almost invisible . Use a piece of cardboard or wood to search for possible leaks.
- Never use your hands to detect pressure leaks.
- Hydraulic tank temperature can reach 180 degrees F.



Warning-Eye Protection

- Always wear splash goggles when operating mixer.

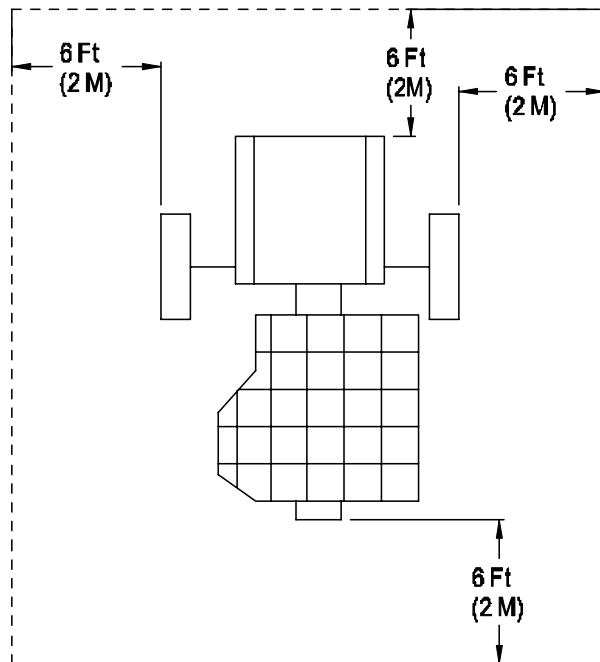
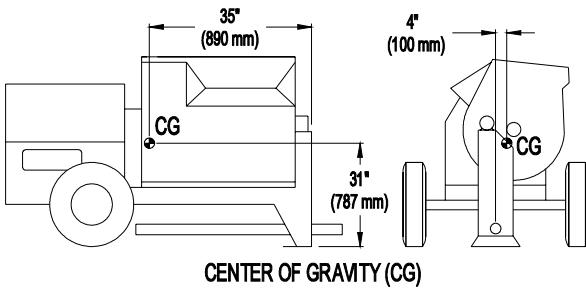


Warning-Towing

- Warning: Do not tow the mixer with the drum in the dump position. Mixer may become unstable and tip over when hitting a curb, pothole, or other obstruction.
- Warning: Always properly attach safety chains before mixer is towed. Maximum towing speed 65 m.p.h. (105 km/hr). Reduce speed according to highway conditions.

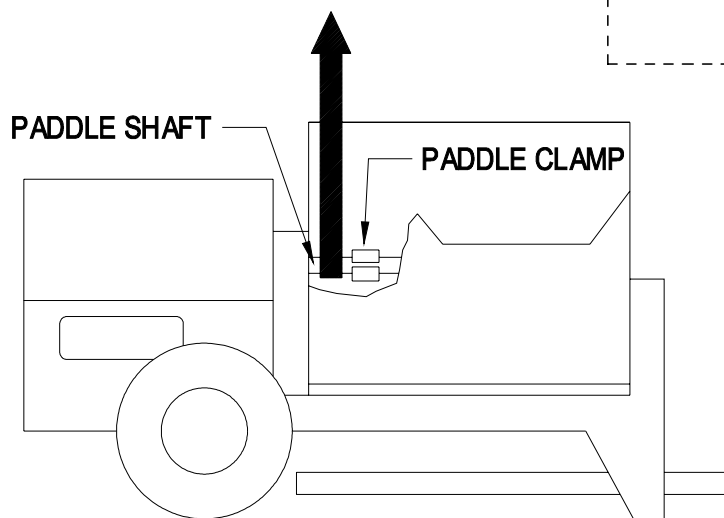
Operation

Center of Gravity



HM01 0a

**1360 lbs (618 kg)
LIFT WITH SLING**



HM009a

When setting up work area, make sure all other equipment, vehicles, scaffolding, walls and other obstructions are at least 6 feet / 2 meters from mixer.

Operation

Operating Features

Your new HM1290 mixer comes standard with the following features:

Patented Automatic Guard Lifter - Lifts the drum guard as the drum is tilted to prevent the mix from being poured through the guard and causing a build up on it. The guard and guard lifter system is designed for your safety and convenience.



Power Blend Paddle System - Adds a new dimension to the mixing action. The sharper angle at which the blades enter the mix divides, separates and recombines in addition to the normal folding and extruding actions. The blades “cut” the mix, rather than “plow it”, resulting in a more lateral movement and less energy consumption. This cutting action minimizes the unproductive rolling action common to other mixers. The six paddles with longer blades ensure a thorough mix in the minimum time.

Curved Plaster Blades - Optional for Power Blend Paddle system. Recommended for mixing plaster and fireproofing materials. Can be used with or without rubber blades. Features curved blades to facilitate cleaning and curved ends on the long blades to minimize splashing and “balling” of the mix.

High Dump - the mixer is designed to dump into a wheelbarrow without having to elevate the mixer. When the mix is hydraulically dumped, the hydraulic cylinder rotates and lifts the drum to obtain the high discharge height.

WARNING

NEVER OPERATE THE MIXER WITH THE GUARD LIFTER DISCONNECTED OR THE GUARDS REMOVED.

Quadruple Shaft Seal - Provides a life long urethane seal system that completely isolates the sealed ball bearings in the drum trunnions from the mix.



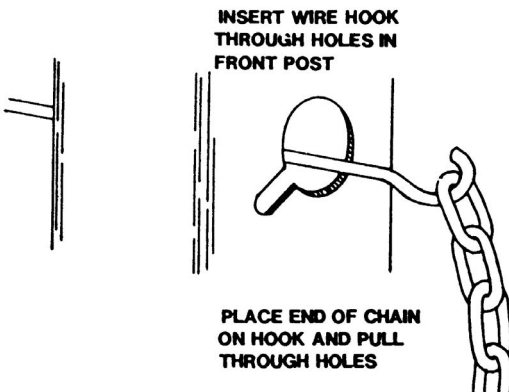
Lubrication

Before Starting

Mixer is shipped completely assembled and ready for operation except for installation of the safety chain.

Safety Chain Installation - Remove the safety chain kit from the engine compartment. The kit includes a safety chain and (2) connecting links. Pull one end of the chain through the (2) key hole slots located in the front post of the mixer with a hook (see drawing below and decal on mixer front post). Attach the connecting links to each end of the chain. Follow the instructions in the TOWING section of this manual and on the mixer front post to attach the safety chain to the towing vehicle.

Installing Chain to Mixer



Engine Oil - Check the oil level before starting the engine. **Warranty is VOID if run without oil.** Consult the **Engine Manual** supplied with this unit for specific instructions and oil recommendations.

Hydraulic Oil - Check oil sight gauge located on the side of the oil tank/main beam under the engine compartment. Consult **Service Manual** supplied with this unit for specific instructions and oil recommendations.

Fuel - Fill the gas tank with clean gasoline from a safety can. Consult the **Engine Manual** supplied with this unit for the proper type of gasoline required.

DO NOT mix oil with gasoline.

Hardware - Check all hardware on mixer and engine/motor before starting. Consult the Torque Chart section of this manual and tighten any loose hardware accordingly.

Follow the guidelines found in the SAFETY PRECAUTION section of this manual whenever handling gasoline.

Lubrication

To Start and Stop the Engine



Caution - Set mixer up in an open area. Avoid close proximity to structures or other equipment. Failure to do so may cause inadvertent injury to operator or other persons in the area.

Cold Start - Open the fuel valve under the gas tank all the way. Position the engine stop switch, located on the engine, to run. Open the throttle approximately half way and apply the choke. Pull the starter rope sharply. When the engine starts, open the choke and adjust the throttle as necessary to keep it running. Allow the engine to warm up for a few minutes before placing it under the load. If the engine doesn't start after (3) pulls, open choke slightly to prevent flooding. Always operate the engine at full throttle when under load.

Hot Start - Open the valve under the gas tank all the way if it has been shut off. Open the throttle approximately half way. Do not apply the choke. Pull the starter rope sharply until the engine starts. When the engine starts, adjust the throttle. Always operate the engine at full throttle when under load.

NOTE: These starting instructions are general guidelines only. Since many engine options are available on Stone PM mixers, consult the Engine Manual included with this unit for specific instructions.



Caution - Gasoline Engines - To improve the engine service life, allow the engine to idle without load for (2) to (5) minutes before shutting it down. When the idling period is up, use the stop switch located on the engine and turn it to stop. Close the fuel valve under the gas tank. Engine flooding can occur if the valve is left open during towing.



Warning - This mixer is designed for mixing only mortar, plaster, fireproofing, refractory and other small grained Portland cement products. Any other use of this mixer may cause premature failure and or great personal risk to the operator or other individuals close by. Do not use for mixing any volatile or corrosive material.

Operation

To Operate the Mixer

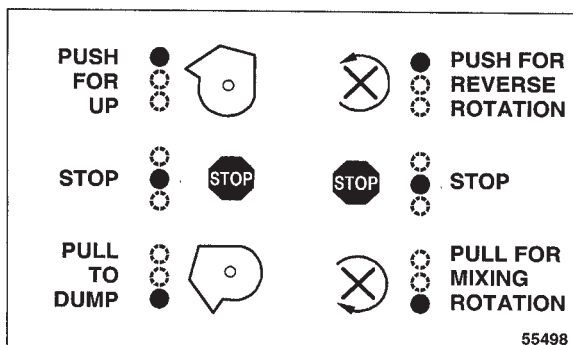
WARNING

ALWAYS WEAR SPLASH GOGGLES WHEN OPERATING THE MIXER. FAILURE TO DO SO WILL ALLOW FOREIGN PARTICLES TO ENTER THE EYES.

WARNING

NEVER OPERATE MIXER WITH ANYONE CLOSE BY. KEEP ALL UNTRAINED PERSONNEL AWAY FROM WORK AREA.

Paddle Rotation – The proper rotation of paddles for mixing is a clockwise rotation. Pull lever, on the left, out to start rotation, push in to center position to stop, and toward mixer for counterclockwise direction. See decal for instructions.



To Dump – Pull the lever on the left side out slowly until correct dumping speed is obtained. Paddles should be rotating in a clockwise direction to clean out the drum. To bring the drum back to the upright position, stop the paddles (push left lever to the center position) and slowly push the lever on the right side toward mixer until the correct return speed is obtained.



Mixing –

1. Pour half of the required water into the drum.
2. Add half of the required sand.
3. Add the total requirement amount of mortar mix (cement, lime, etc.).
4. Add the balance of the sand and water.

After mixing for the proper length of time, (homogeneous mix obtained) discharge (dump) the mix from the drum.

After discharge, if another batch of mortar is to be mixed, return the drum to the mixing position. Immediately pour in half of the required water for the next batch with paddles turning. This will clean the paddles and drum between batches and help prevent lumps of dried mortar from forming and contaminating the next batch.

If no more mortar is to be mixed in the next hour or so, the mixer drum and paddle should be thoroughly cleaned. If no more mortar is to be mixed that day, the mixer should be thoroughly cleaned inside and outside to ensure maximum life and performance.

Operation

Cleaning the Mixer To Lubricate the Mixer

Cleaning the Mixer - For consistent performance, long life and continued high quality mixing of plaster or mortar, thoroughly clean the mixer inside and out at the end of each day's operation. To prevent lumps of dried plaster from forming and contaminating further batches of plaster or mortar, do not allow build up materials to form on drum guards, around paddles or anywhere inside the drum.

- Before cleaning, shut the engine off and disconnect the spark plug wire/power to electric motor to prevent accidental starting.
- Keep drum guard closed
- Always keep guard lifter connected
- Keep drum in upright, mixing position
- Spray mixer with water before mix dries to remove accumulation
- Rotate drum to dump position to remove debris
- DO NOT beat on the drum with a shovel, hammer or other device to break up accumulations of dried mix, as this will dent and damage the drum and void the warranty.

WARNING

FAILURE TO FOLLOW CLEANING INSTRUCTIONS AND/OR ROTATION OF DRUM WITHOUT GUARD LIFTER CONNECTED CAN RESULT IN SERIOUS INJURY.

Daily

1. Check the oil levels in the engine. If required, add a good grade of 10W30 oil. The engine warranty is VOID if run without oil.
2. Check oil level in hydraulic tank. Oil should be visible in the sight gauge. If required, add Mobil 424 or equivalent. *Do not overfill.*

Weekly

1. Grease, using any Grade #1 lithium base greas., the drum shaft seals centrally located on outside of each drum end (2 places).

Monthly

1. Grease, using any Grade #1 lithium base grease, trunnions (sockets in which the drum pivots) in two places.

Yearly

1. Have service/maintenance repack (4)-tapered roller bearings in wheel hubs and replace wheel seals. Install washer and nut. Torque to 20 ft.lbs.--back off one turn, torque to 7 ft.lbs, back off to first slot in nut and insert cotter key.



CALIFORNIA PROPOSITION 65 WARNING: Engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.



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