BARTELL GLOBAL | OWNER'S MANUAL

# CONCRETE MIXER

MC6PH160, MC6PE150, MC75SH160, MC75SE200, MC95PH240, MC95PE200, MC95SH240, MC95SE200, MC12SH390


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# ORIGINAL LANGUAGE OPERATING MANUAL FOR BARTELL RIDE-ON TROWELS



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| REV. | DATE | DESCRIPTION | APPROVED BY: |
|---|---|---|---|
| 00 | 04/18 | Release of new format | B.M |
| 01 | 07/24 | Updated Logos | AN |
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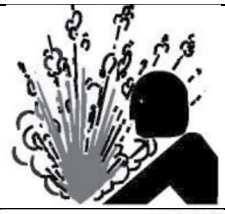
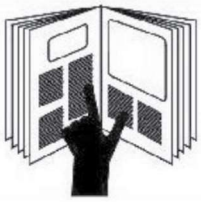
# SAFETY PRECAUTIONS

| | |
|---|---|
|  | **DANGER**<br>**EXPLOSION HAZARD**<br>Never operate the machine in an explosive atmosphere, near combustible materials, or where ventilation does not clear exhaust fumes. |
|  | **WARNING**<br>**BURN HAZARD**<br>Never come into contact with the engine or muffler when engine is operating or shortly after it is turned off. Serious burns may occur. |
|  | **CAUTION**<br>**ROTATING HAZARD**<br>Never place hands or feet inside safety guard rings. Serious injury will result from contact with rotating blades. |
|  | **CAUTION**<br>**MOVING PARTS**<br>Before starting the machine, ensure that all guards and safety devices are in place and functioning properly. |
|  | **ATTENTION**<br>**READ OWNER'S MANUAL**<br>Read and understand owner's manual before using this machine. Failure to follow operating instructions could result in serious injury or death. |

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# SERIAL NUMBER LOCATION

The model/serial number decal is located on the shroud assembly (black).

The unit's year of manufacture can be determined by the serial number. Contact your nearest sales branch or Morrison for more information.

This Unit warranty is stated in this Operational and Safety manual. Failure to return warranty registration card renders the warranty null and void.

An engine owner's manual is also attached to every unit. Engine parts may be ordered from any authorized dealer. Refer to the engine owner´s manual lo learn about specifications and part identification.

# Routine Service Schedule

| Routine Service Intervals | | Each Use | After 1.5 months or 50 hrs | Each 3 months or 100 hrs | Each 6 months or 200 hrs | Each 9 months or 300 hrs | Each 12 months or 400 hrs |
|---|---|---|---|---|---|---|---|
| **General Inspection** | | | | | | | |
| Guards | Check | | O | O | O | O | O |
| Warning Stickers | Check | | O | O | O | O | O |
| Test Run | Check - Operation | | O | O | O | O | O |
| **Engine** | | | | | | | |
| Engine Oil | Check level | O | O | O | O | O | O |
| | Change | | O | | O | | O |
| Air Cleaner | Check - Clean | O | O | | | | |
| | Replace | | | O | | | |
| Sediment Cup | Clean | | | O | O | O | O |
| Spark Plug | Check - adjust | | | O | O | | O |
| | Replace | | | | | O | |
| Idle Speed | Check - adjust | | | | | O | O |
| Valve Clearance | Check - adjust | | | | | O | |
| Combustion Chamber | Clean | After every 500 Hrs. | | | | | |
| Fuel Tank + Filter | Clean | Every 6 months or 100 Hrs. | | | | | |
| Fuel Tube | Check | Every 2 years (Replace if necessary) | | | | | |
| **Drive Train** | | | | | | | |
| Bearings | Grease | O | O | O | O | O | O |
| V-Belts | Check | | O | O | O | O | O |
| Gears | Check | Replace if teeth are cracked, missing or sharp from wear | | | | | |
| Hardware* | Check - tighten | | O | O | O | O | O |
| Tires | Check | O | O | O | O | O | O |

*Check all hardware after the first 5 hours of use, then follow the service interval schedule. Also Re-torque the front leg and axle hardware after the first 50 miles travelled, and then follow the maintenance schedule.

# PARTS ORDERING PROCEDURE

Morrison Parts are available worldwide and must be ordered through your local distributor.

If you can't locate the distributor in your area refer to last page of this manual to locate the nearest branch and contact numbers for assistance.

**ALWAYS HAVE READY:**

1. Model and serial number of machine when ordering Morrison parts.
2. Model and serial number of engine when ordering engine parts.
3. Item part number(S), description, and quantity.
4. Company name, address, zip code, and purchase order number.
5. Preferred method of shipping.

**REMEMBER – you own the best. If repairs are needed use only purchased parts from authorized Morrison distributors.**

# OPERATING INSTRUCTIONS

## INTRODUCTION

Morrison Mixers are intended for use in several applications. They are powered by four cycle gas engines or electric motors and are available in different sizes and manufacturers. The Parts Manual contains only standard parts. Variations of these parts as well as other special parts are not included. Contact your local Morrison distributor for assistance in identifying parts not included in this manual.

## ASSEMBLY INSTRUCTIONS

1. Remove the mixer and all components from its shipping crate. You will see:
   - Two wheels.
   - Axle assembly with hubs on each side, mounting loops and 8 lug nuts.
   - Selected hitch with lock pin and bolt and safety bolt with hair pin.
2. After removing all mixers' safety packing, while standing on an end, locate the axle's place on the mixer. You need to locate the bolts attached to the mixer shroud, bolted to the pallet and make sure these bolts are removed.
3. Lift the axle up to the mixer frame and position it in the center of the mixer make sure the axle guide is inside the mounting loops (both sides) before you hook the axle on the mixers springs or mixer frame (depending mixer size) and bolt the mounting loops.
4. Insert two 1/2-inch bolts with a washer through the mounting loops to secure the axle. Fasten each mounting loop side and tight the bolts at 57 ft.-lbs.
5. Remove the lug nuts from the axle and mount the speed wheel, after wheel is mounted proceed to place the lug nuts (make sure the conical (tapered) end is facing the inside of the wheel. Torque to 105 ft.-lbs.
6. Proceed with the second wheel using the steps of point #3.
7. Using appropriate Equipment, put the mixer on to the ground.
8. Position the safety chain through the key slots in the front leg. Adjust the chain's ends to equal length.
9. Remove the safety bolt and pin from the tow bar.
10. Install the tow bar through the front leg.
11. Insert the pin through the front leg and the front hole in the tow bar. Secure the pin with a hairpin cotter. Insert the 3/4" bolt through the rear hole and secure with a lock washer and nut. Tighten securely.

**Note: All installation hardware must be inserted into its respective location on the mixer, see parts explosion for more details.**

**Warning: failure to use proper lifting equipment could cause mixer to fall and cause serious injury.**

# SAFETY PRECAUTIONS

Read and study the following safety information before attempting to operate this equipment. In addition, ensure that every individual who operates or works with this equipment is familiar with these safety precautions

**WARNING - LETHAL EXHAUST GAS**
An internal combustion engine discharges carbon monoxide, which is a poisonous and odorless invisible gas. Death or serious illness may result if inhaled. Operate only in an area with good ventilation, never operate in a confined area.

**WARNING - DANGEROUS FUELS**
Use extreme caution when storing, handling and using fuels - they are highly volatile and explosive in the vapor state. Do not add fuel while engine is running. Stop and cool the engine before adding fuel.

**DO NOT SMOKE WHEN REFUELING**

**SAFETY GUARDS**
It is the owner's responsibility to ensure all guards and shields are in place and in working order.

**IGNITION SYSTEMS**
Breakerless magneto and batteries ignition systems can cause severe electrical shocks, avoid contact with these components or their wiring.

**SAFE DRESS**
DO NOT WEAR loose clothing, rings, wristwatches, etc., near machinery.

**NOISE PROTECTION**
Wear O.S.H.A. specified hearing protection devices.

**FOOT PROTECTION**
Wear O.S.H.A. specified steel tip safety shoes.

**HEAD PROTECTION**
Wear O.S.H.A. specified safety helmets.

**EYE PROTECTION**
Wear O.S.H.A. specified eyes shields, safety glasses, and sweat bands.

**DUST PROTECTION**
Wear O.S.H.A. specified dust mask or respirator.

## OPERATOR

Keep children and bystanders off and away from the equipment. For details on safety rules and regulations in the United States, contact your local Occupational Safety and Health Administration (O.S.H.A.) office. Equipment operated in other countries must be operated and serviced in accordance and compliance with all safety requirements of such country. The publication of these safety precautions is done for your information does not by the publication of these precautions, imply or in any way represent that these are the sum of all dangers present near equipment. If you are operating a unit it is your responsibility to ensure that such operation is in full accordance with all applicable safety requirements and codes. All requirements of the United States Federal Occupational Safety and Health Administration Act must be met when operated in areas that are under the jurisdiction of that United States Department.

# BEFORE OPERATING

- Remember, it is the owner´s responsibility to communicate information on the safe use and proper operation of this unit to the operators. Before operating, review Safety Precautions listed in this manual.

- Familiarize yourself with the operation of the unit and confirm that all controls function properly before starting engine.

- Locate the safety switch and assure you know how to stop the unit.

- Make sure hands, feet, and clothing are at a safe distance from any moveable parts prior to starting.

- Shrouds and grids are provided to protect the operator or structures near rotating hot engine parts. It is the responsibility of the owner to see that they are properly in place.

- Oil Level - Check the oil level in the engine. For more information see "Lubrication" under the engine "Owner's Manual" the "Maintenance" section of this manual. All mixers come without oil running an engine without lubrication may damage the engine.

- Air Cleaner - Check to ensure elements are in good condition and properly installed. Review every decal with the Operator.

- Fuel Supply - Engines on Morrison Mixer equipment require an automotive grade of clean, fresh, unleaded or regular gasoline. All mixers come without gasoline and oil.

- Fuel Filter - Check to ensure element is in good condition... Replace if it is clogged or damaged.

- Lubrication Points - Make sure all pillow blocks have been properly greased.

**Warning: failure to use proper lifting equipment could cause mixer to fall and cause serious injury.**

# OPERATION INSTRUCTIONS

**Gas engine**

1. Open the fuel valve.
2. Pull the stop switch on the engine shroud to its "Out" position.
3. Move the engine throttle control to the "FAST" position.
4. Choke the engine if necessary. (You may not need to choke a warm engine)
5. Pull the starter string.
6. After the engine starts, move the choke lever to the open position, move the throttle level to the "IDLE" position and let the engine warm-up for one or two minutes.

**Electric motor**

1. Plug the motor into a suitable power source.
2. Move the switch on the motor to the "on" position.

**OPERATING**

1. If using a gas engine, allow the engine to warm up then move the throttle to the fast position.
2. Close the engine shroud.

**Do not operate the mixer with the shroud open.**

3. After loading a batch of concrete, it is recommended to add water for the next batch.
4. After discharging the final batch of concrete, add water to the drum while the mixer is running. Discharge the water after the inside of the mixer is clean.
5. Depending on the mixer power system to have the perfect mix this unit must run at a 27 to 37 RPM, the gas units you can regulate the speed by regulating the throttle control from the engine. For electric units the pulleys will keep the mix in the correct RPM's.

**Engine Warranty is void if the engine is run without oil.**

# STOPPING ENGINE

## GAS ENGINE

1. Move the engagement lever to the "IDLER" position.
2. Whenever possible it is recommended to let the engine idle before stopping.
3. Push in the engine stop switch on the engine shroud.
4. Close the fuel valve.

## ELECTRIC MOTOR

1. Move the switch on the motor to the "off" position.

## STOP THE ENGINE OR ELECTRIC MOTOR BEFORE:

- Adding fuel.
- Leaving equipment unattended for any amount of time.
- Making any repairs or adjustments to the unit.
- Transportation.

## TOWING:

1. Stop the engine or electric motor.
2. Close and hook the engine shroud.
3. Rotate the drum into the tow position and secured it with the locking pin.
4. Secure the mixer hitch and safety chains to the vehicle.

## BEFORE TOWING:

- Make sure the axle and tow bar hardware is tight.
- Check the condition of the pin on the tow bar and make sure it is secured.
- Remove any loose debris from the mixer.
- Use safety chains when towing. Maximum Tow Speed: **45 mph**

**Warning: This mixer is not to be towed on passenger roads.**

**Important: The engine is supplied from the engine manufacture with the high idle speed set at approximately 3500 RPM and no gas or oil. As a result, the engine is not run when mounted to the Mixer. It is the responsibility of the customer to add oil and gas, start the engine and reset the high idle RPM to the operating range (Refer to the Maintenance Section for procedure).**

# SERVICE INSTRUCTIONS

- Never service or lubricate the unit engine while running.
- After servicing the unit, restore and fasten all guards, shields, and covers to their original positions.
- Never drain oil into the ground, into open streams, or down sewage drains.

## ENGINE

See engine owner´s manual maintenance schedule.

## DRUM

1. Wash the drum after every day's usage.
2. Pull the locking pin and tip the drum forward to drain water excess.
3. Return drum to towing position and secure with locking pin before moving mixer.

## LUBRICATION

1. Grease all fittings daily. All mixers have 6 grease fittings, 4 pillow blocks and 2 drum trunnions. Two of the fittings are located at each end of the mixer drum on the top of pillow blocks and trunnions. The two remaining grease fittings are located under the engine shroud on the top of the intermediate shaft pillow blocks (see picture below).
2. Electric mixers only: oil the drive chain once a week.

# APPROXIMATE TIGHTENING TORQUE

| Size | Grade 2 | Grade 5 | Grade 8 |
|---|---|---|---|
| #10-24 | 21 in-lbs | 32s in-lb | 45 in-lbs |
| #10-32 | 23 in-lbs | 36 in-lbs | 51 in-lbs |
| 1/4-20 | 49 in-lbs | 76 in-lbs | 9 in-lbs |
| 1/4-28 | 56 in-lbs | 87 in-lbs | 10 in-lbs |
| 5/16-18 | 8 in-lbs | 13 in-lbs | 18 in-lbs |
| 5/16-24 | 9 in-lbs | 14 in-lbs | 20 in-lbs |
| 3/8-16 | 15 in-lbs | 23 in-lbs | 33 in-lbs |
| 3/8-24 | 17 in-lbs | 26 in-lbs | 37 in-lbs |
| 7/16-14 | 24 in-lbs | 37 in-lbs | 52 in-lbs |
| 7/16-20 | 27 in-lbs | 41 in-lbs | 58 in-lbs |
| 1/2-13 | 37 in-lbs | 57 in-lbs | 80 in-lbs |
| 1/2-20 | 41 in-lbs | 64 in-lbs | 90 in-lbs |
| 9/16-12 | 53 in-lbs | 82 in-lbs | 115 in-lbs |
| 9/16-18 | 59 in-lbs | 82 in-lbs | 129 in-lbs |
| 5/8-11 | 73 in-lbs | 112 in-lbs | 159 in-lbs |
| 5/8-18 | 83 in-lbs | 112 in-lbs | 180 in-lbs |
| 3/4-10 | 129 in-lbs | 223 in-lbs | 282 in-lbs |
| 3/4-16 | 144 in-lbs | 200 in-lbs | 315 in-lbs |
| 7/8-9 | 125 in-lbs | 322 in-lbs | 245 in-lbs |
| 7/8-14 | 138 in-lbs | 355 in-lbs | 501 in-lbs |
| 1-8 | 188 ft-lbs | 483 ft-lbs | 682 ft-lbs |
| 1-12 | 205 ft-lbs | 529 ft-lbs | 746 ft-lbs |
| 1-14 | 210 ft-lbs | 541 ft-lbs | 764 ft-lbs |
| 1-1/8-7 | 266 ft-lbs | 596 ft-lbs | 966 ft-lbs |
| 1-1/8-12 | 297 ft-lbs | 668 ft-lbs | 1083 ft-lbs |
| 1-1/4-7 | 375 ft-lbs | 840 ft-lbs | 1363 ft-lbs |
| 1-1/4-12 | 415 ft-lbs | 930 ft-lbs | 1509 ft-lbs |
| 1-3/8-6 | 491 ft-lbs | 1102 ft-lbs | 1787 ft-lbs |
| 1-3/8-12 | 559 ft-lbs | 1254 ft-lbs | 2034 ft-lbs |
| 1-1/2-6 | 652 ft-lbs | 1462 ft-lbs | 2371 ft-lbs |
| 1-1/2-12 | 734 ft-lbs | 1645 ft-lbs | 2668 ft-lbs |
| M 6 | 3 ft-lbs | 4 ft-lbs | 7 ft-lbs |
| M 8 | 6 ft-lbs | 10 ft-lbs | 18 ft-lbs |
| M 10 | 10 ft-lbs | 20 ft-lbs | 30 ft-lbs |

## Conversion

| | | | |
|---|---|---|---|
| in – lbs x 0.083 = ft-lbs | ft – lbs x 12 = in-lbs | ft – lbs x 0.1383 = kg-m | ft – lbs x1.3558 = N-m |

# WARRANTY

**THIS IS YOUR WARRANTY - PLEASE READ AND SAVE**

1. Morrison warrants each new machine against any defect in material and workmanship under normal use and service for a period of six (6) months. This warranty starts the day the machine is sold, assigned to a rental fleet, or otherwise get into its first use.

2. The obligation under this warranty is limited to the replacement of parts at your factory branch or an authorized Morrison distributor.

3. Machines altered or modified without a Morrison written consent, may void this warranty policy immediately. Misuse, negligence, accidents or the operation of the machines in any other way that the recommended by Morrison operation procedures, will void this warranty policy. This warranty shall not apply to machines repaired by other than Morrison authorized branches or distributors.

4. The cost of transportation and other expenses related are not covered by this warranty.

5. Written authorization for the return of merchandise under warranty must be obtain from Morrison customer service contact.

6. Morrison reserves the right to inspect and render the final decision on each warranty case.

7. Morrison reserves the right to improve or make product changes without incurring any obligation to update, refit or install on machines previously sold.

8. Morrison is not responsible for any liability, damage or injury directly or indirectly from the design, material or operation of its product.

9. The warranty letter must be returned to Morrison within 10 days after purchase/acquire, for a first use failure warranty claim. Failure to return the warranty letter as specified renders the warranty null and void.

10. Warranty request must be submitted in written within 30 days after machine failure to Morrison customer service.

11. The foreign warranty is expressly in lieu of all other warranties, expressed or implied, including warranties of merchant ability and fitness for use and all other obligations or liabilities on our part, and we neither assume failures on engines, motors or their components.

# DECLARATION OF CONFORMITY

## CERTIFICAT DE CONFORMITÉ / GELIJKVORMIGHEIDS CERTIFICAAT / DECLARACIÓN DE CONFORMIDAD / DECLARAÇÃO DE CONFORMIDADE / DICHIARAZIONE DI CONFORMITA

We:

**Bartell Morrison Inc.**
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Declare under our sole responsibility that the product to which this declaration relates is in conformity with the following standard(s) or other normative documents.

Déclarons sous notre responsabilité que le produit cette déclaration est conforme aux normes suivantes ou d'autres documents habituels.

Verklaren onder onze verantwoordelijkheid dat het product naar welke de verklaring verwijst conform de volgende standaards of anders gebruikelijke documenten is.

Declaramos bajo nuestra única responsabilidad que el producto en lo que esta declaración concierne, es conforme con la siguiente normativa u otros documentos.

Declara sob sua responsabilidade que o produto a quem esta declaração interessar, está em comformidade com os seguintes documentos legais ou normas directivas.

Dichiariamo sotto la ns. unica responsibilita che il prodotto al quale questa dichiarazione si riferisce, è fabbricato in conformità ai seguenti standard e documenti di normative.

| | |
|---|---|
| EN 349:1993 | Safety of Machinery - Minimum gaps to avoid crushing of parts of the human body. |
| EN 418:1993 | Safety of Machinery - Emergency stop equipment, functional aspects - Principles for design |
| EN 12100-1:2003 | Safety of Machinery - Basic Concepts, general principles for design - Part 1: Basic Terminology, methodology |
| EN 12100-2:2003 | Safety of Machinery - Basic Concepts, general principles for design - Part 2: Technical Principles |
| EN ISO 4872:1978 | Acoustics - Measurement of Airborne noise emitted by construction equipment intended for outdoor use - Method for determining compliance with noise limits. |
| EN ISO 5349-1:2001 | Mechanical vibration. Measurement and evaluation of human exposure to hand-transmitted vibration. General requirements |
| EN ISO 5349-2:2001 | Mechanical vibration. Measurement and assessment of human exposure to hand-transmitted vibration. Practical guidance for measurement at the workplace. |

Following the provisions of Directive(s):

Suivant les directive(s) déterminées:

Volgens de vastgestelde richtlijnen:

Siguiendo las directiva(s):

No sequimento das clausulas da Directiva(s):

Seguendo quanto indicato dalla Direttiva(s):

| | |
|---|---|
| 98/37/EC | Machinery Directive |
| 2000/14/EC | Noise Directive |
| 2001/95/EC | General Product Safety Directive |
| 2002/95/EC | Reduction of Hazardous Waste Directive |

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