

# Operator's Safety and Service Manual

## Mortar & Plaster Mixer



**MM6 / MM6P**

**MM8 / MM8P**

**MM95**



It is the OWNER'S RESPONSABILITY to communicate information on the  
SAFE USE and OPERATION of this machine to the operators.

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# 1. SERIAL NUMBER LOCATION

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

(Write model number)



(Write serial number)

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


This Unit warranty is stated in this Operational and Safety manual on page 17. 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 order from any authorized dealer. Refer to the engine owner's manual to learn about specifications and part identification.

## 2. PARTS ORDERING PROCEDURE:

 Parts are available worldwide and must be ordered through your local distributor. If you can't locate the  distributor in your area refer to page 18 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  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  distributors.**

## 3. OPERATING INSTRUCTIONS

### INTRODUCCION

 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.

This Operation manual contains only standard parts. Variations of these parts as well as other special parts are not included. Contact your local  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 rim and tire assemblies.
  - Axle assembly with hubs on each side, idler spring, and 8 lug nuts.
  - Selected hitch with lock pin and bolt and safety bolt with hair pin.

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

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 this bolts are removed.
3. Lift the axle up to the mixer frame and position it with the bracket spring lined up to the idler clutch hole on the mixer's frame.
4. Insert two 1/2 inch bolts with a washer through the frame and the vertical mounting bracket on the axle. Secure each bolt with a washer and locknut. 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. Hook one end of the spring to the idler arm. Hook the other end of the spring to the spring plate on the axle. The spring should be hooked through the second hole from the top toward the middle of the mixer.
8. Using appropriated Equipment, put the mixer down to the ground.



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

9. Position the safety chain through the key slots in the front leg. Adjust the chain's ends to equal length.
10. Remove the safety bolt and pin from the tow bar.
11. Install the tow bar through the front leg.
12. Insert the pin through the front leg and the front hole in the tow bar. Secure the pin with a hairpin cotter.
13. Insert the 3/4" bolt through the rear hole and secure with a lock washer and nut. Tighten securely.

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## 4. 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 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.

### **OPERATOR**

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 any and 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 insure 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.

## 5. SAFETY NOTICE & DECALS



### IMPORTANT NOTICE



The "SAFETY ALERT SYMBOL" is used to call attention to items or operations that may be dangerous to those operating or working with this equipment. These symbols can be found throughout the manual and on the unit itself. Please read these warnings and cautions carefully.

## READ SAFETY DECALS CAREFULLY

Carefully read and follow all safety decals. Keep them in good conditions. If they become aged, replace as required. If repainting, **REPLACE ALL** decals. Decals are available from your authorized Distributors. Decals are not shown to scale.



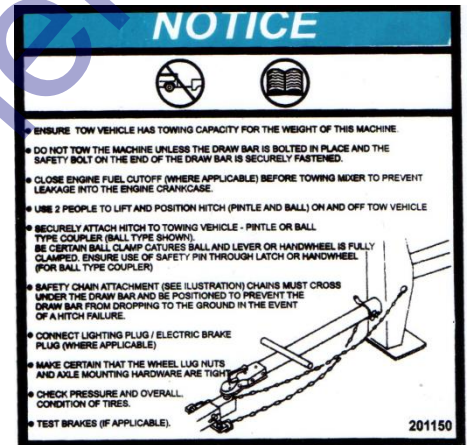
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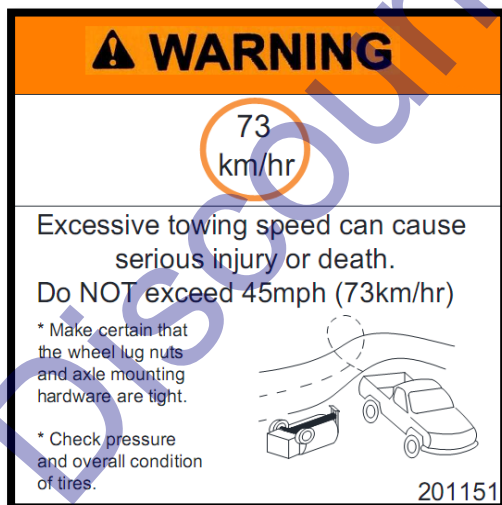
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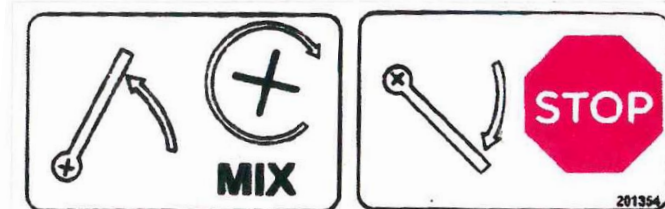
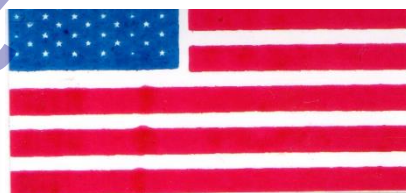
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## 5. SAFETY NOTICE & DECALS



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Carefully read and follow all safety decals. Keep them in good condition. If they become aged, replace as required. If repainting, **REPLACE ALL** decals. Decals are available from your authorized Distributors. Decals are not shown to scale.

**WARNING**

**ROTATING PART HAZARD  
KEEP AWAY**

To prevent serious injury or death rotating parts:

1. Install, close and secure all guards, shields and hoods before operating.
2. Do not place hands in drum unless the motor or engine is off and the power cord unplugged or the spark plug wire is disconnected
3. Keep hands, feet, hair and clothing away from moving parts.

201003

201003 (x2)

**CHECK LIST**

- 1 Check and tighten where necessary - all nuts and bolts.
- 2 Check mixer paddle adjustments and tighten paddle bolts.
- 3 Grease all fittings - grease drum seals forcing grease out under the seal lip.
- 4 Check belt adjustment and tighten belt if necessary.
- 5 Check tire pressure - inflate 12" and 15" tires to 30 psi. 8" tires to 45 psi.
- 6 Ensure that drum lock and hood fasteners are in the locked position before transporting.

TO AVOID DOWNTIME ON REPAIRS CHECK PERIODICALLY WHEN IN USE

290791

290791

**WARNING**

Improper operation of this equipment can cause serious injury or death.

Read Operator's Manual supplied with this machine before operation or servicing.

Modification or alteration of this machine can cause written consent the manufacturer.

Do not alter or modify this machine without the express written consent of the manufacturer.

201154

201154

**WARNING**

201005

201005

**USE  
GASOLINE  
FUEL ONLY**

201152

201152

**WARNING**

- 1 Read and understand Operators Manual and safety signs before starting.
- 2 A Stop engine, disconnect spark plug wire and wait for all moving parts to stop before servicing, maintaining, adjusting or cleaning.
- 2 B Turn motor off, unplug power cord or turn off power at master panel and wait for all moving parts top stop before servicing, maintaining, adjusting, or cleaning
- 3 Keep hands, feet, hair and clothing away from moving parts.
- 4 Install, close and secure all guards, shields and hoods before operating.
- 5 A Do not place hands in the drum unless engine OFF and spark plug wire is disconnected.
- 5 B Do not place hands in the drum unless motor is OFF and power cord is unplugged.
- 6 A Stay away from hot engine components during operation.
- 6 B Have licensed electrician wire up provide power to the electric motor.
- 7 A Do not smoke when refueling.
- 7 B Use a power cord with the required capacity to carry the power to the motor.
- 8 A Follow good safety procedures when handling fuel
- 8 B Route the power cord out of the way or protect it from damage.
- 9 Do not operate in an explosive atmosphere or a poorly ventilated area without adequate ventilation
- 10 Keep working area dry and clean to prevent slipping and tripping.
- 11 Always attach safety chain when towing.
- 12 Comply with applicable transporting regulations when towing.
- 13 Do not allow riders during transporting
- 14 Do not exceed a safe travel speed when transporting. Slow down for corners and when going over rough terrain.

201001

201001 SMALL

**WARNING**

**MISSING GUARD HAZARD**

Install, close and secure all guards, shields and hoods before operating.

201004

201004

**EMERGENCY  
STOP  
PUSH TO STOP**

201026

201026

**DANGER**

**FIRE HAZARD  
NO SMOKING**

Prevent serious injury or death from fire. Do not smoke when refueling. Keep sparks, flames, and hot material away from flammable substances.

201005

201005

**DANGER**

**ELECTROCUTION HAZARD**

1. Turn machine OFF, shut down and lock out power source, unplug power cord and wait for all moving parts to stop before servicing or repairing machine or electrical components
2. Keep electrical components in good repair

201006

201006

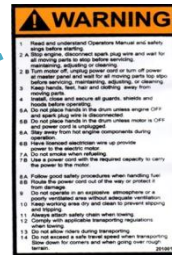
**WARNING**

- 1 Read and understand Operators Manual and safety signs before starting.
- 2 A Stop engine, disconnect spark plug wire and wait for all moving parts to stop before servicing, maintaining, adjusting or cleaning.
- 2 B Turn motor off, unplug power cord or turn off power at master panel and wait for all moving parts top stop before servicing, maintaining, adjusting, or cleaning.
- 3 Keep hands, feet, hair and clothing away from moving parts.
- 4 Install, close and secure all guards, shields and hoods before operating.
- 5 A Do not place hands in the drum unless engine OFF and spark plug wire is disconnected.
- 5 B Do not place hands in the drum unless motor is OFF and power cord is unplugged.
- 6 A Stay away from hot engine components during operation.
- 6 B Have licensed electrician wire up provide power to the electric motor.
- 7 A Do not smoke when refueling.
- 7 B Use a power cord with the required capacity to carry the power to the motor.
- 8 A Follow good safety procedures when handling fuel
- 8 B Route the power cord out of the way or protect it from damage.
- 9 Do not operate in an explosive atmosphere or a poorly ventilated area without adequate ventilation
- 10 Keep working area dry and clean to prevent slipping and tripping.
- 11 Always attach safety chain when towing.
- 12 Comply with applicable transporting regulations when towing.
- 13 Do not allow riders during transporting
- 14 Do not exceed a safe travel speed when transporting. Slow down for corners and when going over rough terrain.

201001

201001 BIG

## 6. SAFETY DECAL LOCATION



201001 BIG



# 6. SAFETY DECAL LOCATION

**WARNING**

Improper operation of this equipment can cause serious injury or death.

Read Operator's Manual supplied with this machine before operation or servicing.

Modification or alteration of this machine can cause written consent of the manufacturer.

Do not alter or modify this machine without the express written consent of the manufacturer.

201154

**USE GASOLINE FUEL ONLY**

201152

When is electric

**DANGER**

**ELECTROCUTION HAZARD**

1. Turn machine OFF, shut down and lock out power source, unplug power cord and wait for all moving parts to stop before servicing or repairing machine or electrical components
2. Keep electrical components in good repair!

201005

**WARNING**

**ROTATING PART HAZARD**

Always stand clear of the drum handle when mixer is in operation. Any binding of material between mixer blades and the drum may cause drum handle to quickly move to the charge position.

201157

**WARNING**

73 km/hr

Excessive towing speed can cause serious injury or death.

Do NOT exceed 45mph (73km/hr)

- \* Make certain that the wheel lug nuts and axle mounting hardware are tight.
- \* Check pressure and overall condition of tires.

201155

**MIX**

**STOP**

201156

**NOTICE**

WARNING: THE WHEELS ARE TIGHTLY LOCKED FOR THE SAFETY OF THE MACHINE. TO UNLOCK THE WHEELS, PULL THE BRAKE LEVER TO THE RIGHT AND TURN THE WHEELS TO THE RIGHT POSITION. DO NOT DRIVE ON THE WHEELS UNTIL THEY ARE FULLY UNLOCKED.

WARNING: NEVER OPERATE THE MACHINE ON A SLOPE EXCEEDING 15% UNLESS THE WHEELS ARE FULLY UNLOCKED. ALWAYS OPERATE THE MACHINE ON A FLAT SURFACE.

WARNING: NEVER OPERATE THE MACHINE ON A SLOPE EXCEEDING 15% UNLESS THE WHEELS ARE FULLY UNLOCKED. ALWAYS OPERATE THE MACHINE ON A FLAT SURFACE.

WARNING: NEVER OPERATE THE MACHINE ON A SLOPE EXCEEDING 15% UNLESS THE WHEELS ARE FULLY UNLOCKED. ALWAYS OPERATE THE MACHINE ON A FLAT SURFACE.

201153



**CHECK LIST**

1. Check and tighten where necessary - all nuts and bolts.
2. Check mixer paddle adjustments and tighten saddle bolts.
3. Grease all fittings - grease drum seals forcing grease out under the seal lip.
4. Check belt adjustment and tighten belt if necessary.
5. Check the pressure - inflate 12" and 15" tires to 30 psi, 17" tires to 45 psi.
6. Grease that drum lock and hood fastener are in the locked position before transporting.

TO AVOID DOWNTIME ON REPAIRS CHECK PERIODICALLY WHEN IN USE

201159

**WARNING**

1. Read and understand Operator's Manual and safety signs before starting.
2. A. Stop engine, disconnect spark plug wire and wait for all moving parts to stop before servicing. B. Turn motor off. Unplug power cord or turn off power at master control panel and wait for all moving parts to stop before servicing, maintaining, adjusting, or cleaning.
3. Keep hands, feet, hair and clothing away from moving parts.
4. Install, close and secure all guards, shields and hoods before operating.
5. A. Do not place hands in the drum unless engine is OFF and power cord is unplugged. B. Do not place hands in the drum unless motor is OFF and power cord is unplugged.
6. A. Do not touch the drum while the motor is running. B. Handle forward electrical wires to provide power to the electric motor.
7. Do not exceed rated weight capacity to carry the energy to the motor.
8. A. Follow good safety procedures when handling fuel. B. B. Route the power cord out of the way or protect it from damage. C. Do not operate in an explosive atmosphere or a poorly ventilated area without adequate ventilation.
9. Keep working area dry and clean to prevent slipping and tripping.
10. Always wear safety chain when towing.
11. Comply with applicable transportation regulations and laws.
12. Do not allow riders during transporting.
13. Do not exceed a safe travel speed when transporting. Slow down for corners and when going over rough terrain.

201001

201001 SMALL

**DANGER**

**FIRE HAZARD NO SMOKING**

Do not smoke or use open flames. Keep sparks, flames, and hot material away from flammable substances.

201002

**WARNING**

**ROTATING PART HAZARD KEEP AWAY**

To prevent serious injury or death rotating parts:

1. Install, close and secure all guards, shields and hoods before operating.
2. Do not place hands in drum unless the motor or engine is off and the power cord unplugged or the spark plug wire is disconnected.
3. Keep hands, feet, hair and clothing away from moving parts.

201003



**CAUTION**

**WHEN TOWING, ENSURE DRAWBAR IS IN THE MIDDLE POSITION**


201152

**CAUTION**

**Use 2 people to lift and position hitch on and off tow vehicle.**

201158

## 7. 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 on page 5 of this manual.
- ✚ Familiarize yourself with the operation of the unit and confirm that all controls function properly BEFORE starting engine.
- ✚ Locate the killing 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 in close proximity to rotating hot engine parts. It is the **RESPONSABILITY OF THE OPERATOR** 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  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 and drum's trunnions have been properly greased.
- ✚ PADDLES AND BLADES - Check the paddles and make sure they are adjusted to about 1/16" interference. This is mandatory after installing rubber blades on the paddles.

## 8. OPERATION INSTRUCTIONS

Prior to starting engine, make sure mixer engagement lever is in the "IDLE" POSITION.

### 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. Move the engagement lever into the "MIX" position and load the mixer.
4. After loading a batch of mortar, it is recommended to add water for the next batch.
5. After discharging the final batch of mortar, add water to the drum while the mixer is running. Discharge the water after the inside of the mixer is clean.

## 9. STARTING 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 should.

**IMPORTANT**  
Engine warranty is void if the engine is run without oil.

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 tightened.
- ✚ 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**

## 10. 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.

## 11. MAINTENANCE SCHEDULE

	<i>Maintenance</i>	<i>Each use</i>	<i>Every 20 hours</i>	<i>Every 50 hours</i>	<i>Every 100 hours</i>	<i>Yearly</i>
Engine	Refer to engine operator/owner manual	X				X
Bearings	Grease	X				X
V-Belts	Check for excessive wear		X			X
Roller chain	Check for excessive wear		X			X
Hardware	Check and tighten 1,2		X	X		X
Tires	Check air pressure	X				

1. Check all hardware after the first 5 hours of use, then follow the maintenance schedule.
2. Re-torque the front leg and axle hardware after the first 50 miles traveled, and then follow the maintenance schedule.

## 12. REPLACEMENT

### Parts

### Tolerance or Replacement Cycle

#### Engine Components

- ✓ Refer to your engine manufacturer's Owner's Manual

#### V-Belts

- ✓ Replace if stretched to the point that the idler does not work properly. Replace the V-belts if they are cracked or torn.

#### Roller Chain

- ✓ Replace if there is excessive play between the links or the links are damaged.

#### Gears

- ✓ Replace if the teeth are cracked or have become sharp.

#### Hardware

- ✓ Re-torque all bolts after the first eight hours of operation and check hardware every 25 hours. Replace any worn or damaged hardware as needed. Replacement hardware should be grade 5 and zinc plated.

#### Safety Decals

- ✓ Replace if they become aged, damaged or cannot be easily read.



## 13. TORQUE CHART

### APROXIMATE TIGHTENING TORQUE

<u>SIZE</u>	<u>GRADE 2</u>	<u>GRADE 5</u>	<u>GRADE 8</u>
# 10-24	21 in-lbs	32 in-lbs	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	454 in-lbs
7/8-14	138 in-lbs	355 in-lbs	501 in-lbs

### APROXIMATE TIGHTENING TORQUE

<u>SIZE</u>	<u>GRADE 2</u>	<u>GRADE 5</u>	<u>GRADE 8</u>
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	1254ft-lbs	2034 ft-lbs
1-1/2-6	652 ft-lbs	1462ft-lbs	2371 ft-lbs
1-1/2-12	734 ft-lbs	1645ft-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

#### CONVERSIONS

in - lbs x 0.083 = ft-lbs












ft - lbs x 12 = in-lbs

ft - lbs x 0.1383 = kg-m

ft - lbs x 1.3558 = N-m

## 14. WARRANTY

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

1.  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 start the first 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  distributor.
3. Machines altered or modified without a  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  operation procedures, will void this warranty policy. This warranty shall not apply to machines repaired by other than  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  customer service contact.
6.  Reserves the right to inspect and render the final decision on each warranty case.
7.  Reserves the right to improve or make product changes without incurring any obligation to update, refit or install on machines previously sold.
8.  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  within 10 days after purchase/adquire, 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  customer service.
11. THE FOREIGN WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR USE AND OF ALL OTHER OBLIGATION OR LIABILITIES ON OUR PART, AND WE NEITHER ASSUME FAILURES ON ENGINES, MOTORS AND THEIR COMPONENTS.



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