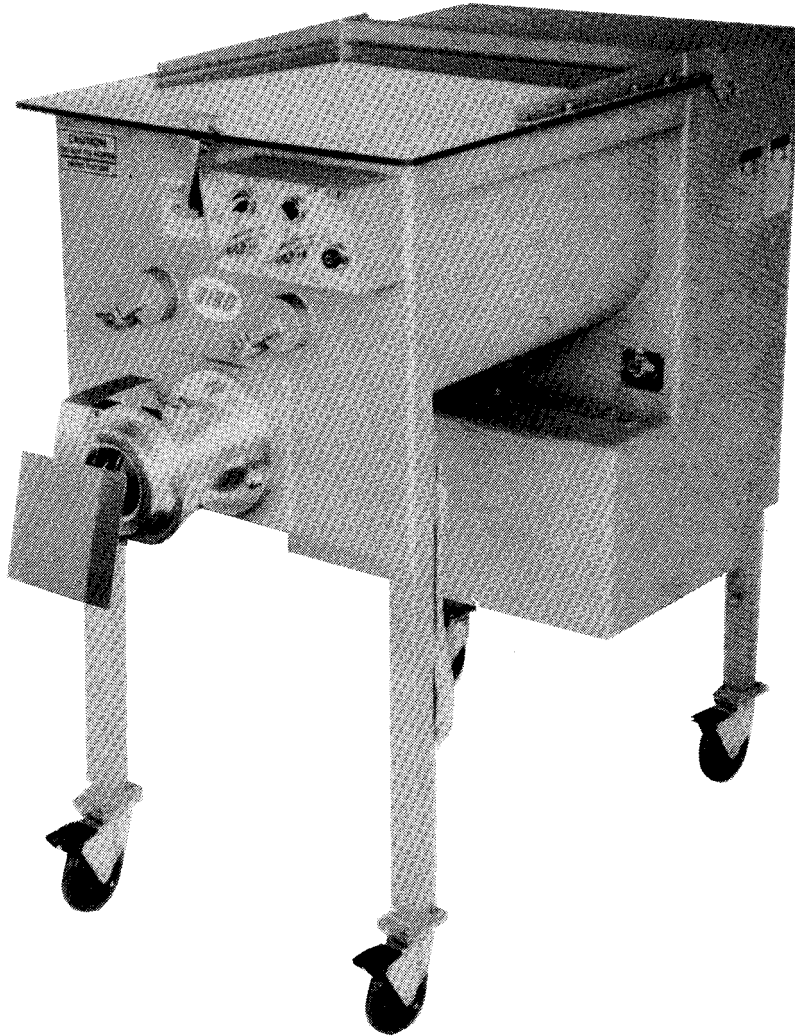




**Model EMG-32  
ERGONOMIC  
MIXER-GRINDER/CHOPPER  
OPERATING MANUAL AND PARTS LIST**



**IMPORTANT NOTICE**



**This Manual contains important safety instructions which must be strictly followed when using this equipment.**

Item No. EMG92099 Manual  
Form No. EMG32MAN-8-07-7 ACME

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# NOTICE TO OWNERS AND OPERATORS

BIRO's products are designed to process food products safely and efficiently. Unless the operator is properly trained and supervised, however, there is the possibility of a serious injury. It is the responsibility of the owner to assure that this machine is used properly and safely, strictly following the instructions contained in this Manual and any requirements of local law.

No one should use or service this machine without proper training and supervision. All operators should be thoroughly familiar with the procedures contained in this Manual. Even so, BIRO cannot anticipate every circumstance or environment in which its products will be used. You, the owner and operator, must remain alert to the hazards posed by the function of this equipment — particularly the ROTATING GRINDING AUGER and the ROTATING MIXING PADDLE, which can severely injure an inattentive operator amputating fingers and limbs. No one under eighteen (18) years of age should operate this equipment. If you are uncertain about a particular task, ask your supervisor.

This Manual contains a number of safe practices in the SAFETY TIPS section. Additional warnings are placed throughout the Manual. Warnings related to your personal safety are indicated by:



Warnings related to possible damage are indicated by:



BIRO also has provided warning labels on the equipment. If any warning label, instruction lable or Manual becomes misplaced, damaged, or illegible, please contact your nearest Distributor or BIRO directly for a replacement.

Remember, however, this Manual or the warning labels do not replace the need to be alert and to use your common sense when using this equipment.

This Manual applies to all **BIRO** Ergonomic Mixer Grinder/Choppers.

– NOTE –

**“A copy of this manual is included with each MODEL EMG-32 MIXER-GRINDER.”**

**“The descriptions and illustrations contained in this manual are not binding. The manufacturer reserves the right to introduce any modification without updating the manual.”**

## SAFETY TIPS



### **ROTATING GRINDING AUGER & ROTATING MIXING PADDLES TO AVOID SERIOUS PERSONAL INJURY**

- **NEVER** Touch This Machine without Training and Authorization by Your Supervisor.
- **NEVER** Place Hands into Machine Input or Output Openings.
- **NEVER** Open Machine During Operation.
- **ONLY** Use a Qualified Electrician to Install According to Local Building Codes: Machine **MUST** Be Properly Grounded.
- **ALWAYS** Connect to **Proper** Voltage & Phase.
- **ONLY** Install on Level, Non-Skid Surface in a Clean, Well-Lighted Work Area Away from Children and Visitors.
- **ALWAYS** Lock Machine Castors After Moving This Machine.
- **NEVER** Use This Machine For Non-Food Products.
- **NEVER** Operate Machine With Product Mixer Safety Cover Open or Removed or Magnetic Interlock Switch By-Passed.
- **ALWAYS** Turn Off, Unplug Machine From Power Source and Perform Lockout/Tagout Procedure to this Machine **BEFORE** Attempting to Unjam or Unclog, Cleaning or Servicing.
- **NEVER** Leave Machine Unattended While Operating.
- **NEVER** Alter This Machine From its Original Form as Shipped From Factory. **DO NOT** Operate Machine With Missing Parts.
- **PROMPTLY REPLACE** Any Worn or Illegible Warning Labels.
- **ALWAYS** Read Operation and Service Manual **BEFORE** Operating, Cleaning, or Servicing.
- **USE ONLY** BIRO Parts and Accessories Properly Installed.

# INSTALLATION



## TO AVOID SERIOUS PERSONAL INJURY, PROPERLY INSTALL EQUIPMENT IN ADEQUATE WORK AREA

- **ALWAYS** Use Qualified Technician and Electrician for Installation.
- **ALWAYS** Connect to **Proper** Voltage & Phase.
- **ALWAYS** Install Equipment in Work Area with Adequate Light and Space Away From Children and Visitors.
- **ONLY** Operate on a Solid, Level, Non-Skid Surface.
- **ALWAYS** Lock Machine Castors After Moving Machine to Operating Location.
- **NEVER** Bypass, Alter, or Modify This Equipment in Any Way From Its Original Condition.
- **NEVER** Operate Machine With Product Mixer Safety Cover Opened or Removed or Magnetic Interlock Switch By-Passed.
- **NEVER** Operate Without all Warning Labels Attached and Owner/Operator Manual Available to the Operator.
- **USE ONLY** BIRO parts and accessories properly installed

## UNCRATING AND SET UP

1. Read this Manual thoroughly before installation and operation. **Do not** proceed with installation and operation if you have any questions or do not understand anything in this Manual. Contact your local Distributor, or BIRO **first**.
2. Remove all banding, shipping carton, and all equipment from inside the tub. Then take machine off shipping pallet.
3. This machine is shipped with the adjustable legs fully retracted. The legs allow for a height adjustment from the floor to centerline of bowl 32" minimum to 38" maximum.
4. This machine weighs approximately 700 pounds. To avoid accidents block up machine after raising to desired operating height.
5. Fasten the casters to the legs.
6. The adjustable legs can now be unbolted and lowered to the floor. Replace bolts and nuts and tighten securely.
7. Install machine on a level, non-skid surface in a well-lighted work area away from children and visitors.
8. This machine is complete except for knife and plate. There is a bowl shipping plug (stamped steel) placed in the output end of the grinding bowl to retain the grinding auger during shipment. **REMOVE THE BOWL SHIPPING PLUG AND THE GRINDING AUGER.**
9. After checking and making sure the power supply is correct, plug in your machine. **NEVER OPERATE MACHINE WITH PRODUCT MIXER SAFETY COVER OPEN.** (Machine will not run with cover open.)
10. Machine must be properly grounded. Use qualified electrician to install according to local building codes.

## MOTOR WIRING AND ELECTRICAL REQUIREMENTS

1. Interchange of current is made in motor outlet box. Leads are properly marked. Changing instructions are on the motor plate or motor outlet box.
2. All mixer-grinder/choppers are wired 208 volts unless otherwise specified. Be sure motor specifications (voltage, cycle, phase) match power supply line. Be sure line voltage is up to specification.
3. Electrical connections to be in accordance with safety codes and National Electrical Code.
4. Rated voltage of the unit shall be identical with full supply voltage.
5. Voltage drop on the supply line shall not exceed 10% of full supply voltage.
6. The feederline conductor size in the raceway from the branch circuit to the unit must be correct to assure adequate voltage under heavy starting and short overload conditions.
7. The feederline conductor shall only be used for the supply of one unit of the relevant horsepower. For connections of more than one unit on the same feeder line, a local electrician will have to be consulted to determine the proper conductor size.
8. The size of the electrical wiring required from the power source to the mixer-grinder/chopper is a **MINIMUM OF No. 10 WIRE**.
9. The BIRO Manufacturing Company is not responsible for permanent wiring, connection or installation



**NOTE TO OWNER AND ELECTRICIAN: IF THIS MACHINE IS NOT CORD AND PLUG CONNECTED TO THE ELECTRICAL SUPPLY SOURCE, THEN IT SHOULD BE EQUIPPED WITH, OR CONNECTED TO, A LOCKABLE, MANUALLY-OPERATED DISCONNECT SWITCH (OSHA 1010.147).**

## MOTOR SPECIFICATIONS

### GRINDER MOTOR

HP	KW	VOLTS	HZ	PH	AMPS
7.5	5.6	208/230	60	3	24/22
7.5	5.6	220	50	3	28
7.5	5.6	380/415	50	3	12.7/12.4
7.5	5.6	460	60	3	11
7.5	5.6	550	60	3	9.2

### MIXER MOTOR

.75	.56	208/230	60	3	3.0/2.8
.75	.56	220	50	3	3.6
.75	.56	380/415	50	3	1.8/1.9
.75	.56	460	60	3	1.5
.75	.56	550	60	3	1.2

10. Two sets of green and red pushbuttons are located at the front of the machine that activate the magnetic contactors that control the mix and grind motors. The time delay product mixer safety cover interlock switch is mounted in the motor compartment. **The product mixer safety cover cannot be opened until the time delay interlock switch times out (which will be after the grinding auger comes to a complete stop).**
11. With the grinding auger removed from the machine, push the green start button for grind **CHECK THE ROTATION of THE AUGER DRIVE SHAFT; ROTATION MUST BE COUNTER-CLOCKWISE** as indicated by the rotation decal affixed to the grinding bowl. **ROTATION MUST ONLY BE CHECKED WITH THE GRINDING AUGER REMOVED**, otherwise serious irreparable damage may occur to the grinding components.



12. If machine runs clockwise (backwards), it must be rewired to correct rotation, otherwise serious irreparable damage may occur to the grinding components. The grinding auger must operate in the proper direction.
13. Check operation of optional footswitch is equipped. Plug footswitch cord into fitting at bottom of contactor box. Turn toggle selector to foot. The machine will operate with pressure on the footswitch treadle. Releasing the treadle stops the machine. The footswitch operates both mix and grind together.
14. Insert grinding auger assembly into the bowl and fully engage the auger into the drive shaft. Place knife first (sharp edges out) then grinding plate into end of grinding bowl. The grinding plate slides over the knife drive pin, and is held from rotating during operation by three pins in the grinding bowl. Install the end retaining ring.



## ONLY HAND TIGHTEN END RETAINING RING

For best results, use knife and plate as a set. Do not operate machine for any period of time without product in the grinding bowl. This will cause heating and dulling of the knife and plate.

15. Check placement of all warning labels and Manual. Machine is now ready for trained operators to process product.
16. Use meat deflector attached to grinding bowl to eliminate meat splatter.
17. Contact your local Distributor of BIRO directly if you have any questions or problems with the installation or operation of this machine.

## OPERATION



## TO AVOID SERIOUS PERSONAL INJURY

- **ONLY** Properly Trained Personnel Should Use This Equipment.
- **NEVER** Place Hands Into Machine Input or Output Openings.

## OPERATION (Cont.)

- **NEVER** Open Machine During Operation.
- **DO NOT** Wear Gloves While Operating.
- **DO NOT** Tamper With, Bypass, Alter, or Modify This Equipment in Any Way From Its Original Condition.
- **NEVER** Operate Machine With Product Mixer Safety Cover Opened or Removed or Magnetic Interlock Switch By-Passed.
- **ALWAYS** Turn Off and Unplug Machine from Power Source and Perform Lockout/Tagout Procedure to This Machine Before Unjamming, Unclogging, Cleaning or Servicing.
- **NEVER** Leave Unattended While Operating.
- **NEVER** Operate Without All Warning Labels Attached and Operating Manual Available to the Operator.

### DO's

- Always keep knife & plate as matched set.
- Always keep the knife & plate sharp.
- Always check for straightness by laying the knife on the plate before inserting in machine.
- Always install the knife & plate in correct sequence, knife 1st, then plate.
- Always keep knives & plates lubricated in storage and when starting machine.
- Always use coolant when sharpening plates.
- Always inspect the plates making sure all holes are clear – that there are no cracks.

### DON'Ts

- Never, never mix different knives to different plates.
- Never, never over tighten the bowl retaining ring on the machine.
- Never, never run the grinder without product. Product is a natural lubricant. Heat can build up so fast that cold product could crack the plate.
- Never, never hit the plate against anything to clean the holes.
- Never, never throw the knives & plates.

## FOOD HANDLING TO PREVENT CONTAMINATION

1. **ALWAYS** wash hands thoroughly with warm soap and water before and after handling raw fish, poultry or meats.
2. **ALWAYS** clean and sanitize all utensils and surfaces that have been in contact with raw products.
3. **ALWAYS** store cold foods at or below 45 deg. F (7.2 deg. C).

## TO PROCESS PRODUCT

1. Before starting the mixer-grinder, have a container for receiving ground product at the output end of the grinding bowl.
2. **FIRST GRIND**
  - a. Fill product hopper (maximum 160 pounds), close the product mixer safety cover.
  - b. Push both grind and mix green start buttons to feed first grind. It is recommended to use a breaker plate with  $\frac{3}{8}$ " diameter or larger holes.
  - c. Push both grind and mix red stop buttons when product has been ground out.
3. **SECOND GRIND**
  - a. Fill Product Hopper (maximum 160 pounds). Before this mix operation seasonings may be added if desired. Close Product Mixer Safety Cover.
  - b. Push the mix green start button only.
  - c. After the desired mix, push the grind green start button to operate the grinding auger and grind out product.
  - d. Push both grind and mix red stop buttons when product has been ground out.
4. Unplug machine from power source and perform lockout/tagout procedures when finished.

## MAINTENANCE



### ROTATING GRINDING AUGER TO AVOID SERIOUS PERSONAL INJURY

- **ALWAYS** Turn Off, Unplug From Power Source and Perform Lockout/Tagout Procedure to This Machine **BEFORE** Servicing.
- **NEVER** Touch This Machine Without Training and Authorization By Your Supervisor.
- **NEVER** Place Hands Into Machine Input or Output Openings.
- **NEVER** Bypass, Alter, or Modify This Equipment in Any Way From Its Original Condition.
- **PROMPTLY REPLACE** Any Worn or Illegible Warning Labels.
- **USE ONLY GENUINE BIRO** Parts and accessories Properly Installed.

#### A. GRINDING BOWL INSTALLATION

1. Mount the grinding bowl on the two threaded studs on the front of the machine. Tighten in position with provided nuts.
2. Place the grinding auger in the grinding bowl and fully seat rear drive tang into auger drive shaft.
3. Install knife, breaker plate and end retaining ring.



#### ONLY HAND TIGHTEN RETAINING RING

4. When the bowl assembly is mounted and tight, there should be approximately  $\frac{1}{8}$ " gap between the back inside wall of the grinding trough and the back of the auger. The bowl ring wrench which is provided with each grinder is used only for **REMOVAL** of the end retaining ring for cleaning purposes or for changing knife and breaker plate.

#### B. LUBRICATION

1. **MOTOR:** The grinder motor has pre-lubricated motor bearings. These bearings should be re-lubricated annually with a good grade of bearing grease. Do not over-grease.
2. **ROLLER CHAIN AND DRIVE SPROCKETS:** The main drive chain has been pre-lubricated at the factory to protect it against dirt and moisture. Chain life will vary appreciably depending upon its lubrication. The better the lubrication, the longer the chain life.

Lubrication effectiveness will vary with the amount of lubricant and frequency of application. Ideally, a lubricant film should always be present between the working parts. Manually lubricate the chain as often **as is needed** (possibly once a week). **NEVER** exceed three months without lubricating.

Lubricating just the outside of the chain does little good. Apply lubrication on the inside of the chain span so that it will work through the moving parts and joints by centrifugal force as the chain rotates and reaches the area where one surface "scrubs" another.

## B. LUBRICATION (cont.)

Recommended types of chain lubricant are those with Molybdenum Disulphide or Graphite added. Also bonded lubricants such as Dow Corning Molykote 321R or equivalent are excellent for open chains. The lubricant should be of a viscosity whereby it will “flow” somewhat and penetrate the internal working surfaces. Thick stiff greases are of little value because they cannot work into moving parts of the chain.

- a. Unplug mixer/grinder from power source and perform lockout/tagout procedures.
  - b. Remove rear drive or access cover.
  - c. Spray or brush lubricant on inside of chain, slowly and carefully turning the large sprocket by hand.
  - d. Reinstall rear drive cover.
3. BEARING HOUSING: The main bearings are housed in an enclosed and sealed journal box. Re-lubricate semi-annually with a good grade of bearing grease. Do not over-grease.
4. MIXER TRANSMISSION: Oil in the mixer transmission should be changed after the first four (4) weeks of operation. This is to remove the “run-in” oil and also any small metal shavings that may have been generated during the mating of the gears. After the initial oil change, subsequent changes should be performed every six (6) months. After draining the oil, refill the unit to the “level” plug on the back side of the transmission with petroleum-based #8 gear oil.
5. PROCEDURE FOR REPLACING OIL IN WINSMITH MIXER TRANSMISSION:
- a. Unplug mixer grinder from power source and perform lockout/tagout procedures.
  - b. Remove rear drive or access cover.
  - c. Remove breather plug from top of transmission and oil level plug from back side of transmission.
  - d. With a container in place to catch old oil, remove the drain plug from the bottom of the transmission.
  - e. When all oil has drained, clean the drain plug and replace in the transmission.
  - f. Refill transmission with petroleum-based #8 gear oil or equivalent until oil appears at bottom of oil level hole. For applications that involve severe ambient temperature extremes, Winsmith recommends the use of Synthetic Lubricant such as: Texaco Vanguard 460, Mobile SHC 630, and Mobile SHC 634. These gear reducers contain 0.9 QT. of lubricant
  - g. Replace breather and oil level plugs.
  - h. Reinstall rear drive or access cover.

## C. MIXER DRIVE CHAIN TENSION

1. Unplug mixer/grinder from power source and perform lockout/tagout procedures.
2. Remove rear drive cover or access cover.
3. Loosen the four bolts holding the ¾HP motor and transmission to its mounting plate.
4. Slide transmission to the right.
5. When approximately 1/8” total chain flex has been attained, retighten transmission bolts.
6. Reinstall rear drive cover or access cover.

## D. MAIN DRIVE CHAIN TENSION

1. Unplug mixer/grinder from power source and perform lockout/tagout procedure.
2. Remove rear drive cover or access cover.
3. Loosen the four bolts that hold the motor to the frame of the machine.
4. Loosen the lock nuts on the motor adjusting stud.
5. **To Loosen Chain Tension.** turn motor adjusting studs counterclockwise. Grasp motor and pull toward adjusting stud. Be sure to turn both adjusting studs the same amount and evenly. Total chain flex should be 1/8” to 3/8”. Be sure to keep motor shaft **parallel** with auger drive shaft.  
**To Tighten Chain Tension.** Turn motor adjusting studs clockwise. Be sure to turn both adjusting studs the same amount and evenly. Total chain flex should be 1/8” to 3/8”. Do not overtighten chain as this will put excessive and damaging pressure on the motor bearings. Be sure to keep motor shaft **parallel** with auger drive shaft.
6. Retighten motor mounting bolts.
7. Retighten motor adjusting stud lock nuts.
8. Reinstall the rear drive cover or access cover.

# INSTALLATION INSTRUCTIONS

## ALTERNATE GROVE GEAR REDUCER

### REPLACING MORSE GEAR REDUCER

#### Mixer Paddle Gear Reducer Retro-Fit

**Effective with Model EMG-32; Serial No. 6988, April 2007**

The Mixing Paddle Gear Reducer, Item No. EMG20301 (Winsmith) has been replaced with an alternate Gear Reducer, Item No. EMG20301G (Grove)

If an old style Winsmith Gear Reducer, #EMG20301, should need replacing, a "Retrofit Kit" will be supplied incorporating the new Grove Reducer, Item No. EMG20301G (see drawing):

#### Procedure for EMG-32 Gear Reducer Replacement:

Perform lock out/tag out on the power supply. Disconnect wiring from the mixer motor. Loosen check nut, Item No. HN30S and back out adjuster bolt, Item No. HHS093S.

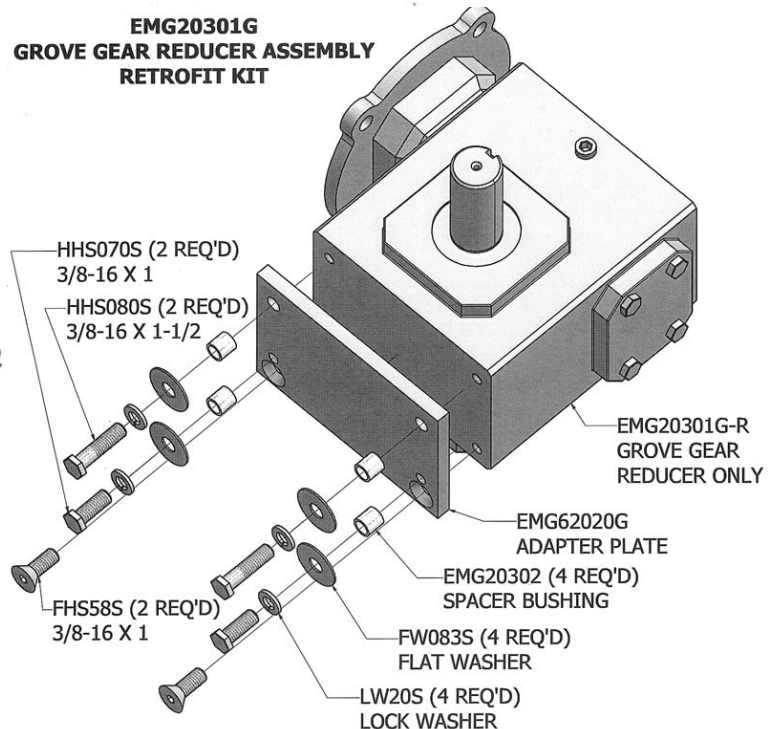
Loosen four (4) reducer mounting bolts. Slide the unit to the left and remove the chain. Loosen and remove sprocket, Item No. EMG62012 and Key, Item No. EMG62197 from the reducer. Remove the reducer mounting bolts and take the motor/reducer unit from the machine. Remove the motor from the reducer and the motor key from the reducer.

New reducer will arrive with the adaptor plate, Item No. EMG62020G installed on the reducer from the factory with two (2) 3/8 – 16 x 1 flat head screws, Item No. FHS58S.

Install mixer motor and key onto the new reducer with the original hardware. Remove fill plug in top hole, backside of reducer, and install vent plug supplied with the gear box. Install sprocket with key on the reducer. Set the unit on the machine. Use two (2) 3/8 – 16 x 1-1/2 long bolts, Item No. HHS080S with two (2) 3/8 lock washers, Item No. LW20S, two (2) flat washers, Item No. FW083S and two (2) spacer bushings, Item No. EMG20302 in the two holes closest to the chain and sprocket.

Use two (2) 3/8 – 16 x 1 long bolts, Item No. HHS070S with two (2) 3/8 lock washers, Item No. LW20S, two (2) flat washers, Item No. FW083S and two (2) spacers, Item No. EMG20302 in the two holes away from the chain and sprocket.

Mount chain on reducer sprocket. Use adjusting bolt to set chain tension to 1/8" total flex. Tighten the four (4) mounting bolts on the reducer. Check the sprocket alignment and tighten set screws. Install electrical supply to mixer motor. Test for proper operation and rotation synchronization with the auger. Install the rear cover.



# LUBRICATION FOR GROVE GEAR REDUCER

## 1. Factory Filling

The speed reducers are oil filled at the factory to the proper level for the standard mounting position. The oil level should be checked and adjusted (if necessary) prior to operation, using the oil level plug provided and while the unit is oriented in its operating position.

## 2. Oil Changing



**WHEN CHANGING OIL FOR ANY REASON,  
DO NOT MIX DIFFERENT OILS IN THE REDUCER.  
OILS SHOULD BE COMPATIBLE WITH  
VITON® SEAL MATERIAL.**

Therefore, when changing to a different oil, it is recommended that the housing be completely drained and thoroughly flushed with a light flushing oil prior to refilling with the appropriate lubricant. The oil level should be rechecked after a short period of operation and adjusted, if necessary.



**OIL SHOULD BE CHANGED MORE OFTEN IF THE  
REDUCER IS USED IN A SEVERE ENVIRONMENT  
(i.e., DUSTY, HUMID)**

### A. Initial Oil Change

The oil in a new speed reducer should be changed at the end of 250 hours of operation. (30 days for 8 hour per day service, 15 days for 16 hour service, 10 days for 24 hour service.)

All standard reducers ordered from the factory are filled with lubricant to operate within a 30° to 100°F ambient temperature range.

### B. Subsequent Oil Changes

Under normal conditions, after the initial oil change, the oil should be changed after every 2500 hours of operation, or every six months, whichever occurs first. Under severe conditions (rapid temperature changes, moist, dirty or corrosive environment) it may be necessary to change oil at intervals of one to three months. Periodic examination of oil samples taken from the unit will help establish the appropriate interval.

### C. Synthetic Oils

Synthetic lubricants can be advantageous over mineral oils in that they generally are more stable, have a longer life, and operate over a wider temperature range. These oils are appropriate for any application but are especially useful when units are subjected to low start-up temperatures or high operating temperatures. Use of synthetics can cause problems if they are not compatible with the seals or the conventional lubricants they replace. For continuous duty at normal ambient temperatures (-10°F to 105°F) we recommend the use of *Mobile SHC 634* which is compatible with the standard compounded oil shipped in our product and the Viton® seal material used through size 252.

## 3. Overfilling or Underfilling

If a speed reducer is overfilled with oil, the energy used in churning the excessive oil can result in overheating. If this occurs, shut down the drive, remove the oil level plug and allow oil to drain until oil ceases to drain from the level hole, reinstall the oil level plug and restart the drive. If the speed reducer is underfilled, the resultant friction can cause overheating and possible damage. If this occurs, fill the speed reducer to the oil level plug hole and check the gearing for excessive wear. NOTE: Oil capacity is 1¾ pints.

## 4. Oil Seals

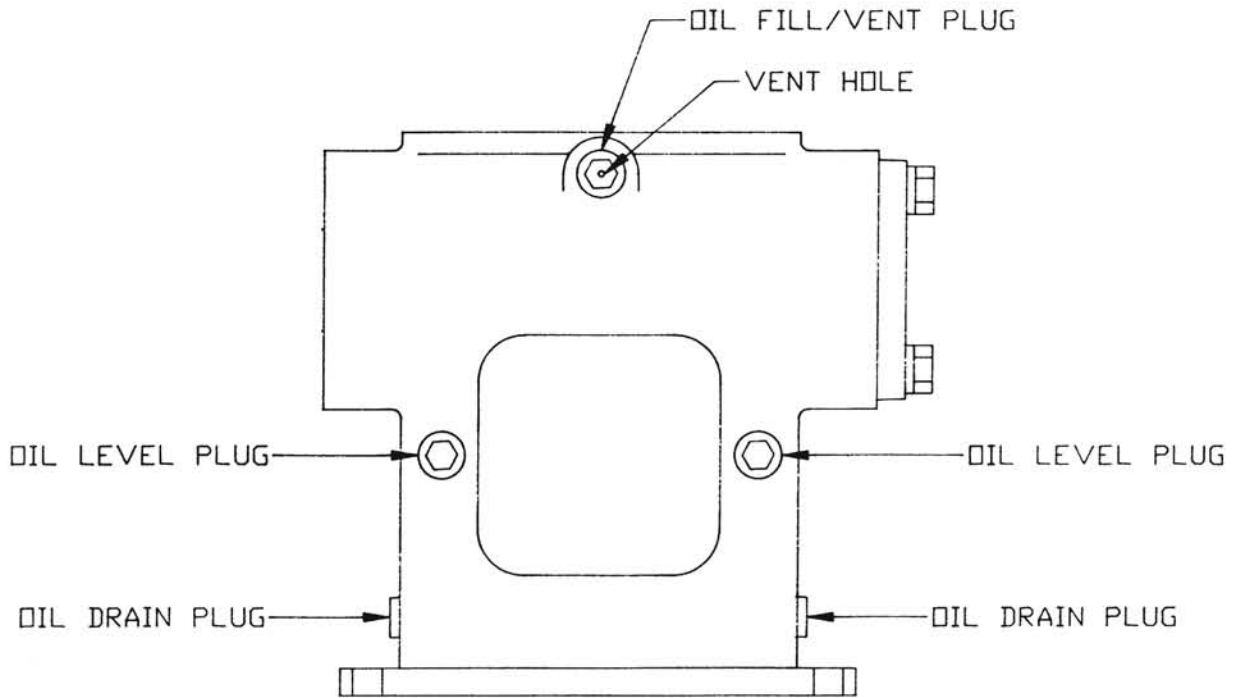
Although the speed reducer uses high quality oil seals and precision ground shafts to provide a superior seal contact surface, it is possible that circumstances beyond the speed reducer's control can cause oil seal leakage (damage during shipment or installation, etc.). When replacing a shaft oil seal, using the following suggestions will help to insure leak-free operation and long seal life.

A. When installing a new seal, cover the keyway and any other surface discontinuity with smooth tape to protect the seal lip from being damaged.

B. A sealant should be used between the O.D. of the seal and the I.D. of the bore into which the seal is installed. The seal bore should also be free of any burrs, nicks, or scratches.

C. Be sure that the seal is not cocked in the seal bore. The outer face of the seal should be flush with the surface into which it is mounted.

# EMG20301G-R GROVE GEAR REDUCER LUBRICATION AND MAINTENANCE AFTER SERIAL No. 6987



**VIEW IS FROM OPPOSITE END OF DRUM**

## LUBRICANTS FOR EMG20301G-R GROVE GEAR WORM REDUCER

The precision-made gears and bearings in Grove Gear Speed Reducers require high-grade lubricants of the proper viscosity to maintain trouble-free performance. For best results, use lubricants on the following chart for worm gear reducers.

Manufacturer	30° to 100°F Ambient Temperature AGMA Compounded No. 7	50° to 125°F Ambient Temperature AGMA Compounded No. 8
Amoco Oil Co.	Worm Gear Oil	Cylinder Oil #680
Chevron USA, Inc.	Cylinder Oil #460X	Cylinder Oil #680X
Exxon Co. USA	Cyclesstic TK-460	Cyclesstic TK-680
Gulf Oil Co.	Senate 460	Senate 680D
Mobile Oil Corp.	600 W Super Cylinder	Extra Hecla Super
Shell Oil Co.	Valvata Oil J460	Valvata Oil J680
Sun Oil Co.	Gear Oil 7C	Gear Oil 8C
Texaco	Honor Cylinder Oil	650T Cylinder Oil
Union Oil Co. of CA	Steaval A	Worm Gear Lube 140

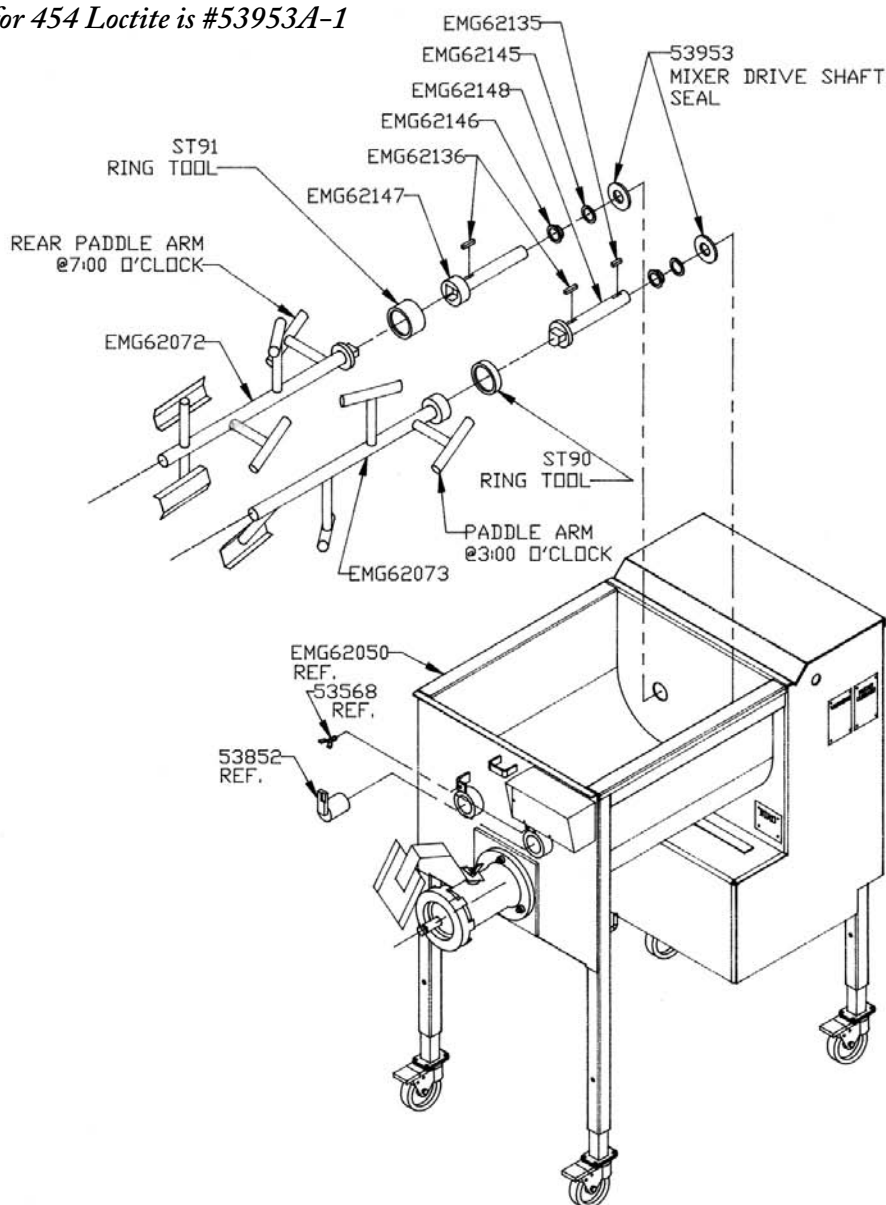
Standard factory-installed lubricant is Mobile Oil Corp. 600 W Super Cylinder Oil (AGMA7).

Some gear lubricants contain E.P. additives that can be corrosive to gear bronze material. Avoid lubricants that are compounded with sulfur and/or chlorine.

# #53953, MIXER DRIVE SHAFT SEAL REPLACEMENT

1. Clean the inside of the groove of the mixer drive shaft seal and mating contact surface of the tub wall throughly with scotch-bright or a roughing pad.
2. Dispense a small amount of #454 Loctite adhesive to both these areas - assure even coverage.
3. Wipe away excess adhesive.
4. Slide the "Pressing Rings" #ST90 and #ST91 over the ends of the mixer drive shaft.
5. Apply "even" pressure to the Rings by installing the paddles and Bearing End Assemblies.
6. Wait 20 minutes Cure-Time.
7. Remove the "Pressing Rings." The seals will be firmly attached to the tub wall.

*NOTE: Part Number for 454 Loctite is #53953A-1*





## CLEANING



### TO AVOID SERIOUS PERSONAL INJURY

- **ALWAYS** Turn Off, Unplug Machine From Power Source and Perform Lockout/Tagout Procedure to This Machine **Before** Cleaning or Servicing.
- **ONLY** Use Recommended Cleaning Equipment, Materials, and Procedures.
- **NEVER** Spray Water or Other Liquid Substances Directly at Motor, Power Switch or any Other Electrical Components.
- **ALWAYS** Thoroughly Clean Equipment at Least Daily.

### CLEANING THE EMG-32 MIXER-GRINDER

1. Disconnect mixer grinder from power source and perform lockout/tagout procedures.
2. Remove grinding bowl end ring, breaker plate, knife and grinding auger.
3. Remove mixing paddles by first loosening the wing nuts locking the mixing paddle front hubs. Turn the front hubs clockwise and remove from front of machine. Slide mixing paddles forward off the drive shafts and remove the mixing paddles from the machine.



### DO NOT POWER SPRAY DIRECTLY AT ELECTRICAL COMPONENTS

4. Machine is now ready to be cleaned using warm soapy water and rinsed with clean water. Machine may be cleaned by power spray washing, taking care to not spray directly at any electrical controls.
5. The grinding bowl can be removed for cleaning if desired. This is accomplished by removing the three nuts on the flange of the grinding bowl.
6. After machine has been cleaned and allowed to air dry, all exposed metal surfaces should be coated with a good food grade light oil or grease.
7. Never wash the clear product mixer safety cover with any type of abrasive cleaners. Use a soft cloth and warm soapy water only, rinse with clear water, let air dry.

#### 8. CLEANING PROCEDURES FOR THE POLYCARBONATE SAFETY COVER:

By using compatible cleaners, coupled with proper maintenance techniques will significantly improve the material's service life

- A. Rinse with water to remove excess dust and dirt.
- B. Wash with soap or mild detergent using a sponge or soft cloth.
- C. Rinse thoroughly with clean water.
- D. Dry with a soft cloth or chamois to prevent water spots.

**COMPATIBLE CLEANERS:** Formula 409, Palmolive liquid - 3, Tob Job, Joy - 2, Windex with Ammonia D-4.

### CLEANING THE BOWL - RING AND WORM CARE OF TIN COATED PRODUCTS (DO'S AND DON'TS)

1. Do not use abrasive cleaning materials, such as brillo pads or metal scrapers. Tin is a soft metal and should be cleaned with a soft cloth and dried.
2. Do not use a cleaning agent containing a high percentage of free alkali or acid.
3. Do not use a detergent containing a high percentage of tri-sodium phosphate or meta-silicate. Tin is reactive to both.
4. Rinse well and dry throughly after washing to remove agents that may be reactive to tin.
5. If sterilizing agent containing chlorine is used, the tinned surface must be throughly rinsed. Chlorine is corrosive to tin.
6. Dry throughly after rinsing and store in a dry environment.
7. If water is exceptionally hard, drying will be necessary to prevent spotting.

# MIXING PADDLE INSTALLATION

## S/N's 6001 to 6057

The Mixing Paddles **ARE NOT INTER-CHANGEABLE**, however they are timed to allow for proper mix action.

### PADDLE INSTALLATION:

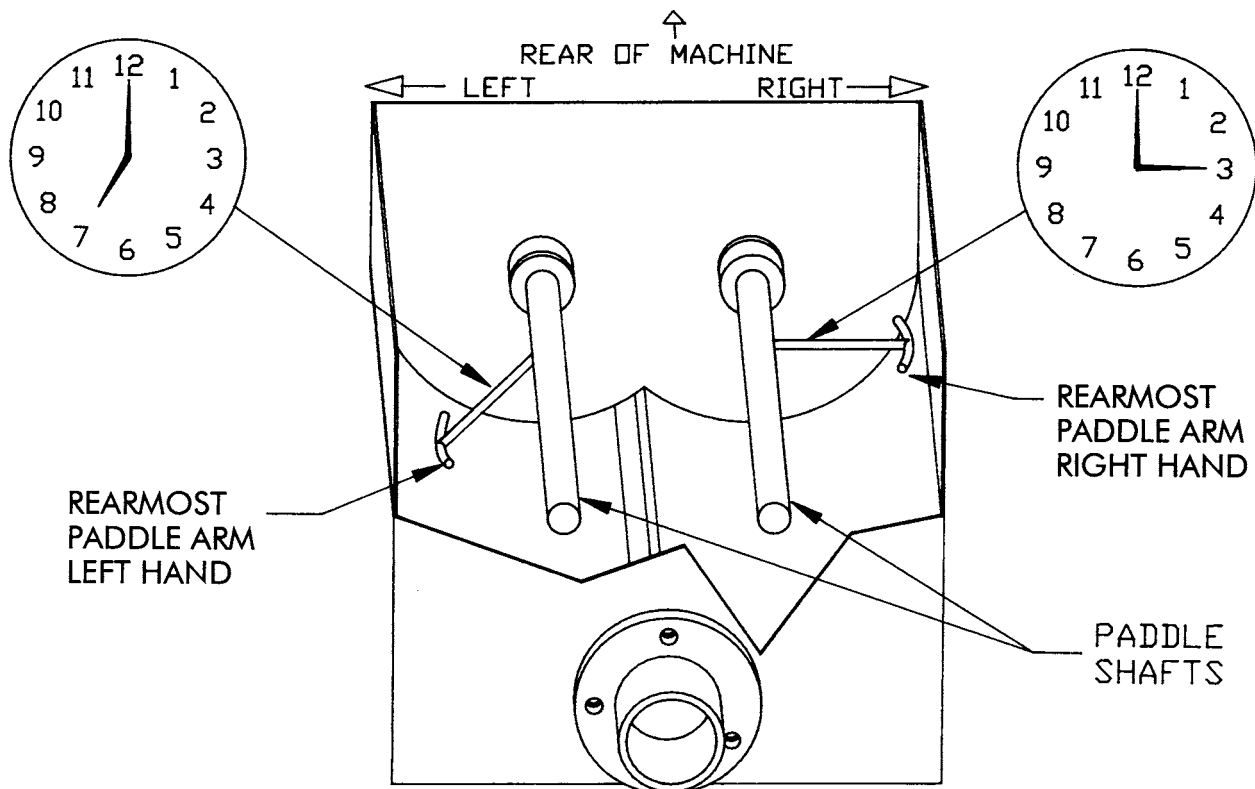
Install the corresponding mixer paddles by matching the male and female hub drives with the respective female and male paddle hubs.

Reinstall the paddle lock arms and tighten the locking wing bolts

### PADDLE REMOVAL:

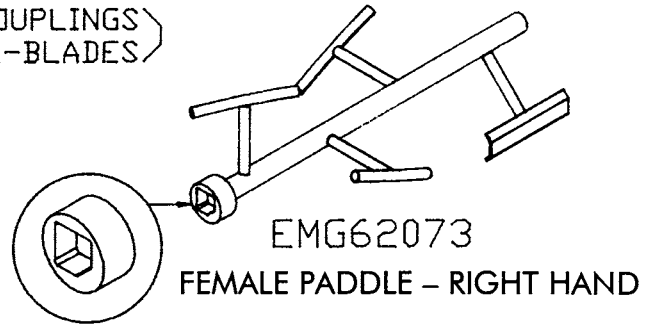
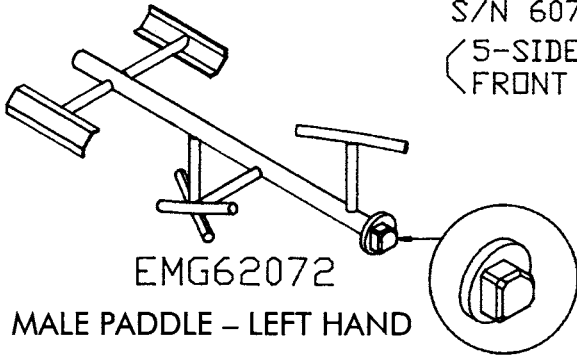
Removing mixing paddles by first loosening the paddle lock knobs (wing bolts located on front of the machine) Then turn the lock arms clockwise approx.  $\frac{1}{4}$  turn to unlock the paddle shafts and remove them from the hopper.

PADDLE SHAFTS ARE INSTALLED CORRECTLY WHEN  
REARMOSt PADDLE ARMS FACE  
DIRECTIONS AS SHOWN

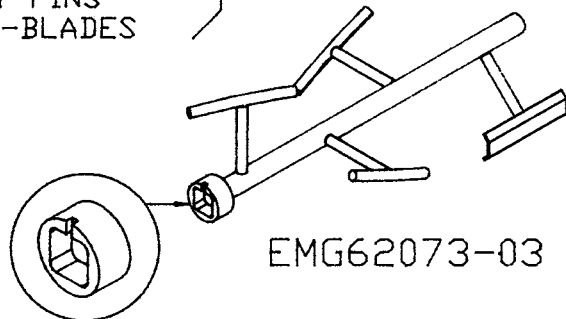
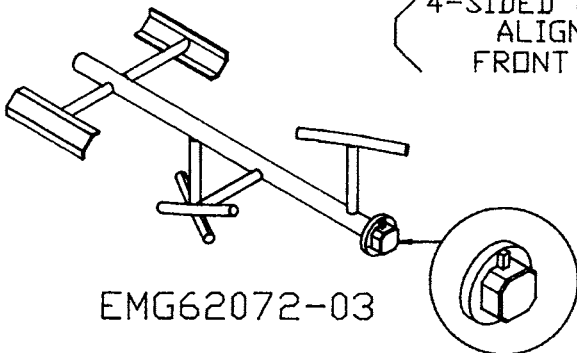


# MIXING PADDLE HISTORY BY SERIAL NUMBER

CURRENT STYLE  
S/N 6075 TO PRESENT  
(5-SIDED COUPLINGS)  
(FRONT VEE-BLADES)

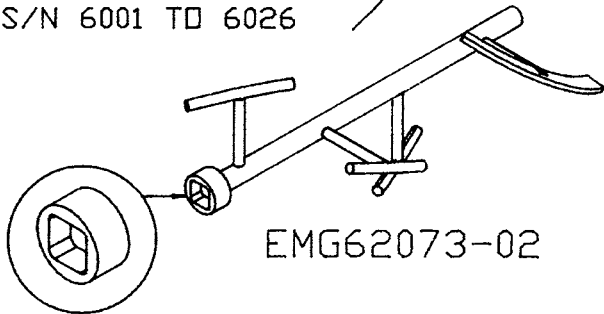
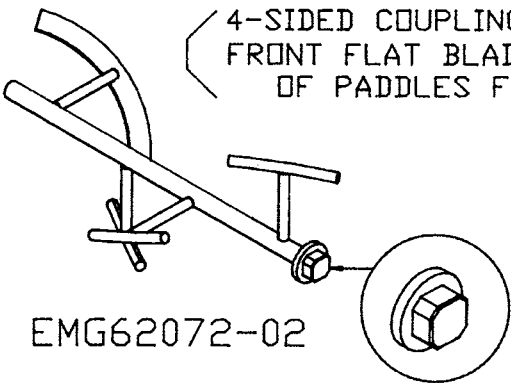


S/N 6066 TO 6074  
(4-SIDED COUPLINGS WITH  
ALIGNMENT PINS  
FRONT VEE-BLADES)



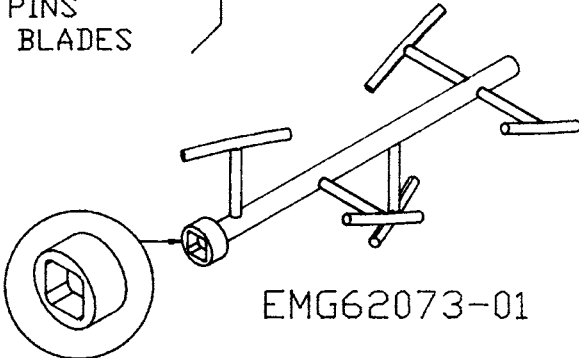
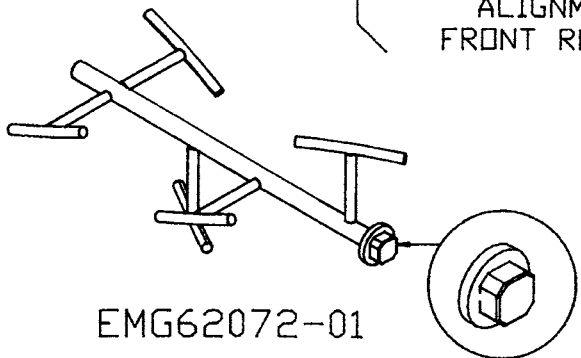
S/N 6026 TO 6065 EXCEPT 6057

(4-SIDED COUPLINGS LESS ALIGNMENT PINS,  
FRONT FLAT BLADES, CAN BE USED INSTEAD  
OF PADDLES FROM S/N 6001 TO 6026)



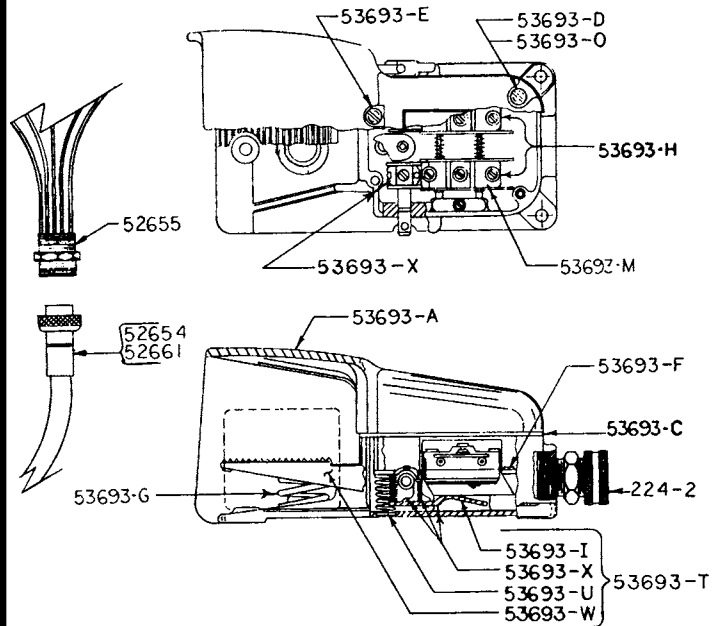
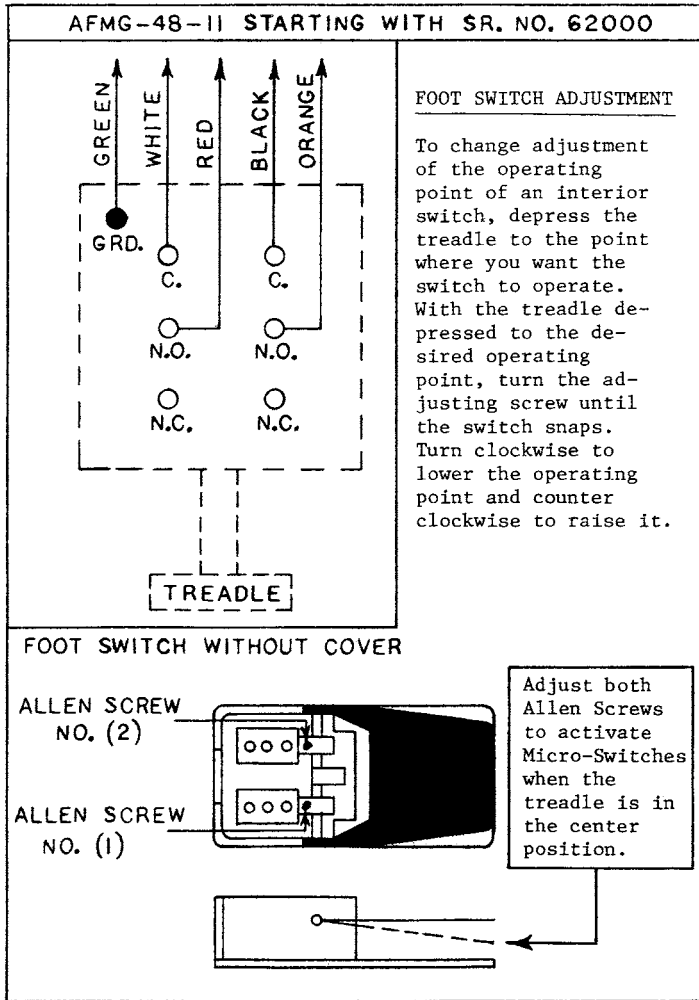
S/N 6001 TO 6025

(4-SIDED COUPLINGS LESS  
ALIGNMENT PINS  
FRONT ROUND BLADES)



# ELECTRIC FOOT SWITCH

## FOOT SWITCH WIRING DIAGRAM

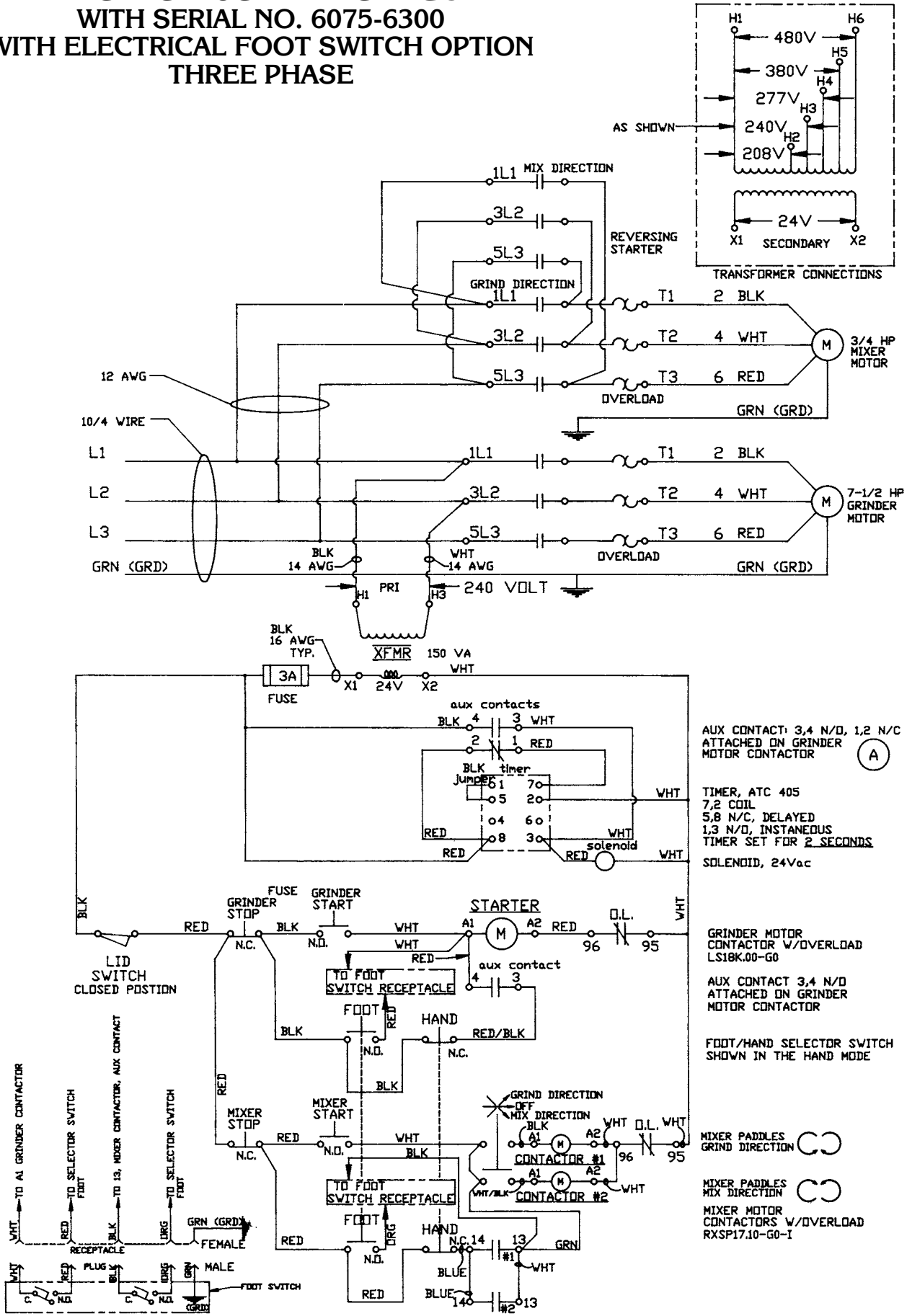


## FOOTSWITCH PARTS LIST

224-2	Cord connector, wt, straight, $\frac{3}{4}$ "
52654	Male plug w/6' cord, 5 wire
56292	Female receptacle 90°
52661	Male plug w/12' cord, 5 wire
52668	Footswitch w/12' cord and plug
53693	Footswitch
53693-A	Cover guard
53693-C	Cover gasket
53693-D	Cover screw - short
53693-E	Cover screw - long
53693-F	Ground screw
53693-G	Treadle spring
53693-H	Internal assembly complete
53693-I	Actuator
53693-M	Micro switch BA-2R62-A4
53693-O	Washer
53693-T	Treadle w/actuator & return spring
53693-U	Auxiliary treadle return spring
53693-W	Treadle
53693-X	One actuator & actuator spring assembly
54213	Foot switch w/6' cord & plug



# ELECTRICAL SCHEMATIC EMG-32 WITH SERIAL NO. 6075-6300 WITH ELECTRICAL FOOT SWITCH OPTION THREE PHASE



AUX CONTACT 3,4 N/D, 1,2 N/C ATTACHED ON GRINDER MOTOR CONTACTOR (A)

TIMER, ATC 405  
7,2 COIL  
5,8 N/C, DELAYED  
1,3 N/D, INSTANTANEOUS  
TIMER SET FOR 2 SECONDS  
SOLENOID, 24V<sub>ac</sub>

GRINDER MOTOR CONTACTOR W/OVERLOAD LS18K.00-G0

AUX CONTACT 3,4 N/D ATTACHED ON GRINDER MOTOR CONTACTOR

FOOT/HAND SELECTOR SWITCH SHOWN IN THE HAND MODE

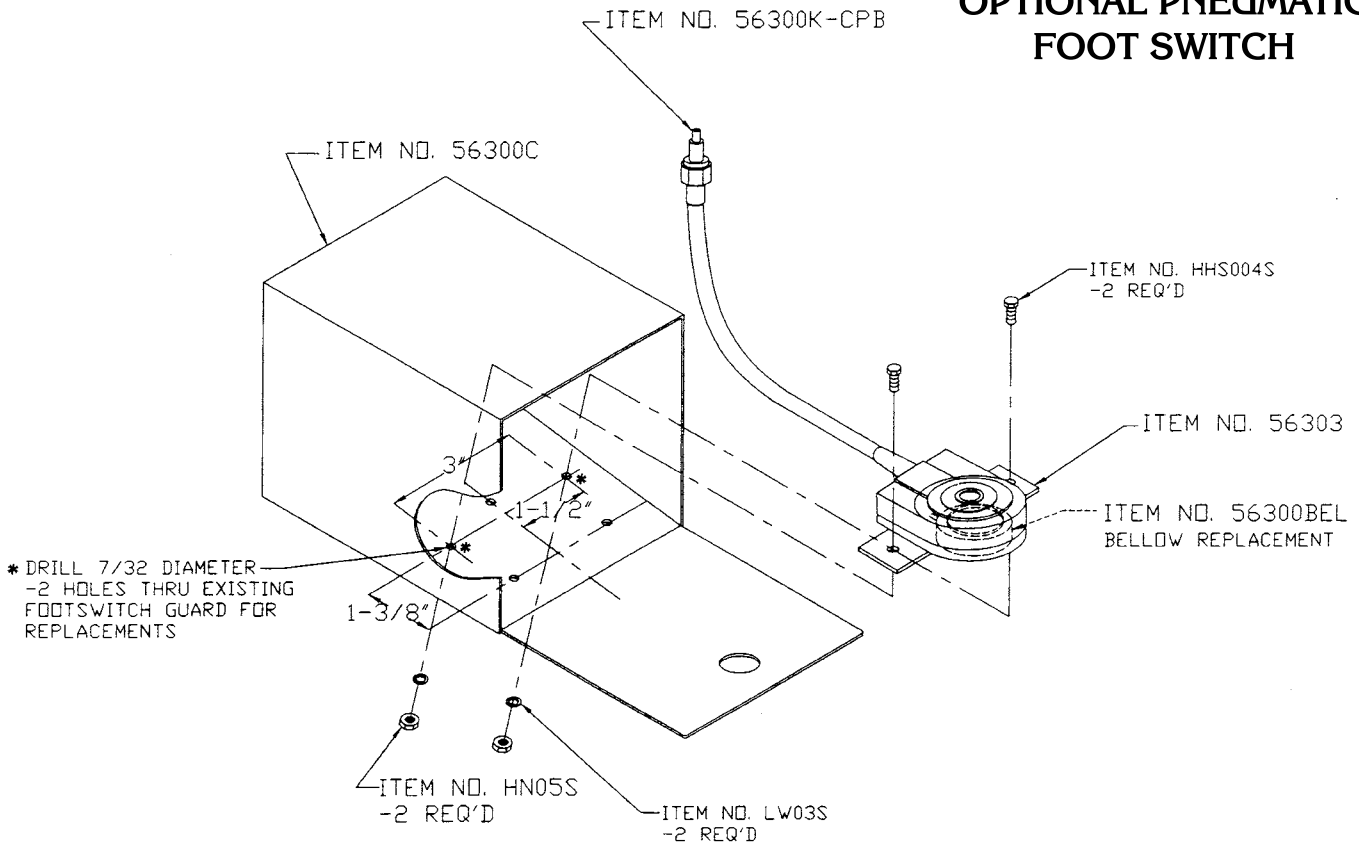
MIXER PADDLES GRIND DIRECTION

MIXER PADDLES MIX DIRECTION

MIXER MOTOR CONTACTORS W/OVERLOAD RXSP17.10-G0-1

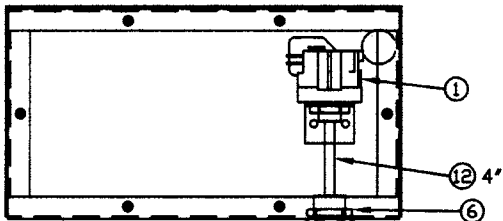
rev. 'A' REMOVED RELAY, ADDED N/C AUX CONTACT 1-15-99 TLW

# OPTIONAL PNEUMATIC FOOT SWITCH



## PNEUMATIC FOOT SWITCH ASSEMBLY

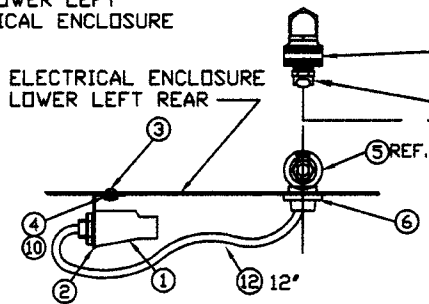
NEW STYLE PNEUMATIC ASSEMBLY  
FROM PUSH BUTTON ENCLOSURE



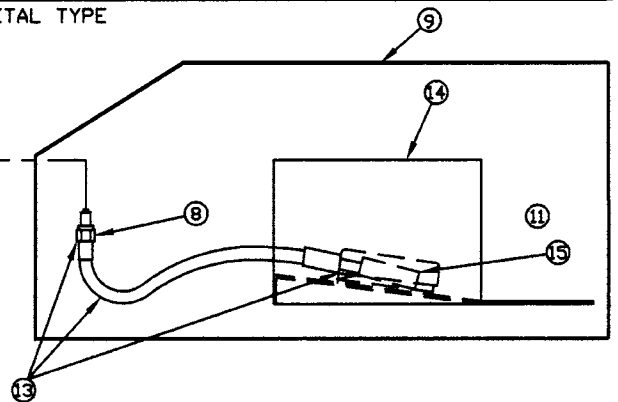
ITEM NO.	PART NO.	PART NAME/DESCRIPTION	QTY
1	56300R	AIR SWITCH W/NUT	1
2	56301E	AIR SWITCH BRACKET	1
3	RHS072S	ROUND HEAD SCREW, #8-32 x 3/8 LG	2
4	HNS05S	HEX NUT, #8-32	2
5	56301G	WATER TIGHT 90° CORD CONNECTOR	1
6	56300H	CORD CONNECTOR LOCKNUT	1
7	56300J	COUPLING BODY, FEMALE -PLASTIC TYPE	1
8	56300K-CPB	COUPLING INSERT, MALE -METAL TYPE	1
9	56304	FOOT SWITCH ASSY W/6' TUBE & GUARD	1
10	LW03S	LOCK WASHER, #8	2
11	224-6	CORD GRIP CONNECTOR, STRAIGHT 1/2	1
12	56302I	PLASTIC TUBING, 1/8 I.D. x 1/4 O.D.	AS SHOWN
13	56303	PNEU. FOOT SWITCH, W/MALE COUPLING	1
14	56300C	GUARD, ONLY	1
15	56300BEL	BELLOW, REPLACEMENT	1

7 OR ITEM NO. 56300J-CPB -METAL TYPE

OLD STYLE PNEUMATIC ASSEMBLY  
FROM LOWER LEFT  
ELECTRICAL ENCLOSURE

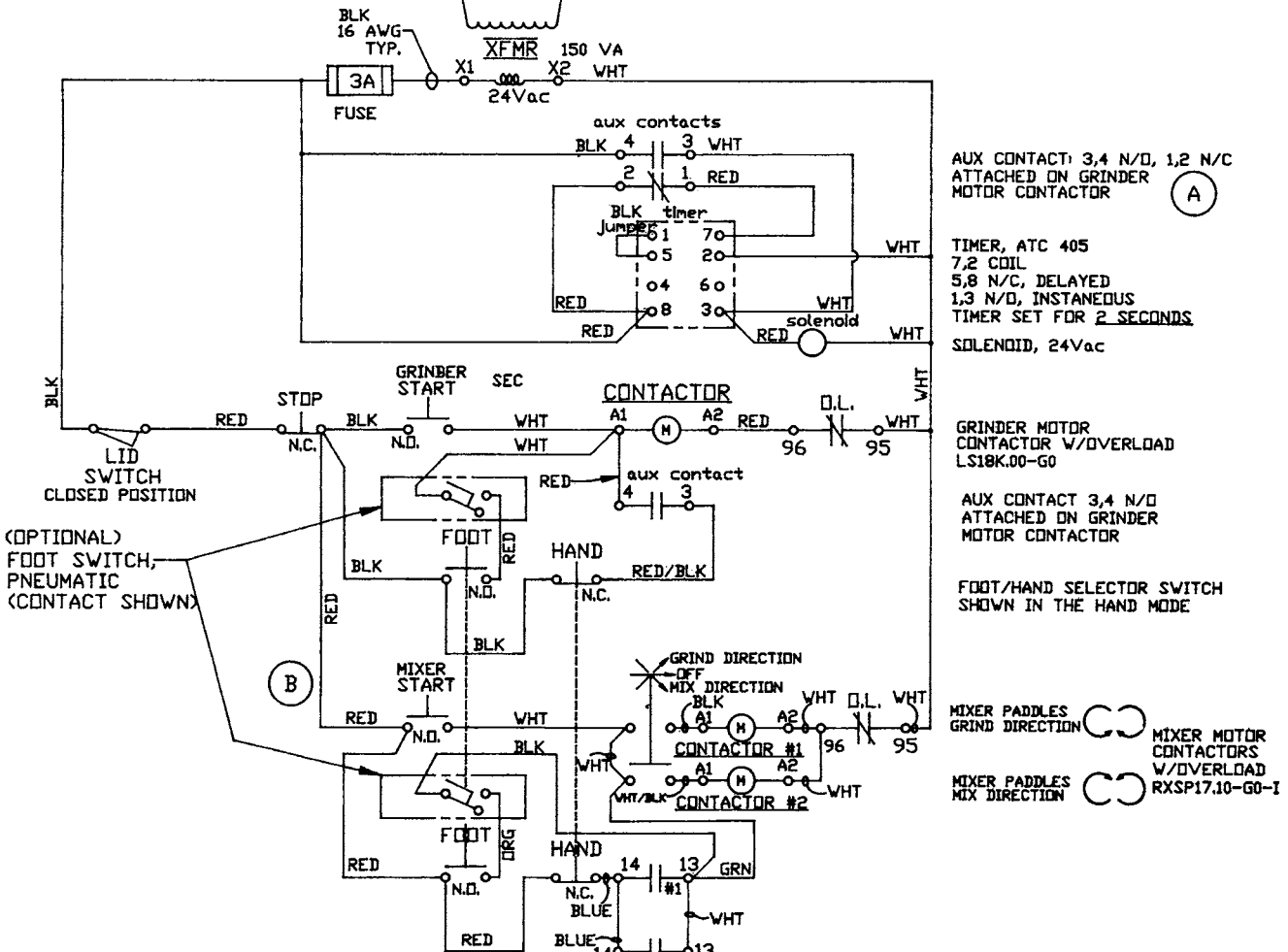
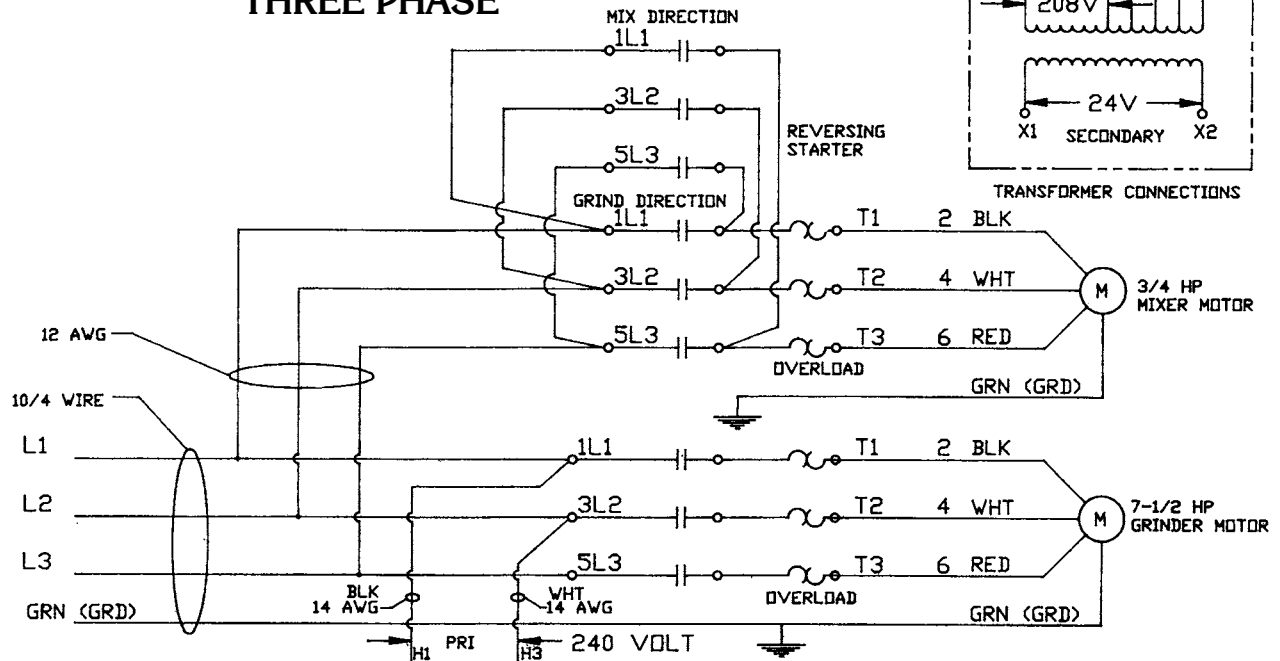
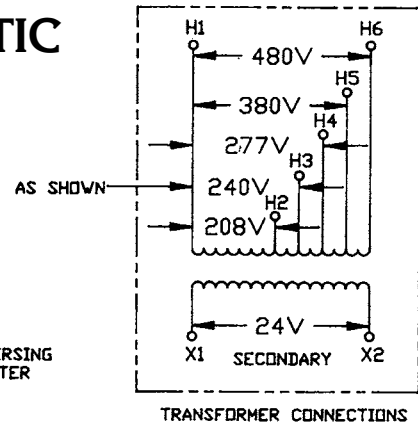


OR



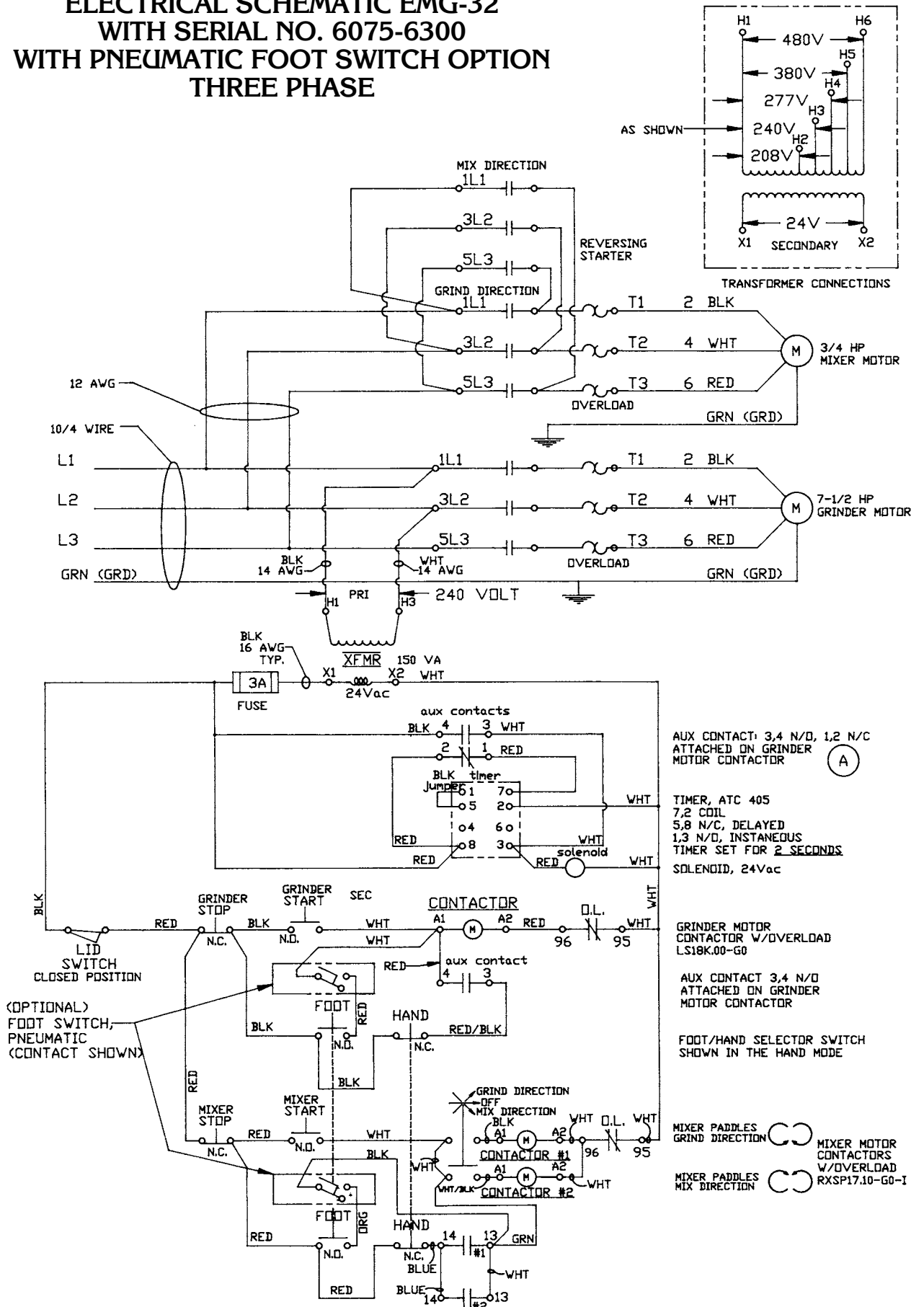
# ELECTRICAL SCHEMATIC

STARTING WITH SERIAL NO. 6301 - ON  
WITH PNEUMATIC FOOT SWITCH OPTION  
THREE PHASE



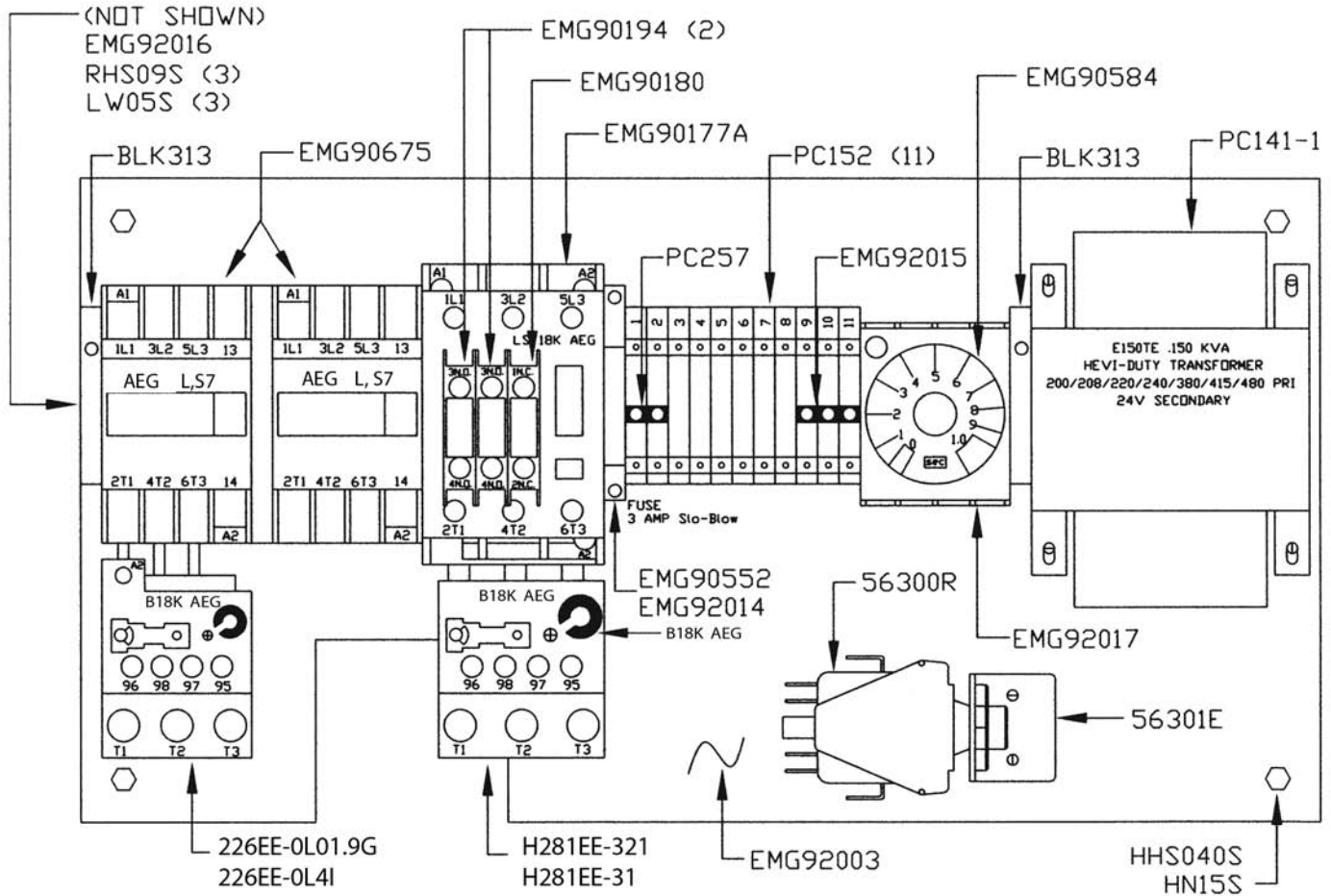
rev. 'A' REMOVED RELAY, ADDED N/C AUX CONTACT 1-15-99 TLW  
rev. 'B' REMOVED STOP SWITCH, STARTING WITH SERIAL NO. 6301-0N 10-22-00 TLW

# ELECTRICAL SCHEMATIC EMG-32 WITH SERIAL NO. 6075-6300 WITH PNEUMATIC FOOT SWITCH OPTION THREE PHASE



rev. 'A' REMOVED RELAY, ADDED N/C AUX CONTACT 1-15-99 TLW

# ELECTRICAL SUBPLATE COMPONENTS



Part No.	Description
226EE-0L01.9G	Overload, B18K-G, 1.3-1.9 AMP, 440-460 Volt
226EE-0L4I	Overload, B18K-I, 2.5-4 AMP, 208-240 Volt
56300R	Air switch – DPDT Momentary
56301E	Air switch mounting bracket
BLK323	End barrier
EMG90177A	Contactors 24V coil w/aux.contacts
EMG90180	Aux. contact block – N.C.
EMG90194	Aux. contact block – N.O.
EMG90249	Buss, connecting link – LSK series
EMG90552	Fuse 3 AMP – time delay
EMG90584	Timer – on delay

Part No.	Description
EMG90675	Reversing contactor – 24 volt
EMG92003	Subplate electrical
EMG92014	Fuse block
EMG92015	Jumper – internal 3 pole
EMG92016	Din rail – 11" long
EMG92017	Timer socket
H281EE-31	Overload, B18K-N, 10-16 Amp, 440-460 Volt
H281EE-321	Overload, B18K-ON, 21-26 AMP, 208-240 Volt
HHS040S	Hex screw 1/4-20 3/4 SS
HN15S	Hex nut 1/4-20 SS
PC141-1	Transformer 208/240-277/380/480 V-2
PC152	Terminal
PC257	Jumper – internal 6mm

## ITEMS NOT SHOWN

<b>14672</b>	Multi hole strain relief	<b>BES16980</b>	Terminal, #6 spade, insulated nylon
<b>1773-1</b>	Lock ring, 1/2"	<b>BLK323</b>	End barrier
<b>241-B</b>	Boot, Hubbell	<b>EMG90249</b>	O/L buss bar
<b>2567</b>	Ring terminal, red	<b>EMG92001</b>	Control cord, 8 conductor
<b>418</b>	Wire nut, orange	<b>EMG92002</b>	Terminal, push on 16-14 AWG insulated
<b>419</b>	Wire nut, yellow	<b>EMG92015</b>	Jumper, internal 3-pole
<b>420</b>	Wire nut, red	<b>EMG92016</b>	Din rail, 1 1 <sup>53</sup> / <sub>64</sub> inches long
<b>53511</b>	Cord connector, 14/4 AL	<b>EMG92022</b>	Strain relief connector .375-.500 R
<b>53687</b>	Decal "Caution Do Not Fill Above Line"	<b>EMG92099</b>	EMG-32 Operating Manual
<b>53689</b>	Cord connector, 10/4 AL	<b>H653-E</b>	Warning label, English
<b>53891</b>	Auger drive shaft key	<b>H653-F</b>	Warning label, French
<b>53894</b>	Auger drive shaft lock washer	<b>H653-SP</b>	Warning label, Spanish
<b>53895</b>	Auger drive shaft lock nut	<b>H486</b>	Decal, "Rotation"
<b>54268</b>	Power cord, 10/4, 13 feet	<b>H340</b>	Ring wrench
<b>54268-2</b>	Extension cord, 10/4, 2 1/2 feet	<b>PC152</b>	Terminal din rail mount
<b>56311</b>	Plug, Hubbell	<b>PC257</b>	Internal jumper
<b>57103-1</b>	Lock ring, 1"	<b>T3289</b>	Terminal, 1/4" female spade, blue
<b>BCC51-1</b>	Terminal, ring ground, non-insulated	<b>T3289-8</b>	Terminal, #8 ring, blue

## FASTENERS

<b>AN15S</b>	Acorn nut, 1/4-20, SS	<b>HN19S</b>	Hex nut, 5/16-18, SS
<b>FW04S</b>	Flat washer, #10	<b>HN43S</b>	Hex nut, 1/2-13, SS
<b>FW05S</b>	Flat washer, 1/4, SS	<b>HN49S</b>	Hex nut, 5/8-11, SS
<b>FW07S</b>	Flat washer, 3/8 x 7/8 OD, SS	<b>HNNL15S</b>	Hex nylok nut, 1/4-20, SS
<b>FW11S</b>	Flat washer, 1/2, SS	<b>HNNL25S</b>	Hex nylok nut, 3/8-16, SS
<b>H374-1</b>	Pop rivet, 1/8 x 1/4, ali.	<b>LW05S</b>	Lock washer, #10, SS
<b>HHS012S</b>	Hex head screw, 10-32 x 1/2	<b>LWE10P</b>	Lock washer, #10 external tooth
<b>HHS025S</b>	Hex head screw, 1/4-20 x 1/2, SS	<b>LW10S</b>	Lock washer, 1/4, SS
<b>HHS040S</b>	Hex head screw, 1/4-20 x 3/4, SS	<b>LW15S</b>	Lock washer, 5/16, SS
<b>HHS060S</b>	Hex head screw, 5/16-18 x 1, SS	<b>LW20S</b>	Lock washer, 3/8, SS
<b>HHS067S</b>	Hex head screw, 3/8-16 x 3/4, SS	<b>LW35S</b>	Lock washer, 5/8, SS
<b>HHS075S</b>	Hex head screw, 3/8-16 x 1 1/4, SS	<b>PHS033S</b>	Pan head screw 10-32 x 3/8
<b>HHS083S</b>	Hex head screw, 3/8-16 x 1 3/4, SS	<b>RHS020S</b>	Round head screw, 6-32 x 3/8, SS
<b>HHS126S</b>	Hex head screw, 1/2-13 x 1 1/4, SS	<b>RHS069S</b>	Round head screw, 10-32, x 3/8, SS
<b>HHS129S</b>	Hex head screw, 1/2-13 x 2, SS	<b>RHS072S</b>	Round head screw, 8-32 x 3/8, SS
<b>HHS147S</b>	Hex head screw, 5/8-11 x 2, SS	<b>RHS090S</b>	Round head screw, 10-32 x 1/4
<b>HHS152S</b>	Hex head screw, 5/8-18 x 1 1/4, SS	<b>RHS10S</b>	Round head screw, 10-32 x 3/4
<b>HN07S</b>	Hex nut, 10-24, SS	<b>RHS31S</b>	Round head screw, 1/4-20 x 1, SS
<b>HN10S</b>	Hex nut, 10-32, SS	<b>WN20S</b>	Wing nut, 3/8-16, SS
<b>HN15S</b>	Hex nut, 1/4-20, SS		

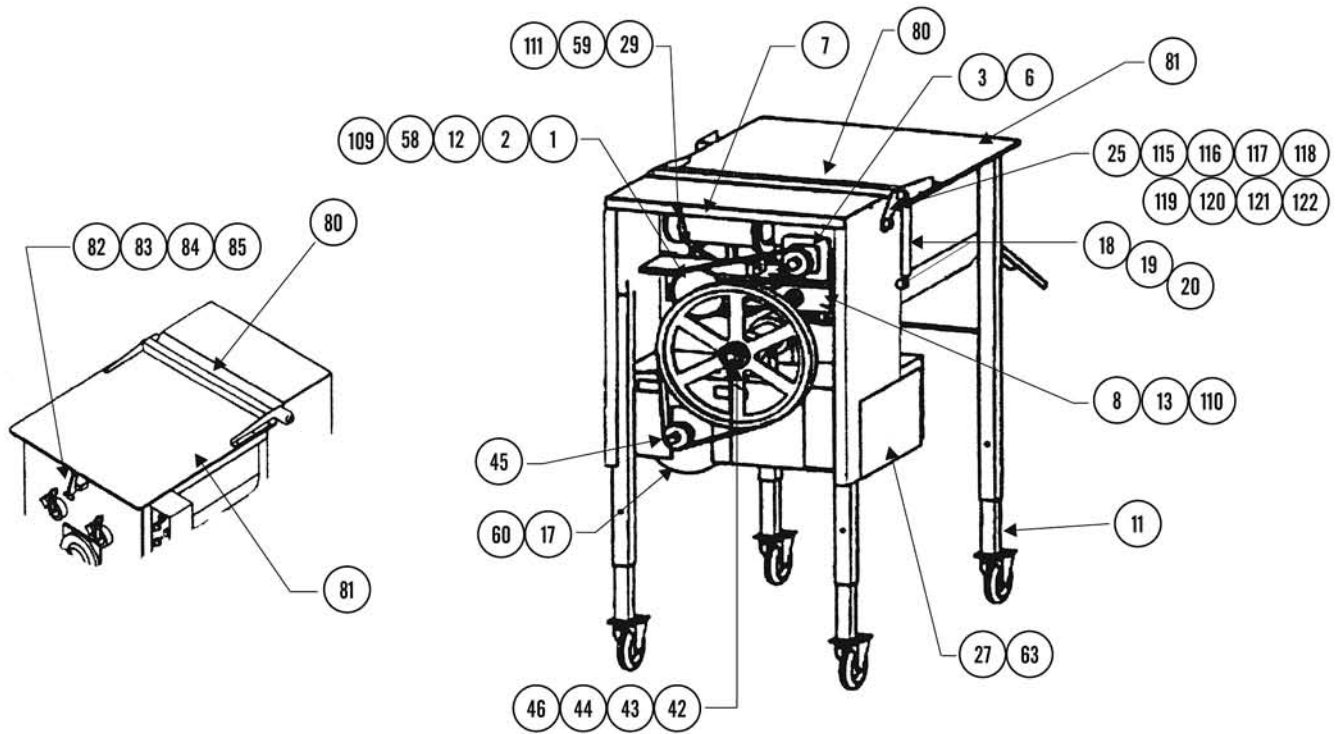


Fig.	Item No.	Description	Fig.	Item No.	Description
1	EMG20050-06	#40 roller chain	46	53891	Auger drive shaft key
2	EMG20050-01	#40 chain connecting link	58	EMG62135	1/4" key, 1" long
3	EMG20301G	Groove gear reducer assembly	59	EMG62136	1/4" key, 1 1/16" long – spur gear key
3A	EMG62197	1/4 x 2 1/4 reducer shaft key	60	EMG62137	1/4" key, 2" long – 7.5HP motor shaft key
6	EMG62012	40B20F 1 1/4" sprocket	63	EMG62144	24 volt relay – old style only
7	EMG62013	Leeson 3/4HP RS56-C drip proof	80	EMG62187	Lid arm bracket
7A	EMG62196	3/16 x 1 1/4 motor shaft key – 3/4HP	81	EMG62167	Plastic safety cover & arm bracket assembly
8	EMG62015	Paddle shaft bearing mount	81A	EMG62056	Plastic safety cover only
11	EMG62035	Adjustable leg weldment	81B	EMG62168	Stainless safety cover & arm bracket assembly
12	EMG62147	Left hand female paddle drive shaft	81C	EMG62008	Stainless safety cover only
13	EMG62148	Right hand male paddle drive shaft	82	EMG62077	Fastener plate latch mount
17	53475	Motor, 7.5HP, 220/440-50/60-3	83	EMG62102	Safety cover latch
17A	53941	Motor, 7.5HP, 575-60-3	84	56073	Left latch mount bracket – LH
18	EMG62061-01	Damper lug	85	EMG62103-02	Right latch mount bracket with stop – RH
19	EMG62062	Gas cylinder – external	109	EMG82029	40B36F 1" sprocket
19A	EMG62062-1	Ball studs (2 req'd)	110	EMG82032	Sealed bearing
19B	EMG62190	Gas cylinder – internal	111	EMG82034	Steel washer shims
19C	EMG62190-1	Retainer clip (2 req'd)	115	EMG90015	Micro switch
20	EMG62063	9416K84 metal eyelet	116	EMG92032	Flat washer, .397 x 1 1/4 x .120 thk, SS
25	EMG62081	Micro switch bracket	117	EMG62182	Sleeve bushing step washer, SS
27	EMG62087	Electrical box panel – old style	118	EMG62184	Outside hinge flat washer, SS
27A	EMG62087-1	Electrical box panel – new style	119	EMG62181	Inside hinge flat washer, plastic
29	EMG62092	Spur gear	120	HHS086S	Hex head screw, 3/8-16 x 2, SS
42	53886	Bearing box assembly	121	HNNL25S	Hex Nylok nut, 3/8-16, SS
43	H384-CL	Roller chain, 35-4 w/connecting link	122	EMG62183	Lid cylinder arm weldment
44	53727	Drive sprocket, 141 tooth			
45	H382-1	Motor pinion, 22 tooth			

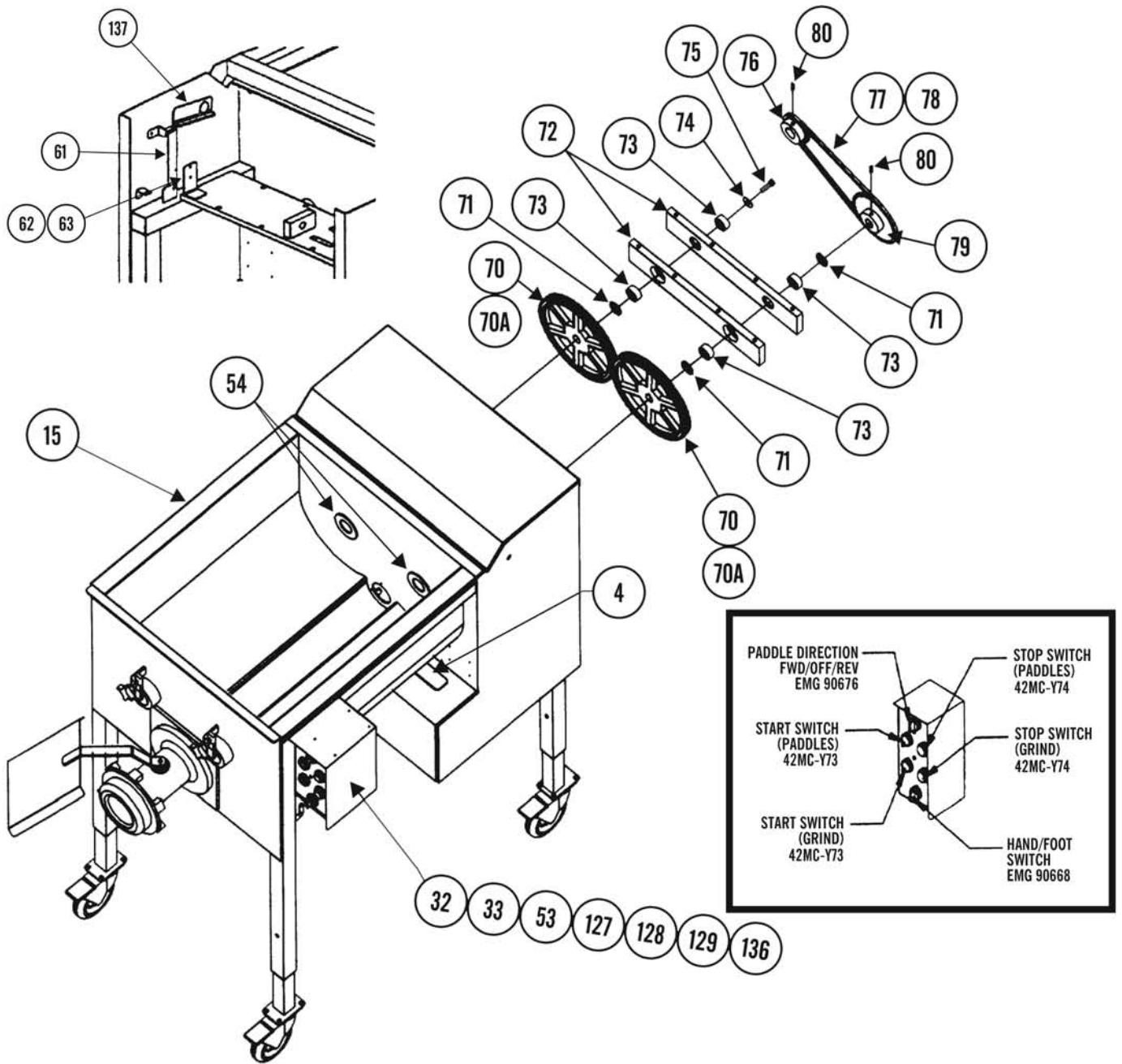
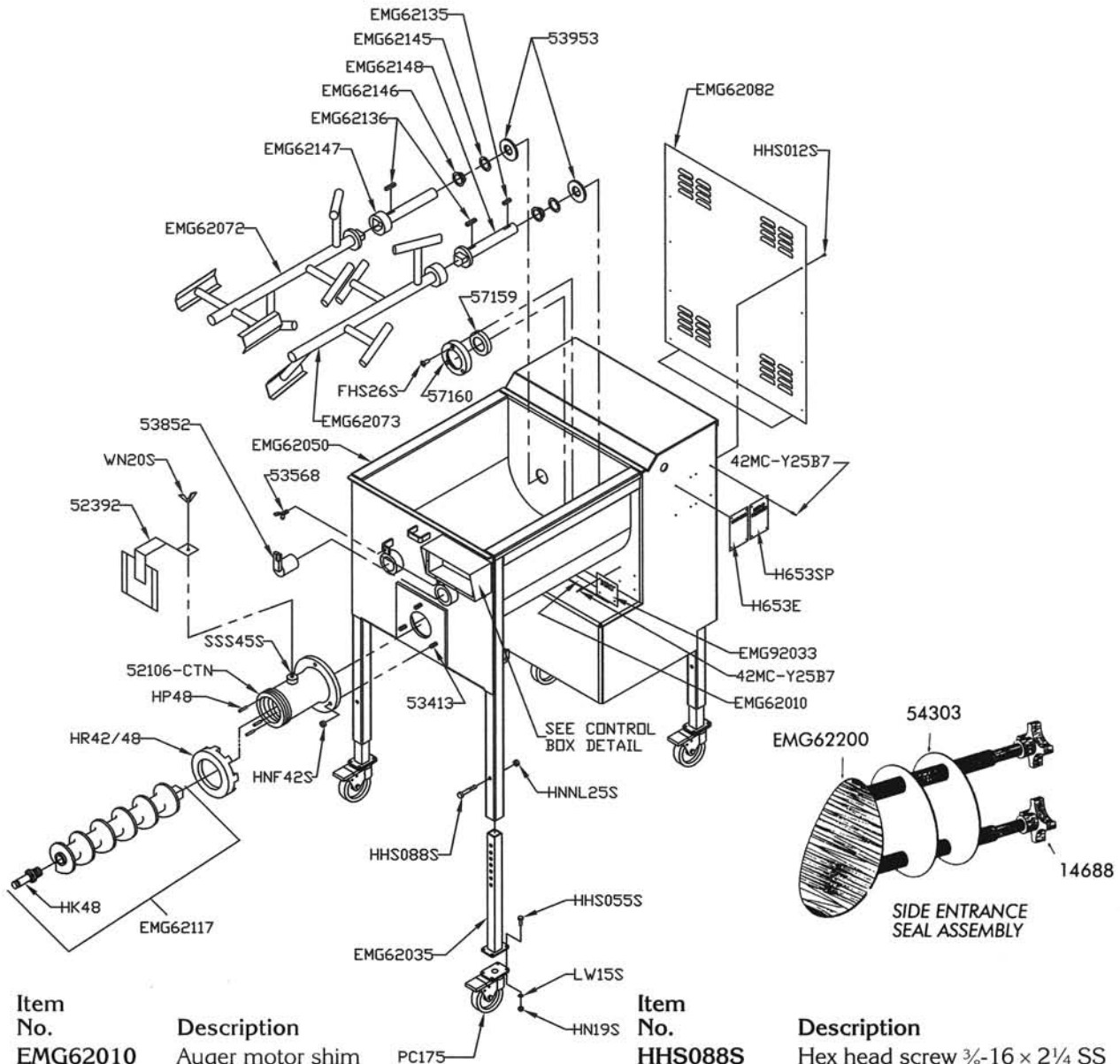


Fig.	Item No.	Description
4	EMG62010	Auger motor shim
5	53568	Mixer paddle lock screw
15	EMG62050	Hopper weldment
32	H462-1	Trim ferrule, switch guard
33	50655-1	Switch guard
34	53852	Lock arm assembly
53	EMG62039	Push button ledger cover
54	53953	Mixer drive shaft seal
61	EMG62140	Lid lock lever
62	EMG62143	24 volt solenoid
63	EMG62044	Spring – lid lock
70	EMG62092	Spur gear
70A	SSS17S	Set screw $\frac{5}{16}$ -18 $\times$ $\frac{3}{8}$ SS
71	EMG82034	Steel washer shim
72	EMG62015	Paddle shaft bearing mount

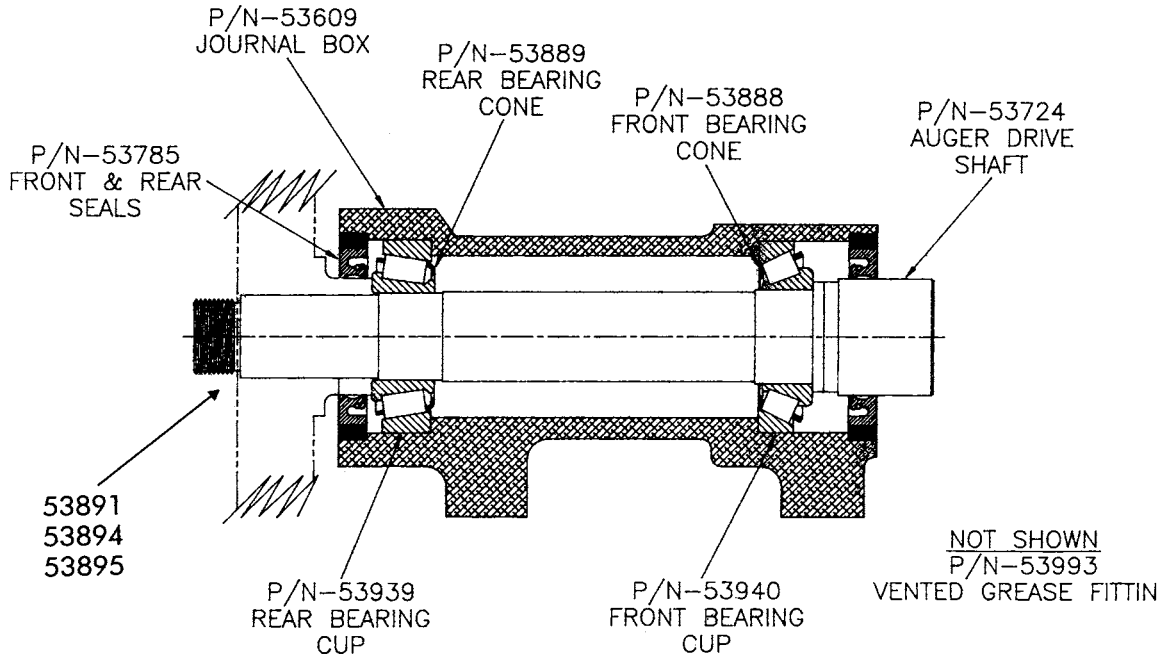
Fig.	Item No.	Description
73	EMG82032	Sealed bearing
74	EMG92032	Flat washer $\frac{3}{8} \times 1\frac{1}{4} \times .120$ TK
75	HHS070S	Hex screw $\frac{3}{8}$ -16 $\times$ 1 SS
76	EMG62012	40B20F $\times$ $\frac{1}{4}$ " sprocket
77	EMG2005-06	#40 Roller chain w/master link
78	EMG20050-01	#40 Chain connecting link
79	EMG82029	40B36F $\times$ 1" sprocket
80	SSS26S	Set screw $\frac{5}{16}$ -18 $\times$ $\frac{1}{2}$ SS
127	42MC-Y73	Green push button
128	42MC-Y74	Red push button
129	EMG90668	Selector switch, hand/foot control
136	EMG90676	3-POS selector switch, paddle direction
137	EMG62179	Safety lid lock weldment arm



Item No.	Description
EMG62010	Auger motor shim
EMG62035	Adjustable leg weldment
EMG62050	Hopper weldment
EMG62072	Male paddle assembly – LH
EMG62073	Female paddle assembly – RH
EMG62082	Access cover
EMG62117	Auger assembly
EMG62135	1/4" key, 1" long
EMG62135-1	1/4" key, 1 1/4" long – shaft to sprocket
EMG62136	1/4" key, 1 7/16" long – spur gear key
EMG62145	Retaining ring
EMG62146	Drive shaft sleeve
EMG62147	Left hand female paddle drive shaft w/sleeve and ring
EMG62041-1	Left hand female paddle drive shaft weldment only
EMG62148	Right hand male paddle drive shaft w/sleeve and ring
EMG62040-1	Right hand male paddle drive shaft weldment only
EMG62200	Side inlet seal
EMG92033	Model & S/N plate
FHS26S	Flat head screw 10-32 x 3/4 SS
HHS012S	Hex head screw 10-32 x 1/2 SS
HHS055S	Hex head screw 5/16-18 x 3/4 SS

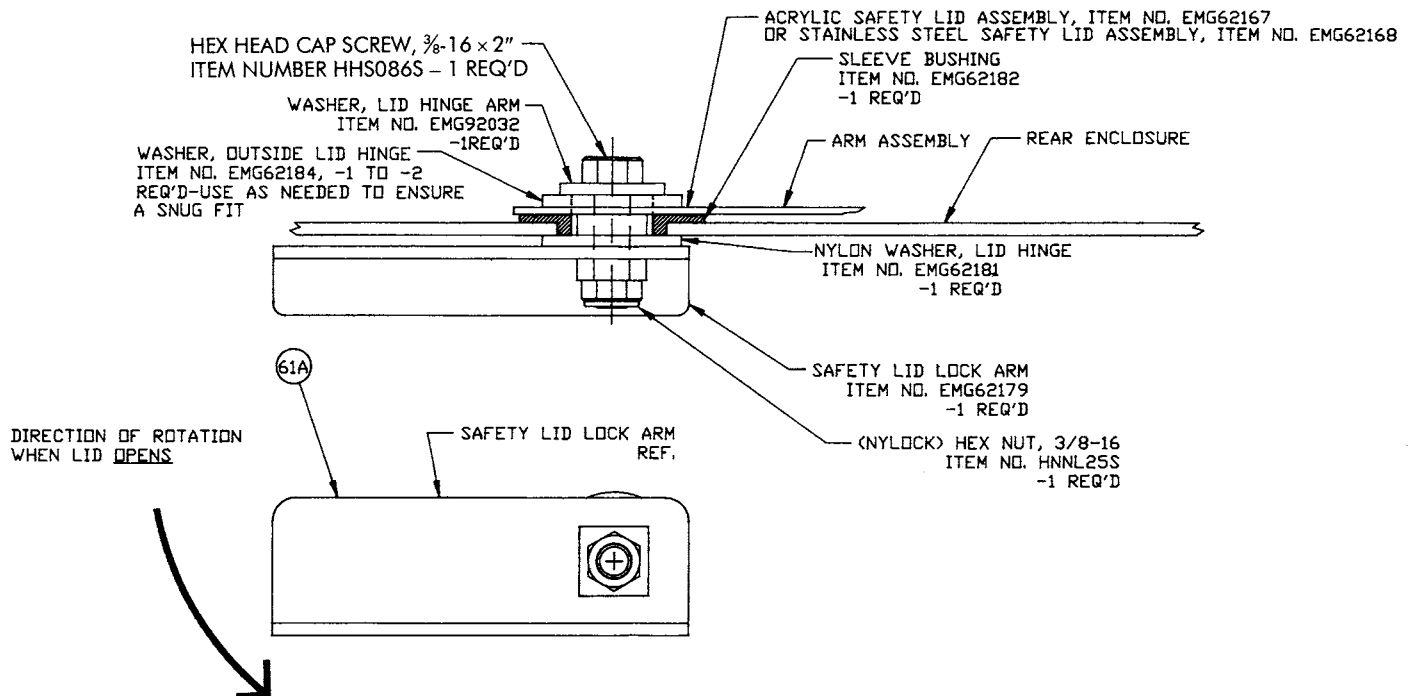
Item No.	Description
HHS088S	Hex head screw 3/8-16 x 2 1/4 SS
HK48	Knife drive pin
HNNL25S	Hex nylock nut 3/8-16 SS
HN19S	Hex nut 5/16-18 SS
HNF 42S	Hex flange nut 1/2-13 SS
HP48	Bowl Plate Pin (3 req.)
HR42/48	Ring
H653E	Grinder warning label – English
H653SP	Grinder warning label – Spanish
LW15S	Lock washer 5/16 SS
PC175	Swivel caster assembly
SSS45S	Meat deflector mounting stud
WN20S	Wing nut
14688	Locking knob
42MC-Y25B7	Pop rivet, Al. 1/8 x 1/4 reach
52106-CTN	Bowl w/plate pins
52392	Meat deflector
53413	Bowl mounting studs
53413-1	Bowl mounting stud – long
53568	Mixer paddle lock screw
53852	Lock arm assembly
53953	Mixer drive shaft seal
54303	Outer disc
57159	Auger drive shaft seal
57159K	Auger drive shaft seal kit
57160	Seal retainer, SS

# JOURNAL BOX ASSEMBLY P/N – 53886

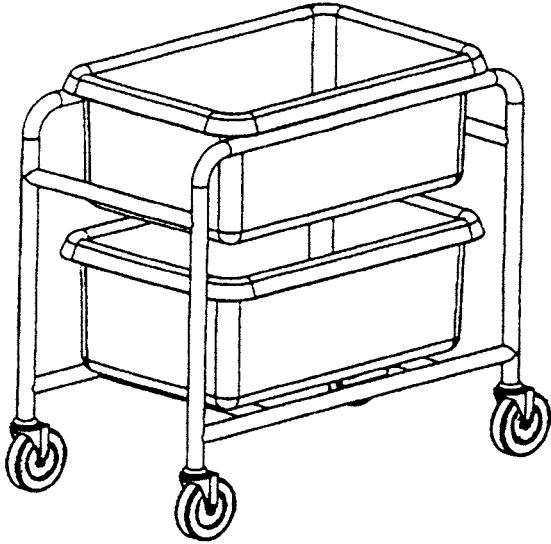


Item No.	Description	Item No.	Description
53609	Journal box, #62001 on	53889, 53939	Rear bearing cup/cone assembly, order H311A
53724	Auger drive shaft, #62001 on	53891	Auger drive shaft key
53785	Journal box seal (2 ea.)	53894	Auger drive shaft lock washer
53886	Journal box assembly complete	53895	Auger drive shaft lock nut
53888, 53940	Front bearing cup/cone assembly, order H310A	53993	Vented grease fitting

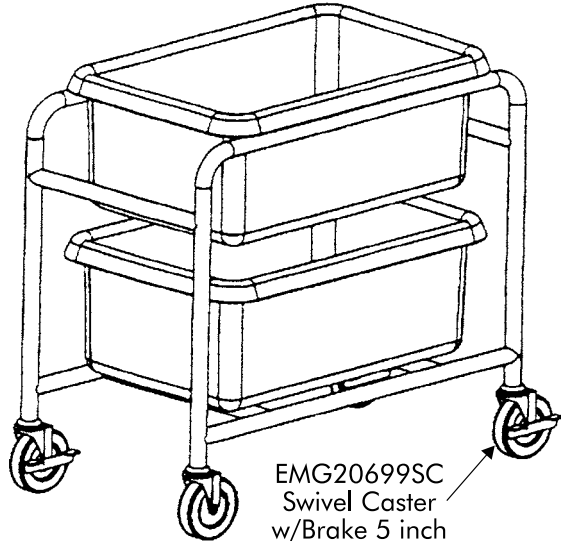
## RIGHT HAND HINGE ASSEMBLY SHOWN IN CLOSED POSITION



# OPTIONAL EQUIPMENT

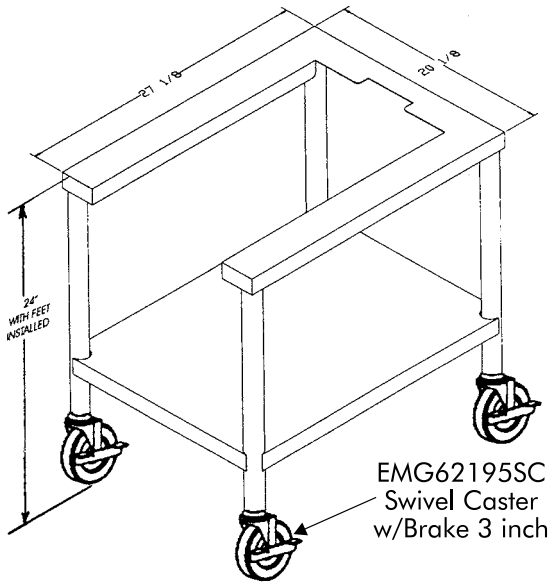


EMG20699  
Multiple Lug Dolly w/3" Casters (std.)



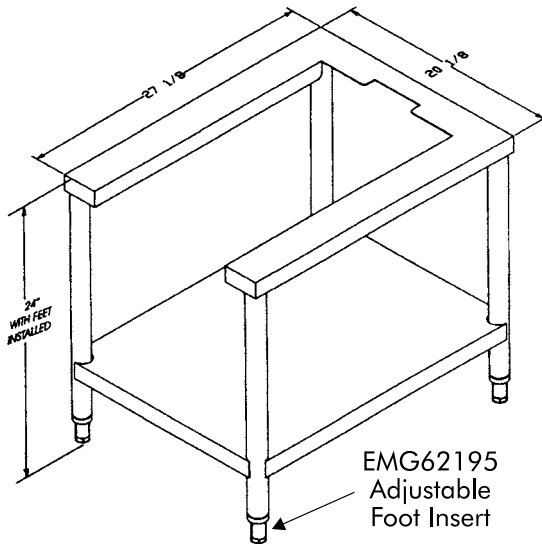
EMG20699SC  
Swivel Caster  
w/Brake 5 inch

EMG20699-1  
Multiple Lug Dolly w/5" Casters/Brakes (std.)



EMG62195SC  
Swivel Caster  
w/Brake 3 inch

EMG62194-1  
Multiple Lug Stainless Cart  
w/3" Casters/Brakes

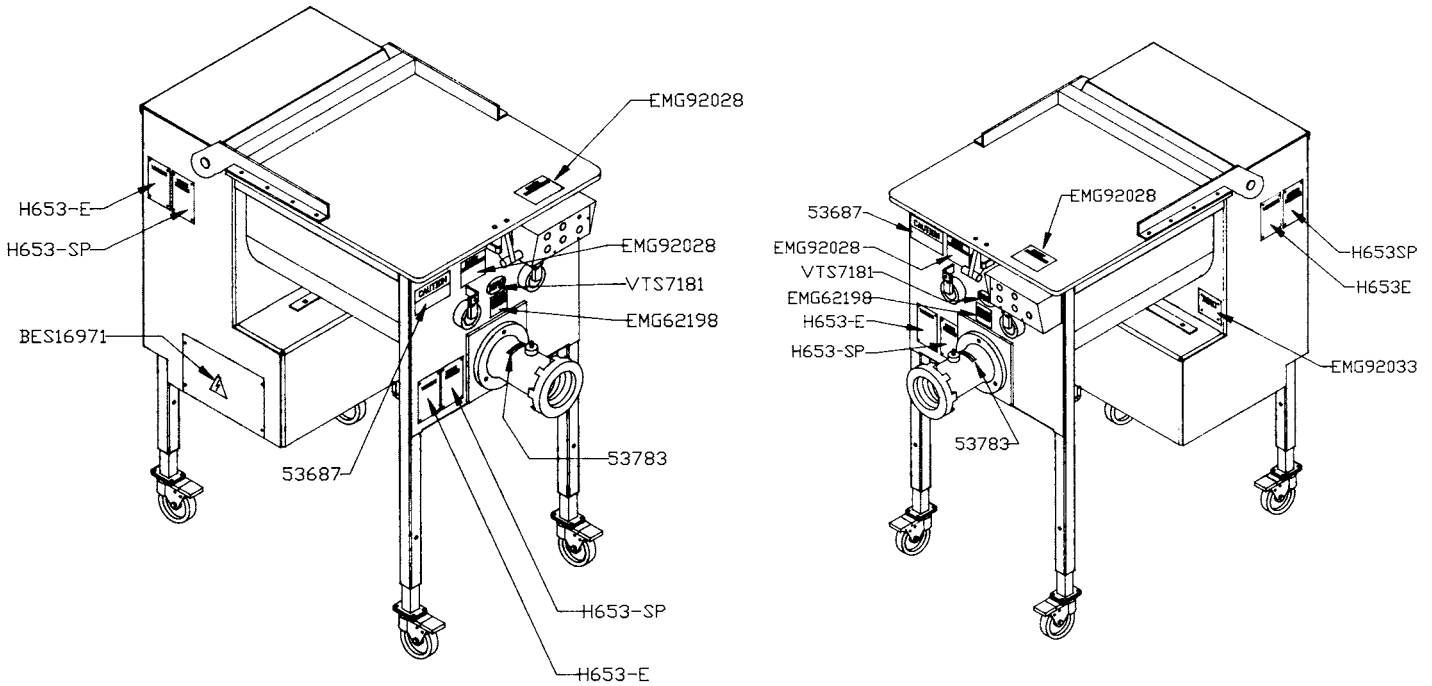


EMG62195  
Adjustable  
Foot Insert

EMG62194  
Multiple Lug Stainless Stand w/feet

# SAFETY LABEL LOCATIONS

**CAUTION  
KEEP HANDS OUT OF HOPPER**



#VTS7181



**NEVER** Touch this Grinder Unless Trained And Authorized By Supervisor and Over 18 Years Old.  
**READ** Operation Manual Thoroughly Before Operating.  
**NEVER** Place Hands Into Grinder Input or Output Opening.  
**ALWAYS** Use Stomper To Feed Product Into Manual Feed Grinder's Input Opening.  
**NEVER** Alter this Machine from its Original Form as Shipped from the Factory.  
**NEVER** Leave Grinder Unattended While Operating.  
**ALWAYS** Disconnect and Unplug from Main Power Source and Perform LOCKOUT/TAGOUT BEFORE Attempting To Unjam, Unclog, Clean or Service.

#H653-E



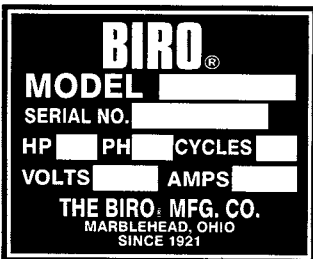
**NUNCA** Toque esta Picadora Sin Haber Tenido Entrenamiento para ello ni sin Autorización del Supervisor. Además se debe Tener 18 Años de Edad.  
**LEA** Cuidadosamente el Manual de Instrucciones antes de Querer Operar la Máquina.  
**NUNCA** Meta las Manos Dentro de la Picadora ni en la Apertura de Entrada o Salida.  
**SIEMPRE** Haga uso del Pistadero para Meter el Producto Dentro de la Apertura de Entrada de la Picadora Siendo ésta Tipo alimentación a Mano.  
**NO** Altere JAMAS la Forma que Presenta la Máquina al Salir Embarcada de la Fábrica.  
**NUNCA** Deje sola la Picadora Estando ésta en Marcha.  
**SIEMPRE** Desconecte el Equipo Desenchufándolo de la Fuente de Fuerza. Déjelo Bajo Llave y con ETIQUETA que Prohíba su uso antes de Desinmovilizarlo o Sacarle Cualquier Obstáculo que lo tape o de Limpiarlo o Realizar Trabajos de Mantenimiento.

#H653-SP

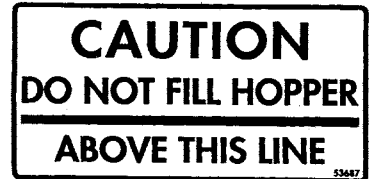


**NOTICE** - This lid contains a timer mechanism.  
 Use pushbuttons or footswitch to turn mixer/grinder off.  
**DO NOT** force lid open.  
 Allow auger and paddles to **STOP TURNING** completely before opening lid.

#EMG92028



#EMG92033



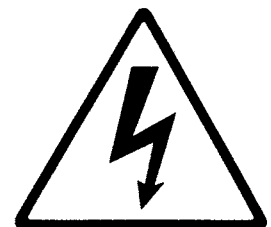
#53687



#EMG62198



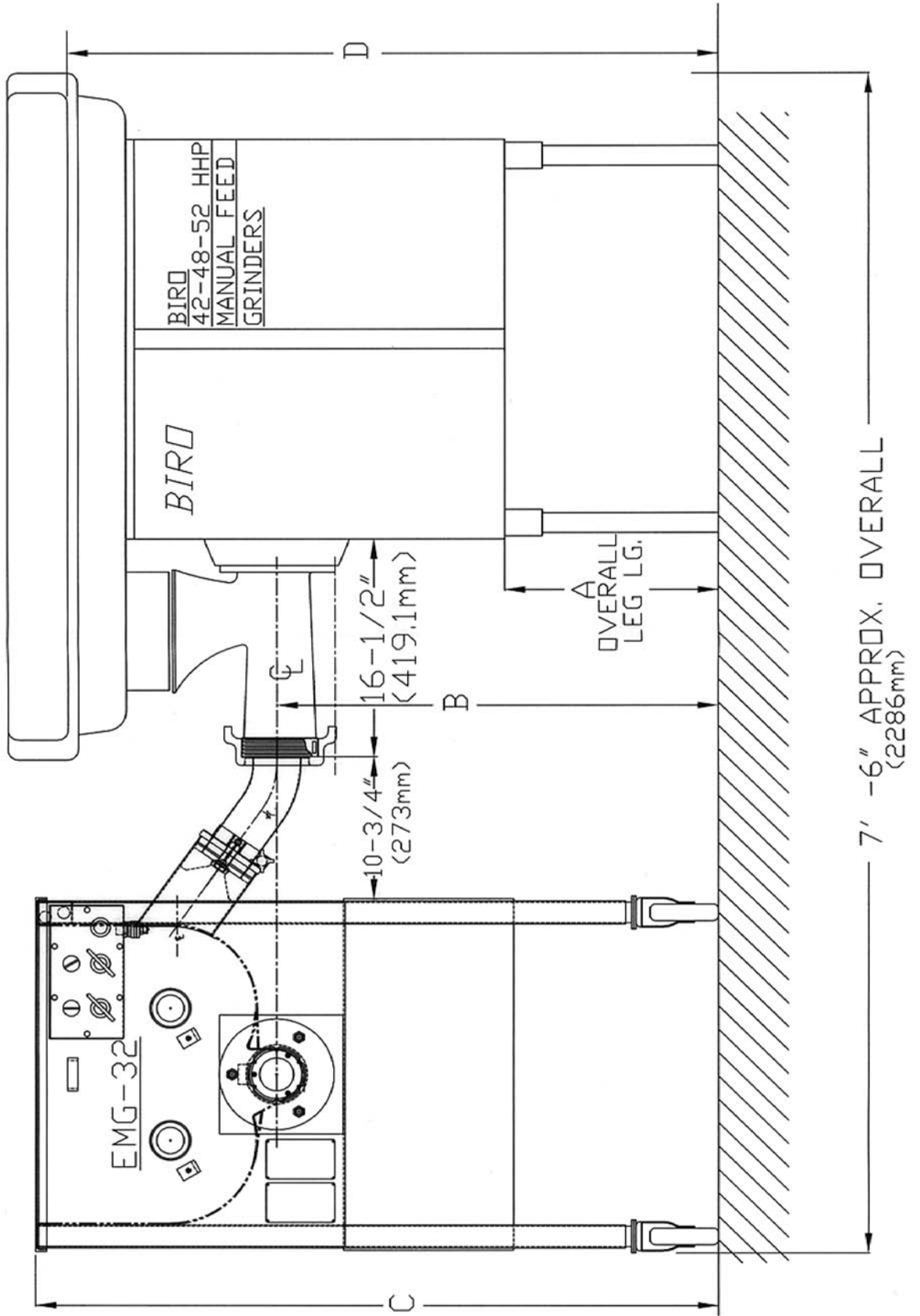
#53783



#BES16971

# TANDEM OPERATION ILLUSTRATION

MODEL	HHP
342548,7548,552,7552	
A	15-5/8" (396.8mm)
B	32-1/4" (819.2mm)
C	50" (1270mm)
D	47-3/8" (1203.3mm)





## LIMITED WARRANTY:

**WARRANTY:** The Biro Manufacturing Company warrants that the BIRO EMG-32 Mixer Grinder/Chopper will be free from defects in material and workmanship under normal use and with recommended service. BIRO will replace defective parts, which are covered by this limited warranty, provided that the defective parts are authorized for return, shipping charges prepaid, to a designated factory for inspection and/or testing.

**DURATION OF WARRANTY:** The warranty period for all parts covered by this limited warranty is one (1) year from date of inspection/demonstration as advised on the returned Warranty registration card, or eighteen (18) months from original factory shipping date, whichever date occurs first, except as noted below.

**PARTS NOT COVERED BY WARRANTY:** The following are **not** covered by this limited warranty: wearable parts in the grinding system such as bowl, ring, worm, drive shaft, and knife drive pin. This limited warranty does not apply to machines sold as used, rebuilt, modified, or altered from the original construction in which the machine was shipped from the factory. Water contaminated electrical systems are not covered under this limited warranty. BIRO is not responsible for electrical connection of equipment, adjustments to the switch controls or any other electrical requirements, which must be performed only by a certified electrician. BIRO is not responsible for service charges or labor required to replace any part covered by this limited warranty or for any damages resulting from misuse, abuse, lack of proper or recommended service.

**EXCLUSION OF WARRANTIES AND LIMITATION OF REMEDIES:** BIRO gives no warranties other than those expressly stated in this limited warranty. THE IMPLIED WARRANTY OF MERCHANTABILITY, THE IMPLIED WARRANTY OF FITNESS FOR PROCESSING OF FOOD PRODUCTS, AND ALL OTHER IMPLIED WARRANTIES ARE SPECIFICALLY EXCLUDED. BIRO IS NOT LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, EXPENSES, OR LOSSES. THE REMEDIES PROVIDED IN THIS BIRO LIMITED WARRANTY ARE PURCHASER'S SOLE AND EXCLUSIVE REMEDIES AGAINST BIRO.

**REGISTRATION CARDS:** You must sign, date and complete warranty registration card supplied with each machine. The warranty card must be returned to The Biro Manufacturing Company for proper registration. If no warranty card is returned to BIRO, the warranty period will begin from the date the machine was originally shipped from the factory.

### HOW TO GET SERVICE:

1. Contact the entity from whom you purchased the machine; or
2. Consult the yellow pages of the phone directory for the nearest authorized dealer; or
3. Contact BIRO Mfg. Company for the authorized service entity (250 plus worldwide) in your area.

## THE BIRO MANUFACTURING COMPANY

1114 Main Street  
Marblehead, Ohio 43440-2099  
Ph. 419-798-4451  
Fax 419-798-9106  
E-mail: [Service@birosaw.com](mailto:Service@birosaw.com)  
Web: <http://www.birosaw.com>