



# OPERATOR'S MANUAL

To be utilized for London Concrete Mixers before March 1, 2024

## Concrete Mixer



**Disclaimer:**

This manual must not be used to repair your mixer. Repair information is available by calling London Machinery Inc. at (800) 265-1098.

The information in this Operator's Manual will be your guide to operation and operator maintenance for this equipment.

All information, illustrations, and specifications in this manual are based on the latest information available at the time of publishing. The illustrations used in this manual are intended as representative reference views only. Moreover, because of our continuous product improvement policy, we may modify information, illustrations, and/or specifications to explain and/or exemplify a product, service, or maintenance improvement. We reserve the right to make any change at any time without notice.

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## 1.0 Purpose of Manual

This Operator's Manual provides operation and operator maintenance instructions for the concrete mixer manufactured by London Machinery Inc.

The information in this operator manual will be your guide to operation and operator maintenance for this equipment.

**Keep this manual with the vehicle at all times.**



### WARNING

**The operator of this vehicle must be properly licensed and trained to operate this vehicle.**

**If you do not have the proper training and licensing to operate this vehicle, you are putting yourself and others at risk of serious injury or death.**

**If you are uncertain how to operate this Mixer, inform your supervisor or contact London Machinery Inc. at (519) 963-2500.**

### NOTE

**This manual is limited to the operation and light maintenance of the mixer system only.**

**This manual does not include the operation or maintenance of the chassis vehicle upon which the mixer system is mounted.**

## 2.0 Scope

This manual provides information for use by the equipment operator under the following headings:

1. **Safety.** Includes important safety information.
2. **Weights and Specifications.** Includes equipment weights and specifications.
3. **Operation.** Includes control functionality and normal equipment operation.
4. **Maintenance.** Includes basic preventive maintenance information for the operator.

To order a replacement manual or safety warning decals, call the London Machinery Inc. parts and service number listed in the Foreword of this manual.

### 3.0 Parts

London is committed to providing customers top quality OEM replacement parts, as well as aftermarket parts for other brands. Whatever you need, we can get you the right part at the right price at the right time. London: The name you trust for the parts you need to keep your fleet operating at peak performance.

Parts Phone: 519-963-2505

Toll Free: 800-265-1098

Parts Fax: 519-453-8916

### 4.0 Service

At London, we think you'll find the strongest commitment to service and support you've encountered anywhere. Why? Because we know it's so important to your success. Contact us anytime for unsurpassed knowledge and experience from customer service professionals who understand what you need to keep your fleet on the road.

Service Phone: 519-963-2531

Toll Free: 800-265-1098

Service Fax: 519-659-2306

### 5.0 Corporate Headquarters

Contact London Machinery Inc. directly at our corporate headquarters at the following address, phone number, and website.

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London, Ontario

Canada

N5V 0A4

Phone: 519-963-2500

Toll Free: 800-265-1098

Fax: 519-659-2306

Corporate Website: [www.lmi.ca](http://www.lmi.ca)



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**NOTES**



## 1.0 Important Safety Information

**READ AND UNDERSTAND THIS ENTIRE MANUAL BEFORE OPERATING, REPAIRING, OR ADJUSTING YOUR LONDON MACHINERY EQUIPMENT.**

**THOSE WHO USE AND MAINTAIN THIS EQUIPMENT MUST BE THOROUGHLY TRAINED AND FAMILIAR WITH THE PRODUCT.**

**IF INCORRECTLY USED OR MAINTAINED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY.**

Always keep this manual in a location where it is readily available for persons who operate or maintain the product. Additional copies of this manual are available from London Machinery Inc. Please contact London Machinery Inc. if you require additional manuals or if you have any questions about the information in this manual, this product, or safe operating procedures.

THESE SAFETY PROCEDURES ARE FOR YOUR OWN PROTECTION.

Do not operate this equipment until you have read its contents thoroughly. Please contact London Machinery Inc. if you require assistance.

Should operators of this equipment have a reading or learning disability, dyslexia, or other such condition, they must be assigned a mentor/trainer to read and explain to them the entire contents of this manual as well as the safety guidelines, danger, caution, and warning decals on this unit. Such individuals should not be allowed to operate this equipment until they thoroughly understand all of these materials. Failure to do so can result in serious injury or death.

Safety and safe working procedures must be followed at all times.

These are your safety responsibilities:

1. Before operating the vehicle/mixer system:
  - a. Read and understand all operating instructions. You must be thoroughly familiar with all controls, gauges, indicators, and instruments.

- b. Walk around the Mixer. Read and understand all safety labels. They will describe the nature of the hazard, and what actions are needed to avoid the hazard.
  - c. Before operating the vehicle/mixer system, read and understand all operating and safety information provided!
2. Not all hazards are identified. Some hazards are clear and obvious, while others may be unique to individual situations. Use your everyday experience and common sense to avoid those types of hazards.
3. All equipment has operating limits. You must operate within those limits. Operating beyond the operating limits might cause equipment to break and fail. This could result in death or serious injury to the operator or others.
4. It is the responsibility of the operator to know what specific requirements, precautions, and work area hazards exist.
5. It is the responsibility of the operator to understand the meaning of all audible alarms and warning lights.
6. The operator must obey all federal, state, and local laws regarding the operation of this vehicle.
7. If you see a feature of the Mixer that you think is unsafe, contact London Machinery Inc., at 800-265-1098 immediately.

The “signal words” of DANGER, WARNING, and CAUTION have specific meanings to alert you to the relative level of hazard.

Take the safety warnings seriously. If you do not understand them or have questions about them, call London Machinery Inc.

## 2.0 Product Safety Information

Safety notices are one of the primary ways to call your attention to potential hazards.



**THIS SAFETY SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL.**

**WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS.**

**BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.**

The following safety notices are used throughout this manual.

### **DANGER**

**Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. Danger is used in the most extreme situations.**

### **WARNING**

**Warning indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.**

### **CAUTION**

**Caution indicates a situation that might result in property damage.**

### **SAFETY NOTICE**

**Failure to follow Safety Notice instructions could cause damage to the equipment or cause it to operate improperly.**

### **OPERATOR'S INSTRUCTION**

The signal words of DANGER, WARNING, and CAUTION

have specific meanings to alert you to the relative level of hazard.

Take the safety warnings seriously. If you do not understand them or have questions about them, contact London Machinery Inc.

## 2.1 Use Proper Safety Equipment

Always wear proper safety equipment/clothing while operating the Mixer.

Proper safety equipment includes:

- Hard Hat
- Safety Glasses or Goggles
- Snug-Fitting, Full-Covering Clothes
- Shirt with Tight-Fitting Long Sleeves (always keep shirt tails tucked in)
- Long Pants without Cuffs (Cuffs can be tripped over. Cuffs may also catch concrete)
- Steel-Toed Shoes or Boots
- Rubber Boots (if standing in concrete is required)
- Lime-Resistant Gloves
- Rubber Gloves (during clean-out)
- Hearing Protection
- Breathing Mask (if working in an area where cement dust is

present)

- Breathing Apparatus and Ventilation Fan (if working in a Confined Space - see CZA Z1006)

Follow these guidelines to reduce risks of injury:

- Avoid wearing clothing that has long strings, fringes, or ties that can become caught in equipment
- Never wear jewelry (rings, necklaces, bracelets, wrist watches, etc.). These can become snagged on equipment or, if they come in contact with electrical circuits, can present a shock or burn hazard.
- Tie up long hair to prevent it from becoming caught in moving parts
- In cold weather, avoid wearing loose-fitting clothing. It is better to wear layers of clothing under a pair of snug-coveralls than a large, loose-fitting jacket or parka
- Keep work clothing clean and in good repair
- Keep the soles of your work boots clean and in good condition for traction when climbing on and off the vehicle/mixer system.

## 3.0 Safety Information

Read, understand, and follow the safety guidelines and heed dangers and warnings listed below and contained in this manual as well as on the Mixer itself to promote reliable operation and prevent serious personal injury.

Contact London Machinery Inc. if you require assistance or have questions.

## 3.1 Safety

### **WARNING**

**Anytime you are working on this equipment or its related systems, you must do the following:**

- 1. Inform the truck driver that the equipment is going to be repaired and locked out and that he must not attempt to start the truck.**
- 2. Follow all CSA and Mixer lockout procedures. Remove the keys from the truck's ignition.**
- 3. Place magnetic signs on both doors of the truck which read "CAUTION - MAN WORKING ON MIXER - DO NOT START ENGINE."**
- 4. Lockout supplies are available from London Machinery Inc.**

**READ, UNDERSTAND, AND FOLLOW THE SAFETY GUIDELINES, DANGERS, AND WARNINGS LISTED BELOW AND CONTAINED IN THIS MANUAL TO PROMOTE RELIABLE OPERATION AND PREVENT SERIOUS PERSONAL INJURY.**

### SAFETY NOTICE

If chassis is equipped with a battery shut-off switch, it must be turned off anytime the equipment is parked overnight, in a shop, or out of service for any extended period of time. Failure to do so may result in a fire and personal injury or property damage.

### SAFETY NOTICE

Immediately replace safety decals if damaged, unreadable, or missing. Contact London Machinery Inc. at 800-265-1098 for no-charge replacement decals when required. Failure to replace decals may result in serious personal injury or death.

## 3.2 Cab Operation

### DANGER

If the Mixer comes into contact or close proximity with a power line or there is any arcing, stay in the truck cab and keep away from the metal parts of the unit. Do not let anyone come in close to the truck. Stay in the cab. The power company must disconnect the power before you can safely leave the cab.

Minimum clearance from power lines:

50,000 Volts or Less	4 Feet
50,000 + Volts	10 Feet
345,000 - 750,000 Volts	16 Feet

Know the clearance of overhead obstructions. Never drive the Mixer under any overhead obstruction without knowing the clearance height. If unit has a flip-up hopper, be sure hopper is in the lowered position. Failure to do so may result in damage to the Mixer body or truck, and may result in serious personal injury or death.

 **DANGER**

Never back up without taking every precaution to be sure the rear is clear. Check behind truck before backing up. Watch mirrors for activity. Never back up the Mixer unless and until you are completely sure it is safe. Use a spotter/observer and/or get out and check yourself to ensure it is safe to do so.

 **WARNING**

The operator and anyone working in the area of the Mixer should understand the meaning of all audible alarms and warning lights.  
Failure to comply may result in serious injury or death.

 **WARNING**

Thoroughly understand the controls before operating the Mixer. Be sure everyone is clear of the area around the truck before operating the Mixer. Remain attentive at all times when operating the controls.

 **WARNING**

No passenger is allowed in the cab unless a manufacturer's approved passenger seat and seat belt are provided. Serious injury or death can result.

 **WARNING**

The Mixer and the chassis must not be overloaded. Gross Vehicle Weights must not exceed the Manufacturer's gross vehicle weight of this vehicle. Gross Vehicle Weights must meet Federal, State, and Local laws.

**⚠ WARNING**

Never drive the truck with the water tank pressurized.  
Serious personal injury or death may occur.

**⚠ WARNING**

Use slower speeds when going around curves or corners. You are carrying a high center of gravity load.

**⚠ WARNING**

At the job site, use the lowest transmission gear and proceed at low speed, 3 mph (4.8 km/h) maximum, to the discharge area.

**⚠ WARNING**

Optional air chute lock is intended for use only on the job site. The manual chute lock should always be engaged during transport. Excessive wear or injury may result due to improper useage.

### 3.3 Outside Operation

**⚠ WARNING****IMPORTANT ALUMINUM AND STEEL WATER TANK INFORMATION.**

1. Inspect water tank on a daily basis for any damage including, but not limited to, dents, gouges in metal, or leaks.
2. Do not weld on or repair water tank. Instead, replace water tank with a new OEM water tank.
3. Never pressure test an empty water tank. Only pressure test a full water tank.
4. Never remove pressure regulator or pressure safety valve from tank.
  - If regulator or safety valve is defective, it must be replaced before Mixer is put into service.
5. Do not pressurize water tank beyond its working pressure.
  - If pressure exceeds the working pressure, immediately depressurize water tank and replace pressure regulator and pressure safety valve.



6. Never drive the truck with the water tank pressurized.
  - Depressurize water tank prior to transit to or from work site.
  - Water tank should be pressurized only when being used.
7. Never modify water tank in any way.
8. Immediately replace safety decals with London Machinery, Inc. decals if decals are missing or difficult to read.
9. Refer to the London Machinery, Inc. Operator's Manual or contact London Machinery, Inc. at 800-265-1098 if you have questions or require assistance.

 **WARNING**

**NEVER** drink the water from the water tank. The water tank may contain residue from chemicals used to modify concrete properties. Drinking the water from a tank may cause serious internal injury or death.

 **WARNING**

Never pressurize water tank in excess of 55 psi (380 kPa). If pressure exceeds 55 psi (380 kPa), depressurize the water tank immediately and adjust or replace the air regulator valve.  
Serious personal injury or death may occur.

 **WARNING**

Never pressurize an empty water tank.  
Serious personal injury or death may occur.

 **WARNING**

The tank must be operated at no more than 55 psi (380 kPa).

** WARNING**

Use the three-point contact method (either two hands and one foot, or two feet and one hand on the ladder at all times) when climbing the ladder. Always face the ladder when climbing up or down. Serious personal injury may result due to a fall.

** WARNING**

Do not climb on ladders or ride on platforms while the truck is in motion or when ladders or platforms are wet and slippery. Serious personal injury may result due to a fall.

** WARNING**

Do not cross or stand behind vehicle while it is backing up.  
Failure to heed these instructions/warnings may result in serious personal injury or death.

** WARNING**

Do not wear watches, rings, and jewelry while working with electrical and mechanical equipment. These items can be hazardous and can cause serious and painful injuries if they come into contact with electrical wires, moving parts, or hydraulic equipment.

** WARNING**

Always keep hands and feet clear of the Mixer drum, revolving parts, and moving parts while checking load and washing down the Mixer.

** WARNING**

Always keep clear of pinch and crush points.  
Failure to heed these instructions/warnings may result in serious personal injury or death.

**⚠ WARNING**

The Mixer must not be overloaded. Load pressures must match the load to be transported.

**⚠ WARNING**

All personnel must stand clear of the chutes during raising and lowering, and when chutes are loaded with concrete. Position chutes while they are not loaded. A loaded chute falling on a person may cause serious injury. All chutes must be handled with great care to avoid injury. Do not stand on the chutes.

**⚠ WARNING**

Do not let persons, other than the driver, handle the chutes, unfold the foldover, and/or remove extension, or stow and secure the extensions for transit. Keep hands away from chute hardware where the chutes connect. Never stand in the path of the chute as it is being unfolded or while in use. Failure to follow the warnings concerning chute safety may result in serious injury.

**⚠ WARNING**

Wear proper Personal Protective Equipment (PPE) such as hard hats, safety glasses, gloves, and safety shoes when operating or maintaining the Mixer.

Reflective clothing is recommended for drivers and employees.

Serious personal injury or death can result without proper PPE.

**⚠ CAUTION**

Do not use the water tank as a step.  
Using the water tank as a step may result in personal injury or damage to equipment.

**⚠ CAUTION**

Do not use more chute extensions than are specified for your Mixer. Never exceed three chute extensions.  
Do not use any other type or style of chute extension, other than ones designed for use with your Mixer.  
Using additional chute extensions, or the improper type of chute extension, may result in personal injury or damage to equipment.

### 3.4 Maintenance

**⚠ DANGER**

LOCKOUT/TAGOUT procedures must be followed when working on this equipment including, but not limited to, cylinders being changed or maintained. Failure to heed these instructions/warnings can result in serious personal injury or death.

**⚠ DANGER**

Do not attempt to use extraneous sources of power or extraneous machines to overcome a malfunctioning system. Contact London Machinery, Inc. if you are unsure how to proceed.  
Do not override with overhead cranes, forklifts, jacks, etc., or jury-rig systems or equipment that may be malfunctioning.  
Failure to heed the foregoing instructions/warnings can result in serious personal injury or death.

 **DANGER**

Auxiliary pusher or tag axles must be supported with jack stands, blocks, or similar devices while being serviced or maintained to prevent serious personal injury or death if auxiliary axle drops unexpectedly. Failure to do so may result in serious personal injury or death.

 **WARNING**

Never enter under the chassis unless the Mixer is in the LOCKOUT mode. Remember to follow the LOCKOUT procedures when working under the truck.  
Failure to heed may result in serious personal injury or death.

 **WARNING**

When working on the Mixer, the wheels must be blocked, the parking brake on, LOCKOUT procedure in effect, and the keys out of the truck's ignition.

Failure to heed may result in serious personal injury or death.

 **WARNING**

Daily inspection should be performed on the Mixer. This includes proper operation of the controls, hydraulics, lock-out systems, electrical systems, and lighting system, including turn signals, back-up alarm, brake lights, clearance lights, head lamps, tail lamps, safety equipment, and work lights. The truck's air system must operate properly and have no leaks. Water and moisture should be drained from the truck's air system daily.

Failure to heed may result in serious personal injury or death.

** WARNING**

The mixer shall not be modified in any way without authorization from TBD. Modifications may not comply with regulations and safety standards (including SAE J2967 Ready Mixed Concrete Truck Recommended Practice), and may result in serious injury or death. Contact TBD if you require assistance.

** WARNING**

Exceeding axle gross weight will result in premature brake wear and reduced brake performance. Inspect and adjust chassis brake as per the chassis manufacturer's recommendations. Failure to inspect and adjust brakes may result in serious personal injury or death.

** WARNING**

Main, foldover, and extension chutes must be inspected on a daily basis for damage, excessive wear, proper hardware fit, twist, and overall condition to determine that they are safe to use. Unsafe chutes must be replaced with new chutes.

** WARNING**

Always check indicator lights in the cab or at the control panel for chute position. Replace lights or bulbs when required. **NOTE:** All models may not have indicator lights. Physically check position when indicator lights are absent. Failure to heed may result in serious personal injury or death.

**⚠ WARNING**

Do not repair or weld on steel or aluminum water tanks. Inspect the water tank for rust and corrosion every 30 days. Inspect the water tank under the straps, on the exterior and interior by removing the flopper. If any rust or corrosion is found, replace the water tank with an OEM water tank from London Machinery, Inc. Contact London Machinery, Inc. with questions. Failure to maintain water tanks may result in serious personal injury or death.

**3.5 Hydraulics****⚠ WARNING**

Hydraulic hoses and tubing must be inspected on a daily basis for leaks, cuts, abrasions, damage, aging, improper clearance, and along the frame for hidden damage. If you find hoses with any such adverse conditions or damage, they must be replaced before the Mixer is returned to service! All hydraulic hoses must be replaced every five years. Failure to properly inspect and maintain your Mixer may result in serious personal injury or death.

**⚠ WARNING**

Inspect the hydraulic reservoir on a daily basis for leaks, cracks, damage, or improper clearance. If you find any such adverse conditions or damage, it must be repaired before the Mixer is returned to service! Failure to properly inspect and maintain your Mixer may result in serious personal injury or death.

** WARNING**

Never operate the hydraulic system if a leak is present. Operating the Mixer with a hydraulic system leak may result in serious personal injury or death.

** WARNING**

Hydraulic systems are hot. **DO NOT TOUCH!** Serious personal injury or death may result from hot oil. When you have completed working on the hydraulic systems, thoroughly clean any spilled oil from the equipment. Do not spill any hydraulic fluid on the ground. Clean any hydraulic fluid from your skin as soon as you have completed your maintenance and repairs. Dispose of used oil and filters as required by law.

** WARNING**

Hydraulic systems operate under high pressure. Only qualified, experienced people properly trained in hydraulic system maintenance should attempt repairs or troubleshoot hydraulic systems. Use the proper tools and equipment when servicing the hydraulic system. Failure to comply can cause serious injury. Please contact London Machinery, Inc. at 800-265-1098 if you require assistance.



 **WARNING**

Correct hoses, fittings, and adapters with the correct SAE rating must be used when replacing hoses to prevent possible serious injury. Always replace hoses, fittings, and adapters with replacements that have a proper, suitable working pressure rating. Replacement hoses must be of correct length and must comply with the hose manufacturer's installation guidelines and recommendations. Hydraulic hoses have the SAE ratings marked on the hose to assist you in selecting the correct hose. Any replacement hydraulic hoses and fittings assemblies must be supplied by the same manufacturer. As an example: Brand "A" hose and brand "B" fitting will not normally be compatible. No "twist" is allowed in the hydraulic hoses. "Twist" may result in premature hose failure.

 **WARNING**

Any hydraulic tubing which is replaced must conform to SAE J1065 specifications. If incorrect hydraulic tubing is installed, the hydraulic system may fail, causing serious injury. Damaged or leaking tubing must be replaced before the Mixer is returned to service. For best results, always use genuine London Machinery, Inc. replacement parts.

 **WARNING**

Do not heat hydraulic tubing. The carbon content of this steel tube is such that if heated for bending, and either water or air is quenched, the tubing may lose its ductility and thereby be subject to failure under high pressure or hydraulic shock conditions. Serious injury can result. Damaged or leaking tubing must be replaced before the Mixer is returned to service. Please contact London Machinery, Inc. (800) 265-1098 if you require assistance or have questions.

## **WARNING**

Hydraulic components can be heavy. Use caution while lifting these components. Serious personal injury can be avoided with proper handling of the components.

## **WARNING**

Use the proper tools and equipment when servicing the hydraulic system. Use only the London Machinery, Inc. charging kit when recharging the accumulator.

## **WARNING**

Never remove hydraulic pipes/tubing, fittings, and adapters until all pressure has been relieved from the hydraulic system.

## **WARNING**

All hydraulic pressures must be relieved from the hydraulic system prior to removing any components from the system to prevent oil from spraying or functions and systems from failing.

## **WARNING**

When performing hydraulic test procedures, use the proper hydraulic gauges. Installing an incorrect test gauge could result in serious injury or death if the gauge fails. Use properly rated hydraulic hoses with adequate length to allow the test gauge to be used far enough away from moving parts and functions.

**⚠ WARNING**

Increasing hydraulic pressure beyond the recommendations may result in serious damage to the Mixer or serious personal injury. If you have questions concerning hydraulic pressures or testing procedures, please contact London Machinery, Inc. at (800) 265-1098 before attempting the test procedures or making adjustments.

**⚠ WARNING**

When using the emergency jumper procedure to rotate the drum on a disabled Mixer, the following must be observed: Before removing the hydraulic motor or hoses from the Mixer drive on both the operating and disabled Mixer, be sure the drum has been allowed to turn freely so that it is balanced with no forces transmitted to the hydraulic motor.

**3.6 Electrical****⚠ WARNING**

Electrical wiring, battery wiring, and electrical cable must be inspected on a daily basis for cuts, abrasions, damage, aging, improper clearance, and along the frame for hidden damage.

If you find electrical wiring or electrical cable with any such adverse conditions or damage, it must be replaced with electrical wiring or cable of equivalent specifications before the Mixer is returned to service! Failure to properly inspect and maintain your Mixer may result in a serious personal injury. Contact London Machinery, Inc. if in need of further information.

### 3.7 Revolution® Drum

#### CAUTION

Do not rotate the Revolution® drum with dry aggregate for more than 15 minutes.

#### CAUTION

Do not expose any part of the Revolution® drum to open flame or temperatures exceeding 220° F (104° C).

### 3.8 Chute Extensions

#### DANGER

Do not repair metal or composite chute extensions.  
Serious personal injury or death could occur.

#### DANGER

Do not over-load chute extensions.  
Maximum load capacity of 400 lbs. (181 kg)  
per chute extension.

#### DANGER

Composite chute extensions are flammable.  
Do not expose to an open flame or a temperature exceeding 220°F (104°C).  
Burning chute extensions produce toxic smoke/fumes during combustion.  
Serious personal injury or death could occur.

#### DANGER

Inspect chute extensions prior to each use.  
Never use a damaged chute extension or a chute extension that has been driven over.  
Replace damaged chute extensions immediately.

#### DANGER

Never stand on a chute or chute extensions.  
Do not use the chute as a crane to pull or transport objects.

**⚠ CAUTION**

**Do not use more than three chute extensions. Do not combine the use of metal and composite chute extensions during operational use. Failure to comply could cause damage to the equipment.**

**⚠ CAUTION**

**Never clean chute extensions by striking or chiseling. Failure to comply could cause damage to the equipment.**

**⚠ CAUTION**

**Chute extensions must be secured on the truck before leaving the job site. Failure to comply may result in damage to the equipment.**

## 4.0 Safety Decals

The following safety decals are found on your concrete Mixer. They warn of hazards related to the use of this equipment. Read and understand all safety decals before operating this equipment. All safety decals should be present and clearly readable at all times. If any safety decals on the equipment are not clearly readable, contact London Machinery, Inc. parts and service at 800-265-1098 for replacements at no charge. Use only London Machinery, Inc. replacement decals.

**NOTE**

**Depending on the Mixer configuration and optional equipment, the actual location of decals and/or placards may vary slightly from the examples shown.**

See the Figures in this section for decal identification of each safety decal.

**NOTE**

**Specifications, appearance, and part numbers for safety decals are subject to change without notice.**

## 4.1 Product Safety Information

### Mixer Serial Number Plate

The mixer serial number plate lists the serial number of the mixer unit and other pertinent details of type and size. It includes mixing and agitating capacities and speeds. If it becomes necessary to communicate with London Machinery Inc. about your unit, always specify the serial number. The serial number plate is located on the front pedestal on the driver's side of the vehicle.

		MANUFACTURED BY: LONDON MACHINERY INC. LONDON, ONTARIO, CANADA	
MIXER TYPE		MIXER SERIAL NO.	
MIXER RATING	MIXING CAPACITY	AGITATING CAPACITY	
<input type="text"/> cu m	<input type="text"/> cu m	<input type="text"/> cu m	
<input type="text"/> cu yd	<input type="text"/> cu yd	<input type="text"/> cu yd	
DRUM VOLUME	MIXING SPEED	AGITATING SPEED	
<input type="text"/> cu m	<input type="text"/> 8 rpm min	<input type="text"/> 2 rpm min	
<input type="text"/> cu ft	<input type="text"/> 12 rpm max	<input type="text"/> 4 rpm max	
MB-39781 REV.2			

### TMMB Rating Plate

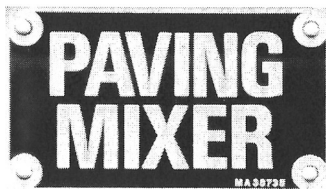
As a member of the National Ready Mixed Concrete Association (NRMCA) and the Truck Mixer Manufacturers Bureau (TMMB), we affix to our units the TMMB Mixer Rating Plate displaying that your unit complies with the Truck Mixers standards, for Type and Size, of the concrete mixing industry. The unit is registered as complying to these standards with the NRMCA and the plate shows that registration number. The plate is displayed with the Mixer Serial Plate on the front pedestal.





### Paver Name Plate

The paver name plate is affixed only to those units designed and designated as a Paver type mixing unit. It is displayed to conform to regulations in various states that stipulate Paver units must have a name plate designating that fact. The paver name plate can be located with the serial plate and the TMMB ratings plate.



### Motor Vehicle Safety Standard Plate

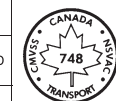
Vehicle running gear safety standard rating for axle weights, tire and rim sizes with applicable pressure tables. These are adhesive backed labels affixed to the corner panel inside the cab.

*U.S Federal Motor Vehicle Safety Standard Type.*

MANUFACTURED BY: LONDON MACHINERY INC		DATE: _____	
INC. VEH. MFD. BY: _____		DATE: _____	
GAWR _____ LB.	TIRES: _____	RIM: _____	CIP: _____ PSI.
GAWR 1ST _____ LB.	TIRES: _____	RIM: _____	CIP: _____ PSI.
GAWR 2ND _____ LB.	TIRES: _____	RIM: _____	CIP: _____ PSI.
GAWR 3RD _____ LB.	TIRES: _____	RIM: _____	CIP: _____ PSI.
GAWR 4TH _____ LB.	TIRES: _____	RIM: _____	CIP: _____ PSI.
GAWR 5TH _____ LB.	TIRES: _____	RIM: _____	CIP: _____ PSI.
GAWR 6TH _____ LB.	TIRES: _____	RIM: _____	CIP: _____ PSI.
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.			
VIN _____		TYPE VEHICLE: TRUCK	

### Canada Motor Vehicle Safety Standards Type

MANUFACTURED BY: / FABRIQUE PAR: LONDON MACHINERY INC.			
TYPE: TRU / CAM V.I.N. / N.I.V.: 3ALPG3DV2DDFJ6981			
GAWR / PNBV: 34015 KG.		DATE: MAR 2013	
GAWR/PNBE KG	TIRES / PNEU	RIM / JANTE	COLD INFL. PRESS PRESS DE GONFLA FROID PSI / LPC KPA
FR/AV 8500	385/65R22.5(J)	22.5X12.2	827 KPA. 120 PSI.
INT 8505	11R22.5(H)	22.5X8.25	827 KPA. 120 PSI.
INT 8505	11R22.5(H)	22.5X8.25	827 KPA. 120 PSI.
INT			KPA. PSI.
INT			KPA. PSI.
RR/AR 8505	11R22.5(H)	22.5X8.25	827 KPA. 120 PSI.

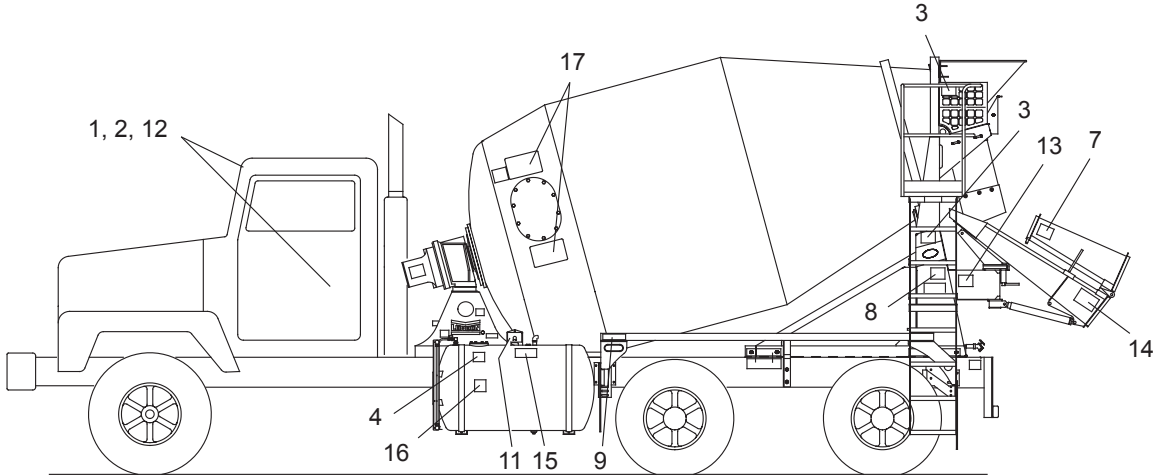


### 4.2 Safety Decals

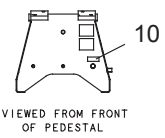
As stated earlier in this manual the TRANSIT MIXER has been specially designed to be as safe a functioning concrete mixer as was possible. In addition to designing safety into the machine itself we have also designed safety signs, in the form of adhesive-backed decals, to caution the operator to be aware of areas and/or situations where he might encounter possible hazards to his person and/or the vehicle.

The following pages illustrate and describe the various decals attached to the vehicle.

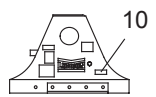




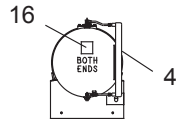
STANDARD MIXER



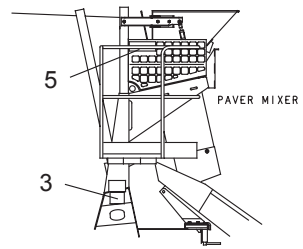
VIEWED FROM FRONT OF PEDESTAL



VIEWED FROM DR. SIDE



WATER TANK DECAL LOCATION FOR CROSS FRAME TANKS ONLY



1

**DANGER**

**Avoid Turnover**  
 You are hauling a high center of gravity fluid load!  
 Failure to do so can result in serious personal injury or death.

**DANGER**

**Éviter faire un tonneau.**  
 Vous transportez une charge avec le centre de gravité en haut!  
 L'inobservation de cet avis peut terminer par vous gravement blesser ou causer la mort.

MA-38723

2

**WARNING**

DO NOT FILL the mixer drum with any amount of concrete that will cause the GVWR or GAWR of the truck (as shown on the certification label of the vehicle manufacturer) to be exceeded. Exceeding the vehicle manufacturer's GVWR or GAWR certification limits or limits of the equipment can cause damage to the equipment or serious personal injury to the operator and others.

**AVERTISSEMENT**

Ne pas remplir la bétonnière avec aucune quantité de béton qui fera en sorte que le PNBV et le PNBE du camion (indiqués sur l'étiquette de certification de la fabrication du véhicule) soient dépassés.  
 Dépasser les limites de certification de PNBV ou PNBE indiquées par le fabricant du véhicule, ou les limites de l'équipement peut l'endommager ou blesser gravement l'opérateur ou quelqu'un d'autre.

MA-38731 REV 1

**DANGER**

**Avoid turnover. You are hauling a high center of gravity fluid load. Failure to do so can result in serious personal injury or death.**

**WARNING**

**A warning against loading mixer to exceed the GVWR or GAWR as listed on the Motor Vehicle Safety Standards plate. Such overloading could result in serious personal injury to the operator as well as serious damage to the equipment due to a possible roll-over of the vehicle.**

3



### **WARNING**

A warning to never place any part of the body, clothing or tools within the mixer body, or any part of the mixer, while it is in motion. Such actions could result in serious personal injury such as the loss of limb or limbs or even loss of life.

4



### **WARNING**

A warning against drinking the water carried by the vehicle for cleaning the vehicle and flushing out the mixer. The accumulation of substances onto the equipment and into the water may result in serious internal injuries if warning is not heeded.

5

<p><b>! WARNING</b></p> <p>Always lock loading hopper in "up" or "down" position when standing on platform.</p> <p>Movement of loading hopper could result in serious personal injury.</p>		<p><b>! ATTENTION</b></p> <p>Toujours verrouiller le cornet de chargement dans la position "up" ou "down" lorsque vous êtes sur la plateforme. Un mouvement du cornet pourrait causer de sérieuses blessures.</p>
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MB-39810 REV 1

**! WARNING**

A warning to always lock loading hopper in UP or DOWN position when standing on platform. Movement of loading hopper could result in serious personal injury.

6

**! WARNING**

**Keep Clear of Pinch Points**

**! ADVERTENCIA**

**Mantenerse Alejado(s) de Partes Móviles**

MA-38704

**! WARNING**

Keep hands away from cylinders and other moving parts. Failure to comply could injure or kill.

7

**CAUTION**

Do not exceed 12 ft. (3.66 m) total length of LMI extension chutes. Aluminum chutes must not exceed 8 ft. (2.44 m) and must be located at the discharge end. Serious personal injury can occur.

**ATTENTION**

Le longueur maximale des chutes d'extension LMI ne doit pas excéder 12 pieds (3,66m). La longueur maximale des chutes en aluminium ne doit pas excéder 8 pieds (2,44m). Les chutes en aluminium doivent être positionnées au point de déchargement arrière. De graves blessures peuvent en résulter.

MA-38721 REV.2

**CAUTION**

To exceed the design capacity of the unit by adding more chutes than three, or attempting to affix styles of chutes different than those supplied by London Machinery could result in serious personal injury and may also cause damage to the machine.

8

**CAUTION**

Use care when climbing on ladder or platform, which may be slippery. Serious personal injury may result due to a fall.

**ATTENTION**

Faire attention en montant l'échelle ou la plateforme qui peuvent être glissantes. Une chute peut causer de graves blessures.

MA-38722 REV 1

**CAUTION**

Falls and personal injuries could result if care is not exercised when using the ladder or the platform. Many situations can cause the ladder and platform to become slippery.

9



<b>⚠ CAUTION</b>	<b>⚠ ATTENTION</b>
<p>Stay clear of rotating drum.</p> <p>A slip or snagging of tools, clothing or yourself could result in serious personal injury.</p>	<p>S'éloigner du tambour en rotation.</p> <p>Un glissement ou coincement d'outils, de vêtements ou de votre personne peut causer de graves blessures.</p>

MA-38735 REV 1

**⚠ CAUTION**

**Loose clothing, body parts and tools near a rotating drum can become a personal injury hazard. Keep clear of a rotating drum.**

10

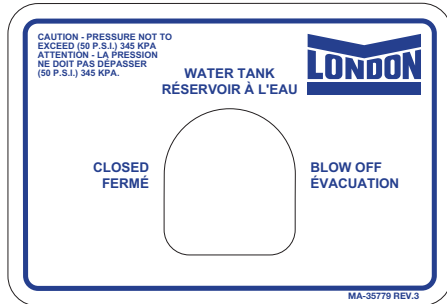
<b>⚠ CAUTION</b>	<b>⚠ ATTENTION</b>
<p>Oil temperatures may exceed 120F/48.8C.</p> <p>This could result in burns to the skin.</p>	<p>La température de l'huile peut dépasser 120F/48,8C.</p> <p>Ceci peut causer des brûlures sur la peau.</p>

MA-38734 REV 1

**⚠ CAUTION**

**Hydraulic oil at operating temperature could exceed 120° F (48.8° C). Serious burns to the operator could result unless care is exercised.**

11



## CAUTION

**Water tank operating pressure is 50 PSI (345 KPA). Never exceed 55 PSI (380 KPA).**

12



## SAFETY NOTICE

**Emphasis to the operator of the importance of knowing his equipment through study of the Operator's Manual.**

13

**SAFETY NOTICE**

**FRESH CONCRETE**  
Can cause burns and eye injury!

- Avoid skin contact
- Wear protective clothing
- Wash exposed skin with water

If concrete gets into eyes, rinse immediately with water and obtain prompt medical attention.  
**KEEP CHILDREN AWAY FROM FRESH CONCRETE.**

**AVIS DE SÉCURITÉ**

**BÉTON FRAIS**  
Peut causer des brûlures ou des lésions aux yeux!

- Éviter tout contact avec la peau.
- Porter des vêtements de protection.
- Laver à l'eau la peau exposée au béton.

Si le béton entre en contact avec les yeux, rincer à l'eau et immédiatement recourir à des soins médicaux.  
**ÉLOIGNER LES ENFANTS DU BÉTON FRAIS.**

MA-38730 REV 1

**SAFETY NOTICE**

**Emphasis on the dangers associated with fresh concrete and advising of preventative measures.**

14



**CAUTION**

**KEEP HANDS AND BODY AWAY FROM PIVOT POINTS**








**ATTENTION**

**ÉLOIGNER LES MAINS ET LE CORPS DES POINTS DE PIVOT**



15

 <b>WARNING</b>	
	<p>Burst hazard. Regulator maintains proper pressure. Never tamper with or remove pressure regulator or relief valve. Never pressure test without tank full of water. Bursting tank may injure or kill.</p>
 <b>AVERTISSEMENT</b>	
<p>Risque d'éclatement. Le régulateur maintient la pression correcte. Ne jamais altérer ou retirer le régulateur de pression ou la soupape de décharge. Ne jamais tester la pression à moins que le réservoir ne soit rempli d'eau. L'éclatement du réservoir peut blesser ou tuer.</p>	
<p><small>Do not paint over this label. Replace if damaged or lost. Ne pas peindre sur cette étiquette. Remplacer si endommagé ou égaré.</small></p>	
1459867	

16

 <b>WARNING</b>	
	<p>Burst hazard. Inspect tank daily for damage or leaks. Replace (do not repair) damaged or leaking tank. Drain pressure before driving. Do not weld or repair tank. Never exceed 55 psi (379 kPa) in tank. Bursting tank may injure or kill.</p>
 <b>AVERTISSEMENT</b>	
<p>Risque d'éclatement. Inspecter le réservoir quotidiennement pour détecter les dommages ou les fuites. Remplacer (ne pas réparer) un réservoir endommagé ou qui fuit. Ne pas souder ou réparer le réservoir. Ne jamais excéder 379 kPa (55 psi) à l'intérieur du réservoir. L'éclatement du réservoir peut blesser ou tuer.</p>	
<p><small>Do not paint over this label. Replace if damaged or lost. Ne pas peindre sur cette étiquette. Remplacer si endommagé ou égaré.</small></p>	
1459871	

## Additional Safety Decals

Safety Instructions - Drum Entry through Hatch. Two decals at each drum hatch.

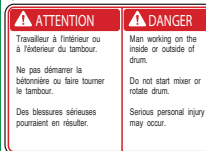
17

### INSTRUCTIONS DE SÉCURITÉ

1. Avant d'entrer dans le tambour, lire et suivre les règles de l'OSHA. Suivre les procédures d'immobilisation et d'identification OSHA 1910.146.
2. Couper le moteur du camion et mettre la clé d'ignition dans votre poche.
3. NOTE: Position du bras de la valve de contrôle. Enlever le bras de la valve de contrôle de la pompe hydrostatique. Mettre le verrou avec le signe d'identification rouge "DANGER - FERMER" dans le trou de la tige du bras de la valve de contrôle. Attacher le cadenas. Mettre les clés dans votre poche.
4. Placer les signes magnétiques "DANGER" sur les 2 portes du camion.
5. Placer le tourniquet double de blocage sur le piédestal arrière. S'assurer que le tourniquet a une surface plane et propre. Etirer les tourniquets afin que les clavettes soient fermement en place entre les rails du rouleau du tambour et les rouleaux. Tourner régulièrement le tourniquet d'un tour ou plus si nécessaire, pour prévenir toute rotation du tambour. Serrer l'écrou d'arrêt pour immobiliser les clavettes en place.
6. Quand vous avez terminé, enlever le tourniquet double en premier, puis déverrouiller le bras de la valve de contrôle et enlever les signes "DANGER" des portes. Ne pas suivre ces procédures peut causer de graves blessures ou la mort.

### SAFETY INSTRUCTIONS

1. BEFORE ENTERING DRUM, read and follow OSHA Regulations 1910.146. Follow Lock and Tag Procedure.
2. Shut off truck engine and put ignition keys in your pocket.
3. NOTE: Position of control valve arm. Remove hydrostatic pump control valve arm. Place lockout with red "Danger Lockout" tag thru spindled hole of control valve arm. Attach padlock. Put keys in your pocket.
4. Place magnetic "Danger" sign on both cab doors.
5. Place dual turnbuckle Wedge Assembly Base on rear pedestal. Make sure wedge assembly base has a flat clean surface. Extend turnbuckles so wedges are firmly in place between drum roller track and rollers. Evenly snug up turnbuckles one turn or more as necessary to prevent any drum rotation. Tighten turnbuckle jam nuts to secure wedges in place.
6. When finished remove dual turnbuckle wedge assembly FIRST, then unlock control valve arm and remove "DANGER" sign from doors. Serious personal injury or death can result if you fail to follow these procedures.



MC-39972 REV 1

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## NOTES

## 4.3 General Safety Instructions

1. Read these rules and instructions carefully. Failure to follow them could cause serious bodily injury and/or damage to the equipment.
2. Be aware the hydraulic oil, gearbox, hoses, and the pump system may become hot enough to burn and cause physical injury.
3. Always test the temperature of the oil and system components by momentarily touching a hose or the gearbox mounting before doing any work or adjustment on the machine. NEVER unscrew a fitting or open a hydraulic line while the oil system is hot. A spray of hot oil can cause serious injury.
4. Relieve hydraulic oil pressure within the system slowly and with great care as a spray of hot oil may cause a severe burn or blindness.
5. Before releasing hydraulic pressure within the system, make sure the drum is not in an unbalanced condition due to concrete buildup. Such a condition might cause the drum to rotate when pressure is released or the hydraulic motor is disengaged, thereby causing serious injury.
6. Make sure the drum and gearbox are properly supported and immobilized against movement before loosening or removing the attaching bolts. Serious injury may occur.

### 4.3.1 Mixer Drum Lockout Procedure

1. Before entering drum, read and follow OSHA regulations concerning entry and working in confined space, OSHA 1910.146. Also refer to the regulations of your employer and/or the authority having jurisdiction in your locality regarding this subject.
2. Notify your supervisor and other affected person(s) that the mixer is going to be locked out and that no attempt should be made to restart it.
3. Park the truck in an appropriate area and set the brakes. Position the drum hatch where convenient for service and maintenance. Set the drum control in the neutral position so the drum remains stationary.
4. Shut off the truck engine and remove ignition key. Roll up cab windows, lock the cab doors and place the truck keys in your pocket. Chock the truck wheels.
5. Place a Danger sign (Figure 1) on both cab doors. "Man working on the inside or outside of drum. Do not start mixer or rotate drum. Serious personal injury may occur."
6. Note position of the mixer pump control valve arm. See Figure 2. Remove the nut and lock washer on the control valve arm. Remove the control valve arm and place a Safety Lockout through the splined hole. Lock the Safety Lockout with a padlock along with a "Danger Lockout Procedure in Affect" tag. Place the padlock key in your pocket. Each person who is working on or in the drum must place his own lock on the Safety Lockout and pocket their own key.

7. Place “Lock-Out Bracket” around drum roller and drum track. Refer to Figure 3. Tighten threaded rods so wedges are firmly in place between drum roller track and roller. Evenly snug up threaded rod one turn or more as necessary to prevent possible drum rotation.
8. Open the hatch and place a suitable ventilating fan at the charge hopper end of the drum. Assemble personal protective equipment, hard-hat, respirator, goggles, hearing protection, safety shoes, coveralls, gloves and other safety equipment as necessary.
9. Assemble tools, equipment and supplies as necessary to complete the job.
10. If drum must be repositioned, and lockout condition interrupted, check for other employees and clear the area, energize the vehicle, rotate the drum and go back to Step 4.
11. At completion of job inspect the drum, remove tools and supplies and check for other employees.
12. Remove the Lock-out Bracket securing the drum.
13. Remove padlocks and Safety Lockout and reconnect the mixer pump control valve arm. Remove the cab door danger signs.
14. Notify your supervisor and other affected person(s) that the job is completed and the vehicle is returned to normal status.

### 4.3.2 Use and Control of Padlocks

1. Locks made by a reputable manufacturer should be used to preclude the possibility of having inferior locks which may be tampered with or opened by other keys.
2. Combination type locks or locks with a master key or duplicate keys are not recommended. If duplicate keys are obtained they must be kept in a locked repository away from the normal “Safety Lock Control” center. They must be under the direct control of a responsible person and used only by him in an emergency. At least two people should be responsible for using a duplicate key.
3. Locks should be checked when purchased to ensure that no two or more locks can be opened by the same key.
4. Each workman should have a personal lock with his name or clock number stamped on it. If this is not practical, a simple and economical method of control for the issue of locks is suggested as follows:
  - a. The locks should be serially numbered by stamping and kept on a “Safety Lock Control Board” against a matching set of serial numbers.
  - b. The locks should be under the control of a responsible person, e.g. safety officer, tool room attendant, who has the facilities to maintain a log or register of locks used, dates of issue and return, and name of workman, foreman or person in charge to whom the locks have been issued. Locks should not be loaned or transferred between workmen. They must be returned and re-issued from the “Safety Lock Control” center.

- c. The workmen should carry their own supply of durable tags bearing their name and department. These tags should be attached to their lock for identification.
- 5. It is recommended that a supply of “Personal Safety Padlock Instructions” be kept at the “Safety Control Board” and issued to each workman who does not already have one, each time a lock is issued.

### 4.3.3 Personal Safety Padlock Instructions

1. Your safety padlock is for your PERSONAL SAFETY and is to be used ONLY for locking-out mixer controls. If loaned from your employer it must be returned to the Safety Lock Control Board at the end of the job.
2. When starting to work on mixer drum, read and follow the “Mixer Drum Lockout Procedure”. This procedure explains how to apply your safety padlock before entering the drum.
3. There is no master key and only one regular key for your lock. It is therefore impossible for any other workman to unlock your padlock.
4. When more than one individual is working on a mixer drum each man shall use his own personal padlock to lock the mixer pump control lever. Therefore, the mixer cannot be restarted until the last man has completed his work.

5. The breaking of a padlock on a Safety Lockout without authority may lead to the death or serious injury of one or more workmen.

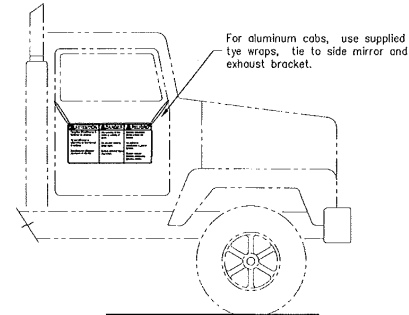


Figure 1

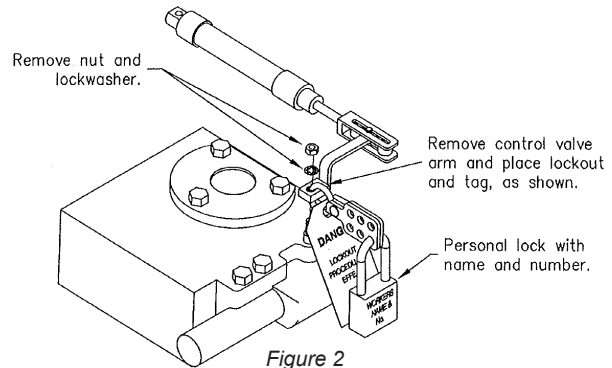
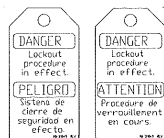
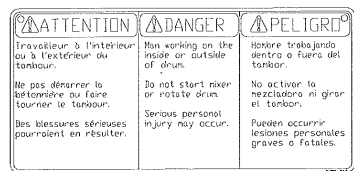
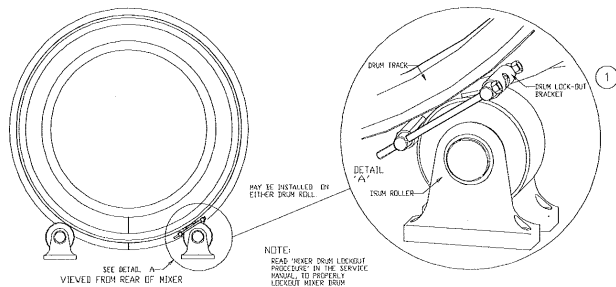


Figure 2



FRONT BACK



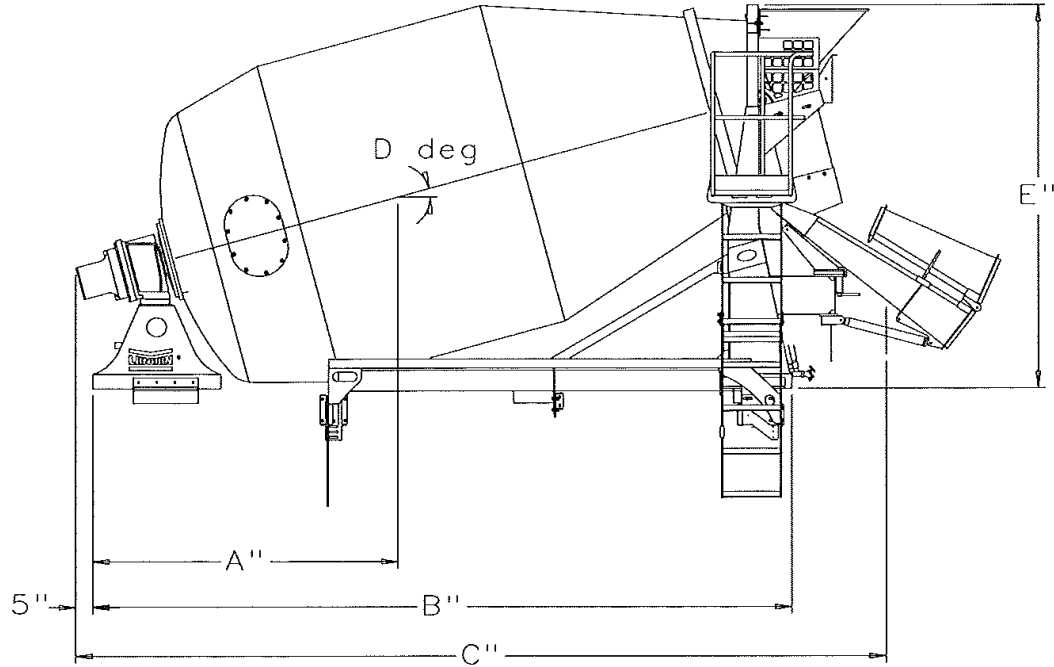
ITEM	DESCRIPTION	QTY	PART No.
1	LOCK-OUT BRACKET	1	MB-40690
2	LABEL, MAGNETIC, DANGER	1	MC-39848
3	TAG, LOCK-OUT	1	MB-39849
4	LOCK-OUT HASP	1	HH-01267-000

## 1.0 Weights and Specifications

### 1.1 Mixer Weights and Dimensions - PK7500 Drive

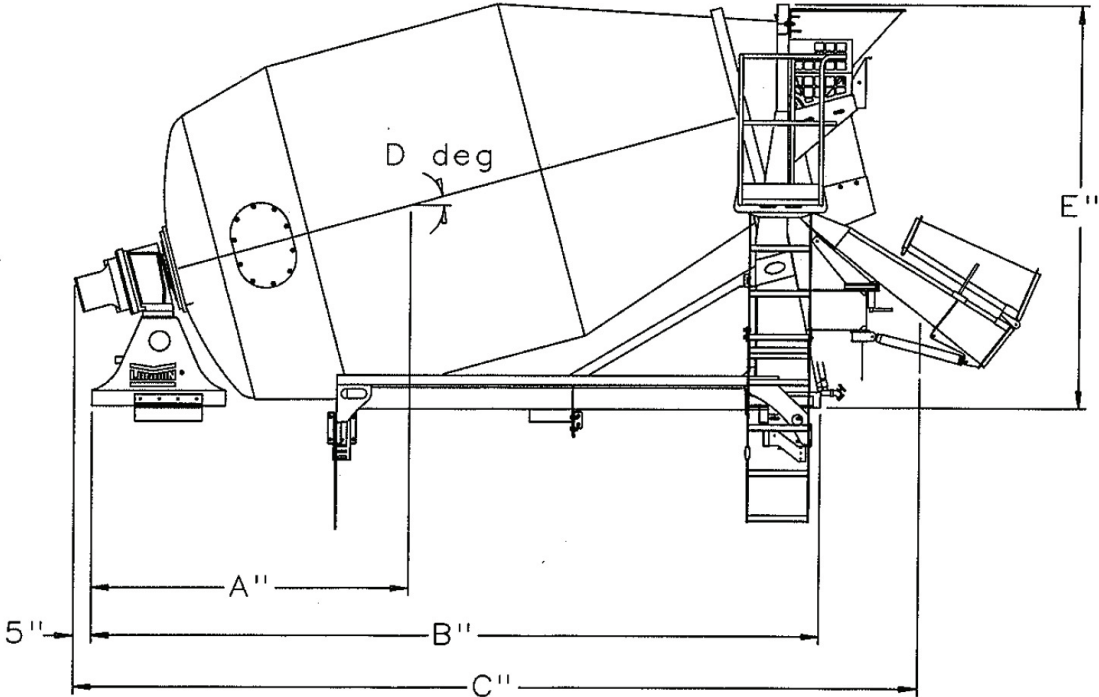
Model Series	60	65	70	80	LP80	85	90	LP90	100
Mixer Size. - cu yd	8.5	9.0	9.5	10.5	10.5	11.5	12.0	12.0	13.0
Mixer Weight. - lb	6646	6787	6928	7206	7206	7577	7711	7678	8034
1/4" Blades - lb	194	209	222	252	252	281	294	294	329
1/4" Drum Skin - lb	344	381	416	489	489	561	595	595	684
Center of Gravity "A" - in.	78.0	80.0	82.0	86.0	87.0	90.5	92.0	93.0	98.0
Frame Length "B" - in.	167	174	181	194	193	207	213	212	229
Overall Length "C" - in.	198	204	211	223	223	236	241	241	257
Overall Height "D" - in.	100	101	103	106	103	109	111	107	112
Hopper Height - in.	98	100	102	104	100	107	109	104	109
Drum Angle "D" - deg	15.0	15.0	15.0	15.0	13.5	15.0	15.0	13.5	14.0
Drum Mouth Diameter - in.	43	43	43	43	43	43	43	43	43
Drum Volume - cu ft	377	401	425	472	472	519	541	541	599
Agitate Capacity - cu m	6.7	7.5	8.0	9.0	9.0	10.0	10.5	10.0	11.5
Agitate Capacity - cu yd	9.0	9.8	10.5	12.0	12.0	13.0	13.8	13.0	15.0
Drive Ratio	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6
Eaton Hydraulic Motor - cu in	4.6	4.6	4.6	4.6	4.6	5.4	5.4	5.4	5.4
Eaton Hydraulic Pump - cu in	5.4	5.4	5.4	5.4	5.4	6.4	6.4	6.4	6.4
Drum Speed Minimum - RPM	15	15	15	15	15	15	15	15	15





## 1.2 Paver Mixer Weights and Dimensions - PK7500 Drive

Model Series	70P	80P	80HPP	85P	90P
Mixer Size. - cu yd	9.5	10.5	10.5	11.0	12.0
Mixer Weight. - lb	6550	6812	6854	7078	7370
1/4" Blades - lb	97	132	132	149	184
1/4" Drum Skin - lb	633	706	706	743	816
Center of Gravity "A" - in.	85.5	90.0	89.0	93.0	96.5
Frame Length "B" - in.	189	202.5	203	209	223.3
Overall Length "C" - in.	222	235.5	235.3	242	255.3
Overall Height "D" - in.	102.5	102.5	107	102.5	107
Hopper Height - in.	99.5	99.5	104	99.5	104
Drum Angle "D" - deg	13.0	12.0	13.5	11.5	12.0
Drum Mouth Diameter - in.	46	46	46	46	46
Drum Volume - cu ft	425	470	470	493	540
Agitate Capacity - cu m	8.0	9.0	9.0	9.5	10.0
Agitate Capacity - cu yd	10.5	12.0	12.0	12.5	13.0
Drive Ratio	138.6	138.6	138.6	138.6	138.6
Eaton Hydraulic Motor - cu in	4.6	4.6	4.6	5.4	5.4
Eaton Hydraulic Pump - cu in	5.4	5.4	5.4	6.4	6.4
Drum Speed Minimum - RPM	15	15	15	15	15



### **1.3 London Standard Mixer Specifications**

#### **1.3.1 Mixer**

TMMB rated capacity from 6 to 10 cu m (8.5 to 13.0 cu yd).

#### **1.3.2 Drum**

1/4" spun drumhead; 48" inside reinforcing plate; 3/16" AR200 wear resistant steel drum shell welded 100% inside and out; 1/4" AR200 blades with hard surfaced lips; solid wire welded seams; solid steel drum track machined inside taper and out square; 43" discharge opening; auxiliary surge fins; 16" x 22.5" bolt on oval inspection hatch.

#### **1.3.3 Front Pedestal**

Fully enclosed Corten "A" front pedestal incorporating a 15 gallon easy clean hydraulic oil reservoir. Flared lower front and rear flanges to distribute load.

#### **1.3.4 Rear Pedestal**

Easy to clean enclosed rear pedestal with service access to the drum rolls. Pedestal constructed of Corten "A" corrosion resistant steel. Fully welded swivel support integrated through pedestal frame.

#### **1.3.5 Transmission**

ZF PK7300 and PK7500, right angle planetary direct drive; 144.3:1 reduction and 138.6:1 respectively; 53,104 lb.ft. output torque capacity. Mounted to machined drum flange by 18 grade 8 bolts and to machined pedestal deck pads by 6 grade 8 bolts.

#### **1.3.6 Hydrostatic**

Eaton heavy duty 4.6/5.4/6.4 cubic inch variable displacement piston pump with built in 5500 psi relief valve; Eaton heavy duty 4.6/5.4 cubic inch displacement motor; speed and direction of the drum rotation controlled from the switch on the rear pendant; 10 micron suction filter; heavy duty front mounted oil cooler with guard.

#### **1.3.7 Water System**

Side mounted water tank; three position on, off and purge air valve; safety relief valve; pressure regulating valve; off set sight gauge; 3.1/2" diameter spring loaded flapper valve; 1" rear water injection line; 25 foot wash down hose with pistol grip spray nozzle. Blow out and drain provision for winter operation.

#### **1.3.8 Drum Rollers**

CM1035 alloy steel drum roller; tapered roller bearings; double sealed; center shaft lubrication; roller surface hardened to Rockwell C46. Full width front and rear drum roll guards.

### **1.3.9 Charge Hopper**

38" x 30" top opening; 19" minimum throat dimension.

### **1.3.10 Rear Ladder**

Non skid ladder rungs and platform base; fold down ladder extension; ladder rungs align for safety when folded. Double guard rail on extra large top platform.

### **1.3.11 Controls**

Electro-hydraulic mix-discharge control in cab and at rear of mixer on 15' quick disconnect cable.

### **1.3.12 Chutes**

Paving type main chute with safety hand grabs and hinged fold over with lock; two 48" extension chutes for 16 feet total length; positive seven position pin lock with 7/8" receptacle hole plate.

### **1.3.13 Chute Hoist**

2.1/2" double acting hydraulic cylinder, 3000 psi rated; A-pad gear pump mounted on the Eaton hydrostatic pump.

### **1.3.14 Fenders**

14 GA heavy duty roll formed fenders with stainless steel hardware and rubber washers; full tandem length with powder coated CorTen "A" center and end supports. Mud flaps front and rear.

### **1.3.15 Lights**

Trucklite brand clearance, marker and identification lamps with integral reflectors in accordance with FMVSS. Trucklite sealed junction box and wiring harness. Midship light is combination clearance/signal.

### **1.3.16 Painting**

Mixer and components shot blasted prior to prime painting. All components painted prior to assembly. Top coat one color Sherwin-Williams. Tie down angles, fender mounting brackets and water tank cradles are powder coated black.

### **1.3.17 Safety**

Full complement of bilingual safety decals. Back-up alarm supplied.

## 1.4 Hydrostatic Transmissions

Model Series	M46	M54	M64
Motor			
Displacement	4.6 cubic inch/rev	5.4 cubic inch/rev	-
Maximum Shaft Speed	4160 RPM	3720 RPM	-
Output Torque @ 6000 PSI	4149 inch lbs.	4916 inch lbs.	-
Pump			
Displacement	4.6 cubic inch/rev	5.4 cubic inch/rev	6.4 cubic inch/rev
Maximum Input Speed	3800 RPM	3720 RPM	3100 RPM

Planetary Gearbox	ZF	
	PK7300	PK7500
1) Gear Ratio	1.44.3:1	138.6:1
2) Maximum Output Speed	18 RPM	
3) Angular Deflection	+ or - 6 degrees	
4) Oil Capacity	16 liters	
5) Rated Capacity	to 12 cubic m	
	mixing capacity	

## 1.0 Mixer Equipment Operation

### 1.1 Walk Around Check

#### CAUTION

**If during a walk around, adverse conditions are noted take corrective action before putting the vehicle back into service. To ignore improper conditions could be hazardous to the operator and/or the equipment.**

1. Make regular vehicle inspection as outlined in truck users manual.
2. Check hydraulic system sight gauges and determine that system is filled.
3. Survey the exposed hydraulic hoses for any oil leaks,  
and check the ground around the vehicle for any fresh oil spills.
4. Start-up vehicle; check that mix/discharge function is operable.
5. Check wheel nuts for tightness.
6. Check water level.
7. For truck tires and wheels follow procedures outlined in truck users manual.

## 1.2 Controls

### 1.2.1 8-Button Radio Remote (Blue)

#### T100 – Transmitter

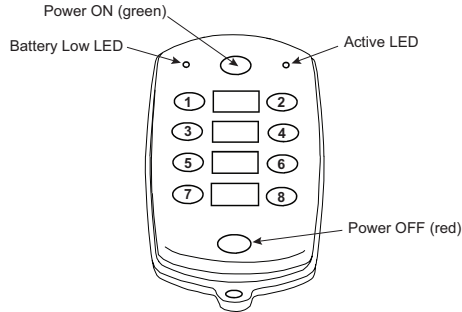


Figure 1

#### R160 – Receiver

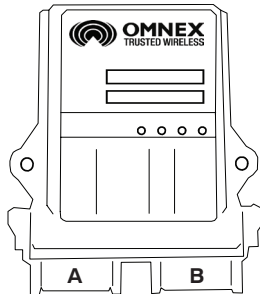


Figure 2

#### 1.2.1.1 Operating Instructions

These instructions refer to the transmitter in Figure 1. Press and release Power ON button (green) to turn radio transmitter on. Yellow LED will begin flashing.

1. **MIX:** Press and hold No. 1 button, upper left gray, to increase drum mixing speed. Release button to stop increasing mixing speed.
2. **DISCHARGE:** Press and hold No. 2 button, upper right gray, to increase drum discharge speed. Release button to stop increasing discharge speed.
3. **ENGINE UP:** Press and hold No. 3 button to increase engine speed. Release button to stop increasing engine speed. Remember to turn on Cruise Control and to set the Parking Brake air switch ON before attempting to control engine speed with Radio Remote.
4. **ENGINE DOWN:** Press and hold No. 4 button to decrease engine speed. Release button to stop decreasing engine speed.
5. **CHUTE UP:** Press and hold No. 5 button to raise main chute. Release button to stop raising.
6. **CHUTE DOWN:** Press and hold No. 6 button to lower main chute. Release button to stop lowering.



7. CHUTE LOCK/UNLOCK: Press and release No. 7 button to unlock the chute positioner. The orange pilot light on the dash bracket will turn on. Press and release No. 7 button, to relock the chute positioner. The orange pilot light will turn off.
8. HOPPER UP/DOWN: Press and release No. 8 button to raise the loading hopper. The red pilot light on the dash bracket will turn on. Press and release No. 8 button to lower the loading hopper. The red pilot light will turn off.
9. PAUSE/RESUME: Press and release Power ON button (green) to stop mixer drum rotation. The green pilot light on the dash bracket will turn on. Press and release Power ON button (green) to start the mixer drum rotation. The green pilot light will turn off.

The eight gray buttons are equipped with decals to indicate their functions. The green button serves to turn the transmitter ON then as the ninth function button to control the drum rotation Pause/Resume feature. Press and release Power OFF button (red) to turn radio transmitter off. The yellow LED will stop flashing.

- 1.2.1.2 Operating Cautions
1. Pressing the Power OFF button (red) (Figure 1) while operating the mixer will result in the following:
    - a. The transmitter is turned off and operator control of the mixer functions is stopped.
    - b. The drum speed and direction or rotation is maintained.
    - c. The engine speed is maintained.
    - d. The main chute up/down position is maintained.
    - e. The chute position setting is maintained.
    - f. The loading hopper setting is maintained. Never enter the rear ladder platform without engaging the loading hopper safety strut.
    - g. The drum rotation if it has been stopped with the Pause/Resume button will remain stopped.

2. Pressing the Power ON button (green) will turn on the transmitter and reestablish radio remote control of the mixer as follows:
  - a. The drum speed and direction is maintained.
  - b. The engine speed is maintained.
  - c. The main chute up/down position is maintained.
  - d. The chute position setting is maintained.
  - e. The loading hopper setting is maintained.
  - f. The Pause/Resume setting is maintained.
3. If the Red LED on the transmitter starts to flash it is indicating LOW BATTERY POWER. Approximately 20% of the transmitter battery life remains and the batteries should be changed as soon as practical.
4. If radio control of the mixer is lost and cannot be reestablished as described above the operator must stop the truck engine immediately. Manual control of the mixer drum is possible; see page 52, step 4 for EP controls or page 64 for RE controls. The main chute control valve has an override switch in the cab. The chute lock and loading hopper up/down air valves are provided with manual overrides on them. Truck engine speed control is available inside the cab.
5. When power to the radio receiver is turned off all settings return to their default state. The chute positioner will lock, the loading hopper will go to its down position and Pause/Resume will go to the resume setting.

- 1.2.1.3 Transmitter/Receiver Replacement and Service

### CAUTION

**Do not place the R160 circuit board on a metal surface when removed from the R160 housing. Placing the circuit board on a metal surface could short out the circuit board damaging the receiver.**

In order to program the R160 or replace the fuse, you will first need to remove the circuit board from the housing of the R160. This is done by releasing the two side tabs on the housing, and sliding the connector block and circuit board out of the housing until the four STATUS LEDs are visible and the (SETUP) SW1 button is accessible. See Figure 4.

Also refer to Setting ID Codes for a step by step procedure of setting ID Codes to match on both the Transmitter and the Receiver.

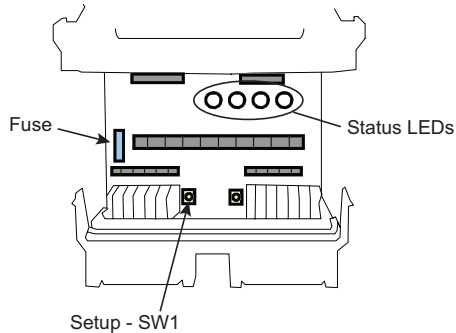


Figure 3

#### • 1.2.1.4 Setting ID Codes

Required when replacing either the Transmitter or Receiver.

The Transmitter has its ID Code factory programmed. Its matching Receiver needs to have the same code programmed into it. To do this, the Receiver needs to have its cover removed, see Figure 6. Follow the procedure below to program the Receiver ID Code to match its corresponding Transmitter.

1. Remove the sheet metal cover protecting the receiver.
2. Release the two tabs holding the receiver cover and pull out the receiver circuit board.
3. Prepare the transmitter by pressing the transmitter button in the following sequence.

- a. Press and hold RED button.
- b. Press and hold GREEN button.
- c. Release the RED button.
- d. Release the GREEN button. The YELLOW LED on transmitter should begin to flash slowly.
- e. Press and hold the receiver SET-UP button. The STATUS LED on the receiver will begin to flash approximately once per second. Release receiver SET-UP button as soon as the STATUS LED begins to flash rapidly (this should take approximately 5 seconds).
- f. Press and release GREEN transmitter button. Both transmitter LED's should go solid and after approximately 10 seconds will go out. This indicates that the program has been downloaded.
- g. Press GREEN transmitter button. The LINK LED on the receiver should begin to flash indicating that a link has been established between the transmitter and receiver.

## 1.2.2 10-Button Remote Control (Yellow)

### T110 – Transmitter – MB-42065

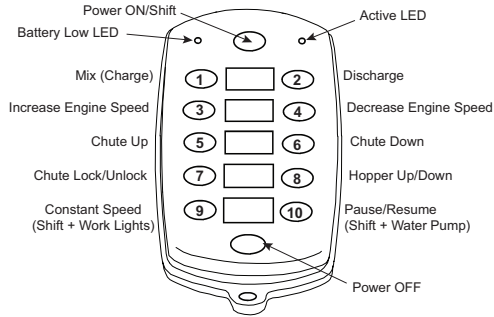


Figure 4

### R160 – Receiver – MA-42100

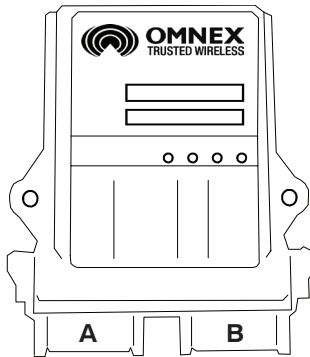


Figure 5

- 1.2.2.1 Operating Instructions

### System Start-Up

#### Pause/Resume Switch Position

After the engine is started, no drum rotation will be allowed until the pause/resume switch is in the pause position. If the pause/resume switch is in the pause position at start-up the pause light on the charging cradle will be lit. Press the PAUSE/RESUME button once to take the mixer out of pause mode.

**Important:** In case of loss or malfunction of the wireless transmitter a backup pause/resume momentary switch is provided on the black box inside the cab where the receiver is located. The yellow reset switch is required to be pressed and released after start-up in order to get the drum rotating by using the mix/discharge switch on the cradle. The pause light will stay on as a reminder that there is no link between the wireless transmitter and receiver. To reset the system, the truck needs to be shutdown and restarted.

In the case of total control system malfunction (with the hydraulic pump still being operational), the drum can still be rotated by pressing the tip of the corresponding (mix or discharge) solenoid at the pump.

### Constant Speed Switch Position

If the constant speed lamp on the dash is lit at power-up, the constant speed button (Figure 4, Item 9) will need to be pressed before the constant speed mode will function.

Press and release the Power ON button (green) to turn radio transmitter on. Yellow LED will begin flashing.

1. MIX: Press and hold No. 1 button to increase drum mixing speed. Release button to stop increasing mixing speed. When the drum is in discharge mode, the discharge light on the dash will turn on.
2. DISCHARGE: Press and hold No. 2 button to increase drum discharge speed. Release button to stop increasing discharge speed. When the drum is in discharge mode, the discharge light on the dash will turn on.
3. ENGINE UP: Press and hold the No. 3 button to increase engine speed. Release button to stop increasing engine speed. Remember to turn on Cruise Control and to set Parking Brake switch ON before attempting to control engine speed with Radio Remote.
4. ENGINE DOWN: Press and hold No. 4 button to decrease engine speed. Release button to stop decreasing engine speed.
5. CHUTE UP: Press and hold No. 5 button to raise main chute. Release button to stop raising.
6. CHUTE DOWN: Press and hold No. 6 button to lower main chute. Release button to stop lowering.
7. CHUTE LOCK/UNLOCK: Press and release No. 7 button to unlock the chute positioned. The orange pilot light on the dash bracket will turn on. Press and release No. 7 button to relock the chute positioned. The orange pilot light will turn off.
8. HOPPER UP/DOWN: Press and release No. 8 button to raise the loading hopper. The red pilot light on the dash bracket will turn on. Press and release the No. 8 button to lower the loading hopper. The red pilot light will turn off.
9. CONSTANT SPEED: Press and release No. 9 button to enter the constant speed mode. When in the constant speed, drum will rotate with approximately 1.5 rpm and the constant speed light on the dash will turn on. The constant speed feature will turn off if the mix, discharge, or pause/resume functions are used. If the drum is being paused while in constant speed mode, it will resume in constant speed mode as well.  
  
SHIFT+9. WORK LIGHTS: Press and release simultaneously the shift (green) button and No. 9 button to turn on the optional work lights. The indicator light on the dash will come on. To turn off the work lights press SHIFT and No. 9 buttons simultaneously again.
10. PAUSE/RESUME: Press and release No. 10 button to stop the mixer drum rotation. The green pilot light on the radio transmitter cradle will turn on. Press and release button to start the mixer drum rotation. The green pilot light will turn off.  
  
SHIFT+10. HYDRAULIC WATER PUMP: Press and

release simultaneously the shift (green) button and No. 10 button to turn on the optional hydraulic water pump. To turn off the work lights press SHIFT and No. 10 buttons simultaneously again.

The ten gray buttons are equipped with decals to indicate their functions. The green button serves to turn the transmitter on and while the transmitter is ON as a shift function.

Press and release Power OFF button (red) to turn radio transmitter off. The yellow LED will stop flashing.

- **1.2.2.2 Operating Cautions**

1. Pressing the Power OFF button (red) while operating the mixer will result in the following:
  - a. The transmitter is turned off and operator control of mixer functions is stopped.
  - b. The drum speed and direction of rotation is maintained.
  - c. The engine speed is maintained.
  - d. The main chute up/down position is maintained.
  - e. The chute positioned setting is maintained.
  - f. The loading hopper setting is maintained. Never enter the rear ladder platform without engaging the loading hopper safety strut.
  - g. The drum rotation if it has been stopped with the pause/resume button will remain stopped.
2. Pressing the Power ON button (green) will turn on the transmitter and reestablish radio remote control of the mixer as follows:
  - a. The drum speed and direction is maintained.
  - b. The engine speed is maintained.
  - c. The main chute up/down position is maintained.
  - d. The chute positioned setting is maintained.
  - e. The loading hopper setting is maintained.
  - f. The Pause/Resume setting is maintained.
3. If the red LED on the transmitter starts to flash it is indicating LOW BATTERY POWER. Approximately 20% of the transmitter battery life remains and the batteries should be charged as soon as practical.
4. If radio control of the mixer is lost and cannot be reestablished as described above the operator must stop the truck engine immediately. Manual control of the mixer drum is possible by pressing the solenoid pins at the EP pump. Manual overrides are provide for the air valves controlling the chute position lock and the loading hopper up/down function. Truck engine speed control is available inside the cab.
5. When power to the radio receiver is turned off all settings return to their default state. The chute positioned will lock the loading hopper will go to its down position and pause/resume will go to the resume setting.

- 1.2.2.3 Transmitter/Receiver Replacement and Service

 **CAUTION**

**Do not place the R160 circuit board on a metal surface when removed from the R160 housing. Placing the circuit board on a metal surface could short out the circuit board damaging the receiver.**

In order to program the R160 or replace the fuse, you will first need to remove the circuit board from the housing of the R160. This is done by releasing the two side tabs on the housing, and sliding the connector block and circuit board out of the housing until the four status LEDs are visible and the (SETUP) SW1 button is accessible. See Figure 3.

Also refer to Setting ID Codes for a step by step procedure of setting ID codes to match on both the Transmitter and the Receiver.

### Setting ID Codes

Required when replacing either the Transmitter or Receiver.

The transmitter has its ID code factory programmed. Its matching receiver needs to have the same code programmed into it. To do this, the receiver needs to have its cover removed. See Figure 4. Follow the procedure below to program the receiver ID code to match its corresponding transmitter.

1. Remove the sheet metal cover protecting the receiver.
2. Release the two tabs holding the receiver cover and pull out the receiver circuit board.
3. Prepare the transmitter by pressing the transmitter button in the following sequence.
  - a. Press and hold RED button.
  - b. Press and hold GREEN button.
  - c. Release the RED button.
  - d. Release the GREEN button. The YELLOW LED on transmitter should begin to flash slowly.
  - e. Press and hold the receiver SET-UP button. The STATUS LED on the receiver will begin to flash approximately once per second. Release receiver SET-UP button as soon as the STATUS LED begins to flash rapidly (this should take approximately 5 seconds).
  - f. Press and release GREEN transmitter button. Both transmitter LED's should go solid and after approximately 10 seconds will go out. This indicates that the program has been downloaded.
  - g. Press GREEN transmitter button. The LINK LED on the receiver should begin to flash indicating that a link has been established between the transmitter and receiver.

## 1.2.3 In-Cab Control Tower

See Figure 6 and the following list for descriptions of the in-cab control tower controls.

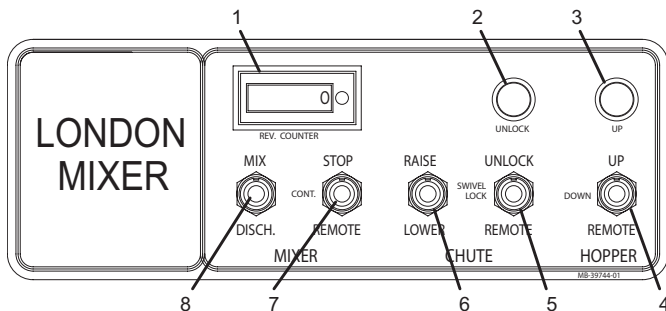


Figure 6

No.	Control	Normal Use or Reading
1	Rev Counter	Records actual revolutions of drum in either direction. Used as an aid in determining mix management.
2	Warning Lights (One) Amber	Provided with Electric/Air Chute Positioner units only. Indicates that Chute Positioner is unlocked
3	Warning Lights – (One) Red	Provided with Tilt Hopper units only. Indicates that Charging (Loading) Hopper is in UP position. DO NOT DRIVE UNIT WHEN THIS CONDITION IS INDICATED.

No.	Control	Normal Use or Reading
4	Charging (Loading) Hopper Switch	Provided with Tilt Hopper units only. Switch activates hopper cylinder to raise and lower charging hopper, and to transfer power to the rear remote control switch
5	Chute Control Switch - Lock/Unlock/Remote	A 3-position toggle switch to activate the lock and unlock functions of the chute-positioner and to transfer power to the rear remote control switch. DO NOT DRIVE UNIT UNLESS SWITCH IS IN LOCK POSITION
6	Chute Control Switch - Raise/Lower	A momentary switch to operate the chute cylinder and raise or lower the unloading chutes
7	Drum Stop, Continue, Remote	A 3-position toggle switch is used to: stop drum rotation, resume drum rotation at last pump setting, transfer power to rear pause/continue switch
8	Drum Control Switch	A momentary type switch to control direction and speeds of drum rotation. Direction of rotation achieved by activating switch to MIX or DISCHARGE. Speed of rotation is controlled by the duration of time that the switch is held; INCREASE speed by holding switch in direction of rotation required; DECREASE speed by holding switch in the opposite direction to the current rotation. Use Rev. Counter as an aid to determining speed



### 1.2.4 Remote 6 Switch

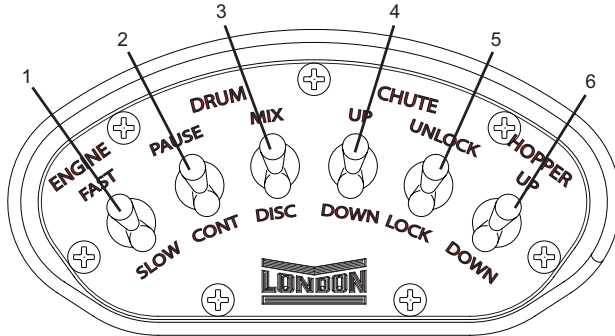


Figure 7

No.	Control	Normal Use or Reading
1	Engine Fast/Slow Switch	Switch is used to control engine speed.
2	Pause/Continue Switch	Switch is used to stop and resume drum rotation.
3	Mix/Discharge Switch	Switch is used to control speed and direction of drum rotation.
4	Chute Up/Down Switch	Switch is used to raise and lower discharge chutes.
5	Chute Lock/Unlock Switch	Switch is used to lock and unlock the chute swivel.
6	Hopper Up/Down Switch	Switch is used to lift/lower the tilt loading hopper.

### 1.2.5 Rear and Remote

Located on Ladder Support Platform.



Figure 8

No	Control	Normal Use or Reading
1	Throttle Control	Air activated adjustable throttle control handle. To increase engine speed push handle forward; to decrease pull handle to rear.
2	Remote Storage	Normal storage pocket for Remote Control Handle.

No	Control	Normal Use or Reading
3	Chute Swivel Switch	Two position toggle switch to activate Lock and Unlock functions of the Chute Positioner Swivel. Leave in LOCK position after stowing chutes into travel position. Switch is inoperable unless activated by the in-cab REMOTE switch.
4	Hopper Control Switch	Provided with Tilt Hopper units only. Two position toggle switch to activate Raise and Lower functions of the Charging (Loading) Hopper. Leave in LOWER position after discharging load. Switch is inoperable unless activated by the in-cab REMOTE switch.
5	Remote Control Handle	A wired remote control station with drum control switch and chute control switch. Drum Control Switch. A momentary type switch to control direction and speeds of drum rotation. Direction of rotation achieved by activating switch to MIX or DISCHARGE. Speed of rotation is controlled by the duration of time that switch is held; INCREASE speed by holding switch in direction of rotation required; DECREASE speed by holding switch in the opposite direction to the current rotation. Chute Control Switch. A momentary switch to operate the chute cylinder and raise or lower the unloading chutes.

## 1.2.6 Hydraulic Shut-Off

Located at the front of the front pedestal/reservoir.

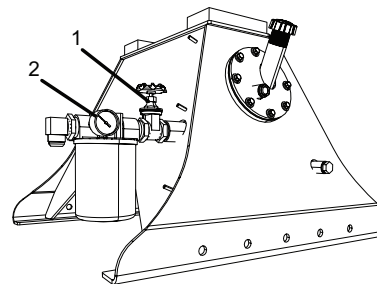


Figure 9

No.	Control	Normal Use or Reading
1	Hydraulic Gate Valve	Screw down type gate valve. Turn clockwise to shut off flow of oil to system; counter-clockwise to open. Valve must be fully open for system to operate correctly. When system is open it is recommended that the valve handle be removed and kept in the cab as a precaution against accidental shutoff, vandalism, or sabotage.
2	Oil Filter and Gauge	A vacuum type gauge to indicate the vacuum created in the suction line of the system. A well functioning system should operate at approximately -6 in.Hg. The system should never be permitted to operate at -10 in.Hg for any extended period of time.

## 1.2.7 Waterline

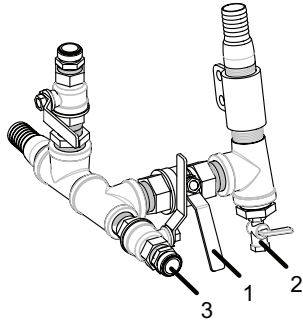


Figure 10

No.	Control	Normal Use or Reading
1	Ball Valve	Turn handle in-line with the valve body to add water to the drum. Turn handle 90 degrees to valve body to stop the flow.
2	Drain Valve	Used to drain water from the line to the upper water nozzle.
3	Faucet	1/2" diameter water line control valve. 1/2" diameter water hose connects to this valve.

## 1.3 Vehicle Transit Information

### 1.3.1 E.P. Controls

#### NOTE

The drum must be checked to make sure it is rotating at each start-up.

The London mixer is equipped with a transport feature that automatically controls the drum rotation whenever the truck engine is running. The transit plug (Figure 11) has a jumper wire and is located at the back of the black control box (Figure 12) on the cab floor between the seats.

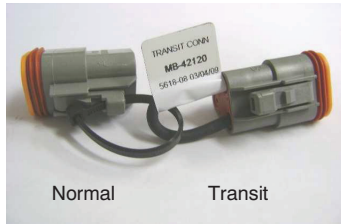


Figure 11

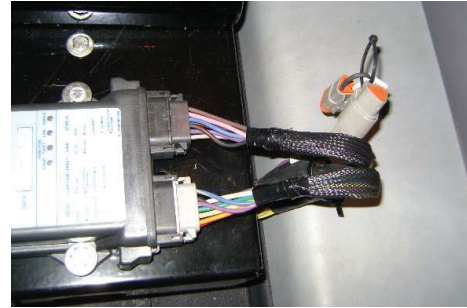


Figure 12

The customer must remove the transit plug from the harness to resume normal control of the drum rotation.

- 1.3.1.1 Drum Stops Rotating

If during transit the drum stops rotating pull over as soon as it is safe and stop the vehicle's engine.

Look for the transit plug (Figure 11 & 12) and make sure it is firmly seated in the harness connector.

Look for signs of oil leakage under the vehicle and check the oil level of the mixer hydraulics located on the driver's side (Figure 13). On level ground it should be visible in the oil level sight gauge (Figure 13). If oil is not visible use a clean object like a plastic tie wrap to dip into the tank and get an actual reading. If the level is within 9 inches of the top of the filler and there are no visible oil leaks, it is safe to restart the vehicle engine.

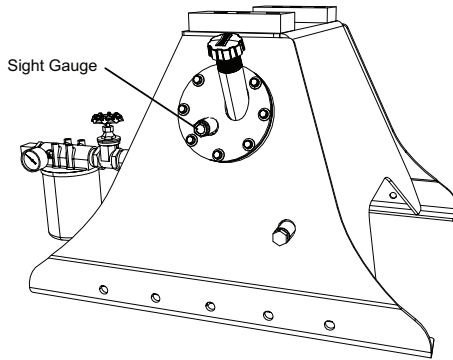


Figure 13

If the engine is restarted, listen for any unusual noises including banging or metallic grinding sounds. If any are heard, shut the engine off immediately and call London Machinery, Inc. at (800) 265-1098.

To attempt to rotate the drum using the yellow transmitter, do the following.

With the engine shut off, swap the jumper wired "transit" plug with the blank "normal" plug (Figure 11 & 12). Start the engine and remove the yellow remote control from the charge cradle and turn it on by pressing the green power button (Figure 14). Next, press the Pause/Resume button (Figure 14, Item 10) of the yellow remote control. The "pause" light on the charge cradle (Figure 15) should go out.

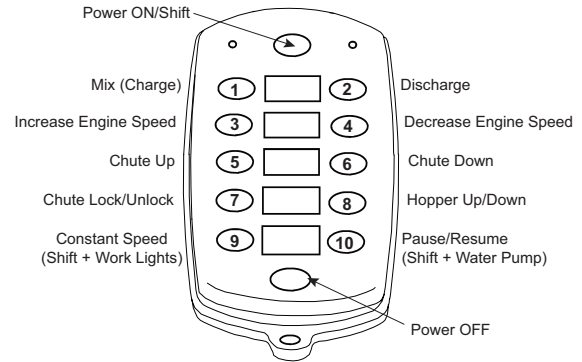


Figure 14



Figure 15

Next, press and hold the Mix/Charge button (Figure 14, Item 1) of the yellow remote. The drum should begin to turn. With the drum turning, press the Constant Speed button (Figure 14, Item 9) of the yellow remote control.

If this process starts the drum rotating, it will have to be repeated EVERY TIME the truck engine is shut off and restarted.

If none of the above steps corrects the problem, call London Machinery, Inc. at (800) 265-1098, explain the situation and your call will be redirected to the appropriate person who can help.

## 1.3.2 RE Mixer Pump C/W Pause Resume

This mixer has been built with a drum control system programmed with a transport feature that commands the drum to be in the pause mode on start-up. To regain full control of the mixer, press the Power ON button (green) and then the number 10 (lower right-hand) button on the radio transmitter.

This mixer does not have any options to automatically control the drum speed. To prevent damage to the drum roller track the drum must be rotating at all times during delivery or use. Use the button on the remote radio transmitter of the mix - discharge rocker switch on the cradle to set the drum speed to approximately 1.5 RPM (in mix) before moving the truck.

If for any reason the radio remote for the mixer is lost or damaged, control of the mixer can be regained by pulling apart the connector at the pause/restore solenoid on the pump and using the mixer - discharge control on the radio cradle.



Figure 16

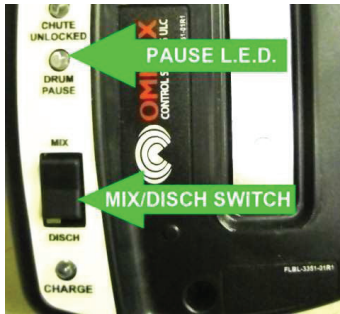


Figure 17

If electrical control of the mixer is lost, follow these steps to regain control.

1. Locate the manual bypass valve on the pump.
2. Turn the knurled thumb screw out fully counterclockwise.
3. Attach a control lever to the top of the pump and operate manually in both the mix and discharge directions.

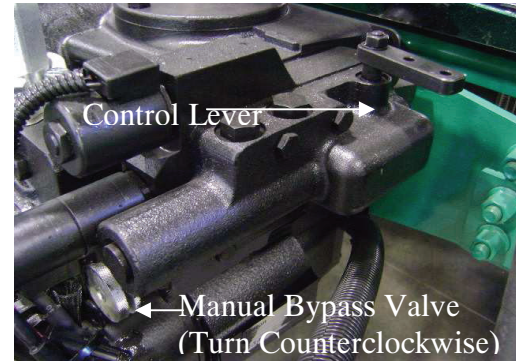


Figure 18

The knurled thumb screw must be turned all the way in clockwise to resume electrical control of the mixer.

## 2.0 Water Tank

### 2.0.1 Pressurized Water System

#### 2.0.1.1 Safety

#### **WARNING**

##### **IMPORTANT ALUMINUM AND STEEL WATER TANK INFORMATION.**

1. Inspect water tank on a daily basis for any damage including, but not limited to, dents, gouges in metal, or leaks.
2. Do not weld on or repair water tank. Instead, replace water tank with a new OEM water tank.
3. Never pressure test an empty water tank. Only pressure test a full water tank.
4. Never remove pressure regulator or pressure safety valve from tank.
  - If regulator or safety valve is defective, it must be replaced before Mixer is put into service.
5. Do not pressurize water tank beyond its working pressure.
  - If pressure exceeds the working pressure, immediately depressurize water tank and replace pressure regulator and pressure safety valve.

6. Never drive the truck with the water tank pressurized.
  - Depressurize water tank prior to transit to or from work site.
  - Water tank should be pressurized only when being used.
7. Never modify water tank in any way.
8. Immediately replace safety decals with London Machinery, Inc. decals if decals are missing or difficult to read.
9. Refer to the London Machinery, Inc. Operator's Manual or contact London Machinery, Inc. at 800-265-1098 if you have questions or require assistance.

#### 2.0.1.2 Introduction

Your mixer may be equipped with a pressurized water tank. This tank is used to add water to a concrete mix, and to provide a source of water pressure for washing down the chutes and the drum. Air pressure from the truck's brake system is used to provide pressure to the tank. Use these instructions for the safe operation and inspection of all London pressurized water tanks.



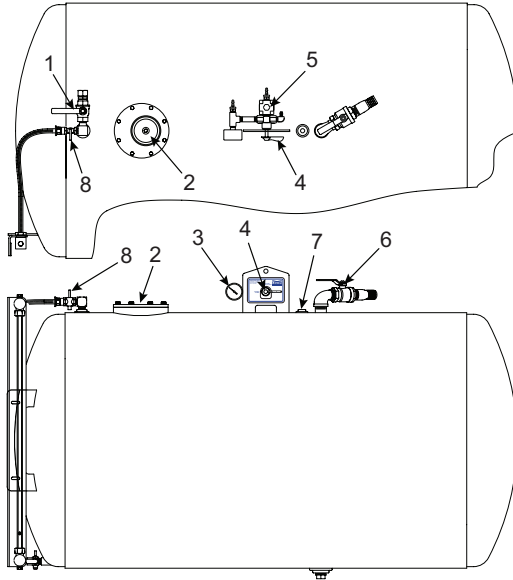




Figure 19

No.	Control	Normal Use or Reading
4	3-Way Selector Valve	Used to: <ul style="list-style-type: none"> <li>• Shut off air supply to tank.</li> <li>• Supply air to tank.</li> <li>• Blow air through the waterway to the rear of the truck</li> </ul>
5	Pressure Regulator	Adjusts water tank pressure up to the relief valve pressure setting
6	Water Control Ball Valve(s)	ON/OFF controls for water supply line. To turn water on turn handle in-line with hose run; turn 90 degrees to waterline to turn off. One valve provided with standard tank; two with dual-compartment type
7	Pressure Relief Valve	Preset to relieve excess tank pressure
8	Water Valve(s) Tank Isolator Valve	Shut-off valves to isolate pressurized tank from the sight tube in case of sight tube breakage. One valve at top of tank and one valve at bottom of tank

No.	Control	Normal Use or Reading
1	Pressure Release Valve	Ball valve (red handle) to de-pressurize tank.
2	Water Filler	Self-sealing spring-loaded filler cap.
3	Pressure Gauge	Shows tank pressure.

## 2.0.1.3 Operation

 <h3 style="margin: 0;">WARNING</h3>	
	<p><b>Burst hazard.</b>            Inspect tank daily for damage or leaks.            Replace (do not repair) damaged or leaking tank.            Drain pressure before driving.            Do not weld or repair tank.            Never exceed 55 psi (379 kPa) in tank.            Bursting tank may injure or kill.</p>
<p>Do not paint over this label. Replace if damaged or lost. <span style="float: right;">1459871</span></p>	

 <h3 style="margin: 0;">WARNING</h3>	
	<p><b>Burst hazard.</b>            Regulator maintains proper pressure.            Never tamper with or remove pressure regulator or relief valve.            Never pressure test without tank full of water.            Bursting tank may injure or kill.</p>
<p>Do not paint over this label. Replace if damaged or lost. <span style="float: right;">1449164</span></p>	

1. Do not drive mixer vehicle to or from job site with water tank pressurized.
2. Set 3-way selector valve to the closed position and depressurize the tank. The pressure gauge should register 0 PSIG.
3. Load the tank with water. Do not pressurize the water tank until after arrival at the job site.
4. Close the pressure release valve and set the 3-way selector valve to the WATERTANK position. The tank pressure gauge should register 50 PSIG maximum.
5. Open the water control ball valve to direct water to the rear of the mixer.
6. Before leaving the job site set the 3-way selector valve to the CLOSED position and vent the water tank. The pressure gauge should register 0 PSIG. If freezing conditions exist, drain the lines and the tank.
7. The water lines may be purged by closing the water control ball valve, opening the drain valves and turning the 3-way selector valve to the BLOW OFF position. Return the 3-way selector valve to the CLOSED position when finished.
8. Do not pressurize a water tank that has noticeable external damage i.e., dented, or leaking from other than a pipe or tube fitting.

## 2.0.2 Water System - Hydraulic Pump

### WARNING

Never attempt to repair the water tank. Never apply a weld procedure to a water tank. Replace water tank immediately if damaged.

Failure to comply may cause serious injury or death.

### WARNING



**Burn Hazard.**  
Do not touch.  
Hot surface may burn skin.

TMMB15-2014 Do not paint over this label. Replace if damaged or lost.

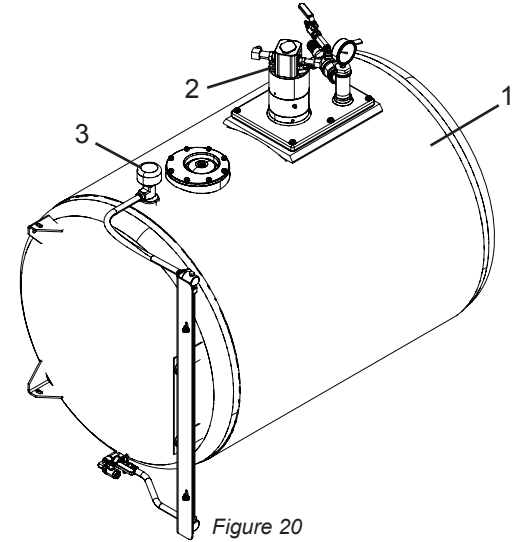


Figure 20

The tank (Figure 20, Item 1) is not pressurized at any time. The water is drawn from the tank and pressurized by the hydraulic-powered pump (Figure 20, Item 2).

The tank is equipped with a breather (Figure 20, Item 3) that must be kept clean to ensure adequate water flow.

### 2.0.2.1 Pump Operation

#### CAUTION

**Do not operate the hydraulic water pump when the water tank is empty or when there is less than 20L (5 gal) of water in the tank.**

**Failure to comply may result in damage to equipment.**

The pump is powered by hydraulic pressure supplied by the A Pad pump.

To operate the hydraulic water pump:

1. Use the radio remote (Figure 21, Item 1) or manual switch (Figure 21, Item 2) to turn the pump ON.

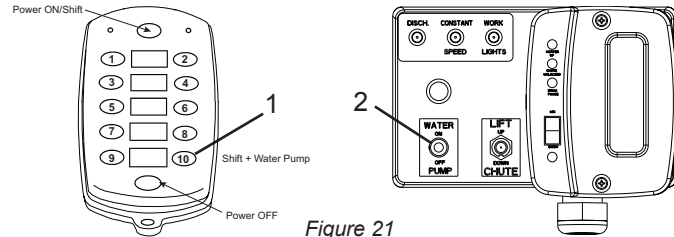


Figure 21

#### NOTE

**The hydraulic water pump and the chute up/down control function share the same hydraulic circuit. Only one function is possible with the truck at idle. An increased engine idle speed will allow operation of the water pump and chute up/down function at the same time.**

**CAUTION**

**DO NOT exceed 80 psi (552 kPa) water pressure or approximately 1200 rpm engine speed.**

**Failure to comply may cause damage to equipment.**

2. Increase truck engine speed to increase water pressure. DO NOT exceed 80 psi (552 kPa) water pressure, approximately 1200 rpm engine speed. See the water pressure gauge (Figure 22, Item 2) mounted on the top of the tank.  
40 psi (276 kPa) water pressure is recommended for transfer of water to the drum. 60-80 psi (414-552 kPa) provides good performance for the wash hose.
3. Turn the water valve (Figure 22, Item 1) to the ON position to deliver water to the wash hose or the drum fill nozzle.

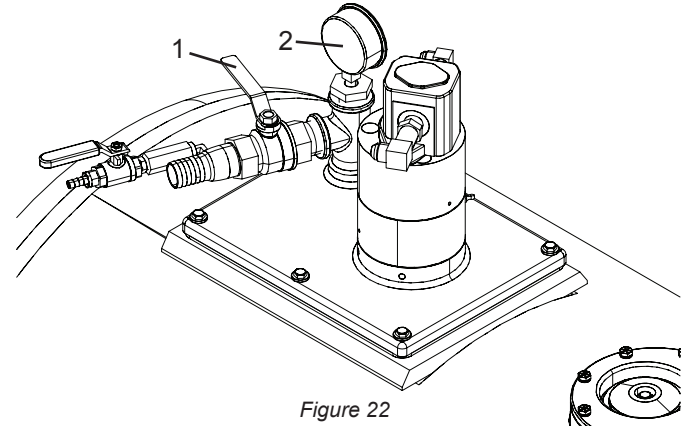
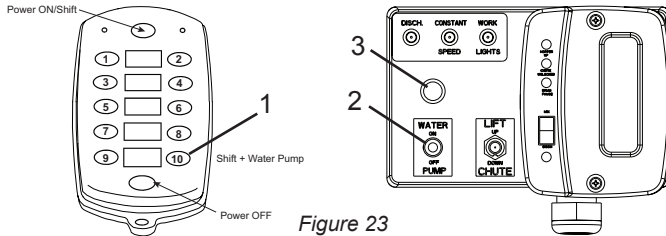


Figure 22

## NOTE

**Turn off pump when not in use.**

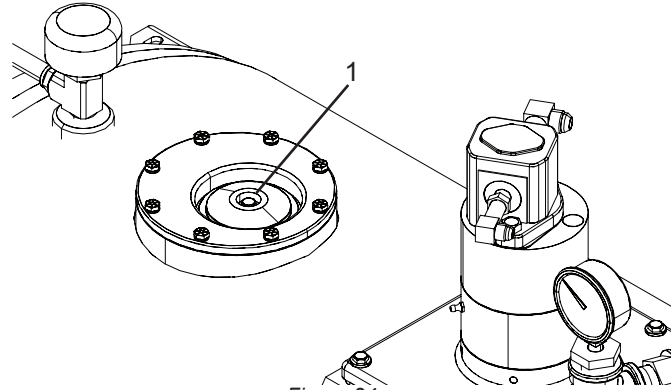
- Turn the water pump OFF after the water in the tank is depleted or when not using water with the radio remote (Figure 23, Item 1) or manual switch (Figure 23, Item 2). The indicator light (Figure 23, Item 3) illuminates when the pump is on.



- In cold weather drain the water tank and lines. See Section 2.0.2.3.

### 2.0.2.2 Filling the Water Tank

- Turn the pump off with either the radio remote or manual switch located next to the radio remote cradle.
- Make sure the water valves are in the OFF position.
- Place the water supply hose in the water tank flopper valve (Figure 24, Item 1) on top of the water tank and fill the tank.



- Close the water supply valve when the water tank is full.
- Remove the supply hose from the flopper valve.

**WARNING**

If damaged, corroded, or leaking, the water tank must be replaced with an OEM water tank from London Machinery Inc.

Failure to maintain water tanks may result in serious personal injury or death.

**CAUTION**

Do not weld on or near the water tank. If the water tank requires structural repair, contact London Machinery Inc. at 800-265-1098.

Attempting to repair the water tank will void your warranty. Failure to comply may result in damage to equipment.

6. Inspect the water system for leaks. If leaks are noticed, repair the leaks before putting the Mixer into service.

**2.0.2.3 Draining the Water System****WARNING**

Never allow water to drain onto a public sidewalk or roadway. Water may cause the sidewalk or roadway to become slippery. Always drain the water system at a location designated by the job site manager, or in compliance with your company policy.

Failure to comply may result in serious personal injury or death.

**CAUTION**

Be sure to drain the water system after each use when operating in temperatures below freezing.

Failure to drain the system may cause damage to equipment.

When operating in temperatures below freezing, drain the water system after each use.

The water pump is self draining when the water tank is completely drained

1. Park the truck on a firm, level surface to allow proper drainage.
2. Open the main tank ball valve drain (Figure 25, Item 5).
3. Remove the water tank drain plug (Figure 25, Item 3).
4. Open the tank sight glass isolator valve (Figure 25, Item 4).
5. When no more water comes from the tank drain(s), install the water tank drain plug (Figure 25, Item 3). Tighten the plug until snug.
6. Close the sight glass isolator valve (Figure 25, Item 4).
7. Close the main tank ball valve drain (Figure 25, Item 5).
8. Open the water pump discharge valve (Figure 25, Item 1) and allow water to drain through the wash-out hose.
9. Close the water pump discharge valve (Figure 25, Item 1) and open the air purge valve (Figure 25, Item 2) to purge the water lines.

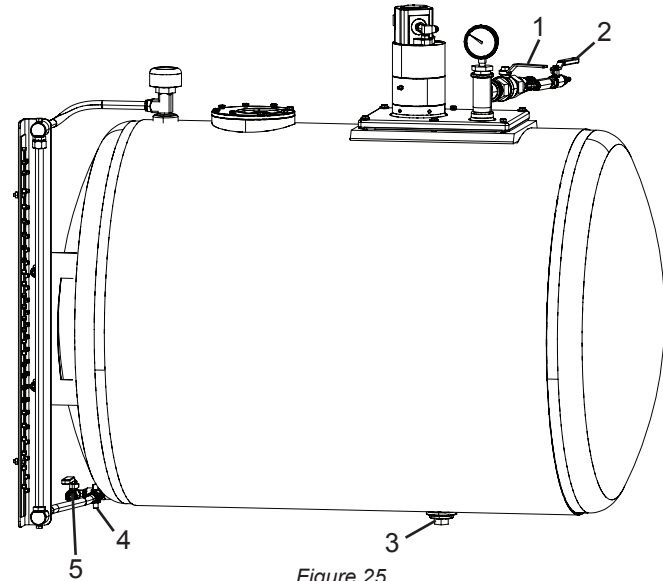


Figure 25



## 2.0.3 Water System - Air Pump

### **WARNING**

**Never attempt to repair the water tank. Never apply a weld procedure to a water tank. Replace water tank immediately if damaged.**

**Failure to comply may cause serious injury or death.**

The tank (Figure 26, Item 1) is not pressurized at any time. The water is drawn from the tank and pressurized by the air-powered diaphragm pump (Figure 26, Item 2).

The tank is equipped with one breather (Figure 26, Item 3) that must be kept clean to ensure adequate water flow.

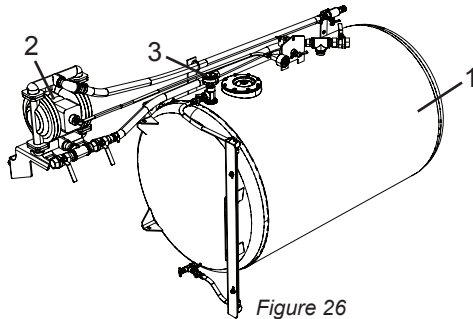


Figure 26

### 2.0.3.1 Pump Operation

The pump is powered by compressed air supplied by the chassis air compressor.

To operate the pump:

1. Start the truck and check to make sure the air pressure gauge is supplied with 100 psi (689 kPa) of pressure.
2. Close the purge valve (Figure 27, Item 1) at the pump inlet.
3. Open the main tank ball valve (Figure 27, Item 2).

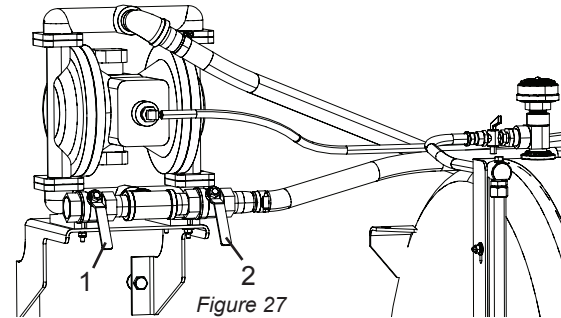


Figure 27

## NOTE

**Turn off pump when not in use.**

4. Turn the air pressure control valve (Figure 28, Item 1) to the WATER TANK position to start the pump.

To stop the pump, turn the air pressure control valve (Figure 28, Item 1) to the CLOSED position.

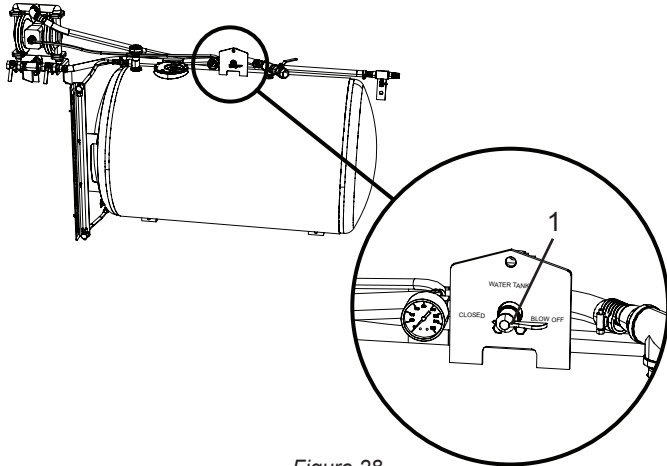


Figure 28

## CAUTION

**Be sure to drain the water system after each use when operating in temperatures below freezing.**

**Failure to drain the system may cause damage to equipment.**

### 2.0.3.2 Filling the Water Tank

1. Turn the pump off by turning the air pressure control valve to the CLOSED position.
2. Place the water supply hose in the water tank flopper valve (Figure 29, Item 1) and fill the tank.

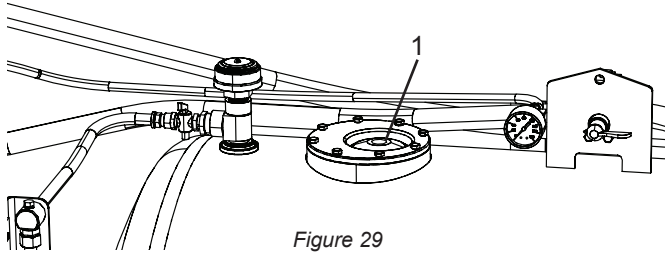


Figure 29

3. Close the water supply valve.
4. Remove the supply hose from the flopper valve.

5. Inspect the water system for leaks. If leaks are noticed, repair the leaks before putting the mixer into service.

#### **WARNING**

If damaged, corroded, or leaking, the water tank must be replaced with an OEM water tank from London Machinery Inc.

Failure to maintain water tanks may result in serious personal injury or death.

#### **CAUTION**

Do not weld on or near the water tank. If the water tank requires structural repair, contact London Machinery Inc. at 800-265-1098.

Attempting to repair the water tank will void your warranty. Failure to comply may result in damage to equipment.

### 2.0.3.3 Draining the Water System

#### **WARNING**

Never allow water to drain onto a public sidewalk or roadway. Water may cause the sidewalk or roadway to become slippery. Always drain the water system at a location designated by the job site manager, or in compliance with your company policy.

Failure to comply may result in serious personal injury or death.

#### **CAUTION**

Be sure to drain the water system after each use when operating in temperatures below freezing.

Failure to drain the system may cause damage to equipment.

When operating in temperatures below freezing, the water system must be drained after each use.

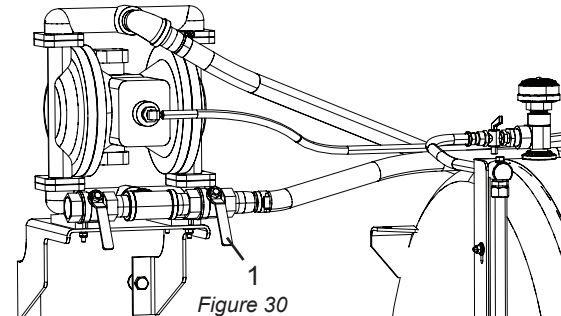
1. Park the truck on a firm, level surface to allow proper drainage.

#### **NOTE**

The purge valve should be angled down slightly to permit proper drainage.

If the valve is not positioned properly, have your service department reposition the valve/tee fitting assembly.

2. Open the main ball valve (Figure 30, Item 1).



3. Remove the water tank drain plug (Figure 31, Item 4), or open the drain valve (Figure 31, Item 2).
4. Open the main tank sight glass isolator valve (Figure 31, Item 1).
5. Open the sight glass drain valve (Figure 31, Item 3).

### NOTE

**Apply thread sealant tape or thread sealant compound to the drain plug threads before installation.**

6. When no more water comes from the tank drains, install the water tank drain plug (Figure 31, Item 4).
7. Close the sight glass drain valve (Figure 31, Item 3).
8. Close the tank drain valve (Figure 31, Item 2).
9. Close the main tank sight glass isolator valve (Figure 31, Item 1).

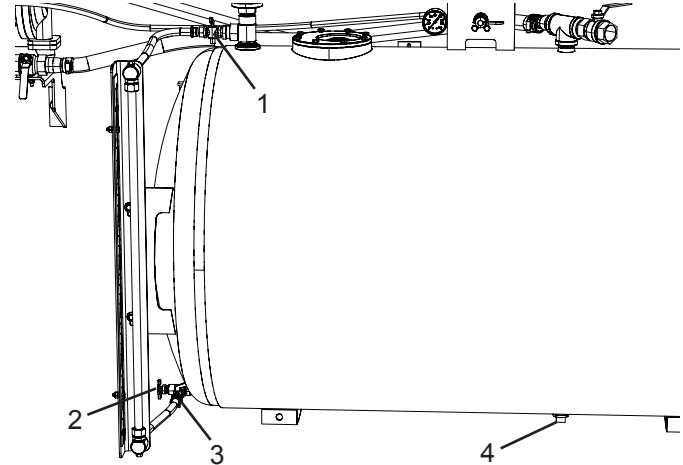
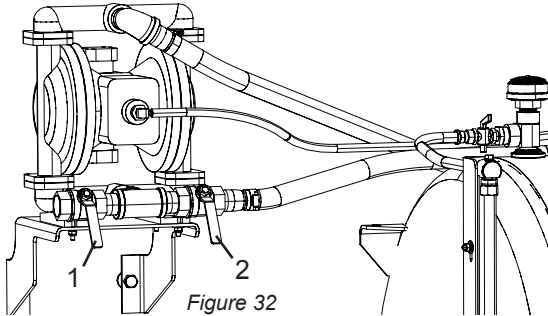


Figure 31

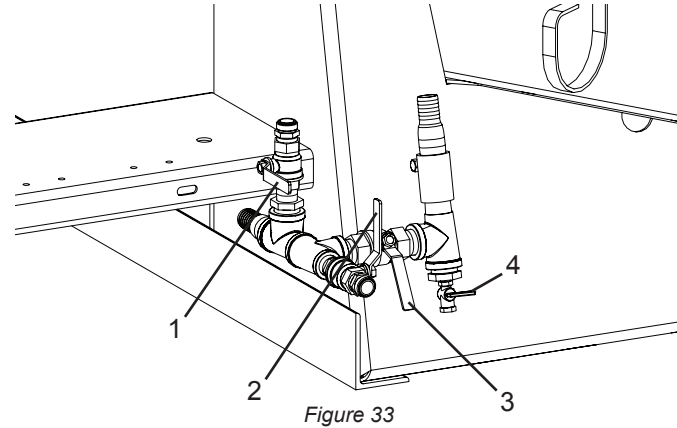
10. Start the truck and check to make sure the air pressure gauge is supplied with 100 psi (689 kPa) of pressure.
11. Turn the pump on by turning the air pressure control valve to the WATER TANK position.

12. Close the main tank ball valve (Figure 32, Item 2).
13. Open the purge valve (Figure 32, Item 1).



14. Open wash-out hose valve (Figure 33, Item 2) at the rear of the Mixer and allow water to drain.

15. Open wash-out valve (Figure 33, Item 1) and add-water valve (Figure 33, Item 3) and allow water to drain through wash-out hose.
16. Open the drain petcock (Figure 33, Item 4).

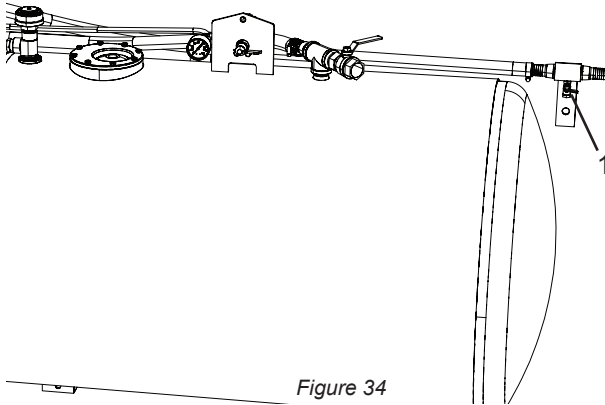


**NOTE**

Inspect hoses for low points that may retain water, even after the system has been drained.

If a low spot is noticed, have your service department reposition hoses to eliminate the low spot

17. Open the drain petcock located at the lowest point in the supply hose (Figure 34, Item 1).



18. Turn the pump off by turning the air pressure control valve to the CLOSED position.

**NOTE**

If possible, drain and remove wash-out hose(s), and store hose(s) in the cab.

19. Open all water control valves and outlets and leave them open until the next use.

## 3.0 Chute Assist

The fold-over chute assist operates on a manual pulley to lower the fold-over chute into position.

To unfold the chute:

1. Unlatch the securing hook.
2. Grip the fold-over chute using the correct hand-holds (Figure 20).
3. Slowly lower the chute into operation position (Figure 21).

To fold the chute:

1. Grip the fold-over chute using the correct hand-holds (Figure 21).
2. Slowly raise the chute into stored position (Figure 22).
3. Latch the securing hook.

**NOTE:** The securing hook needs to be latched on the hand hold of the fold-over chute.

### WARNING

The chute assist has pinch points between the main chute and the fold-over chute. Keep hands away from chute hardware where chutes connect. Keep hands away from the pulley system.

Failure to comply may result in serious personal injury or death or damage to equipment.

### WARNING

Do not let persons, other than the driver, handle the chutes, unfold the foldover, and/or remove extension, or stow and secure the extensions for transit. Keep hands away from chute hardware where the chutes connect. Never stand in the path of the chute as it is being unfolded or while in use. Failure to follow the warnings concerning chute safety may result in serious injury.

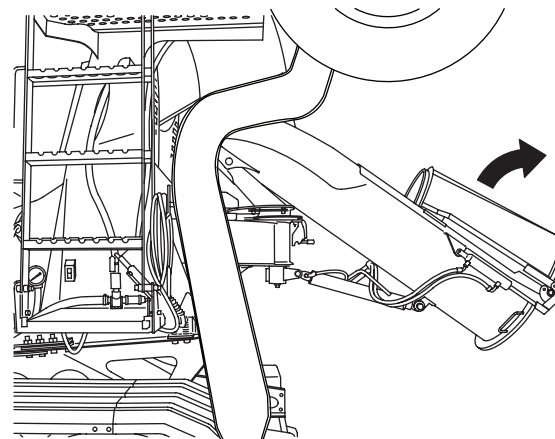


Figure 20



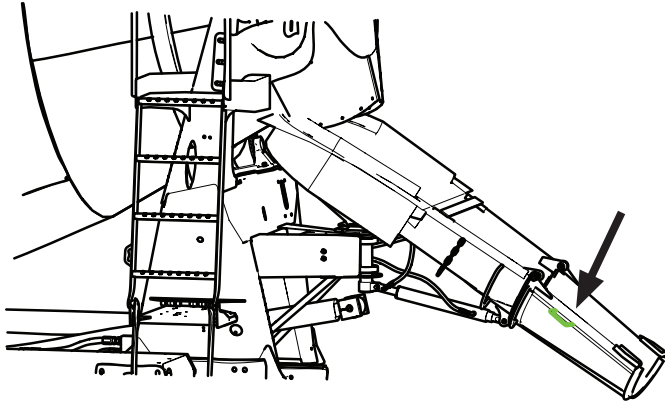


Figure 21

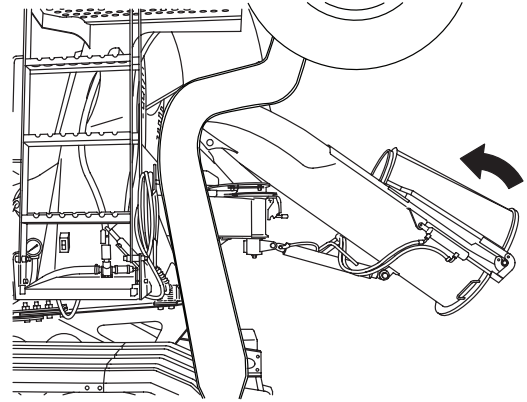


Figure 22

## 1.0 Maintenance

### 1.1 Introduction

The following pages outline checks, adjustments and lubrication instructions that should be incorporated into a regular service/maintenance schedule.

It is recommended also that a Service/Maintenance Log be maintained and kept by the driver/operator in the vehicle cab.

#### SAFETY NOTICE

**Before entering the Mixer drum, read and follow CSA Regulations concerning entry and working in “CONFINED SPACE” CSA Z1006-10 and “LOCKOUT/TAGOUT” CSA Z460.**

**Follow CSA Regulations while performing anywork to the Mixer.**

**Follow all safety instructions in your London Machinery Inc. Mixer Manual.**


**Shut off truck engine, lock cab doors, and keep keys in your pocket before entering drum, or performing any work to the Mixer.**


**Place magnetic “DANGER” signs on both cab doors. Failure to do so can result in serious personal injury or death.**

**If you have any questions regarding this notice or require further assistance, call London Machinery Inc. at 800-265-1098.**

### 1.2 General Information

1. Any gearboxes not installed by LMI are shipped without oil. To fill refer to the Service Manual for specifications and the amounts of oil required.
2. Extreme care must be exercised to ensure that no dirt or foreign matter be allowed in or around the hydraulic pump and motor if fittings or plugs are removed, and when fittings are re-installed.
3. Any replacement hoses not supplied by LMI must be thoroughly washed out before installing on the equipment. New hydraulic kits and assemblies supplied by LMI are washed and capped before shipping.
4. Ensure always that the main shut-off valve from the front pedestal/reservoir to the suction line of the pump is open before starting truck engine.
5. Drum rollers should be checked for alignment with drum track after one or two working days and adjusted if necessary. To align rolls, loosen the 4 bolts and tap casting with hammer towards the front or rear of the vehicle as required. Tighten bolts. Misalignment could be the result of heavy loads causing varying amounts of flexing and settling in different truck frames.

6. Check all hold-down bolts before start-up and at weekly intervals thereafter. Bolts must be tight at all times to maintain proper alignment of drum, drum rollers, and loading hopper.
-  **CAUTION**

**Do not start a fully loaded drum at full throttle and/or with the pump control at a maximum speed.**
-  **CAUTION**

**When reversing the rotation of the drum, throttle back on truck engine and make sure that the drum comes to a complete stop before changing direction.**
7. Check oil regularly for the presence of water. If water is present in the system the oil will have a milky appearance. If present in the system determine the source and correct the problem. Drain the system and replace the oil.
  8. Check often for any oil and/or air leaks and correct immediately. Such leaks can usually be traced to hydraulic hose and pneumatic tubing. Check for any cuts, abrasions and possible chafing points.
  9. Check pump drive-shaft end connections for proper tightness of cap screws.
  10. Check extension chute storage assemblies. Make certain that chutes are secure when not in use, and when vehicle is away from loading and unloading sites. Examine all rubber tie downs for cuts, abrasions and any deterioration.
  11. Keep drum interior clear of any concrete build-up often.
  12. Maintain mixer and truck lighting systems: replace any defective light bulbs and reflectors when required. Check especially for those lights within the mixer electrical system that signal Active and/or Non-active functions and replace immediately if defective.
  13. Check drum speed. Drum speeds should be constant if hydraulic system is working correctly. Check RPM of drum while loading with concrete and with engine running at top governed RPM. If drum speed is 2 RPM less than the previously checked speed, a problem has developed. Check the Eaton pamphlets PROBLEMS IN THE HYDRAULIC SYSTEM and/or TROUBLESHOOTING supplied with this manual.

### 1.3 Emergency Unloading Procedures

#### 1.3.1 Introduction

One of the worst situations, other than an accident on the site or on the road, to face a transit mixer operator is a system failure to the unit with a load still in the drum. The following pages outline procedures to be followed in the case of such an emergency.

#### 1.3.2 Contingency Measures - Preparation

A contingency plan for unloading should be formulated in advance of operations, because normally action time is limited in any emergency situation.

The following are factors which should be addressed before an emergency happens.

1. Maintain a service truck complete with trained personnel and the necessary equipment needed in an emergency.
2. Train operators to familiarize themselves with the operator's manual, so they can perform the necessary actions while waiting for assistance.
3. Check for locations between plant and site where, if necessary, it would be feasible to discharge the load.
4. The dispatcher should be able to locate and dispatch a stand-by mixer to the scene of the emergency immediately after receiving an assistance call.

5. The service truck should carry the following equipment:
  - a. Emergency unloading hose kit.
  - b. A new replacement filter and a supply of hydraulic oil.
  - c. A complete set of mechanics hand tools.
  - d. A set of necessary tools to unload the concrete from the drum, shovels, hoes, rakes, etc.
  - e. Equipment for manually turning and positioning the drum for emptying via the unloading hatches, for example rope, chain, pry-bar, 4 x 4" wooden block, etc.

#### 1.3.3 Failure of the Truck Engine

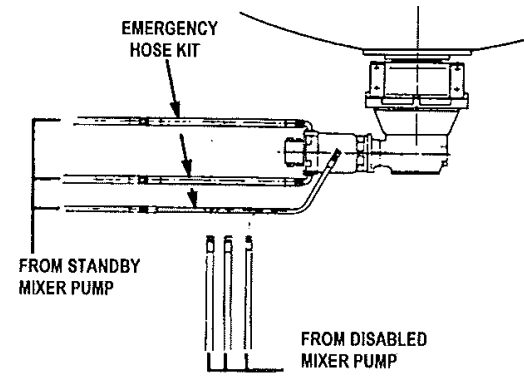
To discharge the load of a disabled mixer, couple the hydraulic systems of the disabled unit and a stand-by mixer. Proceed as follows;

1. Leaving approximately 5 feet of working space between the trucks, position the stand-by unit with its right hand side adjacent to the right hand side of the disabled unit. Locate the mixers so the hydraulic motor hose clusters are opposite to each other. See Figure 1.
2. Put the drum control of the stand-by mixer in STOP (pump NEUTRAL) position, then turn vehicle OFF.

## WARNING

**Make certain that neither hydraulic system is running hot, or that the lines are pressurized. A spray of hot oil could cause serious injury or blindness.**

3. To relieve pressure remove the reservoir filler cap from both mixers.
4. Clean the hose connections of both units thoroughly, and make certain that no contamination will get into either system during the hook-up procedure.
5. On the stand-by mixer, disconnect a hose from a motor port and attach one from the emergency hose kit to this hose. From the disabled mixer, remove the corresponding hose and connect the emergency hose to same coupling.
6. Cap and plug the disconnected hoses immediately with clean plastic caps and plugs.
7. Repeat steps 5 and 6 with the remaining hose connections.
8. Start the engine of the stand-by vehicle. Use low throttle and slow drum speeds until any air-traps and/or voids are eliminated from the hydraulic system. Check the oil level in the reservoir constantly during this procedure, and top up as necessary.
9. Actuate the drum control on the stand-by unit to the discharge function and discharge the disabled units load.
10. When discharging is complete, stop the procedure and remove the emergency hose connections in the reverse sequence as installed. Check oil levels and replace the reservoir filler caps.



**STAND-BY MIXER CONNECTION**

*Figure 1*

### 1.3.4 Problems in the Hydraulic System

#### CAUTION

**A failure of the hydraulic system or the planetary gear train could be a signal that the oil in the system has become contaminated. If either of these conditions occur DO NOT use the procedure in section 1.3.3 or couple to a stand-by mixer. To do so would create the risk of severely damaging the stand-by mixer's hydraulic and gear train components. Use instead, if required, the Manual Unloading procedure.**

First make a quick inspection for:

- a. Broken or leaking hydraulic hoses, lines or fittings.
- b. Broken or loose filter canister.
- c. Clogged filter cartridge.
- d. Reduced fluid level in the reservoir.

Replace defective parts as required. Top up oil level to recommended level.

### 1.3.5 Mechanical Problems other than Engine Failure

Make the following checks for an obvious cause of the failure.

1. Drum not turning. Possibly caught and held by a foreign object. Clear the drum.
2. Roller jammed on the track. Clear the roller.
3. Pump drive shaft disconnected or broken. Reconnect or replace.
  - a. It may be expedient to temporarily use one from a similar mixer.
  - b. If a new drive shaft is not immediately available to unload mixer, use Section 1.3.3 procedure with a standby mixer.

### 1.3.6 Manual Unloading

One method of turning the drum to unload is shown in Figure 2.

Use a tow chain, strap or rope together with a 4 x 4" block placed inside an open emergency hatch. Power to rotate the drum can be provided by a standby truck, or by turning manually using a pry bar as shown.

With the emergency hatch opened and in the bottom position the load can be removed.

When the drum is hydraulically locked against turning by the hydraulic motor, attempt to bleed off sufficient fluid from the motor by loosening the high pressure hose fittings shown in Figure 3. Bleed off sufficient fluid to enable the drum to be turned manually.

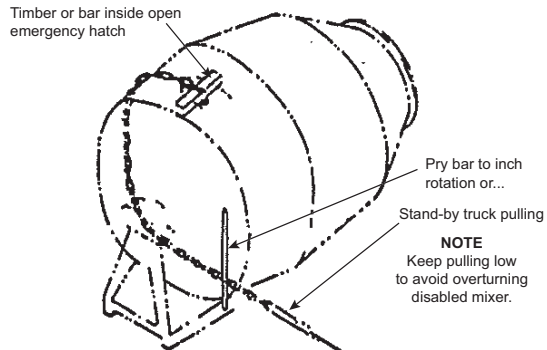


Figure 2

High Pressure Fittings

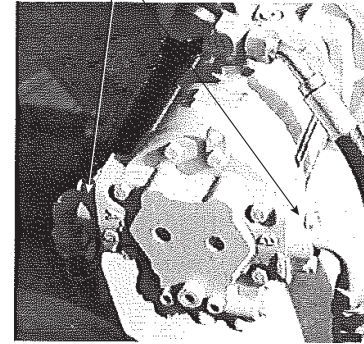


Figure 3

### 1.3.7 After Completing Emergency Unloading Procedures

1. Replace all hoses to their correct (previous) locations.
2. Return both mixers to their respective maintenance bases for service check.
3. Check hydraulic oil system of both mixers for possible contamination by draining oil through a clean lint-free cloth.
4. If contamination is detected, find the source and eliminate it.
5. Flush out entire systems of both units; clean out the reservoir, all hoses and connecting lines. Replace hydraulic oil and filter. See Eaton Start-up Bulletin #2-402 in the service manual.

### **1.4 Front Pedestal Oil Reservoir Inspection**

The oil level should be visible in the sight gauge located near the top of the reservoir. If not, add enough oil to bring to correct level. Do not over-fill. The tank area above the gauge is provided as “foaming space.”

### **1.5 System Temperature**

A temperature gauge is not provided as part of the mixer system. Operating temperature of the circuit depends on a number of factors such as type of oil used, slump concrete, ambient temperature. A temperature gauge is not a reliable indication of circuit condition, if taken as a single indicator. In general, maximum operation temperature can be expected in the range of 155 - 170° F (68 - 77° C). The oil temperature must not exceed 200° F (93° C). (A reservoir which is “hot” to the touch may be only 140° F [60° C]).

If the system is considered to be hot due to oil fumes escaping from the reservoir breather, or due to any other reason, shut unit down. Remove the hose from the pump case drain port and check oil temperature with a thermometer. If temperature is over 200° F (93° C) reduce truck engine speed to 800-1000 RPM, and set pump control lever for 1 or 2 RPM of the drum. Operate in this manner until the circuit cools down. Then shut down. Troubleshoot for cause of excessive heat as detailed in the Troubleshooting Procedure in Eaton bulletin #7-404 provided in the service manual.



## 1.6 Water Tank

### 1.6.1 Water Tank Safety

#### WARNING

##### IMPORTANT ALUMINUM AND STEEL WATER TANK INFORMATION.

1. Inspect water tank on a daily basis for any damage including, but not limited to, dents, gouges in metal, or leaks.
2. Do not weld on or repair water tank. Instead, replace water tank with a new OEM water tank.
3. Never pressure test an empty water tank. Only pressure test a full water tank.
4. Never remove pressure regulator or pressure safety valve from tank.
  - If regulator or safety valve is defective, it must be replaced before Mixer is put into service.
5. Do not pressurize water tank beyond its working pressure.
  - If pressure exceeds the working pressure, immediately depressurize water tank and replace pressure regulator and pressure safety valve.

6. Never drive the truck with the water tank pressurized.
  - Depressurize water tank prior to transit to or from work site.
  - Water tank should be pressurized only when being used.
7. Never modify water tank in any way.
8. Immediately replace safety decals with London Machinery, Inc. decals if decals are missing or difficult to read.
9. Refer to the London Machinery, Inc. Operator's Manual or contact London Machinery, Inc. at 800-265-1098 if you have questions or require assistance.

### 1.6.2 Introduction

Your mixer may be equipped with a pressurized water tank. This tank is used to add water to a concrete mix, and to provide a source of water pressure for washing down the chutes and the drum. Air pressure from the truck's brake system is used to provide pressure to the tank. Use these instructions for the safe operation and inspection of all London pressurized water tanks.

If your mixer is equipped with a non-pressurized water tank (a system that uses a water pump to provide pressure), refer to the instructions provided with the mixer.

### 1.6.3 Daily Inspection

#### **WARNING**

**Burst hazard.**  
**Inspect tank daily for damage or leaks.**  
**Replace (do no repair) damaged or leaking tank.**  
**Drain pressure before driving.**  
**Do not weld or repair tank.**  
**Never exceed 55 psi in tank.**  
**Bursting tank may injure or kill.**

#### • 1.6.3.1 Tank Integrity

At the start of each shift:

- **Inspect Interior:** Drain the tank of water and use a flashlight to look into the tank through the fill opening. Look for signs of corrosion on the inside of the tank which may indicate that the tank has been weakened and is in need of replacement.
- **Inspect Exterior without Pressure:** If the interior inspection indicates that the tank is in good condition, fill the tank with water and inspect the exterior of the tank thoroughly for signs of leaks. Inspect the filler neck and fill opening. Look for signs of damage. Look for cracks in the weld joints or seams. Check that all fastening hardware is tight and undamaged. Inspect fittings for signs of damage, cracks, or looseness.

- **Inspect Exterior with Pressure:** If there are no signs of damage or exterior leakage, pressurize the tank and repeat the inspection.

- **Depressurize Tank:** Release the pressure in the tank as soon as you are finished inspecting and before moving the truck.

**Replace Defective Tank:** Water tanks with any leak or significant signs of internal or external damage or corrosion should be replaced. **DO NOT ATTEMPT TO REPAIR**

- [1.6.3.2 Pressure Regulator Valve](#)

**Inspect Pressure Regulator:** The pressure regulator is used to reduce the air brake system pressure to a pressure that is safe to be used in the water tank. It must be undamaged and in proper working order. Look and listen for signs of leaking. Ensure that the valve and associated hoses and fittings are undamaged.

**Adjust Pressure to Correct Setting:** Many pressure regulators are set at the factory and cannot be adjusted. If your water tank has an adjustable regulator, set it to 50 psi. When setting the regulator, always begin by turning the adjusting knob counterclockwise first to reduce the pressure slightly. Then turn it clockwise slowly to bring the pressure up to the correct setting. Never continue to turn the valve past the correct setting.

**Replace Defective Regulator Valve:** Any water tank with a damaged or missing pressure regulator valve must be removed from service immediately. Do not pressurize the tank until a functioning pressure regulator valve has been installed.

- **1.6.3.3 Pressure Relief Valve**

**Inspect the Relief Valve:** The pressure relief valve is a safety device that will release air or water from the tank if it is inadvertently pressurized over the relief setting. The relief setting on most water tanks is set at the factory and cannot be adjusted. Identify the pressure relief valve and ensure that it has not been damaged or tampered with.

**Replace Defective Relief Valve:** Any water tank with a damaged or missing pressure relief valve must be removed from service immediately. Do not pressurize the tank until a functioning pressure relief valve has been installed.

### **1.6.4 Daily Operation**

The water tank is designed to be used during stationary operation at the yard or the job site only. It is not necessary or beneficial for the tank to be pressurized while driving, and a pressurized tank is an added hazard in the event of a crash or a rollover.

## **WARNING**

**Burst hazard.  
Inspect tank daily for damage or leaks.  
Replace (do no repair) damaged or leaking tank.  
Drain pressure before driving.  
Do not weld or repair tank.  
Never exceed 55 psi in tank.  
Bursting tank may injure or kill.**

### **1.6.5 Vehicle Handling Characteristics**

Safe operation of any vehicle is the responsibility of the driver. The water tank is a fluid load that can increase the rollover tendency if the truck is driven with the water tank partially full. To reduce the risk of rollover, only drive the truck with the water tank either completely full or completely empty. Avoid making sharp turns at excessive speeds and other abrupt maneuvers.

In the event of a rollover or crash, an unbelted person is significantly more likely to become injured or die than a person wearing a seat belt. ALWAYS WEAR YOUR SEAT BELT.

### 1.6.6 Maintenance

On a weekly basis,

1. Inspect the water tank for visible signs of external damage. Dented tanks should be replaced.
2. Inspect the water tank for signs of leakage. If there is leakage from a weld seam or anywhere on the tank shell or heads the tank should be replaced immediately. Correct any leakage from pipe and tube connections. Fill the water tank completely full of water before pressure testing.
3. Check that the water tank pressure gauge is correctly registering both 0 and 50 psig conditions. If in doubt test with an independent pressure gauge. The operating pressure must NOT exceed 50 psig.
4. Check that the pressure relief valve is functioning by pulling on the stem ring. Pressurized air should escape.
5. Check the pressure setting of the relief valve by gradually increasing the pressure regulator setting. Air should escape from the relief valve at 55 psig. Return the regulator to its 50 psig setting and briefly lower the tank pressure by opening the pressure release valve. Upon closing this valve the tank pressure should return to 50 psig and the relief valve should not be leaking.
6. Ensure that all valves, drains and the filler are functioning correctly.
7. Ensure that the water tank is sitting correctly in its rubber lined cradles and the straps are snug. The cradles must be securely mounted.

## 2.0 Daily Checks

### 2.1 Safety Decals

- **Daily Checks** – A complete walk around of the vehicle to inspect the safety decals should be performed every day before operation. If any of the safety decals are damaged, illegible, or missing, they must be replaced before operation.

For the proper location and part numbers of the safety decals for the Mixer, see SAFETY DECALS AND PLACARDS.

If you are unable to determine the proper safety decal or its placement on the Mixer, call London Machinery Inc. at 800-265-1098 for assistance. If any safety decals on the equipment are not clearly readable, contact London Machinery Inc. parts and service for replacements at no charge. Use only London Machinery Inc. replacement decals.

For information on any of the chassis safety decals, please contact the chassis manufacturer.

## 2.2 Hydraulic System

### 2.2.1 Hydraulic Oil Level

- **Daily Checks** – The oil level is checked by the operator or skilled service personnel.

#### NOTE

**Check hydraulic oil level during start-up when the oil temperature is still cold.**

Check the hydraulic oil level with all hydraulic components off.

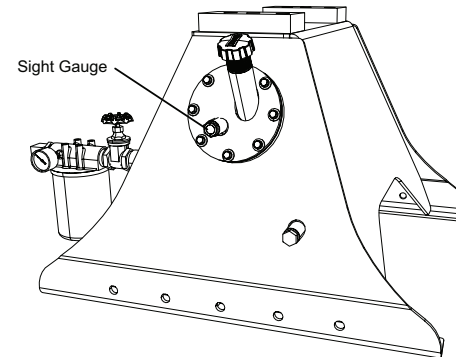


Figure 4

### 2.2.2 Hydraulic System and Components

- **Daily Checks** – The hydraulic system and components are inspected by the operator or skilled service personnel.

Inspect the hydraulic system and components for leaks and damage. Inspect around all fittings and connections. Look for any fresh puddles or drips under the Mixer.

Ensure that all components are securely mounted and that all bolts and nuts are in place and secure.

Inspect for cracks or other damage to the mounting brackets.

### 2.2.3 Hydraulic Hoses and Pipes

- **Daily Checks** – The hydraulic hoses and pipes are inspected by the operator or skilled service personnel.

#### **WARNING**

**Any hydraulic tubing which is replaced must conform to SAE J1065 specifications. If incorrect hydraulic tubing is installed, the hydraulic system may fail, causing serious injury. Damage or leaking tubing must be replaced before the Mixer is returned to service. For best results, always use genuine London Machinery Inc. replacement parts.**

#### **WARNING**

**Correct hoses, fittings, and adapters with the correct SAE rating must be used when replacing hoses to prevent possible serious injury. Always replace hoses, fittings, and adapters with replacements that have a proper, suitable working pressure rating. Replacement hoses must be of correct length and must comply with the hose manufacturer's installation guidelines and recommendations. Hydraulic hoses have the SAE ratings marked on the hose to assist you in selecting the correct hose. Any replacement hydraulic hoses and fittings assemblies must be supplied by the same manufacturer. As an example: Brand "A" hose and brand "B" fitting will not normally be compatible. No "twist" is allowed in the hydraulic hoses. "Twist" may result in premature hose failure.**

Inspect hydraulic hoses and pipes for damage and proper clearance with other components.

The following are examples of hydraulic hose damage to inspect for:

- Bulging (Figure 5, Item 1)
- Cracks (Figure 5, Item 2)
- Cuts (Figure 5, Item 3)
- Abrasion (Figure 5, Item 4)
- Twisting (Figure 5, Item 5)
- Crimped (Figure 5, Item 6)

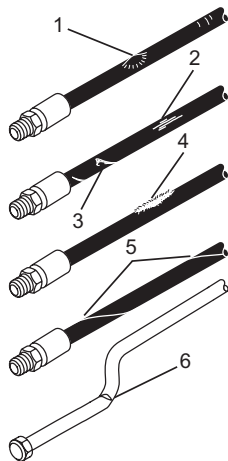


Figure 5

## 2.3 Electrical System

### SAFETY NOTICE

**Before entering the Mixer drum, read and follow CSA Regulations concerning entry and working in “CONFINED SPACE” CSA Z1006-10 and “LOCKOUT/TAGOUT” CSA Z460.**

**Follow CSA Regulations while performing anywork to the Mixer.**

**Follow all safety instructions in your London Machinery Inc. Mixer Manual.**

**Shut off truck engine, lock cab doors, and keep keys in your pocket before entering drum, or performing any work to the Mixer.**

**Place magnetic “DANGER” signs on both cab doors. Failure to do so can result in serious personal injury or death.**

**If you have any questions regarding this notice or require further assistance, call London Machinery Inc. at 800-265-1098.**

### 2.3.1 Lighting System

• **Daily Checks** – The lighting system is inspected by the operator or skilled service personnel.

Check to ensure that all exterior lights on the Mixer and chassis are functioning correctly. Replace any burned-out bulbs with the same type.

### 2.3.2 Wire Harnesses

• **Daily Checks** – The wire harnesses are inspected by the operator or skilled service personnel.

Inspect the wiring harnesses for damage and proper clearance with other components.

The following are examples of wire harness damage to inspect for:

- Cracks (Figure 6, Item 1)
- Cuts (Figure 6, Item 2)
- Abrasion (Figure 6, Item 3)
- Twisting (Figure 6, Item 4)

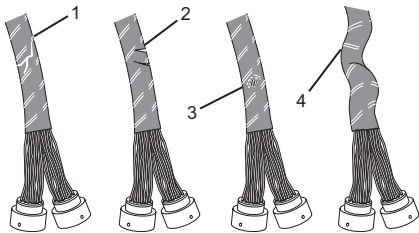


Figure 6

## 2.4 Pneumatic System

### SAFETY NOTICE

**Before entering the Mixer drum, read and follow CSA Regulations concerning entry and working in “CONFINED SPACE” CSA Z1006-10 and “LOCKOUT/TAGOUT” CSA Z460.**

**Follow CSA Regulations while performing anywork to the Mixer.**

**Follow all safety instructions in your London Machinery Inc. Mixer Manual.**

**Shut off truck engine, lock cab doors, and keep keys in your pocket before entering drum, or performing any work to the Mixer.**

**Place magnetic “DANGER” signs on both cab doors. Failure to do so can result in serious personal injury or death.**

**If you have any questions regarding this notice or require further assistance, call London Machinery Inc. at 800-265-1098.**



### 2.4.1 Pneumatic Lines and Fittings

• **Daily Checks** – The pneumatic lines and fittings are inspected by the operator or skilled service personnel.

Check the pneumatic lines and fittings for leaks, wear, abrasion, damage, and proper clearance. Ensure that all fittings are secure.

### 2.4.2 Coalescing Filter

• **Daily Checks** – The coalescing filter is drained by the operator or skilled service personnel.

1. Locate the drain fitting on the bottom of the coalescing filter (Figure 7, Item 1).
2. Drain the filter by turning the drain fitting counterclockwise.
3. After all moisture and contaminants have drained from the canister, turn the drain fitting clockwise.

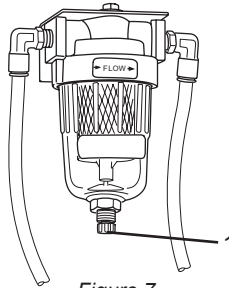


Figure 7

## 2.5 Mechanical System

### SAFETY NOTICE

**Before entering the Mixer drum, read and follow CSA Regulations concerning entry and working in “CONFINED SPACE” CSA Z1006-10 and “LOCKOUT/TAGOUT” CSA Z460.**

**Follow CSA Regulations while performing anywork to the Mixer.**

**Follow all safety instructions in your London Machinery Inc. Mixer Manual.**

**Shut off truck engine, lock cab doors, and keep keys in your pocket before entering drum, or performing any work to the Mixer.**

**Place magnetic “DANGER” signs on both cab doors. Failure to do so can result in serious personal injury or death.**

**If you have any questions regarding this notice or require further assistance, call London Machinery Inc. at 800-265-1098.**

### 2.5.1 Mixer Drums, Pedestals, and Components

• **Daily Checks** – The Mixer components should be inspected by the operator or skilled service personnel.



Inspect the pedestals and all components for binding, damage, and loose or missing parts.

Inspect access ladder(s) and mounting hardware for damage and/or loose or missing hardware.

### 2.5.2 Water Tanks

• **Daily Checks** – The water tank(s) and components should be inspected by the operator or skilled service personnel.

 <b>CAUTION</b>
<p><b>Do not weld on or near the water tank. If the water tank requires structural repair, contact London Machinery Inc. at 800-265-1098. Attempting to repair the water tank will void your warranty. Failure to comply may result in damage to equipment.</b></p>

 <b>WARNING</b>	
	<p><b>Burst hazard.</b></p> <p>Inspect tank daily for damage or leaks.</p> <p>Replace (do not repair) damaged or leaking tank.</p> <p>Drain pressure before driving.</p> <p>Do not weld or repair tank.</p> <p>Never exceed 55 psi (379 kPa) in tank.</p> <p>Bursting tank may injure or kill.</p>
<small>Do not paint over this label. Replace if damaged or lost.</small>	
<small>1459871</small>	

1. Inspect the water tank(s) for leaks, cracks, breaks, or structural damage.
2. Inspect hoses for leaks, cracks, or damage.
3. Inspect sight glass(es) for cracks or damage.
4. Check pump (if equipped) for proper operation.
5. Check breathers (if equipped) to make sure they are free of debris.
6. Check flopper valve for free movement, and make sure it seats properly.
7. Check valves to make sure they move freely.

### 2.5.3 Chute Extensions

- **Daily Checks** – The chute extensions should be inspected by the operator or skilled service personnel.

#### DANGER

Do not repair metal or composite chute extensions.  
Serious personal injury or death could occur.

#### DANGER

Composite chute extensions are flammable. Do not expose to an open flame or a temperature exceeding 220°F (104°C). Burning chute extensions produce toxic smoke/fumes during combustion. Serious personal injury or death could occur.

#### CAUTION

Never clean chute extensions by striking or chiseling. Failure to comply may result in damage to the equipment.

1. Inspect the chute extensions for cracks, breaks, or structural damage. Replace chute(s) if any damage is noted.

### 2.5.4 Chute Assist

- **Daily Checks** – The chute assist should be inspected daily by the operator or skilled service personnel for wear, cable damage, pulley damage, and the correct tension.

#### WARNING

The chute assist has pinch points between the main chute and the fold-over chute. Keep hands away from chute hardware where chutes connect. Keep hands away from the pulley system. Failure to comply may result in serious personal injury or death or damage to equipment.

#### WARNING

Do not stand under the chute while adjusting or testing the tension of the chute assist. Failure to comply may result in serious personal injury or death.

To adjust the tension of the chute assist:

1. Park the truck safely. (Refer to the Operator's Manual supplied by the chassis supplier for all shut-down and parking procedures.)
2. Apply the Lockout/Tagout procedure. (See Applying the Lockout/Tagout Procedure.)
3. Put the fold-over chute in the up/closed position.

4. Loosen the nuts on the tension rod during the adjustment (Figure 7).
5. Use a pair of vice grips or other suitable tool to hold the tension tube and turn the tension rod clockwise to increase the tension or counter-clockwise to reduce the tension (Figure 7).

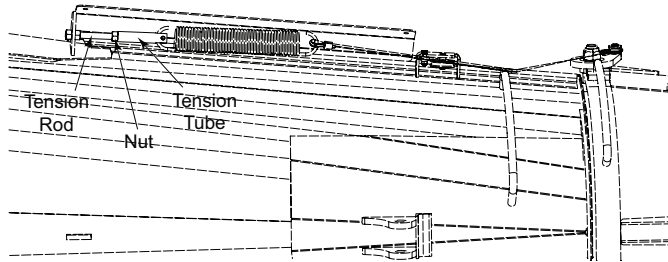


Figure 7

6. Divide the tension adjustment between both sides of the chute assist, making the right side and left side equal.
7. The tension is correct when the chute will hold its position in the three positions illustrated in Figures 8, 9, 10.
8. Once the proper tension is achieved, tighten the nuts to lock the adjustment.
9. Over extension of the spring beyond 22-1/4" will damage the spring.

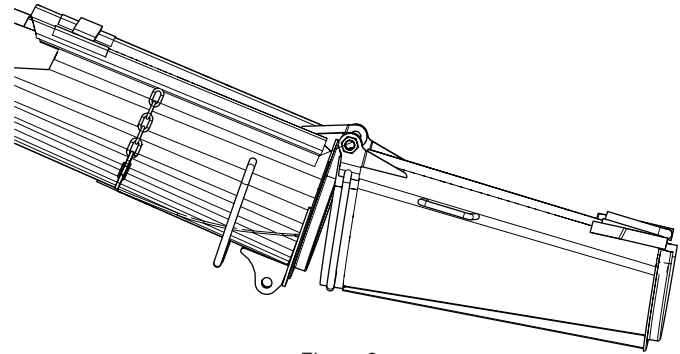


Figure 8

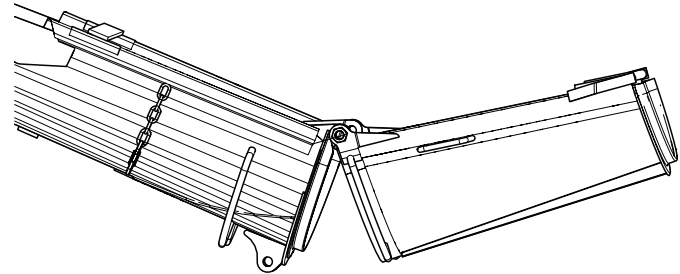


Figure 9

## 2.6 Standard (Steel) Drum

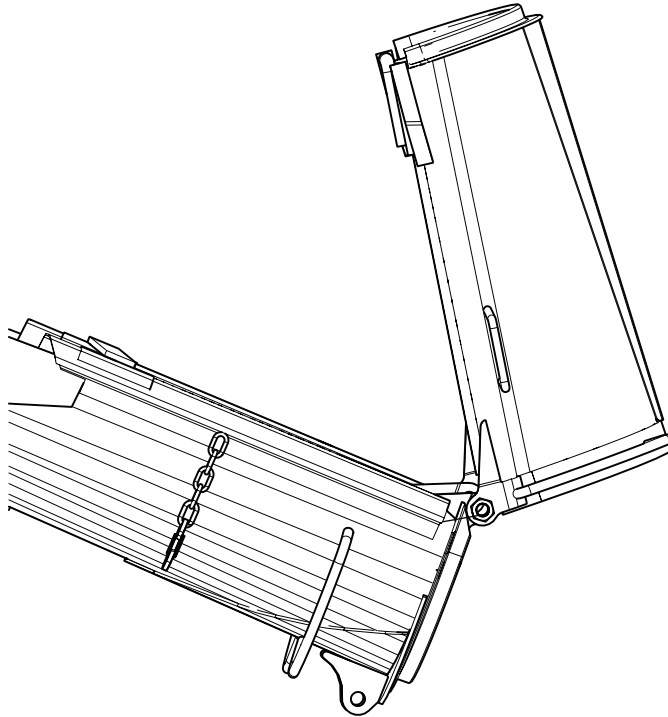


Figure 10

### SAFETY NOTICE

**Before entering the Mixer drum, read and follow CSA Regulations concerning entry and working in “CONFINED SPACE” CSA Z1006-10 and “LOCKOUT/TAGOUT” CSA Z460.**

**Follow CSA Regulations while performing anywork to the Mixer.**

**Follow all safety instructions in your London Machinery Inc. Mixer Manual.**

**Shut off truck engine, lock cab doors, and keep keys in your pocket before entering drum, or performing any work to the Mixer.**

**Place magnetic “DANGER” signs on both cab doors. Failure to do so can result in serious personal injury or death.**

**If you have any questions regarding this notice or require further assistance, call London Machinery Inc. at 800-265-1098.**

### 2.6.1 Standard (Steel) Drum Inspection

- **Daily Checks** – The mixer drum should be inspected by the operator or skilled service personnel.
1. Park the truck safely. (Refer to the Operator's Manual supplied by the chassis supplier for all shut-down and parking procedures.)
  2. Apply the Lockout/Tagout procedure. (See Applying the Lockout/Tagout Procedure.)
  3. Raise the charge hopper.
  4. Inspect the interior of the drum for concrete build-up. Remove concrete as needed. (See Concrete Removal for removal information.)
  5. Check the discharge hopper-to-drip ring clearance. Clearance should be 2 inches (51 mm) between the discharge hopper face and the drip ring, and no more than 1 inch (25 mm) radially around the drip ring.
  6. Check the areas where the discharge hopper and drip ring meet for concrete build-up. Remove concrete as needed.

### **WARNING**

**Crush Hazard—Moving drum can crush you against debouncer. Keep yourself and tools clear of debouncer when drum turns. Drum can snag you before you can react. Failure to follow the warnings may result in serious injury or death.**

7. Check the debouncer-to-drip ring clearance, the clearance should be 3/8 to 1/2 inch (10 to 13 mm) at the closest point.
8. Check the drum flange bolt torque. (Refer to the Service Manual for torque values.) If a bolt turns during this check, that bolt must be removed and replaced with a new Grade 8 bolt.

## NOTE

**Grade 8 bolts can be purchased with or without a pre-applied threadlocker such as Loctite®. There are different torque valves for bolts with and without a pre-applied threadlocker. Use the procedure that applies to your application.**

New Grade 8 Bolt(s) **without** Pre-Applied Threadlocker:

- a. Clean the threads in the drum.
- b. Apply Loctite® 242 (Blue) to the threads of new Grade 8 bolts.
- c. Install and tighten the bolt(s) to the specified torque. (Refer to the Service Manual for torque valve.)

New Grade 8 Bolt(s) **with** Pre-Applied Threadlocker:

- a. Clean the threads in the drum.
  - b. Install and tighten new Grade 8 bolt(s) to the specified torque. (Refer to the Service Manual for torque valve.)
9. Lower charge hopper.
10. Remove the Lockout/Tagout procedure. (See Removing the Lockout/Tagout Procedure.)

## 2.6.2 Concrete Removal

1. Park the truck safely. (Refer to the Operator's Manual supplied by the chassis supplier for all shut-down and parking procedures.)
2. Apply the Lockout/Tagout procedure. (See Applying the Lockout/Tagout Procedure.)
3. Remove drum hatch bolts, and remove the drum hatch.
4. Remove the gasket from the drum hatch.
5. Inspect the gasket; replace as needed.

### CAUTION

**Do not use any sharp-edged tools to remove built-up concrete. If a small air/electric power chisel is used, only blunt-tipped chisel inserts may be used.**

6. Remove built-up concrete using a hand maul. Do not use any sharp-edged tools.

If it becomes necessary to chip-out the drum, use a small air/electric power chisel, using only blunt-tipped chisel inserts.

**CAUTION**

**Remove concrete pieces from the drum by hand. Do not discharge concrete pieces by rotating the drum as they may become lodged between the collector and drum, resulting in severe damage.**

7. Remove concrete pieces from the drum by hand.
8. Reinstall the gasket on the hatch.
9. Install the drum hatch. Loosely install 16 drum hatch bolts.
10. Tighten the drum hatch bolts to 17 lb.ft. (23 N•m) using an alternating (star) pattern.
11. Remove the Lockout/Tagout procedure. (See Removing the Lockout/Tagout Procedure.)

## 2.7 Revolution Drum

**SAFETY NOTICE**

**Before entering the Mixer drum, read and follow CSA Regulations concerning entry and working in “CONFINED SPACE” CSA Z1006-10 and “LOCKOUT/TAGOUT” CSA Z460.**

**Follow CSA Regulations while performing anywork to the Mixer.**

**Follow all safety instructions in your London Machinery Inc. Mixer Manual.**

**Shut off truck engine, lock cab doors, and keep keys in your pocket before entering drum, or performing any work to the Mixer.**

**Place magnetic “DANGER” signs on both cab doors. Failure to do so can result in serious personal injury or death.**

**If you have any questions regarding this notice or require further assistance, call London Machinery Inc. at 800-265-1098.**



### 2.7.1 Revolution Drum Inspection

• **Daily Checks** – The mixer drum should be inspected by the operator or skilled service personnel.

1. Park the truck safely. (Refer to the Operator's Manual supplied by the chassis supplier for all shut-down and parking procedures.)
2. Apply the Lockout/Tagout procedure. (See Applying the Lockout/Tagout Procedure.)
3. Raise the charge hopper.
4. Inspect the interior of the drum for concrete build-up. Remove concrete as needed. (See Concrete Removal for more information.)

#### NOTE

**Report any suspected damage to London Machinery Inc. Service at 800-265-1098.**

5. Inspect the drum exterior for cracks:

Figure 8 shows a small 4-inch (102 mm) crack in the exterior chopper (cosmetic) surface. This crack can occur during chipping operations, or when small pieces of built-up concrete break free and tumble within the drum. No structural damage has occurred.

Figure 9 shows a crack that occurred when a large piece of built-up concrete broke free and tumbled within the

drum. This type of crack will open and close slightly while turning with a load. Structural damage has occurred.

If any damage is noticed, remove the mixer from service until repairs are completed.

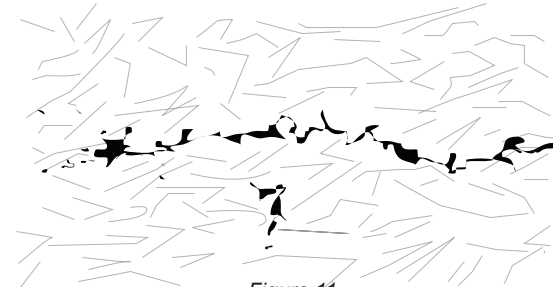


Figure 11

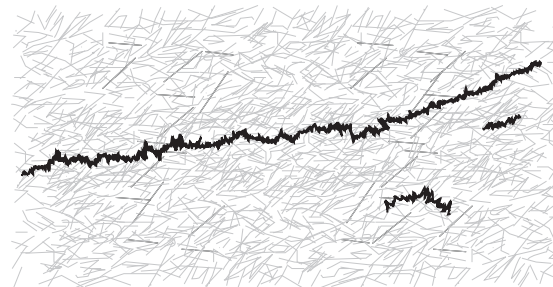


Figure 12

6. Check the discharge hopper-to-drip ring clearance. Clearance should be 2 inches (51 mm) between the discharge hopper face and the drip ring, and no more than 1 inch (25 mm) radially around the drip ring.
7. Check the areas where the discharge hopper and drip ring meet for concrete build-up. Remove concrete as needed.

### **WARNING**

**Crush Hazard - Moving drum can crush you against debouncer. Keep yourself and tools clear of debouncer when drum turns. Drum can snag you before you can react. Failure to follow the warnings may result in serious injury or death.**

8. Check the debouncer-to-drum surface clearance. Clearance should be 1/4 to 1/2 inch (6 to 13 mm) at the closest point.
9. Inspect the drip ring edge for wear and for material build-up under the drip ring surface.
10. Inspect the roller track for separation between the urethane material (Figure 13, Item 1) and the fiberglass drum surface (Figure 13, Item 2).

If the gap is enough to insert a steel rule (Figure 13, Item 3) between the urethane material and the fiberglass drum surface, the condition should be reported to London Machinery Inc. at 800-265-1098.

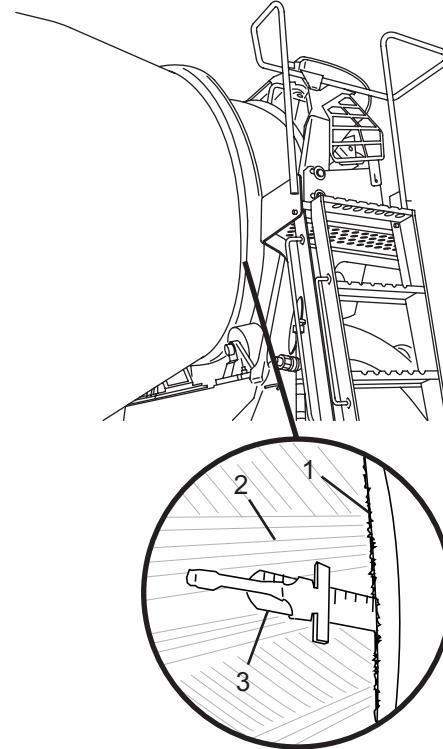


Figure 13

11. Check the drum flange bolt (Figure 14, Item 1) torque. (Refer to the Service Manual for torque values.) If a bolt turns during this check, that bolt must be removed and replaced with a new Grade 8 bolt.

### NOTE

**Grade 8 bolts can be purchased with or without a pre-applied threadlocker such as Loctite®. There are different torque values for bolts with and without a pre-applied threadlocker. Use the procedure that applies to your application.**

New Grade 8 Bolt(s) without Pre-Applied Threadlocker:

- a. Clean the threads in the drum.
- b. Apply Loctite® 242 (Blue) to the threads of the new Grade 8 bolts.
- c. Install and tighten the bolt(s) to the specified torque. (Refer to the Service Manual for torque value.)

New Grade 8 Bolt(s) with Pre-Applied Threadlocker:

- a. Clean the threads in the drum.
- b. Install and tighten the new Grade 8 bolt(s) to the specified torque. (Refer to the Service Manual for torque value.)

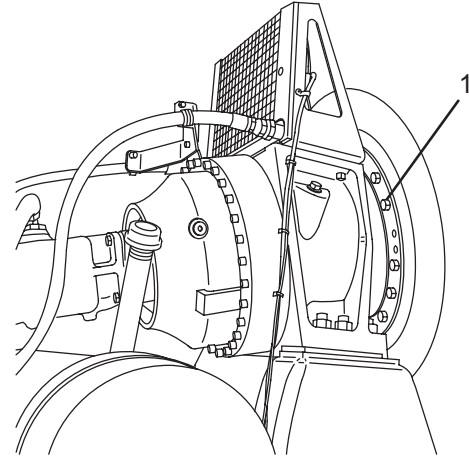


Figure 14

12. Lower charge hopper.
13. Remove the Lockout/Tagout procedure. (See Removing the Lockout/Tagout Procedure.)

### 2.7.2 Concrete Removal

1. Park the truck safely. (Refer to the Operator's Manual supplied by the chassis supplier for all shut-down and parking procedures.)
2. Apply the Lockout/Tagout procedure. (See Applying the Lockout/Tagout Procedure.)
3. Remove the center socket-head cap screw (Figure 15, Item 1), and install a T-bolt to act as a handle when removing the drum hatch (Figure 15, Item 2).
4. Remove 12 drum hatch bolts (Figure 12, Item 3), and remove the drum hatch (Figure 15, Item 2).

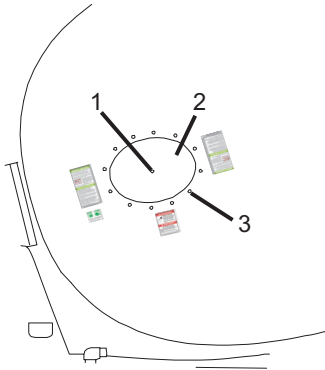


Figure 15

### CAUTION

**Do not use any sharp-edged tools to remove built-up concrete. If a small air/electric powerchisel is used, only blunt-tipped chisel inserts may be used. Avoid striking the urethane liner as this will result in damage to the liner and fiberglass shell.**

### NOTE

**It is common to notice slight cracks in the outer finish of the drum after chipping operations.**

5. Remove built-up concrete using a three-pound hand maul. Do not use any sharp-edged tools.

If it becomes necessary to chip-out the drum, use a small air/electric power chisel, using only blunt-tipped chisel inserts.

While chipping built-up concrete, keep the bit at a slight angle to the drum surface to avoid puncturing the liner.

## CAUTION

**Remove concrete pieces from the drum by hand. Do not discharge concrete pieces by rotating the drum as they may become lodged between the collector and drum, resulting in severe damage.**

6. Remove concrete pieces from the drum by hand.
7. Remove the O-ring seal (Figure 16, Item 2) from the drum hatch (Figure 16, Item 1). Clean the seal using a mild detergent and water. Dry the O-ring before installation.
8. Inspect the O-ring seal; replace as needed.
9. Reinstall the O-ring seal on the hatch.

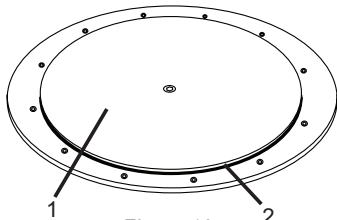


Figure 16

10. Install the drum hatch (Figure 17, Item 2), aligning the arrow (Figure 17, Item 3) on the rear (interior) side of the drum hatch with the arrow (Figure 14, Item 1) in the interior of the hatch opening. Loosely install 12 drum hatch bolts.

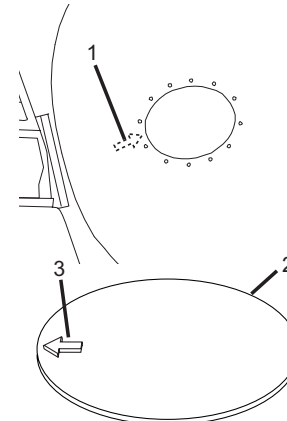


Figure 17

11. Tighten the drum hatch bolts (Item 2) to 17 lb.ft. (23 N•m) using an alternating (star) pattern.

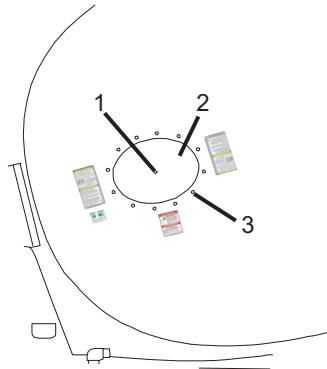


Figure 18

12. Remove the Lockout/Tagout procedure. (See Removing the Lockout/Tagout Procedure.)

## 3.0 Hydraulic System

### 3.1 Hydraulic Oil Requirements

The lubrication requirements for your London Machinery Inc. mixer are common for hydraulic oils. Hydraulic oils differ from other oils. Hydraulic oils have additives to inhibit water, rust, oxidation, and foaming.

## CAUTION

**UTF (Universal Tractor Fluid), TDF (Transmission/Differential Fluid), or ATF (Automatic Transmission Fluid) must not be used in the mixer hydraulic system. Using these hydraulic fluids will cause premature hydrostatic/hydraulic failure, and will void the hydrostatic/hydraulic warranty.**

London Machinery Inc. recommends using a premium hydraulic oil meeting ISO viscosity grade 32.

**Lubrication Type:** Esso Rando HD32

**Alternate Type:** Shell Tellus 32; SAE15W30 API CC;  
CD: SE; SF

**Approximate Capacity:** 56 Litres (14.8 gallons)

Change the hydraulic oil and filter after the initial 50 hours of operation. Second oil and filter change after 500 hours. Subsequent oil and filter changes every 1000 hours.

### 3.2 Hydraulic Oil Reservoir

The hydraulic oil reservoir is part of the front pedestal.

The drain plug (Figure 19, Item 3) is located on the bottom side of the reservoir.

The level sight gauge (Figure 19, Item 2) and fill are located on the side of the reservoir.

A suction hydraulic filter (Figure 19, Item 4) is located between the shut-off valve (Figure 19, Item 5) and hydraulic pump.

Make sure the shut-off valve is fully open and not partially closed.

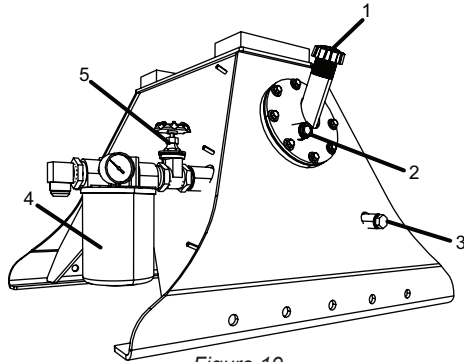


Figure 19

### 3.2.1 Hydraulic Oil Level

The oil should be visible in the bottom half of the sight gauge (Figure 19, Item 2).

### 3.3 Adding Hydraulic Oil

To add hydraulic oil, remove the filler cap (Figure 19, Item 1) and add oil as necessary.

#### NOTE

**When adding hydraulic oil, take every precaution to prevent contaminants from entering the hydraulic system. Cleanliness is extremely important when working with hydraulics.**

#### NOTE

**If it is necessary to add hydraulic oil often or in large quantities, inspect the hydraulic system for leaks and repair before operating the Mixer.**

#### NOTE

**Read vacuum gauge when hydraulic oil is at operating temperature.**

A vacuum type gauge to indicate the vacuum created in the suction line of the system. A well functioning system should operate at approximately -6 in.Hg. The system should never be permitted to operate at -10 in.Hg for any extended period of time.

## 4.0 Optional Equipment

### 4.1 OMNEX Wireless Remote Control

#### 4.1.1 Transmitter/Receiver Link Test

1. Apply power to the receiver (turn truck ignition on).
2. Press the POWER ON button (Figure 20, Item 1) to turn the transmitter on. The Active LED indicator (Figure 20, Item 2) should go into the “fast-flash display” mode.

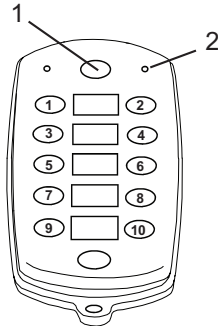


Figure 20

3. Check the receiver (Figure 21). The status indicator LEDs (Figure 21, Item 1) should appear as follows:  
If the LINK LED indicator does not turn green, shop service is required. (See Receiver Locations.)
  - a. ESTOP: ON — Green — Solid
  - b. FAULT: OFF
  - c. LINK: ON — Green — Fast Flash
  - d. STATUS: ON — Green — Solid

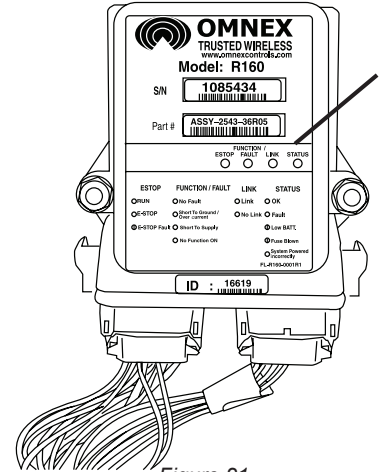


Figure 21



## 5.0 Lubrication

### SAFETY NOTICE

**Before entering the Mixer drum, read and follow CSA Regulations concerning entry and working in “CONFINED SPACE” CSA Z1006-10 and “LOCKOUT/TAGOUT” CSA Z460.**

**Follow CSA Regulations while performing any work to the Mixer.**

**Follow all safety instructions in your London Machinery Inc. Mixer Manual.**

**Shut off truck engine, lock cab doors, and keep keys in your pocket before entering drum, or performing any work to the Mixer.**

**Place magnetic “DANGER” signs on both cab doors. Failure to do so can result in serious personal injury or death.**

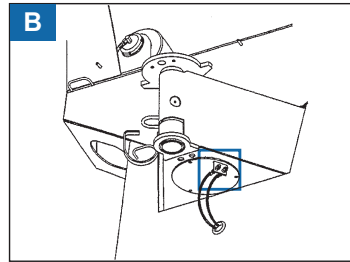
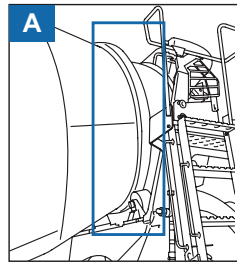
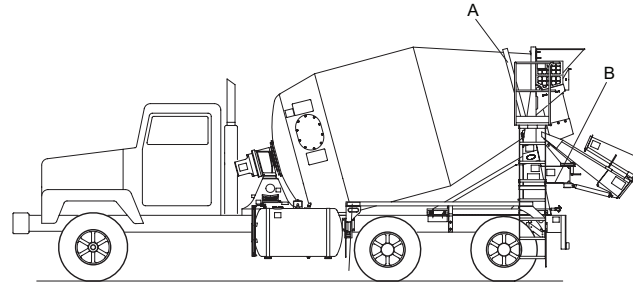
**If you have any questions regarding this notice or require further assistance, call London Machinery Inc. at 800-265-1098.**

## 5.1 Daily Lubrication

Lubricate the following points with a high-quality EP No. Lithium grease.

Daily lubrication intervals are based on a 10-hour day. If the Mixer is operated more hours per day or double shifted, the maintenance interval must be adjusted accordingly.

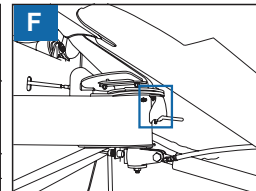
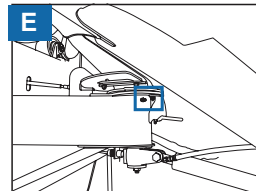
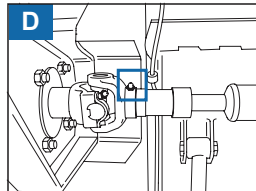
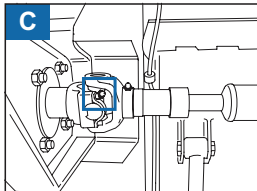
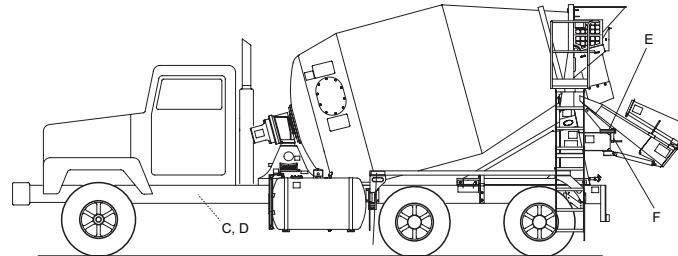
Daily Lubrication Points		Lubricate Daily or Every 10 Hours	
Ref.	Description	No. of Fittings	Comments
A	Drum roller bearings	2	Two remote fittings
B	Drum roller track	-	Brush on



## 5.2 Weekly Lubrication

Lubricate the following points with a high-quality EP No. 2 Lithium grease. Weekly lubrication intervals are based on a 50 hours work week.

Daily Lubrication Points		Lubricate Daily or Every 10 Hours	
Ref.	Description	No. of Fittings	Comments
C	PTO shaft - U-joint	2	Two fittings - front and rear
D	PTO shaft - slip joint	1	
E	Main chute pivot	1	
F	Chute manual lock shaft	-	Apply grease to shaft



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## NOTES





**800-265-1098**