

INTRODUCTION

Congratulations on your choice of a JAY•LOR® Cutter-Mixer-Feeder to complement your operation. This equipment has been designed and manufactured to meet the needs of the discriminating buyer for efficient cutting, mixing and feeding.

Safe, efficient and trouble free operation of your mixer requires that you and anyone else who will be operating or maintaining the machine, read and understand the Safety, Operation, Maintenance and Trouble - Shooting information contained within the Operator's Manual.

This manual covers Models 1300, 1350, 1500, 1600 manufactured by JAY•LOR® Fabricating Inc. Differences between models are explained where appropriate.

Keep this manual readily available for reference and be sure to pass it on to new Operators or Owners. Contact JAY•LOR® Fabricating Inc. if you need assistance or information or for a complete listing of parts and accessories.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout the manual, are as seen from the tractor driver's seat, and facing forward.

CUSTOMER REFERENCE INFORMATION

JAY•LOR® Model Number: _____

JAY•LOR® Serial Number: _____

Scale Indicator Model Number: (IE 615XL / 715) _____

Scale Indicator Serial Number: _____

Remote Scale Indicator Serial Number: _____

Discharge: _____

Date Purchased: _____

Dealer Name: _____

Dealer Tel #: _____

JAY•LOR® Fabricating Inc. Tel: (800) 809-8224, Fax: (519) 787-7053

SAFETY



The Safety Alert Symbol identifies important safety messages on your JAY•LOR® Mixer and in the Operators manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

DANGER:

You are responsible for the SAFE operation and maintenance of your JAY•LOR® Mixer. You must ensure that you, and anyone else who will be operating, maintaining, servicing or working around the Mixer be familiar with the operating and maintenance procedures and related Safety Information contained in this Manual. This manual will take you step-by-step through the operation procedures, and alerts you to all good safety practices that should be adhered to while operating the JAY•LOR® Mixer.

Remember, You are the key to Safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that EVERYONE operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Mixer owners must give operating instructions to their employees before allowing them to operate the machine, and ensure that all operators have read and understood the safety and operating procedures.
- The most important safety device on this equipment is a SAFE operator. It is the Operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow them.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible or serious injury or death.
- Do not modify the equipment in any way. Unauthorized modifications may impair the function and/or safety and could affect the life of the equipment.
- Think SAFETY! Work SAFELY!

Have a first-aid kit available for use should the need arise. Do not allow riders on the machinery. Wear appropriate protective gear. Place all controls in neutral, stop the engine, set park brake, remove ignition key and wait for all moving parts to come to a complete stop before servicing, adjusting, repairing or unplugging machinery.

Review safety related items annually with all personnel who will be operating or maintaining the JAY•LOR® Mixer.

OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety decals before using the equipment.
2. Place all controls in neutral, stop the engine, set park brake, remove ignition key and wait for all moving parts to come to a complete stop before servicing, adjusting, repairing or unplugging. For electrically driven mixers, lock out power supply before servicing, adjusting, repairing, or unplugging.
3. Do not operate when any guards are damaged or removed.
4. Install and secure guards before starting.
5. Keep hands, feet, hair and clothing away from all moving and / or rotating parts.
6. Do not allow riders on the JAY•LOR® Mixer or tractor.
7. Clear the area of all bystanders, especially children, before starting.
8. Do not allow children to play on or around the machine
9. Attach securely to the tractor using a retainer on the drawbar, and a safety chain.
10. Be sure the PTO drive line guard telescopes and rotates freely on the shaft before installation.
11. Stay away from Overhead power lines when loading. Electrocutation can occur without contact.
12. Clean reflectors, SMV signs and lights before transporting.
13. Use hazard flashers on tractor when transporting, and follow all local laws.
14. Do not operate with leaks in the hydraulic system or lubrication system.
15. Before applying pressure to the hydraulic system, make sure all components are tight and that all lines, hoses and couplings are in good condition.
16. Review safety instructions annually.

MAINTENANCE SAFETY

1. Follow ALL the operating, maintenance and safety information in this manual.
2. Place all controls in neutral, stop the engine, set park brake, remove ignition key and wait for all moving parts to come to a complete stop before servicing, adjusting, repairing or unplugging.
3. Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.
4. Support the machine with blocks or safety stands when changing tires or working beneath it.
5. Follow good shop practices:
 - Keep service area clean and dry.
 - Be sure electrical outlets and tools are properly grounded.
 - Use adequate lighting for the job at hand.
6. Use only tools, jacks and hoists of sufficient capacity for the job.
7. Make sure all guards and shields are in place and properly secured when maintenance work is completed.
8. Before applying pressure to the hydraulic system, make sure all lines, fitting, and couplers are tight and in good condition.
9. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
10. Clear the area of all bystanders, especially children, when operating, repairing, maintaining or making adjustments to the machine.

HYDRAULIC SAFETY

1. Make sure that all components in the hydraulic system are kept in good condition and are clean.
2. Relieve pressure before working on the hydraulic system
3. Replace any rusted, worn, cut, abraded, flattened or crimped hoses and metal lines immediately.
4. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tape, clamps, or cements. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly, and create a hazardous and unsafe condition.
5. Wear proper hand and eye protection when searching for a high pressure hydraulic leak. Use a piece of wood or metal as a backstop instead of hands to isolate and identify a leak. Do not attempt to repair a leak, but replace the hose instead.
6. If injured by a concentrated high pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin.
7. Before applying pressure to the system, make sure all components are tight and that lines, hoses and couplings are not damaged.

Think SAFETY! Work SAFELY!

TRANSPORT SAFETY

1. Make sure you are in compliance with all local regulations regarding transporting equipment on public roadways and highways.
2. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors required by law are in place, are clean, and can be seen clearly by overtaking and oncoming traffic.
3. Attach Mixer securely to the tractor using a retainer on the drawbar pin and a safety chain.
4. Do not allow anyone to ride on the JAY•LOR® Mixer or on the tractor during transport.
5. Do not exceed 10 mph (15 kph). Reduce speed on rough roads and surfaces.
6. Always use hazard warning flashers on tractor when transporting, unless prohibited by law.
7. Add extra lights or use pilot vehicles when transporting during times of limited visibility.

STORAGE SAFETY

1. Store the unit in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Store the unit in a dry, level area.
4. Make sure that the hydraulic hoses are placed in the hose holder, and are not laying on the ground.
5. Make sure the implement jack is properly fastened to the unit.

TIRE SAFETY

1. Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death.
2. Do not attempt to mount a tire unless you have the proper equipment and are qualified to do the job.
3. Have a qualified tire dealer or repair service perform required tire maintenance.

SAFETY DECALS

The safety decals are placed on the mixer at the time of manufacture. It is important that all the decals are kept clean and legible at all times. If any decals have become illegible or have been removed, replacements are available through your JAY•LOR® machinery dealer, or from JAY•LOR® Fabricating Inc.

JAY•LOR® Fabricating Inc.

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OPERATION

The JAY•LOR® Cutter-Mixer-Feeder is specifically designed to cut and mix feed ingredients into a total mixed ration (TMR). Many of the features incorporated into this machine are the result of suggestions made by customers like yourself. (At the back of this manual is a suggestion / comments sheet that can be faxed or mailed to JAY•LOR®). Read this manual carefully to learn how to operate the machine safely and how to adjust it to provide maximum efficiency. Following the operating instructions with a proper maintenance program will extend the life of your machinery.

BREAK-IN

After the first several hours of use, it is important to check the wheel nuts and other fasteners, to make sure that they are all tightened properly. (See Torque Spec sheet, Pg 15). Also check to make sure the mixer is properly greased, and the fluid reservoir is filled to the proper level.

PRE-OPERATION CHECKLIST

Efficient and safe operation of the JAY•LOR® Mixer requires that each operator reads and understands all the operating procedures and all related safety precautions outlined in this section.

1. Lubricate the machine as per the schedule in the Service and Maintenance section of the manual.
2. Use only a tractor with adequate power to operate your JAY•LOR® Mixer .
3. Make sure the gearbox oil reservoir is filled to the proper level. (See Figure 1).
4. Check the gearbox. Make sure the drain plugs are properly installed and tightened, and not leaking.
5. Ensure that the machine is properly attached to your tractor. Be sure the retainer is installed in the draw pin, and the safety chain is attached.
6. Check the hydraulic system.
7. Inspect all hydraulic and oil lines, hoses, fittings, and couplers for tightness.
8. Check the tires and make sure they are inflated to the specified pressure.
9. Torque all wheel nuts to 180 ft.lbs.
10. Check for and remove entangled material from the PTO, Driveshaft, Auger, Conveyor and Axles.
11. Check that the PTO Drive line is pinned to the tractor and the guard is chained to the frame.
12. Close and secure all guards.

EQUIPMENT MATCHING

The JAY•LOR® Cutter Mixer Feeder trailer model is designed to be used with Agricultural tractors. To ensure a good performance, the following recommendations regarding minimum equipment size and horse-power should be met:

<u>Model</u>	<u>PTO Horsepower</u>
1300/1350	60
1500	85
1600	90

A loaded machine may weigh as much as 10,000 kg. (22,000 lbs - See Pg 16). An operator must use his own discretion when determining whether the tractor attached is suitable for the terrain. Using a small tractor on a heavy piece of machinery can cause severe injury or death, if the operator loses control of the machinery.

P.T.O. SHAFT INFORMATION

When the Mixer is attached to the tractor, the length of the PTO shaft total length may not exceed 50 ½ inches, on standard shafts. If it does exceed this measurement, the drawbar should be shortened. The P.T.O shaft is not designed to operate at any greater length than specified by the manufacturer, and damage can result. See the attached section, located at the back of this manual, for PTO Shaft maintenance, trouble-shooting, and repair information.

WEIGHING:

There are various scale indicators available for use on your JAY•LOR® Cutter-Mixer-Feeder. The mounting assembly for all Weigh-Tronix scale indicators is the same. When attaching the indicator to the Mixer, be sure that it is securely fastened. The indicator slides down into the mounting bracket, and it is also necessary to use a wire or plastic fastener to secure the indicator to the mounting bracket. In some instances, when transporting the mixer over very rough terrain, the indicator may bounce out of the mounting bracket. For more information, read the Weigh-Tronix® Manual included in this binder.

Depending on the model of JAY•LOR® Cutter Mixer Feeder, the scale indicator has either 3 or 4 weighbar cords that are attached to the outlets on the bottom of the Indicator. These should not be confused with the power supply, which will not attach in the same outlet. The weighbar cords are to be pushed in, and then the tightening ring threaded into place. Make sure that the plugs are free of any moisture and other contaminants, as this may affect the performance of the weighing system. (See Fig. 1)

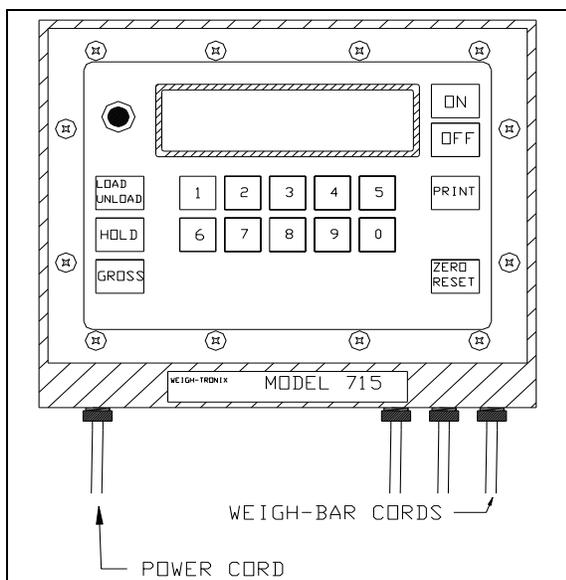


Figure 1 (Model 715 Indicator Shown)

The scale indicator is mounted, on standard models, on the viewing platform of the mixer, and is able to turn to face every direction. Be certain that the indicator is fastened securely, especially when travelling at speeds over 10 km/h, (6 mph), or over uneven surfaces. On standard models, the power cord is to be plugged into the tractor plug, which should be mounted on your tractor, getting its power supply from the tractor's electrical system. This should be a 12 volt, negative ground power supply.

For mixers using a self-contained battery, the tractor plug is to be connected directly to the battery. Be sure to conform to all safety and operational instructions and constraints pertaining to the battery, to avoid injury or death. For 1300 and 1350 models with three point scale systems, it is important that the unit is attached properly to the tractor. Failing to do so may cause damage to the Mixer's weighing system. (see Fig. 2).

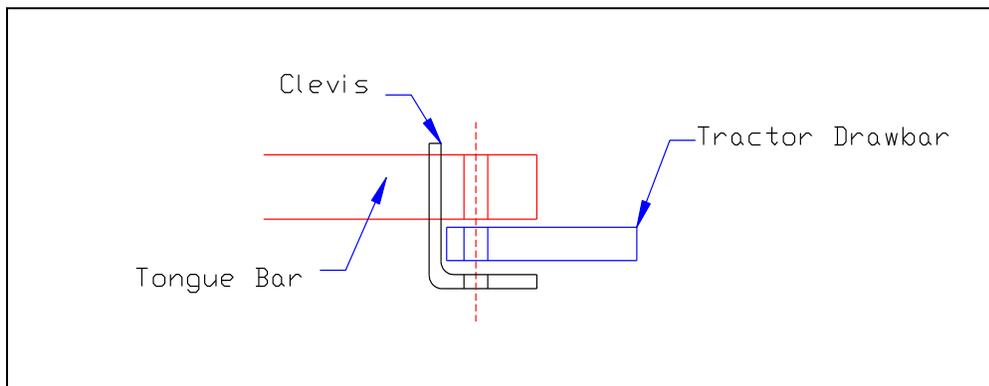


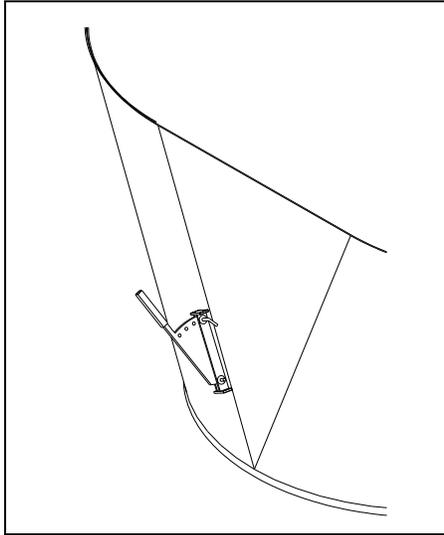
Figure 2

Note: *The weigh-bar must rest on the drawbar, and the clevis is to be mounted underneath for accurate weighing. If the clevis is mounted on top of the drawbar, it will not weigh properly, and damage to the clevis may result.*

NOTE: The scale will be programmed to display the weight in either kilograms or pounds. This is set by the manufacturer and must be ordered to suit. If your scale is not programmed to your preferred units of measurement, please contact your local JAY•LOR® Machinery dealer.

Note: *For complete information on Scale operation and settings, see the attached Weigh-Tronix Users Manual*

The operation of the JAY•LOR® Mixer will vary greatly with the various feeds and climatic conditions. In most instances, "trial and error" is the best method of setting the machine up for a particular commodity to obtain maximum performance. To prevent over-cutting the feed, we suggest to start with the restrictor blades in the out position, and then adjust to obtain the desired coarseness of the mix. The bulkiest and lightest feed should be added first. Once these commodities are partially cut and broken apart, then the fines can be added for mixing purposes. Remember, additional cutting will take place during mixing, so be careful not to over cut. The order in which the secondary ingredients are added is up to the individual user. The type of mix required varies from one operation to the other, and therefore mixing procedures will vary as well.



The Restrictor blades are located on the sides of the machine and come complete with pins that lock the blade in position. On standard units, there are two restrictor blades on the mixer. When completely inserted, the restrictor blades will slow a large bale or mixed feed from moving around the outside of the mixing chamber, allowing the knives to perform aggressive cutting. The restrictor blades may be retracted to the out position, to lessen the cutting action. Again, the positions of the restrictor blades will be based on user preferences. (See Figure # 3)

Figure 3: (Cut-a-way view of Mixing chamber)

Always add commodities to the mixer *while the auger is turning*. Maximum operating speed is 540 RPM, PTO speed (Approx. 41 RPM @ Auger). Starting the auger from a standstill with a full load in the drum places additional stress on the drive train. Even though it is designed to handle this stress, it may affect the life span of the machine. If however, due to circumstances, it is required to restart the machine while loaded, retract the restrictor blades all the way in order to decrease starting torque as much as possible.

Note: *Restarting the Mixer while it is loaded places additional strain on both the Tractor and the mixer.*

Should excessive loads be placed on the drivetrain, the shear bolt will rupture. This is a safety feature, however, do not depend on this as the maximum load indicator.

If the shear bolt does break, it must be replaced it with the correct bolt specified by the manufacturer. (See page 14)

While loading the mixer, be certain that no bucket or loading device comes into contact with the rotating auger inside the mixing chamber. This may cause serious damage to the mixer and / or the loader, and may cause injury or death to the operator.

CONVEYOR:

The conveyor must be greased on a regular basis, as per the Maintenance schedule. When unloading the mixer, activate the conveyor before opening the discharge door. The speed of the conveyor can be adjusted to suit unloading requirements, by adjusting the flow control on the tractor.

The conveyor has an adjustment to tighten or loosen the chain. There is an adjuster located on both sides of the conveyor, opposite the hydraulic motor. Use wrenches to tighten or loosen the tension on the conveyor chain.

DUAL DISCHARGE

On mixers equipped with dual side unloading, the conveyor will unload on both sides of the mixer. The conveyor is operated using the controls on the tractor, for left and right discharge. (The conveyor will reverse from its direction of discharge, when the remote is moved to the opposite position).

RIGHT / LEFT DISCHARGE

Mixers that are equipped with right or left discharge have a section of the conveyor that can be raised and lowered. Depending on the options on your Mixer, raising and lowering the conveyor can be done hydraulically or manually.

For models equipped with a manual lift, the conveyor must be stopped in order to raise and lower it. In order to raise or lower the conveyor, it must be lifted slightly, so the pin in the support arm can be removed. After raising or lowering the extension to the desired height, simply insert the pin in the nearest position. Be sure to completely insert the cotter pin in the support Pin, as serious damage, injury or death can result if the conveyor were to drop suddenly.

It may be necessary, in order to completely empty the mixer of all commodities, to turn the auger at the fastest speed. This will propel the feed that is resting on the auger off the flighting, and allow the auger to unload this.

For the models equipped with hydraulic discharge lift option,, the conveyor must be stopped and the selector valve activated. To activate the selector valve, simply pull the attached rope. When the rope is pulled, the hydraulics can be used to raise and lower the conveyor. When the conveyor reaches the desired position, release the rope, and the conveyor will begin the unload function. When lowering the conveyor, make sure that there are no obstacles beneath the conveyor that could cause damage or be damaged when the conveyor is lowered.

It may be necessary, in order to completely empty the mixer of all commodities, to turn the auger at the fastest speed. This will propel the feed that is resting on the auger off the flighting, and allow the auger to unload this.

CENTER-SIDE DISCHARGE:

Models equipped with a “Center-side” discharge are equipped with a door located on either the left or right side of the mixing chamber. To unload the mixer, open the door using the tractors’ hydraulic controls, while the auger is turning, and the auger will propel the feed out of the mixing chamber.

Make sure there is no personnel near the door while the mixer is in operation, or if the tractor is running. Severe injury or death will result if anyone reaches in the open door while the mixer is in operation.

It may be necessary, in order to completely empty the mixer of all commodities, to turn the auger at the fastest speed. This will propel the feed that is resting on the auger off the flighting, and allow the auger to unload this.

GEARBOX LUBRICATION

The oil reservoir shown in Fig. 1 is constructed using an acrylic body. This is a very durable material, which is able to withstand severe impact, without sustaining damage. However, if the reservoir is damaged, it must be replaced with an approved reservoir, or components, recommended by the manufacturer. If the reservoir sustains any damage, call your JAY•LOR® dealer immediately.

The reservoir has decals on it, showing the maximum and minimum fluid levels, under normal operating conditions. At no time is the fluid level to be lower than the minimum recommended level, as damage to the gearbox may occur. If the fluid level is higher than the maximum level, the oil may overflow the reservoir, and cause fluid loss.

The Gearbox on your JAY•LOR® Cutter-Mixer-Feeder uses synthetic oil as its lubricant. The oil reservoir located on the left side of your mixer contains the lubricant for the gearbox. The oil has colorant added, which makes the fluid level more visible in the reservoir. There are maximum and minimum oil level decals on your reservoir. (See Fig. 4). It is important that the oil level in the reservoir remains between the maximum and minimum oil levels, as indicated. If it is too low, the gearbox will not be sufficiently lubricated. If it is above the maximum level, spillage may occur. The oil in the gearbox may expand and contract due to temperature changes, whether from operating the mixer or changes in ambient temperature. It is recommended to check the oil level in the reservoir every 8 hours of operation.

Note: *The oil level in the reservoir should always be between the Maximum and Minimum indicated levels.*

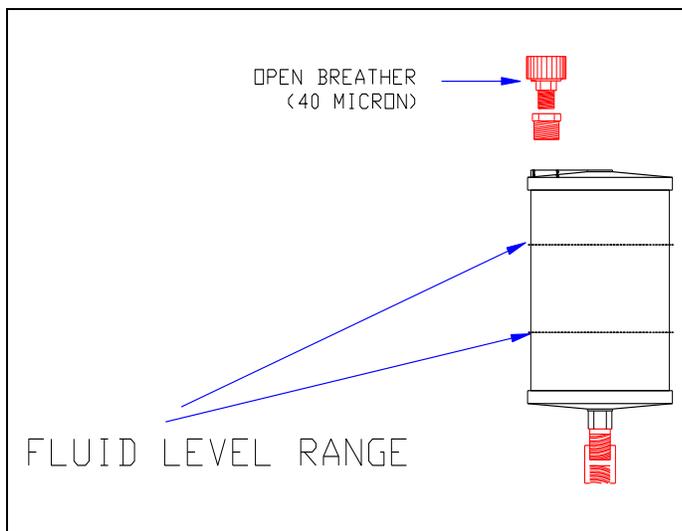


Figure 4 (Oil Reservoir)

The oil reservoir has a filter/breather located on the top, which must be attached to the reservoir at all times. This breather is removable, to allow filling of the reservoir. If the filter/breather becomes contaminated, remove the breather, and clean it using a mild detergent). This breather can be separated into 3 sections, for complete cleaning (See Fig. 5). If the breather is damaged or needs replacing, contact your JAY•LOR® dealer. If any commodities are dumped on the reservoir, it should be cleaned immediately, and the breather checked, to ensure that air can freely pass through it. (If ever spraying water to clean the mixer, protect the breather and reservoir) If it is plugged, clean it properly, as outlined above.

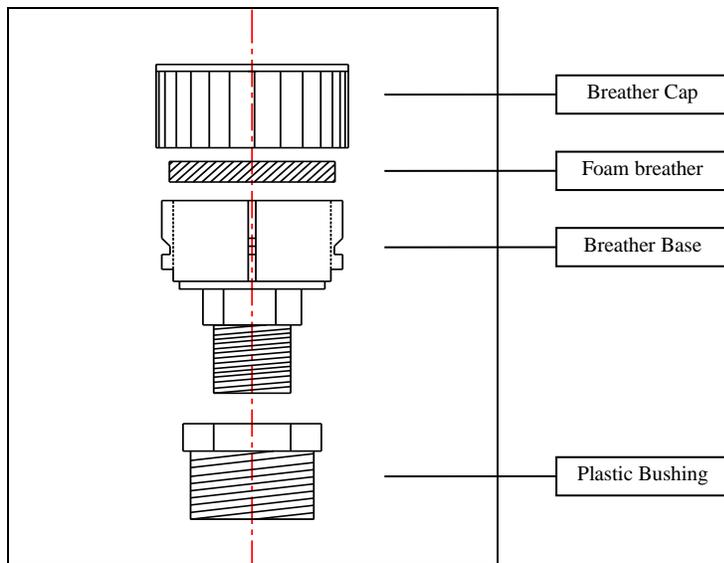


Figure 5 (Filter breather and Plastic Bushing - exploded view)

Note: *Never operate your JAY-LOR Mixer if the breather is not properly attached or is damaged.*

Twice annually, or every 200 hours of operation, whichever comes first, it is recommended to remove the bottom plug, located near the back of the gearbox. (See Fig 6). Use a rubber plug to stop the oil from flowing out of the gearbox while the bottom plug is removed.

This is a magnetic plug, designed to attract any metal particles that are present in the oil. If the plug has metal filings stuck to it, or any other particles are found in the oil, the gearbox should be drained into a clean container, and refilled with new oil. As well, contact your JAY•LOR® Machinery dealer immediately.

In addition to checking the oil, inspect the exterior of the gearbox for signs of leakage. The plugs that are visible on the gearbox should be checked, to make sure they are properly tightened. If signs of oil are found on the casing of the gearbox, there may be a leak.

If signs of leakage are present, contact your JAY-LOR Machinery Dealer immediately.

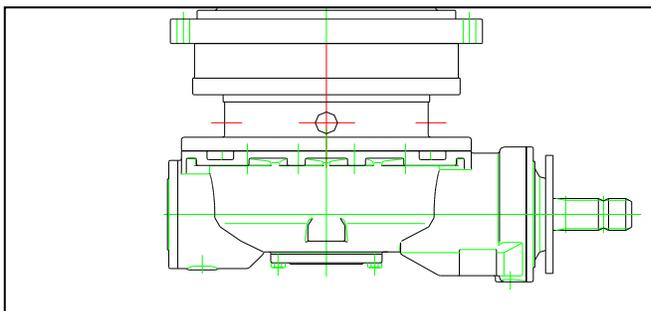


Figure 6

REFILLING GEARBOX

JAY•LOR® Fabricating Inc. recommends that the following procedure be followed, when re-filling the gearbox:

Remove the filler breather from the top of the reservoir. The filler breather is attached to a bushing, which can also be removed. Using a funnel, pour the proper synthetic oil into the reservoir, and allow gravity to feed the oil into the gearbox. This process must be repeated until the oil level in the reservoir stays at the recommended operating level. As the oil will flow slowly, this process may take up to 24 hours to fill a completely empty gearbox.

The gearbox and reservoir should hold approximately 22 litres of oil. (5.75 US Gallons)

It is also possible to pump some oil into the gearbox, to speed up the re-filling process.

Remove the hydraulic hose that attaches to the bottom of the reservoir, and attach your pump. When you have approximately 15 litres (4.0 US Gallons) pumped into the line, remove the pump, and re-attach it to the reservoir. The last several litres should be added to the reservoir using a funnel, and gravity fed, until the oil in the reservoir stays at the recommended operating level.

Note: *When pumping the oil, do not exceed 48.2 KpA's of pressure (7 psi).*

If, for any reason, the oil level in the reservoir does not stay at the recommended level, and oil must be added on a regular basis, contact your JAY•LOR® Equipment Dealer.

GREASE LOCATIONS

Your JAY•LOR® Cutter-Mixer-Feeder has several locations that require grease on a regular basis. On all 1300, 1350, 1500, and 1600 models, there is a grease nipple located on the left side of the mixer, mounted to the mixing chamber, beside the oil reservoir. **This should be greased 3 pumps every 10 hours of operation.** If this is not greased on a regular basis, damage to the driveline will result. If this grease fitting ever becomes plugged or severed, contact your JAY•LOR® dealer.

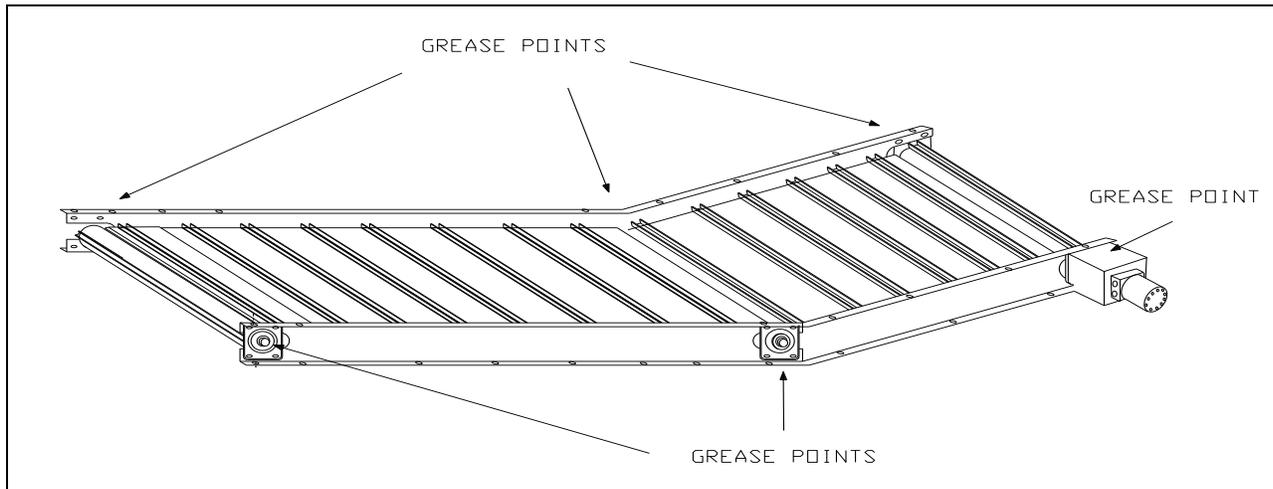


Figure 7 - Conveyor Grease Locations

Figure 7 shows the grease locations for a conveyor with an adjustable extension. A flat conveyor only has the grease locations shown at both ends of the conveyor. The conveyor bearings should be greased every 8 hours of operation.

The wheels on your Mixer have grease fittings in the dust caps. These should be greased every 50 hours, more if operating in very dry, dusty conditions, or very muddy conditions.

As outlined in the Suggested Maintenance Schedule, the PTO should be greased according to the manufacturers specifications. (See attached PTO Information for proper maintenance procedures).

MAINTENANCE

To ensure the long life for which the mixer was designed, it is essential that the proper maintenance procedures are followed. The following chart indicates the manufacturer's recommended lubrication / maintenance schedule. Where both a time frame and hours of use are given, use whichever comes first.

SUGGESTED MAINTENANCE SCHEDULE

DESCRIPTION	TIME	Hours of Operation	Special Instructions
PTO Shaft Universals	12 times annually	8 hours	Heavy Duty multi-purpose grease
Drive Shaft Bearings	12 times annually	8 hours	Heavy Duty multi-purpose grease
Conveyor Bearings	12 times annually	8 hours	Heavy Duty multi-purpose grease
Auger Bearing Tower	12 times annually	8 hours	Heavy Duty multi-purpose grease
Wheel Bearings	Once annually	50 hours	Heavy Duty multi-purpose grease
Planetary Gearbox	Upon receipt of equipment, then 12 times annually	8 hours	Synthetic Oil: Esso Terrestic SHP150 or Mobil SHC-629 Only
Wheel nuts	Upon receipt of equipment, then Once annually	50 hours	Tighten all wheel nuts (180 ft.lbs)
Tire Pressure	Upon receipt of equipment, then 6 times annually	25 hours	Inflate to 45 lbs
Shear Bolt	When broken		10mm x 60mm x 10.9
Sharpen Blades *	When required		Use multi-purpose grinder
Tongue bar bolts	Once annually	50 hrs	175 ft.lbs

The PTO should be greased according to the manufacturers specifications. (See attached PTO Information for proper maintenance procedures).

* The method used to sharpen the cutter blades may vary, depending on the model. Please contact your dealer for more information.

BOLT TORQUE

The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in the chart unless otherwise noted. Check tightness of bolt periodically, using the bolt torque chart as a guide. Replace hardware with the same strength bolt.

ENGLISH TORQUE SPECIFICATIONS.

Bolt Diameter	Bolt Torque					
	SAE 2		SAE 5		SAE 8	
A	N.m.	(lb-ft)	N.m.	(lb-ft)	N.m.	(lb-ft)
¼"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
2"	61	45	110	80	155	115
9/16"	95	70	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970

METRIC TORQUE SPECIFICATIONS

Bolt Diameter	Bolt Torque			
	8.8		10.9	
A	N.m.	(lb-ft)	N.m.	(lb-ft)
M3	.5	.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710

Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

Grade designations of bolts and capscrews are identified by their head markings.

P.T.O. DRIVE SHAFT

The P.T.O. shaft used for power transmissions between the power supply and the machine driven must not be used:

- without the guards supplied by EG S.p.A.
- with only partial protection
- with damaged guards
- without the anti-rotation chains correctly attached so as to permit the attached maximum angle of the P.T.O shaft without compressing the guard.

If the shear bolt has been broken, replace the bolt only with a new one of the same class and size. Do not use superior or inferior class bolts.

- * For complete Trouble-Shooting information / Maintenance procedures on P.T.O Drive-shaft Maintenance, see the attached service bulletin.

SPECIFICATIONS

MODEL	1300	1350	1500	1600
Scale (Weightronix)	3 point	3 point	4 point	4 point
Tires:	12.5 x 16	12.5 x 16	12.5 x 16	12.5 x 16
PTO Speed	540	540	540	540

- * Weight of the machine dependent on options required.
- * Due to continual product development, specifications are subject to change without notice.