# REG COX FEEDMIXERS LTD.

CATTLELAC

FEEDMIXERS

# Operator's Manual


**REG COX FEEDMIXERS LTD**

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# WARRANTY

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The company, Cattlelac Feedmixers, warrants it's products to the original consumer (end user) against defective material or workmanship and agrees to repair or replace without charge, F.O.B. Red Deer, Alberta, Canada, any parts proving defective under normal use and service within one year from date of purchase by the end user. The company will make no allowance for repairs or alterations unless they are authorized in writing by the Company. Any claims for defective material or workmanship must be made within one year from the date of purchase by the end user. This warranty limits the Company's liability solely to the cost of the replacement parts F.O.B. factory, or at the option of the Company, to the repair of damaged parts. The Company shall not be liable for any consequential losses such as lost time, lost profits, personal injury or death, property damage, or any other loss arising out of a claimed failure or defect of Cattlelac Equipment. The Company is the sole judge as to whether or not a part is defective. Claims for alleged defective parts which have been altered or reworked by someone other than the Company will not be considered, unless such work has been authorized in writing by the Company. Since there is no means of preventing materials in products from being stressed beyond the limit of endurance, any claims for failures which have resulted from overload or abnormal conditions will not be accepted by the company. Component parts or equipment manufactured by third parties are not covered under this warranty, except to the extent that they may be covered by the original manufacturer. The Company does not assume responsibility for shipping or travel expenses related to any repairs or replacements. There are no other warranties or guarantees expressed or implied by the Company except as herein expressly set forth.

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# SAFETY GUIDELINES

## General Safety:

Don't become a farm statistic. Practice safety every time you work With machinery. It is your responsibility as an owner, supervisor, or Operator to know all safety instructions, safety precautions, and Potential hazards to this equipment.

Operating instructions must be given to everyone using this feed Mixer at the time of initial use, and at least annually thereafter in\ Accordance with OSHA regulations 1928.57

Failure to read this manual and/or non-compliance with instructions Is a misuse of equipment. If any questions arise, contact us at our Head Office in Red Deer.

The complete observance of one simple rule would prevent many Thousands of serious injuries each year. That rule is:

"NEVER ATTEMPT TO CLEAN, OIL, OR ADJUST A MACHINE WHILE IN OPERATION" - National Safety Council

## Operation Safety:

For maximum safety:

- keep children away from the feed mixer area.
- always have another person nearby who can shut down the feedmixer in case of accident.
- Never operate the mixer with any safety shield removed.
- keep clothing, body and hair away from all moving parts.
- make sure everyone is clear before operating or moving the feed mixer.
- wear hearing protection when using the feed mixer.
- be sure PTO shaft is securely attached to tractor and jackshaft.
- before starting tractor, be sure PTO is disengaged.
- never use the PTO without the rotating shield in good working order.
- shut off and disconnect all power to the feed mixer before servicing, cleaning, or adjusting.

## SAFETY cont.

**PTO Safety:**

For maximum PTO safety, observe the following:

- keep PTO guards and shields in place and in good working order.
- never exceed normal operating speeds of 540 RPM.
- do not exceed the recommended maximum extended length or angularity of the PTO shaft.
- keep clothing, hair, and body away from PTO shaft during operation.
- be certain that the PTO shaft is securely attached to the tractor and the feedmixer.
- always check tires on power source and the feed mixer before operating.
- when operating PTO equipment and truck mounted mixers, apply the park brake and block the wheels.

**Maintenance Safety:**

When maintaining the feed mixer, observe the following precautions:

- shut down the tractor or truck power supply and wait for all machine movement to stop before cleaning, adjusting, servicing, or unclogging the feed mixer.
- after maintenance is completed, replace all shields and safety devices.
- LOCKOUT: When leaving work area, always remove ignition key from the tractor or truck. If this is not possible, - remove the PTO shaft.

**Transport Safety:**

When transporting the feed mixer:

- attach a SMV (Slow Moving Vehicle) sign to the feed mixer if local laws require it.
- be certain hitch pin is in place and is of the type that will not permit separation of the feed mixer from the towing vehicle. Make sure the safety chain is properly attached.
- before moving the feed mixer, be sure the area around the machine is clear of obstructions and personnel.
- do not permit any passengers on the feed mixer.

# MAINTENANCE

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**After initial use, be sure to check hardware tightness and that shields are in proper working order.**

**Lubrication Specifiactions:**

**Use a good grade 1 or 2 lithium base grease for:**
- **drive line bearings**
- **splined drive line yokes**
- **PTO shaft**
- **discharge auger bearings**
- **main auger bearings**

**Use Ep 80 - 90 gear oil for:**
- **planetary gear box**

**Use SAE 20 to SAE 30 non-detergent motor oil for:**
- **drive chain, rear drive**
- **drive chain, discharge**

**Use Dextron #3 , or equivalent, for hydraulic oil**

## Maintenance Schedule:

The following schedule is designed for normal conditions. If the feed mixer is operating in adverse conditions it may be necessary to increase frequency of servicing.

| Check & Inspect the Following | 8 hrs | 50 hrs | 1000 hrs |
|---|---|---|---|
| *Cattlelac Feedmixers* | | | |
| PTO Bearings, Slides, Crosses Lubrication | | * X | |
| Planetary & Reverser Gearbox Oil Level | | X | |
| Planetary & Reverser Gearbox Drain & Refill | | | ** X |
| Oil Bath Level | | X | |
| Oil Bath Drain & Refill | | | **X |
| Main Auger Bearing Lubrication | | * X | |
| Chain, Sprockets for Wear & Adjustment | | X | |
| GTD Belt for Wear or Damage | | X | |
| GTD Bearing Lubrication | | X | |
| *Discharge System* | | | |
| Chain, Sprockets, & Bearings for Wear & Adj. | | X | |
| Bearing Lubrications | | * X | |
| Spout Hinge Lubrication | | * X | |
| Drain Holes Cleared | X | | |
| *Hydraulic System* | | | |
| Hydraulic Fluid | X | | |
| Hydraulic Fluid Drain & Refill | | | ** X |
| Leaks in System | X | | |
| Hydraulic Filter Change | | | ** X |

* In severe conditions these items may require daily service.

** Drain and refill after the first 500 hours

## Truck Mounted Drives:

GTD (Greater Torque Drives)

There are four bearings located on the GTD which should be lubricated. When lubricating these bearings consult the procedures noted in the Grease-Bearing section.

The unit incorporates a notched drive belt which should be checked for wear or damage. The belt is designed to operate in an open environment therefore the bottom of the unit is open to allow for inspection of the belt without removing the shield. With the mixer empty, the transmission in neutral, the wheels blocked, and the engine off, you can rotate the input shaft by hand and visually check the belt for damage. Replace the belt if it shows any cuts or other damage.

Grease-bearings

For the best results the grease should be pumped into the bearings slowly until a very slight bead of grease forms around the bearing seals on the shaft. This bead, in addition to acting as an indication of adequate relubrication, provides additional protection against the entry of foreign matter. To prevent premature bearing failure always insure the grease zerk, grease gun end and the grease is clean and free of dirt, grit, paint, or foreign matter.

Planetary Gearbox

To check the oil in the gearbox remove the check plug(s) located on the side of the gearbox. Add appropriate oil until it reaches the level of the check plug.

To drain the oil remove the drain plug(s) located on the bottom of the gearbox. Always replace the drain plug(s) and tighten immediately after the oil is drained. Refill per the above instructions with the correct oil found in the lubrication specification chart.

Truck Gearbox Drives

To check the oil in the gearbox remove the check plug located on the front side of the gearbox approximately 5" up from the bottom of the box. The oil should be at this level. To drain remove the drain plug located on the bottom of the gearbox and replace plug when finished. Refill with the correct oil, found in the lubrication specification chart, to the proper level.

## MAINTENANCE cont.

**Discharge Maintenance:**

The hydraulic motor drives the discharge augers through the use of a drive chain. Be sure to oil the chain regularly.

The two auger bearings can be greased by filling the bearing housings with grease. This will keep the bearings free from water and contamination as well as lubricated. In severe applications, it may be necessary to grease these bearings on a daily basis for lubrication and protection from moisture.

It is necessary to keep water from accumulating in the bottom of the discharge. To clear water out, open the clean out slides or holes at the bottom of the discharge to allow water to run out.

**Chain Replacement:**

Proper inspection of the roller chain is crucial to the life of other components on the feed mixer. If a chain breaks, other parts can sustain damage too. The chain should be inspected for elongation, metal fatigue, and adjustment.

Before installing a new chain, inspect the teeth on each sprocket for wear. If the sprockets are hooked, they should be replaced to ensure full performance from the new chain.

Proper tension is essential when installing the new chain. Tight chains cause increased load on the chain, sprockets and shaft bearings. A slack chain produces vibration which may result in excessive chain wear, noise and shock loading.

**Sprocket Wear:**

Check for these common sprocket problems which require replacement:

- side wear due to improper alignment.
- tooth wear indicated by hooking or pointing
- broken teeth
- cracks
- wobbling of sprocket on shaft.

## Rear Drive Compartment:

The rear drive compartment encloses the chains and sprockets used to drive the mixing augers. The compartment serves as a seal against contaminants that cause wear. It also provides the lubrication of the chains and sprockets. This compartment may be used as a self lubricating oil bath, or manual lubrication may be chosen. Listed below are maintenance procedures for both methods. Whichever method is used, it is important to keep the door sealed at all times.

Manual Oil Method

If the manual method is chosen, lubrication should follow the maintenance schedule. The feed mixer must be stopped and oil applied using an oil can or oil brush. Apply sufficient oil so that the chain is completely covered. Then close the doors and operate the unit for five minutes to work the oil in.

Oil Bath Method

If the oil bath method is chosen, be sure that the oil drain plug is installed in the bottom of the oil sump, and that the enclosure is clear of contaminants. Fill the enclosure with oil to the center line of the lowest chain. To check the level of the oil, be sure the feedmixer is stopped before opening the door.

Door Adjustment

The doors have numerous adjustable clamps that hold the door and door seal tight against the frame. The door clamps should be adjusted evenly so that they hold the door and door seal up to the frame plus a preload of 3/16 inch. If the seal becomes damaged or compressed to the point where it will not seal, it should be replaced and the doors readjusted.

## Auger Bearing Greasing:

The rear auger drive bearings have a grease zerk bank located on either side of the rear oil tank assembly.

The front auger bearings are located on the front of each unit and are greased individually.

# OPERATION

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**Loading the Feed Mixer:**

Position the feed mixer on level ground and set the parking brake to prevent any movement. Ensure that the discharge door is closed before loading. Engage the PTO at idle and then gradually increase to the rated speed of 540 RPM. For tractors and for truck mounts approximately 14-1600 RPM engine.

Avoid striking the mixing augers with the loading device when loading. For best mixing results, load grain first. If liquid is to be added be sure to add it last. Always load the material to the front of the feed mixer to allow for a better mixing action.

Avoid loading any foreign objects such as rocks and tires.

The most efficient mixing takes place when the feed mixer is between 40% and 90% full. Below this range the upper augers are not utilized, and above this range, the mixture will be forced over the sides.

Mixing time will depend on the product being mixed. Actual use will determine the time required for various combinations. When the desired level of mixing is attained, the mixing augers should be stopped until the unloading process.

**CAUTION:**

When loading manually, NEVER POSITION YOURSELF ABOVE THE SIDE OF THE MIXER. This may result in your falling into the Mixing Chamber!

NEVER USE YOUR HANDS TO THROW MATERIAL INTO THE MIXER You may become entangled in hay or twine and be pulled into the Mixer. Always use a fork or shovel when manually filling.

Hay may be loaded loose preferably pre-processed to a maximum length of 4-6 inches. Never put a whole round bale into the mixer. Always be sure that twine or wire is removed from the bales before loading, as this prevents it from being wrapped around the augers. Excessive amounts of twine can effect torque on augers and lead to premature failure.

**Unloading the Feed Mixer:**

To unload the feed mixer, the mixing augers must be in operation to move the feed to the discharge door.

To begin feeding, lower the discharge chute, open the discharge door to the desired height, and engage the discharge augers.

To stop feeding one pen and go to the next, simply close the discharge door, raise the chute, and stop the PTO.

To stop the unloading process completely, close the discharge door, lift the chute to full upright position, and shut PTO off.

**Storage:**

Never leave feed ration or water in the mixer or the discharge. Feed and water are corrosive and will cause metal deterioration. Also sub-zero temperatures can cause wet feed to swell and freeze, damaging the mixer and locking the discharge augers and stopping them from rotating.

The unit should be completely emptied and cleaned prior to storage. At the rear of the feed mixer are two drain plugs that can be removed for cleaning the feed mixer. The discharge also has drain holes for cleaning.