AccuMix™

AMX850T
AMX690T

Operator's Manual

www.highlinemfg.com

Highline MANUFACTURING
A DIVISION OF BOURGAULT INDUSTRIES LTD.

E26111_A

AccuMix™
AMX850T
AMX690T

Operator's Manual

AMX850T - Starting from Serial No: AM4588201

AMX690T - Starting from Serial No: AM4589501

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Highline Team Message

Congratulations on your purchase of the AccuMix AMX850T or AMX690T *manufactured by Highline Manufacturing. We are excited about you feeding with this technically advanced feed mixer. You will find flexibility and maneuverability of operation with this product.*

This Operator Manual has been prepared to provide information necessary for the safe and efficient operation of your AccuMix AMX850T or AMX690T. In the manual you will find safety procedures, maintenance routines and detailed operational instructions. We urge you to read through this publication carefully and refer to it as needed. This will help assure you safe and trouble-free operation of your AccuMix AMX850T or AMX690T.

If you find that you require information not covered in this manual, please feel free to consult your local dealer. Your dealer is always able to contact Highline for this technical information.

Highline Manufacturing thanks and congratulates you for selecting the AccuMix AMX850T or AMX690T as your machine of choice.

Highline Manufacturing

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GENERAL DESCRIPTION OF THE ACCUMIX AMX850T/AMX690T

The AccuMix AMX850T or AMX690T is a towed total mixed ration machine. It is intended to cut and mix various types of feed products to prepare a mixed ration for feeding livestock.

The AMX850T/AMX690T is available with a single axle and single tires, or a walking beam axle with dual tires.

The power for the mixing screws is provided by a driveline powered by the tractor. The tractor hydraulics are used for opening and closing the front tub door and operating the feed unloading conveyor. The tractor hydraulics also control the right-hand (RH) or left-hand (LH) hydraulic folding conveyor, or the flat bidirectional conveyor, whichever is present. An electric selector valve may be required in order to divert the hydraulic flow between the unload conveyor drive motor and the conveyor lift/shift cylinder in the event that 3 circuits are not available. If an electric selector valve is used, by default, the hydraulic flow will be directed to the drive motor. When the valve is energized, the hydraulic flow will be diverted to the lift/shift cylinder.

The operator drives and controls the machine from the tractor cab. The feed materials are loaded into the mixing tub by means of a pay loader or other loading equipment.

The adding of additives can be done by the operator by standing on the platform and loading additives into the tub.

There are 2 mixing screws that perform cutting and mixing of the materials in the tub. The speed of the mixing screws is adjusted by the operator in the cab by adjusting the PTO speed. The mixing screws are powered by a driveline from the tractor. There is the option of a manual shift 2-speed gearbox as well as a 2-speed power shift gearbox. Both options allow for a reduction in screw speed when the gearbox is shifted to low range. A planetary gearbox located under each screw provides rotation to the screw. The planetary gearbox is equipped with a remote oil reservoir.

An optional hay ring can be installed to aid during the processing of full bales or other loose forage. The hay ring can help to keep material from spilling out of the tub in the early stages of mixing.

The mixing tub is mounted on weigh scales that give a readout of the weight of material in the tub to a display and/or remote display. The weigh scales can also be used to know the weight of material being loaded.

It is recommended that the proportions of the feed materials in the ration be determined in consultation with an animal feed nutritionist. The loading operator regulates the amount of material that is added according to the ration mix prescribed by the nutritionist.

While traveling to the feeding site the mixing screws in the tub agitate the product to cut the material and provide a uniform mix. Optional magnets can be installed in various locations within the mixing tub or on the unload conveyor. The magnets can help collect any metal that may have accidentally been introduced into the feed.

The material is discharged onto the conveyor to be unloaded on the side of the machine. There are various conveyor options available. The flat bidirectional conveyor can discharge material to either the left or right of the machine depending on the operator's preference and settings. The RH or LH hydraulic folding conveyor can discharge the material into a feed bunk. The discharge height can be adjusted to accommodate different feed bunks.

The transporting of feed materials and feeding discharge is controlled by the operator in the tractor cab.

The main source of noise when using the machine is the tractor engine and the mixing screws when operating . The tractor engine noise is not under the control of Highline. The mixing screw gearboxes used on the machine generate minimal noise.

INTENDED USE OF THE ACCUMIX AMX850T/AMX690T

The AccuMix AMX850T/AMX690T is designed to process and mix various animal feeds and to unload animal feed suitable for feeding livestock in a ration that is designed by an animal nutritionist.

The AccuMix AMX850T/AMX690T is intended for use in farming applications.

The AccuMix AMX850T/AMX690T is intended for off road use.

Any uses of the AccuMix AMX850T/AMX690T other than the above stated 'Intended Uses' shall be considered misuse of the AccuMix AMX850T/AMX690T. This misuse shall include (but not limited to):

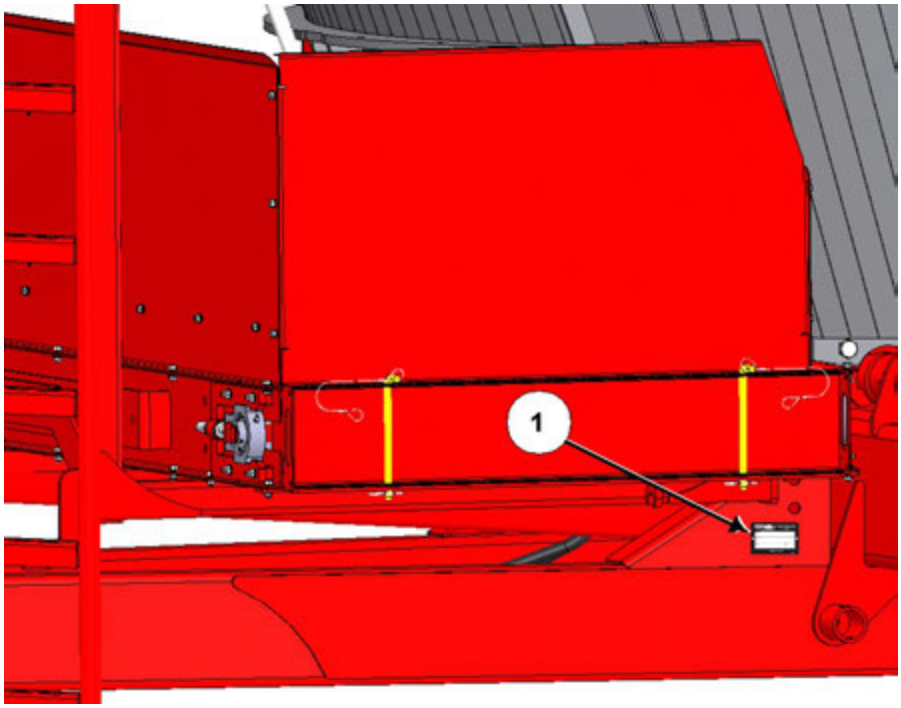
- Using the AccuMix AMX850T/AMX690T in non-farming applications.
- Processing materials other than animal feed materials.

Always use the AccuMix AMX850T/AMX690T according to the instructions contained in this Operator Manual and the safety and instruction decals on the machine.

Perform regular maintenance and repair to ensure that the AccuMix AMX850T/AMX690T operates safely and efficiently.

SERIAL NUMBER

The serial number plate (1) is attached to the AMX850T/AMX690T on the left side of the frame near the tub and the conveyor.



Serial Number Plate Location 225106C

It is important to record the serial number for proof of ownership and for any service or maintenance assistance.

Model Number _____

Serial Number _____

Owner _____

Date of Purchase _____

SAFETY SIGN-OFF FORM

Highline Manufacturing follows the general Safety Standards specified by the American Society of Agricultural and Biological Engineers (ASABE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the AccuMix AMX850T/AMX690T should read and clearly understand all Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow someone to operate this equipment until this information has been reviewed. This information should be reviewed by all operators.

This sign-off sheet is provided for record keeping to indicate that the person working with the equipment has read and understood the information in the Operator Manual and has been instructed in the safe operation of the equipment.

Date	Employee's Signature	Employer's Signature

SAFETY ALERT SYMBOL

The Safety Alert Symbol means:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert Symbol combined with a Signal Word alert to the presence of a hazard and the degree of possible injury.

Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR SERIOUS INJURY. The color is Red with White lettering.

Indicates a potentially hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY, and includes hazards that are exposed when guards are removed or unsafe practices. The color is Orange with Black lettering.

Indicates a potentially hazardous situation that, if not avoided, MAY result in MINOR INJURY. The color is Yellow with Black lettering.

GENERAL SAFETY

1. Ensure that anyone who is going to operate, maintain or work near the AccuMix AMX850T/AMX690T is familiar with the recommended operating, maintenance procedures and safety information contained in this manual and follows all the safety precautions.

2. In addition to the design and configuration of the equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of the machine.

3. The AccuMix AMX850T/AMX690T shall not be operated without all the guards in place.

SAFETY DECALS

1. Keep decals and signs clean and legible at all times.
2. Replace decals and signs that are damaged, missing or have become illegible.
3. Replaced parts that displayed a decal should also display the current decal.
4. Decals are available from the Highline Parts Department.
5. Be familiar with the decals, the type of warning and the area or function(s) related to the area(s) that requires your awareness.

DO NOT ENTER THE TUB WHILE THE MIXERS ARE TURNING

Entering the tub when the mixers are turning will result in death or serious injury.
Do not lean over the mixing tub while the screws are turning to avoid the danger of falling into the tub.

DO NOT CONTACT THE ROTATING SCREWS
Never attempt to manually remove debris while the screws are rotating.

DO NOT ENTER THE TUB WITH MATERIAL IN THE TUB
The material is unstable and may cause entrapment.
There is no means of exiting the tub when the tub is full.

DO NOT CONTACT ROTATING DRIVELINE

Contact with rotating driveline will cause serious injury or death.
Keep all driveline guards in place.
Securely attach drivelines at both ends.
Check that the driveline guards turn freely on the driveline.

DO NOT OPERATE WITH SHIELDS MISSING

Stop engine and ensure the PTO driveline is stopped before working on driveline.

STAND CLEAR OF THE DISCHARGE DOOR DURING OPERATION

A lowering discharge door will result in death or serious injury.

Ensure the door is blocked open before entering the tub.

Before entering an empty tub to perform service:
- Ensure the tractor is turned off, the key is removed.
- All parts have stopped moving.
- The discharge door is supported in the open position.

STAND CLEAR OF THE UNLOADING CONVEYOR

Contact with the moving conveyor could result in death or serious injury.

Keep body and clothing away from moving parts to prevent serious injury or death.

Shut off the machine and remove the key before performing any maintenance on the conveyor.

Do not stand near the conveyor when the engine is running. The conveyor could shift to either side or lift suddenly causing serious injury.

STAY AWAY FROM OVERHEAD POWER LINES

Serious injury or death from electrocution can occur without contacting power lines.

Stay away from overhead power lines when transporting and operating equipment.

DO NOT ALLOW RIDERS ON THE MACHINE

Falling from the moving machine can cause serious injury or death.

Falling from the operating machine can cause being entangled under the machine or being injured by the machine.

KEEP STEPS AND WALKWAYS CLEAN

Dirty or slippery steps, walkways and platforms can cause falls. Make sure these surfaces remain clean and free of debris. Injury may result from slippery surfaces.
Face the machine when mounting and dismounting.

USE PAPER OR CARDBOARD TO CHECK FOR HYDRAULIC OR DIESEL FUEL LEAKS

The hydraulic system operates under extremely high pressure. Hydraulic oil leaking under pressure can penetrate the skin, causing serious injury or infection.

Wear proper hand and eye protection when searching for leaks. DO NOT use your hand to check for leaks. Use a piece of cardboard or paper.

Stop the engine, remove the key and relieve the pressure before connecting or disconnecting, repairing or adjusting hydraulic lines.

Make sure all components are in good condition and tighten all connections before pressurizing the system.

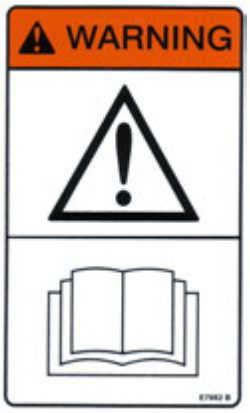
If hydraulic fluid penetrates the skin, seek medical attention immediately.
Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.

Do not attempt any makeshift repairs to the hydraulic fittings or hoses. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly and create a hazardous and dangerous condition.

IMPLEMENT IS DESIGNED FOR OFF ROAD USE ONLY.

This implement is designed for off road use only.
It is not intended for use on public roads.

To transport on public roads consult with local traffic regulations.



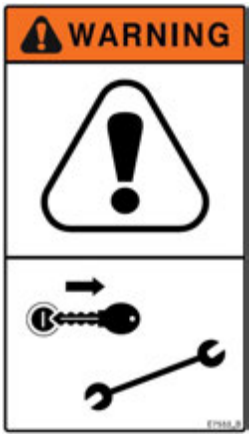
READ, UNDERSTAND AND FOLLOW SAFETY INSTRUCTIONS

Read, understand and follow all instructions and safety messages included in this manual and on decals attached to the machine. These instructions and safety messages contain important information.

Allow only responsible, properly instructed individuals to operate and service the machine.

Failure to follow the instructions and safety messages in this manual and on the decals attached to the machine could result in serious injury or death.

Keep all safety and instruction decals in good condition. Replace any missing or damaged decals.



SHUT DOWN THE ENGINE BEFORE DISMOUNTING TRACTOR

Shut down the engine and remove the key before repairing, servicing, lubricating or cleaning the machine.

Do not attempt to clean, lubricate, clear obstructions or make adjustments to the machine while it is in motion or while the engine is running.

DO NOT CONTACT A MOVING CHAIN

Contacting a moving chain or parts could cause serious injury or death.
Close and secure guards and shields before starting.

Keep hand, feet, hair and clothing away from moving parts.

Never attempt to manually remove material while hydraulic motors are moving the chain.

Always shut off the engine, remove key, set park brake and wait for all parts to stop moving before servicing.

DO NOT EXCEED PTO SPEED

Do not operate at excess speeds or damage to the machine may result.

DO NOT STAND

Do not stand on the PTO shield.

Contact with the moving PTO could result in serious injury or death.

EXPLOSION HAZARD!

Do not remove, install or make repairs to a tire on a wheel rim. Take the tire and rim to a tire shop. Always have a qualified tire mechanic service the tires and rims on this machine.

Failure to comply could result in death or serious injury.

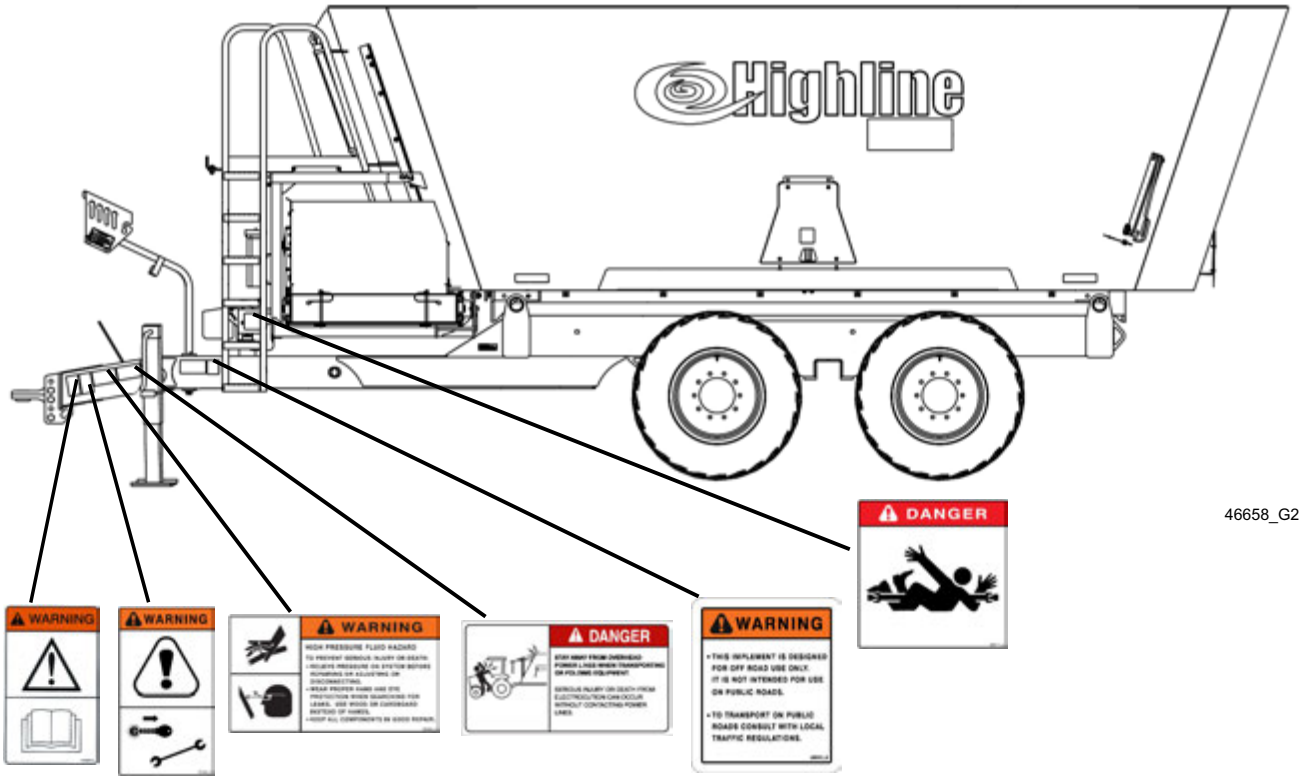
ENSURE SLOW MOVING VEHICLE SIGN IS IN PLACE

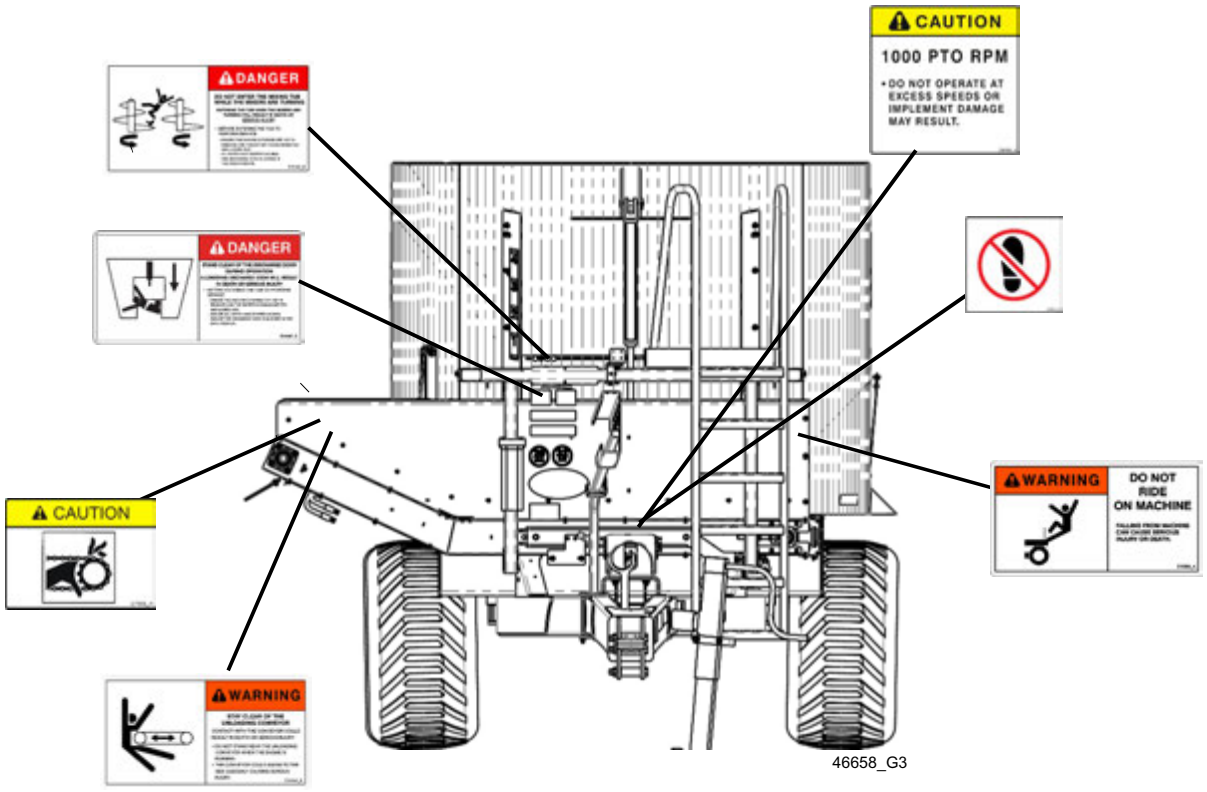
Ensure the Slow Moving Vehicle sign is in place, clean and easily visible.

Ensure the reflectors are in place, clean and easily visible.

SAFETY DECAL LOCATIONS

The decal locations on the AMX690T and the AMX850T are the same.





TRANSPORTING THE AMX850T/AMX690T

Only tow an unloaded AMX850T on public roads behind a properly sized and equipped tractor that has a weight of 30,300 lbs (13,744 kg).

Only tow an unloaded AMX690T on public roads behind a properly sized and equipped tractor that has a weight of 25,410 lbs (11,526 kg).

Do not tow behind a truck or other type of vehicle.

Check with local traffic regulations to transport on public roads.

Stay away from overhead power lines when transporting equipment. Electrocution can occur without contacting power lines.

Do not allow any person to ride on the tractor or AMX850T/ AMX690T. Falling off can result in serious injury or death.

1. Tractor Requirements.

   - Roll Over Protection System (ROPS)
   - Working seatbelts
   - 1-3/4" 20 spline PTO or 1-3/8" 21 spline PTO
   - PTO requirement
     - Refer to the “Specifications” Section for the PTO requirements.
   - 2 Spool Control Valves (SCV)

   AMX850T:
     - Minimum 150 hp (112 Kw).

   MAX690T:
     - Minimum 130 hp (97 Kw).

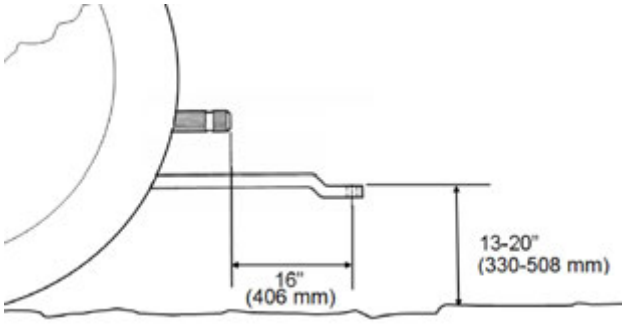
   - To transport an unloaded AMX850T on public roads at 20 mph (32 km/h) use a properly sized and equipped tractor with a weight of 30,300 lbs (13,744 kg).

   - To transport an unloaded AMX690T on public roads at 20 mph (32 km/h) use a properly sized and equipped tractor with a weight of 25,410 lbs (11,526 kg).

2. Ensure the correct PTO speed.
   - Ensure that the tractor PTO speed matches the AMX850T/AMX690T’s gearbox speed of 1000 rpm.
   - Do not attempt to operate the AMX850T/AMX690T at a different PTO speed.

3. Adjust the tractor drawbar length.

   - Set the drawbar length to 16" (406 mm) for a 1-3/8" 21 spline PTO.

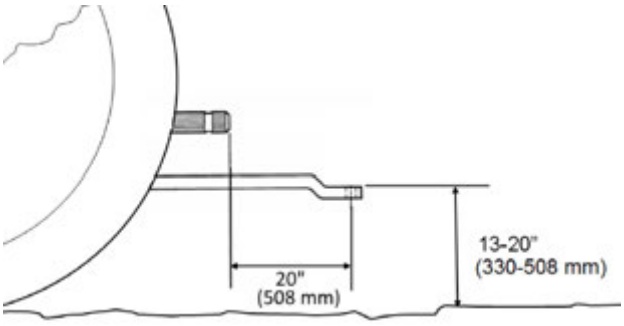


Tractor Drawbar Adjustment - 1 3/8" PTO PTO Dimensions 1-38C

- Set the drawbar length to 20" (508 mm) for a 1-3/4" 20 spline PTO.

- This length of the drawbar is measured from the tip of the PTO shaft end to the center of the drawbar hole. (Refer to your tractor's operator manual for drawbar adjustment procedures.)

Note: To prevent damage to the tractor drawbar, avoid traveling at high speeds and over rough terrain.



Tractor Drawbar Adjustment - 1 3/4" PTO PTO Dimensions 1-34C

4. Lift the hitch.

   - Lift the hitch with the jack.

     - Ensure that the jack is resting on solid level ground or resting on a wood block.

     - The hitch is heavy. Do not attempt to lift it without using the jack.

     Note: There are 2 jack options available; a manual jack and a hydraulic jack.

Lift Hitch with the Jack 224179
(Manual Jack Shown)

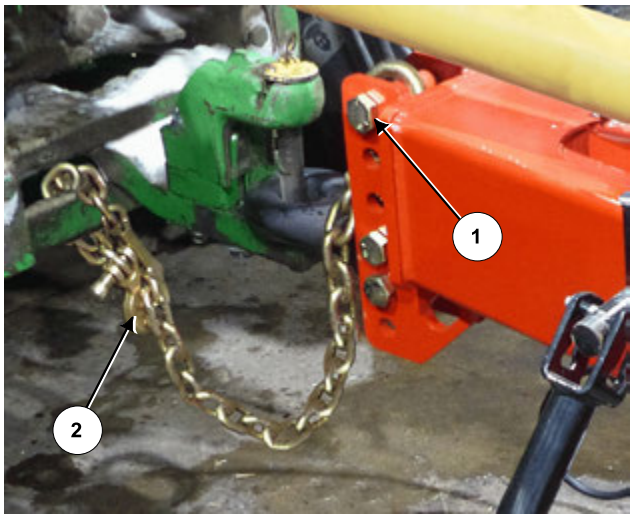
5. Connect the hitch to the tractor drawbar.

   - Use a 1-1/2" (38 mm) pin.
     - Secure with a hitch pin clip.

   Note: If using a 1-1/4" hitch pin, order a 1-1/4" bushing from the Highline Parts department.

6. Connect the safety chain.

   - Ensure the safety chain rating is equal or greater than the gross weight of the AMX850T/AMX690T.
   - Route the safety chain around the upper safety chain bolt (1).
   - Attach the chain to a secure location on the tractor.
   - Fasten the chain hook with the hook lock (2).

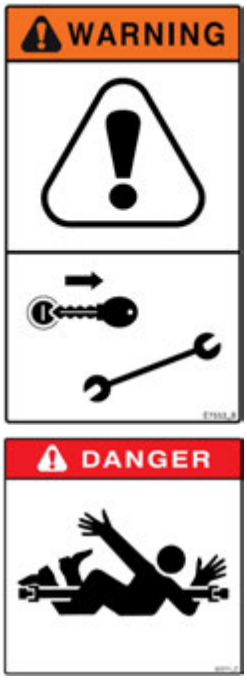


Connect Safety Chain 224180C

7. Attach the driveline to the PTO.

Shut off the tractor engine before attaching the PTO driveline. Entanglement in the rotating driveline can cause serious injury or death.

The AMX850T/AMX690T shall not be operated without the driveline shields in place.



   - Shut off the tractor engine and remove the key.
   - Check that the driveline telescopes easily and that the shields are in good condition and rotate freely.
   - Lift the tractor PTO shield.
   - Support the driveline, pull back on the yoke collar, align the splines by rotating the AMX850T/AMX690T driveline and push the driveline into the tractor PTO shaft until the collar snaps into place.

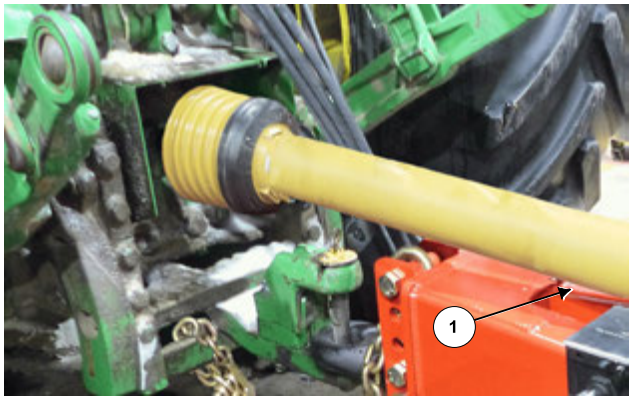
- Lift the tractor PTO shield.

- Support the driveline, pull back on the yoke collar, align the splines by rotating the AMX850T/AMX690T driveline and push the driveline into the tractor PTO shaft until the collar snaps into place.

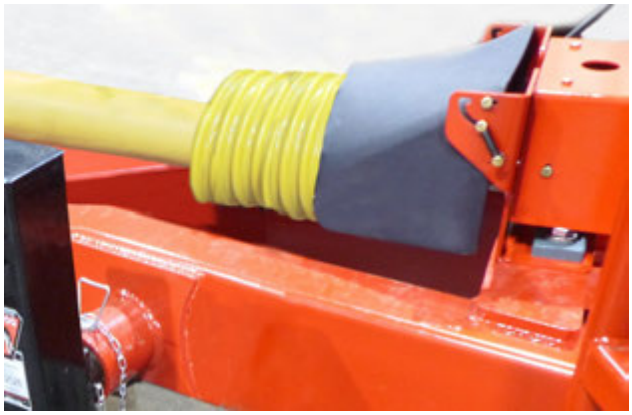
- Push and pull the yoke several times to ensure the driveline is locked. Do not pull on the collar as this will release the lock.

- Lower the tractor PTO shield into place.

- Connect the chains on the driveline guards to stationary points at right angles to the rotation of the driveline.



Connect the Driveline to PTO 224174C


Lower the PTO Shield 224198

8. Fold down the PTO support holder.

    - Failure to fold down the support may result in damage to the driveline.

9. Attach the hydraulics.

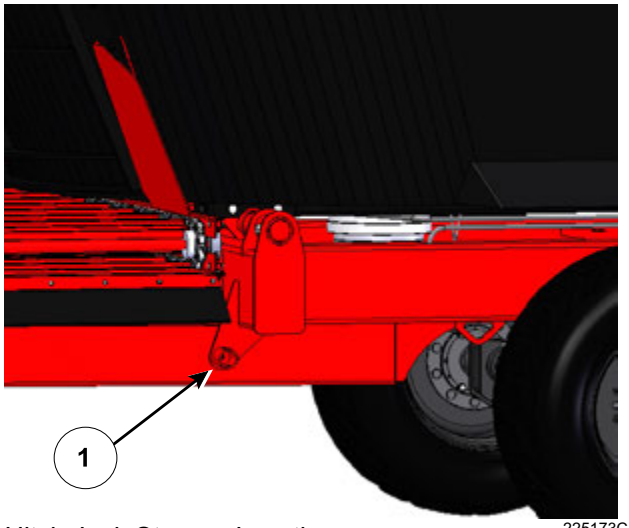
   - Clean the end of the hoses and the connection.
   - Firmly push the hoses into the tractor receptacle according to user preference.
   - Route the hoses so they do not interfere with moving parts.

Attach Hydraulics and Tractor Cable 108008

10. Connect the tractor connection.

   - Connect to the appropriate tractor receptacle.
   - Ensure the cable does not interfere with or contact moving parts.

11. If the manual jack option is installed, place the hitch jack in the storage location (1) on the frame.

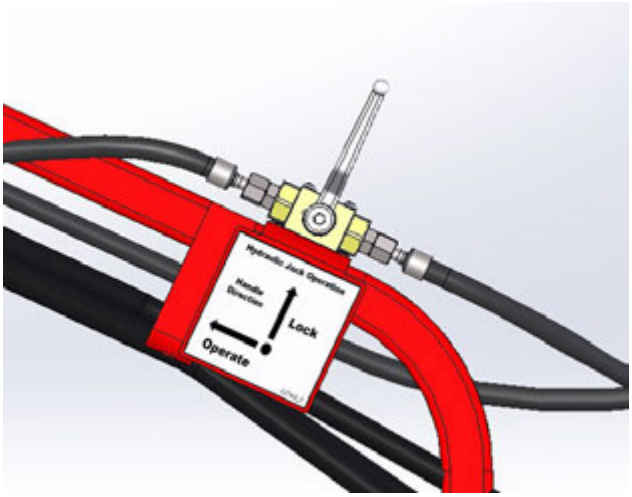


Hitch Jack Storage Location 225173C

12. If the hydraulic jack option is installed, move the ball valve handle into the 'Operate' position in order to raise the jack.

    - Use the tractor hydraulics to raise the jack.

    - Once the jack is fully raised, move the ball valve handle back into the 'Lock' position.



Hydraulic Jack ball valve 225007

13. Check the condition of the tires.

14. Check the tire pressure.

    - Dual Tires on Tandem Axle:
      - For 550/45-22.5 tires, fill the tires to 58 psi (400 kPa).

    - Single Tires on Single Axle:
      - For 445/50R22.5 tires, fill the tires to 97 psi (669 kPa).

Check the Tires
(Dual Tires on Walking Axle Shown) 222219

Check the Tires
(Single Tires on Axle Shown) 224085

15. Check the wheel nut torque.

    - Ensure that the flat portion of the wheel stud washer is against the wheel rim.

        - Dual Tires on Tandem Axle:
            - Torque the lug nuts to 300 - 320 ft-lb (406 - 434 Nm).

        - Single Tires on Single Axle:
            - Torque the lug nuts to 330 - 375 ft-lb (447 - 508 Nm).

Flat of Washer Against Rim, Torque the Nuts 217100

16. Ensure the tub door is closed.

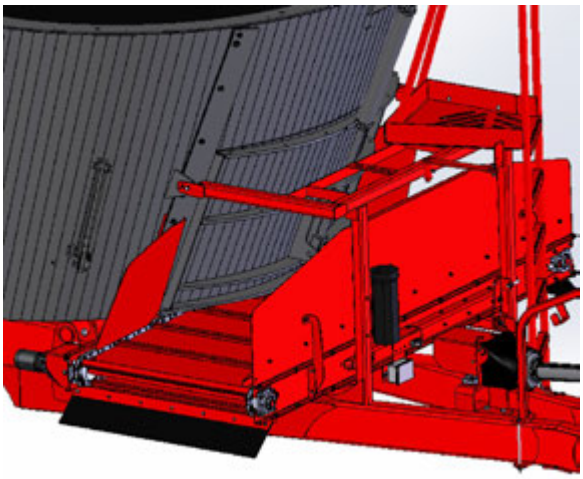
Ensure the Tub Door is Closed 225178

17. Turn off the screws when the tub is empty.

Turn Off Screws When Tub Is Empty
224086

18. If the flat bidirectional conveyor is installed, shift the conveyor to the centered position. This will reduce the width of the machine.
    - Ensure that the unload conveyor is turned off.

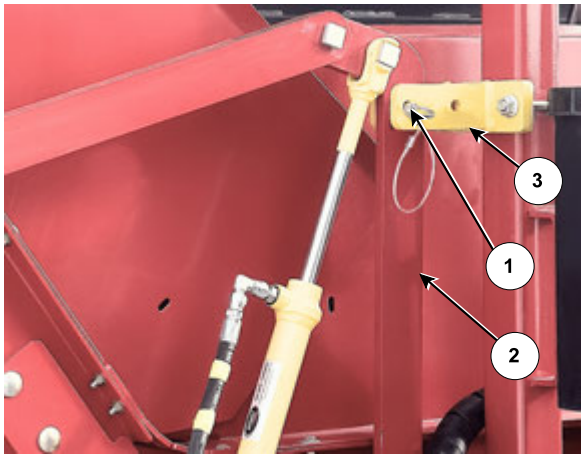
    Note: If 2 remote option is installed, the conveyor drive motor will be linked to the shift cylinder through an electric solenoid valve.
    - Move the electric selector valve so the hydraulic flow goes to the shift cylinder.



Shift the Conveyor to Center
225073

19. If the RH or LH hydraulic folding conveyor is installed, move the conveyor upwards and fasten the conveyor transport lock.
    - Ensure that the unload conveyor is turned off.
    - Remove the transport lock pin (1) from the storage location on the lock bracket (3).
    - Insert the lock pin (1) through the lock bracket (3) and into the lift arm (2).

    Note: If 2 remote option is installed, the conveyor lift cylinder will be linked to the conveyor drive motor through an electric solenoid valve.
    - Move the electric selector valve so the hydraulic flow goes to the lift cylinder.



Lock the Conveyor into Transport Position
(RH Hydraulic Folding Conveyor Shown)
224087C

20. Ensure that the Slow Moving Vehicle (SMV) sign is clean and visible.

Ensure the SMV is Visible 222220

21. Transport

Do not tow behind a truck or other type of vehicle.

Check with local traffic regulations to transport on public roads.

- Do not exceed 20 mph (32 km/h).

AMX850T:

- Only tow an unloaded AMX850T on public roads behind a properly sized and equipped tractor that has a weight of 30,300 lbs (13,744 kg).

AMX690T:

- Only tow an unloaded AMX690T on public roads behind a properly sized and equipped tractor that has a weight of 25,410 lbs (11,526 kg).

PREPARING THE AMX850T/AMX690T

1. Park the tractor and AMX850T/AMX690T on level ground.

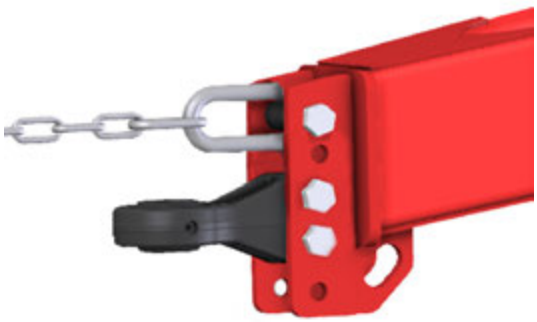
   - Engage the tractor parking brake and shut down the tractor.

Park on Level Ground 223188-1

2. Adjust the height of the mixer hitch tongue so that the mixer is level.

   - Use the following pictures for an indication of where to set the mixer tongue according to the height of the tractor drawbar.

   - For a tractor drawbar that is 16" from the ground, set the tongue in the 3rd and 4th holes from the top.
     - Place the safety chain connection in the top hole.



Tongue Set for Tractor Drawbar 16" from the Ground 223221

   - For a tractor drawbar that is 17 - 18" from the ground, set the tongue to be in the 2nd and 3rd holes from the top.
     - Place the safety chain connection in the bottom hole.

Tongue Set for Tractor Drawbar 17 - 18" from the Ground 223220

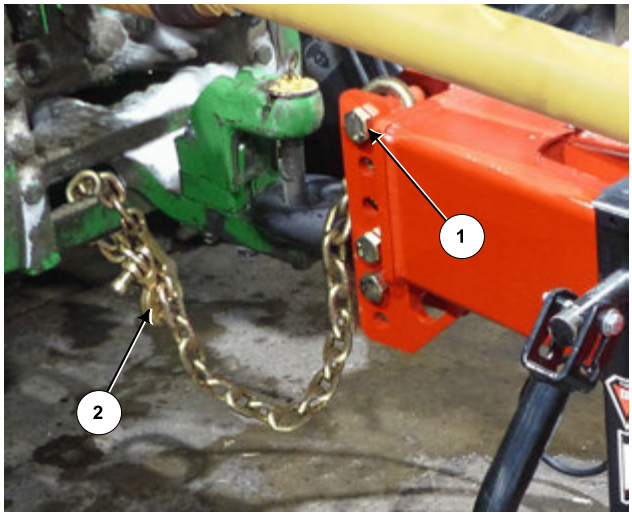
   - For a tractor drawbar that is 20" from the ground, set the tongue to be in the 1st and 2nd holes from the top.
     - Place the safety chain connection in the bottom hole.

Tongue Set for Tractor Drawbar 20" from the Ground 223222

   - Fasten the tongue in place and torque the bolts to 210 ft-lb (285 Nm).

3. Connect the safety chain to the tractor.

   - Ensure the safety chain rating is equal or greater than the gross weight of the AMX850T/AMX690T.
   - Route the safety chain around the safety chain bolt (1).
   - Attach the chain to a secure location on the tractor.
   - Fasten the chain hook with the hook lock (2).

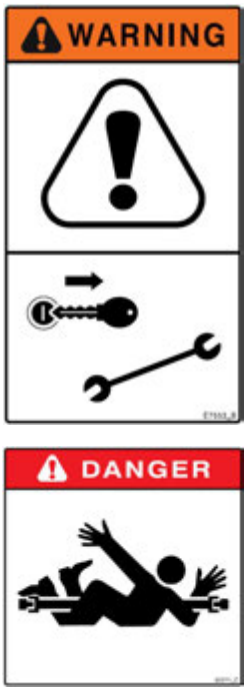


Connect Safety Chain 224180C

4. Attach the driveline to the tractor PTO.

Shut off the tractor engine before attaching the PTO driveline. Entanglement in the rotating driveline can cause serious injury or death.

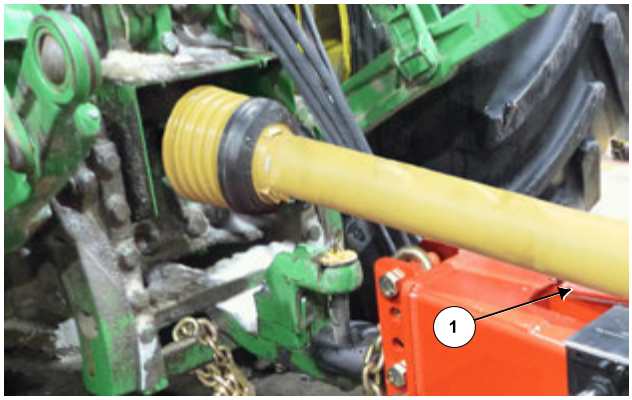
The AMX850T/AMX690T shall not be operated without the driveline shields in place.



   - Shut off the tractor engine and remove the key.
   - Check that the driveline telescopes easily and that the shields are in good condition and rotate freely.
   - Lift the tractor PTO shield.
   - Support the driveline, pull back on the yoke collar, align the splines by rotating the AMX850T/AMX690T driveline and push the driveline into the tractor PTO shaft until the collar snaps into place.

- Push and pull the yoke several times to ensure the driveline is locked. Do not pull on the collar as this will release the lock.

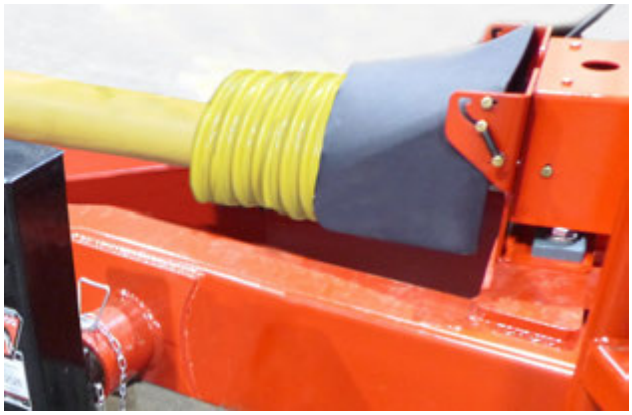
- Fold down the PTO support holder (1).
  - Failure to fold down the support may result in damage to the driveline.



Connect the Driveline to PTO 224174C

- Lower the tractor & hitch PTO shields into place.

- Connect the chains on the driveline guard to stationary points at right angles to the rotation of the driveline.



Lower the PTO Shield 224198

5. If the optional manual shift 2-speed gearbox is present, check the oil level in the gearbox.

   - Check that the oil is showing in the sight glass (3).

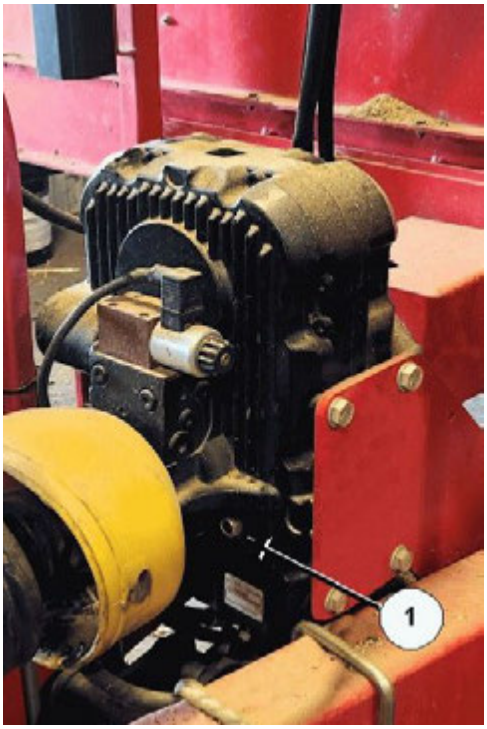
   - If the oil is not showing in the sight glass, refer to Section 5 - "AMX850T/AMX690T Maintenance" for information on filling the gearbox with oil.

Check the Oil Level in the Optional Manual Shift 2-Speed Gearbox 224173C4

6. If the optional 2-speed power shift gearbox is present, check the oil level in the gearbox.

   - Check that the oil is showing in the sight glass (1).

   - If the oil is not showing in the sight glass, refer to Section 5 - "AMX850T/AMX690T Maintenance" for information on filling the gearbox with oil.



Check the Oil Level in the Optional 2-Speed Power Shift Gearbox 225044C2-1

7. Inspect all the hydraulic motors, cylinders and hoses.

   Use a piece of cardboard or heavy paper to check for leaks. Do not use your hand. Wear proper hand and eye protection when searching for leaks.

   Relieve pressure on the hydraulic system before repairing, adjusting or disconnecting.

   - Visually inspect all the hydraulic hoses and fittings.
     - See Section 5 - "AMX850T/AMX690T Maintenance" for conditions indicating that replacement is needed.

Check All Hydraulics 225175
(RH Hydraulic Folding Conveyor Shown)

8. Visually check that the tub does not have any build up or foreign material in it.

Check for Build Up in the Tub and the Condition of the Screws 224086

Do not enter the tub while the mixers are turning.

Entering the tub when the mixers are turning will result in death or serious injury.

Do not lean over the mixing tub while the screws are turning to avoid the danger of falling into the tub.

Do not enter the tub with material in the tub.
The material is unstable and may cause entrapment.
There is no means of exiting the tub when the tub is full.

9. Visually check that the screws are in good condition.

10. Check the condition of the knives (1) installed on the screws.

Do not enter the tub while the mixers are turning.
Entering the tub when the mixers are turning will result in death or serious injury.

- Check that the knives are fastened tightly to the screws.

- Replace any worn or broken knives.

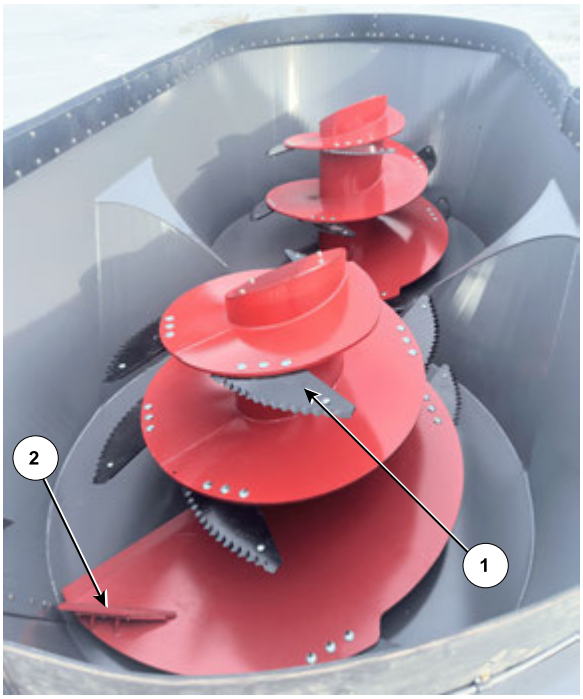
Note: Refer to Section 5 - "AMX850T/690T Maintenance" for additional information on the knives.

11. Check the condition of the kicker plate (2) on the screw leading edge.

- Adjust as required.

Note: Refer to Section 5 - "AMX850T/690T Maintenance" for information on how to adjust the kicker plate.

12. If it is desired for the screws to do additional cutting of long material, move the aggression bars into the tub and fasten in place.



Check Knives and Kicker on the Screws 224086C

Adjust Aggression Bars 224088

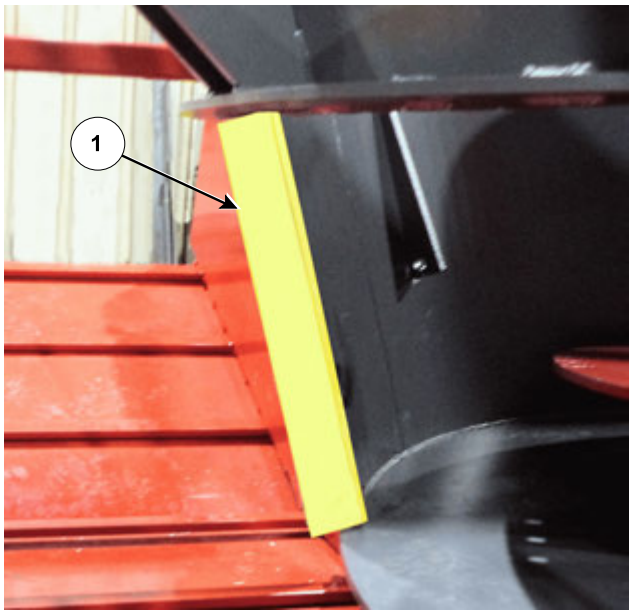
13. Check that the front unloading tub door works.

    - Extend and retract the door cylinder to check for easy movement of the door.

Check the Tub Door Works 225176

14. Take precautions if it is required to enter the tub.

    Stand clear of the discharge door during operation.
    A lowering discharge door will result in death or serious injury.



Raise and Support the Tub Door 223189C

- Ensure all parts have stopped moving before entering an empty tub to perform service.
- Raise the tub door.
- Support the door (1) to ensure that the door does not accidently close causing entrapment.

15. Check that the unload conveyor operates and moves freely.

    Note: If 2 remote option is installed, the conveyor drive motor will be linked to the conveyor lift/shift cylinder through an electric solenoid valve.
    - By default, the hydraulic flow will be directed to the drive motor.

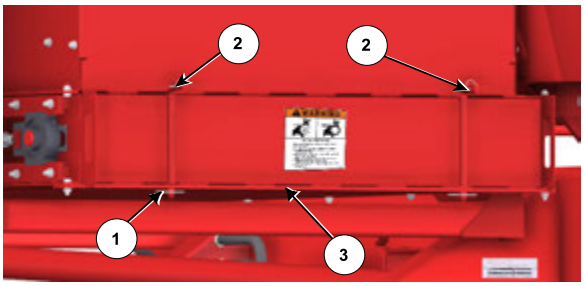
16. Clean out any material on the bottom of the conveyor.

Keep body and clothing away from moving parts to prevent serious injury or death.

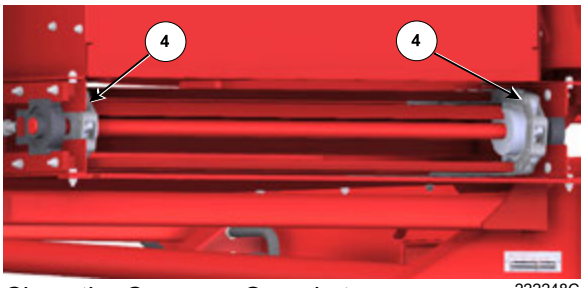
Follow the below steps if the RH or LH hydraulic folding conveyor is installed:

- Remove the spring pins (1) from the two shield retainers (2).
- Remove the shield retainers (2) from the clean out door (3).
- Remove the clean out door (3).
- Clean the conveyor chain sprockets (4).
- Use compressed air or a broom to remove any material located on the spill guard sheet that is under the conveyor.
- Place the clean out door (3) back into position.
- Replace the two shield retainers (2).
- Fasten the shield retainers (2) with the spring pins (1).

Check that the Unload Conveyor Works 225177
(RH Hydraulic Folding Conveyor Shown)



Clean the Conveyor Spill Collector 222247C

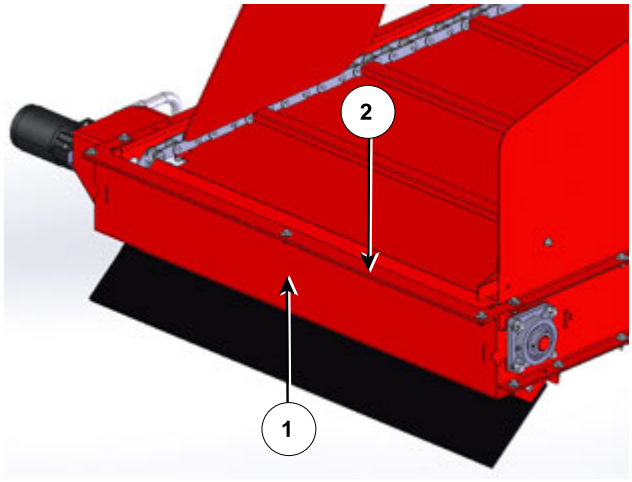


Clean the Conveyor Sprockets 222248C

17. If the flat bidirectional conveyor is installed, and the conveyor will be exclusively used for either LH or RH discharge, an end shield can be installed on the opposite end to reduce back flow and spillage.

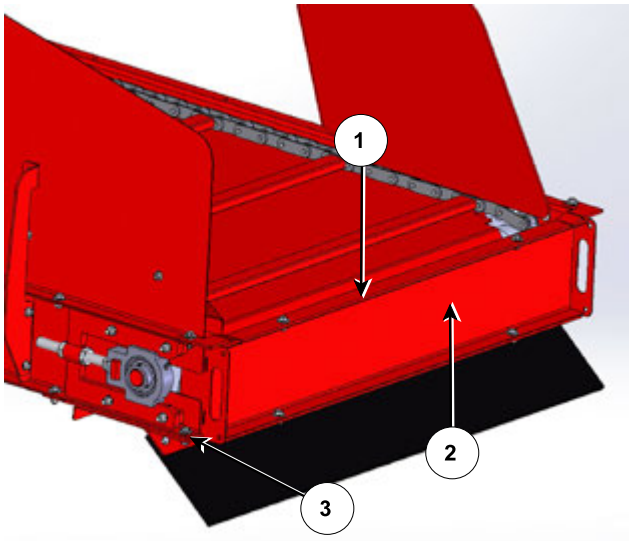
Note: The end shields are not required for normal operation. They can be added/removed from the conveyor at any time, if desired.

- To install the RH end shield:
  - Place the assembled end shield onto the right end of the conveyor.
  - Fasten the end shield (1) and cap (2) to the conveyor using 7 of 5/16" x 3/4" hex bolts, flat washers and flange lock nuts.



Install the RH End Shield 225071C

- To install the LH end shield:
  - Place the assembled end shield onto the left end of the conveyor.
  - Fasten the end shield cap (1) and clean-out door (2) to the conveyor using 6 of 5/16" x 3/4" hex bolts, flat washers and flange lock nuts. Fasten the bottom sides of the end shield using 2 of 5/16" x 1" hex bolts, flat washers and flange lock nuts (3).



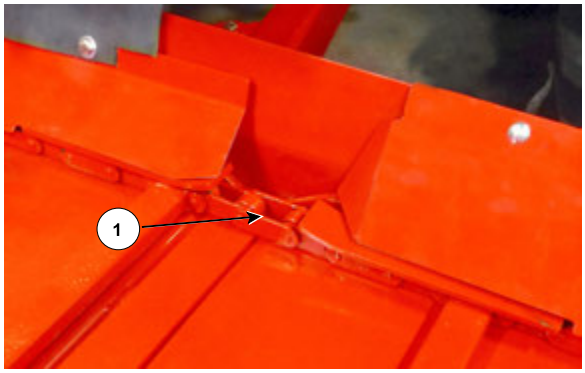
Install the LH End Shield 225072C

18. If the flat bidirectional conveyor is installed, with an end shield, check that there is no debris lodged in the bottom of the conveyor.

- If there is debris, remove the end shield and clean out the area. Replace the end shield once clean out is complete.

19. If the RH or LH hydraulic folding conveyor is installed, check that the pivot points (1) on both sides are clear of debris.

    - Check that there is no debris lodged in the chains.

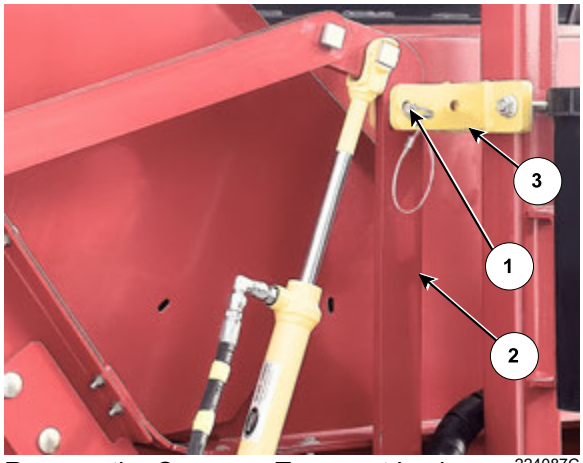


Check the Hydraulic Folding Conveyor is Free of Debris 220200C

20. If the RH or LH hydraulic folding conveyor is installed, remove the conveyor transport lock.

    - Remove the lock pin (1) that is through the lock bracket (3) and the lift arm (2).

    - Place the transport lock pin (1) into the storage location of the lock bracket (3).



Remove the Conveyor Transport Lock 224087C
(RH Hydraulic Folding Conveyor Shown)

21. If the RH or LH hydraulic folding conveyor is installed, check that the end of the conveyor raises/lowers for bunk height adjustment.

    - Operate the hydraulic cylinder to move the lift arm.

    Note: If 2 remote option is installed, the conveyor lift cylinder will be linked to the conveyor drive motor through an electric solenoid valve.
    - Move the electric selector valve so the hydraulic flow goes to the lift cylinder.

Check that Conveyor Raise/Lowers 222273
(RH Hydraulic Folding Conveyor Shown)

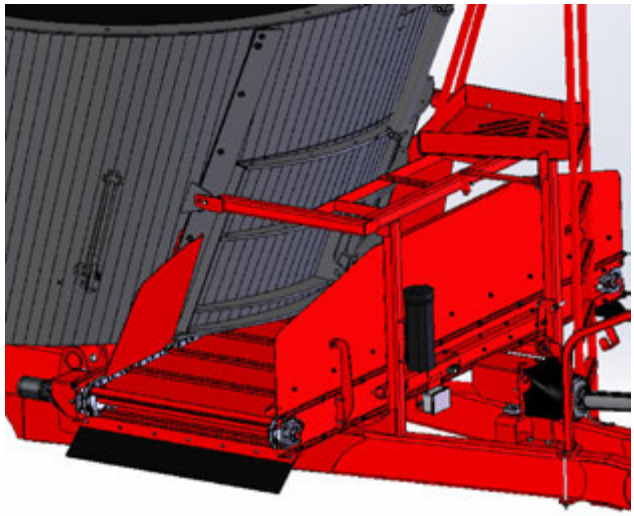
Stay clear of the unload conveyor when it is lowering.
Crushing could cause serious injury or death.

22. If the flat bidirectional conveyor is installed, check that the conveyor can shift either direction from its centered position.

- Operate the hydraulic cylinder to control the shift function.

Note: If 2 remote option is installed, the conveyor shift cylinder will be linked to the conveyor drive motor through an electric solenoid valve.
- Move the electric selector valve so the hydraulic flow goes to the shift cylinder.

Note: The conveyor can be shifted 9" either direction from its centered position.



Check that the Conveyor Shifts 225073

Stay clear of the conveyor when it is moving.
Keep body and clothing away from moving parts to prevent serious injury or death.

23. Check that the mixing screws in the tub operate normally.

- The mixing screws must be able to turn before loading any material.

Do not enter the tub while the mixers are turning.
Entering the tub when the mixers are turning will result in death or serious injury.

Do not lean over the mixing tub while the screws are turning to avoid the danger of falling into the tub.

Do not contact the rotating screws.

Check that the Mixing Screws Turn 219264

24. Check the oil level for the mixing screw drive gearboxes.
    - The oil level indicators are located on the left side of the tub behind the removable panel.

    - The oil level in the tube indicates the oil level in each drive gearbox.

    - Check the level when the oil is cold.

    - Check when the machine is level.

    - Refer to the decal on the oil reservoir for where the oil should be in the sight glasses.

    - See Section 5 - "AMX850T/ AMX690T Maintenance" for filling procedures.

Check the Oil Level for the Mixing Screws 224128

25. Check the condition of the tires.

    - Check that the tire sidewalls and treads are in good condition.

26. Check the tire air pressure.

    - Dual Tires on Tandem Axle:

        - For 550/45-22.5 tires, fill the tires to 58 psi (400 kPa).

    - Single Tires on Single Axle:

        - For 445/50R22.5 tires, fill the tires to 97 psi (669 kPa).

Check the Tires (Dual Tires Walking Axle Shown) 222313

Check the Tires (Single Tires on Axle Shown) 224085

27. Torque the wheel nuts.

    - Ensure that the flat portion of the wheel stud washer is against the wheel rim.

      Dual Tires on Tandem Axle
      - Torque the lug nuts to 300 - 320 ft-lb (406 - 434 Nm).

      Single Tires on Single Axle
      - Torque the lug nuts to 330 - 375 ft-lb (447 - 508 Nm).

Flat of Washer Against Rim,Torque the Nuts[217100]

28. Check that the weigh scale display is working.

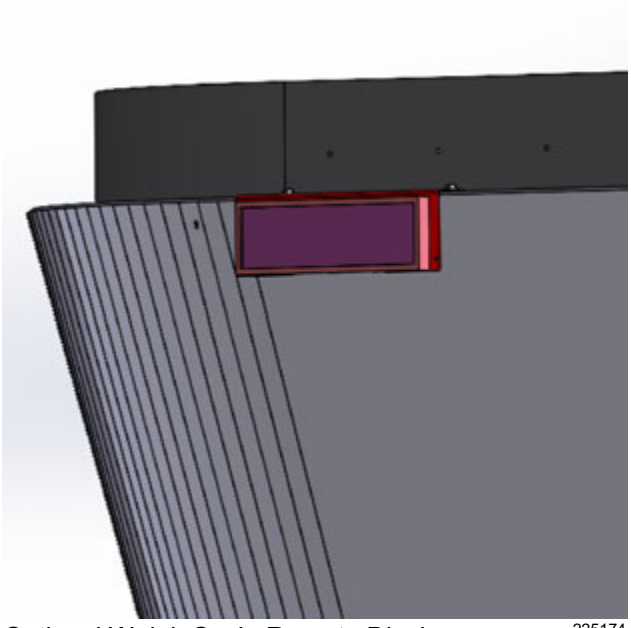
    - Refer to the Weigh Scale Manual for Information.

    Note: The power for the display comes from the display connection located on the tractor cable.

    Note: For the calibration procedure of the weigh scale, see Section 5 - "AMX850T/AMX690T Maintenance".

Check the Weigh Scale Monitor Is Working [225180]

29. If the optional weigh scale remote display is present, check that it is working.



Optional Weigh Scale Remote Display 225174

30. If the optional tub camera or remote backup camera is present, check that the camera display is working.

    - Check the camera display for a clear image.

    - Clean the camera(s) as needed.

Optional Camera Display 222246

31. Lubricate all grease fittings. Refer to Section 5 - "AMX850T/AMX690T Maintenance".

32. Ensure all fasteners are tightened.

Operating the AMX850T/AMX690T

Cutting and Mixing - General Considerations

Note: It is highly recommended to consult with a feed nutritionist when planning the rations, the mixing time and cut length. A feed nutritionist is able to provide the information needed to optimize the ration mix that is best suited for the herd. Follow the nutritionist's recommendations to ensure the best results with the AccuMix AMX850T/AMX690T.

Note: It is the operator's responsibility to ensure that the materials in the feed mix are suitable for livestock feeding.

The cutting and mixing of materials with the AccuMix AMX850T/AMX690T will differ with the various feeds and the weather conditions. Mixing times will vary depending on the mix of materials.
Follow the nutritionist's recommendations for mixing times to ensure the best results with the AccuMix AMX850T/AMX690T.

Mixing beyond a certain amount of time may cause the mix quality to deteriorate. An extended mixing time or a high speed of rotation causes heating of the product because of the contact with the surface of the screws and tub walls.

The ideal mix will be light, fluffy and uniform. Hays and straws will be cut cleanly at short lengths, and no clumping of feed will be visible.

The regular use of a particle separator helps to ensure accuracy of the mix.

Loading Materials

1. Close the tub door.

   - Extend the door hydraulic cylinder to move the door down to the closed position.

Ensure Front Tub Door Is Closed 225178

2. Start the mixing screws at an appropriate speed.

Start the Mixing Screws 224086

Do not enter the tub while the mixers are turning. Entering the tub when the mixers are turning will result in serious injury or death.

3. If the optional manual shift 2-speed gearbox is present, make note of the following:

   - To shift the gearbox, the tractor PTO must be fully stopped and disengaged.

   - Move the lever (4) on the gearbox to change the output speed.

     - A guide to the shift position (5) is indicated on the shield.

       - High range is the same speed as the PTO of the tractor. The high range gives no change in mixing screw speed. High range is often used for tub clean-out.

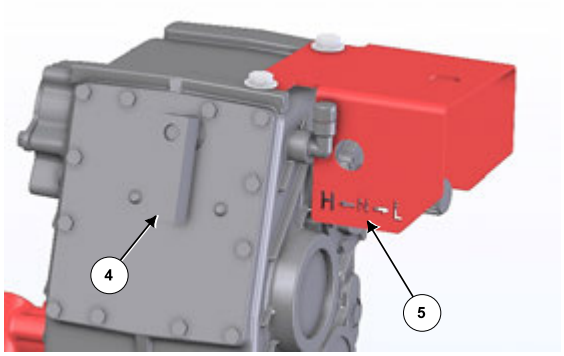
       - The low range reduces the screw rpm by 33% from the PTO speed. The low range is often used for all mixing and reduces fuel usage.

       - There is also a Neutral position.

       Note: Do not operate the tractor PTO driveline while the gearbox is in neutral. The gearbox must in a gear to have the lower gear turning to provide oil to the upper gear and bearings.

   - Re-engage the tractor PTO.

Optional Manual Shift 2-Speed Gearbox 224147



Shift Lever and Shift Position Guide 224305C

4. If the optional 2-speed power shift gearbox is present, make note of the following:

   - Use the in-cab switch to control shifting from low to high speeds.

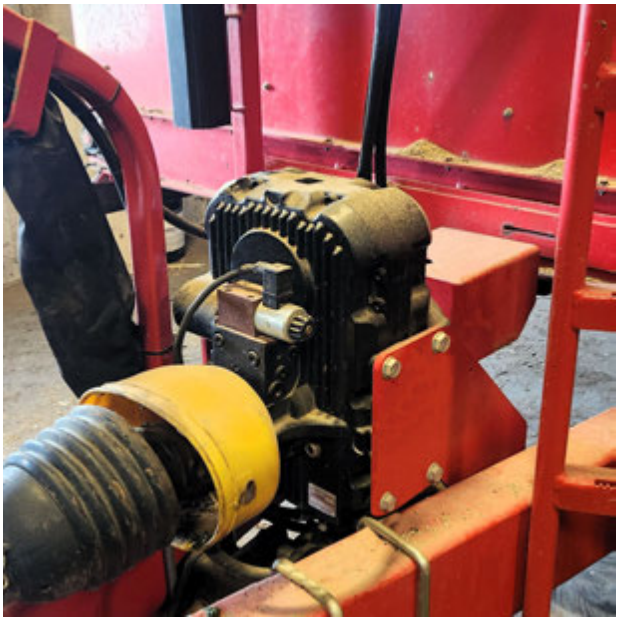
     - The switch positions are indicated on the decal.

     - The gearbox always starts in low range, but it can be shifted to high range at any time, without requiring the PTO to be stopped.

       Note: The gearbox controller will prevent shifting to high range if the PTO input rpm is too low (typically less than 350 rpm).

     - The low range reduces the screw rpm by 33% from the PTO speed. The low range is often used for all mixing, and reduces fuel usage.

     - The high range is the same speed as the PTO of the tractor. High range is often used for tub clean-out.



Optional 2-Speed Power Shift Gearbox 225044-2

5. Before loading bales, remove the twine/wrap or other materials from the bales to prevent from being in the ration mix or becoming entangled in the machine.

   Note: It is the operator's responsibility to ensure that the materials in the feed mix are suitable for livestock feeding. Wrapping material (twine, net wrap, silage cover or other materials) will be discharged with the feed if not removed prior to processing.

   Note: Pre-processing the bale material before loading will reduce the cutting time and the mix time.

Remove Bale Wrap Before Loading 222227

6. Load the feeding materials over the edge of the tub.

   Note: It is the operator's responsibility to ensure that the materials in the feed mix are suitable for livestock feeding. Wrapping material (twine, net wrap, silage cover or other materials) will be discharged with the feed if not removed prior to processing.

Load Feeding Materials 222343-1

7. Monitor the weight of material being loaded by watching the weigh scale display.

   Note: Refer to the weigh scale manual for information on using the weigh scale monitor.

   - Add materials according to the ration recommended by the animal nutritionist.

Monitor Weight of Material Added 225180

8. Minerals or supplements can be loaded with a machine or with bags/pails from the loading platform.

Supplements Can Be Added from the Platform 225179

Do not enter the tub while the mixers are turning. Entering the tub when the mixers are turning will result in death or serious injury.

Note: It is the operator's responsibility to ensure that the materials in the feed mix are suitable for livestock feeding. The mineral/supplement packaging material will be discharged with the feed if the packaging materials are allowed to enter the tub.

9. When loading from overhead augers or piping, drive under the output so that the material will land near the center of the tub.

Loading from Overhead Auger 222254-3

- Monitor the weight of material being loaded by watching the weigh scale display.

  Note: Refer to the weigh scale manual for information on using the weigh scale monitor.

- Add materials according to the ration recommended by the animal nutritionist.

Driving to the Feeding Site

1. Have the mixing screws turning while driving to the feeding site.
   - The turning screws will completely mix the materials.
   - The turning screws will prevent the load from settling and compacting.

   Note: If traveling long distances to the unloading site, be aware that having the screws turning may:
   - Cut the material more than desired.
   - Cause material to separate out from the mix.

   - Consult with the animal nutritionist for the appropriate mixing time.

   - If the screws are turned off while traveling, be aware that the load may settle, especially with larger loads.
     - Load settling may make it more difficult for the screws to begin rotating again.

2. Adjust the travel speed according to the terrain to maintain control and have the machine stable at all times.

   Note: It is the operator's responsibility to decide if the weather, road or ground conditions permit safe operation on a hillside, slope, rough, slick or muddy surfaces.

Keep the Mixing Screws Turning 224192

Unloading the Mix

Stay clear of the unloading conveyor.
Contact with the conveyor could result in death or serious injury.
Keep body and clothing away from moving parts to prevent serious injury or death.

1. If the RH or LH hydraulic folding conveyor is installed, activate the hydraulic cylinder to raise/lower the conveyor to the appropriate height to unload into the bunk.

   Note: If 2 remote option is installed, the conveyor lift cylinder will be linked to the conveyor drive motor through an electric solenoid valve.
   - Move the electric selector valve so the hydraulic flow goes to the lift cylinder.

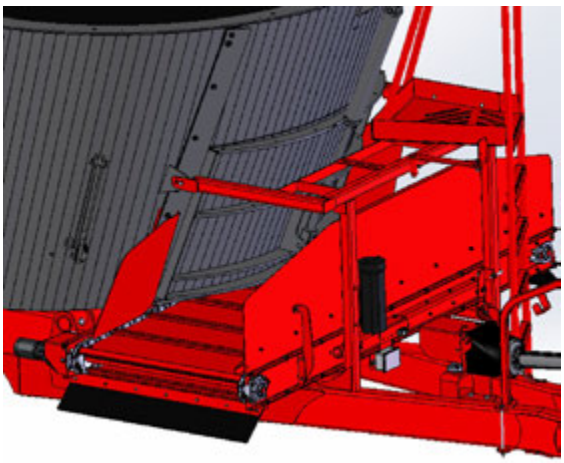
Stay clear of the unload conveyor when it is lowering.
Crushing could cause serious injury or death.

2. If the flat bidirectional conveyor is installed, activate the hydraulic cylinder to shift the conveyor to the desired position for unloading.

   Note: If 2 remote option is installed, the conveyor shift cylinder will be linked to the conveyor drive motor through an electric solenoid valve.
   - Move the electric selector valve so the hydraulic flow goes to the shift cylinder.

Stay clear of the conveyor when it is moving.
Keep body and clothing away from moving parts to prevent serious injury or death.

Raise the Conveyor 222273
(RH Hydraulic Folding Conveyor Shown)



Shift the Flat Bidirectional Conveyor 225073

3. Start the unloading conveyor before opening the discharge door.

   - The speed of the conveyor can be adjusted by adjusting the flow control at the tractor.

   - Adjust the speed of the conveyor to suit the unloading requirements.

   Note: If 2 remote option is installed, the conveyor drive motor will be linked to the conveyor lift/shift cylinder through an electric solenoid valve.
   - By default, the hydraulic flow will be directed to the drive motor.

Start the Unload Conveyor 225177
(RH Hydraulic Folding Conveyor Shown)

4. Raise the tub door to control the amount of feed exiting the mixing tub.

Open the Tub Door 223191

   - There are number indications on the side of the tub to give a reference point for how much the tub door is open.

Indications for Door Opening 225176-1

5. Drive forward to distribute the feed.

Unload at the Feeding Site 225181

6. Control the amount of feed discharged at each feeding spot by adjusting the following:

    - Tub door opening
    - Mixer speed
    - Driving speed

7. Monitor the scale indicator readings to evaluate the ration distribution to the unloading areas.

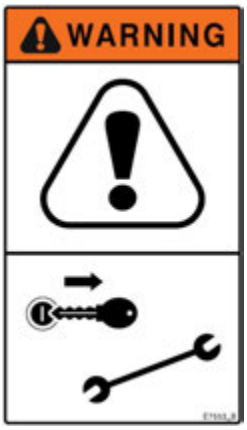
    Note: Refer to the weigh scale manual for information on using the weigh scale monitor.

Monitor the Feeding Ration with the Weigh Scale Monitor 225180

8. At the end of feeding, empty any feed remaining in the mixing tub to prevent it from settling and compacting.

Removing Settled Material That Is Causing the Mixing Screws To Not Turn
This process involves running one screw at a time to allow the screw drive motor to move less material.

Shut down the engine before dismounting machine. Remove the key before doing this procedure.
Block the wheels of the machine to prevent any movement.

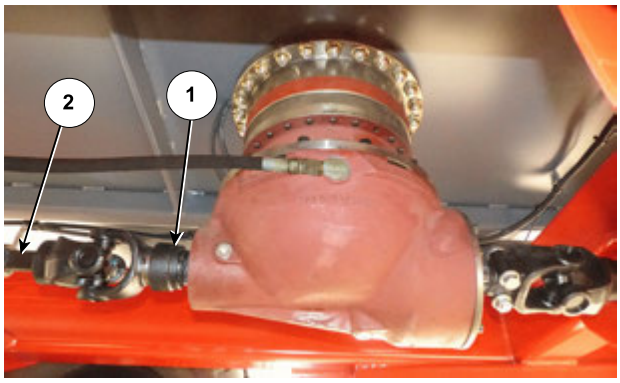


Disconnect the rear screw:

1. From underneath the machine, disconnect the driveline coming out of the front screw gearbox.
   - This will allow the front screw to turn by itself.

   - Place a pipe wrench on the square sliding portion (2) of the driveline going to the rear screw.
     - Remove any torque that may be preventing the driveline quick connect (1) from being released.

   - Release the driveline quick connect (1) from the front screw gearbox.
     - Slide the driveline back.
     - Support the driveline going to the rear screw drive gearbox.



Disconnect Rear Screw Driveline 223231C3

2. Open the tub door.

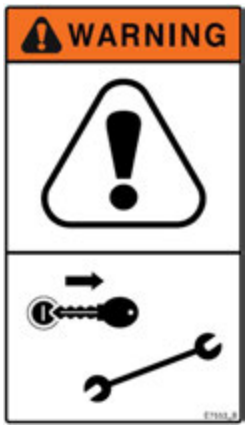
3. Start the conveyor.
   - If the hydraulic folding conveyor is installed, ensure that it is lowered before starting the conveyor drive motor.

4. Start the front mixing screw to remove material in the tub.

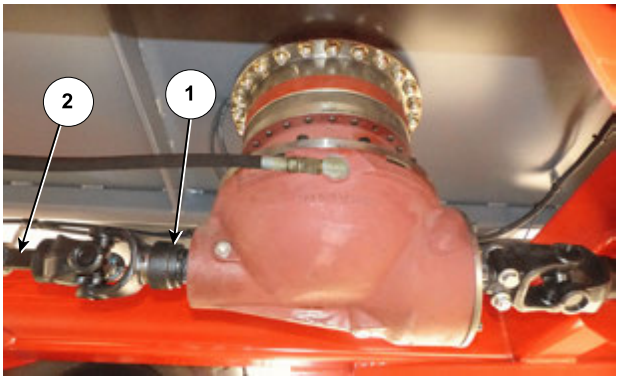
5. Close the tub door when finished unloading and turn off the conveyor.

Reconnect the rear screw:

Shut down the engine before dismounting machine. Remove the key before doing this next procedure.



1. From underneath the machine reconnect the driveline going to the rear screw gearbox to the front gearbox.
   - Attach the driveline quick connect (1) to the front screw gearbox.
2. Open the tub door.
3. Start the conveyor.
4. Start the mixing screws to remove the remaining material in the tub.
5. Close the tub door when unloading is finished and turn off the conveyor.



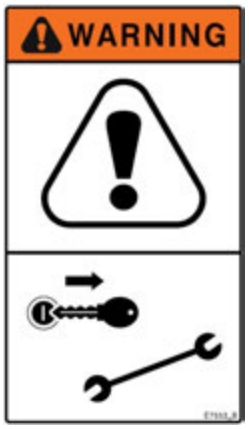
Reconnect the Driveline to the Rear Screw

223231C3

Align the screws in the tub:

After all the material is removed from the tub, the screws need to be positioned in the same orientation to each other.

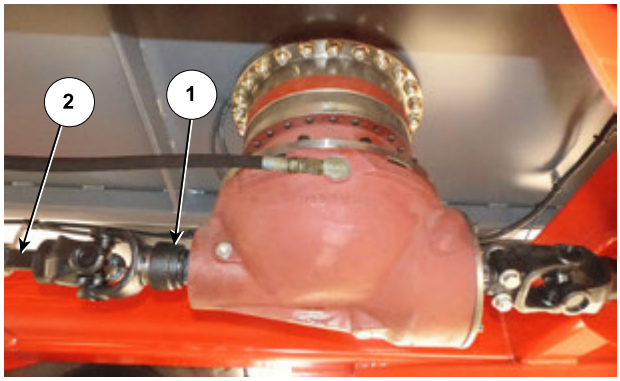
Shut down the engine before dismounting the machine. Remove the key before doing this next procedure.



1. From underneath the machine, disconnect the driveline coming out of the front screw gearbox.
    - This will allow the front screw to turn by itself using hand power.

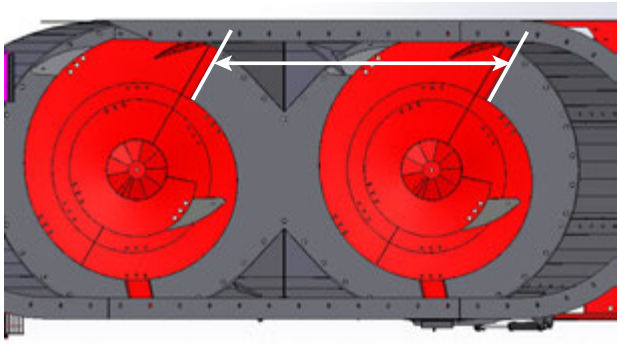
    - Place a pipe wrench on the square sliding portion (2) of the driveline going to the rear screw.
        - Remove any torque that may be preventing the driveline quick connect (1) from being released.

    - Release the driveline quick connect (1) from the front screw gearbox.
        - Slide the driveline back.
        - Support the driveline going to the rear screw drive gearbox.

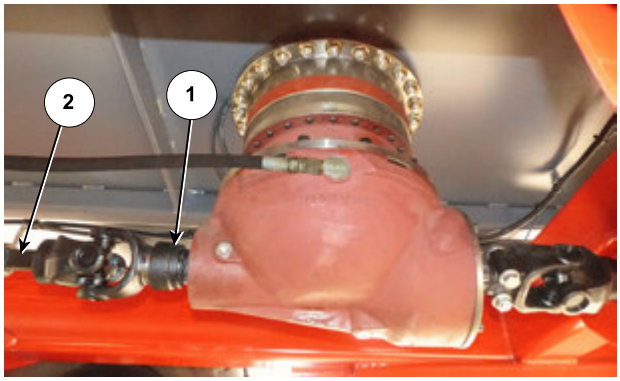


Disconnect Front Screw Driveline 223231C3

2. Use a pipe wrench on the front gearbox shaft to turn the screw so that the leading edge of the front screw is in the same rotational position as the rear screw leading edge.
    - Take care to not harm the splines on the gearbox shaft.


Leading Edge of Screws in the Same Position 219342C

3. From underneath the machine, reconnect the driveline going to the rear screw gearbox to the front gearbox.
    - Attach the driveline quick connect (1) to the front screw gearbox.



Reconnect the Driveline to the Rear Screw 223231C3

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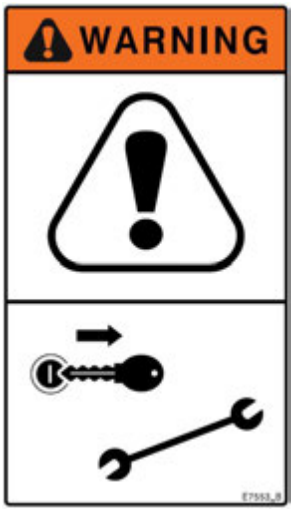
Maintenance of the AMX850T/AMX690T

Shut down the tractor and remove the key before repairing, servicing, lubricating or cleaning the machine.

Relieve all hydraulic pressure in the hoses. Disconnect the hydraulic hoses from the tractor before going near the machine.



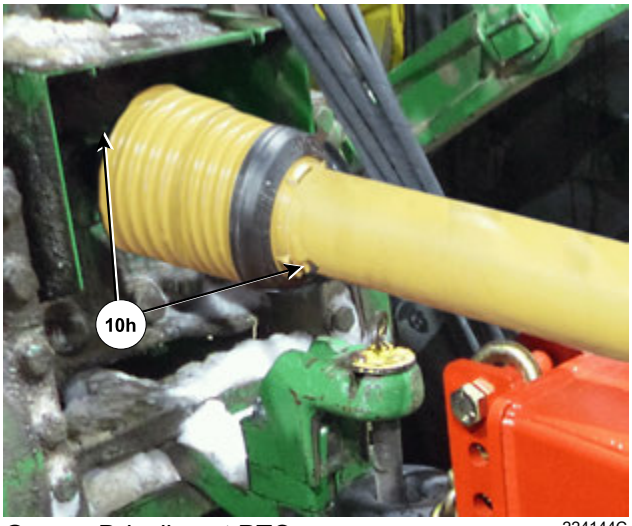
Lubrication - Grease

Lubricate all grease fittings with a quality lithium soap compatible E.P. grease meeting the N.L.G.I. #2 specifications and containing no more than 1% molybdenum disulfide.

- At each grease fitting clean off the fitting before attaching the grease gun.

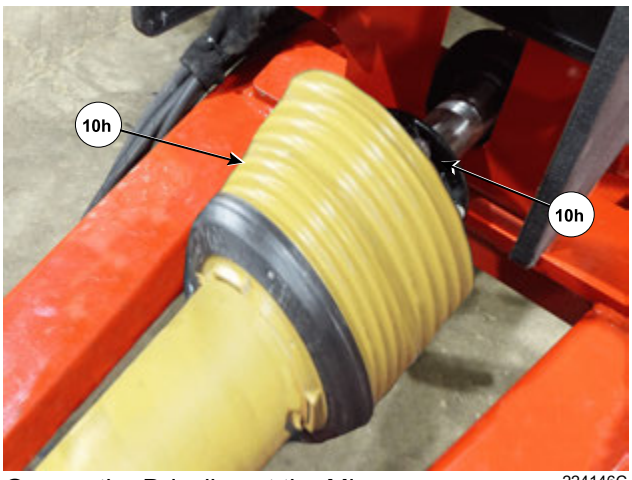
Every 10 Hours

- Grease the driveline at the tractor
  - 2 points on the driveline at the tractor PTO.



Grease Driveline at PTO 224144C

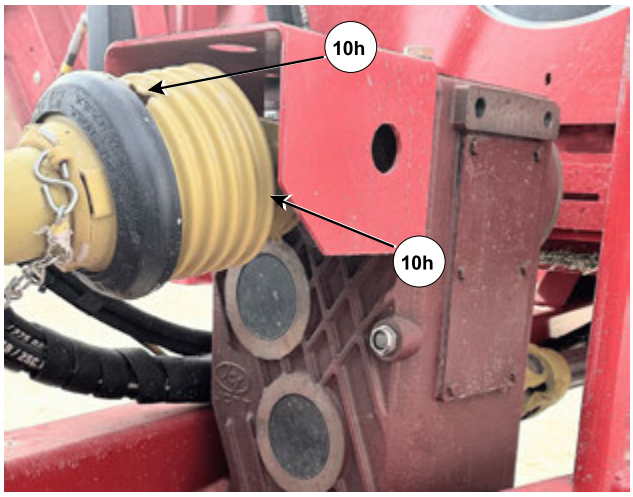
- Grease the driveline at the mixer steady bearing.
  - Raise the driveline shield.
  - 2 points on the driveline at the mixer PTO.



Grease the Driveline at the Mixer 224146C

- If the optional manual shift 2-speed gearbox is installed, grease the driveline going into the gearbox.

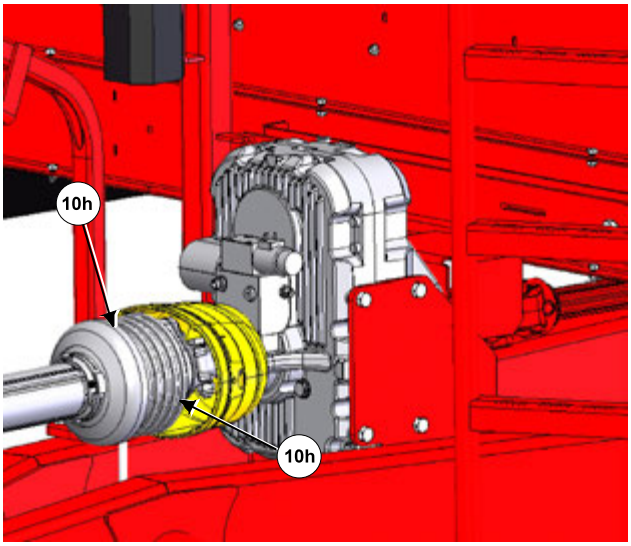
    - 2 points on the driveline.



Grease Driveline on the Optional Manual Shift 2-Speed Gearbox 224147C

- If the optional 2-speed power shift gearbox is installed, grease the driveline going into the gearbox.

    - 2 points on the driveline.

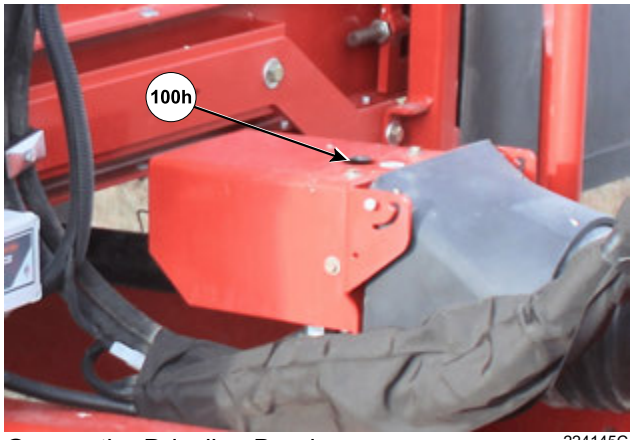


Grease Driveline on the Optional 2-Speed Power Shift Gearbox 225069C

Every 100 Hours

- Grease the Driveline Steady Bearing on Mixer Hitch

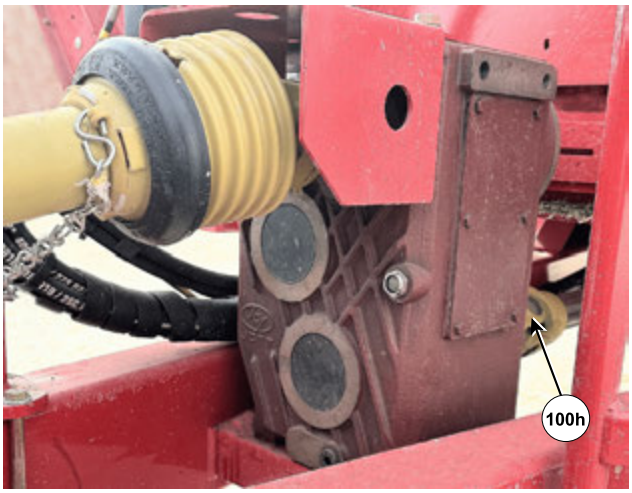
    - 1 point that is accessed through a hole in the top of the bearing shield.



Grease the Driveline Bearing 224145C

- If the optional manual shift 2-speed gearbox is installed, grease the driveline going out of the gearbox.

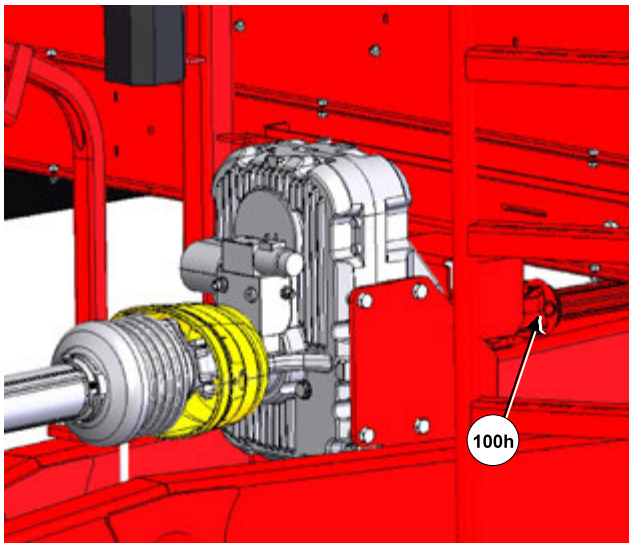
    - 2 points on the driveline.
        - 1 point where the driveline meets the gearbox.
        - 1 point where the driveline meets the planetary gearbox (not pictured).



Grease Driveline Going Out of the Optional Manual Shift 2-Speed Gearbox
224147C2

- If the optional 2-speed power shift gearbox is installed, grease the driveline going out of the gearbox.

    - 2 points on the driveline.
        - 1 point where the driveline meets the gearbox.
        - 1 point where the driveline meets the planetary gearbox (not pictured).



Grease Driveline Going Out of the Optional 2-Speed Power Shift Gearbox
225069C2

- Lubricate 2 bearings at the front of the conveyor.

  Note: This is applicable to all conveyor options.

  - One point through the motor shield on the conveyor.
  - One point on the bearing on the right of the conveyor.

Grease Conveyor Front Bearings
(RH Hydraulic Folding Conveyor Shown)
225177C

- Lubricate 2 bearings at the rear of the conveyor.

  Note: This is applicable to all conveyor options.

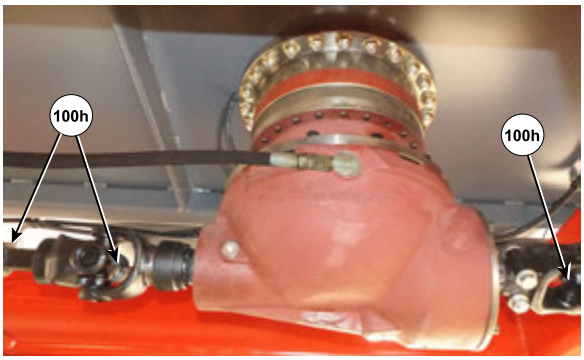
  - One point on each side of the conveyor.

Grease Conveyor Rear Bearings
(Hydraulic Folding Conveyor Shown)
225182C

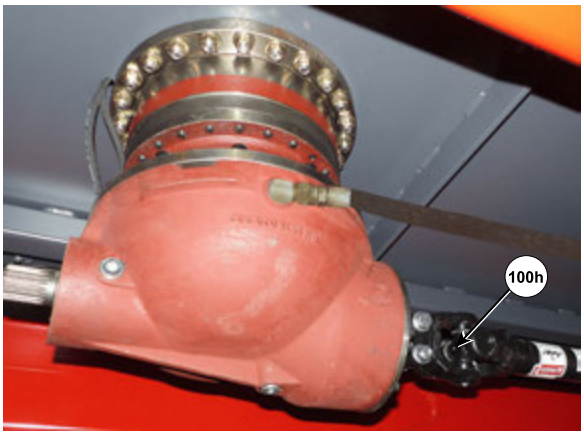
- Grease the Mixing Screw Drivelines

  Note: There are 2 different types of mixer drive gearboxes. The machine will have the same type drive gearboxes as a pair.

  - The driveline to the 2 types of drive gearboxes are the same.
    - 2 points on the joints at the front screw drive gearbox.
    - 1 point on the slip portion of the shaft.
    - 1 point on the joint at the rear screw drive gearbox.



Front Screw Driveline
(Comer Drive Gearbox Shown)
223231C2



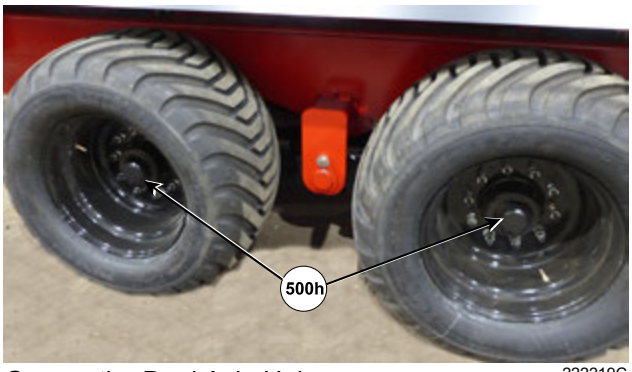
Rear Screw Driveline
(Comer Drive Gearbox Shown)
223232C

Every 500 Hours or Every Year

- Grease the wheel hubs
  - On the dual axle hubs.
    - 1 grease point on 4 hubs.

    Note: If working in heavy muddy conditions, or high moisture, grease more often.

  - On the single axle hubs, remove the hub cap to remove the hub bearings and apply grease into the hub and the bearings.

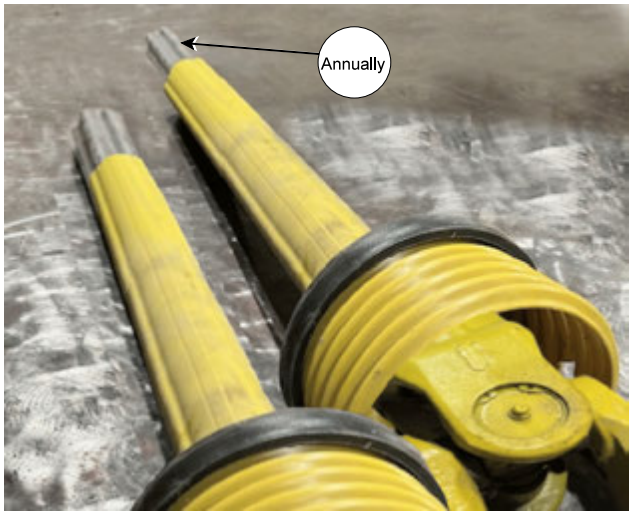


Grease the Dual Axle Hubs 222219C

Grease the Single Axle Hubs 224129C

Once a Year (Annually)

- Grease the PTO from the Tractor to the Mixer
  - Remove the driveline from the tractor to the mixer.
  - Slide the inner and outer sections of the driveline apart into 2 pieces.
  - Place grease on the center portion of the driveline that slides into the other center portion of the driveline.
  - Slide the 2 parts of driveline together.
  - Reconnect the driveline to the tractor PTO and to the mixer.



Grease the Sliding Portion of the Tractor Driveline 224130C

- Grease the PTO from the Front Screw Drive Gearbox to the Rear Screw Drive Gearbox

  - Disconnect the driveline from the front and rear screw drive gearboxes.

  - Slide the inner and outer sections of the driveline apart into 2 pieces.

  - Place grease on the center portion of the driveline that slides into the other center portion of the driveline.

  - Reconnect the driveline to the front and rear screw drive gearboxes.

Grease the Sliding Portion of the Driveline Between Screw Driveboxes 224131C

Every 2,000 Hours

- Grease the Front and Rear Screw Drive Gearbox Top Bearing

  The front and rear screw drive gearboxes have remote grease locations for the top bearing. There are 2 grease lines at each remote location.

  Note: The remote grease location is the same for both types of screw drive gearboxes.

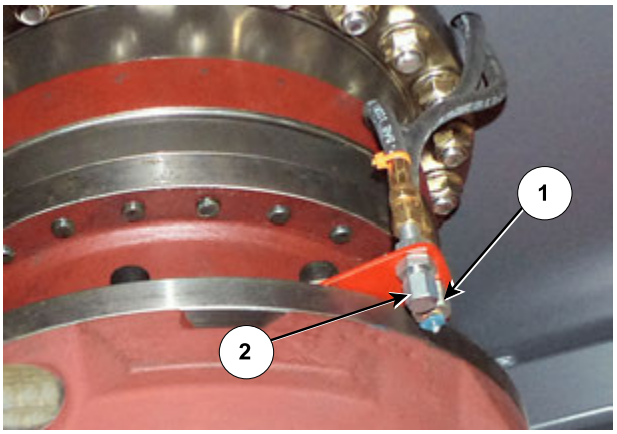
  Note: Grease in warm weather and with the gearbox warm for the best flow of grease.

  - Use Shell GADUS S2 grease or similar.

  - From underneath the mixer, remove the grease line cap (2).

  - Apply grease at the grease point (1) using a hand grease gun only.
    - Apply 20 pumps from the hand grease gun.

  - Replace the grease cap (2) on the other line.



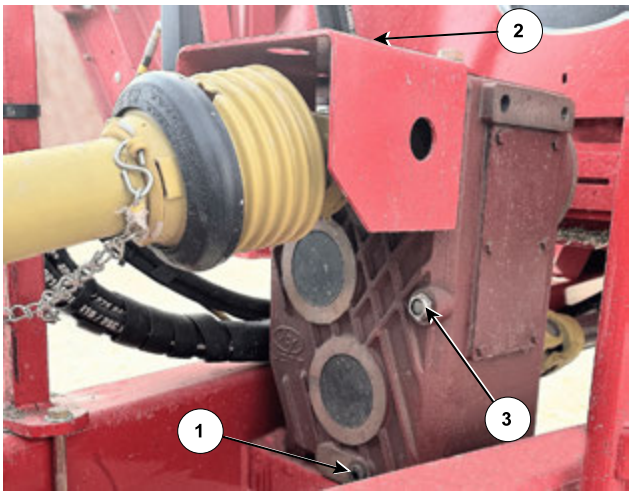
Grease Screw Drivebox Top Bearing 223234C

Optional 2-Speed Manual OR Power Shift Gearbox

- Change the oil in the manual shift 2-speed gearbox following the 'Recommended Service Interval Chart' at the end of this section.
  Note: The first oil change should be done after 50-70 operating hours.

  - Drain the oil from the gearbox by removing the drain plug (1) at the bottom of the gearbox. Collect the oil in an appropriate container.

  - To fill the Gearbox with oil:
    - Replace the drain plug (1).
    - Remove the breather port (2) at the top of the gearbox.
    - Fill with EP 220 synthetic oil until the oil is seen in the sight glass (3) on the front side of the gearbox.
      - Fill with approximately 9 liters of oil.
    - Replace the breather port (2).

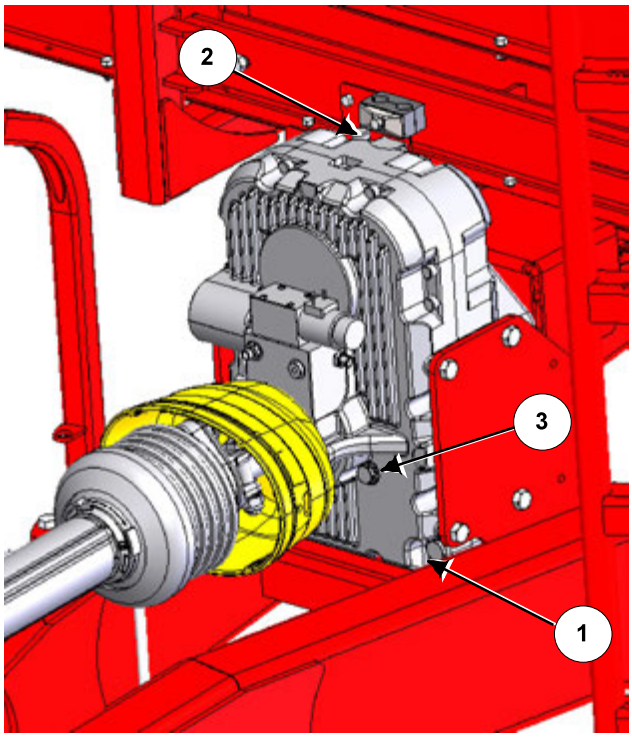


Change the Oil in the Optional Manual Shift 2-Speed Gearbox 224147C3

- Change the oil in the 2-speed power shift gearbox following the 'Recommended Service Interval Chart' at the end of this section.

  - Drain the oil from the gearbox by removing the drain plug (1) at the bottom of the gearbox. Collect the oil in an appropriate container.

  - To fill the Gearbox with Oil:
    - Replace the drain plug (1).
    - Remove the breather port (2) at the top of the gearbox.
    - Fill with Universal Tractor Transmission Oil (UTTO) until the oil is seen in the sight glass (3) on the front side of the gearbox.
      - Fill with approximately 4.1 liters of UTTO.
    - Replace the breather port (2).

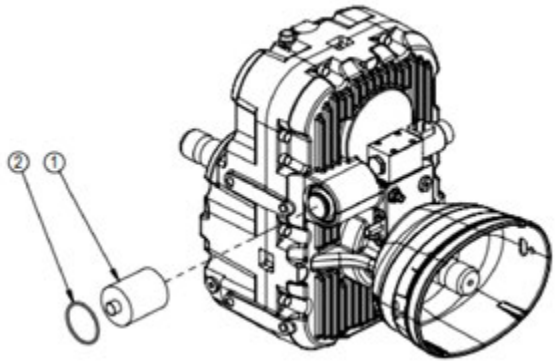


Change the Oil in the Optional 2-Speed Power Shift Gearbox 225070C

- Run the gearbox for a few minutes, switching from low to high gear several times.
- Check the oil level in the sight glass (3), and add more oil as necessary.

- Change the Oil Filter in the Optional 2-Speed Power Shift Gearbox following the 'Recommended Service Interval Chart' at the end of this section.

  - Open the filter housing.
  - Change the oil filter (1), ensuring to install it in the right direction.
  - If necessary, change the O-ring (2).
  - Close the filter housing.



Change the Oil Filter in the Optional 2-Speed Power Shift Gearbox 39534_B

Mixing Screw Drive Gearbox Oil

Note: There are 2 different types of mixer drive gearboxes; Comer and RR. The machine will have the same type as a pair.

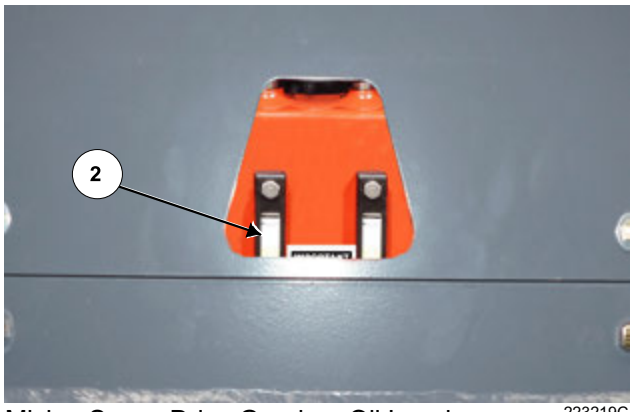
- The oil level indicator for both mixing screw types of gearboxes is located on the left side of the tub behind the removable panel.

  - The oil level in the tube indicates the oil level in each gearbox.

- Check the oil levels in the sight glasses according to the decal (2).

  - Check the oil level when the machine is cold.

- Compare the oil level to the decal on the oil reservoir.

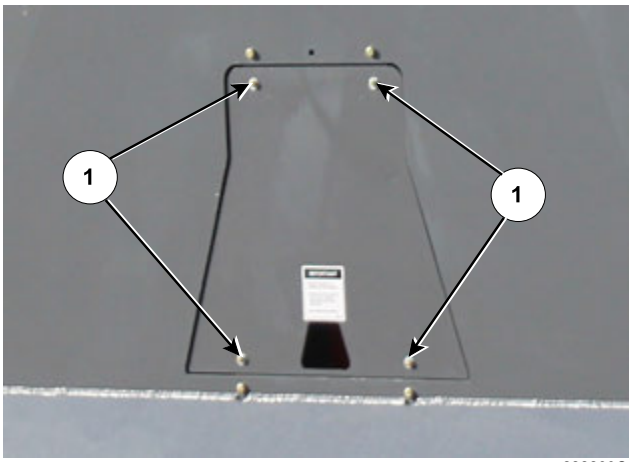


Mixing Screw Drive Gearbox Oil Level 223219C

To Add Oil into the Drive Gearboxes:

- On the left side of the mixer, remove the four fasteners (1) holding the oil reservoir panel.

Note: The oil reservoir consists of 2 separate compartments. The filler cap and sight glass closest to the tub wall are for the drive gearbox in that portion of the mixer tub.



Remove the Oil Reservoir Panel 222260C

- Remove the oil reservoir cap of the gearbox needing oil (2).

- Fill with EP220 synthetic oil.

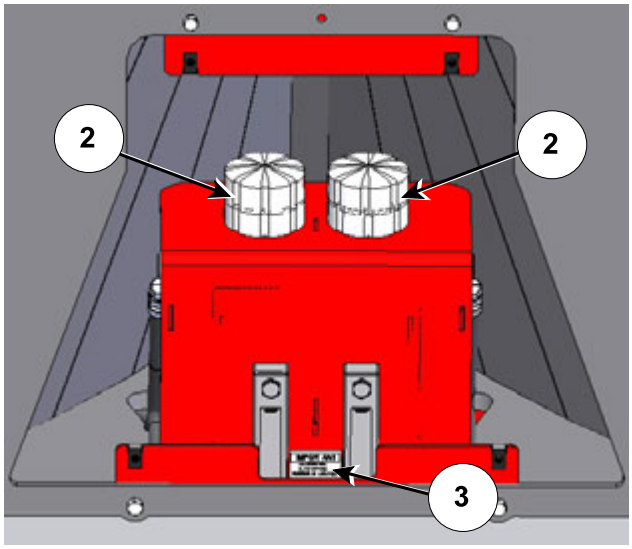
  Note: Pour in oil in small amounts while giving time for the oil to run down the hoses into the gearbox and register in the level tube.

- Fill until the oil level is as shown on the decal (3) between the sight tubes.

  Note: Do not overfill to prevent the breather port of the gearbox from being blocked.

- Replace the oil reservoir cap.

- Replace the panel onto the tub wall.



Fill Oil Reservoir Through the Cap 225187C

Draining the Oil from the Screw Drive Gearbox

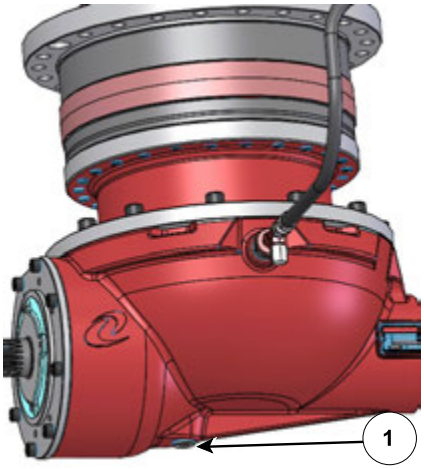
Note: There are 2 different types of mixer drive gearboxes; Comer and RR. The machine will have the same type as a pair.
Note: The procedure of draining and filling with oil are the same for the 2 types of gearboxes.
Note: The drain plugs are different on the 2 types of gearboxes.

- Change the oil in the front and rear screw drive gearboxes following the 'Recommended Service Interval Chart' at the end of this section.
  Note: The first oil change should be done after 100 operating hours.

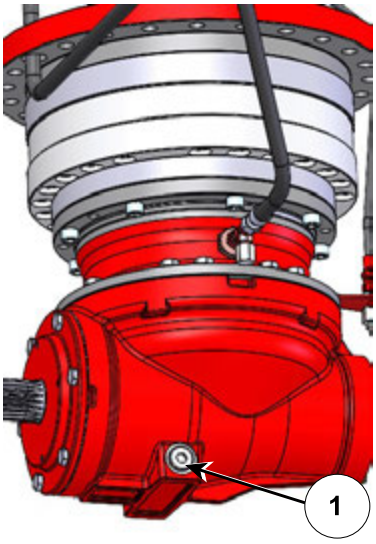
- Remove the drain plug (1) on the bottom of the gearbox to fully remove all the oil.

  - Catch the oil so it can be disposed of in a proper way.

- Replace the drain plug.



Drain Plug - Comer Gearbox 225189C1



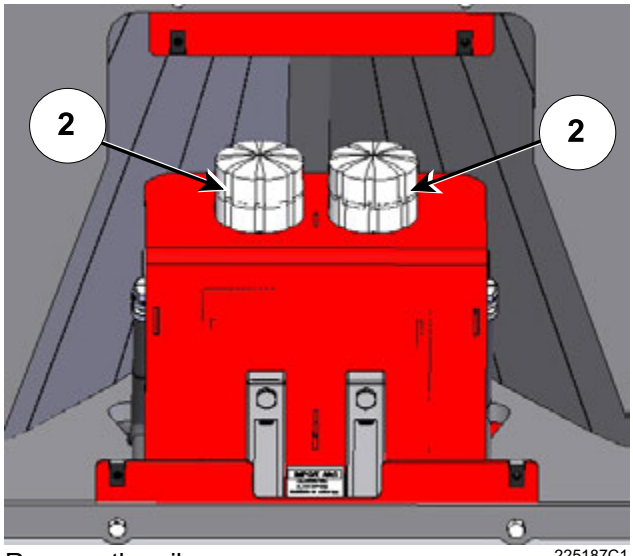
Drain Plug - RR Gearbox 225190C

Filling the Screw Drive Gearbox with Oil after Draining

There are 2 methods for filling the screw drive gearboxes with oil. Select one of the methods and follow the instructions.

- *Method 1 - Fill by Pumping in Oil Through the Tee Fitting:*

1. Remove the oil cap (2) from the oil reservoir closest to the tub wall for the gearbox needing to be filled.



Remove the oil cap 225187C1

2. At the gearbox needing to be filled, remove the cap (2) off of the tee fitting.

3. Connect a pump to the tee fitting, and pump EP220 synthetic oil into the gearbox.
   - If the unit has Comer gearboxes, fill with approximately 20 liters of oil.
   - If the unit has RR gearboxes, fill with approximately 24 liters of oil.

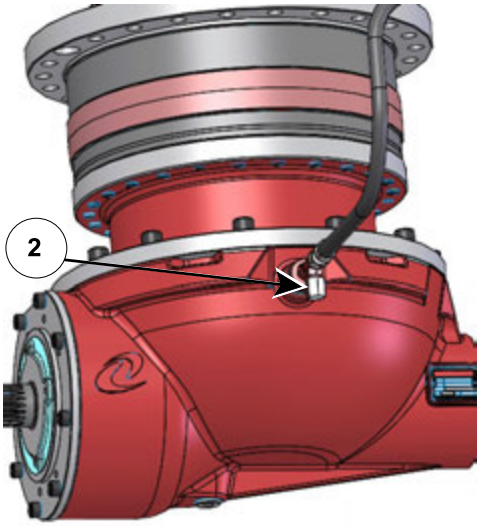
4. Disconnect the pump and replace the cap (2) onto the tee fitting.
   - Allow oil level in the reservoir to stabilize.

5. Check the oil level in the sight glass.

Note: Do not overfill as that will cause oil to come out of the top breather port of the gearbox.

6. Run the machine for a minimum of 5 minutes.
   - If needed, top up accordingly with oil to the level indicated on the decal on the oil reservoir.

7. Place the oil cap back onto the reservoir.



Remove cap off tee fitting, add oil 225189C2
(Comer gearbox shown)

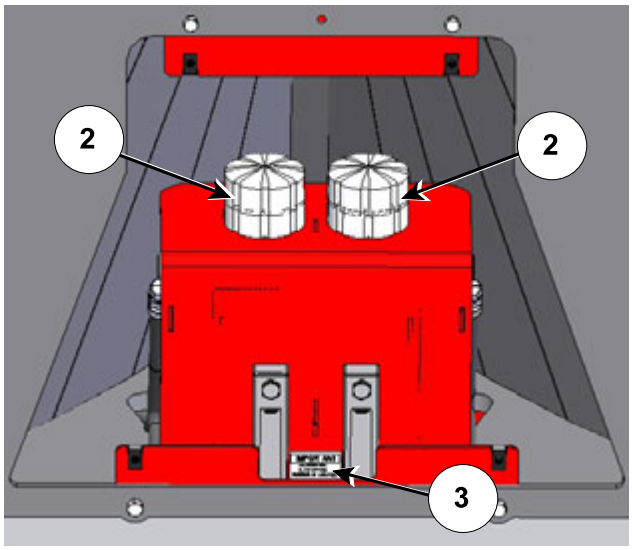
- *Method 2 - Fill Through the Oil Reservoir Cap:*

1. Remove the oil cap (2) from the oil reservoir closest to the tub wall for the gearbox needing to be filled.

2. Slowly add oil until the oil is at the top of the sight glass in that oil reservoir.

3. Wait for the oil to make it's way into the screw drive gearbox.

4. Run the machine for a minimum of 5 minutes.



Fill Oil Reservoir Through the Cap 225187C

5. Repeat the filling and waiting process until the oil level stabilizes at the correct level according to the decal (3) on the oil reservoir.

6. Replace the oil cap (2) onto the reservoir.

If the oil reservoir has been overfilled according the oil level decal:

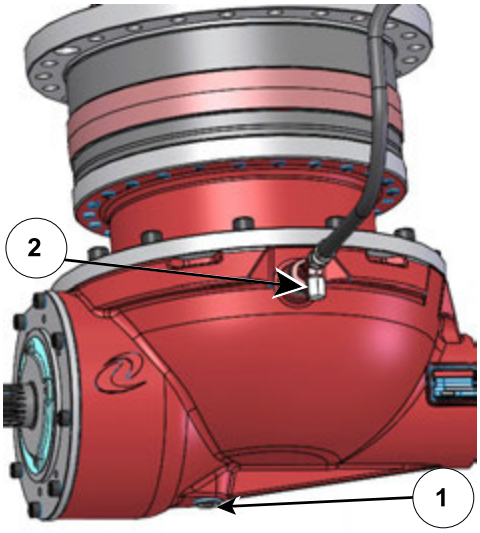
1. Remove the oil cap from the oil reservoir.

2. Remove the cap (2) off of the tee fitting at the gearbox, or remove a drain plug (1).

3. Drain some of the oil from the reservoir/gearbox.
   - Catch the oil in an appropriately sized container.
   - Allow oil level to stabilize.

4. Check the oil level according to the decal on the front of the reservoir.

5. Replace the cap on the tee fitting (2) or replace the drain plug (1).



If Overfilled, Drain Some Oil
(Comer gearbox shown) 225189C

Wheel Nut Torque

- Torque the wheel nuts.

  - Ensure that the flat portion of the wheel stud washer is against the wheel rim.

    Dual Tires on Tandem Axle:
    - Torque the lug nuts to 300 - 320 ft-lb (406 - 434 Nm).

    Single Tires on Single Axle:
    - Torque the lug nuts to 330 - 375 ft-lb (447 - 508 Nm).

  - Follow the 'Recommended Service Interval Chart' at the end of this section.

Flat of Washer Against Rim, Torque the Nuts 217100

Tires

- Ensure the machine is on level ground.
- Ensure all tires are chocked.
- Check the tires for low pressure, cuts, bubbles.
- Check that the tire sidewalls and treads are in good condition.
- Check for damaged rims or missing lug bolts and nuts.
- Adjust the tire air pressure.

  Dual Tires on Tandem Axle:
  - For 550/45-22.5 tires, fill the tires to 58 psi (400 kPa).

  Single Tires on Single Axle:
  - For 445/50R22.5 tires, fill the tires to 97 psi (669 kPa).
- Check the wheel bearings and adjust as needed.
  - Adjust the bearings at the start of every season.
  - Tighten snugly and then turn back until cotter pin can be inserted.
- Have a qualified tire technician service the tires and wheels.
- Follow the 'Recommended Service Interval Chart' at the end of this section.

Check the Tires
(Dual Tires on Walking Axle Shown) 222219

Check the Tires
(Single Tires on Axle Shown) 224085

Explosion hazard!
Do not remove, install, or make repairs to a tire on a wheel rim. Take the tire and rim to a tire shop to have a qualified tire mechanic service the tires and rims.
Failure to comply could result in death or serious injury.

Tire Changing Procedure

Before beginning, make sure the tractor is turned off and the parking brake is set.

Securely block the mixer before any work is done around or under the machine.

Relieve hydraulic pressure and disconnect the hydraulic hoses.

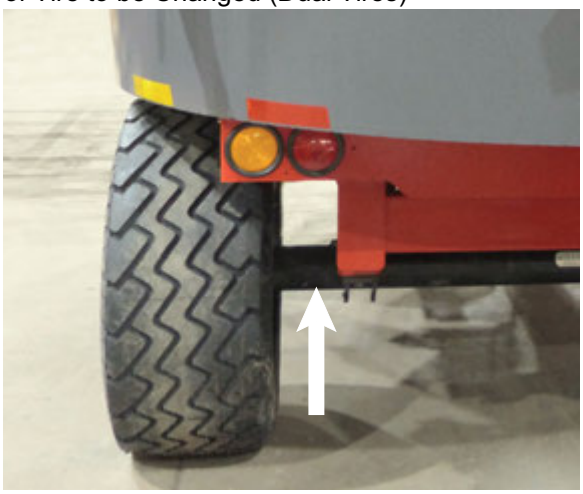
1. Hitch the mixer to the tractor.
2. Block the mixer tires on the opposite side to prevent movement of the mixer.
3. Place a jack under the spindle tube of the tire to be changed.
4. Lift the spindle for sufficient clearance to remove the tire.
5. Put the new tire in place.
6. Ensure that the flat portion of the wheel stud washer is against the wheel rim.
7. Fasten the tire with the lug nuts.

   - Ensure that the flat portion of the wheel stud washer is against the wheel rim.

     Dual Tires on Tandem Axle
     - Torque the lug nuts to 300 - 320 ft-lb (406 - 434 Nm).

     Single Tires on Single Axle
     - Torque the lug nuts to 330 - 375 ft-lb (447 - 508 Nm).

Place Jack Under the Spindle Tube of Tire to be Changed (Dual Tires) 222219



Place Jack Under the Spindle Tube of Tire to be Changed (Single Tire) 224188C

Flat of Washer Against Rim,Torque the Nuts[217100]

Visually Inspect Hydraulic Hoses/Fittings

The hydraulic system operates under extremely high pressure. Hydraulic oil leaking under pressure can penetrate the skin, causing serious injury or infection.

Shut down the machine and replace the hydraulic hose assembly if any of the following conditions exist:

- Fitting slippage on hose.
- Damaged, cracked, cut or abraded cover (any reinforcement exposed).
- Hard, stiff, heat cracked or charred hose.
- Cracked, damaged or badly corroded fittings.
- Leaks at fitting or in hose.
  - Kinked, crushed, flattened or twisted hose.
  - Blistered, soft, degraded or loose cover.

Visually Inspect the Hydraulic Cylinders

- Shut down the machine and visually inspect the tub door hydraulic cylinder, looking for leaks and/or other damage.

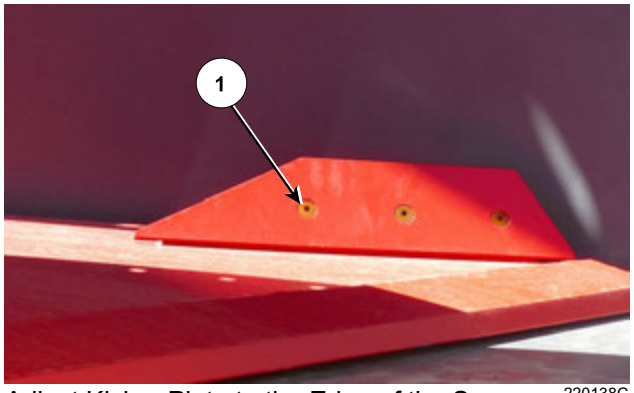
- Check the condition of the lift cylinder on the hydraulic folding conveyor, and check the condition of the shift cylinder on the flat bidirectional conveyor.

- If damage to a hydraulic cylinder is found, make all necessary repairs or replace before operating the machine.

Inspect the Hydraulic Cylinder 225183

Adjust the Kicker Plate on the Screw Leading Edge

- As the machine mixes material, the kicker plate edge will wear as it lifts material onto the screw.
  - For proper mixing the kicker plate should be set to a distance of about 1/8" distance to the tub wall at the closest point (this distance will vary as the screw makes its full rotation).
- Adjust the kicker plate as necessary. Follow the 'Recommended Service Interval Chart' at the end of this section.
  - To adjust the kicker plate:
    - Loosen the fasteners (1) and slide the kicker plate about 1/8" distance to the tub wall at the closest point.
    - Tighten the fasteners (1) to hold the kicker plate.
- Replace the kicker plate when the top edge begins to wear down greater than 1/2", or setting to the tub wall cannot be maintained.

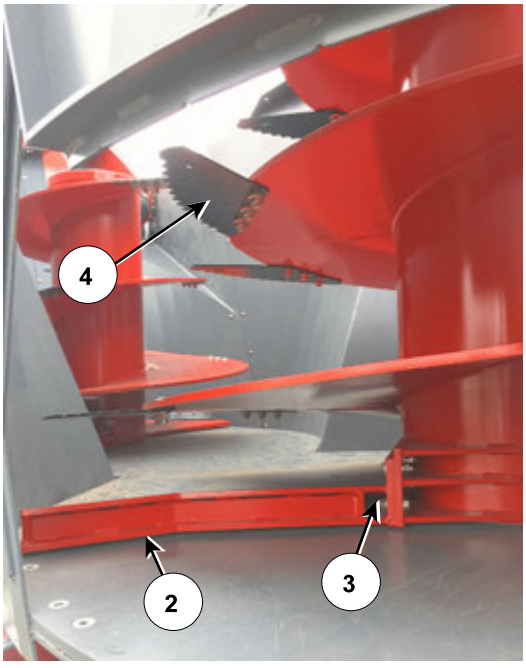


Adjust Kicker Plate to the Edge of the Screw 220138C

Adjust the Screw Sweeper

- If the screw sweeper (2) is installed and is contacting the tub floor, add shims between the sweeper and screw mount (3) to move the sweeper up for a small clearance from the tub floor.

Do Not Enter the Tub While the Mixers Are Turning.
Entering the tub when the mixers are turning will result in death or serious injury.
Do not lean over the mixing tub while the screws are turning to avoid the danger of falling into the tub.
Do not contact the rotating screws. Never attempt to manually remove debris while the screws are rotating.



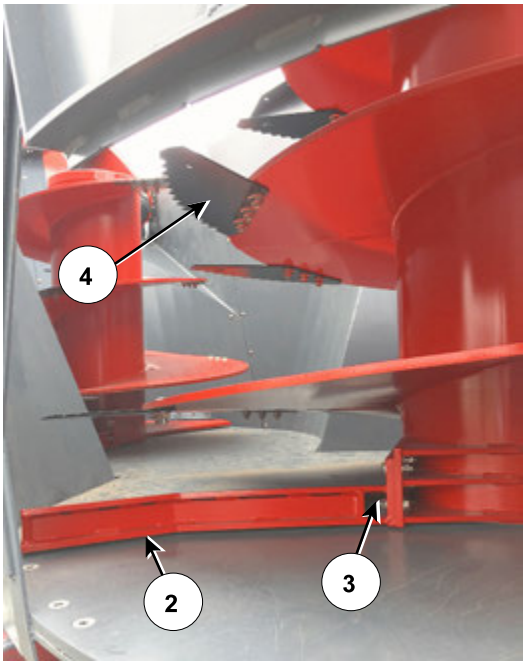
Screw Sweeper Clearance 222267C

Knives on the Screws

- Knives (4) are installed on the screws. The knives nearer to the base of the screw are subject to the most wear.
  - To help with uniform wear, exchange the lower knives with the upper knives

.

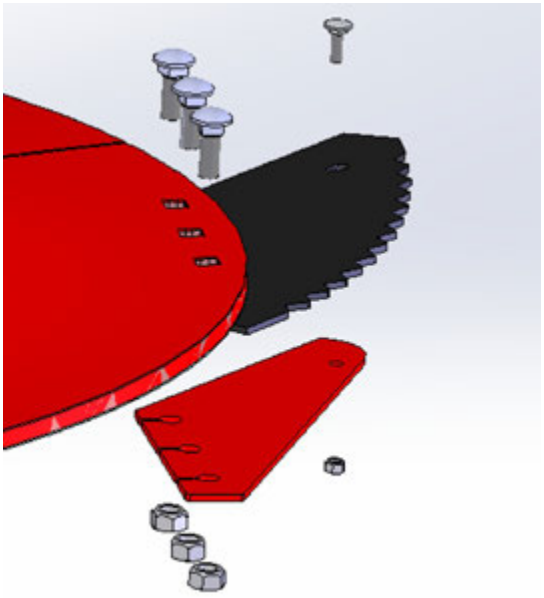
  - Replace the knives when they are worn or are no longer cutting material.
    - Note: The tip of the knife will wear out first.
  - Follow the 'Recommended Service Interval Chart' at the end of this section.



Exchange or Replace the Knives 222267C

Do Not Enter the Tub While the Mixers Are Turning.
Entering the tub when the mixer is turning will result in death or serious injury.
Do not lean over the mixing tub while the screw is turning to avoid the danger of falling into the tub.
Do not contact the rotating screw. Never attempt to manually remove debris while the screw is rotating.

  - To exchange or replace the knives:
    - Remove the hardware and backer plate.
    - Remove the knife.
    - Exchange or replace the knife.
    - Reinstall the knife and backer plate using the same hardware.



Exchange or Replace the Knives 225074

Adjusting the Unloading Conveyor Chains

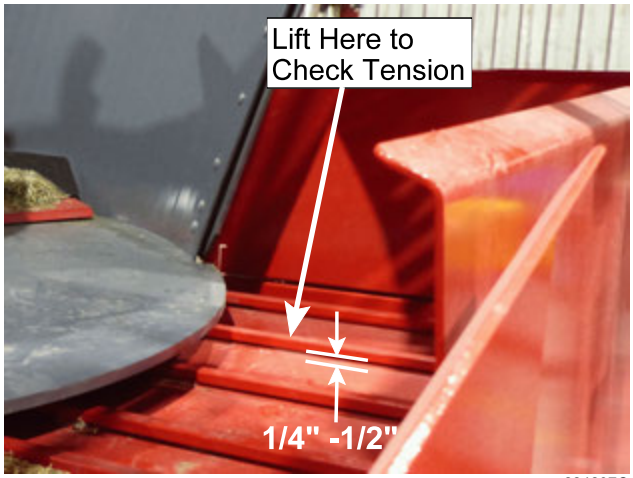
- For all conveyor options, check the tension of the chain following the 'Recommended Service Interval Chart' at the end of this section.
    - Lift the slat that is 18" from the rear of the conveyor.
        - The slat should be able to lift 1/4" to 1/2" from the chain bed.
- If the chain needs to be adjusted, follow the steps listed:

    Note: Adjust the hydraulic folding conveyor chain tension when the conveyor is in the flat position. The chain tension will decrease when the conveyor is raised.

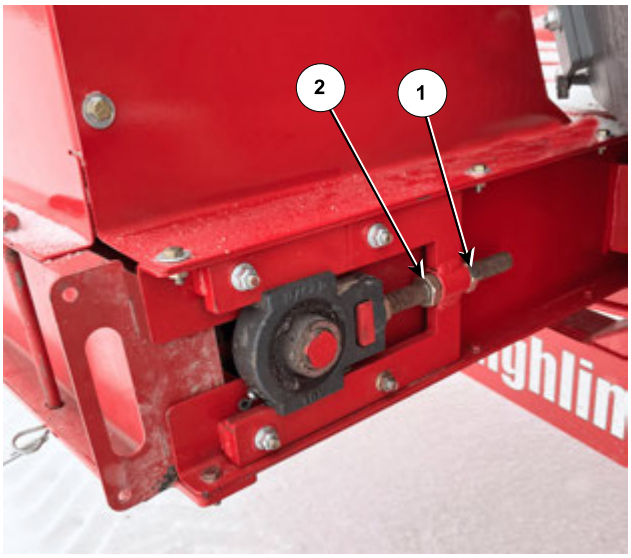
    - At the conveyor end, next to the left side of the tub:

    Note: If the LH hydraulic folding conveyor is installed, the conveyor end will be on the right side of the machine.

        - If there is material build up, remove the conveyor end cap by pulling out the retaining pins.
            - Clean out as necessary.
        - Loosen the locking nut (1) on the tension adjusting bolt.
        - Turn the adjusting nut (2).
        - Check the tension by lifting the slat that is 18" from the rear of the conveyor.
            - Check that it can be lifted 1/4" to 1/2" from the chain bed.
            - Do not over tighten the chain.
        - Tighten the locking nut (1).



Lift Slat to Check Chain Tension 224207C



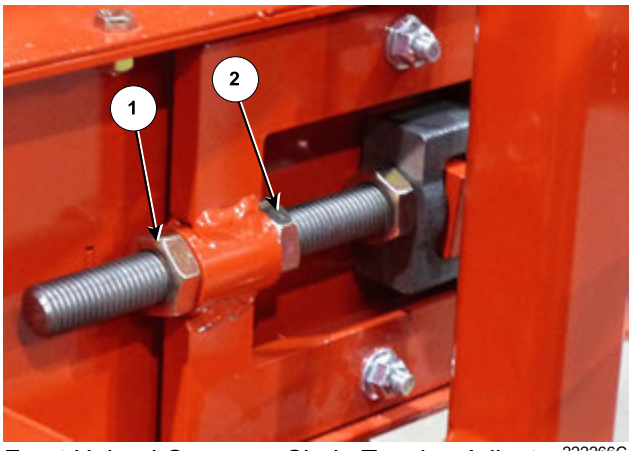
Remove the Conveyor End Cap, if necessary
Rear Unload Conveyor Chain Tension Adjust 222327C

- At the conveyor end, next to the front ladder:

Note: If the LH hydraulic folding conveyor is installed, the conveyor end will be on the right side of the machine, opposite the ladder.

  - Loosen the locking nut (1) on the tension adjusting bolt.
  - Turn the adjusting nut (2).
  - Check the tension by lifting the slat that is 18" from the rear of the conveyor.
    - Check that it can be lifted 1/4" to1/2" from the chain bed.
    - Do not over tighten the chain.
  - Tighten the locking nut (1).

- If removed, replace the conveyor end cap and fasten with the retaining pins.



Front Unload Conveyor Chain Tension Adjust 222266C

Optional Magnet(s)

- Remove any debris and/or collected metal from the magnet(s).
- Check that the fasteners are tight.

Recommended Service Interval Chart

Daily
Check Hydraulic Components for leaking
Check Mixer Screw Drive Gearbox Oil Levels
Check Oil level in Optional 2-speed Manual or Power Shift Gearbox (if present)
Remove Trash and Debris
Check Weigh Scale
Clean Backup Camera (if present)
Clean Tub Camera (if present)
Check Optional Magnet(s)

Every 10 Service Hours
Grease Points on the Input Driveline Shaft
Check Wheels
Check Tire Lug Nuts
Check Tire Inflation

Every 100 Service Hours
Grease Unload Conveyor
Grease Driveline Steady Bearing
Grease Mixing Screw Drive Shafts
Check Kicker Plate on the Screw Leading Edge
Check Knives on the Screw
Check Tension of the Unloading Conveyor Chains

Every 500 Service Hours or Every Year (whichever comes first)
Check Mixing Screw Drive Gearbox Seals and Screw Tightness
Check Wheels and Bolt Torque
Grease the Wheel Hubs
Grease the Driveline between the Mixer Screw Gearboxes
Change Oil in the Optional Manual Shift 2-speed Gearbox (if present)

Every 1000 Service Hours or Every Year (whichever comes first)
Change Oil in the Optional 2-speed Power Shift Gearbox (if present)
Change the Oil Filter in the Optional 2-speed Power Shift Gearbox (if present)

Every 2000 Service Hours
Change the Oil in the Mixing Screw Drive Gearboxes
Check Tightness of Screws on Mixing Screw Drive Gearboxes
Grease the Top Bearing of the Screw Drive Gearboxes

Every 5000 Service Hours
Check And/Or Replace the Seals of the Screw Planetary Gearbox

Every Year
Grease the Driveline from Tractor to Mixer

Calibration Procedure for DigiStar/TopCon Display Weigh Scale

DIGISTAR 2805 Calibration Procedure:

- Power On, Wait for it to boot up.
- Push: **Select** Repeatedly until "Setup" Appears.
- Immediately push and hold: **Function** until Setup reappears.
- Type: **145020**
- Push: **On** (then it should say "Storing" so just wait).
- Type: **36931**
- Push: **On**, then it goes back to Displaying Weight.
- Calibration Is complete.
- Scale Is ready to zero.

Max Weight Calibration:

- Push: **Select** repeatedly until "Menu" appears.
- Immediately Push and Hold: **Function** until it starts giving directions.
- Push: **Select** until "Menu 3" Appears.
- Push: **Enter** to Get into Menu 3.
- Push: **Enter** again to skip "Display Unit".
- Push: **Enter** again to skip "Auto Range" Option.
- Push: **Enter** again to skip "Display Unit Lb-kg" or **Select** then On to Modify.
- Cap Will Be Shown Now.
- Type: **30000**
- Push: **On** to Save.
- Push: **Off**

DIGISTAR 2810 Calibration Procedure:

- Power On
- Type: **8711**
- Push: **Select**
- Type: **145020**
- Push: **Enter**
- Type: **8712**
- Push: **Select**
- Type: **36931**
- Push: **Enter**
- Type: **3002**
- Push: **Select**
- Type: **30000** (To Enter 30000 Lb Max Capacity)
- Push : **Enter**
- Calibration Is Complete.
- Scale Is Ready to Zero.

Calibration Procedure for Dinamica Generale DG500 Weigh Scale

1. Turn on the weigh scale.
2. Hold down Enter as soon as it says on the screen to "Hold Enter" to get into Setup.
3. At the System Configuration screen choose option 6, “Setup Protected by Password”.

4. Use up/down arrows to Enter password 12.
5. Confirm with the Enter key.
6. Use the up/down arrows to change the calibration number to 7680.

   CALIBRATION NUMBER = LOAD CELL CAL (1920) X NUMBER OF CELLS (4) =7680

7. Press Enter to confirm the entered value.

To Fine Tune the Weight on Dinamica Generale DG500 Weigh Scale:

1. Turn on the weigh scale.
2. Hold down Enter as soon as it says on the screen to "Hold Enter" to get into Setup.
3. At the System Configuration screen choose option 6, “Setup Protected by Password”

4. Enter password 67.
5. Confirm with the Enter key.
6. Use the up/down arrows to change the adjustment factor percentage.
7. Press Enter to confirm the entered value.

Refer to the manual that came with the display for additional information on operating the display.

Calibration Procedure for Scale-Tec POINT® Scale Indicator

1. Refer to the Scale-Tec POINT® Quick Start Guide for setup instructions.

    a. Note: The mobile app can be downloaded from the Google Play Store or the Apple App store.
    b. Additional information can be found on the Scale-Tec website.

2. Once the Scale-Tec POINT® device is setup on the mobile app, ensure that the calibration number is set appropriately.

    a. Under the device settings, click on the 'Calibrate' menu.
    b. Ensure that the 'Cal Number' is set to 39,600, as a starting point.
        i. If this is not set, manually input this value into the 'Set Cal Number' box and click 'Set Cal Number'.
    c. Note: The most accurate method to calibrate the scale head is to use a known weight.

Storing the AMX850T/AMX690T

1. Clean all the debris off the machine.

Clean Debris from the Machine 223188-1

2. Remove all material that is inside the tub.

Do not enter the tub while the mixers are turning.
Entering the tub when the mixers are turning will result in death or serious injury.

3. Park the machine on level ground.

Remove all Material from the Tub 222222

4. If the manual jack option is installed, place the jack onto the hitch.
   - Remove the jack from the storage position.
   - Pin the jack in place on the hitch.
   - Ensure that the jack is resting on solid level ground or resting on a wood block.
   - Raise the hitch until the weight is supported by the jack.
     - The hitch is heavy. Do not attempt to lift it without using the jack.

Lift Hitch with the Jack 224179

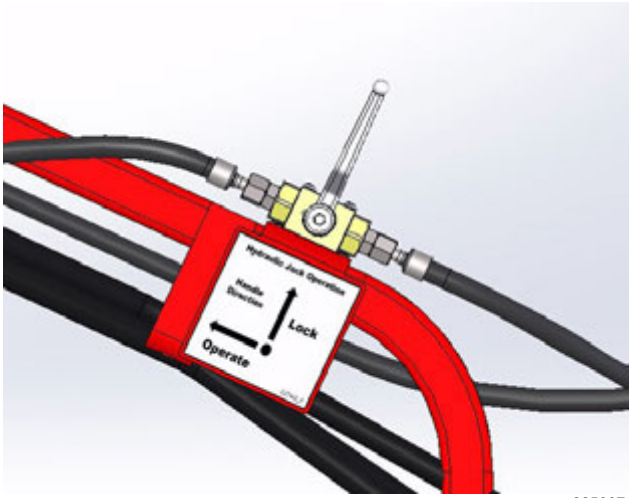
5. If the hydraulic jack option is installed, move the ball valve handle into the 'Operate' position in order to lower the jack.

   - Use the tractor hydraulics to lower the jack.

   - Ensure that the jack is resting on solid level ground or resting on a wood block.

   - Raise the hitch until the weight is supported by the jack.
     - The hitch is heavy. Do not attempt to lift it without using the jack.

   - Once the hitch is fully supported, move the ball valve handle back into the 'Lock' position.



Hydraulic Jack ball valve 225007

6. Raise the tub door a small amount to let any water that collects to drain out from the tub.

   - Support the tub door so it does not lower.

7. Remove the driveline from the tractor PTO shaft.

   - Disconnect the chain on the driveline guard from the tractor.


Disconnect the Driveline from the Tractor 224174

8. Place the driveline into the driveline support (1).

Place the Driveline into the Driveline Support
(Manual Jack Shown) 224191

9. Disconnect the safety chain from the tractor.

10. Remove the hitch pin from the tractor.

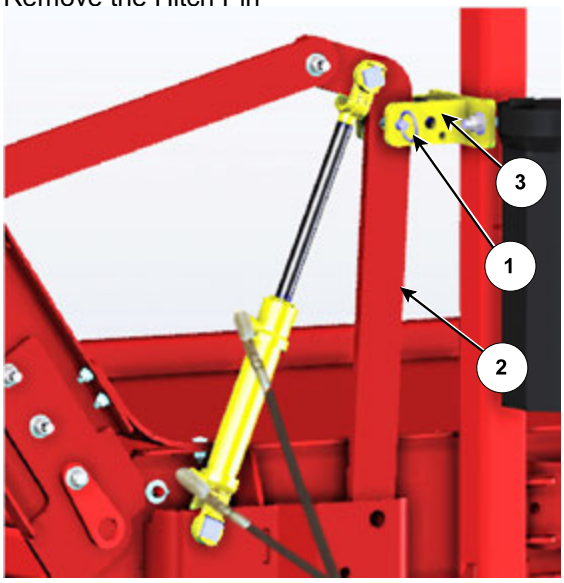
Disconnect Safety Chain from Tractor
Remove the Hitch Pin 224180

11. If the RH or LH hydraulic folding conveyor is installed, move the conveyor upward and fasten the conveyor transport lock.

    - Remove the transport lock pin (1) from the storage location on the lock bracket (3).

    - Insert the lock pin (1) through the lock bracket (3) and into the lift arm (2).

    Note: If 2 remote option is installed, the conveyor lift cylinder will be linked to the conveyor drive motor through an electric solenoid valve.
    - Move the electric selector valve so the hydraulic flow goes to the lift cylinder.



Lock the Conveyor into Transport Position
(RH Hydraulic Folding Conveyor Shown) 223235C

12. Relieve the pressure on the hydraulic hoses and disconnect them.

13. Disconnect the electrical connection.

Disconnect Hydraulic Hoses & Electrical 108008

14. Secure the hydraulic hoses and electrical connector to the hose holder to keep them clean and off the ground.

Place Hydraulic Hoses and Electrical Connector Into the Holder 224190

15. Tighten all bolts to the recommended torque.

16. Check the machine for worn and damaged parts. Replace as needed.

17. Touch-up the paint to prevent rusting.

Mixing Screws

Symptom	Problem	Solution
Screw does not start or it stops during operation	Load is heavy material	Load less material in the tub.
	Load has settled	Follow the procedures detailed in Section 4 for "Removing Settled Material That Is Causing the Mixing Screws To Not Turn".
Screw not cutting material	Aggression Bars	Move the aggression bars into the tub for more material cutting.
	Knives	Knives are dull. Exchange the lower knives that get more wear with the upper knives. Replace with new knives.
PTO and screw not turning	Driveline shear bolt	Replace shear bolt on drive line.
Mixing Screw Not Turning	Screw Driveline	Check that the driveline is connected.
Optional 2-speed manual OR power shift gearbox is overheating	Oil level	Check the oil level and drain/top off if needed.

Unload

Symptom	Problem	Solution
Tub door does not open	Hydraulic cylinder	Check hydraulic connections.
Unload conveyor does not turn	Hydraulic motor	Check the hydraulic connections at the motor.
		If 2 remote option is installed, move the electric selector valve so the hydraulic flow goes to the conveyor drive motor.

Symptom	Problem	Solution
Unload conveyor does not turn (continued)	Material caught in the conveyor chains	Remove material from the chains.
	SCV not supplying enough hydraulic flow	Increase the flow rate at the SCV.
Material spills over sides of conveyor	Too much material released from tub	Control the amount of material coming from the tub by controlling the tub door.
Not enough material comes out of tub door	Mixing Screw Speed	Increase the speed of the mixing screw to move more material out.
RH or LH Hydraulic Folding conveyor does not lift	Hydraulic Cylinder	Check the connections to the hydraulic lift cylinder.
		If 2 remote option is installed, move the electric selector valve so the hydraulic flow goes to the lift cylinder.
	Transport Lock	Remove the transport lock to allow the conveyor to be raised or lowered.
Flat Bidirectional Conveyor does not shift	Hydraulic Cylinder	Check the connections to the hydraulic cylinder.
		If 2 remote option is installed, move the electric selector valve so the hydraulic flow goes to the shift cylinder.
	Material build up in the slides	Clear the material out of the slides, as required.

Weigh System

Symptom	Problem	Solution
Weigh scales do not show correct weight	Connection to the weigh bar	Check for good wire connections at all 4 weigh bars.
	Calibration of the weigh scales	Follow the scale calibration procedure as detailed in Section 5 of this manual. For additional information, see the Weigh Scale Operator manual.

Other

Symptom	Problem	Solution
Optional Hydraulic Jack does not raise/lower	Hydraulics	Check hydraulic connections.
	Ball Valve	Move the value handle into the ‘Operate’ position.

If problems persist, please contact your local Highline dealer.

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Machine Specifications - AMX850T

Tub		
Capacity	745 ft^3	21 m^3
With tub extension	854 ft^3	24 m^3
Number of Screws	2	
Screw Speed	33 rpm @1000 PTO	
Aggression Plates	Yes	
Weigh System	4 Point Weighing System	

Dimensions and Weights		
Unloaded Weight (with flat bidirectional conveyor)	20,200 lb.	9162 kg
Unloaded Tongue Weight	2,015 lb.	914 kg
Max Payload	32,000 lb at 20 mph	14,515 kg at 32 kph
Length	316 in.	8.03 m
Height Standard	114 in.	2.90 m
Height with Extension	124 in.	3.15 m
Width with Flat Bidirectional Conveyor	109 in.	2.77 m
Wheel Track Width	107 in.	2.72 m

Unloading		
Conveyor	Chain with Steel Slats	
Unload Height		
RH or LH Hydraulic Folding Conveyor	36 - 60 in.	914 - 1524 mm
Flat Bidirectional Conveyor	36 in.	914 mm
Unload Door Width	58 in.	1473 mm

Machine Specifications - AMX850T (Continued)

Drivetrain		
Minimum HP	150 hp	112 kW
Drivetrain		
From Tractor	CAT 6 PTO, Constant Velocity Shear Protection, 1000 RPM 1-3/8"-1-3/4"	
Between Gearboxes	CAT 6 PTO, Shear Protection, 1000 RPM 1-3/4"-1-3/4"	
Tires	550/45-22.5 20 Ply (Dual) at 58 psi (400 kPa)	
	445/50-22.5 (Singles) at 97 psi (669 kPa)	
Suspension	Tandem Walking Beam	
	Single Axle	

Note: Right/left hand is determined by sitting in the tractor looking forward.

Machine Specifications - AMX690T

Tub		
Capacity	625 ft^3	17.7 m^3
With tub extension	692 ft^3	19.5 m^3
Number of Screws	2	
Screw Speed	33 rpm @1000 PTO	
Aggression Plates	Yes	
Weigh System	4 Point Weighing System	

Dimensions and Weights		
Unloaded Weight (with flat bidirectional conveyor)	16,940 lb.	7,684 kg
Unloaded Tongue Weight	2,140 lb.	971 kg
Max Payload	18,630 lb at 20 mph	8,450 kg at 32 kph
Length	316 in.	8.03 m
Height Standard	103 in.	2.62 m
Height with 6" Extension	109 in.	2.77 m
Width with Flat Bidirectional Conveyor	109 in.	2.77 m
Wheel Track Width	102 in.	2.59 m

Unloading		
Conveyor	Chain with Steel Slats	
Unload Height		
RH or LH Hydraulic Folding Conveyor	34 - 58 in.	864 - 1473 mm
Flat Bidirectional Conveyor	34 in.	864 mm
Unload Door Width	58 in.	1473 mm

Machine Specifications - AMX690T (Continued)

Drivetrain		
Minimum HP	130 hp	96 kW
Drivetrain		
From Tractor	CAT 6 PTO, Constant Velocity Shear Protection, 1000 RPM 1-3/8"-1-3/4"	
Between Gearboxes	CAT 6 PTO, Shear Protection, 1000 RPM 1-3/4"-1-3/4"	
Tires	550/45-22.5 20 Ply (Dual) at 58 psi (400 kPa)	
	445/50-22.5 (Singles) at 97 psi (669 kPa)	
Suspension	Tandem Walking Beam	
	Single Axle	

Note: Right/left hand is determined by sitting in the tractor looking forward.

Highline New Equipment Limited Warranty Policy

One (1) Year / 12 Months - Parts and Labour

Highline Manufacturing (hereinafter "Highline") warrants this new product of Highline's manufacturer to be free from defects in material and workmanship, under normal use and service for one (1) full year after initial purchase/retail sale. Highline will warrant its product for one (1) year parts and labor, if performed by a qualified Dealer. This Limited Warranty shall apply only to complete machines of Highline's manufacture. Parts are covered by a separate Limited Warranty.

EQUIPMENT AND ACCESSORIES NOT OF HIGHLINE'S MANUFACTURE ARE WARRANTED ONLY TO THE EXTENT OF THE ORIGINAL MANUFACTURER'S WARRANTY AND SUBJECT TO THEIR ALLOWANCE TO HIGHLINE ONLY IF FOUND DEFECTIVE BY SUCH MANUFACTURER.

During the Limited Warranty period specified above, any defect in material or workmanship in any warranted item of Highline Equipment not excluded below shall be repaired or replaced at Highline's option without charge by any authorized independent Highline Dealer. An authorized Dealer must make the warranty repair or replacement. Labour is paid in accordance with Highline's Labour reimbursement policy. Highline reserves the right to supply remanufactured replacement parts as it deems appropriate.

RETAIL PURCHASER RESPONSIBILITY
This Limited Warranty requires proper maintenance and periodic inspections of the Equipment as indicated in the Operator's Manual furnished with each piece of new Equipment. The cost of routine or required maintenance and services is the responsibility of the retail purchaser. The retail purchaser is required to keep documented evidence that these services were performed. This Highline New Equipment Limited Warranty may be subject to cancellation if the above requirements are not performed.

EXCLUSIONS AND LIMITATIONS
The warranties contained herein shall NOT APPLY TO:

1. Any defect which was caused (in Highline's sole judgement) by other than normal use and service of the Equipment, or by any of the following:
    a. accident
    b. misuse or negligence
    c. overloading
    d. of reasonable and proper maintenance
    e. improper repair or installation
    f. unsuitable storage
    g. non-Highline approved alteration or modification
    h. natural calamities
    I. vandalism
    j. parts or accessories installed on Equipment which were not manufactured or installed by Highline authorized Dealers
    k. the elements
    l. collision or other accident.

2. Any Equipment whose identification numbers or marks have been altered or removed.

3. Any Equipment which any of the required or recommended periodic inspection or services have been performed using parts not manufactured or supplied by Highline or meeting Highline Specifications including, but without limitation, lubricants (oil, grease), belt lacings, and hydraulic fluids.

4. Any Equipment used in demonstrations not performed by a Highline Dealer. Warranty will be at the discretion of Highline for all other demonstration warranty.
5. New Equipment delivered to the retail purchaser in which the warranty registration has not been completed and returned to Highline within ten (10) days from the date of purchase.

6. Any defect that was caused (in Highline's sole judgement) by operation of the Equipment not abiding by standard operating procedures outlined in the Operator's Manual.

7. Tire Limited Warranties and support are the responsibility of the respective product's manufacturer.

8. Transportation costs, if any, of transporting to the Highline Dealer.

9. In no event shall Highline's liability exceed the purchase price of the product.

10. Highline shall not be liable to any person under any circumstances for any incidental or consequential damages (including but not limited to, loss of profits, out of service time and damage to equipment which this equipment may be attached) occurring for any reason at any time.

11. Diagnostic and overtime Labour premiums are not covered under this Limited Warranty Policy.

12. Depreciation damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operating instructions, misuse, and/or lack of proper protection during storage.

13. Accessory systems and electronics not of Highline's manufacture are warranted only to the extent of such manufacturer's respective Limited Warranty if any.

14. Wear components.

PARTS WARRANTY
Parts replaced in the warranty period will receive the balance of the one year New Equipment Limited Warranty.
Replacement parts after the original machine warranty are warranted to be free from defects of material for ninety (90) days or the part will be repaired or replaced, without Labour coverage for removal and reinstallation.

EXCLUSION OF WARRANTIES
UNLESS OTHERWISE REQUIRED BY LAW, AND EXCEPT FOR THE WARRANTIES EXPRESSLY AND SPECIFICALLY MADE HEREIN, HIGHLINE MAKES NO OTHER WARRANTIES, AND ANY POSSIBLE LIABILITY OF HIGHLINE HEREIN UNDER IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HIGHLINE RESERVES THE RIGHT TO MODIFY, ALTER AND IMPROVE ANY PRODUCT WITHOUT INCURRING ANY OBLIGATION TO REPLACE ANY PRODUCT PREVIOUSLY SOLD WITH SUCH MODIFICATION. NO PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY, OR TO ASSUME ANY ADDITIONAL OBLIGATION ON HIGHLINE'S BEHALF.

AMX850T/AMX690T Extended Service and Warranty Policy

Highline Manufacturing (referred to hereafter as Highline) warrants its new, unused, Agricultural Equipment to be free of defects in material and workmanship at time of the delivery according to the Highline New Equipment Limited Warranty Policy found at the end of each product manual. In exception to this Highline offers the supplemental information below:

1) 3-YEAR LIMITED EXTENDED WARRANTY REPAIR PERIOD

- 1st Year: Highline will repair or replace, at its option, without charge for parts or labor, any defective part of the equipment for a period of twelve (12) months from the warranty start date to the first retail purchaser (see base warranty policy).
- 2nd Year: Highline will repair or replace, at its option, without charge for parts, any Highline Manufactured Part that is found to be defective for the period of thirteen (13) months to twenty-four (24) months from the warranty start date to the first retail purchaser.
- 3rd year: Highline will repair or replace, at its option, for a charge of 50% of the parts, any Highline Manufactured Part that is found to be defective for the period of twenty-five (25) months to thirty-six (36) months from the warranty start date to the first retail purchaser.

NOTE: A Highline Manufactured Part is any part which has been manufactured by Highline Manufacturing. Parts purchased from an outside supplier are not considered to be manufactured by Highline. Purchased parts would include roller chain, hydraulic motors, hydraulic cylinders, bearings etc.

Any parts that are covered by an Extended Warranty published by Highline are an exception to the Basic Policy and are to be warranted as per the details of the Extended Warranty document. The Extended Warranty policy may change from time to time without prior notice from Highline.

2) SUPPLEMENTAL EXTENDED WARRANTY

- Mechanical mixer gearbox drive units: Highline will repair or replace, at its option, without charge for parts or labor, any defective mixer drive gearbox and/or components for a period of 24 months from the warranty start date to the first retail purchaser. The mixer drive gearbox will be warrantied against any defects in material and/or workmanship under normal use and while being maintained in accordance with the Operator manual or supplemental instructions. This supplemental warranty will require the submission of oil samples.

3) EXCEPTIONS TO THIS WARRANTY

- In no event shall the owner be entitled to recover costs for incidental, special or consequential damages such as, but not limited to: loss of profit or revenue, other commercial losses or inconvenience.

- Repair, Maintenance, and Service items not related to defects:
  1. Loss or damage during shipment.
  2. Failure resulting from lack of or improper maintenance.
  3. Damage caused by operator abuse, negligence, or improper operation.
  4. Non-defective items replaced due to customer demand unless authorized by the Highline Service Department.
  5. Non-reimbursable maintenance items including but not limited to oil, grease, chains, etc.
  6. Any and all costs for repairs or replacement of parts not shown to be defective.
  7. Damage due to accidents.

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