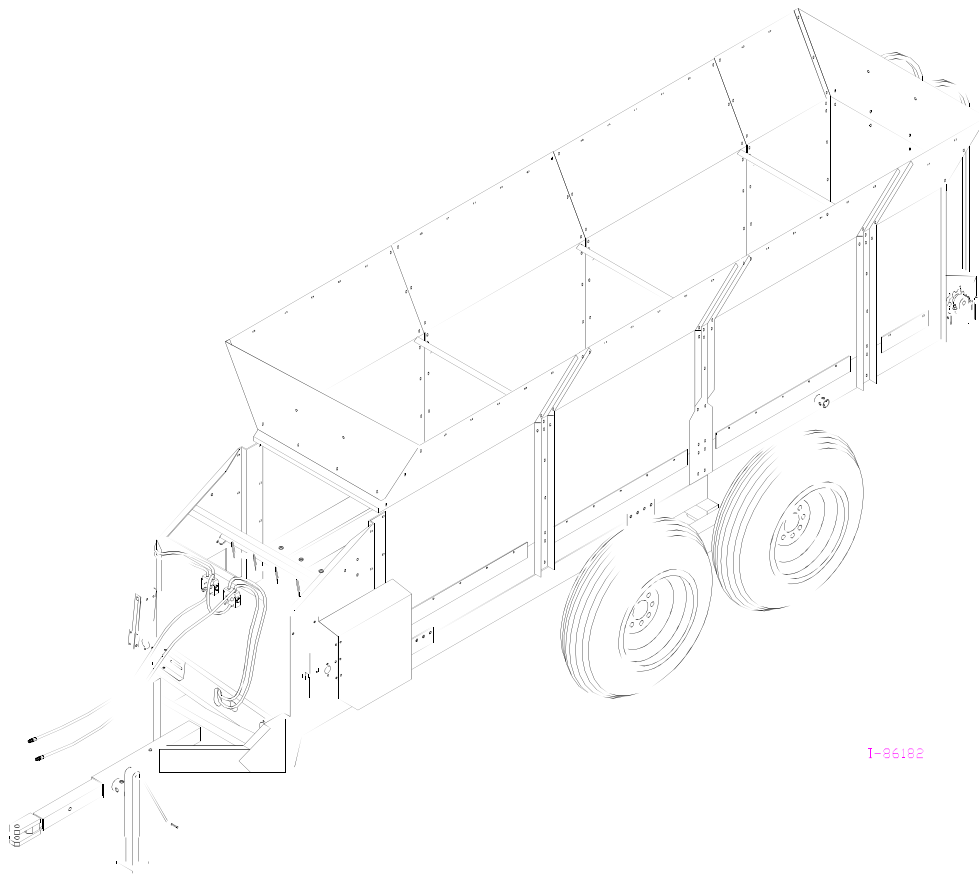


OPERATOR'S MANUAL

**MILLCREEK ROW MULCHER HYDRAULIC MODELS:
505,805,1105**



T-96182

PUBLICATION DATE: 1-23-2024, Rev 1.0

MILLCREEK PART # 43900

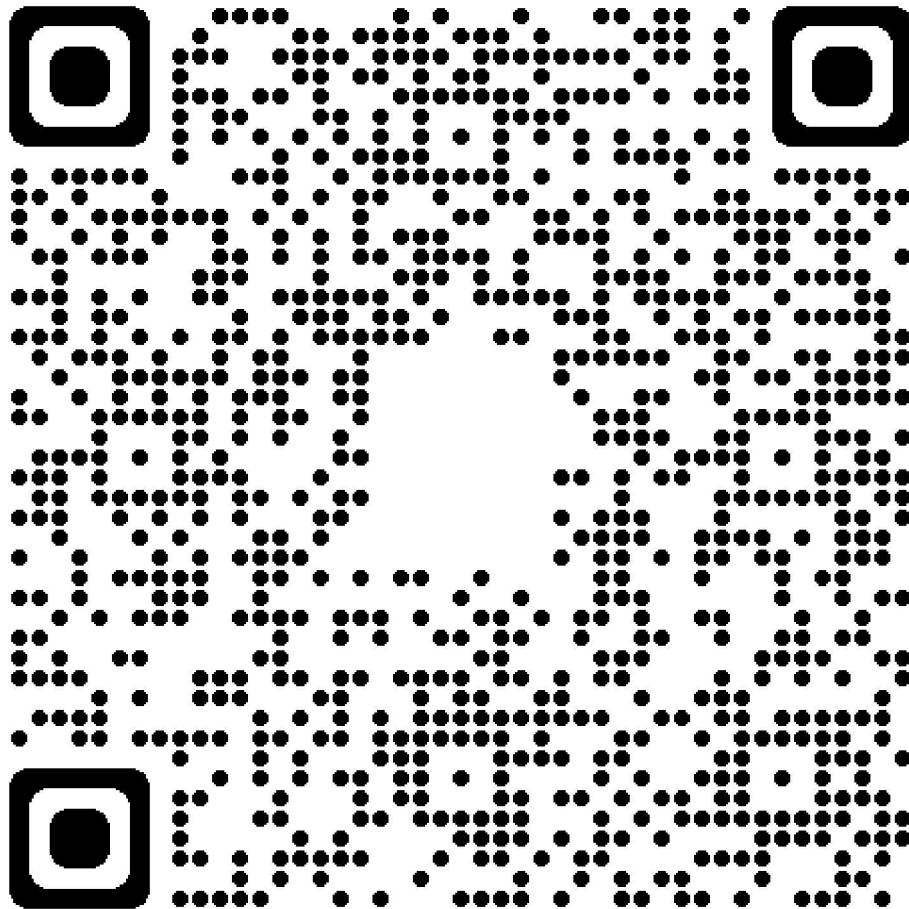
Millcreek Manufacturing Company
525 Reservoir Road
Honey Brook, PA 19344
Phone: 1-800-311-1323
www.millcreekspreaders.com



WARNING: DO NOT assemble, operate, or maintain this equipment without first reading and understanding the information provided in this manual and the ADMA Safety Manual for Agricultural Implement Drivelines. Failure to follow all safety precautions as stated in these manuals may result in serious personal injury or death.

VISIT OUR ONLINE PARTS STORE!

<https://parts.millcreekmfg.com>



MILLCREEK MANUFACTURING WARRANTY

Manure Spreaders

Millcreek Manufacturing (hereafter called the Company) aims to manufacture quality equipment that is free from defects in materials and workmanship. The Company offers a **THREE YEAR FULL COVERAGE WARRANTY** on all parts included on the spreader, with *no exceptions*. If any part breaks or malfunctions within this timeframe, simply give us a call at 1-800-311-1323 and we will replace it for you, free of charge.

The Company offers a **TEN YEAR WARRANTY** on all spray-on polyurethane lining.

The Company offers a **LIFETIME WARRANTY** against cracking or rotting on all poly floor boards.

The Company offers a **LIFETIME WARRANTY** against any rust damage on all stainless steel spreader bodies.

The Company extends this warranty solely to the original purchaser of the machine, meaning the person for whom the equipment is originally supplied. The warranty is valid only within the Continental United States.

The Company cannot guarantee that circumstances beyond its control may affect its ability to obtain or manufacture replacement parts. In these rare events, the Company will make every effort to obtain similar parts, or offer an alternate solution.

This warranty is made in lieu of all other warranties, expressed or implied.

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SECTION 1: INTRODUCTION

Guide to this Manual

This manual contains all the information necessary to safely operate and maintain your Millcreek Row Mulcher. Consult the Table of Contents for a detailed list of topics covered. You'll find this manual's step-by-step procedures easy to follow and understand. Should questions arise, please contact your Millcreek dealer before starting any of the procedures in this manual.

NOTE: Procedures provided in this manual apply to *all* PTO mechanical row mulcher models unless specifically noted otherwise.

Regarding the information presented in this manual:

- All safety, operating, and servicing information reflects current production models at the time of publication of this manual.
- References made to left, right, front, and rear are those directions viewed when facing the unit from the rear.

Please read all sections in the manual carefully--including the important safety information found in this section--before beginning any procedures; doing so is critical for the safe and proper operation of the Millcreek Row Mulcher.

For Your Safety...

For your safety, Millcreek documentation contains the following types of safety statements (listed here in order of increasing intensity):

- **NOTE:** A clarification of previous information or additional pertinent information.
- **ATTENTION:** A safety statement indicating that potential equipment damage may occur if instructions are not followed.



CAUTION: A safety statement that reminds of safety practices or directs attention to unsafe practices which could result in personal injury if proper precautions are not taken.



WARNING: A *strong* safety statement indicating that a hazard exists which can result in injury or death if proper precautions are not taken.



DANGER! *The utmost levels of safety must be observed;* an extreme hazard exists which would result in high probability of death or irreparable serious personal injury if proper precautions are not taken.

The best operator is a careful operator. By using common sense, observing general safety rules, and adhering to the precautions specific to the row mulcher, you, the operator, can promote safe equipment operation.

For Your Safety... (continued)

In addition to observing the specific precautions listed throughout the manual, **the following general precautions apply and *must be heeded* to ensure proper, safe operation.**



WARNING: Keep hands and feet from under the equipment at all times. Ensure that you are safely distanced from any other persons before operating the row mulcher.



WARNING: DO NOT attempt to operate the row mulcher in areas with steep inclines, ditches, large rocks, stumps, or holes which may endanger the operator by upsetting the tractor or cause damage to the row mulcher.



WARNING: To prevent serious personal injury and to promote safe equipment operation, keep all shields in place during operation. Ensure that all mounting hardware is properly tightened.



WARNING: Never clean, adjust, or repair the row mulcher while the equipment/tractor is in motion. Never attempt to pull material from any part of the equipment while it is in motion.



WARNING: On PTO units, DO NOT get off the tractor while the tractor PTO is engaged. Make sure the PTO shield safety chains are properly attached.



WARNING: Never wear loose clothing when operating the row mulcher as it may become caught in the moving parts of the machine.



WARNING: Never allow children or anyone else to ride on the row mulcher.

ATTENTION: For proper and safe operation of the spreader, periodically inspect all parts for excessive wear. Replace worn components with factory-authorized parts.

ATTENTION: To prevent the hitch from coming disconnected during operation, use the proper size hitch pin with a safety cotter at all times.

ATTENTION: Be sure to use a safety chain when traveling with the row mulcher on a public roadway.

Safety Labels

Please note that some labels denote model number, model description, etc. while others contain important safety messages.

Each **Safety Label** contains an important safety message starting with a key word as discussed earlier in this section (e.g. ATTENTION, CAUTION, WARNING, DANGER). For your safety and the safe operation of your equipment, review all labels and heed all safety messages as printed on the labels.

Be sure to keep the safety labels clean and readable. If the labels ever become damaged or illegible, contact your Millcreek dealer for replacements.

Safety Labels (continued)



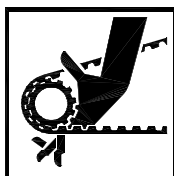
DANGER NO RIDERS

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WARNING

Entanglement Hazards



Moving parts can crush or cut.

STAY CLEAR of machine while engine is running and/or machine is operating. Keep hands, feet, clothing, and hair away from operating parts.



Never adjust, lubricate, or clean machine while engine is running and/or machine is operating.

Never operate machine without safety shields in place.



Read and understand operator's manual and safety labels before operating or servicing the machine.

Failure to follow these warnings may result in serious injury or death.

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DANGER



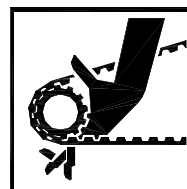
KEEP AWAY!

ROTATING DRIVELINE CONTACT CAN CAUSE DEATH. DO NOT OPERATE WITHOUT ALL DRIVELINE, TRACTOR AND EQUIPMENT SHIELDS IN PLACE. DRIVELINE SHIELDS MUST TURN FREELY ON DRIVELINE. DRIVELINE SHIELDS MUST BE SECURELY ATTACHED AT BOTH ENDS.

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WARNING



Entanglement Hazard.

DO NOT OPERATE without safety shield in place. Moving parts can crush and cut.

42756



WARNING



Entanglement / Flying Debris Hazards.

DO NOT STAND in back of machine while engine is running and/or machine is operating. Rotating beaters and/or flying debris can cause serious personal injury or death.



Approach the rear of the machine **ONLY** when all power sources are shut OFF and all moving parts have stopped.

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Inspection and Warranty Registration

The Row Mulcher is shipped from your Millcreek Dealer completely assembled and ready for operation. Inspect your new row mulcher thoroughly upon receipt to ensure that it has been shipped to you in a satisfactory manner. Immediately notify the freight company and your Millcreek dealer in case of shipping damage, shortage(s), and/or errors.

Standard/Optional Components

The Row Mulcher is supplied completely assembled with the following components (standard):

- Cross Conveyor Crescent Belt
- Variable Speed Apron Chain and Cross Conveyor
- Either PTO or Tractor Hydraulic Drive
- Agricultural Ribbed Tires
- Load Retainer

If your row mulcher has been shipped with optional components, ensure that you have received everything as ordered.

Optional components include:

- Fine Materials Apron Chain
- Cleated Cross Conveyor Belt
- Walking Beam
- Extension Cross Conveyor
- Safety Tow Chain (*user-installed; instructions provided in Section 2*)

NOTE: As ordered, all optional components, except the safety tow chain, are factory installed.

Warranty Registration

Following inspection of your new spreader, locate the Millcreek Warranty Card in the literature packet shipped with your spreader. For proper warranty registration, Millcreek requires that you fill out the warranty registration card and return it *within 30 days* to:

MILLCREEK WARRANTY REGISTRATION
Millcreek Manufacturing Company
525 Reservoir Road
Honey Brook, PA 19344
U.S.A.

SECTION 2: ATTACHING THE ROW MULCHER TO THE TRACTOR

Connecting the Row Mulcher Hitch to the Tractor Drawbar



WARNING: For safe operation, connect the row mulcher directly to the tractor drawbar; DO NOT connect the row mulcher to a three-point hitch.

The row mulcher hitch is designed to work with a standardized tractor drawbar. To connect the row mulcher hitch to the tractor drawbar, refer to Figure 2A and adhere to the following guidelines:

- Extend or shorten the tractor drawbar to obtain the horizontal distance from the end of the tractor power take-off (PTO) shaft to the center of the hitch pin hole (as shown in Figure 2A).
- Locate the jack, which is stored along the side of the row mulcher box. Use the jack to adjust the height of the row mulcher hitch so it matches the height of the tractor drawbar.
- Back the tractor into the hitch until the holes line up.
- Fasten the row mulcher hitch to the drawbar with a hitch pin that fits securely (i.e. so that it will not come out during operation).
- Remove the weight from the jack by lowering the row mulcher hitch on the drawbar.
- Return the jack to its storage bracket on the side of the row mulcher box.

ATTENTION: DO NOT store the jack by swinging it alongside the hitch; doing so allows the handle to hang down and drag on the ground, which may hinder safe and proper operation.



WARNING: Damage to the row mulcher or other vehicle, as well as injury to the operator, may occur if a properly-sized (1" diameter) hitch pin is not installed as recommended. Secure the hitch pin with the clip as shown.

ATTENTION: An improperly located hitch point may cause damage to the universal joints of the PTO. The recommended length of the PTO shaft should range from 22 to 30 inches center to center of the "U" joints.

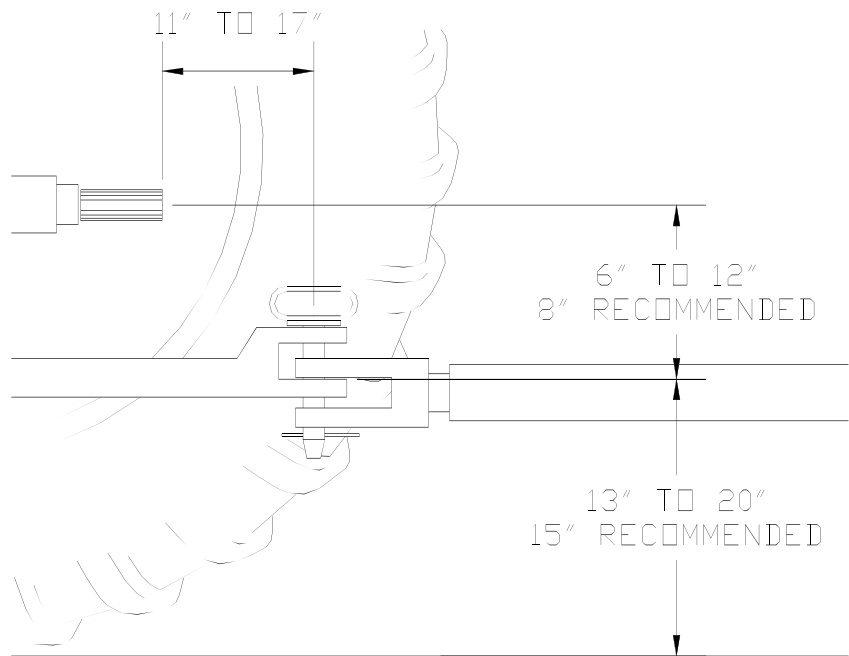


Figure 2A - Specifications for Connecting the Row Mulcher to the Tractor Drawbar

Attaching the Row Mulcher PTO to the Tractor PTO

1. Align the PTO splines on the row mulcher with the PTO splines on the tractor.
2. Pull back the slide collar on the PTO yoke, and slide the row mulcher PTO assembly onto the tractor PTO shaft. Be sure the slide collar snaps forward to indicate that the PTO shaft is properly secured.
ATTENTION: DO NOT transport the row mulcher without having the PTO shaft secured.
3. Refer to Figure 2B. Fasten the PTO safety chain to the link on the row mulcher to prevent rotation of the safety shield during operation.



WARNING: *Failure to secure the PTO safety chain will allow the safety shield to rotate.*

Operating the row mulcher without the safety shield in proper position may result in serious personal injury or death.

Assembling the Safety Tow Chain

NOTE: *The safety tow chain may be ordered as an optional component for the row mulcher and must be used if the row mulcher is to be moved any time on a public roadway.* Be sure to adhere to all local/state transportation codes for travel on public roadways with this type of equipment.



WARNING: DO NOT tow the row mulcher (loaded for operation) at highway speeds; doing so may cause the tires to overheat and/or loss of control.

1. Refer to Figure 2B for an illustration of the hook-up of the safety chains (one on each side).
2. Unscrew the quick link nuts (one on each side).
3. Insert the chain link into the quick link as shown (one on each side) and retighten the quick link nuts to keep the chains from slipping out.
4. Hook the other ends of the chains to the appropriate anchor holes on the vehicle hitch.



WARNING: For the safety chains to be effective, the installation of the chains should not allow more slack than is necessary for movement during row mulcher operation. Inspect the safety chains regularly to check the condition of the links and locking/hooking mechanisms; replace the chains as soon as weakness/breakage is noted.

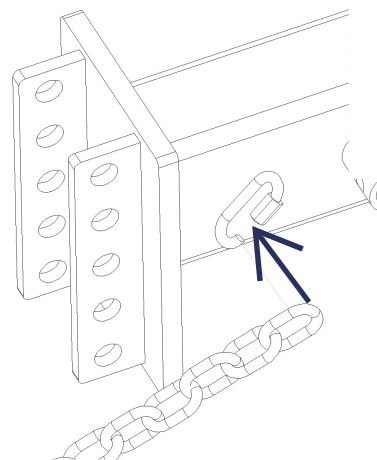


Figure 2B - Attaching the Safety Chains

SECTION 3: OPERATION & ADJUSTMENT

Understanding Row Mulcher Operation

Proper and safe operation of the Millcreek row mulcher requires: (1) being familiar with the row mulcher's operating components and (2) heeding all safety precautions as stated in this manual.

The Row Mulcher Operating Controls

The row mulcher hydraulic models draw power from the tractor PTO. For optimal operating performance, run the tractor at the throttle setting for standard PTO speed of 540 rpm and regulate ground speed to no more than 5 mph.

Key components for row mulcher operation and adjustment are:

- The ***Shifter Rods***, located at the front (tractor end) of the row mulcher, allows you to adjust the mulch feed rate and spread pattern. Note that the length and height of the shifter rod can be horizontally and vertically adjusted to make it easier for the tractor operator to control.

Important Specifications for Row Mulcher Operation



CAUTION: Be aware that each row mulcher model has a specific capacity which must not be exceeded to ensure safe and proper operation and to prevent equipment damage. Review the basic specifications for each row mulcher model.

- ***Ensure that the tractor weight is at least equal to the weight of the loaded row mulcher.***
For optimal operation, Millcreek recommends the following specifications for tractors:
 - For Row Mulcher Model 505, use a tractor of at least 30 HP (PTO).
 - For Row Mulcher Models 805 and 1105, use a tractor of at least 50 HP (PTO).

Guidelines for Loading the Row Mulcher

- For safe and proper operation, DO NOT exceed the maximum payload for each row mulcher model:

<u>MODEL</u>	<u>MAX. PAYLOAD (LBS.)</u>
505	4,000
805	7,000
1105	7,000

- **ATTENTION:** NEVER store material in the row mulcher between unloading times during critical cold weather months when a frozen load could result in severe equipment damage (i.e. torn floor apron chain).
- DO NOT store wet material in the row mulcher (or keep the row mulcher outdoors with material in it)--doing so will accelerate rusting of the steel. Be aware that storing material in the row mulcher also makes the material difficult to unload (i.e. it may solidify/harden).

Hydraulics

Tractor Hydraulic models draw their power directly from the tractor hydraulic system. *For optimal operating performance, the hydraulic oil flow of 15 gallons per minute (GPM) must be maintained.* At 12 GPM, the spreader will still operate but at a slower speed. At flows greater than 15 GPM, oil will be returned to the tractor reservoir by the spreader flow control valve.

PTO Hydraulic models include a hydraulic pump which draws power from the PTO drive line to run the hydraulic motors. The PTO hydraulic pump is designed to provide 15 GPM with a PTO speed of 540 RPM.

Row Mulcher Operating Components

Row Mulcher operation is controlled, in combination, by four variables. The first three variables determine the **application rate**. The fourth variable affects the **spreading pattern**.

- (1) tractor ground speed (mph)
- (2) apron belt speed (0 to 27 feet per minute)
- (3) conveyor speed (0 to 1100 feet per minute)
- (4) deflector positioning

The **Dual Hydraulic Control Valves**, located on the front of the Row Mulcher, provide separate control of floor chain and cross conveyor speeds for maximum control and flexibility.

- The **Left Control Valve** controls the speed of the floor apron chain.
- The **Right Control Valve** controls the speed of the cross conveyor.

SECTION 4: MAINTENANCE & ADJUSTMENT

Guidelines for Regular Maintenance



WARNING: *All shields must be replaced after maintenance or adjustment procedures are performed.* Failure to do so could result in serious personal injury or death.



WARNING: Perform maintenance procedures and/or adjustments to the row mulcher **ONLY** when the PTO is disengaged and the tractor engine is not running. Failure to adhere to this caution could result in serious personal injury.

General Maintenance

Performing regular maintenance on you Millcreek Row Mulcher will help ensure optimal performance. Please follow these guidelines for maintaining your mulcher:

- Clean the row mulcher after each use.
- **ATTENTION:** NEVER store material in the row mulcher between unloading times during critical cold weather months when a frozen load could result in severe equipment damage (i.e. torn floor apron chain). Storing wet material in the row mulcher (or keeping the mulcher outdoors with material in it) will accelerate rusting of the steel.
- Check the row mulcher each time it is used for loose, bent, broken or missing parts.
ATTENTION: During operation, listen for abnormal sounds which might indicate loose parts or other equipment damage. Correct any parts problems immediately; expanded parts views of all row mulcher assemblies are provided in the Appendixes at the back of this manual.
- Inspect the PTO safety shield and chain regularly to check the condition of the links; replace the shield and chain as soon as weakness/breakage is noted.
- Once a year, grease the following row mulcher components: PTO slide, U-joint, wheel hubs.


Guidelines for Regular Maintenance (continued)

Wheel/Tire Maintenance

- Once a month, check the wheel lug bolt torque. The recommended torque is 120 ft. lbs.
- Check the tires and maintain proper tire pressure:
 - 40 PSI for Ag Rib Tires

ATTENTION: When storing the row mulcher for a period of time, block up the unit to remove weight from the tires. Doing so helps to prevent any possible damage to the tires.

Wheel Bearing Maintenance

- Adjust the wheel hub bearings after 100 loads and once each season thereafter.
 - Use a jack to raise the row mulcher to remove weight from the wheel.
-  **CAUTION:** Be sure to block up the row mulcher to prevent personal injury while working on the wheels.
- Rotate the wheel and torque the wheel hub bearings to 25 ft. lbs.
 - Back off the nut one flat, plus enough to install the cotter pin (1/6 turn min., 1/3 turn max.)

Drive System Maintenance

- Apply chain lube to the floor apron chain each time after completing a spreading job **and** before storing the row mulcher for any period of time.
- Periodically check the apron chain and/or cross conveyor belt for proper tension/tightness (refer to Figures 4A and 4B).

Procedure for adjusting the apron chain:

- a) The apron chain can be adjusted using the apron tensioner bolts at the rear of the row mulcher as shown in Figure 4A.
- b) Adjust the apron tensioner bolts so 1/4 to 1/2 of the lower chain strand is laying on the chain guides (steel channels in the apron floor).

Procedure for adjusting the cross conveyor belt:

- a) Use a 3/4" wrench to loosen the mounting bolts on the cross conveyor tensioner bearings (located at the front right corner of the row mulcher on either side of the cross conveyor belt).
- b) Refer to Figure 4B. Adjust the tensioner bolt to obtain the desired tension.

ATTENTION: Be sure to tighten the draw bolts *equally on each side* so the belt does not droop or have any slack in it; the belt may be damaged if it is operated when misaligned.

Guidelines for Regular Maintenance (continued)

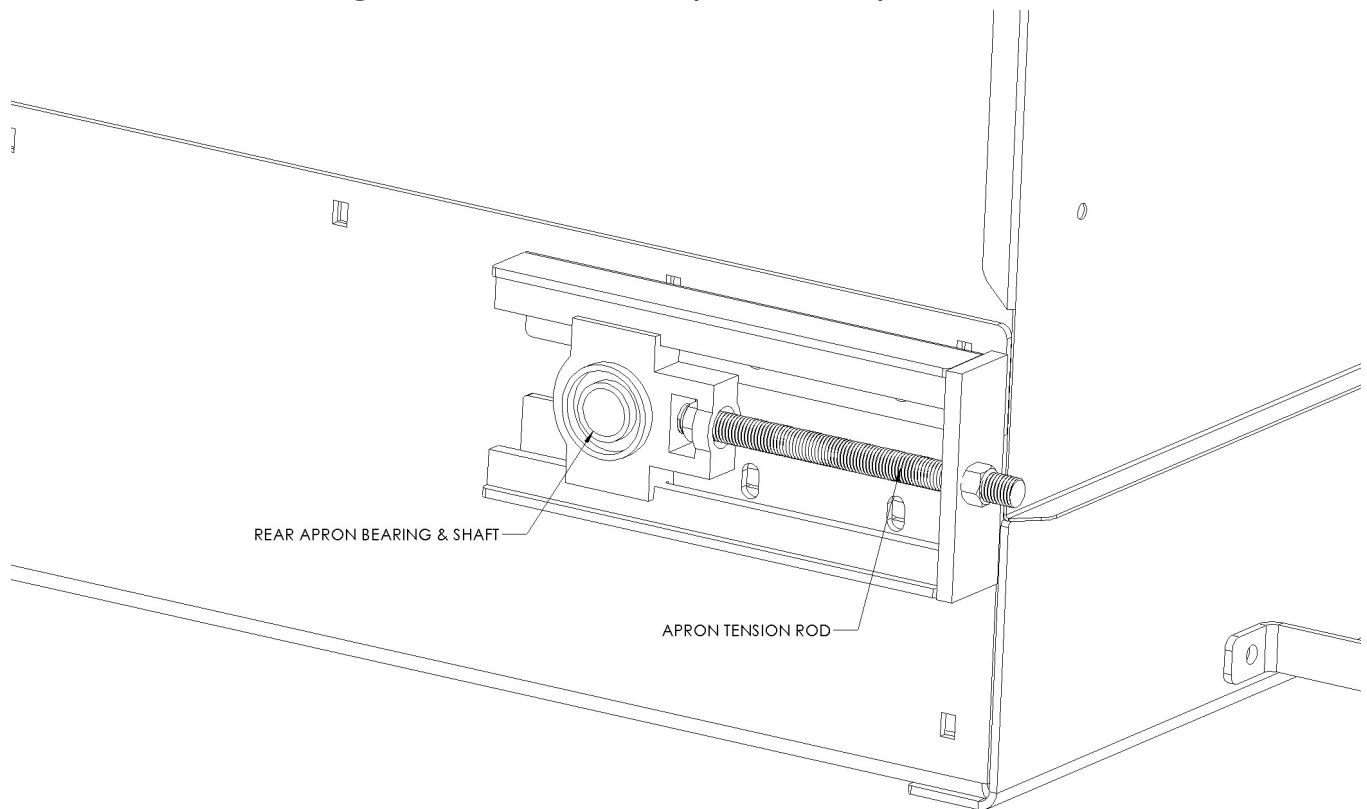


Figure 4A - Adjusting the Apron Chain Tension

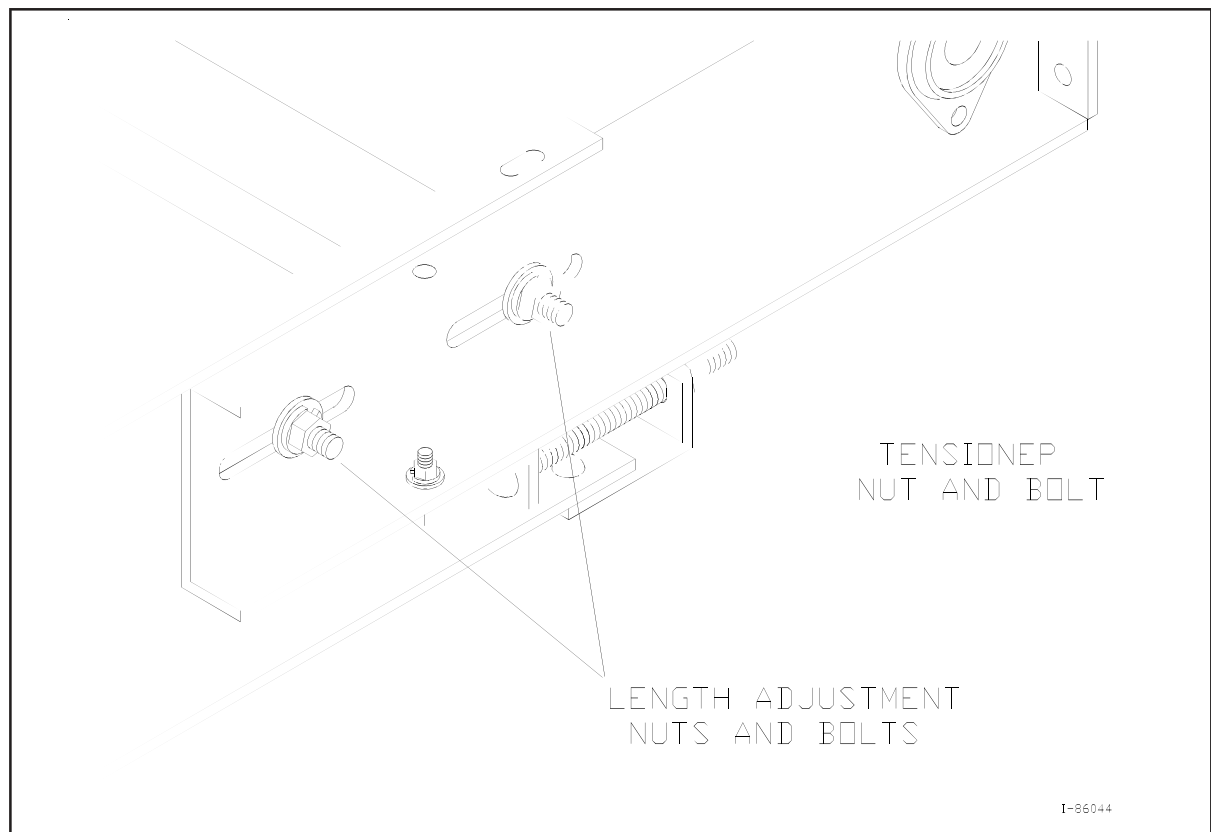


Figure 4B - Cross Conveyor Belt Tension Adjustment

Hydraulic System Maintenance

- Periodically check the condition of the hydraulic hoses for flexibility and any signs of rubbing/weakness on the outer surface. Replace the hose(s) as soon as any weakness or cracking is noted.
- **Proper oil maintenance for Tractor Hydraulic Units:** The Tractor Hydraulic unit is shipped with Universal Tractor Hydraulic Fluid (UTF) in the lines. To protect your tractor, make sure the UTF supplied with the Row Mulcher is compatible with the oil in your tractor.
- **Proper oil maintenance for PTO Hydraulic Units:** The PTO Hydraulic Row Mulcher is supplied with either **Castrol Blue Hydraulic Oil (blue in color)** or **Shell Pellus Plus 46 (amber in color)** in the reservoir. (The oils have identical specifications as shown below.)

Hydraulic Oil Specifications

ISO Grade	46
Former Grade	(10)
Viscosity @ 40° C cSt	45.3
Viscosity @ 100° C cSt	6.6
Viscosity @ 100° F, SUS	215
Viscosity @ 210° F, SUS	48
Viscosity Index	103
Flash Point, °C (°F)	215 (420)
Pour Point, °C (°F)	-26 (-15)

- Replace the oil filter after the first 10 hours of operation. After that initial period, replace the filter every 100 hours (in dusty conditions) or every year.

ATTENTION: If a PTO Hydraulic Row Mulcher is converted to a Tractor Hydraulic unit, be sure to check if the hydraulic oil is compatible with the oil in the tractor. If it is not, the hydraulic system must be flushed out with new oil to ensure proper functioning and to prevent equipment damage.

APPENDIX A: PARTS REFERENCE

The following information is provided for your reference in understanding how the row mulcher is assembled and how spare parts can be identified and ordered properly.

IMPORTANT! Please note that some of the Parts Lists in this section apply generally to all Row Mulcher Model Numbers, while others are specified differently for separate models. Please read carefully to find the appropriate information that applies to your Row Mulcher Model.

Parts Ordering Information

When ordering replacement parts, please provide the following information to your local Millcreek dealer:

- Model and Serial Number of the unit (located on the front right corner of the spreader)
- Part Number and Description as it appears on the following drawings/parts lists

General Spreader Specifications

<u>Specification</u>	<u>505</u>	<u>805</u>	<u>1105</u>
Capacity (cu. yds.)	4.0	6.0	8.0
Maximum Payload (lbs.)	4,000	7,000	7,000
Overall Width	63"	66"	63"
Overall Length	15'	19'	23'
Loading Height	7'2"	7'2"	7'2"
Body Width	3'	3'	3'
Body Length	8'	12'	16'
Body Height	53"	53"	53"
Weight (unloaded - lbs.)	2500	3000	3500
Construction	-----11-gauge, galvanized steel; heavy channel chassis-----		
Floor	-----10-yr. poly floor-----		
Apron Conveyor Chain	-#667X pintle-		
Wheels	11L x 14 x 12-ply	---37L x 14 x 15-ply---	37L x 14 x 15-ply walking beam
Hubs	-----6-bolt-----	-----8-bolt-----	
Body Finish	-----Industrial, rust-proof-----		
Min. Tractor HP Required	30 HP	30 HP	50 HP