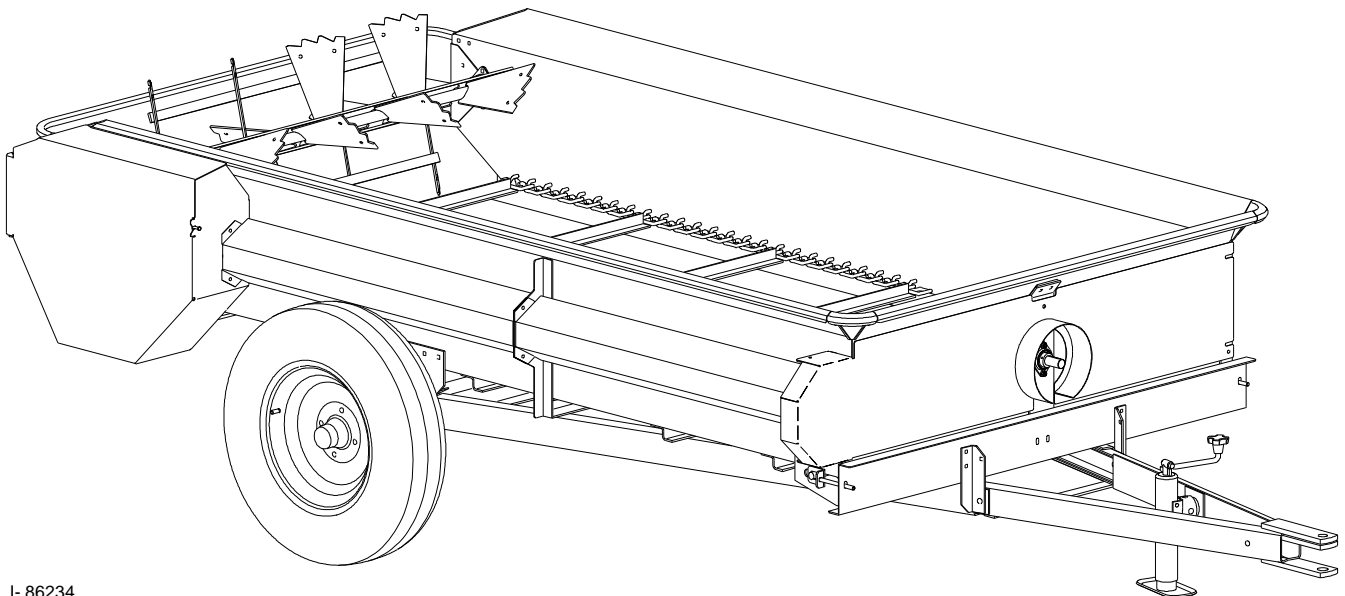


OPERATOR'S MANUAL

**MILLCREEK MODELS:
97 AND 127 SPREADERS**



I- 86234

PUBLICATION DATE: 6/1/13, Rev. 2

MILLCREEK PART # 43833

Sold by Cashmans: (740) 363-6073

www.cashmans.com

Millcreek Manufacturing Company

525 Reservoir Rd

Honey Brook PA 19344



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.

WARRANTY INFORMATION

Millcreek Manufacturing Company (hereinafter called the Company) warrants to the original Purchaser, the Equipment, manufactured by the Company, to be free from defects in material and workmanship under normal use and service. The Company obligation under this Warranty shall be limited to replacement or repair of any parts thereof, free of charge, to the original Purchaser, at their place of business, provided, however, that the part(s) to be replaced or repaired, shall, within one year after delivery to the original Purchaser, be demonstrated to be defective; which determination shall be made by the Company. The said components or parts must be returned through the Selling Dealer or Distributor directly to the Company with all transportation charges prepaid. Notice of defect shall be furnished in writing to the Seller and to the agent through whom the machinery was purchased, disclosing in full all known defects and failure in operation and use. Reasonable time shall be given to the Seller to remedy any such defects and failures.

This Warranty does not cover, under any circumstances, any parts, components, or materials which, in the opinion of the Seller and the Company, have been subjected to neglect, misuse, alteration, accident, or repaired with parts other than those manufactured by and obtained from Millcreek Manufacturing Company.

This Warranty does not cover components which are already covered by a separate warranty provided by the supplier of said parts or components.

This Warranty is made in lieu of all other warranties, expressed or implied, including any warranty of merchantability and fitness for use and purpose and of all other obligations or liabilities on the Company part and any implied warranty. The Company neither assumes nor authorizes any other person to assume for it, any other liability in connection with the sale of this equipment. This Warranty shall not apply to this equipment or to any part thereof which has been subjected to accident, negligence, alteration, abuse, or misuse.

The Company makes no warranty whatsoever in respect to accessories or parts not supplied by the Company. The term "original Purchaser," as used in this Warranty, shall be deemed to mean that person for whom the equipment is originally supplied. This Warranty shall apply only within the boundaries of the continental United States.

Under this Warranty, the Company cannot guarantee that conditions existing beyond its control will not affect the Company's ability to obtain materials or manufacture necessary replacement parts.

The Company reserves the right to make design changes, or changes in specifications at any time, without any contingent obligation on the part of the Company to purchasers of machines and parts previously sold.

The Company warrants the construction of the equipment sold herein and will replace at the Company's expense for a period of **two years** from the date hereof, any parts which prove defective as determined under the terms of this Limited Warranty. **Ten (10) year**, pro-rated warranty on spray-on polyurethane lining (applied to internal sides of unit). High density, polyethylene floors are warranted for the life of the machine from cracking, rotting, splitting, or peeling.

TRADEMARKS

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SECTION 1: INTRODUCTION

Guide to this Manual

This manual contains all the information necessary to safely operate and maintain the Millcreek 97P PTO Spreader. 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.

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 assembly/operation procedures; doing so allows you to use your Millcreek Spreader safely with optimal performance.

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 spreader, 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 for proper, safe operation.**



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



WARNING: DO NOT attempt to operate the spreader 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 spreader.



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



WARNING: Never clean, adjust, or repair the spreader while the tractor is running.



WARNING: Never get off the tractor while it is in motion, while the spreader is in operation, and/or while the PTO is engaged.



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



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

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 spreader on a public roadway.

Safety Labels

Following are the locations and descriptions of all labels on the spreader; refer to Figure 1A. 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)

Spreader Safety Labels

<u>Label Part #</u>	<u>Description</u>
42792	DANGER - NO riders
42710	WARNING - Flying Debris
42756	WARNING - Entanglement, Do NOT operation without shields
42772	WARNING - Spreader combination safety label - moving parts, read manual
42783	ATTENTION - Do NOT exceed specified speed
42778	Millcreek Logo Label
42802	Spreader Serial Number Label
42807	Spreader Model Number Label

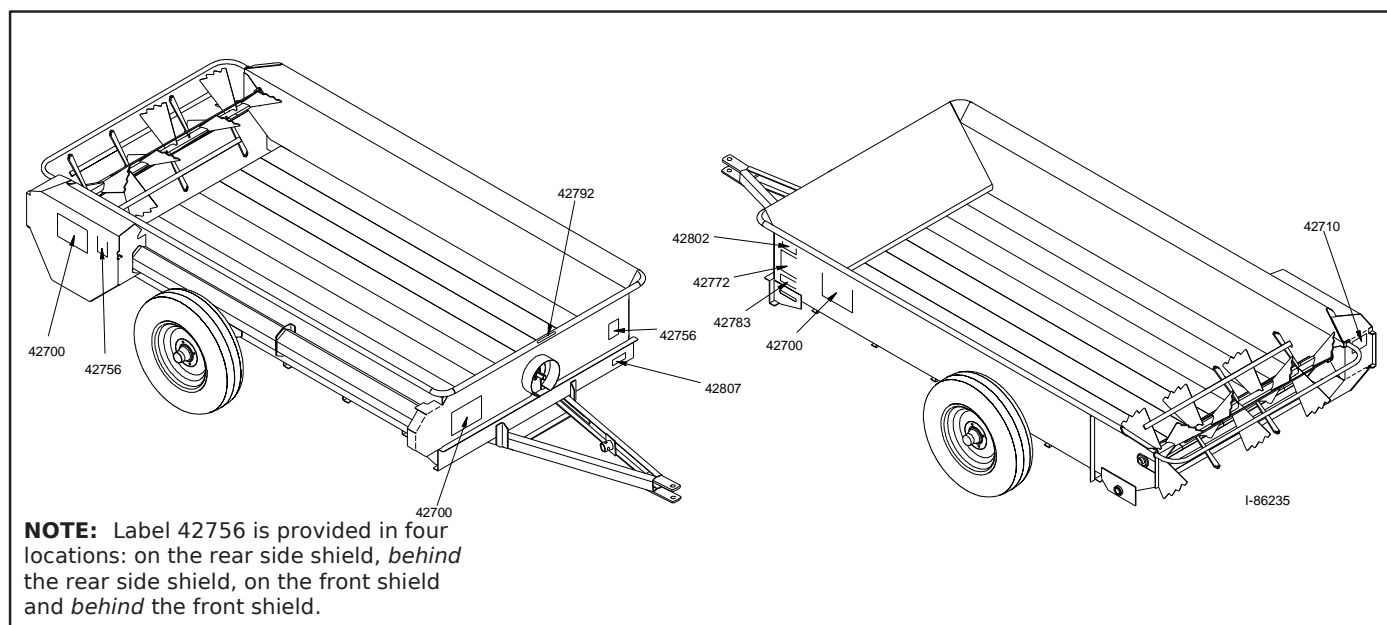


Figure 1A - Spreader Safety Label Locations

For your safety, be sure to locate all safety labels and review their content before proceeding with operating the spreader!

Safety Labels (continued)



DANGER

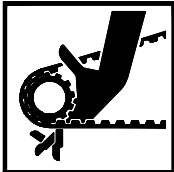
NO RIDERS

42792



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.



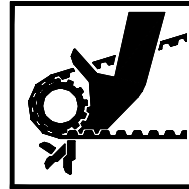
Read and understand operator's manual and safety labels before operating or servicing the machine.

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

42772



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.

42710



ATTENTION

DO NOT exceed 6 mph when spreading.
DO NOT exceed 15 mph when transporting a full load.
When traveling on public roadways, use a safety chain and adhere to all applicable motor vehicle codes.

42783

Inspection and Warranty Registration

Most spreader models are shipped from your Millcreek Dealer completely assembled and ready for operation. Inspect your new spreader 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.

NOTE: If the spreader has not been pre-assembled, please refer to the **Supplemental Assembly Instructions**. Please contact your local Millcreek Dealer for assistance as needed. If you ordered an **optional endgate** and/or **optional fines pan** with your spreader, you may also have to assemble these components on your spreader; refer to the **Assembly Instructions** sheet and/or **Appendix B** at the back of this manual for the corresponding parts drawings.

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 17540

For your safety, be sure to locate all safety decals and review their content before proceeding with operating the spreader.

SECTION 2: ATTACHING THE SPREADER TO THE TRACTOR

Connecting the Spreader to the Tractor

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

- Adjust the drawbar so that it is 13 to 20 inches above the ground as shown in Figure 2A.
- Extend or shorten the tractor hitch 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).
- Use the jack provided with your spreader to adjust the height of the spreader hitch so the tractor drawbar matches the height of the spreader hitch.
- Back the tractor into the hitch until the holes line up.
- Fasten the spreader hitch to the drawbar with a hitch pin that fits securely (i.e. so that it will not come out during spreader operation) and lock in place with the clip as shown.
- Remove the weight from the jack by lowering the spreader hitch on the drawbar.
- Swing the jack back into its horizontal position and lock it in position to provide maximum ground clearance.



WARNING: Damage to the spreader or other vehicle, as well as injury to the operator, may occur if a properly-sized hitch pin is not installed as recommended. Note that the installation of the safety clip, as noted in Figure 2A, is also required for safe spreader operation.

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 36 to 51 inches center to center of the "U" joints.

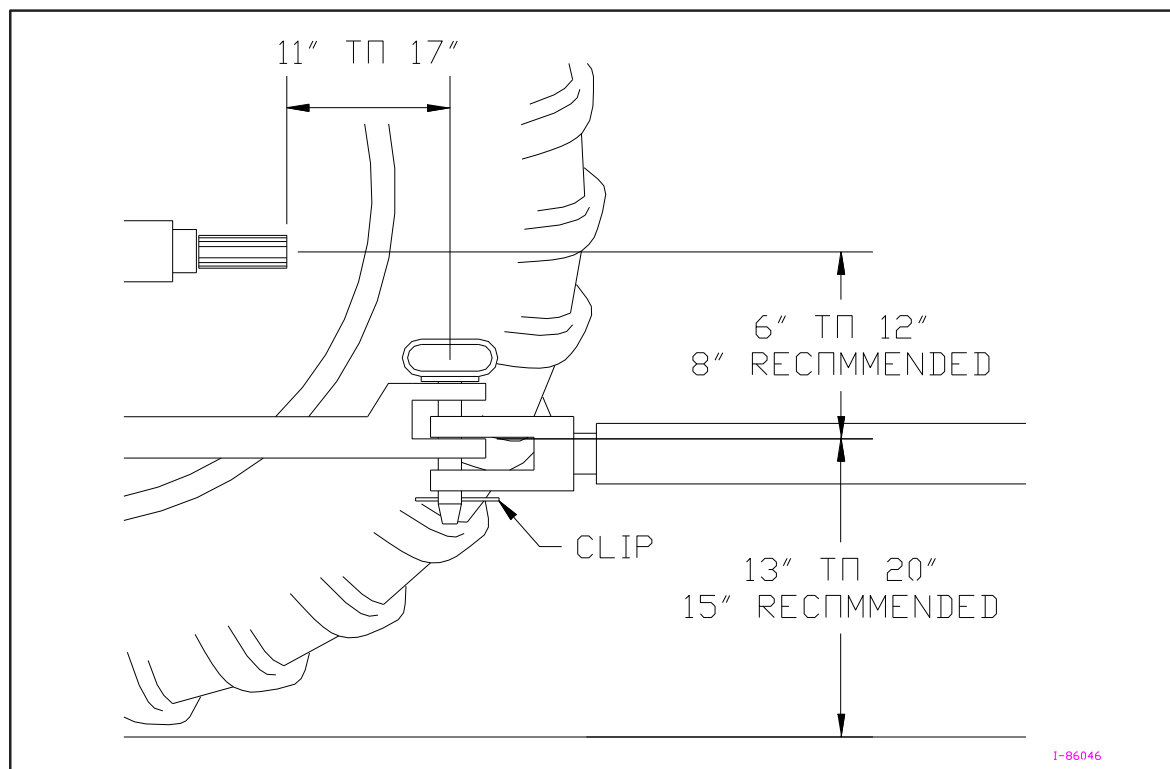


Figure 2A - Specifications for Connecting the Spreader/Tractor Hitch

Attaching the Spreader PTO to the Tractor PTO

1. Align the PTO splines on the spreader with the PTO splines on the tractor.
2. Pull back the slide collar on the PTO yoke, and slide the spreader PTO assembly onto the tractor PTO shaft. **Be sure the slide collar snaps forward to indicate that the spreader PTO assembly is properly secured to the tractor PTO shaft.**
3. Fasten the PTO safety chain to one of the hitch brackets on the front of the spreader (fasten to upper unused hole in bracket) to prevent rotation of the safety shield during operation.
4. Fold down the PTO holder bracket alongside the hitch member, and wrap the bungee/ball strap around the bracket for safe keeping during operation of the spreader.



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

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

SECTION 3: OPERATION

Understanding Spreader Operation

Proper and safe operation of the Millcreek 97P Spreader requires: (1) being familiar with the spreader's operating components and (2) heeding all safety precautions as stated in this manual.

The Spreader Operating Components

By definition, the left and right sides of the spreader are determined while sitting on the tractor seat. PTO model spreaders are powered through the tractor drive train. The PTO powers the apron chain and the beater. For further information on engaging the PTO drive line, please refer to the following section, *Operating the Spreader*.

The following operating components are included with the **Standard Model 97P** spreader:

- The **swing-away jack** facilitates hook-up of the spreader to the tractor.
- The **T-rod apron chain** provides reliable material movement in the spreader load after load.

Optional operating components (ordered separately) for the Model 97P include:

- The **hydraulic endgate** helps to contain loads between spreading and also shields the operator during spreading.
- The **finer pan** aids in distributing fine materials (e.g. compost) evenly.
- The **safety chain**, which is strongly recommended for use when the spreader is transported on a public roadway.

Guidelines for Loading the Spreader for Operation

- Millcreek recommends that you **load the spreader from the front toward the back** to facilitate easier unloading.
- **ATTENTION:** NEVER store manure in the spreader 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 manure in the spreader (or keep the spreader outdoors with manure in it)--doing so will accelerate rusting of the steel.

Operating the Spreader

WARNING! Before proceeding with operation of the spreader, review all safety statements as provided in Section 1 of this manual.



WARNING: To prevent serious personal injury, ensure that ALL safety shields are in place on the spreader before starting operation. NEVER operate the spreader without ALL safety shields in place.

1. If you have a spreader with the endgate option, lift the endgate.
2. With the tractor at idle, simply activate the switch to engage the PTO.
ATTENTION: DO NOT engage the PTO while running at full throttle; doing so may tear the front drive belt or cause it to jump off the pulley.

Operating the Spreader (continued)

3. For best results, run the tractor throttle at the 540 rpm PTO shaft speed and regulate the ground speed to no more than 6 mph.
4. When the spreader box is empty, stop the PTO by disengaging the lever/switch on the tractor. Lower the endgate (if applicable).
5. Refer to Section 4 in this manual for maintenance to be performed following operation of the spreader.

IMPORTANT! After a few hours of initial operation, watch and listen for any loose components. Be aware that it may be necessary to re-tighten hitch hardware and/or wheel bolts; please refer to Section 4 in this manual for the proper torque specifications.

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.

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

- Clean the spreader once a week and before storing the unit for an extended period of time.
ATTENTION: NEVER store manure in the spreader 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 manure in the spreader (or keeping the spreader outdoors with manure in it) will accelerate rusting of the steel.
- Check the spreader 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 spreader assemblies are provided in the Appendixes at the back of this manual.
ATTENTION: For safe and proper operation of the spreader, adhere to the following specifications for tightening the hitch hardware; failure to tighten all hitch hardware securely may result in equipment damage.

<u>Hardware</u>	<u>Torque Specification</u>
1/2"	60 ft. lbs.
3/8"	25 ft. lbs.
5/16"	15 ft. lbs.

- Check and grease the lube fitting at the PTO (at the front of the spreader) once a year. Remove the telescoping shaft, clean, and add a light coating of grease.
- Check that the implement tires have adequate air pressure (30 psi). Wheel bolts should be torqued to 75 to 80 ft. lbs.
- Inspect the safety chain regularly to check the condition of the links and locking/hooks mechanisms; replace the chain as soon as weakness/breakage is noted.
- Apply chain lube once a month (or as needed) to the drive chains (shown in Figure 4B); use vegetable oil or a common spray lube for chains.
- Apply chain lube once a month (or as needed) to the floor apron chain; use vegetable oil or a common spray lube for chains.

Guidelines for Regular Maintenance (continued)

- Periodically check the floor apron chain for proper tension/tightness (refer to Figure 4A).

Procedure for checking/adjusting the floor apron chain:

- Check the distance between the apron chain and the bottom of the side sheet at the apron's lowest point (just behind the wheels). *If the distance is more than 6-1/2 inches, the chain must be tightened.*

NOTE: The recommended floor apron chain tension is achieved when the apron's lowest point is 4-1/2 to 5 inches below the frame (behind the tire).

- Use a 9/16" wrench to tighten the adjustment nut on the lower left/right front of the spreader box as shown in Figure 4A. Observe the chain positioning with respect to the floor/apron.

Make sure that the chains on each side of the apron are equally taut.

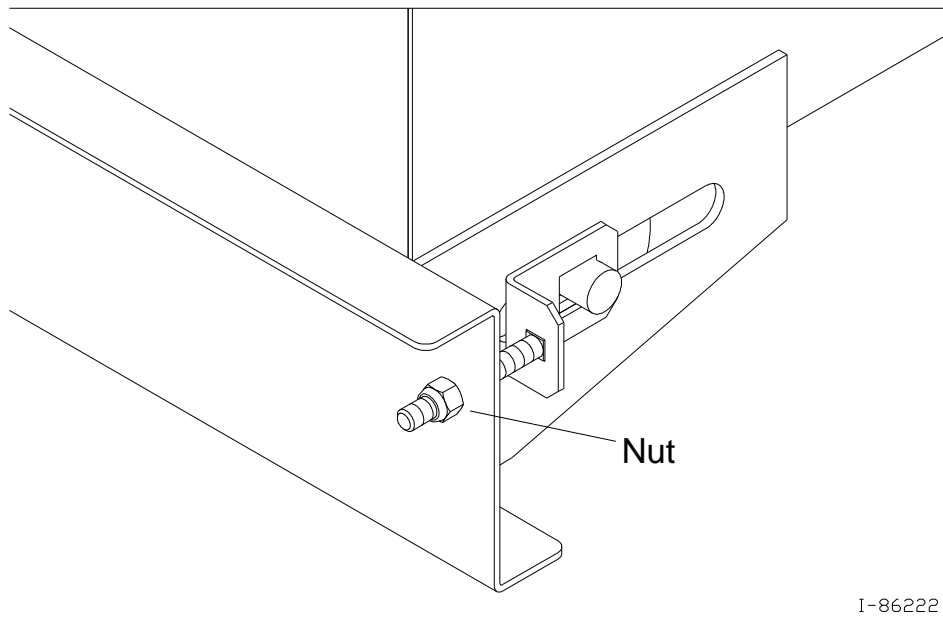


Figure 4A - Adjusting the Floor Apron Chain for Proper Tension

Procedures for Spreader Adjustment

Problems with spreader operation may indicate that certain adjustments are required to restore proper functioning. The following procedures address common problems which may be encountered in spreader operation.

Adjusting the Holding Pawl

If the apron chain is not advancing properly, the holding pawl may need to be re-adjusted to restore proper apron chain speed and functioning.

To Reset the Holding Pawl (refer to Figure 4B):

- (a) Rotate the crankarm sprocket until the short link is in the horizontal rearward position.
- (b) Loosen the nut that secures the holding pawl.
- (c) Adjust the holding pawl to obtain a 1/8" gap between the end of the pawl and bottom of the notch as shown in Figure 4B. Tighten the nut to secure the holding pawl.

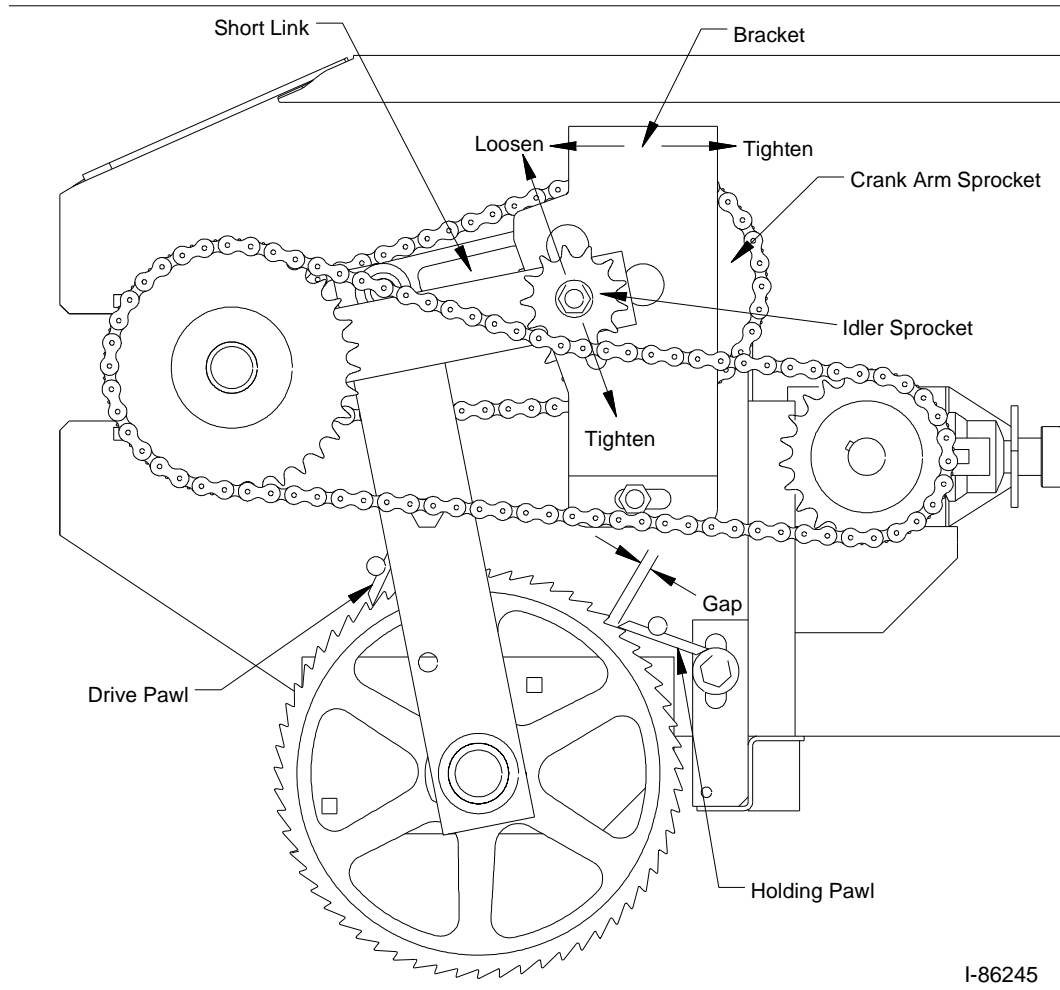


Figure 4B - Adjusting the Holding Pawl and Drive Chains

Procedures for Spreader Adjustment (continued)

Adjusting the Drive Chains

NOTE: The drive chains are factory-set for the proper operating tension and should not require adjustment. The following instructions are provided for reference only, in rare cases where re-adjustment or replacement may become necessary.

Refer to Figure 4B on the previous page for an illustration of the drive chains and related components. The chains should be snug, but not too tight. If the chains are too tight, they may cause excessive wear on the bushings in the crank arm sprocket (resulting in premature failure). If the chains are too loose, they can slip and jump sprocket teeth when the spreader is operating with a full load.

- **Check the drive chains in two positions:**
 - (a) **Gearbox to Beater Chain:** check the bottom span.
 - (b) **Ratchet Drive Chain:** check top or bottom span.

NOTE: When pushing on the middle of the span with one finger (about 20 lbs. pressure), the chain should deflect about 3/8 to 1/2 inch. A straight-edge ruler may be helpful in verifying the proper setting.

- **Adjust the drive chains** according to Figure 4B and the following guidelines:
 - (a) **Gearbox to Beater Chain:** adjust the **idler sprocket** as indicated.
 - (b) **Ratchet Drive Chain:** adjust the **bracket position** by loosening the two (2) 1/2" bracket bolts and the idler sprocket bolt, then slide the bracket forward or backward as shown.

APPENDIX A: PARTS REFERENCE

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

General Spreader Specifications

	Model 97	Model 127
Capacity, struck	58 cubic ft.	89 cubic ft.
Capacity, heaped	109 cubic ft.	140 cubic ft.
Body Length	114 inches	
Body Width	55 inches	
Body Height	17.5 inches	26 inches
Overall Length	13 ft. 6 inches	
Loading Height	39 inches	47.5 inches
Construction	All steel, poly floor	
Apron Chain	T-Rod 11/32	
Beater Bearings	Sealed ball bearings	
Beater Drive	Gear box	
Apron Drive	Ratchet	
Body Finish	Powder coating	
Weight	1260 lbs (Approx)	1440 lbs (Approx)
Tractor Weight and HP required	1500 lbs and 25 HP & greater	1800 lbs and 28 hp & greater

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 left side towards the front of the spreader; see **Section 1** in this manual for an illustration of specific label locations)
- **Part Number and Description** as it appears on the following drawings/parts lists

Spreader Box & Hitch Assembly

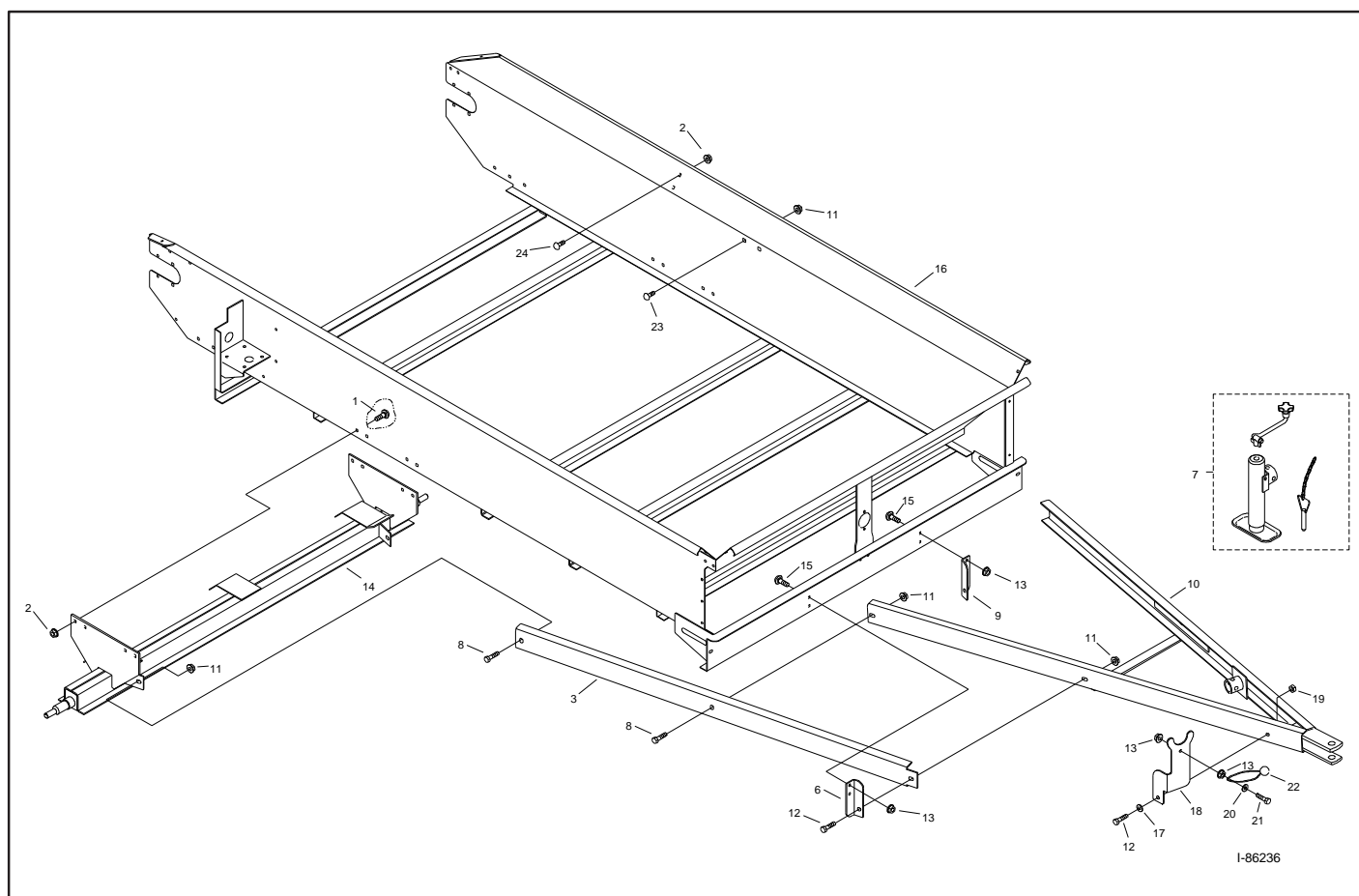


Figure A1 - Hitch Assembly Parts Detail

Box & Hitch Assembly (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	34191	8	3/8 x 3/4 Carriage Bolt
2	34009	12	3/8 Flange Nut
3	261550	2	Hitch Extension
6	261409	1	Right Front Hitch Bracket
7	215320	1	Complete Jack (includes items 25 & 26)
8	34085	4	1/2 x 1 Flange Bolt
9	261408	1	Left Front Hitch Bracket
10	261404	1	Hitch
11	34384	8	1/2 Flange Nut
12	34311	3	1/2 x 1-1/4 Bolt
13	34099	6	5/16 Flange Nut
14	261537	1	Axle
15	34274	4	5/16 x 3/4 Carriage Bolt
16	261530	1	97 Box
17	34227	1	1/2 Washer
18	261690	1	PTO Shaft Holder
19	34198	1	1/2 Nylon Lock Nut
20	34057	1	5/16 Washer
21	34257	1	5/16 x 1-1/2 Bolt
22	220197	1	Ball Bungee
23	34406	2	1/2 x 1 Low Carriage Bolt
24	34405	4	3/8 x 3/4 Low Carriage Bolt

NOTE: For maintenance/repair work on the polyurethane-lined sides of the spreader box, order the **Urethane Repair Kit, MC Part# 215298**.

Wheel and Hub Assembly

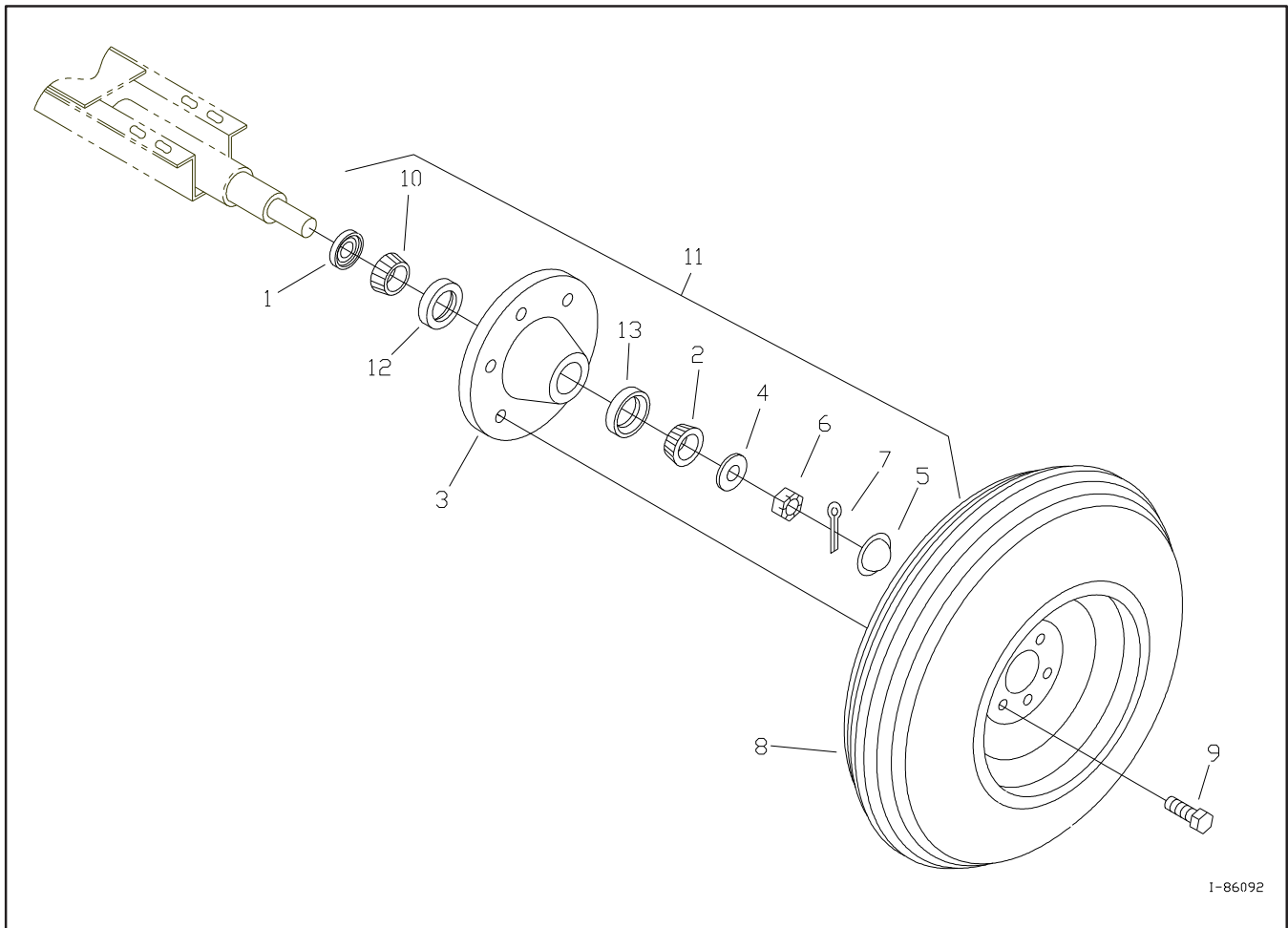


Figure A2 - Wheel and Hub Assembly Parts Detail

Wheel and Hub Assembly (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	215158	2	Grease Seal
2	215203	2	Outer Bearing Cone
3	215162	2	Hub (includes items 12, 13)
4	215164	2	Washer
5	215161	2	Dust Cap
6	215160	2	Spindle Nut
7	34347	2	Cotter Pin
8	215133	2	Wheel and New Tire
	215119	2	Wheel
	215126	2	New Tire
9	215222	12	Wheel Lug
10	215159	2	Inner Bearing Cone
11	215114	2	Complete Hub (includes items 1-7, 10)
12	215279	2	Inner Bearing Cup
13	215277	2	Outer Bearing Cup

Rear Drive Assembly (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	261548	1	Beater
2	34266	1	1/2 x 2-1/2 Carriage Bolt
3	34209	1	Cotter Pin
4	34240	1	1/2 x 2 Carriage Bolt
5	210412	1	Chain #50 RC x 83 Links (includes connector link 210284)
6	210372	1	Chain #50 RC x 58 Links (includes connector link 210284)
7	210130	4	Key 1/4 x 1
8	34383	1	3/8 x 3/4 Set Screw
9	210375	2	Pawl Bushing
10	220176	1	Key 5/16 x 1-1/2
11	220104	2	Pawl Spring
12	220181	2	3/16 x 2-3/4 Roll Pin
13	34201	1	3/4 SAE Washer
14	210174	1	Gearbox
15	34241	4	3/8 x 4-1/2 Bolt
16	220161	1	1" Shaft Coupler (includes 2 set screws 34325)
17	210389	1	22 Tooth Sprocket (includes set screw 34325)
18	34009	8	3/8 Flange Nut
19	261229	1	Pitman Link (includes 2 bushings 210403)
20	261230	1	Crank Sprocket (includes bushing 210100)
21	261367	1	Crank Sprocket Bracket
22	34384	2	1/2 Flange Nut
23	34211	3	1/2 Nylon Lock Nut
24	261227	1	Crank Arm (includes bushing 210364)
25	261288	2	Pawl
26	210368	1	Ratchet Wheel
27	210378	2	1-1/2 Washer
28	34230	1	1/2 x 3 Bolt
29	34112	2	1/2 x 1 Carriage Bolt
30	210205	1	13 Tooth Sprocket
31	34227	5	1/2 SAE Washer
32	260281	2	1-1/8 Washer
33	34191	4	3/8 x 3/4 Carriage Bolt
34	261407	2	1-1/8" 2-Flange Bearing
35	210428	1	14 Tooth Sprocket (includes 2 set screws 34325)
36	210429	1	33 Tooth Sprocket (includes 2 set screws 34325)
37	261607	1	Beater Brace (includes bushing 210104)

Front Drive Assembly

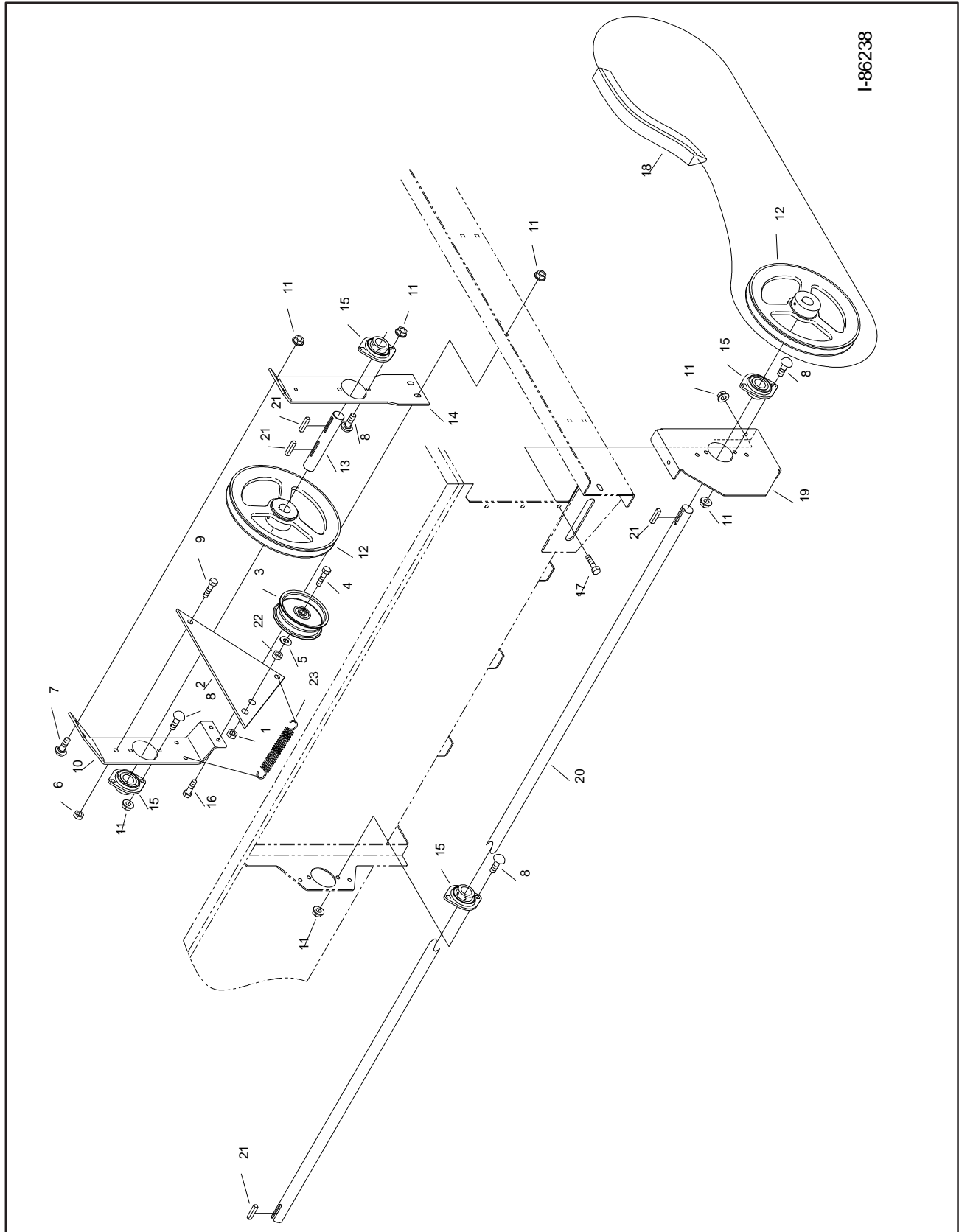


Figure A4 - Front Drive Assembly Parts Detail

Front Drive Assembly (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	34384	1	1/2 Flange Nut
2	261594	1	Belt Idler Bracket
3	210200	1	Belt Tensioner
4	34254	1	1/2 x 2 Bolt
5	34227	1	1/2 Washer
6	34095	1	3/8 Stover Nut
7	34275	2	5/16 x 1 Carriage Bolt
8	34274	8	5/16 x 3/4 Carriage Bolt
9	34199	1	3/8 x 1 Bolt
10	261223	1	Rear PTO Shaft Bracket
11	34099	15	5/16 Flange Nut
12	210202	2	10" Belt Sheave (includes setscrew 34325)
13	261289	1	PTO Stub Shaft
14	261222	1	Front PTO Shaft Bracket
15	210144	4	1" 2-Flange Bearing
16	34336	2	5/16 x 1 Flange Bolt
17	34136	3	5/16 x 1/2 Flange Bolt
18	210435	1	Belt
19	261224	1	Front Drive Shaft Bracket
20	261234	1	Side Drive Shaft
21	210131	4	1/4 x 1-1/4 Key
22	34034	1	1/2 Nut
23	220138	1	Spring

Apron Chain and Sprocket Assembly

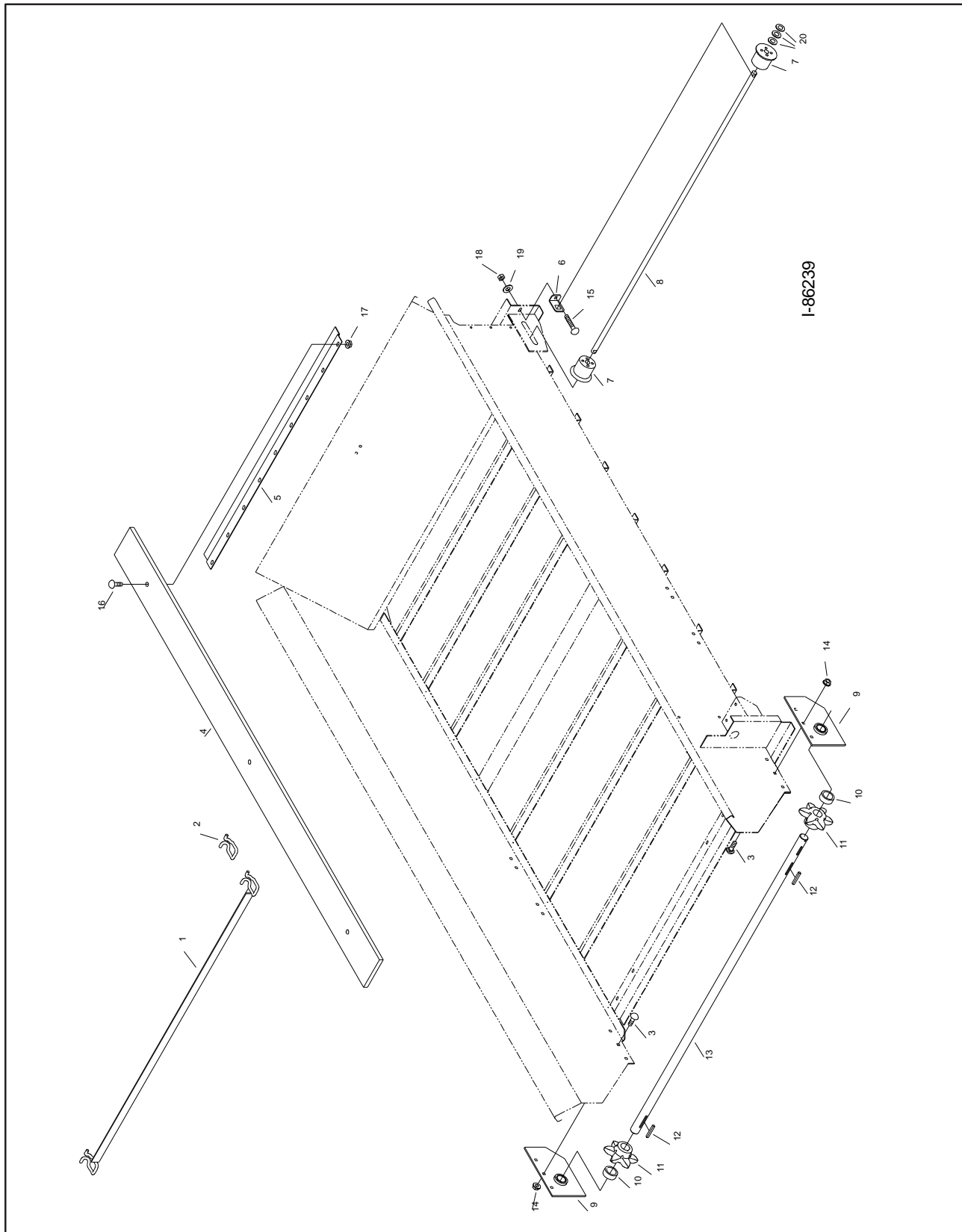


Figure A5 - Apron Chain and Sprocket Assembly Parts Detail

Apron Chain and Sprocket Assembly (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	261599	12	Apron Slat (w/links welded)
2	210421	154	Apron Chain Link
3	34191	6	3/8 x 3/4 Carriage Bolt
4	261557	9	Floor Board
5	260433	2	Poly Board Bracket
6	261587	2	Apron Tightener Bracket
7	220167	2	Plastic Idler
8	261560	1	Apron Idler Shaft
9	261213	2	Apron Shaft Bracket
10	261490	2	Spacer
11	210360	2	Apron Sprocket
12	220189	2	5/16 x 2 Key
13	261539	1	Apron Shaft
14	34009	6	3/8 Flange Nut
15	34389	2	3/8 x 3-3/4 Carriage Bolt
16	34320	27	5/16 x 1-1/4 Carriage Bolt
17	34099	27	5/16 Flange Nut
18	34220	2	3/8 Nylon Stop Nut
19	34018	2	3/8 Washer
20	34201	6	3/4 Washer

Safety Shields & Guards

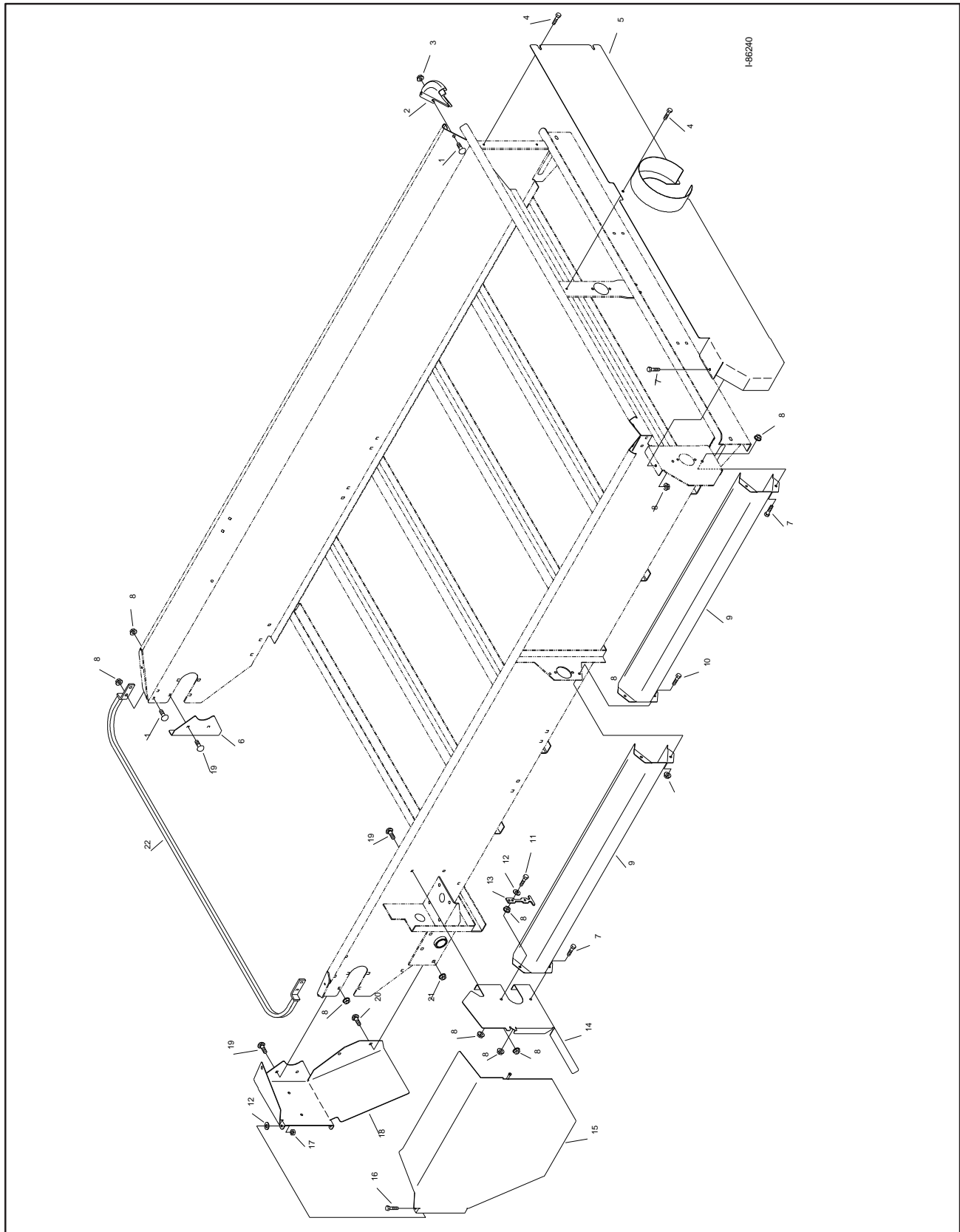


Figure A6 - Safety Shields and Guards Parts Detail

Safety Shields (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	34274	8	5/16 x 3/4 Carriage Bolt
2	215314	2	Cast Corner
3	34367	4	5/16 Large Flange Nut
4	34118	3	5/16 x 3/4 Self Tapping Bolt
5	261540	1	Front Shield
6	261290	1	Left Rear Guard
7	34136	5	5/16 x 1/2 Bolt
8	34099	21	5/16 Flange Nut
9	261236	2	Side Shield
10	34328	2	5/16 x 3/4 Flange Bolt
11	34222	1	5/16 x 1-1/4 Bolt
12	34057	2	5/16 Washer
13	220113	1	Rubber Latch
14	261293	1	Gearbox Shield
15	261378	1	Rear Shield Door
16	34200	2	5/16 x 3/4 Bolt
17	34072	2	5/16 Stover Nut
18	261291	1	Back Shield
19	34337	8	5/16 x 1/2 Carriage Bolt
20	34191	1	3/8 x 3/4 Carriage Bolt
21	34009	1	3/8 Flange Nut
22	261544	1	Beater Guard Bar

PTO Shaft Assembly

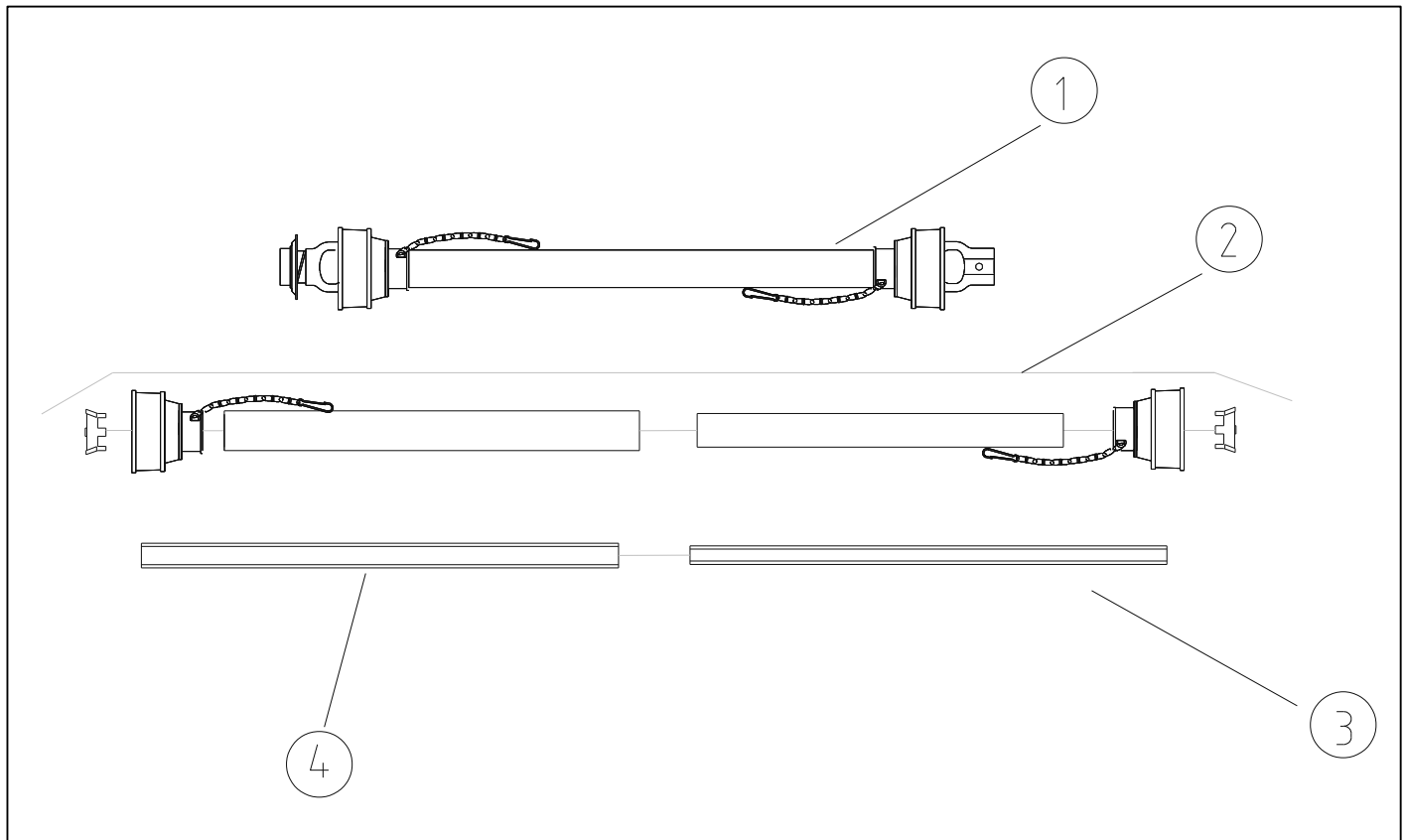


Figure A7 -PTO Shaft Assembly Parts Detail

PTO Shaft Assembly (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	210164	1	Complete PTO Shaft
2	210540	1	PTO Shield Kit
3	210538	1	Inner Profile
4	210539	1	Outer Profile

Side Extensions & Upper Beater

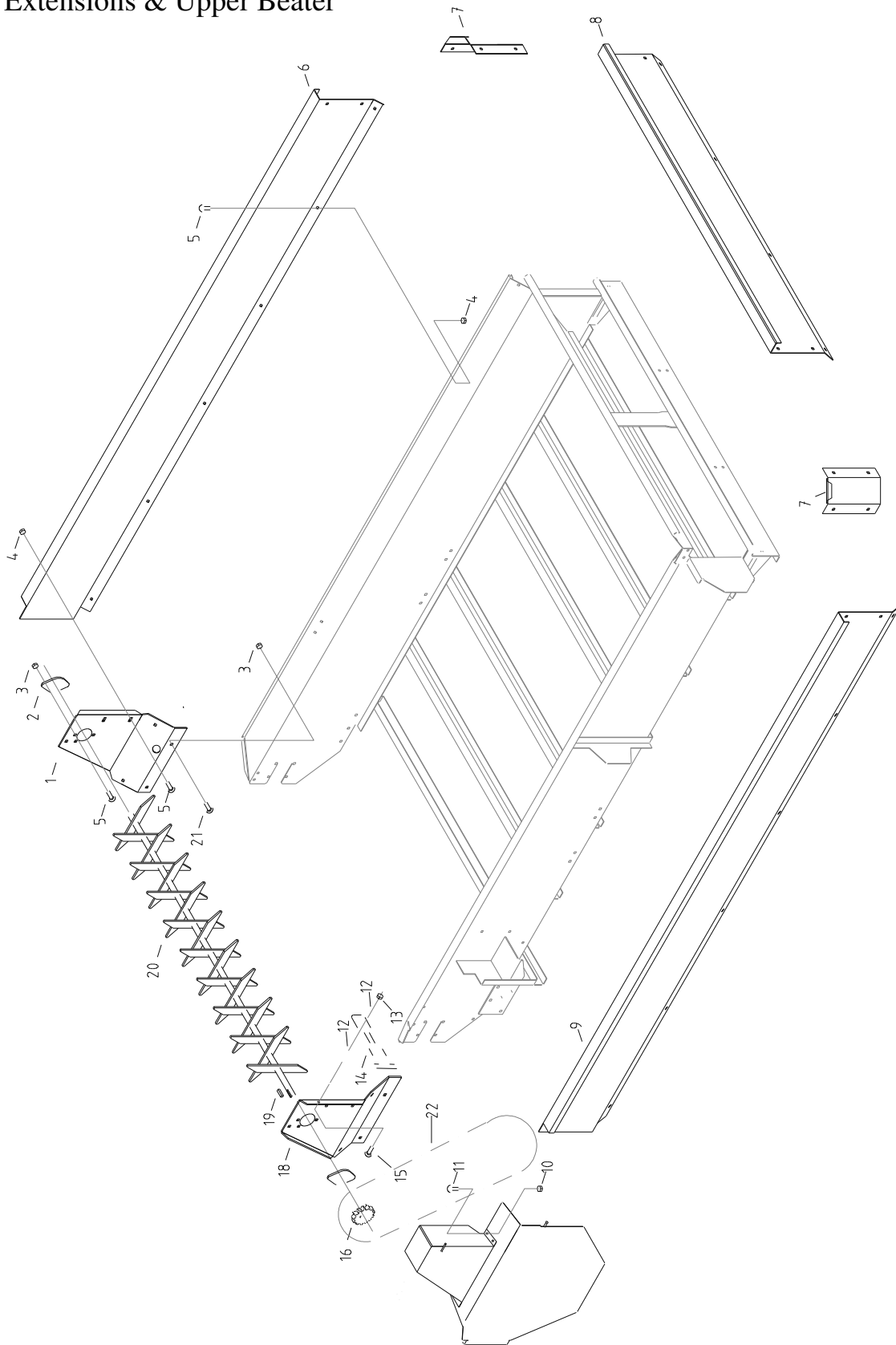


Figure C-1: Side Extensions & Upper Beater

Item #	MC Part #	Qty	Description
1	262029	1	Upper Beater Bearing Bracket LH
2	210144	2	Ball Bearing Sphere 1"
3	34009	10	3/8-16 Hex Serr Flange Nut Plt
4	34099	32	5/16-18 Hex Serr Flange L/n Z
5	34274	32	5/16-18 X 3/4 Carriage Bolt
6	262038	1	97 Extension Side LH
7	262040	2	97 Extension Corner
8	262037	1	97 Extension Front
9	262039	1	97 Extension Side RH
10	34092	4	1/4-20 Hex Serrated Flange Nut
11	34234	4	1/4-20 X 3/4 Hhcs Gr5 Zinc
12	34052	2	1/4 Uss Flat Washer Zinc
13	34124	1	1/4-20 Esna Nut Ne Zinc
14	220113	1	Latch Rubber
15	210145	1	Sprocket 12 Teeth
15	34245	1	1/4-20 X 1 1/4 Carriage Bolt G5 Z
17	262032	1	Sheild 57/77/97 Upper Beater Wa
18	262028	1	Upper Beater Bearing Bracket RH
20	262036	1	97 Upper Beater Wa
21	34191	8	3/8-16 X 3/4 Carr Bolt Gr-5
22	210526	1	Upper Beater Chain 90Links #50 Chain

APPENDIX B: SPREADER OPTIONS PARTS REFERENCE

The following options are available for Model 97P PTO Spreaders. Please refer to the appropriate parts/assembly drawings provided in this Appendix. Some options come pre-assembled on the spreader from the factory; others may require assembly/installation. Please contact Millcreek for additional instructions as needed if the appropriate instructions have not been included with your shipment.

Model 97P Spreader Options

- Hydraulic End Gate
- Fines Pan
- Safety Chain

Hydraulic Endgate Assembly (Model 97)

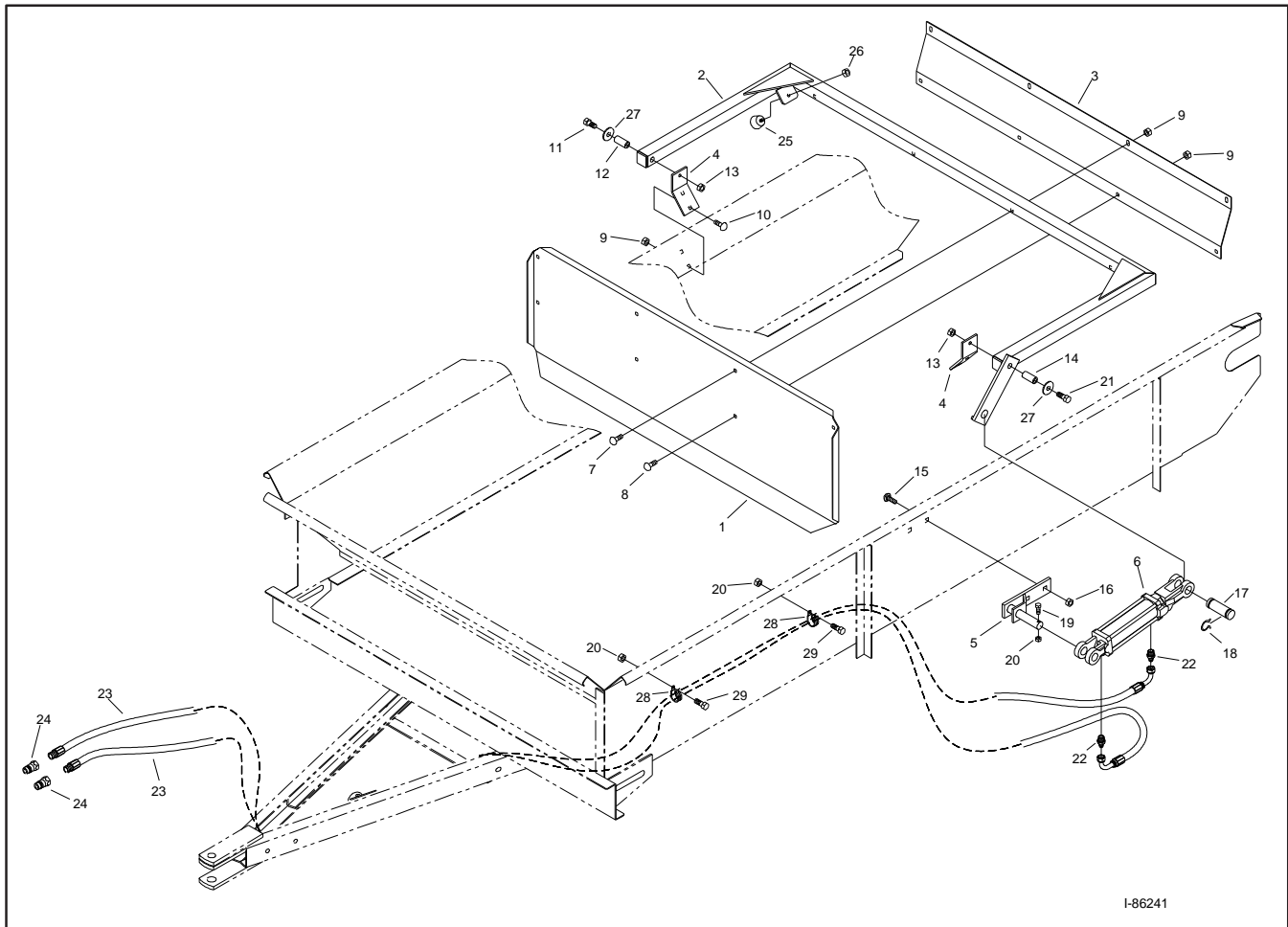


Figure B1 - Hydraulic Endgate Parts Detail

Assembling the Endgate on the Spreader

1. Install the two (2) endgate mounting plates (**item #4**) on the inside of the spreader box, using the nuts and bolts provided. Note that the upper half of each bracket will extend above the top of the spreader box.
2. Mount the endgate frame (**item #2**) on the endgate mounting plates (on each side), using the hardware provided. Be sure to install the 3/8" washers and lock nuts in sequence as shown and tighten securely.
3. Refer to Figure B1. Mount the endgate (**item #1**) on the frame, using the four (4) 3/8 x 2-1/2" carriage bolts provided.
4. Mount the endgate brace (**item #3**) on the opposite side of the frame, threading it onto the 2-1/2" carriage bolts. Assemble the 3/8" flange nuts (**item #9**) onto the bolts and just finger tighten to hold in place until assembly is complete.
5. Thread the four (4) 3/8 x 3/4" carriage bolts (**item #8**) through the lower set of holes in the endgate and the endgate brace. Assemble the 3/8" flange nuts onto the bolts.
6. Firmly tighten ALL bolts on the endgate assembly.

Hydraulic Endgate Assembly

Assembling the Endgate on the Spreader (continued)

7. Install the protective endgate stop pieces (**item #25**) on each side of the spreader box.
8. Install the hydraulic cylinder mounting bracket (**item #5**) to the side sheet as shown, using the hardware provided.
9. Assemble the hydraulic cylinder (**item #6**) onto the mounting bracket. Use the 1/4" bolt and lock nut to secure as shown in Figure B1.
10. Install the pin (**item #17**) to secure the hydraulic cylinder to the endgate; install the safety clip (**item #18**) to lock the cylinder in place.
11. Run the hydraulic hoses through the clamps (**item #28**) on the side of the spreader box as shown. Then, thread the hoses through the channel in the hitch and UP between the hitch members (above the hitch connection) as shown in Figure B1.

ATTENTION: Ensure that the hydraulic hoses are installed as shown in Figure B1. Failure to do so may result in damage to the hoses.

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	261617	1	Endgate
2	261613	1	Endgate Frame
3	261618	1	Endgate Brace
4	261611	2	Endgate Mounting Bracket
5	261621	1	Cylinder Mounting Bracket
6	240271	1	Hydraulic Cylinder
7	34219	4	3/8 x 2-1/2 Carriage Bolt
8	34191	4	3/8 x 3/4 Carriage Bolt
9	34009	12	3/8 Flange Nut
10	34006	4	3/8 x 1 Carriage Bolt
11	34242	2	3/8 x 2-1/2 Bolt
12	261619	1	Right Side Hinge Tube
13	34391	4	3/8 Center Locking Nut
14	261648	1	Left Side Hinge Tube
15	34112	2	1/2 x 1 Carriage Bolt
16	34384	2	1/2 Flange Nut
17	220132	1	Pin
18	220133	2	Clip
19	34251	1	1/4 x 1-1/2 Bolt
20	34124	3	1/4 Nylon Lock Nut
21	34259	1	3/8 x 3 Bolt
22	240272	2	Adapter 6MB-4MJ
23	243182	2	Hose 156" 8MP - 4FJX90S
24	240233	2	Quick Coupler to Tractor
25	220196	2	Rubber Foot
26	34223	2	5/16 Nylon Stop Nut
27	34018	2	3/8 Washer
28	240273	2	3/4" Loom Clamp
29	34234	2	1/4 x 3/4 Bolt

Fines Pan Assembly

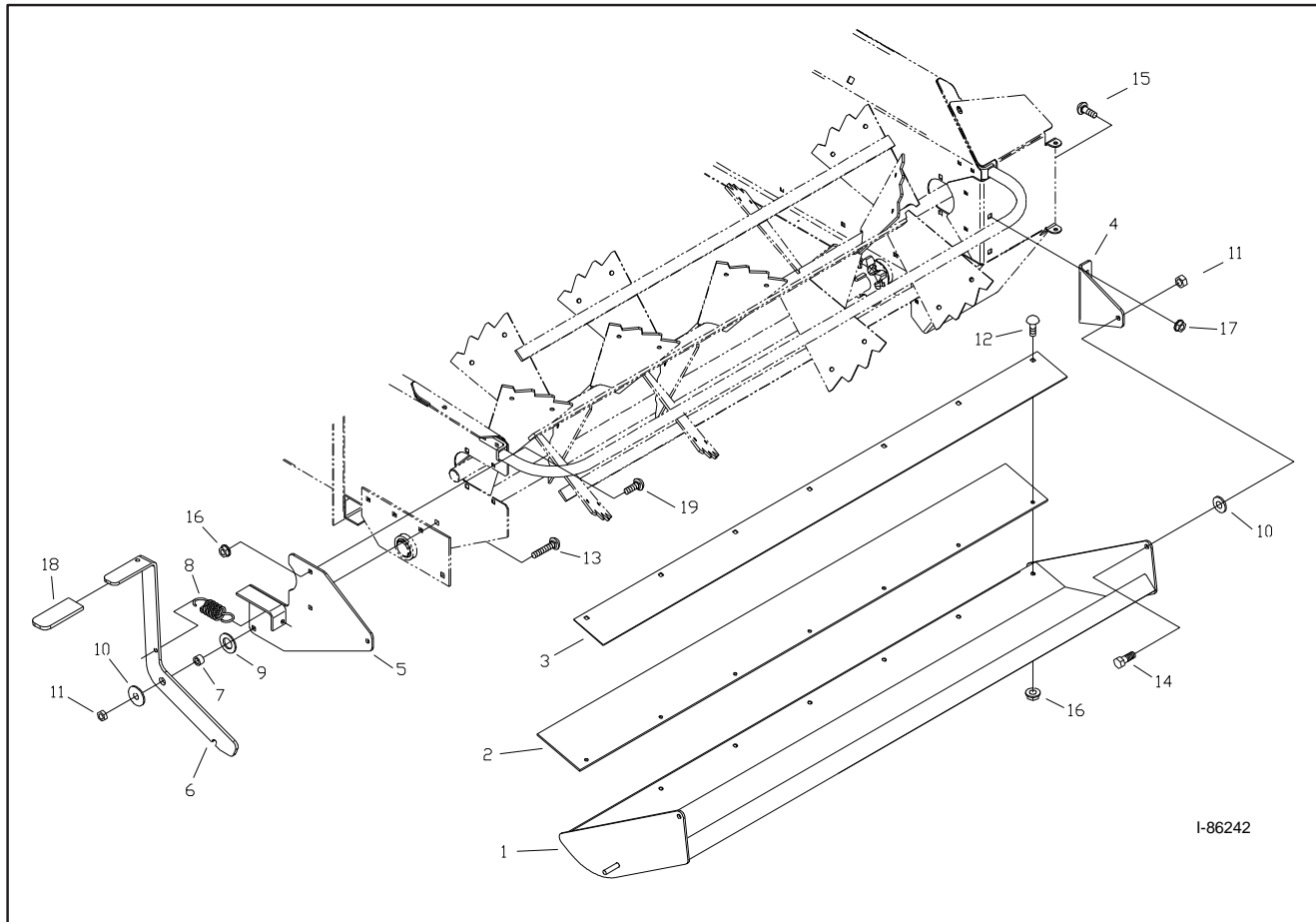


Figure B2 - Fines Pan Parts Detail

Assembling the Fines Pan on the Spreader

1. Refer to the **Safety Shields & Guards** drawing, **Appendix A**. Remove the **Left Rear Guard (items #6, 8, 19)** to accommodate the installation of the fines pan mounting bracket.
2. Refer to the **Figure B2**. Install the lefthand (LH) fines pan mounting bracket (**item #5**) on the left rear of the spreader box, using the hardware provided.
3. Install the lever (**item #6**) onto the LH mounting bracket, assembling the hardware (provided) in the following order:
 - (a) Install the 3/8 x 1-1/2 carriage bolt (**item #13**) through the side sheet of the spreader box and the LH mounting bracket.
 - (b) Assemble the spacer (**item #7**) and the 3/4 SAE washer (**item #9**) onto the carriage bolt.
 - (c) Hook the spring (**item #8**) onto the LH mounting bracket and also onto the lever (**item #6**).
 - (d) Install the lever onto the carriage bolt/spacer assembly.
 - (e) Install the 3/8 flat washer (**item #10**) and 3/8 center lock nut (**item #11**) onto the lever.
4. Open the rear shield door on the right rear side of the spreader box. Install the righthand (RH) fines pan mounting bracket (**item #4**) on the right rear of the spreader box, using the hardware provided.
NOTE: The 3/8 x 3/4 carriage bolt (**item #15**) is installed from the inside through the back shield. When assembly of the RH mounting bracket is complete, close the rear shield door and fasten the strap.

Fines Pan Assembly

Assembling the Fines Pan on the Spreader (continued)

5. Assemble **item #'s 1, 2, and 3** as shown in Figure B2 to form the fines pan.
 6. Mount the fines pan to the LH/RH mounting brackets, using the hardware provided.
 7. Set the fines pan for operation by stepping or pushing forward on the kick plate; doing so engages the spring (attached to the lever). Note that the knob on the fines pan should fit into the notch cutout on the lever.
 8. To open the fines pan for operation, pull front on the lever (i.e. towards the tractor).
-

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	261609	1	Fines Pan
2	260543	1	Rubber Seal
3	261608	1	Hold Down Plate
4	261568	1	Bracket RH
5	261574	1	Bracket LH
6	261576	1	Lever
7	260998	1	Spacer
8	220171	1	Spring
9	34300	1	3/4 SAE Washer
10	34018	3	3/8 Flat Washer
11	34391	3	3/8 Center Lock Nut
12	34320	7	5/16 x 1-1/4 Carriage Bolt
13	34218	1	3/8 x 1-1/2 Carriage Bolt
14	34190	2	3/8 x 1 Bolt
15	34191	2	3/8 x 3/4 Carriage Bolt
16	34099	9	5/16 Flange Nut
17	34009	2	3/8 Flange Nut
18	220157	1	Rubber Handle
19	34274	2	5/16 x 3/4 Carriage Bolt

Safety Chain Assembly

NOTE: The safety chain may be ordered as an optional component for the Millcreek 97P PTO Spreaders and is strongly recommended if the spreader is to be moved any time on a public roadway.

1. Refer to Figure B3 for an illustration of the hook-up of the safety chain.
2. Attach the chain to the spreader hitch as shown, using the hardware provided (1/2-inch bolt, flat washer, lock nut).
3. Wrap the hook end of the chain around the tractor drawbar support or other structural member of the tractor frame and connect it as shown.

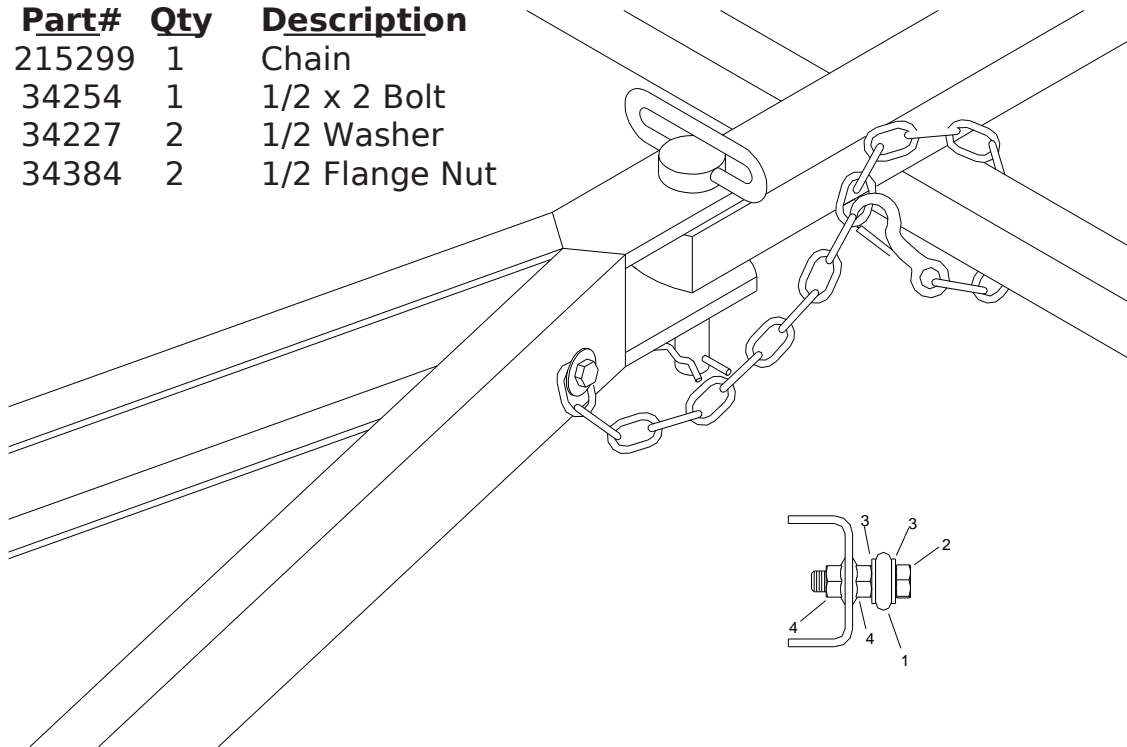


WARNING: For the safety chain to be effective, the installation of the chain should not allow more slack than is necessary for movement during spreader operation. Inspect the safety chain regularly to check the condition of the links and locking/hooking mechanisms; replace the chain as soon as weakness/breakage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

Safety Chain Kit

Millcreek Part# 261494

Item#	Part#	Qty	Description
1	215299	1	Chain
2	34254	1	1/2 x 2 Bolt
3	34227	2	1/2 Washer
4	34384	2	1/2 Flange Nut



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Figure B3 - Attaching the Safety Chain