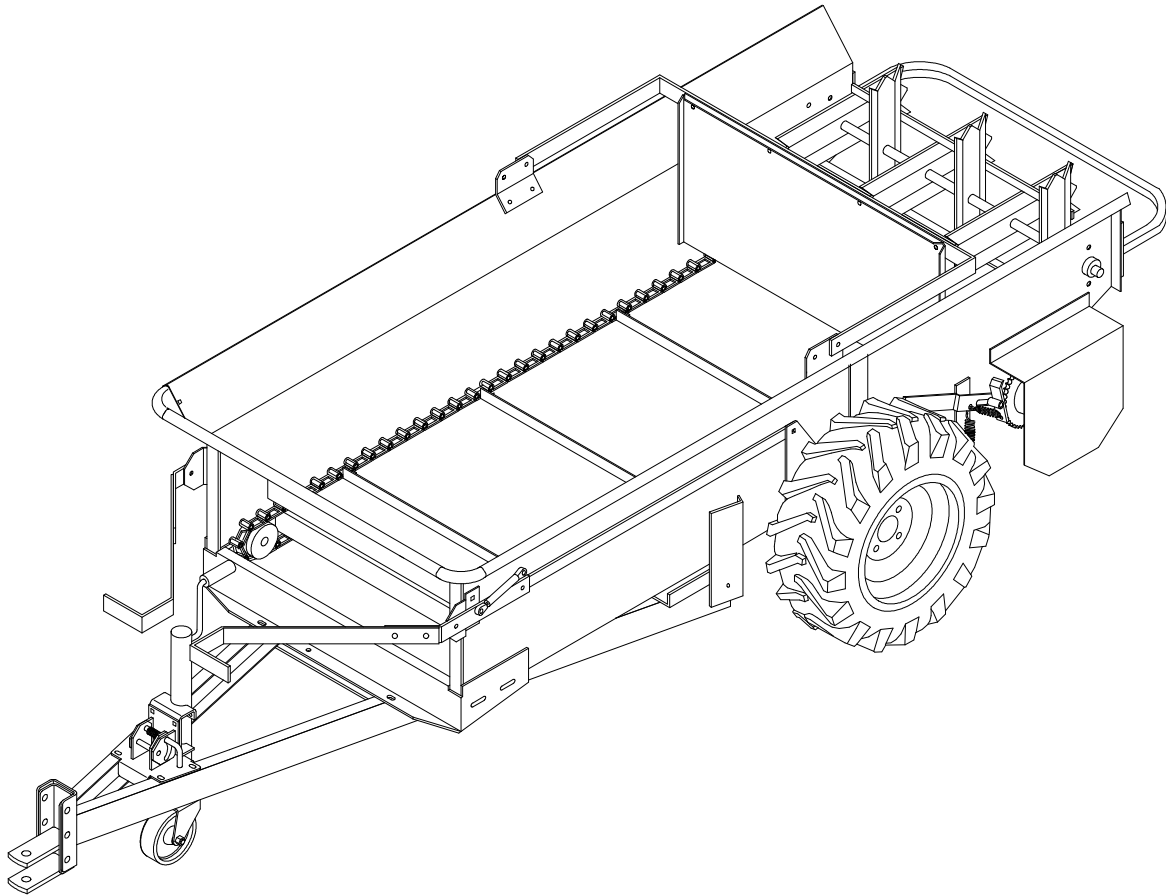


OPERATOR'S MANUAL

**MILLCREEK MODELS:
27G and 37G *GROUND DRIVE* SPREADERS**



I-86015-A

PUBLICATION DATE: 1/10/05, Rev. 1

MILLCREEK PART # 43831

Millcreek Manufacturing Company
525 Reservoir Road
Honey Brook, PA 19344
Phone: 1-800-311-1323 / Fax: 717-656-0952
www.millcreekspreaders.com



WARNING: DO NOT assemble, operate, or maintain this equipment without first reading and understanding the information provided in this manual. Failure to follow all safety precautions as stated in the manual 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 **20 years** 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 27G or 37G 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.

NOTE: Procedures provided in this manual apply to *both* spreader models (Model 27G and Model 37G) 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 ensures your safety and the optimal performance of your Millcreek Spreader.

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 and/or while the spreader is in operation.



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: DO NOT back up when the spreader is in unloading mode; doing so can cause the beater drive chain to jump off the sprocket (and may damage your spreader).

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

Safety Labels

Following are the locations and descriptions of all labels on the spreader (labels are identical for both Models 27G and 37G); 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 operate without shields
42772	WARNING - Spreader combination safety label - moving parts, read manual
42760	ATTENTION - Do NOT exceed specified speed
42700	Millcreek Logo Label
42798/42799	Spreader Serial Number Label
42803/42804	Spreader Model Number Label

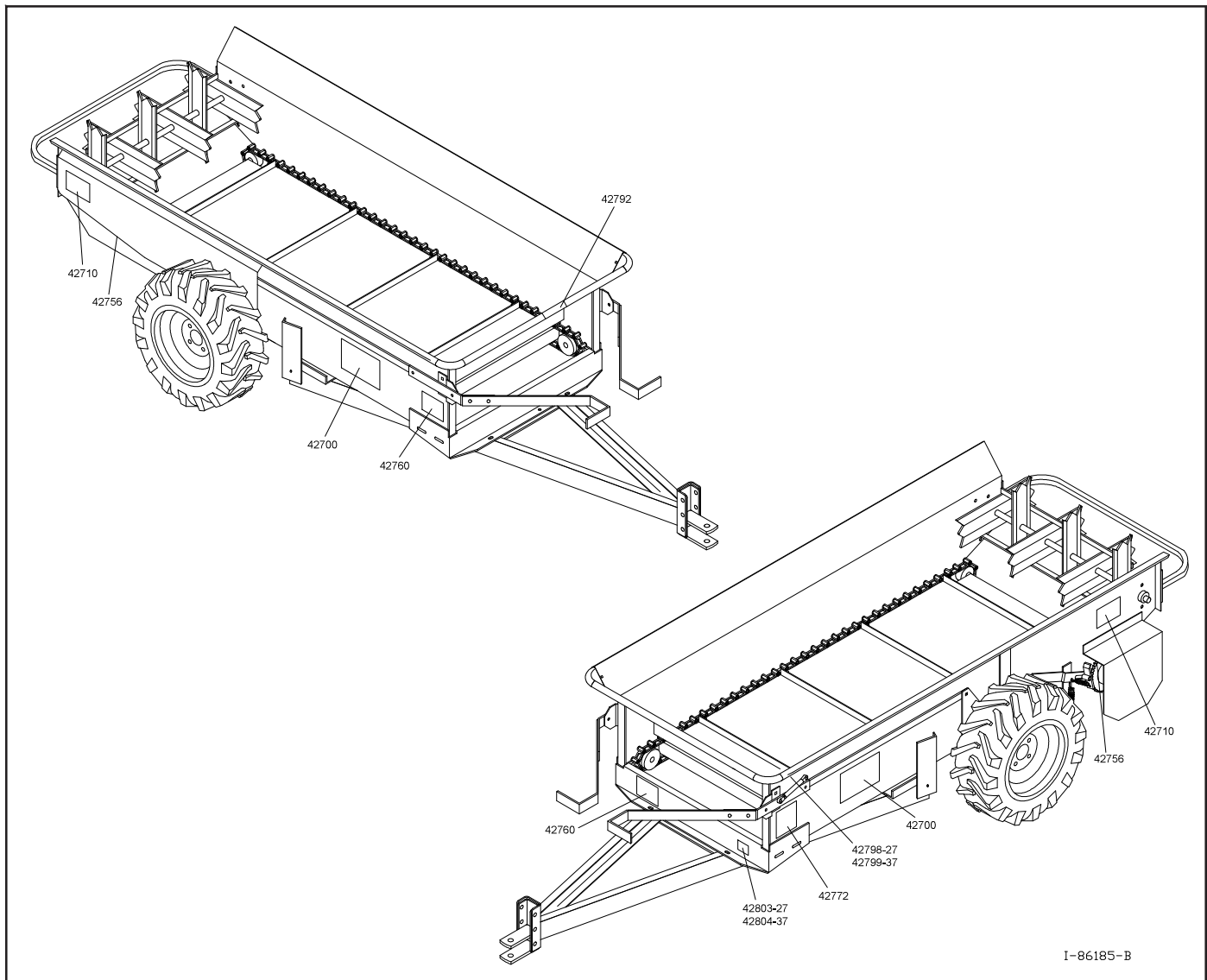


Figure 1A - Spreader Safety Label Locations

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

Safety Labels (continued)



DANGER

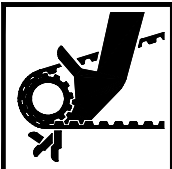
NO RIDERS

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.



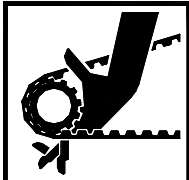
Read and understand operator's manual and safety labels before operating or servicing the machine.

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

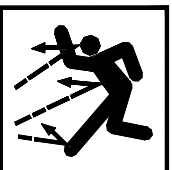


WARNING



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 5 MPH
WHILE MACHINE IS ENGAGED**

**DO NOT BACK UP WHILE
MACHINE IS ENGAGED**

42760

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 and includes all of the features/options as ordered. 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.

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
34 Zimmerman Road
Leola, PA 17540

SECTION 2: OPERATION

Understanding Spreader Operation

Proper and safe operation of the Millcreek 27G/37G 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. The following operating components are included with the **Standard Model 27/37** spreaders:

- The **dollywheel/jack** allows easy movement of the spreader around the stable or barn; also adjusts the height of the spreader to facilitate hook-up to the spreader towing vehicle.
- The **endgate** helps to contain loads between spreading and also shields the operator during spreading.
- The **lefthand spreader lever** *engages the floor apron chain which moves the manure to the rear of the spreader and into the beater.*
- The **riighthand spreader lever** *engages the chain that drives the beater and spreads the manure.*

Connecting the Spreader to the Towing Vehicle

For operation in the field, the Millcreek Model 27/37 spreaders can be towed by a number of vehicles--garden tractor, ATV, or utility vehicle. Please adhere to the following procedure for connecting the spreader to your towing vehicle. ***Attaching the spreader to the towing vehicle as instructed is necessary for safe and proper operation of the equipment.***

1. Back the towing vehicle within a few inches of the spreader hitch.
2. Refer to Figure 2A. Determine the spreader hitch position required to allow the spreader to remain parallel to the ground with relation to the towing vehicle.
NOTE: As shown in Figure 2A, the adjustable hitch on the front of the spreader may be positioned in a number of ways, by sliding up/down or inverting, to achieve a higher or lower positioning of the spreader hitch.
3. Re-position the adjustable hitch as required and tighten the two (2) 1/2" bolts and lock nuts securely.

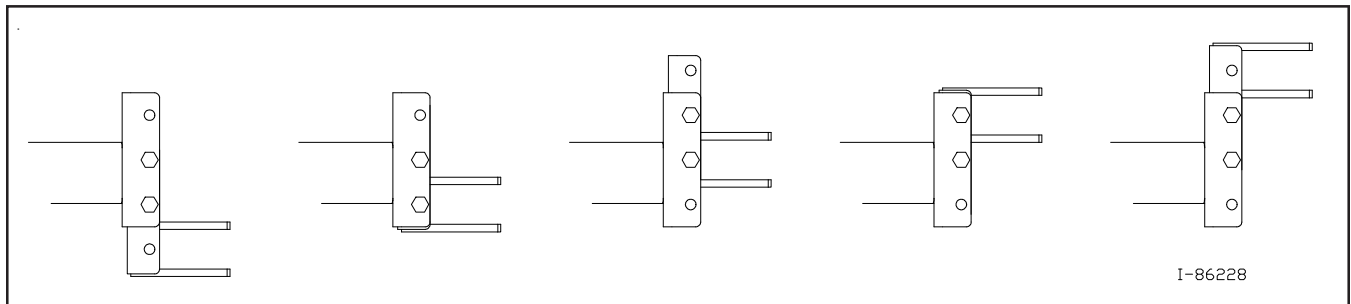


Figure 2A - Adjusting the Hitch Position

Attaching the Spreader to the Towing Vehicle (continued)

4. Refer to Figure 2B. Adjust the overall height of the spreader/hitch with the dollywheel/jack so the height of the spreader hitch matches the height of the tractor drawbar or vehicle hitch point (as applicable).

NOTE: The dollywheel/jack is held in its upright position with a spring-loaded pin. To release the jack to move it into its operational position, simply pull the pin outward and swing the jack down.

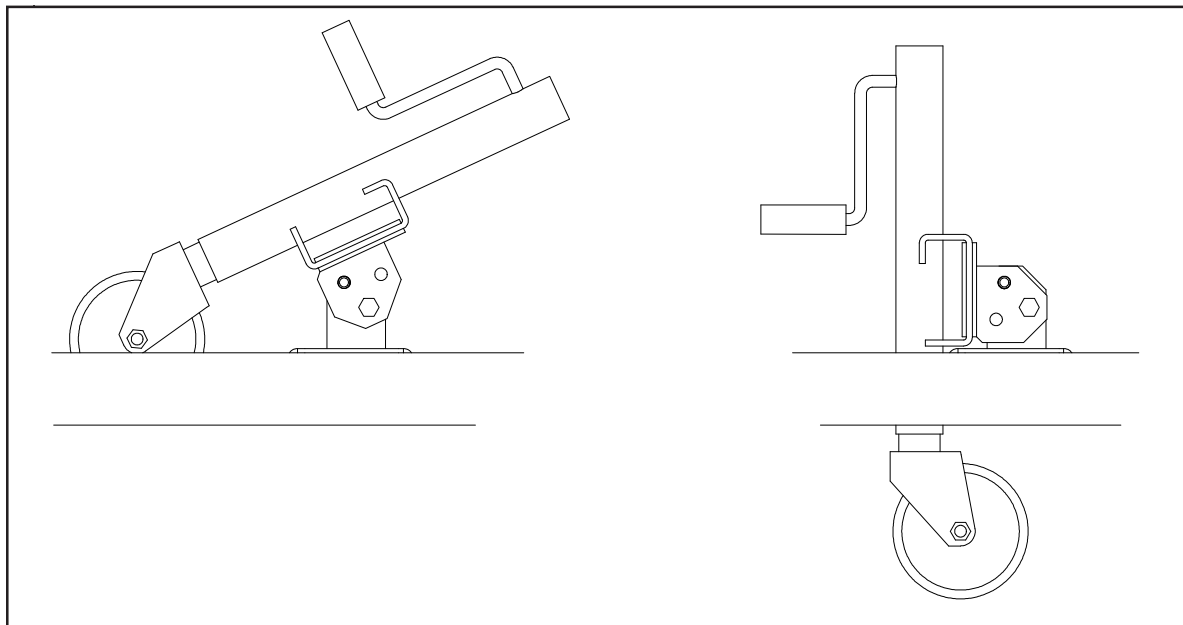



Figure 2B - Using the Dollywheel/Jack

5. Back the towing vehicle into the hitch until the holes of the spreader hitch line up with the vehicle hitch point.
 6. Fasten the spreader hitch to the vehicle drawbar/hitch point 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 safety clip.
-  **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 to hold the hitch pin in place is also required for safe spreader operation.
7. Remove the weight from the dollywheel/jack by lowering the spreader hitch on the vehicle drawbar/hitch point.
 8. To provide adequate ground clearance for operation, swing the dollywheel/jack up into its resting position (i.e. pull the spring-loaded pin out to release the jack and swing the jack upward, then allow the pin to re-engage to hold the jack in its upward position.)

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

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.

ATTENTION / CAUTION: In order to obtain proper, aggressive spreading action, *the spreader ground speed must reach a minimum of 3.0 miles per hour--the equivalent of a comfortable walking pace.* (Note that the wheels drive the beater action.) However, spreading at speeds over 5.0 miles per hour (i.e. similar to a very brisk walking pace) can cause excessive wear or damage to the equipment.

1. Ensure that the spreader (and towing vehicle) are in a stopped position (i.e. NOT in motion).
2. Lift the manual endgate.
3. Engage the right lever to start the beater.
4. Begin moving forward, and engage the left lever, which starts the action of the apron floor chain (moving the material towards the rear of the spreader).
5. Ensure that you are reaching the optimal operating speed for spreading (at least 3.0 mph, but not more than 5.0 mph). Remember that this optimal speed is similar to a comfortable walking pace.
6. When the spreader is almost empty and there is very little manure pushing against the beater, disengage the right spreader lever (which controls the beater rotation).
7. Allow the apron chain to run the remaining manure out the back of the spreader.
8. When completely unloaded, disengage the left spreader lever to stop the action of the apron chain.
9. Refer to Section 3 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 3 in this manual for the proper torque specifications.*

SECTION 3: 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 your 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>Hitch Hardware*</u>	<u>Torque Specification</u>
3/8"	25 ft. lbs.
5/16"	15 ft. lbs.

***Note that these torque specifications apply to the hitch members fastened to the spreader box, NOT to the adjustable hitch prong bracket at the front of the hitch.**

- Check that implement tires have adequate air pressure (28 psi). Always use ag-traction implement tires on the drive wheels. Wheel bolts should be torqued to 60 ft. lbs.
- Apply chain lube once a month (or as needed) to the drive chains (shown in Figure 4C); 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 tension/tightness (refer to Figure 4A).

Procedure for checking/adjusting the floor apron chain:

- Pull up on the center slat of the floor apron chain.
- If you can lift it higher than 5 inches, the chain is too loose.
- If you can lift it no higher than 3 inches, the chain is too tight.
- If the chain needs adjustment, use a 1/2" wrench to loosen the two side nuts on each side of the spreader box as shown in Figure 4A. Turn the *front* nut clockwise or counterclockwise until correct tension/tightness is achieved. Repeat for the other side. ***Make sure that the chains on each side of the apron are equally taut.***
- Re-tighten the side nuts.

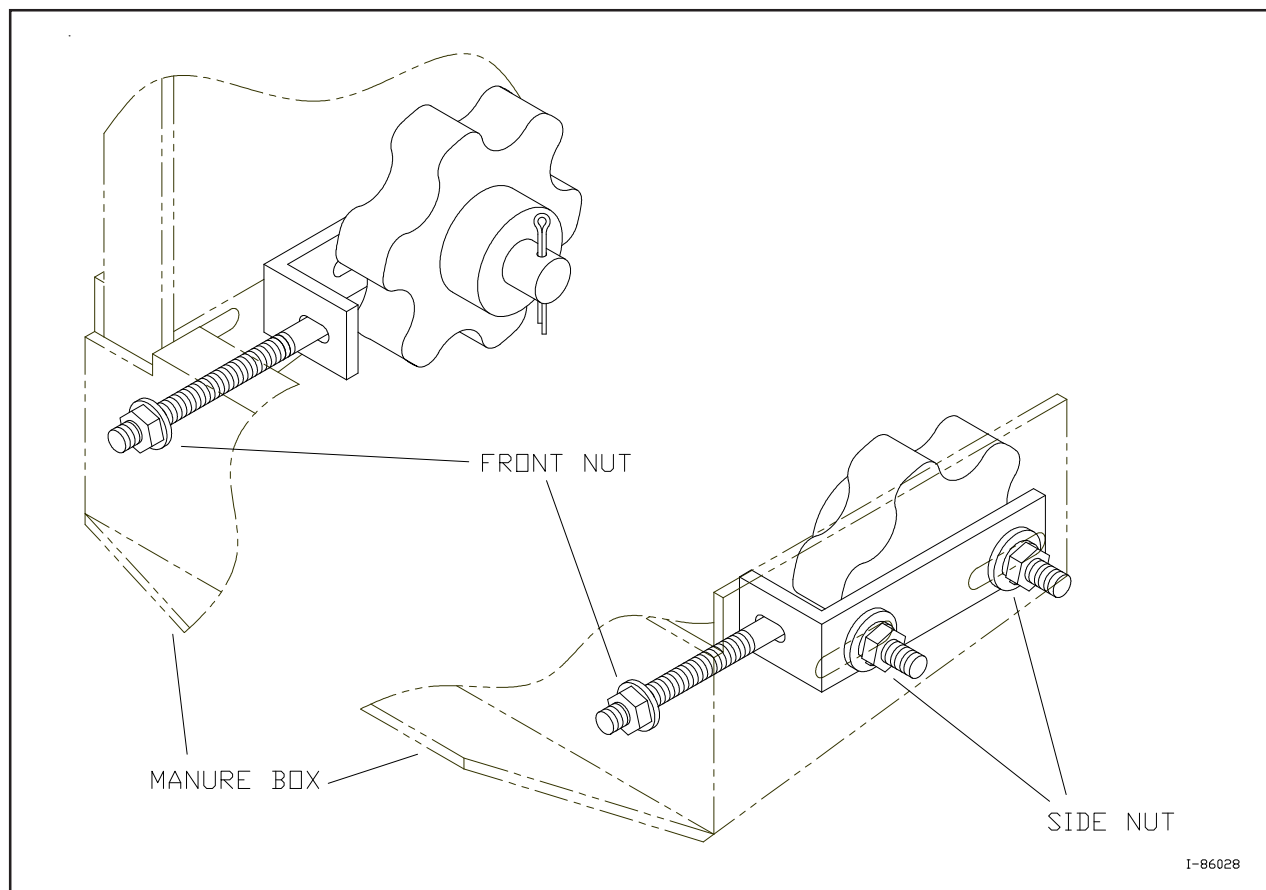


Figure 4A - Adjusting the Floor Apron Chain for Proper Tension

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 Rear Pawl

If the floor apron chain is not moving, the most common cause is improper brake (rear) pawl adjustment. (by jacking up the lefthand drive wheel and turning the wheel by hand, you will be able to observe the brake pawl engagement in the sprocket teeth.)

1. Refer to Figure 4B.
2. Remove the shield covering the brake pawl assembly by removing the two (2) bolts, washers, and nuts holding it in place.
3. Loosen the nut behind the brake pawl using a 9/16" wrench.
4. With the roller positioned at the highest point on the star cam, tap the brake pawl up or down as necessary to attain a 1/16" to 1/8" clearance between the brake pawl and the sprocket tooth (see close-up detail in Figure 4B).
5. After the desired adjustment is achieved, re-tighten the rear nut.
6. Replace the safety shield.

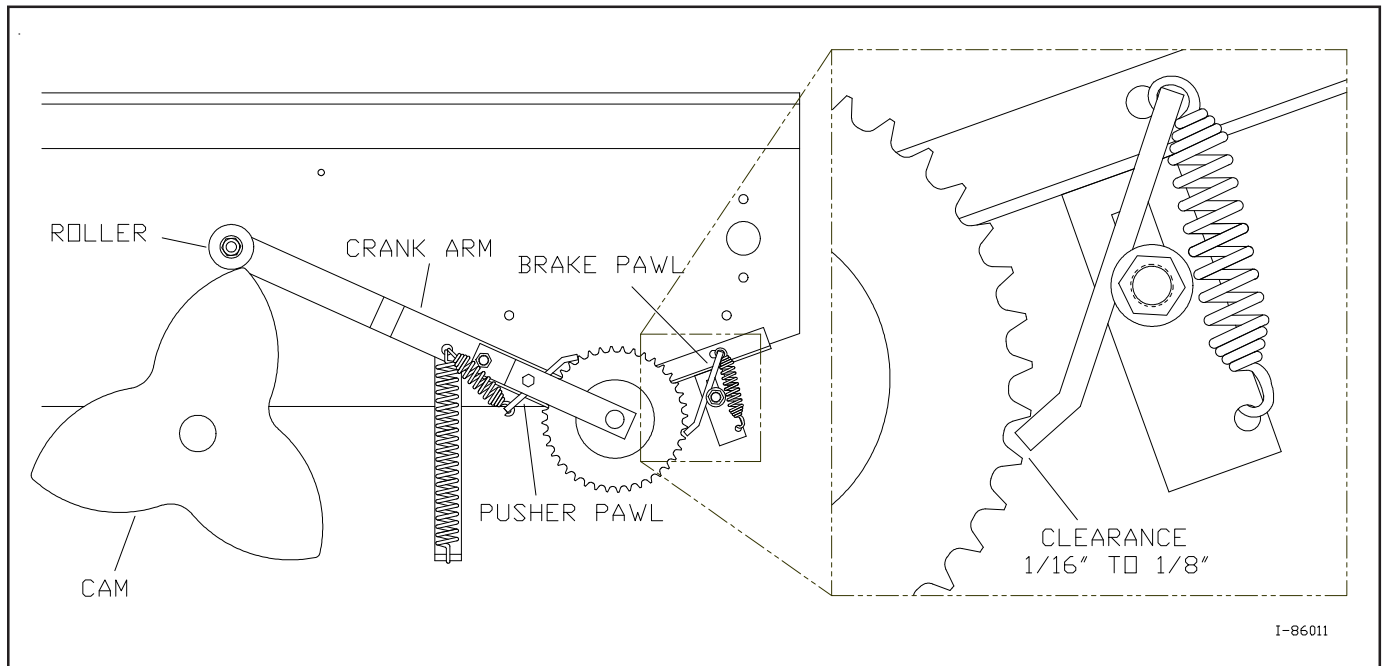


Figure 4B - Adjusting the Rear Brake Pawl

Procedures for Spreader Adjustment (continued)

Re-installing the Beater Drive Chain

Backward motion (backing up) *with the spreader engaged* will probably cause the beater drive chain to come off the rear sprocket. The following procedure explains how to re-install the chain should this ever become necessary. As needed, refer to the **Beaters and Drive Assembly** parts detail in **Appendix A** at the back of this manual.

1. Disconnect the spreader from the tractor.
2. Securely block up the right side of the spreader, and remove the right side wheel.
3. Remove the right safety shield by removing the three (3) bolts, washers, and nuts along the top of the shield.
4. At the front of the spreader, pull up on the right lever to engage the beater drive components.
5. Refer to Figure 4C. Loosen the chain guide nut to allow re-positioning of the beater drive chain.
6. As shown in Figure 4C, re-install the chain around the small rear sprocket.
7. Re-install the chain over the top idler sprocket.
8. Re-install the chain around the bottom idler sprocket.
9. Re-install the chain over the large drive sprocket.
10. Verify that the chain is positioned properly over and around all sprockets as shown in Figure 4C.

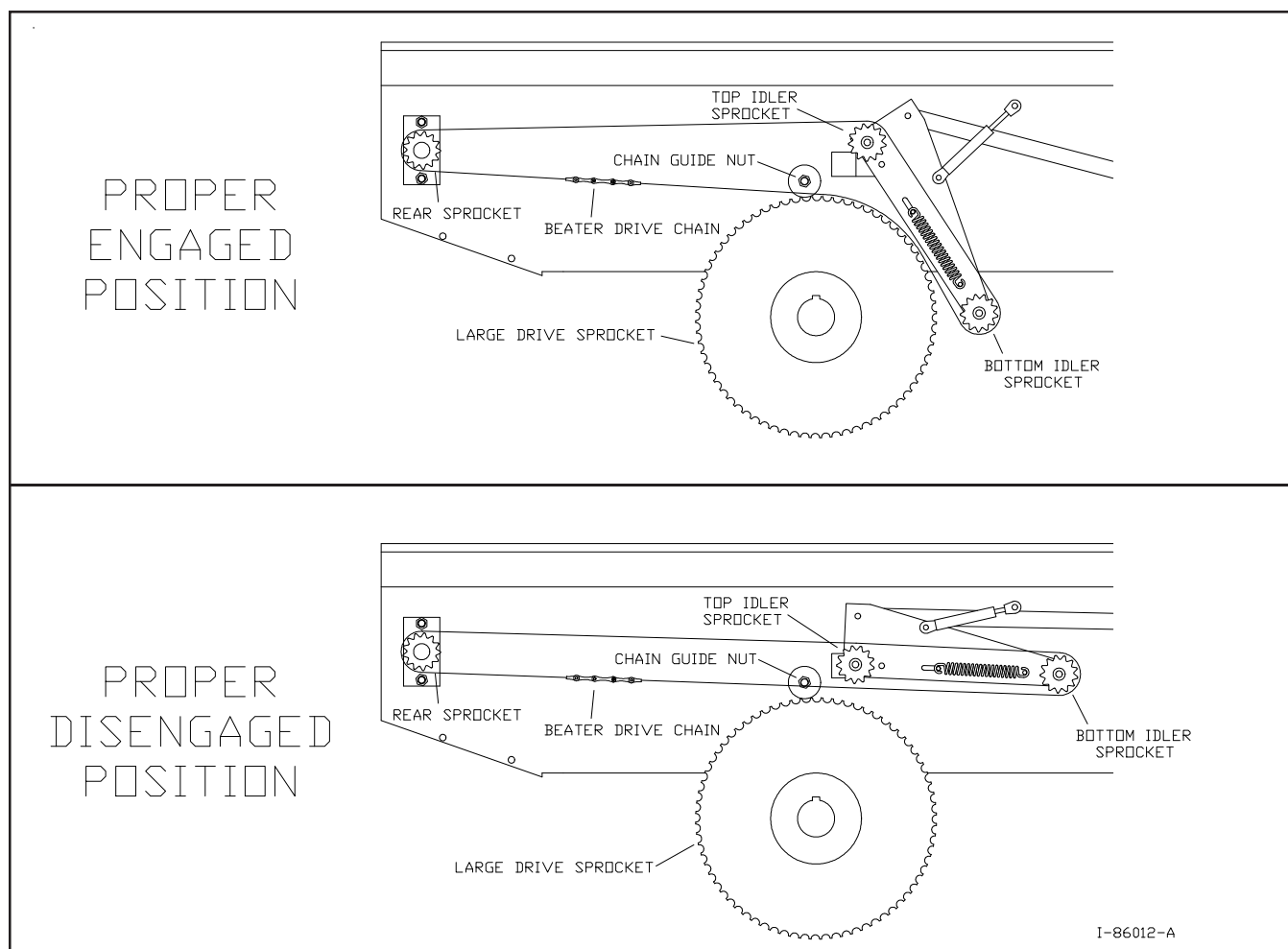


Figure 4C - Beater Drive Chain Installed in the Proper Position

Re-installing the Beater Drive Chain (continued)

11. Re-position the chain guide washers (in sequence with the chain guide nut) to keep the chain on the drive sprocket.
12. At the front of the spreader, push down on the right lever to disengage the beater drive. Verify the positioning of the beater drive chain according to the lower portion of Figure 4C.
13. Re-install the safety shield.
14. Re-install the wheel and torque the wheel bolts to 60 ft. lbs. Remove the safety blocking.

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 27G	Model 37G
Capacity, <i>struck</i>	16.0 cubic ft.	22.0 cubic ft.
Capacity, <i>heaped</i>	28.0 cubic ft.	37.3 cubic ft.
Body Length	72 inches	96 inches
Body Width	28 inches	28 inches
Body Flare Width	34 inches	34 inches
Body Height	15 inches	15 inches
Overall Length	9 ft., 3 inches	11 ft., 3 inches
Overall Width	46.5 inches	46.5 inches
Overall Height	26.5 inches	26.5 inches
Loading Height	26.5 inches	26.5 inches
Construction	All steel with poly floor	All steel with poly floor
Body Finish	Powder coating	Powder coating
Apron Chain	#55 steel detachable	#55 steel detachable
Tires (28 psi)*	6.00-12 traction tire	6.00-12 traction tire
Bearings (beater/axles)	Sealed ball bearings	Sealed ball bearings
Beater Drive	#40 roller chain	#40 roller chain
Apron Drive	Ratchet	Ratchet
Weight (with tires)	325 lbs.	395 lbs.
Tractor Size (weight required)	15 HP+ tractor or 350cc ATV	18 HP+ tractor or 450cc ATV

**NOTE: The tires are mounted in reverse direction of "normal" installation.*

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

Spreader Box Assembly & Safety Shields

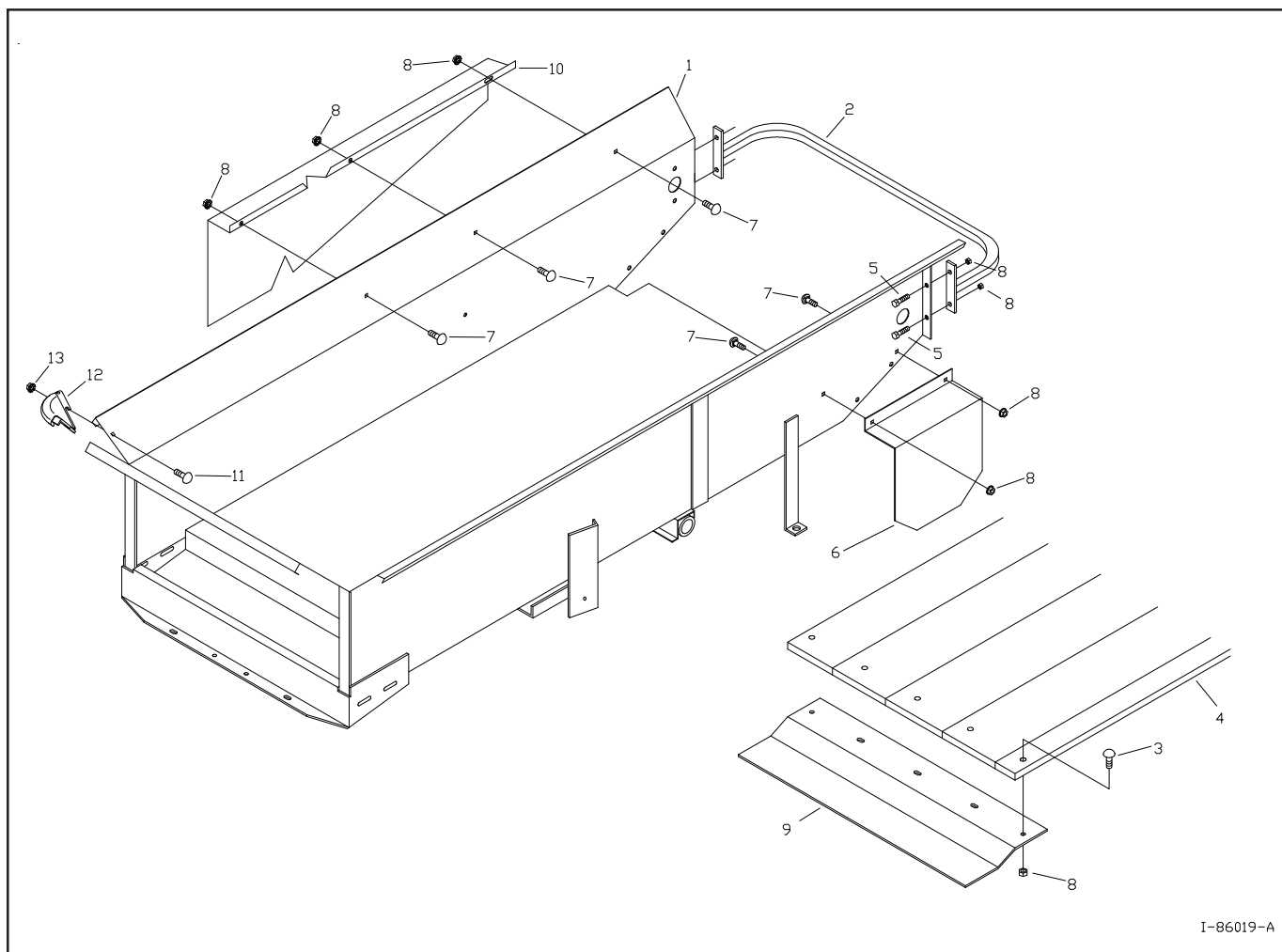


Figure A1 - Spreader Box Assembly Parts Detail

Spreader Box Assembly (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	260176	1	Model 27 Spreader Box, Steel Floor
	260177	1	Model 27 Spreader Box, Poly Floor
	260179	1	Model 37 Spreader Box, Poly Floor
2	260338	1	Rear Guard
3	34320	15	5/16 x 1-1/4 Carriage Bolt
4	215100	4	Model 27 Poly Board, 6" Wide
	215102	4	Model 37 Poly Board, 6" Wide
	215296	1	Model 27 Poly Board, 3" Wide
	215297	1	Model 37 Poly Board, 3" Wide
5	34328	4	5/16 x 3/4 Flange Bolt
6	260129	1	Ratchet Shield
7	34337	5	5/16 x 1/2 Carriage Bolt
8	34099	24	5/16 Flange Nut
9	260112	2	Poly Floor Hold Down
10	260996	1	Beater Drive Shield
11	34274	4	5/16 x 3/4 Carriage Bolt
12	215314	2	Cast Corner
13	34367	4	5/16 Large Flange Nut

Axle and Wheel Assembly

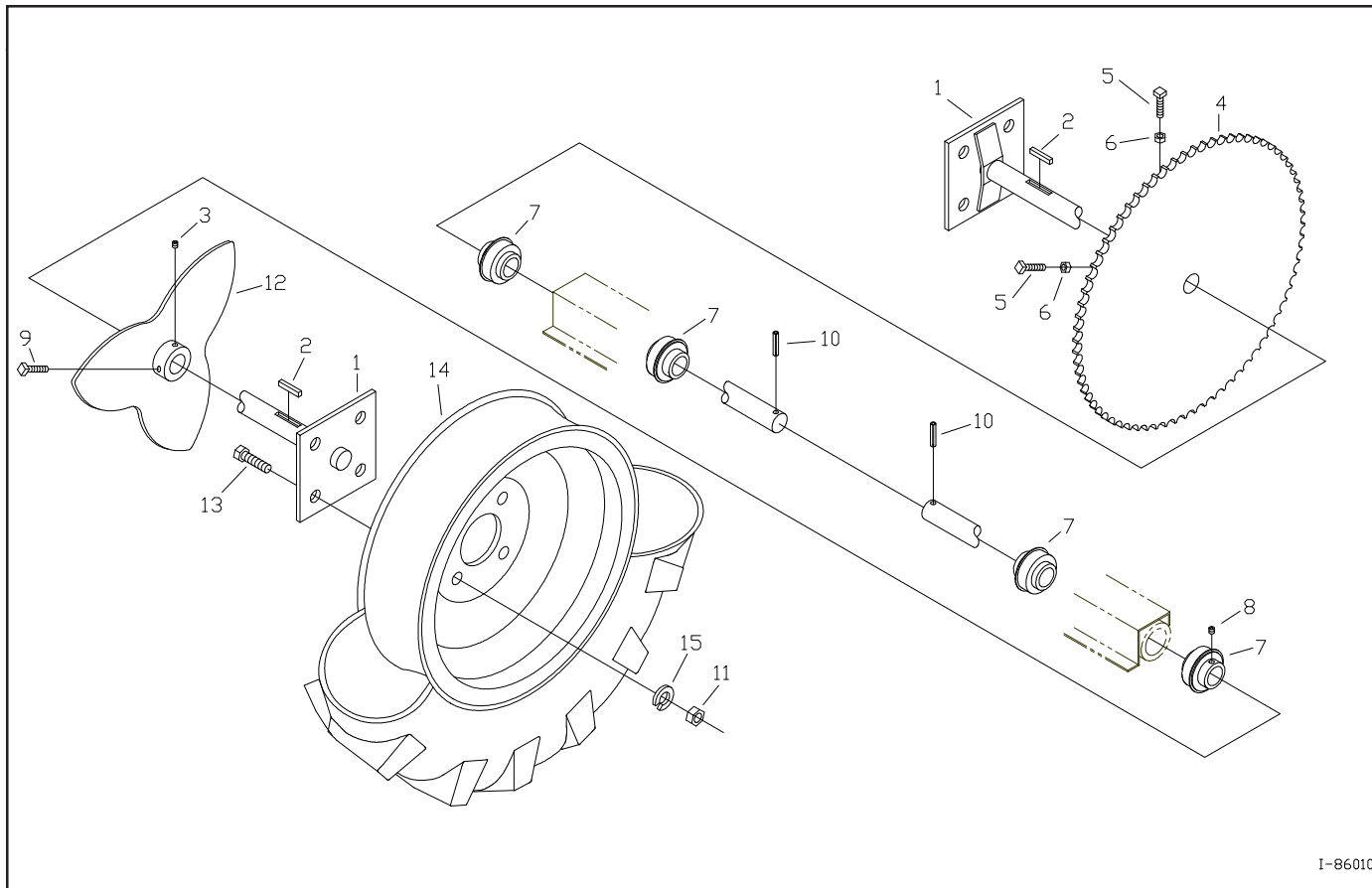


Figure A2 - Axle and Wheel Assembly Parts Detail

NOTE: The spreader tires are mounted in reverse direction of the "normal" installation.

Axle and Wheel Assembly (continued)

<u>Item#</u>	<u>MC Part#</u>	<u>Qty.</u>	<u>Component Description</u>
1	260121	2	Axle Shaft
2	210130	2	1/4 x 1 Key
3	NA	1	5/16 x 5/16 Set Screw
4	210125	1	72 Tooth Sprocket (includes items 3, 5 & 6)
5	34215	2	5/16 x 2 Square Head Set Screw
6	34020	2	5/16 Nut
7	210329	4	Axle Bearing
8	N/A	8	1/4 x 1/4 Set Screw
9	34290	1	5/16 x 3/4 Square Head Set Screw
10	220106	2	1/4 x 1-1/4 Roll Pin
11	34034	8	1/2 Nut
12	260263	1	Star Cam (includes items 3 & 18)
13	34311	8	1/2 x 1-1/4 Bolt
14	215120	1	Wheel and Tire LH
	215263	1	Wheel and Tire RH
	215134	1	Steel Wheel Option RH
	215135	1	Steel Wheel Option LH
15	34035	8	1/2 Lock Washer

Hitch Assembly and Spreader Controls

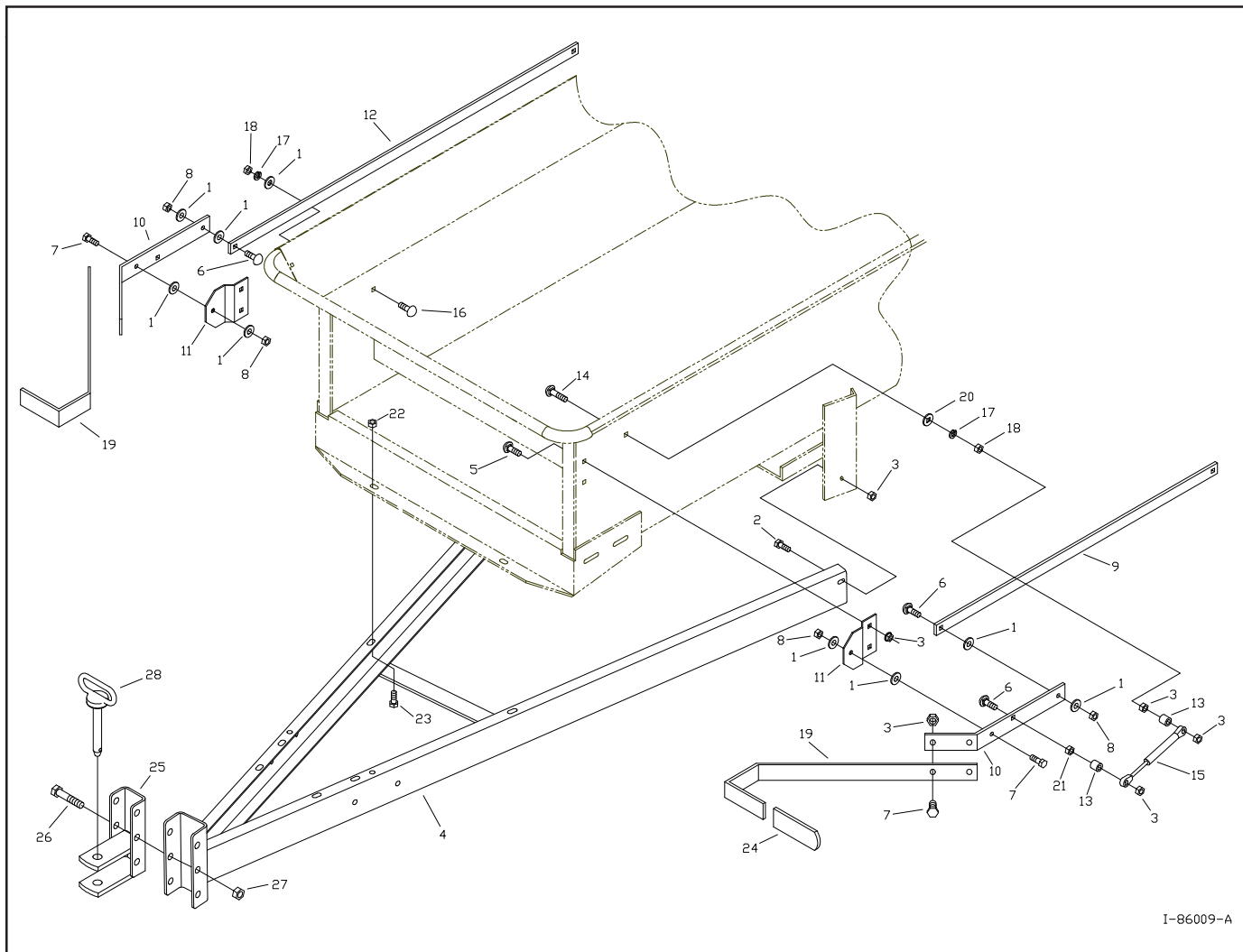


Figure A3 - Hitch Assembly and Controls Parts Detail

Hitch Assembly and Spreader Controls (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	34057	9	5/16 Washer
2	34328	2	5/16 x 3/4 Flange Bolt
3	34099	13	5/16 Flange Nut
4	260102	1	Hitch
5	34337	4	5/16 x 1/2 Low Shoulder Carriage Bolt
6	34317	3	5/16 x 1-1/4 Carriage Bolt
7	34336	6	5/16 x 1 Flange Bolt
8**	34072	4	5/16 Grade B Lock Nut (Stover)
9	260991	1	Model 27 Left Lever Link
	261059	1	Model 37 Left Lever Link
10	260987	2	Lever
11	260986	2	Lever Pivot Bracket
12	260988	1	Model 27 Right Lever Link
	261058	1	Model 37 Right Lever Link
13	210342	2	Spacer
14	34283	1	5/16 x 2-1/2 Carriage Bolt
15	220163	1	Gas Shock
16	34275	1	5/16 x 1 Carriage Bolt
17	34203	2	5/16 Lock Washer
18	34020	2	5/16 Nut
19	261136	2	Handle
20	261159	1	5/16 Sq. Washer
21	34357	1	5/16 Jam Nut
22	34009	2	3/8 Flange Nut
23	34330	2	3/8 x 3/4 Flange Bolt
24	220157	2	Rubber Sleeve
25	261662	1	Adjustable Hitch
26	34268	2	1/2 x 3-1/2 Bolt
27	34211	1	1/2 Nylon Lock Nut
28	220156	1	Hitch Pin

****NOTE:** The **LEVERS** and **LEVER LINKS** must be able to **PIVOT** for proper operation; DO NOT overtighten the Grade B lock nuts (**item #8**). Millcreek recommends that you just tighten the lock nuts, then loosen 1/4 turn to allow for proper movement.

Apron Chain and Sprocket Assembly

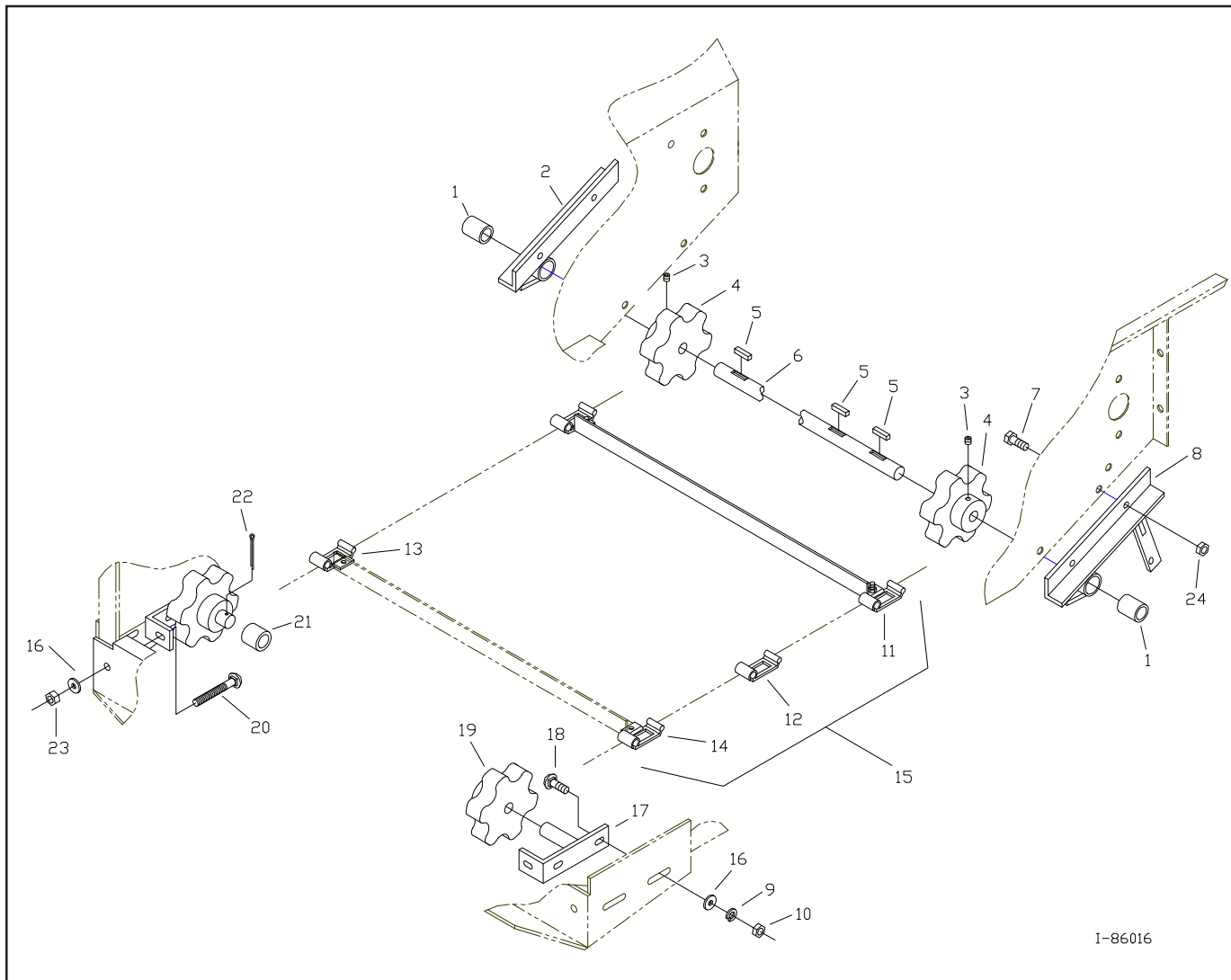


Figure A4 - Apron Chain and Sprocket Assembly Parts Detail

Apron Chain and Sprocket Assembly (continued)

<u>Item#</u>	<u>MC Part#</u>	<u>Qty.</u>	<u>Component Description</u>
1	210110	2	Bushing
2	260325	1	Apron Bearing RH (includes item #1)
3	NA	2	5/16 x 5/16 Set Screw
4	210111	2	Apron Sprocket (includes item #3)
5	210129	3	3/16 x 1 Key
6	260130	1	Apron Shaft
7	34328	4	5/16 x 3/4 Flange Bolt
8	260328	1	Apron Bearing LH (includes item #1)
9	34203	4	5/16 Lock Washer
10	34020	4	5/16 Nut
11	260973	8	Apron Slat, Model 27 (includes item #13 & 14)
	260973	11	Apron Slat, Model 37 (includes item #13 & 14)
12	210238	144	Apron Link, Model 27
	210238	196	Apron Link, Model 37
13	210236	8	Attachment Link RH, Model 27
	210236	11	Attachment Link RH, Model 37
14	210237	8	Attachment Link LH, Model 27
	210237	11	Attachment Link LH, Model 37
15	260499	1	Apron Assembly, Model 27
	260500	1	Apron Assembly, Model 37
16	34057	6	5/16 Washer
17	260329	2	Apron Adjustment Bracket
18	34275	4	5/16 x 1 Carriage Bolt
19	210112	2	Idler Sprocket (includes item #21)
20	34366	2	5/16 x 3 Carriage Bolt
21	210133	2	Bushing
22	34209	2	Cotter Pin
23	34223	2	5/16 Nylon Stop Nut
24	34099	4	5/16 Flange Nut

Apron Chain Drive Group

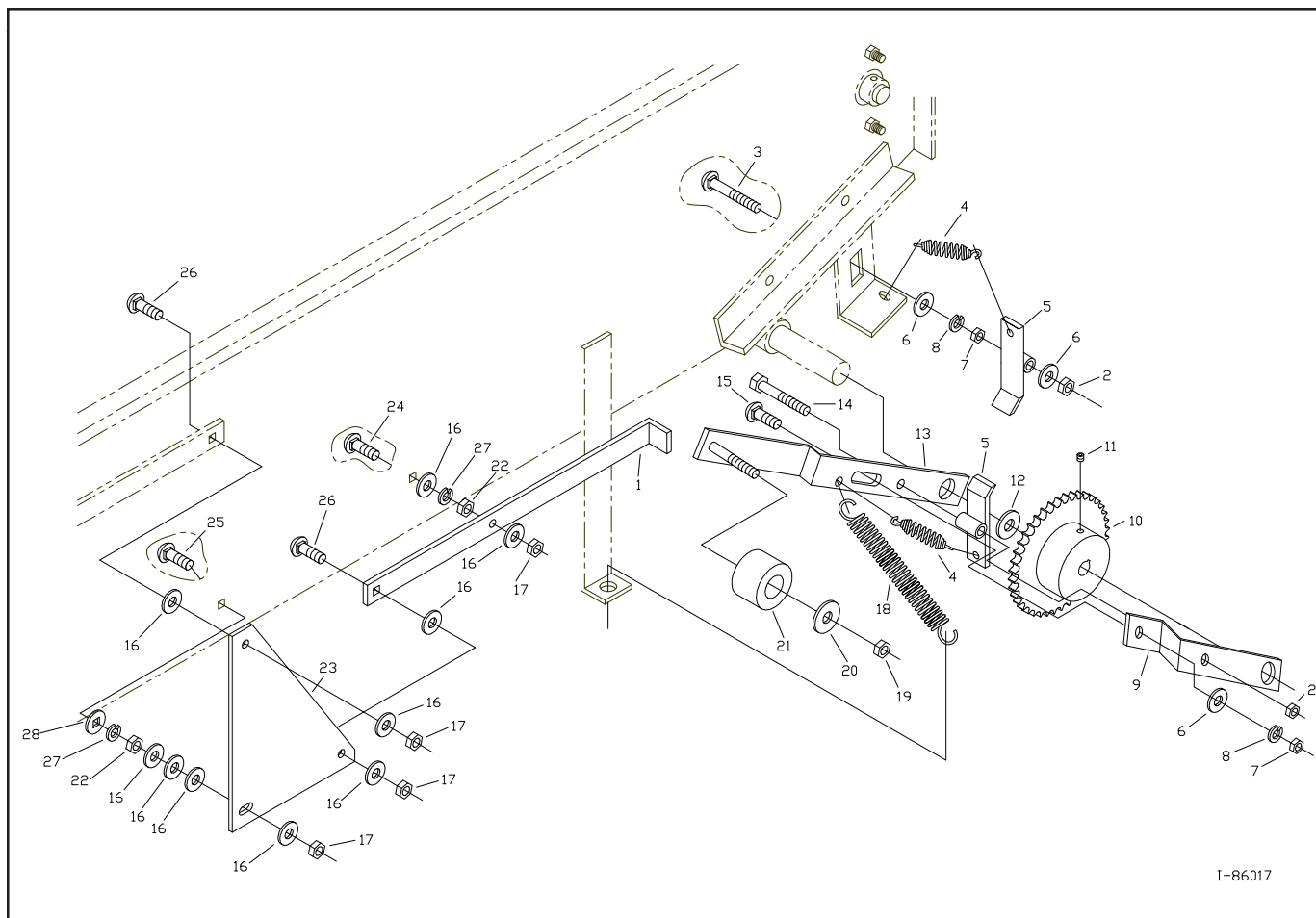


Figure A5 - Apron Chain Drive Group Parts Detail

Apron Chain Drive Group (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	260993	1	Lift Arm
2**	34095	2	3/8 Grade B Lock Nut (Stover)
3	34219	1	3/8 x 2-1/2 Carriage Bolt
4	220104	2	Pawl Spring
5	260332	2	Pawl
6	34018	3	3/8 Washer
7	34087	2	3/8 Nut
8	34141	2	3/8 Lock Washer
9	260196	1	Short Crank Arm
10	210119	1	40 Tooth Sprocket (includes item #11)
11	N/A	2	5/16 x 5/16 Set Screw
12	34201	1	3/4 SAE Flat Washer
13	260947	1	Long Crank Arm
14	34202	1	3/8 x 2-1/4 Bolt
15	34006	1	3/8 x 1 Carriage Bolt
16	34057	10	5/16 Washer
17**	34223	4	5/16 Nylon Stop Nut
18	220105	1	Ratchet Spring
19	34198	1	1/2 Thin Stop Nut
20	34094	1	1/2 Washer
21	261050	1	Nylon Cam Roller
22	34020	4	5/16 Nut
23	260995	1	Ratchet Lift Link
24	34317	1	5/16 x 1-1/4 Carriage Bolt
25	34282	1	5/16 x 1-1/2 Carriage Bolt
26	34275	2	5/16 x 1 Carriage Bolt
27	34203	2	5/16 Lock Washer
28	261159	1	5/16 Sq. Washer

****NOTE:** The **Lift Arm**, **Pawl**, **Nylon Cam Roller**, and **Ratchet Lift Link** must be able to **PIVOT/ROTATE** for proper operation; DO NOT overtighten the Grade B lock nuts (**item #2**) or the 5/16 nylon stop nuts (**item #17**). Millcreek recommends that you just tighten these hardware components, then loosen 1/4 turn to allow for proper movement.

Beaters and Drive Assembly

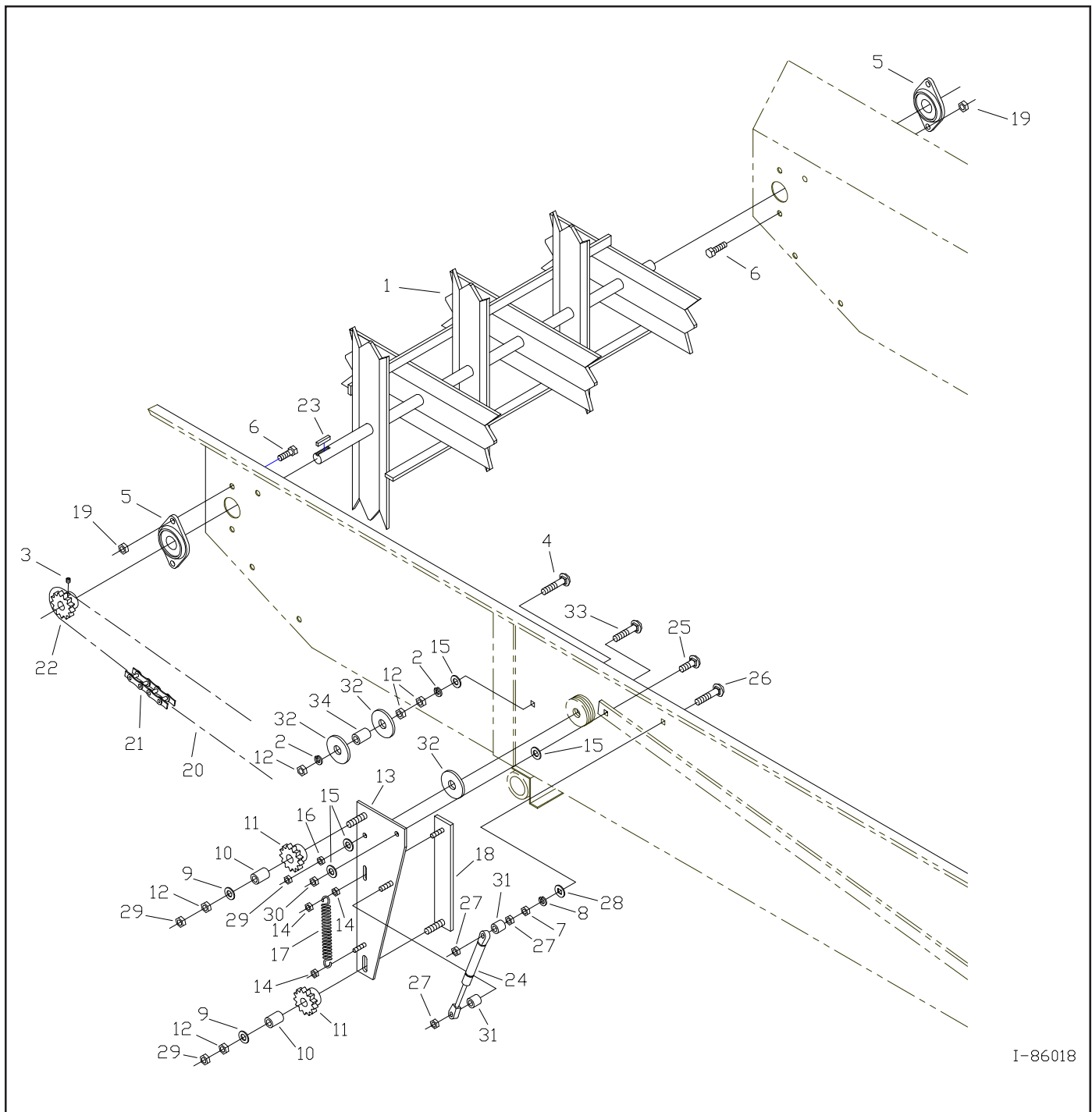


Figure A6 - Beaters and Drive Assembly Parts Detail

Beaters and Drive Assembly (continued)

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	260234	1	Beater
2	34141	2	3/8 Lock Washer
3	34306	2	1/4 x 3/8 Set Screw
4	34375	1	3/8 x 3 Carriage Bolt
5	210106	2	3/4" Spherical Ball Bearing
6	34328	4	5/16 x 3/4 Flange Bolt
7	34020	1	5/16 Nut
8	34203	1	5/16 Lock Washer
9	34018	2	3/8 Flat Washer
10	210103	2	Bushing
11	260345	2	13 Tooth Sprocket (includes item #10)
12**	34087	5	3/8 Nut
13	261270	1	Lifter Arm
14**	34124	3	1/4 Stop Nut
15	34057	4	5/16 Washer
16**	34220	1	3/8 Nylon Lock Nut
17	220138	1	Spring
18	261055	1	Chain Tensioner Bracket
19	34099	4	5/16 Flange Nut
20	210134	1	Beater Chain, #40 x 168 Links (includes item #21)
21	210328	1	Connector Link #40 Roller Chain
22	210123	1	13 Tooth Sprocket (includes item #3)
23	210128	1	3/16 x 3/4 Key
24	220163	1	Gas Shock
25	34275	1	5/16 x 1 Carriage Bolt
26	34283	1	5/16 x 2-1/2 Carriage Bolt
27	34099	3	5/16 Flange Nut
28	261159	1	5/16 Sq. Washer
29**	34356	3	3/8 Jam Nut
30**	34223	1	5/16 Nylon Stop Nut
31	210342	2	Spacer
32	34373	3	Large 3/8 Washer
33	34219	1	3/8 x 2-1/2 Carriage Bolt
34	210363	1	Spacer

****NOTE:** The **LIFTER ARM** and the **CHAIN TENSIONER BRACKET** must be able to **PIVOT/MOVE** for proper operation; DO NOT overtighten the specified hardware (**item #'s 12, 14, 16, 29, 30**). Millcreek recommends that you just tighten these hardware components, then loosen 1/4 turn to allow for proper movement.

Dollywheel/Jack

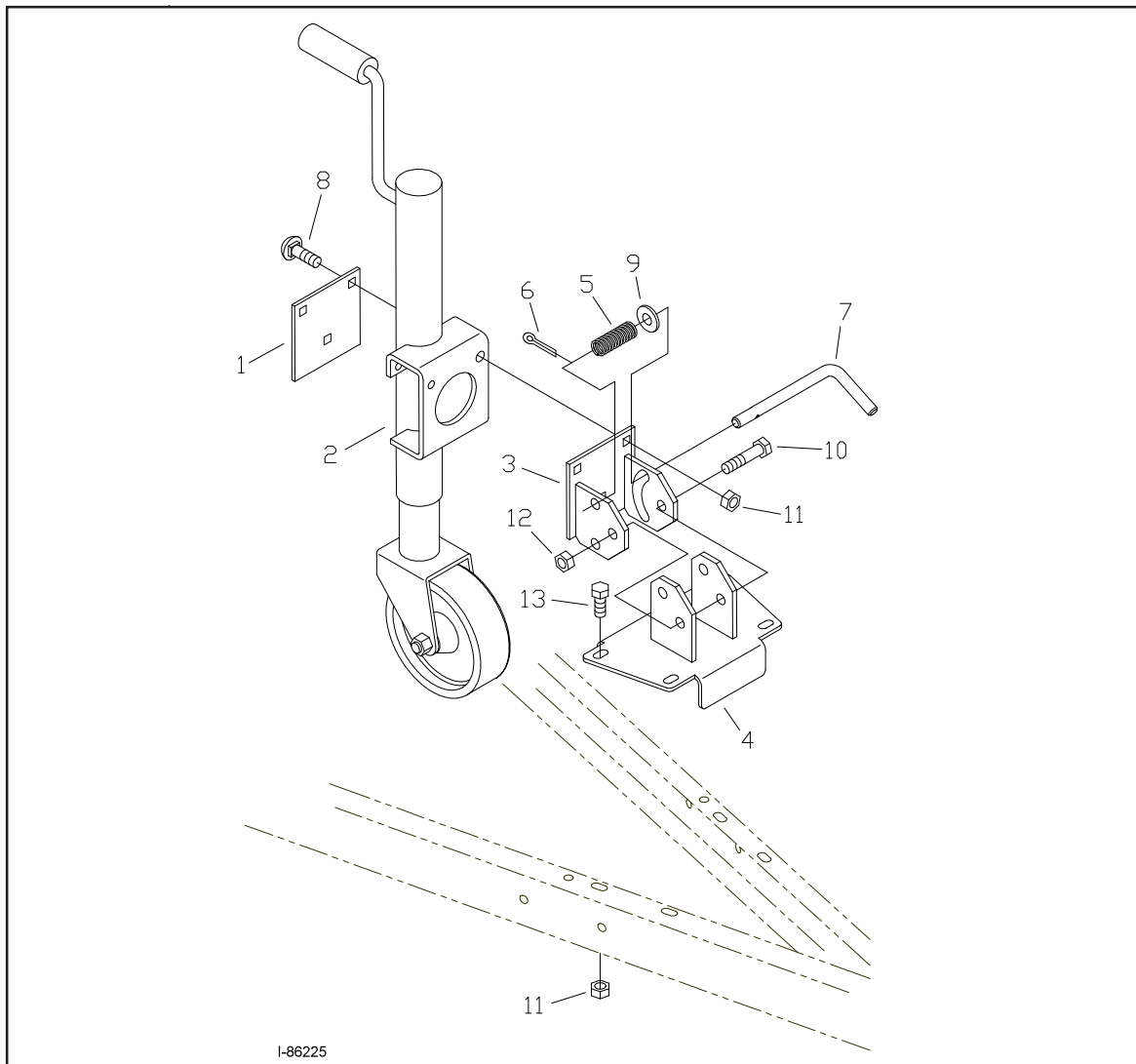


Figure A7 - Dollywheel/Jack Parts Detail

<u>Item #</u>	<u>MC Part #</u>	<u>Qty.</u>	<u>Component Description</u>
1	261630	1	Jack Mount Plate
2	215347	1	Dolly Wheel Jack
3	261635	1	Jack Bracket
4	261636	1	Jack Pivot Bracket
5	220190	1	Spring
6	34209	1	Cotter Pin
7	261631	1	Latch Pin
8	34006	3	3/8 x 1 Carriage Bolt
9	34227	1	1/2 Washer
10	34269	1	1/2 x 4 Bolt
11	34009	7	3/8 Flange Nut
12**	34211	1	1/2 Nylon Lock Nut
13	34330	4	3/8 x 3/4 Flange Bolt

****NOTE:** The **JACK PIVOT BRACKET** must be able to **PIVOT** for proper operation; DO NOT overtighten the 1/2 Nylon lock nut (**item #12**). Millcreek recommends that you just tighten the lock nut, then loosen 1/4 turn for proper movement.

Manual Endgate

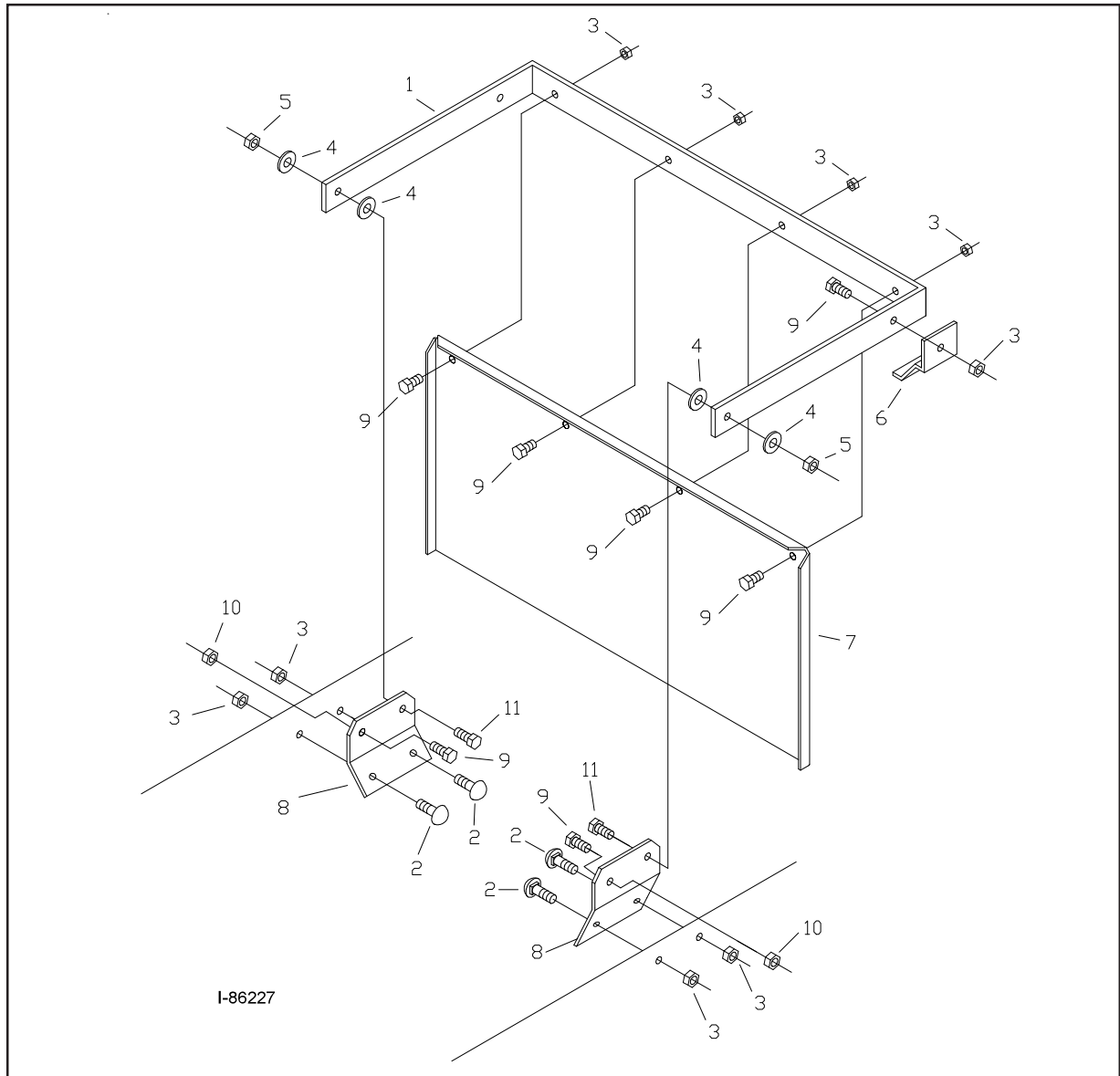


Figure A8 - Manual Endgate Parts Detail

Item #	MC Part #	Qty.	Component Description
1	260967	1	Endgate Frame
2	34274	4	5/16 x 3/4 Carriage Bolt
3	34099	10	5/16 Flange Nut
4	34057	4	5/16 Washer
5**	34072	2	5/16 Grade B Lock Nut
6	261113	2	Endgate Stop
7	260966	1	Endgate
8	260965	2	Endgate Plate
9	34328	8	5/16 x 3/4 Flange Bolt
10	34223	2	5/16 Nylon Stop Nut
11	34336	2	5/16 x 1 Flange Bolt

****NOTE:** The **ENDGATE FRAME** must be able to **PIVOT** for proper operation; DO NOT overtighten the Grade B lock nut (**item #5**). Millcreek recommends that you just tighten the lock nut, then loosen 1/4 turn for proper movement.

