



OPERATIONS & PARTS MANUAL

FOR MODELS:

- BE-23MS
- BE-32MS

PURCHASE DATE	MODEL NO.	SERIAL NUMBER
DEALER		

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INTRODUCTION

Guide to this Manual

This manual contains all the information necessary to safely operate and maintain the Agriease 23MS or 32MS 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 Braber Equipment before starting any of the procedures in this manual.

NOTE: Procedures provided in this manual apply to both spreader models (Model 23MS and Model 32MS) 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 Agriease Spreader.

For Your Safety...

For your safety, Agriease 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. Use common sense and observe general safety rules.

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:

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 23MS and 32MS); refer to Figure 1A. Please note that some labels denote model number, model description, etc. while others contain important safety messages.

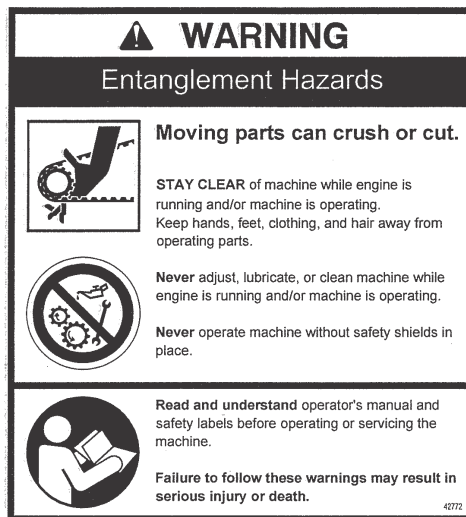
Each safety label contains an important safety message starting with a key word as discussed earlier in this section (e.g. ATTENTION, CAUTION, WARNING, DANGER). For your safety and the safe operation of your equipment, review all labels and heed all safety messages as printed on the labels.

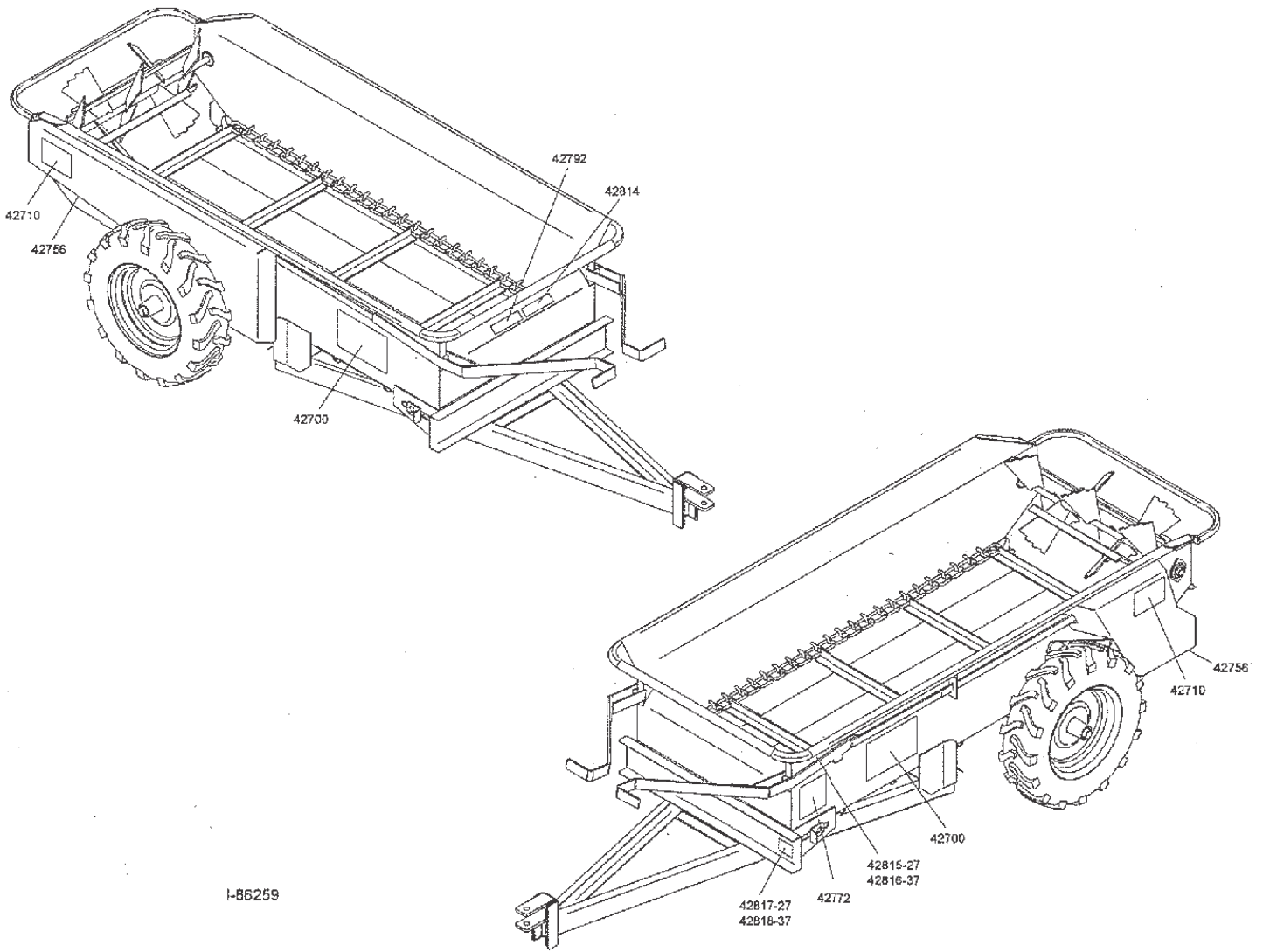
Be sure to keep the safety labels clean and readable. If the labels ever become damaged or illegible, contact Braber Equipment for replacements.

Spreader Safety Labels



LABEL PART NUMBER	DESCRIPTION
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
42814	ATTENTION - Do NOT exceed specified speed
42700	Agriease Logo Label
42815/42816	Spreader Serial Number Label
42817/42818	Spreader Model Number Label





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OPERATION

Understanding Spreader Operation

Proper and safe operation of the Agriease 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 all Model 23MS and 32MS spreaders:

- The left hand spreader lever engages the floor apron chain which moves the manure to the rear of the spreader and into the beater.
- The right hand spreader lever engages the chain that drives the beater and spreads the manure.

The following are optional operating components included with some Model 23MS and 32MS spreaders (depending on the specific model configuration ordered):

- The jack stand dolly wheel option 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 end gate helps to contain loads between spreading and also shields the operator during spreading.

Connecting the Spreader to the Towing Vehicle

For operation in the field, the Agriease spreaders can be towed by a number of vehicles such as garden tractors, ATVs, and utility vehicles. 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 higher or lower positioning.

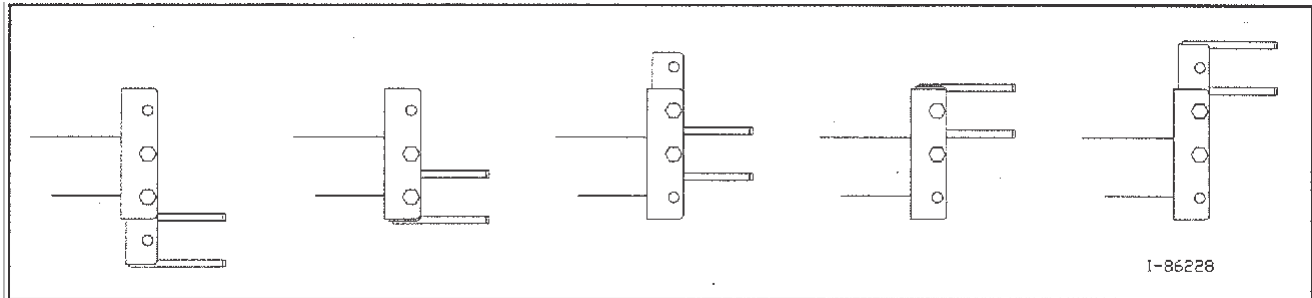


Figure 2A - Adjusting the Hitch Position

Attaching the Spreader to the Towing Vehicle (continued)

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

NOTE: The 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.

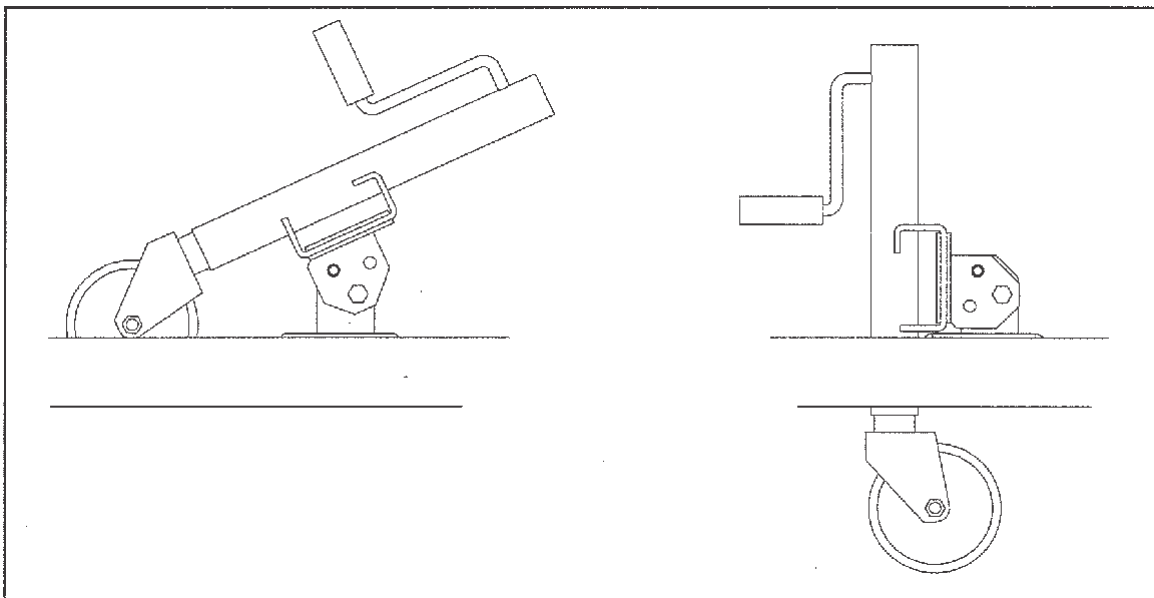


Figure 2B - Using the Jack Stand with Dolly Wheel

4. Back the towing vehicle into the hitch until the holes of the spreader hitch line up with the vehicle hitch point.
5. 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.

6. Remove the weight from the Jack /DollyWheel by lowering the spreader hitch on the vehicle drawbar/hitch point.
7. To provide adequate ground clearance for operation, swing the 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

It is recommended that you load the spreader from the front towards 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).

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, which may void your warranty.

Ensure that the spreader (and towing vehicle) are in a stopped position (i.e. NOT in motion). Lift the manual end gate. (Optional equipment)

Engage the right lever to start the beater.

Engage the left lever to start the action of the apron floor chain (moving the material towards the rear of the spreader).

Begin moving forward, and 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 walkingpace.

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).

Allow the apron chain to run the remaining manure out the back of the spreader.

When completely unloaded, disengage the left spreader lever to stop the action of the apron chain.

If your spreader is equipped with a manual end gate, return the end gate to the closed (down) position.

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.

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 Agriease 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.

HITCH HARDWARE	TORQUE SPECIFICATION
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.

GUIDELINES FOR REGULAR MAINTENANCE (CONTINUED)

Periodically check the floor apron chain for tension/tightness (refer to Figure 3A). Procedure for checking/adjusting the floor apron chain:

1. Pull up firmly on the center slat of the floor apron chain.
NOTE: The force required to adequately pull up on the apron chain to determine the tension measures approximately 30 lbs.
2. If you can lift it higher than five (5) inches, the chain is too loose.
3. If you cannot lift it higher than three (3) inches, the chain is too tight.
4. If the chain needs adjustment, turn the front nut clockwise or counter-clockwise until correct tension/tightness is achieved. (See Figure 3B.) Repeat for the other side. Make sure that the chains on each side of the apron are equally taut.

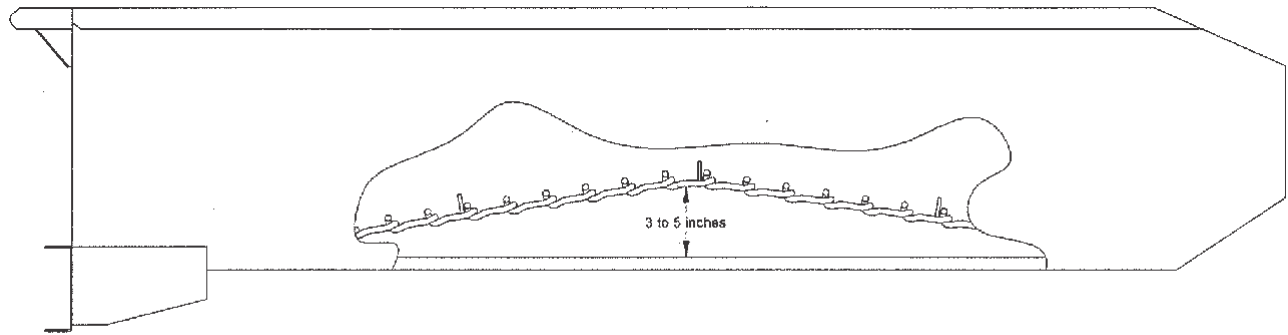


Figure 3A - Checking for Proper Tension on the Floor Apron Chain

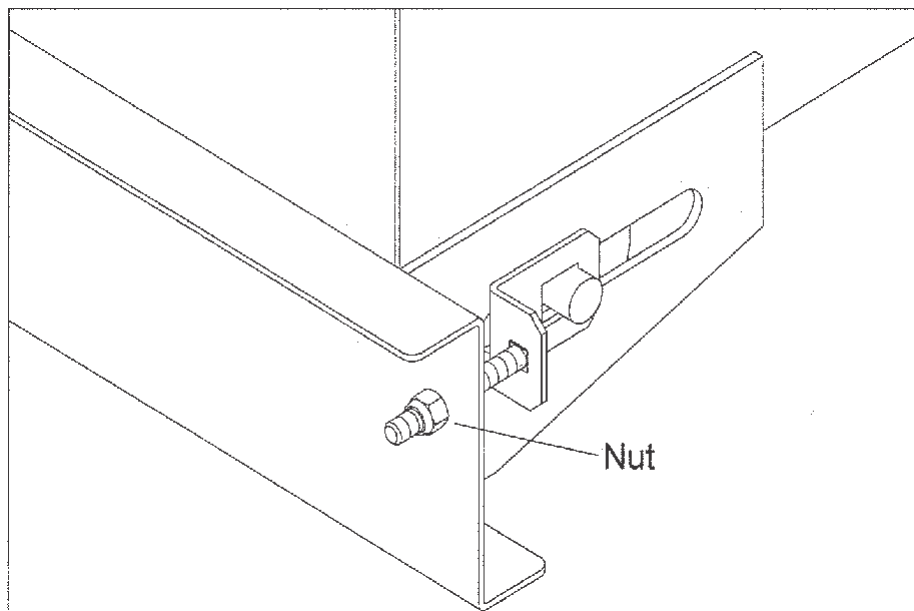


Figure 3B - Adjusting the Floor Apron Chain

LUBRICATION

The Agriease spreader is designed to require little maintenance and lubrication. However, it is still important to keep all moving parts well-lubricated. Following a regular maintenance and lubrication schedule will enhance the operation and increase the life of the spreader significantly. The following pages show the grease points on the spreader. The operator should establish a systematic routine to ensure complete and quick lubrication of the spreader.

The spreader should be greased every 50 loads or once a month. Wipe the old grease and any dirt or dust off the grease fittings before greasing so it doesn't get forced into the bearing.

There are two grease fittings inside the front cover on the engaging lever pivot. One on each side of the spreader.



Figure 6

There is a grease fitting on each wheel hub.



Figure 7

There is one grease fitting on each axle bearing.



Figure 8

There is one grease fitting on each rear web bearing.

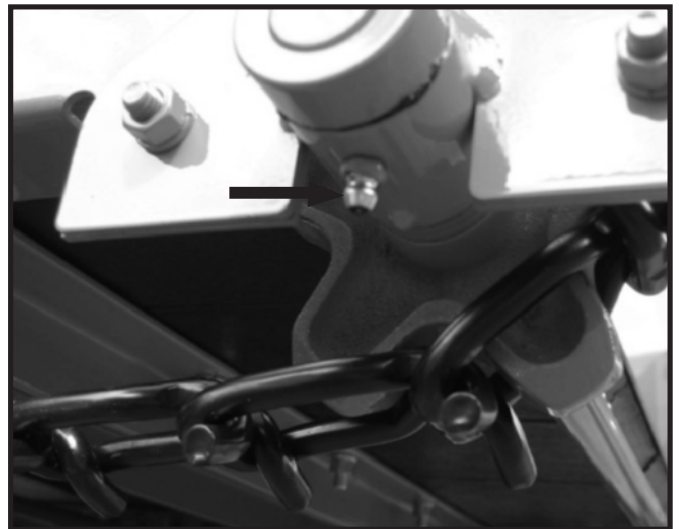


Figure 9

There is one grease fitting on each beater bearing.

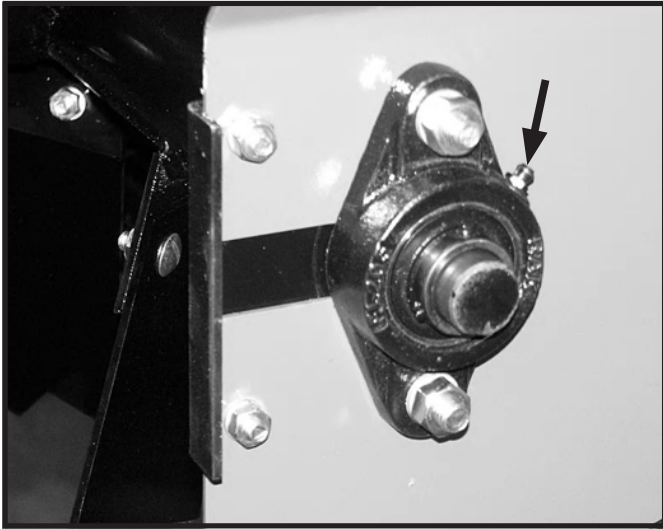


Figure 10

Lubricate the apron chain with SAE #30 oil or similar lubricant at least twice yearly. More often if the manure is of high acid nature or if the spreader is stored outside. Regular lubrication of the apron chain will substantially increase its life



Figure 11

Lubricate the beater drive chain with engine oil every 50 loads or once a month.

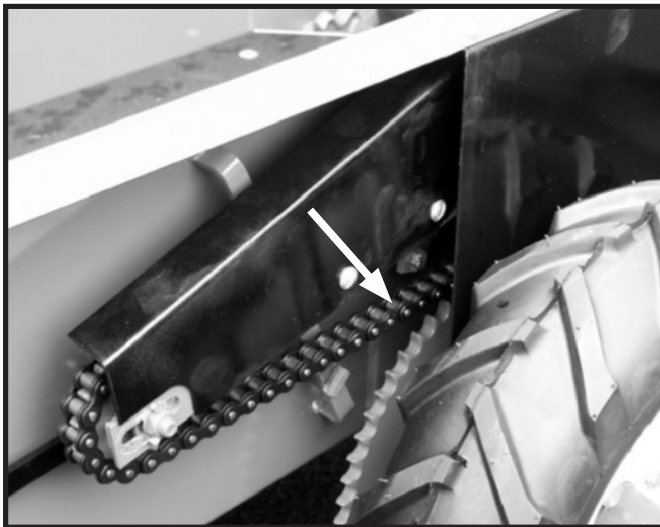


Figure 12

Procedures for Spreader Adjustment

Problems with spreader operation may indicate that certain adjustments are required to restore proper function. 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. NOTE: By engaging both side drives and turning the beater by hand, you will be able to observe the brake pawl engagement in the sprocket teeth.

1. Refer to Figure 3C.
2. Remove the shield covering the brake pawl assembly by removing the two (2) 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 3C).
5. After the desired adjustment is achieved, re-tighten the rear nut.
6. Replace the safety shield.

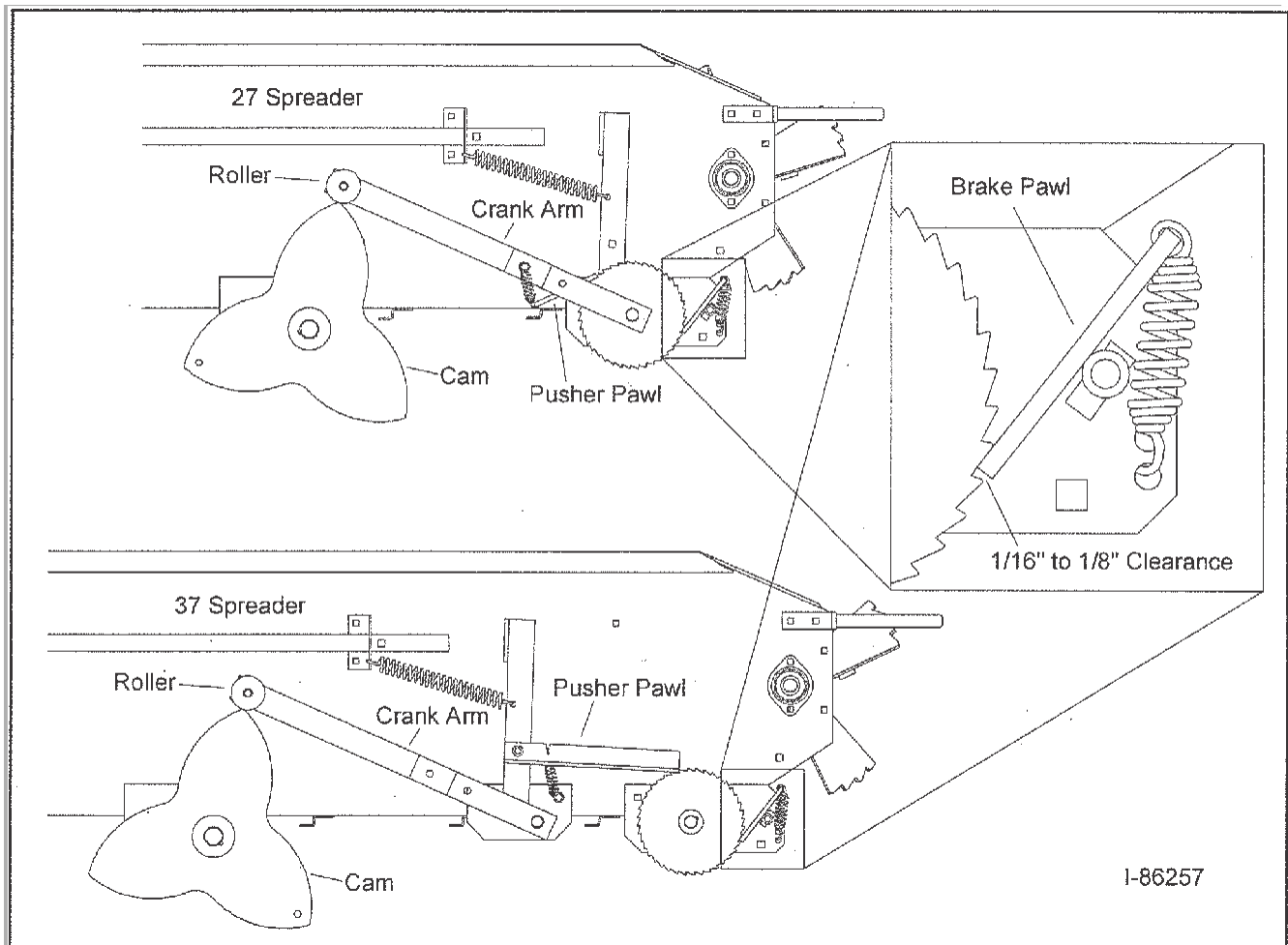


Figure 3C - Adjusting the Rear Brake Pawl

Re-installing the Beater

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) nuts holding the shield in place.
4. At the front of the spreader, pull up on the right lever to engage the beater drive components.
5. As shown in Figure 3D, re-install the chain around the small rear sprocket.
6. Re-install the chain over the top idler sprocket.
7. Re-install the chain around the bottom idler sprocket.
8. Push the operating lever down (right side) to disengage the beater drive.
9. Verify that the chain is positioned properly over and around all sprockets as shown in Figure 3D.
10. Re-install the safety shield with the three (3) nuts to hold it in place.
11. Re-install the wheel and torque the wheel bolts to 60 ft. lbs. Remove the safety blocking.

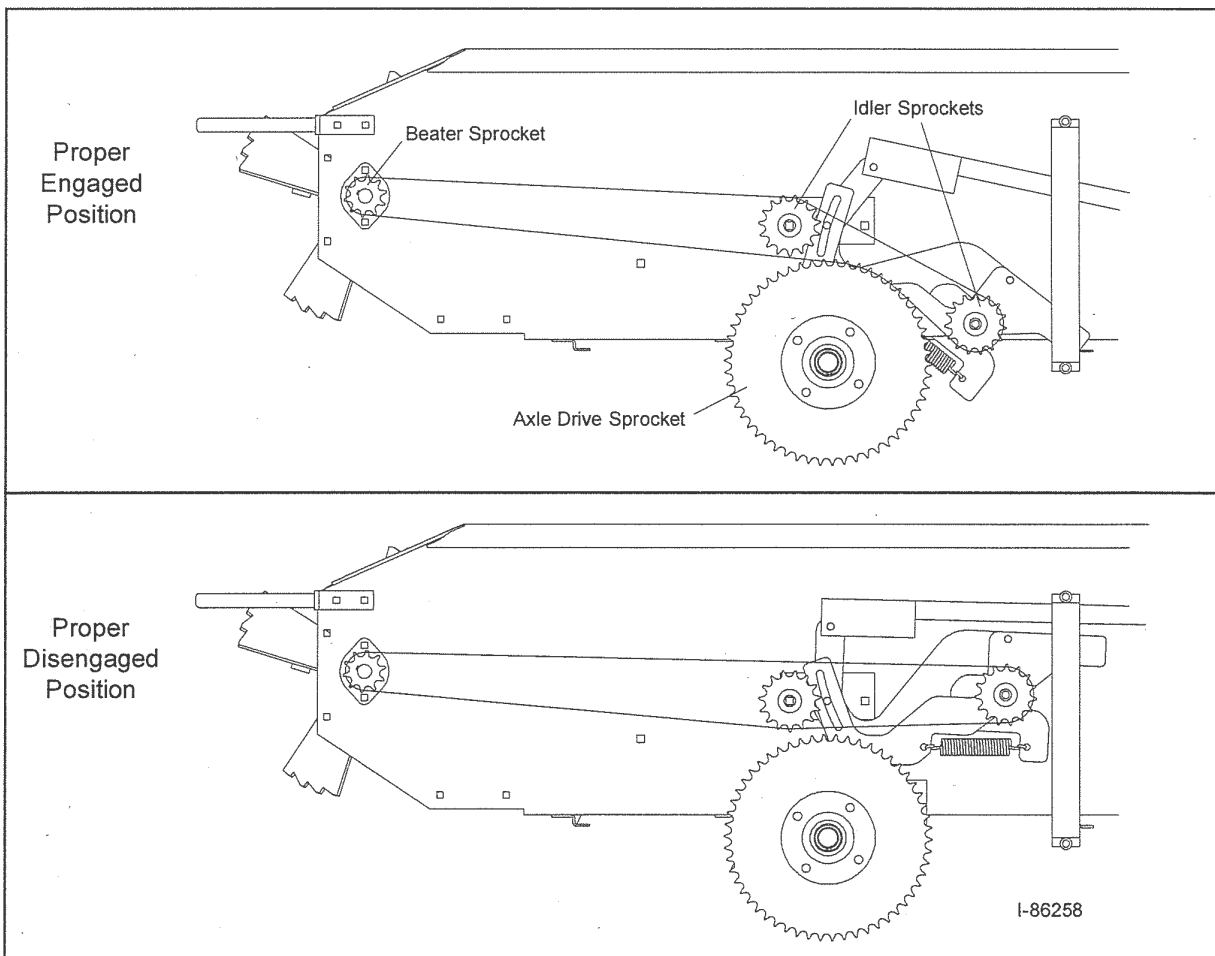


Figure 3D - Beater Drive Chain Installed in the Proper Position

APPENDIX A: PARTS REFERENCE

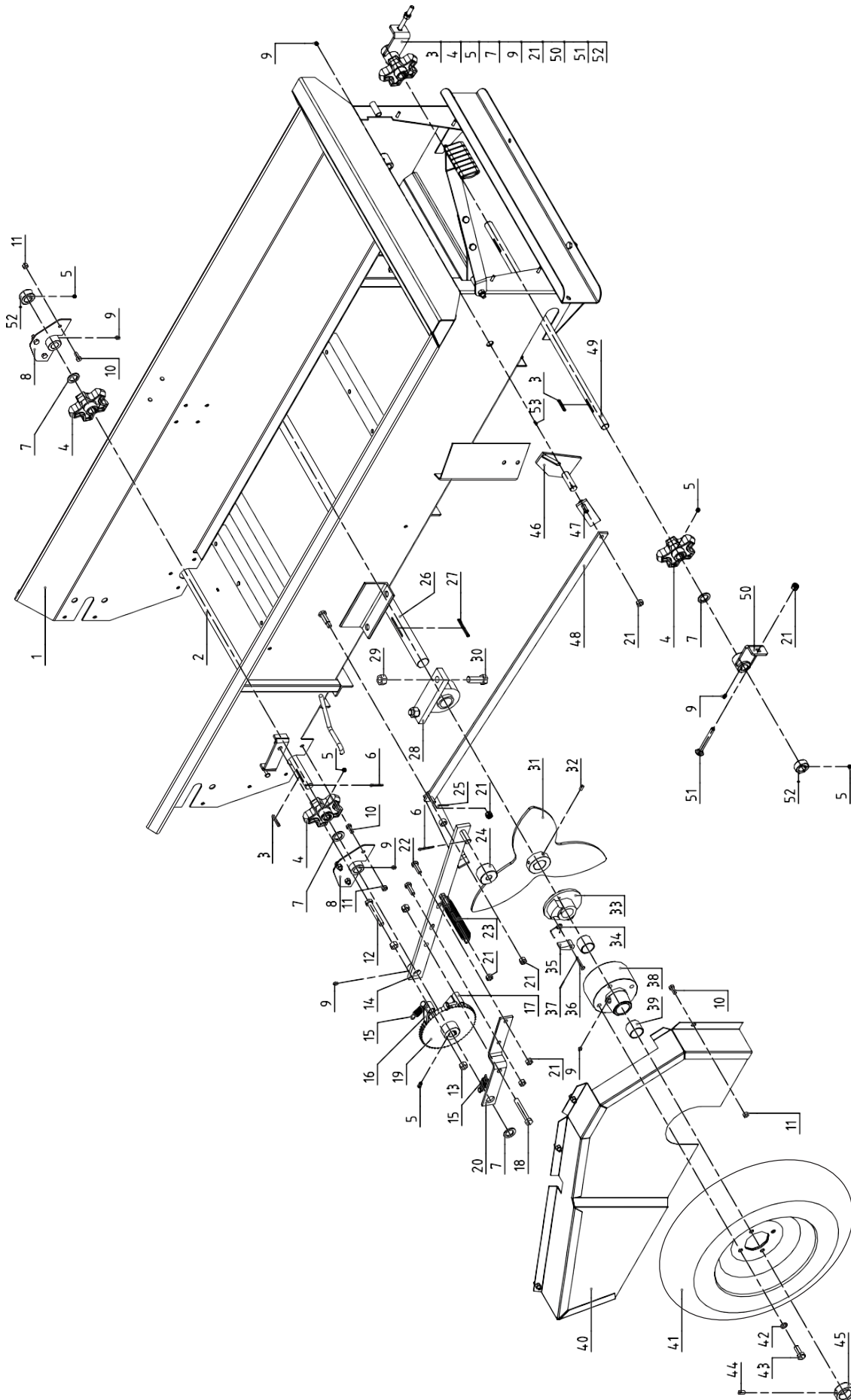
The following information is provided for your reference in understanding how the spreader is assembled and how spare parts can be identified and ordered properly.

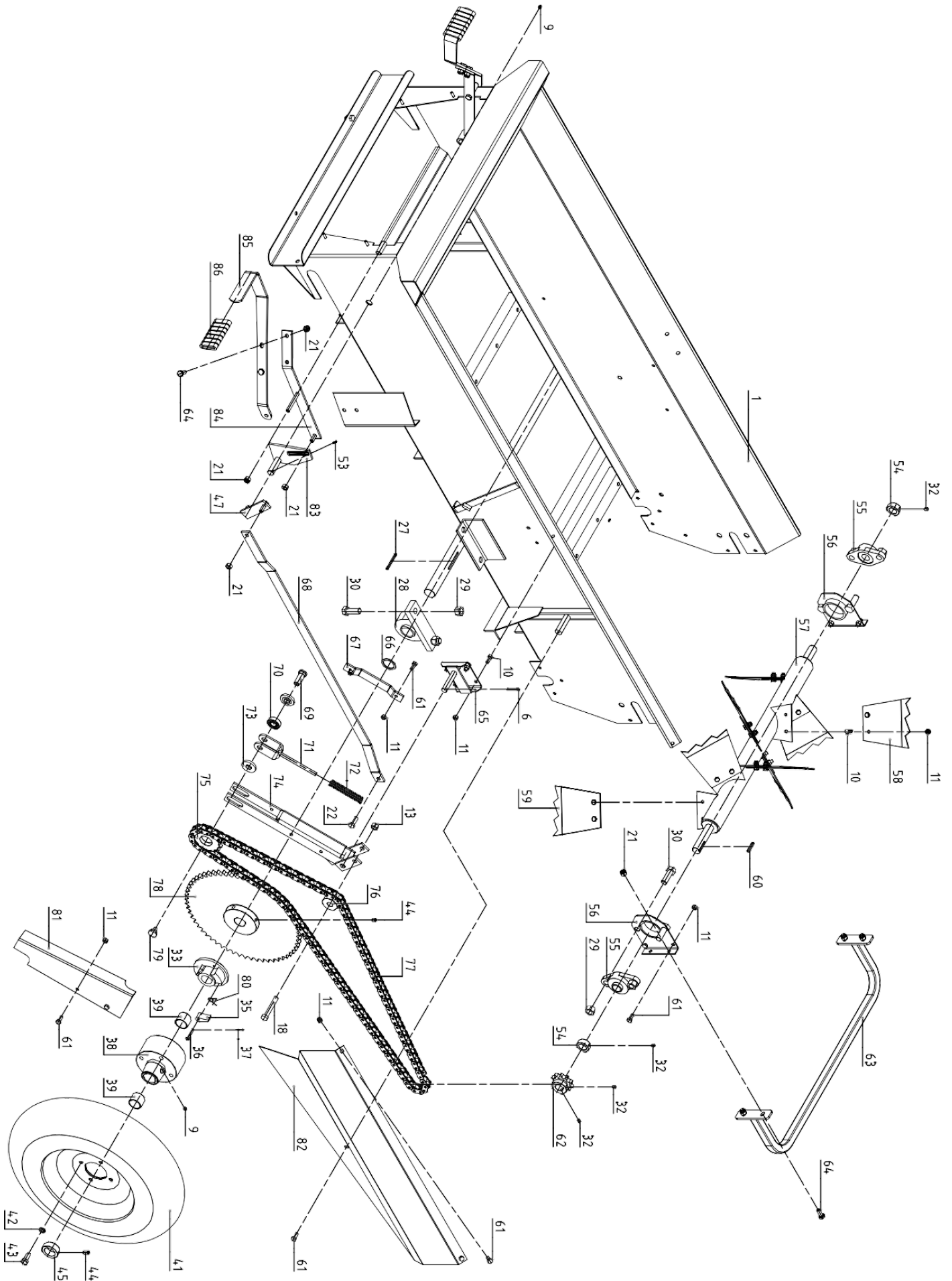
General Spreader Specifications

MODEL	BEMS23		BEMS32	
	INCH	METRIC	INCH	METRIC
Heaped Capacity	29 cu.ft	0.82 m ³	39.6 cu.ft	1.12 m ³
Overall Length (A)	124.7 in	3168 mm	148.3 in	3768 mm
Overall Width (B)	46.5 in	1180 mm	46.5 in	1180 mm
Overall Height (C)	31.7 in	805 mm	31.7 in	805 mm
Box Length (D)	77.4 in	1966 mm	101 in	2566 mm
Box Width (E)	28 in	715 mm	28 in	715 mm
Box Height (F)	16.7 in	424 mm	16.7 in	424 mm
Flared With (G)	36.5 in	926 mm	36.5 in	926 mm
Beater Diameter	17 in	434 mm	17 in	434 mm
Drive	2 Wheel ground drive			
Spindle	1.38 in	35mm	1.38 in	35 mm
Wheels	5-12 Traction Tires			
Weight	584lbs	265kg	660 lbs	300kg

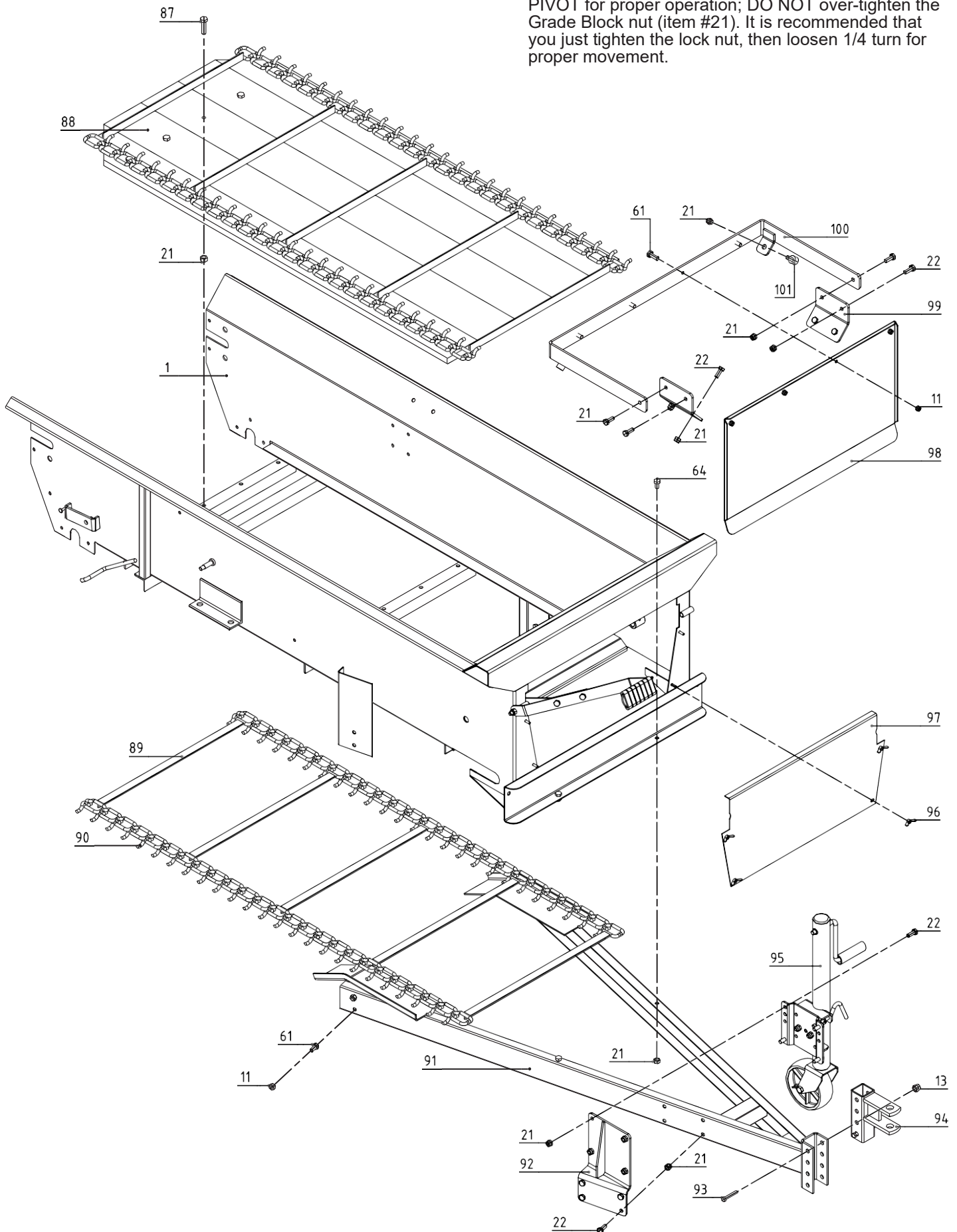
*NOTE: The tires are mounted in reverse direction of “normal” installation.

EXPLODED VIEW & PARTS LIST





*NOTE: The ENDGATE FRAME must be able to PIVOT for proper operation; DO NOT over-tighten the Grade Block nut (item #21). It is recommended that you just tighten the lock nut, then loosen 1/4 turn for proper movement.



REF	PART NUM	DESCRIPTION	QTY
1	25G.00.010	Spreader Box 23MS	1
	27G.00.010	Spreader Box 32MS	1
2	401252	Web Shaft	
3	GB/T1096-2003	Key B5x40	5
4	401266	Web Sprocket	4
5	GB/T80-2000	Set screw M6x8	9
6	GB/T91-2000	Cotter Pin 5x32	3
7	25G.00.101	Spacer	9
8	401220	Web Bearing	2
9	GB/T1152-89	Oil Cup M6	9
10	GB/T14-198	Carriage Bolt M8x20	26
11	GB/T889.1-2000	Locknut M8	44
12	GB/T5783-2000	Bolt M12x80	1
13	GB/T889.1-2000	Locknut M12	6
14	401297	Push Arm Weld Assembly 23MS	1
	27G.401297	Push Arm Weld Assembly 32MS	1
15	400116	Spring	2
16	401271	Idler Dawg Assembly	1
17	401255	Ratchet Dawg Assembly	1
18	GB/T5782-2000	Bolt M12x75	2
19	401260	Ratchet Wheel Assembly	1
20	401300	Ratchet Arm Assembly 23MS	1
	27G.401300	Ratchet Arm Assembly 32MS	1
21	GB/T889.1-2000	Locknut M10	45
22	GB/T5783-2000	Bolt M10x30	19
23	400404	Spring	1
24	401299	Cam Roller	1
25	401280	Push Arm Engaging Arm 23MS	1
	27G.401280	Push Arm Engaging Arm 32MS	1
26	401193	Axle Shaft	1
27	GB/T1096-2003	Key B6x70	2
28	401293	Axle Bearing	2
29	GB/T889.1-2000	Locknut M16	8
30	GB/T5783-2000	Bolt M16x40	8
31	401259	Star Hub	1
32	GB/T80-2000	Set screw M8x8	6
33	401246	Backing Hub	2
34	401034	Hub Dawg Spring, Left	1
35	401327	Hub Dawg	2
36	401028	Clevis Pin	2
37	GB/T91-2000	Cotter Pin 2x25	2
38	401244	Hub	2
39	401250	Hub Bushing	4
40	401240	Push Arm Shield Assembly 23MS	1
	27G.401240	Push Arm Shield Assembly 32MS	1
41	401373	Tire 5.0-12	2
42	GB/T93-1987	Spring washer 12	8
43	GB/T5786-2000	Bolt M12x1.5*25	8

REF	PART NUM	DESCRIPTION	QTY
44	GB/T80-2000	Set screw M10x8	4
45	401476	Shaft Collar	2
46	401277	Lever Pivot Assembly, Right	1
47	401278	Engaging Linkage Assembly	2
48	401210	Push Arm Control Assembly 23MS	1
	27G.401210	Push Arm Control Assembly 32MS	1
49	25G.00.107	Web Shaft, front	1
50	401282	Front Web Idler Assembly	2
51	GB T14-1988	Carriage Bolt M10x90	2
52	300053	Shaft Collar	3
53	GB879.1-2000	Roll Pin 5x32	2
54	400143	Shaft Collar	2
55	401294	Flange Bearing	2
56	401064	Beater Bearing Bracket	2
57	401057	Widespread Shaft Assembly	1
58	401309	Beater Paddle, Right	4
59	401060	Beater Paddle, Left	4
60	GB/T1096-2003	Key B6x32	1
61	GB/T5783-2000	Bolt M8x20	19
62	401290	Widespread Sprocket	1
63	25G.00.014	Rear guard	1
64	GB/T5783-2000	Bolt M10x25	10
65	401217	Lifter Arm Pivot Assembly	1
66	25G.00.102	Spacer	1
67	400235	Guide Bracket	1
68	401261	Lifter Arm Control Arm 23MS	1
	27G.401261	Lifter Arm Control Arm 32MS	1
69	400399-1	Shaft, Idler Sprocket	1
70	GB/T276-94	Bearing 6203-2RS	1
71	401214	Tightener Sprocket Bracket	1
72	401287	Tightener Spring	1
73	001055	Flat washer	2
74	401270	Lifter Arm Weld Assembly	1
75	400399	Idler Sprocket	1
76	401232	Drive Chain Idler	1
77	GB/T1243-97	Drive Chain 12A-1-130	1
		Drive Chain 12A-1-156	1
78	401185	Drive Sprocket	1
79	400399-2	Bolt, Idler Sprocket	2
80	401027	Dawg Spring, Right	1
81	401097	Lifter Arm Chain Shield	1
82	401206	Drive Chain Shield 23MS	1
	27G.401206	Drive Chain Shield 32MS	1
83	401275	Lever Pivot Assembly, Left	1
84	401289	Handle Grip	2
85	25G.00.108	Handle Bar	2
86	25G.00.110	Handle sleeve	2
87	GB/T5783-2000	Bolt M10x40	5

REF	PART NUM	DESCRIPTION	QTY
88	401237	Floor Board 23MS	1
	27G.401237	Floor Board 32MS	1
89	401279	Web Slat 23MS	9
		32MS	12
90	401184	T-Rod Link 23MS	98
		T-Rod Link 32MS	120
91	401269	Hitch Assembly	1
92	25G.00.011	Dolly Jack Bracket	1
93	GB/T5782-2000	Bolt M12x80	2
94	25G.00.013	Adjustable Hitch	1
95	25G.00.002	Dolly Wheel Jack Assembly	1
96	GB/T62-1988	Wing Nut M6	4
97	401095	Front Lid	1
98	25G.00.104	Endgate	1
99	25G.00.105	Endgate Plate	2
100	25G.00.012	Endgate Frame	1
101	25G.00.103	Rubber Cushion	2



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