



# BUSH HOG®

## MS250G Manure Spreader Ground Drive

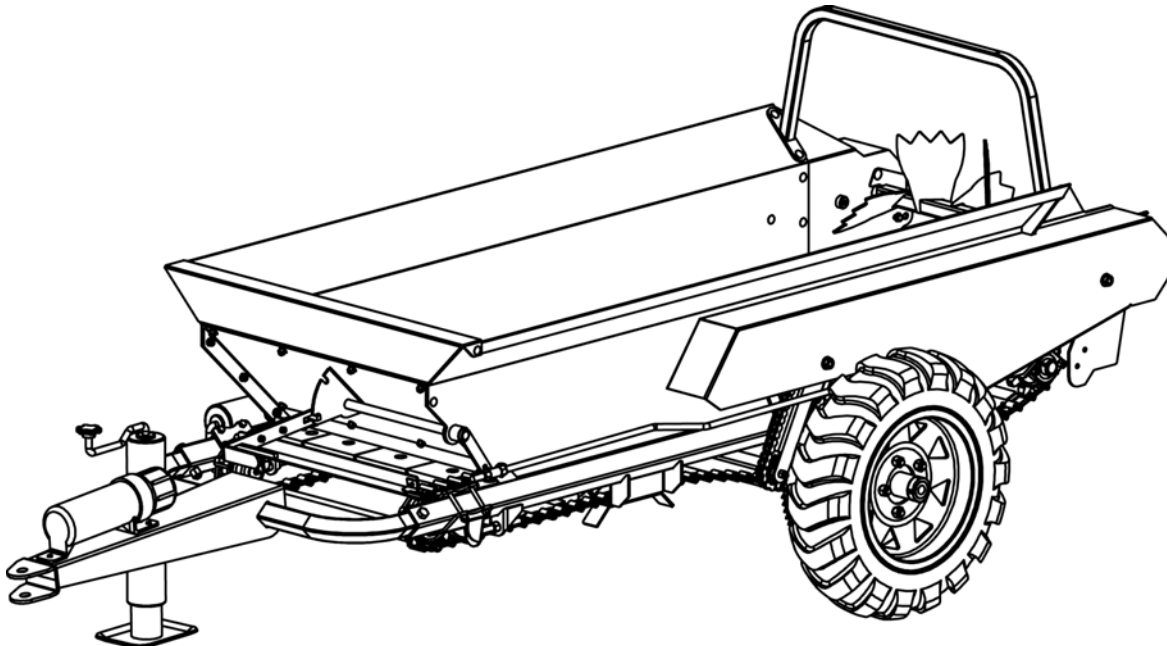
PUBLISHED 06/16

MATERIAL HANDLING PARTS MANUAL

# PARTS MANUAL SECTION 48A



An Operator's Manual was shipped with the equipment . The Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. **READ, UNDERSTAND, and FOLLOW** the Safety and Operation Instructions contained in this manual before operating the equipment. If the Operator's Manual is not with the equipment, contact your dealer or Bush Hog to obtain a Free copy before operating the equipment.



## BUSH HOG®

2501 Griffin Ave.  
Selma, AL 36703  
334-874-2700  
[www.bushhog.com](http://www.bushhog.com)



7011T105

# TO THE OWNER/OPERATOR/DEALER

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

**BEFORE YOU START!!** Read the safety messages on the implement and shown in your manual.  
Observe the rules of safety and common sense!

## **WARNING**

### **TO AVOID SERIOUS INJURY OR DEATH:**

1. READ AND UNDERSTAND OPERATORS MANUAL.
2. TRACTOR MUST BE EQUIPPED WITH ROLL-OVER PROTECTION (ROPS) AND SWAY CHAINS.
3. ALWAYS WEAR SAFETY GLASSES, SAFETY SHOES, AND SEAT BELT FASTENED TIGHTLY.
4. STOP TRACTOR, LOCK BRAKES, AND BLOCK UP OR SUPPORT IMPLEMENT SECURELY BEFORE WORKING UNDER RAISED COMPONENT.
5. ALLOW NO RIDERS AT ANY TIME ON TRACTOR OR IMPLEMENT: FALLING OFF CAN KILL.
6. KEEP BYSTANDERS CLEAR OF MOVING PARTS AND WORKING AREA. KEEP CHILDREN AWAY!
7. DO NOT LIFT, LOWER, OR OPERATE UNLESS EVERYONE IS CLEAR OF IMPLEMENT.
8. USE INCREASED CAUTION ON SLOPES & NEAR BANKS AND DITCHES TO PREVENT OVERTURN.
9. LOCK LIFT LEVER UP FOR TRANSPORT. HAVE SMV SIGN VISIBLE. FOLLOW LOCAL LAWS.
10. USE PARKING STAND OR BLOCK UP WHEN UNHITCHING FROM TRACTOR.

### **WARRANTY INFORMATION:**

It is the Dealers responsibility to fill out and record all Warranty information of this product with BUSH HOG at the time of purchase. Read and understand the complete Warranty Statement found in this Manual. Make certain the Serial Number of the Machine is recorded.

The use of "will-fit" parts will void your warranty and cause catastrophic failure with possible serious injury or death.

For threaded parts installation, refer to the torque charts in this manual.

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## MS250G Manure Spreader

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## PARTS ORDERING GUIDE

The following instructions are offered to help eliminate needless delay and error in processing purchase orders for the equipment in this section.

1. The Parts Section is prepared in logical sequence and grouping of parts that belong to the basic machine featured in this manual. Part Numbers and Descriptions are given to help locate the parts and quantities required.
2. The Purchase Order must include the name and address of the person or organization ordering the parts, who should be charged, and if possible, the serial number of the machine for which the parts are ordered.
3. The Purchase Order must clearly list the quantity of each part, the complete and correct part number (be sure to include all periods), and the basic name of the part.
4. The Manufacturer reserves the right to substitute parts where applicable.
5. Some parts are unlisted items which are special production items not normally stocked and are subject to special handling. Request a quotation for such parts before sending a Purchase Order.
6. The Manufacturer reserves the right to change prices without prior notice.



For maximum safety and to guarantee optimum product reliability, always use genuine BUSH HOG Parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death. Direct any questions regarding parts to:

**BUSH HOG**  
2501 Griffin Ave.  
Selma, AL 36703  
[www.bushhog.com](http://www.bushhog.com)  
Contact Us  
800-304-2836



## Bolt Torque

### CHECKING BOLT TORQUE

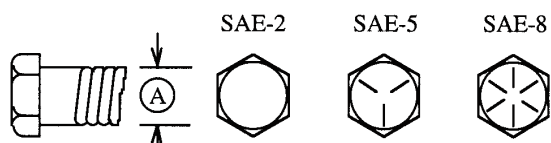
The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

\* Torque value for bolts and capscrews are identified by their head markings.

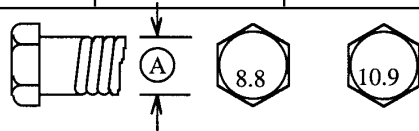
### ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*					
	SAE 2 (N.m) (lb-ft)		SAE 5 (N.m) (lb-ft)		SAE 8 (N.m) (lb-ft)	
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970



### METRIC TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*			
	8.8 (N.m) (lb-ft)		10.9 (N.m) (lb-ft)	
M3	.5	.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710



### Hydraulic Fitting Torque

#### Tightening Flare Type Tube Fittings \*

1. Check flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Lubricate connection and hand tighten swivel nut until snug.
4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

Tube Size OD	Nut Size Across Flats	Torque Value*		Recommended Turns To Tighten (After Finger Tightening)	
		(N.m)	(lb-ft)	(Flats)	(Turn)
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
<b>3/8</b>	<b>11/16</b>	<b>24</b>	<b>18</b>	<b>1</b>	<b>1/6</b>
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

The torque values shown are based on lubricated connections as in reassembly.

### Wheel Lug Torque

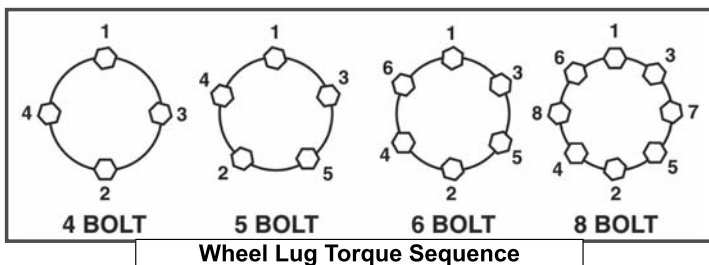
It is extremely important safety procedure to apply and maintain proper wheel mounting torque on your trailer axle. Torque wrenches are the best method to assure the proper amount of torque is being applied to a fastener.

Wheel lugs should be torqued before first road use and after each wheel removal. Check and re torque after the first 16Km (10 miles), 40Km (25 miles), and again at 80Km (50 miles). Check periodically thereafter.

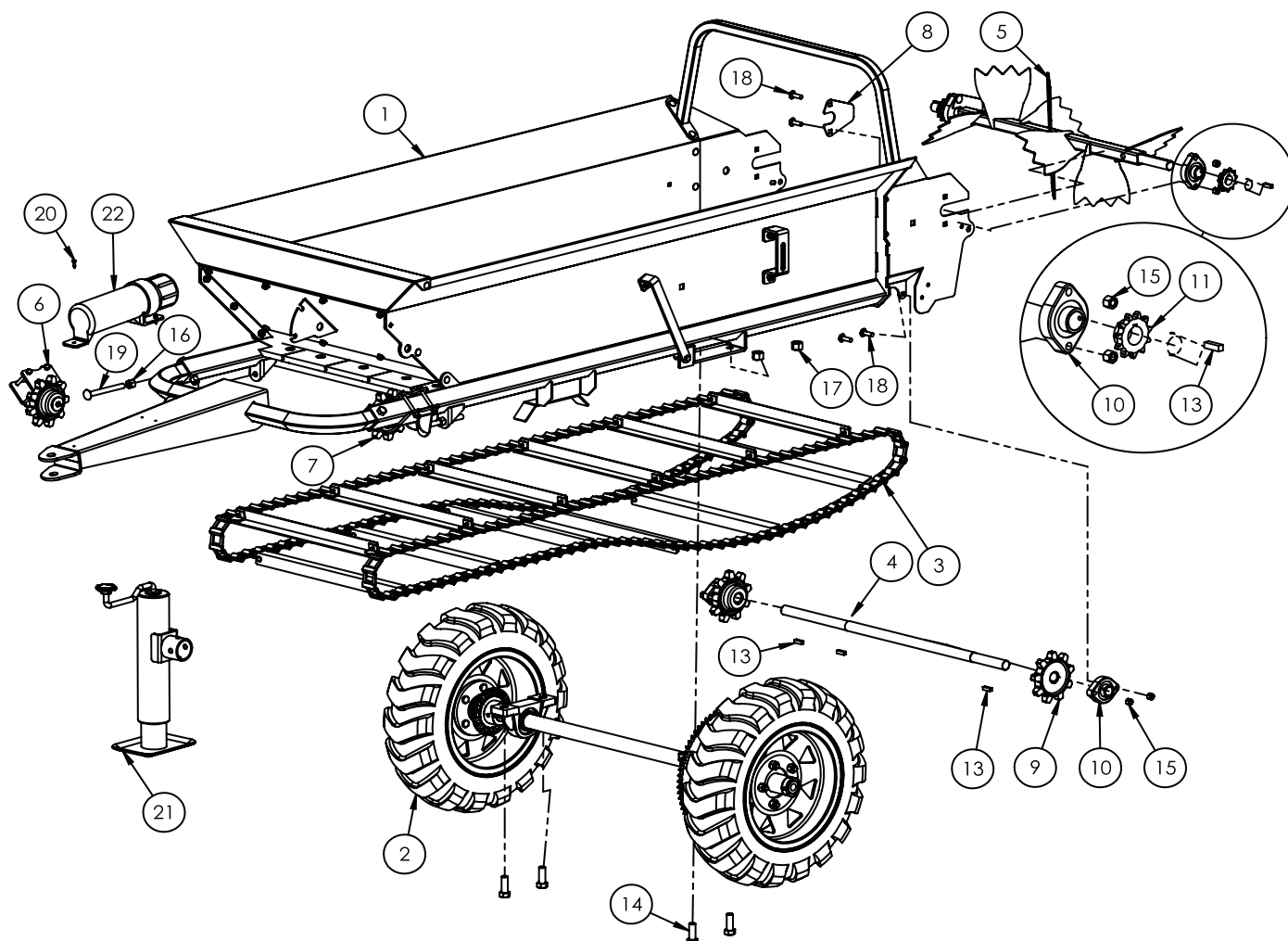
Note: Wheel lugs must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle.

- Start all lugs by hand to prevent cross threading.
- Tighten lugs in sequence, per wheel lug torque sequence chart.
- The tightening of the fasteners should be done in stages. Following the recommended sequence, tighten fasteners per wheel torque requirements chart.

Wheel Torque Requirements				
Wheel Size	Torque Unit	1st Stage	2nd Stage	3rd Stage
8"	ft-lbs	12 - 20	30 - 35	45 - 55
	Nm	16 - 26	39 - 45.5	58.5 - 71.5
12"	ft-lbs	20 - 25	35 - 40	50 - 60
	Nm	26 - 32.5	45.5 - 52	65 - 78
13"	ft-lbs	20 - 25	35 - 40	50 - 60
	Nm	26 - 32.5	45.5 - 52	65 - 78
14"	ft-lbs	20 - 25	50 - 60	90 - 120
	Nm	26 - 32.5	65 - 78	117 - 156
15"	ft-lbs	20 - 25	50 - 60	90 - 120
	Nm	26 - 32.5	65 - 78	117 - 156
16"	ft-lbs	20 - 25	50 - 60	90 - 120
	Nm	26 - 32.5	65 - 78	117 - 156

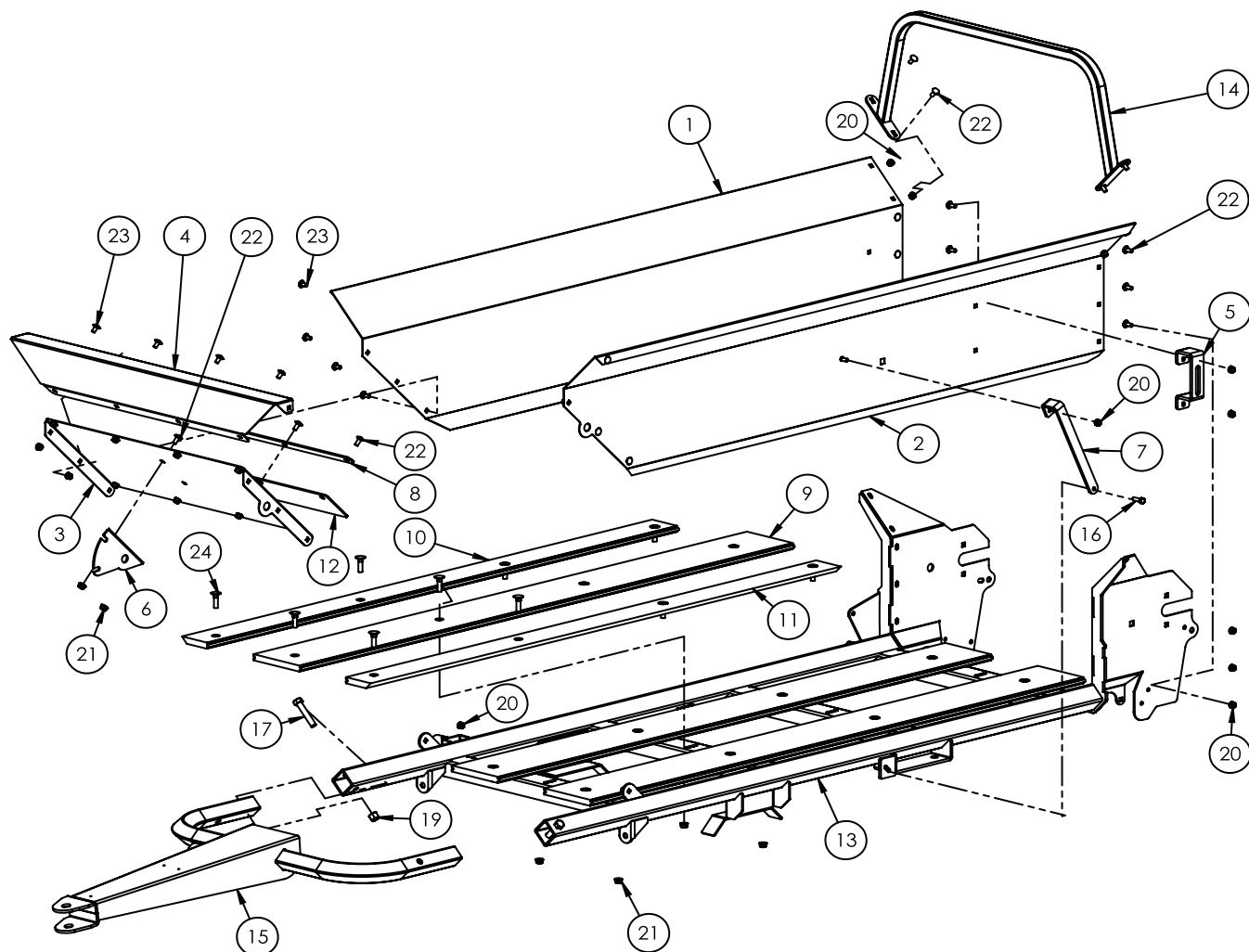


## Main Parts



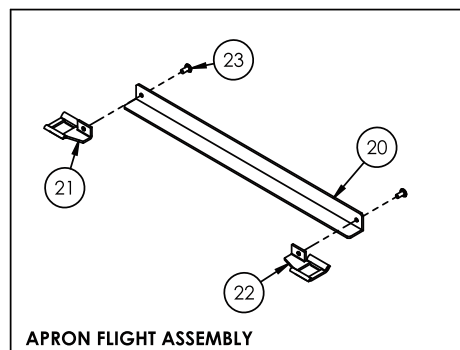
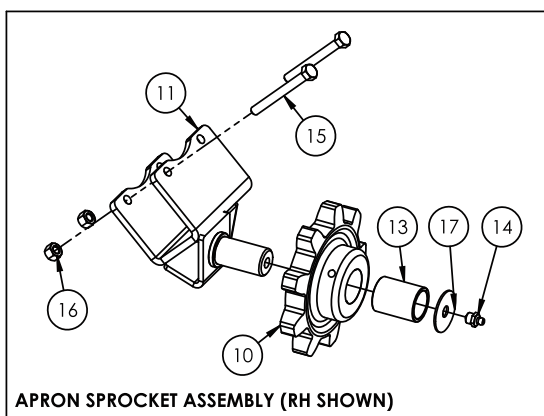
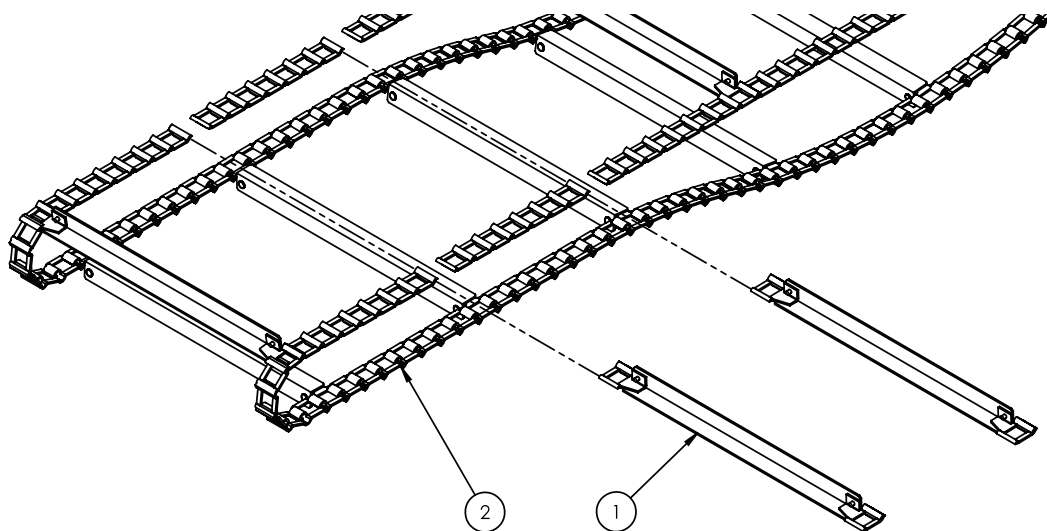
Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	7011A100	Assembly, Main Box	1	12	Z46535	Key, 1/4 x 1/4 x 1-3/4	1
2	7011A102	Assembly, Ground Drive Axle	1	13	Z46532	Key 1/4 x 1/4 x 1-1/2	4
3	-----	Assembly, Apron Chain	1	14	-----	Hex Bolt 5/8NC x 1-3/4	4
4	7011M300	Shaft, Rear Apron Drive	1	15	-----	Hex Lock Nut 3/8NC	8
5	7011W101	Weldment, Beater Bar	1	16	-----	Hex Lock Nut 1/2NC	4
6	7015A505	Assy, Front Apron Sprocket RH	1	17	-----	Hex Lock Nut 5/8NC	4
7	7015A506	Assy, Front Apron Sprocket LH	1	18	-----	Carriage Bolt 3/8NC x 1-1/4 Extra Short Neck	8
8	7015L560	Plate, Beater Bar Capture	2	19	Z76253	Carriage Bolt 1/2NC x 5	2
9	7015M501	Sprocket, Apron Chain Rear	2	20	-----	Self-tapping Screw #10	3
10	Z25102	FD 2-Bolt Flange Bearing 1"	4	21	Z91513	Top-Wind 10" Swivel Jack	1
11	Z42803	Sprocket, #50 11Tooth 1" Bore	2	22	50035829	Manual Tube 3-1/2 Short	1

# Box



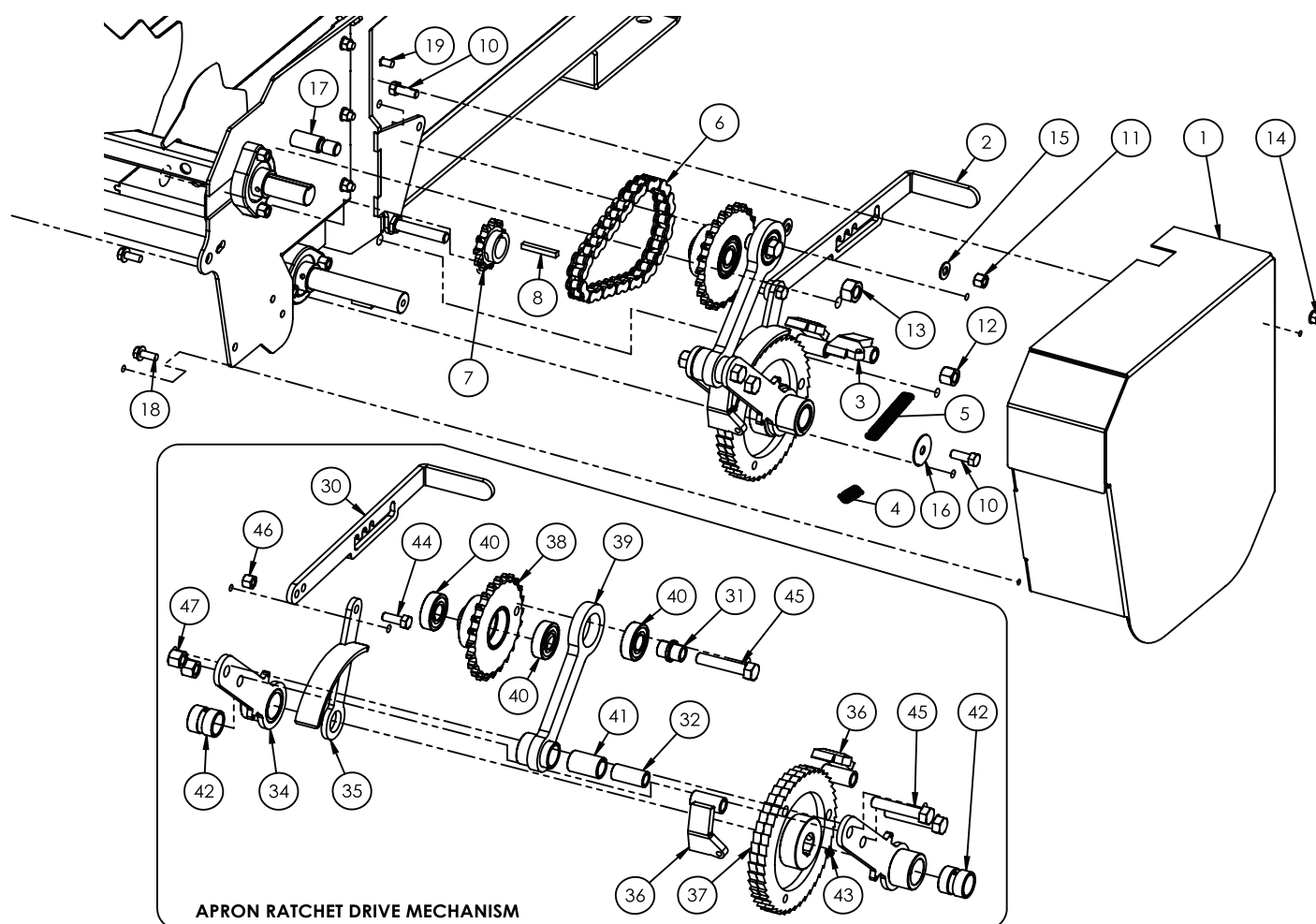
Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	7011L101	Side, RH Box	1	13	7011W102	Weldment, Main Frame	1
2	7011L102	Side, LH Box	1	14	7011W106	Stiffener, Frame	1
3	7011L105	Front, Box	1	15	7011W107	Frame, Hitch	1
4	7011L106	Rim, Front	1	16	-----	Hex Bolt 5/16NC x 1	1
5	7011L117	Mount, Tensioner Bearing	1	17	-----	Hex Bolt, 1/2NC x 2-3/4	2
6	7011L141	Base, Ground Drive Engage	1	18	-----	Hex Lock Nut 5/16NC	1
7	7011L149	Guide, Chain Lifter	1	19	-----	Hex Lock Nut 1/2NC	2
8	7011L161	Clamp, Floor Seal	1	20	44623BH	Flange Nut 5/16NC	29
9	7011S105	Floorboard, Full	3	21	Z72531	Flange Nut 3/8NC	22
10	7011S106	Floorboard, RH	1	22	5161006	Carriage Bolt 5/16NC x 3/4	21
11	7011S107	Floorboard, LH	1	23	-----	Carriage Bolt 5/16NC x 5/8 Extra Short Neck	10
12	7011S113	Floor Seal	1	24	44928BH	Plow Bolt 3/8NC x 1-1/2	20

## Apron Chain & Front Sprocket



Ref. No.	Part No.	Description	Qty.
1	-----	Apron Flight Assembly	12
2	-----	Apron Chain #62 x 93 links	2
10	-----	Sprocket, Apron Chain Front	1
11	7015W507	Bracket, Front Sprocket RH	1
	7015W508	Bracket, Front Sprocket LH	1
13	Z26301	Bushing, 1 ID x 1-1/4 OD x 1-5/8	1
14	Z29201	Grease Fitting, 1/8NPT	1
15	-----	Hex Bolt 5/16NC x 3	2
16	-----	Hex Lock Nut 5/16NC	2
17	Z73232	Wide Washer 3/8 Thin	1
20	-----	Apron Flight	1
21	-----	Apron Chain #62 End RH	1
22	-----	Apron Chain #62 End LH	1
23	-----	Rivet 1/4 x 1/2 Flat Head	2

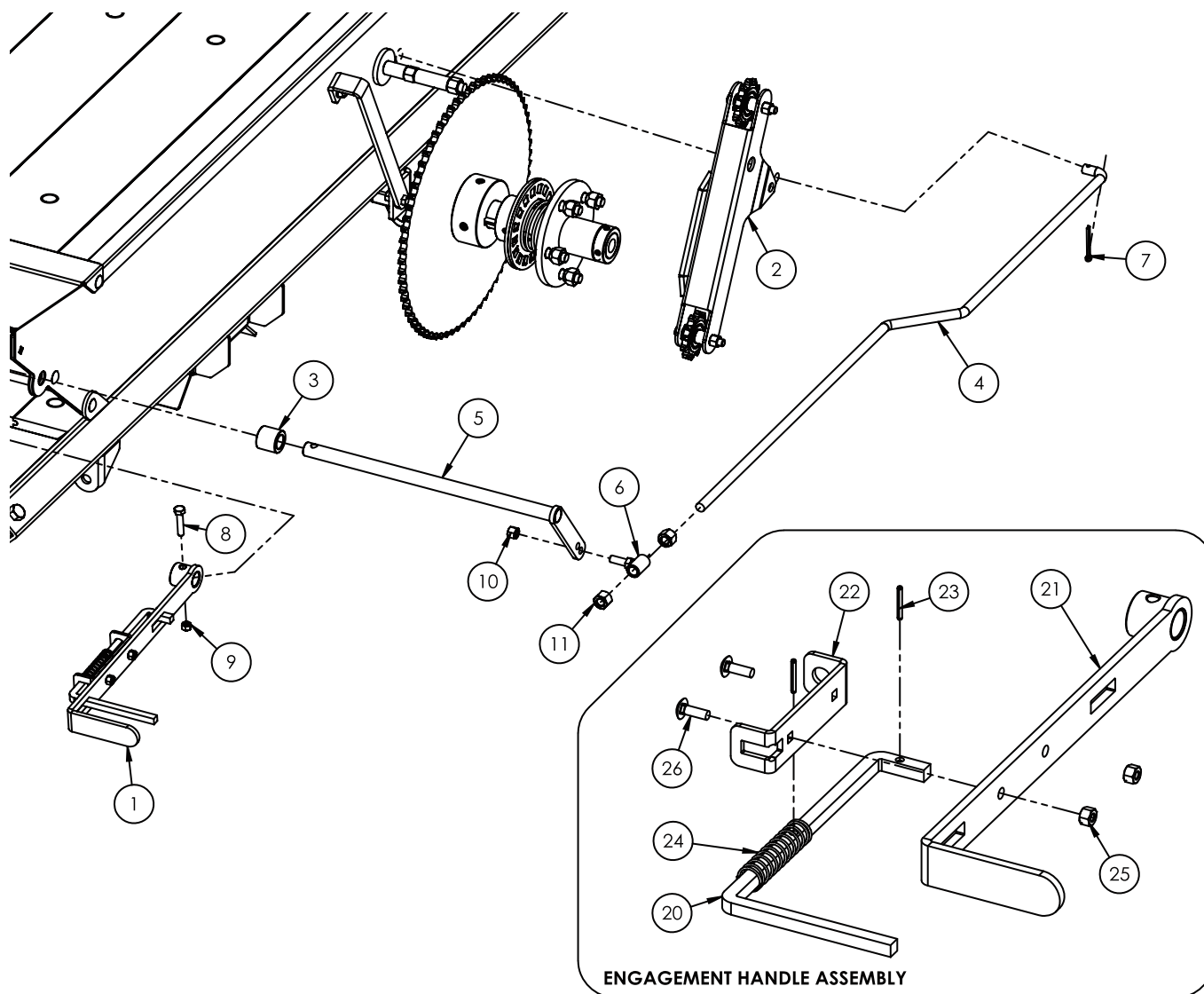
## Apron Ratchet



APRON RATCHET DRIVE MECHANISM

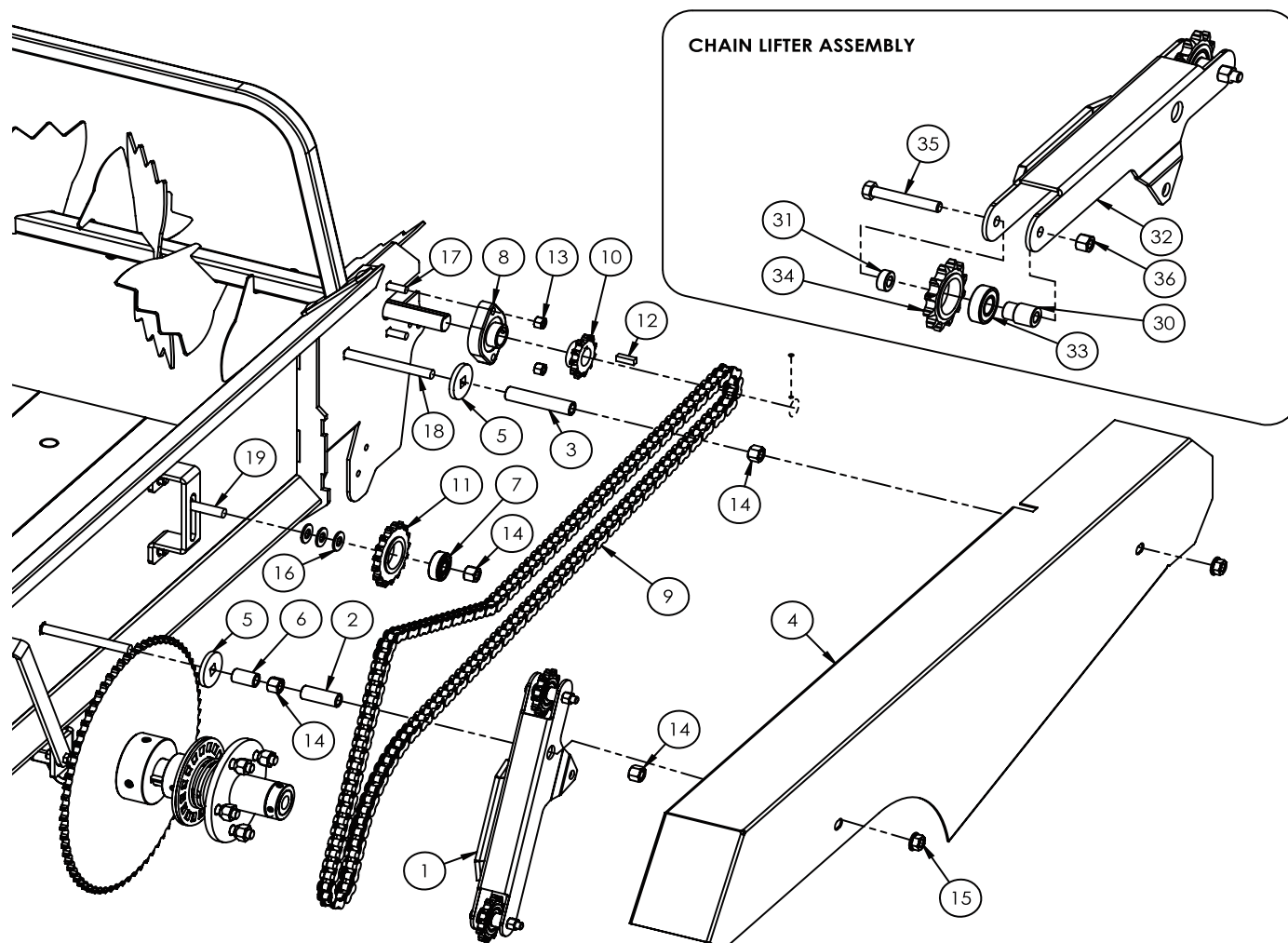
Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	7011W110	Ratchet Sheild	1	30	7015L524	Handle, Ratchet Speed Set	1
2	7015A507	Apron Ratchet Drive Mechanism	1	31	7015M512	Flange Bushing	1
3	7015W512	Dog, Ratchet	1	32	7015M514	Bushing, Link Arm Bolt	1
4	-----	Spring 1/2 x 1-1/2 x .063	1	33	-----	Bolt Spacer	1
5	Z31304	Spring 1/2 x 2-1/2 x .063	1	34	7015W510	Arm, Apron Ratchet Drive	2
6	Z42143	#50 Roller Chain 32P (16 Links)	1	35	7015W511	Slide, Speed Adjuster	1
7	Z42803	Sprocket, #50 11Tooth 1" Bore	1	36	7015W512	Dog, Ratchet	2
8	Z46535	Key, 1/4 x 1/4 x 1-3/4	1	37	7015W513	Ratchet, Apron Drive	1
9	-----	Key 5/16 x 5/16 x 1	3	38	7015W514	#50 24Tooth Sprocket Hub	1
10	-----	Hex Bolt /8NC x 1	2	39	7015W515	Arm, Ratchet Drive Link	1
11	-----	Hex Lock Nut 3/8NC	1	40	Z21204	Ball Bearing 1635 RS	3
12	-----	Hex Lock Nut 1/2NC	1	41	Z26201	Bushing, 3/4 ID x 1-1/2	1
13	Z72461	Low Profile Lock Nut 5/8NC	1	42	Z26303	Bushing, 1 ID x 1-1/4 Long Grooved	2
14	44623BH	Flange Nut 5/16NC	1	43	449BH	Grease Zerk 1/4NF	2
15	15915BH	Flat Washer 3/8	2	44	-----	Hex Bolt 3/8NC x 1	1
16	Z73232	Wide Washer 3/8 Thin	1	45	-----	Hex Bolt 1/2NC x 2-1/2	3
17	Z75571	Shoulder Bolt 3/4 x 1-1/2	1	46	-----	Hex Lock Nut 3/8NC	1
18	Z76121	Flange Bolt 5/16NC x 3/4	2	47	-----	Hex Lock Nut 1/2NC	3
19	Z76222	Carriage Bolt 5/16NC x 5/8	1				

## Ground Drive Engagement



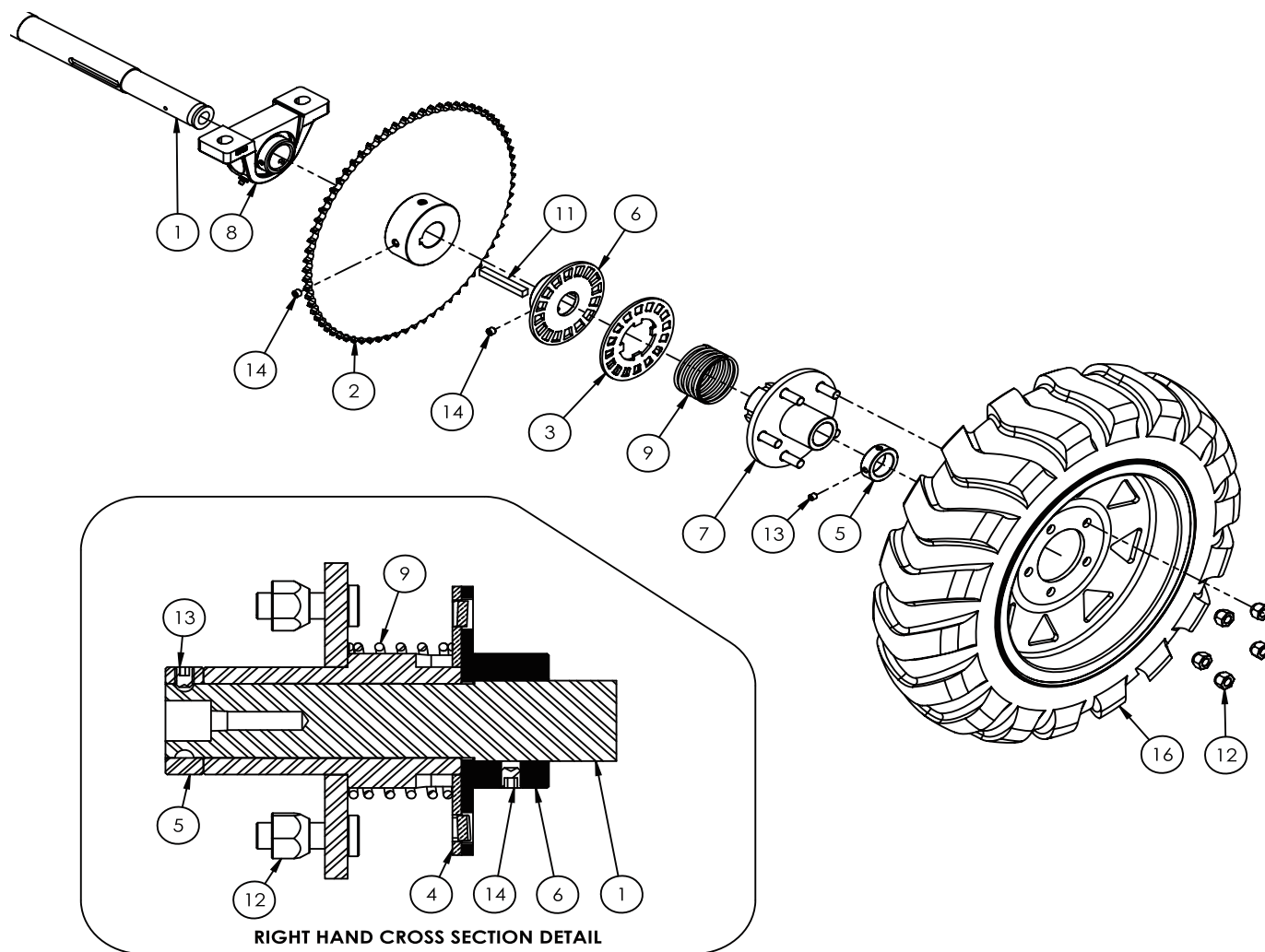
Ref. No.	Part No.	Description	Qty.
1	7011A101	Assy, Engagement Handle	1
2	7011A103	Assembly, Chain Lifter	1
3	7011M159	Engaging Shaft Spacer	1
4	7011S114	Rod, Connecting	1
5	7011W105	Rod, Drive Engagement	1
6	7014W458	Joint, Engagement Linkage	1
7	Z12321	Cotter Pin 3/16 X 2-1/2	1
8	-----	Hex Bolt, 5/16NC x 1-1/2	1
9	-----	Hex Lock Nut 1/4NC	1
10	-----	Hex Lock Nut 3/8NC	1
11	-----	Hex Lock Nut 1/2NC	2
20	7011S103	Latch Rod	1
21	7011W104	Engaging Lever	1
22	7014L465	Engaging Arm Guide	1
23	Z14131	Roll Pin 1/8 x 1	2
24	Z32301	Spring 19mm x 79mm Med	1
25	-----	Hex Lock Nut 1/4NC	2
26	5160806	Carriage Bolt 1/4NC x 3/4	2

## Ground Drive



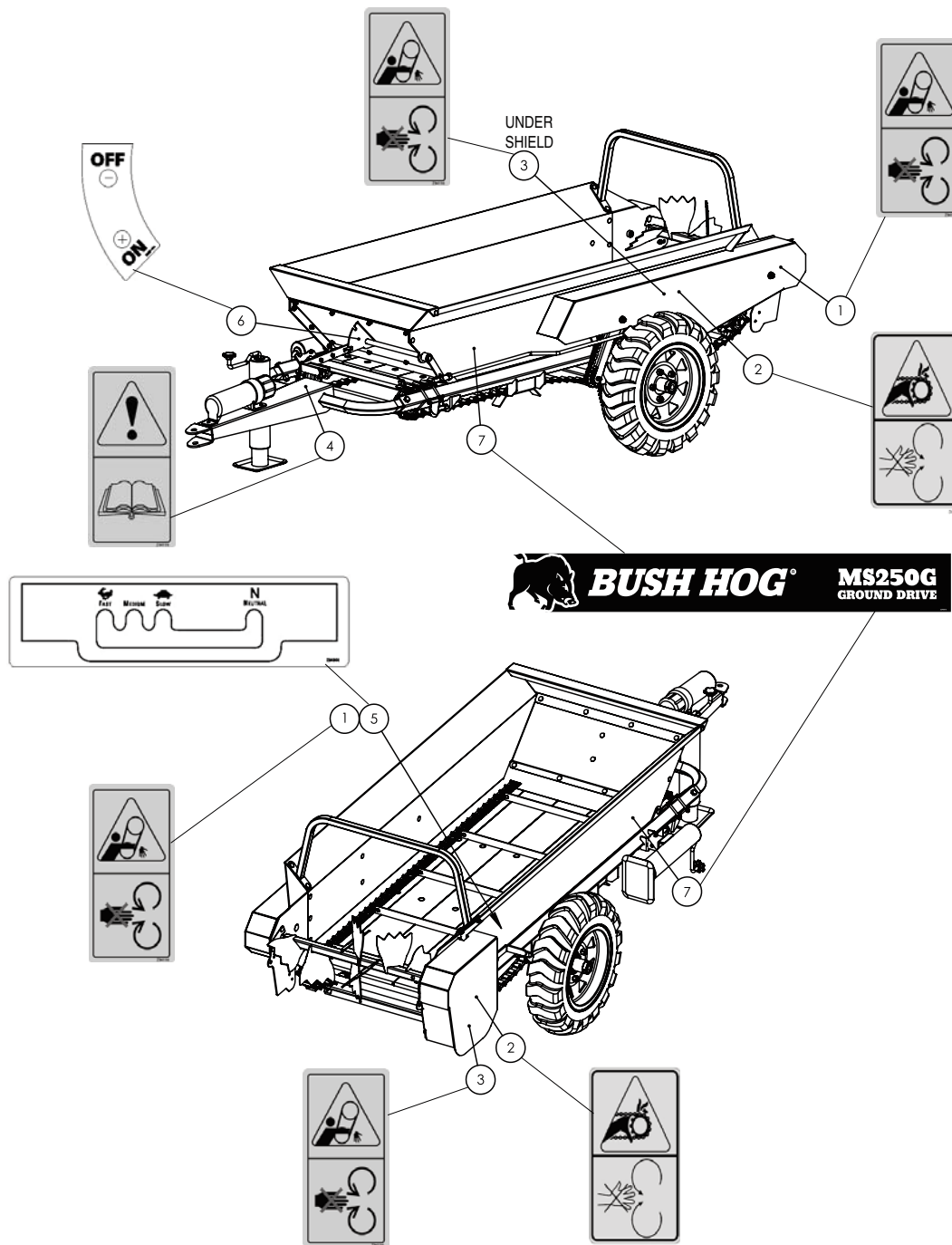
Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	7011A103	Assembly, Chain Lifter	1	15	Z72551	Flange Nut 1/2NC	2
2	7011M105	Spacer, 2"	1	16	-----	Flat Washer, 1/2	3
3	7011M165	Spacer, Rear Shield	1	17	5161212	Carriage Bolt 3/8NC x 1-1/4	2
4	7011W112	Guard, Ground Drive	1	18	Z76253	Carriage Bolt 1/2NC x 5	2
5	7014L458	Washer, Square Head	2	19	44366BH	Carriage Bolt, 1/2NC x 2	1
6	7014M460	Spacer, 1-1/4	1	20	Z91513	Top-Wind 10" Swivel Jack	1
7	-----	Ball Bearing, 6203 RS	1	30	7011M122	Hub, Sprocket Bearing	2
8	Z25102	FD 2-Bolt Flange Bearing 1"	1	31	7011M160	Spacer	2
9	Z42142	#50 Roller Chain 160P (80 Links)	1	32	7011W111	Lifter, Chain	1
10	Z42803	Sprocket, #50 11Tooth 1" Bore	1	33	-----	Ball Bearing 99502HS	2
11	Z42810	Sprocket, #50 17 Tooth	1	34	Z42809	Sprocket, #50 12 Tooth	2
12	-----	Key 5/16 x 5/16 x 1	4	35	-----	Hex Bolt 3/8NC x 2-1/2	2
13	-----	Hex Lock Nut 3/8NC	2	36	-----	Hex Lock Nut 3/8NC	2
14	-----	Hex Lock Nut 1/2NC	4				

## Axle



Ref. No.	Part No.	Description	Qty.
1	7011M117	Shaft, Main Ground Drive	1
2	7011W103	Main Drive Sprocket	1
3	7014L452	Driver, GD Ratchet LH	1
4	7014L468	Driver, GD Ratchet RH	1
5	7014M456	Collar, Wheel Stop	2
6	7014W454	Reciever, GD Ratchet	2
7	7014W460	Hub, 5-Bolt Ground Drive	2
8	Z24101	P208 Pillow Block 1-1/2	2
9	Z32402	Spring 3" x 4-1/2 x .145 wire	2
10	19BH	Key, 3/8 x 3/8 x 1-1/4	1
11	Z465502	Key, 3/8 x 3/8 x 3	1
12	Z72931	Lug Nut 1/2NF	10
13	-----	Set Screw 5/16NC	4
14	-----	Set Screw 3/8NC	6
15	-----	5.7-12 4-Ply Trac Chief RH	1
16	-----	5.7-12 4-Ply Trac Chief LH	1

## Decal Locations



Ref. No.	Part No.	Description	Qty.
1	Z94168	Decal - Rotating Blade	2
2	Z94169	Decal - Rotating Part	2
3	Z94116	Decal - Shield Hazard	2
4	Z94119	Decal - Read Manual	1
5	Z94044	Decal - Apron Speed	1
6	Z94162	Decal - Off/ On	1
7	Z946615	Model Decal, MS250G	2





**BUSH HOG®**

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(334) 872-6261 • (334) 874-2700  
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FAX 1-800-572-1784  
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