

Automatic

ABC3600

Stationary Roller Mill



Operator, Parts & Installation Manual

Introduction

Congratulations! You are now the owner/operator of America's finest roller mill. Please take a few minutes to be sure that you understand the maintenance and operation of this roller mill. Read this operator's manual carefully: you'll get better results and have fewer problems.

After your roller mill has been in operation for a few hours, check for loose bolts, setscrews, belts, etc. All are tight when the roller mill leaves the factory; however, after a break-in period, some items may require additional tightening. Like any other machine, your Automatic roller mill requires proper care and intelligence in operation. Misuse and neglect will only cause unnecessary expense and dissatisfaction.

This manual is written as a guide for owners and operators of the Automatic ABC3600 model roller mill. Read it carefully and follow the suggestions made. Keep this manual in a convenient place for quick, easy reference, and use it whenever questions arise.

Fill in the following information now for future reference and convenience. Always give this information to your dealer when ordering new parts. If at any time it becomes necessary for you to write directly to Automatic Equipment Manufacturing Company for additional information, give the model and serial number of your machine, and as much descriptive information as possible. It will enable us to more thoroughly and quickly expedite your order.

Model No. _____ **Serial No.** _____

Date of Purchase _____

Name and Address of Dealer _____

Dealer/Operator Pre-Use Inspection Checklist

Although everything is in working order when the roller mill leaves the factory, some components may get out of adjustment in transit. The following inspection must be made prior to operation. Check each item listed and make adjustments if necessary. Refer to the corresponding sections of the manual to determine the correct settings for individual items.

- Check all belts for proper tension and alignment.
- Check to make sure the set screws in all pulleys and bearings are tight.
- Check all grease line connections and lines for damage during shipment.
- Make a general check for bolts that may have vibrated loose during shipment.
- Check greased bearings for proper lubrication.
- Check to make sure all shields and guards are in place.
- After operating the roller mill for the first few times, go through this checklist again. Some bolts, setscrews and belts may require additional adjustment during this break-in period.

Safety

DO NOT OPERATE OR USE THIS EQUIPMENT UNTIL THE FOLLOWING OPERATING AND SAFETY INSTRUCTIONS HAVE BEEN READ AND UNDERSTOOD. FAILURE TO UNDERSTAND AND PRACTICE GOOD SAFETY PROCEDURES COULD RESULT IN PERSONAL INJURY OR DEATH.

All farm machinery is inherently dangerous to children and to persons unfamiliar with its general operation. Children should not be permitted in areas where machinery of this nature is operating.

Since mills contain numerous moving parts, some of which may not always be visible to the operator, they can be extremely dangerous. Steps should be taken to assure the safety of the operator, and any other people in the area. Automatic Equipment strongly recommends that no person be permitted to operate this mill without a thorough understanding of how the machine works and the precautions to be observed.

The operator of this machine should be a responsible adult who is familiar with farm machinery, and trained in its operation. **REMEMBER!** Your best insurance against accidents is a careful and responsible operator. A careless operator is a liability to himself and those who work with him.

Because of the dry, highly flammable material associated with this machine, **FIRE FIGHTING EQUIPMENT SHOULD BE READILY AVAILABLE DURING THE OPERATION OF THIS MACHINE.**

Because of the high voltage required to run this mill, a licensed electrician is recommended to hook up this unit's main power supply

Before operating this equipment, be sure to read and understand this operator's manual. If there is any portion of the manual, or any phase of the roller mill's operation you do not understand, be sure to contact your local Automatic dealer or Automatic Equipment, Pender, Nebraska. 402-385-3051.




SAFETY PRECAUTIONS - BEFORE OPERATION

1. Keep the mill in good repair. Good maintenance is your responsibility. A poorly maintained machine is an invitation for trouble. Always use proper tools when servicing your mill.
2. **DO NOT** start, operate, or attempt repair work on the mill until you carefully read and thoroughly understand this operator's manual.
3. Be sure all shields are in place and all bolts are tight throughout the mill.
4. Be sure the rolls and drive belts are properly adjusted and in good condition. (See Operation Section)
5. Be sure there are no tools or other foreign objects lying on or in the machine.
6. If equipment discharges into an auger, be sure auger is covered, and that shields are provided between equipment discharge and auger.
7. When installing, a means of positively preventing the application of electrical power to equipment must be included.
8. When installing, be sure to allow adequate room for proper servicing.
9. Install all units according to American National Standard ANSI/NFPA 70, National Electrical Code.
10. All electrical components including motors shall comply with ANSI/NFPA 70, National Electrical Code, and with the requirements of the authority having local jurisdiction.
11. Electric motors integrally equipped with thermal overload protection devices shall be of the manual reset type rather than the automatic time delay reset type, except where automatic reset is essential for functional requirements and no personal hazard is created.

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Safety

SAFETY PRECAUTIONS - DURING OPERATION

1. **DO NOT** wear loose-fitting clothing that may catch in moving parts.
2. Children should not be permitted in areas where machinery of this nature is operating.
3. **DO NOT** operate this machine until you are sure everyone is clear of the area.
4. **NEVER** leave the mill running unattended.
5. Always keep hands, feet, and clothing away from moving parts.
6.  **DANGER** Keep hands and feet out of the hopper when machine is in operation. Never remove safety grates, or use your hands or feet to dislodge any obstruction from the mill. Never try to push or force feed grain or snow that may be bridged or laying in the hopper.
7. **NEVER** sit or stand on the mill while it is in operation.
8. **NEVER** adjust or service the unit while it is in operation.
9. **NEVER** open shields, mill access doors or clean out doors while the mill is in operation.



SAFETY PRECAUTIONS - SERVICE AND REPAIR

1. **SAFETY SHUTDOWN PROCEDURE:** Working on the mill when it is operating is expressly prohibited. Never clean, adjust, lubricate, or otherwise service this machine until the following steps have been taken.
 - A. Disengage the power source.
 - B. Lock all switches.
 - C. Wait until all mechanical motion has stopped on the mill.Only when these precautions have been taken, should you proceed in the adjustment or servicing of the mill. Failure to follow the above procedure could lead to death or serious personal injury.
2. Keep the mill in good repair. Good maintenance is your responsibility. A poorly maintained machine is an invitation for trouble. Always use proper tools when servicing machine, making certain that they are removed from the unit when services or repairs have been completed.
3. All mills are equipped with shielding to protect the operator from injury. **For purposes of clarity only**, some illustrations in this manual may show the mill with the shields removed or missing. Although shields may be opened or removed for servicing and repair of the mill, they **MUST** always be closed or replaced before operation resumes.

Your roller mill is designed to eliminate complicated adjustments. There are only two (2) major points of adjustment for any small grain or shelled corn - roller spacing and hopper control gate.

1. **HOPPER GATE.** Open feed gate gradually until you reach the maximum flow of grain that power will handle. If it becomes necessary to stop the machine at any time before hopper is empty, be sure to close the feed door before shutting off power.
2. **ROLLER SPACING.** This depends upon the type of grain to be rolled. Different grain varies in size, shape, toughness and moisture content. This is also true of the same kind of grain from different localities. For this reason, it is impossible for us to tell you how to set the rolls. Do not over-roll hard or dry grains, as this will cause dusting. Remember, proper adjustment keeps dust at a minimum, even when rolling the driest grain.

The closest roll setting is preset at the factory and as a rule and should not require additional adjustment. However, for certain types or conditions of rolling, some "fine tuning" may be required.

IMPORTANT - Check to make sure the roll teeth do not come in contact with each other by turning the mill by hand after each adjustment

Roller Mill Maintenance & Operation

Automatic Grain roller mills are manufactured from the best materials and workmanship available - each has been tested and properly adjusted at the factory before shipping. Simple adjustments and minimum maintenance have been emphasized. Reasonable care and operation will assure many years of trouble-free service.

- **BE SURE** roller mill is mounted on a firm base. The machine should be level while operating so the grain will flow evenly across the rolls. This will eliminate unnecessary strain on roll bearings and shafts, and also do a better job of rolling.
- **IT IS IMPORTANT** that all units be checked after the first few hours of service to insure that all set screws, lock collars, and other hardware has remained secure. This operation should be performed periodically as part of general maintenance on your roller mill.
- **ELECTRIC POWERED UNITS** should be operated at about 600 RPM. Use a pulley ratio of 3 to 1 on 1800 RPM motors.
- **ROLLER TENSION SPRINGS** on floating roll are set at the factory to maintain just the right amount of pressure. **NEVER** readjust compression spring tension. These springs prevent stoppage, allowing foreign objects such as nails, bolts, etc. to pass between rolls. On all of our mills, magnets are available and recommended, as they separate pieces of iron and steel from the feed. Saving the life of just one animal will pay for several magnet installations.
- **HOPPER GATE CONTROL.** Your roller mill will not start with grain between rolls. Always start roller and bring rolls to full RPM before opening feed gate. Make sure feed gate in hopper is closed before putting grain in hopper. If grain is released to rolls before they are turning, grain will pile up and it will be necessary to clean out between rolls and run remaining kernels through by hand before starting.
- **ADJUSTING FEED ROLLS** from fine to medium or coarse grind by pulling down on the cam adjust handle.
- **DON'T OVERCROWD THE ROLLS** - keep a ribbon of grain going between the rolls, and you'll do a better job of rolling. This is especially true of oats and barley. It is not necessary to completely flatten the kernel. The grain becomes easy to digest when the hard coat or hull is broken open, exposing the nutrients to the digestive juices.
- **BEARINGS** - All pillow block and cast flange bearings are sealed and as a general rule, require no lubrication. However, the bearing manufacturer does furnish grease zerks and recommends the bearings be re-greased before one-third (1/3) of the bearings' calculated life elapses. Usually just a pump or two of grease per bearing before start up each harvest or after the unit has not been used for a month or more will be sufficient.

IMPORTANT - DO NOT OVER GREASE. Over greasing can cause damage to the bearing seal.

- **REALIGNING ROLLS...** If rolls should ever come out-of-alignment, (more gap on one side of the roll pair than the other side), they must be realigned to maintain feed consistency. This can be accomplished by first removing the connecting link, (see page 2, item 21), from the quick-adjust chain, and then removing the chain from the sprockets. The rolls can now be brought back into alignment by turning the quick-adjust handle. Check the gap between the rolls with a feeler gage and turn the quick-adjust handle until the gap is equal at both ends of the roll pair. Replace the chain and connecting link previously removed, to complete the procedure.
- **BELT TENSION**
 - Drive Belt
 - New Belt - - - After 15 minutes of running
 - First 4 Hours of Service - - - Every Hour
 - After first 4 hours - - - Every 8 hours service

Roll Drive Belts are tensioned properly when they can be depressed 3/8 inch, in the middle of the longest span, using a force of 7 pounds.

Auger Base Drive Belts are tensioned properly when they can be depressed 1/4 inch, in the middle of the longest span, using a force of 7 pounds.

Replacement Parts

When ordering parts for your mill, please state your needs with the following information:

MODEL NO.	SERIAL NO.	PART NO.	DESCRIPTION
ABC3600	000000	101-4038	Hinge Plate

When you order in this way, you can be certain the correct part will be delivered in the shortest time possible.

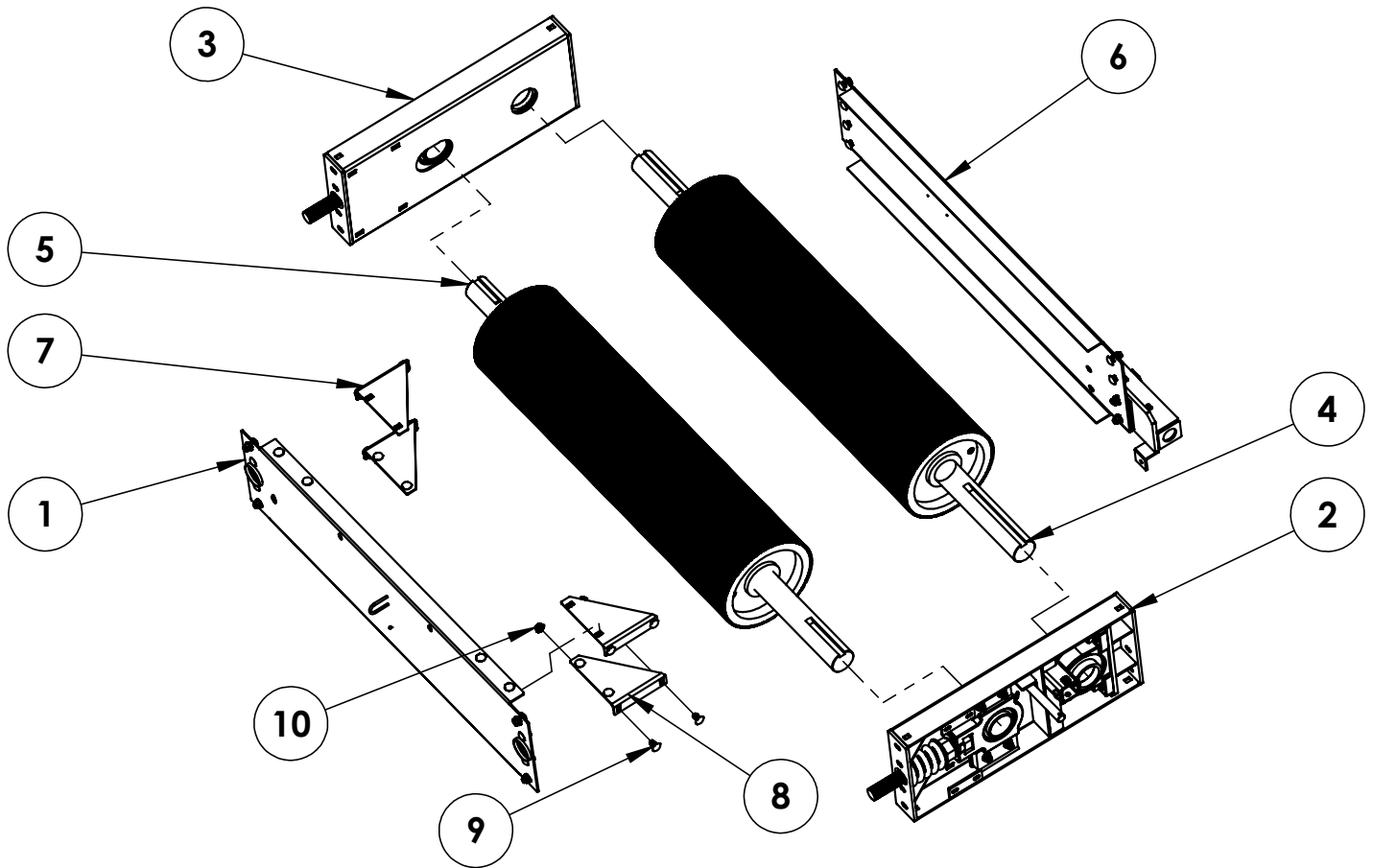
IMPORTANT: Use only genuine factory replacement parts on your mill. Do not substitute homemade or non-typical parts. If a bolt is lost or in need of replacement, for your safety and the preservation of your mill, be sure to use a replacement bolt of the same grade (Usually Grade 5).

Repair parts can be ordered through your nearest dealer. If there is no dealer in your area, call Automatic Equipment Manufacturing at (402) 385-3051.

Parts Index

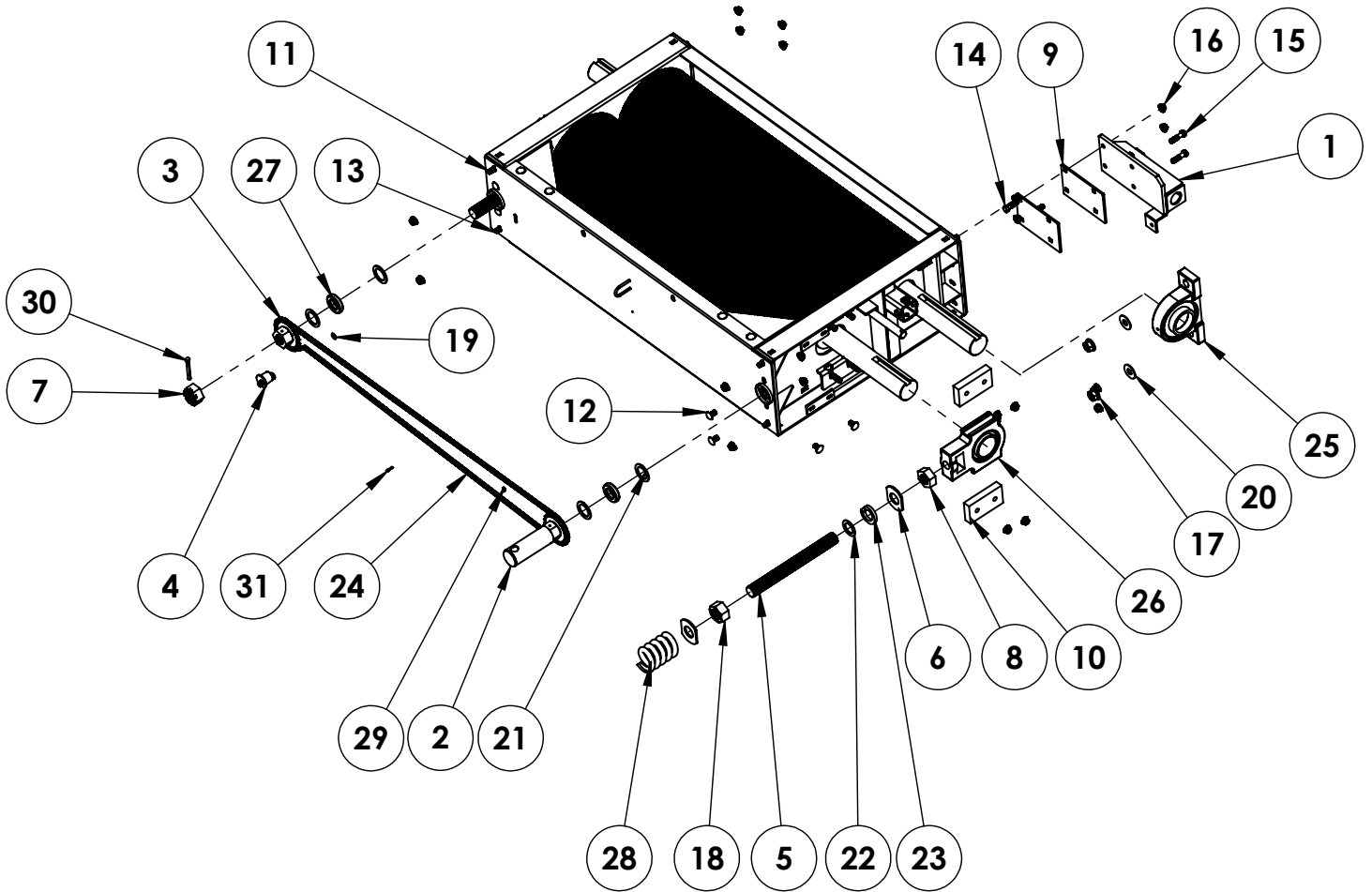
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Basic Assembly



Item No.	Part No.	Description	Qty.
1.....	61-2460	2-15/16" Right Plate	1
2.....	61-1492	Front Mill Channel	1
3.....	61-1493	Rear Mill Channel.....	1
4.....	71-0527	Mill Drive Roll, 4 Cut.....	1
.....	71-0528	Mill Drive Roll, 6.5 Cut.....	1
.....	71-0529	Mill Drive Roll, 8 Cut.....	1
.....	71-0530	Mill Drive Roll, 10 Cut.....	1
.....	71-0531	Mill Drive Roll, 12 Cut.....	1
.....	71-0531	Mill Drive Roll, 14 Cut.....	1
5.....	71-0541	Mill Idler Roll, 4 Cut	1
.....	71-0542	Mill Idler Roll, 6.5 Cut	1
.....	71-0543	Mill Idler Roll, 8 Cut	1
.....	71-0544	Mill Idler Roll, 10 Cut	1
.....	71-0545	Mill Idler Roll, 12 Cut	1
.....	71-0546	Mill Idler Roll, 14 Cut	1
6.....	101-2766	End Plate.....	1
7.....	101-3396	Corner Gusset, Right.....	2
8.....	101-3398	Corner Gusset, Left.....	2
9.....	201-0024	1/2"-13 x 1" Carriage Bolt, Grade 5	20
10.....	202-0072	1/2"-13 Hex Flange Whiz Lock Nut, ZP	34

Basic Roll Adjustment Assembly

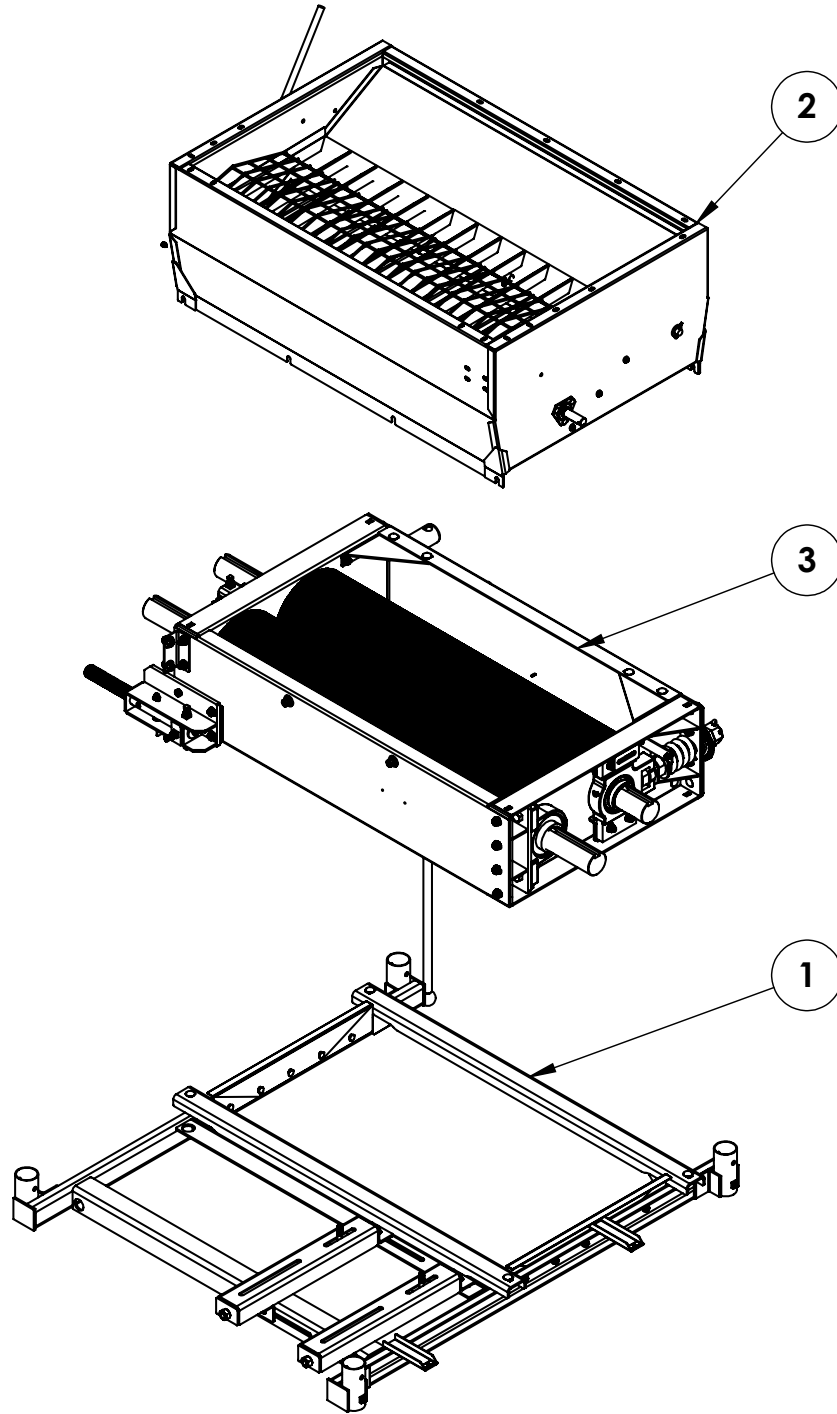


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Basic Roll Adjustment Assembly Continued

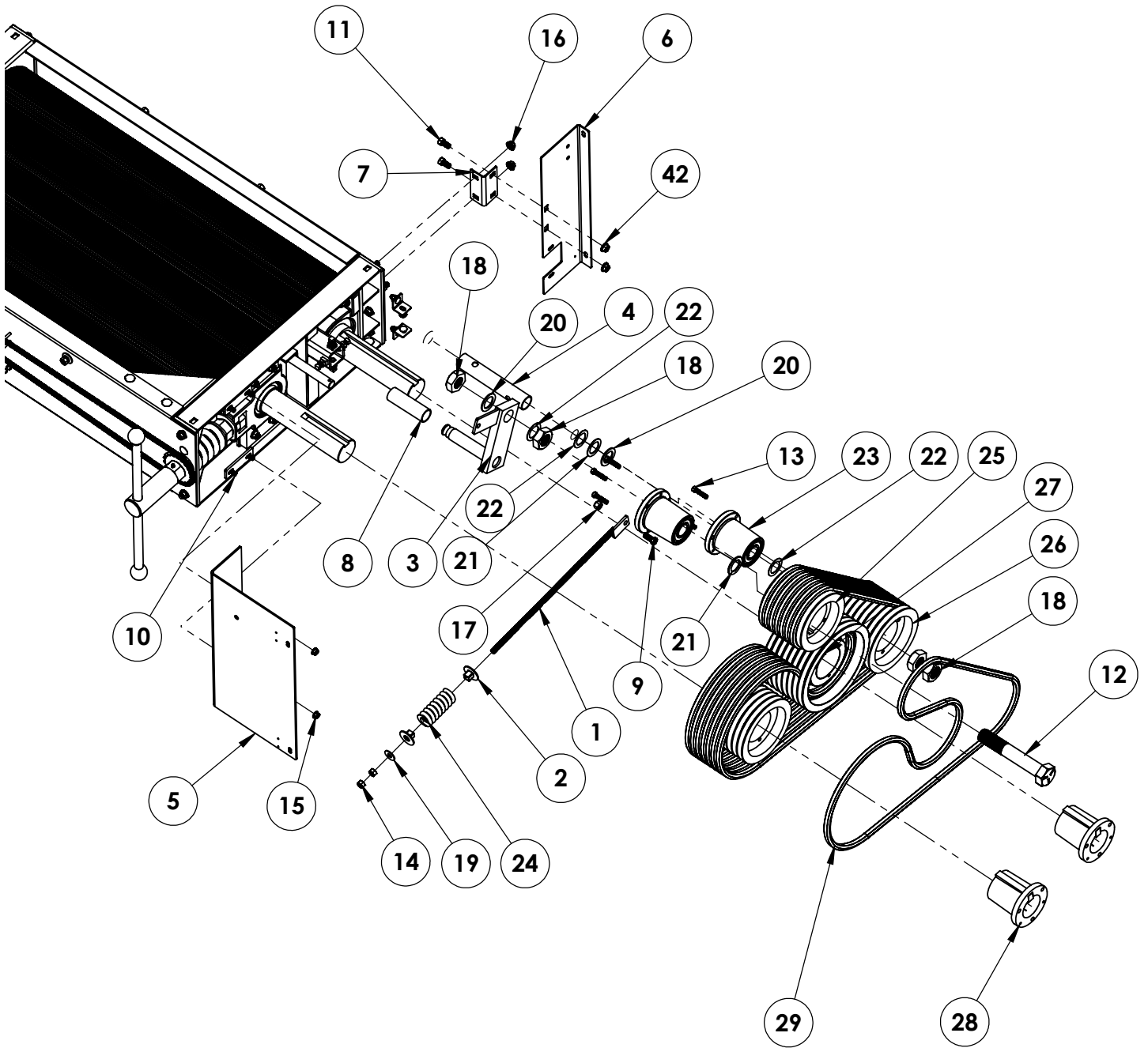
Item No.	Part No.	Description	Qty.
1	61-2274	Lower Idler Support	1
2	61-2327	Quick Adjust Drive Sprocket	1
3	61-2402	Quick Adjust Idler Sprocket	1
4	62-0382	Eccentric	1
5	100-0666	2-15/16" Shaft Base Take-Up Rod	2
6	100-0667	1-1/2" Clipped Washer	4
7	100-0677	1-1/2"-8 Slotted Nut, Grade 8	1
8	100-0689	1-1/2"-8 Thin Nut, Grade 8	2
9	102-1685	Idler Support Flat Spacer	2
10	102-1750	2-15/16" Take-Up Block Shaft	4
11	201-0012	1/2"-13 x 1-1/2" Carriage Bolt, Grade 5, ZP	3
12	201-0024	1/2"-13 x 1" Carriage Bolt, Grade 5	20
13	201-0058	1/2"-13 x 1-1/4" Carriage Bolt, Grade 5, ZP	7
14	201-0068	1/2"-13 x 1-3/4" Hex Head Bolt, Grade 5, ZP	2
15	201-0283	1/2"-13 x 2" Hex Head Bolt, Grade 5, ZP	2
16	202-0072	1/2"-13 Hex Flange Whiz Lock Nut, ZP	34
17	202-0074	3/4"-10 Flange Whiz Lock Nut	4
18	202-0093	1-1/2"-8 Hex Nut, Grade 8, Heavy	2
19	203-0003	3/8" Flat Washer, ZP	1
20	203-0007	3/4" Flat Washer, ZP	4
21	203-0034	10 GA x 2-1/2" x 1-3/4" Machined Bushing	4
22	203-0082	10 GA x 2-1/4" x 1-1/2" Plain Machined Bushing	2
23	203-0085	1-1/2" Lock Washer, ZP	2
24	206-0185	50 x 186 Pitch Chain Includes Convenience Link	1
25	209-0104	2-15/16" Pillow Block Bearing	2
26	209-0105	2-15/16" Take-Up Bearing	2
27	209-0106	2-19/32" x 1-9/16" Thrust Bearing	2
28	222-0048	3" x 4-7/8" Compression Spring	2
29	224-0327	1/4"-28 Grease Zerk	1
30	229-0063	3/8" x 3" Cotter Pin	1
31	229-0118	3/16" x 3/4" Cotter Pin	1

Mill Assembly



Item No.	Part No.	Description	Qty.
1.....	61-7794	Frame	1
2.....	62-4208	Hopper Assembly	1
3.....	93-0397	Stationary Basic, 4 Cut.....	1
.....	93-0398	Stationary Basic, 6.5 Cut.....	1
.....	93-0399	Stationary Basic, 8 Cut.....	1
.....	93-0400	Stationary Basic, 10 Cut.....	1
.....	93-0401	Stationary Basic, 14 Cut.....	1

Belt Drive

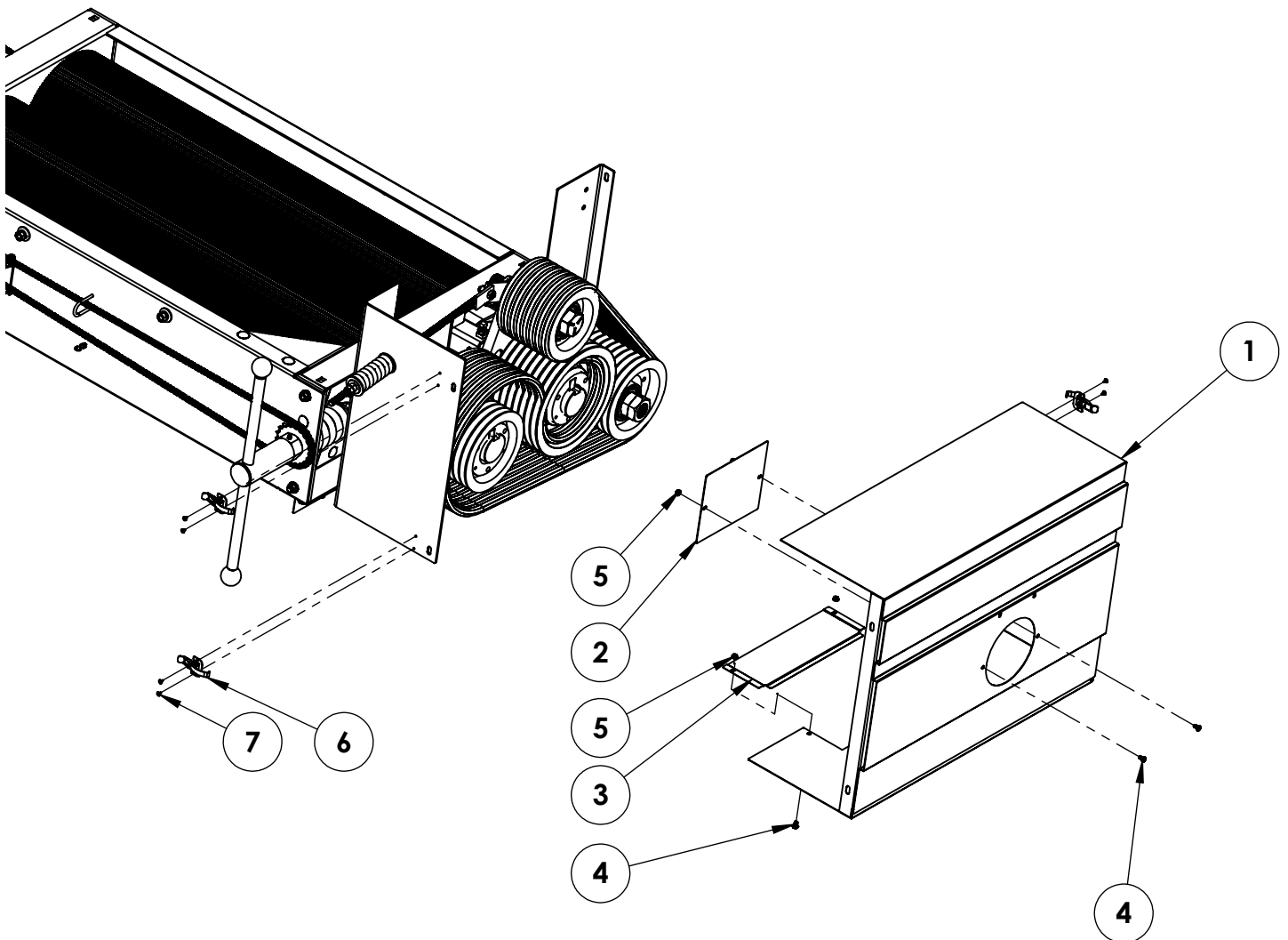


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Belt Drive Continued

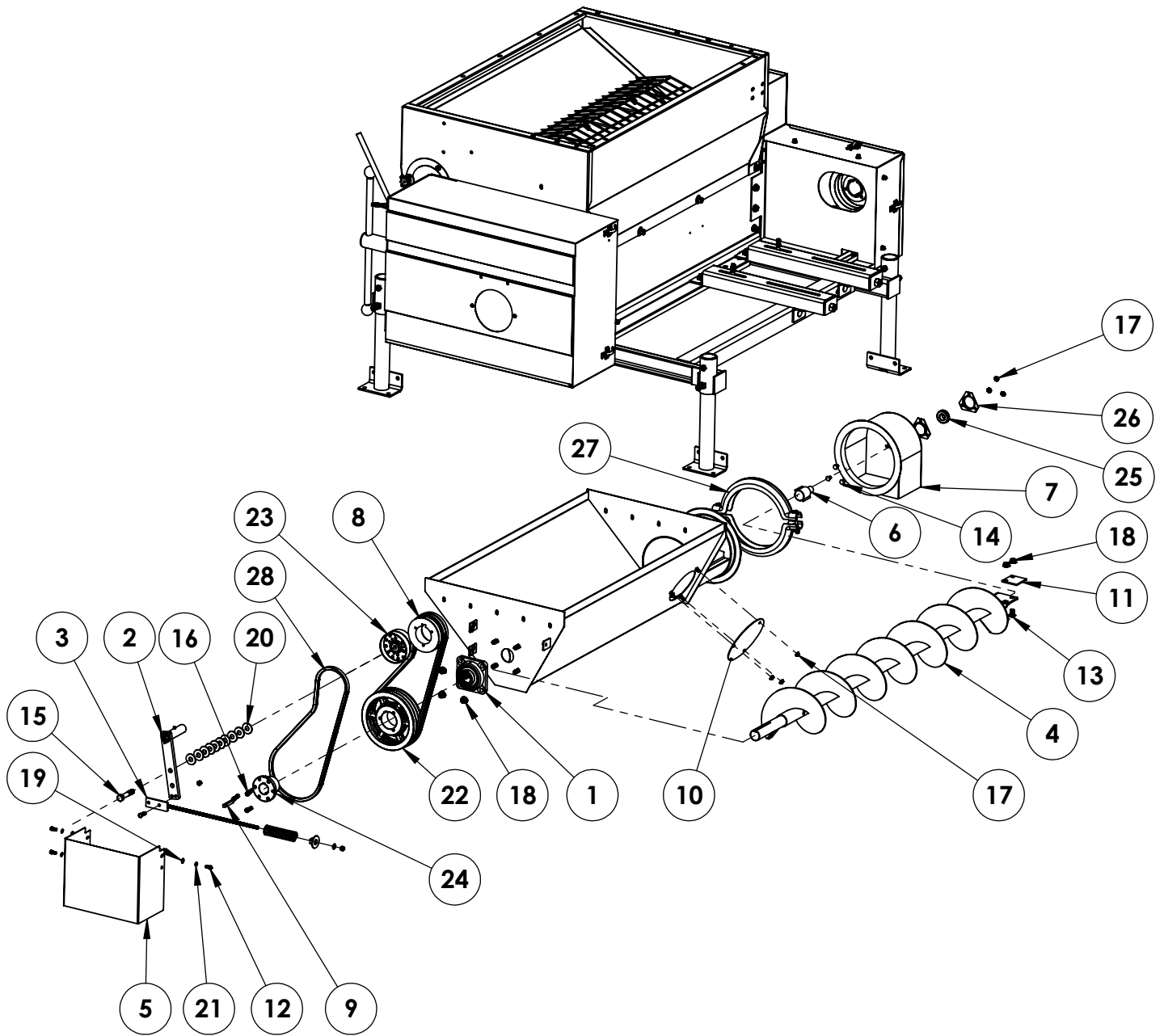
Item No.	Part No.	Description	Qty.
1	61-1863	Idler Take-Up Road	1
2	61-1968	Center Spring	2
3	61-2275	Belt Drive Pivot Idler Arm	1
4	61-2276	Idler Support Shaft Tube	1
5	61-2278	Support Shield, Right	1
6	101-3322	Support Shield, Left	1
7	105-0970	Flat Support Shield	1
8	107-0824	Idler Shaft Sleeve	1
9	201-0011	1/2"-13 x 1-1/4" Hex Head Bolt, Grade 5, ZP	1
10	201-0034	3/8"-16 x 1" Carriage Bolt, Grade 5, ZP	4
11	201-0060	1/2"-13 x 1" Hex Head Bolt, Grade 5, ZP	2
12	201-0364	1-1/2"-6 x 9" Hex Head Bolt, Grade 5	1
13	201-0404	3/8"-16 x 1-3/4" Hex Head Bolt, Grade 5, ZP	6
14	202-0005	1/2"-13 Hex Nut, ZP	6
15	202-0071	3/8"-16 Whiz Flange Lock Nut, ZP	4
16	202-0072	1/2"-13 Hex Flange Whiz Lock Nut, ZP	4
17	202-0094	1/2"-13 Hex Nylon Insert Lock Nut, ZP	1
18	202-0104	1-1/2"-6 Hex Jam Nut	4
19	203-0005	1/2" Flat Washer	1
20	203-0082	10 GA x 2-1/4" x 1-1/2" Plain Finish Machined Bushing	2
21	203-0083	14 GA x 2-1/4" x 1-1/2" Machined Bushing	2
22	203-0084	18 GA x 2-1/4" x 1-1/2" Machined Bushing	4
23	205-0223	IDR2 - 1-1/2" Special Idler Bushing	2
24	222-0078	Mill Compression Spring	1
25	225-0049	8B70R Browning Bushing	1
26	205-0217	8B80R Browning Bushing	2
27	205-0219	8B110R Browning Bushing	1
28	290-0298	R2 - 2-15/16" Bushing	2
29	251-0125	BB116 Belt	8

Belt Shield



Item No.	Part No.	Description	Qty.
1.....	61-2277	Front Shield	1
2.....	101-2934	Cover Shield	1
3.....	101-2935	Filler Shield.....	1
4.....	201-0112	1/4\"-20 x 1/2\" Slot Truss Head Screw	4
5.....	202-0069	1/4\"-20 Hex Flange Whiz Lock Nut, ZP	4
6.....	229-0132	Tension Latch	4
7.....	229-0988	3/16\" x 1/16\"-1/8\" SB6-2 Pop Rivet	8

Auger Base

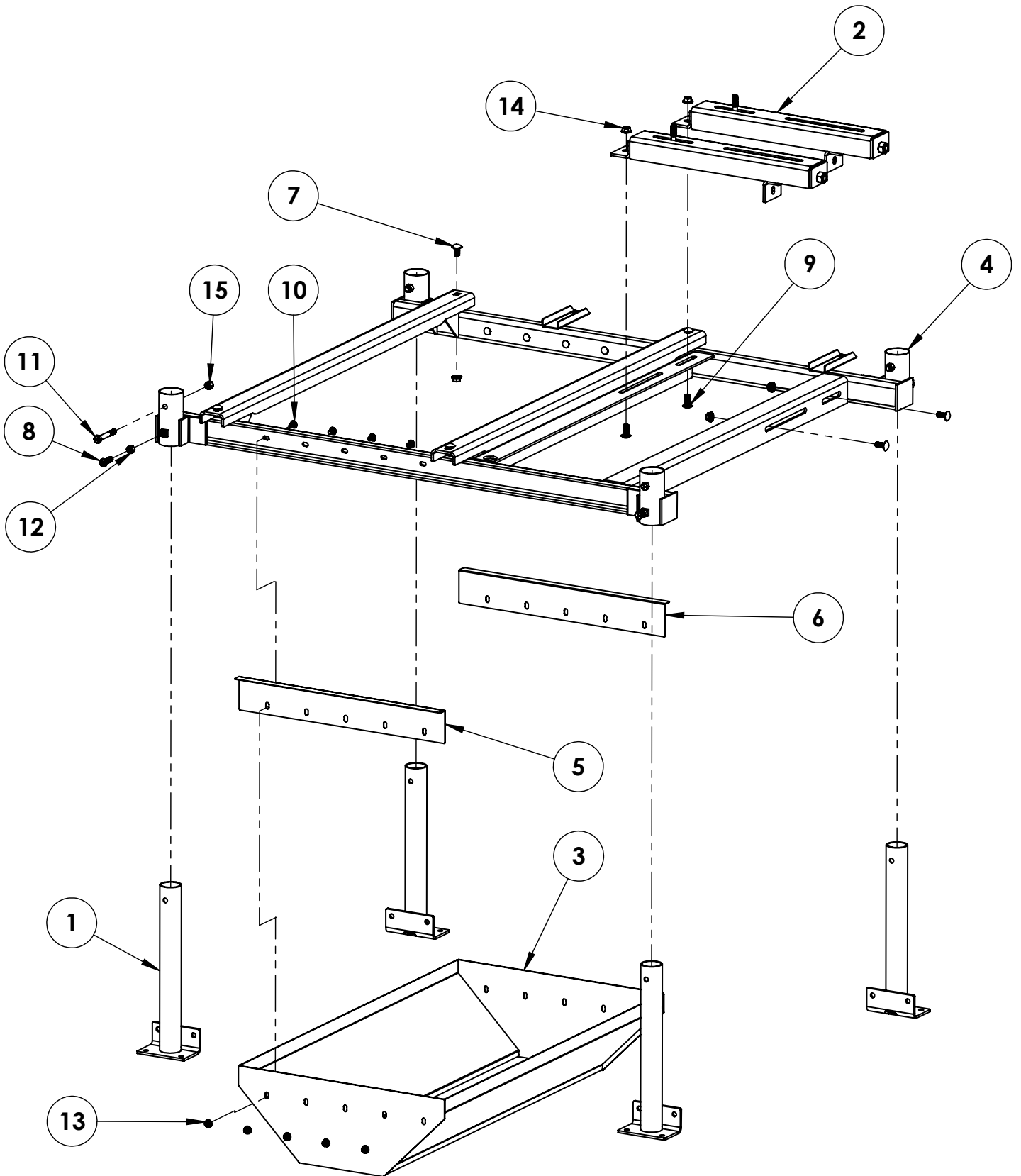


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Auger Base Continued

Item No.	Part No.	Description	Qty.
1	53-0007	1-3/4" Cast Hole Bearing	1
2	61-1860	Auger Base Idler	1
3	61-1864	Idler Take-Up Rod	1
4	61-1875	Auger Base Screw	4
5	61-2028	Auger Base Shield	2
6	61-2264	Transfer Shield Adapter	1
7	61-2270	Auger Base Head	2
8	62-1504	2-15/16" 3B54Q Sheave w/ SS	1
9	100-0003	3/8" x 2-1/2" Square Key	1
10	101-2306	Clean Out Door Cover	2
11	102-1399	Horizontal Screw Flat Paddle	2
12	201-0003	5/16"-18 x 3/4" Hex Head Bolt, Grade 5, ZP	3
13	201-0024	1/2"-13 x 1" Carriage Bolt, Grade 5, ZP	4
14	201-0119	5/16"-18 x 3/4" Carriage Bolt, Grade 5, ZP	3
15	201-0125	5/8"-11 x 3-1/2" Hex Head Bolt, Grade 2, ZP	1
16	201-0368	3/8"-16 x 1-1/4" Hex Head Bolt, Grade 5, ZP	3
17	202-0070	5/16"-18 Whiz Flange Lock Nut, ZP	9
18	202-0072	1/2"-13 Hex Flange Whiz Lock Nut, ZP	8
19	203-0002	5/16" Flat Washer, ZP	3
20	203-0006	5/8" Flat Washer, ZP	10
21	203-0009	5/16" Lock Washer, ZP	3
22	205-0083	3TB94 Browning Sheave	1
23	205-0189	5 OD x 2-1/2" Wide Flat Idler	1
24	205-0221	Q1 - 1-3/4" Browning Bushing	1
25	209-0032	1" Flangette Bearing Insert	1
26	211-0023	1" Flangette Housing	2
27	225-0040	Clamp Band Set 10	1
25	251-0118	B58 Belt	3

Frame Assembly

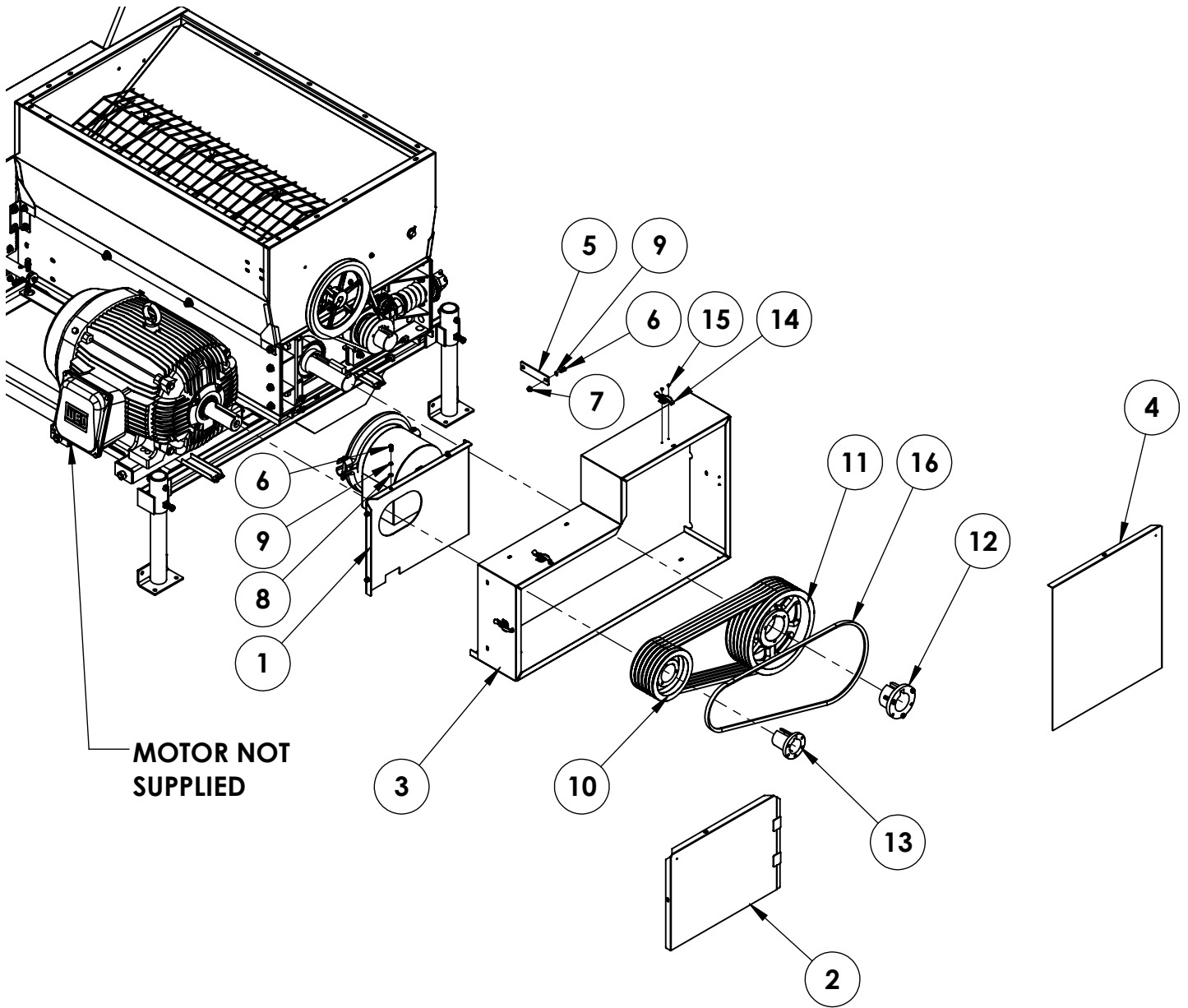


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Frame Assembly Continued

Item No.	Part No.	Description	Qty.
1.....	61-1873	Leg	4
2.....	61-1878	Motor Mount	2
3.....	61-2253	Downspout	1
4.....	61-7794	Frame	1
5.....	101-3220	Filler, Left	1
6.....	101-3221	Filler, Right	1
7.....	201-0024	1/2"-13 x 1" Carriage Bolt, Grade 5	4
8.....	201-0051	1/2"-13 x 1-1/2" Hex Head Bolt, Grade 5	4
9.....	201-0058	1/2"-13 x 1-1/4" Carriage Bolt, Grade 5, ZP	4
10.....	201-0284	3/8"-16 x 3/4" Carriage Bolt, Grade 5, ZP	10
11.....	201-0369	1/2"-13 x 3-1/2" Hex Head Bolt, Grade 5, ZP	4
12.....	202-0005	1/2"-13 Hex Nut, ZP	4
13.....	202-0071	3/8"-16 Whiz Flange Lock Nut, ZP	10
14.....	202-0072	1/2"-13 Hex Flange Whiz Lock Nut, ZP	8
15.....	202-0094	1/2"-13 Hex Nylon Insert Lock Nut, ZP	4

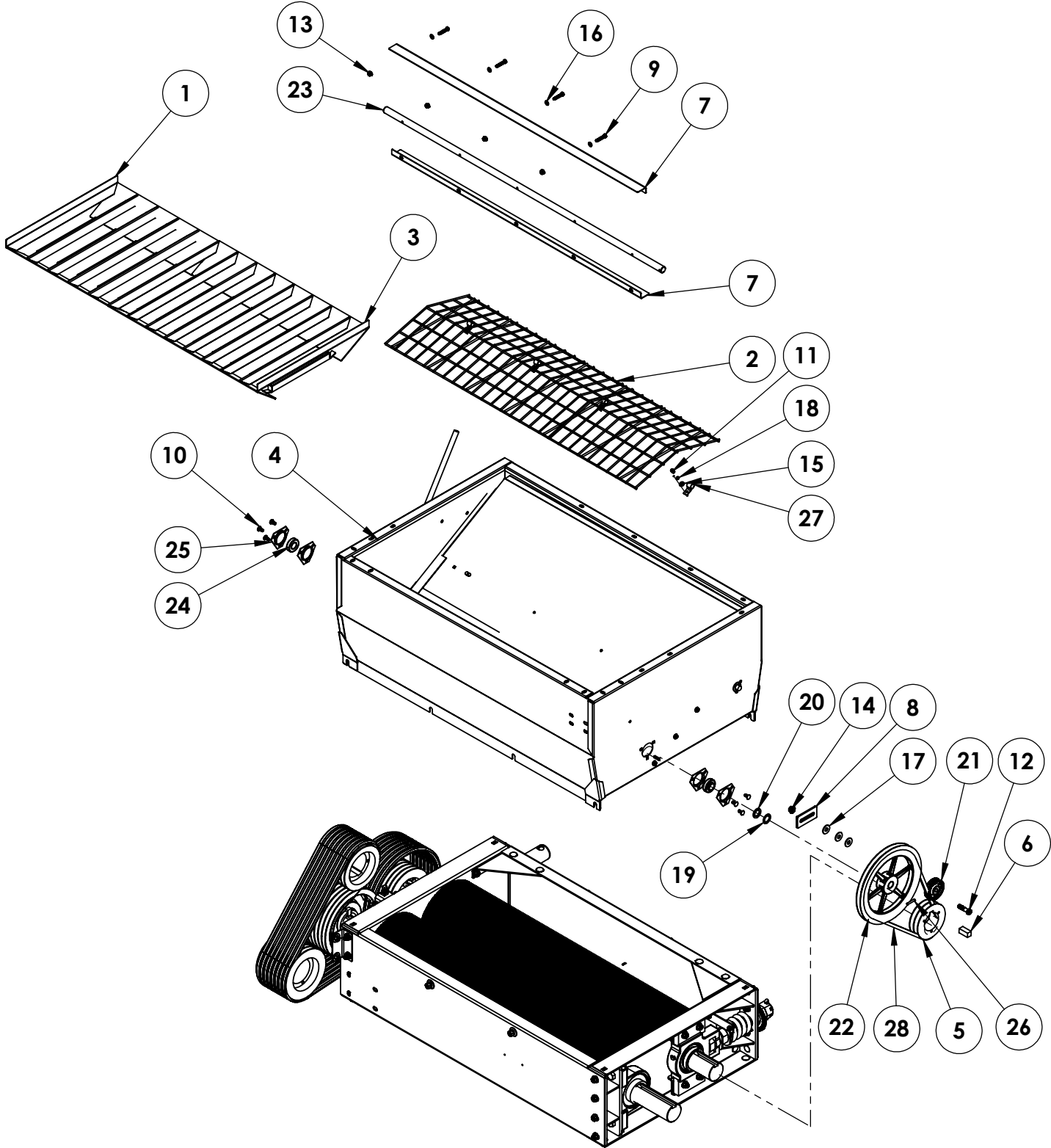
Motor Drive & Shields



MOTOR NOT SUPPLIED

Item No.	Part No.	Description	Qty.
1.....	61-2003.....	Motor Shield	1
2.....	61-2004.....	Door Shield, Left.....	1
3.....	101-2306.....	Frame Shield	1
4.....	101-2940.....	Door Shield, Right	1
5.....	102-1440.....	Drive Shield Bracket.....	1
6.....	201-0003.....	5/16"-18 x 3/4" Hex Head Bolt, Grade 5, ZP	5
7.....	201-0070.....	5/16"-18 Whiz Flange Lock Nut, ZP	2
8.....	203-0002.....	5/16" Flat Washer, ZP.....	5
9.....	203-0009.....	5/16" Lock Washer	5
10.....	205-0194.....	6TB80 Browning Sheave.....	1
11.....	205-0230.....	6B136R Browning Sheave	1
12.....	205-0231.....	R1 - 2-15/16" Bushing	1
13.....	205-0235.....	Q2- 2-3/8" Bushing	1
14.....	229-0132.....	Tension Latch	4
15.....	229-0988.....	3/16 x 1/16"-1/8" SB6-2 Pop Rivet	8
16.....	251-0119.....	B76 Belt.....	6

Hopper Assembly

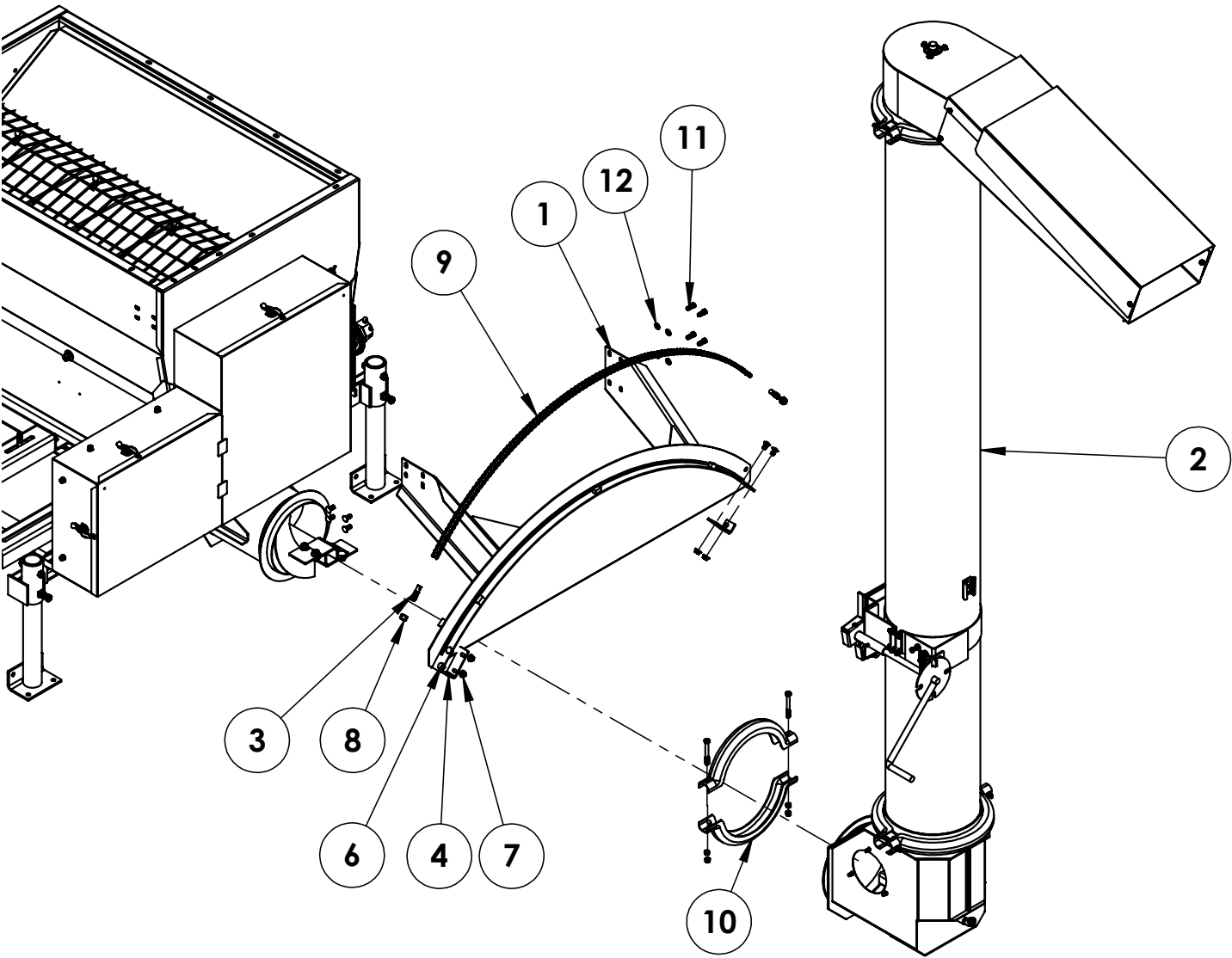


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Hopper Assembly Continued

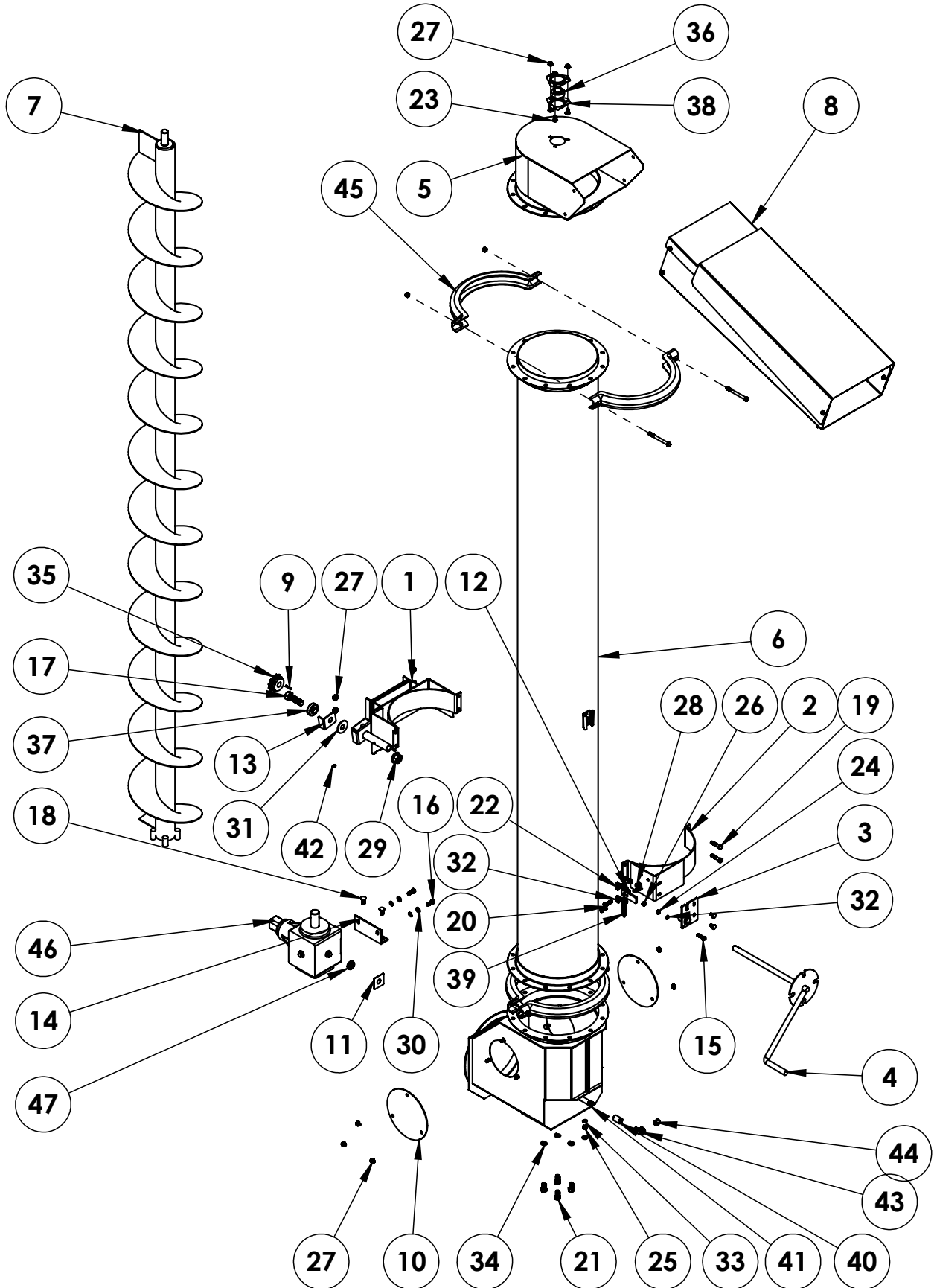
Item No.	Part No.	Description	Qty.
1.....	61-1597	Magnetic Grate	1
2.....	61-1842	Safety Mesh	1
3.....	61-1962	Rear Magnetic Grate	1
4.....	62-4208	Hopper.....	1
5.....	100-0692	2-15/16" 2B54Q Bored Sheave	1
6.....	100-0694	3/4" x 3/4" x 1-3/4" Key.....	1
7.....	101-2877	Agitator Paddle.....	2
8.....	102-1383	Agitator Support Idler	1
9.....	201-0006	5/16"-18 x 1-3/4" Hex Head Bolt, Grade 2, ZP	4
10.....	201-0119	5/16"-18 x 3/4" Carriage Bolt, Grade 5, ZP.....	6
11.....	201-0193	1/4"-20 x 1/2" Hex Head Bolt, Grade 5, ZP	4
12.....	201-0283	1/2"-13 x 2" Hex Head Bolt, Grade 5, ZP	1
13.....	202-0070	5/16"-18 Whiz Flange Lock Nut, ZP	4
14.....	202-0072	1/2"-13 Hex Flange Whiz Lock Nut, ZP	1
15.....	203-0001	1/4" Flat Washer, ZP.....	4
16.....	203-0002	5/16" Flat Washer, ZP.....	4
17.....	203-0005	1/2" Flat Washer	3
18.....	203-0008	1/4" Lock Washer, ZP	4
19.....	203-0071	14 GA x 1-1/2" x 1" Machined Bushing.....	1
20.....	203-0072	10 GA x 1-1/2" x 1" Machined Bushing.....	1
21.....	205-0111.....	Flat Idler	1
22.....	205-0183	BK130 x 1 Bore Sheave	1
23.....	207-0408	Agitator Shaft.....	1
24.....	209-0032	1" Flangette Bearing Insert.....	2
25.....	211-0023	1" Flangette Housing	4
26.....	220-0006	1/4" x 1-1/2" Spring Pin	1
27.....	225-0008	1/2" EMT Snap Strap.....	4
28.....	251-0117	B56 Belt.....	1

Discharge Auger Mount



Item No.	Part No.	Description	Qty.
1.....	61-1902	Discharge Auger Rack.....	1
2.....	62-3448	12" Discharge Auger, 11 Ft.....	1
	62-4162	12" Discharge Auger, 13 Ft.....	1
3.....	100-0529	Threaded Chain Snugger Rod	2
4.....	102-1430	Chain Rack Bracket, Left.....	1
5.....	201-0034	3/8"-16 x 1" Carriage Bolt, Grade 5, ZP.....	12
6.....	201-0284	3/8"-16 x 3/4" Carriage Bolt, Grade 5, ZP.....	14
7.....	202-0071	3/8"-16 Whiz Flange Lock Nut, ZP	26
8.....	202-0094	1/12"-13 Hex Nylon Insert Lock Nut, ZP.....	7
9.....	206-0169	50 x 103 Pitch Chain Includes 2 Convenience Links	1
10.....	225-0040	Clamp Band Set 10"	1
11.....	201-0007	3/8"-16 x 1" Hex Head Bolt, Grade 2, ZP	4
12.....	203-0003	3/8" Flat Washer, ZP.....	4

Discharge Auger



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Discharge Auger Continued

Item No.	Part No.	Description	Qty.
1	61-1892	Guide End Clamp	1
2	61-1893	Crank End Clamp	1
3	61-1894	Crank Support Bracket	1
4	61-1895	Crank	1
5	61-1897	Head	1
6	61-1899	12" Discharge Auger Tube, 11 Ft.	1
	61-3369	12" Discharge Auger Tube, 13 Ft.	1
7	61-1901	Discharge Auger Screw, 11 Ft.	1
	61-3367	Discharge Auger Screw, 13 Ft.	1
8	63-0288	Spout Kit	1
9	100-0544	3/16" x 3/16" x 1" Key	1
10	101-2306	Clean Out Door Cover	2
11	101-2794	Oil Fill Seal Plate	1
12	102-1428	Flat Latch	1
13	102-1433	Roller Shield	1
14	105-0942	Gearbox Support Angle	1
15	201-0004	5/16"-18 x 1-1/4" Hex Head Bolt, Grade 5, Tap	2
16	201-0007	3/8"-16 x 1" Hex Head Bolt, Grade 2, ZP	2
17	201-0016	3/4"-10 x 2-1/2" Hex Tap Bolt	1
18	201-0034	3/8"-16 x 1" Carriage Bolt, Grade 5, ZP	2
19	201-0053	3/8"-16 x 1-3/4" Hex Head Bolt, Grade 2, ZP	4
20	201-0057	3/8"-16 x 1-1/4" Hex Head Bolt, Grade 2, ZP	1
21	201-0060	1/2"-13 x 1" Hex Head Bolt, Grade 5, ZP	4
22	201-0073	5/16"-18 x 1-1/2" Hex Head Bolt, Grade 2, ZP, Tap	1
23	201-0119	5/16"-18 x 3/4" Carriage Bolt, Grade 5, ZP	5
24	202-0002	5/16"-18 Hex Nut, ZP	2
25	202-0003	3/8"-16 Hex Nut, ZP	5
26	202-0015	5/16"-18 Hex Center Dimple Lock Nut, ZP	2
27	202-0070	5/16"-18 Whiz Flange Lock Nut, ZP	7
28	202-0071	3/8"-16 Whiz Flange Lock Nut, ZP	5
29	202-0074	3/4"-10 Flange Whiz Lock Nut	1
30	203-0003	3/8" Flat Washer, ZP	6
31	203-0007	3/4" Flat Washer, ZP	1
32	203-0009	5/16" Lock Washer	2
33	203-0010	3/8" Lock Washer, ZP	4
34	203-0012	1/2" Lock Washer, ZP	4
35	204-0151	5012 x 3/4" W/KW & SS Sprocket	1
36	209-0032	1" Flangette Bearing Insert	1
37	209-0083	3/4" Flangette Bearing Insert	1
38	211-0023	1" Flangette Housing	2
39	222-0014	2.75 x 437 Spring Extension	1
40	224-0315	0.38 Pipe Coupler	1
41	224-0316	3/8" x 3" Nipple	1
42	224-0327	1/4"-28 Grease Zerk	1
43	224-0570	3/8" NPT x 45 Street Elbow	1
44	224-0751	3/8" NPT Vent Plug	1
45	225-0041	Camp Band Set 12"	2
46	228-0011	Gear Box	1
47	250-0060	11/16" x 1" Rubber Grommet	1

Troubleshooting

This section is a condensed chart to help you remedy problems if unsatisfactory operation occurs. If you are unable to determine and correct the trouble, consult your authorized dealer.

TROUBLE	CAUSE	REMEDY
Abnormal Power Requirement	1. Overload on mills.	Running damp, high moisture grain can cause "sticking to the rolls," and cause an abnormal power requirement on new mills. There sometimes can be some sticking of dry grain to new rolls, particularly on oats and barley. This condition should not continue after 200-300 bushels of grain has been run.
	2. Opening grain control gate too fast and too far open.	Always open gate slowly and open only as far as necessary to keep rolls "hungry". Don't overfeed rolls and cause an excess building up of grain in roll pocket between rolls.
Excessive Roll Wear	1. Overfeeding with excess grain continually sliding off top of rolls creates friction and excessive roll wear.	Keep rolls "hungry". Adjust control gate to feed in only amount of grain rolls will take away. Usually overfeeding is not the cause for roll wear on deep-grooved rollers.
	2. Crushing abrasive materials other than grain.	Mills are designed to be used only on grain or similar textured materials.
	3. Foreign matter, such as metal, going between rolls.	We recommend a magnetic trap to remove steel or iron from the grain.
	4. Gravel in grain.	Sand and small gravel is difficult to remove from grain because of similar sizes as grain. Larger gravel and small rocks can be removed by screening with wire hardware cloth on frame mounted in hopper.
Excess Vibration	1. Uneven flow of grain into mill.	Eliminate "surging of grain" into mill as much as possible.
	2. Excess RPM	Recommend operation 900 to 1,000 RPM.
Whole Grain Coming Through Mill	1. Improper setting of rolls.	Rolls should be set closer together to crimp all grain being processed.
	2. Over feeding.	Grain control gate opened so wide rolls will not take all grain and builds up above rolls. This can cause some whole grain to go over top and not between rolls.
	3. Uneven size kernels.	This could be reason for a few small, poorly developed whole kernels going through mill. It is better to not set mill to crack these if in doing so you would "over-roll" the majority of the kernels.
Grain too Fine or Dusting of Grain	1. Over rolling.	Open control gate to allow more grain to feed into rollers or readjust spacing of rolls.
	2. Rolling mixed grain.	If mixed grains of different sizes are run together, to crack or crimp the small grain, the rolls "over roll" or pulverize larger kernels in mixed grain. As a general rule, all grains should be rolled separately and then mixed after rolling.
	3. Failure to reset rolls for different varieties of grain.	Always reset rolls every time a different grain is to be processed.
	4. Very dry grain, particularly when hard.	Open rolls wider than normal to eliminate over-rolling. On extreme cases, grain can be tempered by sprinkling a small amount of water over grain to be rolled and let stand 8 to 12 hours. This is generally done in small holding bin or wagon. The amount of moisture used depends on dryness of grain.

Troubleshooting cont'd

Mill is Hard to Start	1. Grain between rolls.	When grain is between rolls, separate rolls to allow grain to fall through or turn rolls backwards and scoop out grain by hand. The best remedy is to make a practice of closing gate before stopping mill so no grain is left between rolls.
	2. Low Voltage	On electric motor check line loss for low voltage
Belt Breakage or Slippage	1. Overloading roller mill.	Decrease load on roller mill by reducing intake rate.
	2. Belts too loose or too tight.	Tighten as per recommendation.
	3. Using new belts and old belts together.	Always replace with a complete, new matched set.

Warranty

TO BE VALID, THE WARRANTY CARD MUST BE COMPLETED IN ITS ENTIRETY BY AN AUTHORIZED DISTRIBUTOR OR DEALER AND SENT TO AUTOMATIC EQUIPMENT MANUFACTURING COMPANY, P.O. BOX 430, PENDER, NEBRASKA 68047. FAILURE TO DO SO WILL VOID THIS WARRANTY.

The manufacturer warrants all AUTOMATIC roller mills to be free from defects in material and workmanship under the normal use and service for which the machine was intended.

NINETY DAY - At any time within ninety (90) days from date of delivery to the original purchaser, the manufacturer will furnish replacement parts or repair material for any portion of the roller mill found to be defective. Such replacement part or repair material shall be furnished without cost to the owner or the user through an authorized dealer, or F.O.B. factory at manufacturer's option. Automatic liability under this warranty must be for part or parts but not for such labor charges involved for removing and replacing defective parts. The warranty repair period for equipment used for commercial or rental purposes is limited to thirty days. All rolls are guaranteed for life against breakage.

This warranty does not apply to any part of an Automatic roller mill which has been subject to misuse, neglect, alteration, accident, or damage caused by fire, flood, or other damage beyond control of the manufacturer. IN NO EVENT SHALL THE OWNER BE ENTITLED TO RECOVER FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE OR COST OF RENTAL OR REPLACEMENT EQUIPMENT. No responsibility is assumed for delays or failure caused by strikes, Government regulations, or other circumstances beyond the control of the manufacturer or authorized dealer or distributor. Further, tires and tubes are warranted directly by the respective manufacturer only and not by Automatic Equipment Manufacturing Company.

Automatic Equipment Manufacturing Company assumes no liability for damages that might be inflicted on the operator, spectator or general public who might be in the general area while the machine is in operation, or for any cause whatsoever.

Removal of original serial number voids this warranty in its entirety..

It is a continuing policy of Automatic Equipment Manufacturing Company to make improvements. The company reserves the right to make these improvements without incurring any obligation to add them to machines already in the field. Many years of research combined with experience gained through close contact with operators have been drawn upon in designing your mill.

Automatic

Please visit us at www.automaticag.com for our complete line of agricultural equipment.