



Econo-Mizer Grain Spreaders

Models 982, 986 and 996

Owner's Manual

PNEG-1139

Date: 01-19-09

DMC



PNEG-1139

Contents

Chapter 1 Safety	4
Safety Guidelines	4
Safety Instructions	5
Chapter 2 General Precautions	7
Chapter 3 Installation and Operation	8
Installation	8
Adjustment and Operation	9
Adjustment and Operation of Cone Hopper Baffle	10
Chapter 4 Parts List	11
Model 982 Econo-Mizer Grain Spreader	11
Models 986 and 996 Econo-Mizer Grain Spreaders	12
Chapter 5 Troubleshooting Guide	14
Chapter 6 Warranty	15

Safety Guidelines

This manual contains information that is important for you, the owner/operator, to know and understand. This information relates to protecting **personal safety** and **preventing equipment problems**. It is the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of these safety guidelines. To help you recognize this information, we use the symbols that are defined below. Please read the manual and pay attention to these sections. Failure to read this manual and its safety instructions is a misuse of the equipment and may lead to serious injury or death.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.



NOTE indicates information about the equipment that you should pay special attention.

Safety Instructions

Our foremost concern is your safety and the safety of others associated with this equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.

As owner and/or operator, it is your responsibility to know what requirements, hazards and precautions exist, and to inform all personnel associated with the equipment or in the area. Safety precautions may be required from the personnel. Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation where **SERIOUS INJURY** or **DEATH** may occur.

This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

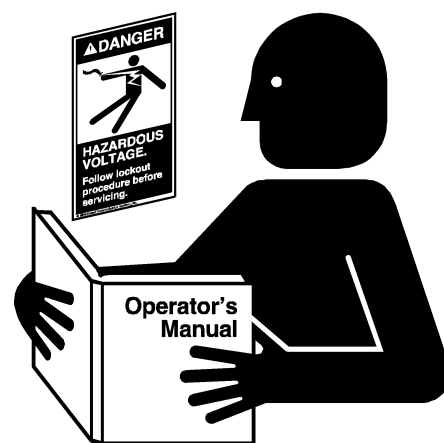
Follow Safety Instructions

Carefully read all safety messages in this manual and safety signs on your machine. Keep signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from the manufacturer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machinery in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual or need assistance, contact your dealer.



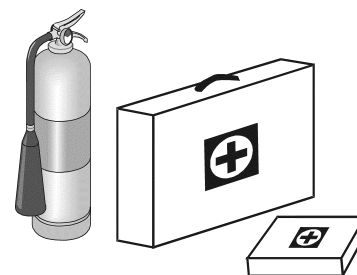
Read and Understand Manual

Prepare for Emergencies

Be prepared if fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.



Keep Emergency Equipment Quickly Accessible

1. Safety

Wear Protective Clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Remove all jewelry.

Long hair should be tied up and back.

Safety glasses should be worn at all times to protect eyes from debris.

Wear gloves to protect your hands from sharp edges on plastic or steel parts.

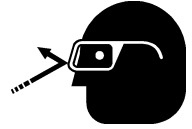
Wear steel toe boots to help protect your feet from falling debris. Tuck in any loose or dangling shoe strings.

A respirator may be needed to prevent breathing potentially toxic fumes and dust.

Wear hard hat to help protect your head.

Wear appropriate fall protection equipment when working at elevations greater than six feet (6').

Eye Protection



Gloves



Steel Toe Boots



Respirator



Hard Hat



Fall Protection





1. *Disconnect all power before servicing or adjusting. Have bin properly grounded.*
2. *Do not enter a bin while the unit is operating without proper eye protection.*
3. *Do not attempt to service or adjust the unit from a ladder unless the ladder is secured to another piece of equipment or to the bin. The grain spreader can swing and will not support a ladder. Be sure electrical power is disconnected.*
4. *Power cords, plug and receptacles should be the grounded type to prevent injury.*
5. *All wiring should be done according to the National Electric Code and by a qualified electrician.*
6. *Read and understand the Operator's Manual.*



Failure to follow these instructions may result in personal injury or property damage.

Spreading Capacities			
Econo-Mizer	982	986	996
Heavy Grain 2500 BPH	18'-30'	31'-48'	31'-48' 3500 BPH
Heavy Grain 3500 BPH	18'-27'	28'-42'	28'-42' 5000 BPH
Light Grain 3500 BPH	18'-24'	25'-36'	25'-36' 5000 BPH

Installation

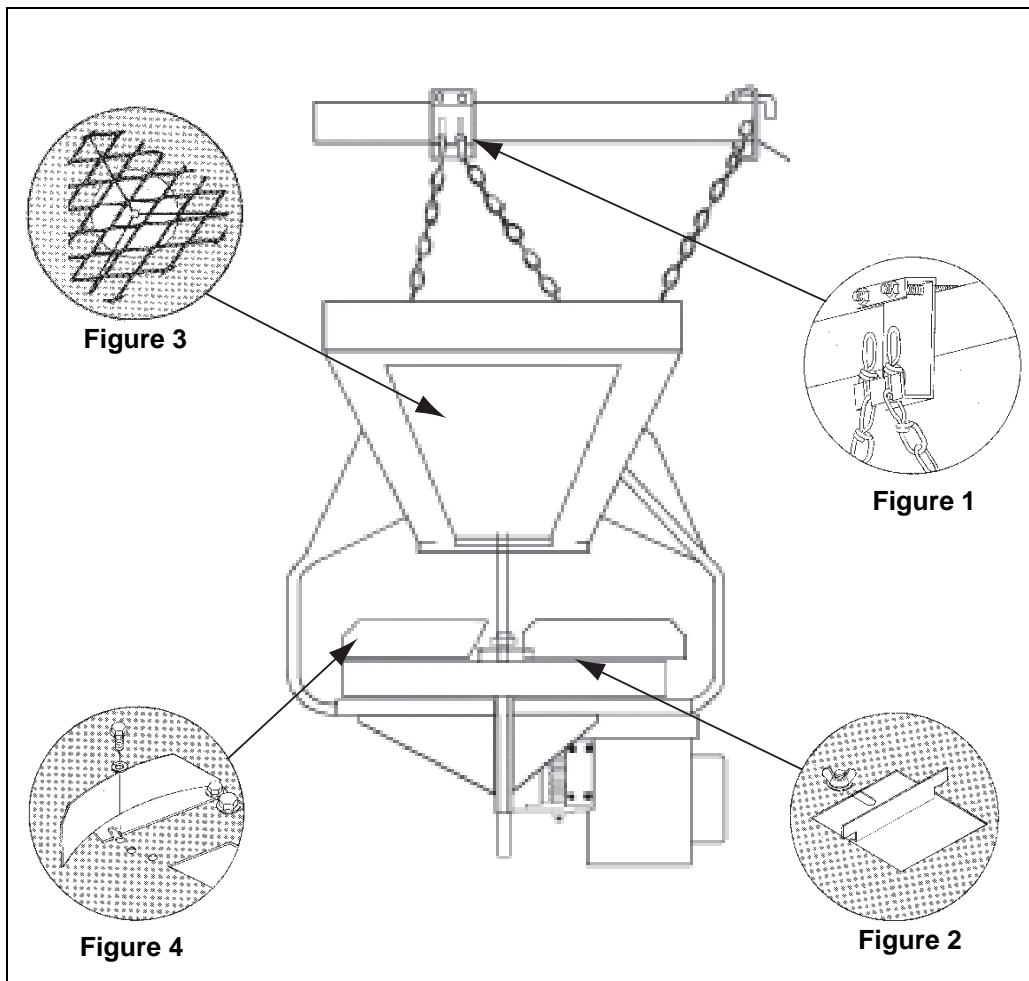


Figure 3A

Hanger Brackets and Chains (Figure 1)

The hanger brackets should be positioned equally spaced around the outer fill hole lip of the bin. Do not tighten the bracket hardware until the spreader has been installed and leveled. Hang the spreader from these brackets by hooking the two (2) chains that are attached to each of the spreader support arms to two (2) adjacent hanger brackets. When properly hung, each set of chains will form a “V” and will restrict random movement of the spreader.

The spreader can be installed at various heights in the bin depending on the bin diameter and roof angle. The spreader should be installed as level as possible by checking with a level and adjusting the position of the hanger brackets and/or the lengths of the chains.

Finish the installation by securely tightening the hanger brackets.

Wiring: Refer to [Wiring Diagram on Page 9](#) and [Table A and Table B on Page 10](#).

Adjustment and Operation

Slide Gate Adjustment *(Figure 2 on Page 8.)*

The slide gates are provided in the pan to allow grain to be spread in the center of the bin. These are usually to be open wider for smaller diameter bins.

Center Cone Adjustment *(Figure 3 on Page 8.)*

It is important that the incoming grain be directed onto the center of the baffle cone in order to disperse the grain evenly in the hopper. This cone functions as a flow control and can be adjusted by lifting it from the spreader and placing the hairpin clip in one of the holes in the baffle post. The cone needs to be adjusted higher above the spreader pan for greater capacities and lower for lesser rates. Best spreading results are obtained when the cone is adjusted to maintain a cushion of grain in the hopper.

Slinger Adjustment *(Figure 4 on Page 8.)*

982, 986 and 996 Econo-Mizers have slingers that can be adjusted to accommodate various sizes of bins and grain densities. The slingers will throw grain farther when in the most advanced position (hole #1) and will not throw as far when in the swept back position (hole #3). A guide line to use for adjusting is to use the third hole for 18' diameter bins, the middle hole for 24'-30' bins and the first hole for 33' and larger bins.

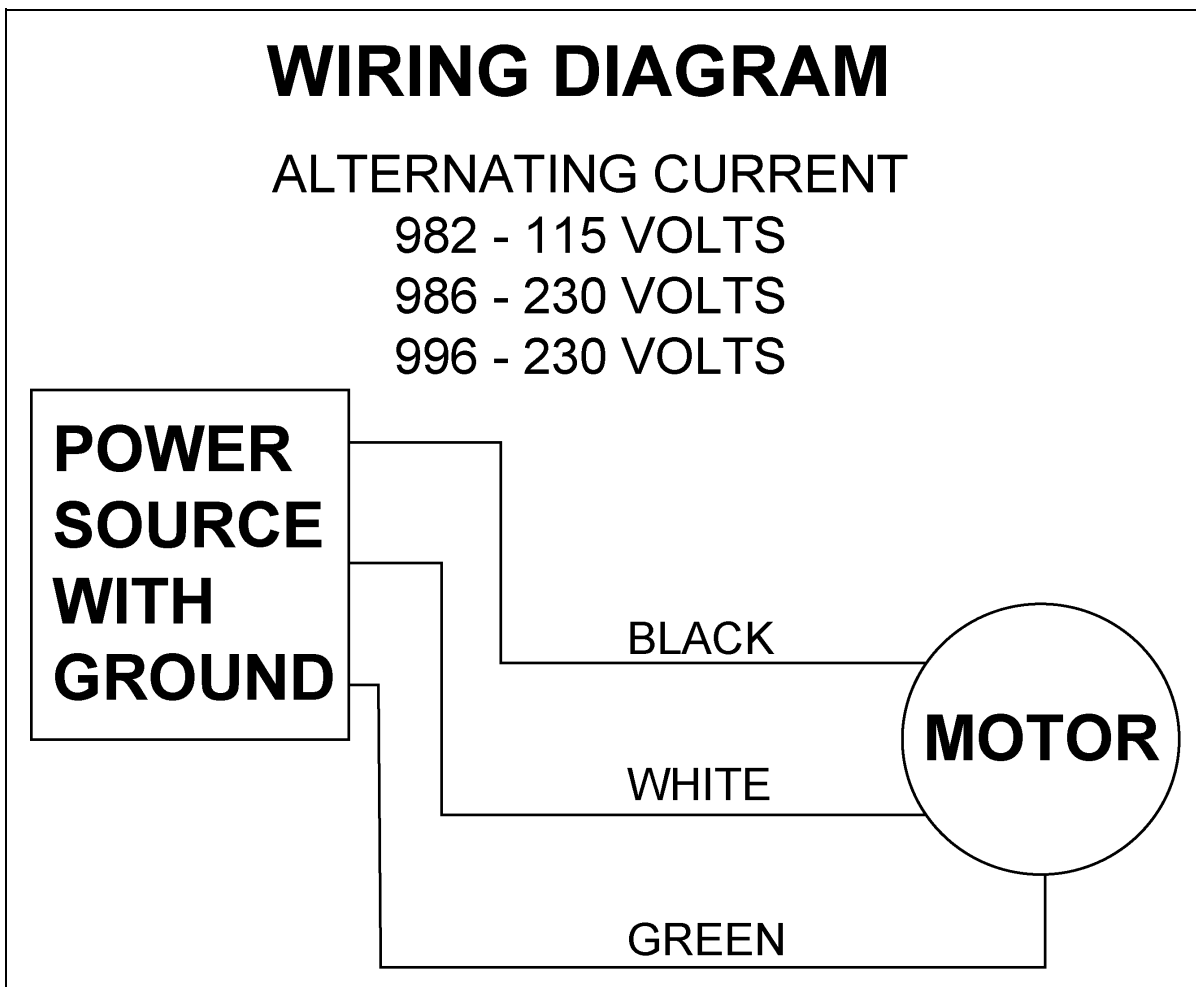


Figure 3B

3. Installation and Operation

Installation

Use [Table A](#) and [Table B](#) to determine the proper size of fuse protection and the length and size of wiring required. Portable extension cords, if used, should be as short as possible to minimize voltage drop. Cords that are too long, or cords that are made of inadequate wire gauge, can cause the motor to fail.

Table A (Wire Size)

Motor	Distance			
	25 Ft.	50 Ft.	100 Ft.	200 Ft.
982 (1/3 HP-115V)	#18 Gauge	#16 Gauge	#12 Gauge	#10 Gauge
986 (1 HP-230V)	#14 Gauge	#14 Gauge	#12 Gauge	#10 Gauge
996 (1-1/2 HP-230V)	#14 Gauge	#14 Gauge	#12 Gauge	#10 Gauge

Table B (Fuse Size)

Motor	Type of Fuse	
	Non-Time Delay	Dual Element Time Delay
982 (1/3 HP-115V)	15	12
986 (1 HP-230V)	15	12
996 (1-1/2 HP-230V)	20	15

Adjustment and Operation of Cone Hopper Baffle

The cone hopper baffle is used to restrict the entering grain and slow it down enough to ensure that the cone will always be full and overflowing with grain. The cone baffle should be adjusted high enough above the spreading pan to allow the overflowing grain to flow between the hopper and the cone baffle and to not flow over the sides of the main hopper. Entering grain should be directed onto the expanded metal restrictor on top of the cone baffle.

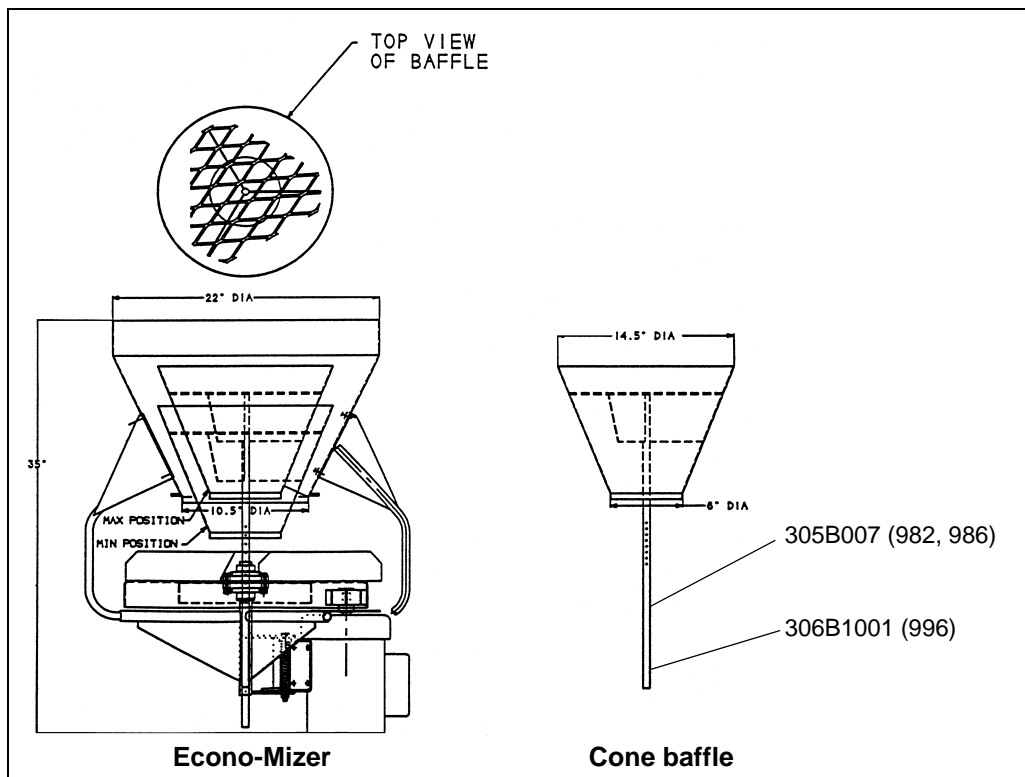
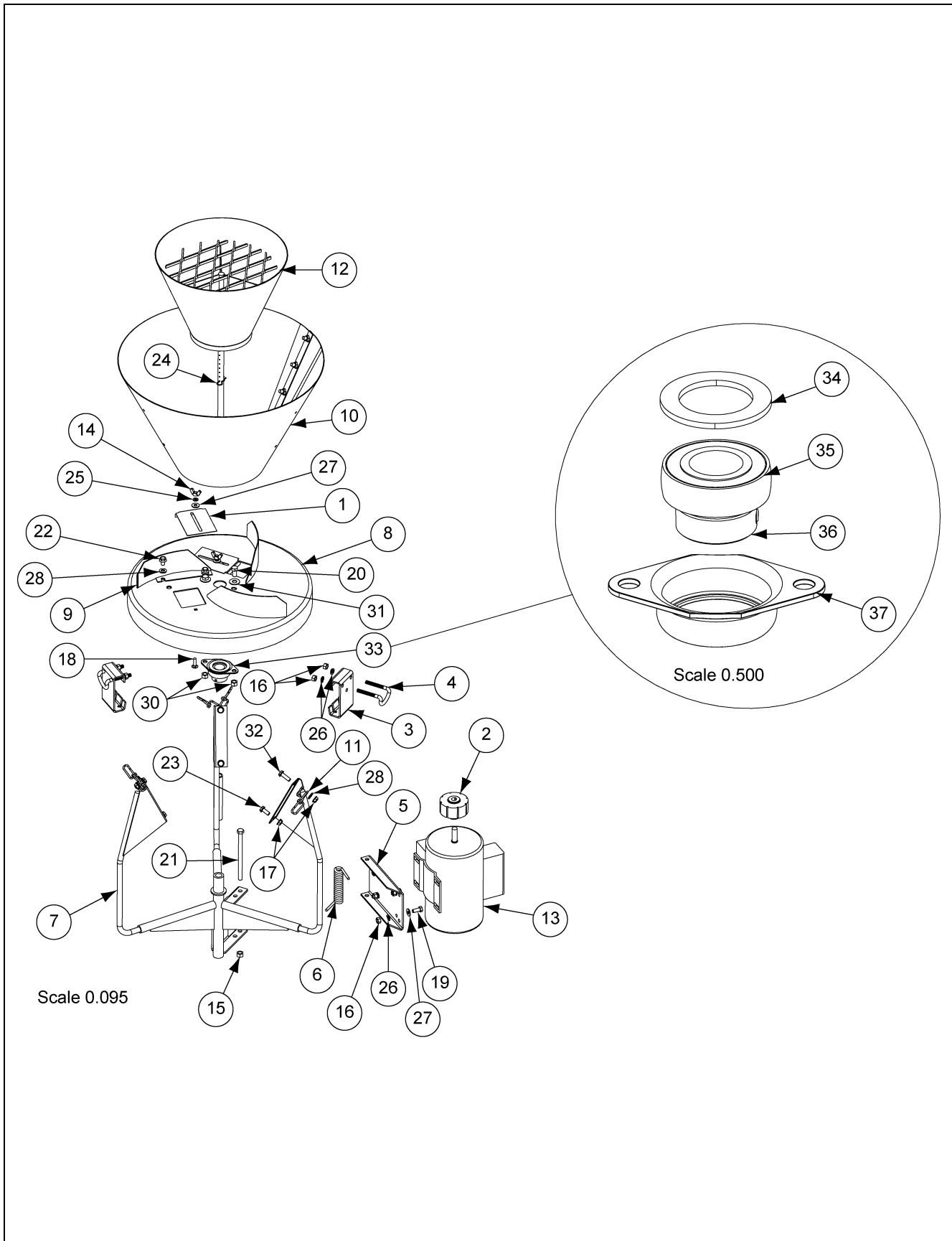
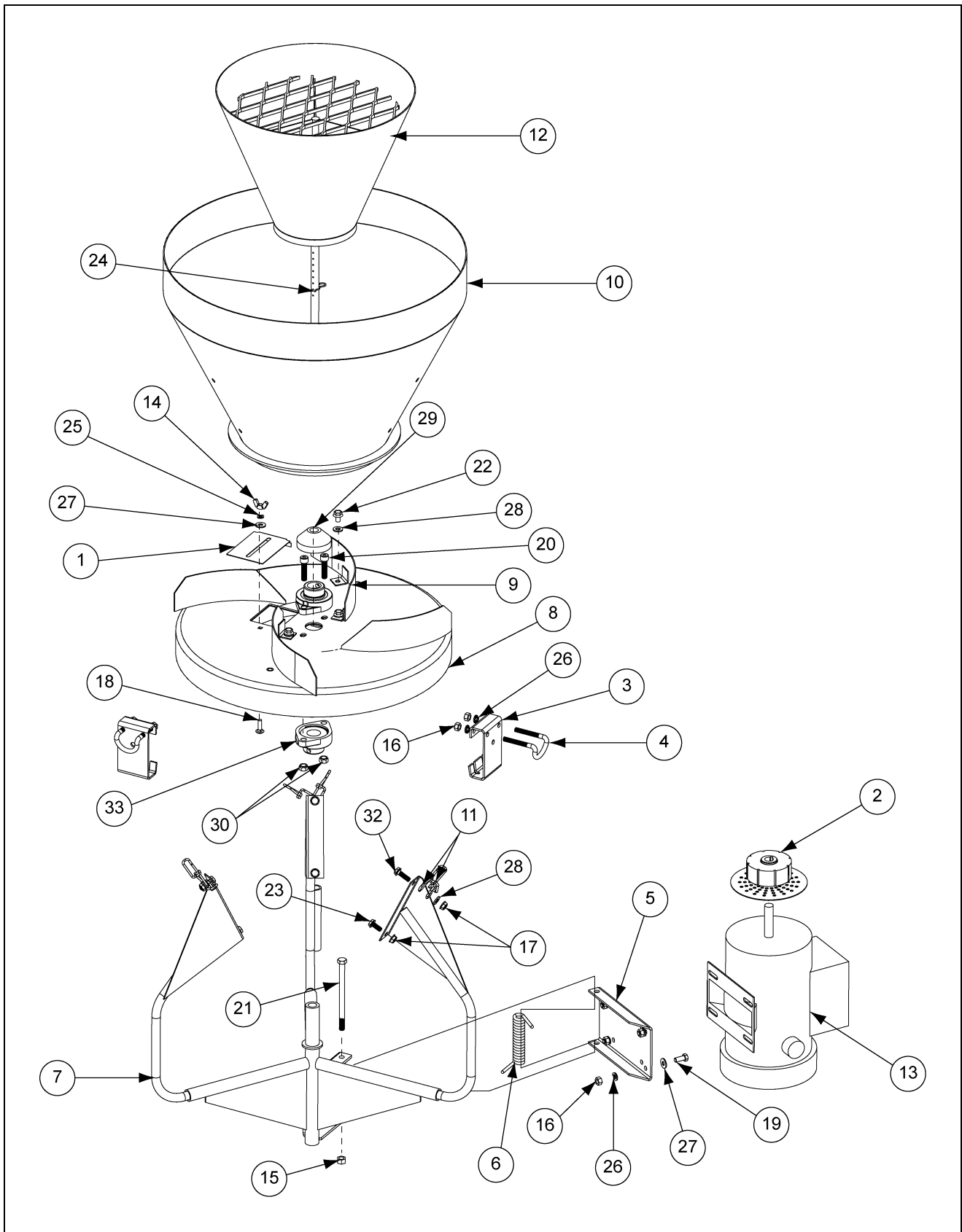


Figure 3C

Model 982 Econo-Mizer Grain Spreader



Models 986 and 996 Econo-Mizer Grain Spreaders

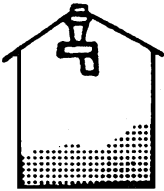
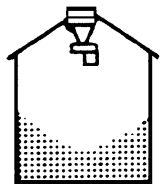
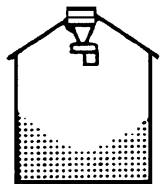
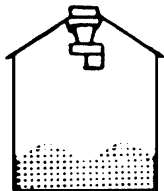
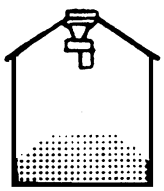


Models 982, 986 and 996 Econo-Mizer Grain Spreaders Parts List

Ref #	Part #			Description	# Required		
	982	986	996		982	986	996
1	301A0110	301A0110	301A0110	Slide Gate	2	1	1
2	301A0122	303A0001	303A0001	Rubber Drive Wheel with Shield	1	1	1
3	301B0220	301B0220	301B0220	Hanger Bracket	3	3	3
4	301B0221	301B0221	301B0221	Hanger U-Bolt Hook	3	3	3
5	302A0304	302A0304	302A0304	Motor Mount Bracket	1	1	1
6	302A0311	302A0311	302A0311	Torsion Spring	1	1	1
7	304A0002	305A002	305A002	Hopper Base and Braces	1	1	1
8	304A0005	305A005	305A005	Pan with Slings	1	1	1
9	304A0015	305A012	305A012	Adjustable Slinger	1	2	2
10	304B0001	304B0001	3061010	Hopper	1	1	1
11	304B0006	305B004	305B004	Support Chain	6	6	6
12	305B007	305B007	3061001	Hopper Baffle	1	1	1
13	3EL5055	--	--	1/3 HP Motor	1	--	--
	--	3EL5082	--	1 HP Motor	--	1	--
	--	--	3EL5088	1-1/2 HP Motor	--	--	1
14	S-4198	S-4198	S-4198	1/4" Wing Nut	2	1	1
15	S-4663	S-4663	S-4663	3/8" Hex Lock Nut	1	1	1
16	S-396	S-396	S-396	5/16" Hex Nut	10	10	10
17	S-3611	S-3611	S-3611	5/16" Hex Flange Lock Nut	6	6	6
18	S-6369	S-6369	S-6369	1/4" x 3/4" Carriage Bolt	2	1	1
19	S-8072	S-8072	S-8072	5/16" x 3/4" Hex Head Bolt	4	4	4
20	S-7105	--	--	3/8" x 3/4" Hex Head Bolt	2	--	--
	--	S-9463	S-9463	3/8" x 1-1/2" Socket Head Cap Screw	--	2	2
21	S-6121	S-6121	S-6121	3/8" x 5-1/2" Hex Bolt	1	1	1
22	2FH0988	2FH0988	2FH0988	5/16" x 1/2" Hex Flange Whiz Lock Screw	2	4	4
23	S-6606	S-6606	S-6606	5/16" x 3/4" Hex	3	3	3
24	3FH0769	3FH0769	3FH0769	0.08" x 1-5/8" Hair Pin	1	1	1
25	S-2041	S-2041	S-2041	1/4" Lock Washer	2	1	1
26	S-1147	S-1147	S-1147	5/16" Lock Washer	10	10	10
27	S-1430	S-1430	S-1430	1/4" Lock Washer	6	5	5
28	S-1937	S-1937	S-1937	5/16" SAE Flat Washer	5	7	7
29	--	3061035	3061035	Bearing Protector Cap	--	1	1
30	S-4663	--	--	3/16" Hex Lock Nut	2	--	--
	--	S-8251	S-8251	3/8" Hex Lock Nut	--	2	2
31	S-248	--	--	7/16" I.D. 1" O.D. Flat Washer	2	--	--
32	S-7470	S-7470	S-7470	5/16" x 1" Flange Bolt	3	3	3
33	PT0106	PT0109	PT0109	1" Bearing with Cast Housing	1	2	2
34	302A0334	--	--	Bearing Spacer Washer	1	--	--
35	PT0202	--	--	1" Light Duty Bearing	1	--	--
36	PT0401	--	--	1" Locking Collar	1	--	--
37	PT0415	--	--	2 Hole Bearing Housing	1	--	--
38	1782	1782	1782	1/2" Thread Connector	1	1	1
39	1EL0553	1EL0553	--	Wire Nut, Ideal Style #71B	3	3	0
40	304E0001	S-7144	305E001	Power Cord	1	1	1
41	--	TFC-0094	TFC-0094	12 Gauge Insulated Fork	--	1	1
42	--	--	00401176	Wire Nut, Orange Ideal #73B	--	--	3

NOTE: Parts 38 through 42 are not shown on exploded views.

5. Troubleshooting Guide

Problem	Correction
<p>Grain is high on one side of bin.</p> 	<ul style="list-style-type: none"> a. Spreader is not hung level. b. Grain is not hitting the center of the baffle. c. The baffle is too high causing the grain to slide off one side. d. The flow of grain is not adequate to fill the center hopper, see Instructions for Cone Baffle Hopper on Page 10.
<p>Grain is high at the center of bin.</p> 	<ul style="list-style-type: none"> a. Slide gate is open too far. b. Check to make sure spreader is running. c. Grain is overflowing the main hopper - raise center baffle or slow grain flow rate.
<p>Grain is low at the center of bin.</p> 	<ul style="list-style-type: none"> a. Slide gate is not open enough. b. Slingers on pan are set too far out.
<p>Grain forms "donut" a few feet from wall.</p> 	<ul style="list-style-type: none"> a. Slingers on pan are set too far out (grain is hitting the wall and bouncing back). b. Open slide gate to fill center of bin. c. Spreader model is not adequate for bin size.
<p>Grain not getting all the way to wall.</p> 	<ul style="list-style-type: none"> a. Spreader pan is turning the wrong direction: Pan should turn clockwise when viewed from the top. b. Rubber drive wheel is slipping - replace if badly worn. c. Spreader is hanging too high in the center of the bin. d. Spreader model is not adequate for bin size.
<p>Spreader swings when starting.</p>	<ul style="list-style-type: none"> a. Hanging chains are not installed correctly - they should be equally spaced and positioned as in Figure 2 on Page 8 of installation instructions.
<p>Spreader does not run.</p>	<ul style="list-style-type: none"> a. Rubber drive wheel may be slipping due to excessive moisture or broken motor mount spring. b. Motor overload may have tripped. It will reset automatically after the motor has cooled. c. Blown fuse or circuit breaker. d. Too much voltage drop. See Table A on Page 10 for proper wiring size.
<p>Spreader pan slows down when loaded.</p>	<ul style="list-style-type: none"> a. Spreader pan is turning the wrong direction: Pan should turn clockwise when viewed from the top.



Limited Warranty

The GSI Group, LLC. ("GSI") warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user's sole remedy (and GSI's only obligation) is to repair or replace, at GSI's option and expense, products that in GSI's judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions: The Limited Warranty period is extended for the following products:

	Product	Warranty Period
AP Fans and Flooring	Performer Series Direct Drive Fan Motor	3 Years
	All Fiberglass Housings	Lifetime
	All Fiberglass Propellers	Lifetime
Cumberland Feeding/Watering Systems	Feeder System Pan Assemblies	5 Years **
	Feed Tubes (1.75" & 2.00")	10 Years *
	Centerless Augers	10 Years *
	Watering Nipples	10 Years *
Grain Systems	Grain Bin Structural Design	5 Years
Grain Systems Farm Fans Zimmerman	Portable & Tower Dryers	2 Years
	Portable & Tower Dryer Frames and Internal Infrastructure †	5 Years

* Warranty prorated from list price:
 0 to 3 years – no cost to end-user
 3 to 5 years – end-user pays 25%
 5 to 7 years – end-user pays 50%
 7 to 10 years – end user pays 75%

** Warranty prorated from list price:
 0 to 3 years – no cost to end-user
 3 to 5 years – end-user pays 50%

† Motors, burner components and moving parts not included. Portable Dryer screens included. Tower Dryer screens not included.

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12th) month from the date of purchase and continuing until the sixtieth (60th) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (i) PRODUCT MANUFACTURED OR SOLD BY GSI OR (ii) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.

For more information, contact the DMC Distribution Center closest to you.



Illiana Distribution Center
1004 E. Illinois St.
Assumption, Illinois 62510
Phone: 1-217-226-5100
Fax: 1-217-226-5070

Clear Lake Distribution Center
5205 4th Ave South
Clear Lake, Iowa 50428
Phone: 1-641-357-3386
Fax: 1-641-357-1928

www.dmc-davidmanufacturing.com