



Model F212
SERVICE MANUAL

Manual No. 513693

Rev.0

This manual provides basic information about the machine. Instructions and suggestions are given covering its operation and care.

The illustrations and specifications are not binding in detail. We reserve the right to make changes to the machine without notice, and without incurring any obligation to modify or provide new parts for machines built prior to date of change.

DO NOT ATTEMPT to operate the machine until instructions and safety precautions in this manual are read completely and are thoroughly understood. If problems develop or questions arise in connection with installation, operation, or servicing of the machine, contact Stoelting.



stoeltingfoodservice.com

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A Few Words About Safety

Safety Information

Read and understand the entire manual before operating or maintaining Stoelting equipment.

This manual provides the operator with information for the safe operation and maintenance of Stoelting equipment. As with any machine, there are hazards associated with their operation. For this reason safety is emphasized throughout the manual. To highlight specific safety information, the following safety definitions are provided to assist the reader.

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

If you need to replace a part, use genuine Stoelting parts with the correct part number or an equivalent part. We strongly recommend that you do not use replacement parts of inferior quality.



Safety Alert Symbol:

This symbol Indicates danger, warning or caution. Attention is required in order to avoid serious personal injury. The message that follows the symbol contains important information about safety.

Signal Word:

Signal words are distinctive words used throughout this manual that alert the reader to the existence and relative degree of a hazard.



The signal word "WARNING" indicates a potentially hazardous situation, which, if not avoided, may result in death or serious injury and equipment/property damage.



The signal word "CAUTION" indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury and equipment/property damage.

CAUTION

The signal word "CAUTION" not preceded by the safety alert symbol indicates a potentially hazardous situation, which, if not avoided, may result in equipment/property damage.

NOTE (or NOTICE)

The signal word "NOTICE" indicates information or procedures that relate directly or indirectly to the safety of personnel or equipment/property.

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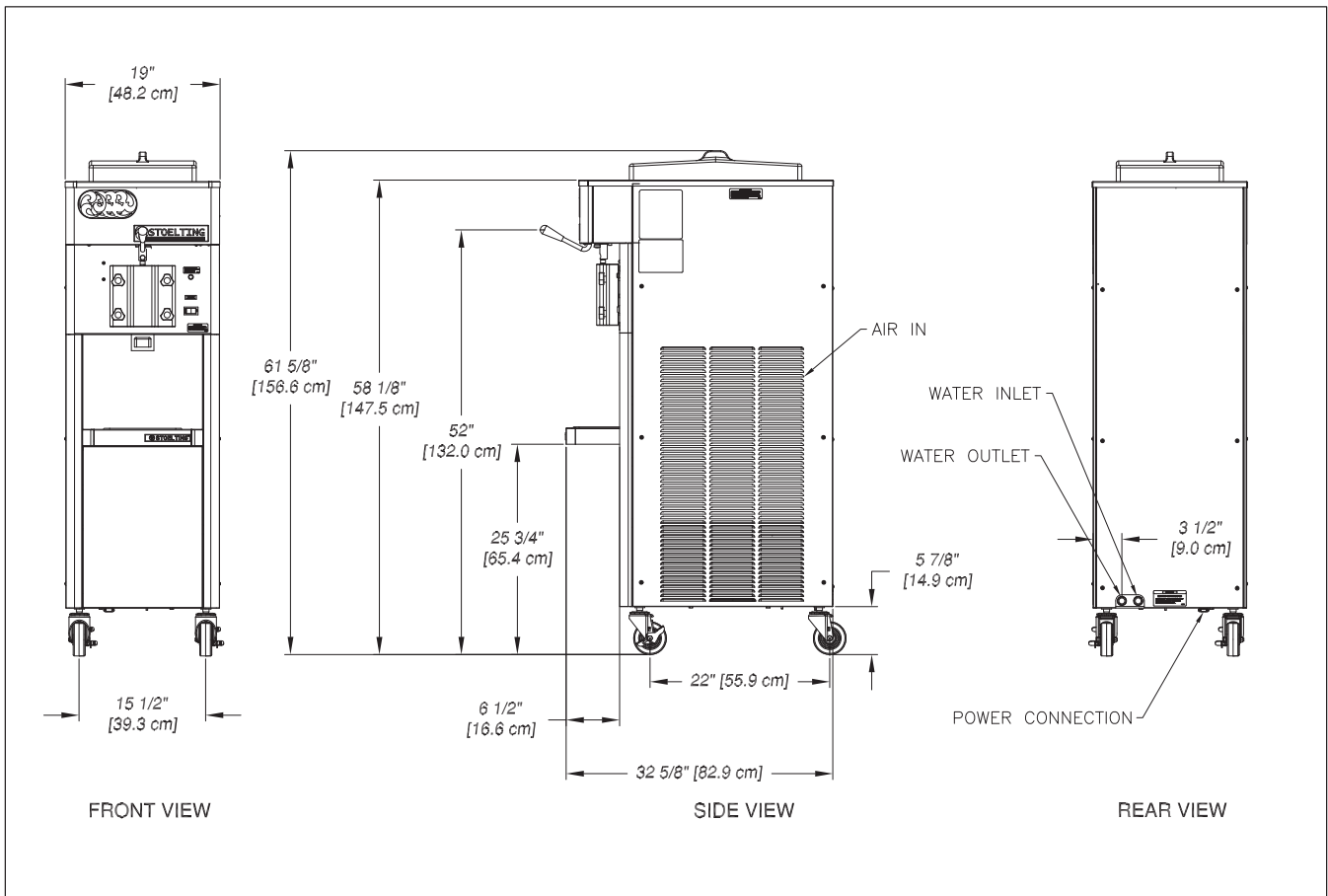
SECTION 1 DESCRIPTION AND SPECIFICATIONS

1.1 DESCRIPTION

The Stoelting F212 floor model machine is gravity fed. The machine is equipped with fully automatic controls to provide a uniform product. The machine will operate with almost any type of shake mix. This manual is designed to help qualified service personnel and operators with the installation, operation and maintenance of the Stoelting F212 gravity machine.



Figure 1-1 Model F212



1.2 SPECIFICATIONS

	F212	
Dimensions	Machine	with crate
width	19" (48,3 cm)	25" (63,5 cm)
height	61-5/8" (156,5 cm)	66" (167,6 cm)
depth	32-5/8" (82,9 cm)	51" (129,5 cm)
Weight	315 lbs (142,8 kg)	410 lbs (185,9 kg)
Electrical	1 Phase, 208-240 VAC, 60Hz	
running amps	10A	
connection type	NEMA6-20P power cord provided	
Compressor	12,000 Btu/hr	
Drive Motor	3/4 hp	
Air Flow	Air cooled units require 3" (7,6 cm) air space on both sides	
Plumbing Fittings	Water cooled units require 3/8" N.P.T. water and drain fittings	
Hopper Volume	7 gallon (26,50 liters)	
Freezing Cylinder Volume	2 gallon (7,57 liters)	

	F212
Refrigerant	R-404A
Charge	38 oz
Suction Pressure (at 72°F)	22-26 psig
Discharge Pressure	225-230 psig
	Hopper
Refrigerant	R-134A
Charge	8 oz
EPR Valve	18-22 psig

1.3 MODES OF NORMAL OPERATION

Following is an explanation of the normal operation modes on the F212 (Refer to Figure 1-3).

NOTE

The timers for the hopper refrigeration system and hopper agitator are independent of the freezing cylinder operation. Every 9 minutes a hopper refrigeration cycle will start. The agitator will turn during this refrigeration cycle. The cycle lasts for 5 minutes.

A. PRE STIR

When the CLEAN-OFF-ON switch is moved into the ON position (or when the spigot is opened if the switch is already in the ON position), the drive motor will start a 4-second pre stir.

B. FREEZING CYCLE

After the pre stir, a freezing cycle begins. The freezing cycle continues until the consistency setting is met. This setting is based on the potentiometer in the header panel. If product consistency is not met within 20 minutes, the machine will operate in the compressor time out mode (See Section 1.4).

NOTE

If the spigot is pulled during a freezing cycle, the 20-minute timer will restart.

C. POST STIR

After the freezing cycle ends, the drive motor will continue to run for an 18 second post stir. The post stir ensures the product does not freeze to the cylinder. If the spigot is opened during the post stir, the machine will check consistency. If the product is at consistency, the machine will move into standby. If the product is not at consistency, the machine will start a freezing cycle.

D. STANDBY

Every 12 minutes during standby the drive motor will start a 3-second pre stir, the compressor will then run for 10 seconds, then the drive motor will do a 3-second post stir.

If the spigot is opened during standby, normal operation mode will begin.

E. CLEAN MODE

When the CLEAN-OFF-ON switch is in the CLEAN position, the drive motor starts and will run for 20 minutes. After the 20 minutes expire, the drive motor will stop and the diagnostic light will flash three times every 4 seconds. It will continue to flash until the CLEAN-OFF-ON switch is moved out of the CLEAN position.

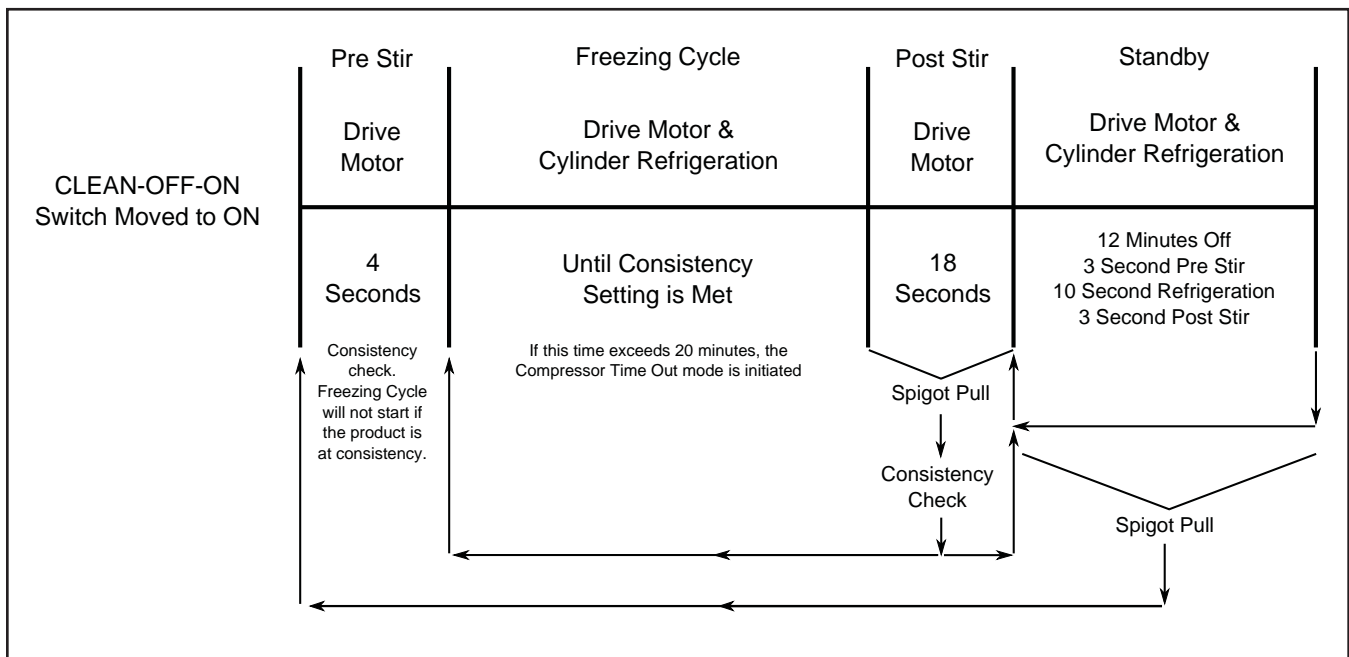


Figure 1-3 Modes of Normal Operation

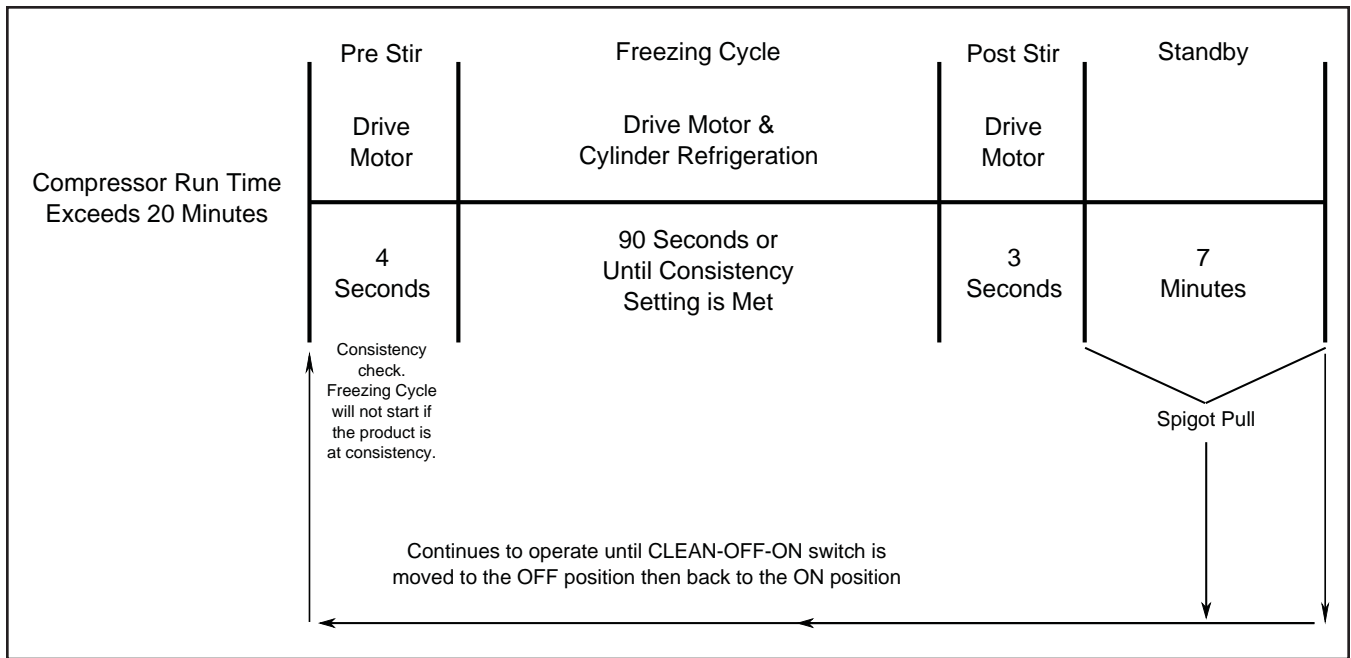


Figure 1-4 Compressor Time Out Mode

1.4 OPERATION DURING AN ERROR MODE

A. COMPRESSOR TIME OUT MODE

If the freezing cycle exceeds 22 minutes, the machine will operate on timers. The diagnostic light will flash once every 4 seconds (Refer to Figure 1-4).

B. LOW MIX MODE

If the mix level falls below the sensor probe, the machine will operate on timers. The ADD MIX light will flash. The machine will continue to operate on timers until the mix level in the hopper is above the sensor probe (Refer to Figure 1-5).

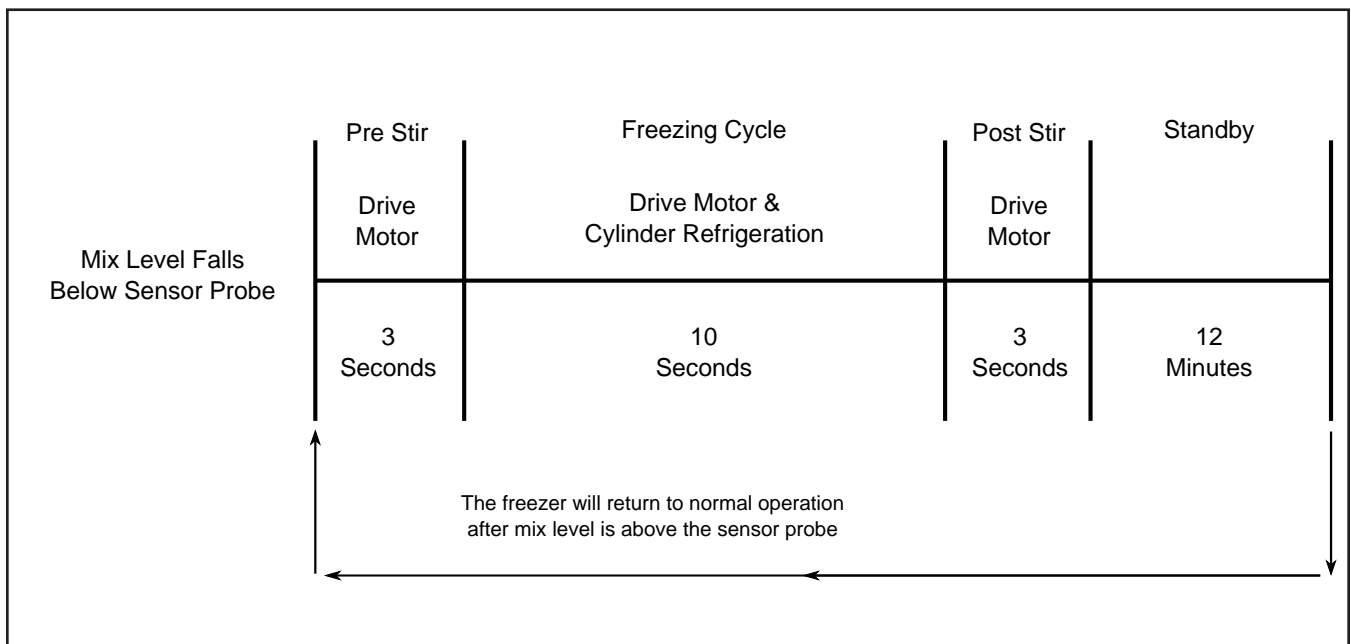


Figure 1-5 Low Mix Mode

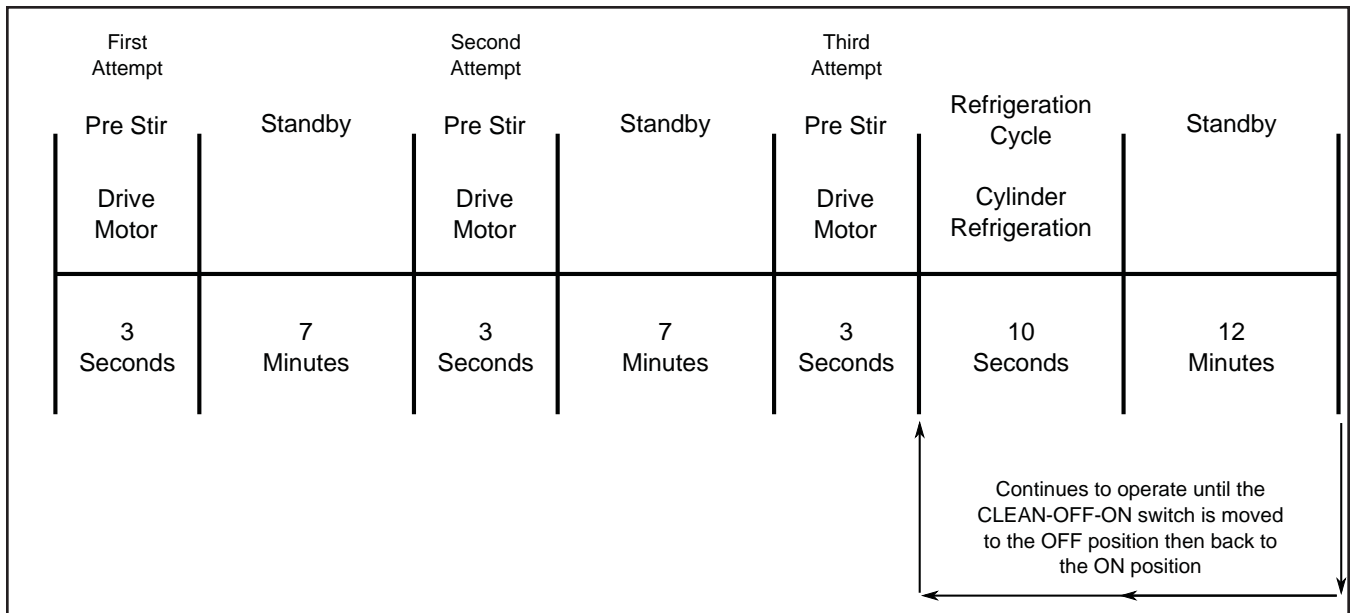


Figure 1-6 Drive Motor Error Mode

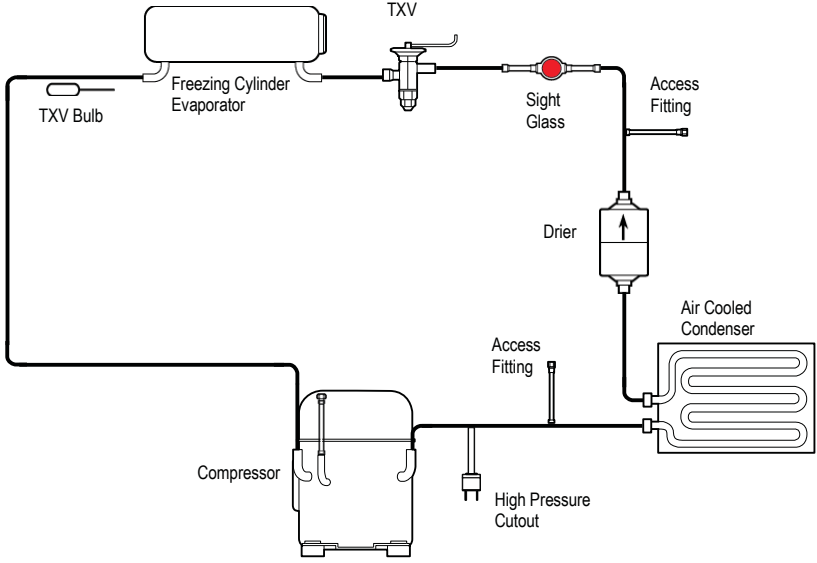
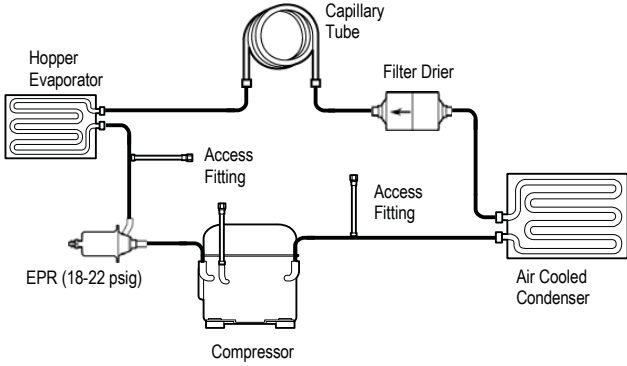
C. DRIVE MOTOR ERROR MODE

If the control does not sense current from the drive motor during a pre stir, the machine will go into standby mode for 7 minutes. After standby, the control will repeat the pre stir and attempt to sense drive motor current. After the third pre stir without sensing drive motor current, the machine will operate on timers and the diagnostic light will flash twice every four seconds (Refer to Figure 1-6). The attempts to sense the drive motor current can be substituted by pulling the spigot.

SECTION 2 REFRIGERATION DIAGRAM AND WIRING DIAGRAMS

2.1 REFRIGERATION DIAGRAM

**Hopper Refrigeration
R134A**



2.2 WIRING DIAGRAM

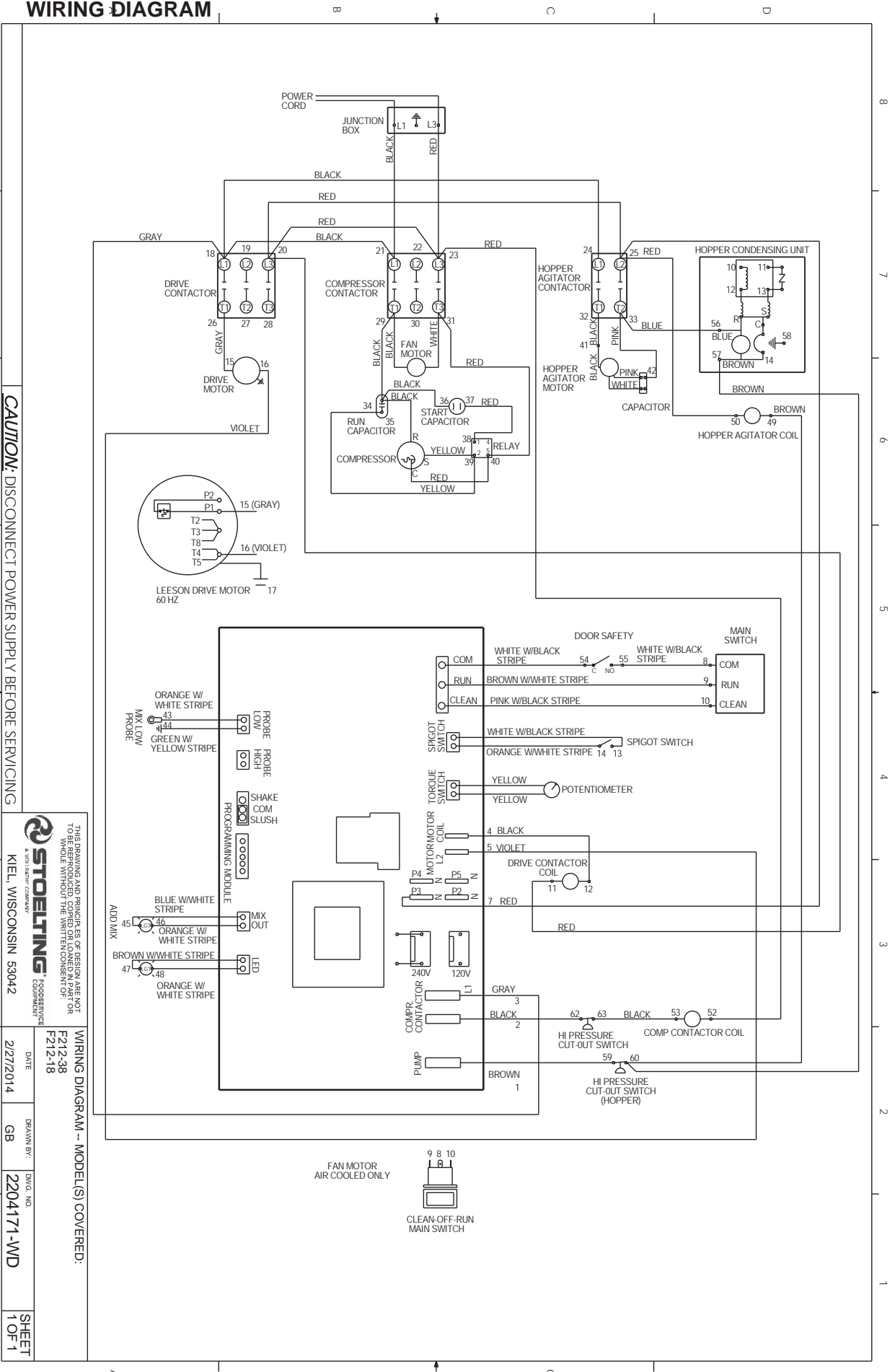
CAUTION: DISCONNECT POWER SUPPLY BEFORE SERVICING

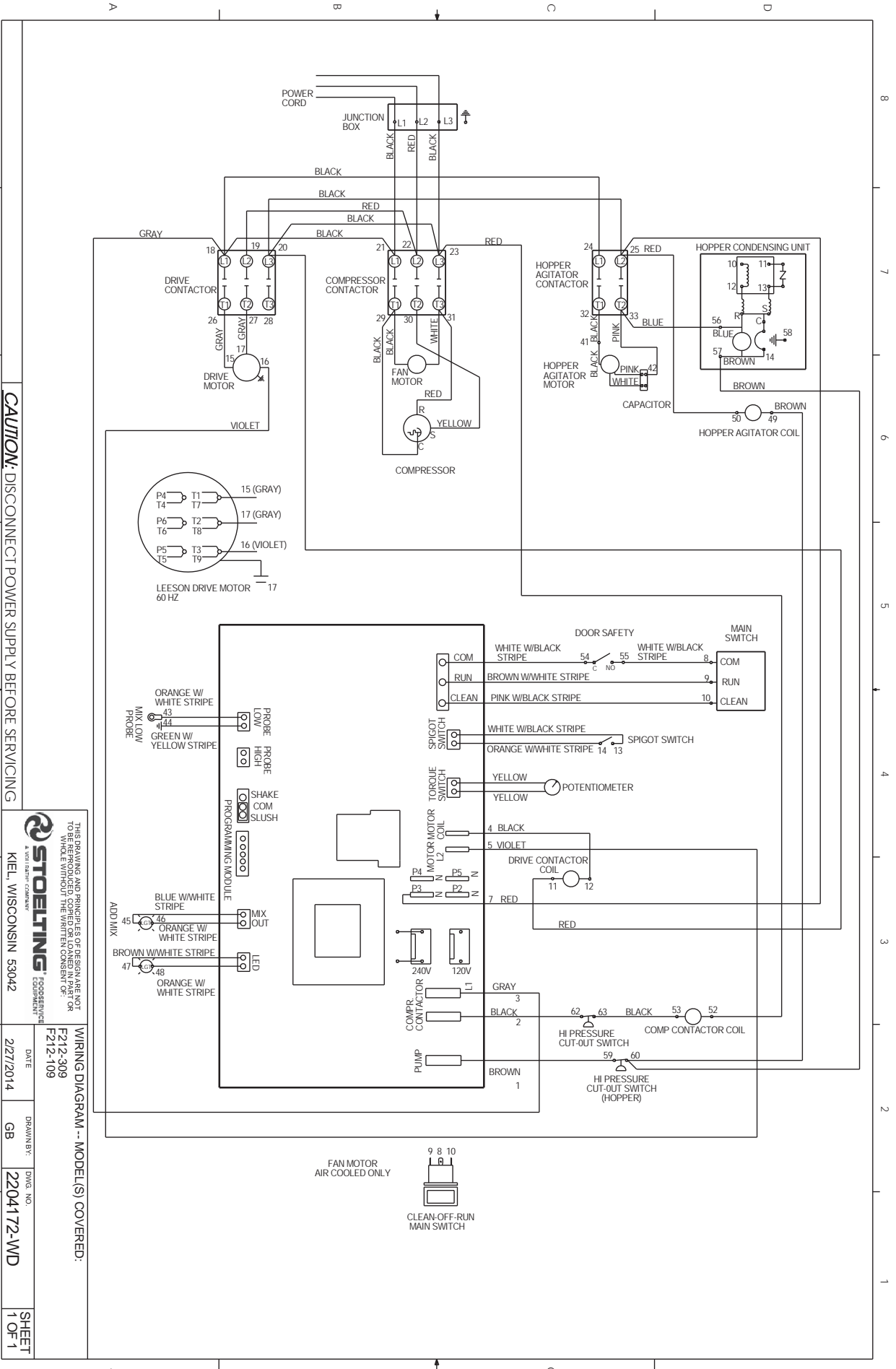


 THIS DRAWING AND PRINCIPAL EG. OR DESIGN ARE NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF:

WIRING DIAGRAM -- MODEL(S) COVERED:
 F212-38
 F212-18
 DATE: 2/27/2014
 DRAWN BY: GB
 DWG. NO.: 2204171-WD
 SHEET 1 OF 1

SHEET 1 OF 1





CAUTION: DISCONNECT POWER SUPPLY BEFORE SERVICING

STOELTING
 A Division of
KIEL, WISCONSIN 53042

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DATE	2/27/2014	DRAWN BY:	GB	DATE	2/27/2014
WIRING DIAGRAM -- MODEL(S) COVERED:	F212-309	DWG. NO.	2204172-WD	SHEET	1 OF 1
	F212-109				

SECTION 3 REPLACEMENT PARTS

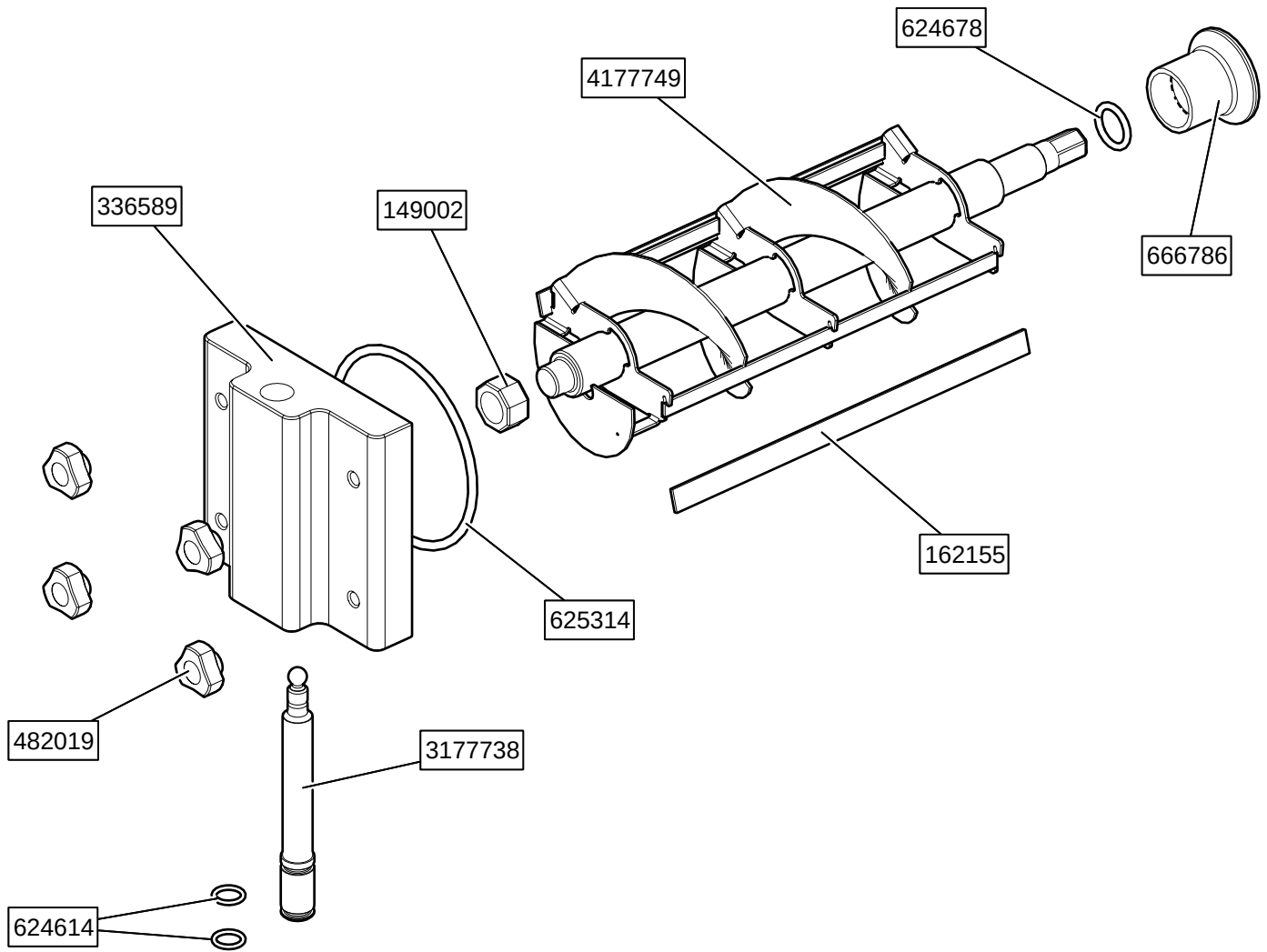
3.1 BRUSHES, DECALS AND LUBRICATION

Part	Description	Quantity
C-1000-26C	Decal - Made In USA	1
208135	Brush - 4" X 8" X 16" (Barrel)	1
208380	Brush - 1/4" X 3" X 14"	1
208401	Brush - 1" X 3" X 10"	1
208410	Brush - 1-1/2" X 4" X 12"	1
324065	Decal - Water Inlet	1
324105	Decal - Caution Electrical Shock	6
324106	Decal - Caution Electrical Wiring Materials	1
324107	Decal - Caution Hazardous Moving Parts	3
324141	Decal - Caution Rotating Blades	1
324200	Decal - High Pressure Cut-Out	1
324208	Decal - Attention Refrigerant Leak Check	2
324242	Decal - Temperature Adjustment	1
324393	Decal - Stoelting Swirl Logo	1
324509	Decal - Cleaning Instructions	1
324566	Decal - Wired According To	1
324584	Decal - Adequate Ventilation 3"	2
324803	Decal - Domed Stoelting Logo (Large) (Header Panel)	1
324804	Decal - Domed Stoelting Swirl (Header Panel)	1
324865	Decal - Standby Light	1
324927	Decal - Motor Compressor Thermally Protected	1
508048	Lubricant - Spline (2 oz Squeeze Tube)	1
508135	Petrol Gel - 4 oz Tube	1

3.2 PANELS AND SCREWS

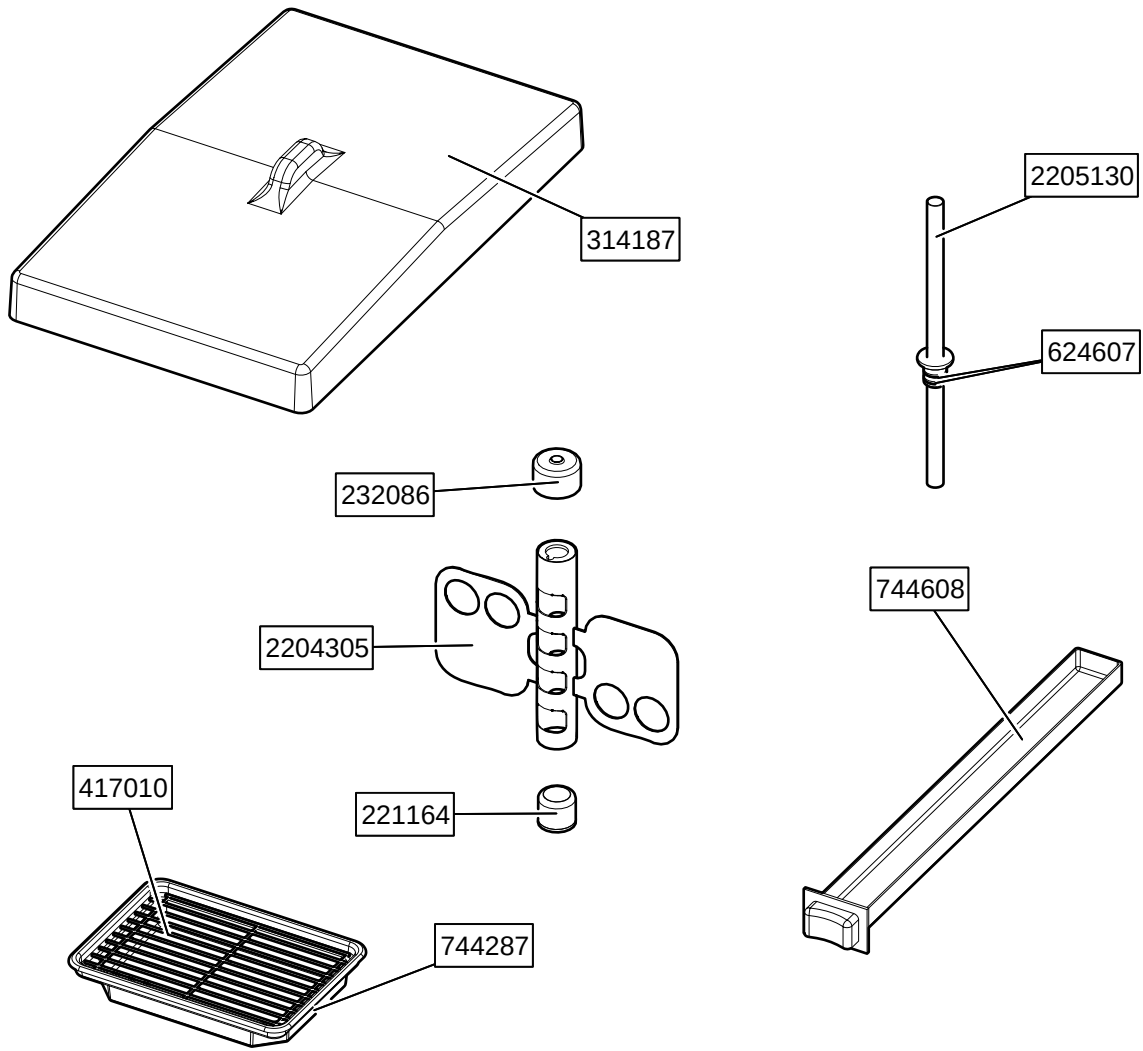
Part	Description	Quantity
644734	Screw - Panel (Sides & Rear)	-
647653	Screw - Panel (Header)	-
649114	Screw (Upper & Lower Front Panels)	-
2204177	Panel - Upper Front	1
2204178	Panel - Lower Front	1
2204179	Panel - Sides	2
2204180	Panel - Rear	1
2204181	Panel - Header	1

3.3 AUGER SHAFT AND FACEPLATE PARTS



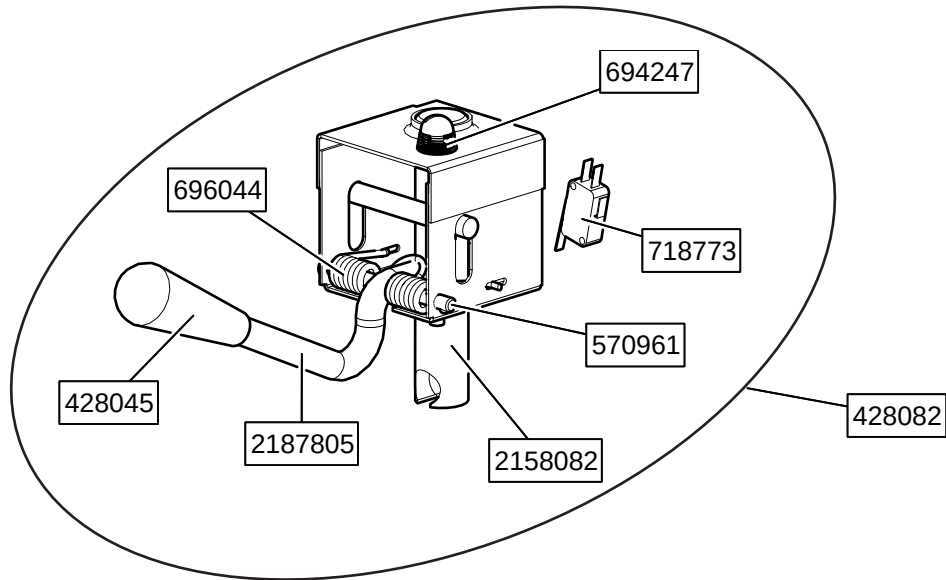
Part	Description	Quantity
149002	Bushing - Front Auger Support	1
162155	Blade - Scraper	2
336589	Door - Front	1
482019	Knob - Front Door (Black)	4
624614-5	O-Ring - Spigot (5 Pack)	2
624678-5	O-Ring - Rear Seal - Black (5 Pack)	1
625314	O-Ring - Front Door - Black	1
666786	Seal - Rear Auger - Black	1
3177738	Spigot Body	1
4177749	Auger Shaft	1

3.4 HOPPER PARTS



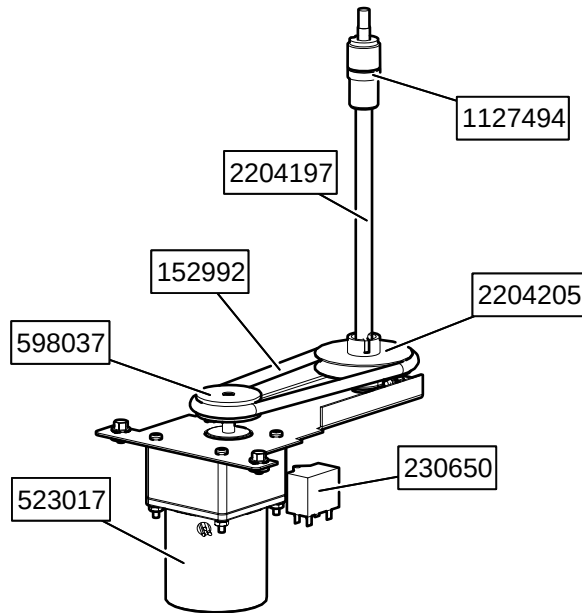
Part	Description	Quantity
221164	Bushing - Agitator Bottom Center Post	1
232086	Cap - Drive	1
314187	Cover - Hopper	1
417010	Grid - Drip Tray	1
624607	O-Ring - Mix Inlet	2
744287	Tray - Drip	1
744608	Tray - Drain	1
2204302	Agitator - Hopper	1
2205129	Mix Inlet Assembly	1

3.5 SPIGOT PARTS



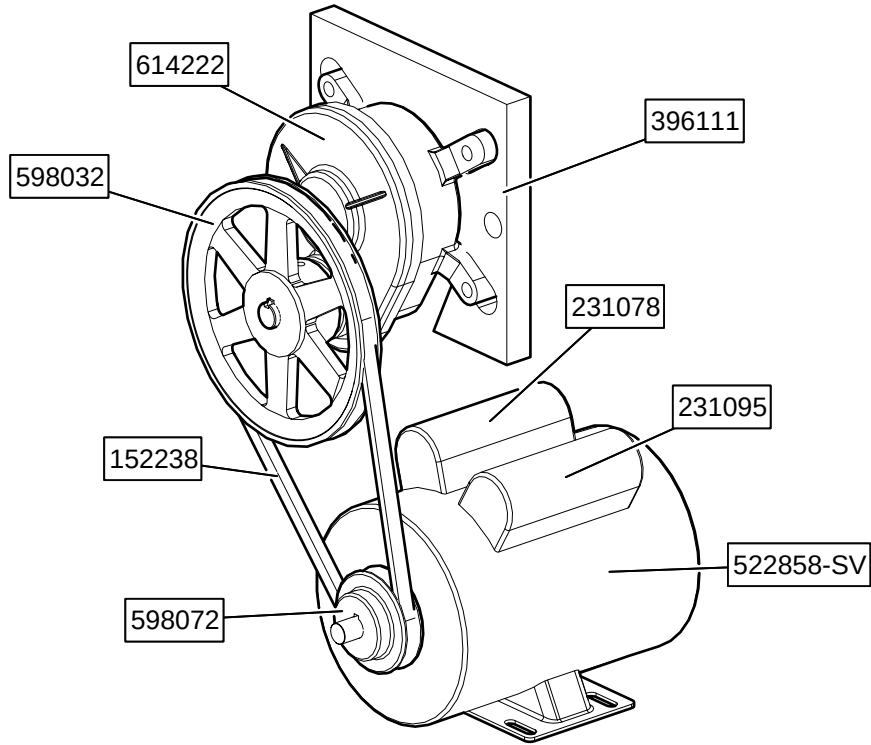
Part	Description	Quantity
428045	Knob - Spigot Handle (Black)	1
428082	Handle Assembly (27°)	1
570961	Pin - Cotterless Clevis (Spigot Handle)	1
694247	Spring - Spigot Adjustment	1
696044	Spring - Torsion (Spigot Handle)	1
718773	Switch - Spigot	1
2158082	Glide - Spigot Socket	1
2187805	Handle - Spigot (Metal Only)	1

3.6 HOPPER AGITATOR



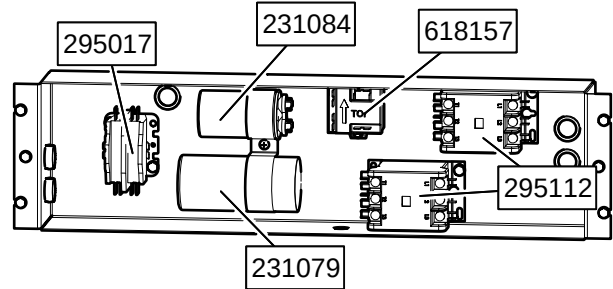
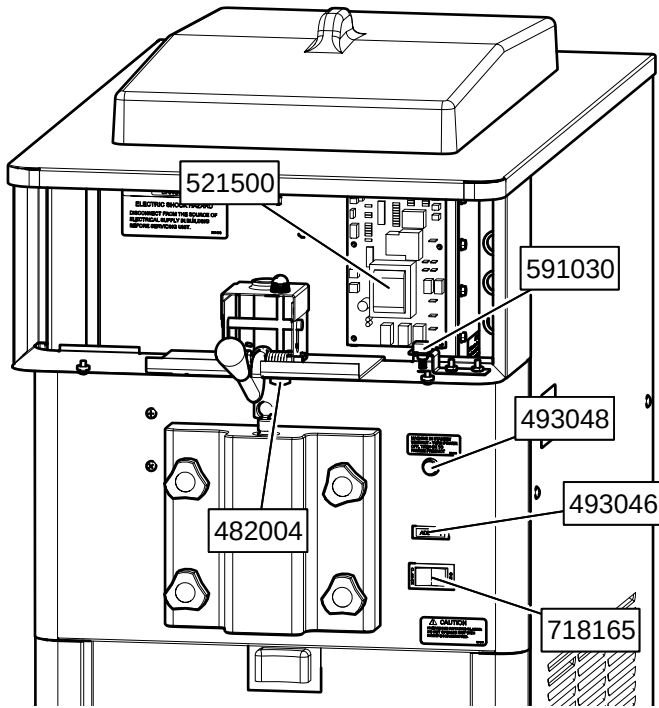
Part	Description	Quantity
152992	Belt - Clear - 3/8" (Hopper Agitator)	1
230650	Capacitor - Hopper Motor (#523017)	1
523017	Motor - Gear (Hopper Agitator)	1
598037	Pulley - Gear Motor (Hopper Agitator)	1
1127494	Bushing (Top of Center Post) (Evaporator Top)	1
2204197	Drive Shaft	1
2204205	Pulley - Drive Shaft (Hopper Agitator)	1

3.7 MOTOR AND SPEED REDUCER



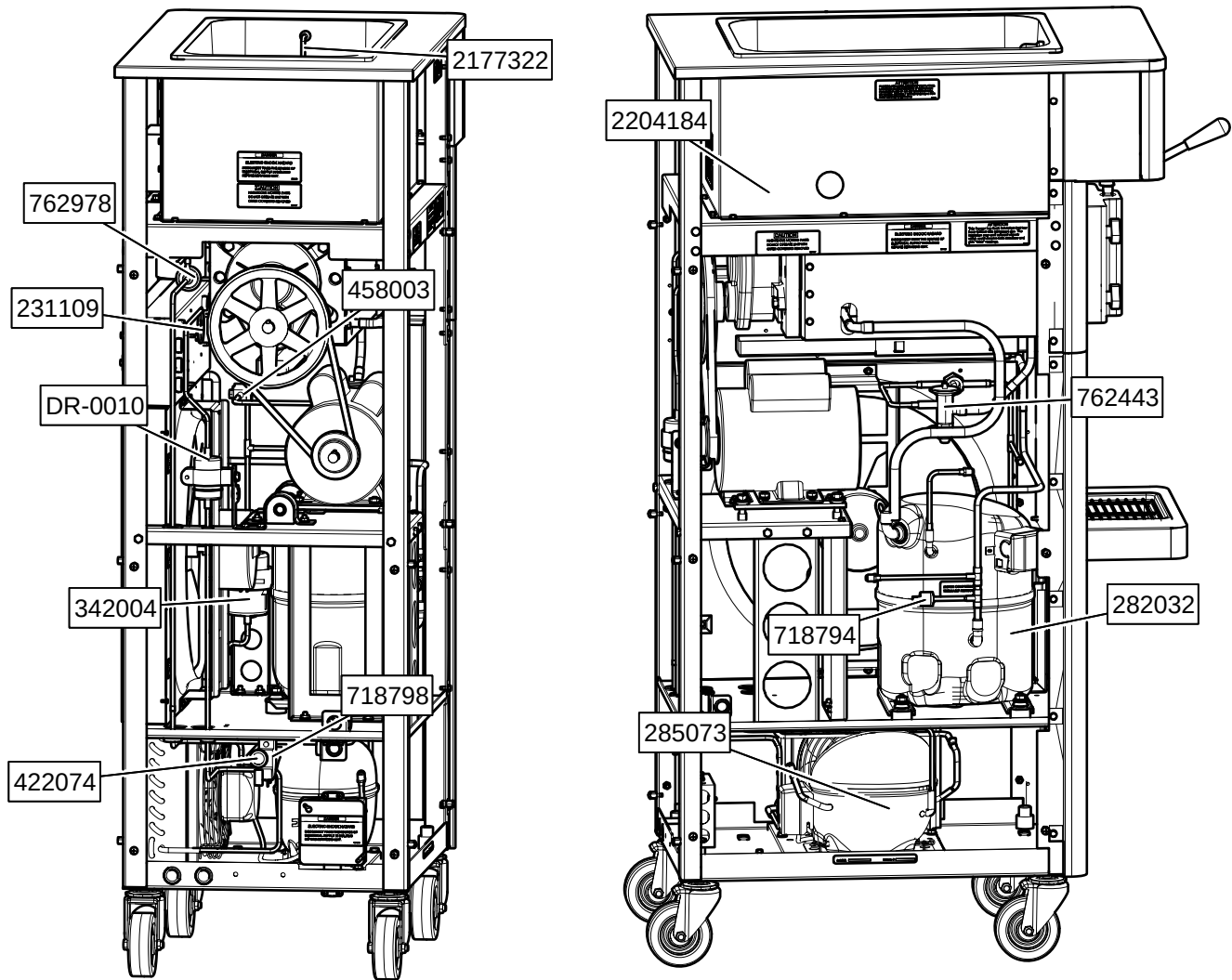
Part	Description	Quantity
152238	Belt - Gripnotch (AX34)	1
231078	Capacitor - Run (#522858 Motor) (2" Wide)	1
231095	Capacitor - Start (#522858 Motor)	1
396111	Gasket - Rear Evaporator	1
522858-SV	Motor - Drive	1
598032	Pulley - Speed Reducer	1
598072	Pulley - Drive Motor	1
614222	Speed Reducer	1

3.8 ELECTRICAL



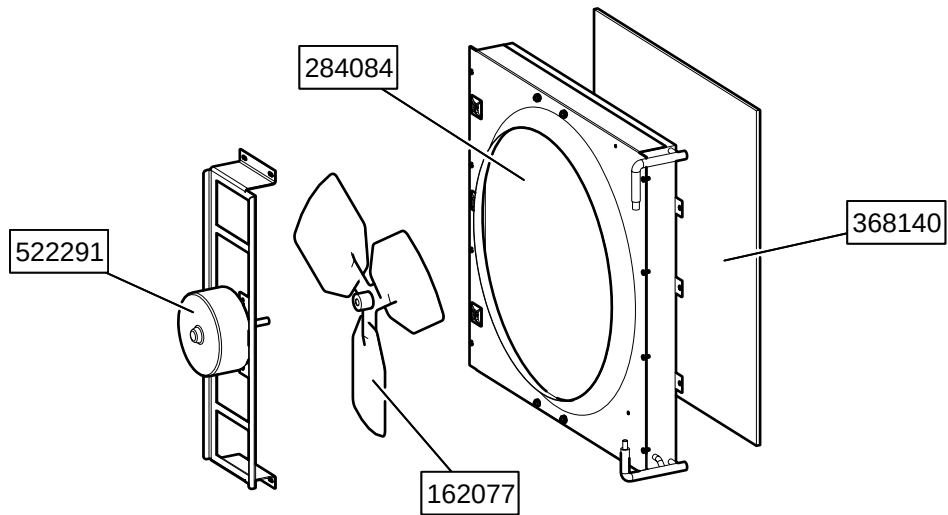
Part	Description	Quantity
231079	Capacitor - Start (#282032 Compressor)	1
231084	Capacitor - Run (#282032 Compressor)	1
295017	Contactor (45CG20AG) (Hopper Agitator)	1
295112	Contactor (Drive & Compressor)	2
430119	Cord - Power	1
482004	Knob (Spigot Adjustment)	1
493046	Light - Mix Low	1
493048	Light - Diagnostic (Round)	1
521500	Board - Program Control	1
591030	Potentiometer - Shake Control	1
618157	Relay - Start (#282032 Compressor)	1
718051	Switch - Reed (Door Interlock)	1
718165	Switch - Rocker (Clean-Off-On)	1

3.9 REFRIGERATION



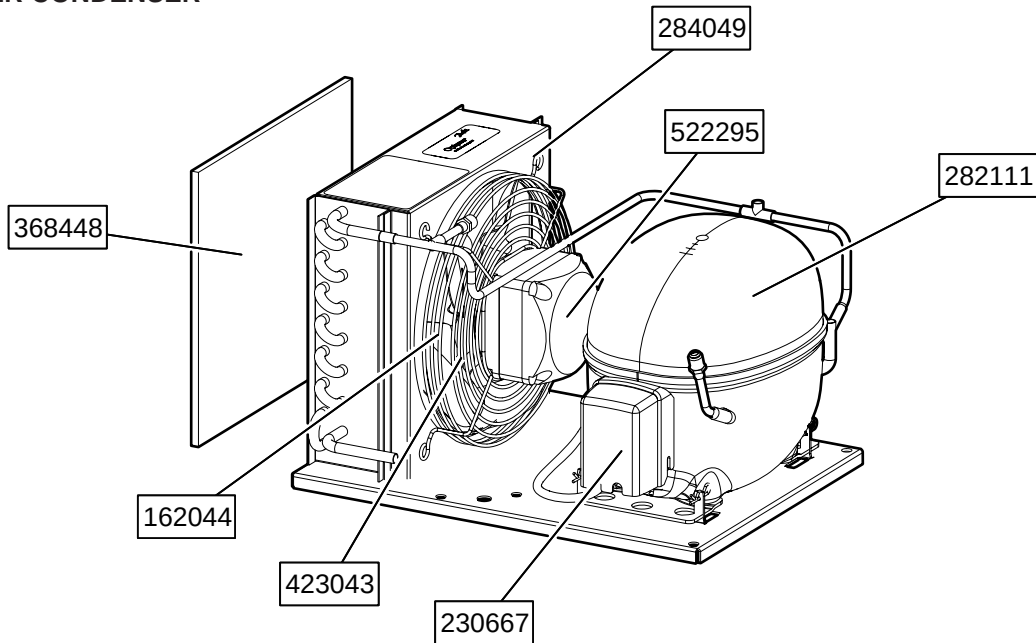
Part	Description	Quantity
DR-0010	Drier - Filter (1/4" OD) (Hopper Liquid)	1
231109	Cap Tube Only	1
282032	Compressor - 1 PH - 60 Hz	1
284104	Condenser (Water-Cooled)	1
285073	Condensing Unit	1
342004	Drier - Liquid Line	1
422074	Grommet - Rubber (Rear Panel - High Pressure Cut Out)	1
458003	Sight Glass	1
718794	Switch - High Pressure Reset	1
718798	Switch - High Pressure Cutout (Hopper)	1
762443	Valve - Expansion	1
762978	Valve - EPR	1
763181	Valve - Water	1
2177322	Probe Assembly - Mix Low (Long) (Hopper)	1
2204184	Evaporator Assembly	1

3.10 AIR COOLED CONDENSER



Part	Description	Quantity
162077	Blade - Fan (#284084 Condenser)	1
284084	Condenser (Air-Cooled)	1
368140	Filter - Air (#284084 Condenser)	1
522291	Motor - Fan (#284084 Condenser)	1

3.11 HOPPER CONDENSER



Part	Description	Quantity
162044	Blade - Fan (#285073 Condensing Unit)	1
230667	Capacitor - Start (#285073 Condensing Unit)	1
282111	Compressor (#285073 Condensing Unit)	1
284049	Condenser (#285073 Condensing Unit)	1
368448	Filter - Air (#285073 Condensing Unit)	1
423043	Guard - Fan (#285073 Condensing Unit)	1
522295	Motor - Fan (#285073 Condensing Unit)	1
618365	Relay - Start (#285073 Condensing Unit)	1



**DOMESTIC WARRANTY
(Including Mexico)
SOFT SERVE / SHAKE EQUIPMENT**

1. **Scope:**
PW Stoelting, L.L.C. (“Stoelting”) warrants to the first user (the “Buyer”) that the freezing cylinders, hoppers, compressors, drive motors, speed reducers, and augers of Stoelting soft serve / shake equipment will be free from defects in materials and workmanship under normal use and proper maintenance appearing within five (5) years, and that all other components of such equipment manufactured by Stoelting will be free from defects in material and workmanship under normal use and proper maintenance appearing within twelve (12) months after the date that such equipment is originally installed.

2. **Disclaimer of Other Warranties:**

THIS WARRANTY IS EXCLUSIVE; AND STOELTING HEREBY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

3. **Remedies:**
Stoelting’s sole obligations, and Buyer’s sole remedies, for any breach of this warranty shall be the repair or (at Stoelting’s option) replacement of the affected component at Stoelting’s plant in Kiel, Wisconsin, or (again, at Stoelting’s option) refund of the purchase price of the affected equipment, and, during the first twelve (12) months of the warranty period, deinstallation/reinstallation of the affected component from/into the equipment. Those obligations/remedies are subject to the conditions that Buyer (a) signs and returns to Stoelting, upon installation, the Start-Up and Training Checklist for the affected equipment, (b) gives Stoelting prompt written notice of any claimed breach of warranty within the applicable warranty period, and (c) delivers the affected equipment to Stoelting or its designated service location, in its original packaging/crating, also within that period. Buyer shall bear the cost and risk of shipping to and from Stoelting’s plant or designated service location.

4. **Exclusions and Limitations:**
This warranty does not extend to parts, sometimes called “wear parts”, which are generally expected to deteriorate and to require replacement as equipment is used, including as examples but not intended to be limited to o-rings, auger flights, auger seals, auger support bushings, and drive belts. All such parts are sold

AS IS.

Further, Stoelting shall not be responsible to provide any remedy under this warranty with respect to any component that fails by reason of negligence, abnormal use, misuse or abuse, use with parts or equipment not manufactured or supplied by Stoelting, or damage in transit.

THE REMEDIES SET FORTH IN THIS WARRANTY SHALL BE THE SOLE LIABILITY STOELTING AND THE EXCLUSIVE REMEDY OF BUYER WITH RESPECT TO EQUIPMENT SUPPLIED BY STOELTING; AND IN NO EVENT SHALL STOELTING BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER FOR BREACH OF WARRANTY OR OTHER CONTRACT BREACH, NEGLIGENCE OR OTHER TORT, OR ON ANY STRICT LIABILITY THEORY.