

OPERATOR & SERVICE MANUAL

IMPORTANT INFORMATION, KEEP FOR OPERATOR

This manual provides information for:

MODEL TA/3 INCLINED MIXER ASSEMBLY *Domestic*

- Stainless Steel
- Tilt-Out Drive System
- Speed Agitator Controls
- For 40, 60 & 80 Gallon Kettles:
DEE 4/T - (40, 60) TA/3
DHT - (40, 60) TA/3
D - (40, 60) TA/3



THIS MANUAL MUST BE RETAINED FOR FUTURE REFERENCE. READ, UNDERSTAND AND FOLLOW THE INSTRUCTIONS AND WARNINGS CONTAINED IN THIS MANUAL.

WARNING

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

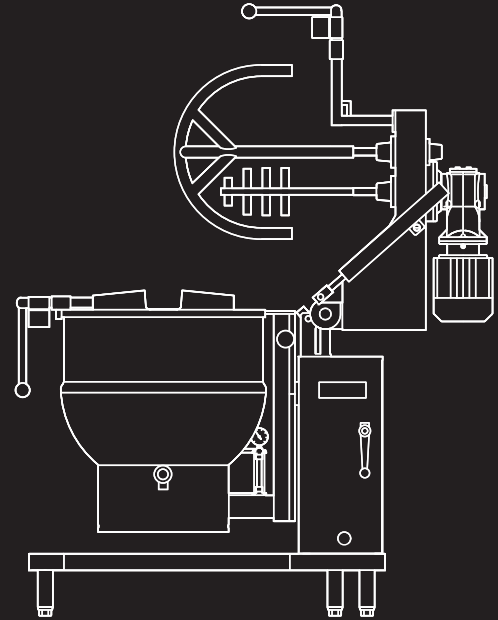
NOTIFY CARRIER OF DAMAGE AT ONCE

It is the responsibility of the consignee to inspect the container upon receipt of same and to determine the possibility of any damage, including concealed damage. Unified Brands suggests that if you are suspicious of damage to make a notation on the delivery receipt. It will be the responsibility of the consignee to file a claim with the carrier. We recommend that you do so at once.

Manufacture Service/Questions 888-994-7636.

Information contained in this document is known to be current and accurate at the time of printing/creation. Unified Brands recommends referencing our product line websites, unifiedbrands.net, for the most updated product information and specifications.

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A **BOVER** COMPANY

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unifiedbrands.net

IMPORTANT - READ FIRST - IMPORTANT

- CAUTION:** BE SURE ALL OPERATORS READ, UNDERSTAND AND FOLLOW THE OPERATING INSTRUCTIONS, CAUTIONS, AND SAFETY INSTRUCTIONS CONTAINED IN THIS MANUAL.
- WARNING:** THIS UNIT IS INTENDED FOR USE IN THE COMMERCIAL HEATING, COOKING AND HOLDING OF WATER AND FOOD PRODUCTS, PER THE INSTRUCTIONS CONTAINED IN THIS MANUAL. ANY OTHER USE COULD RESULT IN SERIOUS PERSONAL INJURY OR DAMAGE TO THE EQUIPMENT.
- WARNING:** THE KETTLE MUST BE INSTALLED BY PERSONNEL QUALIFIED TO WORK WITH ELECTRICITY. IMPROPER INSTALLATION CAN RESULT IN INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.
- DANGER:** ELECTRICALLY GROUND THE UNIT AT THE TERMINAL PROVIDED. FAILURE TO GROUND UNIT COULD RESULT IN ELECTROCUTION AND DEATH.
- WARNING:** AVOID ALL DIRECT CONTACT WITH HOT EQUIPMENT SURFACES. DIRECT SKIN CONTACT COULD RESULT IN SEVERE BURNS.
- WARNING:** AVOID ALL DIRECT CONTACT WITH HOT FOOD OR WATER IN THE KETTLE. DIRECT CONTACT COULD RESULT IN SEVERE BURNS.
- CAUTION:** DO NOT OVER FILL THE KETTLE WHEN COOKING, HOLDING OR CLEANING. KEEP LIQUIDS A MINIMUM OF 2-3" (5-8 CM) BELOW THE KETTLE BODY RIM TO ALLOW CLEARANCE FOR STIRRING, BOILING AND SAFE PRODUCT TRANSFER.
- WARNING:** TAKE SPECIAL CARE TO AVOID CONTACT WITH HOT KETTLE BODY OR HOT PRODUCT WHEN ADDING INGREDIENTS, STIRRING OR TRANSFERRING PRODUCT TO ANOTHER CONTAINER.
- WARNING:** DO NOT STAND ON OR APPLY UNNECESSARY WEIGHT OR PRESSURE ON THE KETTLE FRONT OR POURING LIP. THIS COULD RESULT IN OVERLOAD AND FAILURE OF THE TILT MECHANISM, AND POSSIBLE SERIOUS INJURY AND BURNS TO THE OPERATOR AND OTHERS.
- WARNING:** WHEN TILTING KETTLE FOR PRODUCT TRANSFER:
- 1) WEAR PROTECTIVE OVEN MITT AND PROTECTIVE APRON.
 - 2) USE CONTAINER DEEP ENOUGH TO CONTAIN AND MINIMIZE PRODUCT SPLASHING.
 - 3) PLACE CONTAINER ON STABLE, FLAT SURFACE, AS CLOSE TO KETTLE AS POSSIBLE.
 - 4) STAND TO LEFT OR RIGHT SIDE OF KETTLE WHILE POURING. DO NOT STAND DIRECTLY IN POUR PATH OF HOT CONTENTS.
 - 5) POUR SLOWLY, MAINTAIN CONTROL OF KETTLE, AND RETURN KETTLE BODY TO UPRIGHT POSITION AFTER CONTAINER IS FILLED OR TRANSFER IS COMPLETE.
 - 6) DO NOT OVER-FILL CONTAINER. AVOID DIRECT SKIN CONTACT WITH HOT CONTAINER AND ITS CONTENTS.
- CAUTION:** KEEP FLOORS IN FRONT OF KETTLE WORK AREA CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY, TO AVOID SLIPS OR FALLS.
- WARNING:** FAILURE TO CHECK PRESSURE RELIEF VALVE OPERATION PERIODICALLY COULD RESULT IN PERSONAL INJURY AND/OR DAMAGE TO EQUIPMENT.
- WARNING:** WHEN TESTING, AVOID ANY EXPOSURE TO THE STEAM BLOWING OUT OF THE PRESSURE RELIEF VALVE. DIRECT CONTACT COULD RESULT IN SEVERE BURNS.
- WARNING:** TO AVOID INJURY, READ AND FOLLOW ALL PRECAUTIONS STATED ON THE LABEL OF THE WATER TREATMENT COMPOUND.
- WARNING:** BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC POWER SUPPLY.
- WARNING:** TURN OFF POWER AT THE CIRCUIT BREAKER PRIOR TO INSTALLATION OR SERVICE.

IMPORTANT - READ FIRST - IMPORTANT

- WARNING:** THE MIXER MUST BE INSTALLED BY PERSONNEL WHO ARE QUALIFIED TO WORK WITH ELECTRICITY, IMPROPER INSTALLATION CAN RESULT IN INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.
- WARNING:** ANY MECHANICAL OR ELECTRICAL CHANGE MUST BE APPROVED BY THE GROEN FOOD SERVICE ENGINEERING DEPARTMENT.
- WARNING:** TURN OFF AGITATOR BEFORE ADDING INGREDIENTS OR INSPECTING KETTLE CONTENTS. DO NOT WEAR LOOSE CLOTHING OR JEWELRY AROUND OPERATING MIXER KETTLE. KEEP WELL CLEAR OF ROTATING MIXER ARMS AND PADDLES AT ALL TIMES.
- WARNING:** THE UNIT IS EQUIPPED WITH AN AUTOMATIC CUTOFF SWITCH. IF POWER IS ON WHEN A TILTED MIXER IS LOWERED INTO THE OPERATING POSITION, THE MIXER WILL AUTOMATICALLY START.
- CAUTION:** STARTING WITH THE MIXER SET AT HIGH SPEED MAY CAUSE MATERIAL TO SPILL OUT OF THE KETTLE ON TWO SPEED AND VARIABLE SPEED UNITS.
- CAUTION:** UNDER HEAVY LOAD DO NOT RUN THE MIXER CONTINUOUSLY AT SLOWER THAN 5% OF FULL SPEED. SLOWER OPERATION COULD DAMAGE THE SPEED CONTROL.
- WARNING:** BEFORE CLEANING ANY PART OF THE MIXER, OTHER THAN THE AGITATOR, DISCONNECT THE ELECTRICAL SUPPLY AT THE CIRCUIT BREAKER OR FUSE BOX TO AVOID POSSIBLE ELECTRICAL SHOCK.
- WARNING:** KEEP WATER AND SOLUTIONS OUT OF THE CONTROLS, ELECTRICAL WIRING, AND DRIVE MECHANISM. NEVER SPRAY OR HOSE THE MIXER.
- CAUTION:** WHEN YOU INSTALL THE SCRAPER BLADES, MAKE SURE THE SCRAPER IS CURVED. A REVERSED SCRAPER WILL NOT SCRAPE AND CAN CAUSE SERIOUS DAMAGE.
- WARNING:** AVOID CONTACT WITH CLEANING PRODUCTS IN ACCORDANCE WITH SUPPLIER AND MANUFACTURER RECOMMENDATIONS. MANY CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. READ THE WARNINGS AND FOLLOW DIRECTIONS ON THE CLEANER LABEL.
- WARNING:** USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR THEIR AUTHORIZED DISTRIBUTOR VOIDS ALL WARRANTIES AND CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT.
- WARNING:** SERVICE PERFORMED BY OTHER THAN FACTORY AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.
- WARNING:** BEFORE REPLACING ANY PARTS, SHUT OFF ALL ELECTRIC POWER SUPPLIES TO THE COOKER/ MIXER.
- WARNING:** USE ONLY GROEN-SUPPLIED PARTS. SUBSTITUTION OF UNAUTHORIZED OR GENERIC PARTS CAN RESULT IN BODILY INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT.
- WARNING:** DO NOT PLACE HANDS, TOOLS, OR HOSES IN KETTLE WHILE AGITATOR IS MOVING.
- WARNING:** AGITATOR AREA MUST BE CLEAR OF OBSTRUCTION BEFORE OPERATION. TO RUN AGITATOR:
- 1) ENSURE KETTLE IS FULLY UPRIGHT
 - 2) ENSURE MIXER HEAD IS FULLY DOWN AND LATCHED
 - 3) SET THE SPEED DIAL TO DESIRED SPEED
 - 4) TURN THE START SWITCH TO ON
- TO STOP AGITATOR:
- 1) PRESS THE RED STOP BUTTON OR TURN THE SWITCH TO OFF

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References

NATIONAL FIRE PROTECTION ASSOCIATION
60 Battery March Park
Quincy, Massachusetts 02269

NFPA/70 The National Electrical Code

Equipment Description

The Groen TA/3 assembly is an electrically powered mixer with dual counter rotating agitators, which is incorporated into Groen kettles of 40 to 80 gallon capacity. The main agitator is anchor type and of tubular stainless steel and fitted with scraper fingers. Both the scraper fingers and the agitator assembly are easily removed.

The secondary, counter rotating agitator is constructed of stainless steel and is easily removeable. The mixer has a variable speed drive with electrical speed control.

For a description of the kettle component of your cooker/mixer, see the separate kettle manual.

Installation

WARNING
TURN OFF POWER AT THE CIRCUIT BREAKER PRIOR TO INSTALLATION. THE MIXER MUST BE INSTALLED BY PERSONNEL WHO ARE QUALIFIED TO WORK WITH ELECTRICITY. IMPROPER INSTALLATION CAN RESULT IN INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

ANY MECHANICAL OR ELECTRICAL CHANGE MUST BE APPROVED BY THE GROEN FOOD SERVICE ENGINEERING DEPARTMENT.

WARNING
TO PREVENT POSSIBLE ELECTRIC SHOCK, GROUND THE UNIT AT THE TERMINAL PROVIDED.



Your Groen mixer has been test operated at the factory and is furnished with all internal wiring. It is complete and ready for final connection. A wiring diagram is furnished at the rear of this manual.

A. INSTALLATION

1. Set the cooker/mixer in place and level it. If the mixer is a tilting model, confirm that there is enough rear or side clearance, depending on model, and overhead clearance to tilt the mixer safely through its entire tilting range. Provide enough clearance to permit access for service as well. Cooker/Mixers are provided with flanged feet and/or mounting plates.
2. Provide the proper electric power supply as specified on the electrical information plate attached to the mixer. Observe local codes and/or The National Electrical Code in accordance with ANSI/NFPA 70 - latest edition. The installation must conform to the code that has the more strict requirements.
3. Your mixer requires a permanent connection with the electrical service. Use waterproof conduit and waterproof connectors for this connection. Install the conduit fittings on the side or bottom of the equipment box, not on the top.
4. Any electrical service for the kettle will require a separate connection. See the specific kettle manual.
5. Use the following check list to confirm that the installation is correct.
 - Unit level (reference to kettle rim)
 - Adequate clearance for tilting
 - Access for service
 - Unit fastened down
 - Mixer power supply conforms to information plate and code
 - Electrical conduit and connections are waterproof
 - Mixer grounded

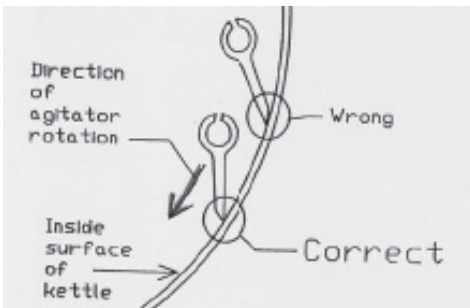
For instructions on installing the kettle component of your cooker/mixer, see the separate kettle manual.

Installation

WARNING
TURN OFF AGITATOR BEFORE ADDING INGREDIENTS OR INSPECTING KETTLE CONTENTS. DO NOT WEAR LOOSE CLOTHING OR JEWELRY AROUND OPERATING MIXER KETTLE. KEEP WELL CLEAR OF ROTATING MIXER ARMS AND PADDLES AT ALL TIMES.



Slip-on Coupling



B. INITIAL START-UP

After the mixer is installed, take the following actions to confirm that the equipment is operating correctly.

1. For a tilting model, tilt the mixer through its complete tilting range to ensure that there is no hazard or interference.
2. Make sure the agitator is properly coupled with its drive shaft. The mixer agitators have slip-on couplings. The drive pin of each shaft must be positioned at the end of the J-slot in the mating coupling. (See photograph at left)
3. Carefully examine the primary agitator to verify that each finger is positioned correctly as shown in the figure at left.
4. When the mixer is in operating position, the scraper blades should touch the inside of the kettle during at least part of each revolution of the agitator.
5. At the circuit breaker or fuse box, turn on the electric power supply to the mixer.
6. Switch on the drive and confirm that the mixer operates smoothly throughout its speed range.
7. Make sure the agitator turns in the correct direction, so it pushes the nylon scraper blades ahead of the agitator bar.

If the unit functions as described above, it is ready for use. If the unit does not function as intended, call your local Groen authorized service agency.

For instructions on initial start-up of the kettle component of your cooker/mixer, see the separate kettle manual.

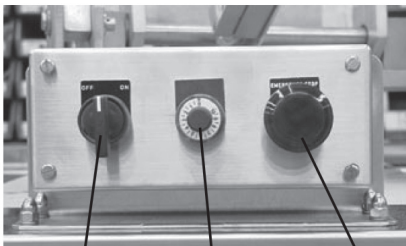
Operation

WARNING
TURN OFF AGITATOR BEFORE ADDING INGREDIENTS OR INSPECTING KETTLE CONTENTS. DO NOT WEAR LOOSE CLOTHING OR JEWELRY AROUND OPERATING MIXER KETTLE. KEEP WELL CLEAR OF ROTATING MIXER ARMS AND PADDLES AT ALL TIMES.

WARNING
THE UNIT IS EQUIPPED WITH AN AUTOMATIC TILT CUTOFF SWITCH. IF POWER IS ON WHEN A TILTED MIXER IS LOWERED INTO OPERATING POSITION, THE MIXER WILL AUTOMATICALLY START.

CAUTION
STARTING WITH THE MIXER SET AT HIGH SPEED MAY CAUSE MATERIAL TO SPILL OUT OF THE KETTLE ON VARIABLE SPEED UNITS.

CAUTION
UNDER HEAVY LOAD DO NOT RUN THE MIXER CONTINUOUSLY AT SLOWER THAN 5% OF FULL SPEED. SLOWER OPERATION COULD DAMAGE THE SPEED CONTROL.



ON/OFF Switch 3 Speed Control Knob Emergency Stop Switch

1. Before you operate the mixer, make sure that the agitator is firmly connected with the drive shaft and properly positioned in the kettle. The agitator must be positioned so every scraper blade touches the kettle during at least part of each revolution. To connect the agitator:
 - a. Slip-on Coupling: Slide the coupling up onto the shaft as far as it will go. Then turn the agitator and pull it down, so that the drive pin on the shaft becomes firmly seated against the end of the J-slot.
 - b. Bolted Coupling:
 1. Guide the two pins of the drive shaft into the holes in the coupling.
 2. With the lobe of the cam pointing up, and while holding the two cam bolts, insert the bolts through the larger holes in the side of the coupling. The bolts must pass the flat part of the shaft, and through the smaller holes in the other side of the coupling.
 3. Turn the cam bolts toward the shaft 1/8 turn or until the lobe of the cam is snug against the flat side of the shaft.
 4. Fasten the bolts in place with the supplied hex nuts, and tighten the nuts.
2. If the mixer has been tilted up, lower it into operating position.
3. Turn on electric power to the unit at the circuit breaker or fuse box.
4. Switch on the drive.
5. Set the desired mixing speed.
 - a. On a variable speed drive with electrical speed control, turn the speed adjustment knob.
6. To stop the mixer, switch off the drive. If the cooker/mixer will be cleaned or serviced, or will not be used for a week or longer, cut off all power to the unit at the circuit breaker or fuse box.
7. Switch off the drive, before you tilt the mixer. To tilt the mixer, first unlatch it. For some units, you may need to tilt the kettle forward slightly to let the agitator clear the kettle wall as you tilt the mixer.
8. As you tilt the mixer out of the kettle, clean any clinging product from the agitator, so product will not drip onto the outside of the kettle or surroundings, and so the weight of product will not make the mixer fall down.

To operate the kettle component of your cooker/mixer, see the separate kettle manual.

Cleaning

WARNING

BEFORE CLEANING ANY PART OF THE MIXER, OTHER THAN THE AGITATOR, SHUT OFF ALL ELECTRIC POWER TO THE COOKER/MIXER AT THE CIRCUIT BREAKER OR FUSE BOX, TO AVOID POSSIBLE ELECTRIC SHOCK. KEEP WATER AND SOLUTIONS OUT OF THE CONTROLS, ELECTRICAL WIRING, AND DRIVE MECHANISM. NEVER SPRAY OR HOSE THE MIXER.

CAUTION

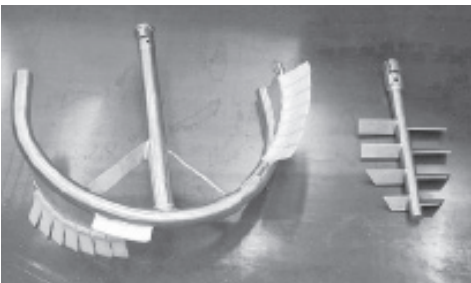
WHEN YOU CONNECT THE SCRAPER WITH THE YOKE, MAKE SURE THE SCRAPER IS CURVED THE SAME WAY AS THE KETTLE. A REVERSED SCRAPER WILL NOT SCRAPE AND CAN CAUSE SERIOUS DAMAGE.

WARNING

AVOID CONTACT WITH ANY CLEANER, AS RECOMMENDED BY THE SUPPLIER. CAREFULLY READ THE WARNINGS AND FOLLOW THE DIRECTIONS ON THE LABEL OF THE CLEANER. MANY CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES, AND CLOTHING.

CAUTION

NEVER LEAVE A SANITIZER IN CONTACT WITH THE SURFACE OF STAINLESS STEEL LONGER THAN 20 MINUTES. LONGER CONTACT CAN CAUSE CORROSION.



A. SUGGESTED TOOLS & MATERIALS

1. A good stainless steel cleaner.
2. Stiff brush.
3. Sanitizer Solution

B. PROCEDURE

1. Wash the agitator as soon as possible after use. If the unit is in continuous use, thoroughly clean and sanitize all parts of the mixer at least once every 12 hours
2. Disassemble the scrapers and clean them along with the rest of the agitator, then reassemble them. To disassemble a scraper:
 - a. Decouple both agitators from the drive shafts (see photo on page 6). Just lift the agitator and rotate it in the "J" slot to decouple.
 - b. Lay both agitators on flat surface (top photo at left)
 - c. Remove hairpin clip from agitator (bottom photo at left)
 - d. Remove scraper blades.
 - e. Reverse procedure to assemble. CAUTION - verify that the scraper blade is assembled correctly (see figure on page 6).
3. Prepare a hot solution of the cleaning compound as instructed by the supplier. Wash the agitator parts and rinse them well. Use a cloth moistened with the cleaning solution to clean other parts of the mixer.
4. To remove materials stuck to the agitator, use a brush, sponge, cloth, plastic or rubber scraper, or plastic wool along with the cleaning solution. To make washing easier, let the cleaning solution soak into the residue. When you clean the stainless steel parts, do not use any abrasive material (like metal sponges or scouring powder) or metal implement (like a spoon, scraper, or wire brush) that might scratch the surface. Scratches make the surface hard to clean and provide places for bacteria to grow. Do not use steel wool, which may leave particles imbedded in the surface and cause eventual corrosion and pitting.
5. As part of the daily cleaning program, clean all surfaces that may have been soiled. Remember to check such parts as the back and underside of the drive housing.
6. When the agitator needs to be sanitized, use a sanitizing solution equivalent to one that supplies 100 parts per million available chlorine. Obtain advice on the best sanitizing agent from your supplier of sanitation products. Following the supplier's directions, apply the sanitizer after the agitator has been washed, then rinse off the sanitizer completely. It is recommended that the agitator be sanitized just before use.
7. The exterior of the unit may be polished with a good quality stainless steel cleaner.

Cleaning procedures for the kettle component of your cooker/mixer are described in the separate kettle manual.

Maintenance

WARNING

USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY GROEN OR THEIR AUTHORIZED DISTRIBUTOR VOIDS ALL WARRANTIES AND CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT. SERVICE PERFORMED BY OTHER THAN FACTORY AUTHORIZED PERSONNEL WILL VOID ALL WARRANTIES.

WARNING

BEFORE REPLACING ANY PARTS, SHUT OFF ALL ELECTRIC POWER SUPPLIES TO THE COOKER/MIXER.

A. PERIODIC SERVICE

1. The interior of control and drive housings should be kept clean and dry.
2. Electrical wiring should be kept securely connected and in good condition.
3. Regular service of the mixer should include cleaning the motor and checking the reducer gearcase. Check oil level at 3000 hours of operation or every 6 months. Change oil completely every 3 years or every 15,000 hours. Lubricant type is GG Artic SHC 23" Food grade lubricant (Mobil product).
4. Every six (6) months lubricate all grease fittings on the transfer case with a USDA approved food grade grease/lubricant. Wipe off excess lubricant.

B. COMPONENT REPLACEMENT

All internal wiring is marked as shown on the schematic drawings in this manual. Be sure that new components are wired in the same manner as the old components.

C. SERVICE RECORDS

A Service Log is provided At the rear of this manual. Each time service is performed on this equipment, enter the date on which the work was done, what was done, and who did it. Keep this log with the equipment.

Service procedures for the kettle component of the cooker/mixer are described in the separate kettle manual.

Troubleshooting

Your Groen Mixer will operate smoothly and efficiently if properly maintained. However, the following is a list of checks to make in the event of a problem. If the actions suggested do not solve the problem, call your authorized Groen Service Representative. For the phone number of the nearest agency, check the Unified Brands web site at unifiedbrands.net, ask your area Groen representative or call the Groen Parts and Service Department. If an item on the list is followed by X, the work should only be performed by a qualified service representative.

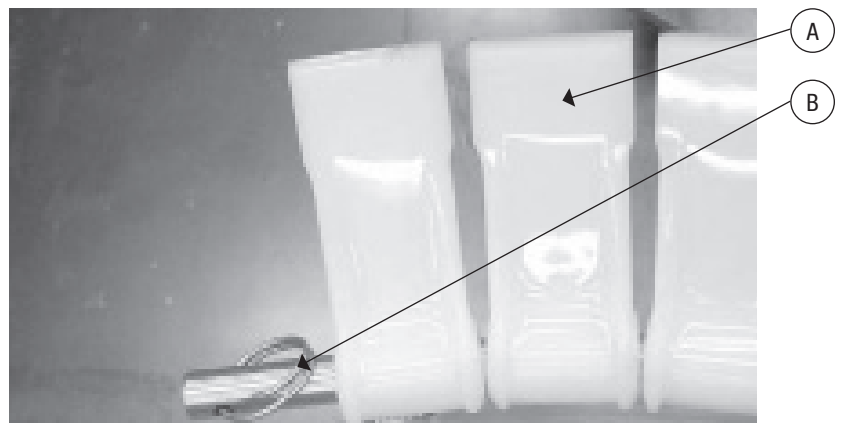
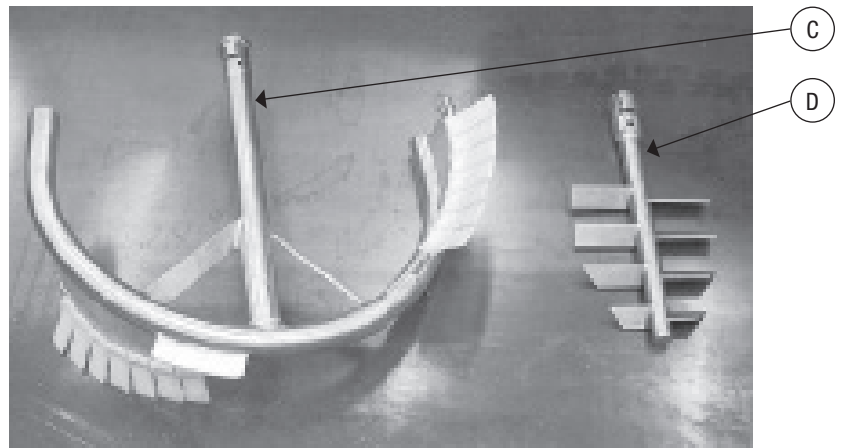
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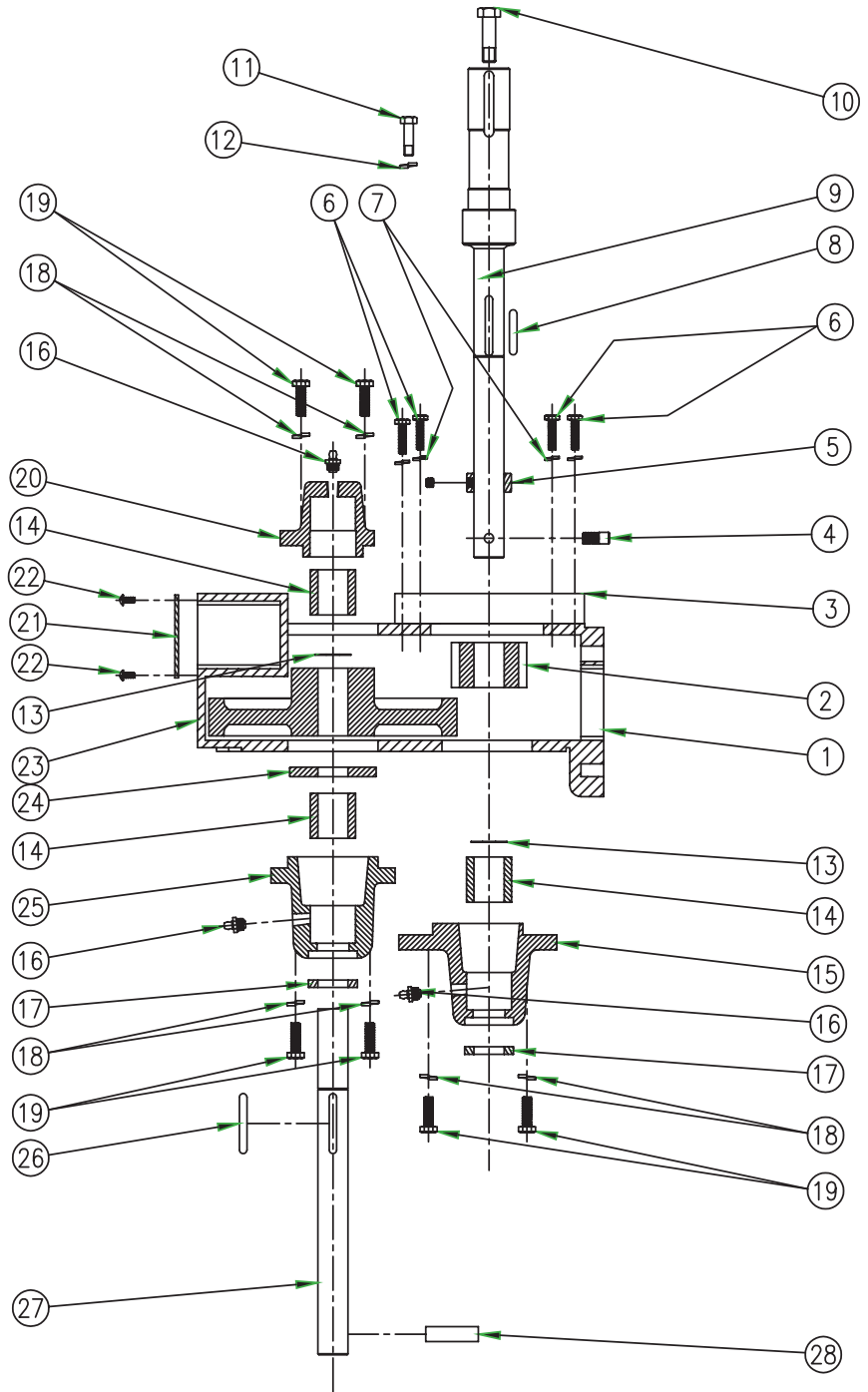
SYMPTOM	WHO	WHAT TO CHECK X indicates items which must be performed by an authorized technician.
Motor will not run.	User	a. Power supply to the unit. b. For a mechanical overload. (example: frozen product) c. Circuit breaker or fuse.
	Authorized Service Rep Only	d. That the tilt switch is closed. X e. For a ground or short in the motor. X f. Overload heaters. X
Motor runs slowly.	User	a. For a mechanical overload.
	Authorized Service Rep Only	b. For open motor field circuit, by checking field current. X
Motor speed varies rapidly.	User	a. For an oscillating load, by disconnecting the mixer drive from the agitator and checking motor speed.
	Authorized Service Rep Only	b. Variable speed controller X
Motor overheats and/or sparks excessively.	User	a. For a mechanical overload. b. Ambient temperature is high.
	Authorized Service Rep Only	c. Incorrect supply voltage to motor. X d. Excessive variation (under voltage or over voltage) in supply voltage. X e. Single phasing due to loose connection in supply line or a blown fuse. X
Circuit breaker or heater cuts out frequently.	User	a. For air in the jacket. See "Jacket Vacuum" in the "Maintenance" section of this manual.
	Authorized Service Rep Only	b. Whether line voltage is too high. X c. Motor armature and wiring for ground or short. X d. For open motor field circuit, by checking field current. X e. For defective circuit breaker. X f. Motor improperly connected. X

Troubleshooting guidance for the kettle component of your cooker/mixer is contained in the separate kettle manual.

Ref	Description	Part #	QUANTITY		
			40 Gal	60 Gal	80 Gal
A	FINGER, SCRAPER	006502	14	16	18
B	PIN, CIRCULAR, COTTER	111957	2	2	2
C	AGITATOR, PRIMARY, 40 GAL	009243	1	-	-
D	AGITATOR, SECONDARY, 40 GAL	009686	1	-	-
C	AGITATOR, PRIMARY, 60 GAL	009244	-	1	-
D	AGITATOR, SECONDARY, 60 GAL	009687	-	1	-
C	AGITATOR, PRIMARY, 80 GAL	009245	-	-	1
D	AGITATOR, SECONDARY, 80 GAL	009688	-	-	1



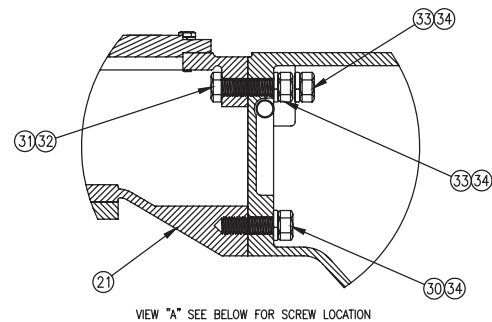
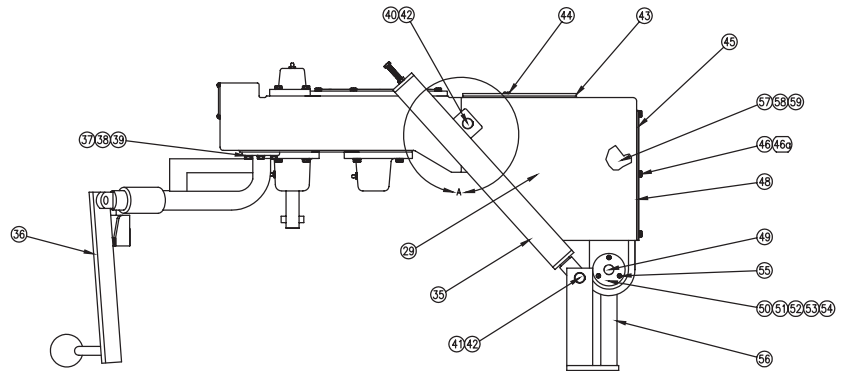
Ref	Description	Part #	QUANTITY		
			40 Gal	60 Gal	80 Gal
1	FRONT HOUSING, TRANSFER CASE	009263	1	-	-
1	FRONT HOUSING, TRANSFER CASE	009250	-	1	1
2	GEAR, PINION (24 TEETH)	009268	1	-	-
2	GEAR, PINION (28 TEETH)	009254	-	1	-
2	GEAR, PINION (32 TEETH)	009255	-	-	1
3	MOUNTING PLATE, GERMOTOR	135118	1	-	-
4	PIN, COUPLING, 3/8" DIA X 7/8" LONG	009253	1	1	1
5	SET COLLAR, 1" ID	012012	1	1	1
6	SCREW, MACHINE, HEX HEAD, 1/4-20 X 1" LONG	005610	4	8	8
7	WASHER, LOCK, 1/4"	005655	4	8	8
8	KEY, 1/4 X 1/4 X 1-1/2"	009249	1	1	1
9	SHAFT, MOTOR DRIVE	135117	1	-	-
9	SHAFT, MOTOR DRIVE	132026	-	1	1
10	SCREW, MACHINE, HEX HEAD, 7/16-14 X 1-1/2" LONG	006029	1	-	-
11	SCREW, MACHINE, SOCKET CAP, 5/16-18 X 1-1/2" LONG	115302	4	-	-
12	WASHER, LOCK, 5/16	005656	4	-	-
13	RING, EXTERNAL	009223	2	2	2
14	BEARING, CYLINDRICAL	009209	3	3	3
15	HOUSING, ECCENTRIC	009204	1	1	1
16	FITTING, GREASE, STRAIGHT	012100	3	3	3
17	SEAL, SHAFT	001758	2	2	2
18	WASHER, LOCK, 5/16	005656	12	12	12
19	SCREW, MACHINE, HEX HEAD, 5/16-18 X 1" LONG	005613	12	12	12
20	HOUSING, TOP BEARING	009205	1	1	1
21	COVER PLATE	128379	1	1	1
22	SCREW, ROUND HEAD, #10-32 X 3/8" LONG	006009	4	4	4
23	GEAR, SPUR (64 TEETH)	009269	1	-	-
23	GEAR, SPUR (72 TEETH)	009260	-	1	-
23	GEAR, SPUR (80 TEETH)	009261	-	-	1
24	WASHER, THRUST, 1"	009208	1	1	1
25	HOUSING, FRONT BEARING	009203	1	1	1
26	KEY, 1/4 X 1/4 X 2"	009258	1	1	1
27	SHAFT, 1" DIA X 11-1/2" LONG	009557	1	1	1
28	PIN, COUPLING, 1/2" DIA X 1-3/4" LONG	009305	1	1	1



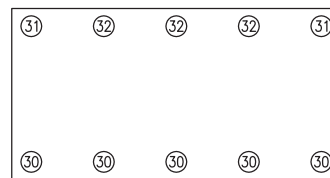
Transfer Case Assembly – Rear Housing
(For DHT & DEE/4 Kettles)

Parts List

Ref	Description	Part #	QUANTITY	
			40 Gal	60 Gal
29	REAR HOUSING, TRANSFER CASE	009295	1	1
30	SCREW, MACHINE, HEX HEAD, 1/2-13 X 1-1/4" LONG	005623	5	5
31	SCREW, MACHINE, HEX HEAD, 1/2-13 X 2-1/4" LONG	005728	2	2
32	SCREW, MACHINE, HEX HEAD, 1/2-13 X 1-3/4" LONG	005734	3	3
33	NUT, HEX, 1/2-13 HEAVY DUTY	005705	5	5
34	WASHER, LOCK, 1/2	005735	10	10
35	POWER-AID ASSEMBLY	009718	1	-
35	POWER-AID ASSEMBLY	009719	-	1
36	HANDLE AND LATCH ASSEMBLY	044392	1	-
36	HANDLE AND LATCH ASSEMBLY	041015	-	1
37	SCREW, MACHINE, HEX HEAD, 5/16 X 3/4" LONG	006014	4	-
38	SCREW, MACHINE, HEX HEAD, 5/16 X 1" LONG	005613	-	4
39	WASHER, LOCK, 5/16	005656	4	4
40	PIN, POWER-AID, TOP CONNECTION	012899	2	2
41	PIN, POWER-AID, BOTTOM CONNECTION	012890	2	2
42	RING, RETAINING, EXTERNAL	001538	4	4
43	COVER PLATE, TOP, REAR TRANSFER CASE	009608	1	1
44	SCREW, FLAT HEAD, #3/8-16 X 3/4" LONG	013466	2	2
45	COVER PLATE, BACK, REAR TRANSFER CASE	132037	1	1
46	SCREW, MACHINE, HEX HEAD, 1/4-20 X 5/8" LONG	078546	12	12
46a	WASHER, LOCK, 1/4"	005655	12	12
47	GASKET, 5/32 X 1/2 X 8" LONG	005233	1	1
48	GASKET, 5/32 X 1/2 X 10-1/8" LONG	002121	2	2
49	SHAFT, 3/4" DIA X 7-5/8" LONG	009694	1	1
50	COVER, TRUNNION, AGITATOR TILT	006972	2	2
51	COVER, INSIDE, TRUNNION, AGITATOR TILT	006973	2	2
52	WASHER, COVER PLATE GASKET	006974	2	2
53	SEAL, COVER PLATE GASKET	006975	2	2
54	BEARING, ROLLER, 1" ID	009212	2	2
55	SCREW, ROUND HEAD, #10-24 X 3/8" LONG	006009	6	6
56	BASE, PIVOT	128618	1	-
56	BASE, PIVOT	003662	-	1
57	SWITCH, TILT	122176	1	1
58	BRACKET, TILT SWITCH	128408	1	1
59	SCREW, ROUND HEAD, #8-32 X 5/8" LONG	007526	1	1



VIEW "A" SEE BELOW FOR SCREW LOCATION



SCREW LOCATION

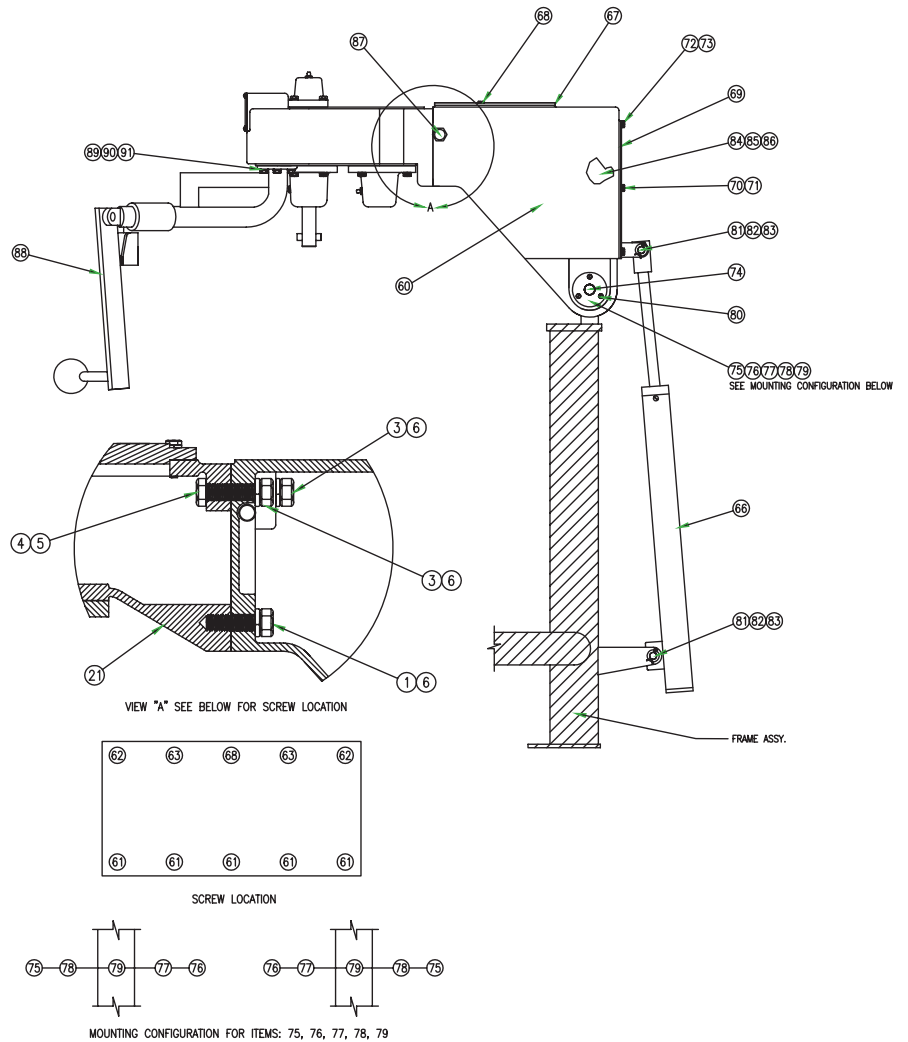


MOUNTING CONFIGURATION FOR ITEMS: 50, 51, 52, 53, 54

Transfer Case Assembly – Rear Housing
(For DL Kettles)

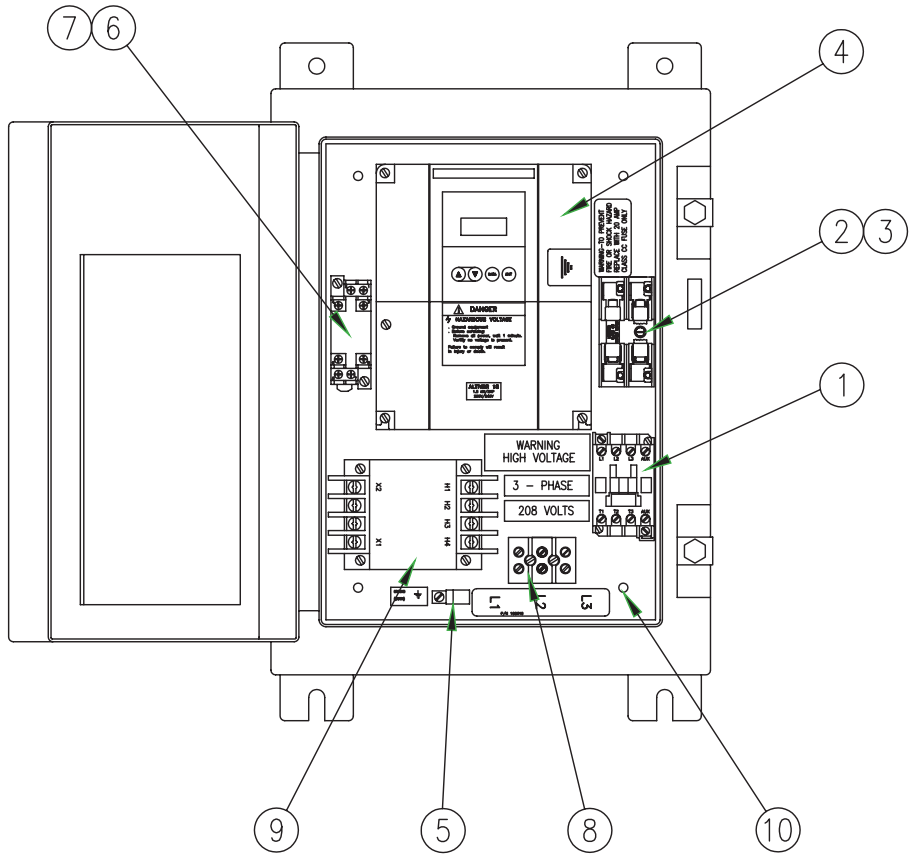
Parts List

Ref	Description	Part #	QUANTITY		
			40 Gal	60 Gal	80 Gal
60	REAR HOUSING, TRANSFER CASE	009295	1	1	1
61	SCREW, MACHINE, HEX HEAD, 1/2-13 X 1-1/4" LONG	005623	5	5	5
62	SCREW, MACHINE, HEX HEAD, 1/2-13 X 2-1/4" LONG	005728	2	2	2
63	SCREW, MACHINE, HEX HEAD, 1/2-13 X 1-3/4" LONG	005734	3	3	3
64	NUT, HEX, 1/2-13 HEAVY DUTY	005705	5	5	5
65	WASHER, LOCK, 1/2	005735	10	10	10
66	POWER-AID ASSEMBLY	009677	1	-	-
66	POWER-AID ASSEMBLY	012903	-	1	-
66	POWER-AID ASSEMBLY	009642	-	-	1
67	COVER PLATE, TOP, REAR TRANSFER CASE	132037	1	1	1
68	SCREW, FLAT HEAD, #3/8-16 X 3/4" LONG	013466	2	2	2
69	COVER PLATE, BACK, REAR TRANSFER CASE	013873	1	1	1
70	SCREW, MACHINE, HEX HEAD, 1/4-20 X 5/8" LONG	078546	12	12	12
71	WASHER, LOCK, 1/4"	005655	12	12	12
72	GASKET, 5/32 X 1/2 X 8" LONG	005233	1	1	1
73	GASKET, 5/32 X 1/2 X 10-1/8" LONG	002121	2	2	2
74	SHAFT, 3/4" DIA X 7-5/8" LONG	009694	1	1	1
75	COVER, TRUNNION, AGITATOR TILT	006972	2	2	2
76	COVER, INSIDE, TRUNNION, AGITATOR TILT	006973	2	2	2
77	WASHER, COVER PLATE GASKET	006974	2	2	2
78	SEAL, COVER PLATE GASKET	006975	2	2	2
79	BEARING, ROLLER, 1" ID	009212	2	2	2
80	SCREW, ROUND HEAD, #10-24 X 3/8" LONG	006009	6	6	6
81	PIN, CONNECTING, POWER-AID	013405	2	2	2
82	WASHER, PLAIN, 1/2" ID, 0.078" THICK	005598	4	4	4
83	PIN, COTTER, 1/8" DIAMETER X 1" LONG	009246	4	4	4
84	SWITCH, TILT	122176	1	1	1
85	BRACKET, TILT SWITCH	128408	1	1	1
86	SCREW, ROUND HEAD, #8-32 X 5/8" LONG	007526	1	1	1
87	SCREW, MACHINE, HEX HEAD, 5/8-11 X 3/4" LONG	009878	2	2	2

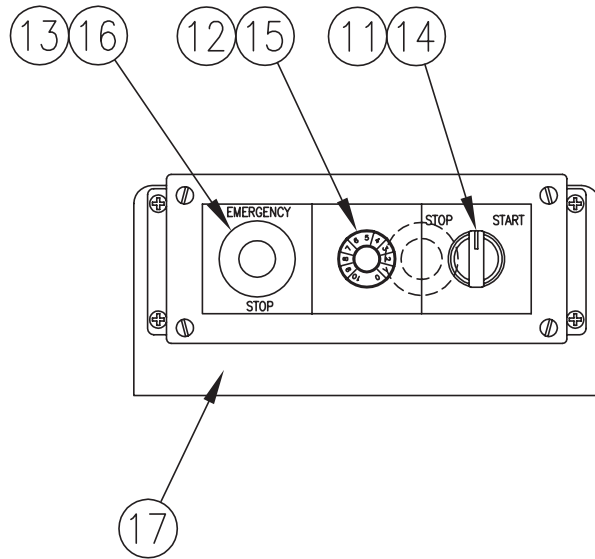


Ref	Description	Part #	QUANTITY		
			40 Gal	60 Gal	80 Gal
88	HANDLE AND LATCH ASSEMBLY	044392	1	-	-
88	HANDLE AND LATCH ASSEMBLY	041015	-	1	-
88	HANDLE AND LATCH ASSEMBLY	026685	-	-	1
89	SCREW, MACHINE, HEX HEAD, 5/16 X 3/4" LONG	006014	4	-	-
90	SCREW, MACHINE, HEX HEAD, 5/16 X 1" LONG	005613	-	4	4
91	WASHER, LOCK, 5/16	005656	4	4	4
MOTOR AND DRIVE GEAR					
-	MOTOR & DRIVE GEAR ASM, 1.5HP, 208V/360V	135822	1	-	-
-	MOTOR & DRIVE GEAR ASM, 2.0HP, 208V/360V	132099	-	1	1
-	MOTOR & DRIVE GEAR ASM, 1.5HP, 240V/480V	135578	1	-	-
-	MOTOR & DRIVE GEAR ASM, 2.0HP, 240V/480V	128979	-	1	1
HARDWARE					
-	KNOB, BALL, RED	012691	1	1	1

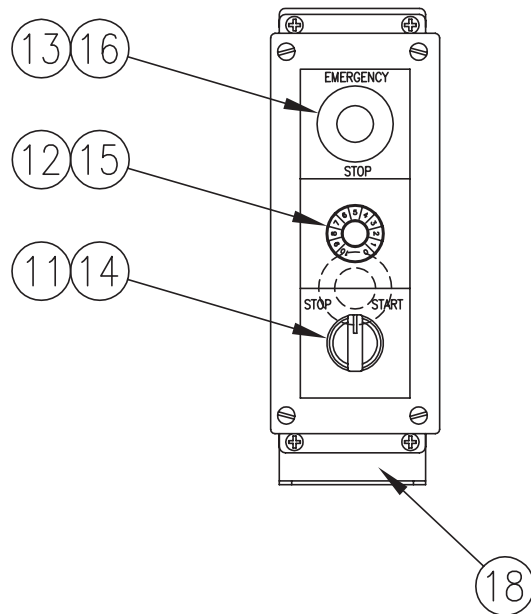
Ref	Description	Part #	Qty
1	CONTACTOR, 12A, 4-POLE	111072	1
2	BLOCK, FUSE, 2-POLE	096809	1
3	FUSE, 20A, CLASS CC	071489	2
4	INVERTER, 2HP, 200/240V	120436	1
4	INVERTER 2 HP, 380/460V	128975	1
5	LUG, GROUND, 14-16 AWG	119829	1
6	SOCKET, RELAY	115359	1
7	RELAY, CONTROL	115358	1
8	BLOCK, TERMINAL, 3-POLE	003888	1
9	TRANSFORMER, 100VA	115356	1
-	WIRING KIT, VAR. SPEED	132383	1
10	PLATE, CONTACTOR MOUNTING	128384	1



Ref	Description	Part #	Qty
-	ASSY, ELECTRICAL CONTROL, OPERATOR (COMPLETE)	128458	1
11	SWITCH, START-STOP, AGITATOR	128485	1
12	SWITCH, SPEED, AGITATOR	115341	1
13	SWITCH, EMERGENCY STOP	115342	1
14	LEGEND PLATE, START - STOP	128477	1
15	LEGEND PLATE, BLANK	128478	1
16	LEGEND PLATE, EMERGENCY STOP	128479	1
17	BRACKET, CONTROL, HORIZ. MOUNTING	128386	1
18	BRACKET, CONTROL, VERT. MOUNTING	128490	1
-	WIRING HARNESS, CONTROL ASSY TO EQMT BOX	128482	1
-	WIRING HARNESS, TILT SWITCH TO CONTROL ASSY	128483	1
-	WIRING HARNESS, AGITATOR MOTOR TO EQMT BOX	128484	1
-	WIRING DIAGRAM	128491	1

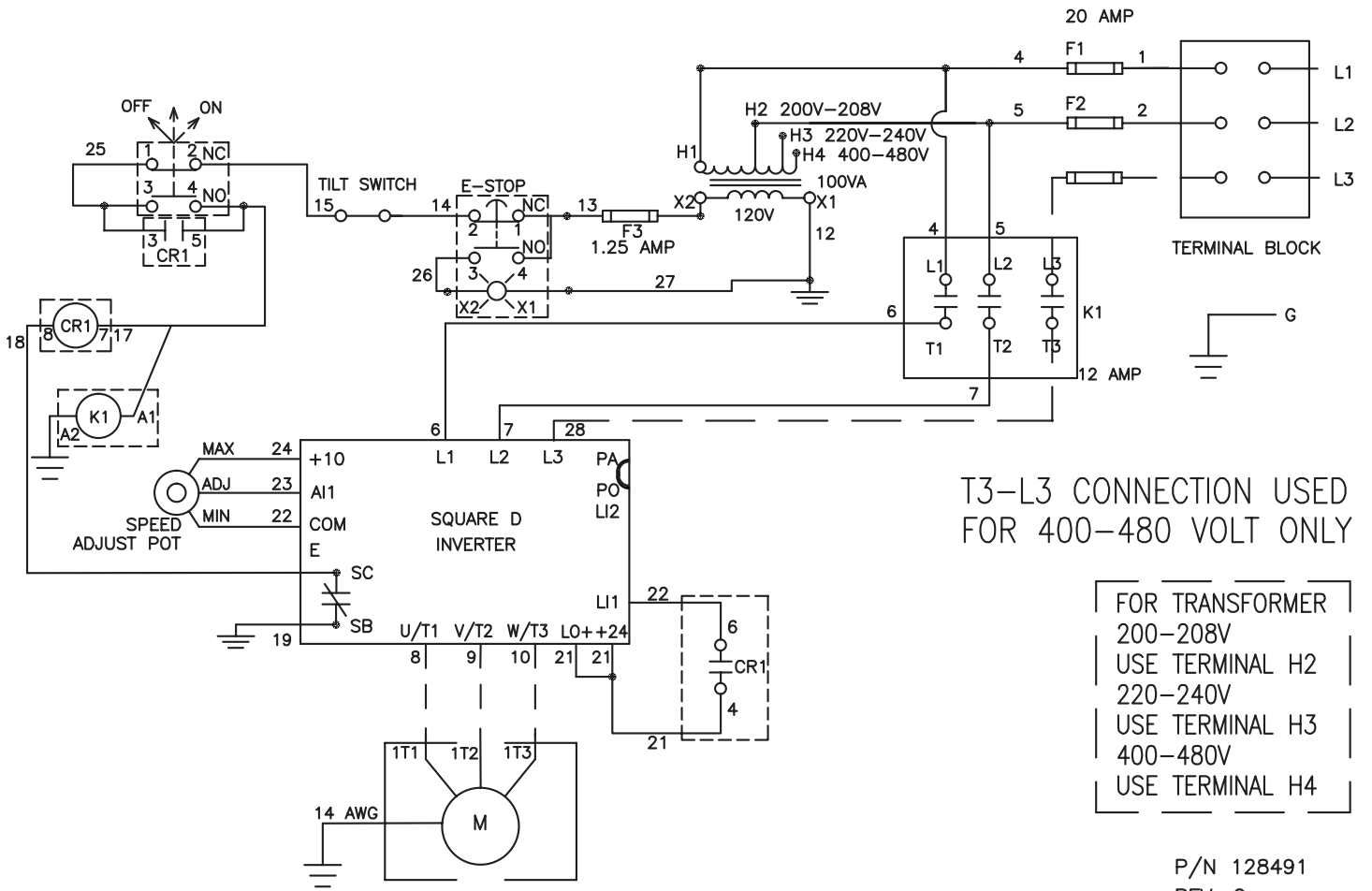


HORIZONTAL MOUNT



VERTICAL MOUNT

Wiring Diagram





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