

TECHNICAL MANUAL

INSTALLATION MANUAL FOR DOMESTIC UNITS INSTALLATION MANUAL FOR EXPORT UNITS SERVICE MANUAL FOR DOMESTIC UNITS

FOR JACKSON MODELS:

HT-1 HT-2

LT-1

LT-3



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REVISION	REVISION DATE	MADE BY	APPLICABLE ECN	DETAILS
D	06-29-04	MAW	N/A	CONVERTED TO NEW LAYOUT

NOMENCLATURE FOR THE MODELS COVERED IN THIS MANUAL:



LT-3

- HT-1 = Detergent dispensing unit for high temp dishmacines.
- HT-2 = Detergent and rinse aid dispensing unit for high temp dishmachines.
- LT-1 = Sanitizer dispensing unit for low temp dishmachines.
- LT-3 = Detergent, rinse aid, and sanitizer dispensing unit for low temp dishmachines.

Model:
Serial No.:
Installation Date:
Service Rep. Name:
Phone No.:

Jackson MSC Inc. provides technical support for all of the dishmachines detailed in this manual. We strongly recommend that you refer to this manual before making a call to our technical support staff. Please have this manual with you when you call so that our staff can refer you, if necessary, to the proper page. Technical support is available from 8:00 a.m. to 5:00 p.m. (EST), Monday through Friday. Technical support is not available on holidays. Contact technical support toll free at 1-888-800-5672. Please remember that technical support is available for service personnel only.





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SECTION 1: SPECIFICATION INFORMATION

DIMENSIONS







SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS

INSTALLATION/OPERATION INSTRUCTIONS HT-1 & HT-2 DISPENSERS

Mount the chemical dispenser unit in a convienent location on the wall.



VERY IMPORTANT: Do not use a domestic type detergent in this machine at any time. This type of detergent may damage and/or obstruct pump operation or cause corrosion in the tank.

HT-1 DISPENSING EQUIPMENT- ELECTRICAL CONNECTION: Power and signal source for the detergent and rinse aid are provided as follows:

1. DETERGENT SIGNAL-White/red wire, signal (line voltage) for detergent dispensing. Connected between the normally closed contact (N.C.) of C6 cam and the Detergent Pump Motor (SM) also connecting to the Detergent Prime Switch (S4). Detergent will be dispensed during the rinse cycle.

2. DISPENSER POWER-White wire (line voltage). Connected between Detergent Primer Switch (S4) and the On/Fill-Off/Drain Switch (S1).

All conduit and wiring for the interconnections is shipped pre-mounted to the HT-1 Chemical Dispensing Equipment. For connections to the dishmachine the wires terminate with butt splice connectors. When installing the chemical dispensing wiring match the correct wire colors then crimp the connectors.

HT-2 DISPENSING EQUIPMENT- ELECTRICAL CONNECTION: Power and signal source for the detergent and rinse aid are provided as follows:

1. DETERGENT SIGNAL-White/red wire, signal (line voltage) for detergent dispensing. Connected between the normally closed contact (N.C.) of C6 cam and the detergent terminal of the Speed Control Circuit Board (SC). Detergent will be dispensed during the rinse cycle.

2. DISPENSER POWER-Red wire, (line voltage) Connected between "L2" and the "C" terminal on the step-down transformer in the HT-2 box.

3. DISPENSER POWER-White wire (line voltage). Connected between "L1" and the appropriate line voltage terminal on the stepdown transformer in the HT-2 box.

4. RINSE AID SIGNAL-Blue wire, (line voltage). Signal for dispensing the rinse aid. Connected between the normally closed contact (N.C.) of the C5 cam and the rinse aid terminal of the Speed Control Circuit Board (SC). Rinse aid will be injected into the final rinse line during the rinse cycle.

All conduit and wiring for the interconnections is shipped pre-mounted to the HT-2 Chemical Dispensing Panel. For connections to the dishmachine the wires terminate with butt splice connectors. When installing the chemical dispensing wiring match the correct wire colors then crimp the connectors.

DETERGENT RECOMMENDATIONS: We suggest that you contact your local detergent specialist for the correct detergent for your area.

LIQUID DETERGENT DISPENSING POINT: Liquid detergent will be dispensed into machine from factory supplied hole at back of the tub above the basket strainer. Remove factory installed plug and install injector fitting for the detergent.

RINSE ADDITIVE INJECTION-FINAL RINSE LINE (HT-2 ONLY): Rinse Aid will be injected into the final rinse line at the rear of the machine. Remove one of the 1/4" plugs from the line and install the rinse aid injector fitting.

TIMER ADJUSTMENT FOR DETERGENT CONCENTRATION: The amount of detergent may need to be increased or decreased depending on water quality and type of detergent. It is factory set to dispense 15 ml of detergent into the wash water during the rinse cycle. Consult your detergent representative for adjustment.

VOLTAGE CHECK: Ensure that the power switch is in the OFF position and apply power to the dishmachine. Check the incoming power at the terminal block and ensure it corresponds to the voltage listed on the data plate of the dishmachine. If not, contact a qualified service agency to examine the problem. Do not run the dishmachine if the voltage is too high or too low. Shut off the service breaker and mark it as being for the dishmachine. Advise all proper personnel of any problems and of the location of the service breaker. Replace the front kick panel and tighten down the screws.





INSTALLATION / OPERATION INSTRUCTIONS LT-1 & LT-3 DISPENSERS

The dishmachine is a "DUMP AND FILL" type unit that dumps (drains) the wash water after each washing cycle. Water added from the fresh water final rinse is used for the next washing cycle.

Mount the chemical dispenser unit in a convienent location on the wall.

A

VERY IMPORTANT: Do Not use a domestic type detergent in this machine at any time. This type of detergent may damage and/or obstruct pump operation or cause corrosion in the tank.

LT-1 DISPENSING EQUIPMENT- ELECTRICAL CONNECTION: Power and signal source for the sanitizer are provided as follows:

1. SANITIZER SIGNAL-White/red wire, signal (line voltage) for sanitizer dispensing. Connected between the normally closed contact (N.C.) of C6 cam and the Sanitizer Pump Motor (SM) also connecting to the Sanitizer Prime Switch (S4). Sanitizer will be dispensed during the rinse cycle.

2. DISPENSER POWER-White wire (line voltage). Connected between Sanitizer Primer Switch (S4) and the On/Fill-Off/Drain Switch (S1).

All conduit and wiring for the interconnections is shipped pre-mounted to the LT-1 chemical dispensing equipment. For connections to the dishmachine the wires terminate with butt splice connectors. When installing the chemical dispensing wiring match the correct wire colors then crimp the connectors.

LT-3 DISPENSING EQUIPMENT- ELECTRICAL CONNECTION: Power and signal source for the detergent and rinse aid are provided as follows:

1. SANITIZER SIGNAL-White/red wire, signal (line voltage) for sanitizer dispensing. Connected between the normally closed contact (N.C.) of C6 cam and the Sanitizer Pump Motor (SM) also connecting to the Sanitizer Prime Switch (S4). Sanitizer will be dispensed during the rinse cycle.

2. DISPENSER POWER-White wire (line voltage). Connected between Sanitizer Primer Switch (S4) and the On/Fill-Off/Drain Switch (S1).

3. DETERGENT SIGNAL-White/red wire, signal (line voltage) for detergent dispensing. Connected between the normally closed contact (N.C.) of C7 cam and the Detergent Pump Motor (DM) also connecting to the Detergent Prime Switch (S5). Detergent will be dispensed during the rinse cycle.

4. DISPENSER POWER-White wire (line voltage). Connected between Detergent Primer Switch (S5) and the On/Fill-Off/Drain Switch (S1).

5. RINSE ADDITIVE SIGNAL-White/red wire, signal (line voltage) for rinse additive dispensing. Connected between the normally closed contact (N.C.) of C8 cam and the Rinse Aid Pump Motor (RM) also connecting to the Rinse Aid Prime Switch (S6). Rinse Aid will be dispensed during the rinse cycle.

6. DISPENSER POWER-White wire (line voltage). Connected between Rinse Aid Primer Switch (S6) and the On/Fill-Off/Drain Switch (S1).

All conduit and wiring for the interconnections is shipped pre-mounted to the LT-3 chemical dispensing panel. For connections to the dishmachine the wires terminate with butt splice connectors. When installing the chemical dispensing wiring match the correct wire colors then crimp the connectors.

SANITIZER RECOMMENDATIONS: We suggest that you contact your local chemical specialist for the correct sanitizer for your application.

DETERGENT RECOMMENDATIONS AND RINSE ADDITIVES (LT-3 Only): We suggest that you contact your local detergent specialist for the correct detergent and rinse additives for your area.





INSTALLATION / OPERATION INSTRUCTIONS LT-1 & LT-3 DISPENSERS (CONTINUED)

LIQUID DETERGENT DISPENSING POINT (LT-3 Only): Liquid detergent will be dispensed into machine from factory supplied hole at back of the tub above the basket strainer. Remove factory installed plug and install injector fitting for the detergent.

TIMER ADJUSTMENT FOR DETERGENT CONCENTRATION (LT-3 Only): The amount of detergent may need to be increased or decreased depending on water quality and type of detergent. It is factory set to dispense 15 ml of detergent into the wash water during the rinse cycle. Consult your detergent representative for adjustment.

RINSE ADDITIVE INJECTION-FINAL RINSE LINE (LT-3 ONLY): Rinse Aid will be injected into the final rinse line at the rear of the machine. Remove one of the 1/4" plugs from the line and install the rinse aid injector fitting.

SANITIZER INJECTION-FINAL RINSE LINE: Sanitizer will be injected into the final rinse line at the rear of the machine. Remove one of the 1/4" plugs from the line and install the sanitizer injector fitting.

TIMER ADJUSTMENT FOR SANITIZER CONCENTRATION: The amount of sanitizer may need to be increased or decreased depending on concentration and type of sanitizer used. The dispenser needs to be able to provide 2.271 ml of a 10% Chlorine sanitizer for every machine cycle.

VOLTAGE CHECK: Ensure that the power switch is in the OFF position and apply power to the dishmachine. Check the incoming power at the terminal block and ensure it corresponds to the voltage listed on the data plate of the dishmachine. If not, contact a qualified service agency to examine the problem. Do not run the dishmachine if the voltage is too high or too low. Shut off the service breaker and mark it as being for the dishmachine. Advise all proper personnel of any problems and of the location of the service breaker. Replace the front kick panel and tighten down the screws.



SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS & DIAGRAMS for the HT-1 & HT-2

Installation Instructions:

1. Identify the appropriate location for the box.

Make sure the electrical supply to the dishmachine has been turned off at the supply circuit breaker.

- 3. Loosen the two screws in the upper corners of the box and open. (See photo #1)
- 4. Loosen and remove the four screws to the component mounting plate inside. (Removing the around screw will give additional slack.) (See photo #2)
- 5. Hold the box up to the wall and mark four mounting holes. (See photo #3)
- 6. Install appropriate wall anchors for the type of wall.
- 7. Mount the box to the wall.
- 8. Replace the component mounting plate. Reinstall the ground screw.
- 9. Close the box and retighten screws.
- 10. Run flexible conduit to rear of dishmachine and attach with fitting provided.

11. Remove the front kick panel from the dishmachine by loosening the screws under the front two corners and lifting upward and out.

12. Locate the wire bundle above the thermostat. (See photo #4) There will be four wires (white, red, blue and white with a red stripe) all with red crimp-type butt splices.

13. Run the five wires from the conduit to the front of the unit and match up color to color with the wire bundle. Cut wires from the conduit to proper length, if needed.

14. Crimp all wires to matching color on dishmachine. Attach green and yellow wire to grounding lug. Use wire ties to route wires out of the way of moving parts.

15. Reinstall the kick panel on the dishmachine.

16. Locate and remove the white bulkhead plug on the rear of the dishmachine.

17. Install the bulkhead fitting from the kit (bulkhead with a hole through the center) in its place. (See photo #5) Install one of the compression elbows into the bulkhead fitting. Route the red chemical tube into the compression elbow and hand tighten only.

18. Locate the rinse injector on the rear of the dishmachine. Remove one of the square headed plugs. Wrap the compression elbow threads with plumber's teflon tape and install the elbow into the hole.

19. Insert a short piece of clear tubing from the kit into the other compression elbow. Route the white tubing from the dispenser to the compression elbow. Insert white tube through clear tube

in compression elbow and hand tighten only. (See photo #6)

20. Power up the unit and run a cycle and check for leaks.

21. Put the unit back in place.

22. Place the gray stiffeners in the appropriate chemicals. (red for detergent, and white for rinse aid)

23. Prime each pump until chemical is seen flowing through tube going into the unit.

24. Installation is complete.



Photo #4





Photo #5



Photo #2



Photo #3



Photo #6



INSTALLATION INSTRUCTIONS & DIAGRAMS for the LT-1 & LT-3

- 1. Identify the appropriate location for the box.
- 2. Make sure the electrical supply to the dishmachine has been turned off at the supply circuit breaker.
- 3. Loosen the two screws in the upper corners of the box and open. (See diagram #1)
- 4. Hold the box up to the wall and mark four mounting holes. (See diagram #2)
- 5. Install appropriate wall anchors for the type of wall.
- 6. Mount the box to the wall.
- 7. Close the box and retighten screws.
- 8. Run flexible conduit to rear of dishmachine and attach with fitting provided.

9. Remove the front kick panel from the dishmachine by loosening the screws under the front two corners and lifting upward and out.

10. Locate the wire bundle above the thermostat. There will be four wires (white, red, blue and white with a red stripe) all with red crimp-type butt splices.

11. Run the five wires from the conduit to the front of the unit and match up color to color with the wire bundle. Cut wires from the conduit to proper length, if needed.

12. Crimp all wires to matching color on dishmachine. Attach green and yellow wire to grounding lug. Use wire ties to route wires out of the way of moving parts.

13. Reinstall the kick panel on the dishmachine.

14. Locate and remove the white bulkhead plug on the rear of the dishmachine.

15. Install the bulkhead fitting from the kit (bulkhead with a hole through the center) in its place. (See diagram #3) Install one of the compression elbows into the bulkhead fitting. Route the red chemical tube into the compression elbow and hand tighten only.

16. Locate the rinse injector on the rear of the dishmachine. Remove one of the square headed plugs. Wrap the compression elbow threads with plumber's teflon tape and install the elbow into the hole.

17. Insert a short piece of clear tubing from the kit into the other compression elbow. Route the white tubing from the dispenser to the compression elbow. Insert white tube through clear tube in compression elbow and hand tighten only. (See diagram #4) 18. Power up the unit and run a cycle and check for leaks.

19. Put the unit back in place.

20. Place the gray stiffeners in the appropriate chemicals. (red for detergent, and white for sanitizer, and blue for rinse aid)

21. Prime each pump until chemical is seen flowing through tube going into the unit.

22. Installation is complete.



Diagram #2



Diagram #1



Diagram #4

Diagram #3



SECTION 2: INSTALLATION/OPERATION INSTRUCTIONS

CHEMICAL DISPENSING EQUIPMENT HT-1 & HT-2

TO PREPARE PUMPS FOR OPERATION

The HT-1 is a chemical dispensing unit supplied with a detergent pump. Locate the open end of the chemical tube with the tube stiffener and place in the appropriate container.

The HT-2 is a chemical dispensing unit supplied with detergent and rinse additive pumps. Locate the open ends of the chemical tubes with the tube stiffeners and place each one in the appropriate container.

A. Red Tubing = Detergent

B. Blue Tubing (HT-2 Only) = Rinse Aid

PRIMING CHEMICAL FEEDER PUMPS

Chemical feeder pumps need priming when the machine is first installed or if for some reason the chemical lines have been removed and air has been allowed to enter.

CAUTION: Water must be in the sump and wash tank prior to the dispensing of the chemical.

1. Verify that the chemical tube stiffener inlet is in the detergent container.

2. Use the toggle switches on the front of the dispenser box to prime each pump. There is one (1) switch mounted above each peristaltic pump. One will prime the detergent pump, and the second will prime the rinse aid pump (HT-2 Only).

3. To prime the pump, hold the switch in the momentary position until chemical can be observed entering the tub.

4. Detergent is dispensed as required during the wash cycle by the cam timer. The amount of detergent may need to be increased or decreased depending on water quality and type of detergent. It is adjusted by changing Cam 6 on the cam timer.

5. Rinse additive is dispensed as required into the final rinse. The amount of rinse aid may need to be adjusted depending on water hardness and results. It can be changed by changing Cam 5 on the cam timer.



WARNING: Some of the chemicals used in dishwashing may cause chemical burns if they come on contact with your skin. Wear appropriate protective gear when handling these chemicals. If you do come in contact with these chemicals flush the area with fresh water.





CHEMICAL DISPENSING EQUIPMENT LT-1 & LT-3

TO PREPARE PUMPS FOR OPERATION

The LT-1 is a chemical dispensing unit supplied with a sanitizer chemical pump. Locate the open end of the chemical tube with the tube stiffener and place in the appropriate container.

The LT-3 is a chemical dispensing unit supplied with detergent, rinse additive, and sanitizer chemical pumps. Locate the open ends of the chemical tubes with the tube stiffeners and place each one in the appropriate container.

A. Red Tubing = Detergent

B. Blue Tubing (LT-3 Only) = Rinse Aid

C. White Tubing (LT-3 Only) = Sanitizer

PRIMING CHEMICAL FEEDER PUMPS

Chemical feeder pumps need priming when the machine is first installed or if for some reason the chemical lines have been removed and air has been allowed to enter.

CAUTION: Water must be in the sump and wash tank prior to the dispensing of the chemical.

1. Verify that the proper chemical tube stiffener inlet is in the proper container.

2. Use the toggle switches on the front of the dispenser box to prime each pump. There is one (1) switch mounted above each peristaltic pump. One will prime the detergent pump, and the second will prime either the rinse aid pump.

3. To prime the pumps, hold the switch in the momentary position until chemical can be observed entering the tub.

4. Sanitizer, either chlorine or iodine, is dispensed into the final rinse. The amount of sanitizer may need to be adjusted depending on the concentration and type of sanitizer used. It is adjusted by changing Cam 6 on the cam timer.

5. Detergent is dispensed as required during the wash cycle by the cam timer. The amount of detergent may need to be increased or decreased depending on water quality and type of detergent. It is adjusted by changing Cam 7 on the cam timer.

6. Rinse additive is dispensed as required into the final rinse. The amount of rinse aid may need to be adjusted depending on water hardness and results. It can be changed by changing Cam 8 on the cam timer.



WARNING: Some of the chemicals used in dishwashing may cause chemical burns if they come on contact with your skin. Wear appropriate protective gear when handling these chemicals. If you do come in contact with these chemicals flush the area with fresh water.





CAM TIMER OPERATION FOR HT-1

The cam timer is a 2 minute 6 cam timer with an OFF-DRAIN function.

The following is a description of set points for each cam and function for each switch.

CAM 1: Cam 1 is a cut cam with a single notch and serves as the Cycle/Reset.

FUNCTION: When the machine is in the operation mode the notch is the home position. The machine will set idle until the door is opened, then cam 1 moves to the start position and holds until the door is closed. The closing of the door will start the next cycle. The cam will rotate a complete cycle and back to the home position and hold.

CAM 2: Cam 2 is a cut cam and provides the off/drain function.

FUNCTION: The function of the off/drain cam is controlled by the power switch. When the power switch is in the ON position the off/drain function is disabled. To use the off/drain, start a cycle and place the power switch in the OFF position. The machine will run a wash cycle, drain and stop. The machine will hold this state of operation until the power switch is turned on, when turned on the machine will fill, run a rinse cycle and stop at the home position.

The off/drain cam works off the normally open contacts of cam 2. This requires the switch to be held closed by the cam. The off/drain cam switch will pick up just after the cycle cam switch and drop back down just after the wash cycle cam switch.

CAM 3: Cam 3 is a cut cam and controls the wash and rinse cycles.

FUNCTION: The wash and rinse cam works off the normally open contacts of cam 3. This requires the switch to be held closed by the cam. The wash/rinse cam switch will pick up just after the cycle cam switch and drop back down just before the off/drain cycle cam switch. Wash pump will run approximately 58 seconds. The machine will drain and fill. The rinse cycle will start after the fill, approximately at the 82 second mark and will last 35 seconds. The machine will then return to the home position.

NOTE: The last 3 cams are adjustable. The following instructions will require that the timer position have the cams to the front and the motor to the left.

CAM 4: Cam 4 is an adjustable cam and controls the drain valve.

FUNCTION: The drain valve cam works off the normally closed contacts of cam 4. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the drain valve. The pumped drain and fill cams require adjustment due to varying water pressure. The drain must be adjusted to remove whatever water the fill brings into the machine.

SETTINGS: The right side of cam 4 must be set to pick up the switch arm just before the wash cycle cam switch drops. If the drain valve does not close first the water in the drain hose will back up into the pump housing and wash tank.

Any adjustment made to the drain should be made with the left side of cam 4. The adjustment must be moved back into the wash time until all water is drained from the wash tank.

CAM 5: Cam 5 is an adjustable cam and controls the fill valve.

FUNCTION: The fill valve cam works off the normally closed contacts of cam 5. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the fill valve. The pumped drain and fill cams require adjustment due to varying water pressure. Cam 5 must be adjusted to fill the wash tank to the proper operating water level. (Remember, the drain cycle must remove what the fill cycle brings in.)

SETTINGS: The left side of cam 5 must be set to drop in just past the stop point of the off/drain cam. There must be a dwell between the off/drain and the fill, so that the fill will not run while the machine is in the off state.

Any adjustment made to the fill should be made with the right side of cam 5. Proper water level will be achieved when the water touches the bottom of the strainer pan.





CAM TIMER OPERATION FOR HT-1 (CONTINUED)

CAM 6: Cam 6 is an adjustable cam and controls the detergent pump.

FUNCTION: The detergent pump cam works off the normally closed contacts of cam 6. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 6 must be set to drop in just past the starting point of the wash cam. The adjustment for detergent volume must be made with the right side of the cam.





CAM TIMER OPERATION FOR HT-2

The cam timer is a 2 minute 6 cam timer with an OFF-DRAIN function.

The following is a description of set points for each cam and function for each switch.

CAM 1: Cam 1 is a cut cam with a single notch and serves as the Cycle/Reset.

FUNCTION: When the machine is in the operation mode the notch is the home position. The machine will set idle until the door is opened, then cam 1 moves to the start position and holds until the door is closed. The closing of the door will start the next cycle. The cam will rotate a complete cycle and back to the home position and hold.

CAM 2: Cam 2 is a cut cam and provides the off/drain function.

FUNCTION: The function of the off/drain cam is controlled by the power switch. When the power switch is in the ON position the off/drain function is disabled. To use the off/drain, start a cycle and place the power switch in the OFF position. The machine will run a wash cycle, drain and stop. The machine will hold this state of operation until the power switch is turned on, when turned on the machine will fill, run a rinse cycle and stop at the home position.

The off/drain cam works off the normally open contacts of cam 2. This requires the switch to be held closed by the cam. The off/drain cam switch will pick up just after the cycle cam switch and drop back down just after the wash cycle cam switch.

CAM 3: Cam 3 is a cut cam and controls the wash and rinse cycles.

FUNCTION: The wash and rinse cam works off the normally open contacts of cam 3. This requires the switch to be held closed by the cam. The wash/rinse cam switch will pick up just after the cycle cam switch and drop back down just before the off/drain cycle cam switch. Wash pump will run approximately 58 seconds. The machine will drain and fill. The rinse cycle will start after the fill, approximately at the 82 second mark and will last 35 seconds. The machine will then return to the home position.

NOTE: The last 3 cams are adjustable. The following instructions will require that the timer position have the cams to the front and the motor to the left.

CAM 4: Cam 4 is an adjustable cam and controls the drain valve.

FUNCTION: The drain valve cam works off the normally closed contacts of cam 4. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the drain valve. The pumped drain and fill cams require adjustment due to varying water pressure. The drain must be adjusted to remove whatever water the fill brings into the machine.

SETTINGS: The right side of cam 4 must be set to pick up the switch arm just before the wash cycle cam switch drops. If the drain valve does not close first the water in the drain hose will back up into the pump housing and wash tank.

Any adjustment made to the drain should be made with the left side of cam 4. The adjustment must be moved back into the wash time until all water is drained from the wash tank.

CAM 5: Cam 5 is an adjustable cam and controls the fill valve.

FUNCTION: The fill valve cam works off the normally closed contacts of cam 5. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the fill valve. The pumped drain and fill cams require adjustment due to varying water pressure. Cam 5 must be adjusted to fill the wash tank to the proper operating water level. (Remember, the drain cycle must remove what the fill cycle brings in.)

SETTINGS: The left side of cam 5 must be set to drop in just past the stop point of the off/drain cam. There must be a dwell between the off/drain and the fill, so that the fill will not run while the machine is in the off state.

Any adjustment made to the fill should be made with the right side of cam 5. Proper water level will be achieved when the water touches the bottom of the strainer pan.

CAM 5: Cam 5 is an adjustable cam and also controls the rinse aid pump.





CAM TIMER OPERATION FOR HT-2 (CONTINUED)

FUNCTION: The rinse aid pump cam works off the normally closed contacts of cam 5. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 5 must be set to drop in just past the starting point of the fill cam. The adjustment for rinse aid volume must be made with the right side of the cam.

CAM 6: Cam 6 is an adjustable cam and controls the detergent pump.

FUNCTION: The detergent pump cam works off the normally closed contacts of cam 6. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 6 must be set to drop in just past the starting point of the wash cam. The adjustment for detergent volume must be made with the right side of the cam.



CAM TIMER OPERATION FOR LT-1

The cam timer is a 2 minute 8 cam timer with an OFF-DRAIN function.

The following is a description of set points for each cam and function for each switch.

CAM 1: Cam 1 is a cut cam with a single notch and serves as the Cycle/Reset.

FUNCTION: When the machine is in the operation mode the notch is the home position. The machine will set idle until the door is opened, then cam 1 moves to the start position and holds until the door is closed. The closing of the door will start the next cycle. The cam will rotate a complete cycle and back to the home position and hold.

CAM 2: Cam 2 is a cut cam and provides the off/drain function.

FUNCTION: The function of the off/drain cam is controlled by the power switch. When the power switch is in the ON position the off/drain function is disabled. To use the off/drain, start a cycle and place the power switch in the OFF position. The machine will run a wash cycle, drain and stop. The machine will hold this state of operation until the power switch is turned on, when turned on the machine will fill, run a rinse cycle and stop at the home position.

The off/drain cam works off the normally open contacts of cam 2. This requires the switch to be held closed by the cam. The off/drain cam switch will pick up just after the cycle cam switch and drop back down just after the wash cycle cam switch.

CAM 3: Cam 3 is a cut cam and controls the wash and rinse cycles.

FUNCTION: The wash and rinse cam works off the normally open contacts of cam 3. This requires the switch to be held closed by the cam. The wash/rinse cam switch will pick up just after the cycle cam switch and drop back down just before the off/drain cycle cam switch. Wash pump will run approximately 58 seconds. The machine will drain and fill. The rinse cycle will start after the fill, approximately at the 82 second mark and will last 35 seconds. The machine will then return to the home position.

NOTE: The last 3 cams are adjustable. The following instructions will require that the timer position have the cams to the front and the motor to the left.

CAM 4: Cam 4 is an adjustable cam and controls the drain valve.

FUNCTION: The drain valve cam works off the normally closed contacts of cam 4. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the drain valve. The pumped drain and fill cams require adjustment due to varying water pressure. The drain must be adjusted to remove whatever water the fill brings into the machine.

SETTINGS: The right side of cam 4 must be set to pick up the switch arm just before the wash cycle cam switch drops. If the drain valve does not close first the water in the drain hose will back up into the pump housing and wash tank.

Any adjustment made to the drain should be made with the left side of cam 4. The adjustment must be moved back into the wash time until all water is drained from the wash tank.

CAM 5: Cam 5 is an adjustable cam and controls the fill valve.

FUNCTION: The fill valve cam works off the normally closed contacts of cam 5. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the fill valve. The pumped drain and fill cams require adjustment due to varying water pressure. Cam 5 must be adjusted to fill the wash tank to the proper operating water level. (Remember, the drain cycle must remove what the fill cycle brings in.)

SETTINGS: The left side of cam 5 must be set to drop in just past the stop point of the off/drain cam. There must be a dwell between the off/drain and the fill, so that the fill will not run while the machine is in the off state.

Any adjustment made to the fill should be made with the right side of cam 5. Proper water level will be achieved when the water touches the bottom of the strainer pan.





CAM TIMER OPERATION FOR LT-1 (CONTINUED)

CAM 6: Cam 6 is an adjustable cam and controls the sanitizer pump.

FUNCTION: The sanitizer pump cam works off the normally closed contacts of cam 6. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 6 must be set to drop in just past the starting point of the wash cam. The adjustment for sanitizer volume must be made with the right side of the cam.

CAM 7: Cam 7 is an adjustable cam and controls the detergent pump.

FUNCTION: The detergent pump cam works off the normally closed contacts of cam 7. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 7 must be set to drop in just past the starting point of the wash cam. The adjustment for detergent volume must be made with the right side of the cam.

CAM 8: Cam 8 is an adjustable cam and controls the rinse aid pump.

FUNCTION: The rinse aid pump cam works off the normally closed contacts of cam 8. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 8 must be set to drop in just past the starting point of the wash cam. The adjustment for rinse aid volume must be made with the right side of the cam.





CAM TIMER OPERATION FOR LT-3

The cam timer is a 2 minute 6 cam timer with an OFF-DRAIN function.

The following is a description of set points for each cam and function for each switch.

CAM 1: Cam 1 is a cut cam with a single notch and serves as the Cycle/Reset.

FUNCTION: When the machine is in the operation mode the notch is the home position. The machine will set idle until the door is opened, then cam 1 moves to the start position and holds until the door is closed. The closing of the door will start the next cycle. The cam will rotate a complete cycle and back to the home position and hold.

CAM 2: Cam 2 is a cut cam and provides the off/drain function.

FUNCTION: The function of the off/drain cam is controlled by the power switch. When the power switch is in the ON position the off/drain function is disabled. To use the off/drain, start a cycle and place the power switch in the OFF position. The machine will run a wash cycle, drain and stop. The machine will hold this state of operation until the power switch is turned on, when turned on the machine will fill, run a rinse cycle and stop at the home position.

The off/drain cam works off the normally open contacts of cam 2. This requires the switch to be held closed by the cam. The off/drain cam switch will pick up just after the cycle cam switch and drop back down just after the wash cycle cam switch.

CAM 3: Cam 3 is a cut cam and controls the wash and rinse cycles.

FUNCTION: The wash and rinse cam works off the normally open contacts of cam 3. This requires the switch to be held closed by the cam. The wash/rinse cam switch will pick up just after the cycle cam switch and drop back down just before the off/drain cycle cam switch. Wash pump will run approximately 58 seconds. The machine will drain and fill. The rinse cycle will start after the fill, approximately at the 82 second mark and will last 35 seconds. The machine will then return to the home position.

NOTE: The last 3 cams are adjustable. The following instructions will require that the timer position have the cams to the front and the motor to the left.

CAM 4: Cam 4 is an adjustable cam and controls the drain valve.

FUNCTION: The drain valve cam works off the normally closed contacts of cam 4. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the drain valve. The pumped drain and fill cams require adjustment due to varying water pressure. The drain must be adjusted to remove whatever water the fill brings into the machine.

SETTINGS: The right side of cam 4 must be set to pick up the switch arm just before the wash cycle cam switch drops. If the drain valve does not close first the water in the drain hose will back up into the pump housing and wash tank.

Any adjustment made to the drain should be made with the left side of cam 4. The adjustment must be moved back into the wash time until all water is drained from the wash tank.

CAM 5: Cam 5 is an adjustable cam and controls the fill valve.

FUNCTION: The fill valve cam works off the normally closed contacts of cam 5. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the fill valve. The pumped drain and fill cams require adjustment due to varying water pressure. Cam 5 must be adjusted to fill the wash tank to the proper operating water level. (Remember, the drain cycle must remove what the fill cycle brings in.)

SETTINGS: The left side of cam 5 must be set to drop in just past the stop point of the off/drain cam. There must be a dwell between the off/drain and the fill, so that the fill will not run while the machine is in the off state.

Any adjustment made to the fill should be made with the right side of cam 5. Proper water level will be achieved when the water touches the bottom of the strainer pan.





CAM TIMER OPERATION FOR LT-3 (CONTINUED)

CAM 6: Cam 6 is an adjustable cam and controls the sanitizer pump.

FUNCTION: The sanitizer pump cam works off the normally closed contacts of cam 6. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 6 must be set to drop in just past the starting point of the wash cam. The adjustment for sanitizer volume must be made with the right side of the cam.

CAM 7: Cam 7 is an adjustable cam and controls the detergent pump.

FUNCTION: The detergent pump cam works off the normally closed contacts of cam 7. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 7 must be set to drop in just past the starting point of the wash cam. The adjustment for detergent volume must be made with the right side of the cam.

CAM 8: Cam 8 is an adjustable cam and controls the rinse aid pump.

FUNCTION: The rinse aid pump cam works off the normally closed contacts of cam 8. This requires the switch to be held open by the cam and allowed to drop into the notch to operate the pump.

SETTINGS: The left side of cam 8 must be set to drop in just past the starting point of the wash cam. The adjustment for rinse aid volume must be made with the right side of the cam.





SECTION 3: PARTS SECTION

HT-1 ASSEMBLY







HT-1 ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
	1	Complete HT-1 Assembly	5700-002-51-98
1	1	Box, Fiberglass Single Chemical Feeder Pump	5700-031-73-03
2	1	Decal, Warning - Disconnect Power	9905-100-75-93
3	1	Chemical Feeder Pump Motor, 240V, 36 RPM	4320-111-47-47
4	1	Switch, SPST OFF/ON	5930-111-38-21
5	1	Decal, Electrical Schematic	9905-002-51-94
6	1	Decal, HT-1	9905-002-51-97
7	1	Conduit Fitting, 1/2" 90° Plastic	5975-011-45-14
8	1	Tubing, 5/16" ID x 7/16" OD Clear	4720-111-35-34
9	1	Tubing, 3/16" ID x 3/8" OD x 1.6" Long	5700-111-35-33
10	2	Tubing, Plastic 1/4" OD Red	4720-601-12-00
	1	Chemical Feeder Pump Assembly, 36 RPM	4320-121-37-10
11	1	Housing, Rear Assy	4320-111-37-09
12	2	Screw, 8-32 x 1/2" Phillips Flat Head	5305-011-37-06
13	2	Screw, 8-32 x 3/8" Phillips Flat Head	5305-011-37-07
14	1	Squeeze Tube	5700-111-35-29
15	1	Anko Roller	4320-111-36-70
16	1	Housing, Front	4320-111-37-08
17	4	Screw, 6-32 x 3/4" Phillips Pan Head	5305-011-37-05
18	2	Stiffener, Tube	5700-002-66-49



HT-2 ASSEMBLY







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HT-2 ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
	1	Complete HT-2 Assembly, 240V	5700-031-75-62
	1	Complete HT-2 Assembly, 115V	5700-002-84-70
1	1	Box, Fiberglass Double Chemical Feeder Pump	5700-031-73-02
2	1	Inner Panel Assembly, 240V	5700-002-10-21
2	1	Inner Panel Assembly, 115V	5700-002-84-71
3	1	Decal, Warning	9905-100-75-93
4	2	Switch, OFF/ON Toggle	5930-111-20-18
5	1	Decal, Electrical Schematic	9905-011-74-58
6	1	Decal, HT-2	9905-021-76-59
7	2	Conduit Fitting, 1/2" Straight	5975-011-45-13
8	1	Conduit, 1/2" x 6' Long	5700-002-92-41
9	2	Tubing, Santoprene 3/8" OD x 3" Long	5700-011-85-73
10	2	Tubing, Santoprene 3/8" OD x 8" Long	5700-111-35-29
11	2	Tubing, Polyethylene, White 1/8" x 120" Long	5700-002-76-14
12	2	Tubing, Tygon Clear 7/16" OD x 1.93" Long	5700-011-85-72
13	1	Chemical Feeder Pump Assembly, 240V, 14 RPM	5700-031-63-34
14	1	Chemical Feeder Pump Assembly, 240V, 14 RPM	5700-031-65-20
15	2	Tubing, Polyethylene, Red 1/4" x 120" Long	5700-011-85-68
16	2	Stiffener, Tube	5700-002-66-49
17	1	Tubing, Polyethylene, Blue 1/4" x 22" Long	5700-011-86-78
*18	1	Bulk Head Plug, Modified	5700-011-61-37
		-	

* Represents an item not shown.



HT-2 INNER PANEL ASSEMBLY



ITEM	QTY	DESCRIPTION	Mfg. No.
	1	Inner Panel Assembly, 240V	5700-002-10-21
	1	Inner Panel Assembly, 115V	5700-002-84-71
1	1	Panel	5700-021-74-54
2	1	Transformer, 20VA 208/240V - 24V	5950-011-61-67
2	1	Transformer, 115V - 24V	5950-002-16-78
3	3	Screw, 10-24 x 3/8" Phillips Truss Head	5305-173-03-00
4	1	Board, Speed Control	5945-011-46-24
5	2	Screw, 10-32 x 7/8" Fillister Head	5305-973-04-00
6	1	Star Washer, External Tooth #10	5311-273-02-00

* Represents an item not shown.











LT-1 ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
	1	Complete LT-1 Assembly	5700-031-75-60
1	1	Box, Fiberglass Single Chemical Feeder Pump	5700-031-73-03
2	1	Decal, Warning - Disconnect Power	9905-100-75-93
3	1	Chemical Feeder Pump Motor, 115V, 36 RPM	4320-111-35-14
4	1	Switch, SPST OFF/ON	5930-111-38-21
5	1	Decal, Electrical Schematic	9905-011-74-22
6	1	Decal, LT-1	9905-021-76-57
7*	1	Conduit Fitting, 1/2" 90° Plastic	5975-011-45-14
8	.17 FT	Tubing, 5/16" ID x 7/16" OD Clear	4720-111-35-34
9	1	Tubing, 3/16" ID x 3/8" OD x 1.6" Long	5700-111-35-33
10	12 FT	Tubing, 1/4" OD Paraflex	4720-111-51-70
	1	Chemical Feeder Pump Assembly	4320-121-37-10
11	1	Housing, Rear Assy	4320-111-37-09
12	2	Screw, 8-32 x 1/2" Phillips Flat Head	5305-011-37-06
13	2	Screw, 8-32 x 3/8" Phillips Flat Head	5305-011-37-07
14	1	Chemical Feeder Pump Squeeze Tube	5700-111-35-29
15	1	Anko Roller	4320-111-36-70
16	1	Housing, Front	4320-111-37-08
17	4	Screw, 6-32 x 3/4" Phillips Pan Head	5305-011-37-05
18	1	Stiffener, Tube	5700-002-66-49



LT-3 ASSEMBLY





LT-3 ASSEMBLY (CONTINUED)

ITEM	QTY	DESCRIPTION	Mfg. No.
	1	Complete LT-3 Assembly, 115V	5700-031-75-61
	1	Complete LT-3 Assembly, 240V	5700-002-37-80
1	1	Box, Fiberglass Triple Chemical Feeder Pump	5700-031-73-00
2	1	Decal, Warning	9905-100-75-93
3	3	Switch, OFF/ON Toggle	5930-111-38-21
4	1	Chemical Feeder Pump Motor, 115V, 14 RPM	4320-111-35-13
4	1	Chemical Feeder Pump Motor, 240V, 14 RPM	4320-111-47-46
5	2	Chemical Feeder Pump Motor, 115V, 36 RPM	4320-111-35-14
5	2	Chemical Feeder Pump Motor, 240V, 36 RPM	4320-111-47-47
6*	1	Decal, Electrical Schematic	9905-011-74-23
7	1	Decal, LT-3	9905-021-76-58
8	3	Chemical Feeder Pump Assembly,	4320-121-37-10
9	1	Housing, Rear Assy	4320-111-37-09
10	2	Screw, 8-32 x 1/2" Phillips Flat Head	5305-011-37-06
11	2	Screw, 8-32 x 3/8" Phillips Flat Head	5305-011-37-07
12	1	Squeeze Tube	5700-111-35-29
13	1	Anko Roller	4320-111-36-70
14	1	Housing, Front	4320-111-37-08
15	4	Screw, 6-32 x 3/4" Phillips Pan Head	5305-011-37-05
16	3	Tubing, Tygon Clear 5/16" ID x 7/16" OD x 1.93" Long	5700-011-85-72
17	2	Tubing, Santoprene 3/8" OD x 3" Long	5700-011-85-73
18	12 FT	Tubing, Plastic, 1/4" Blue	4720-601-11-00
19	3	Stiffener, Tube	5700-002-66-49
20	12 FT	Tubing, Parflex 1/4"	4720-111-51-70
21	1	Conduit, 1/2" x 6' Long	5700-011-85-71
22	2	Conduit Fitting, 1/2" Straight	5975-011-45-13
23	12 FT	Tubing, Plastic, 1/4" Red	4720-601-12-00
24*	1	Tube, 3/16" ID x 3/8" OD x 1.6" Long	5700-111-35-33
25*	1	Bulk Head Plug, Modified	5700-011-61-37

* Represents an item not shown.











SECTION 4: ELECTRICAL SCHEMATICS

HT-1 208-240 VOLT, 60 HERTZ, SINGLE PHASE







HT-2 115 VOLT, 60 HERTZ, SINGLE PHASE







HT-2 208-240 VOLT, 60 HERTZ, SINGLE PHASE







LT-1 115 VOLT, 60 HERTZ, SINGLE PHASE





LT-3 115 VOLT, 60 HERTZ, SINGLE PHASE







LT-3 240 VOLT, 60 HERTZ, SINGLE PHASE







SECTION 5: JACKSON MAINTENANCE & REPAIR CENTERS

ALABAMA TO HAWAII

ALABAMA:

JONES-McLEOD

APPLIANCE SVC 1616 7TH AVE. NORTH BIRMINGHAM, AL 35203 (205) 251-0159 800-821-1150 FAX: (205) 322-1440 service@jones-mcleod.com

JONES-McLEOD

APPLIANCE SVC 854 LAKESIDE DRIVE MOBILE, AL 36693 (334) 666-7278 800-237-9859 FAX: (334) 661-0223

ALASKA:

RESTAURANT APPLIANCE SVC 7219 ROOSEVELT WAY NE SEATTLE, WA 98115 (206) 524-8200 800-433-9390 FAX: (206) 525-2890 info@restappl.com

ARIZONA:

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FOOD EQMT. SVC 4832 SOUTH 35TH STREET PHOENIX, AZ 85040 (602) 234-2443 800-824-8875 FAX: (602) 232-5862 acsboss@aol.com

GCS SERVICE INC. PHOENIX, AZ 800-822-2303

ARKANSAS:

BROMLEY PARTS & SVC 10TH AND RINGO P.O. BOX 1688 LITTLE ROCK, AR 72202 (501) 374-0281 800-482-9269 FAX: (501) 374-8352 service@bromleyparts.com parts@bromleyparts.com

COMMERCIAL PARTS & SVC.

3717 CHERRY ROAD MEMPHIS, TN 38118 (901) 366-4587 800-262-9155 FAX: (901) 366-4588

CALIFORNIA:

BARKERS FOOD MACHINERY SERVICES 5367 SECOND STREET IRWINDALE, CA 91706 (626) 960-9390 800-258-6999 FAX: (626) 337-4541 service@barkers.com

GCS SERVICE INC.

LOS ANGELES, CA 800-822-2303

P & D APPLIANCE 4220-C ROSEVILLE ROAD NORTH HIGHLANDS, CA 95660 (916) 974-2772 800-824-7219 FAX:(916) 974-2774

INDUSTRIAL ELECTRIC SVC

5662 ENGINEER DRIVE HUNTINGON BEACH, CA 92649 (714) 379-7100 800-4573783 FAX: (714) 379-7109

GCS SERVICE INC.

360 LITTLEFIELD AVE S. SAN FRANCISCO, CA 94080 (650) 635-0720 800-969-4427 FAX: (650) 871-4019

BARKERS FOOD

MACHINERY SERVICES 9373 ACTIVITY ROAD #G SAN DIEGO, CA 92126 (858) 695-1091 800-995-7955 FAX: (858) 995-7955

GCS SERVICE INC.

9030 KENMAR DR. SUITE 313 SAN DIEGO, CA 92121 (858) 549-8411 800-422-7278 FAX: (858) 549-2323

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100 SOUTH LINDEN AVE. S. SAN FRANCISCO, CA 94080 (650) 635-1900 800-424-1414 FAX: (650) 635-1919 pndappl@aol.com

COLORADO:

HAWKINS COMMERCIAL APPLIANCE SERVICE 3000 S. WYANDOT ST. ENGLEWOOD, CO 80110 (303) 781-5548 (800) 624-2117 FAX: (303) 761-8861

COLORADO (cont.):

METRO APPLIANCE SERVICE 1640 S BROADWAY DENVER, CO 80210 (303) 778-1126 800-525-3532 FAX: (303) 778-0268 metroappls@aol.com

CONNECTICUT:

GCS SERVICE INC. 302 MURPHY ROAD HARTFORD, CT 06114 (860) 549-5575 800-423-1562 FAX: (860) 527-6355

DELAWARE:

AMERICAN KITCHEN MACHIN-ERY & REPAIR 204 QUARRY STREET PHILADELPHIA, PA 19106 (215) 627-7760 800-848-7760 FAX: (215) 627-1604

GCS SERVICE INC.

817 N. THIRD STREET PHILADELPHIA, PA (215)925-6217 800-441-9115 FAX: (215) 925-6208

ELMER SCHULTZ SERVICE

36 BELMONT AVE. WILLMINGTON, DE 19804 (302) 655-8900 800-225-0599 FAX: (302) 656-3673 elmer2@erols.com

EMR SERVICE DIVISION

106 WILLIAMSPORT CIRCLE SALISBURY, MD 21804 (410) 543-8197 FAX: (410) 548-4038

FLORIDA:

COMMERCIAL APPLIANCE SVC 8416 LAUREL FAIR CIRCLE BLDG 6, SUITE 114 TAMPA, FL 33610 (813) 663-0313 800-282-4718 FAX: (813) 663-0212 commercialappliance@worldnet.at t net

FLORIDA (cont.):

GCS SERVICE INC 3373 N. W. 168TH STREET MIAMI, FL 33056 (305) 621-6666 800-766-8966 FAX: (305) 621-6656

GCS SERVICE INC

3902 CORPORES PARK DR. SUITE 350 TAMPA, FL 33619 (813) 626-6044 800-282-3008 FAX: (813) 621-1174

JONES-McLEOD

APPLIANCE SVC 854 LAKESIDE DRIVE MOBILE, AL 36693 (334) 666-7278 800-237-9859 FAX: (334) 661-0223 service@jones-mcleod.com

GEORGIA:

GCS SERVICE INC 3127 PRESIDENTIAL DRIVE ATLANTA, GA 30340 (770) 452-7322 800-334-3599 FAX: (770) 452-7473

SOUTHEASTERN

RESTAURANT SVC. 2200 NORCROSS PKWY. SUITE 210 NORCROSS, GA 30071 (770) 446-6177 800-235-6516 FAX: (770) 446-3157 info@srs-atl.com

WHALEY FOODSERVICE

REPAIRS 109-A OWENS INDUSTRIAL DRIVE SAVANNAH, GA 31405 (912) 447-0827 888-765-0036 FAX: (912) 447-0826

HAWAII:

FOOD EQMT. PARTS & SER-VICE CO. 300 PUUHALE RD.

Enedis

300 PUUHALE RD. HONOLULU, HI 96819 (808) 847-4871 FAX: (808) 842-1560 fepsco@hula.net



IDAHO:

RON'S SERVICE

703 E 44TH STREET STE 10 GARDEN CITY, ID 83714 (208) 375-4073 FAX: (208) 375-4402

RESTAURANT APPLIANCE SVC.

7219 ROOSEVELT WAY NE SEATTLE, WA 98115 (206) 524-8200 800-433-9390 FAX: (206) 525-2890 info@restappl.com

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CONES REPAIR SVC.

2408 40TH AVE. MOLINE, IL 61265 (309) 797-5323 800-716-7070 FAX: (309)797-3631 jackb@cones.com

EICHENAUER SERVICES INC.

130 S OAKLAND ST. DECATUR, IL 62522 (217) 429-4229 800-252-5892 FAX: (217) 429-0226 esi@esiquality.com

GCS SERVICE INC.

696 LARCH AVENUE ELMHURST, IL 60126 (630) 941-7800 800-942-9689 FAX: (630) 941-6048

GCS SERVICE INC. 9722 REAVIS PARK DRIVE ST. LOUIS, MO 63123 (314) 683-7444 800-284-4427 FAX: (314) 638-0135

INDIANA:

GCS SERVICE INC. 5310 E. 25TH STREET INDIANAPOLIS, IN 46218 (317) 545-9655 800-727-8710 FAX: (317) 549-6286

IOWA:

GOODWIN-TUCKER GROUP

3509 DELAWARE AVENUE DES MOINES, IA 50313 (515) 262-9308 800-372-6066 FAX: (515) 262-2936 goodwintuc@aol.com



IOWA (cont.):

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KANSAS:

GCS SERVICE INC. 6107 CONNECTICUT KANSAS CITY, MO 64210 (816) 920-5999 800-229-6477 FAX: (816) 920-7387

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1051 GOODWIN DRIVE LEXINGTON, KY 40505 (606) 254-8854 800-432-9269 FAX: (606) 231-7781 jatkins@certifiedsc.com

GCS SERVICE INC.

1002 NANDINO BLVD. LEXINGTON, KY 40511 (606) 255-0746 800-432-9260 FAX: (606) 255-0748

CERTIFIED SERVICE CENTER

RAMCO BUSINESS PARK 4283 PRODUCE ROAD LOUISVILLE, KY 40218 (502) 964-7007 800-637-6350 FAX: (502) 964-7202 cwalker@certifiedsc.com droenigk@certifiedsc.com

GCS SERVICE INC. 4204 SOUTH BROOK STREET LOUISVILLE, KY 40214 (502) 367-1788 800-752-6160 FAX: (502) 367-0400

LOUISIANA:

BANA PARTS INC. 1501 KUEBLE STREET HARAHAN, LA 70123 (504) 734-0076 800-325-7543 FAX: (504) 734-8456

LOUISIANA (cont.):

BANA PARTS INC. 4028 GREENWOOD ROAD SHREVEPORT, LA 71109 (318) 631-6550 800-832-6550 FAX: (318) 636-5675

MAINE:

MRE, INC. 170 JOHN ROBERTS RD UNIT #3 PROTLAND, ME 04106 (207) 772-1152 800-823-9700 FAX: (207) 772-1445

NORTHERN CROWN

SERVICES, INC. 225 INDUSTRIAL WAY PORTLAND, ME 04103 (207) 797-7333 (800) 696-7560 FAX: (207) 696-1128 steve@northerncrownservices.com richard@northerncrownservices.com

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EMR SERVICE DIVISION

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EMR SERVICE DIVISION

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GCS SERVICE INC.

2660 PITTMAN DRIVE SILVER SPRING, MD 20910 (301) 585-7550 (DC) (410) 792-0338 (BALT) (800) 638-7278 FAX: (301) 495-4410

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MASSACHUSETTS:

ACE SERVICE CO. 95 HAMPTON AVE. NEEDHAM, MA 02494 (781) 449-4220 800-225-4510 MA & NH FAX: (781) 444-4789 taceservice@aol.com

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RESTAURANT SUPPLY 34 SOUTH STREET SOMERVILLE, MA 02143 (617) 868-1930 800-338-6737 FAX: (617) 868-5331

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GCS SERVICE INC.

302 MURPHY ROAD HARTFORD, CT 06114 (860) 549-5575 800-723-1562 FAX: (860) 527-6355

MICHIGAN:

GCS SERVICE INC.

31829 WEST EIGHT MILE ROAD LIVONIA, MI 48152 (248) 426-9500 800-772-2936 FAX: (248) 426-7555

JACKSON SERVICE COMPANY

MINNESOTA:

GCS SERVICE INC. 2857 LOUISIANA AVENUE N. MINNEAPOLIS, MN 55427 (612) 546-4221 800-345-4221 FAX: (612) 546-4286

MISSISSIPPI:

GCS SERVICE INC. 2815 19TH ANENUE, UNIT A GULFPORT, MS 39501 (228) 864-2722 877-964-2722 FAX: (228) 822-9412



MISSISSIPPI TO NORTH CAROLINA

MISSISSIPPI (cont.):

GCS SERVICE INC. 5755 GALLANT DRIVE. JACKSON, MS 39206 (601) 956-7800 800-274-5954 FAX: (601) 956-1200

GCS SERVICE INC. 3717 CHERRY ROAD MEMPHIS, TN 38118 (901) 366-4587 800-262-9155 FAX: (901) 366-4588

MISSOURI:

GCS SERVICE INC. 6107 CONNECTICUT KANSAS CITY, MO 64120 (816) 920-5999 800-229-6477 FAX: (816) 920-7387

GCS SERVICE INC. 9722 REAVIS PARK DRIVE ST. LOUIS, MO 63123 (314) 638-7444 800-284-4427 FAX: (314) 638-0135

KAMMERLIN PARTS & SVC. 1359 SOUTH KINGSHIGHWAY ST. LOUIS, MO 63110 (314) 535-2222 FAX: (314) 535-6205

MONTANA:

petek@kps.stl.com

RESTAURANT APPLIANCE SVC. 7219 ROOSEVELT WAY NE SEATTLE, WA 98115 (206) 524-8200 800-433-9390 FAX: (206) 525-2890 info@restappl.com

NEBRASKA:

GOODWIN - TUCKER GROUP 7535 D STREET OMAHA, NE 68124 (402) 397-2880 800-228-0372 FAX: (402) 397-2881 goodwintuc@aol.com

NEVADA:

HI TECH COMMERCIAL SVC 400 E. MEAD BLVD. LAS VEGAS, NV 89030 (702) 649-4616 (877) 924-4832 FAX: (702) 649-4607

GCS SERVICE INC. LAS VEGAS, NV 800-822-2303

NEW HAMPSHIRE:

GCS SERVICE INC.

180 SECOND STREET CHELSEA, MA 02150 (617)889-9393 800-225-1155 FAX: (617) 889-1222

ACE SERVICE CO. 500 HARVEY RD. MANCHESTER, NH 03103 (603) 668-5070 800-225-4510 FAX: (603) 626-6067 taceservice@aol.com

MASSACHUSETTS RESTAURANT SUPPLY 34 SOUTH STREET SOMERVILLE, MA 02143 (617) 868-1930 800-338-6737 FAX: (617) 868-5331

NEW JERSEY:

JACKSON FASPRAY SVC. 155 SARGEANT AVE. CLIFTON, NJ 07013 (973) 471-8000 800-356-6740 FAX: (973) 471-1289 jfs155@aol.com

AMERICAN KITCHEN MACHINERY & REPAIR 204 QUARRY STREET PHILADELPHIA, PA 19106 (215) 627-7760 800-848-7760 FAX: (215) 627-1604

GCS SERVICE INC. 817 N. THIRD STREET PHILADELPHIA, PA 19123 (215) 925-6217 800-441-9115 FAX: (215) 925-6208

NEW JERSEY (cont.):

ELMER SCHULTZ SERVICES 201 WASHINGTON AVE. PLEASANTVILLE, NJ 08232 (609) 641-0317 800-378-1641 FAX:(609) 641-8703 elmer2@erols.com

NEW MEXICO:

STOVE PARTS SUPPLY CO. 2120 SOLANA STREET FORT WORTH, TX 76117 (817) 831-0381 800-433-1804 FAX: (817) 834-7754 bud@stoveparts.com

HAWKINS COMMERCIAL APPLI-ANCE SERVICE 300 S. WYANDOT STREET ENGLEWOOD, CA 80110 (303) 781-5548 800-624-2117 FAX: (303) 761-8861

NEW YORK:

GCS SERVICE INC. BROOKLYN, NY 11211 800-822-2303

APPLIANCE INSTALLATION

AND SERVICE CORP. 1336 MAIN STREET BUFFALO, NY 14209 (716) 884-7425 800-722-1252 FAX: (716) 884-0410 ais@worldnet.att.net

B.E.S.T. INC.

3003 GENESEE STREET BUFFALO, NY 14225 (716) 893-6464 800-338-5011 FAX: (716) 893-6466 bestserv@aol.com

DUFFY'S EQUIPMENT SVC.

3138 ONEIDA STREET SAUQUOIT, NY 13456 (315) 737-9401 800-443-8339 FAX: (315) 737-7132 duffyequip@aol.com

NORTHERN PARTS & SVC.

21 NORTHERN AVENUE PLATTSBURGH, NY 12903 (518) 563-3200 800-634-5005 FAX: (800) 782-5424 info@northernparts.com

NEW YORK (cont.):

JACKSON FASPRAY SVC.

155 SARGEANT AVE. CLIFTON, NJ 07013 (973) 471-8000 800-356-6740 FAX: (973) 471-1289 jfs155@aol.com

ALL ISLAND REPAIR

40-9 BURT DRIVE DEER PARK, NY 11729 (631) 242-5588 800-323-9411 FAX: (631) 242-6102

A. I. S. COMMERCIAL

PARTS & SVC 1900 COLLEGE AVENUE ELMIRA HEIGHTS, NY 14901 (607) 734-6072 888-724-7377 FAX: (607) 734-9294

A. I. S. COMMERCIAL

PARTS & SVC 13 WESTR MAIN STREET FALCONER, NY 14733 (716) 665-6556 800-552-6556 FAX: (716) 665-4227

A. I. S. COMMERCIAL

PARTS & SVC 200 SALINA ST. SUITE 114 LIVERPOOL, NY 13088 (315) 435-0709 800-371-5921 FAX: (315) 453-1412

A. I. S. COMMERCIAL

PARTS & SVC 7387 PITTSFORD VICTOR RD. ROCHESTER, NY 14610 (716) 461-2370 800-458-4198 FAX: (716) 461-5545

NORTH CAROLINA:

AUTHORIZED APPLIANCE SERVICE CENTER 1020 TUCKASEEGEE RD. CHARLOTTE, NC 28208 (704) 377-4501 (900) 520 2127

(704) 377-4501 (800) 532-6127 FAX: (704) 377-4504

WHALEY FOODSERVICE

203-D CREEK RIDGE RD. GREENSBORO, NC 27604 (336) 333-2333 FAX: (336) 333-2533



NORTH CAROLINA (cont.):

AUTHORIZED APPLIANCE SERVICE CENTER 109 HINTON AVE. WILMINGTON, NC 28403 (910) 313-1250 FAX: (910) 313-6130

WHALEY FOODSERVICE 8334-K ARROWRIDGE BLVD CHARLOTTE, NC 28273 (704) 529-6242 FAX: (704) 529-1558 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

335-105 SHERWEE DRIVE RALEIGH, NC 27603 (919) 779-2266 FAX: (919) 779-2224 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

6418-101 AMSTERDAM WAY WILMINGTON, NC 28405 (910) 791-0000 FAX: (910) 791-6662 info@whaleyfoodservice.com

NORTH DAKOTA:

GCS SERVICE INC. 2857 LOUISIANA AVENUE N. MINNEAPOLIS, MN 55427 (612) 546-4221 800-345-4221 FAX: (612) 546-4286

OHIO:

CERTIFIED SERVICE CENTER

890 REDNA TERRACE CINCINNATI, OH 45215 (513) 772-6600 800-543-2060 FAX: (513) 612-6600 sbarasch@certifiedsc.com

CERTIFIED SERVICE CENTER

6025 N. DIXIE DRIVE DAYTON, OH 45414 (937) 898-4040 (800) 257-2611 FAX: (937) 898-4177 dharvey@certifiedsc.com

COMMERCIAL PARTS & SVC. OF COLUMBUS

1150 WEST MOUND STREET COLUMBUS, OH 43223 (614) 221-0057 800-837-8327 FAX: (614) 221-3622



OHIO (cont.):

GCS SERVICE INC. 2830 JOHNSTON RD. COLUMBUS, OH 43219 (614) 476-3225 800-282-5406 FAX: (614) 476-1196

ELECTRICAL APPLIANCE REPAIR SVC.

5805 VALLEY BELT ROAD CLEVELAND, OH 44131 (216) 459-8700 800-621-8259 FAX: (216) 459-8707 tomr@electappIrep.com

OKLAHOMA:

HAGAR RESTAURANT EQMT. 1229 W MAIN STREET OKLAHOMA CITY, OK 73106 (405) 235-2184 800-445-1791 FAX: (405) 236-5592

OREGON:

RON'S SERVICE 16364 SW 72ND AVE PORTLAND, OR 97224 (503) 624-0890 800-851-4118 FAX: (503) 684-6107 Irobinson@ronsservice.com

PENNSYLVANIA:

A.I.S. COMMERCIAL PARTS & SERVICE 1816 WEST 26TH STREET ERIE, PA 16508 (814) 456-3732 800-332-3732 FAX: (814) 452-4843 aiserie@aol.com

ELMER SCHULTZ SVC.

540 NORTH 3RD STREET PHILADELPHIA, PA 19123 (215) 627-5400 FAX: (215) 627-5408 elmer2@erols.com

K & D PARTS & SERVICE

1833-41 N. CAMERON STREET HARRISBURG, PA 17103 (717) 236-9039 800-932-0503 FAX: (717) 238-4367

PENNSYLVANIA (cont.):

AMERICAN KITCHEN MACHIN-ERY & REPAIR 204 QUARRY STREET PHILADELPHIA, PA 19106 (215) 627-7760 800-848-7760 FAX: (215) 627-1604

GCS SERVICE INC. 817 N. THIRD STREET P.O. BOX 3564 PHILADELPHIA, PA 19123 (215) 925-6217 800-441-9115

FAX: (215) 925-6208

GCS SERVICE INC. 210 VISTA PARK DRIVE PITTSBURGH, PA 15205 (412) 787-1970 800-738-1221 FAX: (412) 787-5005

RHODE ISLAND:

GCS SERVICE INC. 180 SECOND STREET CHELSEA, MA 02150 (617)889-9393 800-225-1155 FAX: (617) 889-1222

SOUTH CAROLINA:

AUTHORIZED APPLIANCE SERVICECENTER 1811 TAYLOR ST. COLUMBIA, SC 29202 (803) 254-8414 FAX: (803) 254-5146

AUTHORIZED APPLIANCE SERVICECENTER 2249 AUGUSTA RD. GREENVILLE, SC 29605 (864) 235-9616 FAX: (864) 235-9623

WHALEY FOODSERVICE REPAIRS

I 26 & US1 P.O. BOX 4023 WEST COLUMBIA, SC 29170 (803) 791-4420 800-877-2662 FAX: (803) 794-4630 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

748 CONGAREE ROAD GREENVILLE, SC 29607 (864) 234-7011 800-494-2539 FAX: (864) 234-6662 info@whaleyfoodservice.com

NORTH CAROLINA TO TEXAS

SOUTH CAROLINA (cont.):

WHALEY FOODSERVICE REPAIRS 1406-C COMMERCE PL. MYRTLE BEACH, SC 29577 (843) 626-1866 FAX: (843) 626-2632 info@whaleyfoodservice.com

WHALEY FOODSERVICE REPAIRS

4740-A FRANCHISE STREET N. CHARLESTON, SC 29418 (843) 760-2110 FAX: (843) 760-2255 info@whaleyfoodservice.com

SOUTH DAKOTA:

GCS SERVICE INC. 2857 LOUISIANA AVENUE N. MINNEAPOLIS, MN 55247 (612) 546-4221 800-345-4221 FAX: (612) 546-4286

TENNESSEE:

GCS SERVICE INC. 3717 CHERRY ROAD MEMPHIS, TN 38118 (901) 366-4587 800-262-9155 FAX: (901) 366-4588

GCS SERVICE INC. 748 FESSLERS LANE NASHVILLE, TN 37210 (615) 244-8050 800-831-7174 FAX: (615) 244-8885

TEXAS:

GCS SERVICE INC. AUSTIN, TX 800-822-2303

ARMSTRONG

REPAIR CENTER 1700 S LAMAR BLVD #327 AUSTIN, TX 78704 (512) 416-1101 800-392-5322 FAX: (512) 416-6912

ARMSTRONG

REPAIR CENTER 5110 GLENMONT DRIVE HOUSTON, TX 77081 (713) 666-7100 800-392-5325 FAX: (713) 661-0520 gm@armstrongrepair.com



TEXAS TO WYOMING/CANADA

TEXAS (cont.):

COMMERCIAL KITCHEN

REPAIR CO. 1377 N BRASOS P.O BOX 831128 SAN ANTONIO, TX 78207 (210) 735-2811 800-292-2120 FAX: (210) 735-7421 brock@commercialkitchen.com

GCS SERVICE INC. 440 WRANGLER DRIVE #100 COPPELL, TX 75019 (972) 906-0307 800-442-5026 FAX: (972) 906-9886

GCS SERVICE INC. HOUSTON, TX 800-822-2303

GCS/STOVE PARTS

2120 SOLANA STREET FORT WORTH, TX 76117 (817) 831-0381 800-433-1804 FAX: (817) 834-7754 bud@stoveparts.com

UTAH:

LA MONICA'S RESTAURANT EQMT. SVC. 6182 SOUTH STRATLER AVENUE

MURRAY, UT 84107 (801) 263-3221 800-527-2561 FAX: (801) 263-3229 lamonica81@aol.com

GCS SERVICE INC.

1366 S. 400 WEST SALT LAKE CITY, UT 84115 (801) 487-3653 800-955-9201 FAX: (801) 487-2253

VERMONT:

NORTHERN PARTS & SVC. 4874 S. CATHERINE STREET PLATTSBURGH, NY 12901 (518) 563-3200 800-634-5005 FAX: (800) 782-5424 info@northernparts.com

GCS SERVICE INC.

180 SECOND STREET CHELSEA, MA 02150 (617)889-9393 800-225-1155 FAX: (617) 889-1222



VIRGINIA:

DAUBERS, INC. 7645 DYNATECH COURT SPINGFIELD, VA 22153 (703) 866-3600 800-554-7788 FAX: (703) 866-4071 daubers@aol.com

GCS SERVICE INC.

2660 PITTMAN DRIVE SILVER SPRING, MD 20910 (301) 585-7550(DC) (410) 792-0388(BALT) 800-638-7278 FAX: (301)495-4410

GCS SERVICE INC. RICHMOND, VA 800-822-2303

WASHINGTON:

RESTAURANT APPLIANCE SVC 7219 ROOSEVELT WAY, NE SEATTLE, WA 98115 (206) 524-8200 800-433-9390 FAX: (206) 525-2890

WEST VIRGINIA:

info@restappl.com

STATEWIDE SERVICE, INC. 603 MAIN AVE. NITRO, WV 25143 (304) 755-1811 (800) 441-9739 FAX: (304) 755-4001 sws3182@aol.com

WISCONSIN:

APPLIANCE SERVICE

CENTER, INC. 2439 ATWOOD AVE MADISON, WI 53704 (608) 246-3160 800-236-7440 FAX: (608) 246-2721 ascmad@execpc.com

APPLIANCE SERVICE CENTER, INC.

6843 W. BELLOIT RD. WEST ALLIS, WI 53219 (414) 543-6460 800-236-6460 FAX: (414) 543-6480 ascmil@execpc.com

WISCONSIN (cont.):

APPLIANCE SERVICE CENTER

786 MORRIS AVE GREEN BAY, WI 54304 (920) 496-9993 800-236-0871 FAX: (920) 496-9927 ascfox@execpc.com

METROPOLITAN SERVICE

3210 LONDON RD. EAU CLAIRE, WI 54701 (715) 832-0555 800-848-3945 FAX: (715) 832-7813

WYOMING:

HAWKINS COMMERCIAL

APPLIANCE SERVICE 300 S. WYANDOT ST. ENGLEWOOD, CO 80110 (303) 781-5548 (800) 624-2117 FAX: (303) 761-5561 johns@hawkinscommercial.com

METRO APPLIANCE SERVICE

1640 S BROADWAY DENVER, CO 80210 (303) 778-1126 800-525-3532 FAX: (303) 778-0268 metroappls@aol.com

<u>CANADA</u>

Garland Commercial Ranges, Ltd. 1177 KAMATO ROAD MISSISSAUGA, ONTARIO L4W 1X4 (905) 624-0260 800-427-6668 FAX: (905) 624-0623

