



**KLE-235D DOUBLE RACK
IN-LINE CONFIGURATION**

**KLE-175GTM SINGLE RACK
THREE-DOOR CONFIGURATION**

**KLE SERIES
ULTRA WASH DISHMACHINE
INSTRUCTION MANUAL**

INTRODUCTION

The KLE-235D and KLE-175GTM Low Energy Dishwashers are designed to provide years of excellent warewash results under many types of conditions. These machines are configured as an automatic start dishwasher, meaning that the dishwasher starts when the doors are closed. Both models of these dishwashers includes a three product chemical dispenser located on top of the machine which dispenses liquid detergent, rinse product, and a chemical sanitizer suitable for low temperature (recommended 140°F) applications. Options and additional features are also available. Contact your nearest Knight representative for more details.

INSTALLATION

- (1) Inspect the dishwasher upon initial receipt. Lift the door arm and examine the accessory package located inside the dishwasher. Note that it includes spray arms and other equipment required for installation.
- (2) Examine the spot where the dishwasher is to be normally operated. Ensure that all electrical and plumbing connections, as well as dish table placement, have been considered for installation.
- (3) Place the dishwasher at the spot desired for normal operation. Level the dishwasher using adjustable "bullet feet" at the bottom of the legs. Install spray arms included in the accessory box.
- (4) Connect hot water supply connection to the rear of dishwasher at the line strainer. Ensure that water pressure is sufficient for fill (approx. 20 PSI flow pressure) Make proper drain connections using drain accessories found in the accessory box.
- (5) Make proper electrical connections (refer to data plate for voltage and current ratings) to the labeled barrier provided at the back of the control box. Run all electrical wire through suitable conduit and ensure all connections are made in accordance with local wiring codes. It is recommended that the circuit breaker carrying the dishwasher load have NO OTHER ELECTRICAL DEVICES connected.
- (6) Attach prewash and drying tables to the dishwasher, insuring that sufficient space is provided for the dishwasher operator. Insure that adjustable legs on prewash and drying tables have been adjusted for proper drainage of water.

INITIAL OPERATION

- (1) Ensure that the master power switch (mounted on the rear of the control box) is OFF and the door switch override (mounted on the side of the control box) is OFF. Energize the Master Power Switch.
- (2) Open doors to the dishwasher and fill the dishwasher using the FILL switch (mounted on the side of the control box) until approximately 3/4 of the dishwasher pan is covered by water.

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- (3) Turn the door switch override ON and close dishwasher doors to start dishwasher. Allow the dishwasher to complete at least one complete cycle of operation. The wash cycle will take approximately 90 seconds. Inspect the following equipment during the wash cycle to ensure proper operation:

Detergent Supply Pump
Wash Motor
Drain Solenoid and Drain Ball
Electrical Fill Valve during Rinse Cycle
Rinse Product Pump
Chemical Sanitizer Pump
Spray Arms

- (4) Approximately 5 seconds after the end of the cycle, lift doors to dishwasher and check for leaks and proper fill level. Spray arms should still be in motion indicating proper water pressure. If the water level is low, adjust "FILL" cam in control box to fill dishwasher to top of overflow standpipe in sump, or to the hole in the drainball stem.

NORMAL OPERATION

- (1) Manually remove food debris from dishes, glasses, cups, etc.
- (2) Place dishes, glasses, cups, etc. in dish rack. Do not stack dishes. Ensure glasses and cups are placed upside down.
- (3) Ensure that the door switch override is ON and close doors to start dishwasher. The wash cycle will take approximately 90 seconds.

PERIODIC MAINTENANCE

NOTE: BEFORE PERFORMING PERIODIC MAINTENANCE INSURE WATER SUPPLY VALVE IS OFF AND CIRCUIT BREAKER IS OFF.

- (1) Remove and clean line strainer assembly. The line strainer assembly is located on the incoming water line (before the vacuum breaker).
- (2) Clean scrap accumulator and drain ball. Inspect drain opening and clean if necessary.
- (3) Clean spray arms. Spray arms can be cleaned by removing end cap, dislodging any debris, and flushing length of spray arm with water. Remove debris in spray jets with a toothpick or other pointed object.

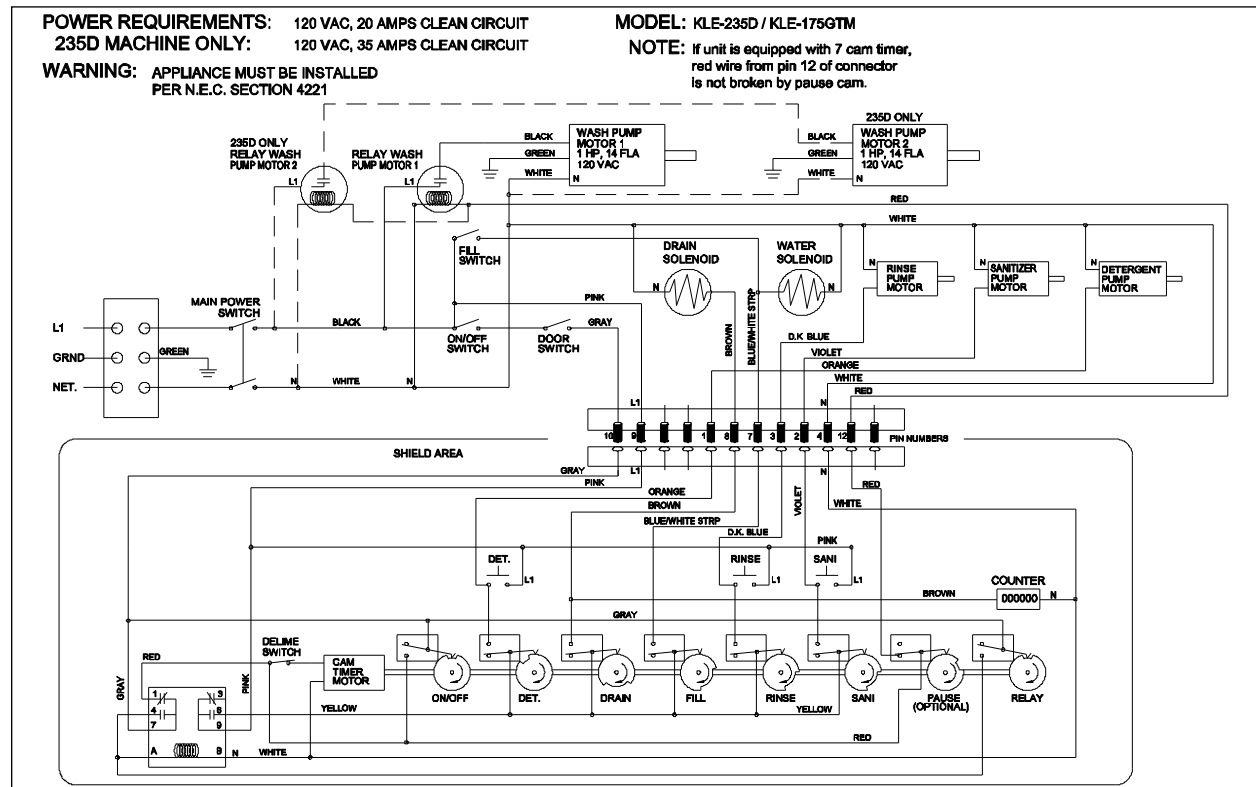
TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE(S)	REMEDY
<u>Low/No Spray Arm Pressure</u>	Impeller Clog	Clear Pump Intake Tube Clear Impeller
	Clogged Spray Tips	Clear Spray Tips Clear Spray Arm
	Low Water Level	Adjust Fill Cam Clear Line Strainer
<u>Machine Doesn't Shut Off</u>	Bad ON Microswitch	Replace Microswitch
	Bad Door Switch	Replace Door Switch
	Bad Cube Relay	Replace Relay
<u>Machine Won't Start</u>	Bad Door Start Switch	Replace Switch
	Bad RUN/STOP switch	Replace Switch
	Circuit Breaker Tripped	Reset Circuit Breaker
<u>Pump Motor Inoperative</u>	Bad Motor Relay	Replace Motor Relay
	Bad Pump Motor	Replace Motor
	RUN/STOP switch in STOP	Move to RUN position
<u>Machine Won't Fill</u>	Bad Fill Solenoid	Replace Solenoid
	Bad Fill Microswitch	Replace Microswitch
	Bad Fill Switch	Replace Switch

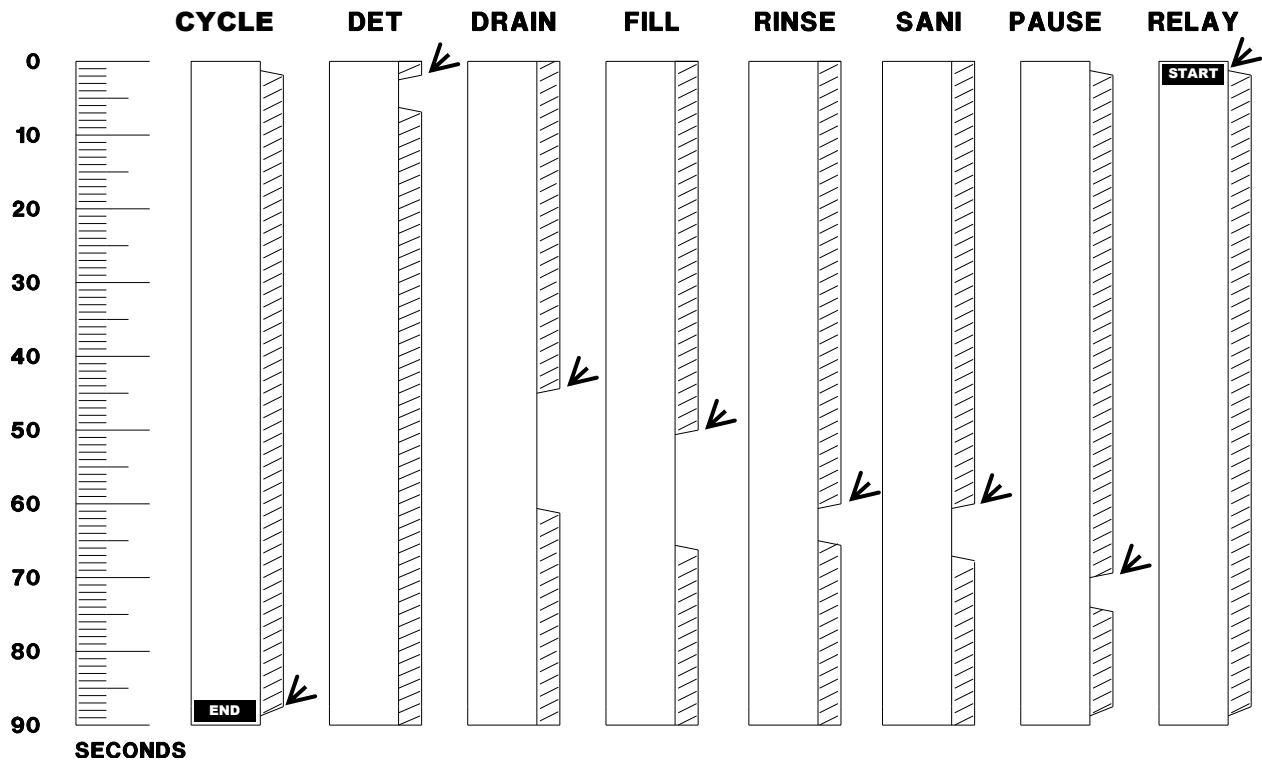
TROUBLESHOOTING (cont.)

PROBLEM	POSSIBLE CAUSE(S)	REMEDY
<u>Machine Won't Drain</u>	Bad Drain Ball Lift Assy. Bad Drain Solenoid Bad Drain Microswitch	Repair/Replace Lift Assy. Replace Solenoid Replace Microswitch
<u>Chemical Injection Bad or Poor</u> (Detergent, Rinse, Sanitizer)	Not Enough Chemical Poor Chemical Flow Bad Pump Motor No Chemical Flow	Adjust Cam Replace Pump Tube Replace Motor Replace Product Container
<u>Machine Leaks Water</u>	Debris on Drain Ball Loose Hose Clamps	Clean Drain Ball Tighten Clamps
<u>Leaky/Noisy Vacuum Breaker</u>	Water Pressure Too Low Water Pressure Too High	Clear Line Strainer Adjust Fill Pressure
<u>Spray Arms Hitting Tray Rails</u>	Machine Not Level Tray Rails Damaged Worn Spray Arm Bearings	Balance Machine Feet Adjust/Replace Tray Rails Replace Bearings

WIRING DIAGRAM



CAM TIMER SETTINGS



The cycle of operation begins when the RELAY cam lifts and ends when the CYCLE cam falls. The arrows ↙ indicate the time each noted feature begins to operate.

The above settings are set at the factory and can be adjusted as necessary (except for the CYCLE cam which is “fixed” and cannot be changed).

SPECIFICATIONS

FEATURES:

Automatic Door Start Switch
Removable Legs
Adjustable "Bullet" Feet
Quick Connect Plumbing
Removable Control Assembly
Chemical Prime Switches
Delime Switch
Heavy Duty Tray Rails
Quick Service Fill Strainer
Scrap Accumulator

TECHNICAL:

3450 RPM Pump Motor
30 RPM Chemical Injection Motors (3)
140 Degree Wash Temperature
90 Second Wash/Rinse Cycle

POWER REQUIREMENTS:

KLE-175GTM Single Rack:
115 VAC, 60 Hz, 20 Amp Supply
KLE-235D Double Rack:
115 VAC, 60 Hz, 35 Amp Supply

DISCLAIMER

Knight LLC does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. For hazardous materials information consult label, MSDS, or Knight LLC. Knight products are not for use in potentially explosive environments. Any use of our equipment in such an environment is at the risk of the user, Knight does not accept any liability in such circumstances.

WARRANTY

All Knight controls and pump systems are warranted against defects in material and workmanship for a period of ONE year. All electronic control boards have a TWO year warranty. Warranty applies only to the replacement or repair of such parts when returned to factory with a Knight Return Authorization (KRA) number, freight prepaid, and found to be defective upon factory authorized inspection. Bearings and pump seals or rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing, and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty.

FOOTNOTE

The information and specifications included in this publication were in effect at the time of approval for printing. Knight LLC reserves the right, however, to discontinue or change specifications or design at any time without notice and without incurring any obligation whatsoever.

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