

## Statement of Responsibilities

This document is for use by experienced and trained Qualified Cleveland Range, LLC Authorized Service Representatives who are familiar with both the safety procedures, and equipment they service.

Cleveland Range, LLC assumes no liability for any death, injury, equipment damage, or property damage resulting from use of, improper use of, or failure to use the information contained in this document.

Cleveland Range, LLC has made every effort to provide accurate information in this document, but cannot guarantee that this document does not contain unintentional errors and omissions.

The information in this document may be subject to technical and technological changes, revisions, or updates.

Cleveland Range, LLC assumes no liability or responsibility regarding errata, changes, revisions, or updates.

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to follow industry standard safety procedures, including, but not limited to, OSHA regulations, and disconnect / lock out / tag out procedures for all utilities including steam, and disconnect / lock out / tag out procedures for gas, electric, and steam powered equipment and / or appliances

All utilities (gas, electric, water and steam) should be turned OFF to the equipment and locked out of operation according to OSHA approved practices during any servicing of Cleveland Range equipment

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to maintain up-to-date knowledge, skills, materials and equipment.



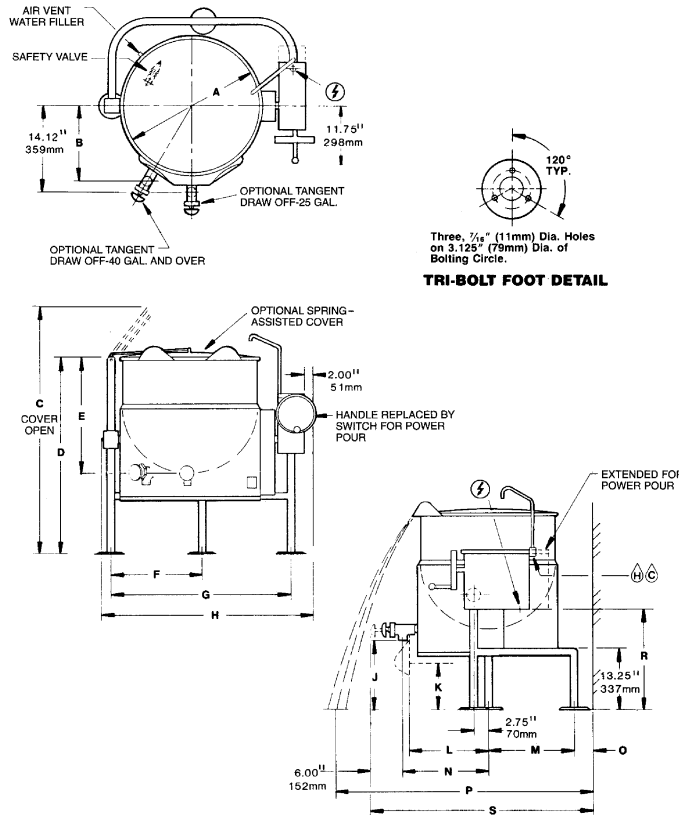
# Steam Jacketed Kettles

**TRI-LEG, ELECTRIC**  
**SELF-CONTAINED**  
**25, 40, 60 or 80 GALLONS**  
**(100, 150, 225 or 300 LITERS)**  
**2/3 STEAM JACKETED**  
**TILTING**

**MODELS:**  KEL-25-T  KEL-80-T  
 KEL-40-T  KEL-100-T  
 KEL-60-T

ITEM NUMBER \_\_\_\_\_

JOB NAME / NUMBER \_\_\_\_\_



Shown with optional Spring-assisted Cover and 2" Tangent Draw-Off Valve

## SHORT FORM SPECIFICATION

Shall be CLEVELAND, Electric Kettle, Tri-leg mounted, self-contained, tilting, Model KEL - \_\_\_\_ - T; \_\_\_\_ gallons, 2/3 Steam Jacketed. Type 304 Stainless Steel Kettle and Supports. 50 psi Steam Jacket Rating; 50 psi Safety Valve; Jacket factory charged with Distilled Water, Corrosion Inhibitor and Antifreeze; with combination Pressure/Vacuum Jacket Gauge. Solid State Temperature and Safety Control System in plug-in Module.

GALS.	LITERS		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S
25	100	IN mm	21.00 533	N/A	60.00 1524	37.50 953	20.50 521	14.38 365	28.50 724	36.19 919	14.50 368	12.75 324	11.62 295	14.50 368	14.00 356	2.75 70	42.75 1086	21.10 536	37.25 946
40	150	IN mm	26.00 660	14.25 362	66.75 1695	39.50 1003	22.50 572	16.81 427	33.62 854	41.19 1046	13.50 343	10.25 260	16.25 413	17.50 445	16.50 419	2.50 64	50.00 1270	20.30 516	42.50 1079
60	225	IN mm	29.50 749	15.88 403	75.25 1911	45.00 1143	26.00 660	18.60 472	37.21 945	44.69 1135	14.50 368	11.25 286	19.00 483	19.00 483	18.25 464	2.50 64	52.00 1321	23.10 587	45.75 1162
80	300	IN mm	33.00 838	17.38 441	81.00 2057	48.00 1219	28.00 711	20.31 516	40.62 1032	48.19 1224	15.50 394	11.50 292	20.00 508	21.50 546	20.00 508	2.50 64	56.00 1422	25.10 638	50.00 1270

**WATER**   
 3/4" O.D. copper tube or  
 1/2" N.P.T. pipe.  
 When ordered with optional faucet.

		<b>ELECTRIC</b>																<b>CLEARANCE</b>				
		ELECTRICAL SUPPLY-STANDARD WATTAGE												HIGH WATTAGE				RIGHT = 4.00" handle clearance LEFT = .00" REAR = See "O" on above chart				
		208 V			240 V			220/380 V			480 V			208 V		240V			220/380V		480V	
GALS.	LITERS	KW	AMS 1PH	AMPS 3PH	KW	AMPS 1PH	AMPS 3PH	KW	AMPS 1PH	AMPS 3PH	KW	AMPS 1PH	AMPS 3PH	KW	AMPS 3PH	KW	AMPS 3PH		KW	AMPS 3PH	KW	AMPS 3PH
25	100	9.8	47.3	27.3	13.0	54.5	31.5	10.9	16.5	9.8	11.8	14.8	41.0	19.6	47.3	16.4	24.8	19.6	23.6			
40	150	14.8	70.9	41.0	19.6	81.7	47.3	16.4	24.8	13.1	15.8	24.6	69.0	32.7	78.8	27.3	41.4	33.0	40.0			
60	225	14.8	70.9	41.0	19.6	81.7	47.3	16.4	24.8	19.6	23.6	29.5	82.0	39.2	94.5	32.8	49.6	39.2	47.2			
80	300	14.8	70.9	41.0	19.6	81.7	47.3	16.4	24.8	19.6	23.6	29.5	82.0	39.2	94.5	32.8	49.6	39.2	47.2			

Cleveland Range reserves right of design improvement or modification, as warranted.

# Cleveland Range, LLC

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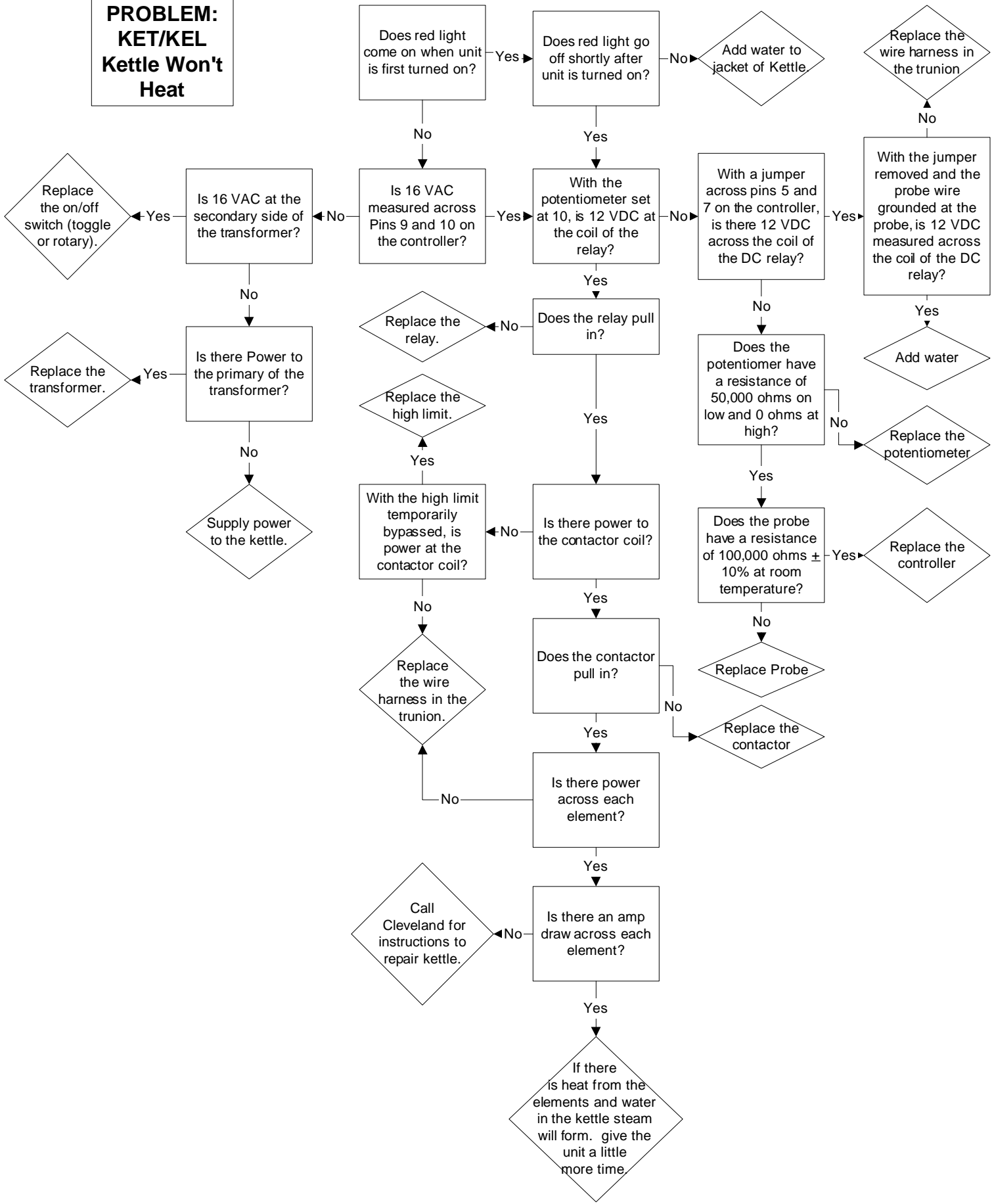
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Visit our Web Site at [www.clevelandrange.com](http://www.clevelandrange.com)

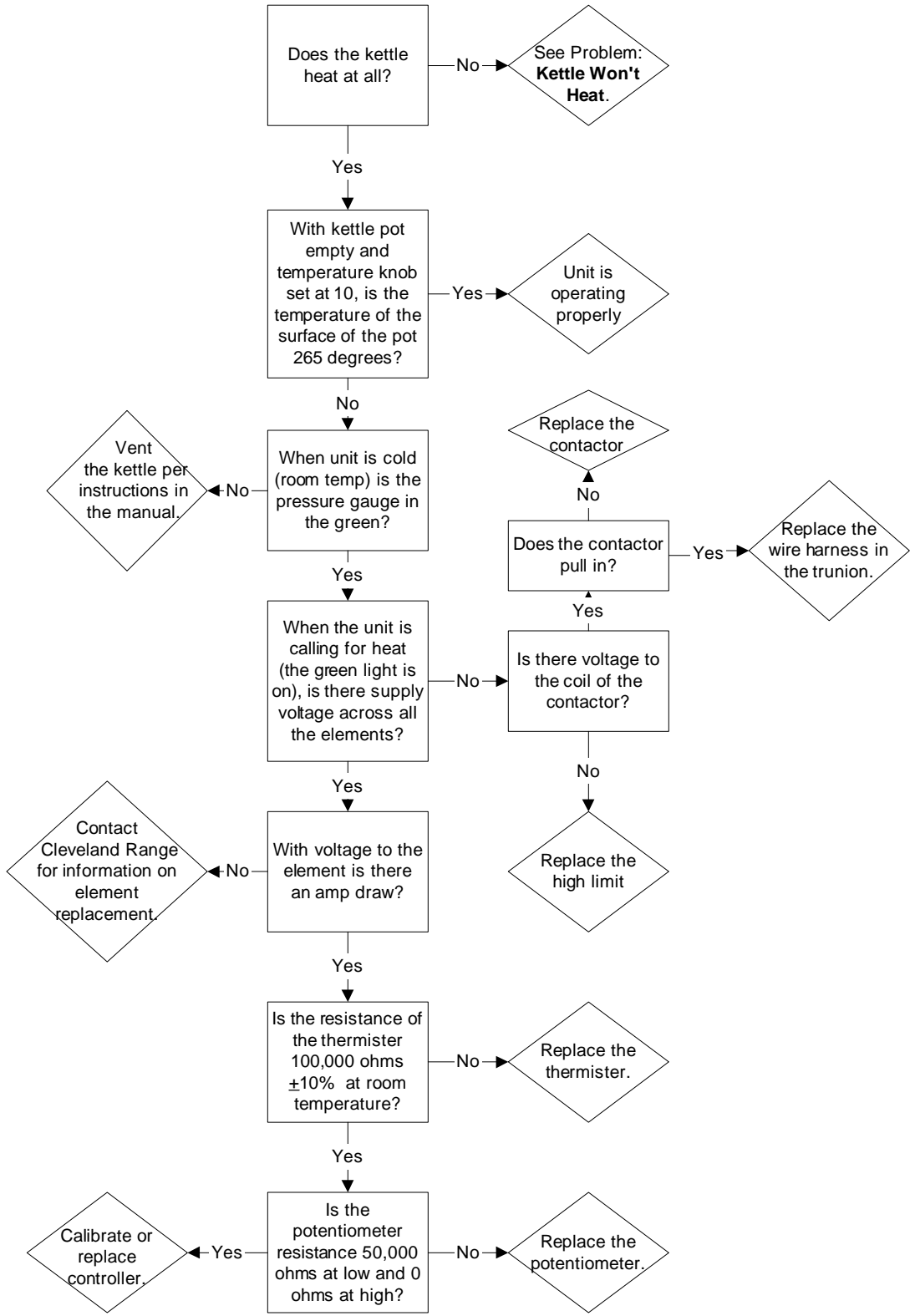
## CLEVELAND RANGE KEL SEQUENCE OF OPERATIONS

1. To turn the unit on, turn the switch to the on position.
  - Power is sent to primary side of the 120vac/16vac transformer.
  - Power is sent to the normally closed high limit.
  - From the high limit power is sent to the normally open contacts of the 12VDC relay.
2. From the secondary of the transformer 16VAC is sent to the controller.
  - Power is sent to the red LED (low water indicator light) from terminal 4 of the controller.
    - If the water probe is grounded through water the LED will go off.
    - If the water probe is not grounded the LED will remain on and the unit will not heat.
  - If the resistance of the thermistor is higher than the setting of the potentiometer( the unit is calling for heat) then 16VDC is sent to the coil of the relay and the green LED (heat indicator light)
  - The 12VDC relay will close until the unit reaches temperature
3. With the contacts of the relay closed, power is sent to the coil of the contactor(s).
  - The contactor(s) close sending the supply voltage to the element(s).
  - The elements will heat causing the water to boil and steam to be generated.
4. The kettle will heat (build pressure) until the controller is satisfied by the thermistor at the setting of the potentiometer.
  - The controller will then turn off the heat circuit until the temperature of the kettle is below the setting.
  - When the temperature drops below the setting the controller will send 12 VDC to the relay and the heat circuit will be energized again.
5. To turn the unit off, place the switch in the off position.
  - Power will be removed from the controller and the heat circuit will de-energize.

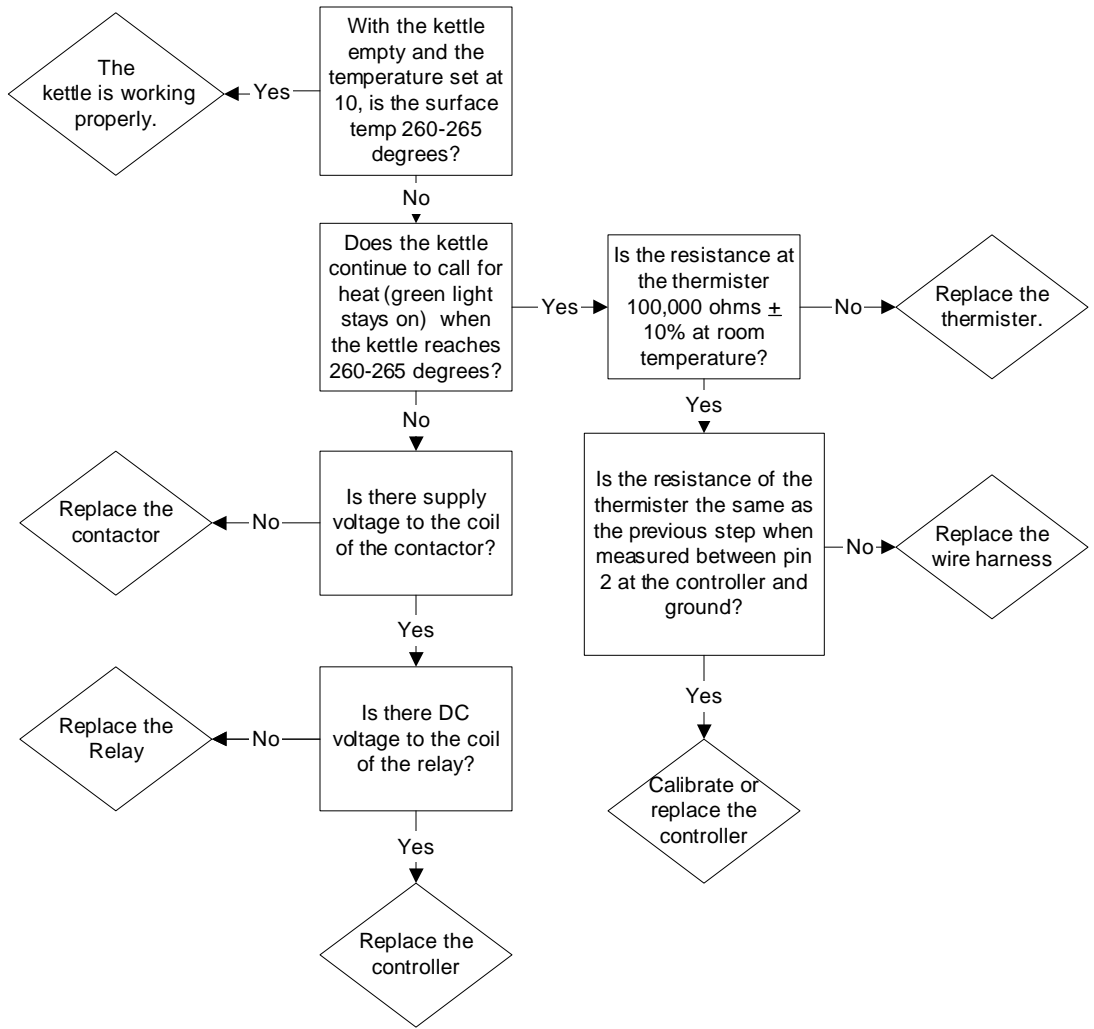
**PROBLEM:  
KET/KEL  
Kettle Won't  
Heat**



**PROBLEM:  
KET/KEL  
Kettle Not  
Hot Enough**



**PROBLEM:  
KET/KEL  
Kettle Gets  
Too Hot**



**PROBLEM: Red Add Water LED Stays On**

