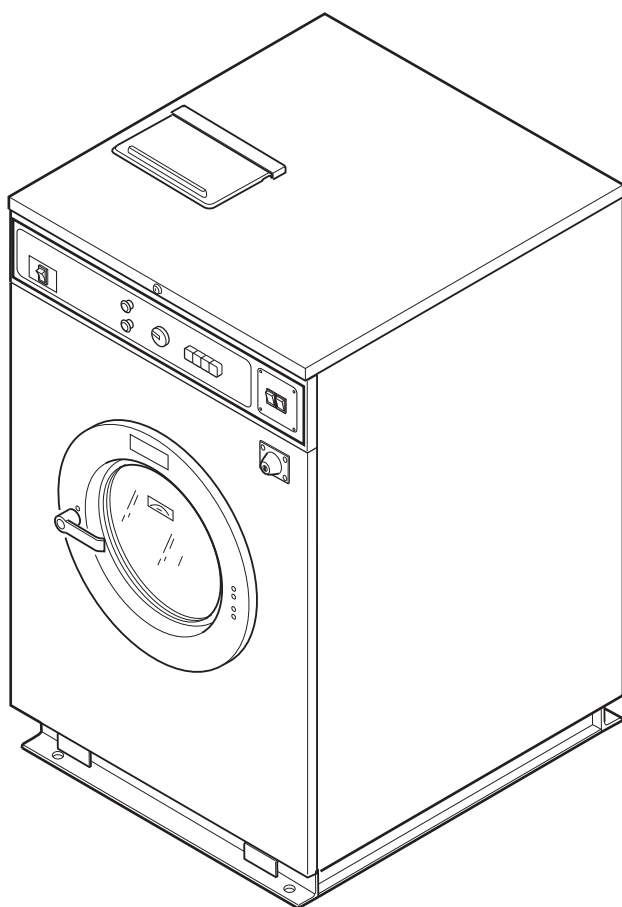


Washer-Extractor

Cabinet Hardmount
Mechanical Timer

Refer to Page 8 for Model Numbers



CHM1624C

— Troubleshooting —

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Section 1

Safety Information

Throughout this manual and on machine decals, you will find precautionary statements (“CAUTION,” “WARNING,” and “DANGER”) followed by specific instructions. These precautions are intended for the personal safety of the operator, user, servicer and those maintaining the machine.

DANGER

Danger indicates the presence of a hazard that **will** cause **severe** personal injury, death or substantial property damage if the danger is ignored.

WARNING

Warning indicates the presence of a hazard that **can** cause **severe** personal injury, death or substantial property damage if the warning is ignored.

CAUTION

Caution indicates the presence of a hazard that **will** or **can** cause **minor** personal injury or property damage if the caution is ignored.

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

IMPORTANT

The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE

The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

General Safety Precautions

In the interest of safety, some general precautions relating to the operation of this machine follow.

	WARNING
• Failure to install, maintain and/or operate this product according to the manufacturer’s instructions may result in conditions which can produce serious injury, death and/or property damage. • Do not repair or replace any part of the product or attempt any servicing unless specifically recommended or published in this Service Manual and unless you understand and have the skills to carry out the servicing. • Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the product is properly grounded and to reduce the risk of fire, electric shock, serious injury or death. W006R2	

(continued)



WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the washer-extractor before servicing.
- Never start the washer-extractor with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the washer-extractor is properly grounded.

W460



WARNING

Repairs that are made to your products by unqualified persons can result in hazards due to improper assembly or adjustments subjecting you, or the inexperienced person making such repairs, to the risk of serious injury, electrical shock, or death.

W007



WARNING

If you or an unqualified person perform service on your product, you must assume the responsibility for any personal injury or property damage which may result. The manufacturer will not be responsible for any injury or property damage arising from improper service and/or service procedures.

W008

Always contact your dealer, distributor, service agent or the manufacturer about any problems or conditions you do not understand.

Important Safety Instructions



WARNING

To reduce the risk of fire, electric shock, serious injury or death to persons when using your washer, follow these basic precautions:

W023

1. Read all instructions before using the washer-extractor.
2. Refer to the GROUNDING INSTRUCTIONS in the INSTALLATION manual (supplied with your washer-extractor) for the proper grounding of the washer-extractor.
3. Do not wash textiles that have been previously cleaned in, washed in, soaked in or spotted with gasoline, dry-cleaning solvents or other flammable or explosive substances. They give off vapors that could ignite or explode.
4. Do not add gasoline, dry-cleaning solvents or other flammable or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
5. Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot water system has not been used for such a period, before using a washer-extractor, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. The gas is flammable. Do not smoke or use an open flame during this time.

6. Do not allow children to play on or in a washer-extractor. Close supervision of children is necessary when the washer-extractor is used near children.
7. Before the washer-extractor is removed from service or discarded, remove the door to the washing compartment.
8. Do not reach into the washer-extractor if the wash basket is moving.
9. Do not install or store the washer-extractor where it will be exposed to water and/or weather.
10. Do not tamper with the washer-extractor's controls.
11. Do not repair or replace any part of the washer-extractor or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out.
12. To reduce the risk of an electrical shock or fire, DO NOT use an extension cord or an adapter to connect the washer-extractor to an electrical power source.
13. Use the washer-extractor only for its intended purpose, washing clothes.
14. ALWAYS disconnect the washer-extractor from its electrical supply before attempting any service.
15. Install the washer-extractor according to the INSTALLATION INSTRUCTIONS. All connections for water, drain, electrical power and grounding must comply with local codes and, when required, be made by licensed personnel.
16. To reduce the risk of fire, textiles which have traces of any flammable substances such as vegetable oil, cooking oil, machine oil, flammable chemicals, thinner, etc. or anything containing wax or chemicals such as in mops or cleaning cloths, must not be put into the washer-extractor. These flammable substances may cause the fabric to ignite.
17. Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
18. Keep the washer-extractor in good condition. Bumping or dropping the washer-extractor can damage its safety features. If this occurs, have the washer-extractor checked by a qualified service person.
19. Replace worn power cords and/or loose plugs.
20. Be sure that water connections have a shut-off valve and that fill hose connections are tight. CLOSE the shut-off valves at the end of each wash day.
21. The loading door MUST BE CLOSED any time the washer-extractor is to fill, tumble or spin. DO NOT by-pass the loading door switch and permit the washer-extractor to operate with the loading door open.
22. Always read and follow the manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings and precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times (preferably in a locked cabinet).
23. Always follow the fabric care instructions supplied by the textile manufacturer.
24. Never operate the washer-extractor with any guards and/or panels removed.
25. DO NOT operate the washer-extractor with missing or broken parts.
26. DO NOT by-pass any safety devices.
27. Failure to install, maintain and/or operate this washer-extractor according to the manufacturer's instructions may result in conditions that can produce bodily injury and/or property damage.

NOTE: The WARNING and IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining and operating the washer-extractor.

Any problems or conditions not understood should be reported to the dealer, distributor, service agent or the manufacturer.

Safety Information

Locating an Authorized Servicer

Alliance Laundry Systems is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

Warranty service must be performed by an authorized technician, using authorized factory parts. If service is required after the warranty expires, Alliance Laundry Systems also recommends contacting an authorized technician and using authorized factory parts.

Section 2

Introduction

Customer Service

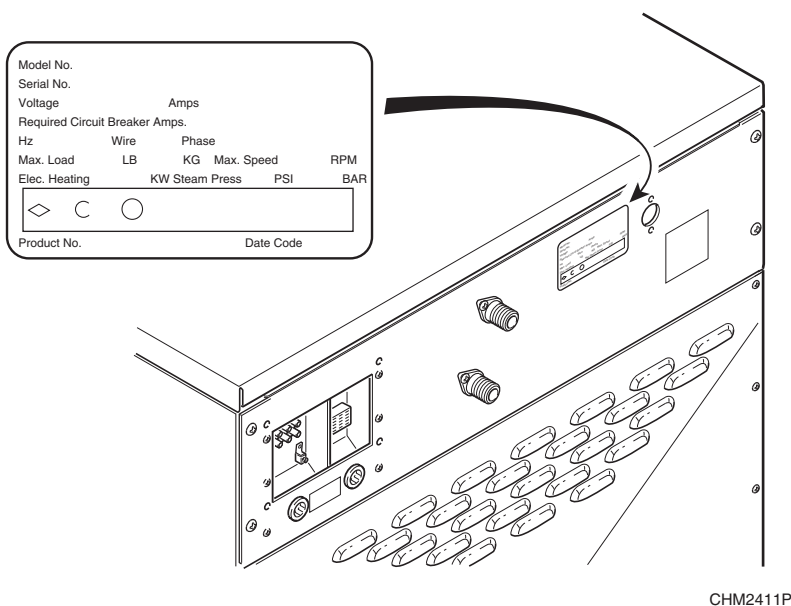
Alliance Laundry Systems is not responsible for personal injury or property damage resulting from improper service. Review all service information before beginning repairs.

For technical assistance, call (920) 748-3121.

If literature or replacement parts are required, contact the source from whom the machine was purchased or contact Alliance Laundry Systems at (920) 748-3950 for the name of the nearest authorized parts distributor.

Nameplate Location

When calling or writing about your product, be sure to mention model and serial numbers. Model and serial numbers are located on nameplate(s) as shown.



Model Identification

Information in this manual is applicable to these washer-extractors.

HC18MC2	HC35MN2	SC18MN3	SC35MH2	SC80MD3	UC30MN2
HC18MD2	HC35MV2	SC18MV2	SC35MH3	SC80MH3	UC30MX2
HC18MH2	HC35MX2	SC18MV3	SC35MN2	SC80MN3	UC35MC2
HC18MN2	HC40MD2	SC18MX2	SC35MN3	SC80MV3	UC35MC3
HC18MV2	HC40ML2	SC18MX3	SC35MV2	UC18MC2	UC35MD2
HC18MX2	HC40MN2	SC20MD2	SC35MV3	UC18MC3	UC35MD3
HC20MD2	HC40MX2	SC20ML2	SC35MX2	UC18MD2	UC35MH2
HC20ML2	HC40MY2	SC20MN2	SC35MX3	UC18MD3	UC35MH3
HC20MN2	HC50MC2	SC20MX2	SC40MD2	UC18MH2	UC35MN2
HC20MX2	HC50MD2	SC20MY2	SC40ML2	UC18MH3	UC35MN3
HC20MY2	HC50MH2	SC25MC2	SC40MN2	UC18MN2	UC35MV2
HC25MC2	HC50ML2	SC25MD2	SC40MX2	UC18MN3	UC35MV3
HC25MD2	HC50MN2	SC25MH2	SC40MY2	UC18MV2	UC35MX3
HC25MH2	HC50MV2	SC25ML2	SC50MC2	UC18MV3	UC40MN2
HC25ML2	HC50MX2	SC25MN2	SC50MC3	UC18MX2	UC50MC2
HC25MN2	HC50MY2	SC25MV2	SC50MD2	UC18MX3	UC50MC3
HC25MV2	HC60MD2	SC25MX2	SC50MD3	UC20MD2	UC50MD2
HC25MX2	HC60ML2	SC25MY2	SC50MH2	UC20ML2	UC50MD3
HC25MY2	HC60MN2	SC27MC2	SC50MH3	UC20MN2	UC50MH2
HC27MC2	HC60MX2	SC27MD2	SC50ML2	UC20MX2	UC50MH3
HC27MD2	HC60MY2	SC27MH2	SC50MN2	UC25MC2	UC50MN2
HC27MH2	HC80MC3	SC27MN2	SC50MN3	UC25MD2	UC50MN3
HC27MN2	HC80MD3	SC27MV2	SC50MV2	UC25MH2	UC50MV2
HC27MV2	HC80MH3	SC27MX2	SC50MV3	UC25MN2	UC50MV3
HC27MX2	HC80MN3	SC30MD2	SC50MX2	UC25MV2	UC50MX2
HC30MD2	HC80MV3	SC30ML2	SC50MX3	UC25MX2	UC50MX3
HC30ML2	SC18MC2	SC30MN2	SC50MY2	UC27MC2	UC60MN2
HC30MN2	SC18MC3	SC30MX2	SC60MD2	UC27MD2	UC80MC3
HC30MX2	SC18MD2	SC30MY2	SC60ML2	UC27MH2	UC80MD3
HC30MY2	SC18MD3	SC35MC2	SC60MN2	UC27MN2	UC80MH3
HC35MC2	SC18MH2	SC35MC3	SC60MX2	UC27MV2	UC80MN3
HC35MD2	SC18MH3	SC35MD2	SC60MY2	UC27MX2	UC80MV3
HC35MH2	SC18MN2	SC35MD3	SC80MC3	UC30ML2	

Section 3

Theory of Operation

Starting the Machine

The door lock will not allow a cycle to be started until the door has been closed.

Fill

The operator selects a cycle and starts the machine. Water enters the machine through water valves that are controlled by the microcomputer. As water fills the basket, a column of air is trapped in a pressure bulb and hose. The air pressure continues to increase as the basket fills with water. When the desired water level is reached, the water level switch triggers the microcomputer and the water valves turn off.

A vacuum breaker installed in the inlet plumbing prevents the backflow of water.

Supply

The operator can either connect external liquid supplies to the machine or fill the supply dispenser with liquid or dry supplies. The supply dispenser's nozzles flush the compartments with water at the appropriate times throughout a cycle.

Wash

The basket includes ribs that lift the laundry from the wash water. The laundry then tumbles back into the bath.

In 2-speed and variable-speed models, 1 dual-speed motor drives the basket's shaft with a V-belt. In 3-speed models, 2 motors drive the basket's cylinder with a V-belt.

18-60 pound capacity models use 2 bearings that are held in place by a single cast-iron trunnion that is bolted to the frame. 80 and 125-pound capacity models use 2 flange-type bearing that are bolted to the frame.

Drain

Cabinet Hardmount washer-extractors use a normally open gravity-type drain system. No pump is used. When the drain valve opens, the perforated basket allows water to drain from it.

In the event of a power failure, the drain valve will open automatically and the machine will drain.

Extract

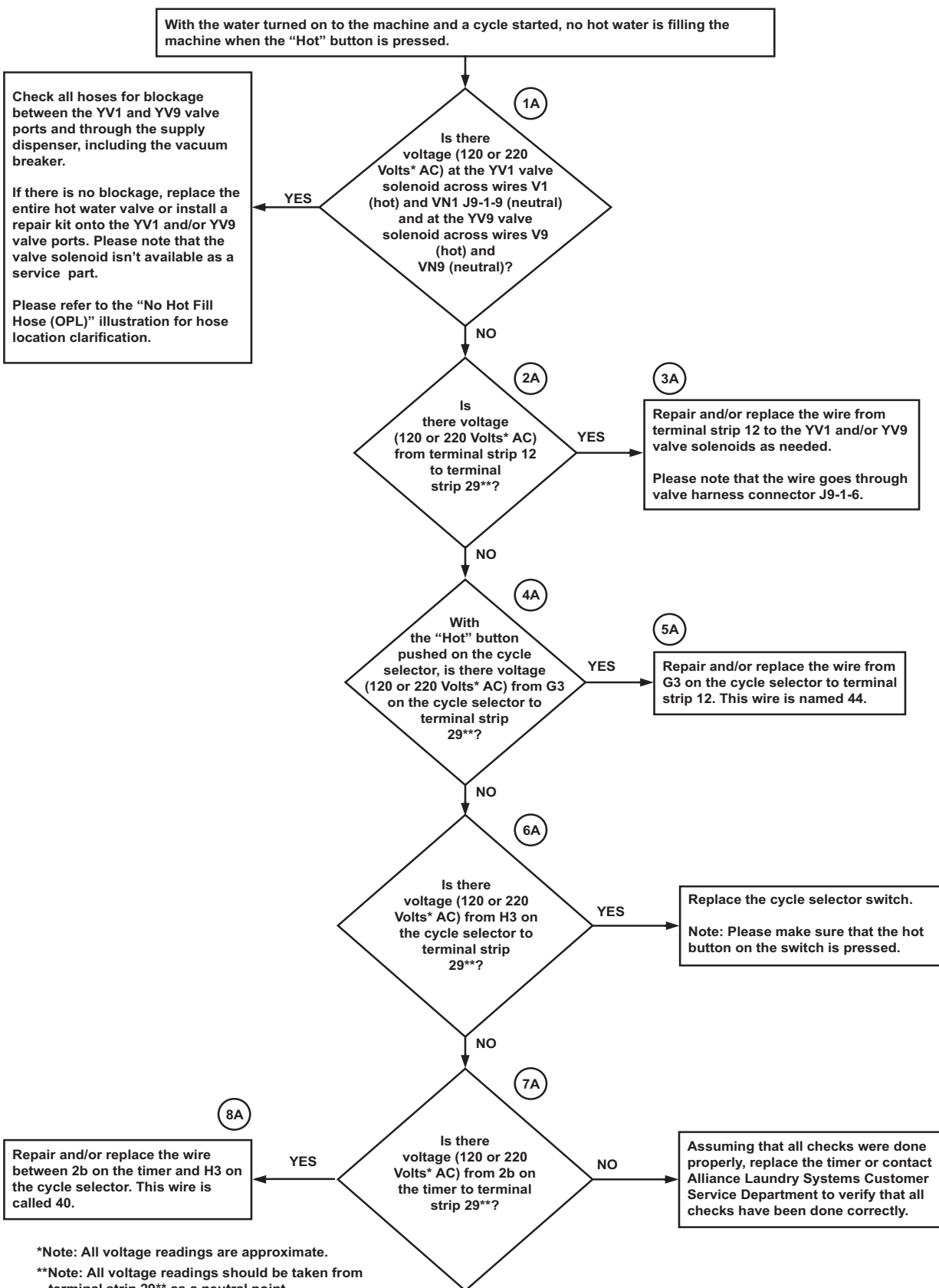
A final high-speed extract step removes water from the load, which maximizes drying efficiency.

The door lock system will not allow the door to be opened until the cycle has finished.

Section 4

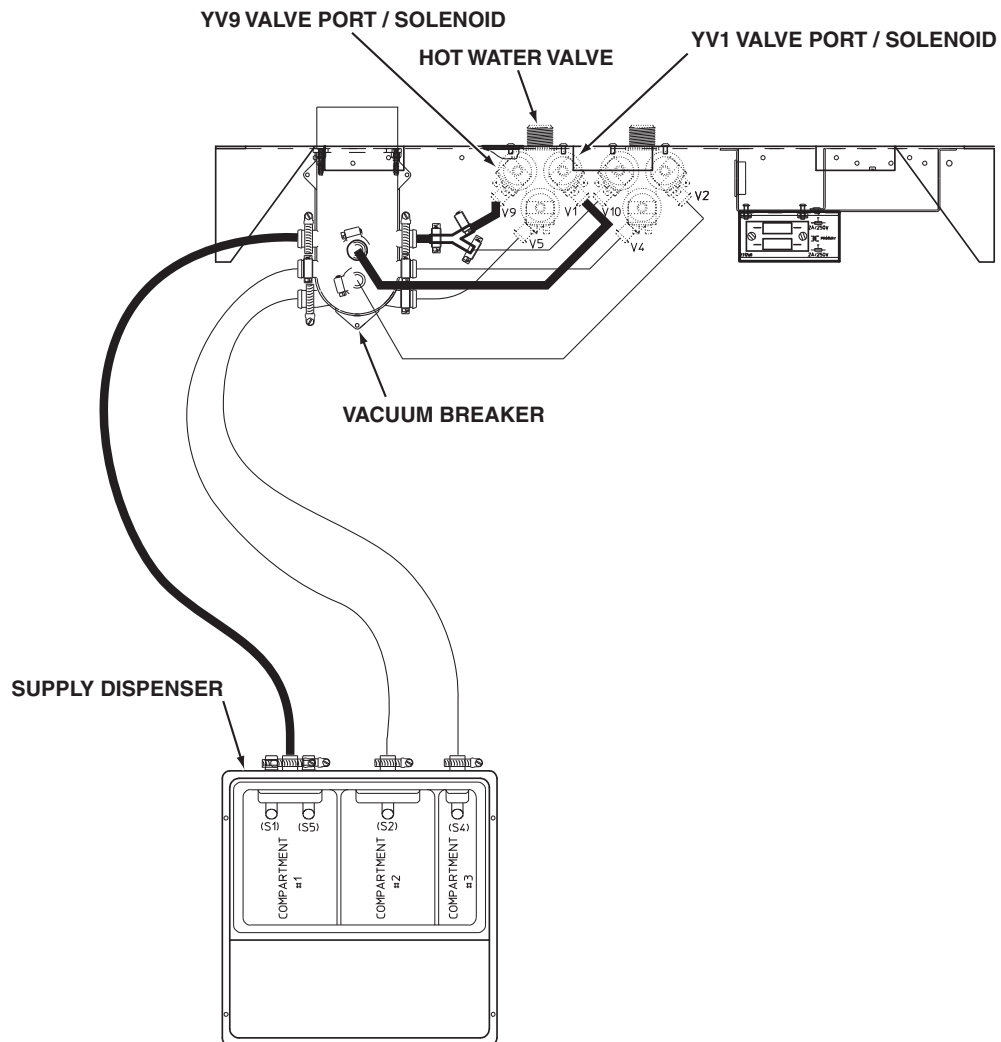
Troubleshooting

1. No Hot Fill Analysis (OPL)



CHM513S

No Hot Fill Hose (OPL) Illustration



CHM277S

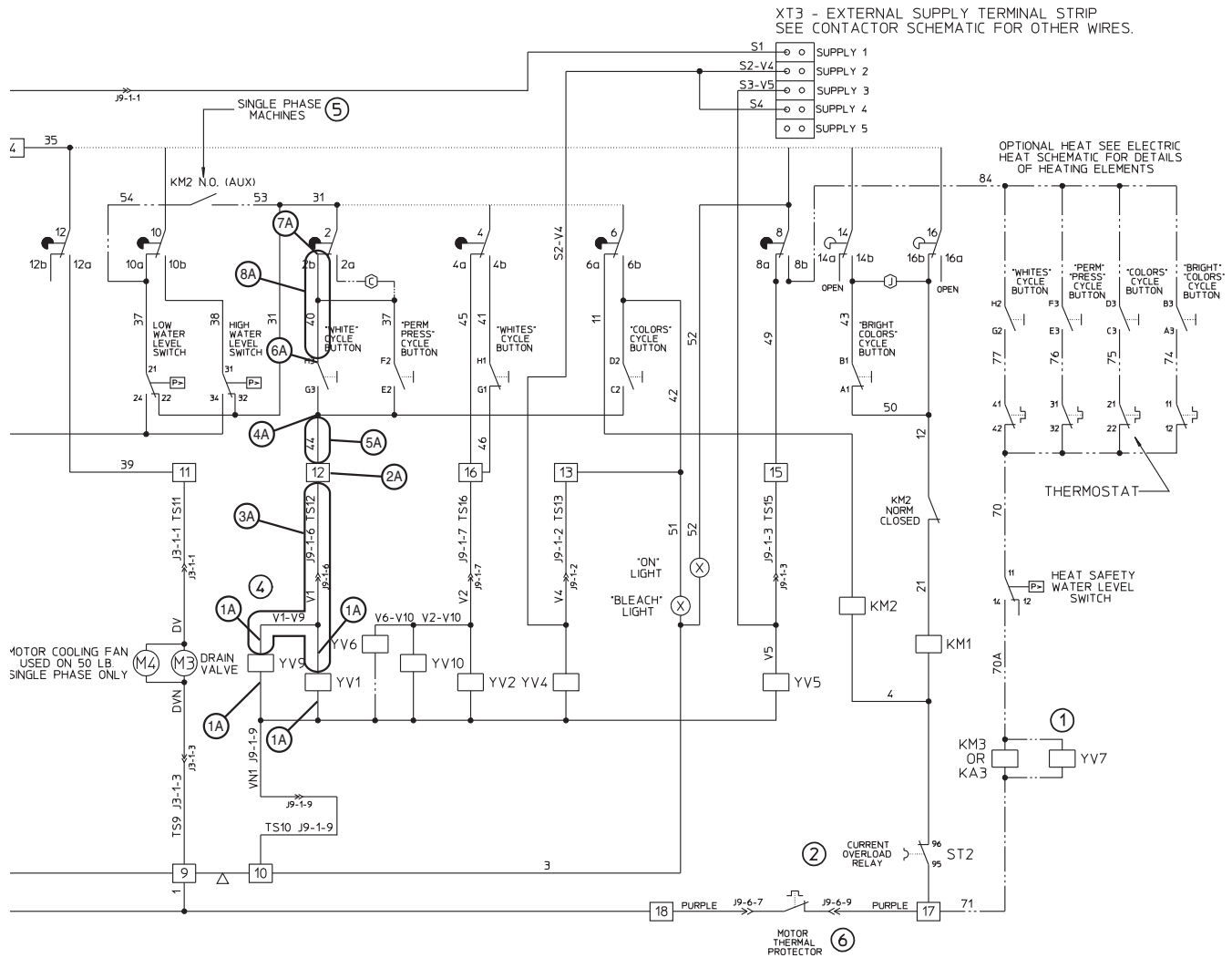
Please refer to the following 2 pages for wiring diagram information.

Please refer to the following 2 pages for wiring diagram information.

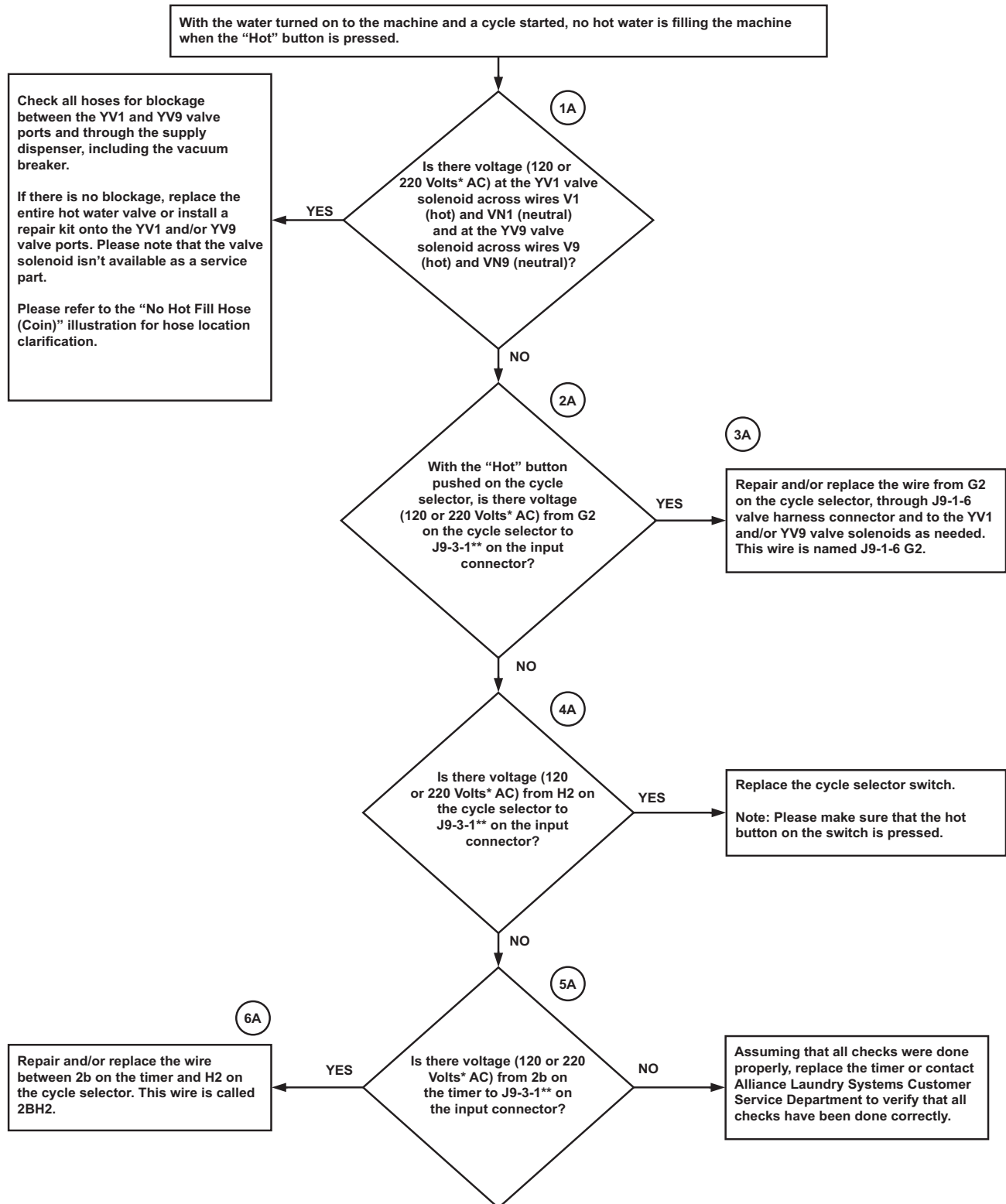
No Hot Fill Analysis (OPL) (Sheet 1 of 2)



No Hot Fill Analysis (OPL) (Sheet 2 of 2)



2. No Hot Fill Analysis (Coin)

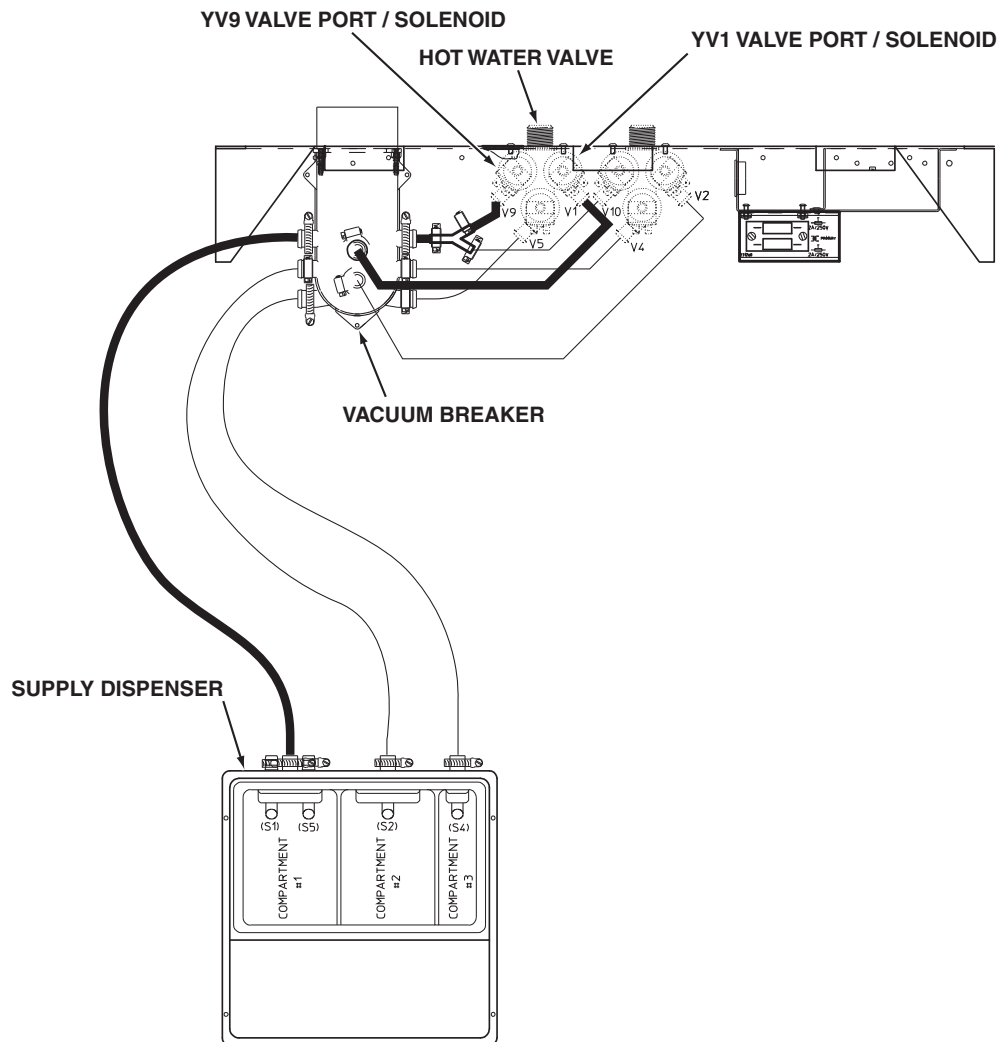


*Note: All voltage readings are approximate.

**Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

CHM514S

No Hot Fill Hose (Coin) Illustration



CHM277S

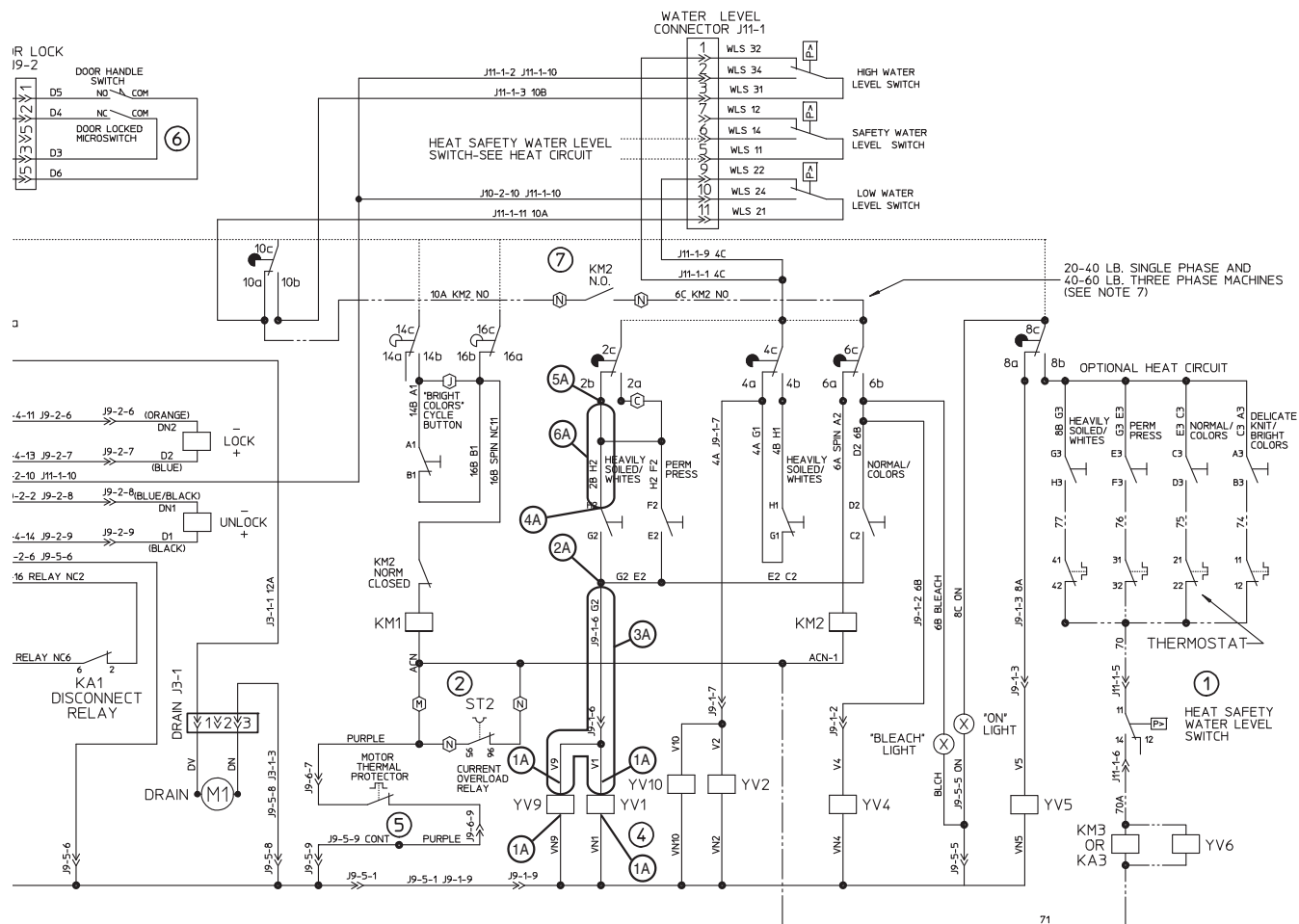
Please refer to the following 2 pages for wiring diagram information.

No Hot Fill Analysis (Coin) (Sheet 1 of 2)

N
FO
CO
ST
FO
CU
PH
"B"
SC
DO
(K/
YV
3'
WI
J9-
ON
DO
CL
PO
SH
TO
KM
MA
MA
WI
WI

F232202R4

No Hot Fill Analysis (Coin) (Sheet 2 of 2)



NOTES

- ① FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 20 LB. "B" VOLTAGE MACHINES. SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ DOOR MAGNETIC SWITCH (SQ1) AND SAFETY RELAY (KA4) USED ON "CE" OPTION MACHINES ONLY.
- ④ Y9 AND Y10 ARE USED WITH TWO SEPARATE 3 WAY ELBI WATER VALVES, ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.
- ⑥ DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION. OTHER SWITCHES AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- ⑦ KM2N0 WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 40 AND 60 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WITH MACHINE, WAS ORIGINALLY EQUIPPED WITH THESE WIRES.

LEGEND

- ⊕ CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- ⊖ NOT FACTORY INSTALLED
- ⊕ ADD CONNECTION FOR HEAT
- ⊖ REMOVE CONNECTION FOR HEAT
- ⊖ REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- ⊕ REMOVE CONNECTION FOR CE MARK OPTION
- ⊕ ADD CONNECTION FOR CE MARK OPTION
- ⊖ CONNECTION FOR 3 PHASE MACHINES
- ⊖ CONNECTION FOR SINGLE PHASE MACHINES

J9-5-1 CONNECTOR/PIN NUMBER
→→ J9-5(CONNECTOR #)-1(PIN #)

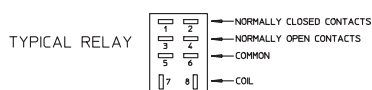
⌋ REVERSING TIMER CONTACTS FOR WASH AGITATION

 PROGRAM TIMER CONTACTS

..... CONNECTIONS INTERNAL TO DEVICE

-----OPTIONAL CONNECTIONS

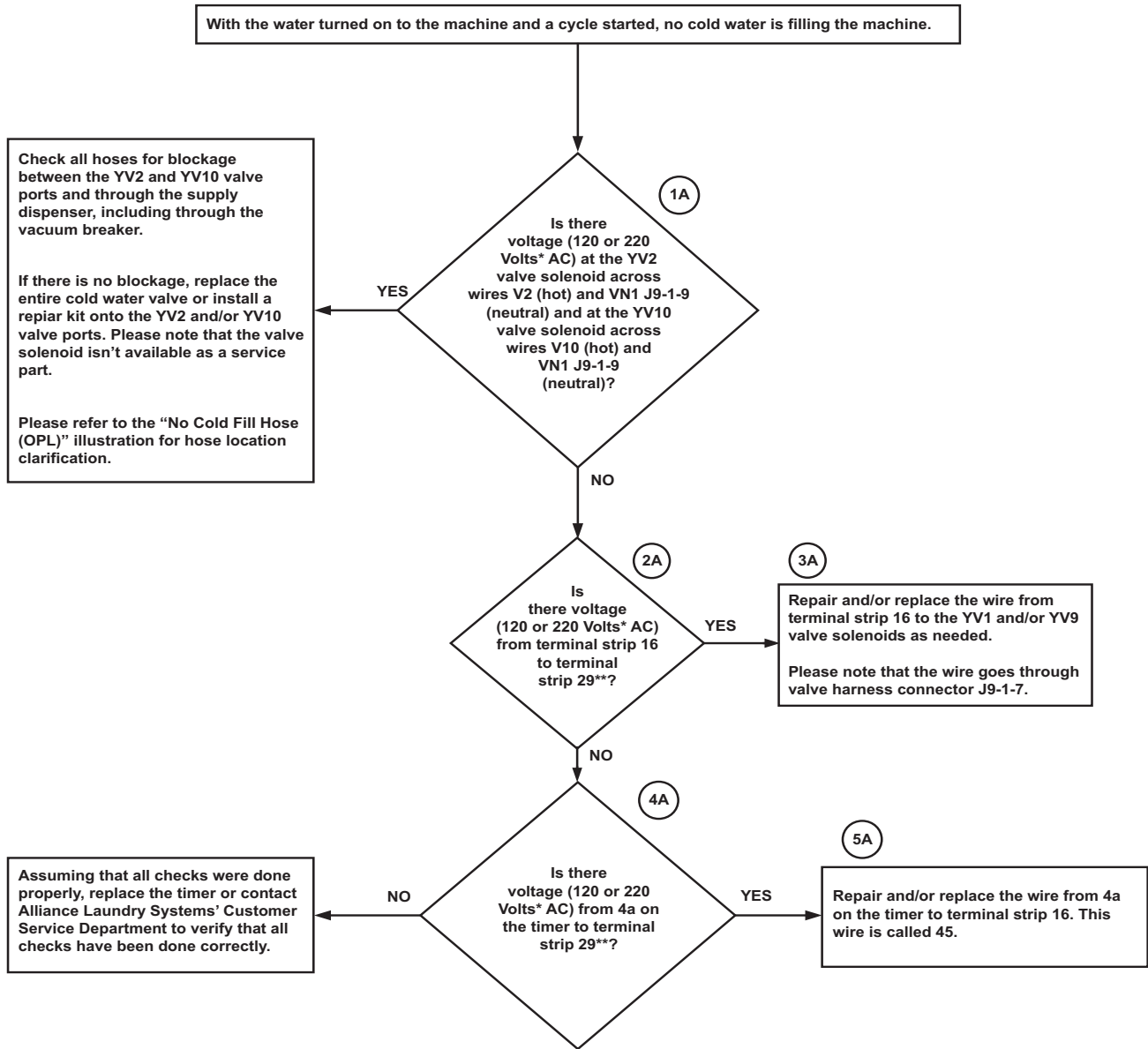
- KM1 - WASH CONTACTOR
 KM2 - SPIN CONTACTOR
 KM3 - OPTIONAL HEAT CONTACTOR
 KA1 - TIME DELAY DISCONNECT RELAY
 KA2 - DOOR UNLOCK TIME DELAY
 KA3 - STEAM HEAT RELAY
 KA4 - DOOR SAFETY RELAY
 SQ1 - MAGNETIC DOOR POSITION SENSOR
 ST2 - CURRENT OVERLOAD RELAY (10)
 YV1 - HOT FILL VALVE
 YV2 - COLD FILL VALVE
 YV4 - SUPPLY 2 VALVE (BLEACH)
 YV5 - SUPPLY 3 VALVE (SOFTENER)
 YV6 - OPTIONAL STEAM HEAT VALVE
 YV9 - SUPPLY 1 HOT FLUSH VALVE
 YV10- SUPPLY 1 COLD FLUSH VALVE
 M1 - DRAIN VALVE MOTOR
 M2 - TIMER PROGRAM MOTOR
 M3 - TIMER REVERSING MOTOR



ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME

CHM276S
0636156(H)

3. No Cold Fill Analysis (OPL)

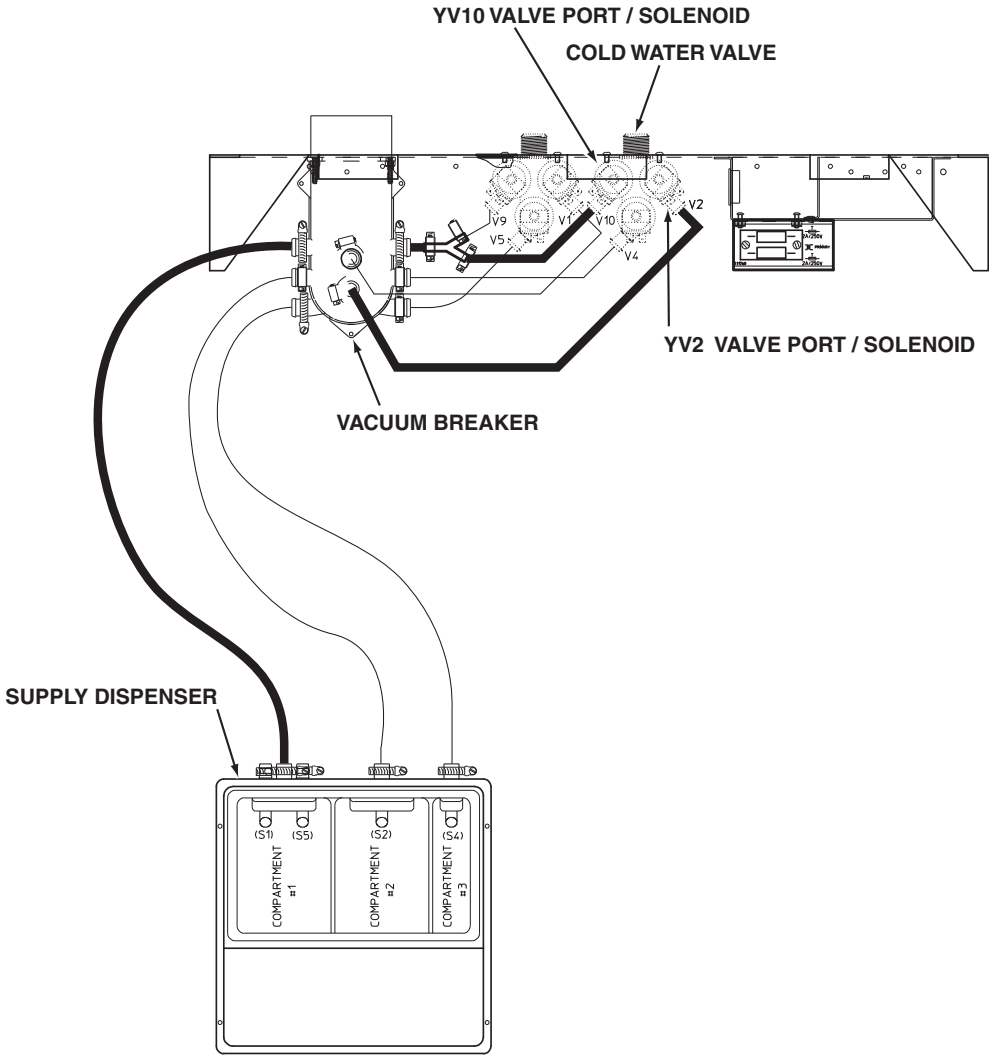


*Note: All voltage readings are approximate.

** Note: All voltage readings should be taken from terminal strip 29** as a neutral point.

CHM515S

No Cold Fill Hose (OPL) Illustration



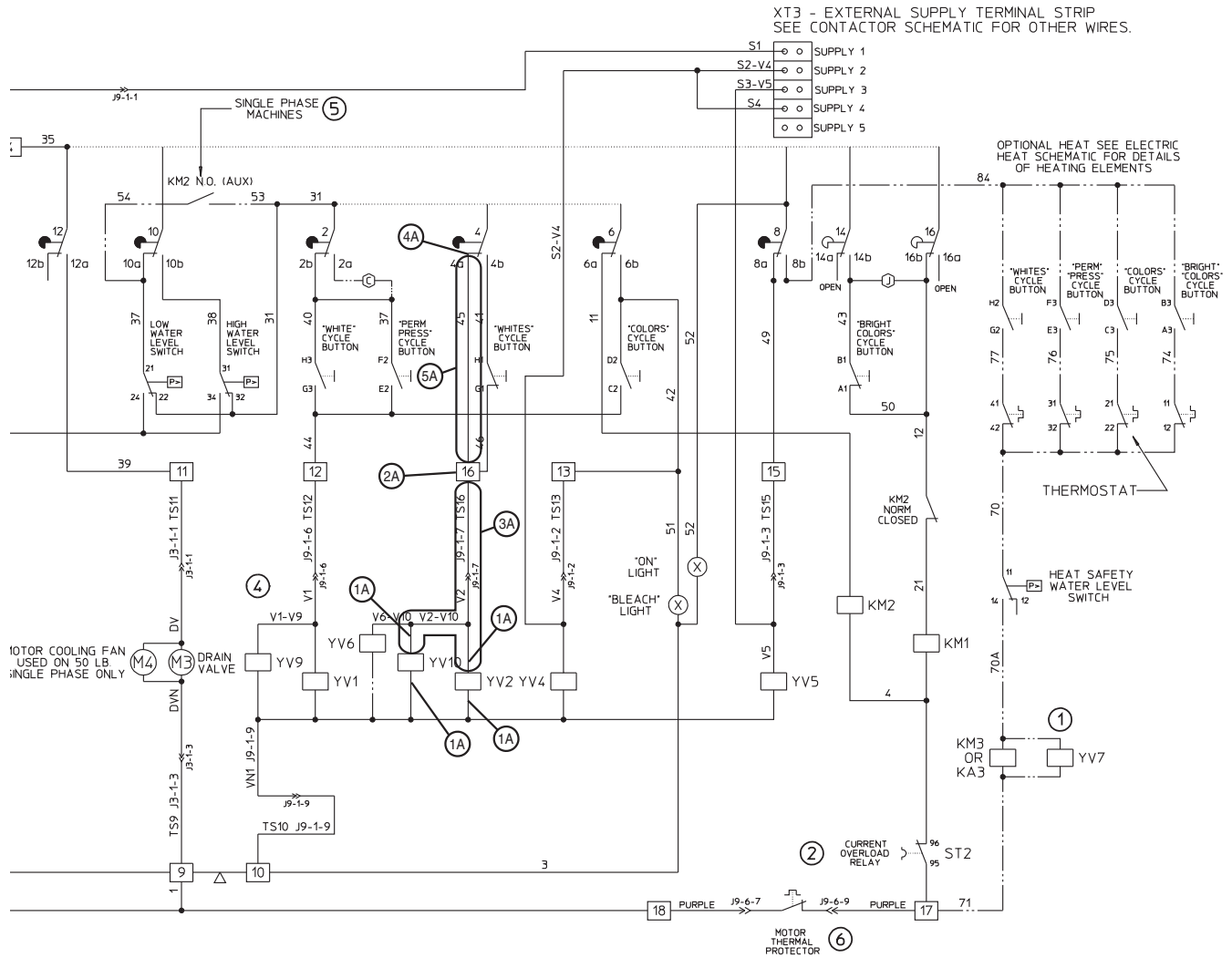
CHM280S

Please refer to the following 2 pages for wiring diagram information.

No Cold Fill Analysis (OPL) (Sheet 1 of 2)



No Cold Fill Analysis (OPL) (Sheet 2 of 2)



1. REPLACE HEAT
RELAY AND STEAM
RELAY SCHEMATIC FOR
NS.

Y IS USED ON SINGLE
PHASE (INCLUDING THE 20 LB.
CONTACTOR)

FOR UNLOCK CONFIGURATION
SCHEMATIC CONTROL
IS SAME FOR BOTH

WITH TWO SEPARATE 3
PHASES ARE NOT USED WITH
VE.

CH BYPASS WIRES MAY BE
ON 3 PHASE MACHINES.
CONNECTED WHEN MACHINE
WITH THESE WIRES.

AY NOT BE PRESENT ON

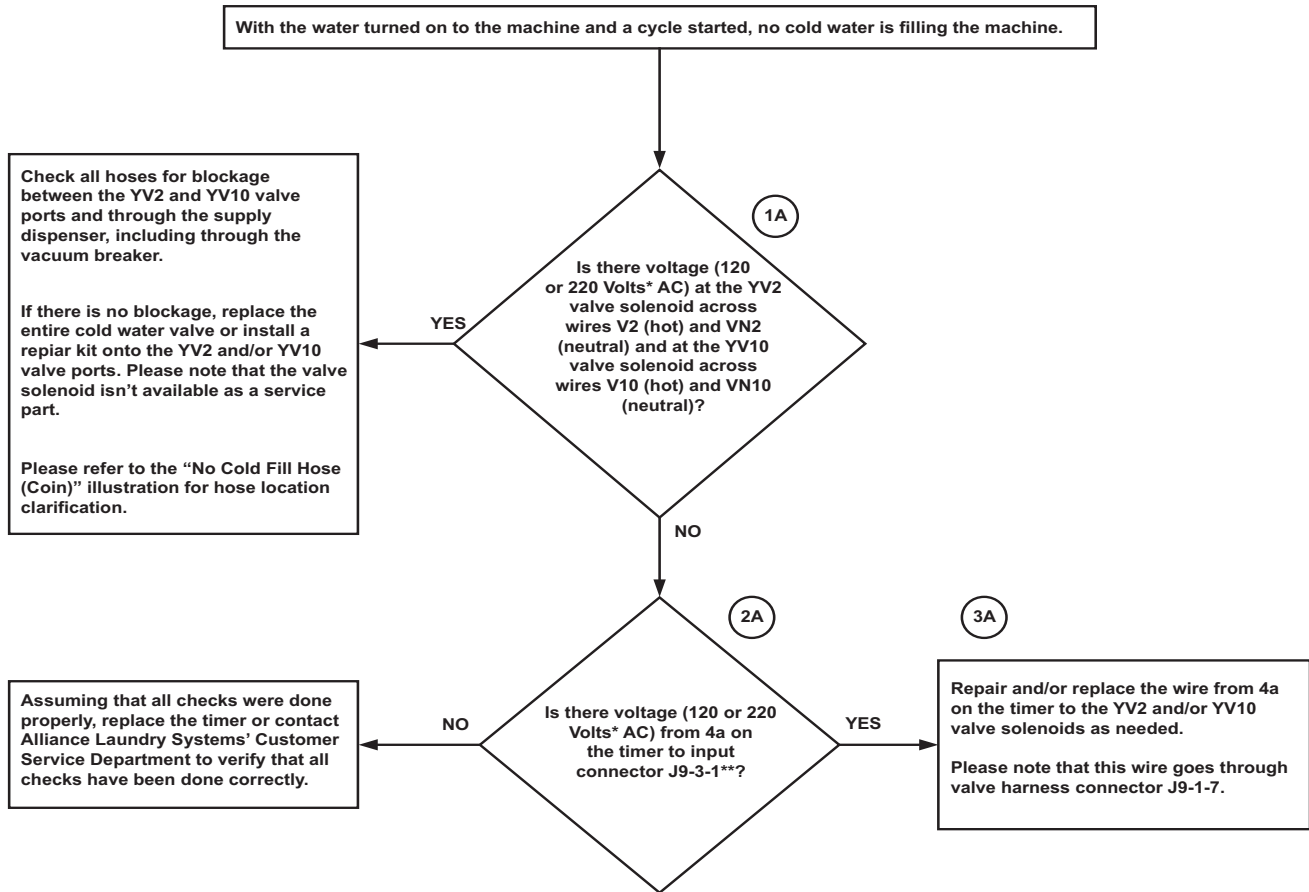
LEGEND

- ① CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- ② NOT FACTORY INSTALLED
- ③ ADD CONNECTION FOR HEAT
- ④ REMOVE CONNECTION FOR HEAT
- ⑤ REMOVE CONNECTION FOR GENTLE AGITATION IN
BRIGHT COLORS CYCLE
- △ TERMINAL STRIP JUMPER
- ③② TERMINAL STRIP CONNECTION
- ↔ REVERSING TIMER CONTACTS FOR WASH AGITATION
- ⏰ PROGRAM TIMER CONTACTS
- CONNECTIONS INTERNAL TO DEVICE
- OPTIONAL CONNECTIONS
- RC RESISTOR/CAPACITOR NETWORK

- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL ELECTRIC HEAT CONTACTOR
- KA1 - DOOR SAFETY RELAY
- KA3 - STEAM RELAY
- M1 - TIMER PROGRAM MOTOR
- M2 - TIMER REVERSING MOTOR
- M3 - DRAIN VALVE MOTOR
- M4 - OPTIONAL MOTOR FAN
- ST2 - MOTOR CURRENT OVERLOAD RELAY
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2(BLEACH) VALVE
- YV5 - SUPPLY 3(SOFTENER) VALVE
- YV6 - OPTIONAL 3RD SUPPLY INLET VALVE
- YV7 - OPTIONAL STEAM VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10 - SUPPLY 1 COLD FLUSH VALVE
- XT3 - EXTERNAL SUPPLY TERMINAL STRIP

CHM284S
0635913(E)

4. No Cold Fill Analysis (Coin)

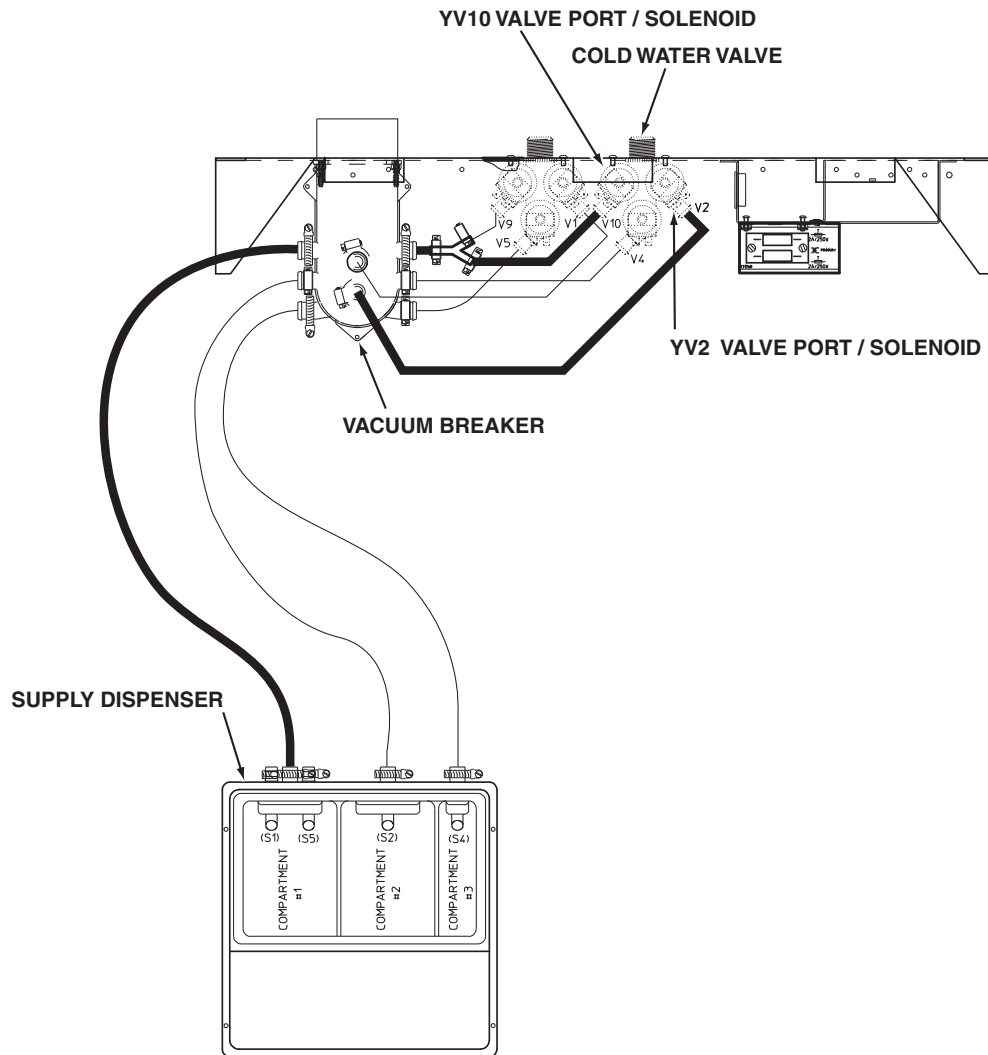


*Note: All voltage readings are approximate.

** Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

CHM516S

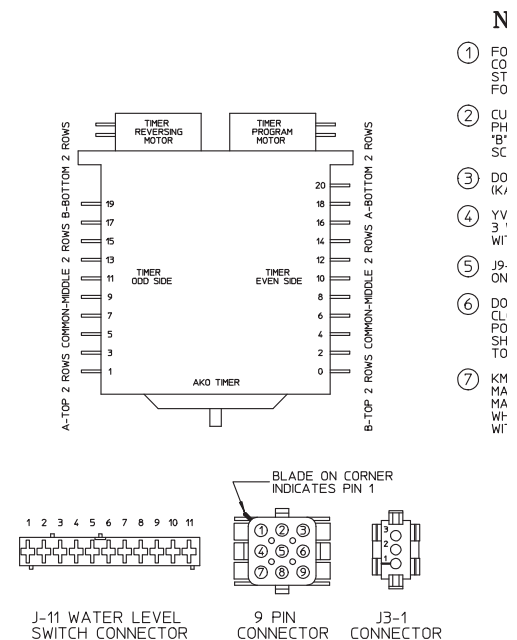
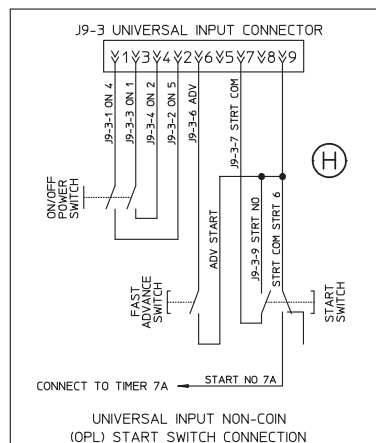
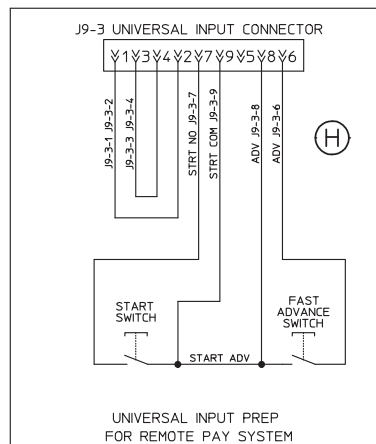
No Cold Fill Hose (Coin) Illustration



CHM280S

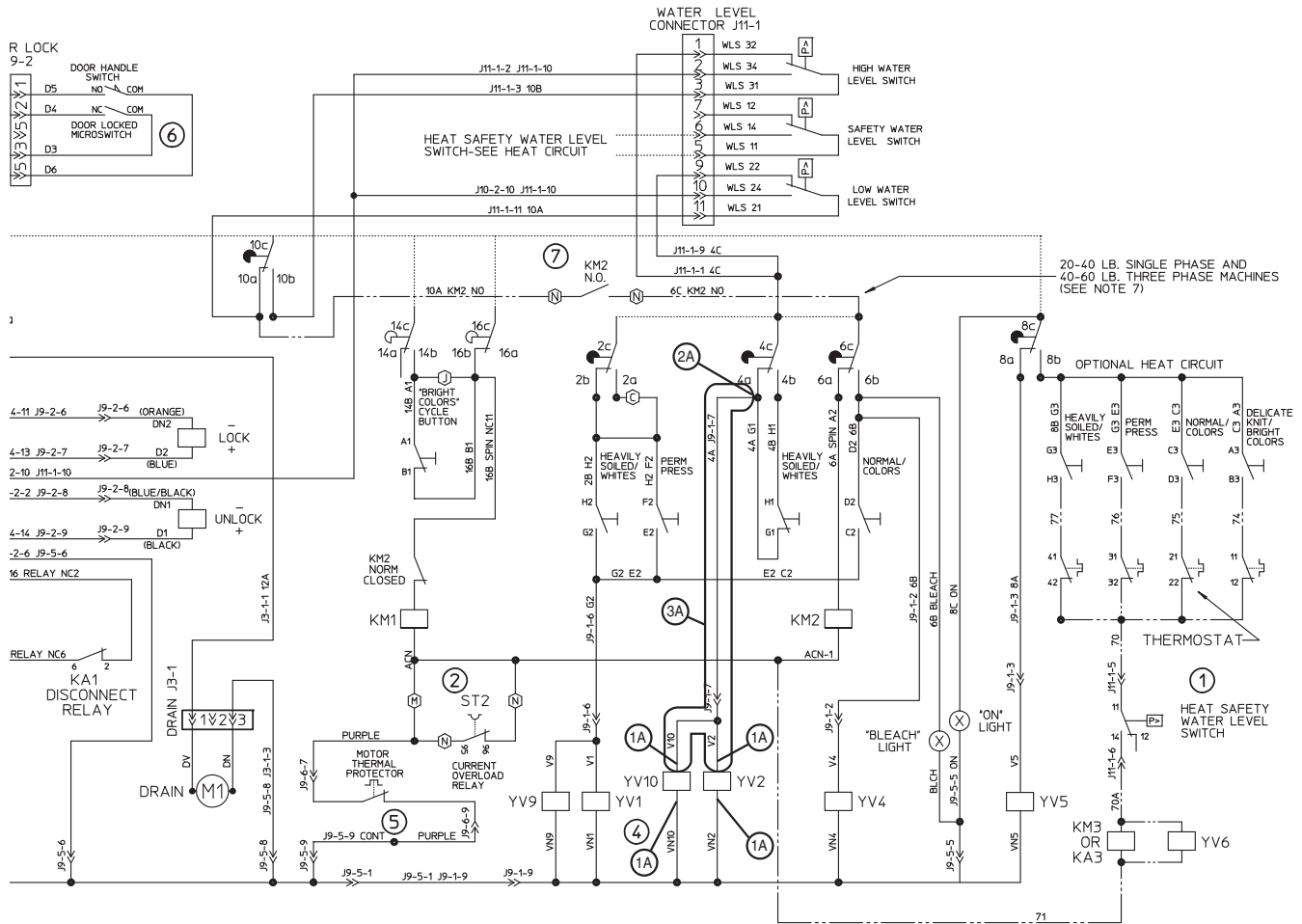
Please refer to the following 2 pages for wiring diagram information.

No Cold Fill Analysis (Coin) (Sheet 1 of 2)



F232202R4

No Cold Fill Analysis (Coin) (Sheet 2 of 2)



NOTES

- ① FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 20 LB. "B" VOLTAGE MACHINES. SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ DOOR MAGNETIC SWITCH (SQ1) AND SAFETY RELAY (KA4) USED ON "CE" OPTION MACHINES ONLY.
- ④ YV9 AND YV10 ARE USED WITH TWO SEPARATE 3 WAY ELBI WATER VALVES, ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.
- ⑥ DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION. OTHER SWITCHES AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- ⑦ KM2NO WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 40 AND 60 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN MACHINE WAS ORIGINALLY EQUIPPED WITH THESE WIRES.

LEGEND

- ① CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- ② NOT FACTORY INSTALLED
- ③ ADD CONNECTION FOR HEAT
- ④ REMOVE CONNECTION FOR HEAT
- ⑤ REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- ⑥ REMOVE CONNECTION FOR CE MARK OPTION
- ⑦ ADD CONNECTION FOR CE MARK OPTION
- ⑧ CONNECTION FOR 3 PHASE MACHINES
- ⑨ CONNECTION FOR SINGLE PHASE MACHINES

J9-5-1 CONNECTOR/PIN NUMBER
 J9-5(CONNECTOR #)-1(PIN #)

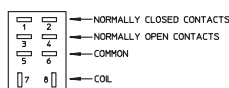
REVERSING TIMER CONTACTS FOR WASH AGITATION

PROGRAM TIMER CONTACTS

CONNECTIONS INTERNAL TO DEVICE

OPTIONAL CONNECTIONS

TYPICAL RELAY



ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME.

- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL HEAT CONTACTOR
- KA1 - TIME DELAY DISCONNECT RELAY
- KA2 - DOOR UNLOCK TIME DELAY
- KA3 - STEAM HEAT RELAY
- KA4 - DOOR SAFETY RELAY
- SQ1 - MAGNETIC DOOR POSITION SENSOR
- ST2 - CURRENT OVERLOAD RELAY (10)
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2 VALVE (BLEACH)
- YV5 - SUPPLY 3 VALVE (SOFTENER)
- YV6 - OPTIONAL STEAM HEAT VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10 - SUPPLY 1 COLD FLUSH VALVE
- M1 - DRAIN VALVE MOTOR
- M2 - TIMER PROGRAM MOTOR
- M3 - TIMER REVERSING MOTOR

CHM279S
 0636156(H)

5. No Supply 2 Fill Analysis (OPL)

With the machine beginning the wash step, no water is coming into the supply compartment #2. Please be sure that all other cycle steps have been performed properly up to the wash. Please refer to the "Cycle Timer Wash Step" illustration for timer position clarification.

Note: The following voltage readings must be taken within 30-60 seconds from the start of the wash step, as close as possible to the start of the wash step. The bleach light will be lit at this time.

Check all hoses for blockage between the YV4 valve port and the supply dispenser, including through the vacuum breaker.

If there is no blockage, replace the entire cold water valve or install a repair kit onto the YV4 valve port. Please note that the valve solenoid isn't available as a service part.

Please refer to the "Supply 2 Fill Hose" illustration for hose location clarification.

YES

Is there voltage (120 or 220 Volts** AC) at the YV4 valve solenoid across wires V4 (hot) and VN1 J9-1-9 (neutral)?

NO

2A

Is there voltage (120 or 220 Volts** AC) from terminal strip 13 to terminal strip 29*?

YES

3A

Check the wiring between terminal strip 13 and the YV4 valve solenoid. Repair and/or replace the wire as needed.

NO

4A

Is there voltage (120 or 220 Volts** AC) from 6b on the timer to terminal strip 29*?

YES

5A

Repair and/or replace the wire between 6b on the timer and terminal strip 13 as needed.

NO

Assuming that all checks were done properly, replace the timer or contact Alliance Laundry Systems' Customer Service Department to verify that all checks have been done correctly.

Please remember that all voltage readings must be taken within 30-60 seconds from the start of the wash step.

*Note: All voltage readings should be taken from terminal 29 as a neutral point.

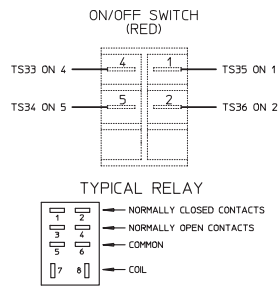
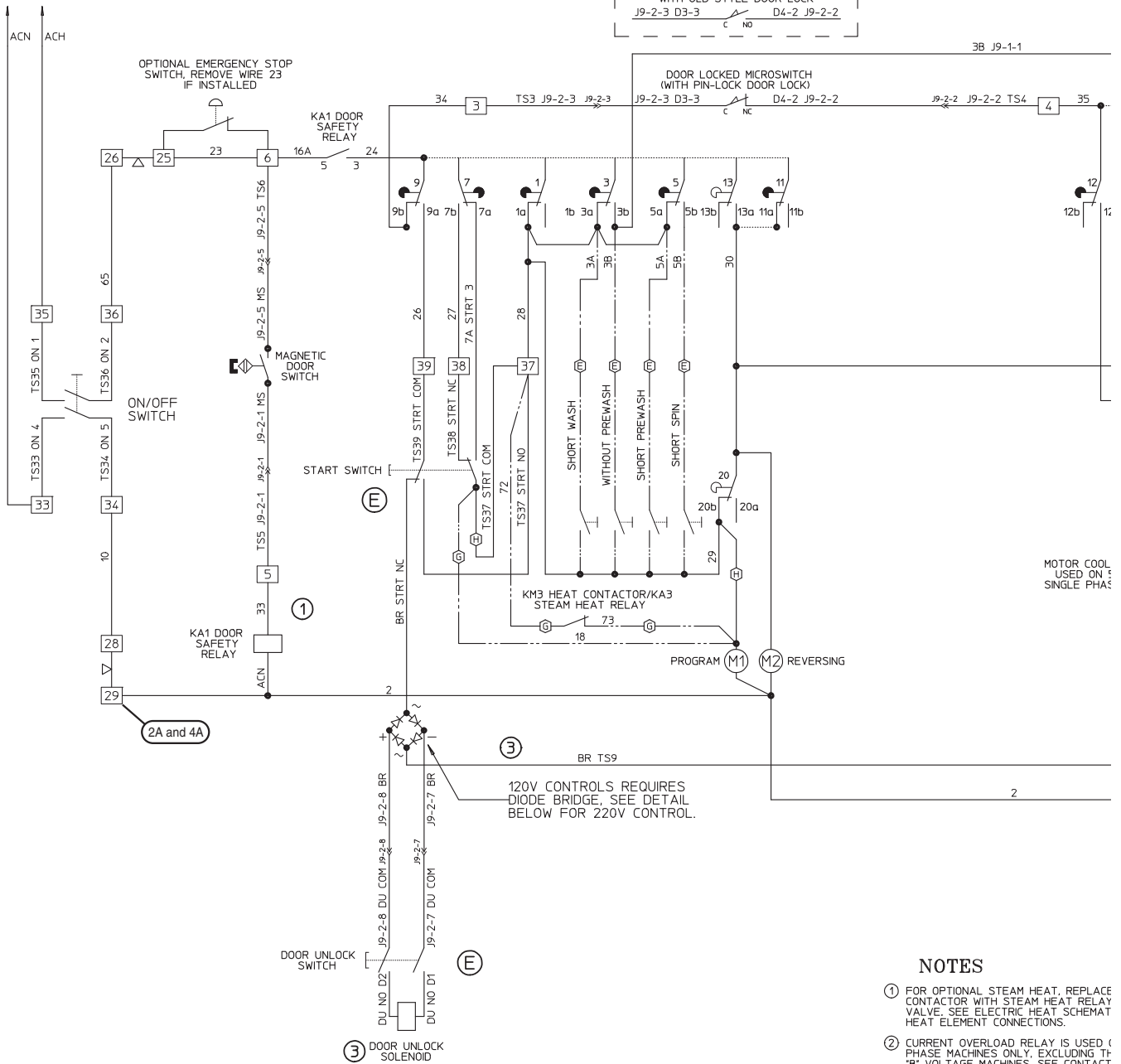
**Note: All voltage readings are approximate.

CHM517S

Please refer to the following 2 pages for wiring diagram information.

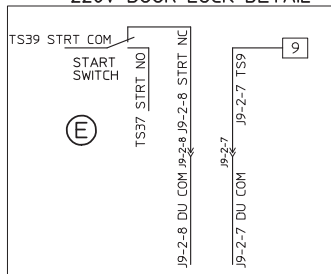
No Supply 2 Fill Analysis (OPL) (Sheet 1 of 2)

REFER TO CONTACTOR SCHEMATIC
FOR CONTROL CIRCUIT POWER INPUT



000 NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME.

220V DOOR LOCK DETAIL

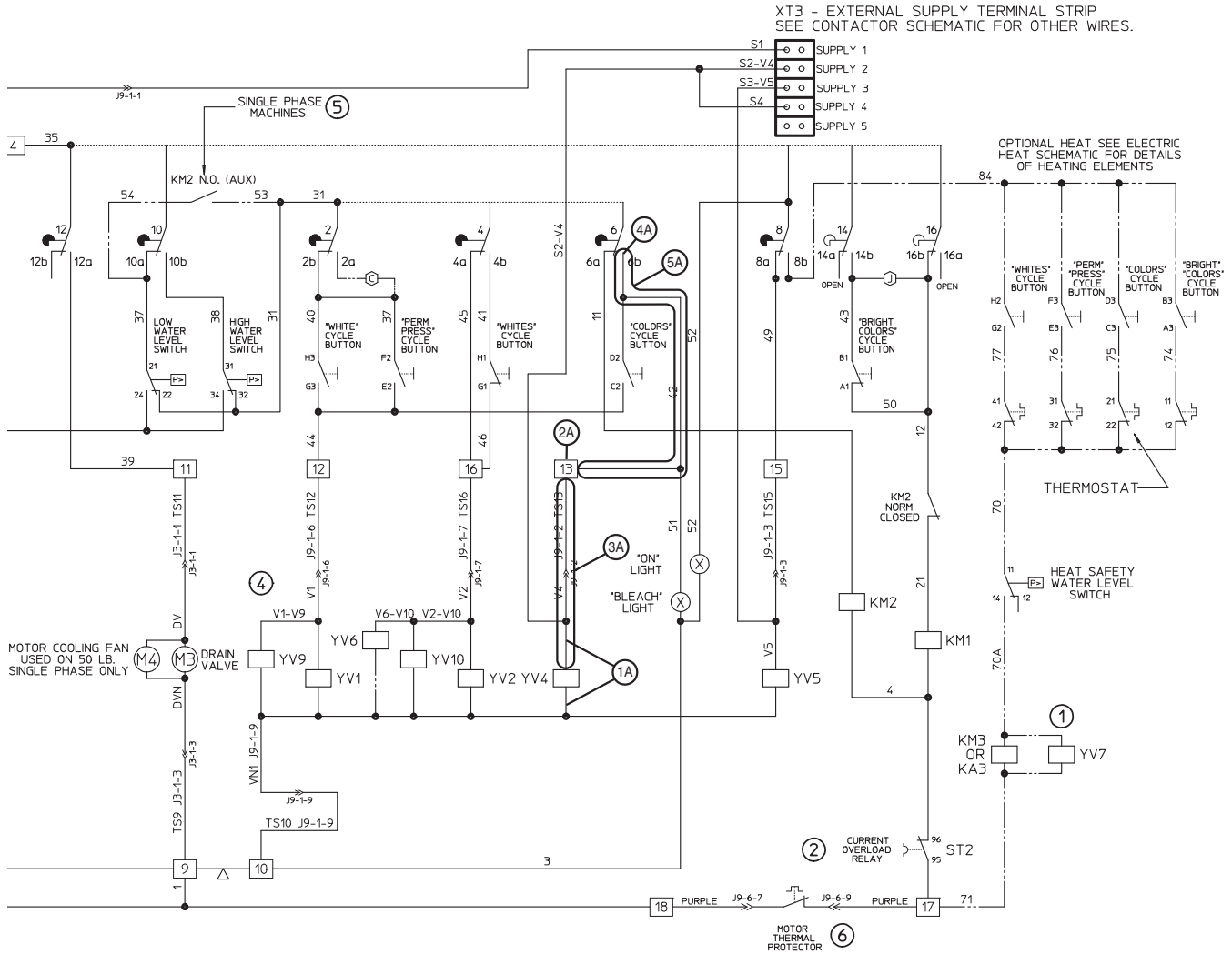


NOTES

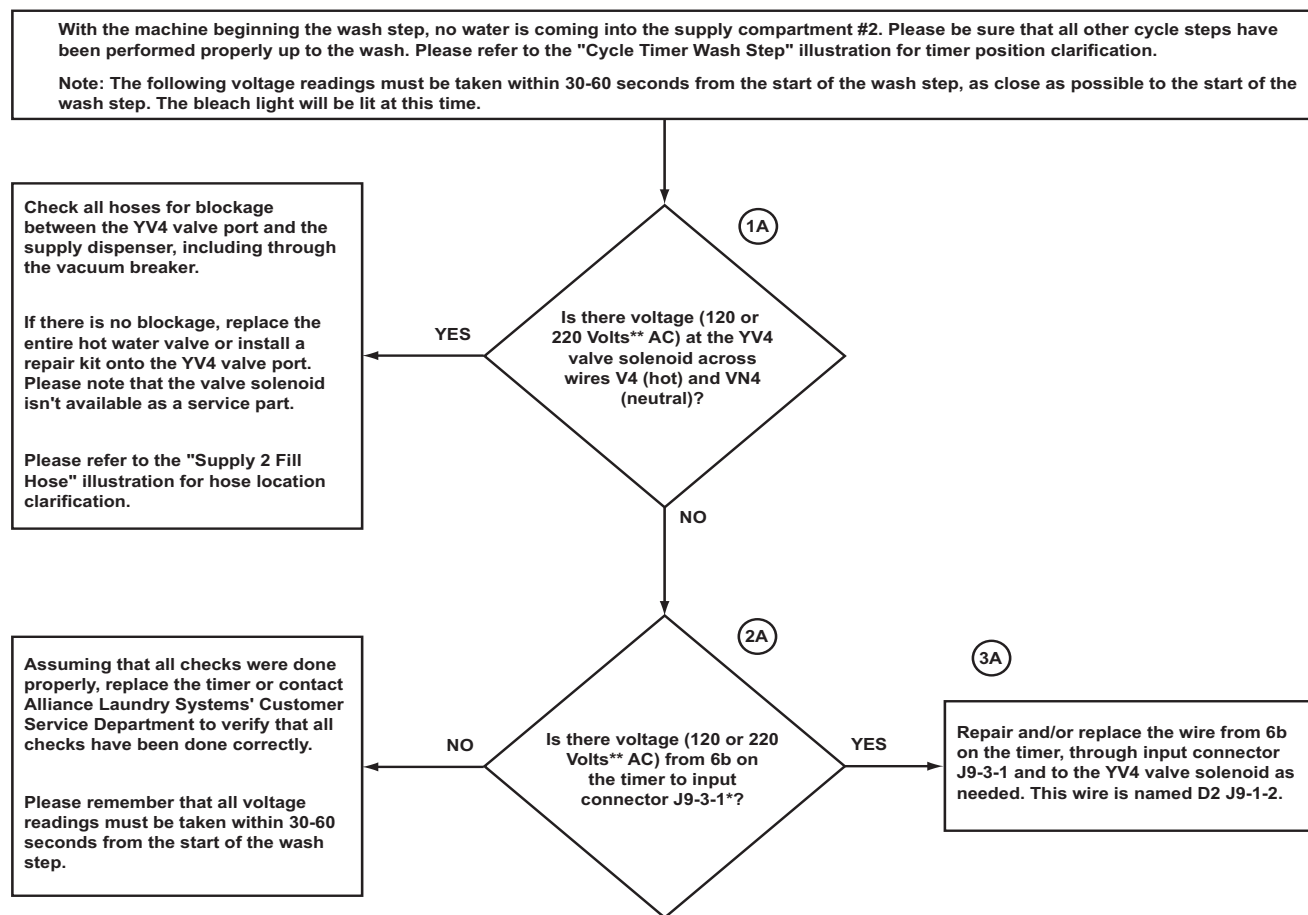
- FOR OPTIONAL STEAM HEAT, REPLACE CONTACTOR WITH STEAM HEAT RELAY VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR ELEMENT CONNECTIONS.
- CURRENT OVERLOAD RELAY IS USED (PHASE MACHINES ONLY, EXCLUDING THE "B" VOLTAGE MACHINES. SEE CONTACT SCHEMATIC FOR SETTING.
- USE CORRECT VOLTAGE DOOR UNLOCK SOLENOID IS THE SAME FOR VOLTAGES.
- YV9 AND YV10 ARE USED WITH TWO 5 WAY ELBI WATER VALVES. ARE NOT I MULLER 3 WAY MIXING VALVE.
- KM2NO WATER LEVEL SWITCH BYPASS PRESENT ON 35 AND 50 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN WAS ORIGINALLY EQUIPPED WITH THEM.
- J9-6 MOTOR CONNECTOR MAY NOT BE ALL MACHINES.

NOTE: Refer to the wiring diagram supplied with your machine.

No Supply 2 Fill Analysis (OPL) (Sheet 2 of 2)



6. No Supply 2 Fill Analysis (Coin)

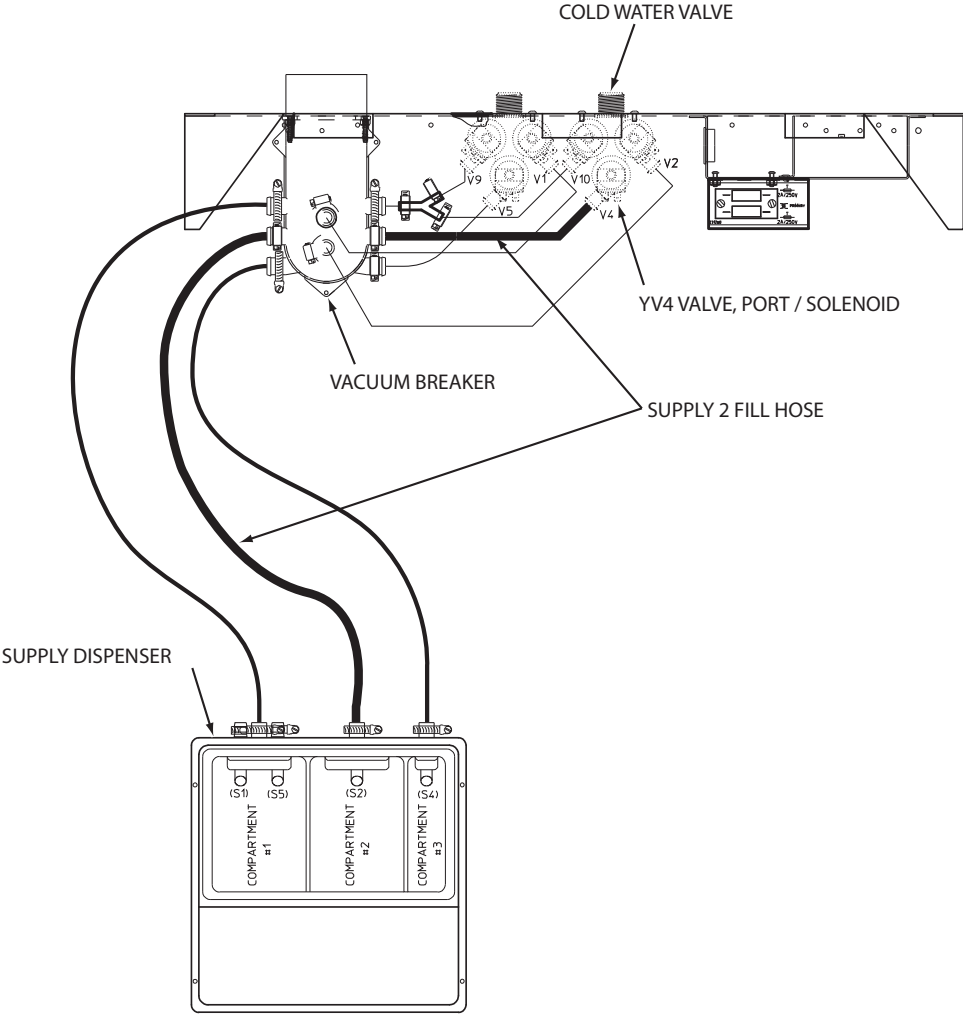


*Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

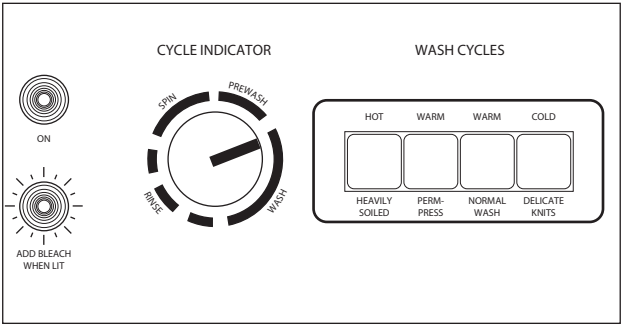
**Note: All voltage readings are approximate.

CHM518S

Supply 2 Fill Hose Illustration



Cycle Timer Wash Step Illustration

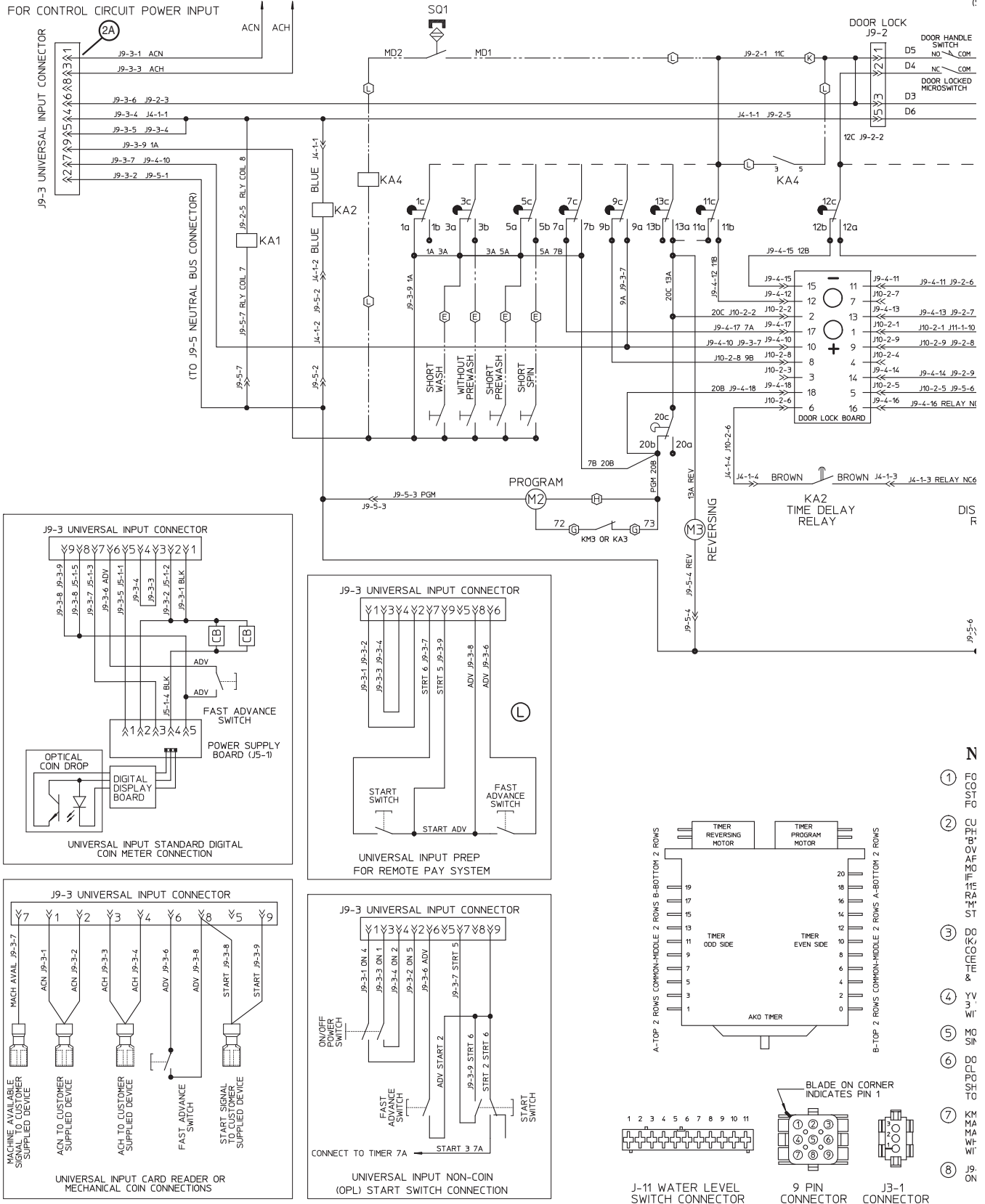


CHM2735
0635860(G)

Please refer to the following 2 pages for wiring diagram information.

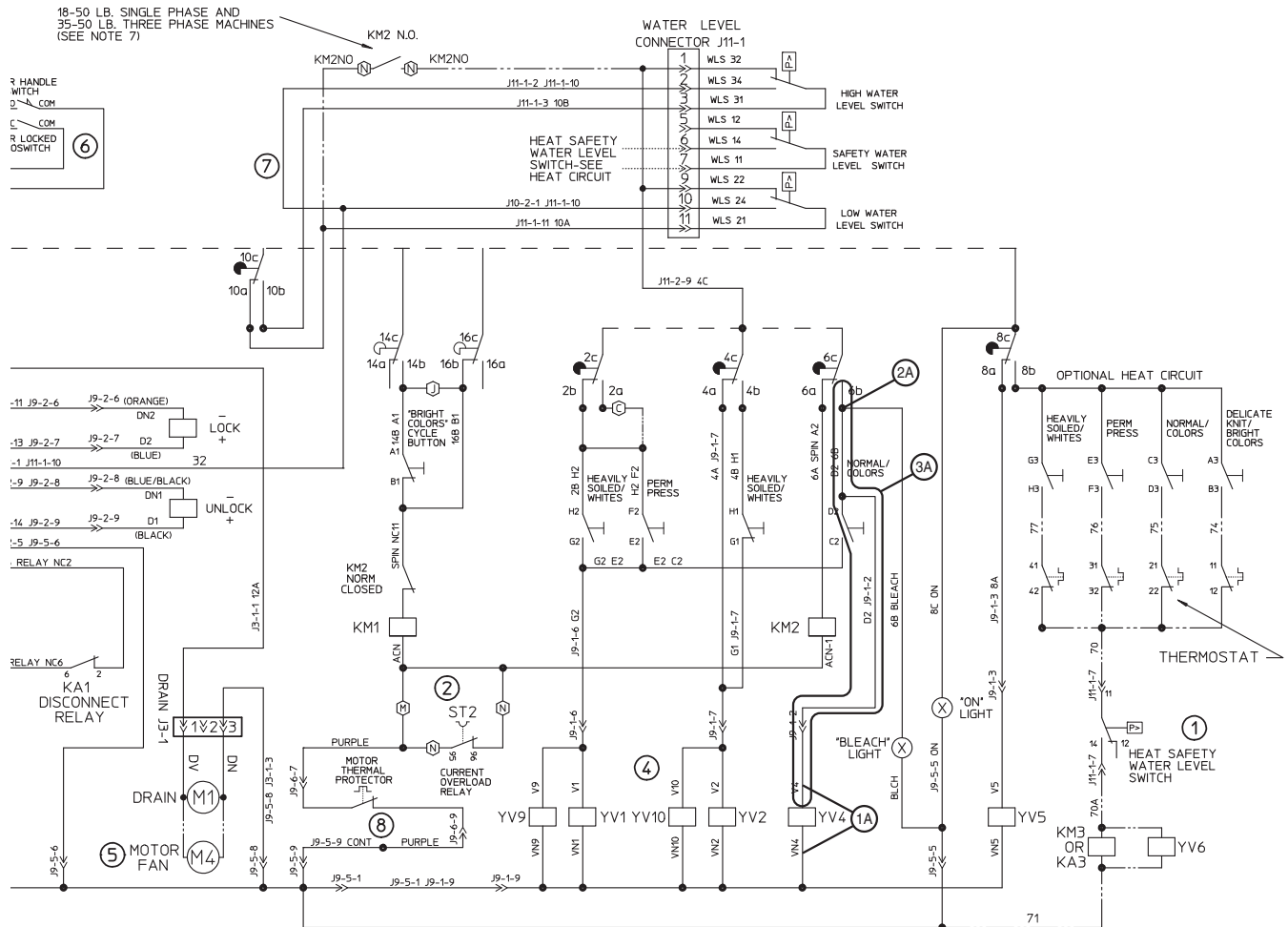
No Supply 2 Fill Analysis (Coin) (Sheet 1 of 2)

REFER TO CONTACTOR SCHEMATIC
FOR CONTROL CIRCUIT POWER INPUT



NOTE: Refer to the wiring diagram supplied with your machine.

No Supply 2 Fill Analysis (Coin) (Sheet 2 of 2)



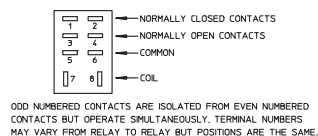
NOTES

- FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 48 LB. "B" AND "E" VOLTAGE MACHINES. ST2 CURRENT OVERLOAD RELAY MUST BE SET TO "TRIP" AT APPROPRIATE CURRENT LOAD. SET DIAL TO MOTOR NAMEPLATE FULL LOAD CURRENT RATING. IF MOTOR HAS SERVICE FACTOR OF LESS THAN 115, SET DIAL TO 90% OF FULL LOAD CURRENT RATING. ALSO SET OPERATING MODE DIAL TO "M" (MANUAL RESET) TO PREVENT ACCIDENTAL STARTING OF MOTOR.
- DOOR MAGNETIC SWITCH (SQ1) AND SAFETY RELAY (KA4) USED ON "CE" OPTION MACHINES ONLY. CONNECT WIRE "D6" TO DOOR SAFETY RELAY FOR CE UNITS. OTHERWISE, CONNECT WIRE D6 TO TERMINAL STRIP TERM #6 WHEN MAGNETIC SWITCH & SAFETY RELAY ARE NOT USED.
- YV9 AND YV10 ARE USED WITH TWO SEPARATE 3 WAY ELB WATER VALVES. ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- MOTOR COOLING FAN IS ONLY USED ON 50LB. SINGLE PHASE MACHINES.
- DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION. OTHER SWITCHES AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- KM2NO WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 35 AND 50 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN MACHINE WAS ORIGINALLY EQUIPPED WITH THESE WIRES.
- J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.

LEGEND

- CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
 - NOT FACTORY INSTALLED
 - ADD CONNECTION FOR HEAT
 - REMOVE CONNECTION FOR HEAT
 - REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
 - REMOVE CONNECTION FOR CE MARK OPTION
 - ADD CONNECTION FOR CE MARK OPTION
 - CONNECTION FOR 3 PHASE MACHINES
 - CONNECTION FOR SINGLE PHASE MACHINES
- J9-5-1 CONNECTOR/PIN NUMBER
J9-5(CONNECTOR #)-1(PIN #)
- REVERSING TIMER CONTACTS FOR WASH AGITATION
- PROGRAM TIMER CONTACTS
- CONNECTIONS INTERNAL TO DEVICE
----- OPTIONAL CONNECTIONS

TYPICAL RELAY



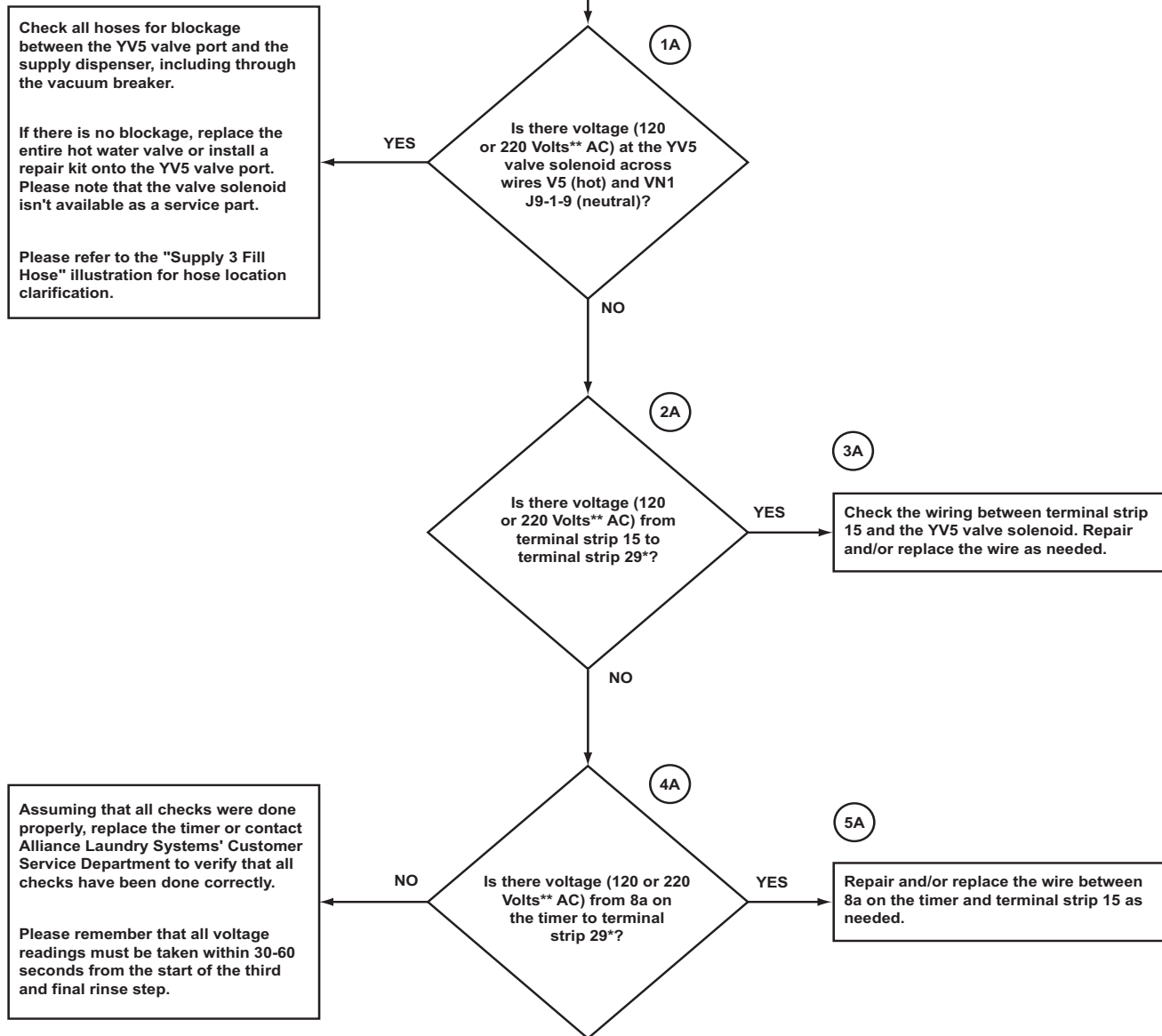
- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL HEAT CONTACTOR
- KA1 - TIME DELAY DISCONNECT RELAY
- KA2 - DOOR UNLOCK TIME DELAY
- KA3 - STEAM HEAT RELAY
- KA4 - DOOR SAFETY RELAY
- SQ1 - MAGNETIC DOOR POSITION SENSOR
- ST2 - CURRENT OVERLOAD RELAY (10)
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2 VALVE (BLEACH)
- YV5 - SUPPLY 3 VALVE (SOFTENER)
- YV6 - OPTIONAL STEAM HEAT VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10 - SUPPLY 1 COLD FLUSH VALVE
- M1 - DRAIN VALVE MOTOR
- M2 - TIMER PROGRAM MOTOR
- M3 - TIMER REVERSING MOTOR
- M4 - OPTIONAL MOTOR FAN *C50 10

CHM271S
0634311(I)

7. No Supply 3 Fill Analysis (OPL)

With the machine beginning the third and final rinse step, no water is coming into the basket. Please be sure that all other cycle steps have been performed properly up to the third and final rinse step. Please refer to the "Cycle Timer Final Rinse Step" illustration for timer position clarification.

Note: The following voltage readings must be taken within 30-60 seconds from the start of the third and final rinse step.

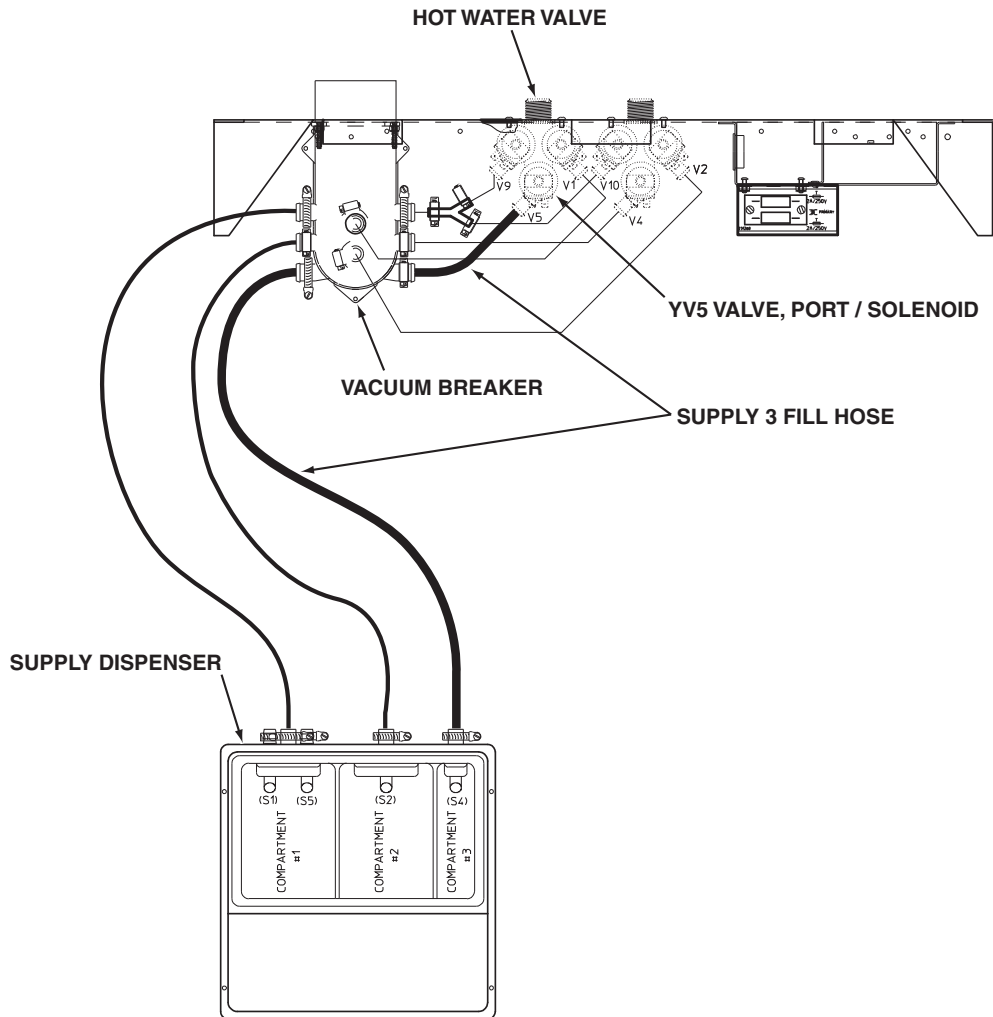


*Note: All voltage readings should be taken from terminal 29 as a neutral point.

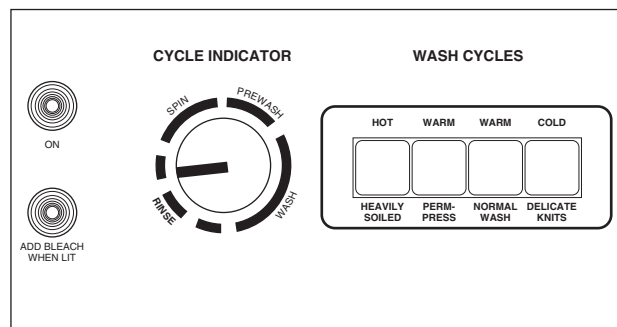
**Note: All voltage readings are approximate.

CHM519S

Supply 3 Fill Hose Illustration



Cycle Timer Final Rinse Step Illustration



CHM268S
0635860(G)

Please refer to the following 2 pages for wiring diagram information.

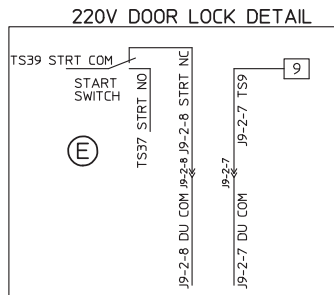
No Supply 3 Fill Analysis (OPL) (Sheet 1 of 2)

Figure 1 is a detailed electrical schematic diagram for the control of a steam heat machine. The diagram illustrates the power supply (ACN, ACH) entering the system, passing through various safety switches (KA1 DOOR SAFETY RELAY, MAGNETIC DOOR SWITCH, ON/OFF SWITCH) and terminal blocks (TS33, TS34, TS35, TS36). The power then flows through a series of relays and switches (TS37, TS38, TS39, TS40, TS41, TS42, TS43, TS44, TS45, TS46, TS47, TS48, TS49, TS50, TS51, TS52, TS53, TS54, TS55, TS56, TS57, TS58, TS59, TS60, TS61, TS62, TS63, TS64, TS65, TS66, TS67, TS68, TS69, TS70, TS71, TS72, TS73, TS74, TS75, TS76, TS77, TS78, TS79, TS80, TS81, TS82, TS83, TS84, TS85, TS86, TS87, TS88, TS89, TS90, TS91, TS92, TS93, TS94, TS95, TS96, TS97, TS98, TS99, TS100) to the motor (M1, M2) and the steam heat relay (KM3). The diagram also shows the connection to the door unlock solenoid (DU NO D1, DU NO D2) and the door unlock switch. The schematic includes various safety features and interlocks to ensure the machine operates safely.

NOTES

- FOR OPTIONAL STEAM HEAT, REPLACE CONTACTOR WITH STEAM HEAT RELAY VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR WIRE CONNECTIONS.
- CURRENT OVERLOAD RELAY IS USED ON 3 PHASE MACHINES ONLY, EXCLUDING TH

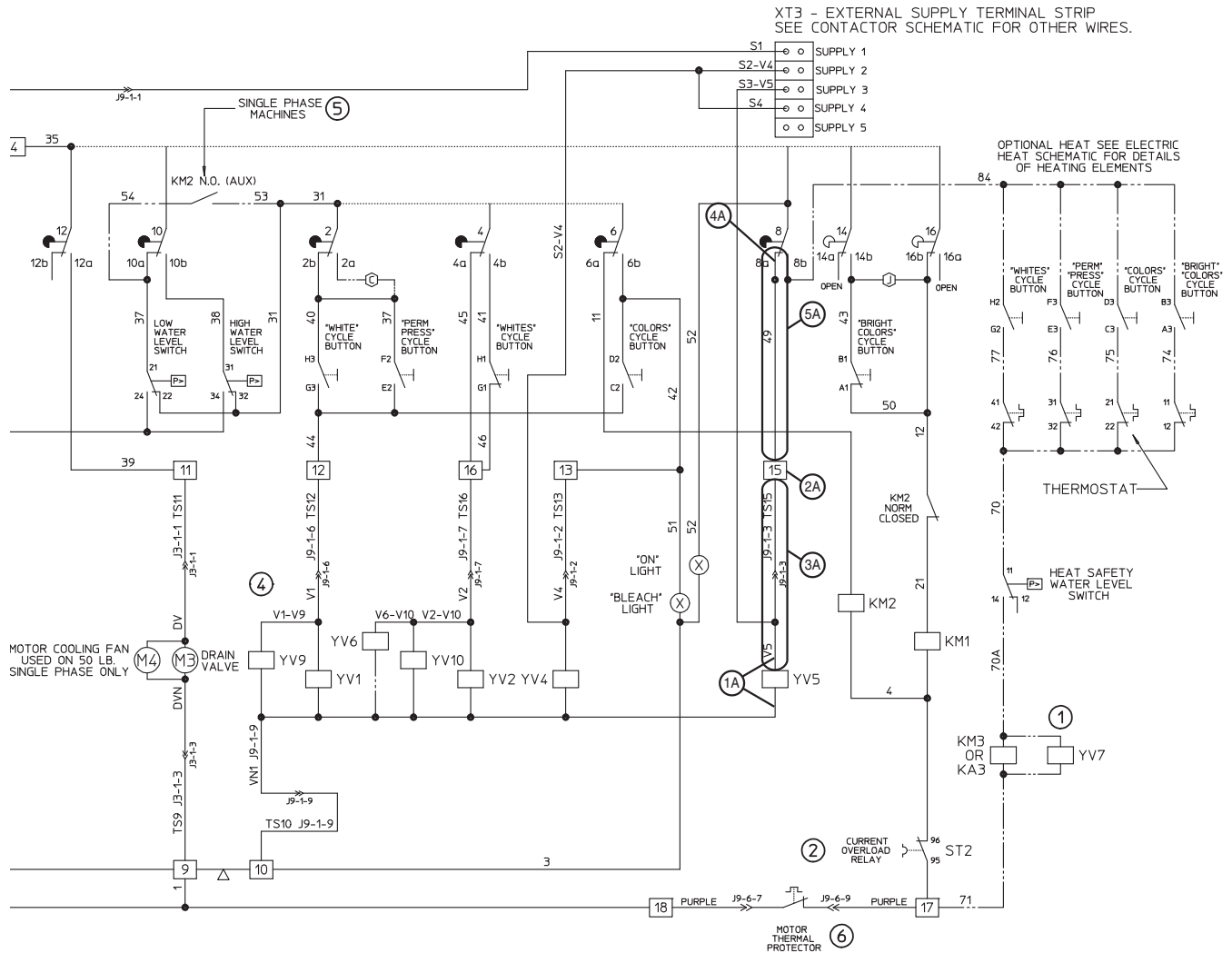
- ① FOR OPTIONAL STEAM HEAT, REPLACE CONTACTOR WITH STEAM HEAT RELAY VALVE. SEE ELECTRIC HEAT SCHEMATIC HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON PHASE MACHINES ONLY, EXCLUDING THE "B" VOLTAGE MACHINES. SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ USE CORRECT VOLTAGE DOOR UNLOCK ACCORDING TO CONTACTOR SCHEMATIC VOLTAGE. SOLENOID IS THE SAME FOR ALL VOLTAGES.
- ④ Y9 AND Y10 ARE USED WITH TWO SIZES OF WATER VALVES. ARE NOT ON MULLER 3 WAY MIXING VALVE.
- ⑤ KM20 WATER LEVEL SWITCH BYPASS PRESENT ON 35 AND 50 LB. PHASES. THEY MUST NOT BE DISCONNECTED WITH WAS ORIGINALLY EQUIPPED WITH THESE.
- ⑥ JP-6 MOTOR CONNECTOR MAY NOT BE ALL MACHINES.



ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME

F232202R4

No Supply 3 Fill Analysis (OPL) (Sheet 2 of 2)



AT, REPLACE HEAT
HEAT RELAY AND STEAM
AT SCHEMATIC FOR
ONS.

LY IS USED ON SINGLE
XCLUDING THE 20 LB.
EE CONTACTOR

OOD UNLOCK CONFIGURATION
3 SCHEMATIC CONTROL
IE SAME FOR BOTH

WITH TWO SEPARATE 3
, ARE NOT USED WITH
LVE.

TCH BYPASS WIRES MAY BE
B, 3 PHASE MACHINES
INNECTED WHEN MACHINE
3 WITH THESE WIRES.

14Y NOT BE PRESENT ON

LEGEND

- Ⓢ CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- Ⓢ NOT FACTORY INSTALLED
- Ⓢ ADD CONNECTION FOR HEAT
- Ⓢ REMOVE CONNECTION FOR HEAT
- Ⓢ REMOVE CONNECTION FOR GENTLE AGITATION IN BRIGHT COLORS CYCLE
- Ⓢ TERMINAL STRIP JUMPER
- Ⓢ TERMINAL STRIP CONNECTION
- Ⓢ REVERSING TIMER CONTACTS FOR WASH AGITATION
- Ⓢ PROGRAM TIMER CONTACTS
- Ⓢ CONNECTIONS INTERNAL TO DEVICE
- Ⓢ OPTIONAL CONNECTIONS
- Ⓢ RESISTOR/CAPACITOR NETWORK

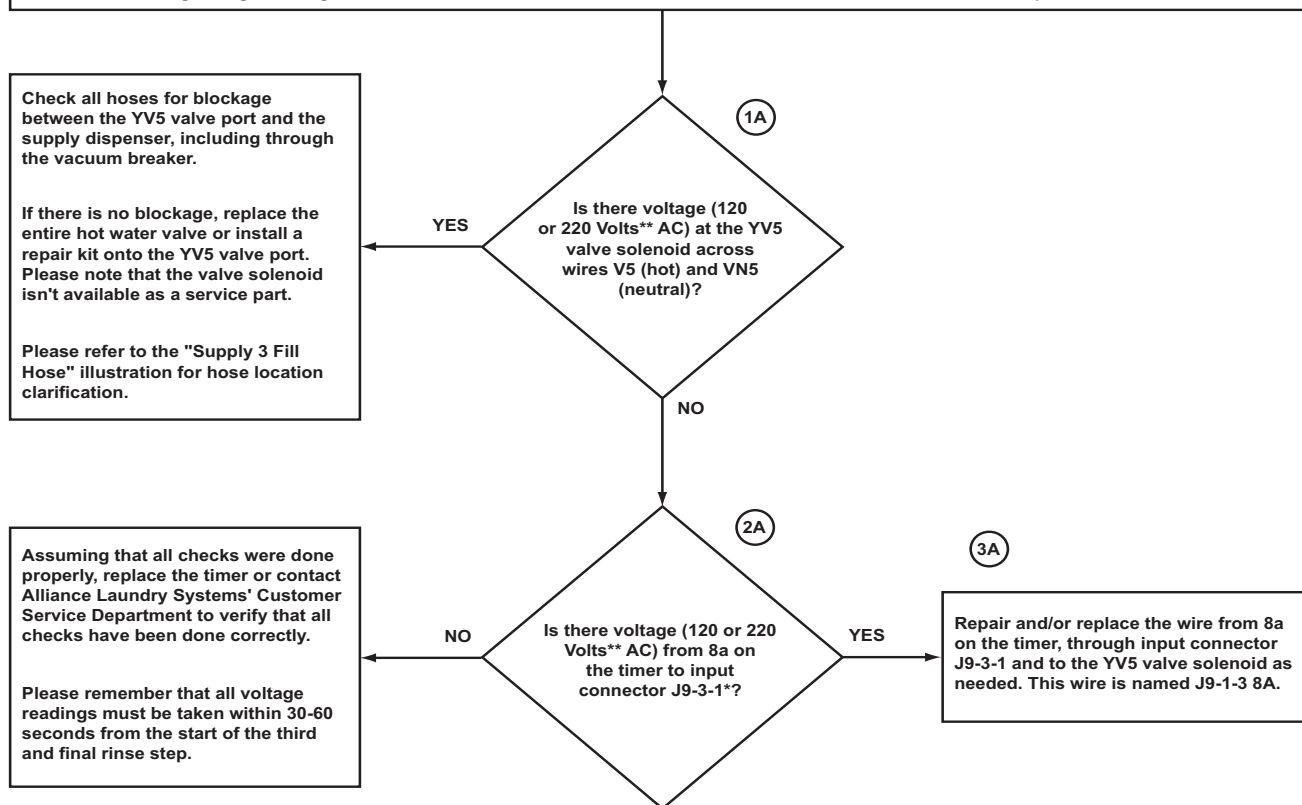
- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL ELECTRIC HEAT CONTACTOR
- KA1 - DOOR SAFETY RELAY
- KA3 - STEAM RELAY
- M1 - TIMER PROGRAM MOTOR
- M2 - TIMER REVERSING MOTOR
- M3 - DRAIN VALVE MOTOR
- M4 - OPTIONAL MOTOR FAN
- ST2 - MOTOR CURRENT OVERLOAD RELAY
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2(BLEACH) VALVE
- YV5 - SUPPLY 3(SOFTENER) VALVE
- YV6 - OPTIONAL 3RD SUPPLY INLET VALVE
- YV7 - OPTIONAL STEAM VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10 - SUPPLY 1 COLD FLUSH VALVE
- XT3 - EXTERNAL SUPPLY TERMINAL STRIP

CHM266S
0635913(E)

8. No Supply 3 Fill Analysis (Coin)

With the machine beginning the third and final rinse step, no water is coming into the basket. Please be sure that all other cycle steps have been performed properly up to the third and final rinse step. Please refer to the "Cycle Timer Final Rinse Step" illustration for timer position clarification.

Note: The following voltage readings must be taken within 30-60 seconds from the start of the third and final rinse step.



*Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

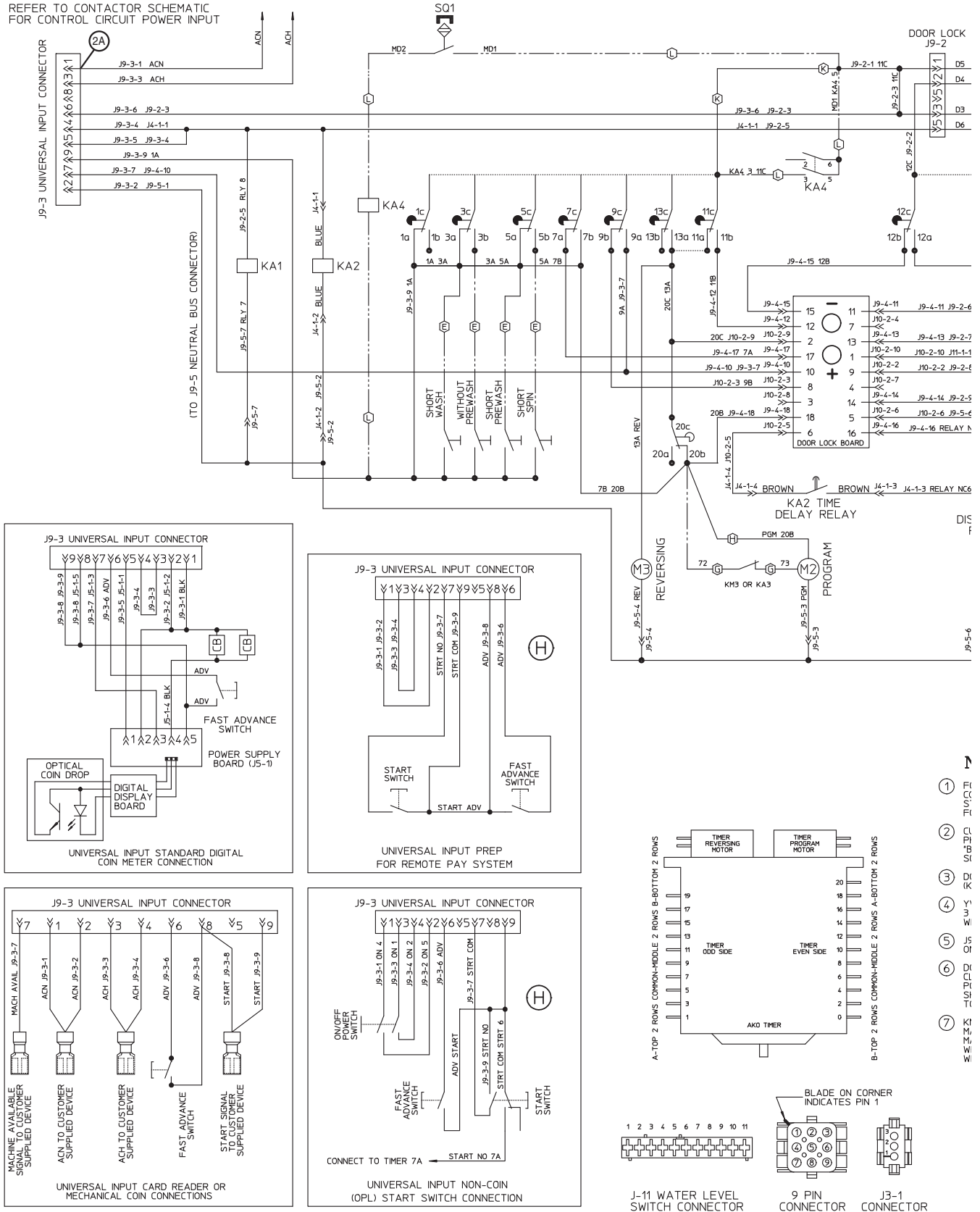
**Note: All voltage readings are approximate.

CHM520S

Please refer to the following 2 pages for wiring diagram information.

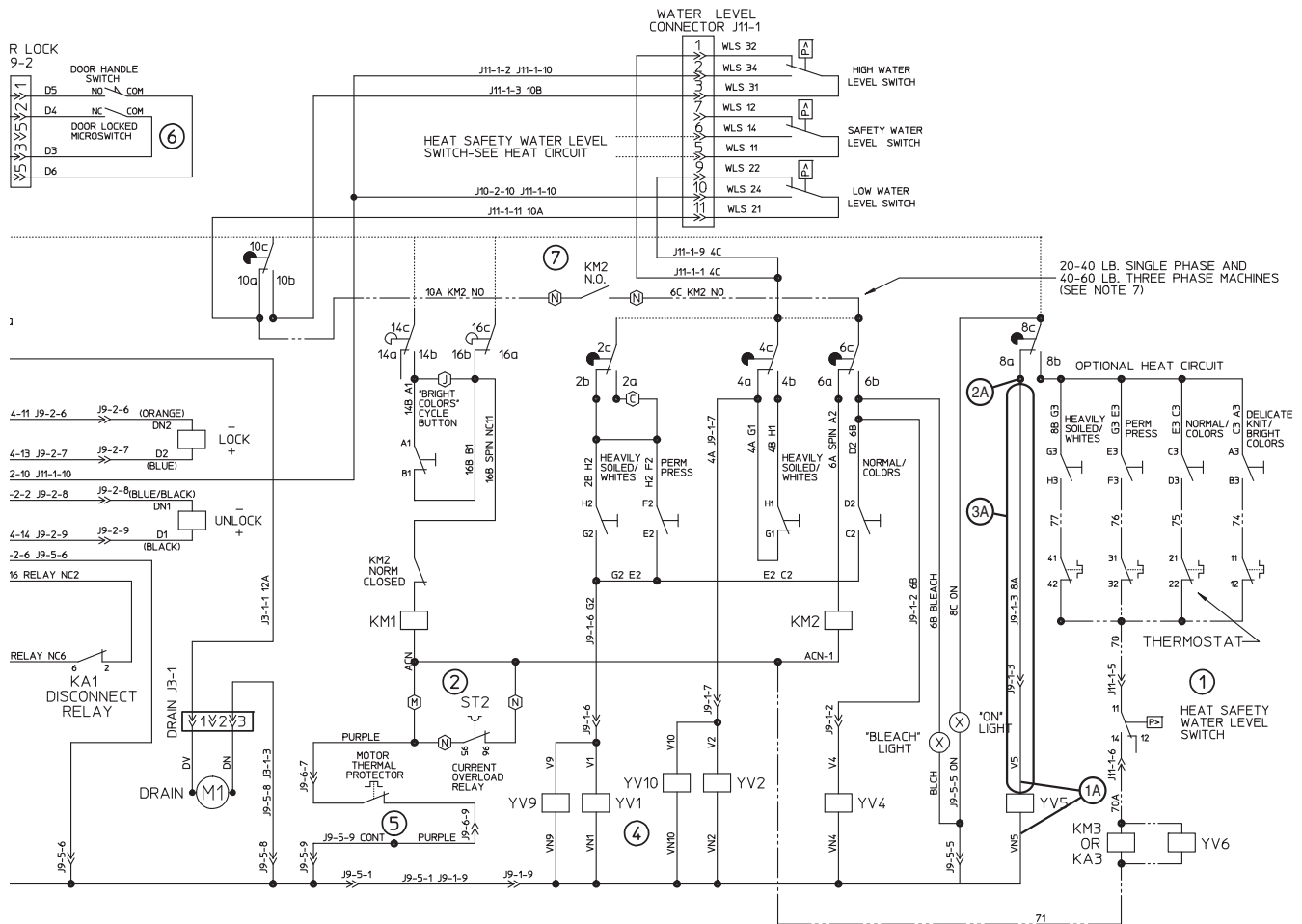
No Supply 3 Fill Analysis (Coin) (Sheet 1 of 2)

REFER TO CONTACTOR SCHEMATIC
FOR CONTROL CIRCUIT POWER INPUT



NOTE: Refer to the wiring diagram supplied with your machine.

No Supply 3 Fill Analysis (Coin) (Sheet 2 of 2)



NOTES

- ① FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 20 LB. "B" VOLTAGE MACHINES. SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ DOOR MAGNETIC SWITCH (S01) AND SAFETY RELAY (KA4) USED ON "CE" OPTION MACHINES ONLY.
- ④ Y9 AND Y10 ARE USED WITH TWO SEPARATE 3/4 ELBI WATER VALVES, ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ J9-6 MOTOR CONNECTION MAY NOT BE PRESENT ON ALL MACHINES.
- ⑥ DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION. OTHER SWITCHES AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- ⑦ KM2NO WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 40 AND 60 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WITH MACHINE WHICH IS ORIGINALLY EQUIPPED WITH THESE WIRES.

LEGEND

- Ⓒ CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- Ⓓ NOT FACTORY INSTALLED
- Ⓔ ADD CONNECTION FOR HEAT
- Ⓕ REMOVE CONNECTION FOR HEAT
- Ⓖ REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- Ⓚ REMOVE CONNECTION FOR CE MARK OPTION
- Ⓛ ADD CONNECTION FOR CE MARK OPTION
- Ⓜ CONNECTION FOR 3 PHASE MACHINES
- Ⓝ CONNECTION FOR SINGLE PHASE MACHINES

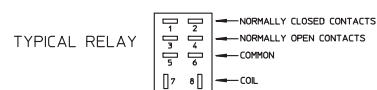
J9-5-1 CONNECTOR/PIN NUMBER
→→ J9-5(CONNECTOR #)-1(PIN #)

 REVERSING TIMER CONTACTS FOR WASH AGITATION

 PROGRAM TIMER CONTACTS

..... CONNECTIONS INTERNAL TO DEVICE
 — — — — — OPTIONAL CONNECTIONS

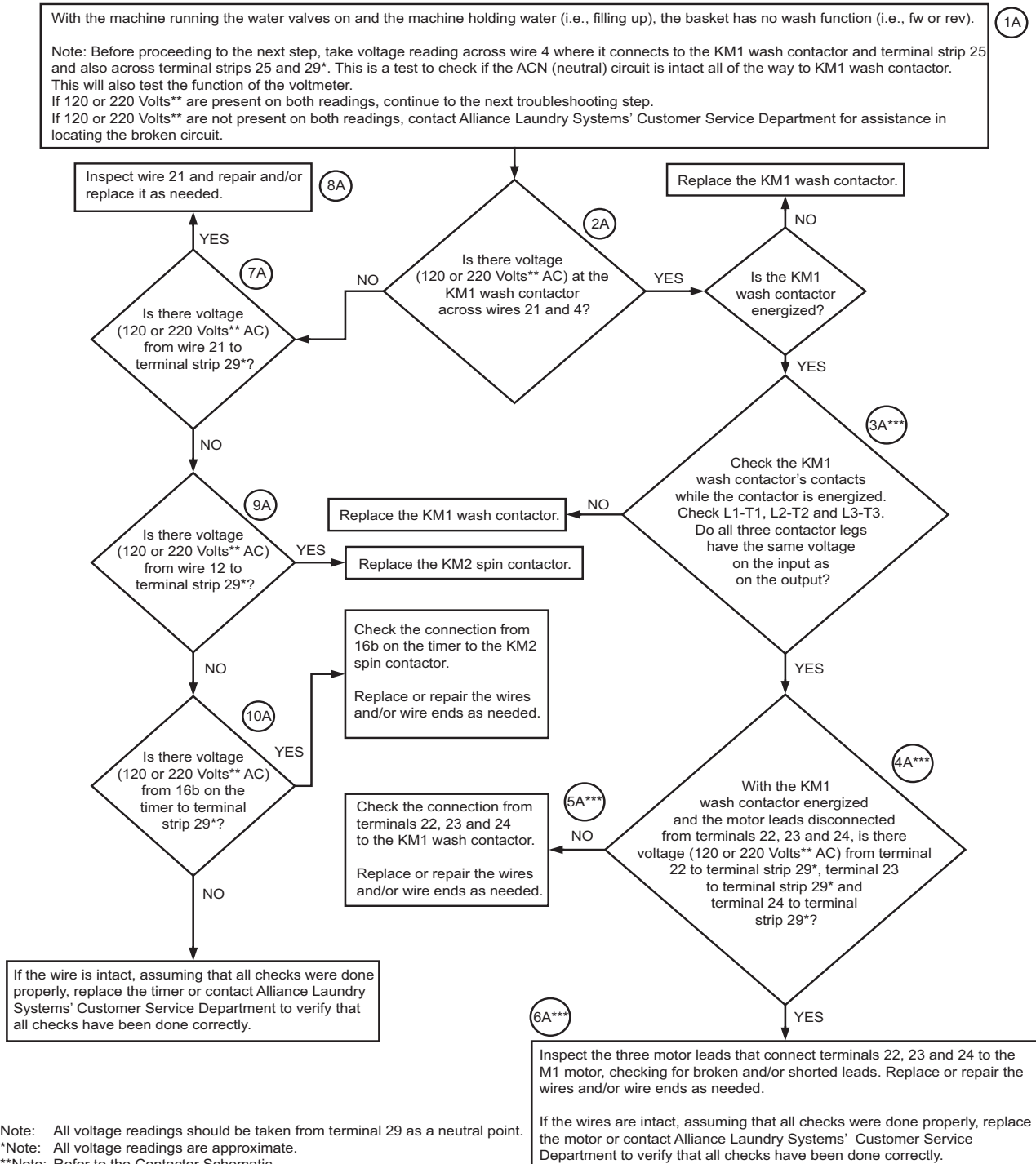
- KM1 – WASH CONTACTOR
- KM2 – SPIN CONTACTOR
- KM3 – OPTIONAL HEAT CONTACTOR
- KA1 – TIME DELAY DISCONNECT RELAY
- KA2 – DOOR UNLOCK TIME DELAY
- KA3 – STEAM HEAT RELAY
- KA4 – DOOR SAFETY RELAY
- SQ1 – MAGNETIC DOOR POSITION SENSOR
- ST2 – CURRENT OVERLOAD RELAY (10)
- YV1 – HOT FILL VALVE
- YV2 – COLD FILL VALVE
- YV4 – SUPPLY 2 VALVE (BLEACH)
- YV5 – SUPPLY 3 VALVE (SOFTENER)
- YV6 – OPTIONAL STEAM HEAT VALVE
- YV9 – SUPPLY 1 HOT FLUSH VALVE
- YV10- SUPPLY 1 COLD FLUSH VALVE
- M1 – DRAIN VALVE MOTOR
- M2 – TIMER PROGRAM MOTOR
- M3 – TIMER REVERSING MOTOR



ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME

CHM269S
0636156(H)

9. No Motor Function (OPL; Fw and Rev)



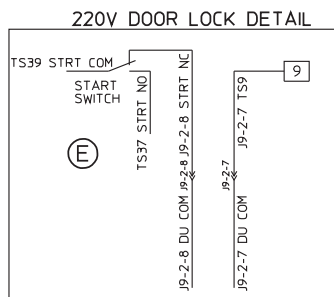
CHM521S

Please refer to the following 2 pages for wiring diagram information.

No Motor Function (OPL; Fw and Rev) (Sheet 1 of 2)

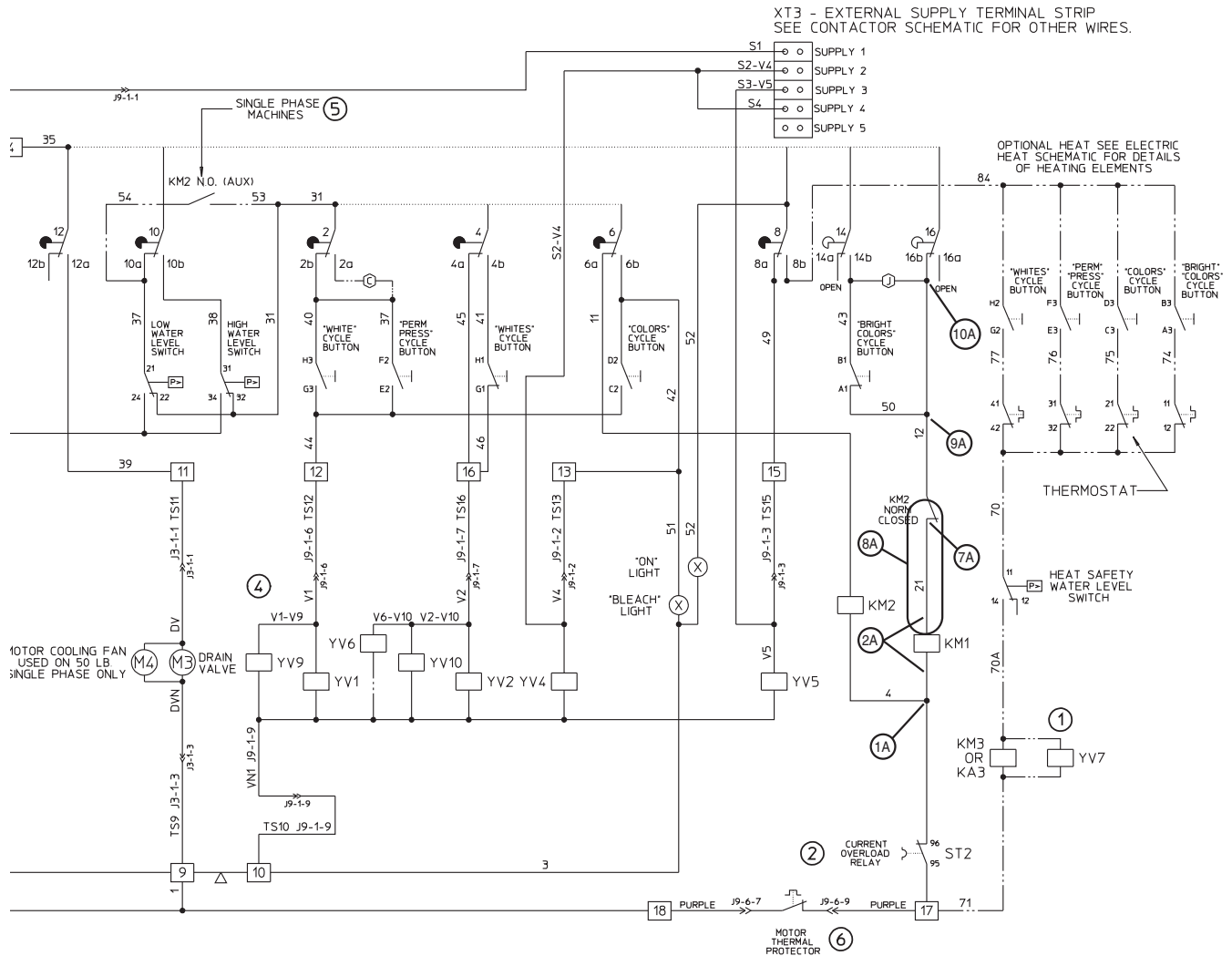
MOTOR COOLING
USED ON 5
SINGLE PHASE

- ① FOR OPTIONAL STEAM HEAT, REPLACE CONTACTOR WITH STEAM HEAT RELAY VALVE. SEE ELECTRIC HEAT SCHEMATIC HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON PHASE MACHINES ONLY, EXCLUDING THE "B" VOLTAGE MACHINES. SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ USE CORRECT VOLTAGE DOOR UNLOCK ACCORDING TO CONTACTOR SCHEMATIC VOLTAGE SOLENOID IS THE SAME FOR ALL VOLTAGES.
- ④ Y9Y AND YV10 ARE USED WITH TWO S W/ ELB WATER VALVES. ARE NOT U MULLER 3 WAY MIXING VALVE.
- ⑤ KM2NO WATER LEVEL SWITCH BYPASS PRESERVE OR ABANDON B-3 PHASE. THE SWITCH MUST NOT BE DISCONNECTED W/ WAS ORIGINALLY EQUIPPED WITH THESE.
- ⑥ J9-6 MOTOR CONNECTOR MAY NOT BE ALL MACHINES.



F232202R4

No Motor Function (OPL; Fw and Rev) (Sheet 2 of 2)



1. T. REPLACE HEAT
HEAT RELAY AND STEAM
T SCHEMATIC FOR
INS.

Y IS USED ON SINGLE
INCLUDING THE 20 LB.
THE CONTACTOR

FOR UNLOCK CONFIGURATION
! SCHEMATIC CONTROL
= SAME FOR BOTH

WITH TWO SEPARATE 3
ARE NOT USED WITH
.VE.

*CH BYPASS WIRES MAY BE
B. 3 PHASE MACHINES.
NNECTED WHEN MACHINE
I WITH THESE WIRES.

AY NOT BE PRESENT ON

LEGEND

-  CONN FOR WARM WATER RINSES (HOT & WARM CYCLES)
-  NOT FACTORY INSTALLED
-  ADD CONNECTION FOR HEAT
-  REMOVE CONNECTION FOR HEAT
-  REMOVE CONNECTION FOR GENTLE AGITATION IN BRIGHT COLORS CYCLE
-  TERMINAL STRIP JUMPER
-  TERMINAL STRIP CONNECTION
-  REVERSING TIMER CONTACTS FOR WASH AGITATION
-  PROGRAM TIMER CONTACTS
- CONNECTIONS INTERNAL TO DEVICE
- OPTIONAL CONNECTIONS
-  RESISTOR/CAPACITOR NETWORK

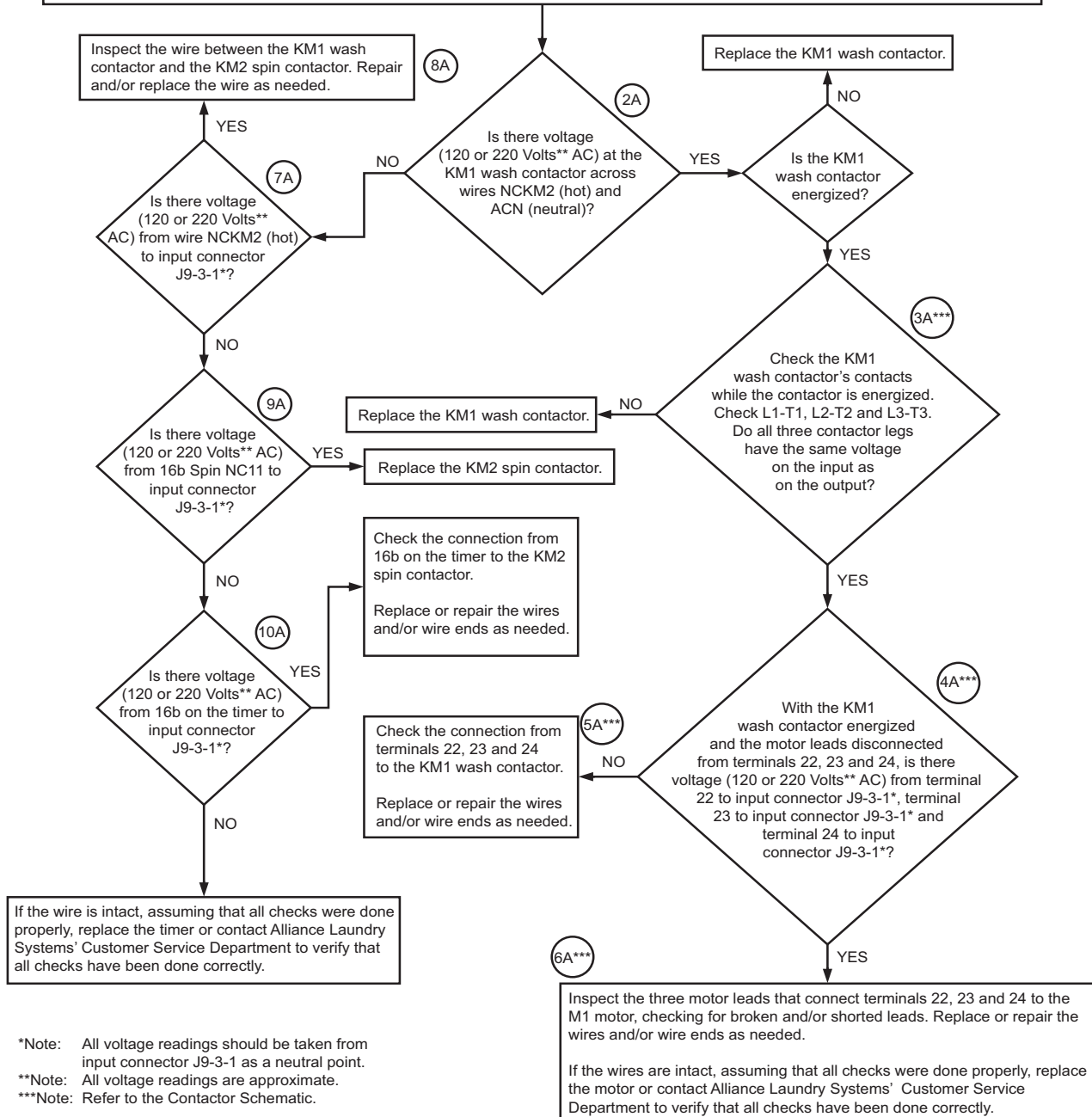
- KM1 - WASH CONTACTOR
 KM2 - SPIN CONTACTOR
 KM3 - OPTIONAL ELECTRIC HEAT CONTACTOR
 KA1 - DOOR SAFETY RELAY
 KA3 - STEAM RELAY
 M1 - TIMER PROGRAM MOTOR
 M2 - TIMER REVERSING MOTOR
 M3 - DRAIN VALVE MOTOR
 M4 - OPTIONAL MOTOR FAN
 ST2 - MOTOR CURRENT OVERLOAD RELAY
 YV1 - HOT FILL VALVE
 YV2 - COLD FILL VALVE
 YV4 - SUPPLY 2(BLEACH) VALVE
 YV5 - SUPPLY 3(SOFTENER) VALVE
 YV6 - OPTIONAL 3RD SUPPLY INLET VALVE
 YV7 - OPTIONAL STEAM VALVE
 YV9 - SUPPLY 1 HOT FLUSH VALVE
 YV10- SUPPLY 1 COLD FLUSH VALVE
 XT3 - EXTERNAL SUPPLY TERMINAL STRIP

10. No Motor Function (Coin; Fw and Rev)

With the machine running, the water valves on and the machine holding water (i.e., filling up), the basket has no wash function (i.e., fw or rev).

1A

Note: Before proceeding to the next step, take voltage reading across the ACN (neutral) wire where it connects to the KM1 wash contactor and input connector J9-3-3 and also across input connector J9-3-3 and input connector J9-3-1*. This is a test to check if the ACN (neutral) circuit is intact all of the way to the KM1 wash contactor. This will also test the function of the voltmeter. If 120 or 220 Volts** are present on both readings, continue to the next troubleshooting step. If 120 or 220 Volts** are not present on both readings, contact Alliance Laundry Systems' Customer Service Department for assistance in locating the broken circuit.



*Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

**Note: All voltage readings are approximate.

***Note: Refer to the Contactor Schematic.

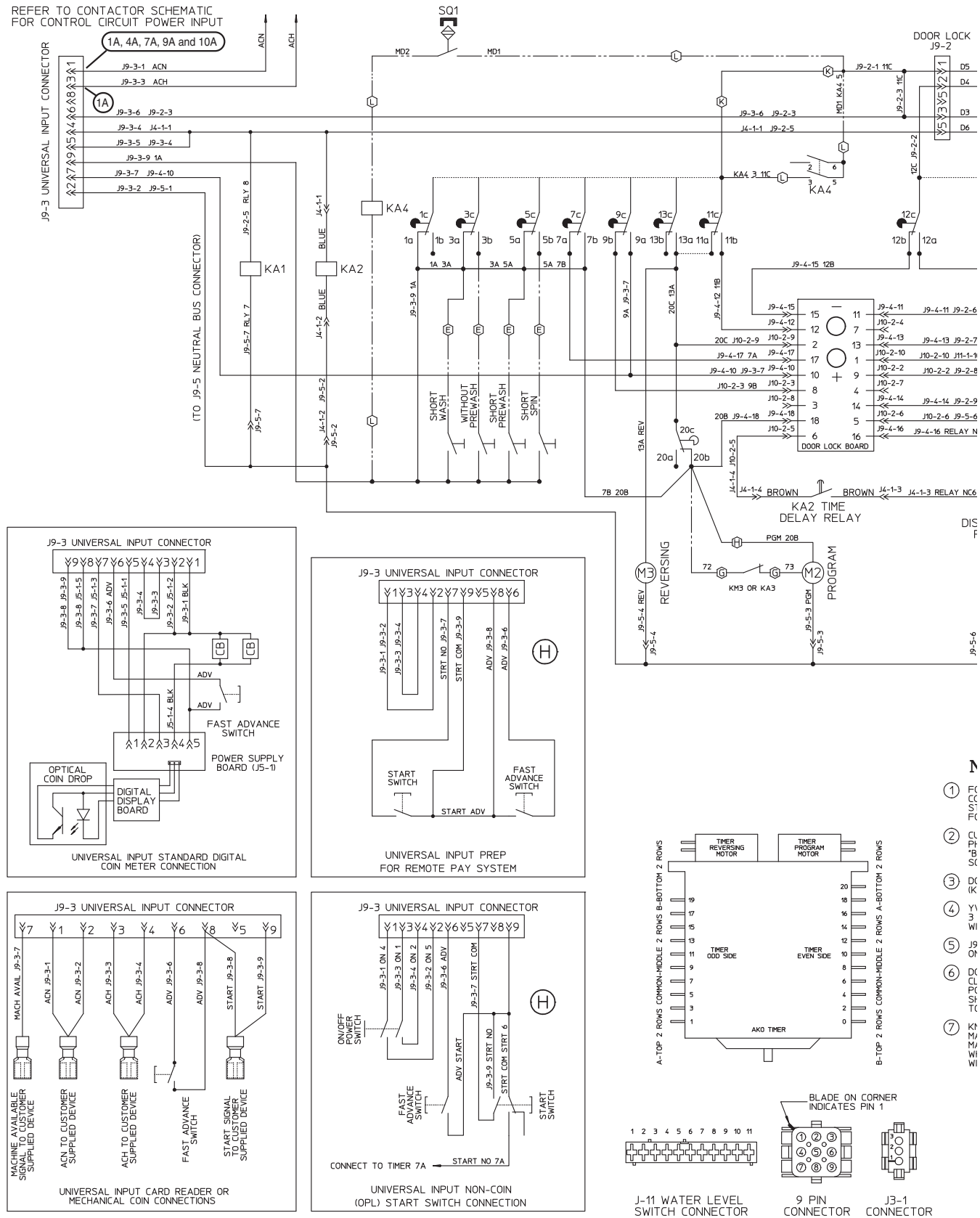
CHM522S

Please refer to the following 4 pages for wiring diagram information.

Troubleshooting

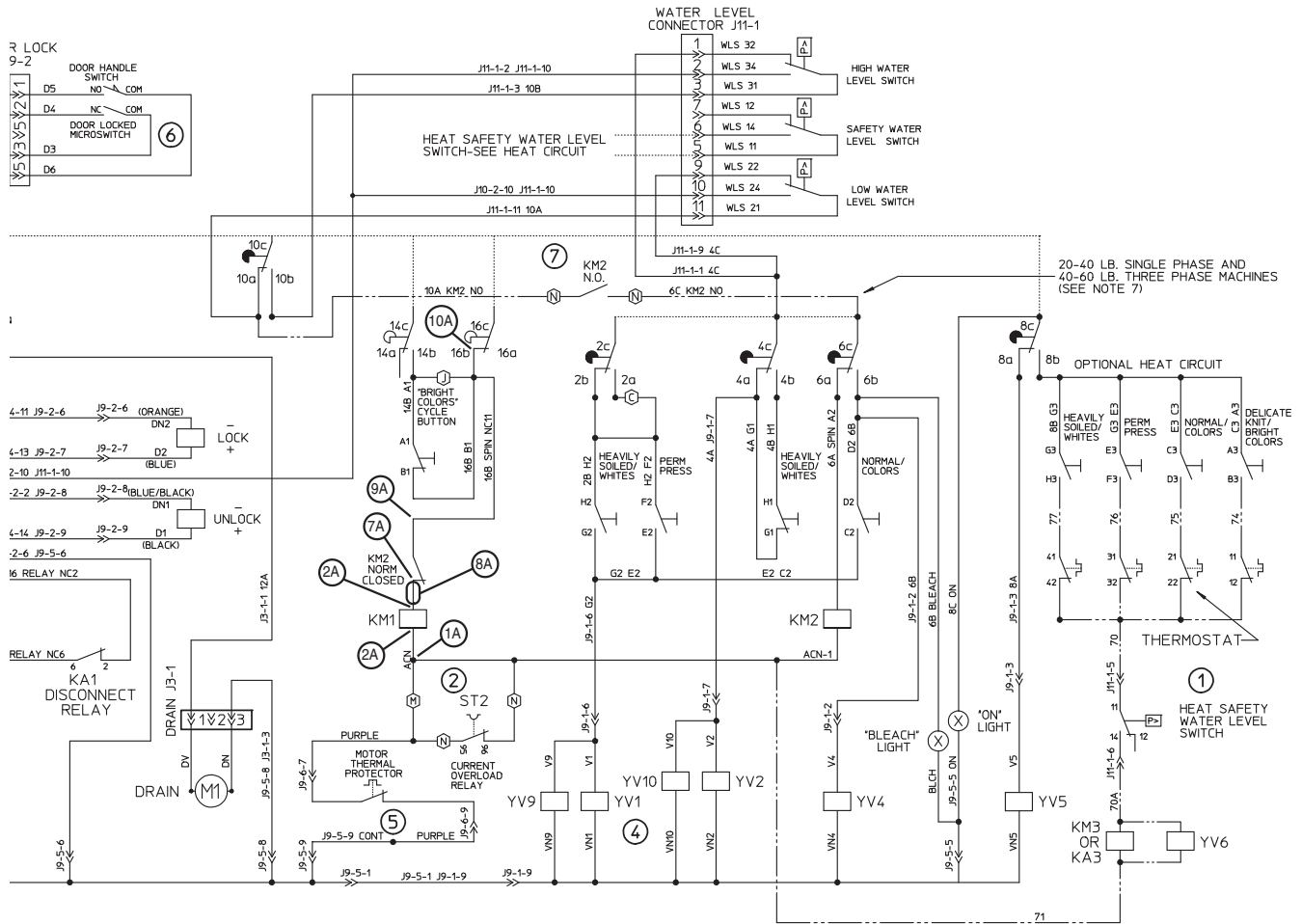
No Motor Function (Coin; Fw and Rev) (Sheet 1 of 2)

REFER TO CONTACTOR SCHEMATIC
FOR CONTROL CIRCUIT POWER INPUT



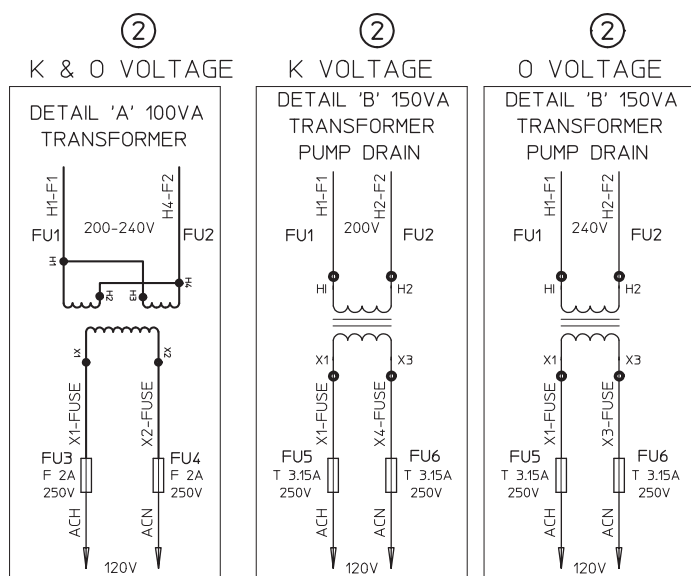
NOTE: Refer to the wiring diagram supplied with your machine.

No Motor Function (Coin; Fw and Rev) (Sheet 2 of 2)



No Motor Function (Fw and Rev) Contactor Schematic (Sheet 1 of 2)

O: 208-240/60HZ/3 ϕ /3W/120V CONTROL



NOTES:

- ① IF MOTOR ROTATION IS INCORRECT IN ANY ONE SPEED, REVERSE ANY TWO WIRES FOR THAT SPEED. IF ALL SPEEDS ARE INCORRECT, REVERSE TWO WIRES AT THE POWER INPUT TERMINAL BLOCK.
- ② USE TRANSFORMER 360117 AND 350117 F2A (FAST BLOW) FUSE FOR NON PUMP DRAIN MACHINES. USE 350124 TRANSFORMER AND 350141 T3.15A (SLOW BLOW) FUSE FOR PUMP DRAIN MACHINES. SEE DETAIL BOXES A, B, AND C FOR DETAILS.
- ③ TERMINAL STRIPS MAY NOT BE PRESENT ON ALL MACHINES. MAKE CONNECTIONS DIRECTLY TO CONTACTOR OR OR JUMPER WIRE AS NECESSARY. J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES. MOTOR WIRES MAY BE GRAY WITH COLORS PRINTED, OR MAY BE COLORED WIRES WITH OR WITHOUT STRIPES.
- ④ CAUTION: ATTEMPTING TO OBTAIN 110VAC BY USING L1 OR L2 WITH COMMON MAY DAMAGE LAUNDRY MACHINE CIRCUITRY AND/OR THE CHEMICAL INJECTION SYSTEM.

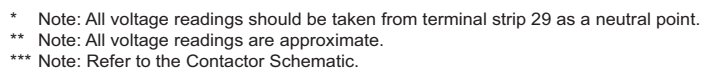
NOTE: Refer to the wiring diagram supplied with your machine.

INTERNAL SUPPLY TERM. STRIP COMMON

ALL MOTOR CIRCUIT
WIRING IS 14 AWG



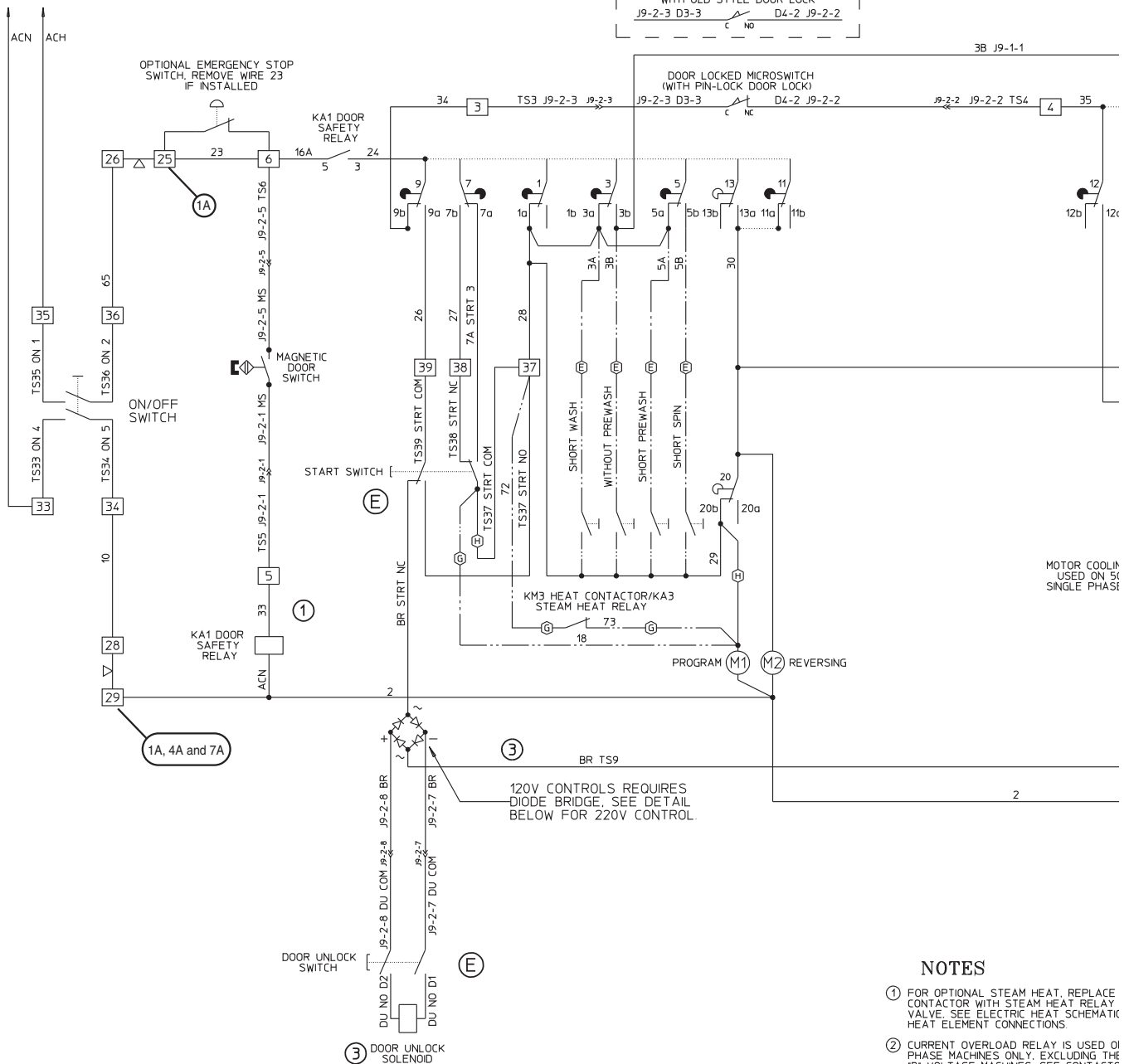
CHM251S
0634283(G)



Please refer to the following 2 pages for wiring diagram information.

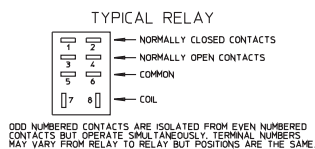
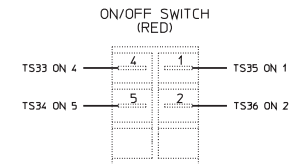
No Motor Function (OPL; Extract) (Sheet 1 of 2)

REFER TO CONTACTOR SCHEMATIC
FOR CONTROL CIRCUIT POWER INPUT

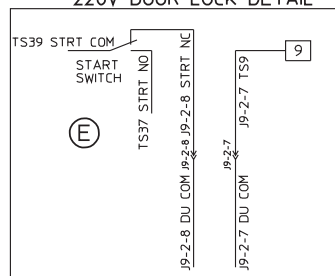


NOTES

- FOR OPTIONAL STEAM HEAT, REPLACE CONTACTOR WITH STEAM HEAT RELAY VALVE. SEE ELECTRIC HEAT SCHEMATIC HEAT ELEMENT CONNECTIONS.
- CURRENT OVERLOAD RELAY IS USED ON PHASE MACHINES ONLY, EXCLUDING THE "B" VOLTAGE MACHINES. SEE CONTACT SCHEMATIC FOR SETTING.
- USE CORRECT VOLTAGE DOOR UNLOCK ACCORDING TO CONTACTOR SCHEMATIC VOLTAGE. SOLENOID IS THE SAME FOR VOLTAGES.
- YV9 AND YV10 ARE USED WITH TWO SE WAY ELBI WATER VALVES, ARE NOT US MULLER 3 WAY MIXING VALVE.
- KM2NO WATER LEVEL SWITCH BYPASS PRESENT ON 35 AND 50 LB 3 PHASE. THEY MUST NOT BE DISCONNECTED WHEN WAS ORIGINALLY EQUIPPED WITH THESE.
- J9-6 MOTOR CONNECTOR MAY NOT BE F ALL MACHINES.

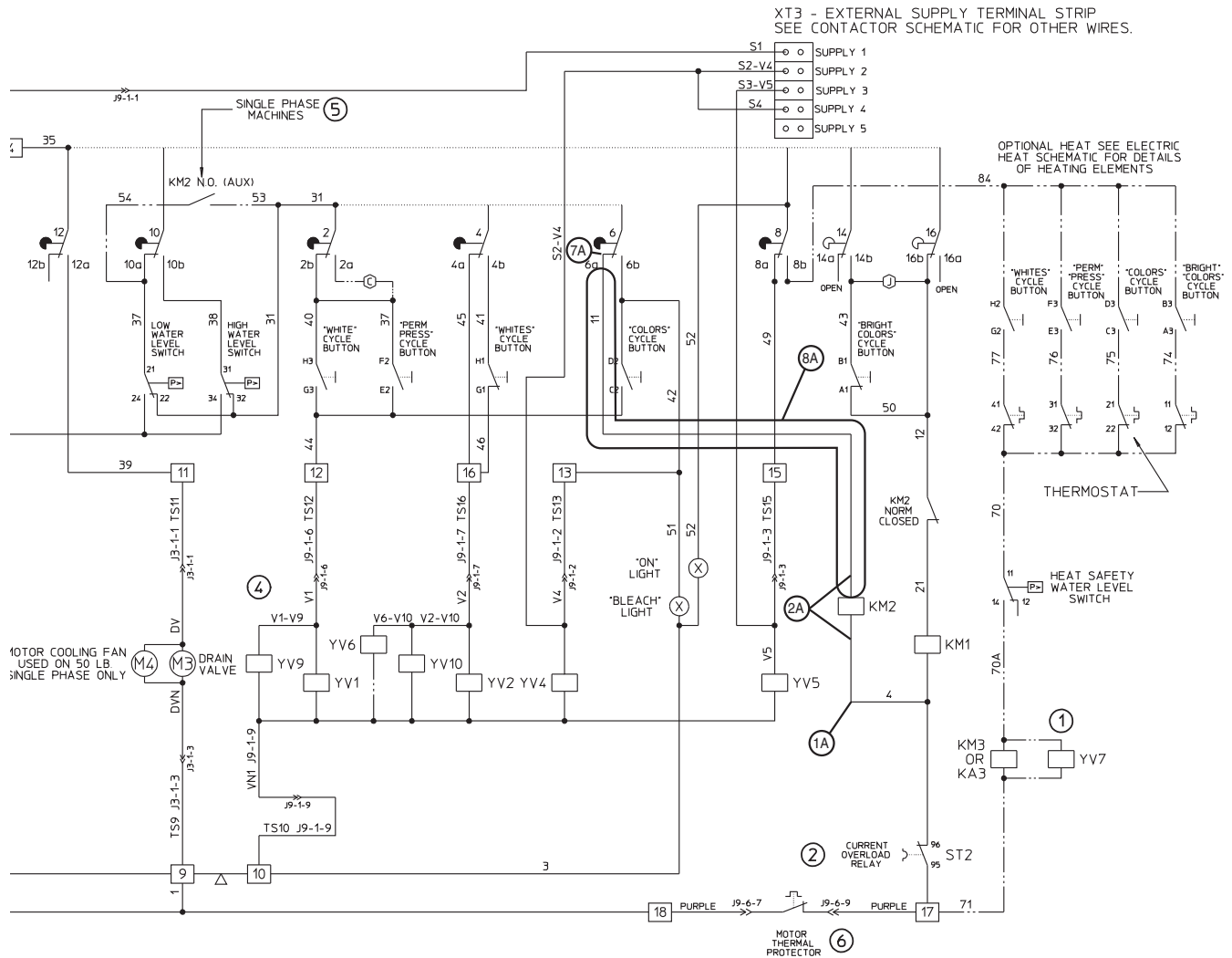


220V DOOR LOCK DETAIL



NOTE: Refer to the wiring diagram supplied with your machine.

No Motor Function (OPL; Extract) (Sheet 2 of 2)



1. REPLACE HEAT
HEAT RELAY AND STEAM
HEAT SCHEMATIC FOR
INS

Y IS USED ON SINGLE
CLUDING THE 20 LB.
E CONTACTOR

FOR UN-LOCK CONFIGURATION
SCHEMATIC CONTROL
E SAME FOR BOTH

WITH TWO SEPARATE 3
ARE NOT USED WITH
VE.

CH BYPASS WIRES MAY BE
B 3 PHASE MACHINES
NNECTED WHEN MACHINE
I WITH THESE WIRES.

AY NOT BE PRESENT ON

LEGEND

- ⊗ CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- ⊕ NOT FACTORY INSTALLED
- ⊕ ADD CONNECTION FOR HEAT
- ⊕ REMOVE CONNECTION FOR HEAT
- ⊕ REMOVE CONNECTION FOR GENTLE AGITATION IN BRIGHT COLORS CYCLE
- △ TERMINAL STRIP JUMPER
- ⊠ TERMINAL STRIP CONNECTION
- ↔ REVERSING TIMER CONTACTS FOR WASH AGITATION
- ⏱ PROGRAM TIMER CONTACTS
- CONNECTIONS INTERNAL TO DEVICE
- OPTIONAL CONNECTIONS
- ⊠ RC RESISTOR/CAPACITOR NETWORK

- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL ELECTRIC HEAT CONTACTOR
- KA1 - DOOR SAFETY RELAY
- KA3 - STEAM RELAY
- M1 - TIMER PROGRAM MOTOR
- M2 - TIMER REVERSING MOTOR
- M3 - DRAIN VALVE MOTOR
- M4 - OPTIONAL MOTOR FAN
- ST2 - MOTOR CURRENT OVERLOAD RELAY
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2(BLEACH) VALVE
- YV5 - SUPPLY 3(SOFTENER) VALVE
- YV6 - OPTIONAL 3RD SUPPLY INLET VALVE
- YV7 - OPTIONAL STEAM VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10- SUPPLY 1 COLD FLUSH VALVE
- XT3 - EXTERNAL SUPPLY TERMINAL STRIP

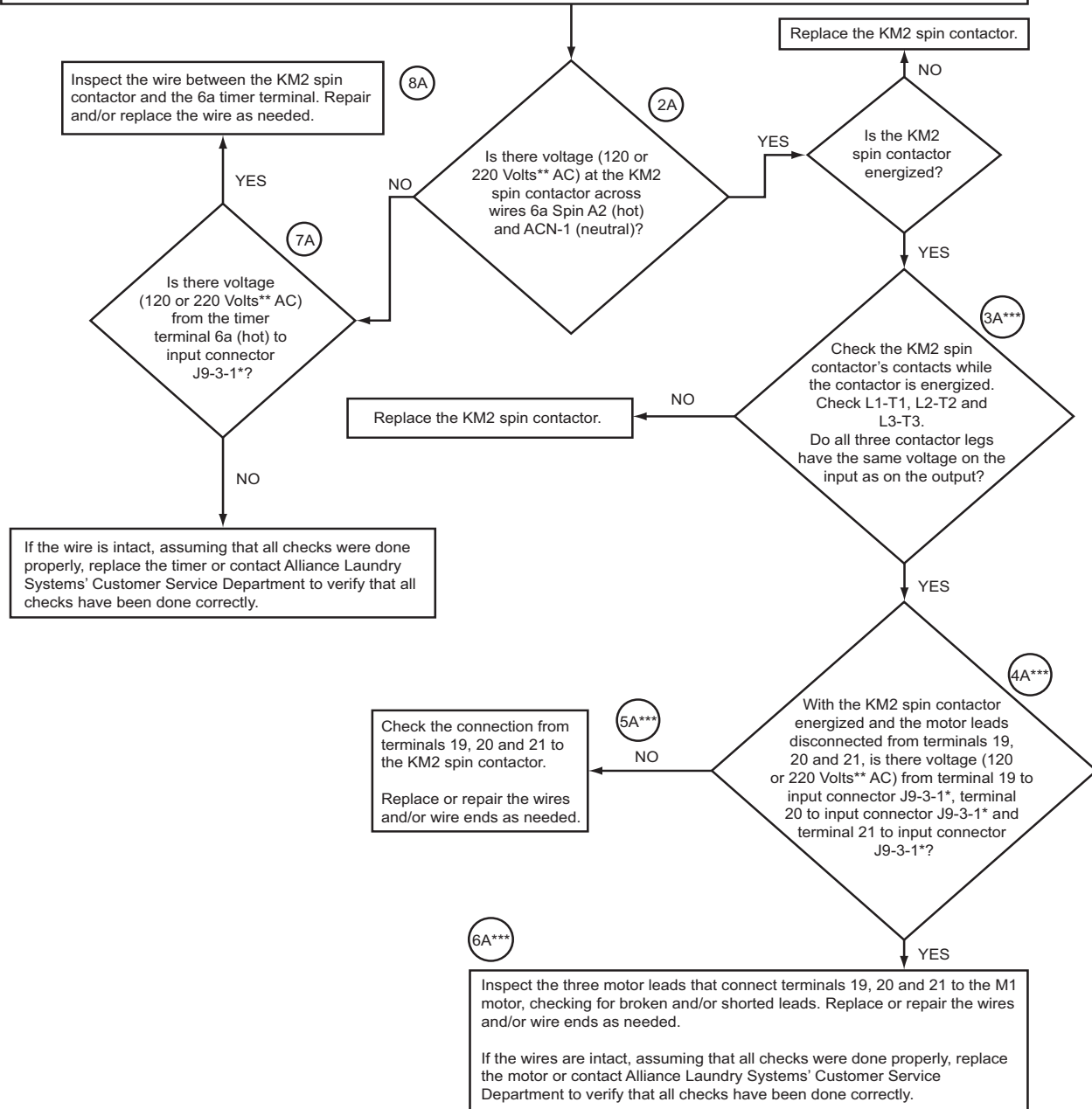
CHM258S
0635913(E)

12. No Motor Function (Coin; Extract)

With the machine running, the water valves on and the machine holding water (i.e., filling up), the basket has no extract function (i.e., spin).

1A

Note: Before proceeding to the next step, take voltage reading across the ACN (neutral) wire where it connects to the KM2 spin contactor and input connector J9-3-3 and also across input connector J9-3-3 and input connector J9-3-1*. This is a test to check if the ACN (neutral) circuit is intact all of the way to the KM2 spin contactor. This will also test the function of the voltmeter.
If 120 or 220 Volts** are present on both readings, continue to the next troubleshooting step.
If 120 or 220 Volts** are not present on both readings, contact Alliance Laundry Systems' Customer Service Department for assistance in locating the broken circuit.



* Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

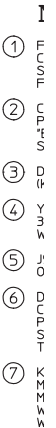
** Note: All voltage readings are approximate.

*** Note: Refer to the Contactor Schematic.

CHM524S

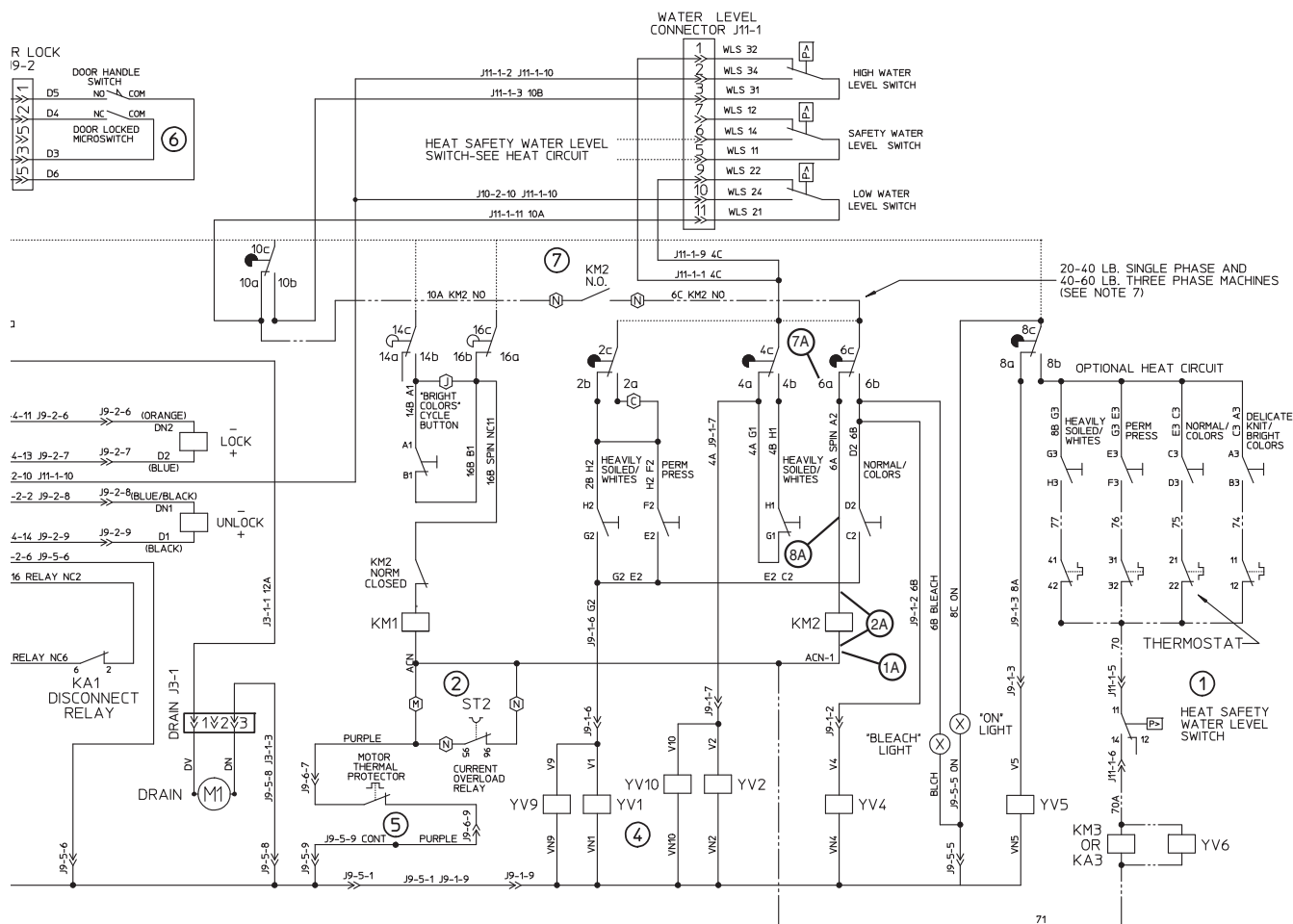
Please refer to the following 4 pages for wiring diagram information.

No Motor Function (Coin; Extract) (Sheet 1 of 2)



F232202R4

No Motor Function (Coin; Extract) (Sheet 2 of 2)



NOTES

- ① FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 20 LB. "B" VOLTAGE MACHINES. SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ DOOR MAGNETIC SWITCH (SQ1) AND SAFETY RELAY (KA4) USED ON "CE" OPTION MACHINES ONLY.
- ④ Y9 AND Y10 ARE USED WITH TWO SEPARATE 3 WAY ELBI WATER VALVES, ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.
- ⑥ DOOR LOCKED SWITCH IS SHOWN TO NORMALLY CLOSED CONTACT, BUT IS WIRE IN UNLOCKED POSITION. OTHER SWITCHES AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- ⑦ KM2N0 WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 40 AND 60 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN MACHINE WAS ORIGINALLY EQUIPPED WITH "CE" OPTION.

LEGEND

- Ⓢ CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- Ⓡ NOT FACTORY INSTALLED
- Ⓢ ADD CONNECTION FOR HEAT
- Ⓡ REMOVE CONNECTION FOR HEAT
- Ⓢ REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- Ⓡ REMOVE CONNECTION FOR CE MARK OPTION
- Ⓢ ADD CONNECTION FOR CE MARK OPTION
- Ⓡ CONNECTION FOR 3 PHASE MACHINES
- Ⓢ CONNECTION FOR SINGLE PHASE MACHINES

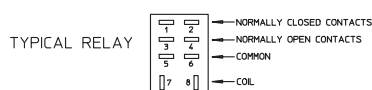
J9-5-1 CONNECTOR/PIN NUMBER
→→→ J9-5(CONNECTOR #)-1(PIN #)

⌚ REVERSING TIMER CONTACTS FOR WASH AGITATION

 PROGRAM TIMER CONTACTS

.. CONNECTIONS INTERNAL TO DEVICE

OPTIONAL CONNECTIONS



ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME

- KM1 - WASH CONTACTOR
KM2 - SPIN CONTACTOR
KM3 - OPTIONAL HEAT CONTACTOR
KA1 - TIME DELAY DISCONNECT RELAY
KA2 - DOOR UNLOCK TIME DELAY
KA3 - STEAM HEAT RELAY
KA4 - DOOR SAFETY RELAY
SQ1 - MAGNETIC DOOR POSITION SENSOR
ST2 - CURRENT OVERLOAD RELAY (10)
YV1 - HOT FILL VALVE
YV2 - COLD FILL VALVE
YV4 - SUPPLY 2 VALVE (BLEACH)
YV5 - SUPPLY 3 VALVE (SOFTENER)
YV6 - OPTIONAL STEAM HEAT VALVE
YV9 - SUPPLY 1 HOT FLUSH VALVE
YV10- SUPPLY 1 COLD FLUSH VALVE
M1 - DRAIN VALVE MOTOR
M2 - TIMER PROGRAM MOTOR
M3 - TIMER REVERSING MOTOR

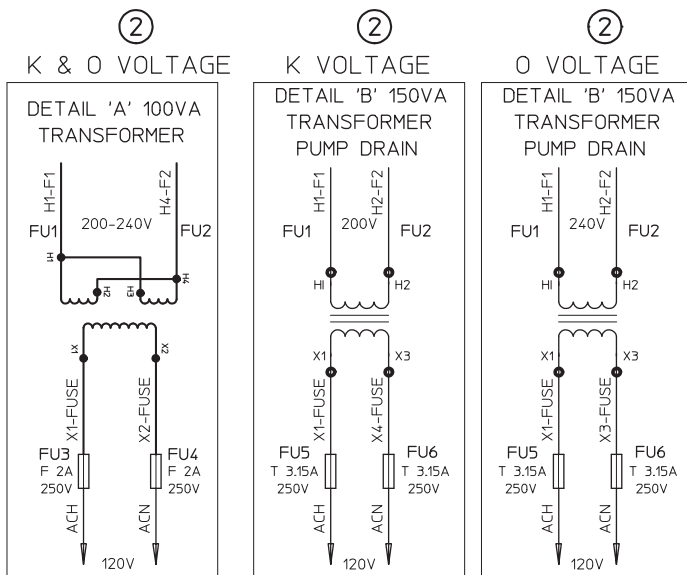
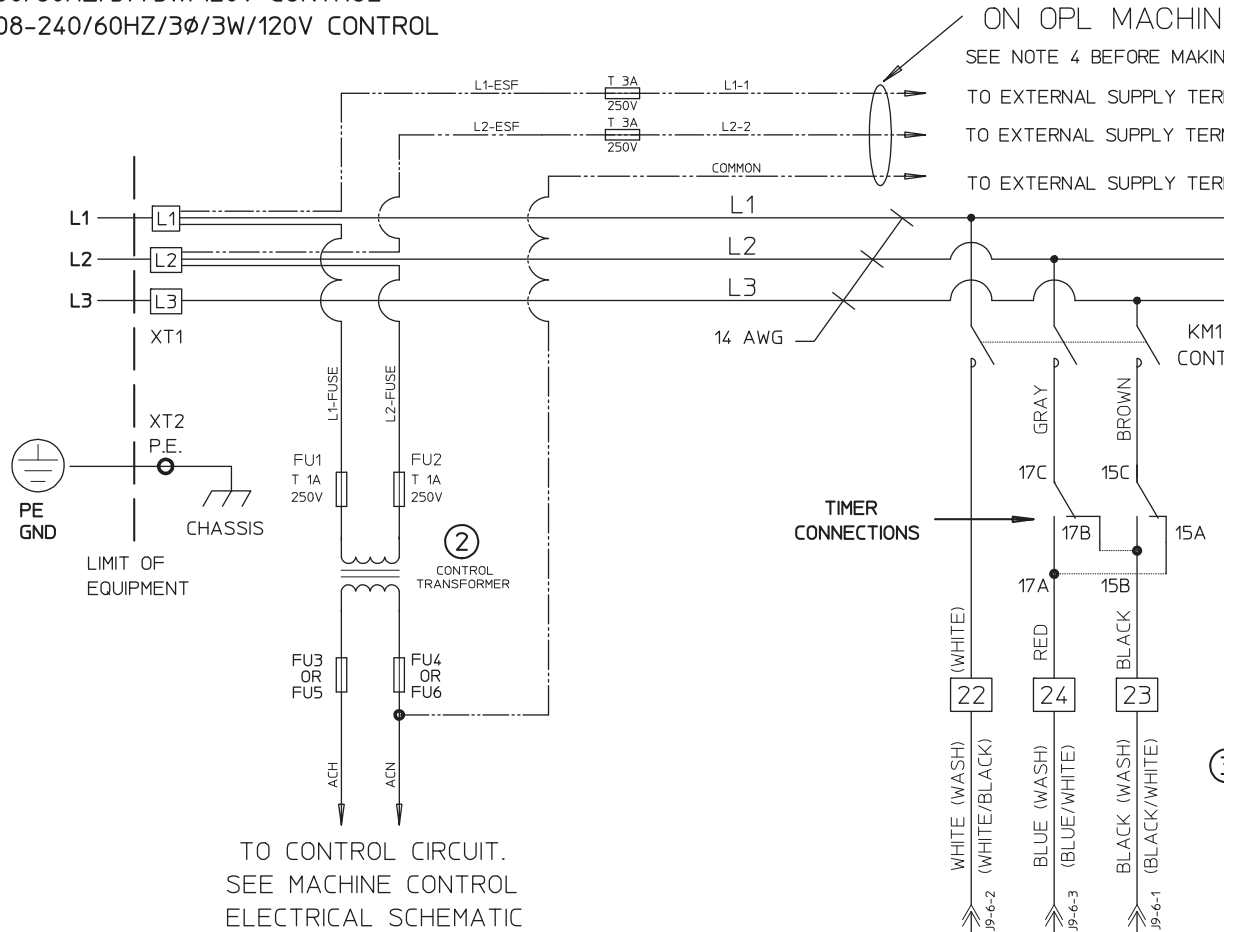
CHM255S
0636156(H)

Troubleshooting

No Motor Function (Extract) Contactor Schematic (Sheet 1 of 2)

K: 200/60HZ/3Ø/3W/120V CONTROL

0: 208-240/60HZ/3Ø/3W/120V CONTROL



NOTES:

- ① IF MOTOR ROTATION IS INCORRECT IN ANY ONE SPEED, REVERSE ANY TWO WIRES FOR THAT SPEED. IF ALL SPEEDS ARE INCORRECT, REVERSE TWO WIRES AT THE POWER INPUT TERMINAL BLOCK.
- ② USE TRANSFORMER 360117 AND 350117 F2A (FAST BLOW) FUSE FOR NON PUMP DRAIN MACHINES. USE 350124 TRANSFORMER AND 350141 T3.15A (SLOW BLOW) FUSE FOR PUMP DRAIN MACHINES. SEE DETAIL BOXES A, B, AND C FOR DETAILS.
- ③ TERMINAL STRIPS MAY NOT BE PRESENT ON ALL MACHINES. MAKE CONNECTIONS DIRECTLY TO CONTACTOR OR OR JUMPER WIRE AS NECESSARY. J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES. MOTOR WIRES MAY BE GRAY WITH COLORS PRINTED, OR MAY BE COLORED WIRES WITH OR WITHOUT STRIPES.
- ④ CAUTION: ATTEMPTING TO OBTAIN 110VAC BY USING L1 OR L2 WITH COMMON MAY DAMAGE LAUNDRY MACHINE CIRCUITRY AND/OR THE CHEMICAL INJECTION SYSTEM.

0634283 | G | 1 | drawings - RELEASED. Plotted by 'shannono' on 3-May-2004 12:06:57

NOTE: Refer to the wiring diagram supplied with your machine.

No Motor Function (Extract) Contactor Schematic (Sheet 2 of 2)

OPL MACHINES ONLY

STEP 4 BEFORE MAKING CONNECTIONS. ④

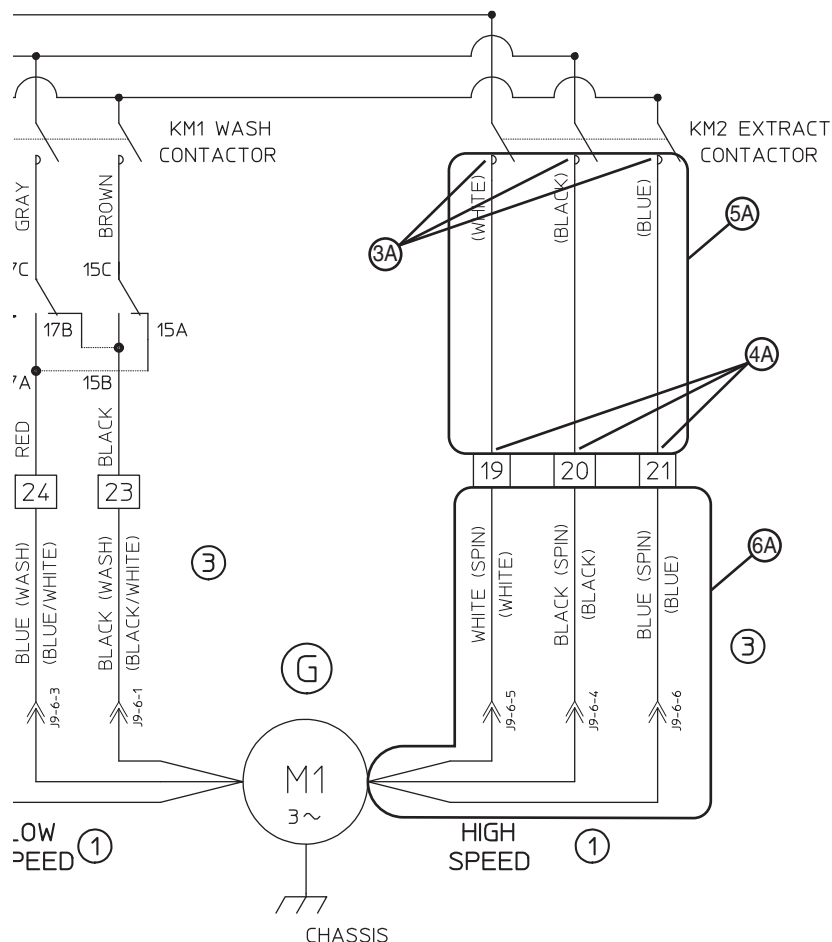
INTERNAL SUPPLY TERM. STRIP L1

INTERNAL SUPPLY TERM. STRIP L2

INTERNAL SUPPLY TERM. STRIP COMMON

CONFIGURATION FOR
ELMO MOTORS ONLY

ALL MOTOR CIRCUIT
WIRING IS 14 AWG



ANY ONE SPEED,
SPEED. IF ALL
0 WIRES AT THE

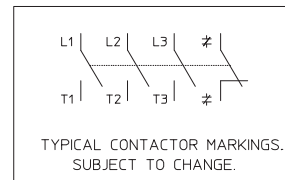
F2A (FAST BLOW)
USE 350124
BLOW FUSE FOR
BOXES A, B, AND C

NOT ON ALL
LY TO CONTACTOR
J9-6 MOTOR
ALL MACHINES.
ORS PRINTED.
WITHOUT STRIPES.

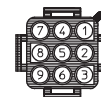
AC BY USING L1 OR
RY MACHINE
TION SYSTEM.

CONTACTORS FACE
FRONT OR RIGHT
SIDE OF MACHINE

CONTACTOR DETAIL



J9-6 MOTOR
CONNECTOR



LEGEND

24 - TERMINAL STRIP CONNECTION

----- - OPTIONAL CONNECTIONS

KM1 RATED 15A INDUCTIVE AC3 (NX-101 OR EQUIV)

KM2 RATED 15A INDUCTIVE AC3 (NX-101 OR EQUIV)

CHM256S
0634283(G)

13. No Fill at Any Time During the Cycle (OPL)

1A

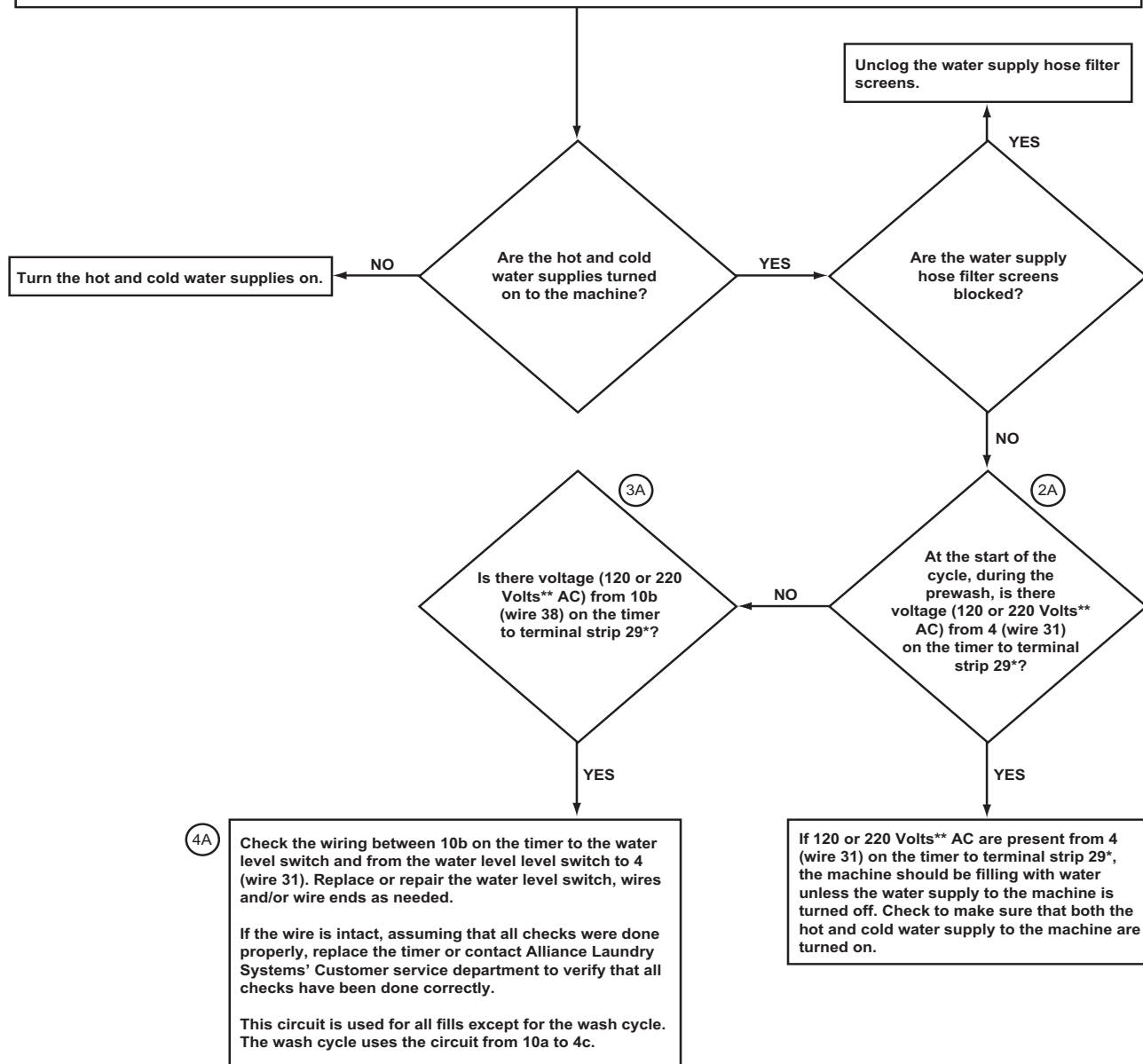
With the machine running, the basket turning and the "ON" light (i.e., the light on the control panel by the timer cycle indicator light) lit, the machine does not fill up (i.e., the water inlet valves do not turn on).

Note: Before proceeding to the next step, take voltage readings across the VN1 J9-1-9 (neutral) wire where it connects to any of the fill valves and terminal strip 25 also across terminal strip 25 and terminal strip 29*. This is a test to check if the VN1 J9-1-9 (neutral) circuit is intact all of the way to all water valves.

This will also test the function of the voltmeter.

If 120 or 220 Volts** are present on both readings, continue to the next troubleshooting step.

If 120 or 220 Volts** are not present on both readings, contact Alliance Laundry Systems' Customer Service department for assistance in locating the broken circuit.



*Note: All voltage readings should be taken from terminal strip 29 as a neutral point.

**Note: All voltage readings are approximate.

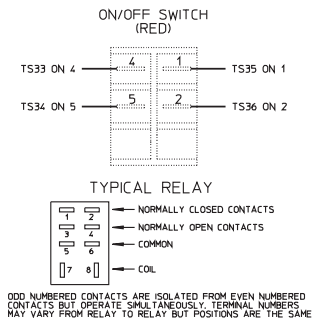
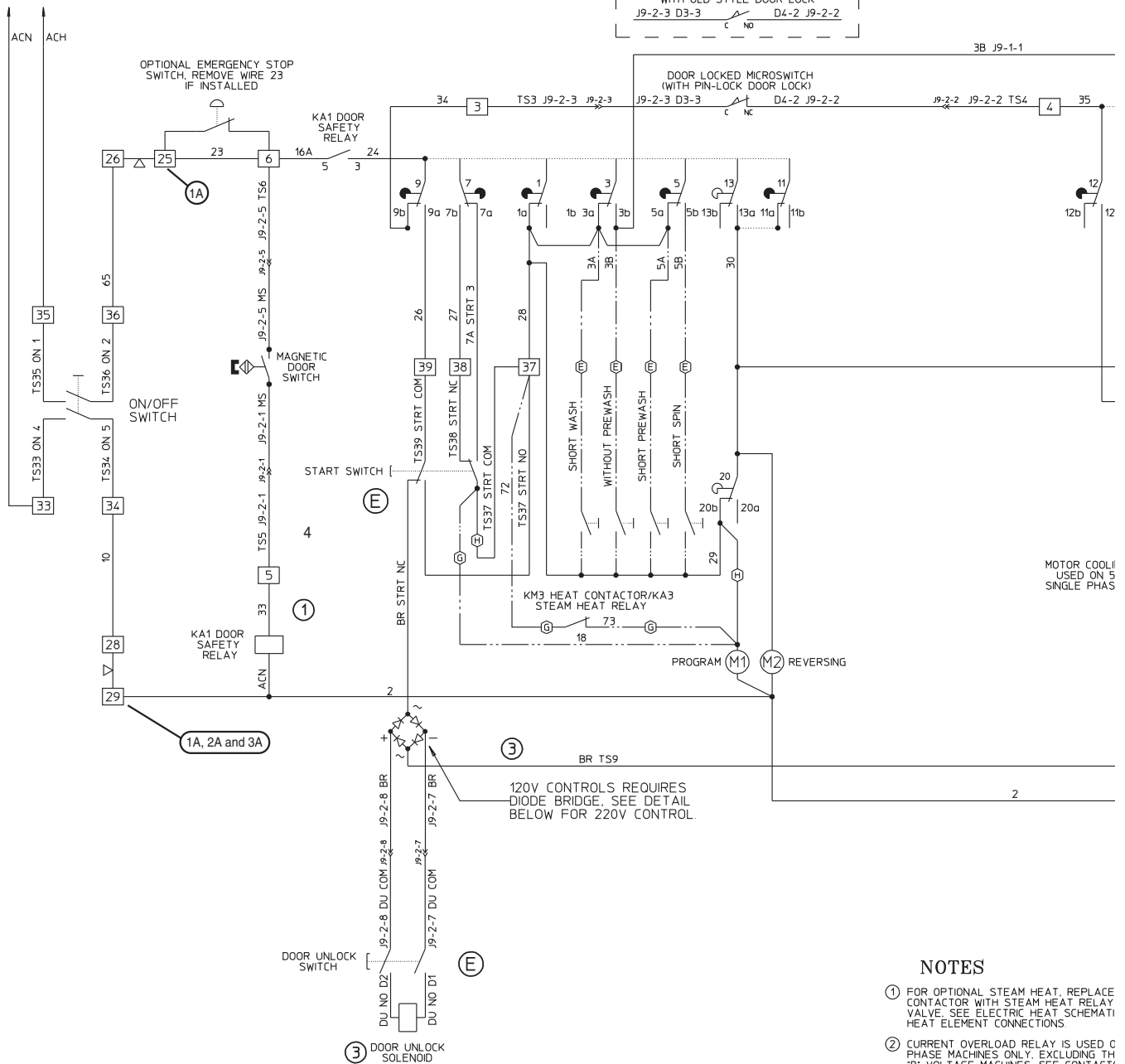
CHM525S

Please refer to the following 2 pages for wiring diagram information.

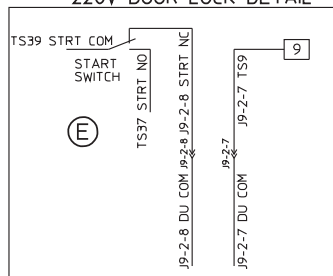
Troubleshooting

No Fill at Any Time During the Cycle (OPL) (Sheet 1 of 2)

REFER TO CONTACTOR SCHEMATIC FOR CONTROL CIRCUIT POWER INPUT



220V DOOR LOCK DETAIL

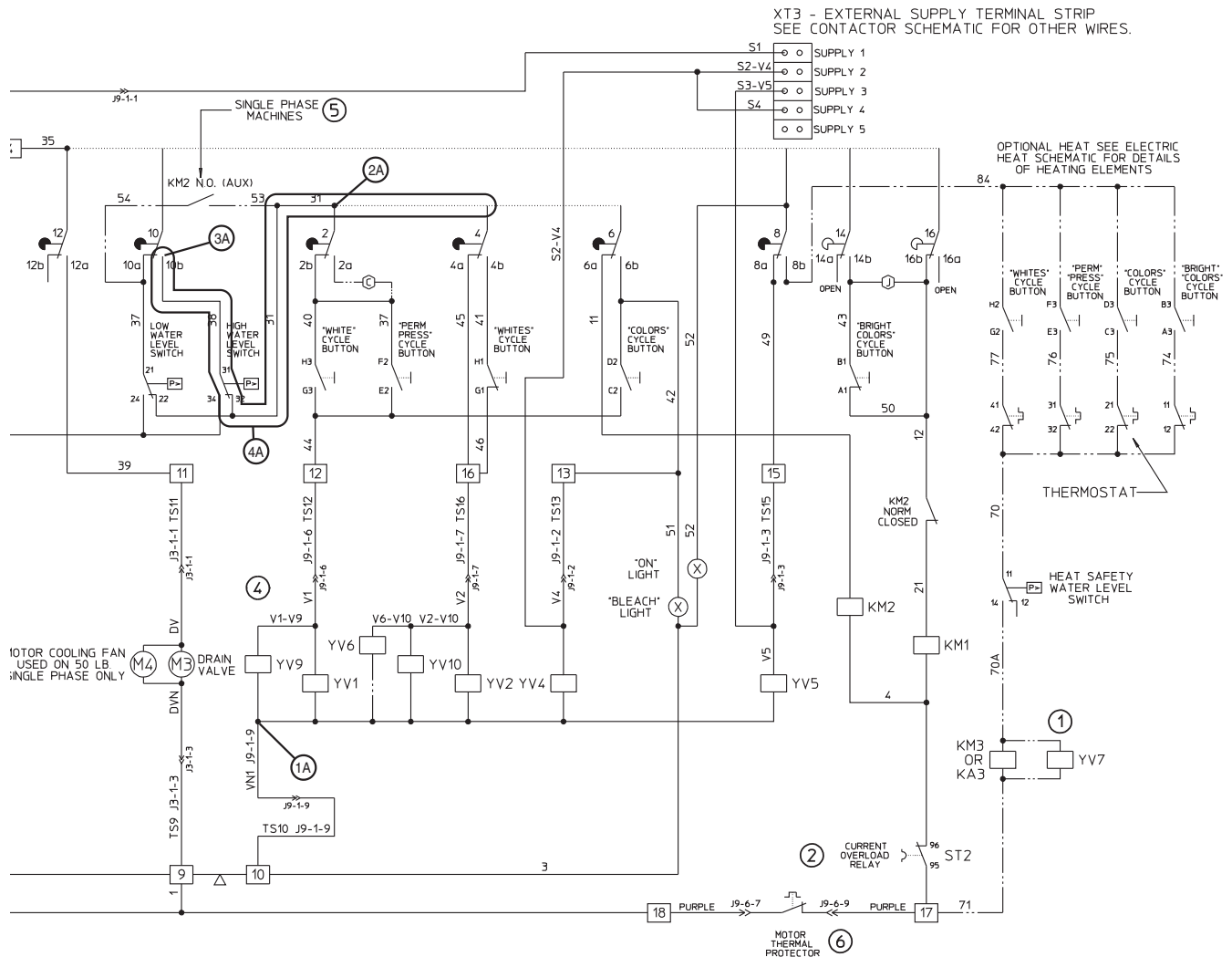


NOTES

- ① FOR OPTIONAL STEAM HEAT, REPLACE CONTACTOR WITH STEAM HEAT RELAY VALVE; SEE ELECTRIC HEAT SCHEMATIC HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON PHASE MACHINES ONLY; EXCLUDING THE "B" VOLTAGE MACHINES; SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ USE CORRECT VOLTAGE DOOR UNLOCK SOLENOID IS THE SAME FOR VOLTAGES.
- ④ YV9 AND YV10 ARE USED WITH TWO 5 WAY ELBI WATER VALVES; ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ KM2NO WATER LEVEL SWITCH BYPASS PRESENT ON 35 AND 50 LB 3 PHASE MACHINES; THEY MUST NOT BE DISCONNECTED WHEN WAS ORIGINALLY EQUIPPED WITH THESE.
- ⑥ J9-6 MOTOR CONNECTOR MAY NOT BE ALL MACHINES.

NOTE: Refer to the wiring diagram supplied with your machine.

No Fill at Any Time During the Cycle (OPL) (Sheet 2 of 2)



14. No Fill at Any Time During the Cycle (Coin)

1A

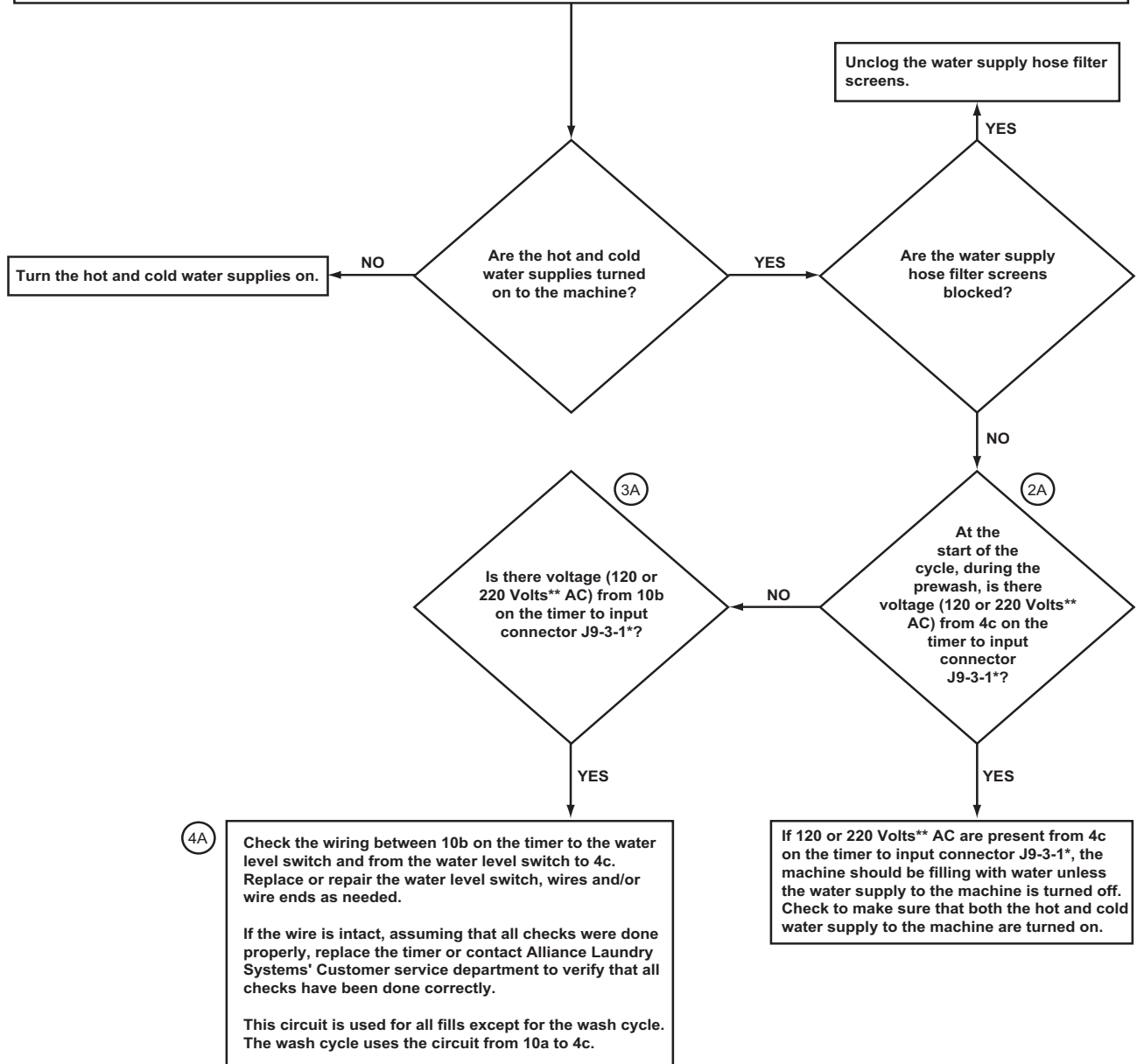
With the machine running, the basket turning and the "ON" light (i.e., the light on the control panel by the timer cycle indicator light) lit, the machine does not fill up (i.e., the water inlet valves do not turn on).

Note: Before proceeding to the next step, take voltage readings across the VN2 (neutral) wire where it connects to the VN2 cold fill valve and input connector J9-3-3 and also across input connector J9-3-3 and input connector J9-3-1*. This is a test to check if the VN2 (neutral) circuit is intact all of the way to all water valves.

This will also test the function of the voltmeter.

If 120 or 220 Volts** are present on both readings, continue to the next troubleshooting step.

If 120 or 220 Volts** are not present on both readings, contact Alliance Laundry Systems' Customer Service department for assistance in locating the broken circuit.



*Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

**Note: All voltage readings are approximate.

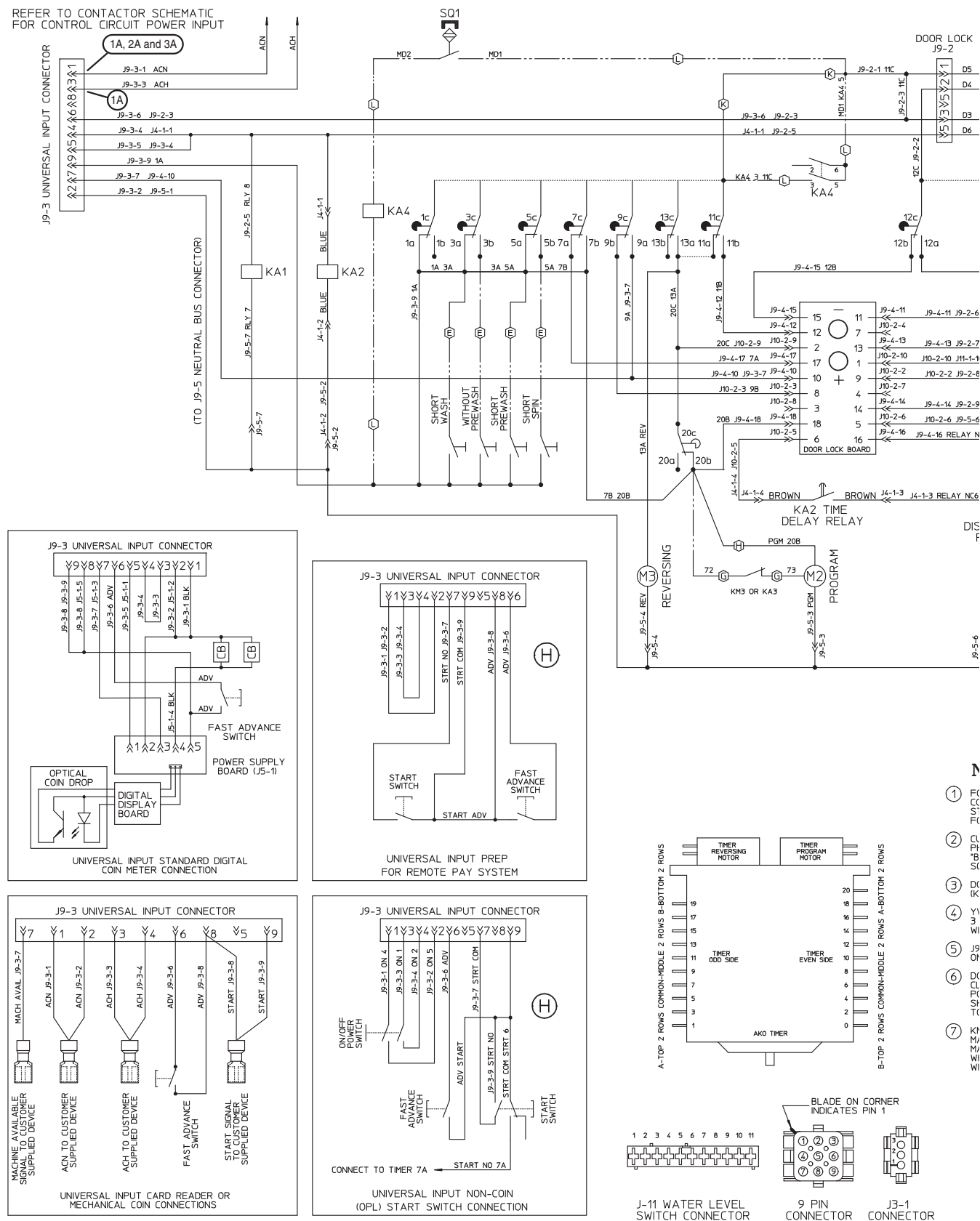
CHM526S

Please refer to the following 2 pages for wiring diagram information.

Troubleshooting

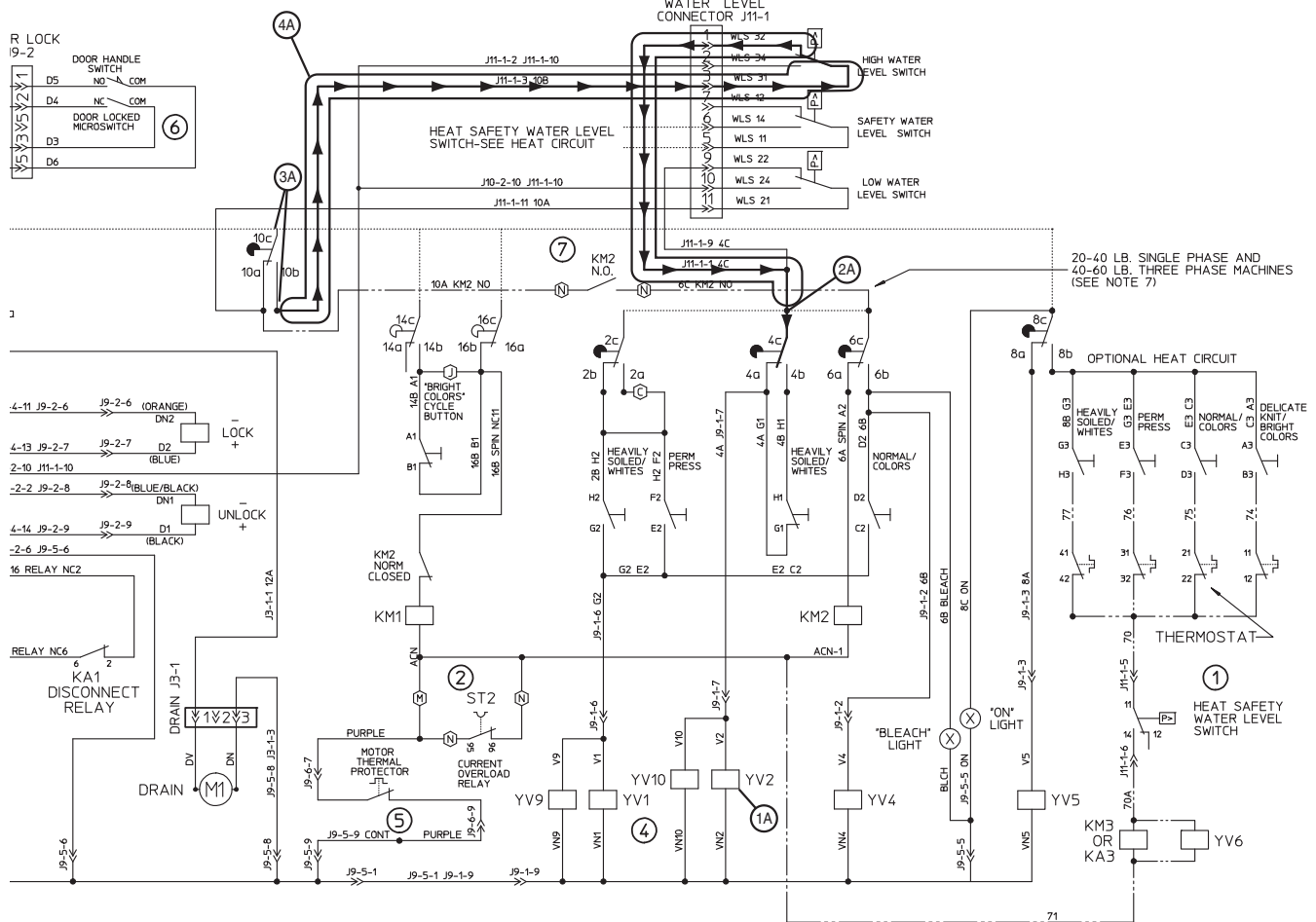
No Fill at Any Time During the Cycle (Coin) (Sheet 1 of 2)

REFER TO CONTACTOR SCHEMATIC
FOR CONTROL CIRCUIT POWER INPUT



NOTE: Refer to the wiring diagram supplied with your machine.

No Fill at Any Time During the Cycle (Coin) (Sheet 2 of 2)



NOTES

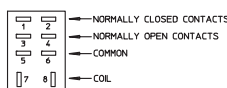
- ① FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY. EXCLUDING THE 20 LB. "B" VOLTAGE MACHINES, SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ DOOR MAGNETIC SWITCH (SQ1) AND SAFETY RELAY (KA4) USED ON "CE" OPTION MACHINES ONLY.
- ④ YV9 AND YV10 ARE USED WITH TWO SEPARATE 3 WAY ELBI WATER VALVES. ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.
- ⑥ DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION. OTHER SWITCHES AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- ⑦ KM2NO WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 40 AND 60 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN MACHINE WAS ORIGINALLY EQUIPPED WITH THESE WIRES.

LEGEND

- ① CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- ② NOT FACTORY INSTALLED
- ③ ADD CONNECTION FOR HEAT
- ④ REMOVE CONNECTION FOR HEAT
- ⑤ REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- ⑥ REMOVE CONNECTION FOR CE MARK OPTION
- ⑦ ADD CONNECTION FOR CE MARK OPTION
- ⑧ CONNECTION FOR 3 PHASE MACHINES
- ⑨ CONNECTION FOR SINGLE PHASE MACHINES
- J9-5-1 CONNECTOR/PIN NUMBER
J9-5(CONNECTOR #)-1(PIN #)
- REVERSING TIMER CONTACTS FOR WASH AGITATION
- PROGRAM TIMER CONTACTS
- CONNECTIONS INTERNAL TO DEVICE
- OPTIONAL CONNECTIONS

- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL HEAT CONTACTOR
- KA1 - TIME DELAY DISCONNECT RELAY
- KA2 - DOOR UNLOCK TIME DELAY
- KA3 - STEAM HEAT RELAY
- KA4 - DOOR SAFETY RELAY
- SQ1 - MAGNETIC DOOR POSITION SENSOR
- ST2 - CURRENT OVERLOAD RELAY (10)
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2 VALVE (BLEACH)
- YV5 - SUPPLY 3 VALVE (SOFTENER)
- YV6 - OPTIONAL STEAM HEAT VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10- SUPPLY 1 COLD FLUSH VALVE
- M1 - DRAIN VALVE MOTOR
- M2 - TIMER PROGRAM MOTOR
- M3 - TIMER REVERSING MOTOR

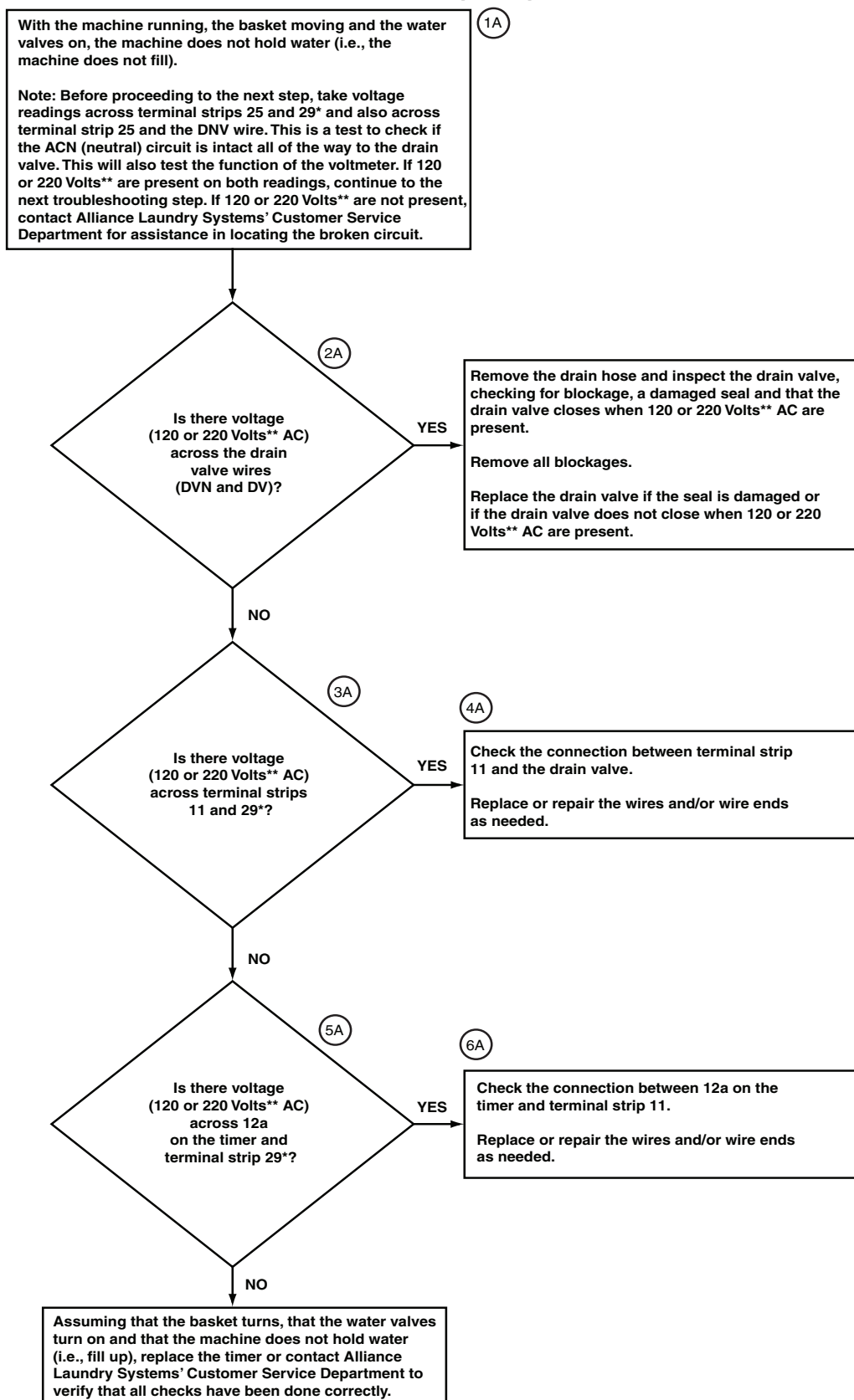
TYPICAL RELAY



ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME.

CHM260S
0636156(H)

15. Drain Valve Malfunction (OPL)



*Note: All voltage readings should be taken from terminal 29 as a neutral point.

**Note: All voltage readings are approximate.

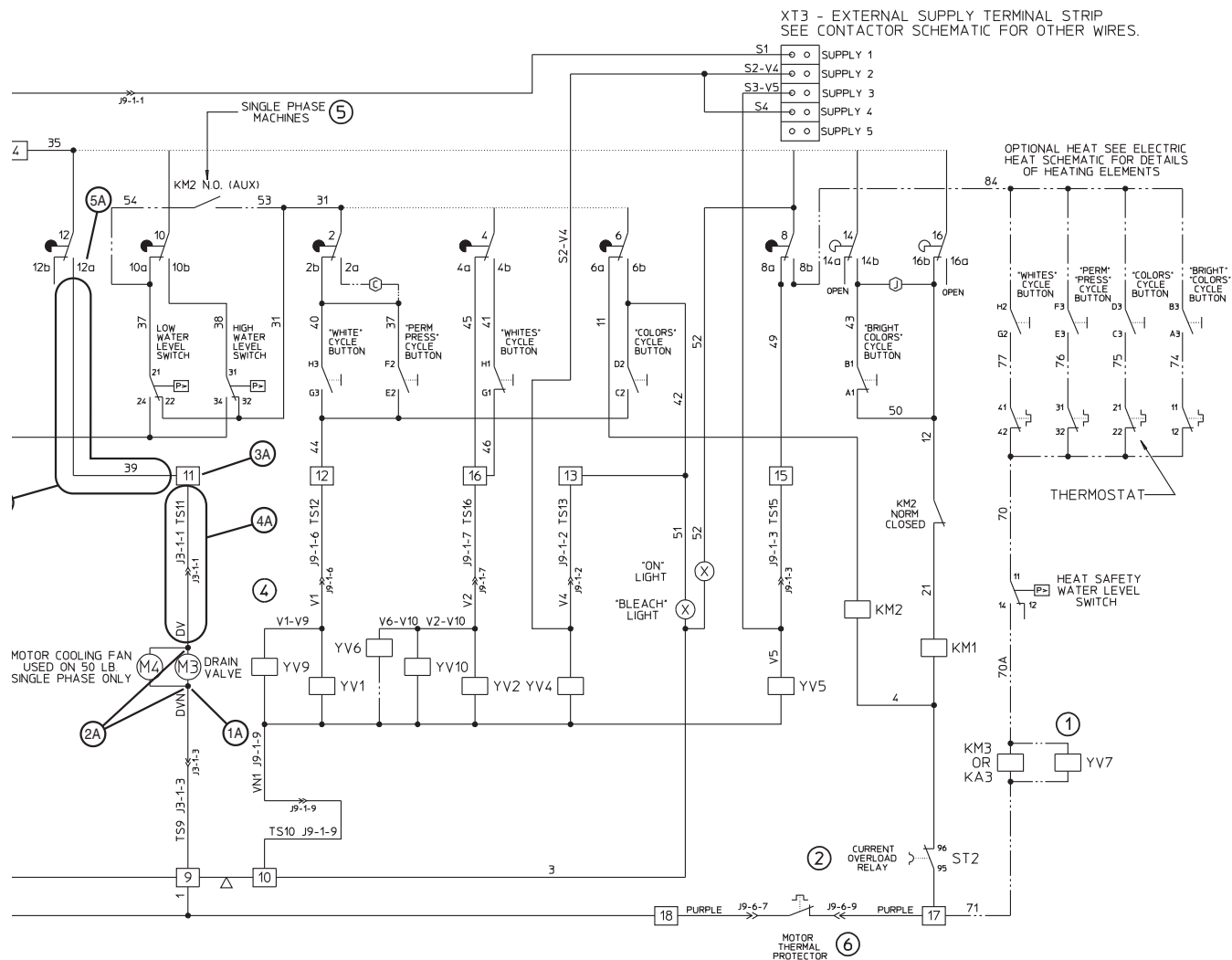
CHM527S

Please refer to the following 2 pages for wiring diagram information.

Drain Valve Malfunction (OPL) (Sheet 1 of 2)



Drain Valve Malfunction (OPL) (Sheet 2 of 2)



AT, REPLACE HEAT
HEAT RELAY AND STEAM
AT SCHEMATIC FOR
ONS

LY IS USED ON SINGLE
XCLUDING THE 20 LB.
EE CONTACTOR

DOOR UNLOCK CONFIGURATION
R SCHEMATIC CONTROL
E SAME FOR BOTH

WITH TWO SEPARATE 3
ARE NOT USED WITH
LVE

TCH BYPASS WIRES MAY BE
B 3 PHASE MACHINES
CONNECTED WHEN MACHINE
D WITH THESE WIRES.

14Y NOT BE PRESENT ON

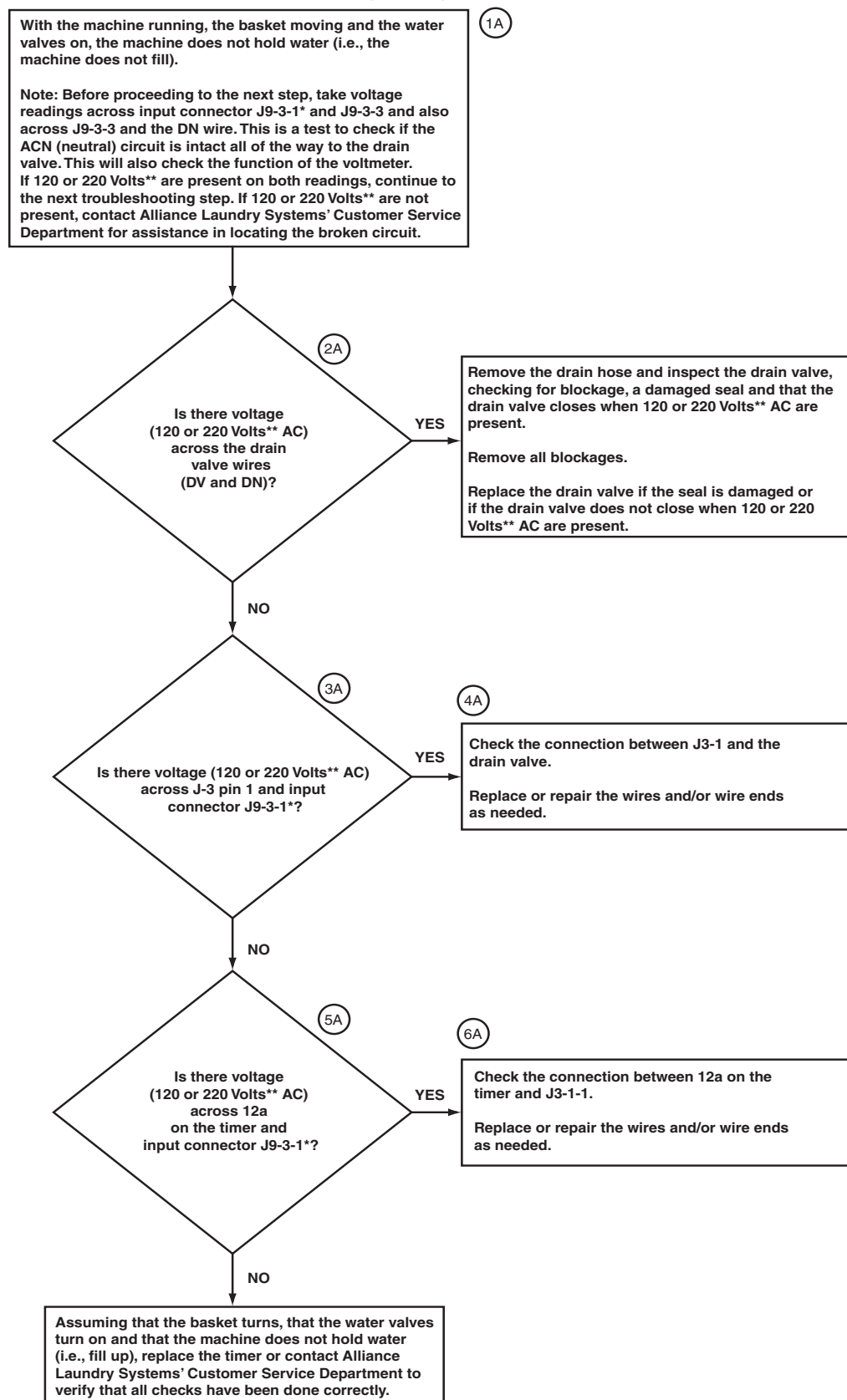
LEGEND

- Ⓢ CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- Ⓢ NOT FACTORY INSTALLED
- Ⓢ ADD CONNECTION FOR HEAT
- Ⓢ REMOVE CONNECTION FOR HEAT
- Ⓢ REMOVE CONNECTION FOR GENTLE AGITATION IN
BRIGHT COLORS CYCLE
- Ⓢ TERMINAL STRIP JUMPER
- Ⓢ TERMINAL STRIP CONNECTION
- Ⓢ REVERSING TIMER CONTACTS FOR WASH AGITATION
- Ⓢ PROGRAM TIMER CONTACTS
- Ⓢ CONNECTIONS INTERNAL TO DEVICE
- Ⓢ OPTIONAL CONNECTIONS
- Ⓢ RESISTOR/CAPACITOR NETWORK

- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL ELECTRIC HEAT CONTACTOR
- KA1 - DOOR SAFETY RELAY
- KA3 - STEAM RELAY
- M1 - TIMER PROGRAM MOTOR
- M2 - TIMER REVERSING MOTOR
- M3 - DRAIN VALVE MOTOR
- M4 - OPTIONAL MOTOR FAN
- ST2 - MOTOR CURRENT OVERLOAD RELAY
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV3 - SUPPLY 2(BLEACH) VALVE
- YV4 - SUPPLY 3(SOFTENER) VALVE
- YV5 - SUPPLY 1 HOT FLUSH VALVE
- YV6 - SUPPLY 1 COLD FLUSH VALVE
- YV7 - SUPPLY 1 HOT FLUSH VALVE
- YV8 - SUPPLY 1 COLD FLUSH VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10 - SUPPLY 1 COLD FLUSH VALVE
- XT3 - EXTERNAL SUPPLY TERMINAL STRIP

CHM244S
0635913(E)

16. Drain Valve Malfunction (Coin)



*Note: All voltage readings should be taken from J9-3-1 as a neutral point.

**Note: All voltage readings are approximate.

CHM528S

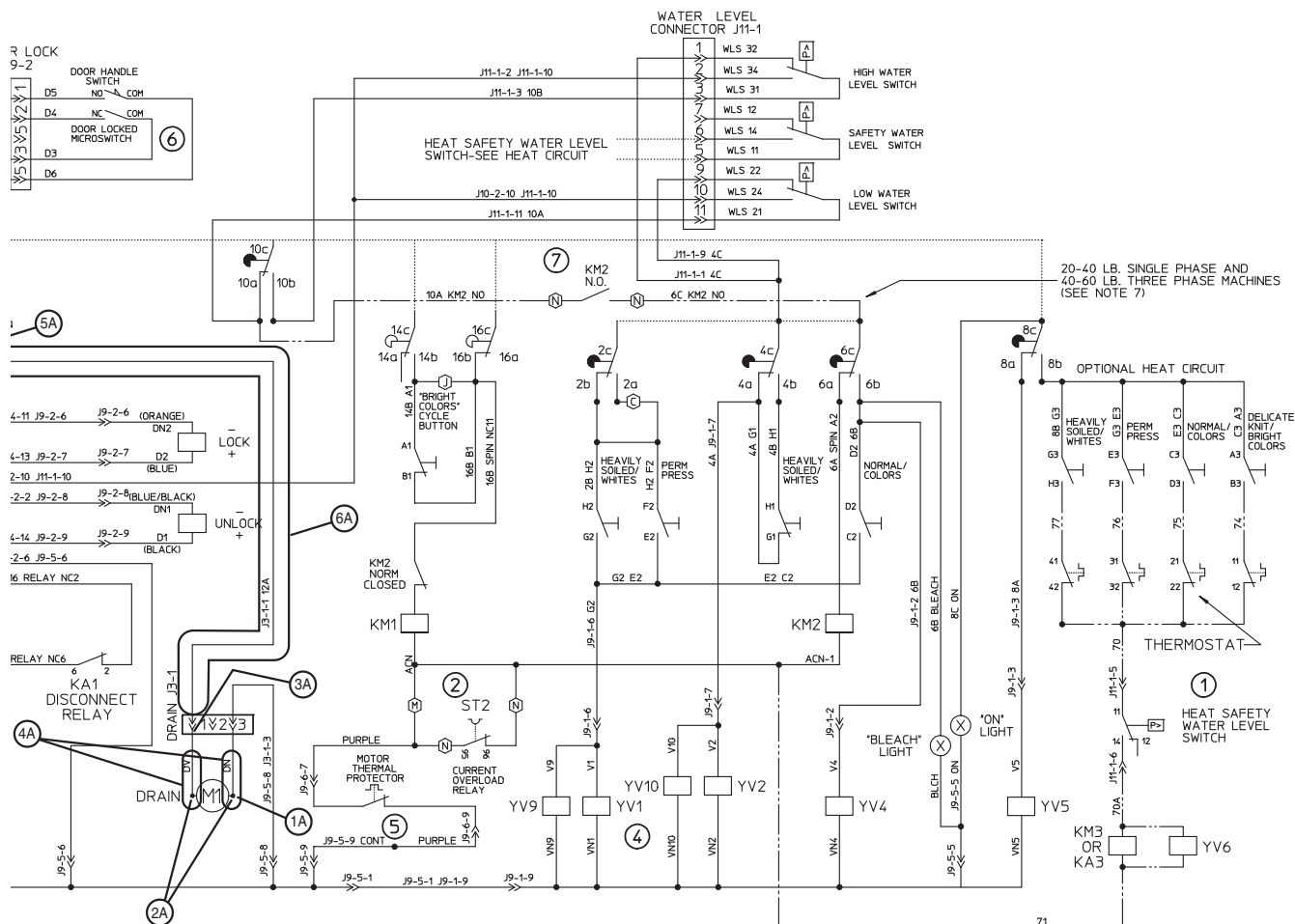
Please refer to the following 2 pages for wiring diagram information.

Drain Valve Malfunction (Coin) (Sheet 1 of 2)

[illegible]

F232202R4

Drain Valve Malfunction (Coin) (Sheet 2 of 2)



NOTES

- ① FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 20 LB. "B" VOLTAGE MACHINES. SEE CONTACTOR SCHEMATIC FOR SETTING.
- ③ DOOR MAGNETIC SWITCH (SQ1) AND SAFETY RELAY (KA4) USED ON "CE" OPTION MACHINES ONLY.
- ④ YV9 AND YV10 ARE USED WITH TWO SEPARATE 3 WAY ELBI WATER VALVES, ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.
- ⑥ DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION. OTHER SWITCHES AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- ⑦ KM2NO WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 40 AND 60 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN MACHINE WAS ORIGINALLY EQUIPPED WITH THESE WIRES.

LEGEND

- ① CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- ② NOT FACTORY INSTALLED
- ③ ADD CONNECTION FOR HEAT
- ④ REMOVE CONNECTION FOR HEAT
- ⑤ REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- ⑥ REMOVE CONNECTION FOR CE MARK OPTION
- ⑦ ADD CONNECTION FOR CE MARK OPTION
- ⑧ CONNECTION FOR 3 PHASE MACHINES
- ⑨ CONNECTION FOR SINGLE PHASE MACHINES

J9-5-1 CONNECTOR/PIN NUMBER
 → J9-5(CONNECTOR #)-1(PIN #)

↔ REVERSING TIMER CONTACTS FOR WASH AGITATION

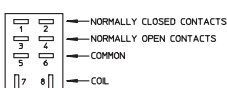
⌒ PROGRAM TIMER CONTACTS

..... CONNECTIONS INTERNAL TO DEVICE

----- OPTIONAL CONNECTIONS

- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL HEAT CONTACTOR
- KA1 - TIME DELAY DISCONNECT RELAY
- KA2 - DOOR UNLOCK TIME DELAY
- KA3 - STEAM HEAT RELAY
- KA4 - DOOR SAFETY RELAY
- SQ1 - MAGNETIC DOOR POSITION SENSOR
- ST2 - CURRENT OVERLOAD RELAY (1Ø)
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2 VALVE (BLEACH)
- YV5 - SUPPLY 3 VALVE (SOFTENER)
- YV6 - OPTIONAL STEAM HEAT VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10- SUPPLY 1 COLD FLUSH VALVE
- M1 - DRAIN VALVE MOTOR
- M2 - TIMER PROGRAM MOTOR
- M3 - TIMER REVERSING MOTOR

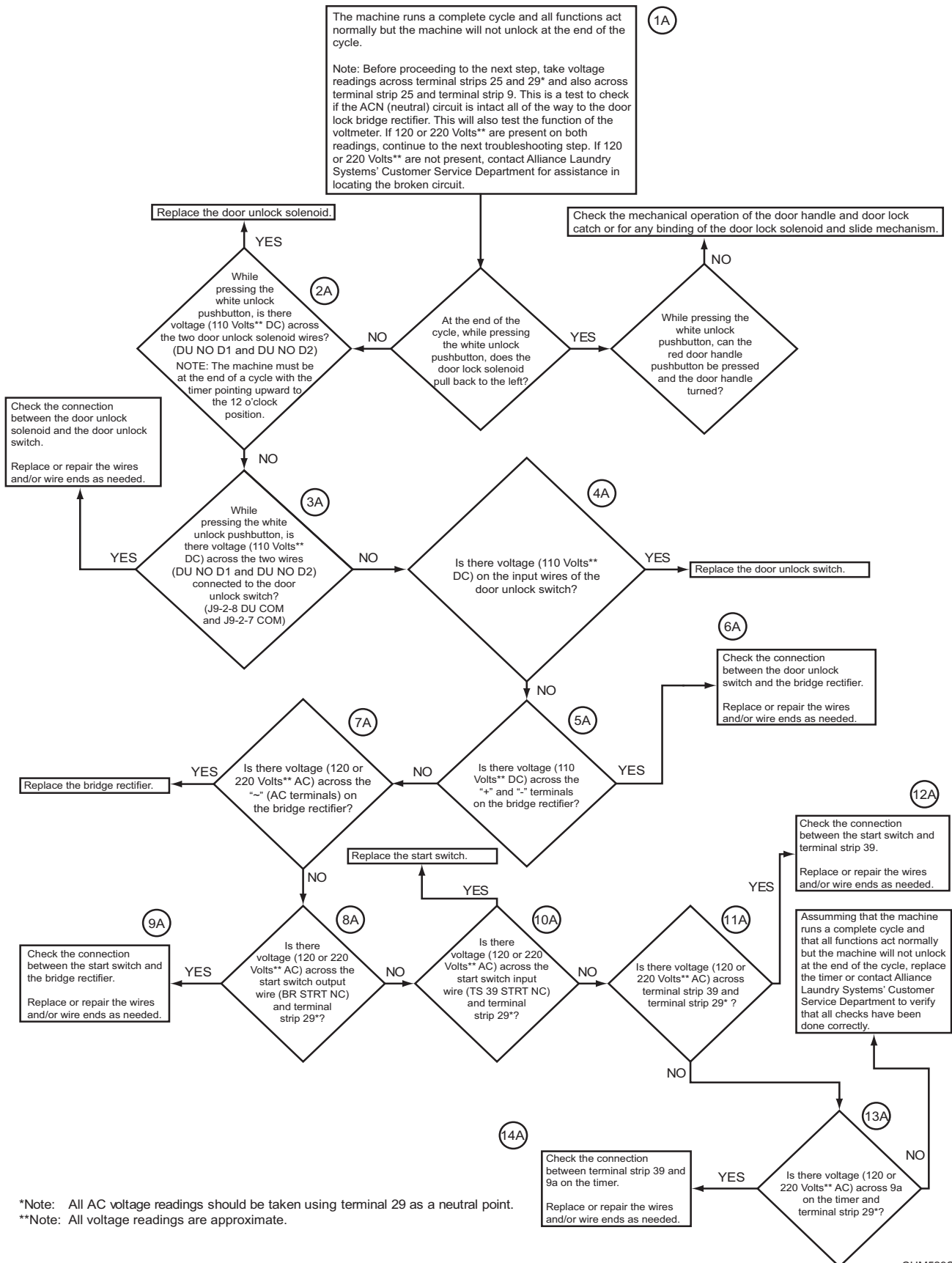
TYPICAL RELAY



000 NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME.

CHM243S
 0636156(H)

17. Door Unlocking Malfunction (OPL)



CHM529S

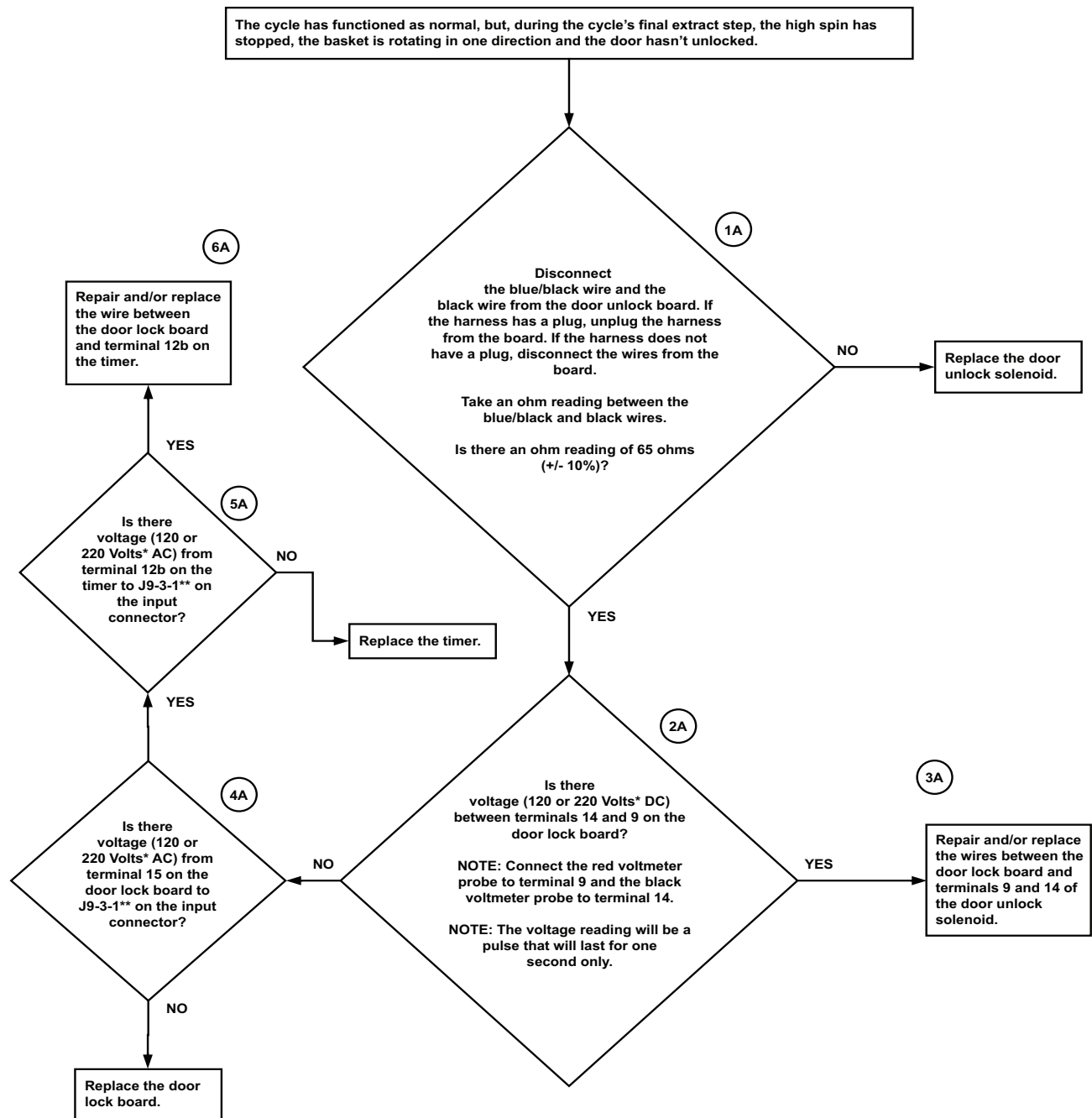
Please refer to the following 2 pages for wiring diagram information.

Door Unlocking Malfunction (OPL) (Sheet 1 of 2)



F232202R4

18. Door Unlocking Malfunction (Coin)



*Note: All voltage readings are approximate.

** Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

CHM530S

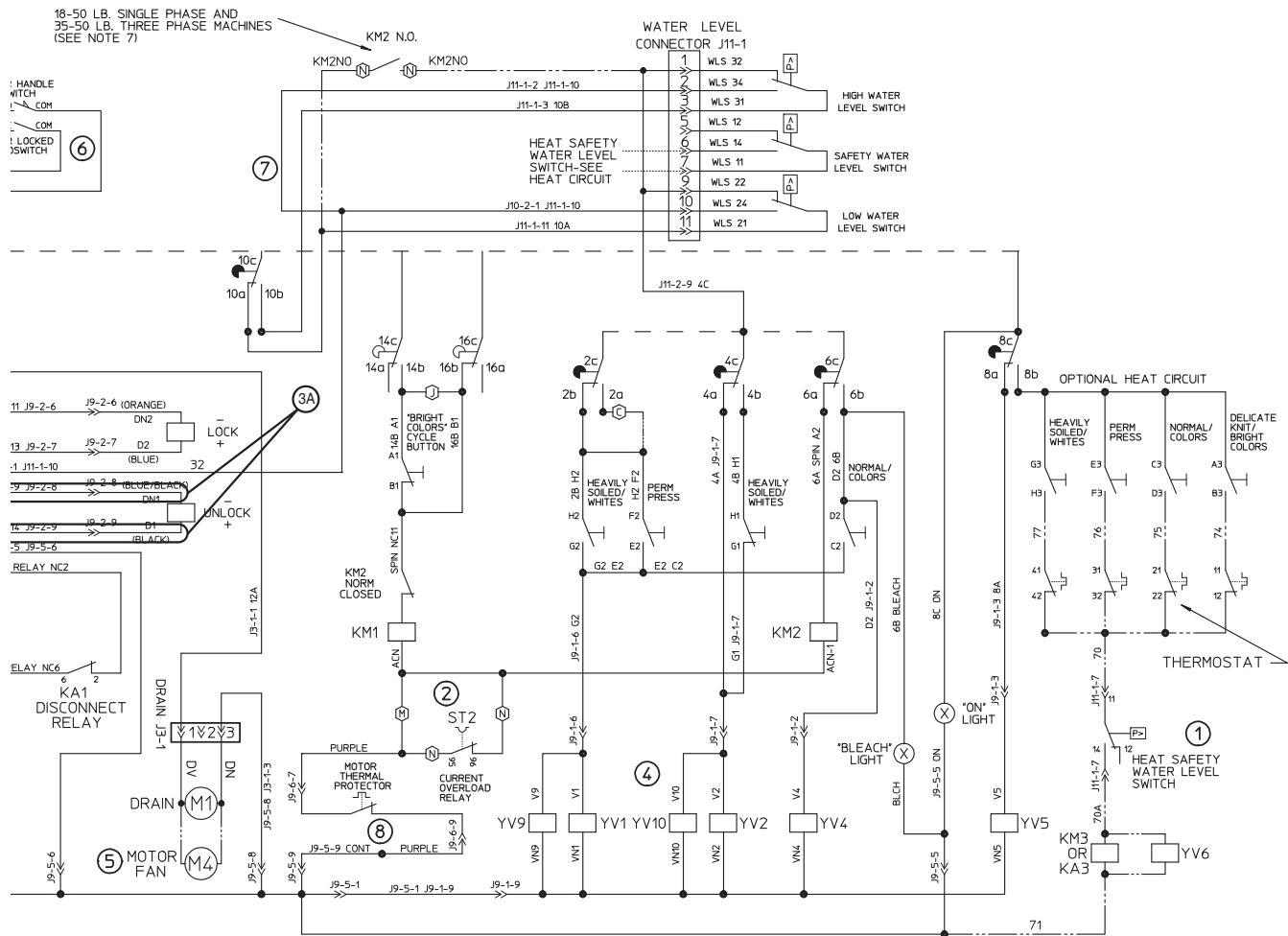
Please refer to the following 2 pages for wiring diagram information.

Door Unlocking Malfunction (Coin) (Sheet 1 of 2)



F232202R4

Door Unlocking Malfunction (Coin) (Sheet 2 of 2)



NOTES

- ① FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 18 LB. "B" AND "E" VOLTAGE MACHINES. ST2 CURRENT OVERLOAD RELAY MUST BE SET TO "TRIP" AT APPROPRIATE CURRENT LOAD. SET DIAL TO 100% OF MACHINE RATING. CURRENT RATING. IF MOTOR HAS SERVICE FACTOR OF LESS THAN 115, SET DIAL TO 90% OF FULL LOAD CURRENT RATING. ALSO SET OPERATING MODE DIAL TO "M" (MANUAL RESET) TO PREVENT ACCIDENTAL STARTING OF MOTOR.
- ③ DOOR MAGNETIC SWITCH (IS01) AND SAFETY RELAY (KA2) USED ON "CE" OPTION MACHINES ONLY. CONNECT WIRE FROM DOOR SAFETY RELAY FOR CE UNITS. OTHERWISE CONNECT WIRE D6 TO TERMINAL STRIP TERM #6 WHEN MAGNETIC SWITCH & SAFETY RELAY ARE NOT USED.
- ④ Y99 AND YV10 ARE USED WITH TWO SEPARATE 3 WAY ELBI WATER VALVES, ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ MOTOR COOLING FAN IS ONLY USED ON 50LB. SINGLE PHASE MACHINES.
- ⑥ DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION ON OTHER SITESCH AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- ⑦ KY2NO WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 35 AND 50 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN MACHINE WAS ORIGINALLY EQUIPPED WITH THESE WIRES.
- ⑧ J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.

LEGEND

- ⊕ CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- ⊖ NOT FACTORY INSTALLED
- ⊕ ADD CONNECTION FOR HEAT
- ⊖ REMOVE CONNECTION FOR HEAT
- ⊖ REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- ⊖ REMOVE CONNECTION FOR CE MARK OPTION
- ⊕ ADD CONNECTION FOR CE MARK OPTION
- ⊖ CONNECTION FOR 3 PHASE MACHINES
- ⊖ CONNECTION FOR SINGLE PHASE MACHINES

J9-5-1 CONNECTOR/PIN NUMBER
→→ J9-5(CONNECTOR #)-1(PIN #)

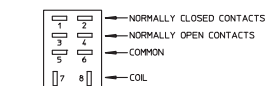
REVERSING TIMER CONTACTS FOR WASH AGITATION

PROGRAM TIMER CONTACTS

— — CONNECTIONS INTERNAL TO

--- OPTIONAL CONNECTIONS

TYPICAL RELAY

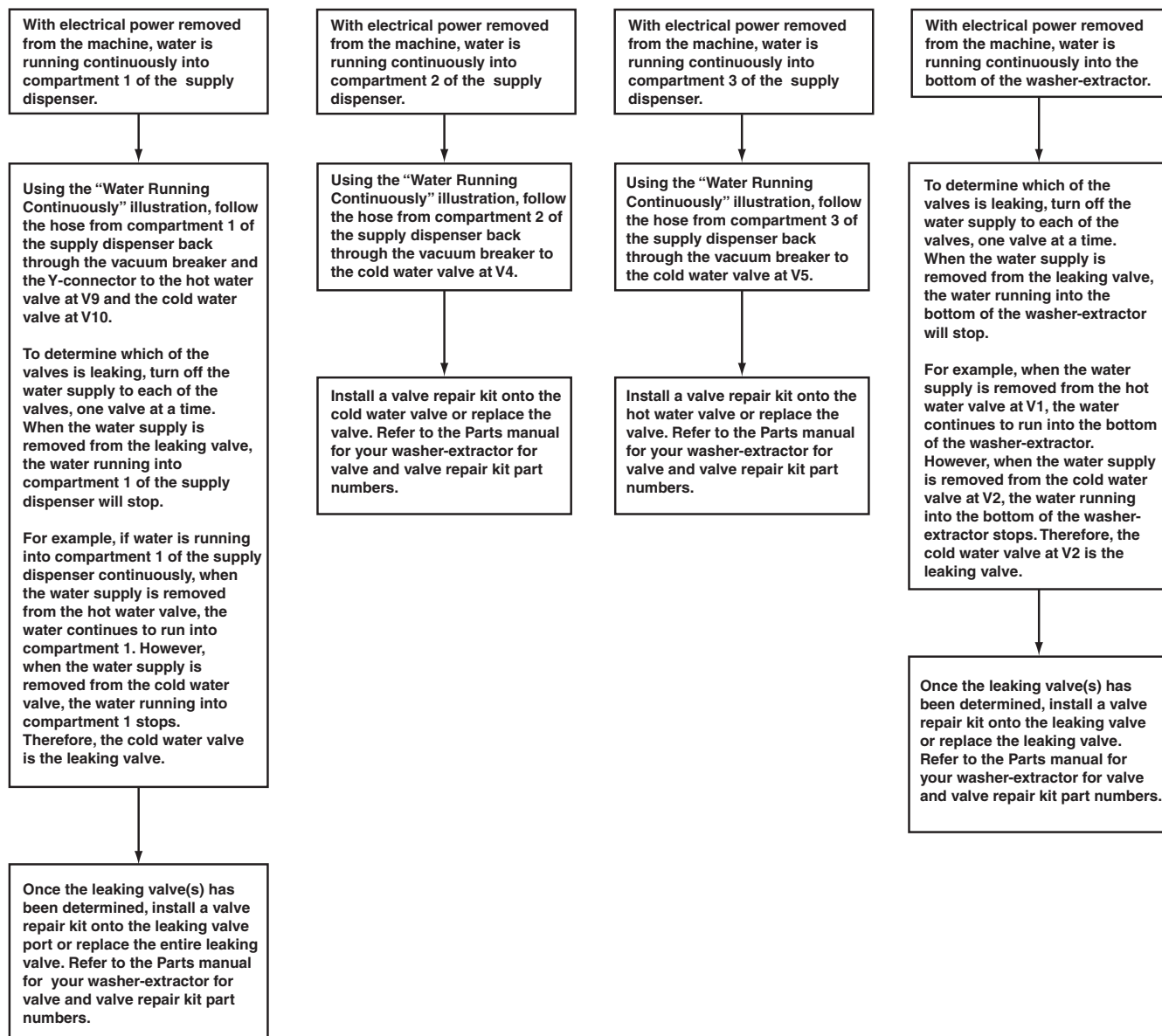


ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME.

- KM1 – WASH CONTACTOR
- KM2 – SPIN CONTACTOR
- KM3 – OPTIONAL HEAT CONTACTOR
- KA1 – TIME DELAY DISCONNECT RELAY
- KA2 – DOOR UNLOCK TIME DELAY
- KA3 – STEAM HEAT RELAY
- KA4 – DOOR SAFETY RELAY
- SQ1 – MAGNETIC DOOR POSITION SENSOR
- ST2 – CURRENT OVERLOAD RELAY (10)
- YV1 – HOT FILL VALVE
- YV2 – COLD FILL VALVE
- YV4 – SUPPLY 2 VALVE (BLEACH)
- YV5 – SUPPLY 3 VALVE (SOFTENER)
- YV6 – OPTIONAL STEAM HEAT VALVE
- YV9 – SUPPLY 1 HOT FLUSH VALVE
- YV10 – SUPPLY 1 COLD FLUSH VALVE
- M1 – DRAIN VALVE MOTOR
- M2 – TIMER PROGRAM MOTOR
- M3 – TIMER REVERSING MOTOR
- M4 – OPTIONAL MOTOR FAN *C50 10

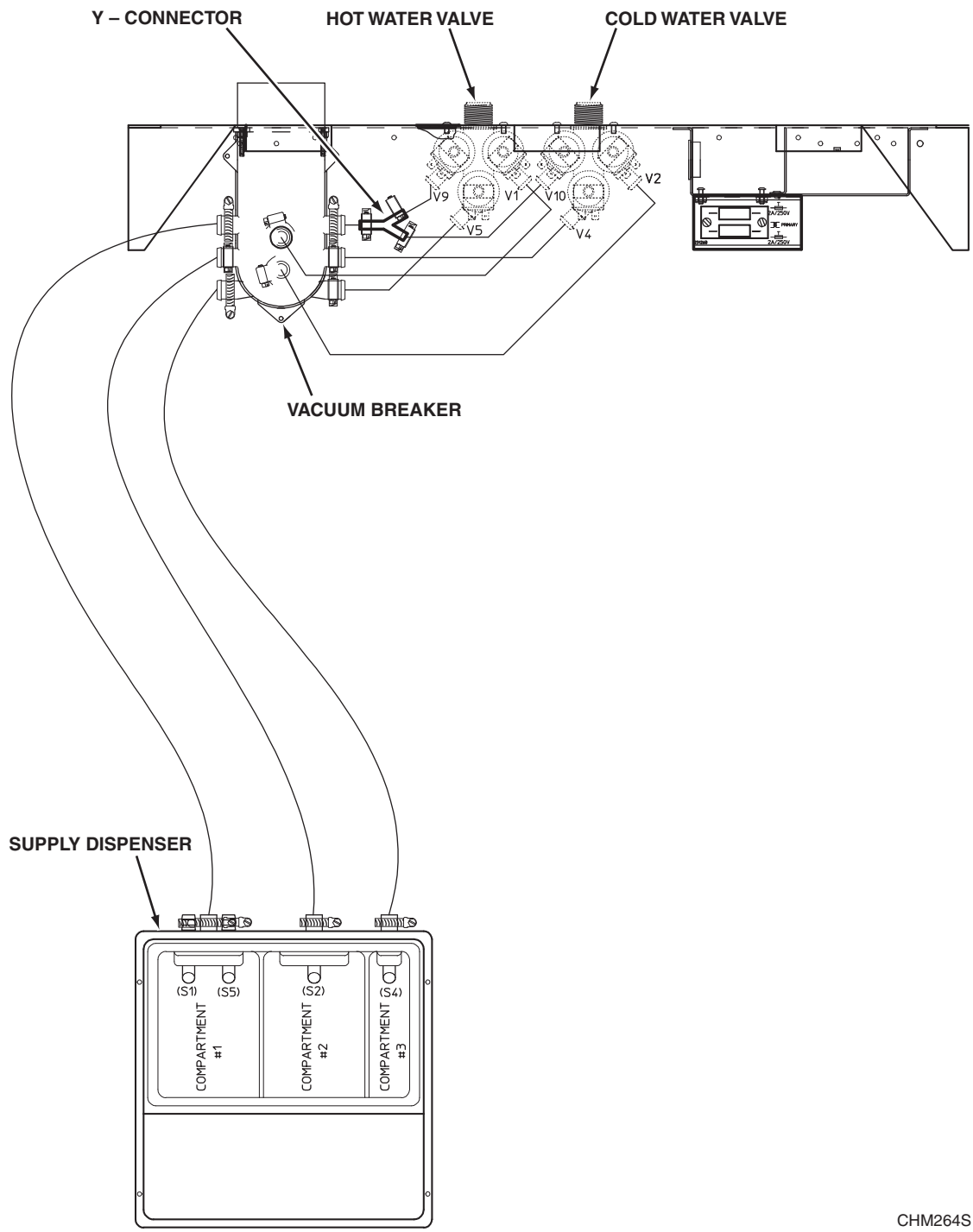
CHM326S
0634311(I)

19. Water Running Continuously with Machine Power Off



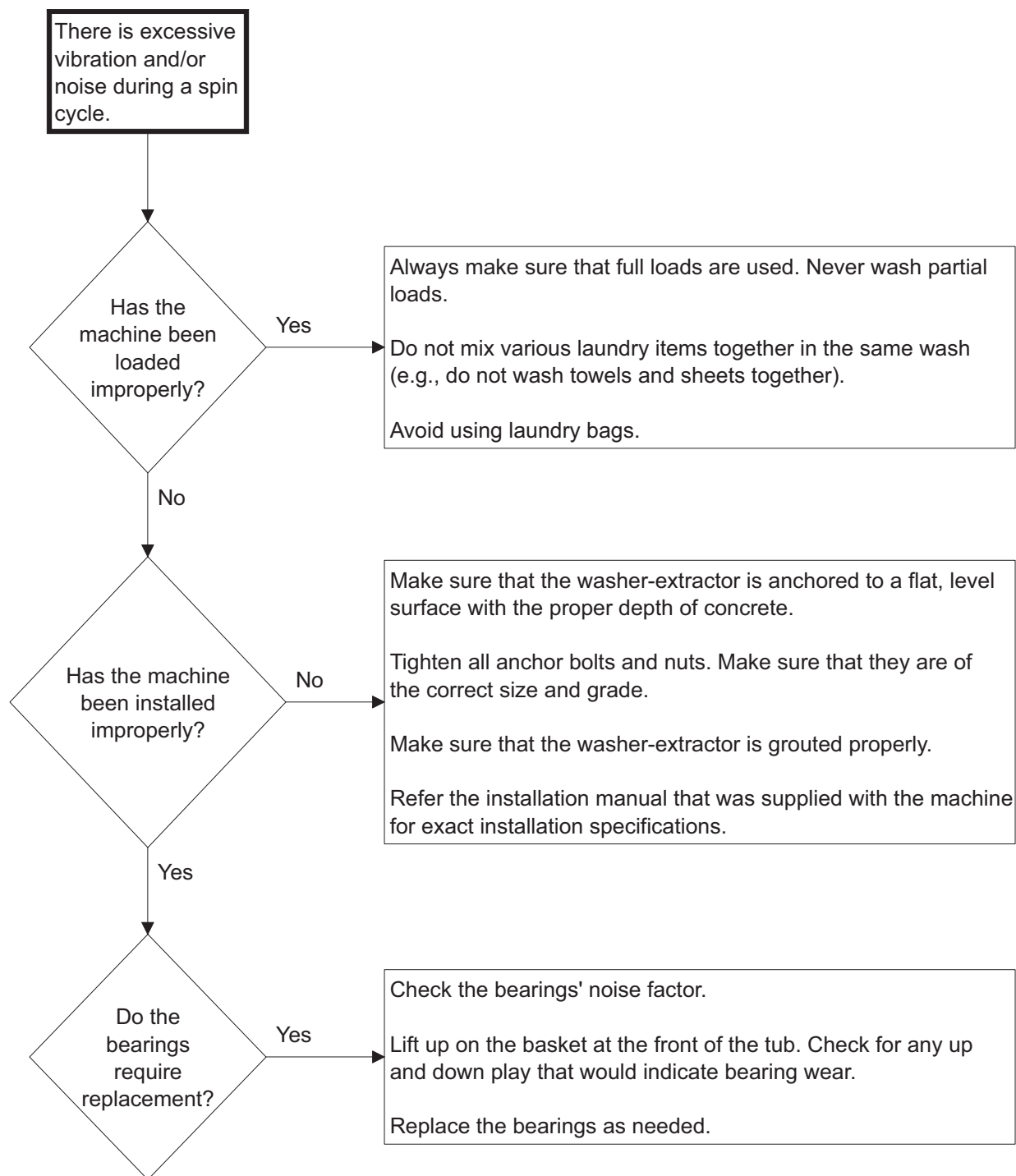
CHM263S

Water Running Continuously Illustration



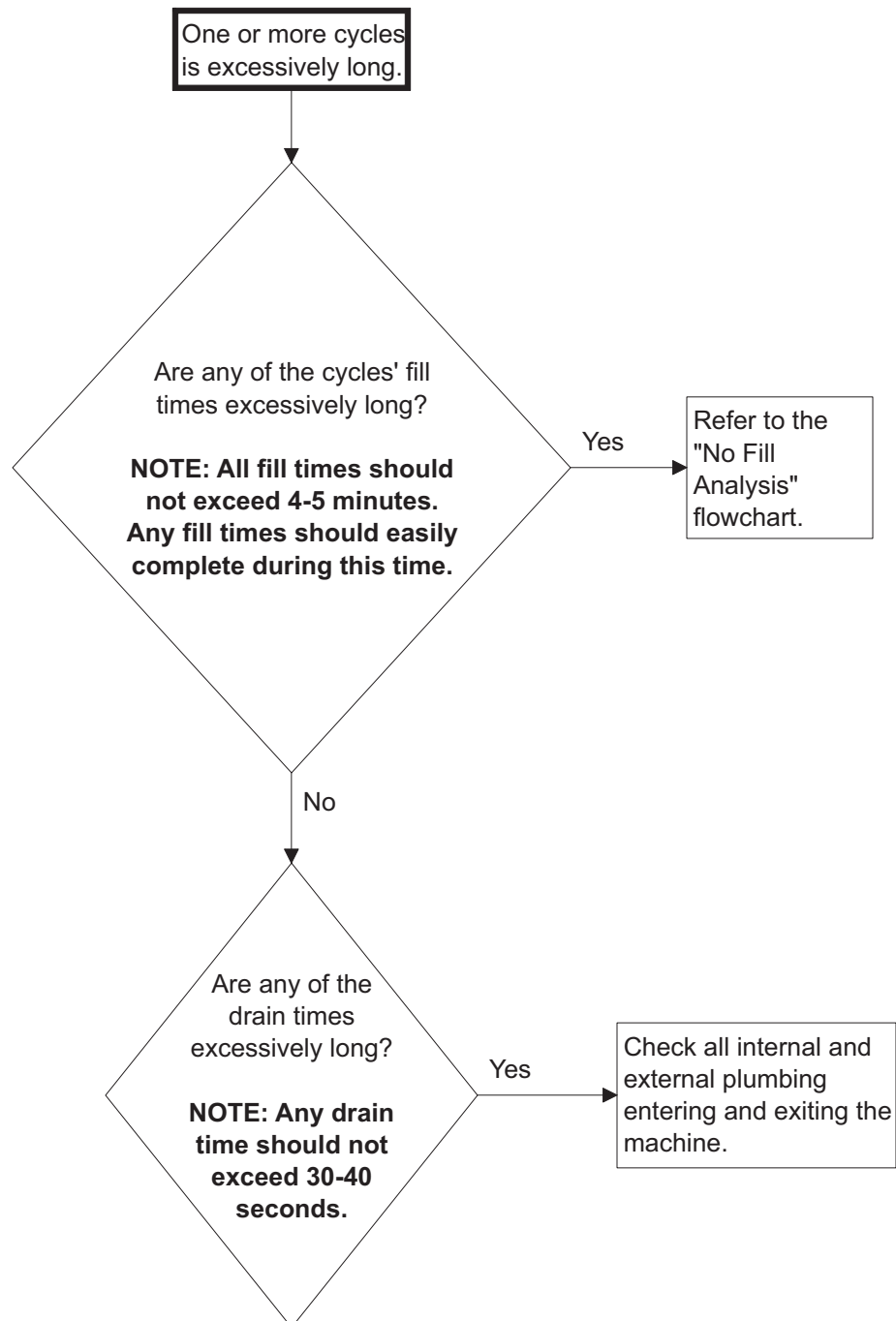
CHM264S
0635860(G)

20. Excessive Vibration and/or Noise During Spin



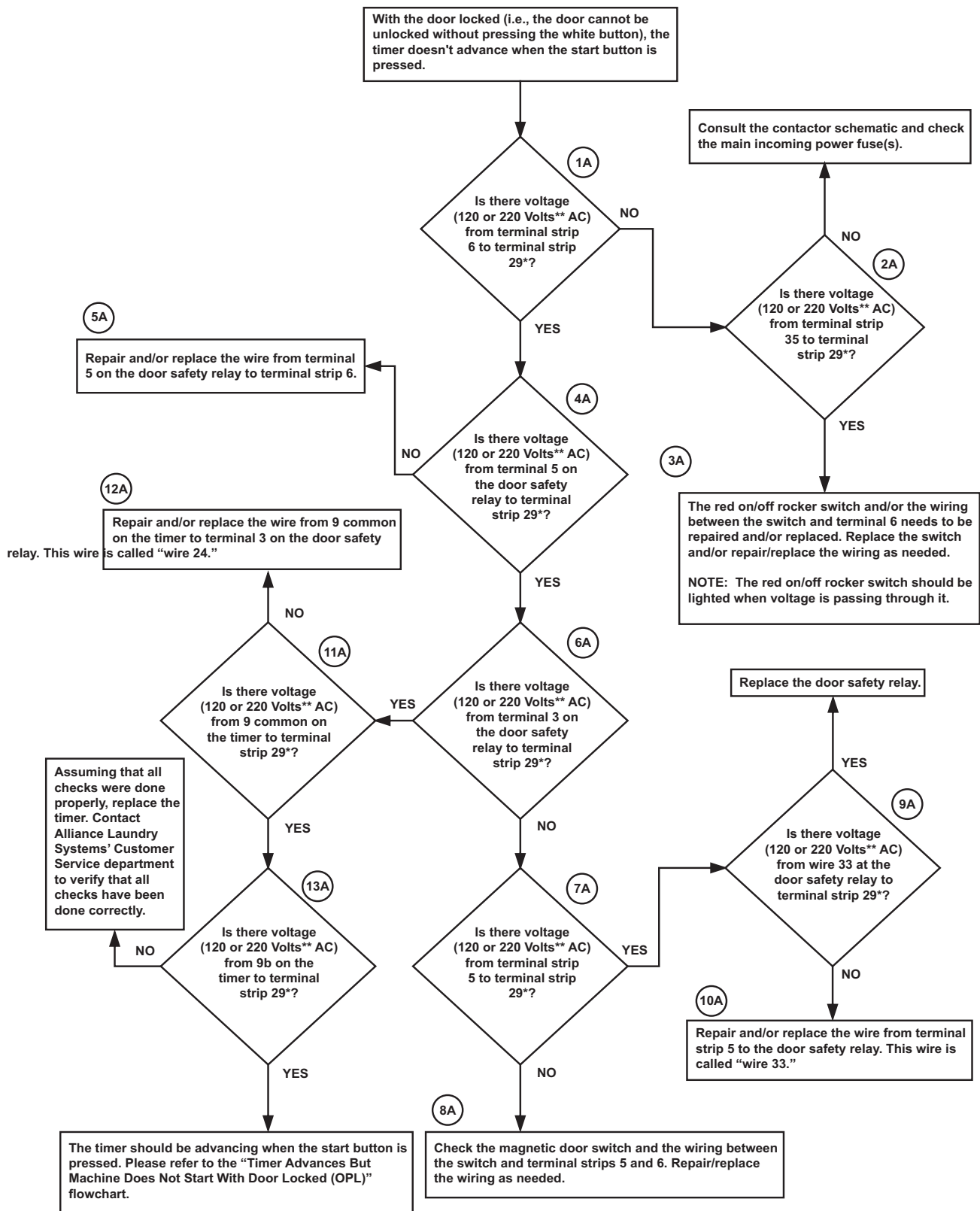
CHM431S

21. Excessive Cycle Time



CHM432S

22. Machine Timer Won't Advance with Door Locked (OPL)



*Note: All voltage readings should be taken from terminal 29 as a neutral point.

**Note: All voltage readings are approximate.

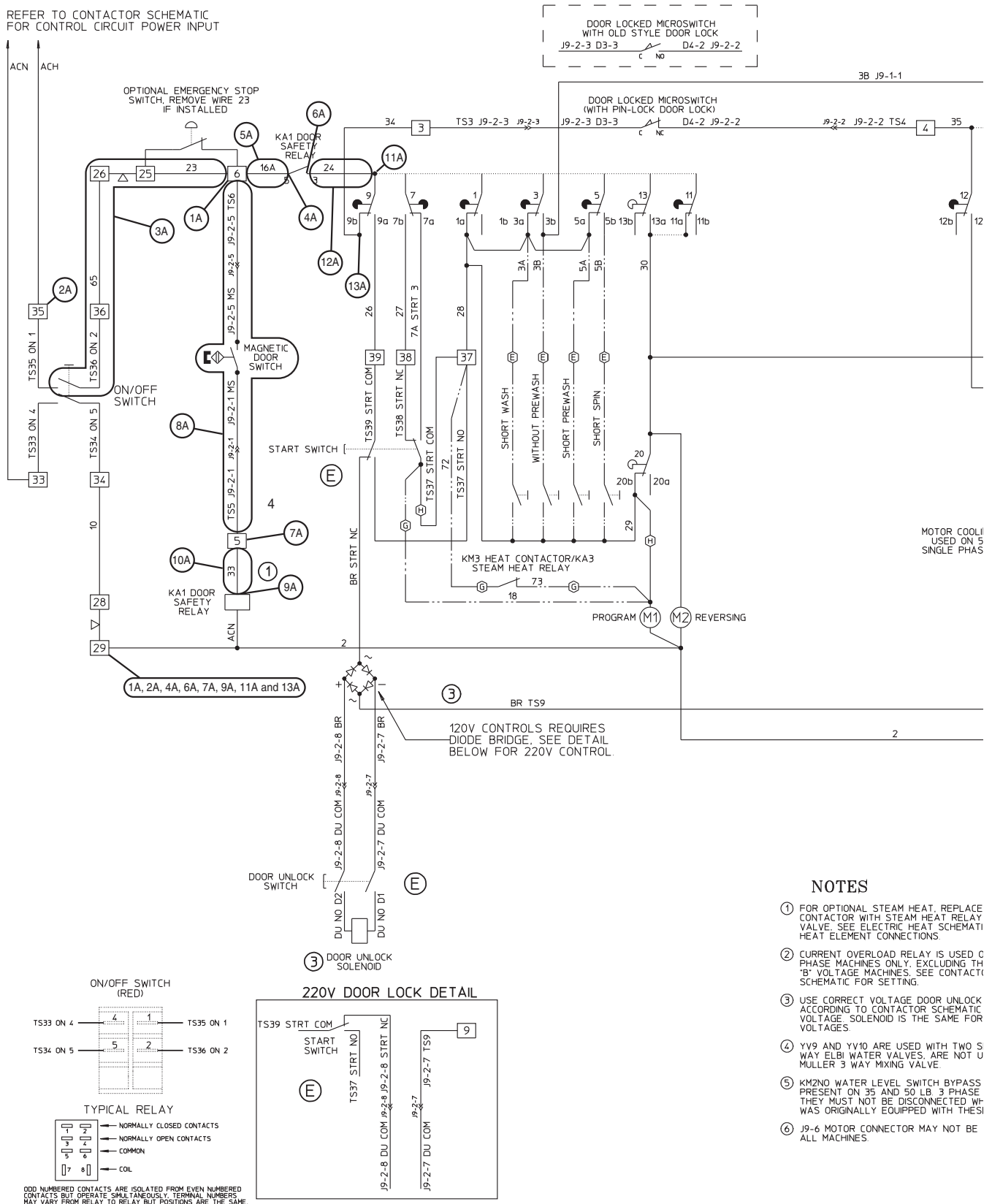
CHM531S

Please refer to the following 2 pages for wiring diagram information.

Troubleshooting

Machine Timer Won't Advance with Door Locked (OPL) (Sheet 1 of 2)

REFER TO CONTACTOR SCHEMATIC
FOR CONTROL CIRCUIT POWER INPUT



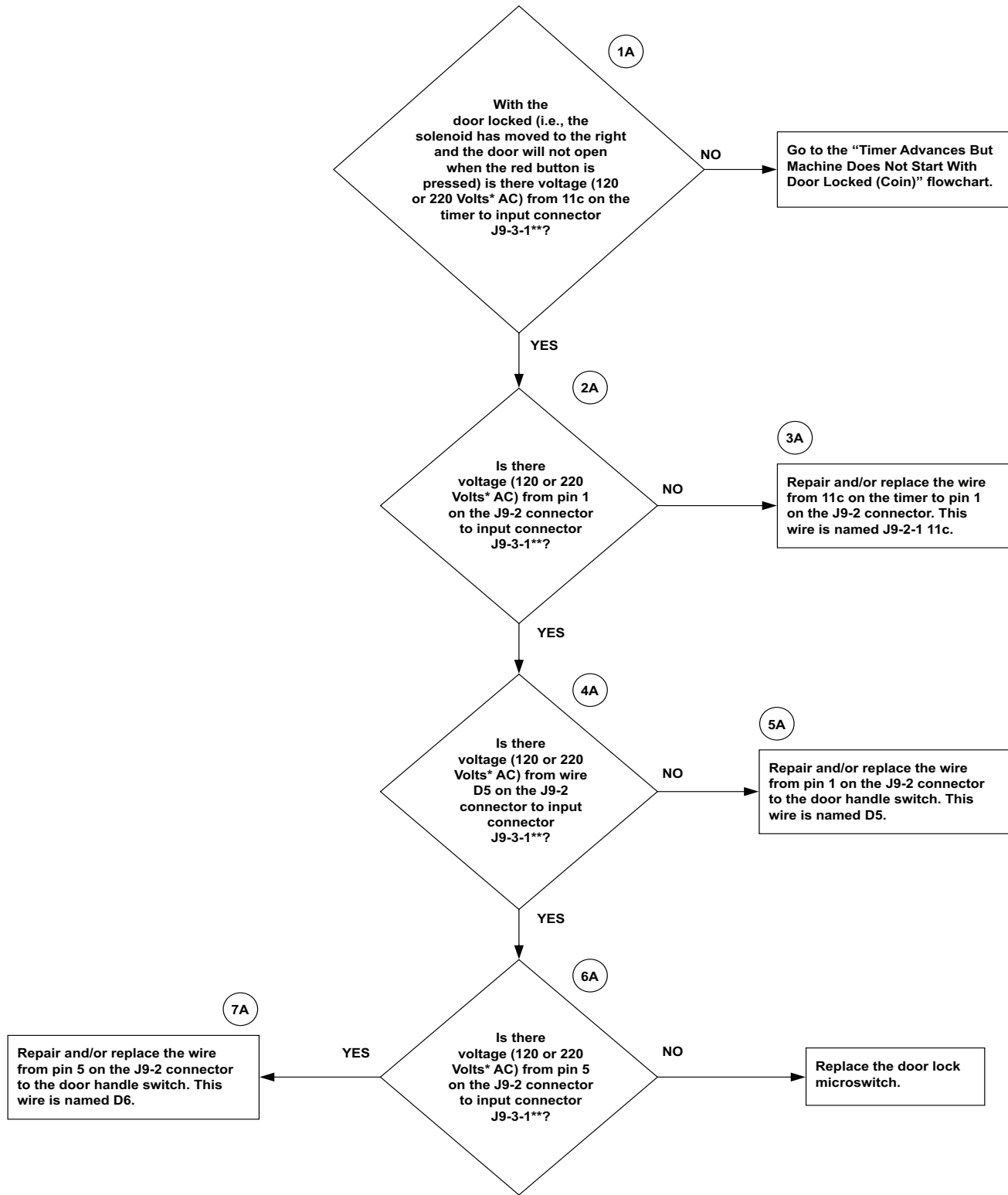
NOTES

- FOR OPTIONAL STEAM HEAT, REPLACE CONTACTOR WITH STEAM HEAT RELAY VALVE. SEE ELECTRIC HEAT SCHEMATIC HEAT ELEMENT CONNECTIONS
- CURRENT OVERLOAD RELAY IS USED C PHASE MACHINES ONLY. EXCLUDING TH "B" VOLTAGE MACHINES. SEE CONTACTOR SCHEMATIC FOR SETTING.
- USE CORRECT VOLTAGE DOOR UNLOCK ACCORDING TO CONTACTOR SCHEMATIC VOLTAGE. SOLENOID IS THE SAME FOR VOLTAGES.
- YV9 AND YV10 ARE USED WITH TWO S WAY ELBI WATER VALVES. ARE NOT U MULLER 3 WAY MIXING VALVE.
- KM2NO WATER LEVEL SWITCH BYPASS PRESENT ON 35 AND 50 LB. 3 PHASE. THEY MUST NOT BE DISCONNECTED W/ WAS ORIGINALLY EQUIPPED WITH THESE.
- J9-6 MOTOR CONNECTOR MAY NOT BE ALL MACHINES.

NOTE: Refer to the wiring diagram supplied with your machine.



23. Machine Timer Won't Advance with Door Locked (Coin)



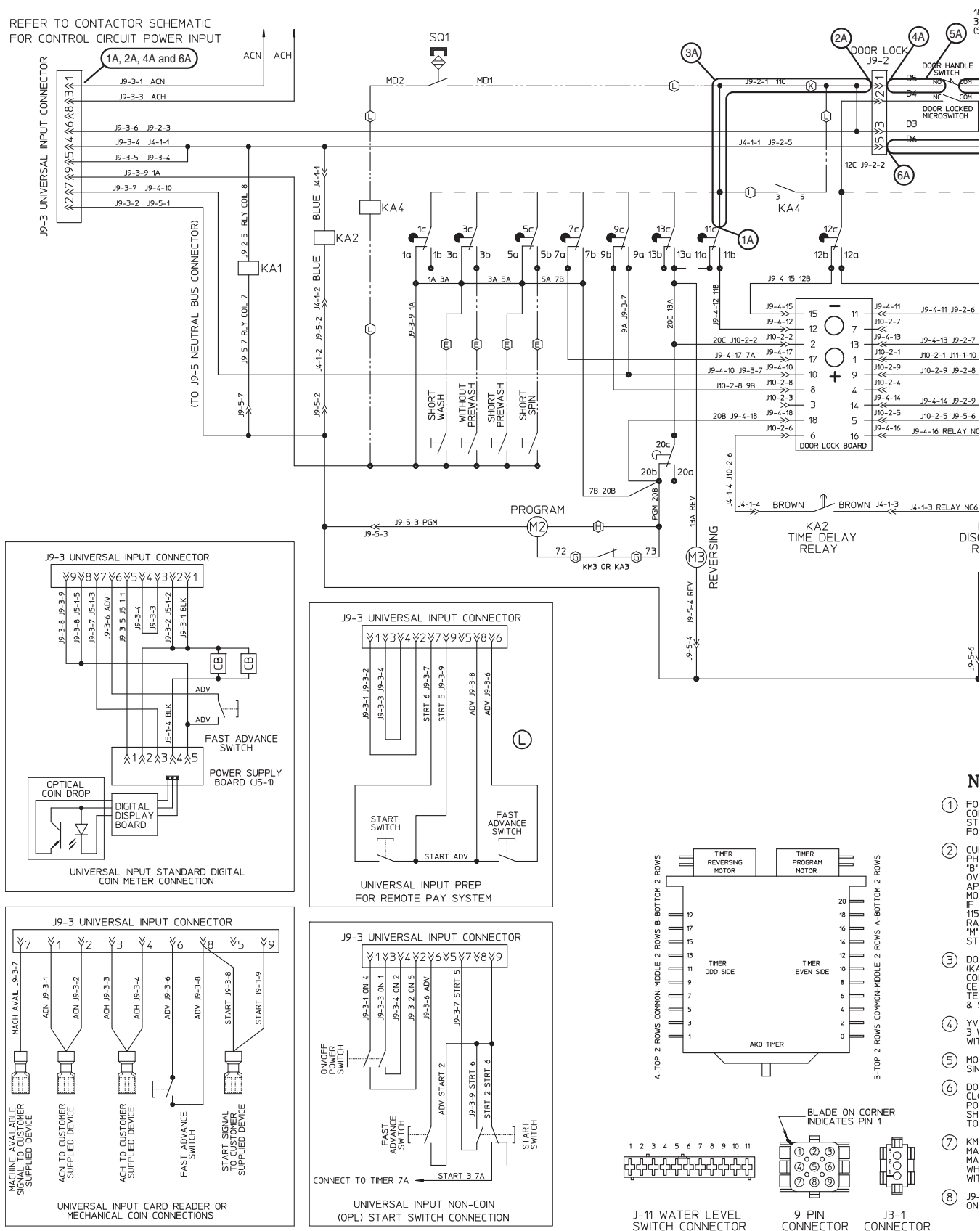
*Note: All voltage readings are approximate.

** Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

CHM532S

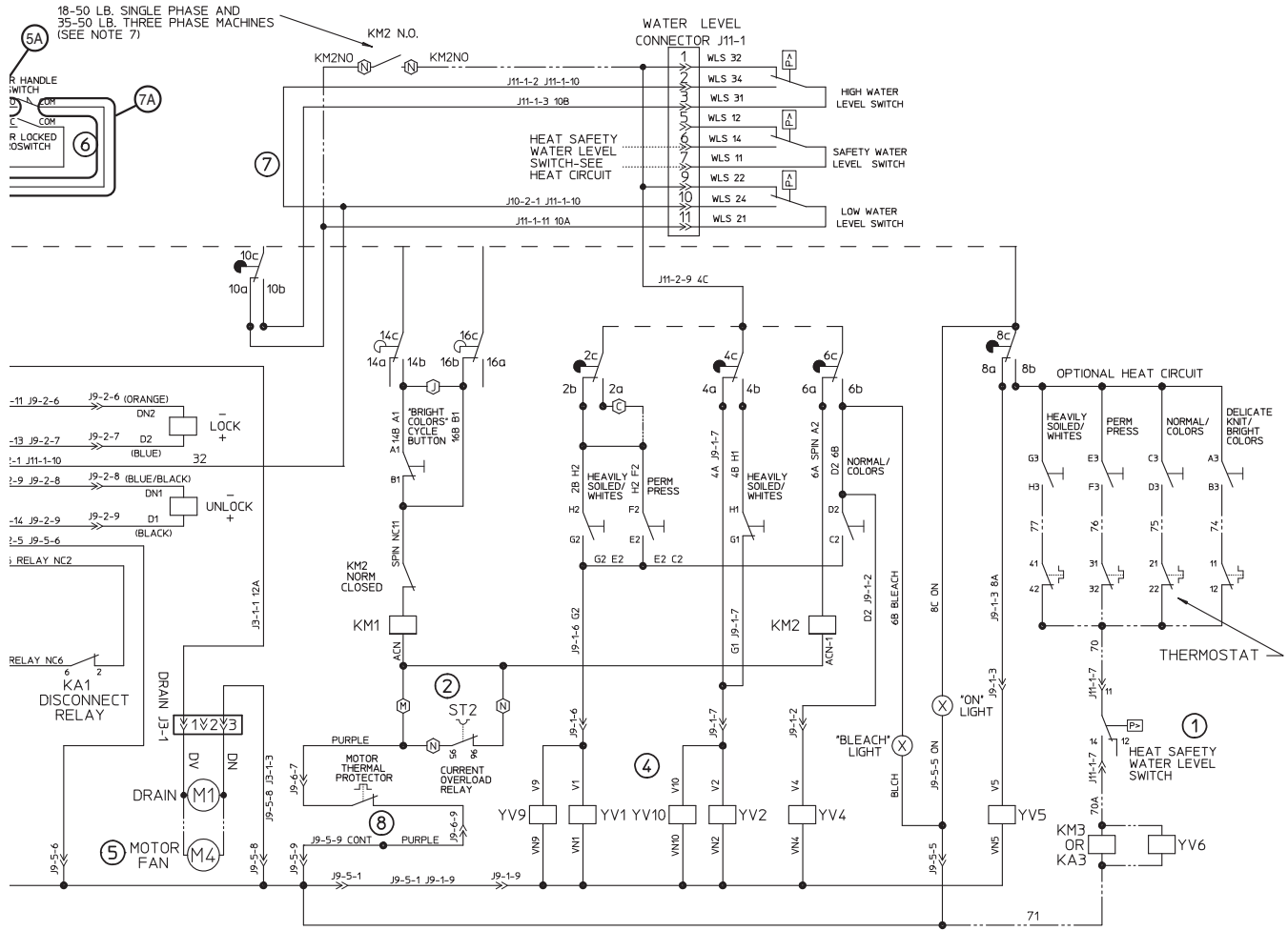
Please refer to the following 2 pages for wiring diagram information.

Machine Timer Won't Advance with Door Locked (Coin) (Sheet 1 of 2)



F232202R4

Machine Timer Won't Advance with Door Locked (Coin) (Sheet 2 of 2)



NOTES

- ① FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- ② CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 18 LB. "B" AND "E" VOLTAGE MACHINES. ST2 CURRENT OVERLOAD RELAY MUST BE SET TO "TRIP" AT APPROPRIATE CURRENT. SET DIAL TO MOTOR NAMEPLATE FULL LOAD CURRENT RATING. IF MOTOR HAS SERVICE FACTOR OF LESS THAN 115, SET DIAL TO 90% OF FULL LOAD CURRENT RATING. ALSO SET OPERATING MODE DIAL TO "M" (MANUAL RESET) TO PREVENT ACCIDENTAL STARTING OF MOTOR.
- ③ DOOR MAGNETIC SWITCH (S01) AND SAFETY RELAY (K02) USED ON "CE" OPTION MACHINES ONLY. CONNECT WIRE "D6" TO DOOR SAFETY RELAY FOR CE UNITS. OTHERWISE CONNECT WIRE D6 TO TERMINAL STRIP TERM #6 WHEN MAGNETIC SWITCH & SAFETY RELAY ARE NOT USED.
- ④ Y99 AND YV10 ARE USED WITH TWO SEPARATE 3 WAY ELBI WATER VALVES, ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- ⑤ MOTOR COOLING FAN IS ONLY USED ON 50LB. SINGLE PHASE MACHINES.
- ⑥ DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION ON OTHER SWITCHES AND DEVICES. ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- ⑦ KY2NO WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 35 AND 50 LB 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN MACHINE WAS ORIGINALLY EQUIPPED WITH THESE WIRES.
- ⑧ J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.

LEGEND

- Ⓢ CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- Ⓢ NOT FACTORY INSTALLED
- Ⓢ ADD CONNECTION FOR HEAT
- Ⓢ REMOVE CONNECTION FOR HEAT
- Ⓢ REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- Ⓢ REMOVE CONNECTION FOR CE MARK OPTION
- Ⓢ ADD CONNECTION FOR CE MARK OPTION
- Ⓢ CONNECTION FOR 3 PHASE MACHINES
- Ⓢ CONNECTION FOR SINGLE PHASE MACHINES

J9-5-1 CONNECTOR/PIN NUMBER
→ J9-5(CONNECTOR #)-1(PIN #)

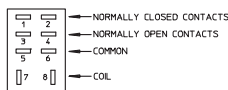
REVERSING TIMER CONTACTS FOR WASH AGITATION

PROGRAM TIMER CONTACTS

— — — — CONNECTIONS INTERNAL TO DEVICE

OPTIONAL CONNECTIONS

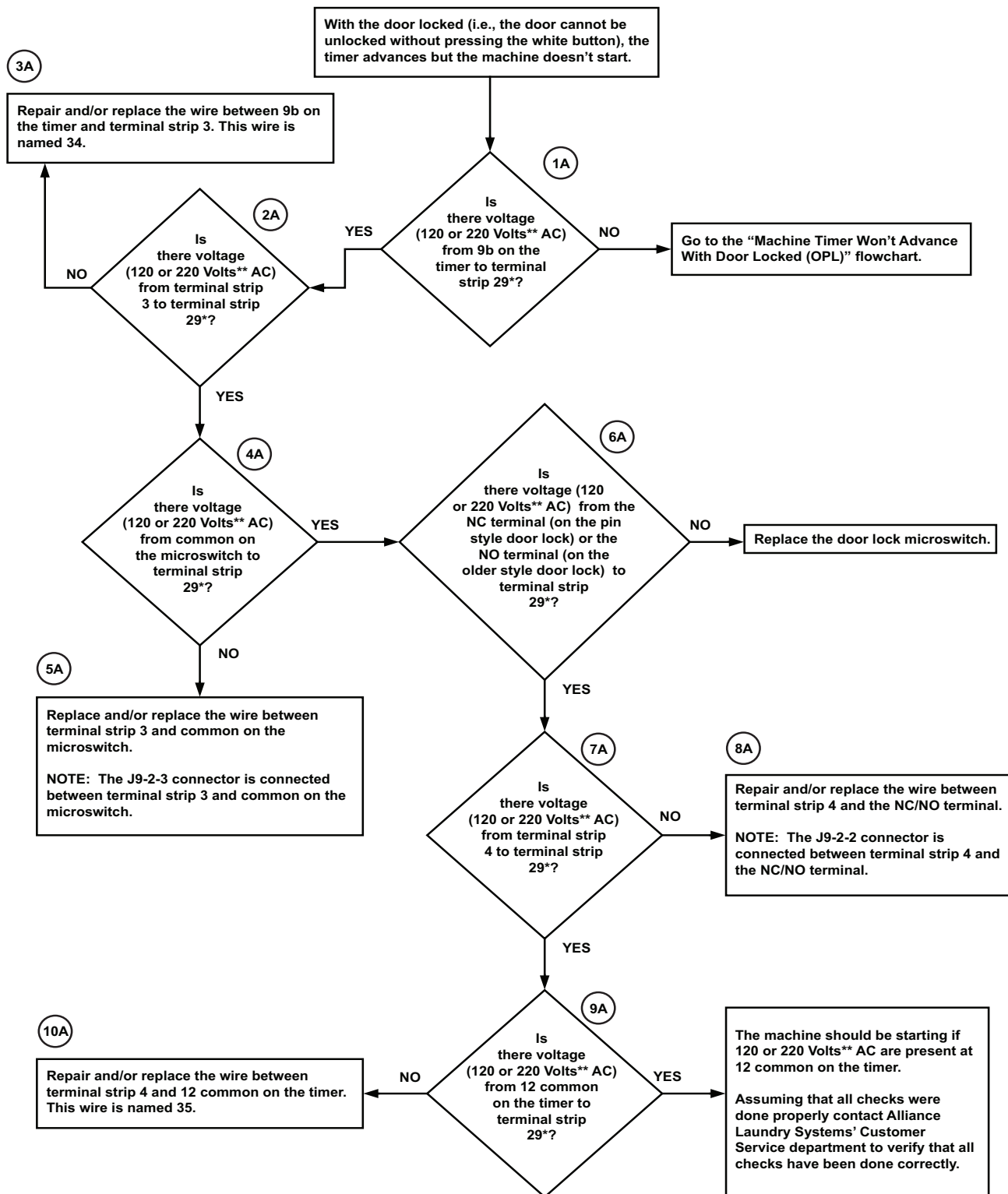
TYPICAL RELAY



ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME.

- KM1 - WASH CONTACTOR
 KM2 - SPIN CONTACTOR
 KM3 - OPTIONAL HEAT CONTACTOR
 KA1 - TIME DELAY DISCONNECT RELAY
 KA2 - DOOR UNLOCK TIME DELAY
 KA3 - STEAM HEAT RELAY
 KA4 - DOOR SAFETY RELAY
 SQ1 - MAGNETIC DOOR POSITION SENSOR
 ST2 - CURRENT OVERLOAD RELAY (10)
 YV1 - HOT FILL VALVE
 YV2 - COLD FILL VALVE
 YV4 - SUPPLY 2 VALVE (BLEACH)
 YV5 - SUPPLY 3 VALVE (SOFTENER)
 YV6 - OPTIONAL STEAM HEAT VALVE
 YV9 - SUPPLY 1 HOT FLUSH VALVE
 YV10- SUPPLY 1 COLD FLUSH VALVE
 M1 - DRAIN VALVE MOTOR
 M2 - TIMER PROGRAM MOTOR
 M3 - TIMER REVERSING MOTOR
 M4 - OPTIONAL MOTOR FAN *C50 10

24. Timer Advances But Machine Does Not Start with Door Locked (OPL)



*Note: All voltage readings should be taken from terminal 29 as a neutral point.

**Note: All voltage readings are approximate.

CHM533S

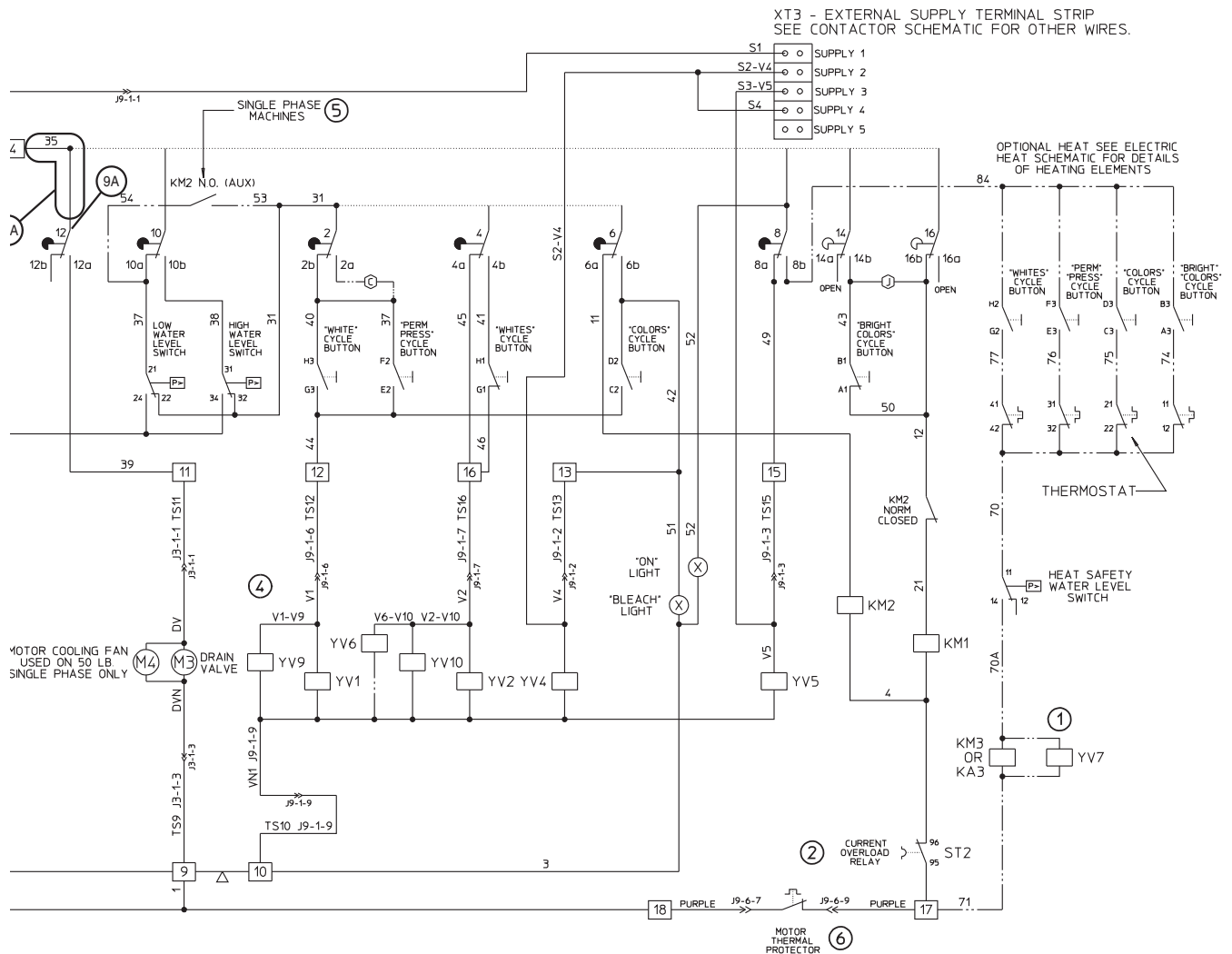
Please refer to the following 2 pages for wiring diagram information.

Timer Advances But Machine Does Not Start with Door Locked (OPL)

(Sheet 1 of 2)



Timer Advances But Machine Does Not Start with Door Locked (OPL) (Sheet 2 of 2)



AT, REPLACE HEAT
HEAT RELAY AND STEAM
AT SCHEMATIC FOR
DMS.

Y IS USED ON SINGLE
XCLUDING THE 20 LB.
EE CONTACTOR

DOOR UNLOCK CONFIGURATION
SCHEMATIC CONTROL
E SAME FOR BOTH

WITH TWO SEPARATE 3
ARE NOT USED WITH
VE.

TCH BYPASS WIRES MAY BE
B 3 PHASE MACHINES.
NNECTED WHEN MACHINE
O WITH THESE WIRES.

YAY NOT BE PRESENT ON

LEGEND

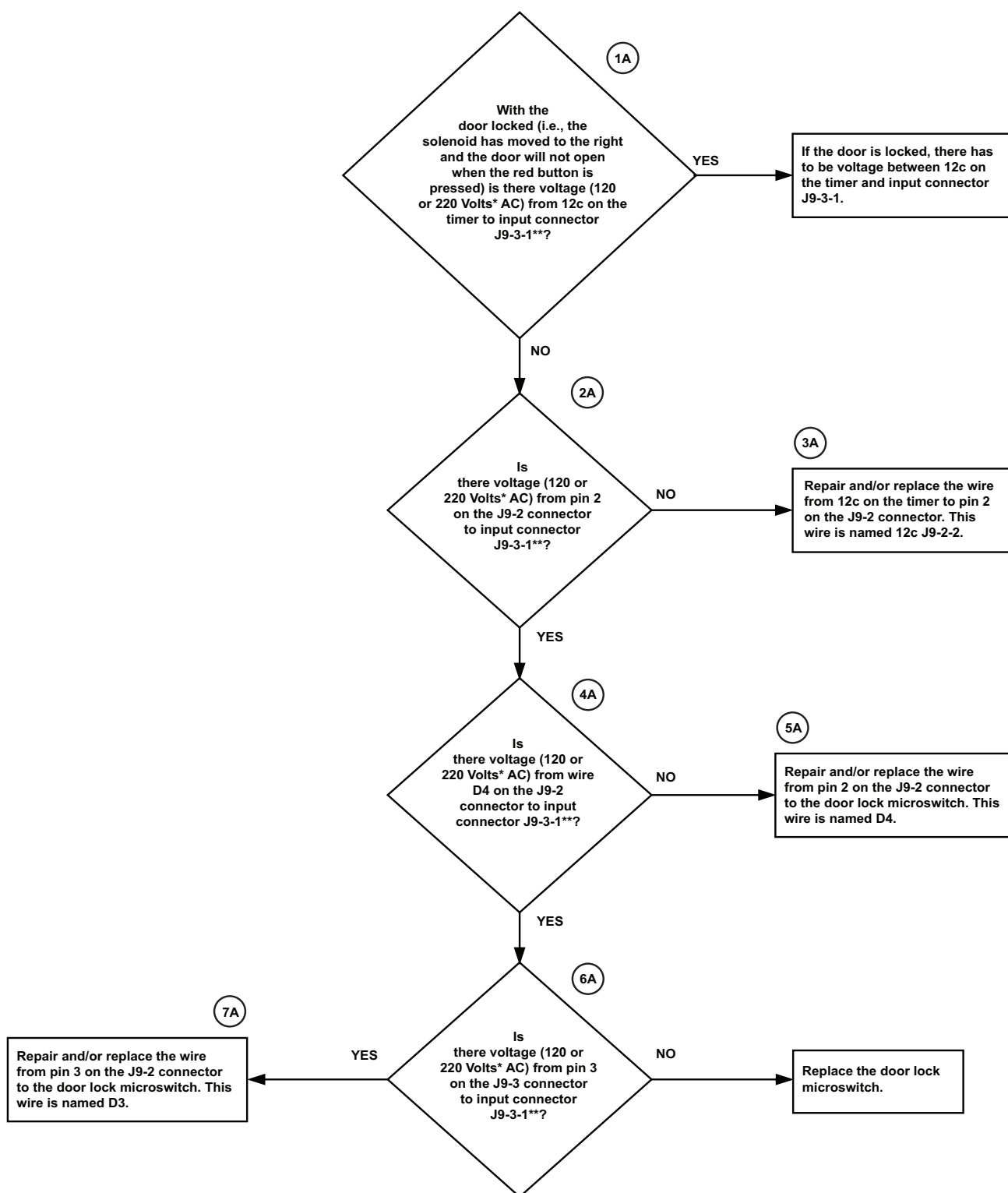
- ① CONN FOR WARM WATER RINSES (HOT & WARM CYCLES)
- ② NOT FACTORY INSTALLED
- ③ ADD CONNECTION FOR HEAT
- ④ REMOVE CONNECTION FOR HEAT
- ⑤ REMOVE CONNECTION FOR GENTLE AGITATION IN BRIGHT COLORS CYCLE
- ⑥ TERMINAL STRIP JUMPER
- ⑦ TERMINAL STRIP CONNECTION
- ⑧ REVERSING TIMER CONTACTS FOR WASH AGITATION
- ⑨ PROGRAM TIMER CONTACTS

- CONNECTIONS INTERNAL TO DEVICE
- OPTIONAL CONNECTIONS
- [RC] RESISTOR/CAPACITOR NETWORK

- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL ELECTRIC HEAT CONTACTOR
- KA1 - DOOR SAFETY RELAY
- KA3 - STEAM RELAY
- M1 - TIMER PROGRAM MOTOR
- M2 - TIMER REVERSING MOTOR
- M3 - DRAIN VALVE MOTOR
- M4 - OPTIONAL MOTOR FAN
- ST2 - MOTOR CURRENT OVERLOAD RELAY
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2(BLEACH) VALVE
- YV5 - SUPPLY 3(SOFTENER) VALVE
- YV6 - OPTIONAL 3RD SUPPLY INLET VALVE
- YV7 - OPTIONAL STEAM VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10 - SUPPLY 1 COLD FLUSH VALVE
- XT3 - EXTERNAL SUPPLY TERMINAL STRIP

CHM288S
0635913(E)

25. Timer Advances But Machine Does Not Start with Door Locked (Coin)



*Note: All voltage readings are approximate.

** Note: All voltage readings should be taken from input connector J9-3-1 as a neutral point.

CHM534S

Please refer to the following 2 pages for wiring diagram information.

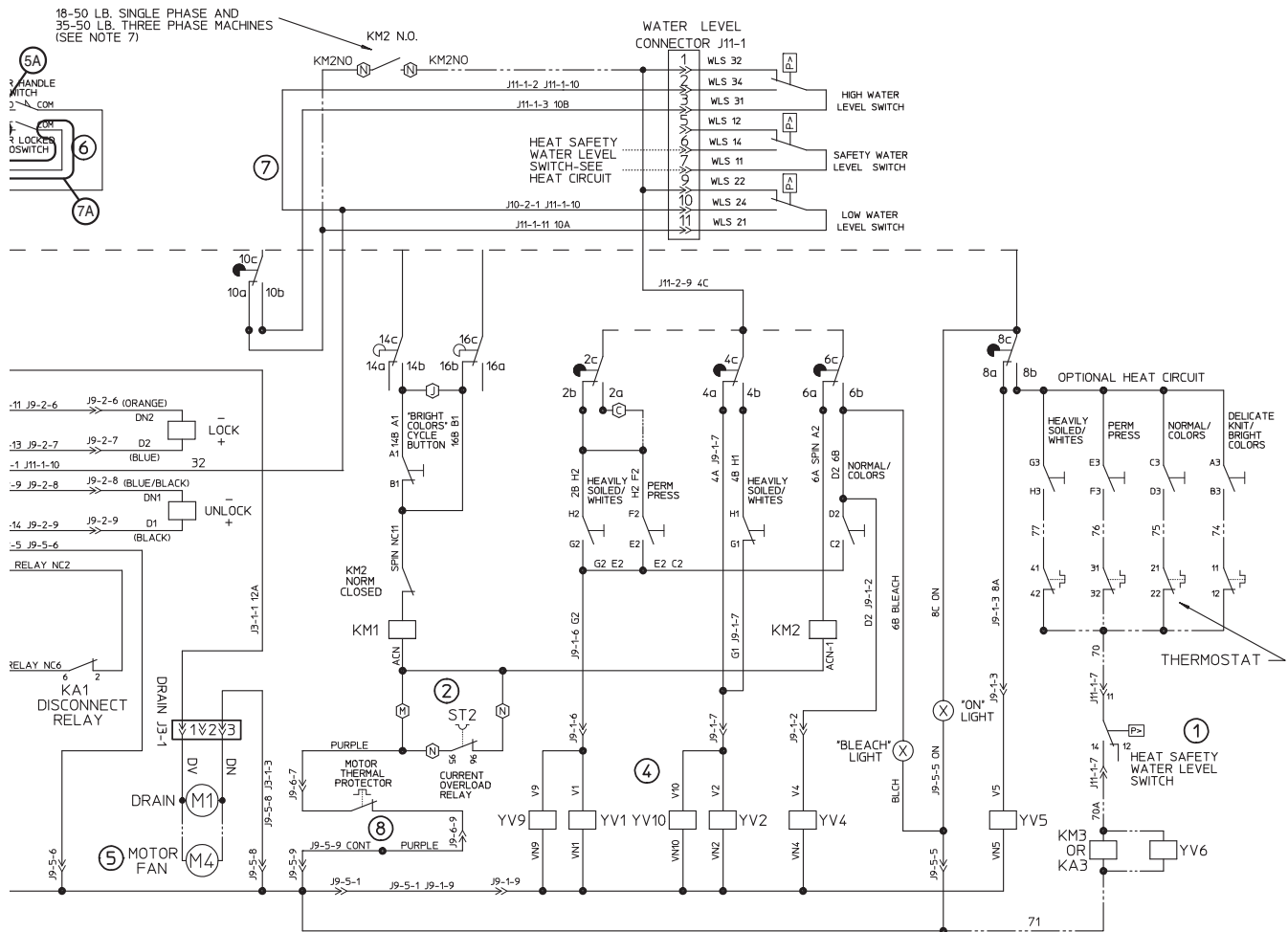
Timer Advances But Machine Does Not Start with Door Locked (Coin)

(Sheet 1 of 2)



F232202R4

Timer Advances But Machine Does Not Start with Door Locked (Coin) (Sheet 2 of 2)



NOTES

- FOR OPTIONAL STEAM HEAT, REPLACE HEAT CONTACTOR WITH STEAM HEAT RELAY AND STEAM VALVE. SEE ELECTRIC HEAT SCHEMATIC FOR HEAT ELEMENT CONNECTIONS.
- CURRENT OVERLOAD RELAY IS USED ON SINGLE PHASE MACHINES ONLY, EXCLUDING THE 18 LB. "B" AND "E" VOLTAGE MACHINES. ST2 CURRENT OVERLOAD RELAY MUST BE SET TO "TRIP" AT APPROPRIATE CURRENT LOAD. SET DIAL TO MOTOR NAMEPLATE FULL LOAD CURRENT RATING. IF MOTOR HAS SERVICE FACTOR OF LESS THAN 115, SET DIAL TO 90% OF FULL LOAD CURRENT RATING. ALSO SET OPERATING MODE DIAL TO "M" (MANUAL RESET) TO PREVENT ACCIDENTAL STARTING OF MOTOR.
- DOOR MAGNETIC SWITCH (SO1) AND SAFETY RELAY (KA4) USED ON "CE" OPTION MACHINES ONLY. CONNECT WIRE "D6" TO DOOR SAFETY RELAY FOR CE UNITS. OTHERWISE CONNECT WIRE D6 TO TERMINAL STRIP TERM #6 WHEN MAGNETIC SWITCH & SAFETY RELAY ARE NOT USED.
- YV9 AND YV10 ARE USED WITH TWO SEPARATE 3 WAY ELBI WATER VALVES. ARE NOT USED WITH MULLER 3 WAY MIXING VALVE.
- MOTOR COOLING FAN IS ONLY USED ON 50LB. SINGLE PHASE MACHINES.
- DOOR LOCKED SWITCH IS WIRED TO NORMALLY CLOSED CONTACT, BUT IS SHOWN IN UNLOCKED POSITION. OTHER SWITCHES AND DEVICES ARE SHOWN IN DOOR OPEN POSITION WITH NO POWER TO MACHINE.
- KM2NO WATER LEVEL SWITCH BYPASS WIRES MAY BE PRESENT ON 35 AND 50 LB. 3 PHASE MACHINES. THEY MUST NOT BE DISCONNECTED WHEN MACHINE WAS ORIGINALLY EQUIPPED WITH THESE WIRES.
- J9-6 MOTOR CONNECTOR MAY NOT BE PRESENT ON ALL MACHINES.

LEGEND

- CONN. FOR WARM WATER RINSES (HOT & WARM CYCLES)
- NOT FACTORY INSTALLED
- ADD CONNECTION FOR HEAT
- REMOVE CONNECTION FOR HEAT
- REMOVE CONNECTION FOR GENTLE AGITATION IN DELICATE CYCLE
- REMOVE CONNECTION FOR CE MARK OPTION
- ADD CONNECTION FOR CE MARK OPTION
- CONNECTION FOR 3 PHASE MACHINES
- CONNECTION FOR SINGLE PHASE MACHINES

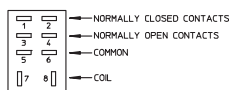
J9-5-1 CONNECTOR/PIN NUMBER
J9-5(CONNECTOR #)-1(PIN #)

REVERSING TIMER CONTACTS FOR WASH AGITATION

PROGRAM TIMER CONTACTS

--- CONNECTIONS INTERNAL TO DEVICE
- - - - - OPTIONAL CONNECTIONS

TYPICAL RELAY



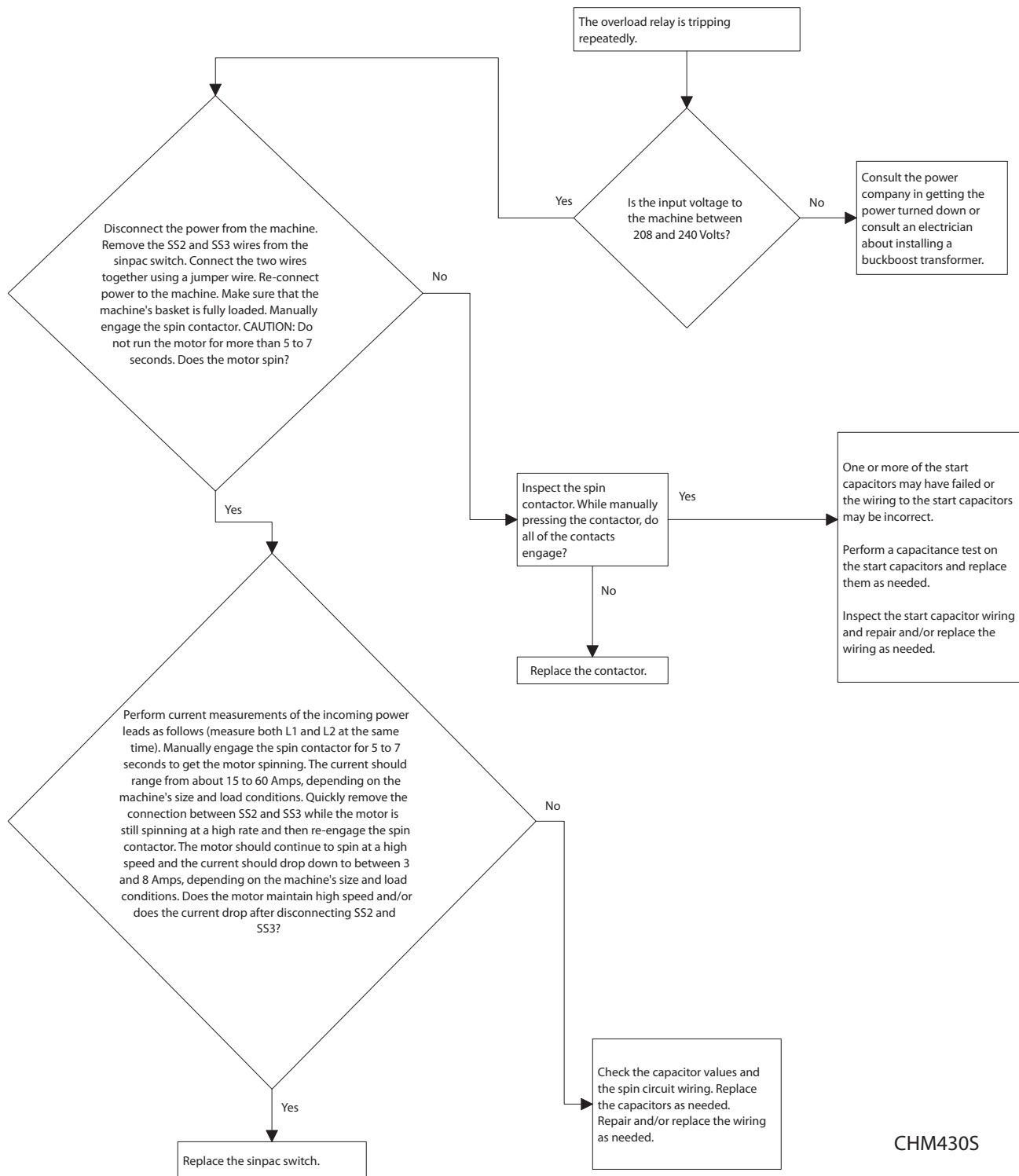
ODD NUMBERED CONTACTS ARE ISOLATED FROM EVEN NUMBERED CONTACTS BUT OPERATE SIMULTANEOUSLY. TERMINAL NUMBERS MAY VARY FROM RELAY TO RELAY BUT POSITIONS ARE THE SAME.

- KM1 - WASH CONTACTOR
- KM2 - SPIN CONTACTOR
- KM3 - OPTIONAL HEAT CONTACTOR
- KA1 - TIME DELAY DISCONNECT RELAY
- KA2 - DOOR UNLOCK TIME DELAY
- KA3 - STEAM HEAT RELAY
- KA4 - DOOR SAFETY RELAY
- SO1 - MAGNETIC DOOR POSITION SENSOR
- ST2 - CURRENT OVERLOAD RELAY (10)
- YV1 - HOT FILL VALVE
- YV2 - COLD FILL VALVE
- YV4 - SUPPLY 2 VALVE (BLEACH)
- YV5 - SUPPLY 3 VALVE (SOFTENER)
- YV6 - OPTIONAL STEAM HEAT VALVE
- YV9 - SUPPLY 1 HOT FLUSH VALVE
- YV10 - SUPPLY 1 COLD FLUSH VALVE
- M1 - DRAIN VALVE MOTOR
- M2 - TIMER PROGRAM MOTOR
- M3 - TIMER REVERSING MOTOR
- M4 - OPTIONAL MOTOR FAN #C50 10

CHM290S
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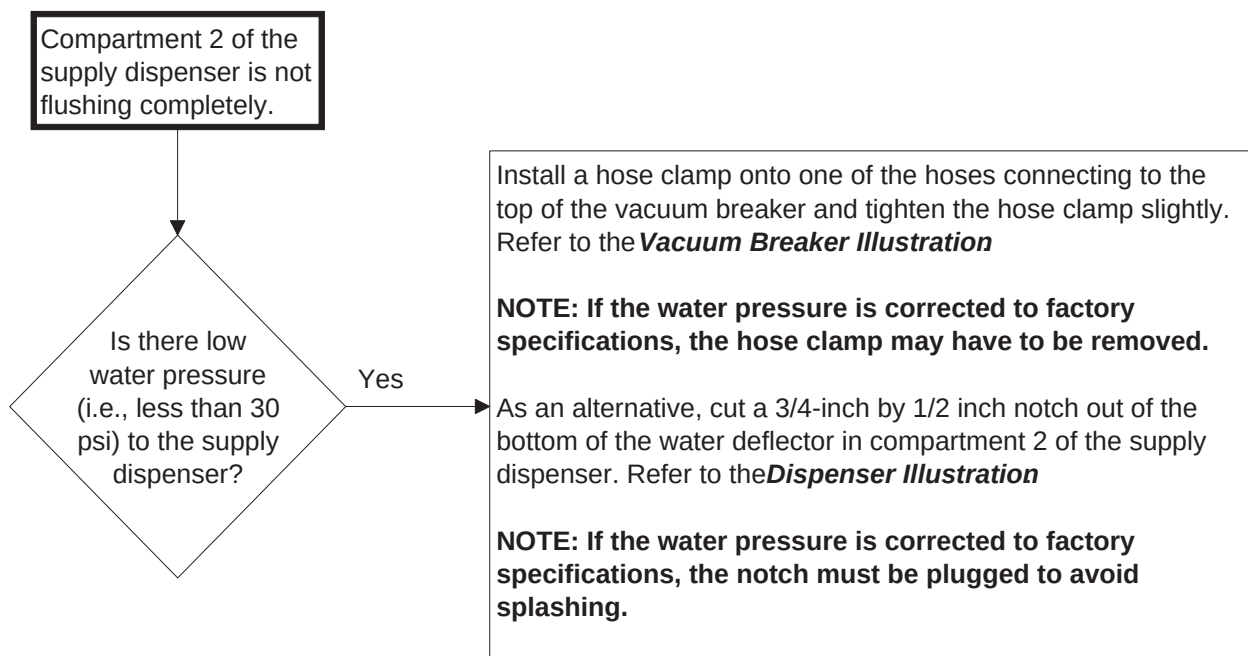
26. Overload Relay Tripping Repeatedly

Repeated overload tripping may result from a failed sinpac switch. Symptoms of a failed sinpac switch may include motor humming without rotation during spin or high current during running speed.



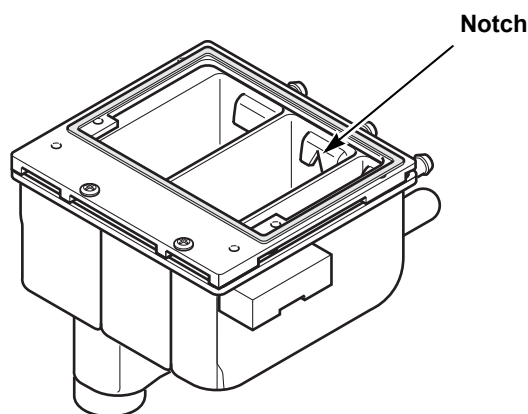
CHM430S

27. Compartment 2 of Supply Dispenser Not Flushing Completely



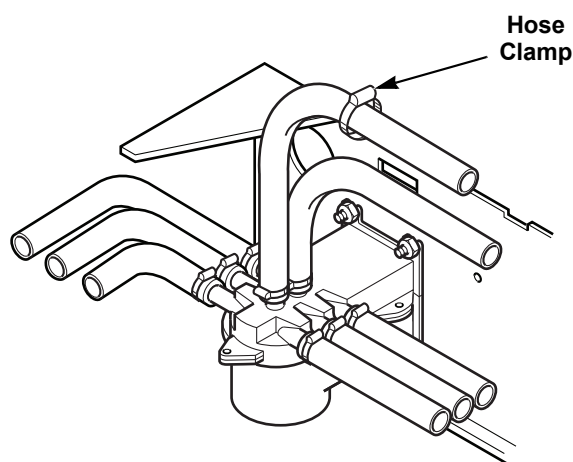
CHM443S

Dispenser Illustration



CHM366S

Vacuum Breaker Illustration



CHM441S

28. Troubleshooting and Cleaning the Coin Drop

When a coin is placed into coin slot, the coin should roll down drop and be heard dropping into coin vault. If coin does not fall into coin vault or if coin drop sensor does not register that coin has been entered, follow troubleshooting instructions below.

Troubleshooting Coin Drop

Is proper electrical power supplied to coin drop? Incorrect electrical connection may prevent coins from registering in coin drop. Refer to wiring diagram and service manual for proper connections.

Is machine level? Machines that are not level may prevent coins from following through required check stages of drop. Refer to Installation Instructions for instructions on leveling machine.

Is coin drop clean? Residue or lint build-up may prevent coins from following through required check stages of drop. Refer to *Cleaning Coin Drop* instructions below.

IMPORTANT: Never use oil to correct coin drop problems. Oil residue will prevent coins from rolling properly.

IMPORTANT: Do not bend or damage mechanical parts within coin drop.

Cleaning Coin Drop

The electronic coin drop should be cleaned once a year. Clean the drop more often if it is exposed to high levels of residue or lint build-up. Follow the instructions below for cleaning the coin drop.

Coin Drops with Old-Style Spring

Refer to *Figure 1*.

1. Disconnect electrical power to machine and drop.
2. Remove coin drop from machine.

3. Open cover of coin drop.
 - a. Move spring downward until cover catch is free. Refer to *Figure 1*.

NOTE: Do not lift or overbend the spring in any direction.

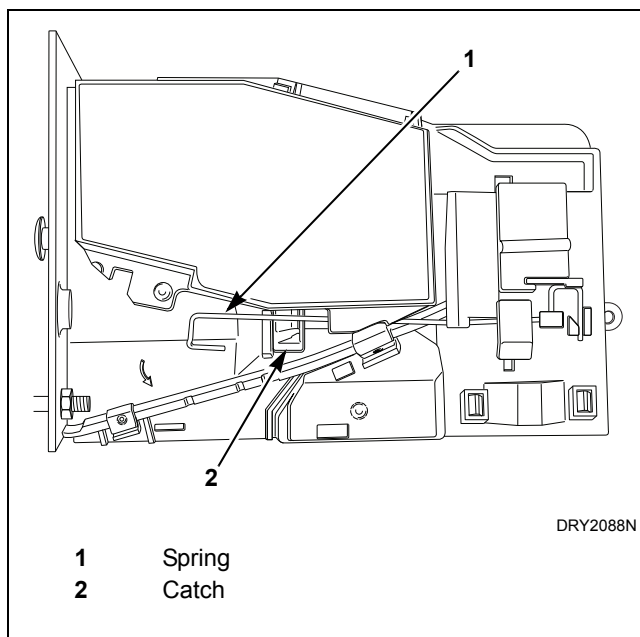


Figure 1

- b. Open cover for coin drop. Refer to *Figure 2*.

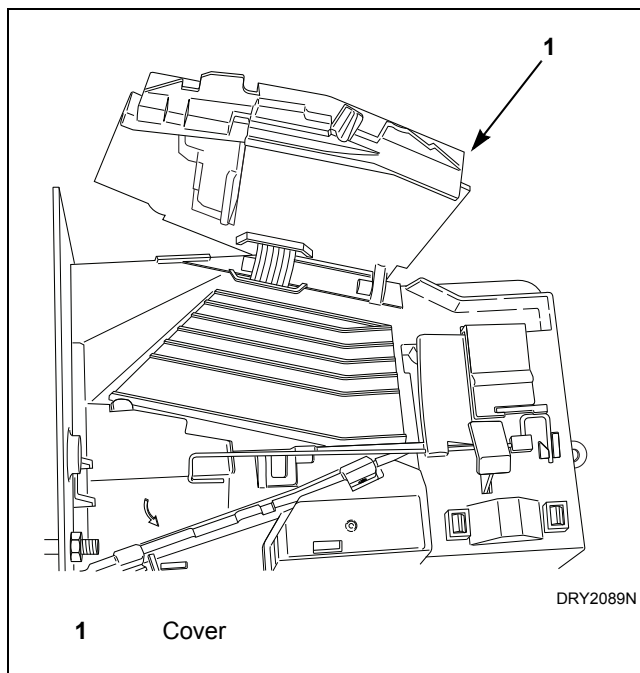


Figure 2

4. Clean the coin path with a soft brush and wipe exposed surfaces with an alcohol moistened cloth. Refer to *Figure 3*.

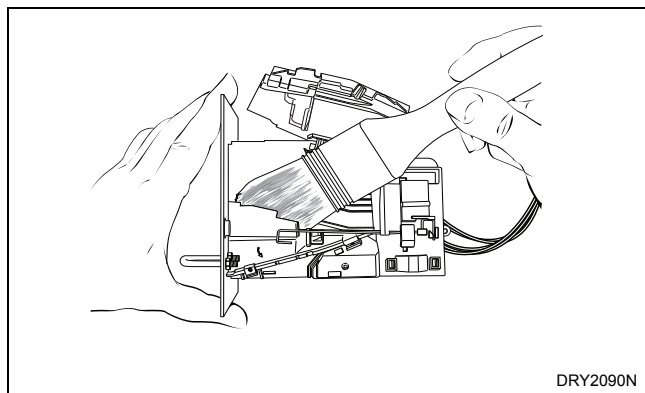


Figure 3

5. Clean residue from coin rail with an alcohol moistened cloth. Refer to *Figure 4*.

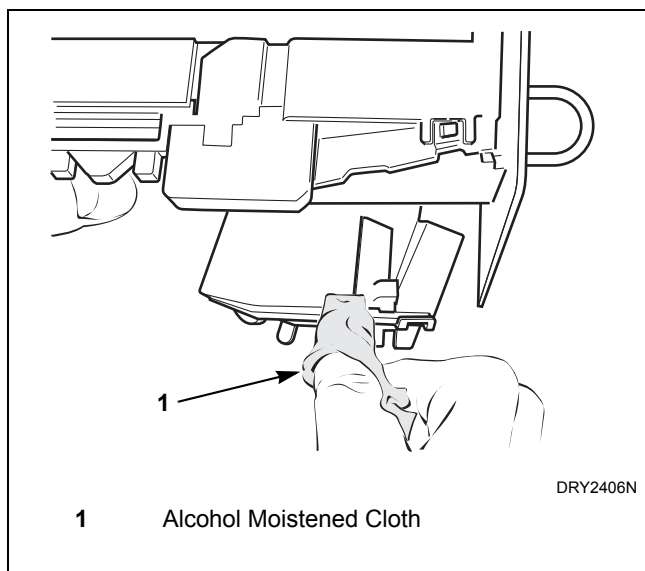


Figure 4

6. Clean light sensors with a soft brush or air spray duster. Refer to *Figure 5*.

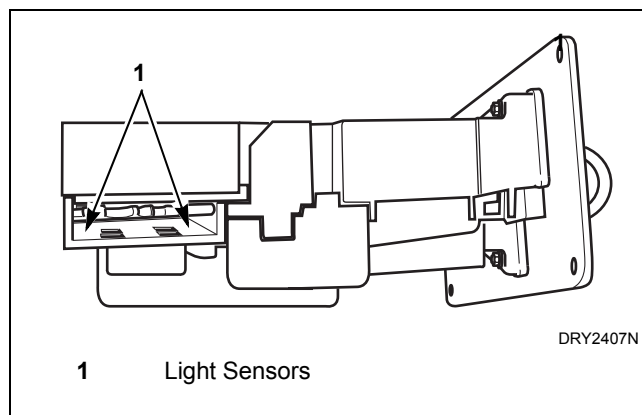


Figure 5

7. Close cover for coin drop.
8. Move spring back over cover catch.
9. Reinstall coin drop into machine.
10. Reconnect electrical power to machine and drop.
11. Add a coin to drop to verify that coin drop is operating properly and that electrical connection is working properly.

Coin Drops with New-Style Spring

Refer to *Figure 6*.

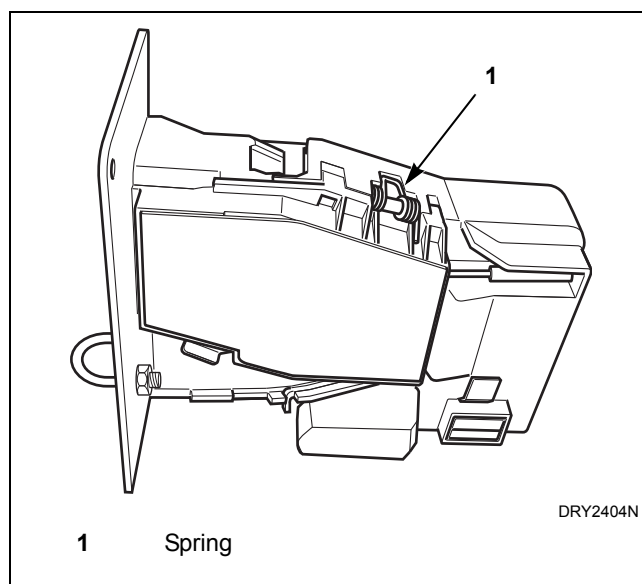


Figure 6

1. Disconnect electrical power to machine and drop.
2. Remove coin drop from machine.

Troubleshooting

3. Open cover of coin drop. Refer to *Figure 7*.

NOTE: Do not overbend the spring by opening cover too far.

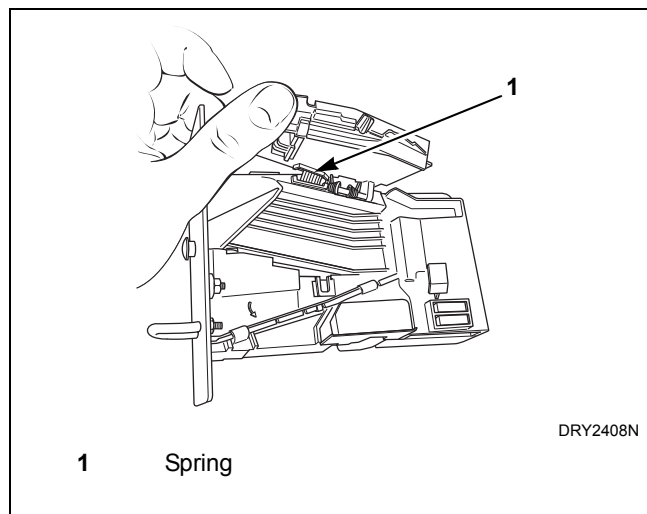


Figure 7

4. Clean the coin path with a soft brush and wipe exposed surfaces with an alcohol moistened cloth. Refer to *Figure 8*.

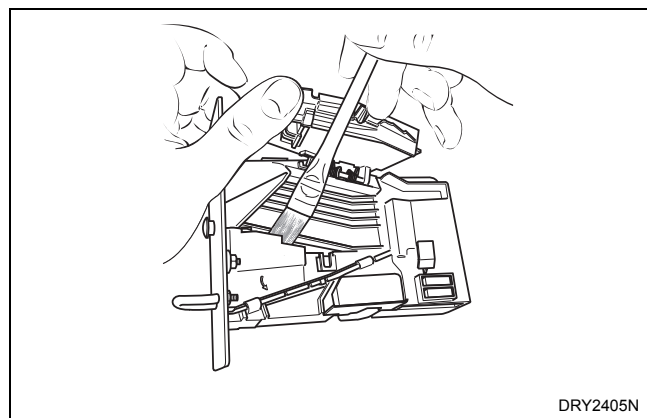


Figure 8

5. Clean residue from coin rail with an alcohol moistened cloth. Refer to *Figure 9*.

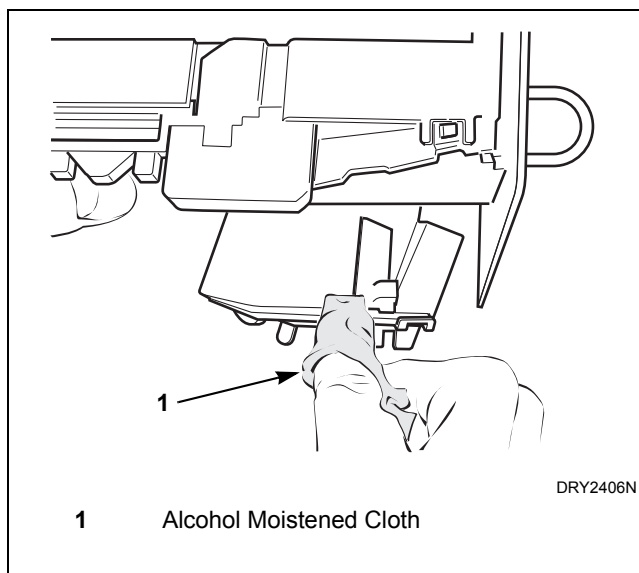


Figure 9

6. Clean light sensors with a soft brush or air spray duster. Refer to *Figure 10*.

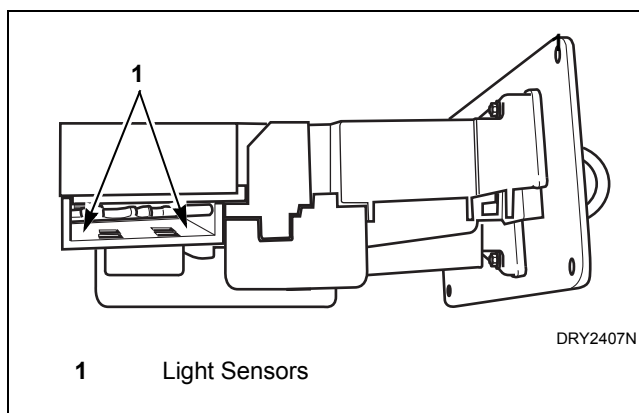


Figure 10

7. Close cover for coin drop.
8. Reinstall coin drop into machine.
9. Reconnect electrical power to machine and drop.
10. Add a coin to drop to verify that coin drop is operating properly and that electrical connection is working properly.

29. Replacing Old-Style Tension Spring on Electronic Coin Drop

If coin drop is not accepting coins, perform the following:

1. Clean coin drop according to instructions supplied with drop.
2. On electronic coin drops with an old-style tension spring (shown in *Figure 11* and *Figure 13*), test and replace tension spring using the following instructions.

Remove Coin Drop From Machine

1. Disconnect electrical power to machine and drop.
2. Remove coin drop from machine.

Test Tension Spring

1. Push coin return button to open and close coin drop cover to clear possible coin jams. Refer to *Figure 11*.

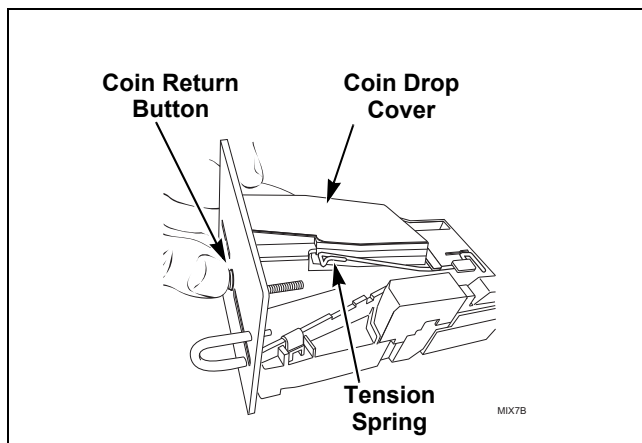


Figure 11

2. Manually hold down coin drop cover and insert coin. Refer to *Figure 12*.

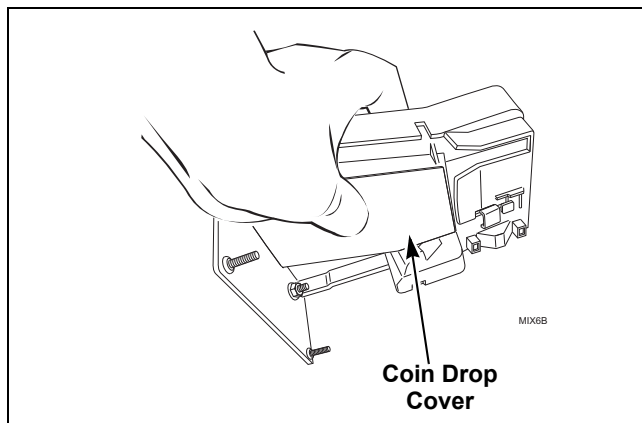


Figure 12

3. If coin drop now operates properly, replace tension spring using instructions on following pages.

Replace Tension Spring

1. Move tension spring downward until cover catch is free. Refer to *Figure 13*.

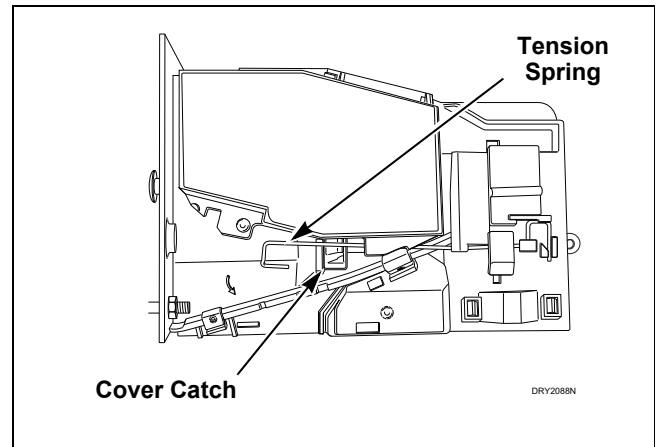


Figure 13

2. Open cover for coin drop.
3. Place a small flathead screwdriver under right side of tension spring and lift up. Refer to *Figure 14*.

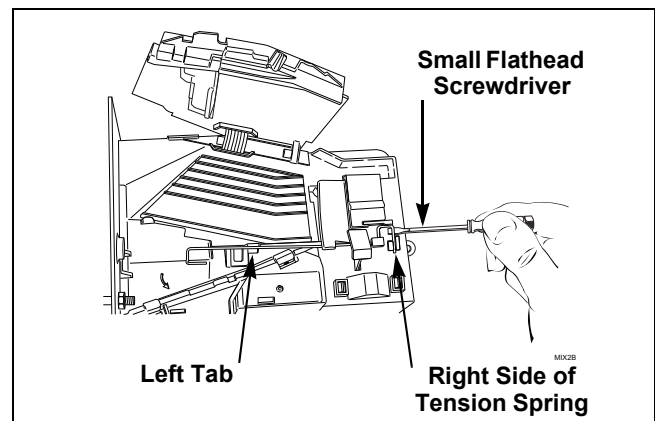


Figure 14

4. Use screwdriver to move spring approximately 3 mm to left.
5. Lift spring over left tab. Refer to *Figure 14*.

Troubleshooting

6. Rotate spring clockwise, 40 to 60 degrees, until it is free from right tabs. Refer to *Figure 15*.

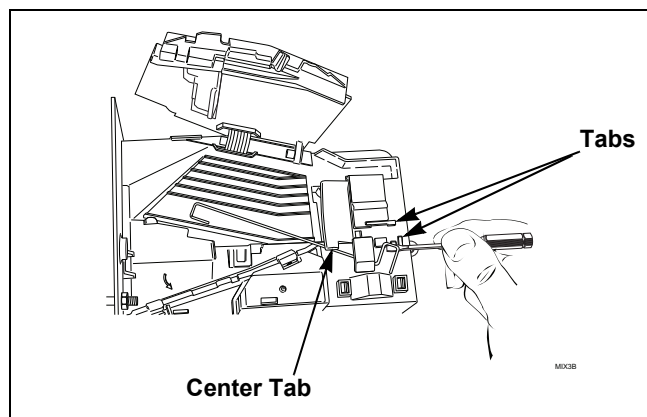


Figure 15

7. Use screwdriver to remove spring from center tab. Refer to *Figure 14*.
8. Lift spring, with attached clip, off drop.
9. Remove clip from spring. Refer to *Figure 16*.

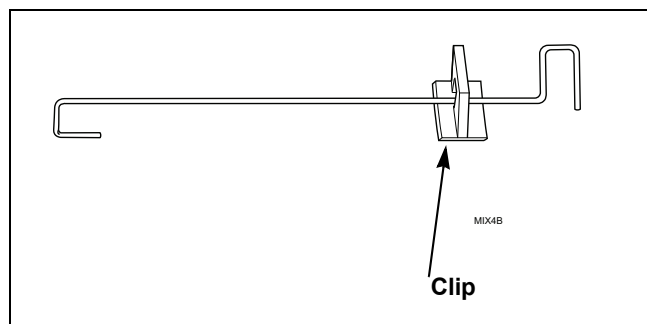


Figure 16

10. Attach clip to new tension spring, Part No. 209/00598/02.
11. Place clip, installed on spring, in slot on coin drop. Refer to *Figure 17*.

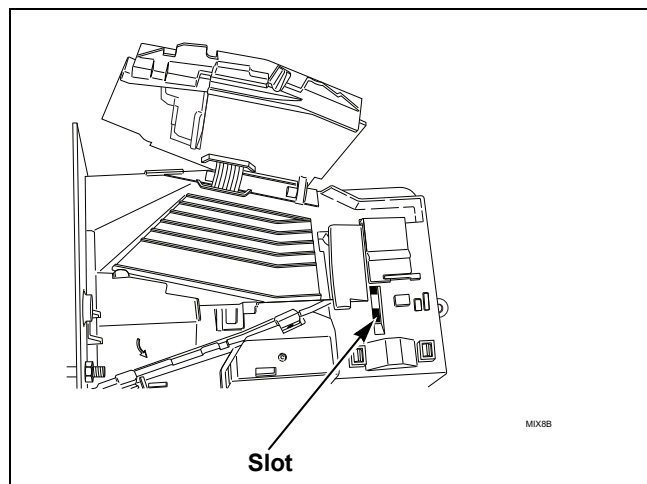


Figure 17

12. Use a small flathead screwdriver to push spring under center tab. Refer to *Figure 18*.

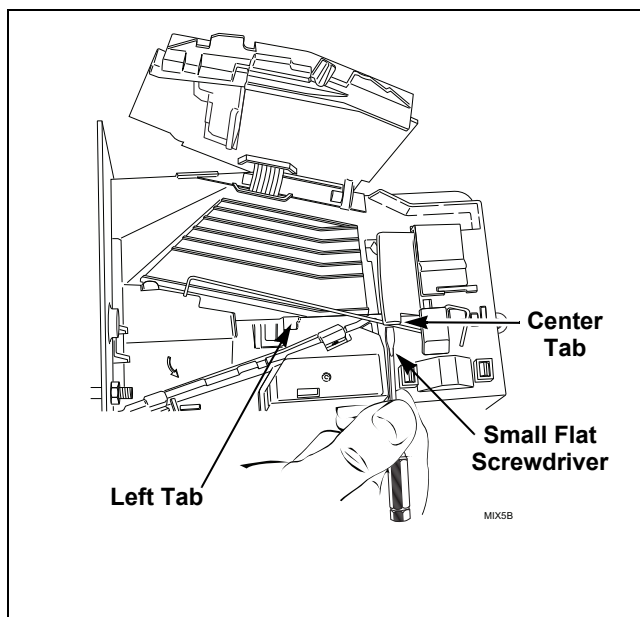


Figure 18

13. Lift spring gently to place in position under left tab.
14. Push spring to right until it snaps into position. Refer to *Figure 14*.
15. Close coin drop cover.
16. Move tension spring over cover catch. Refer to *Figure 13*.

Reinstall Coin Drop Into Machine

1. Reinstall coin drop into machine.
2. Reconnect electrical power to machine and drop.
3. Add a coin to drop to verify that coin drop is operating properly and that electrical connection is working properly.