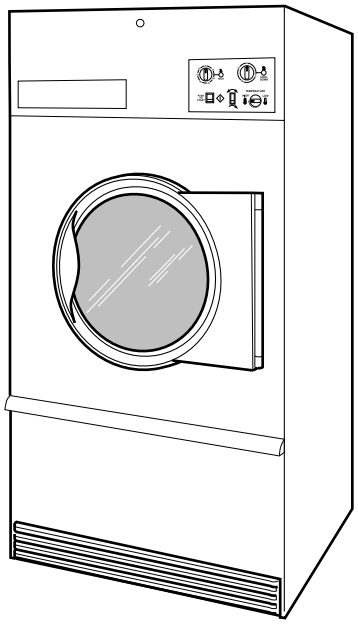
Tumble Dryers

50 Pound Capacity
75 Pound Capacity

Starting Serial No. 0904004427

Refer to Page 7 for Model Numbers



TMB795C

Troubleshooting

Alliance Laundry Systems

www.alliancelaundry.com

Part No. 70422101R1
April 2013

Table of Contents

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 an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.

WARNING

Warning indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.

CAUTION

Caution indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.

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.

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

IMPORTANT INFORMATION: During the lifetime of a tumbler, it may require service. The information contained in this manual was written and is intended for use by qualified service technicians who are familiar with the safety procedures required in the repair of a tumbler, and who are equipped with the proper tools and testing equipment.

WARNING

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

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

W240R1

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

CAUTION

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

NOTE: The WARNING and IMPORTANT instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which CANNOT be built into this tumbler. These factors MUST BE supplied by the person(s) installing, maintaining or operating the tumbler.

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

Locating an Authorized Service Person

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.

Safety Warnings and Decals

SAFETY WARNINGS and decals have been provided in key locations to remind you of important precautions for the safe operation and maintenance of your tumbler. Please take the time to review these warnings before proceeding with service work.

All decals have been designed and applied to withstand washing and cleaning. Decals should be checked periodically to be sure they have not been damaged, removed, or painted.

Safety Precautions for Servicing Tumblers

Prior to servicing tumbler:

- **Disconnect electrical service and "lockout" to prevent unintentional connection.**
- **Shut off supply gas valve.**
- **Allow machine to cool prior to servicing.**

After servicing tumbler:

- **Control/access panels must be reinstalled.**
- **Motor/drive/belt guards must be reinstalled.**
- **Contactor/junction/accessory box covers must be reinstalled.**
- **Use a non-corrosive leak detection solution to check all pipe connections for gas leaks. DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS!**
- **The loading door switch, lint door switch and airflow switch must be operating properly.**

Section 2
Introduction

Model Identification

Information in this manual is applicable to these models:

	Gas			Steam/Thermal Oil		Electric
50 Pound	CA050L	GU050N	PK050N	CT050S	LT050T	CT050E
	CA050N	HA050L	PT050L	CT050T	LU050S	CU050E
	CK050N	HA050N	PT050N	CU050S	LU050T	DR50E2-BT050E
	CT050L	HK050N	PU050L	CU050T	PT050S	DR50E2-BU050E
	CT050N	HT050D	PU050N	DR50S2-BT050S	PT050T	DR55E2-BT050E
	CU050L	HT050L	SA050L	DR50S2-BT050T	PU050S	DR55E2-BU050E
	CU050N	HT050N	SA050N	DR50S2-BU050S	PU050T	GT050E
	DR50G2-BA050L	HU050L	SK050N	DR50S2-BU050T	ST050S	GU050E
	DR50G2-BA050N	HU050N	ST050D	DR55S2-BT050S	ST050T	HT050E
	DR50G2-BK050N	IPD50G2	ST050L	DR55S2-BT050T	SU050S	HU050E
	DR50G2-BT050D	IT050L	ST050N	DR55S2-BU050S	SU050T	IPD50E2
	DR50G2-BT050L	IT050N	SU050L	DR55S2-BU050T	UT050S	IT050E
	DR50G2-BT050N	KA050L	SU050N	GT050S	UT050T	KT050E
	DR50G2-BU050L	KA050N	UA050L	GT050T	UU050S	KU050E
	DR50G2-BU050N	KK050N	UA050N	GU050S	UU050T	LT050E
	DR55G2-BA050L	KT050L	UK050N	GU050T	YT050S	LU050E
	DR55G2-BA050N	KT050N	UT050L	HT050S	YT050T	PT050E
	DR55G2-BT050D	KU050L	UT050N	HT050T	YU050S	PU050E
	DR55G2-BT050L	KU050N	UU050L	HU050S	YU050T	ST050E
	DR55G2-BT050N	LA050L	UU050N	HU050T		SU050E
	DR55G2-BU050L	LA050N	YT050L	IPD50S2		UT050E
	DR55G2-BU050N	LK050N	YT050N	IT050S		UU050E
	GA050L	LT050L	YU050L	IT050T		YT050E
	GA050N	LT050N	YU050N	KT050S		YU050E
	GK050N	LU050L		KT050T		
	GT050L	LU050N		KU050S		
	GT050N	PA050L		KU050T		
	GU050L	PA050N		LT050S		

(continued)

NOTE: Control suffixes listed on next page.

(continued)

	Gas			Steam/Thermal Oil		Electric
75 Pound	CA075L	HA075N	PU075N	CT075S	LU075T	CT075E
	CA075N	HK075N	SA075L	CT075T	PT075S	CU075E
	CK075N	HT075D	SA075N	CU075S	PT075T	DR75E2-BT075E
	CT075L	HT075L	SK075N	CU075T	PU075S	DR75E2-BU075E
	CT075N	HT075N	ST075D	DR75S2-BT075S	PU075T	DR80E2-BT075E
	CU075L	HU075L	ST075L	DR75S2-BT075T	ST075S	DR80E2-BU075E
	CU075N	HU075N	ST075N	DR75S2-BU075S	ST075T	GT075E
	DR75G2-BA075L	IPD75G2	STF75L	DR75S2-BU075T	SU075S	GU075E
	DR75G2-BA075N	IT075L	STF75N	DR80S2-BT075S	SU075T	HT075E
	DR75G2-BK075N	IT075N	SU075L	DR80S2-BT075T	UT075S	HU075E
	DR75G2-BT075D	KA075L	SU075N	DR80S2-BU075S	UT075T	IPD75E2
	DR75G2-BT075L	KA075N	UA075L	DR80S2-BU075T	UU075S	IT075E
	DR75G2-BT075N	KK075N	UA075N	GT075S	UU075T	KT075E
	DR75G2-BU075L	KT075L	UK075N	GT075T	YT075S	KU075E
	DR75G2-BU075N	KT075N	UT075L	GU075S	YT075T	LT075E
	DR80G2-BA075L	KU075L	UT075N	GU075T	YU075S	LU075E
	DR80G2-BA075N	KU075N	UTF75L	HT075S	YU075T	PT075E
	DR80G2-BT075D	LA075L	UTF75N	HT075T		PU075E
	DR80G2-BT075L	LA075N	UU075L	HU075S		ST075E
	DR80G2-BT075N	LK075N	UU075N	HU075T		SU075E
	DR80G2-BU075L	LT075L	YT075L	IPD75S2		UB075E
	DR80G2-BU075N	LT075N	YT075N	IT075S		UT075E
	GA075L	LU075L	YU075L	IT075T		UU075E
	GA075N	LU075N	YU075N	KT075S		YT075E
	GK075N	PA075L		KT075T		YU075E
	GT075L	PA075N		KU075S		
	GT075N	PK075N		KU075T		
	GU075L	PT075L		LT075S		
	GU075N	PT075N		LT075T		
	HA075L	PU075L		LU075S		

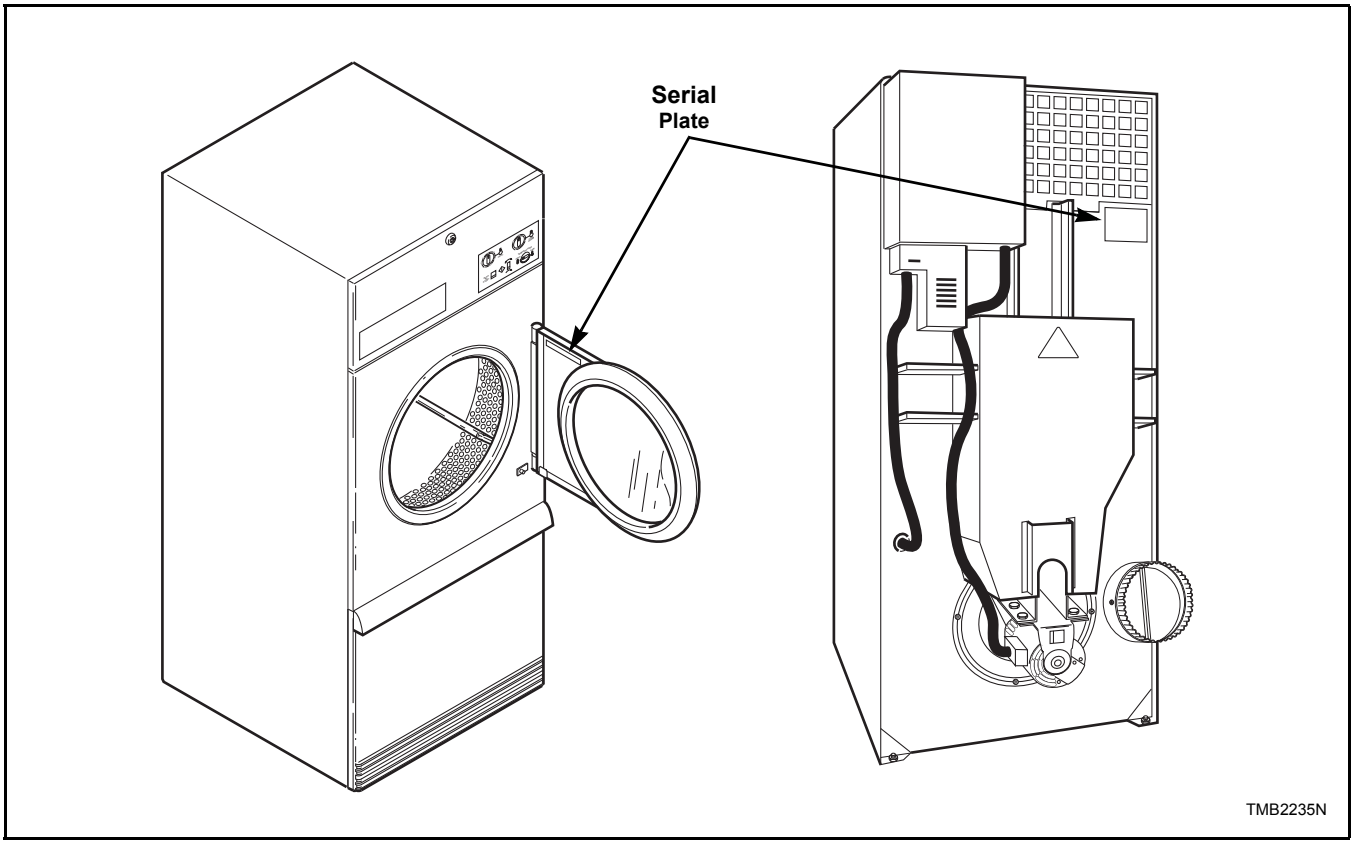
NOTE: Control suffixes listed on next page.

Includes models with the following control suffixes:

3B – reversing DX4 vended
3O – DX4 OPL
3V – DX4 vended
3W – reversing DX4 prep for coin
3X – DX4 prep for coin
BB – reversing basic electronic, coin
BC – basic electronic, coin
BG – basic electronic, OPL mode
BL – basic electronic, central pay for coin
BW – reversing basic electronic, prep for coin
BX – basic electronic, prep for coin
BY – basic electronic, prep for card
BZ – reversing basic electronic, prep for card
DO – DMP OPL
DV – DMP vended
DX – DMP prep for coin
EO – LED OPL
KB – reversing single coin
KC – single coin
KW – reversing prep for coin
KX – prep for coin
KY – prep for card
KZ – reversing prep for card
LB – reversing network adaptable coin
LC – network adaptable coin
LW – reversing network adaptable, prep for coin
LX – network adaptable, prep for coin
LY – network adaptable, prep for card
LZ – reversing network adaptable, prep for card
NC – NetMaster coin
NX – NetMaster, prep for coin
NY – NetMaster, prep for card
OM – OPL micro
QT – dual digital timer
R3 – reversing DX4 OPL
RD – reversing DMP OPL
RE – reversing LED OPL
RM – reversing OPL micro
RQ – reversing dual digital timer
RU – reversing UniLinc OPL
SD – single drop
SX – single drop, prep for coin
UO – UniLinc OPL
WB – reversing network ready coin
WC – network ready coin
WW – reversing network ready, prep for coin
WX – network ready, prep for coin
WY – network ready, prep for card
WZ – reversing network ready, prep for card

Serial Plate Location

When calling or writing about your product, be sure to mention model and serial numbers. Model and serial numbers are found on serial plate on the rear of machine and inside door.



Customer Service

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

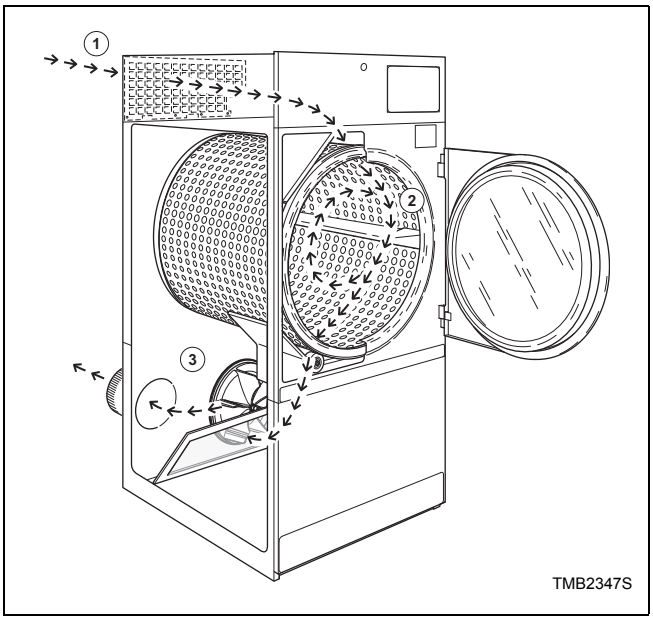
For technical assistance, call (920) 748-3121.

Wiring Diagram

The wiring diagram is located inside the junction or contactor box.

The wiring diagram part number is in the lower portion of the electrical data on the serial plate.

How a Tumble Dryer Works



A tumble dryer uses heated air to dry loads of laundry.

(1) When the motor is started, the exhaust fan pulls room temperature air in through the air intake at the rear of the tumble dryer and over the heat source (burner flame for gas, heating element for electric, and coil for steam).

(2) The heated air moves into the cylinder, where it is circulated through the wet load by the tumbling action of the cylinder.

(3) The air then passes through the lint filter, exhaust fan, and is vented to the outdoors.

Theory of Operation of Instant Electronic Ignition

IMPORTANT: The Non-CE Marked Instant Electronic Ignition system will attempt to light the gas by sparking for approximately 15 seconds. If gas ignition does not take place within approximately 15 seconds, the Instant Electronic Ignition control will go into safety lockout and the valve will no longer open until Instant Electronic Ignition control is reset. To reset Instant Electronic Ignition control, remove power from control by opening and closing the tumble dryer door. If condition persists, check that the gas shut-off valve is in "on" position and that the gas service is properly connected.

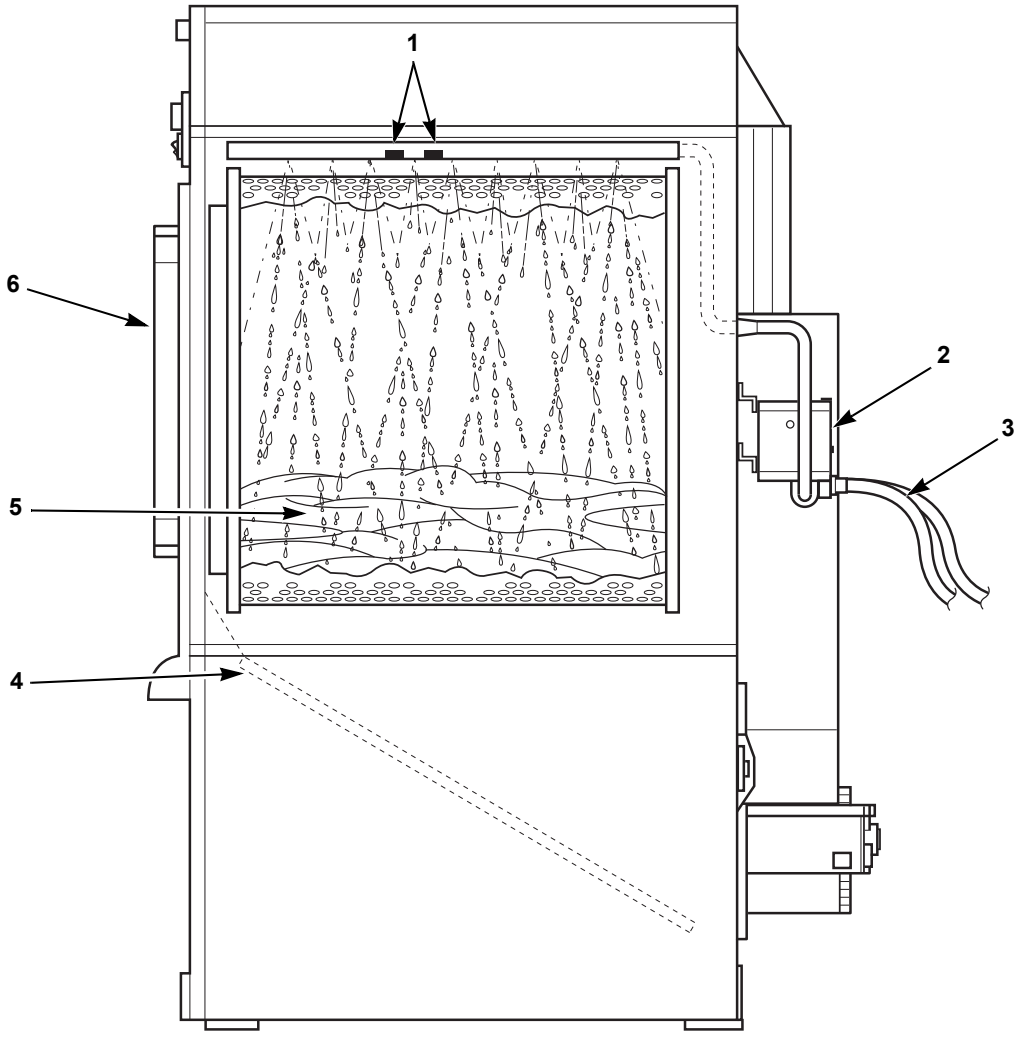
If condition persists:

1. Check resistance of high tension lead (approximately 1000 ohms/inch), and replace if not within resistance range.
2. Check voltage present at valve.
3. Check that machine is properly grounded.
4. Check the gap between igniter and burner tube (gap should be 1/4-3/8 inch).
5. Check that burner ports are not blocked or plugged under the igniter.

Fire Suppression System Theory of Operation

IMPORTANT: The fire suppression system is designed to diminish a laundry fire starting inside a fire suppression system equipped tumble dryer. The fire suppression system is not designed to stop or eliminate high temperature and spontaneous combustion situations. Follow all instructions in the installation manual to ensure the fire suppression system operates properly. Train all operators in the proper preventative maintenance of the fire suppression system.

IMPORTANT: For safety purposes, do not operate tumble dryer if a fire has occurred.

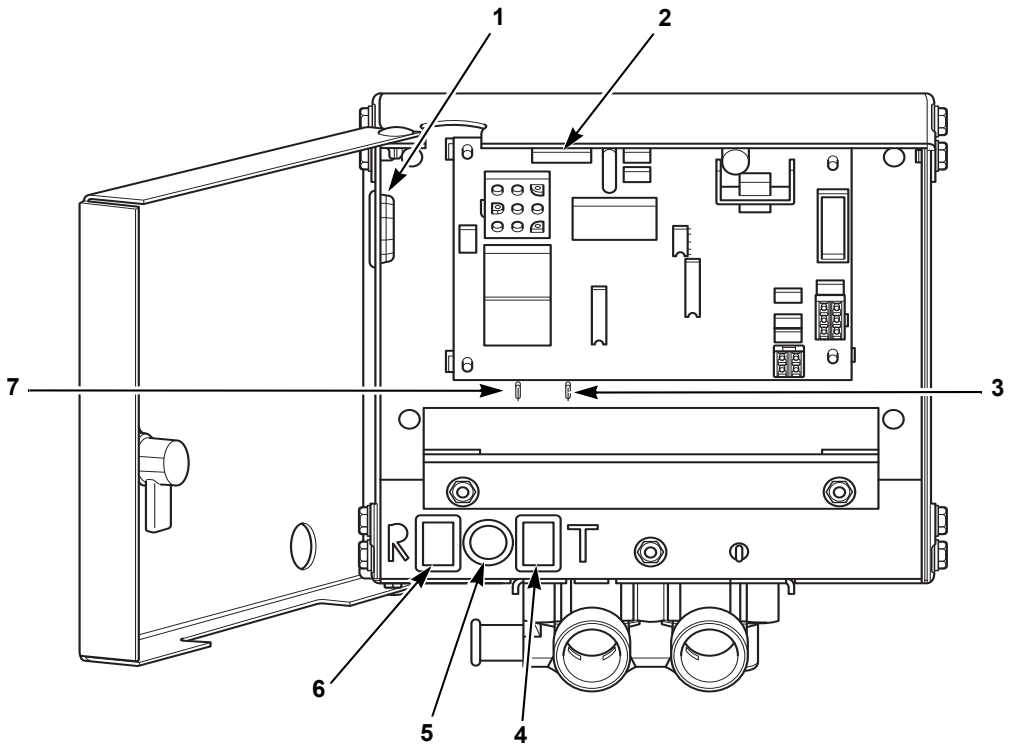


1	Temperature Sensors	**4**	Lint Screen
2	Fire Suppression System Control Box	**5**	Load
3	Water Flow to Machine	**6**	Loading Door

Figure 1

Temperature Sensor

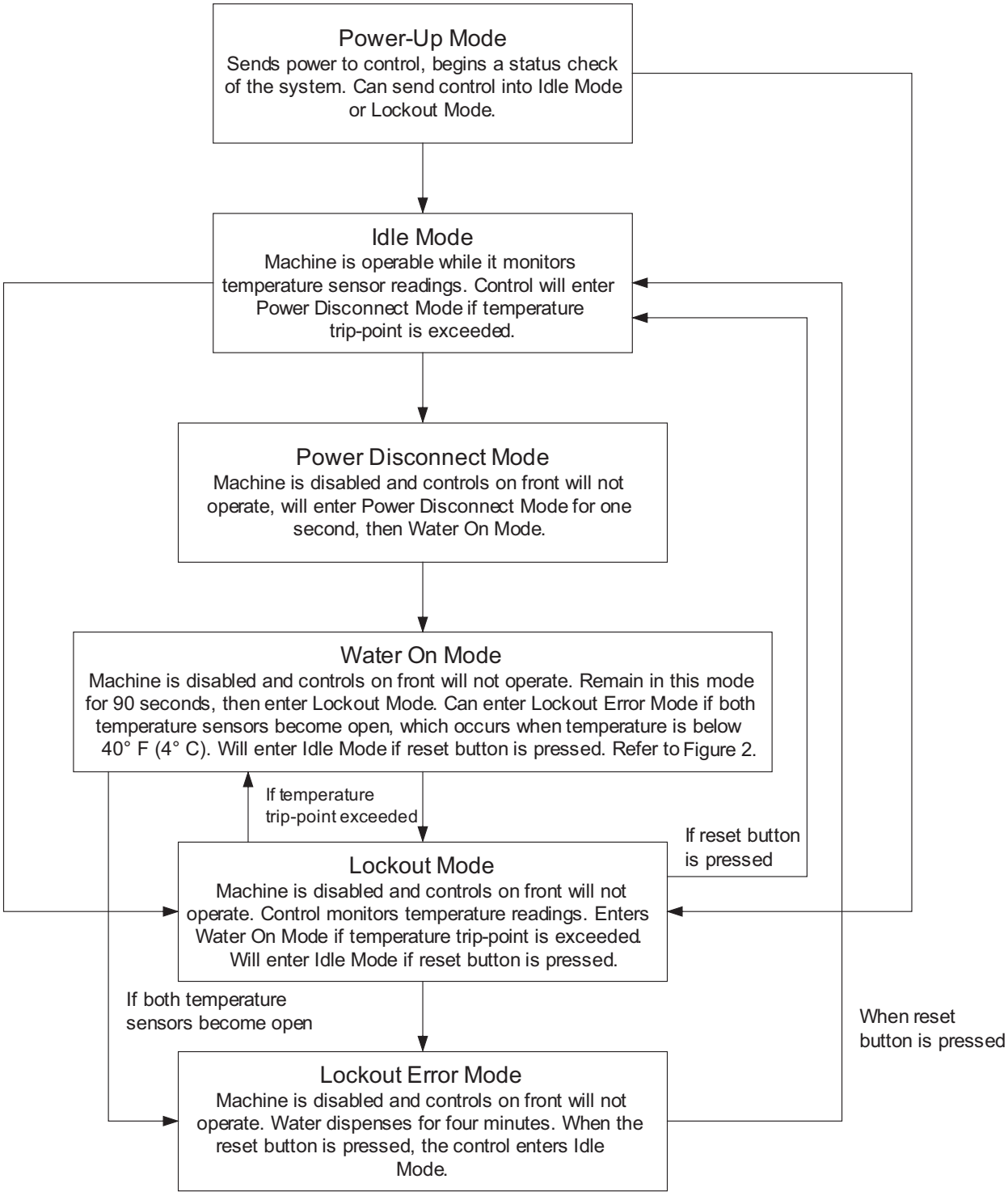
Two temperature sensors are located in the cylinder area of the tumble dryer to provide temperature readings. Refer to *Figure 1* and *Figure* 2. These temperature sensors will trigger a mode change based on a pre-set temperature trip-point.



1	Opening for Auxiliary Alarm Cable	**5**	Light
2	Fuse	**6**	Reset Button
3	Auxiliary Alarm Fast-On Connection	**7**	Auxiliary Alarm Fast-On Connection
4	Test Button		

Figure 2

Modes of Operation



Section 1
Troubleshooting

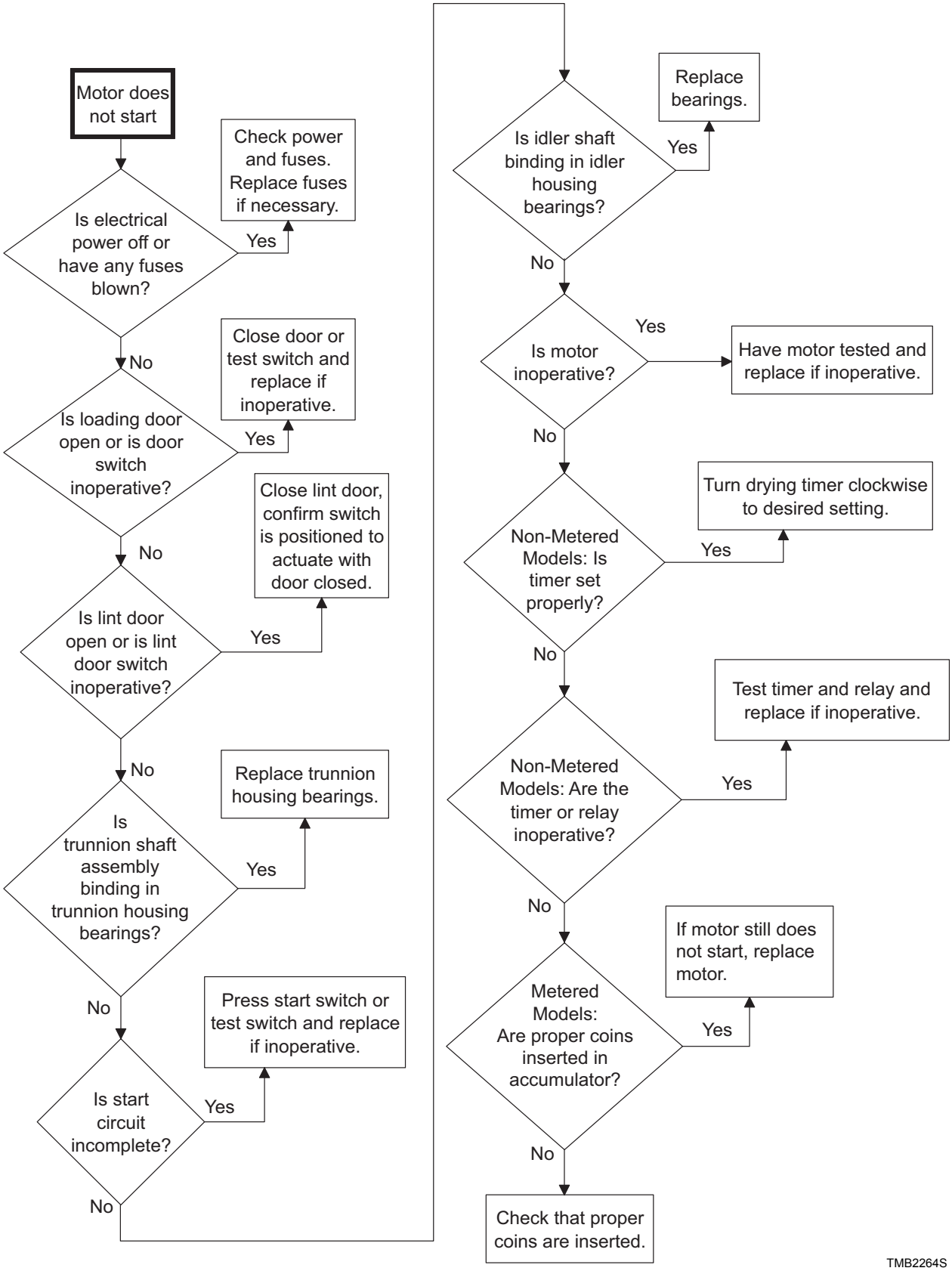
WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

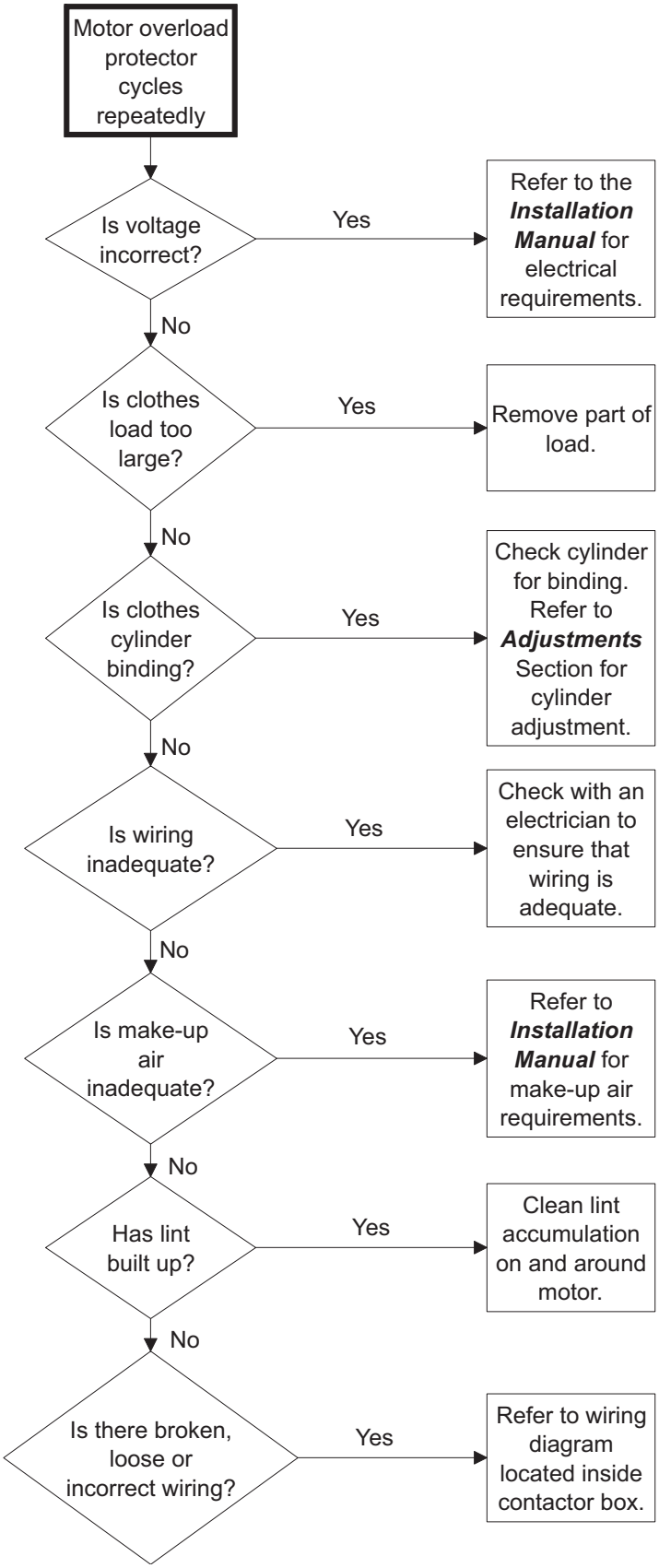
W002

IMPORTANT: Refer to appropriate wiring diagram for aid in testing tumble dryer components.

1. Motor Does Not Start



2. Motor Overload Protector Cycles Repeatedly



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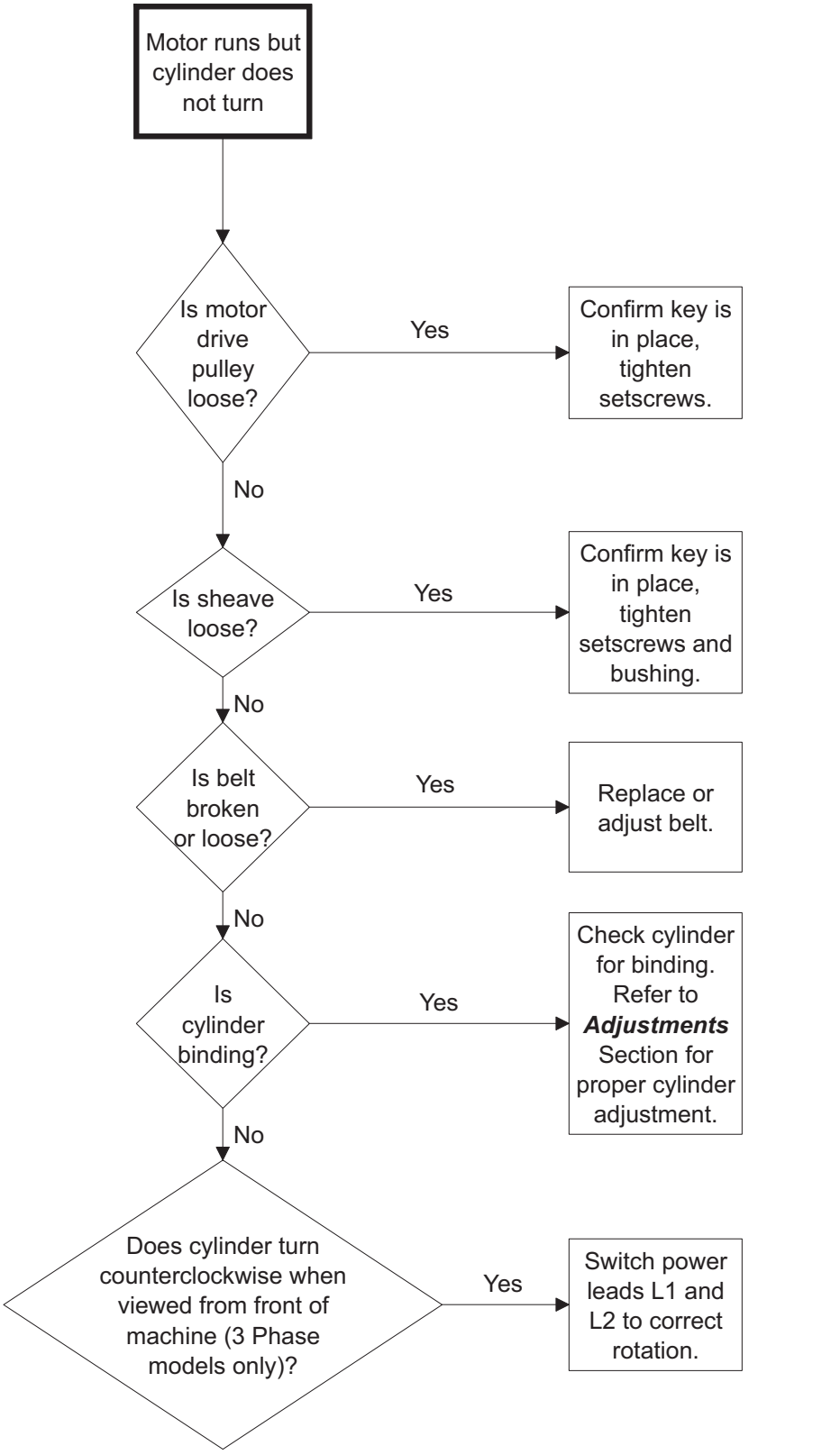
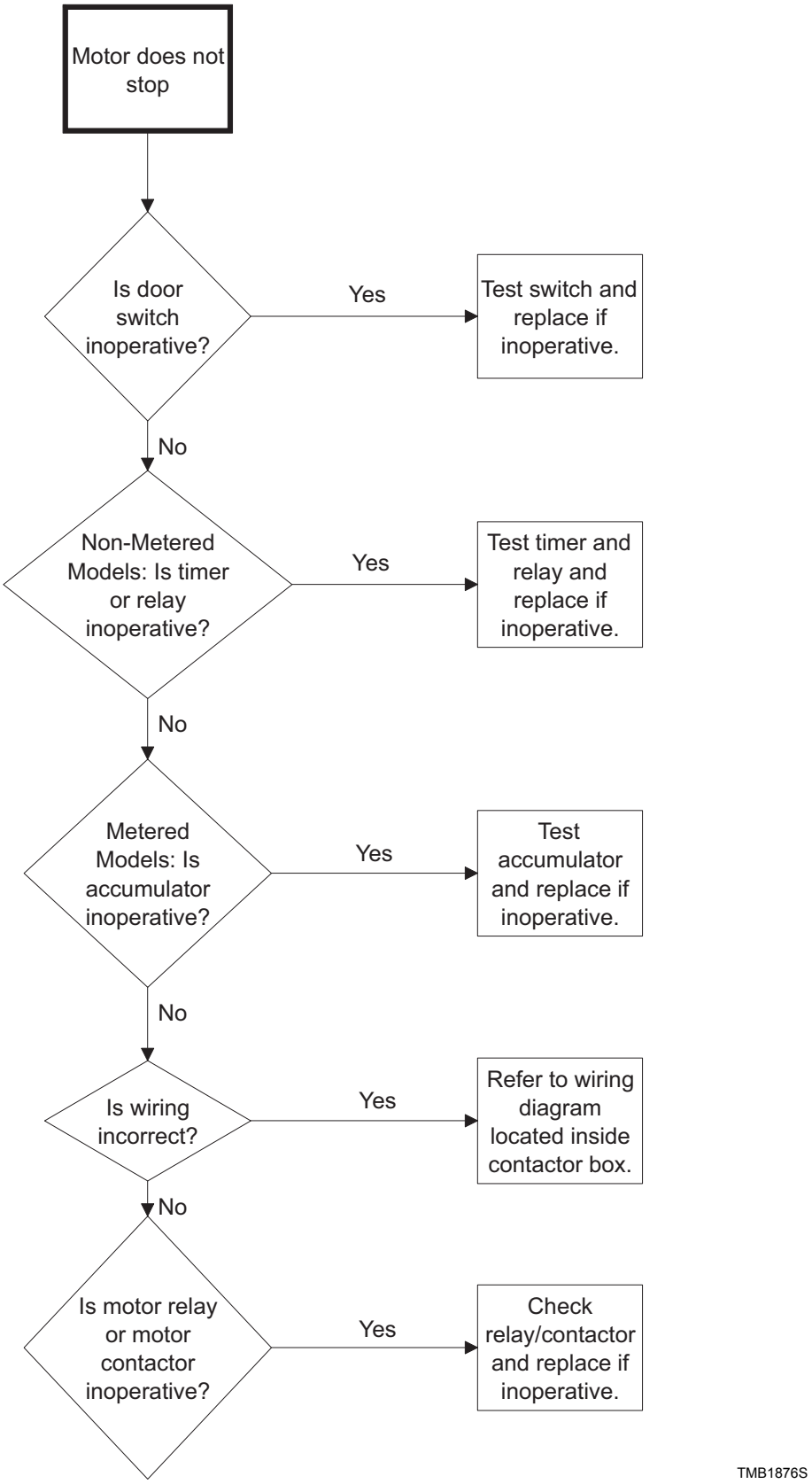
3. Motor Runs But Cylinder Does Not Turn



TMB1875S

4. Motor Does Not Stop



TMB1876S

5. No Heat Condition (Non-CE and Non-Australian Models)

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

Ignition Control Module Function

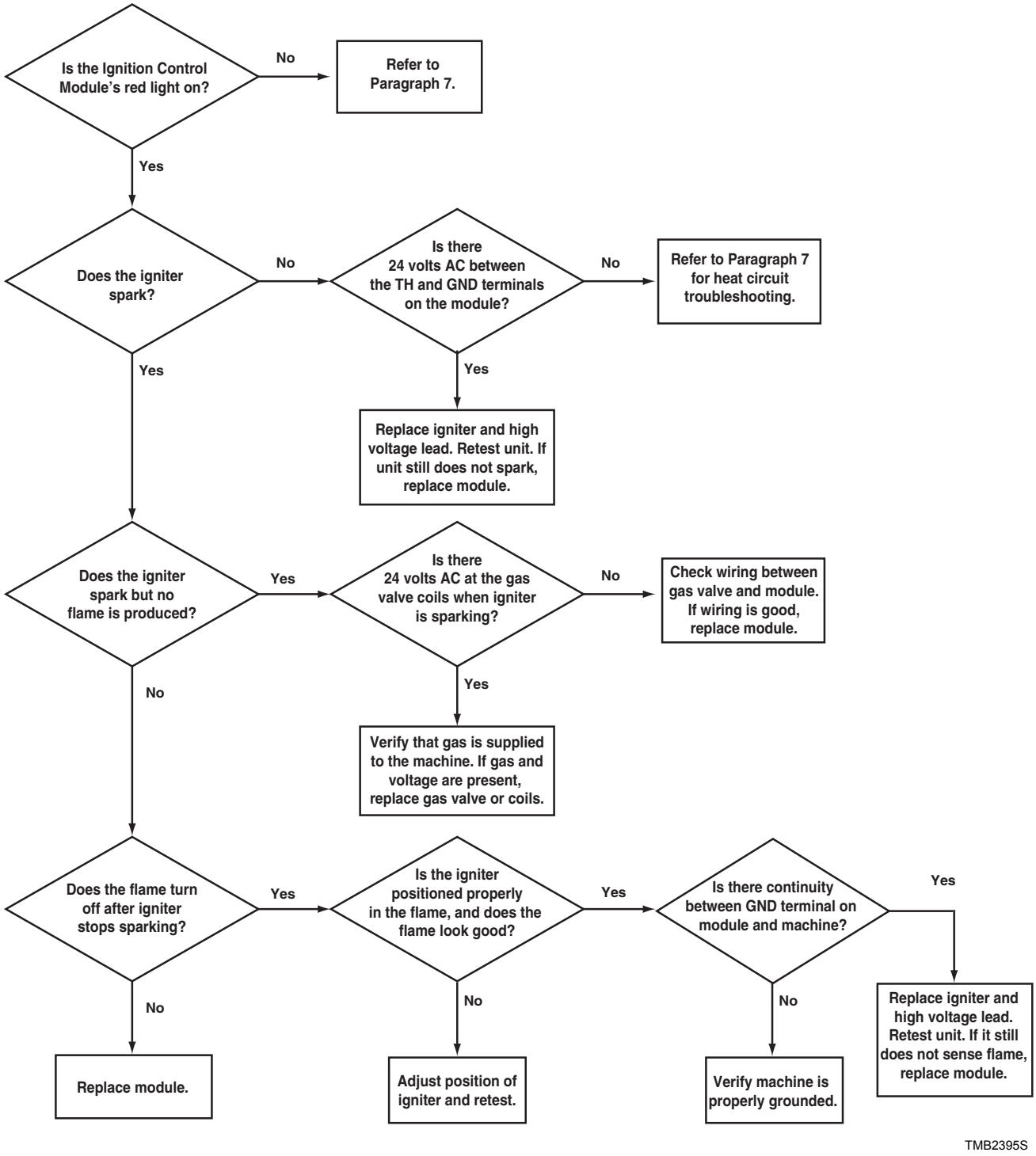
There are four components to the ignition system: the module, the spark igniter, the high voltage cable and ground wire. When 24 VAC is applied between the TH and GND terminals on the module, the module will send the high voltage signal to the igniter and 24 VAC to the gas valve coils. Gas will hit the sparking igniter and flame will be established. The igniter being engulfed in flame will create a millivolt electric signal that is sent back to the module by the high voltage cable; this is what the module sees as flame recognition. If the millivolt signal is not at the module in ten seconds, the module will go into safety lockout. The voltage will be cut from the igniter and gas valve coils and will not be restored until voltage is cycled at the module.

Intermittent Heat Test Procedure

On ignition control modules with date codes higher than 08t2, perform the following test.

Start the tumble dryer and run for 10 minutes (verify that the tumble dryer is heating properly). After the 10 minute cycle, re-start the tumble dryer and once again verify the unit is heating. Repeat this procedure 3 times. If the tumble dryer passes this test, the ignition control module is operating properly and SHOULD NOT be changed. Refer to Troubleshooting Manual for additional service procedures.

5. No Heat Condition



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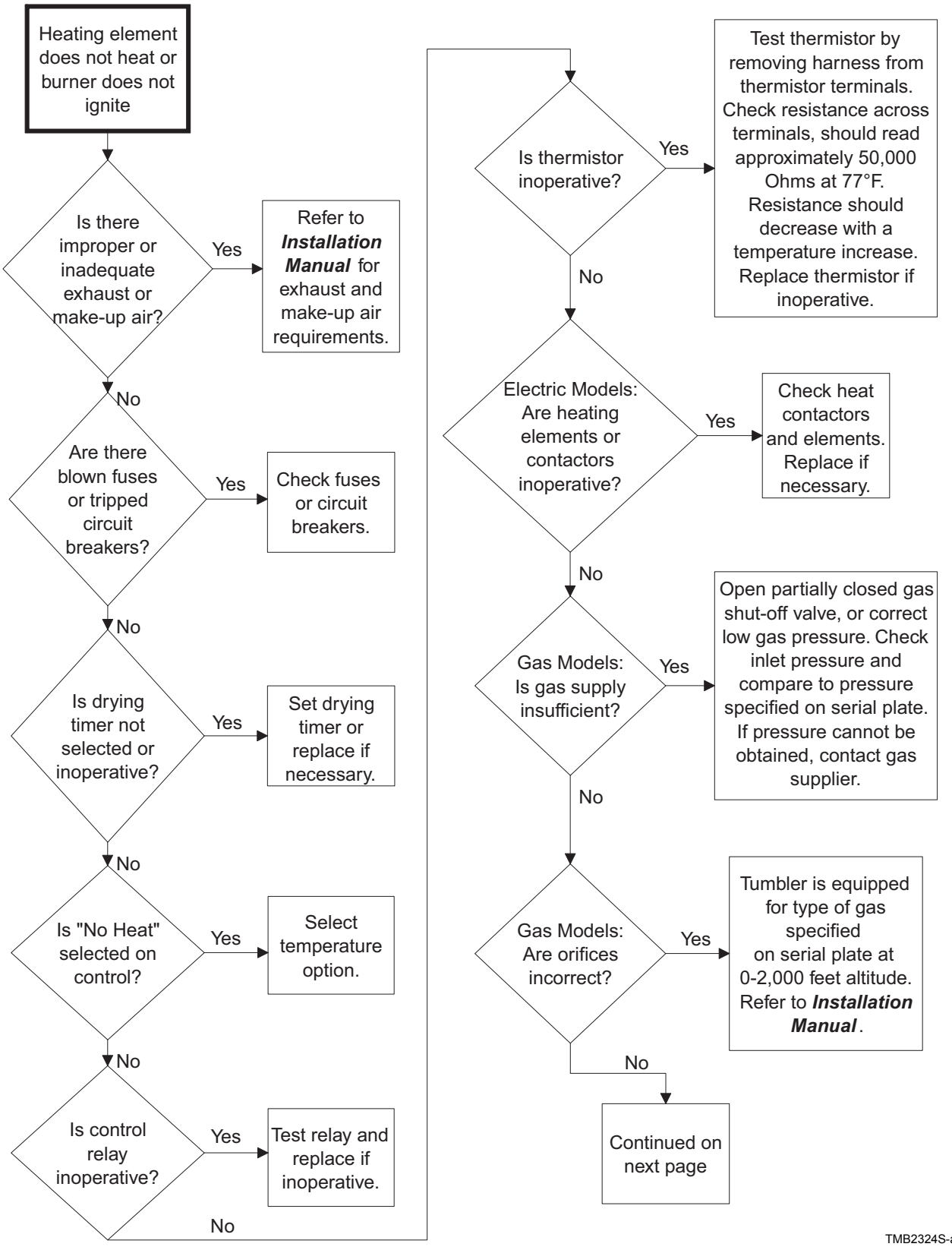
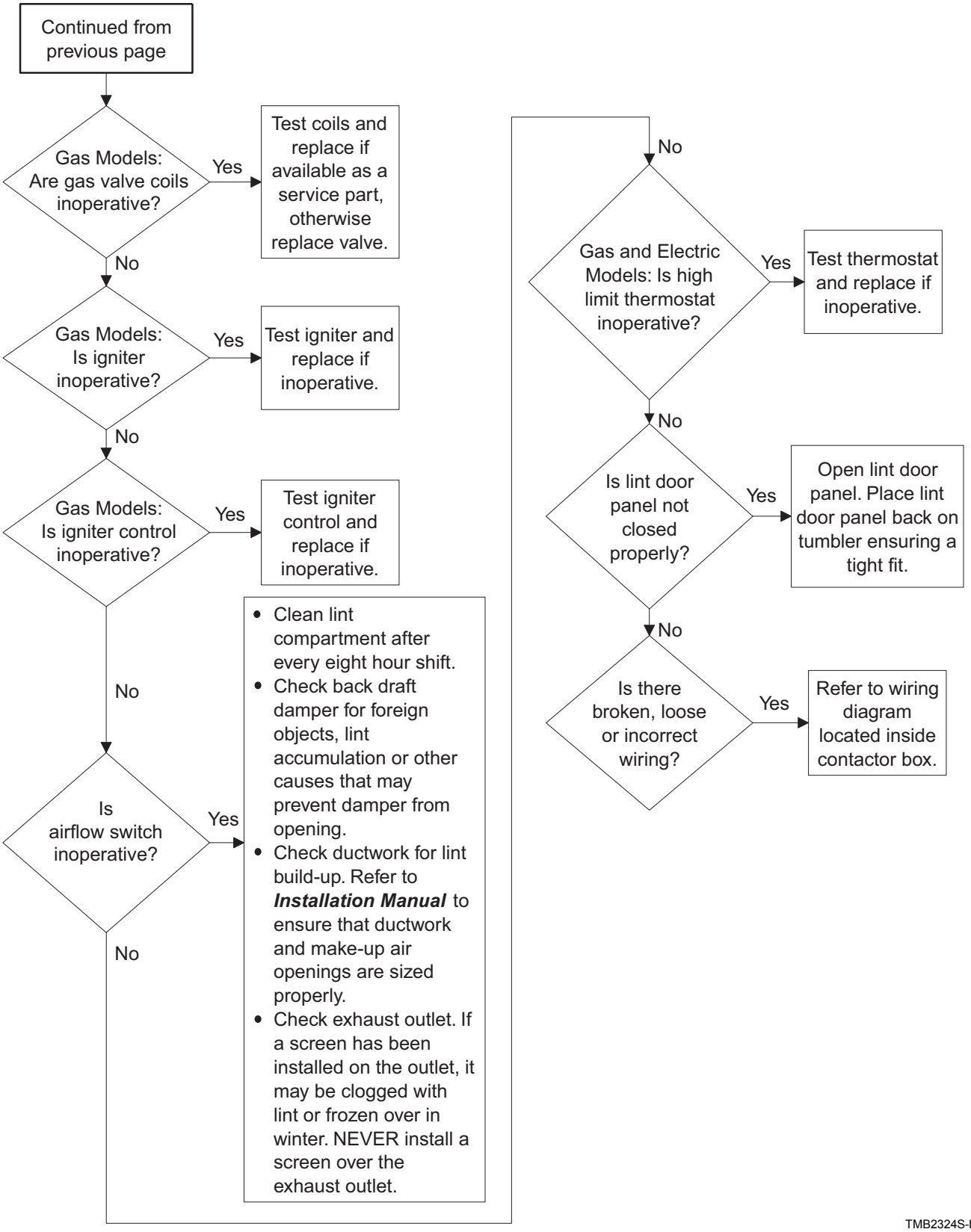
6. Heating Element Does Not Heat or Burner Does Not Ignite



6. Heating Element Does Not Heat or Burner Does Not Ignite (continued)



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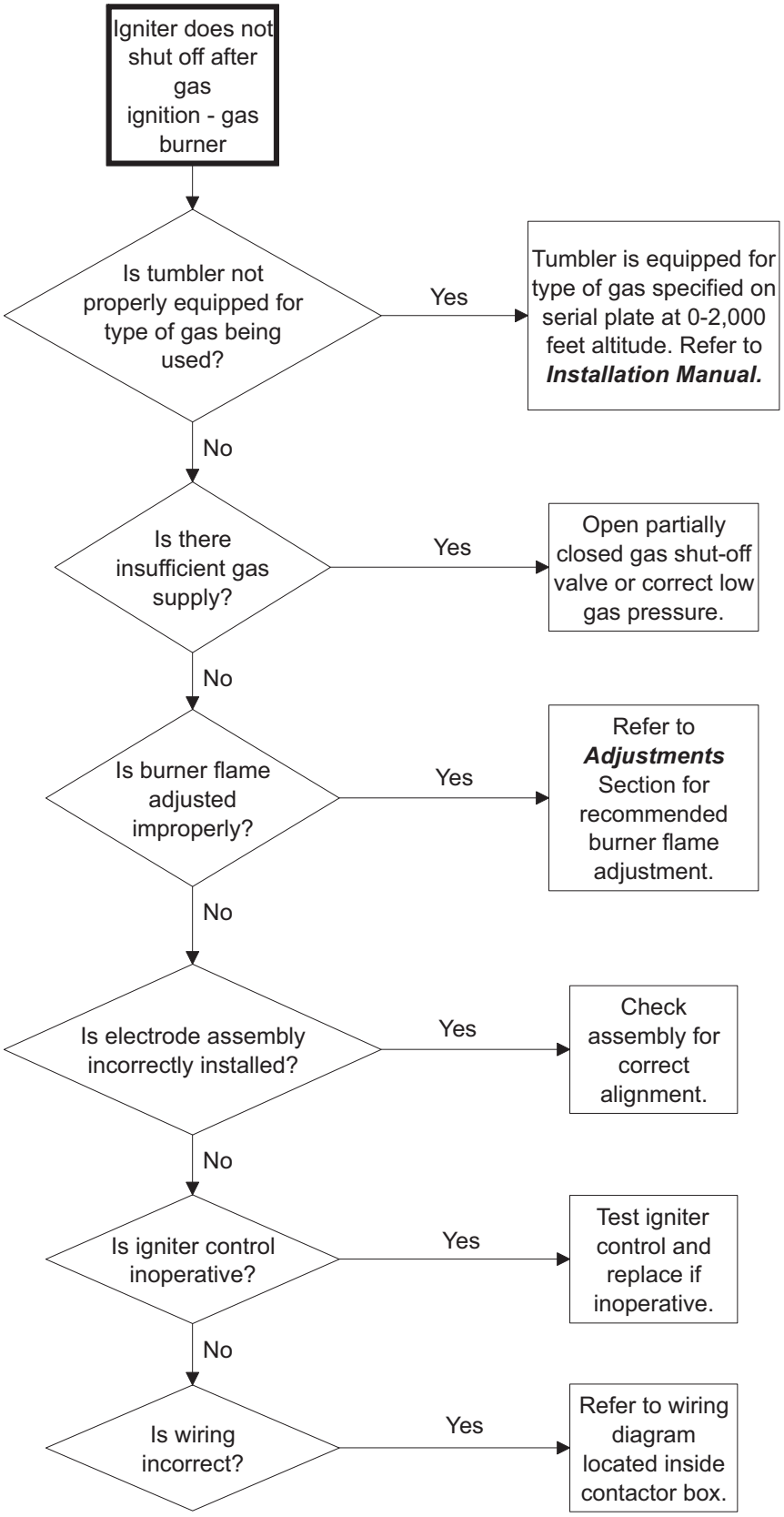
7. Igniter Does Not Shut Off After Gas Ignition — Gas Burner



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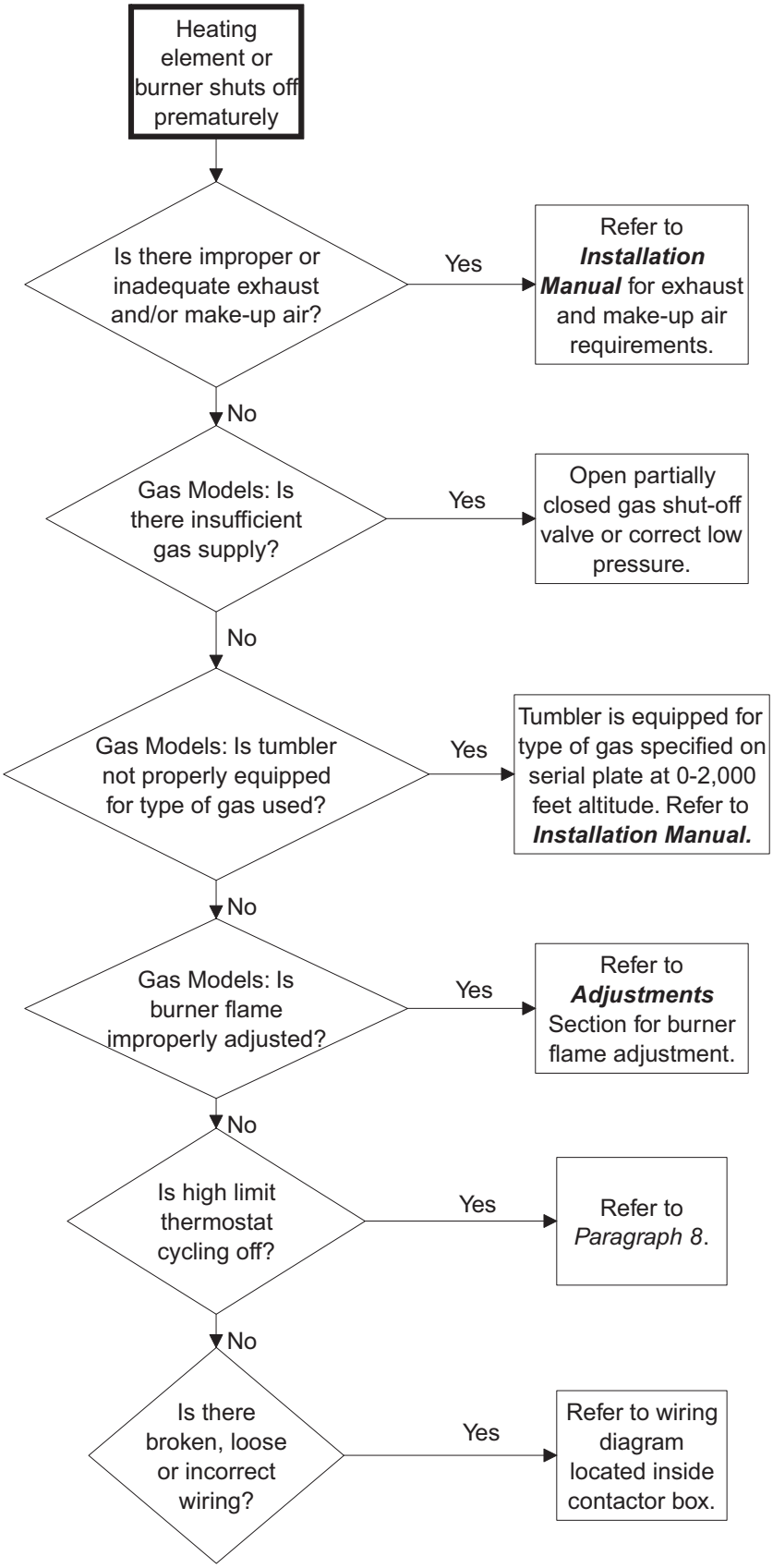
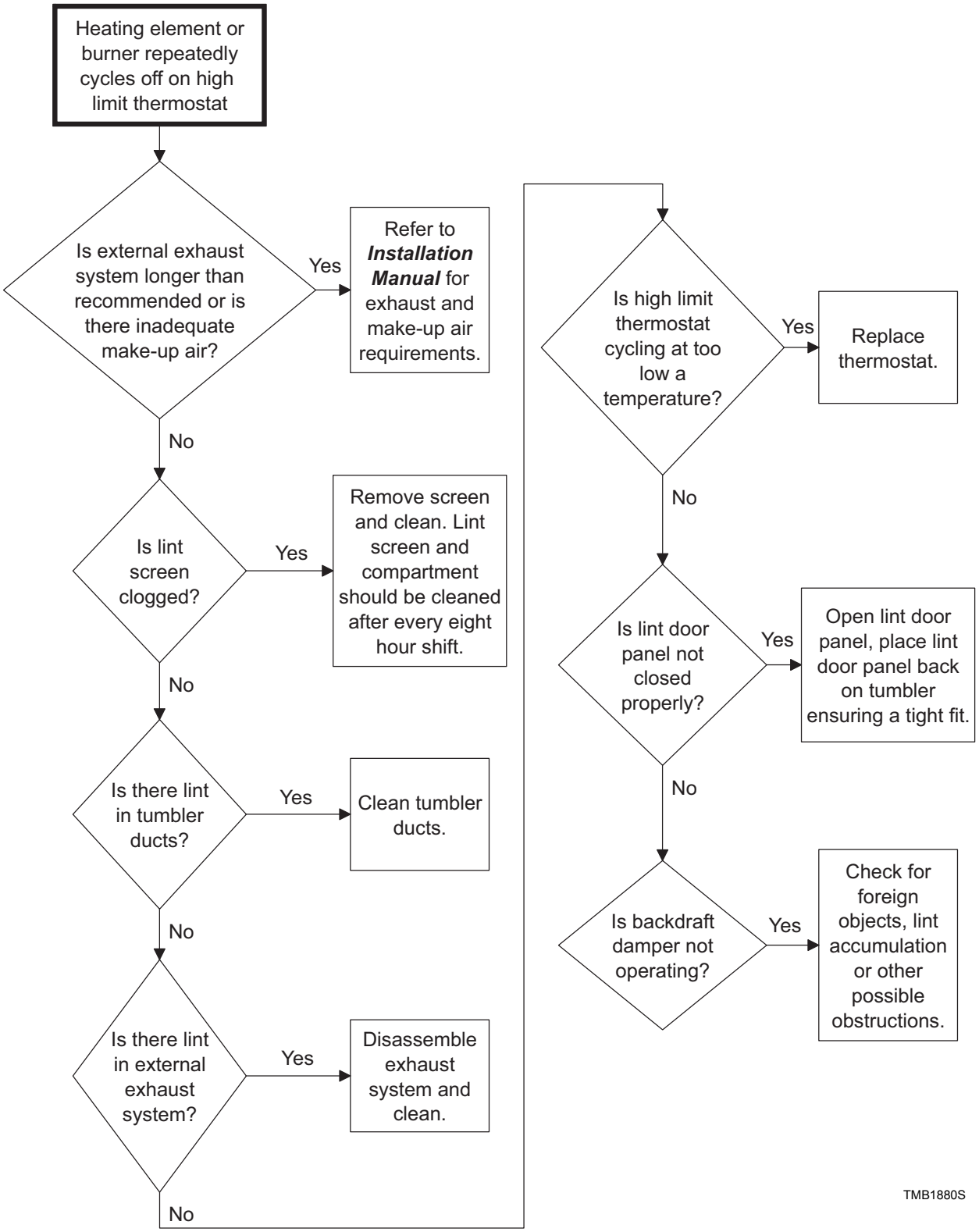
8. Heating Element or Burner Shuts Off Prematurely

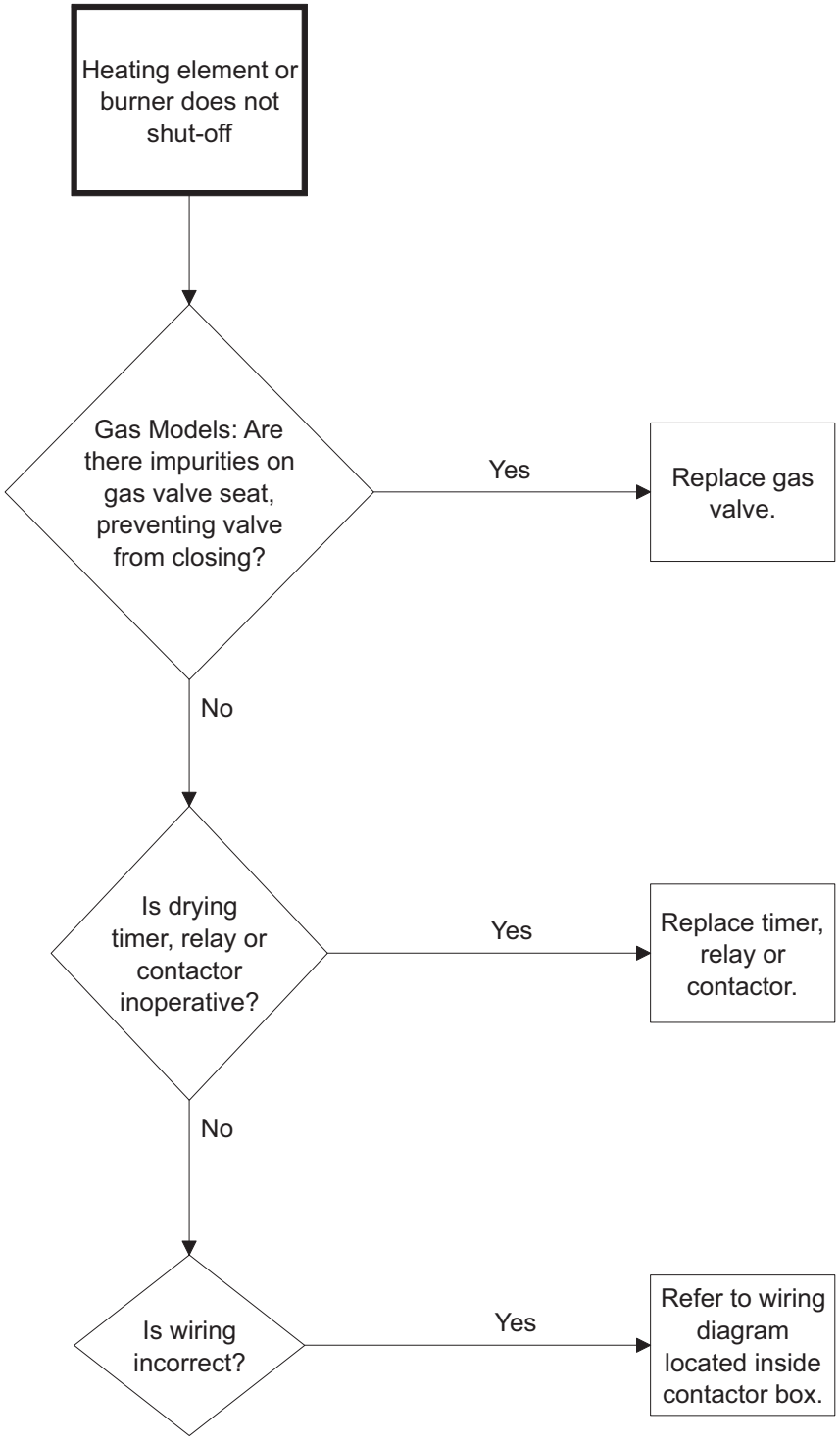


TMB1879S

9. Heating Element or Burner Repeatedly Cycles Off On High Limit Thermostat

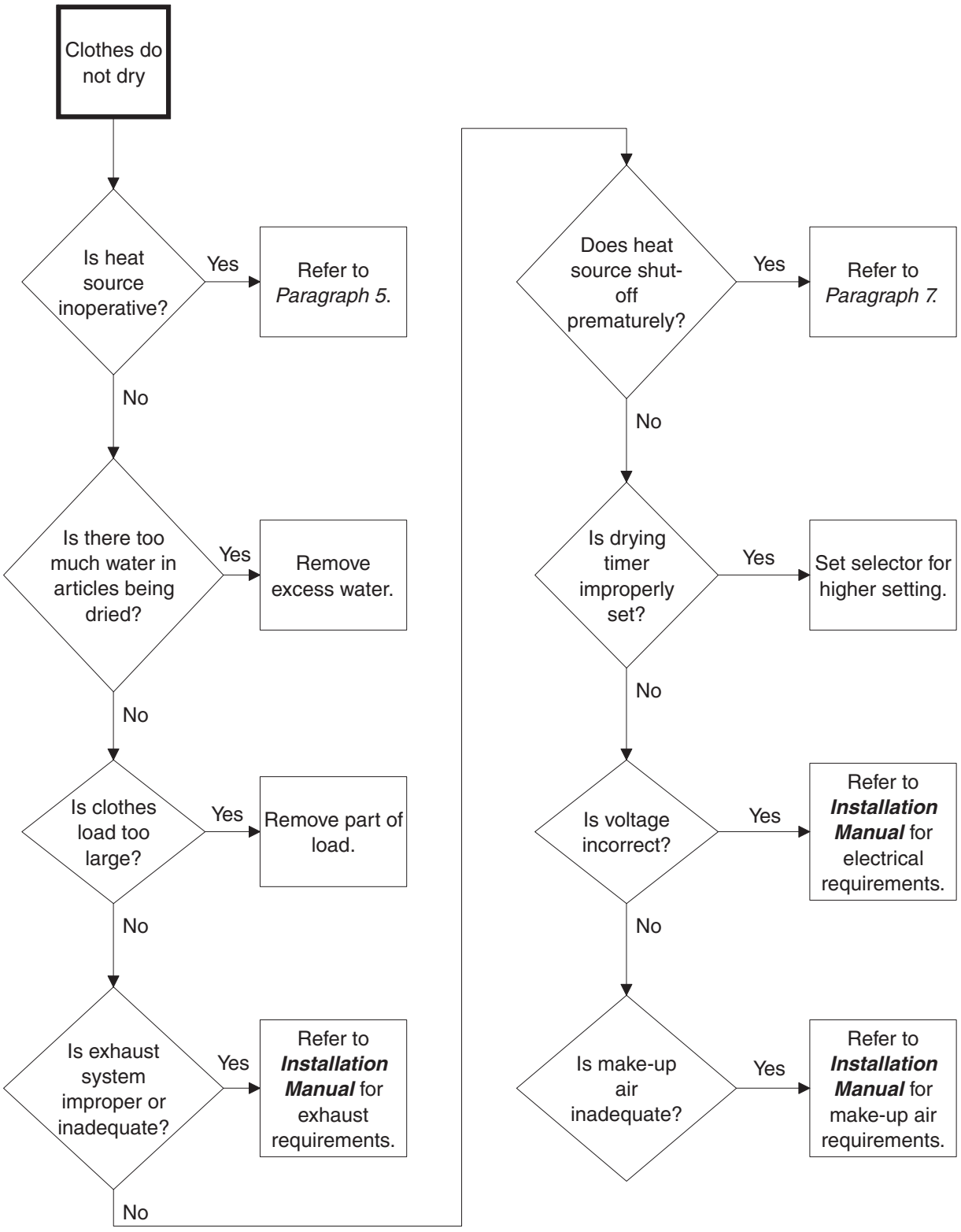


10. Heating Element or Burner Does Not Shut-Off



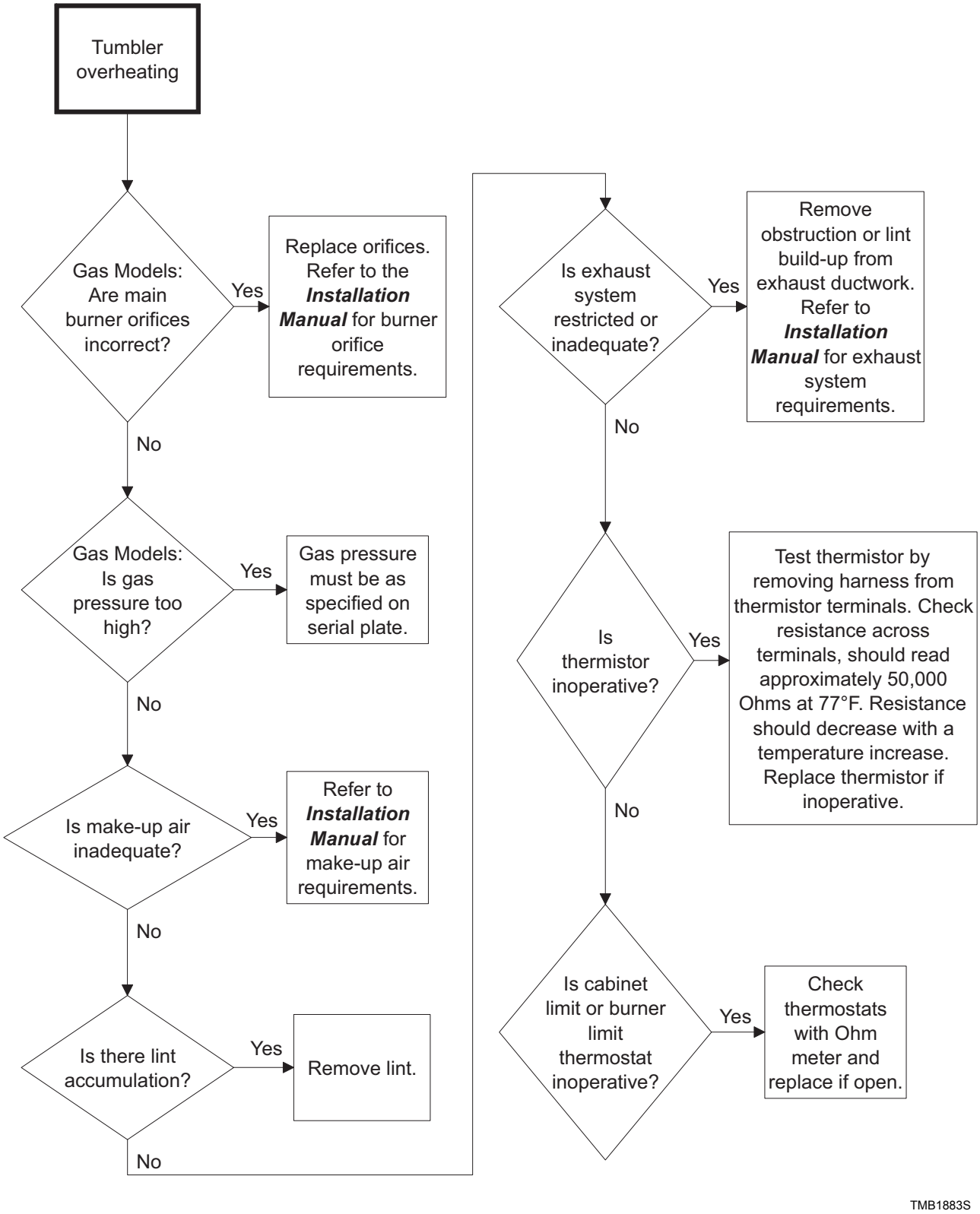
TMB1881S

11. Clothes Do Not Dry



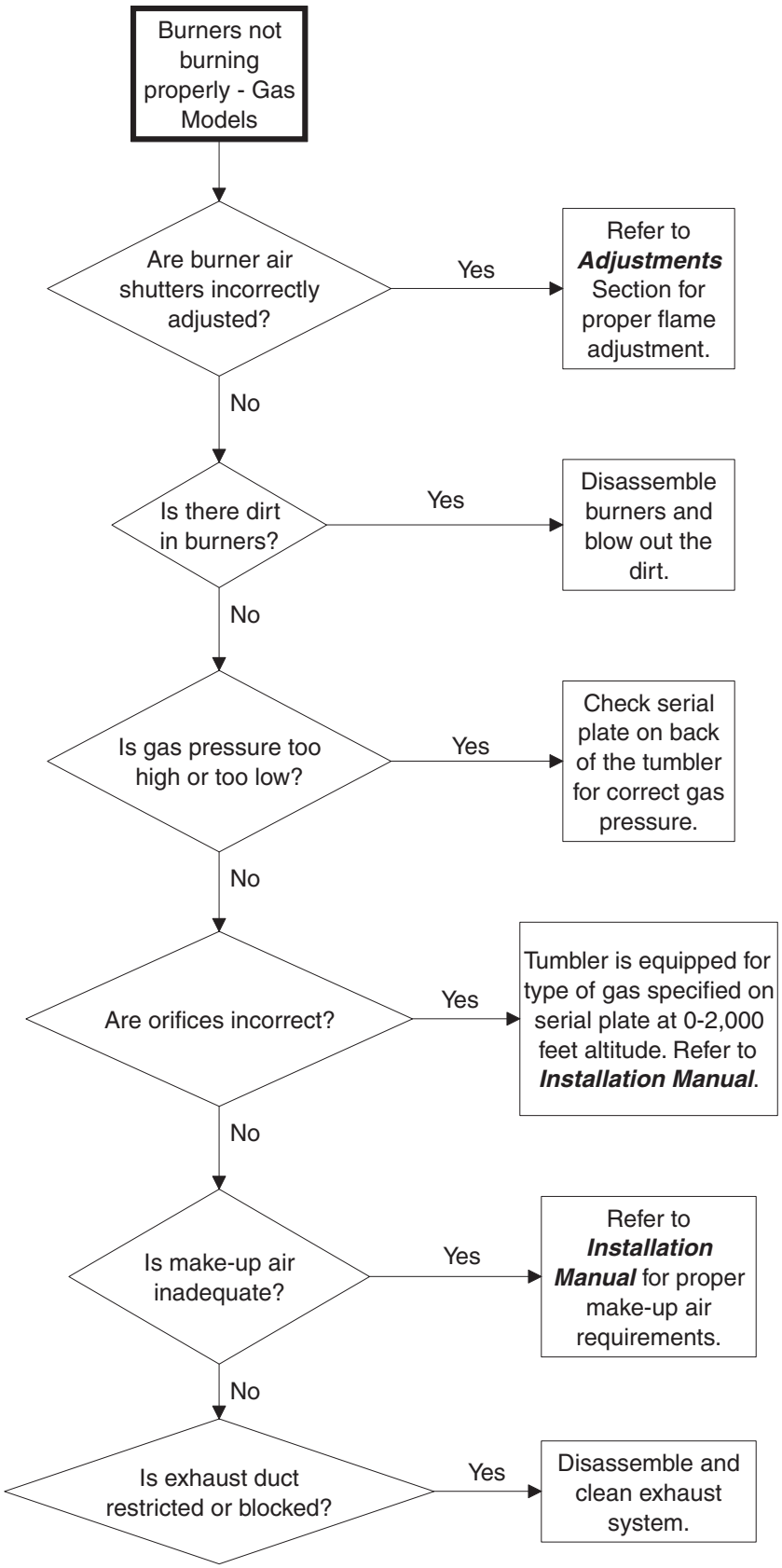
TMB1882S

12. Tumble Dryer Overheating



TMB1883S

13. Burners Not Burning Properly — Gas Models



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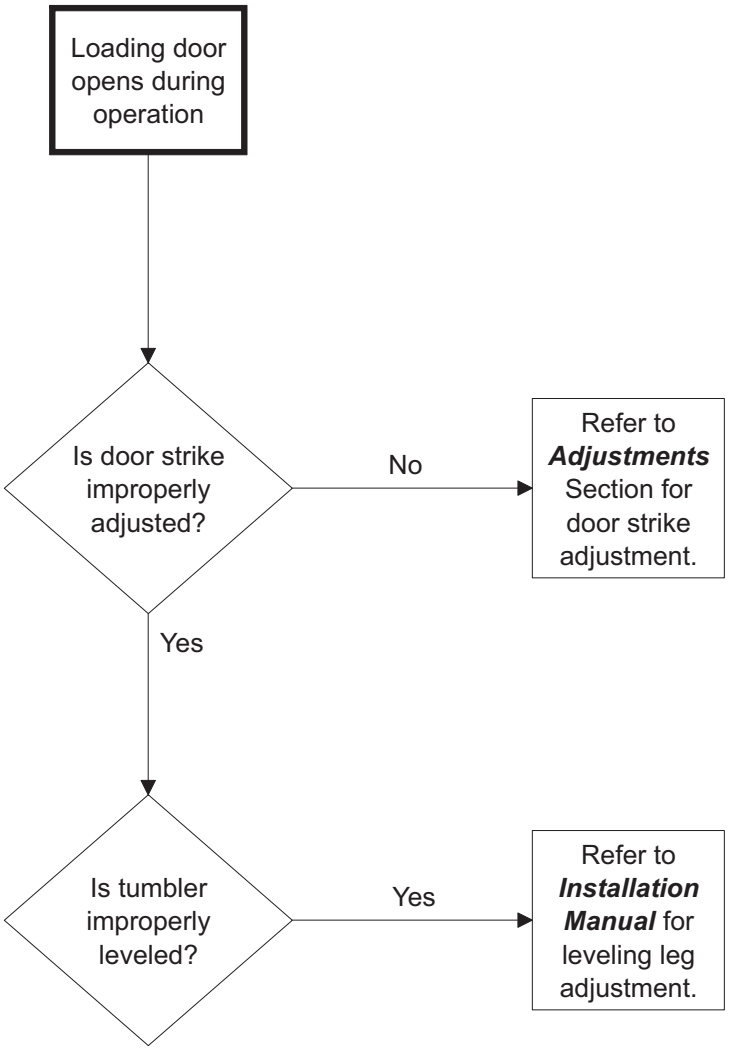
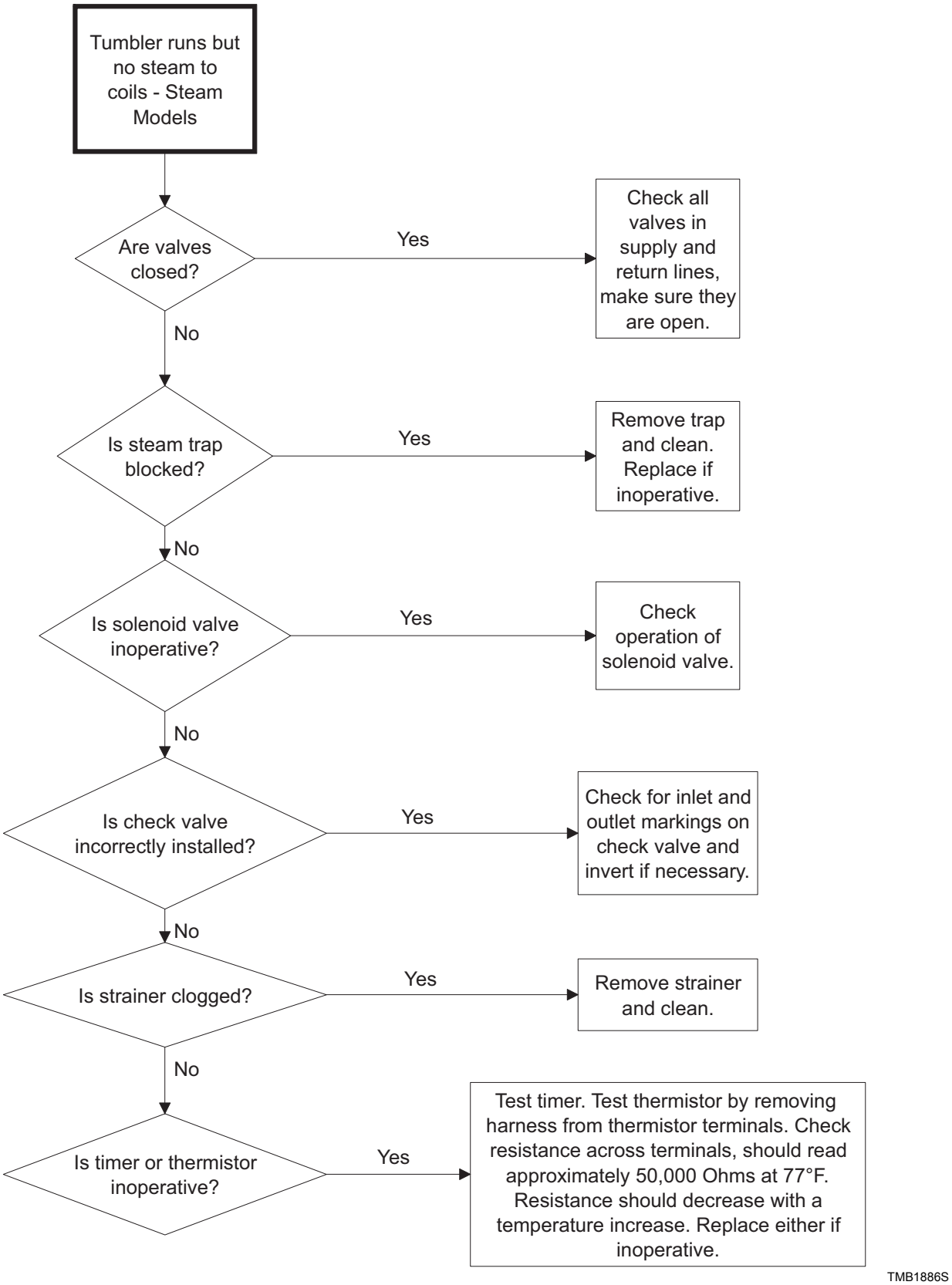
14. Loading Door Opens During Operation



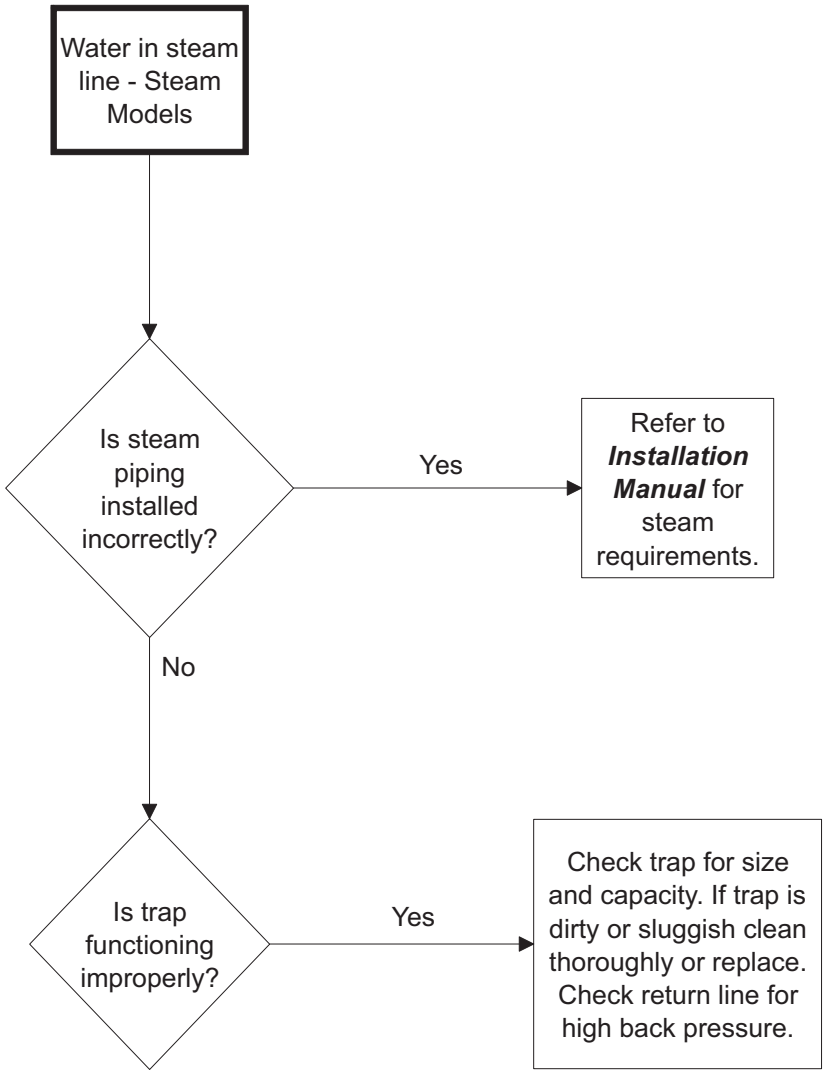
TMB1885S

15. Tumble Dryer Runs But No Steam To Coils — Steam Models



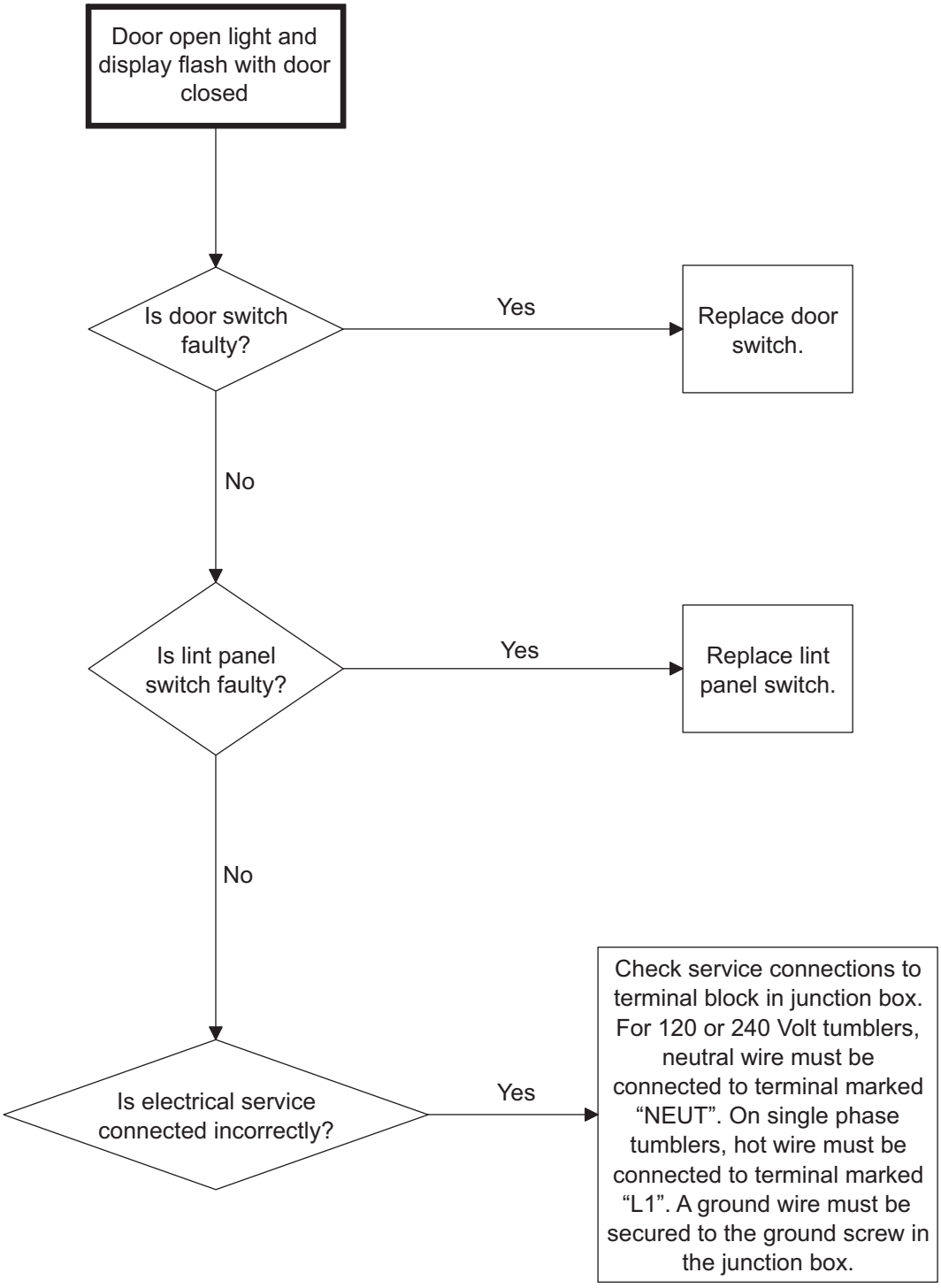
TMB1886S

16. Water In Steam Line — Steam Models



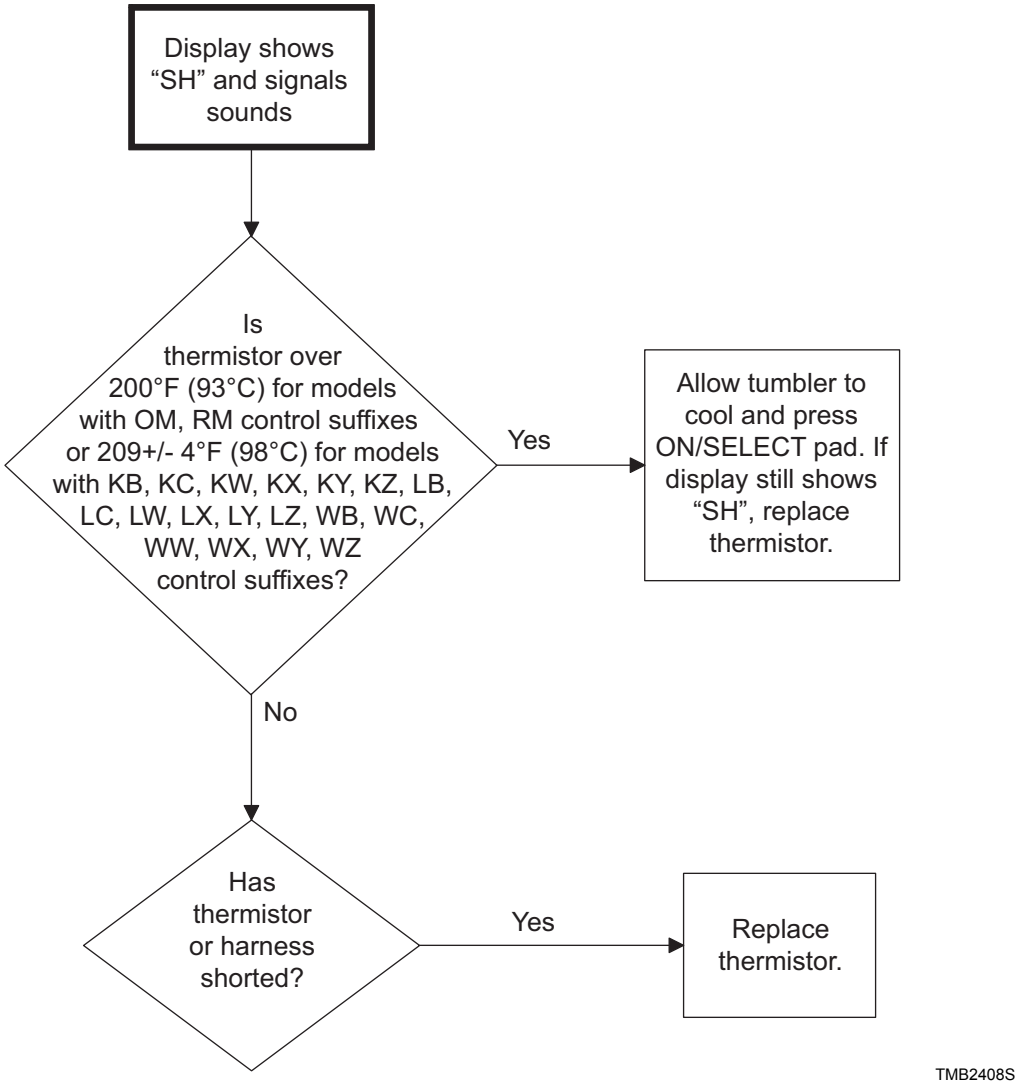
TMB1887S

17. Door Open Light and Display Flash With Door Closed

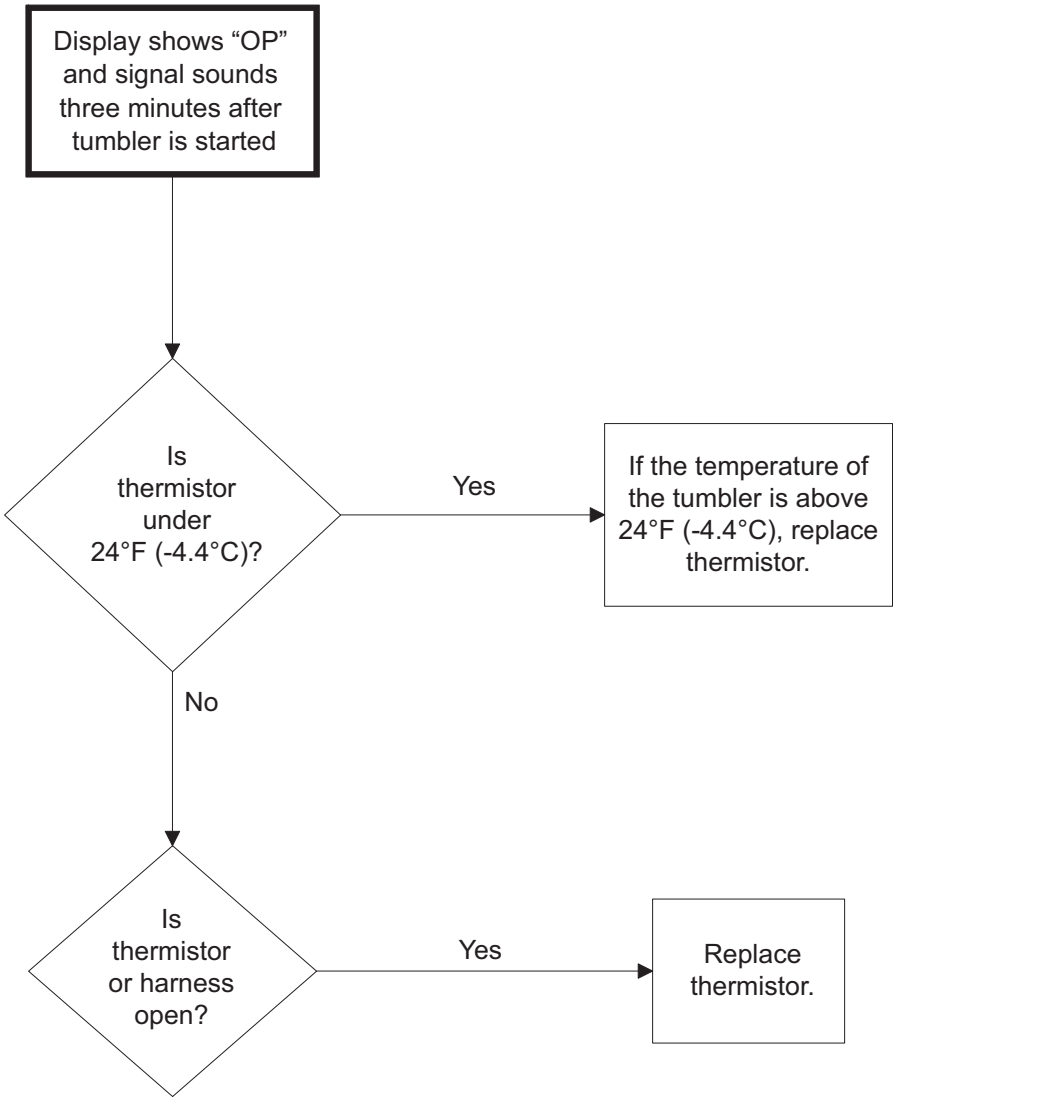


TMB2265S

18. Display Shows “SH” and Signals Sounds

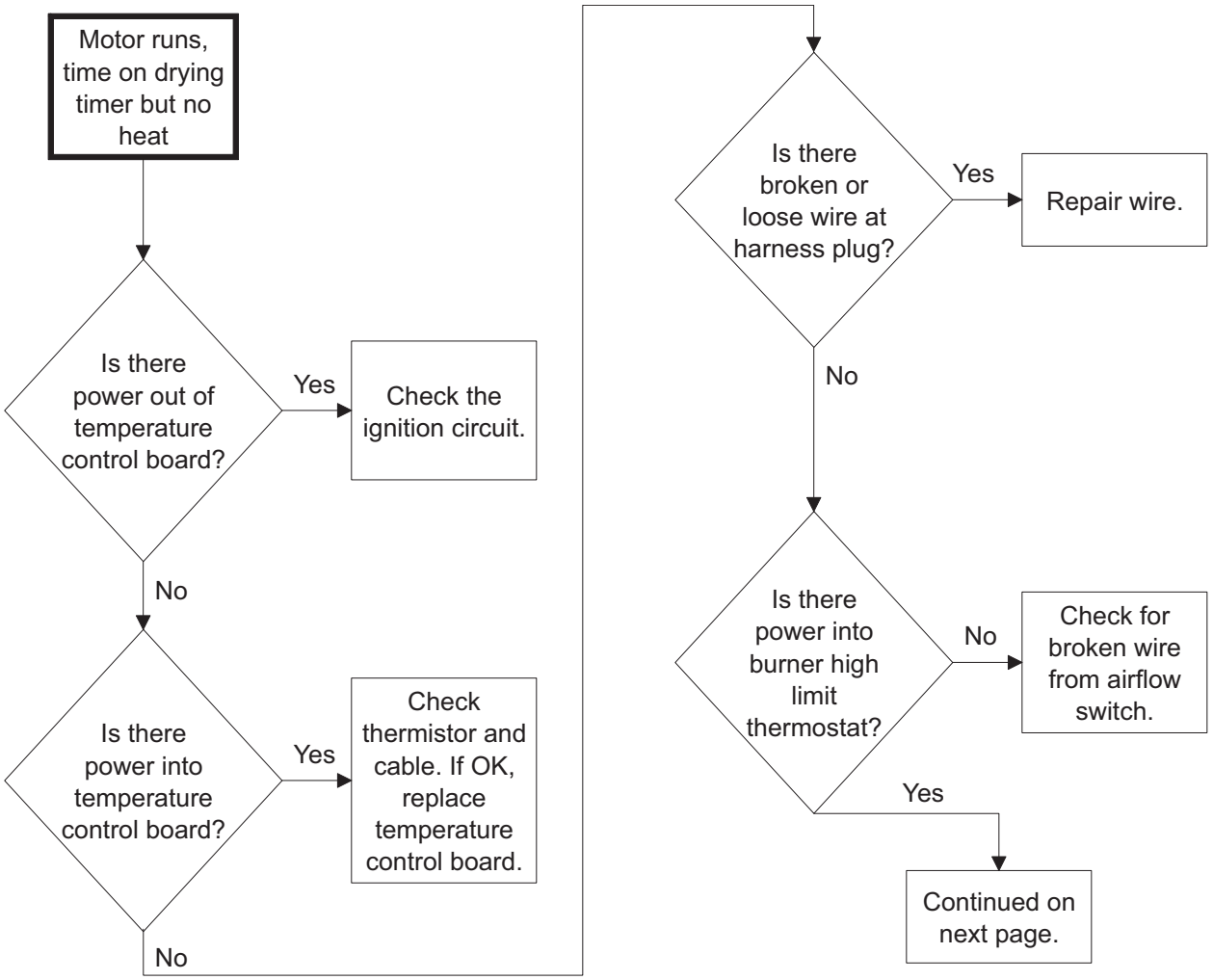


19. Display Shows “OP” and Signal Sounds Three Minutes After Tumble Dryer is Started



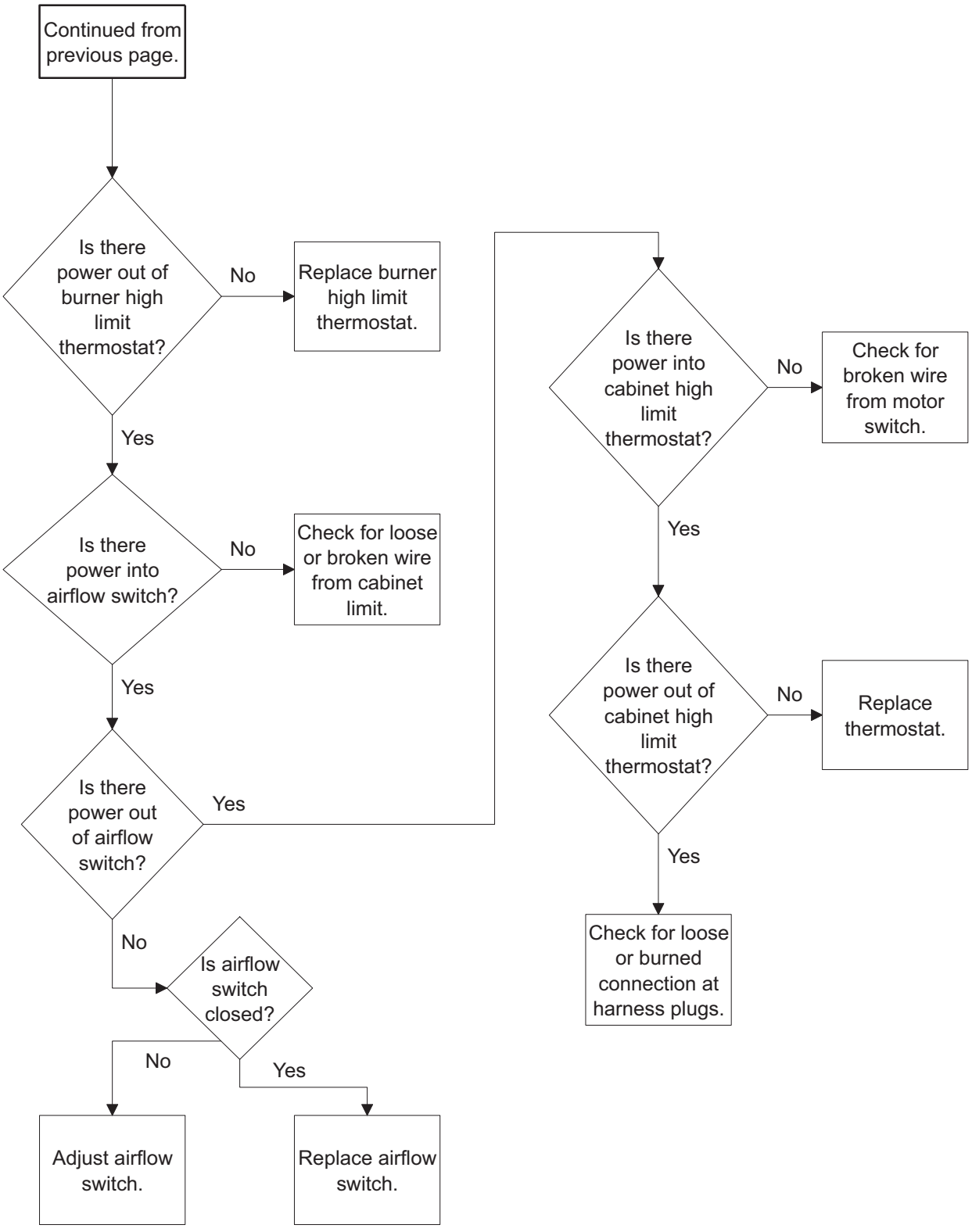
TMB2267S

20. Motor Runs, Time on Drying Timer But No Heat



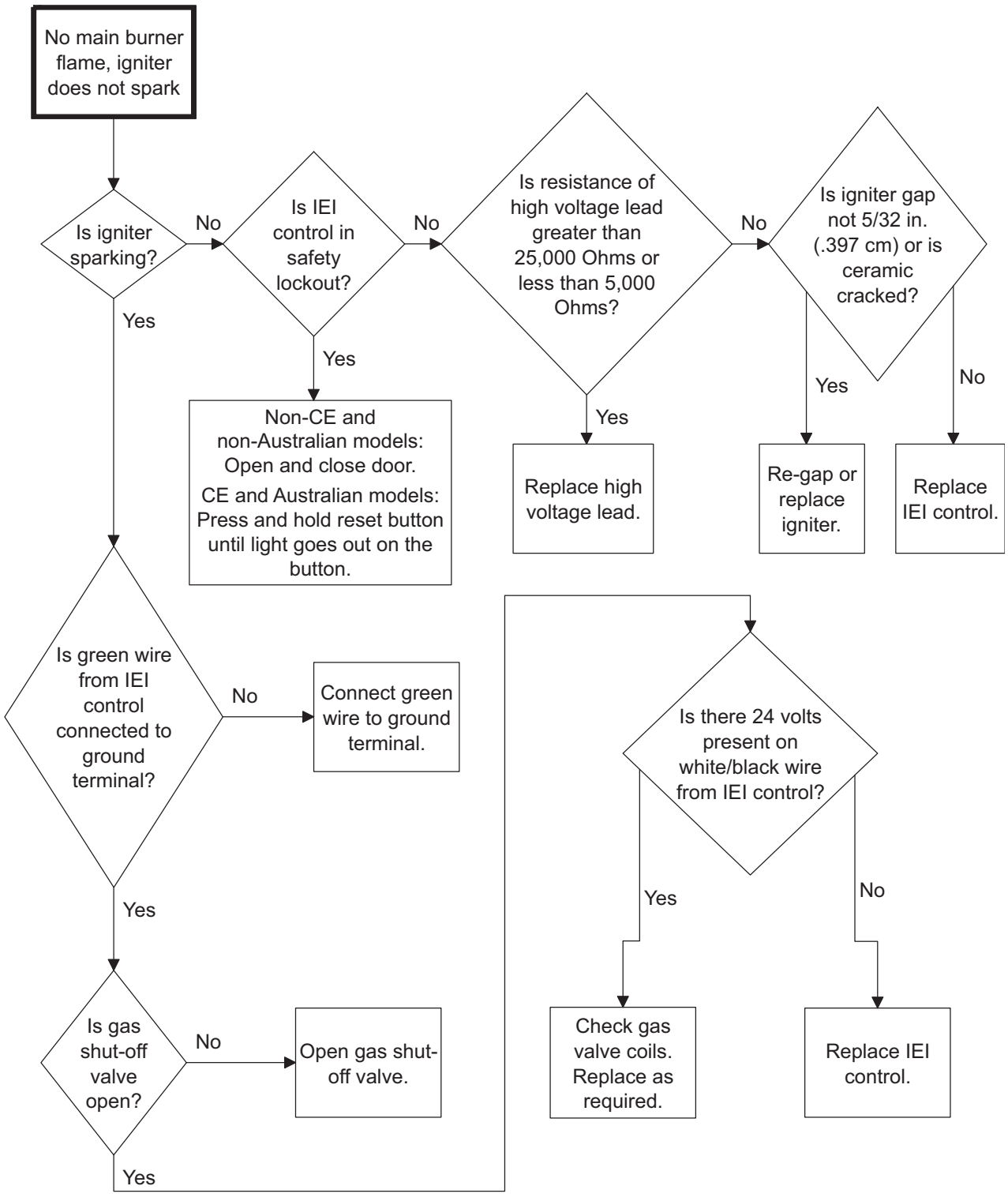
TMB2268S-a

20. Motor Runs, Time on Drying Timer But No Heat (continued)



TMB2268S-b

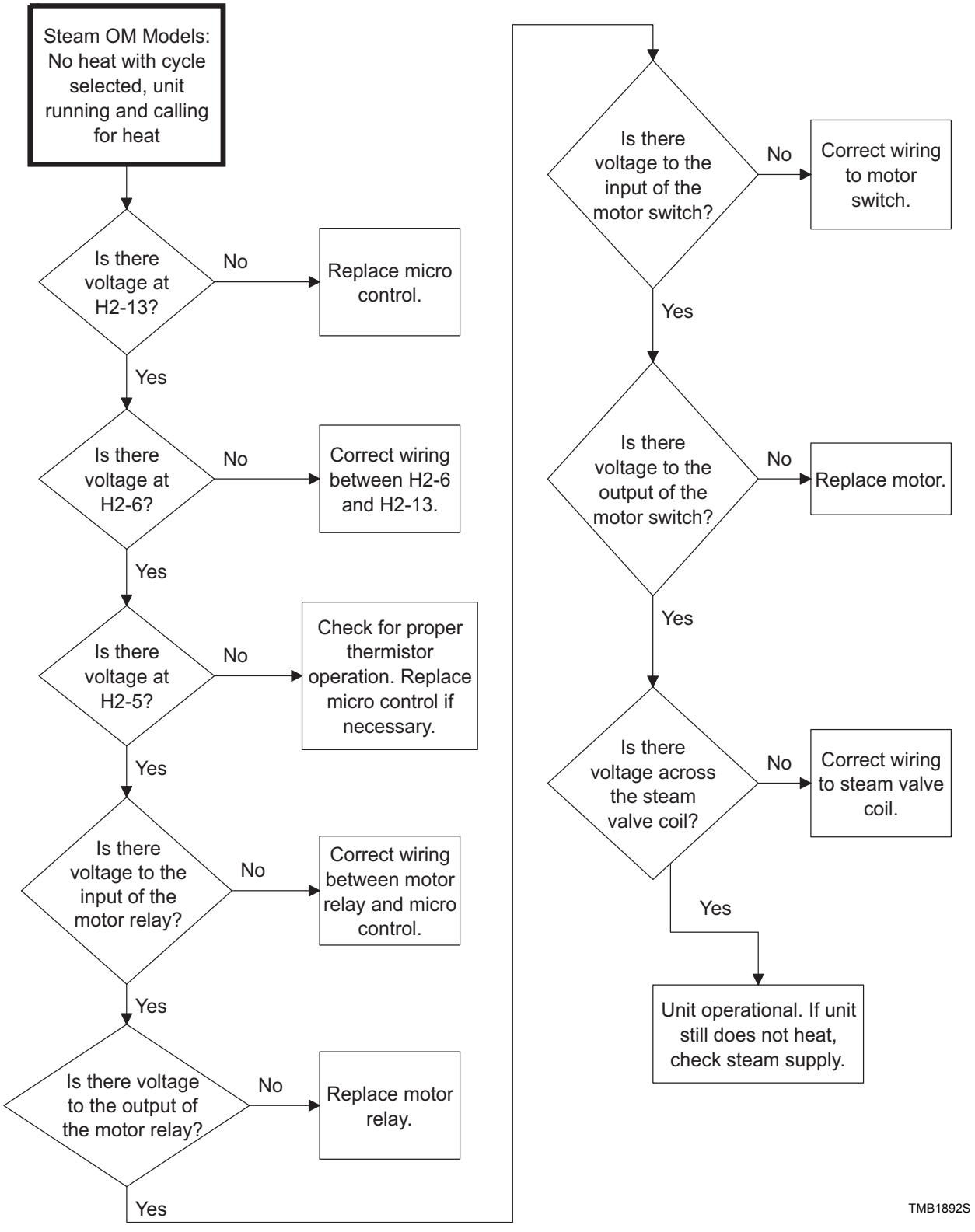
21. No Main Burner Flame, Igniter Does Not Spark



TMB2326S

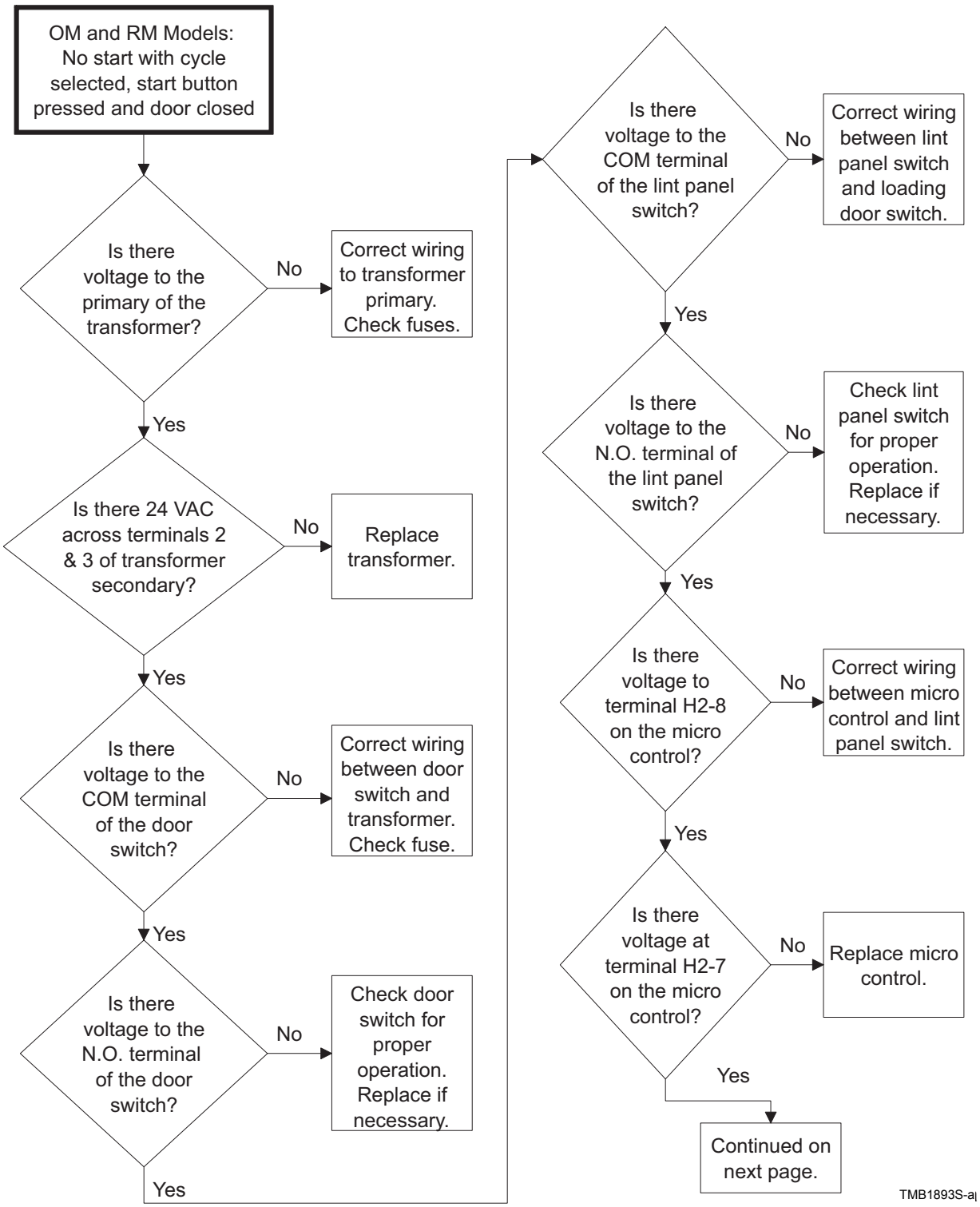
22. Steam OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat

120 Volt/60 Hertz/1 Phase and 208-240 Volt/60 Hertz/1 Phase Nonreversing
460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing

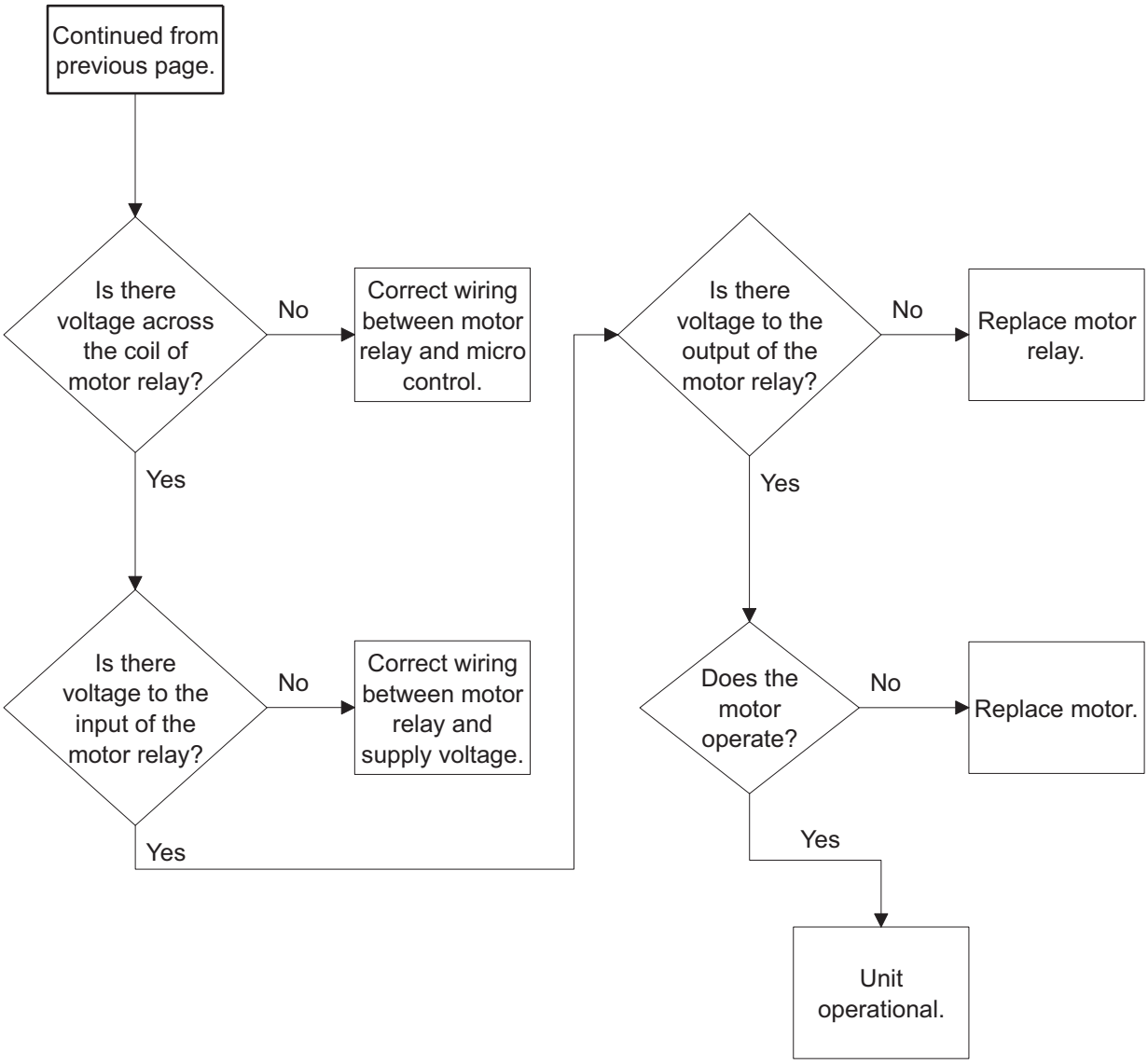


23. OM and RM Control: No Start With Cycle Selected, Start Button Pressed and Door Closed

120 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing
208-240 Volt/60 Hertz/1 or 3 Phase Steam Nonreversing
208-240 Volt/60 Hertz/3 Phase Electric Nonreversing
460-480 Volt/60 Hertz/3 Phase Gas, Electric and Steam Nonreversing



23. OM and RM Control: No Start With Cycle Selected, Start Button Pressed and Door Closed (continued)

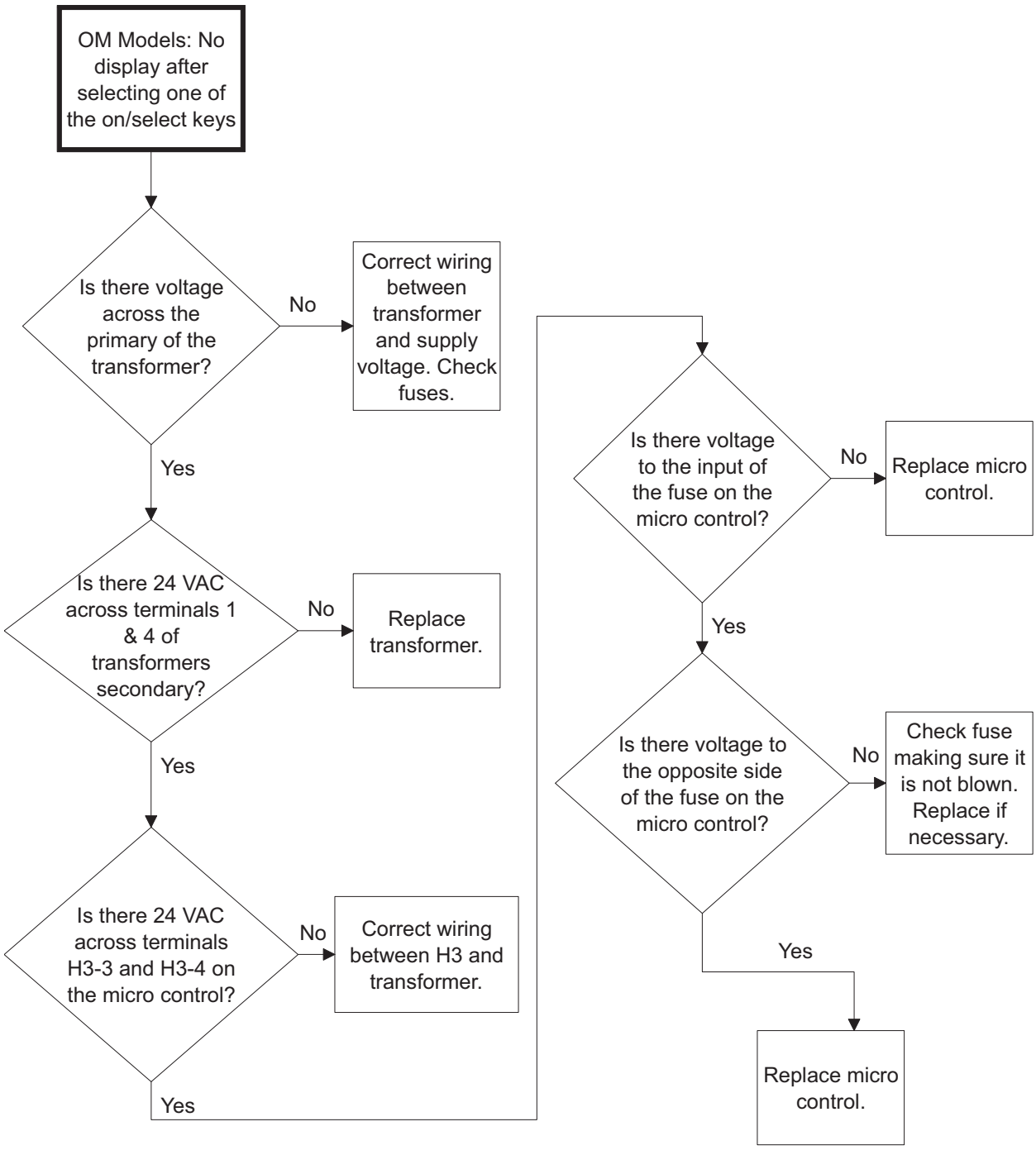


TMB1893S-b

TMB2325S-a

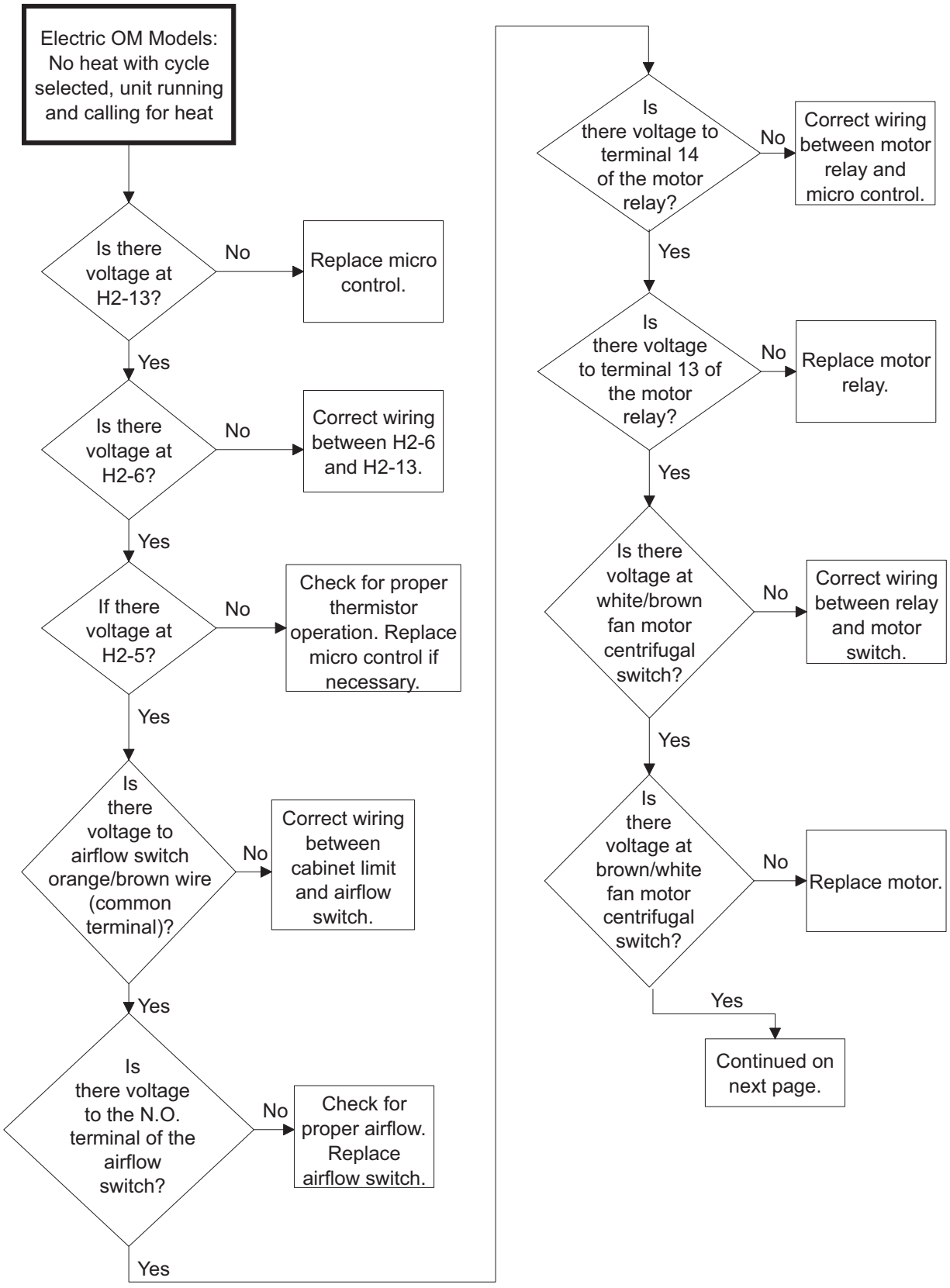
24. OM Control: No Display After Selecting One of the ON/SELECT Keys

120 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing
208-240 Volt/60 Hertz/1 Phase Gas and Steam Nonreversing
208-240 Volt/60 Hertz/3 Phase Gas and Steam Reversing/Nonreversing
208-240 Volt/60 Hertz/3 Phase Electric Reversing/Nonreversing
460-480 Volt/60 Hertz/3 Phase Gas, Electric and Steam Reversing/Nonreversing

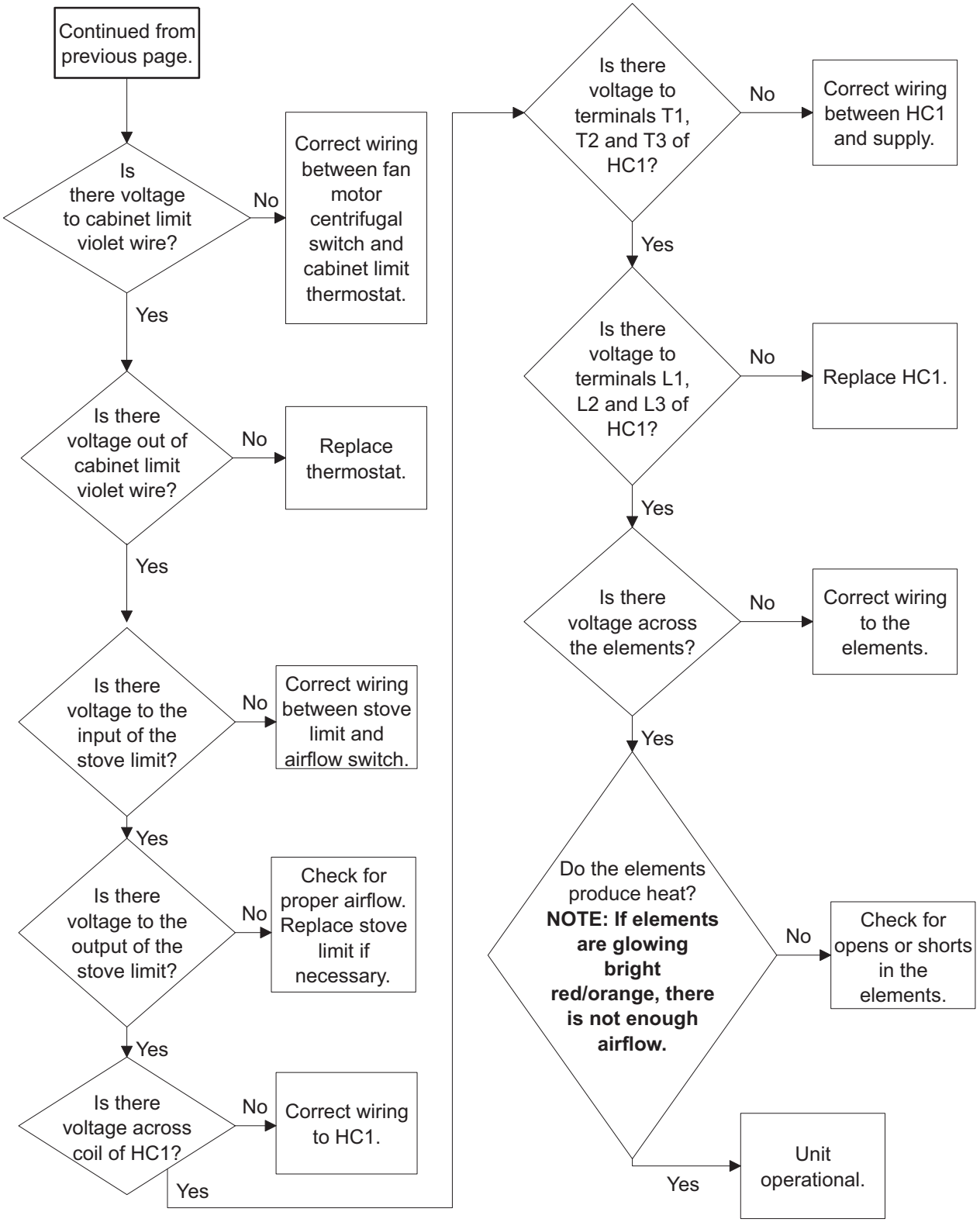


25. Electric OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat

460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing

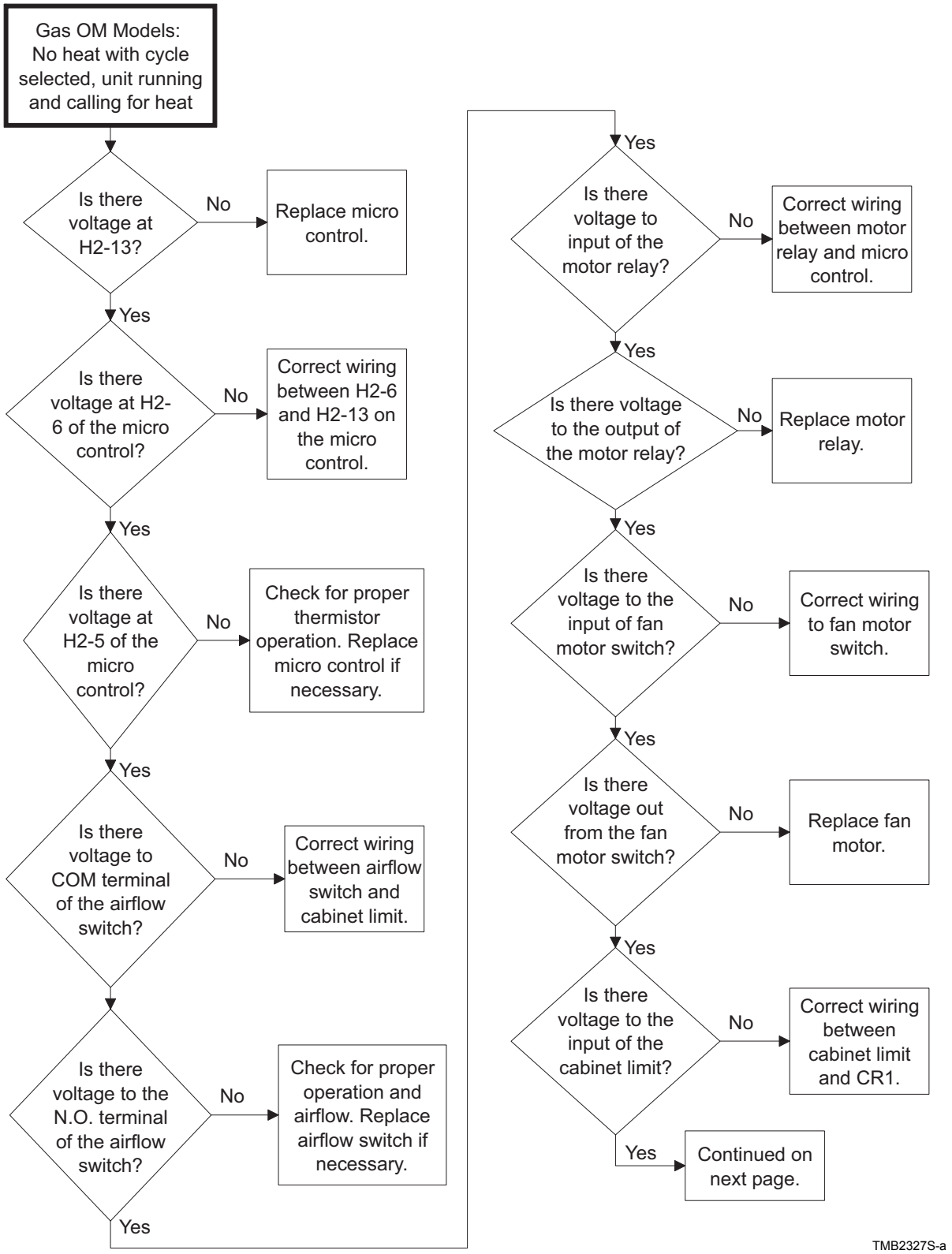


25. Electric OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat (continued)

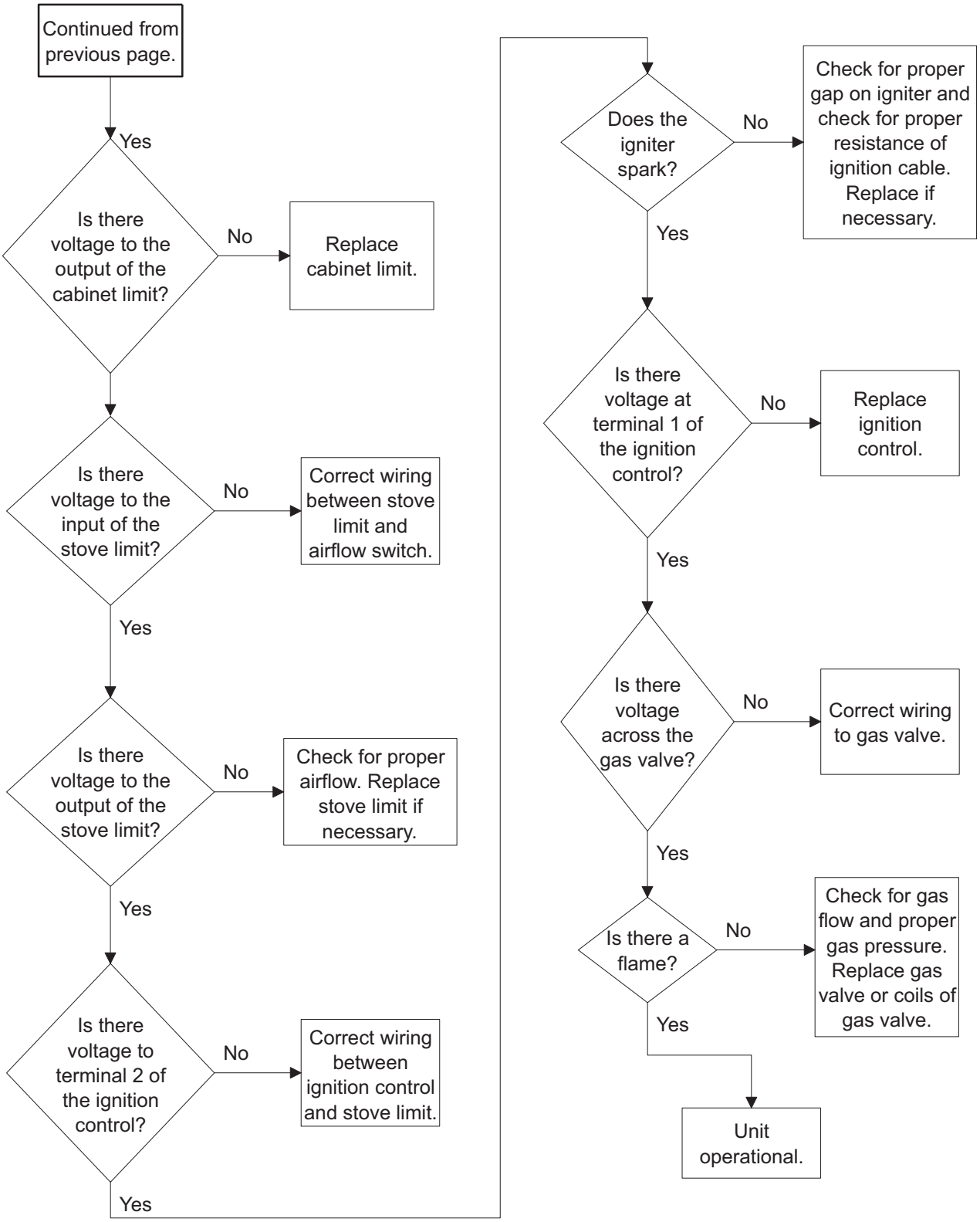


26. Gas OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat

120 Volt/60 Hertz/1 Phase and 208-240 Volt/60 Hertz/1 Phase Nonreversing
460-480 Volt/60 Hertz/3 Phase and 208-240 Volt/60 Hertz/3 Phase Reversing and Nonreversing



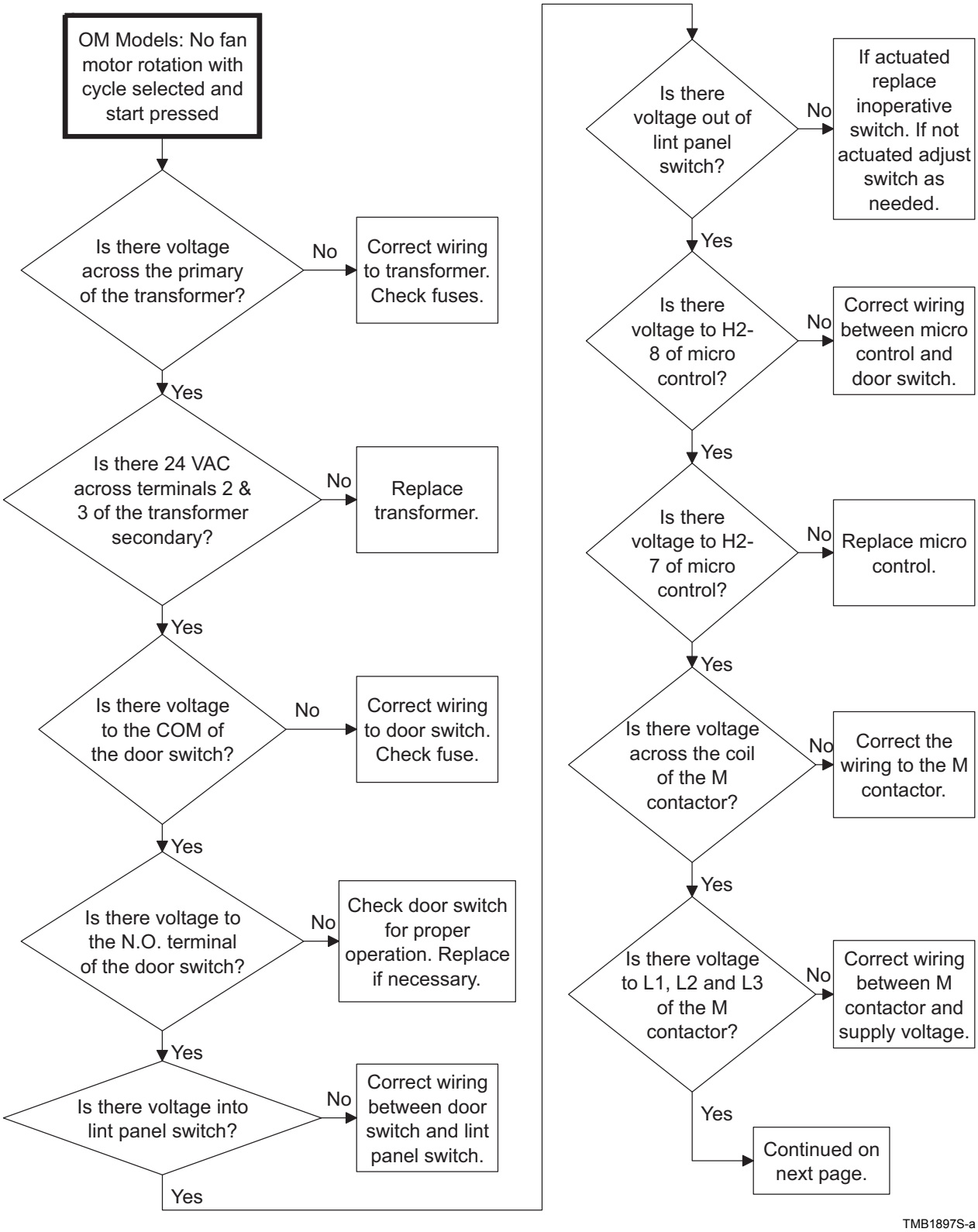
26. Gas OM Control: No Heat With Cycle Selected, Unit Running and Calling For Heat (continued)



TMB2327S-b

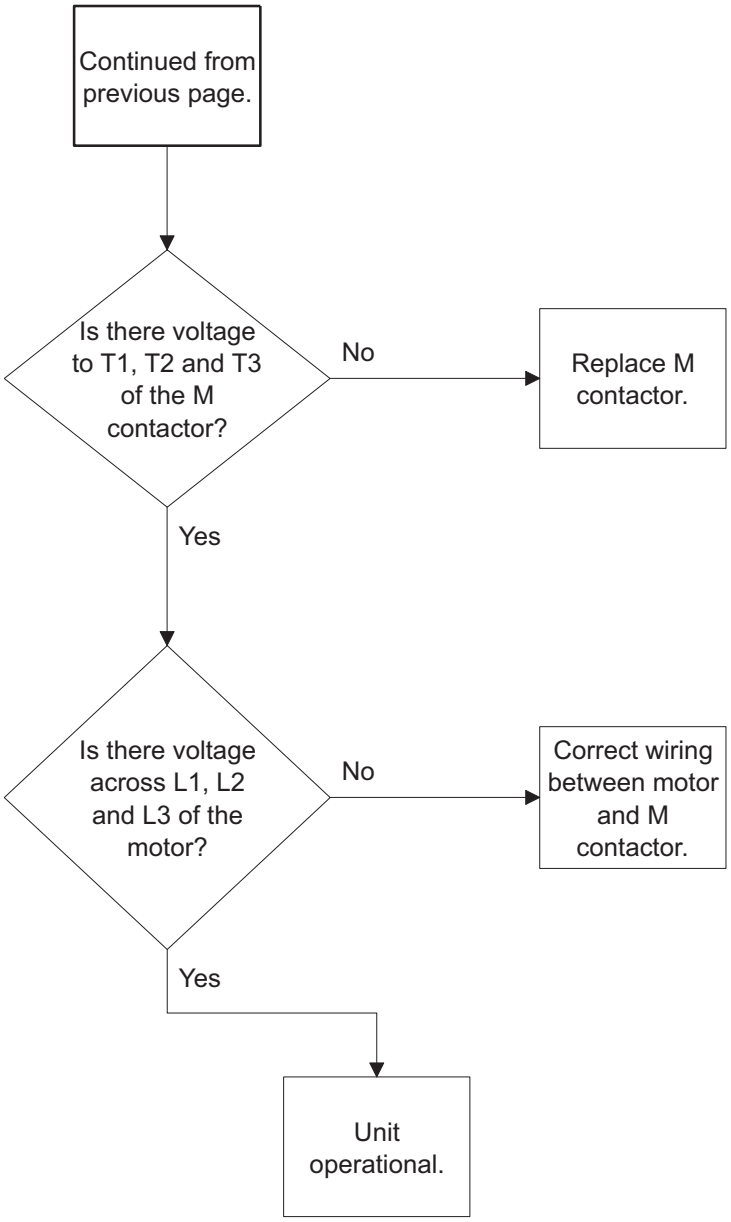
27. OM Control: No Fan Motor Rotation With Cycle Selected and Start Pressed

208-240 Volt/60 Hertz/3 Phase and 480 Volt/60 Hertz/3 Phase Electric Reversing Models
208-240 Volt/60 Hertz/3 Phase and 460-480 Volt/60 Hertz/3 Phase Gas Reversing and Steam Models



TMB1897S-a

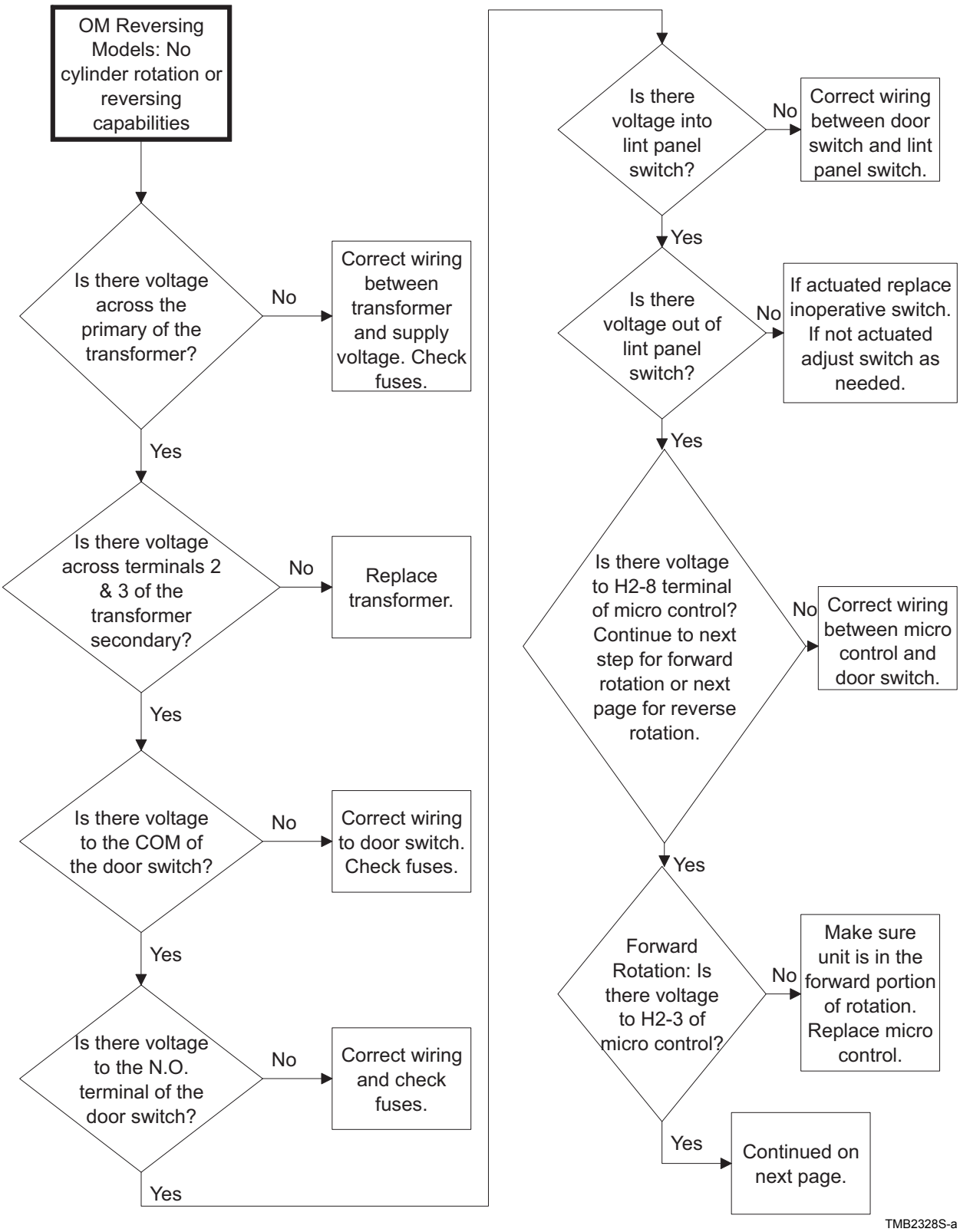
27. OM Control: No Fan Motor Rotation With Cycle Selected and Start Pressed (continued)



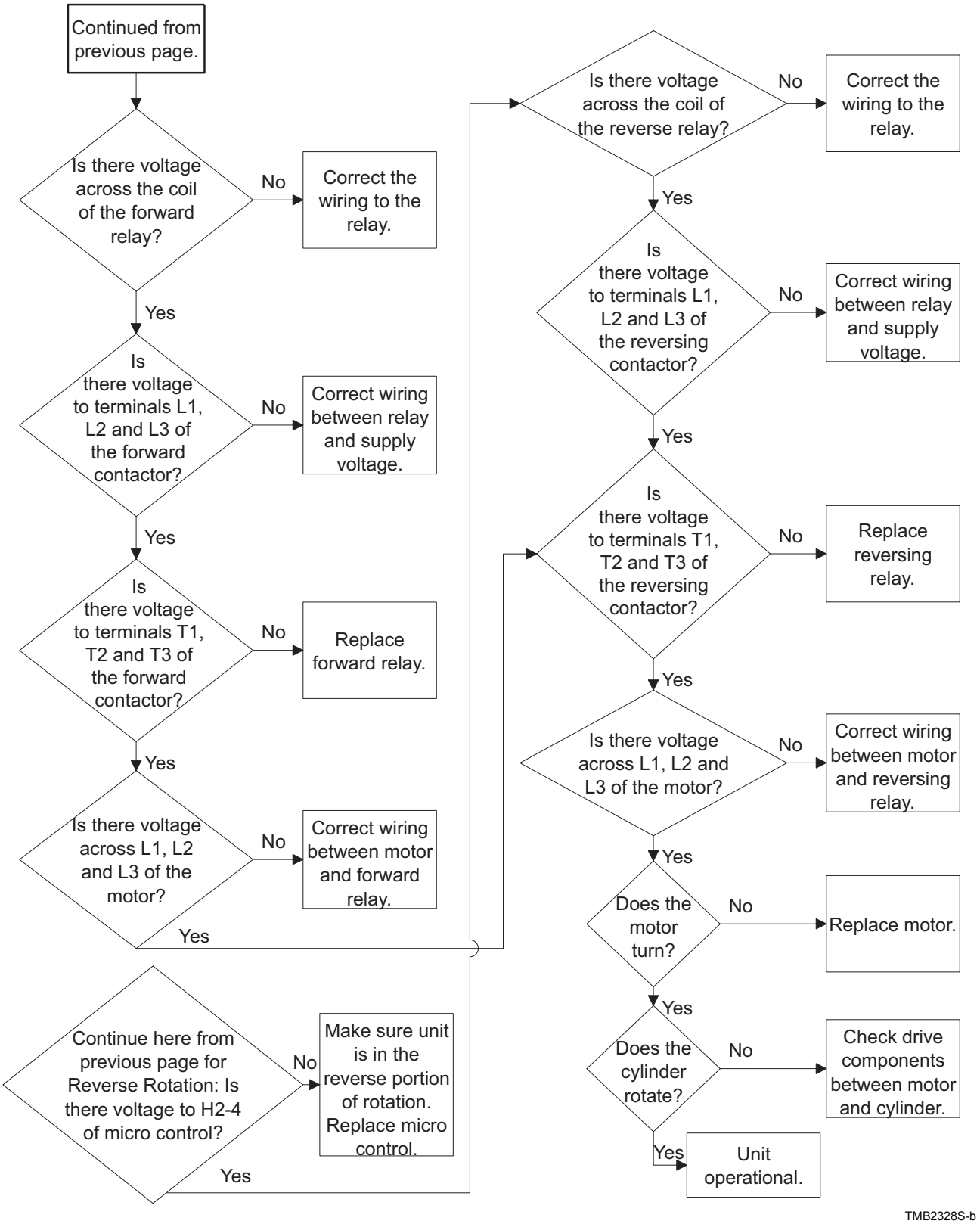
TMB1897S-b

28. OM Reversing Control: No Cylinder Rotation or Reversing Capabilities

208-240 Volt/60 Hertz/3 Phase and 480 Volt/60 Hertz/3 Phase Electric Models
208-240 Volt/60 Hertz/3 Phase and 460-480 Volt/60 Hertz/3 Phase Gas and Steam Models

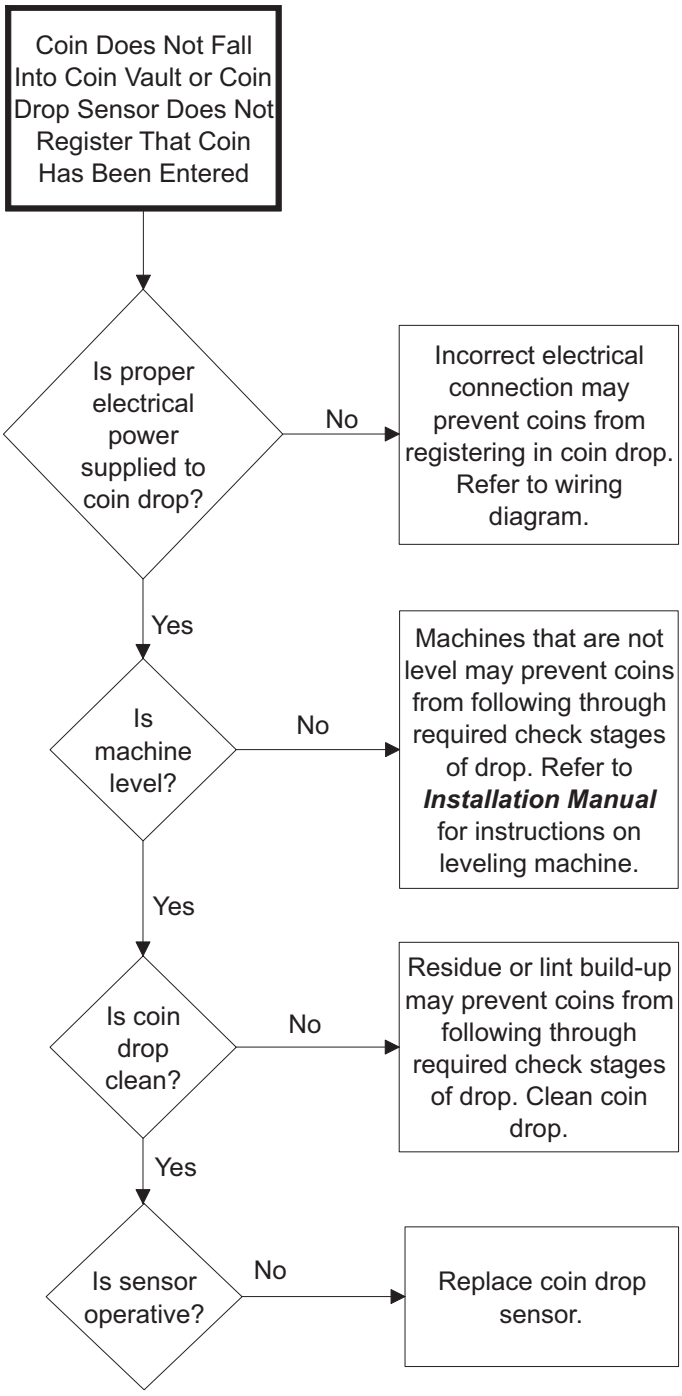


28. OM Reversing Control: No Cylinder Rotation or Reversing Capabilities (continued)



TMB2328S-b

29. Coin Does Not Fall into Coin Vault or Coin Drop Sensor Does Not Register that Coin Has Been Entered



TMB1915S

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

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

Troubleshooting Coin Drop

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

1. Clean coin drop. Refer to *Paragraph 23.*
2. On electronic coin drops with an old-style tension spring (shown in *Figure 1* and *Figure 3*), 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 1*.

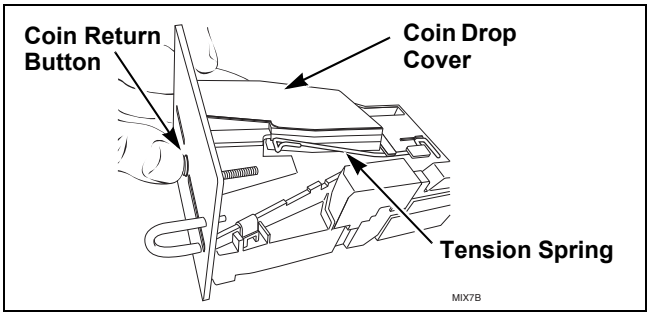


Figure 1

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

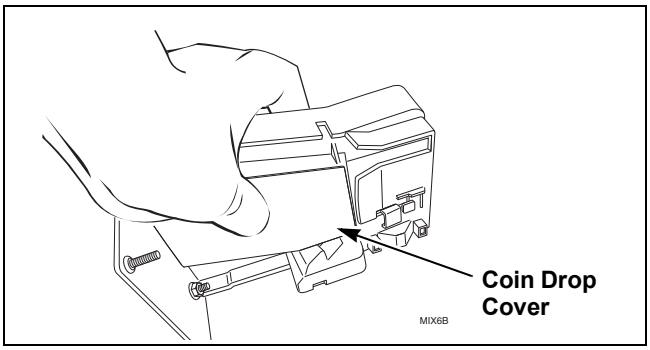


Figure 2

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 3*.

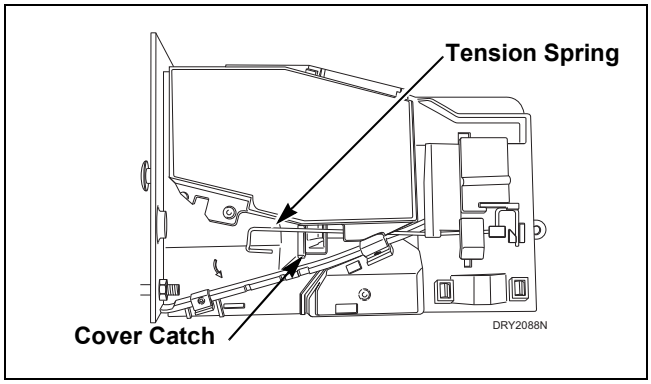


Figure 3

2. Open cover for coin drop.
3. Place a small flathead screwdriver under right side of tension spring and lift up. Refer to *Figure 4*.

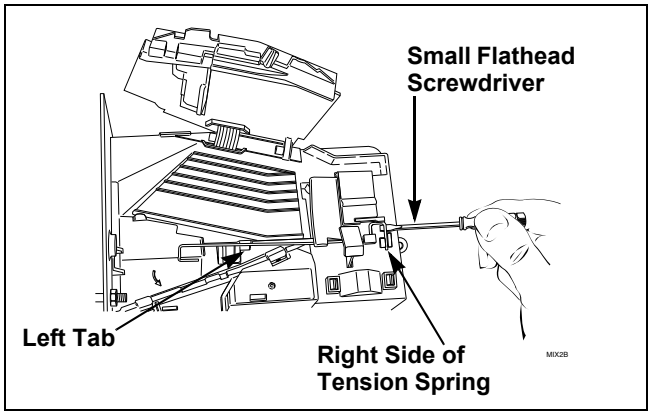


Figure 4

4. Use screwdriver to move spring approximately 3 mm to left.
5. Lift spring over left tab. Refer to *Figure 4*.
6. Rotate spring clockwise, 40 to 60 degrees, until it is free from right tabs. Refer to *Figure 5*.

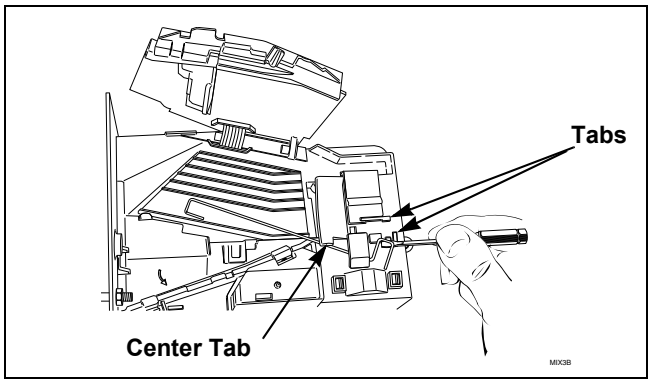


Figure 5

7. Use screwdriver to remove spring from center tab. Refer to *Figure 5*.
8. Lift spring, with attached clip, off drop.
9. Remove clip from spring. Refer to *Figure 6*.

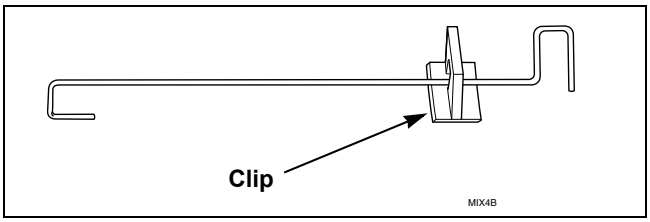


Figure 6

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 7*.

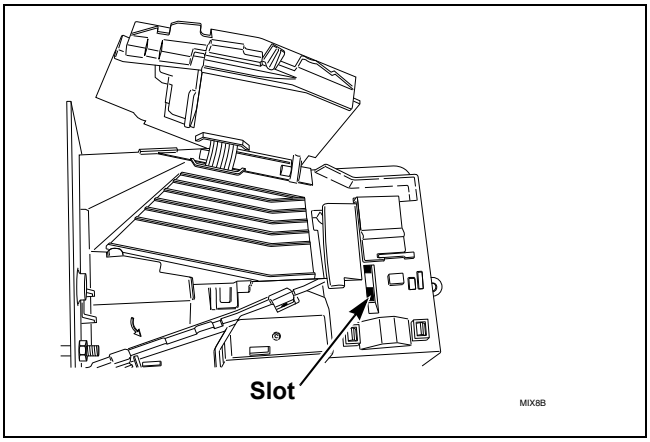


Figure 7

12. Use a small flathead screwdriver to push spring under center tab. Refer to *Figure 8*.

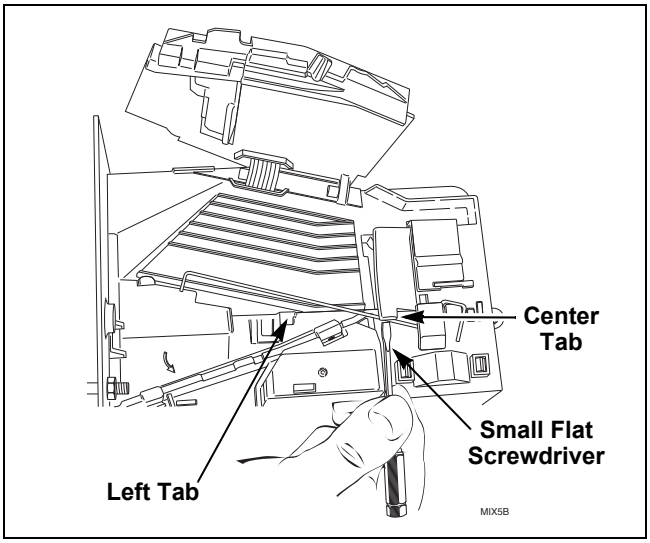


Figure 8

13. Lift spring gently to place in position under left tab.
14. Push spring to right until it snaps into position. Refer to *Figure 4*.
15. Close coin drop cover.
16. Move tension spring over cover catch. Refer to *Figure 3*.

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.

30. Cylinder Is “Stained”

Over time, the cylinder and cylinder backs of tumble dryers can become “stained” from various melted fabrics. These discolored areas can be removed by scrubbing the inside of the cylinder with cleaner and a cleaning pad, such as Scotch- Brite®.

IMPORTANT: Do not use a steel wool pad to clean the cylinder. Steel wool can damage your machine.

Galvanized Cylinders

For galvanized cylinders, use an all-purpose cleaner (such as 409®) and a cleaning pad (such as Scotch-Brite®) to clean the inside of the cylinder.

1. Spray the cleaner on the discolored areas and let soak for a few minutes.
2. Using the pad, scrub the areas until the discoloration is removed.
3. Repeat steps 1-2 as necessary.
4. Thoroughly wipe the entire cylinder after cleaning to insure the cleaner has been removed.

Stainless Steel Cylinders

For stainless steel cylinders, use a heavy duty powder cleanser (such as Zud®) and a cleaning pad (such as Scotch- Brite®) to clean the inside of the cylinder.

1. Using a water spray bottle, wet the cylinder and cylinder back.
2. Sprinkle cleanser onto the pad and scrub the discolored areas.
3. Repeat steps 1-2 as necessary.
4. Thoroughly wipe the entire cylinder after cleaning to insure the cleanser has been removed.

Section 4
Fire Supression System Troubleshooting

CAUTION

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

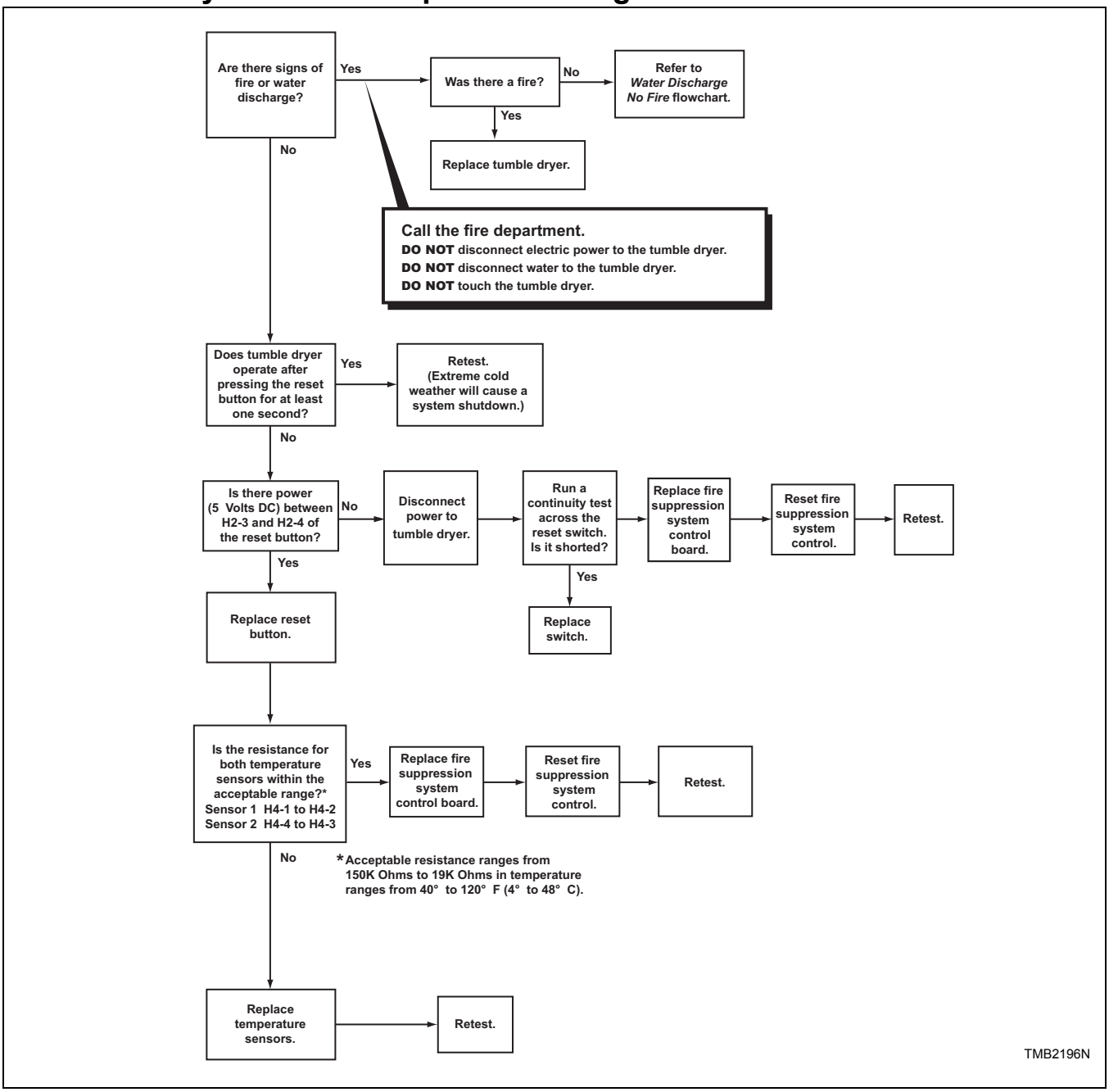
- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

A water discharge or system fault is indicated when the fire suppression system control box light is on.

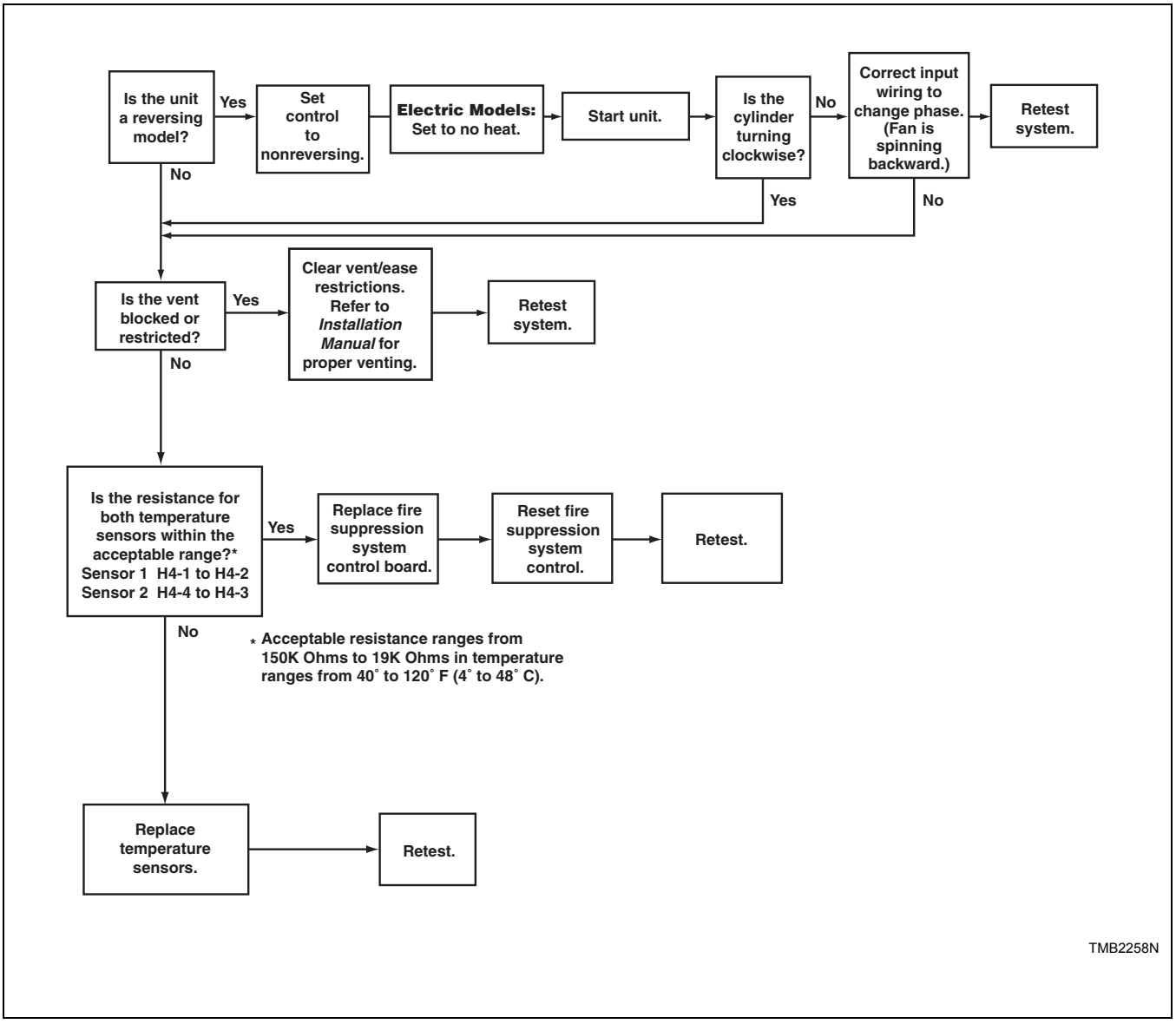
IMPORTANT: When handling electronic controls, use a ground wrist strap. Due to the sensitivity of electronic controls, careful handling is required. Wrist strap, cord and alligator clip are designed to carry away any electrostatic charge from your body and to direct charge to an available ground. By using this static protection device, potential electrostatic discharge problems associated with handling of electronic control will be minimized. Always handle electronic control by its metal edges.

31. Tumble Dryer Does Not Operate and Light Is On

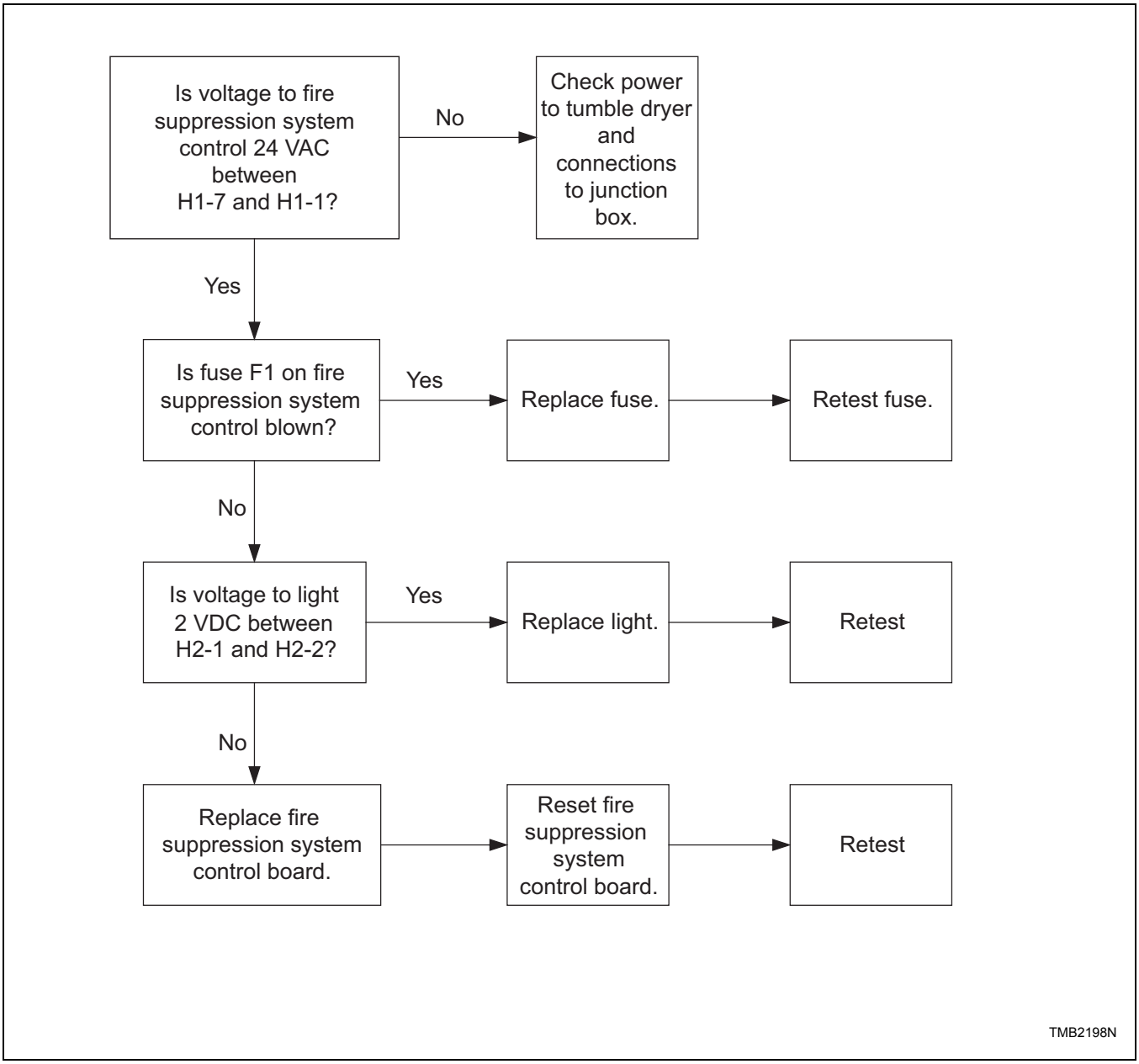


32. Water Discharge, but No Fire

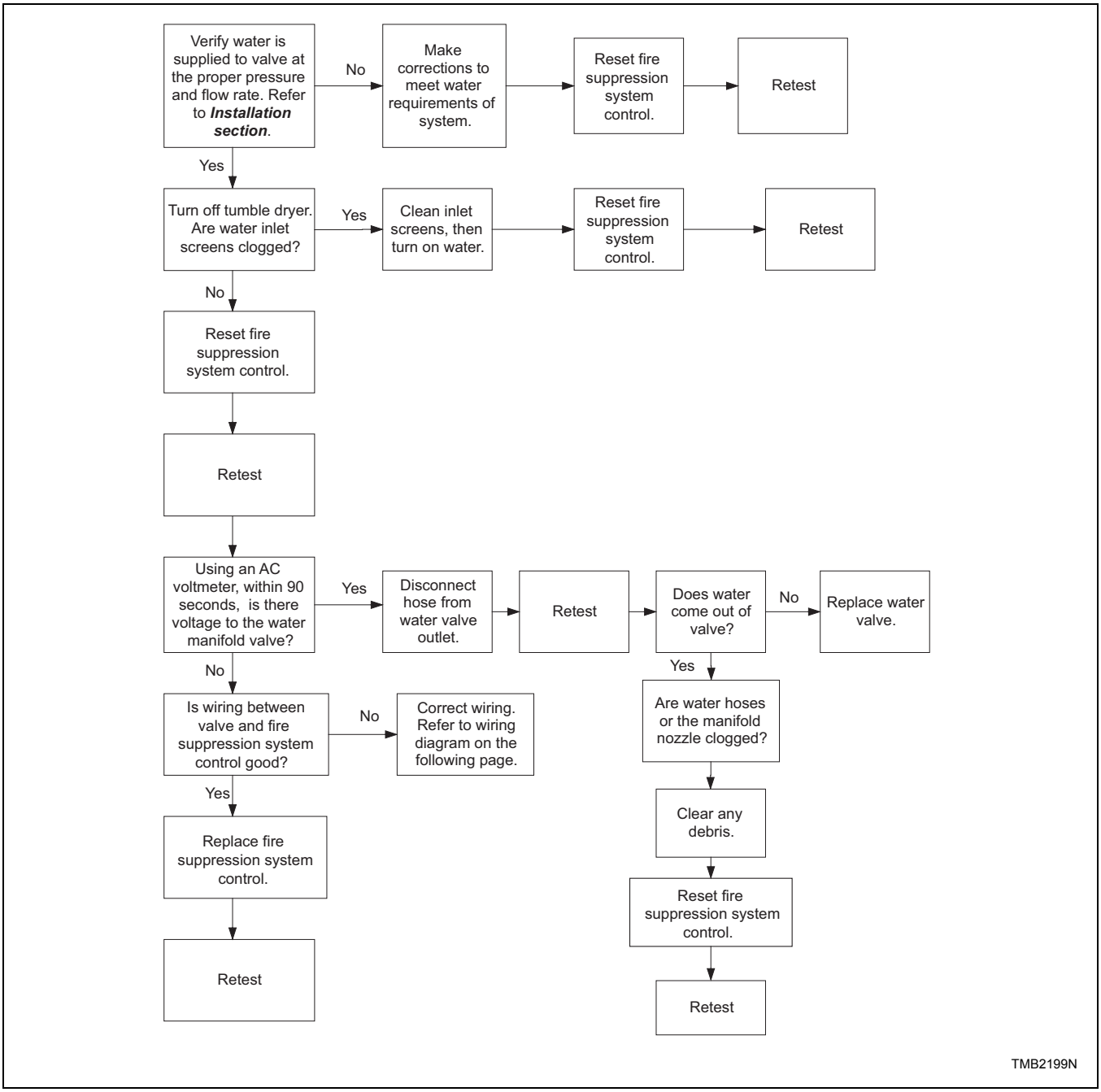
IMPORTANT: Electric Models: If water has discharged into machine, you MUST perform this diagnostic test with NO HEAT to the machine.



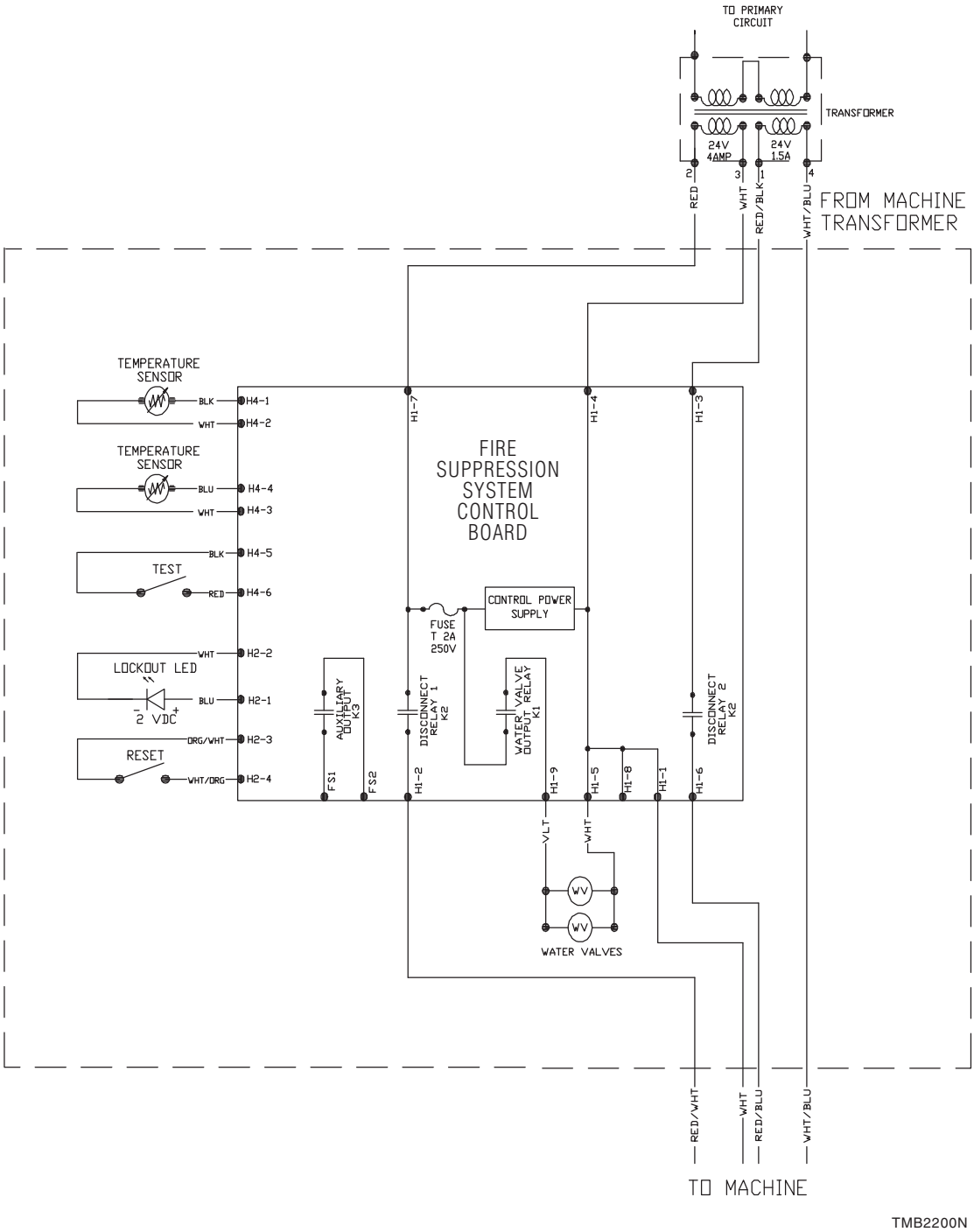
33. Tumble Dryer Does Not Operate and Light Is Off



34. Tumble Dryer Operates, but Water Does Not Discharge and Light Is On



Tumble Dryer Operates, but Water Does Not Discharge and Light Is On



Section 5
Adjustments

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

35. Main Gas Burner Air Inlet Shutters (Gas Models)

Refer to *Figure 11*.

CAUTION

The air inlet shutters on the burner must be adjusted so sufficient primary air is metered into the system for proper combustion and maximum efficiency. Before adjusting the inlet shutter be sure that all lint is removed from lint compartment and lint screen.

W281

Air inlet shutter adjustments will vary from location to location and will depend on the vent system, number of units installed, make-up air and line gas pressure. Opening the shutter increases the amount of air supplied to the burner while closing the shutter decreases the air supply. Adjust air shutter as follows:

a. Unlock and remove the access door. Remove guard on rear of unit.
b. Start the tumbler and check the flame pattern. Correct air and gas mixture is indicated if the flame pattern is primarily blue, with small yellow tips, and bends to the left of the heater section. Too little air is indicated if the flame is yellow, lazy and smoky.
c. To adjust the air inlet shutter, loosen adjusting screws.
d. Push or pull shutters in or out as necessary to obtain desired flame intensity.
e. After shutter is adjusted, tighten locking screw securely.
f. If the shutter is correctly adjusted, but the flame pattern is stright up, insufficient air is flowing through the tumbler. A flame pattern that flares to the right and left indicates that no air is flowing through the tumbler. Check make-up air and exhaust vent.

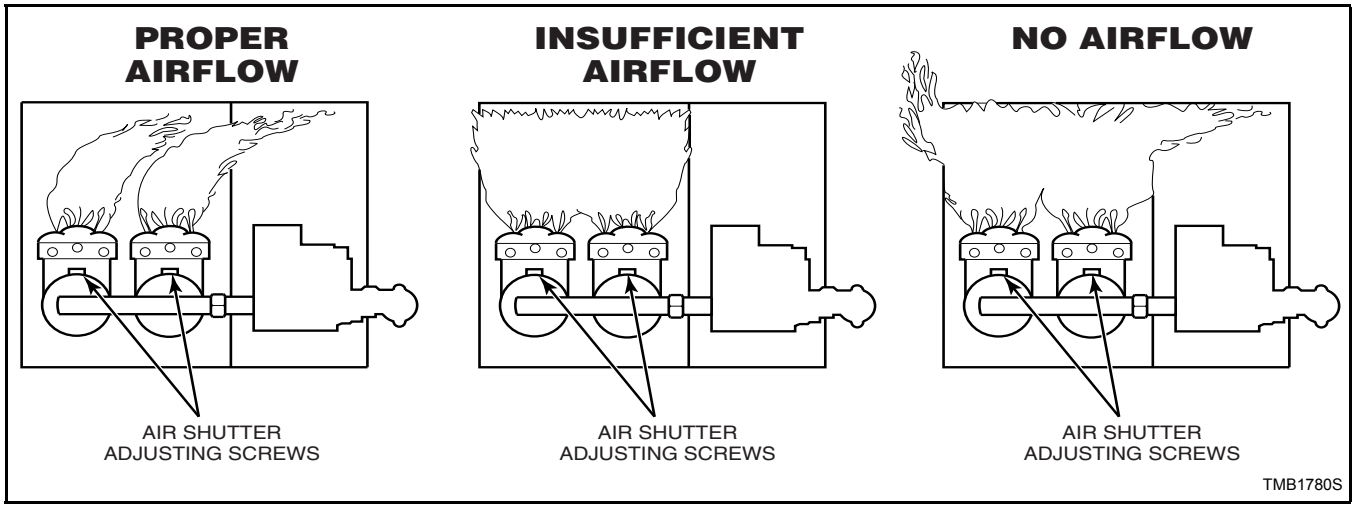


Figure 11

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

36. Airflow Switch

The airflow switch is set at the factory for proper operation. No adjustment necessary.

The airflow switch operation may be affected by shipping tape still in place, lack of make-up air, or an obstruction in the exhaust duct. These should be checked and the required corrective action taken.

WARNING

The tumble dryer must not be operated if the airflow switch does not operate properly. Faulty airflow switch operation may cause an explosive gas mixture to collect in the tumble dryer.

W072R1

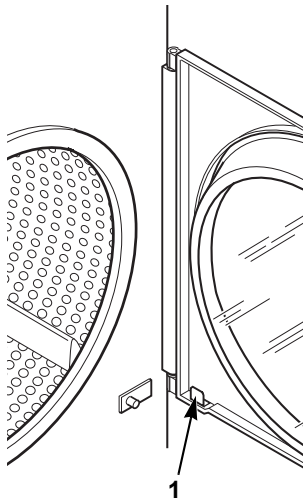
IMPORTANT: Airflow switch vane must remain closed during operation. If it opens and closes during the drying cycle, this indicates insufficient airflow through the tumble dryer. If switch remains open, or pops open and closed during the cycle, the heating system will shut off. The cylinder and fan will continue to operate even though the airflow switch is indicating insufficient airflow.

NOTE: To properly mount the airflow switch bracket, or in case of a load not drying, the airflow switch bracket may need to be checked for proper alignment. Be sure the locator pins are securely in their respective holes before tightening the bracket mounting screws. This will assure proper alignment of the airflow switch arm in the channel of the airflow switch bracket and prevent binding of the arm.

37. Loading Door Switch

The door switch should be adjusted so the cylinder stops when door is opened 51 mm (2 inches) plus or minus 6 mm (0.25 inch). This switch is a normally open switch and is closed by the hinge cam when the door is closed. If adjustment is required, refer to *Figure 12* and proceed as follows:

1. Close door and start tumble dryer, slowly open loading door. Cylinder and heat system should shut off when door is open 51 mm (2 inches) plus or minus 6 mm (0.25 inch).
2. Slowly close the loading door. When door is 51 mm (2 inches) from being fully closed, the door switch actuating bracket (located on the door) should depress the button and the switch arm with an audible “click.”
3. If the actuating bracket does not operate the switch at the appropriate door closure, bend the actuating switch arm in or out to achieve proper actuation.



TMB2105N

1 Switch Actuator

Figure 12

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

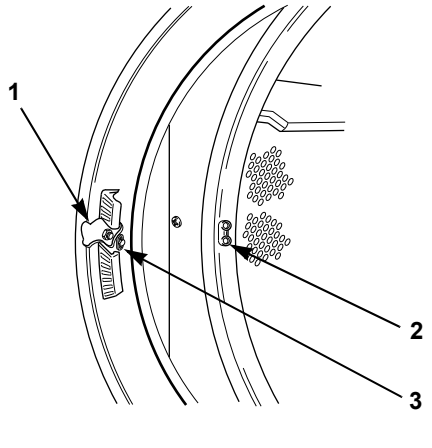
W002

38. Loading Door Catch

The door catch must be adjusted to have sufficient tension to hold loading door closed against force of load tumbling against it. Proper adjustment is when 0.48-1.03 bar (7-15 pounds) pull is required to open door.

If adjustment is required, refer to *Figure 13* and proceed as follows:

To adjust, open door, loosen acorn nut and turn door strike screw in or out as required. Tighten acorn nut.



T048I

1	Door Latch
2	Door Catch
3	Acorn Nut

Figure 13

39. Aligning Door Strike

If the door acorn nut is breaking or the door catch is prematurely wearing (refer to *Figure 13*), a door adjustment may be necessary to align the two striking surfaces.

a. Visually check door strike to catch position to determine if door is striking low or high.
b. Make sure the door frame to the tumble dryer hinge mounting screws are secure.
c. To adjust the strike position slightly, loosen both hinge hex bolts until the door frame can be moved. If the door is striking low, lift up on the door and while maintaining pressure tighten both hinge bolts. If the door is striking high, push down on the door and while maintaing pressure tighten both hinge bolts. Re-check strike position and repeat until position is correct.

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

40. Drive Belt Tension

Proper tension is when drive belt can be depressed 1/2 inch (12.7 mm) by applying light thumb pressure (approximately 5 pounds) at a point midway between sheave and motor pulley.

Reversing Belt Drive Models: Proper tension is when each cylinder belt can be depressed approximately 3/16 inch (4.77 mm) by applying light thumb pressure (approximately 5 pounds) at a point midway between the sheave and the idler.

Nonreversing Models:
Refer to *Figure 14*.

a. Remove guard from rear of tumbler.
b. Loosen idler housing capscrews holding idler housing to the housing support.
c. Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing capscrews.
d. Replace guard on rear of tumbler.

Reversing Models:
Refer to *Figure 15*.

a. Remove guard from rear of tumbler.
b. To adjust cylinder belt tension, loosen idler housing bolts holding idler housing assembly to the housing support.
c. Position housing assembly by turning adjusting bolt until proper belt tension is reached, then retighten idler housing bolts.

NOTE: Adjust cylinder belt tension first, then adjust motor to idler belt tension. Refer to *Figure 15*.

d. Loosen the locking bolt.
e. Loosen the adjusting nut and use the adjusting screw to move the motor up or down.
f. Once proper belt tension is reached, retighten the adjusting nut and locking bolt.
g. Replace the guard on rear of tumbler.

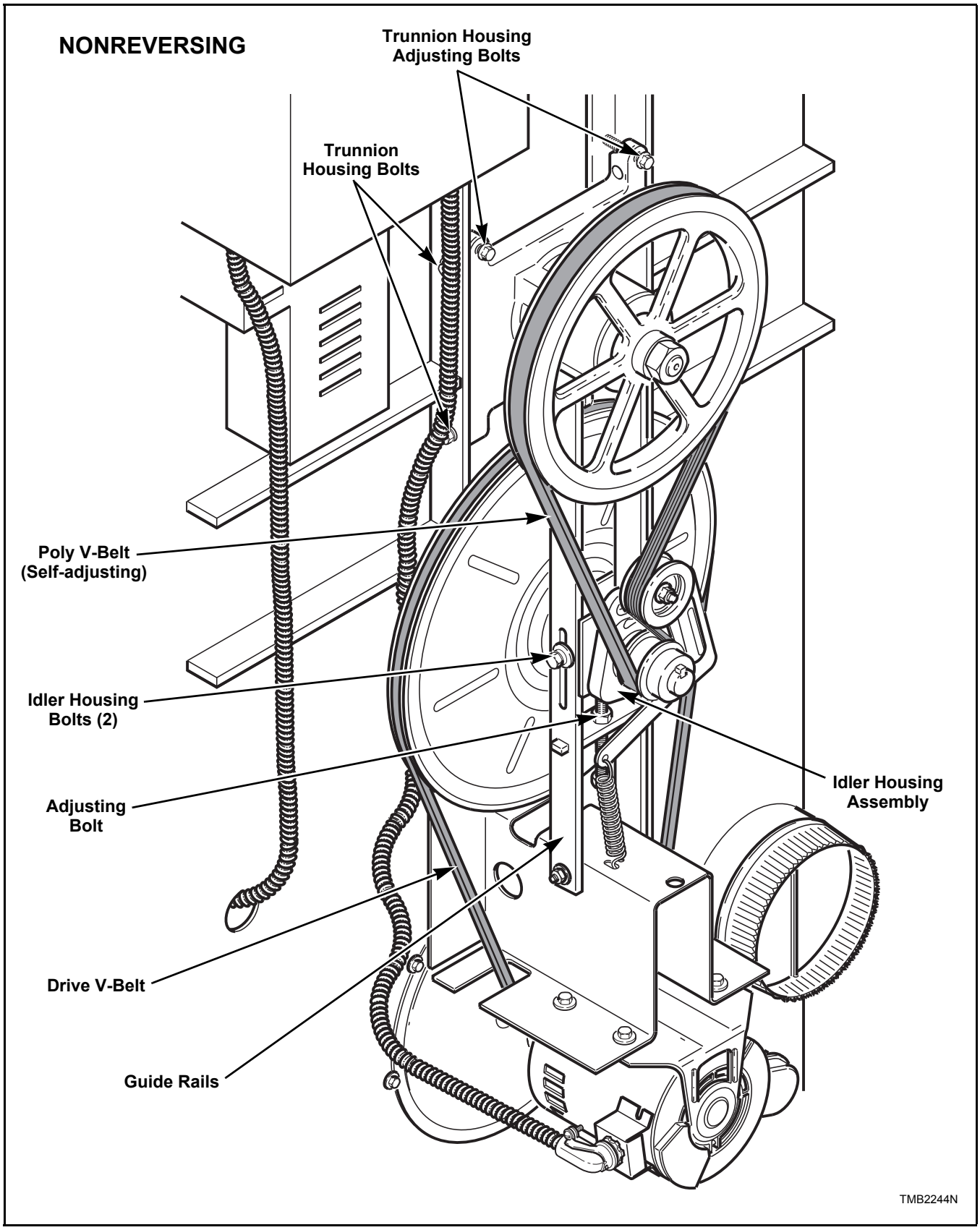


Figure 14

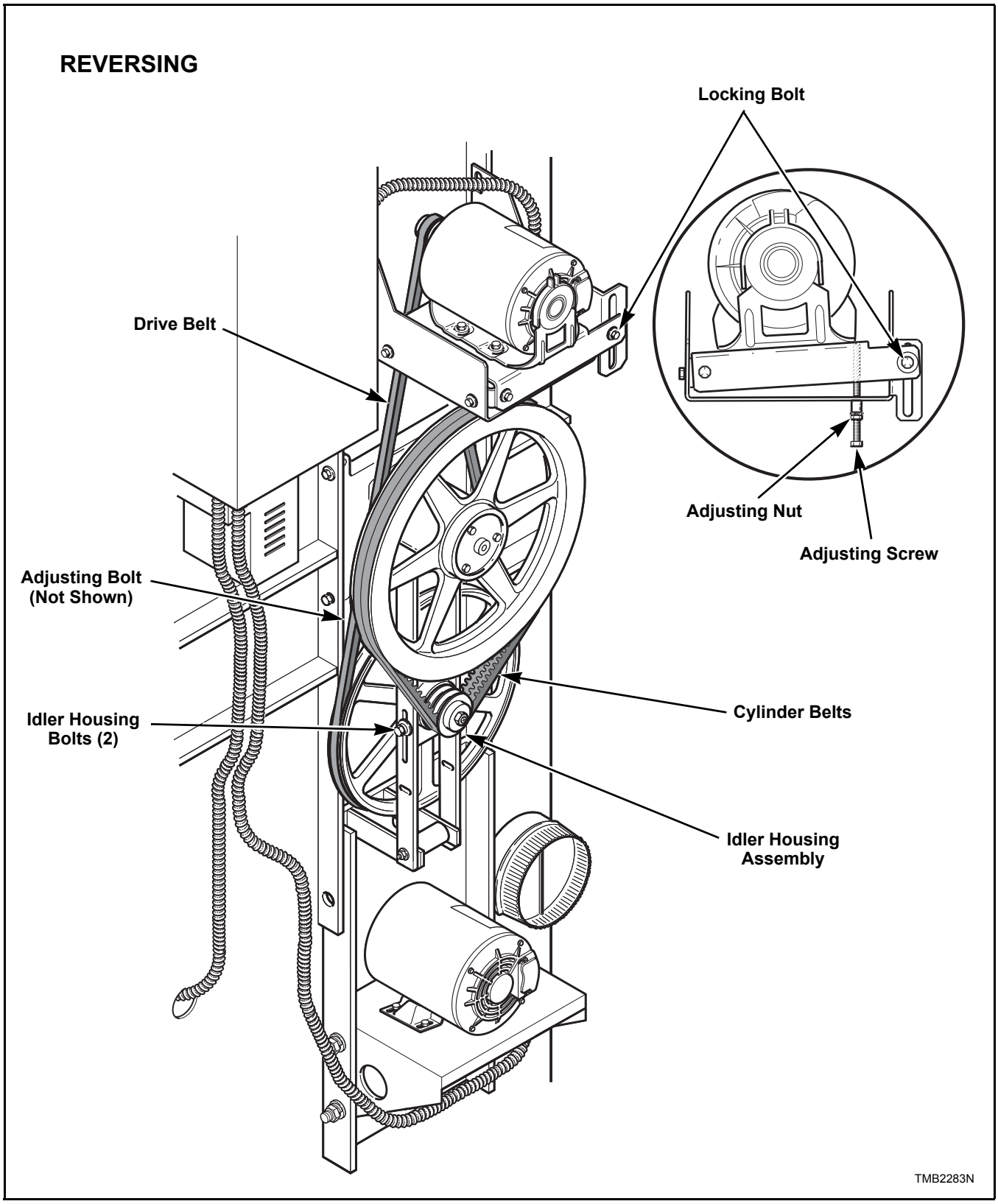


Figure 15

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

41. Cylinder Clearance

The clearance between the cylinder rim and front panel must be adjusted so the cylinder is centered within the front panel opening when the cylinder is fully loaded and is turning. However, the adjustment should be made when the cylinder is empty.

a. Open loading door and check the gap between the center of the front panel top flange and the cylinder rim. Proper adjustment is when the gap is 1/2 - 3/4 inch (12.7 - 19.05 mm). Refer to *Figure 16*.
b. Remove drive guard.
c. Loosen the four trunnion housing bolts. Refer to *Figure 14*.
d. Loosen the locknuts on the trunnion housing adjusting bolts. Refer to *Figure 14*.
e. Turn the adjusting bolts in or out as necessary to obtain proper clearance between cylinder rim and front panel.

NOTE: Turning the adjusting bolts clockwise will raise the cylinder and turning them counter-clockwise will lower the cylinder. Turn both bolts evenly to adjust top and bottom clearance. Turn one or the other adjusting bolt in or out to adjust side clearance.

f. After the cylinder is properly adjusted, tighten the adjusting bolt locknuts and the four trunnion housing bolts.
g. Install the belt guard removed in *Step b*.

NOTE: If adjusting the trunnion housing fails to correct the clearance, the problem is probably due to a worn trunnion shaft or bearings.

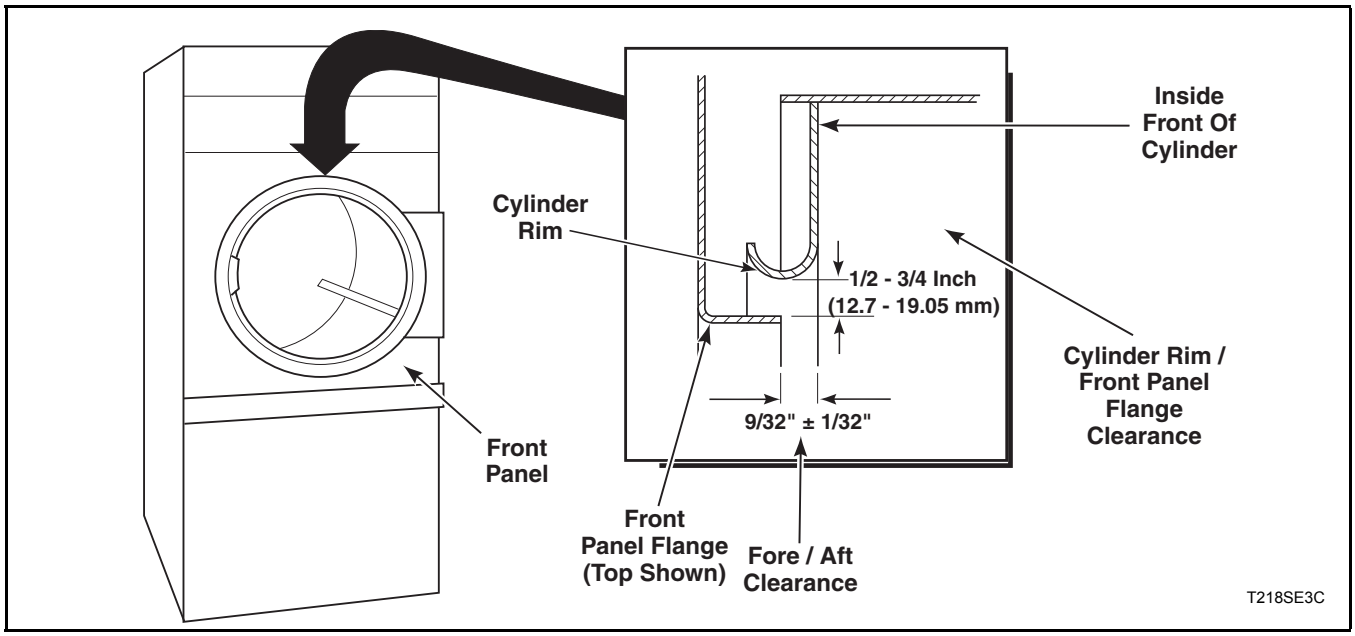


Figure 16

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

42. Cleaning Coin Drop

NOTE: The 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.

a. Disconnect electrical power to machine and drop.
b. Remove coin drop from machine.
c. Check the spring style of coin drop.
Coin Drops with Old-Style Spring (refer to *Figure 17*):
(1) Move spring downward until cover catch is free. Refer to *Figure 17*.

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

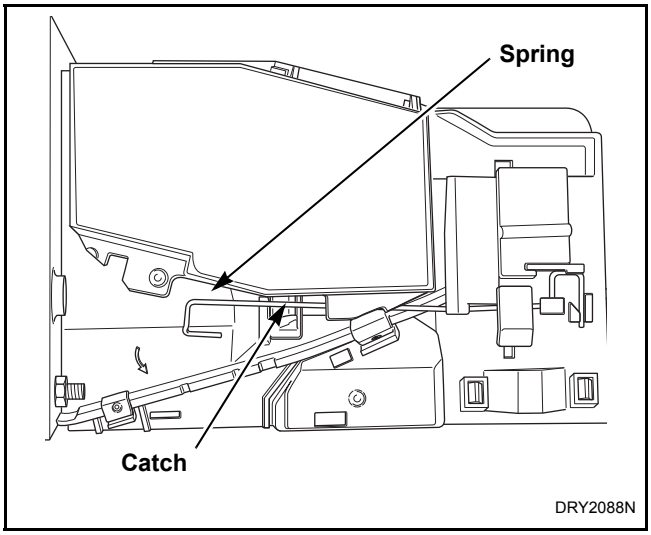


Figure 17

(2) Open cover for coin drop. Refer to *Figure 18*.

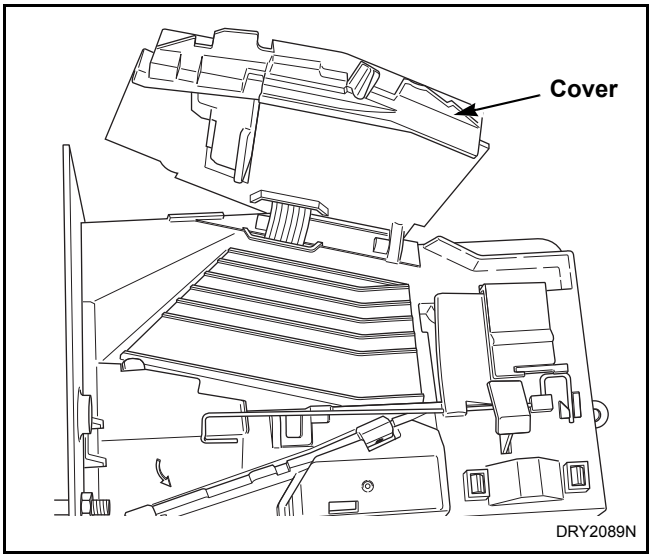


Figure 18

Coin Drops with New-Style Spring (refer to *Figure 19*):

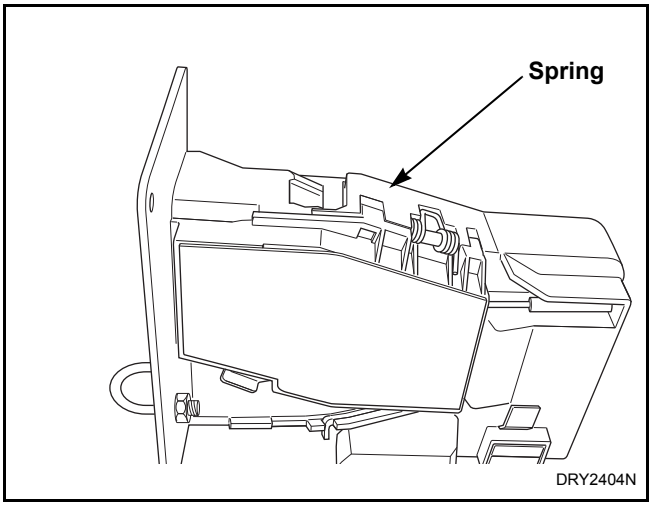
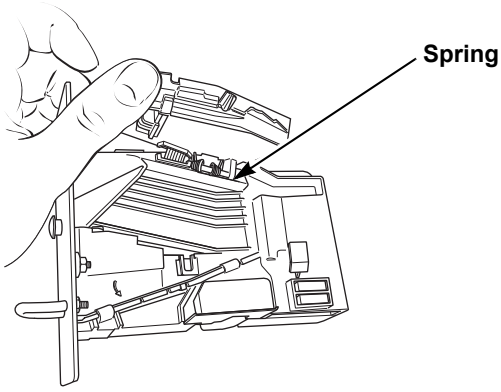


Figure 19

(3) Open cover of coin drop. Refer to *Figure 20*.

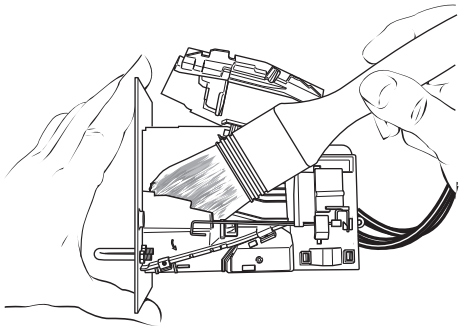
NOTE: Do not overbend the spring by opening cover too far.



DRY2408N

Figure 20

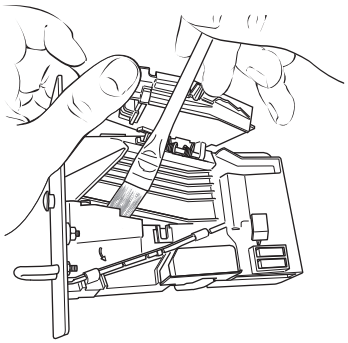
d. Clean the coin path with a soft brush and wipe exposed surfaces with an alcohol moistened cloth. Refer to *Figure 21* or *Figure 22*.



Old-Style Spring Coin Drop

DRY2090N

Figure 21

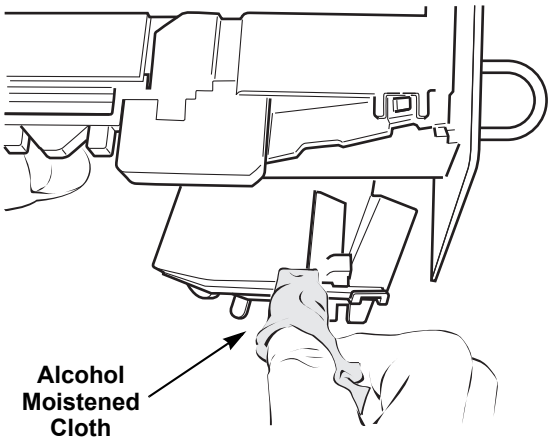


New-Style Spring Coin Drop

DRY2405N

Figure 22

e. Clean residue from coin rail with an alcohol moistened cloth. Refer to *Figure 23*.



DRY2406N

Figure 23

f. Clean light sensors with a soft brush or air spray duster. Refer to *Figure 24*.

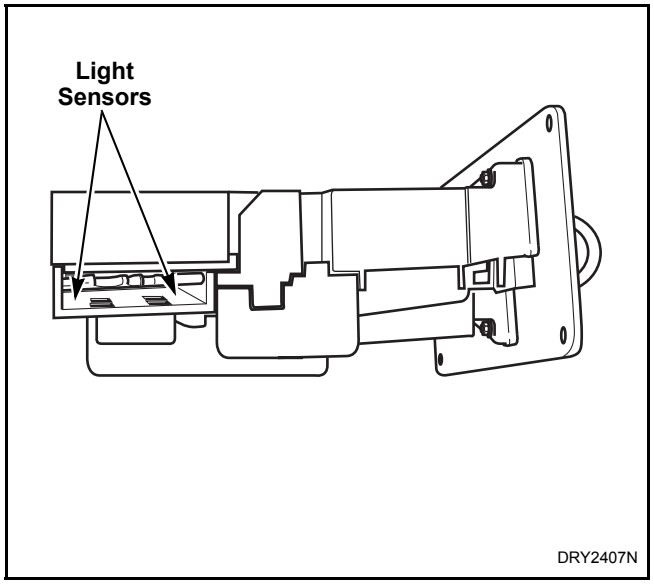
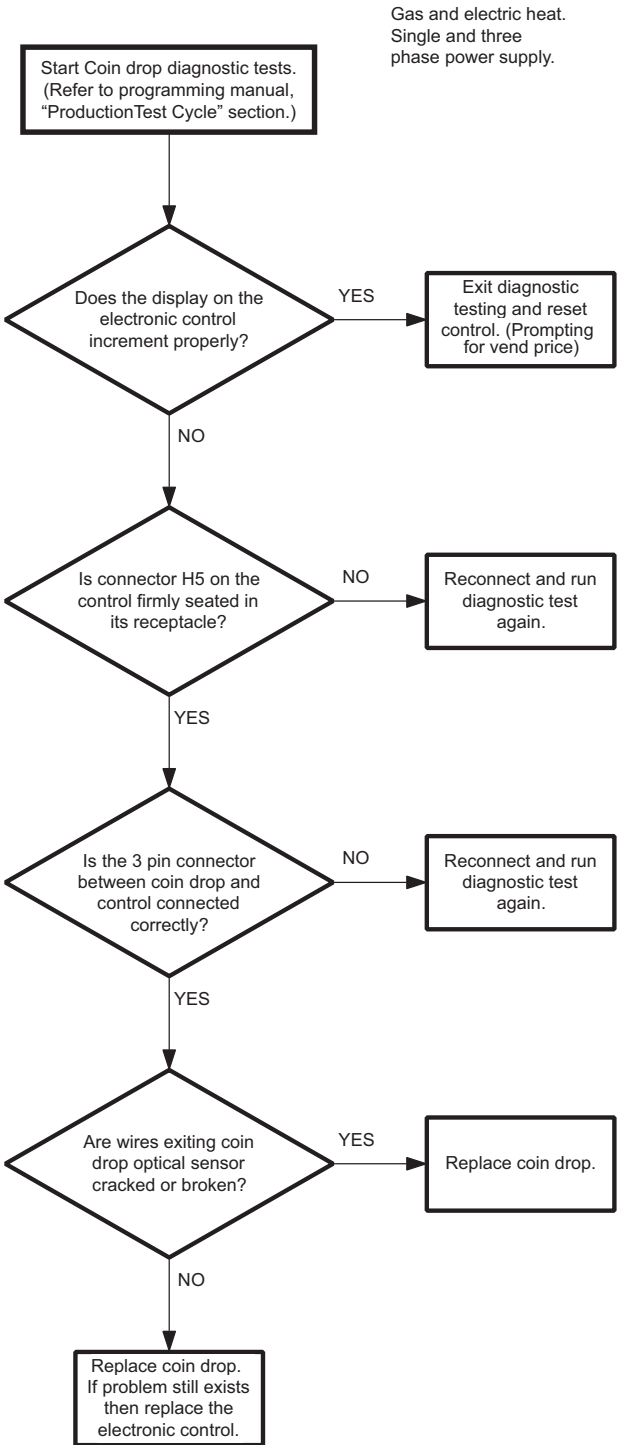


Figure 24

g. Close cover for coin drop.
h. **Coin Drops with OLD-Style Spring** – Move spring back over cover catch.
i. Reinstall coin drop into machine.
j. Reconnect electrical power to machine and drop.
k. Add a coin to drop to verify that coin drop is operating properly and that electrical connection is working properly.

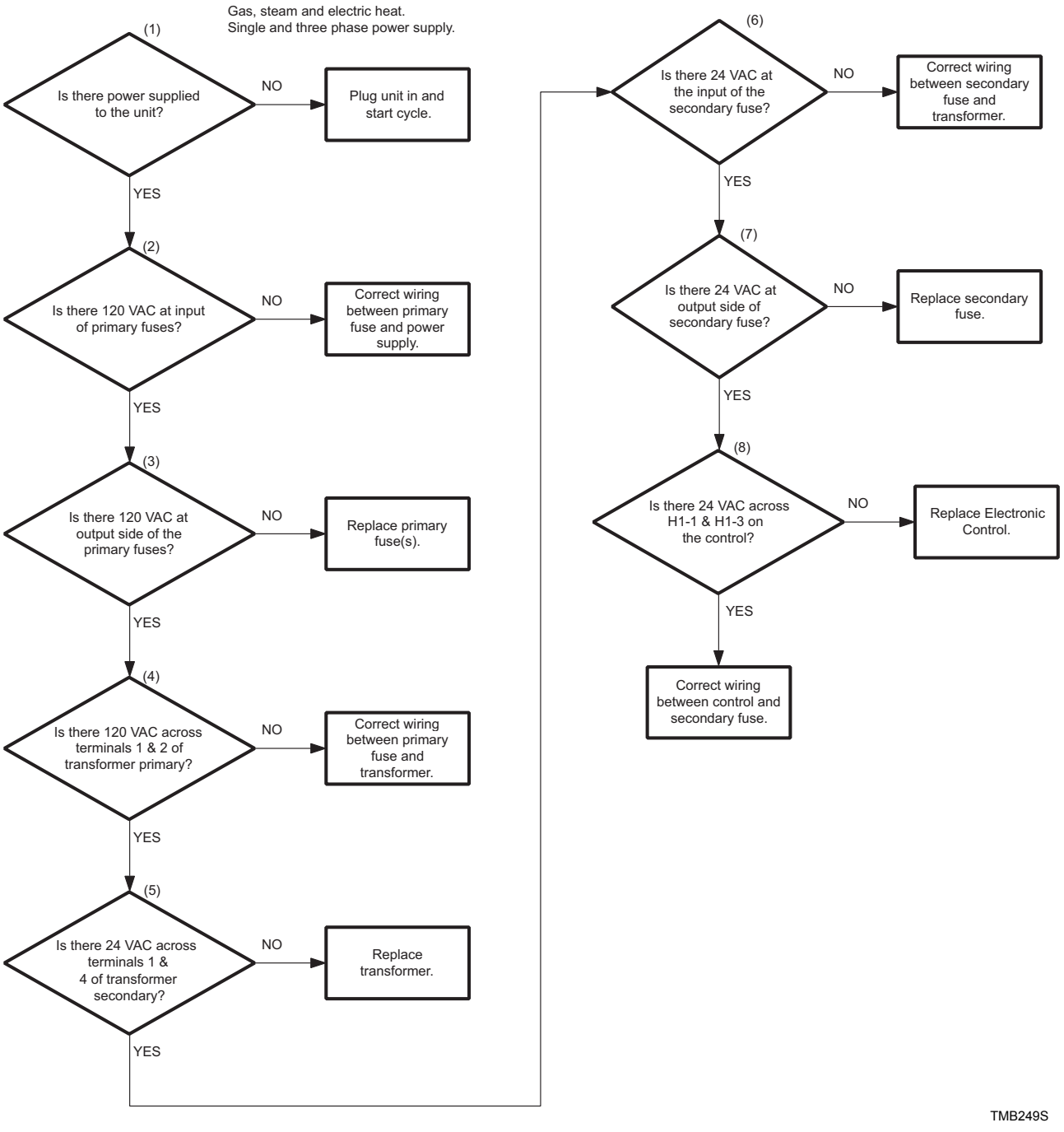
Section 6
Micro Display Control (MDC) Troubleshooting

43. Coins Ignored When Entered

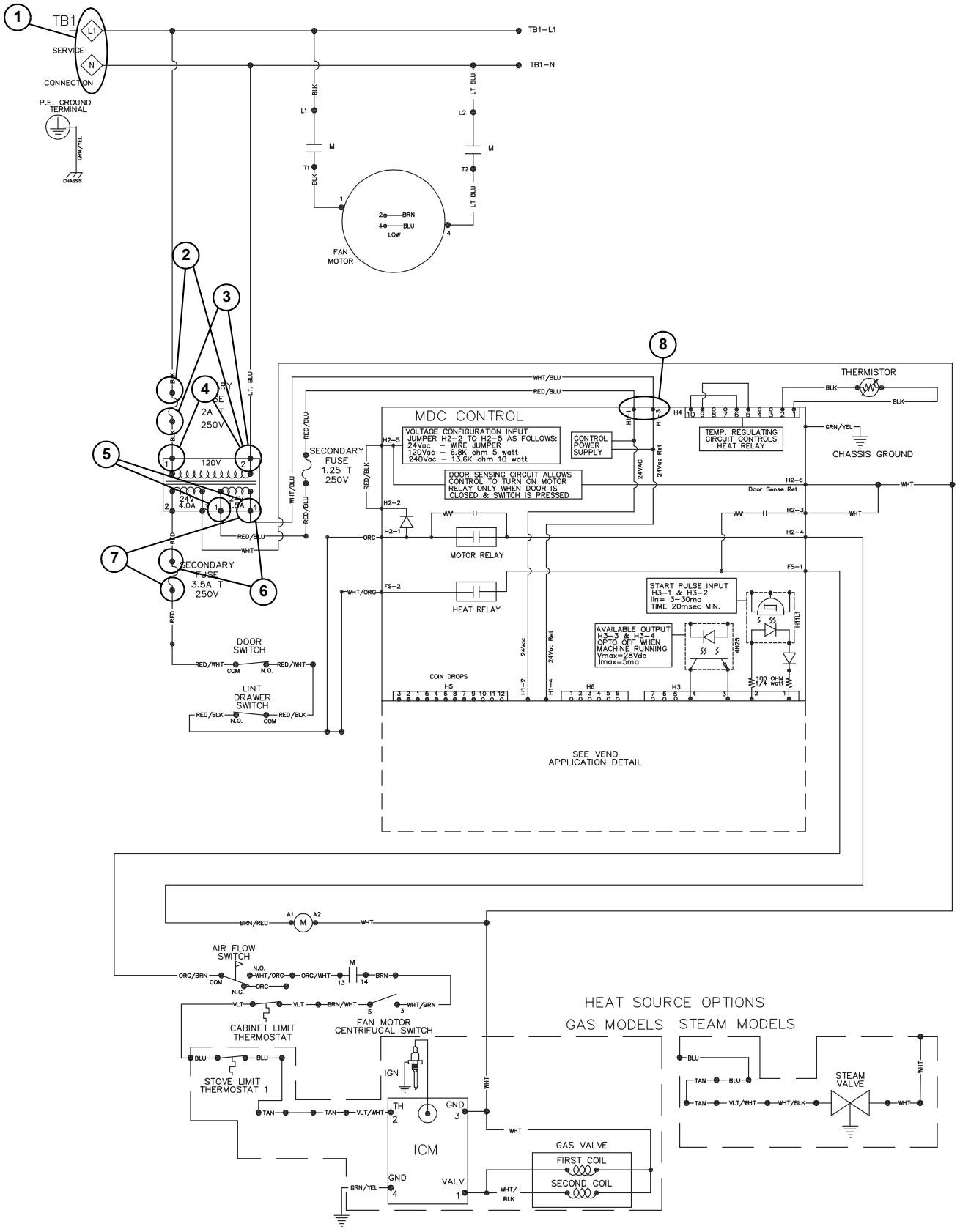


TMB2304S

44. Control Has No Display

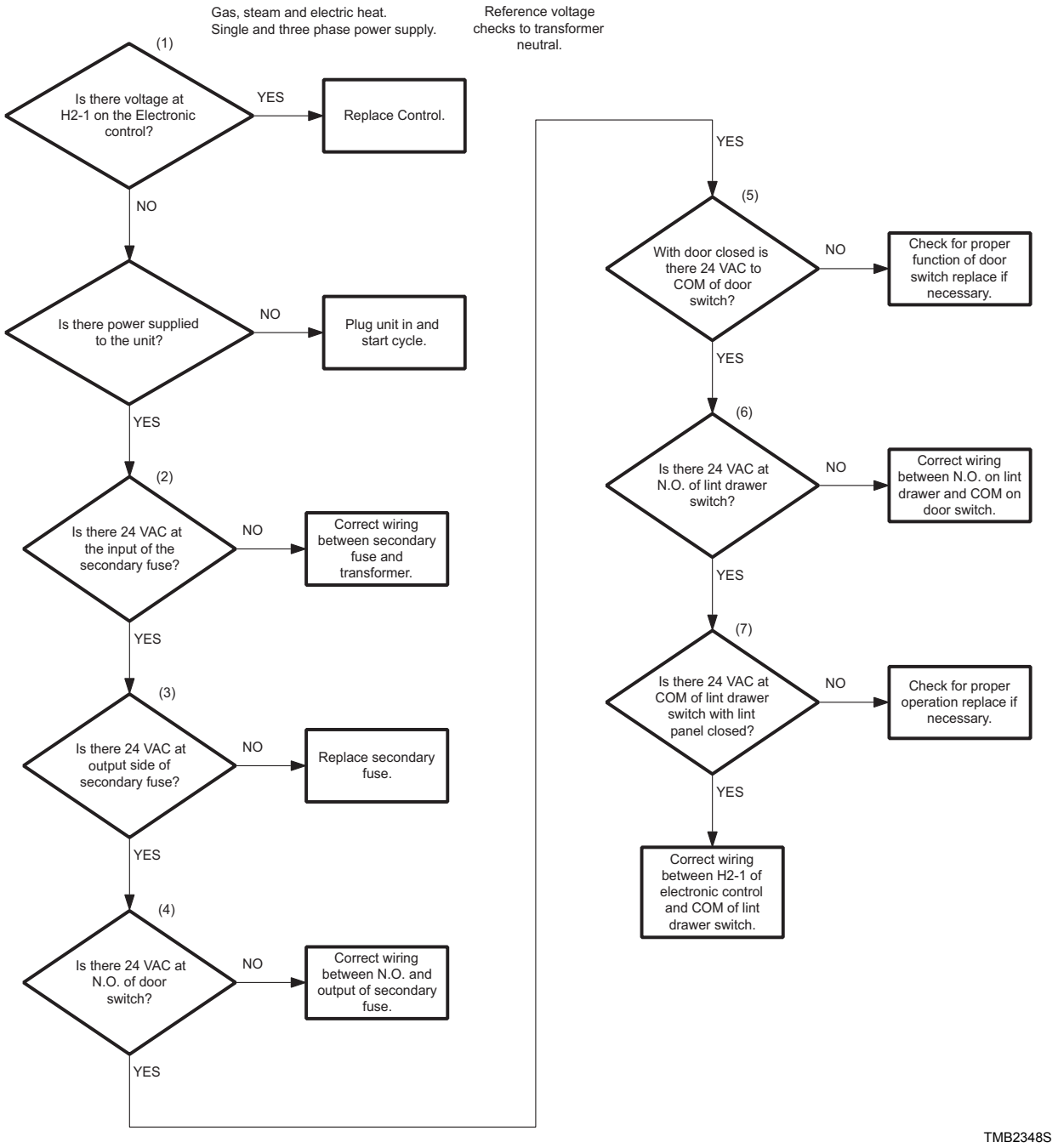


Control Has No Display

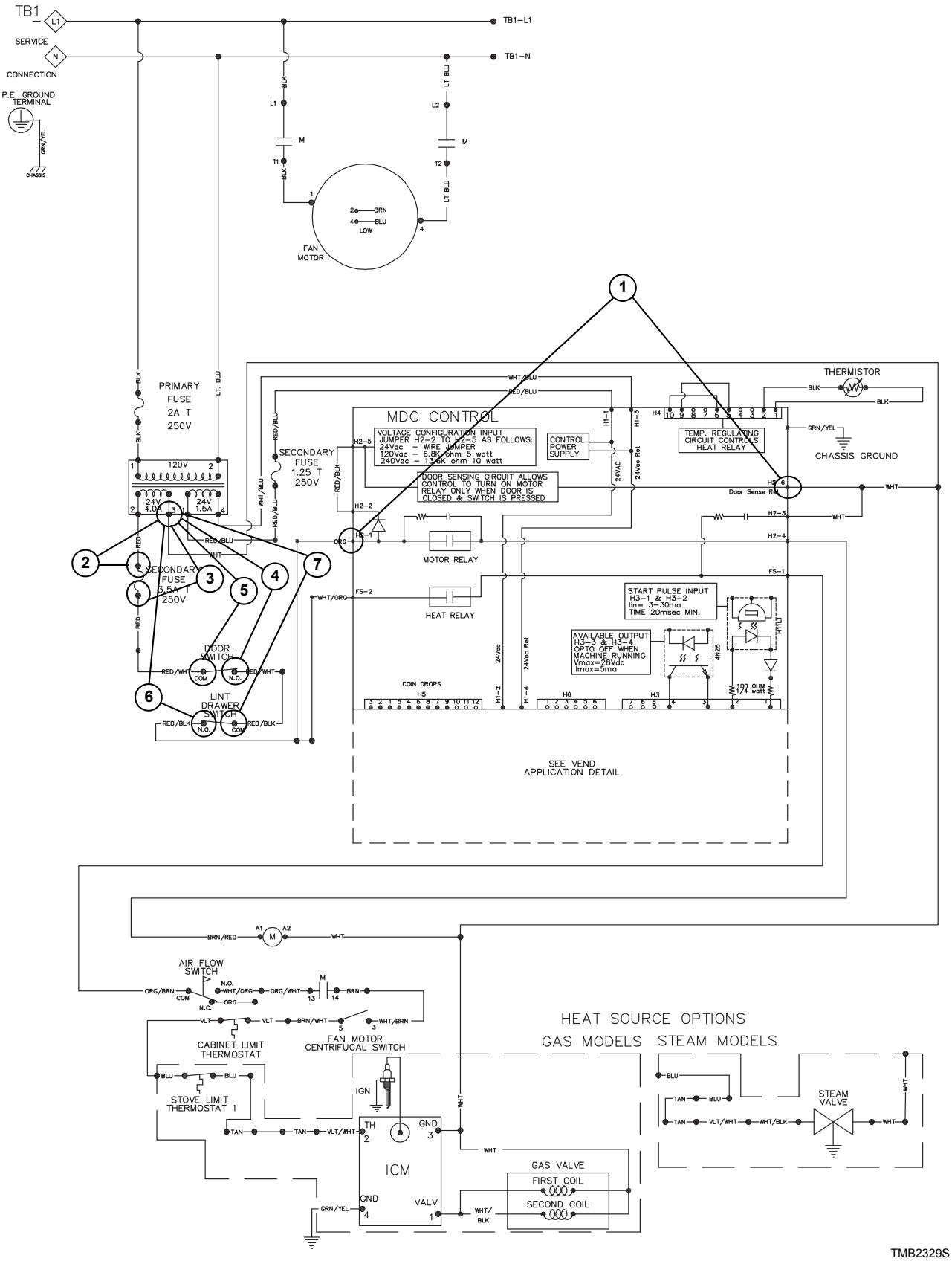


TMB2329S

45. Door Open Indicator

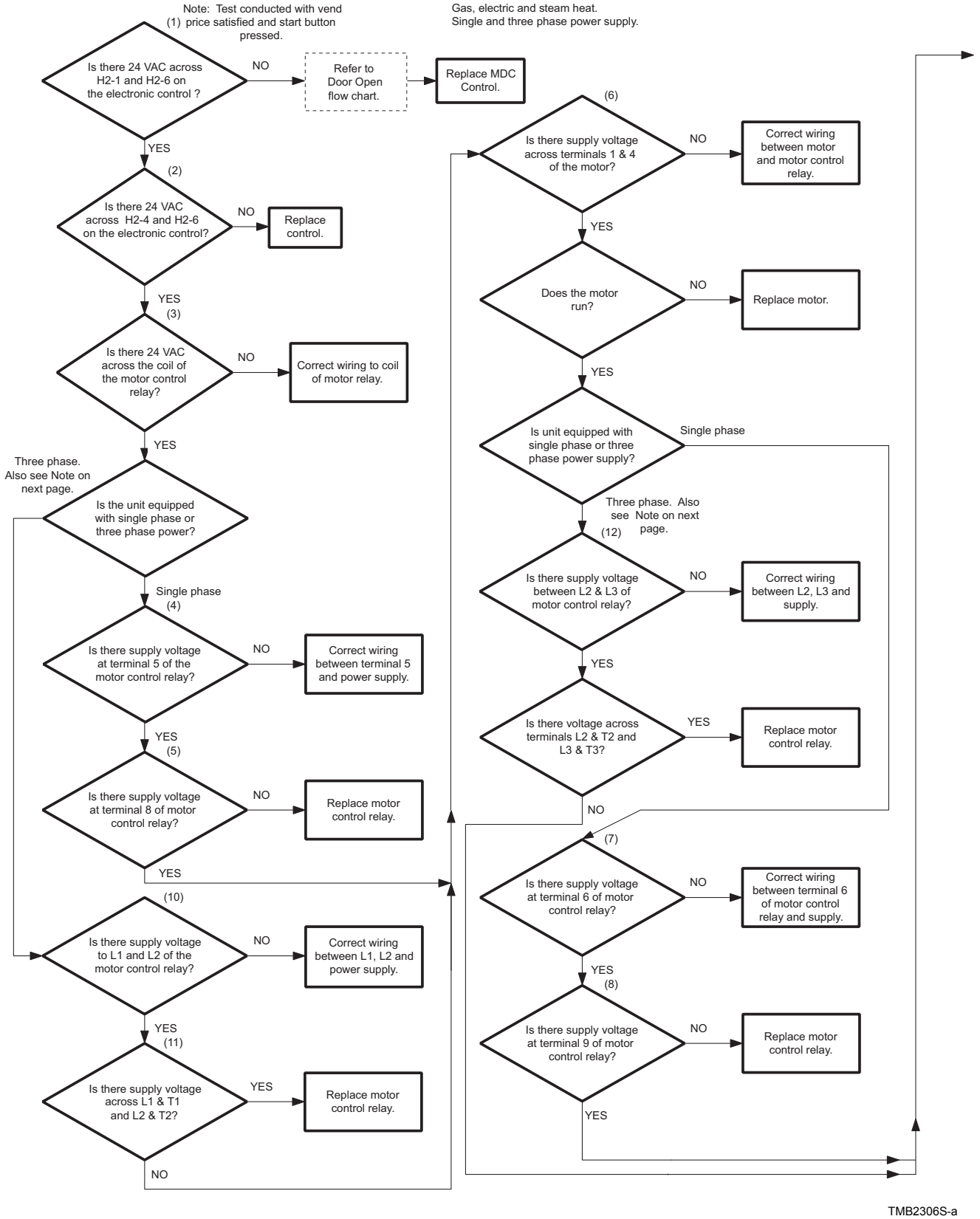


Door Open Indicator



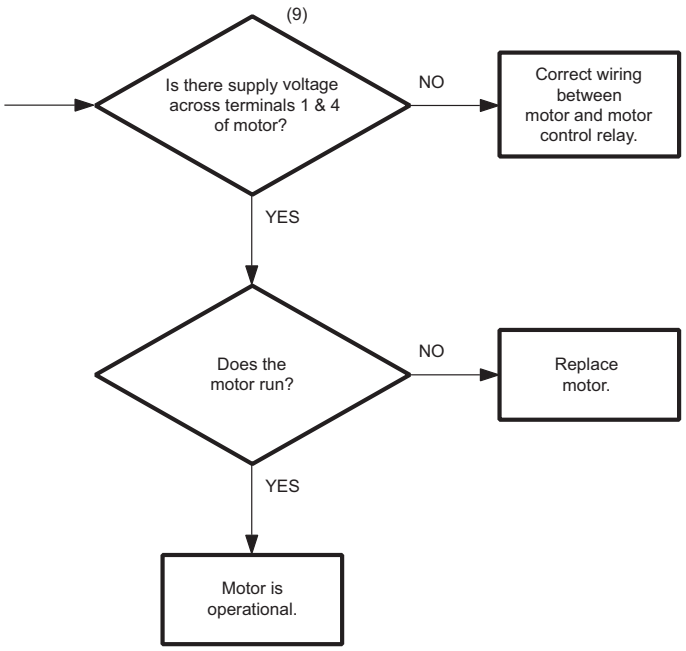
TMB2329S

46. Motor Will Not Start/Run



TMB2306S-a

46. Motor Will Not Start/Run (continued)

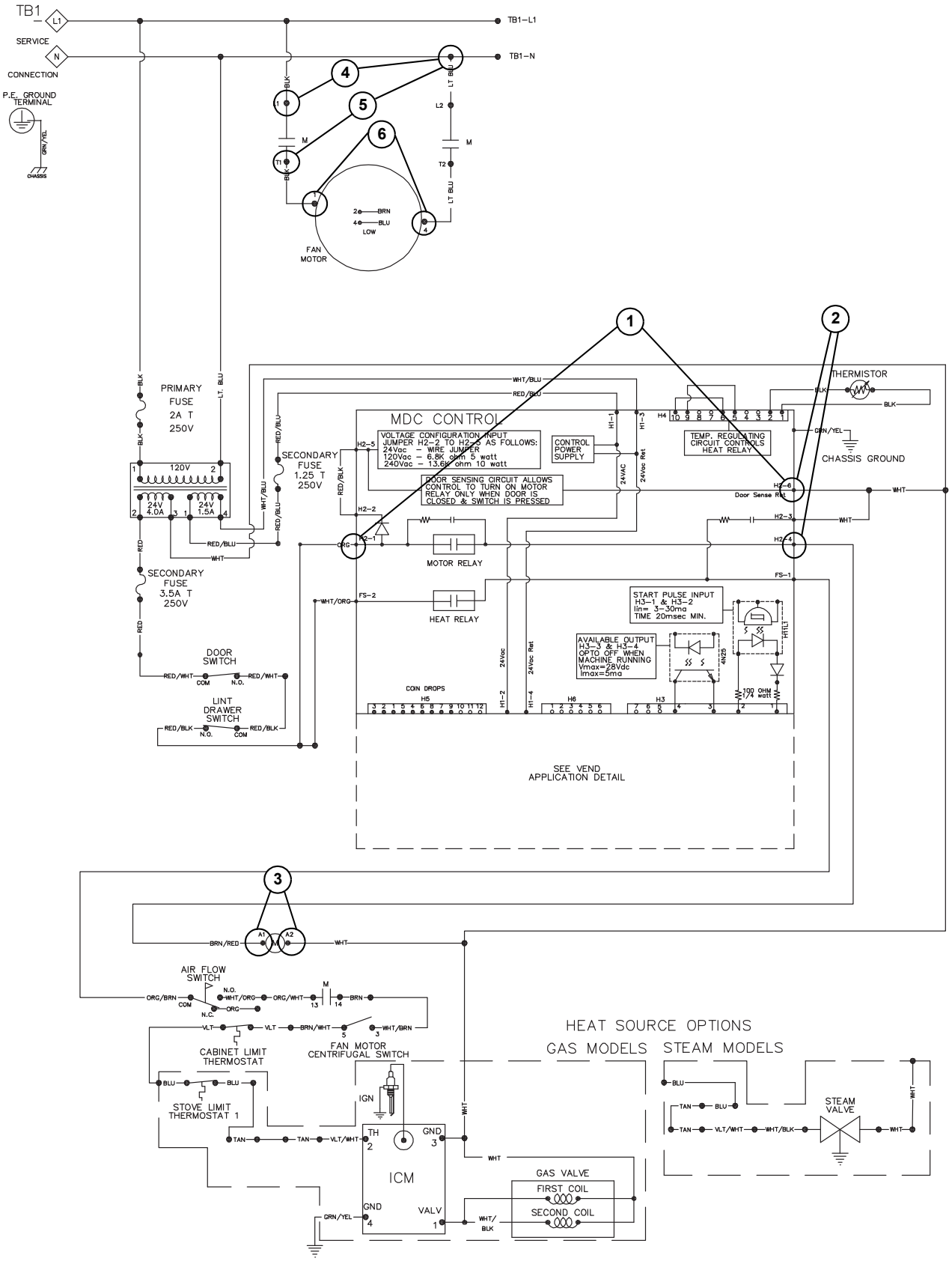


Note: For high voltage three phase supply (200 volts or higher), the motor is supplied by L1, L2, L3 through the motor contactor terminals T1, T2, T3. Make the appropriate adjustments when doing voltage checks.

TMB2306S-b

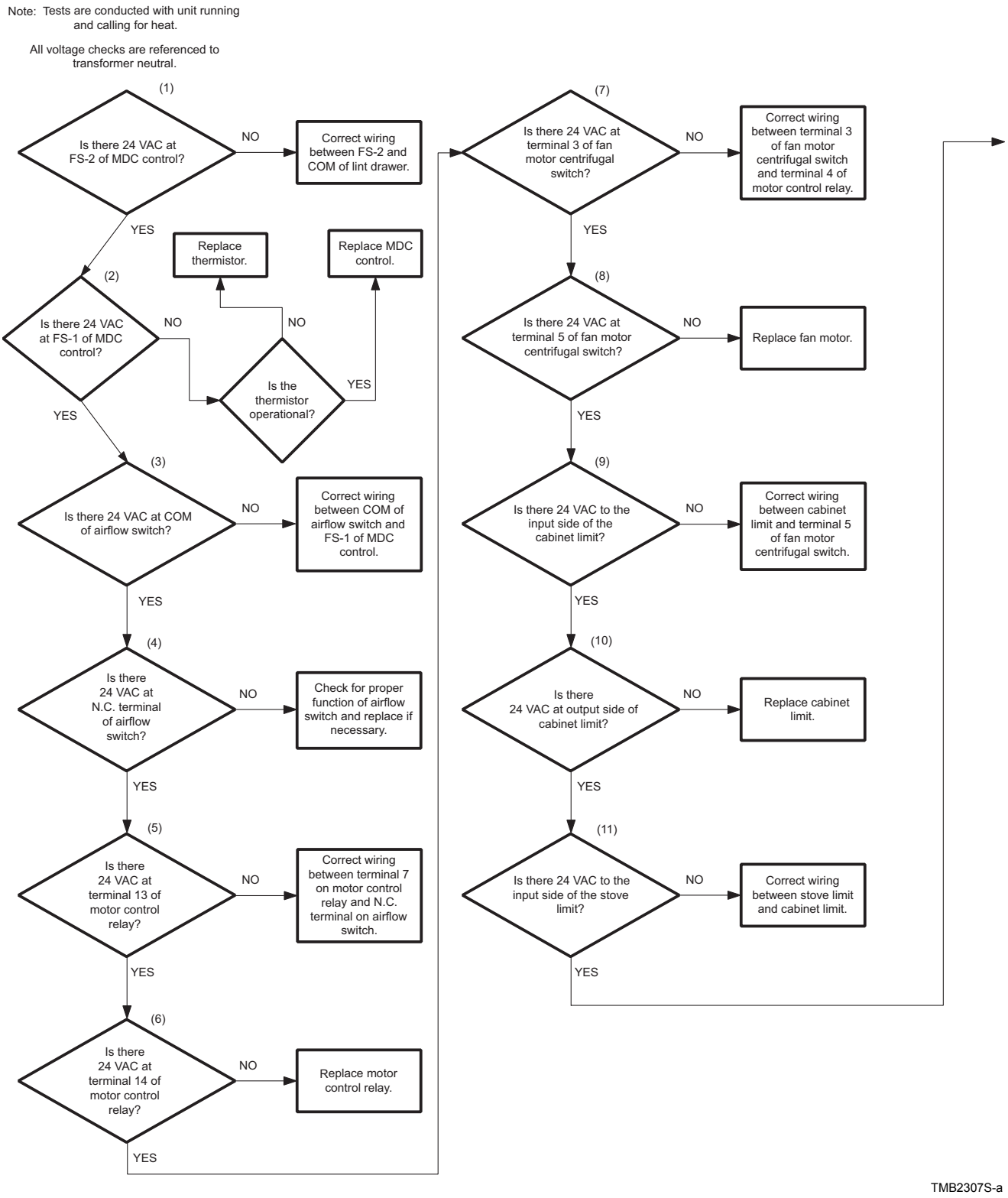
Please see following page for wiring diagram information.

Motor Will Not Start/Run



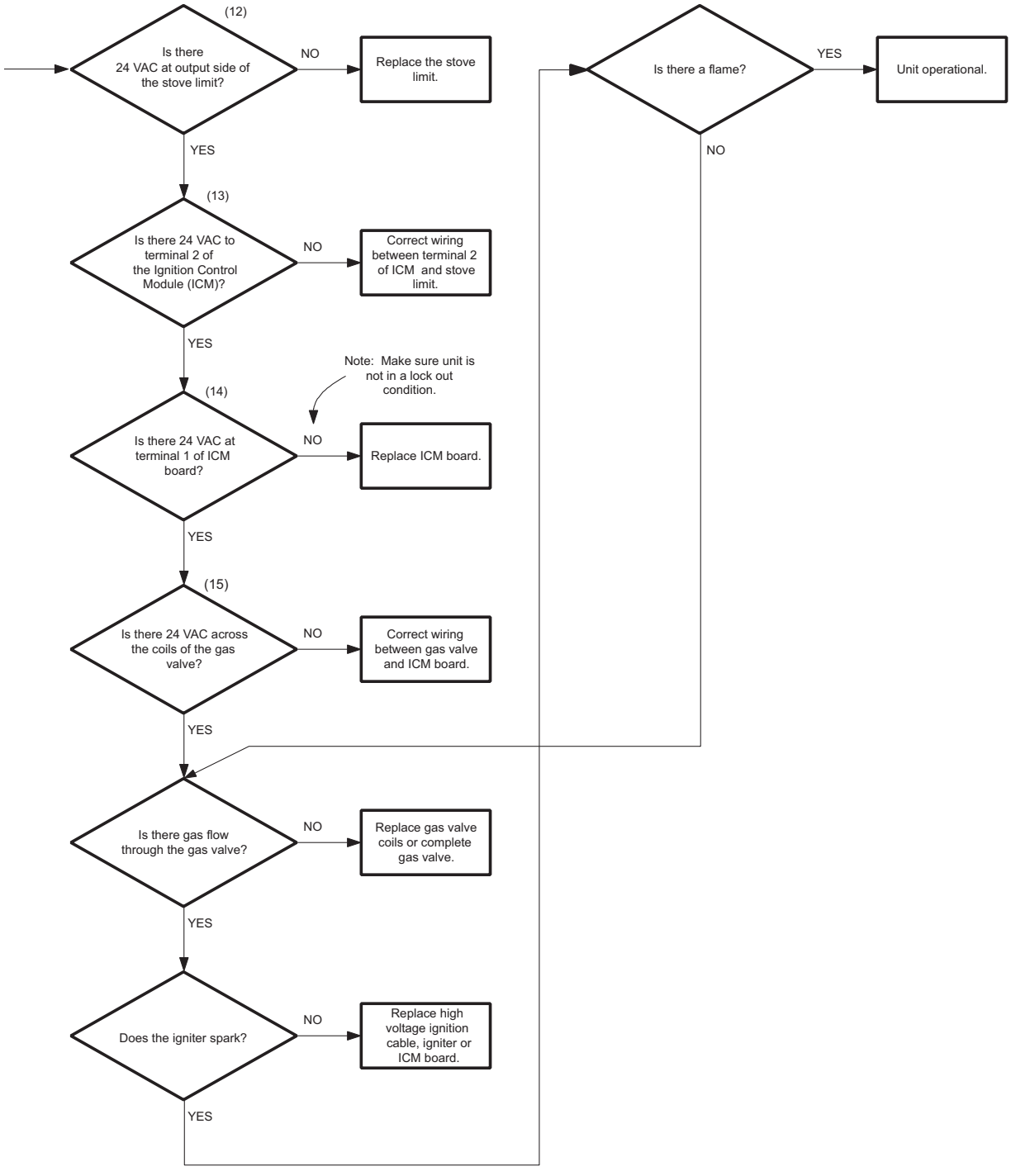
TMB2329S

47. Unit Will Not Heat – Gas



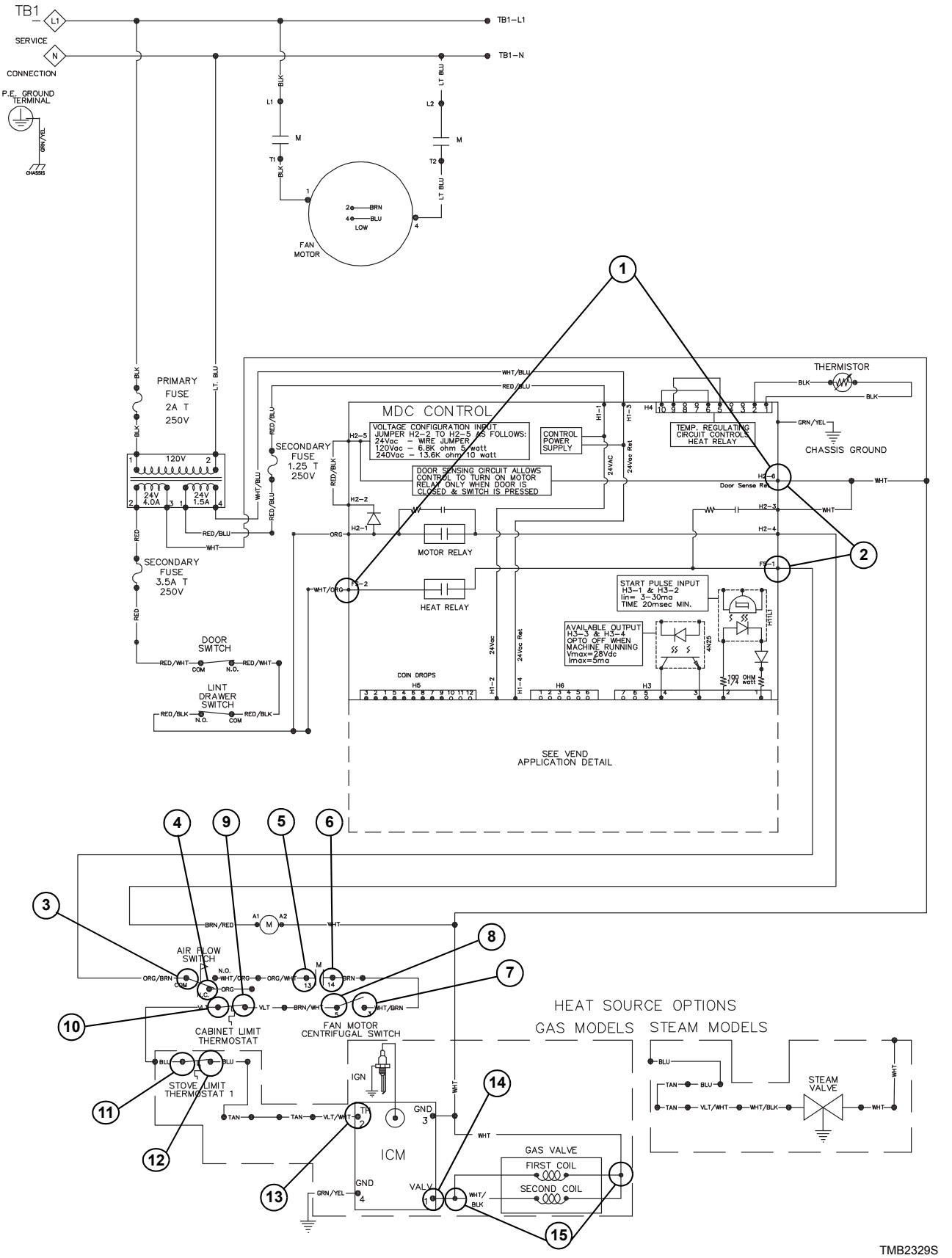
TMB2307S-a

47. Unit Will Not Heat – Gas (continued)



Please see following page for wiring diagram information.

Unit Will Not Heat – Gas

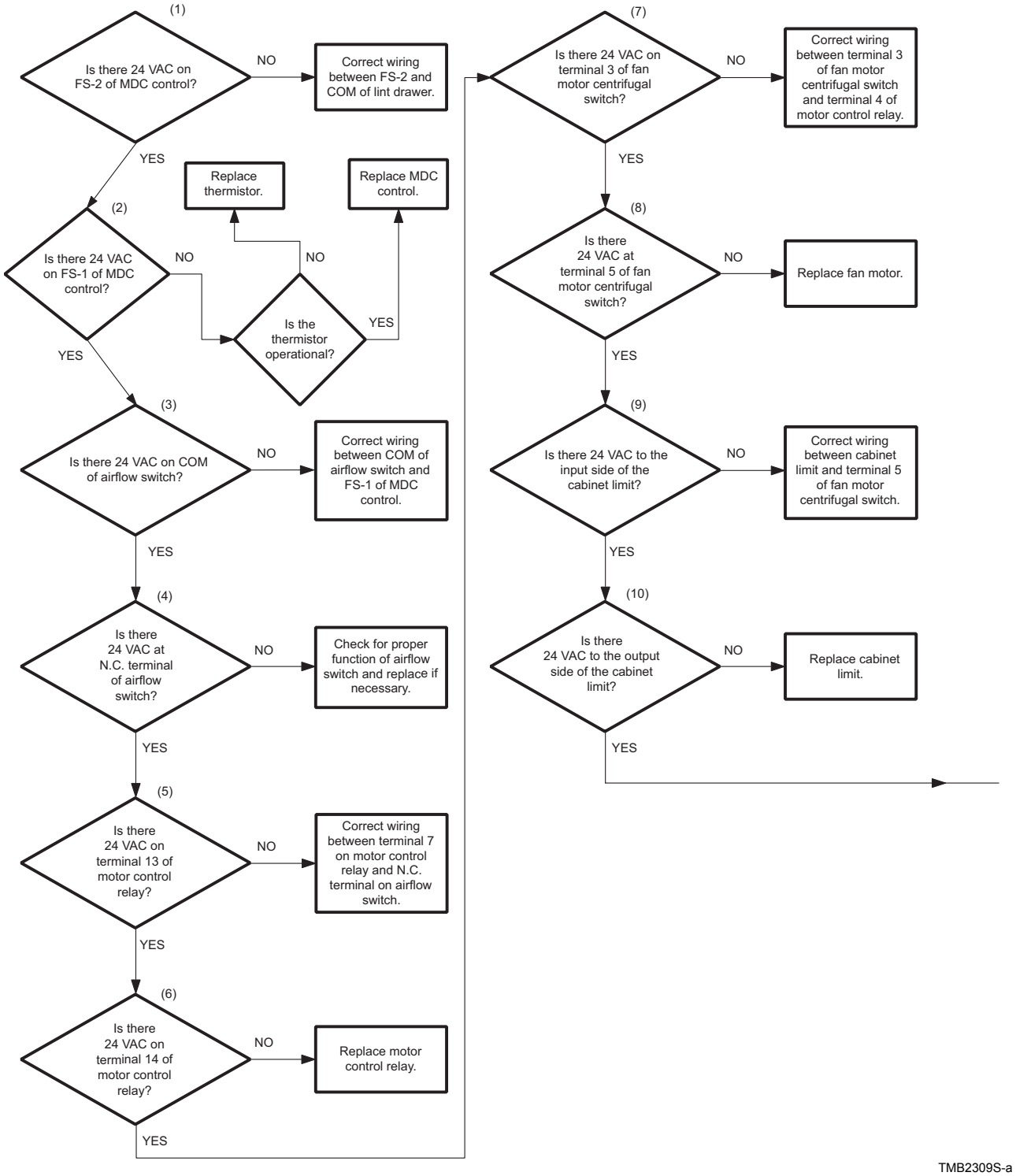


TMB2329S

48. Unit Will Not Heat – Steam

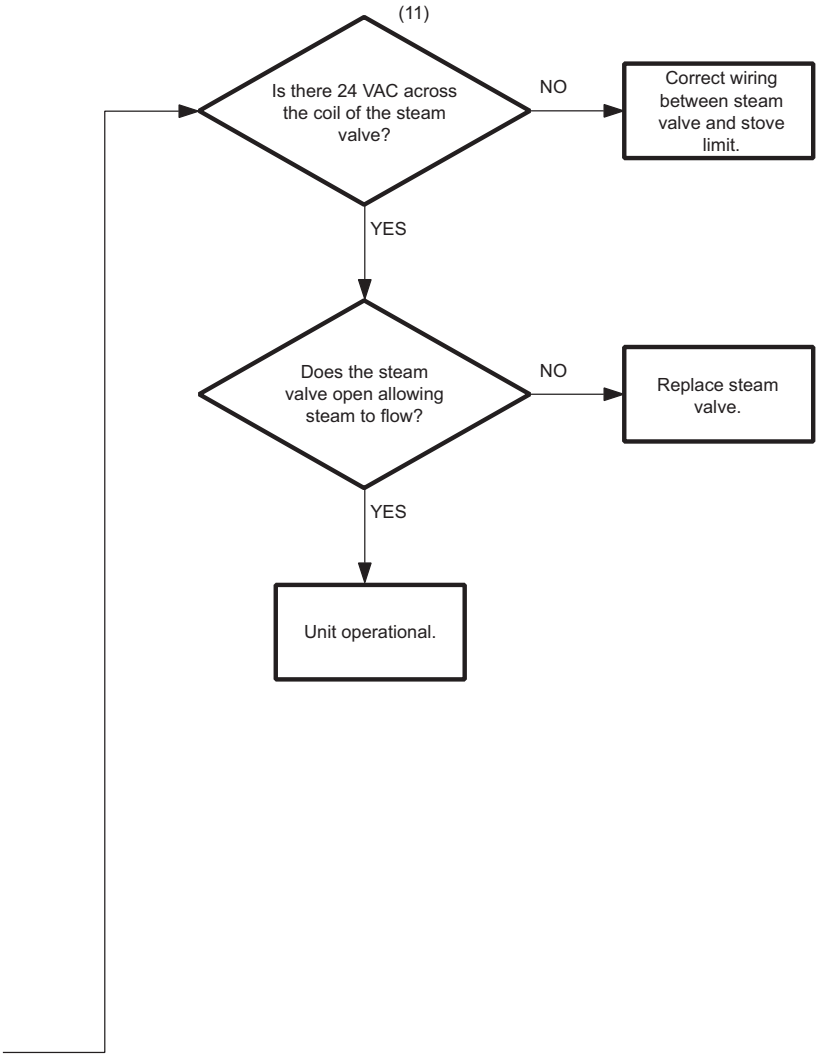
Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.



TMB2309S-a

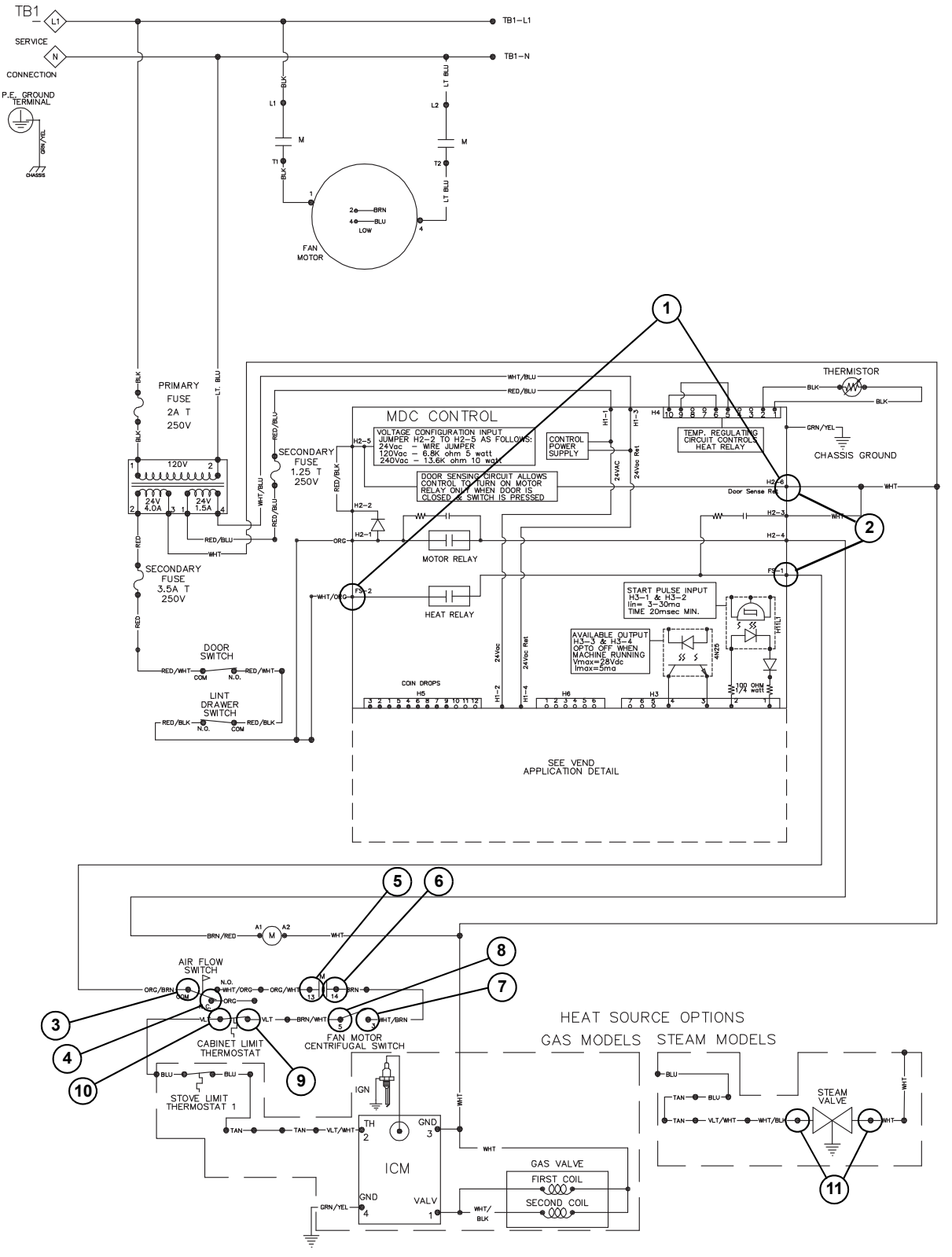
48. Unit Will Not Heat – Steam (continued)



TMB2309S-b

Please see following page for wiring diagram information.

Unit Will Not Heat – Steam

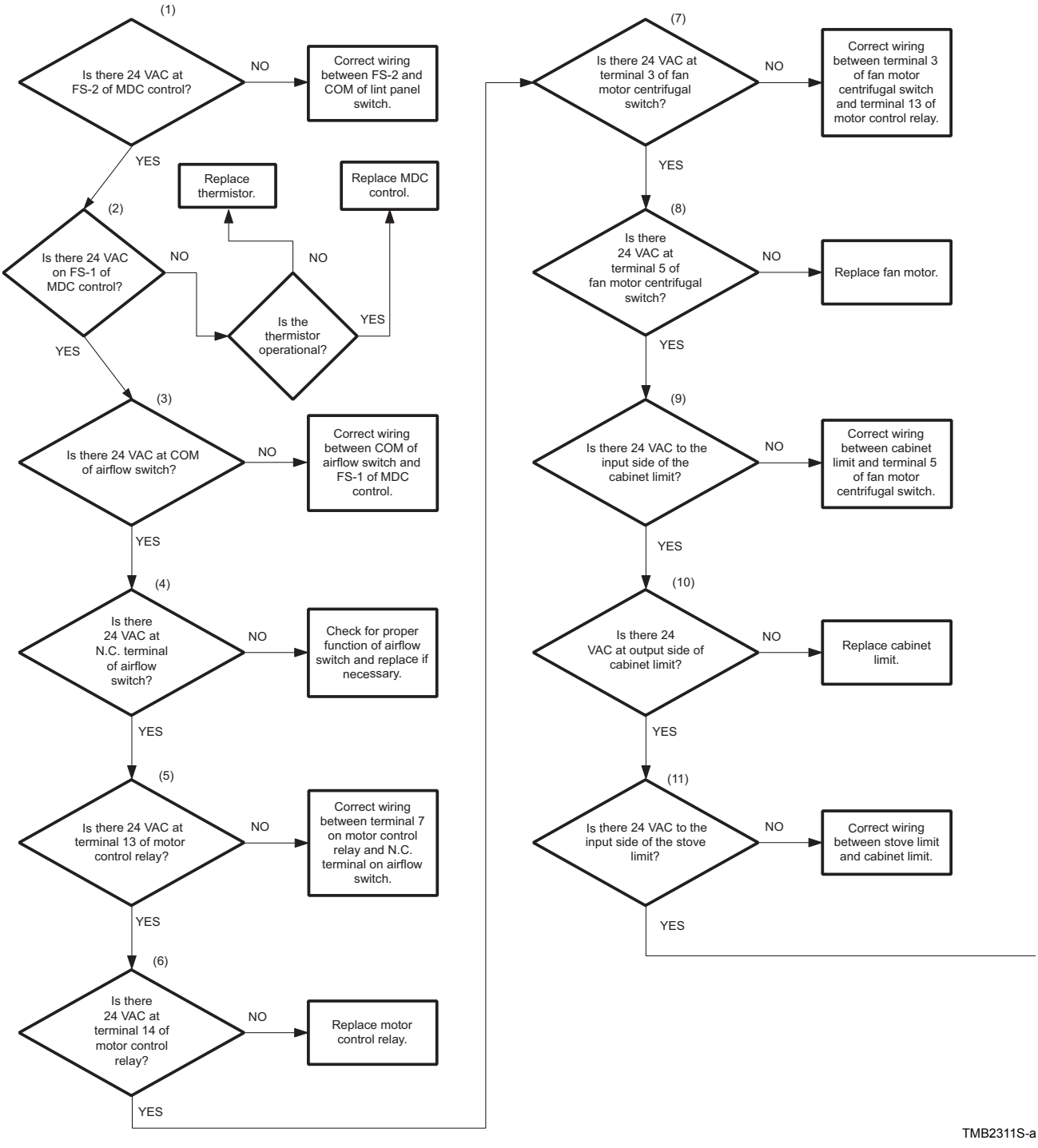


TMB2329S

49. Unit Will Not Heat – Electric

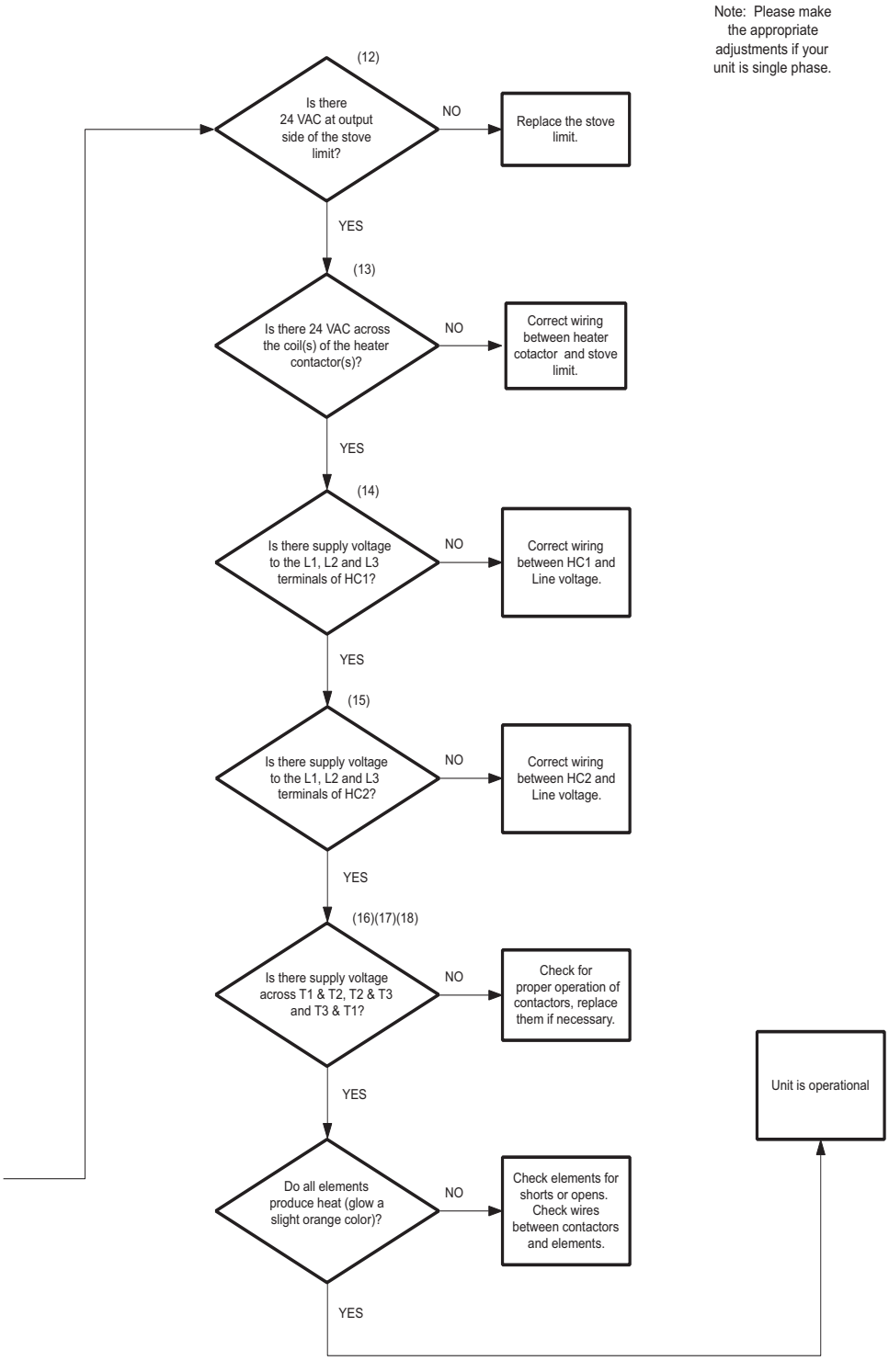
Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.



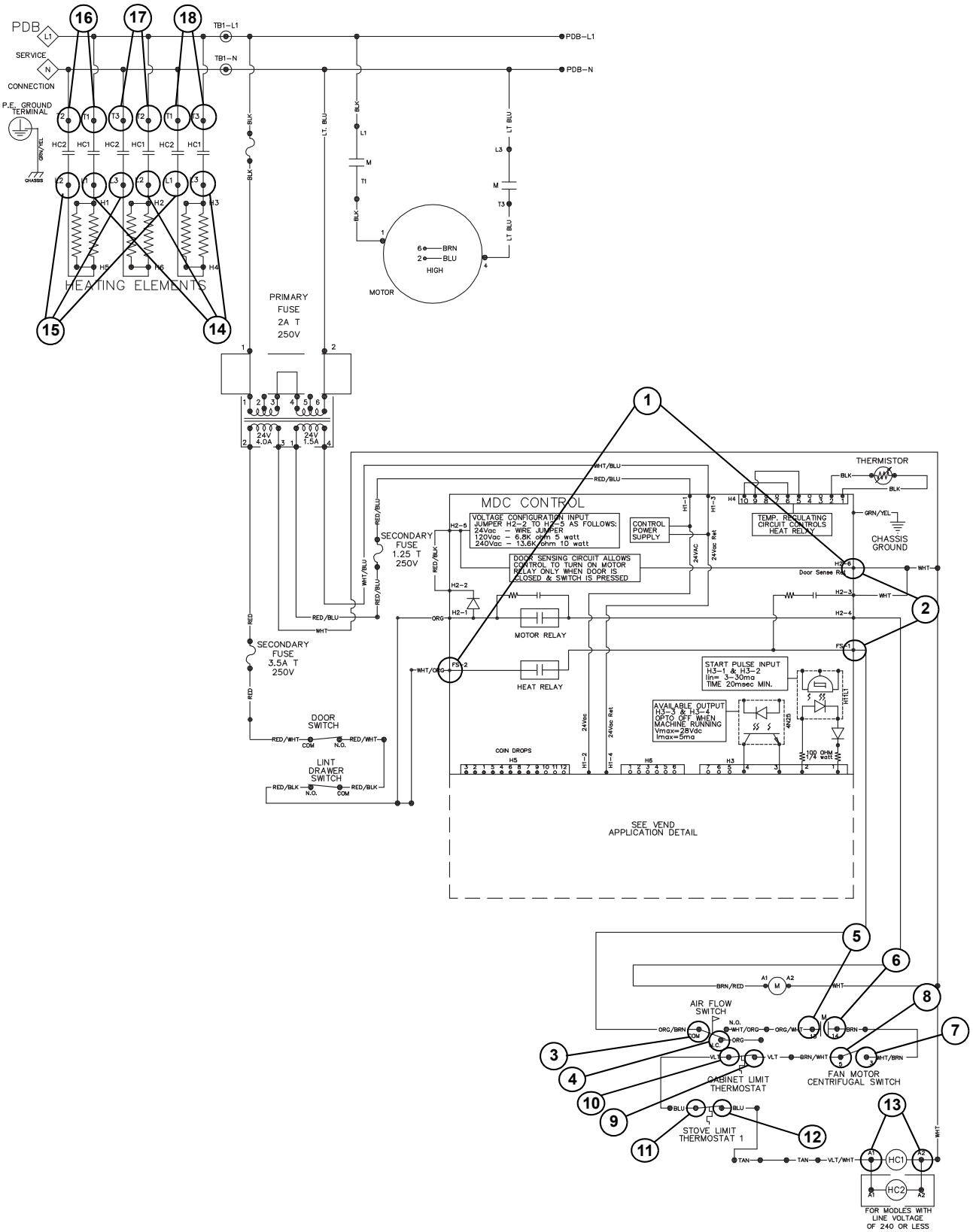
TMB2311S-a

49. Unit Will Not Heat – Electric (continued)



Please see following page for wiring diagram information.

Unit Will Not Heat – Electric



TMB2330S

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the dryer(s) before servicing.**
- **Close gas shut-off valve to gas dryer(s) before servicing.**
- **Never start the dryer(s) with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the dryer is properly grounded.**

W001R1

50. Error Codes

OP - Indicates physical "open" in the thermistor circuit. Possible causes are: 1) thermistor, 2) wiring between control and thermistor, 3) control.
SH - Indicates a "short" in the thermistor circuit. Possible causes are: 1) shorted thermistor, 2) a short in the wiring between control and thermistor, 3) control.

Card Reader Machines: (In addition to the above errors)

EC:19 - Indicates no card reader communication. The control and the reader cannot communicate. Check reader, control and harness.

NOTE: For all other card reader errors, consult the card reader manual provided by the manufacturer.

Display	Definition	Corrective Action
OP	Indicates an open circuit in the thermistor.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Indicates a short circuit in the thermistor.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
EC:19 *Card Reader models only	Indicates no communication between control and card reader.	• Check card reader. Replace if inoperative. • Check wire harness connecting card reader and control. Replace if inoperative. • Check control. Replace if inoperative.

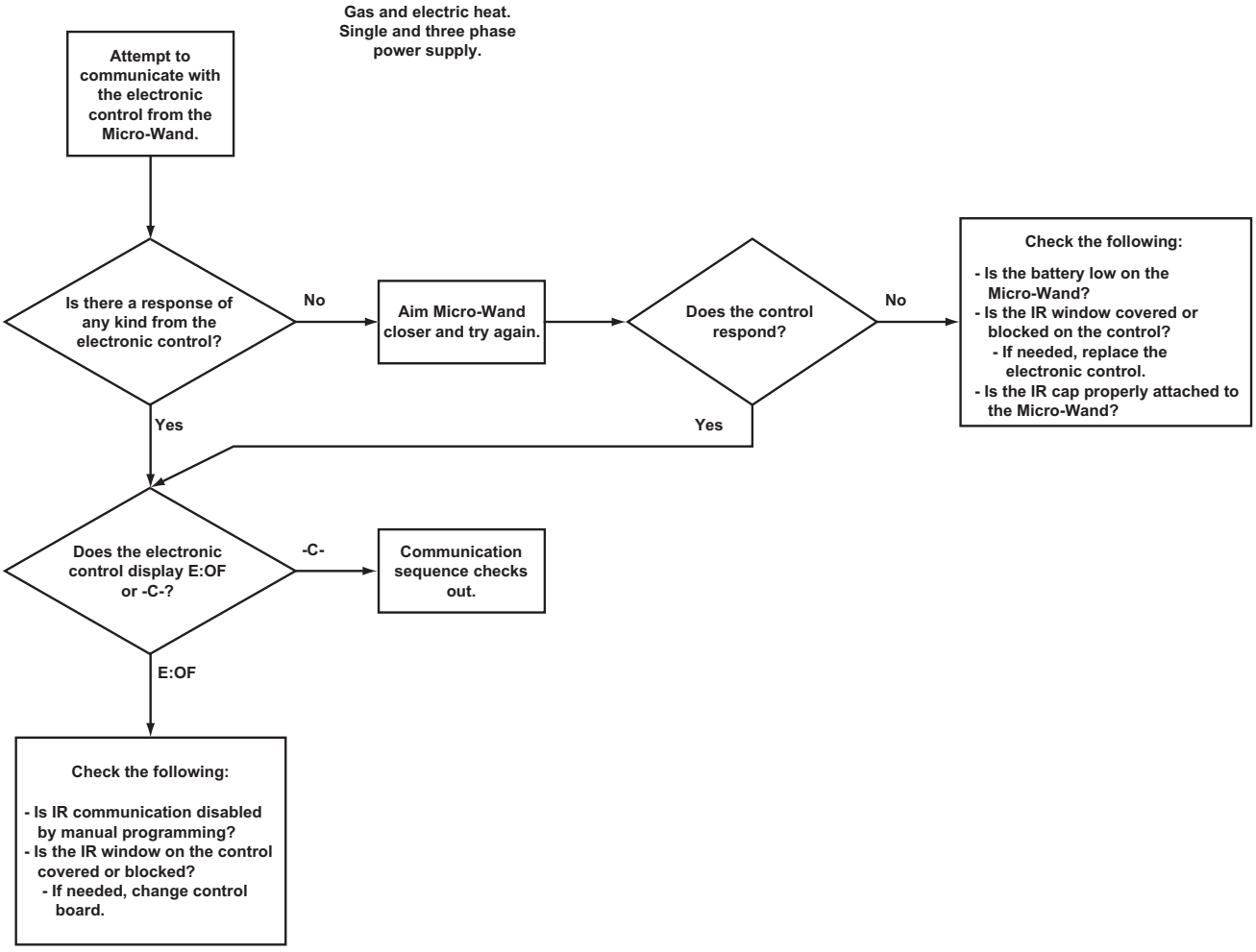
Section 7
NetMaster Troubleshooting – KT075 Models Only

WARNING

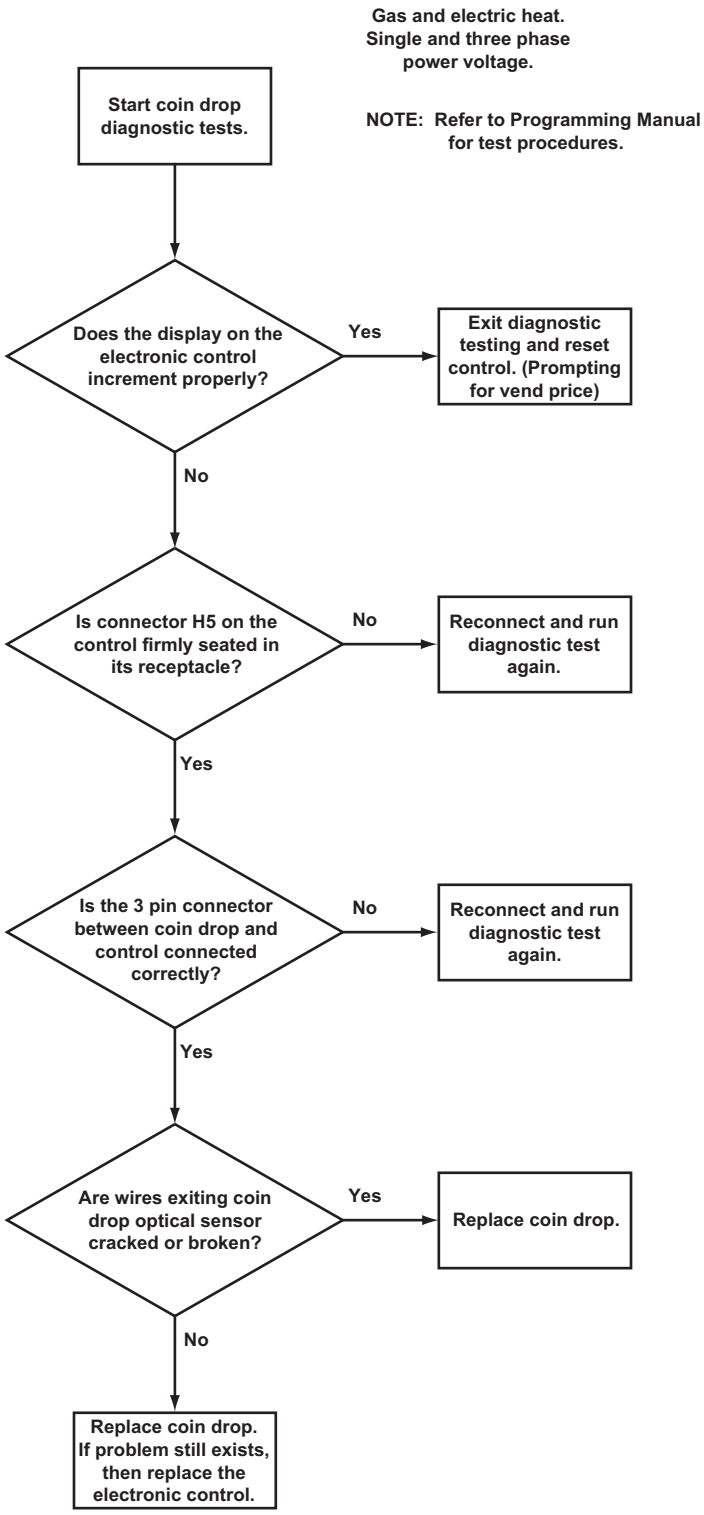
To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

51. No Infrared Communication

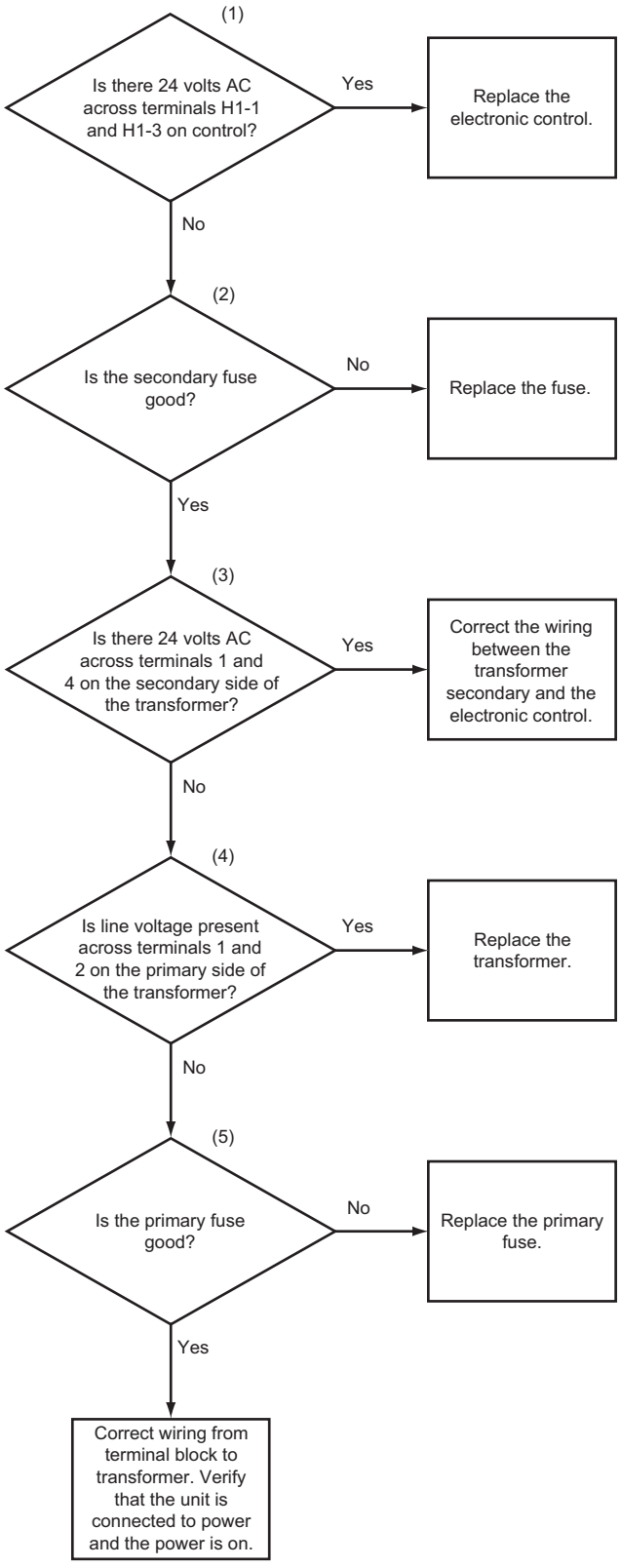


52. Coins Ignored When Entered



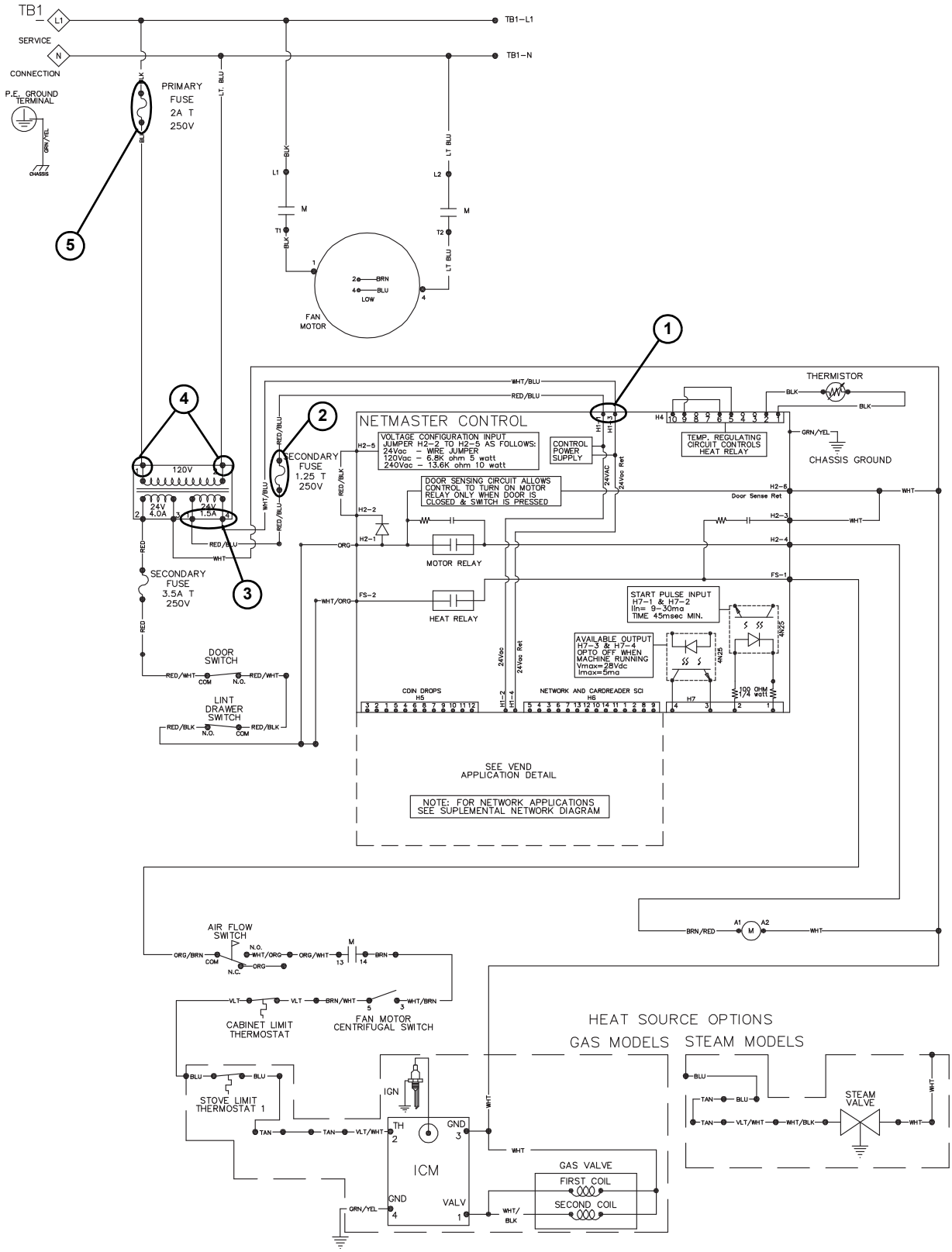
TMB1794S

53. No Display



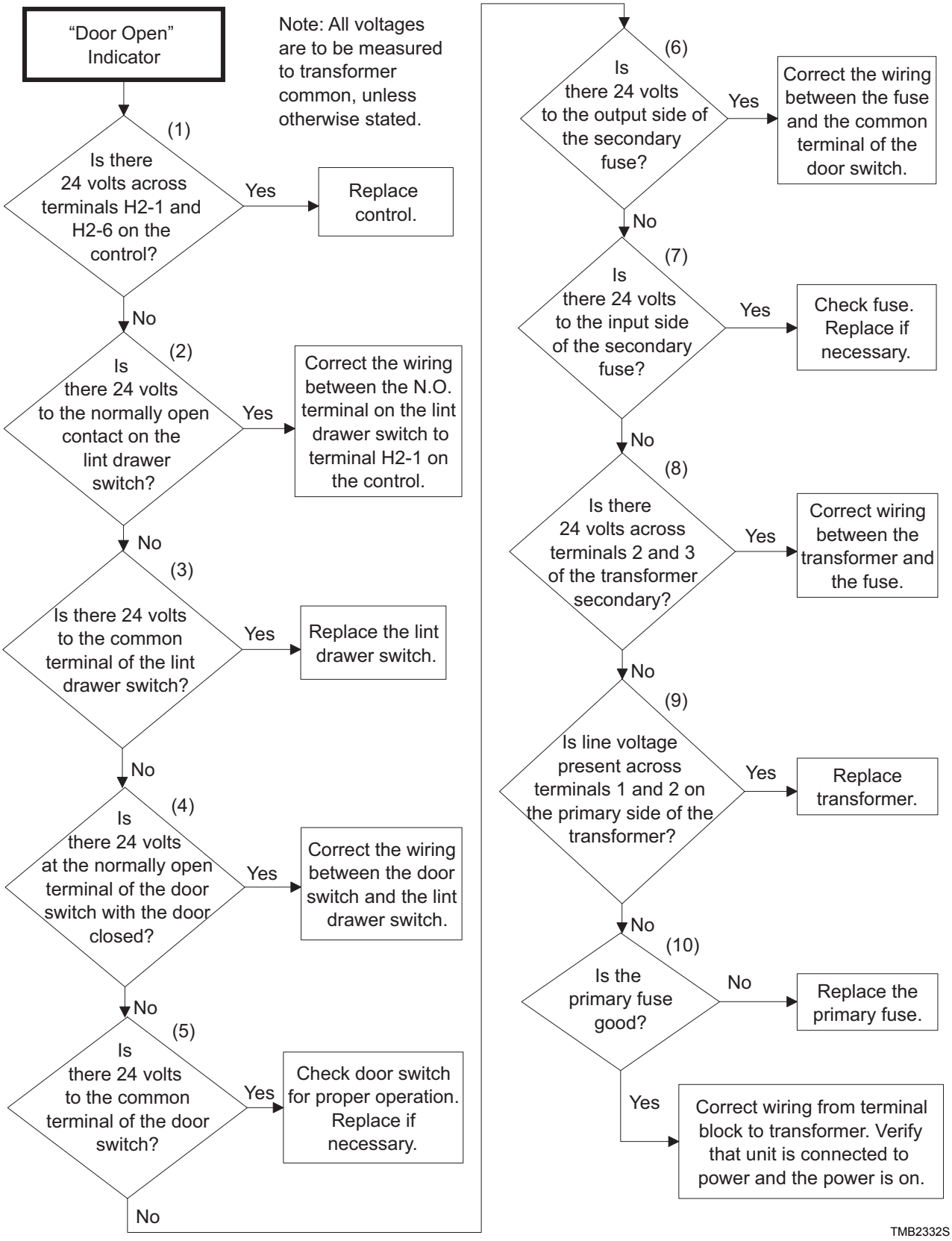
TMB1795S

No Display

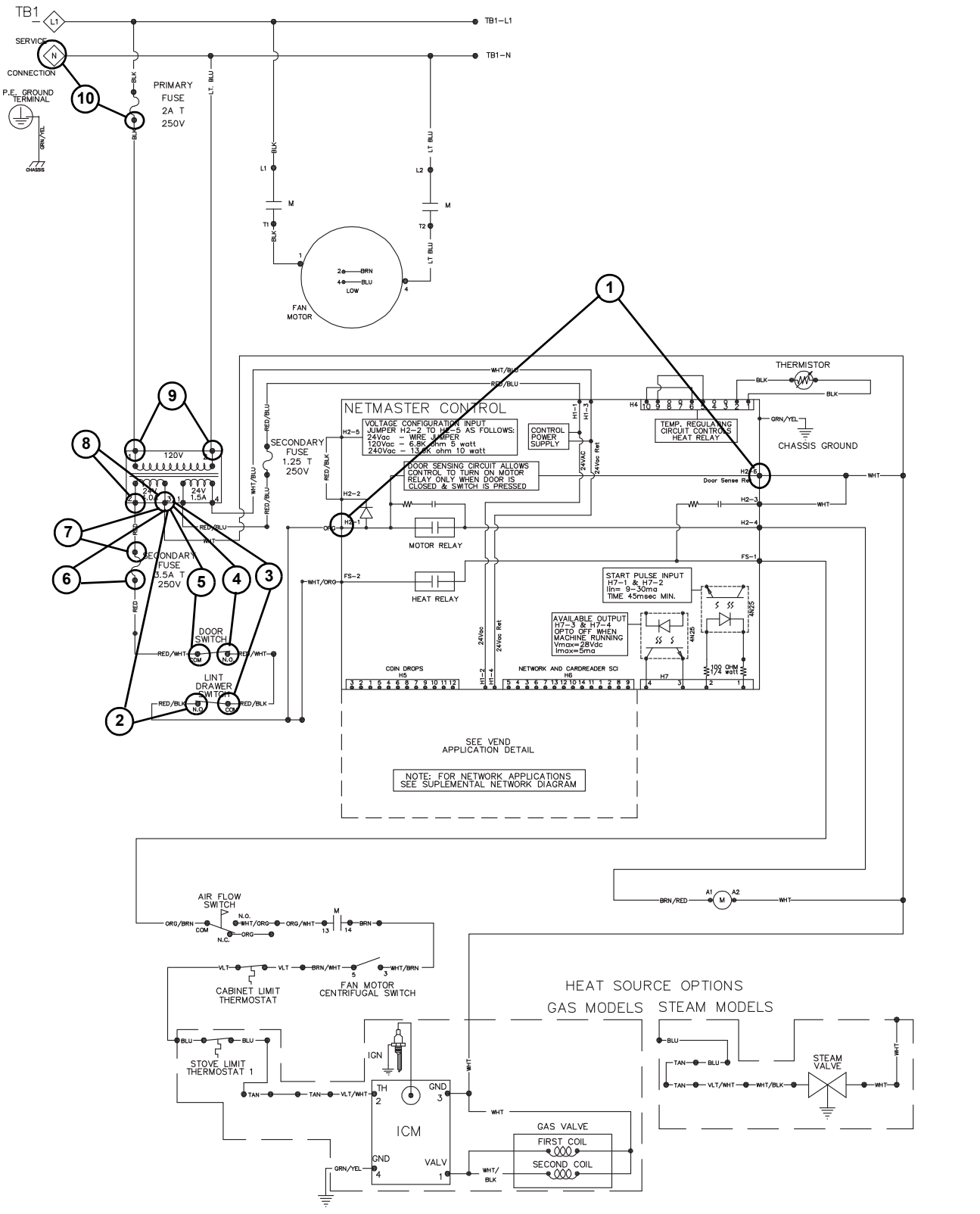


TMB2331S

54. “Door Open” Indicator



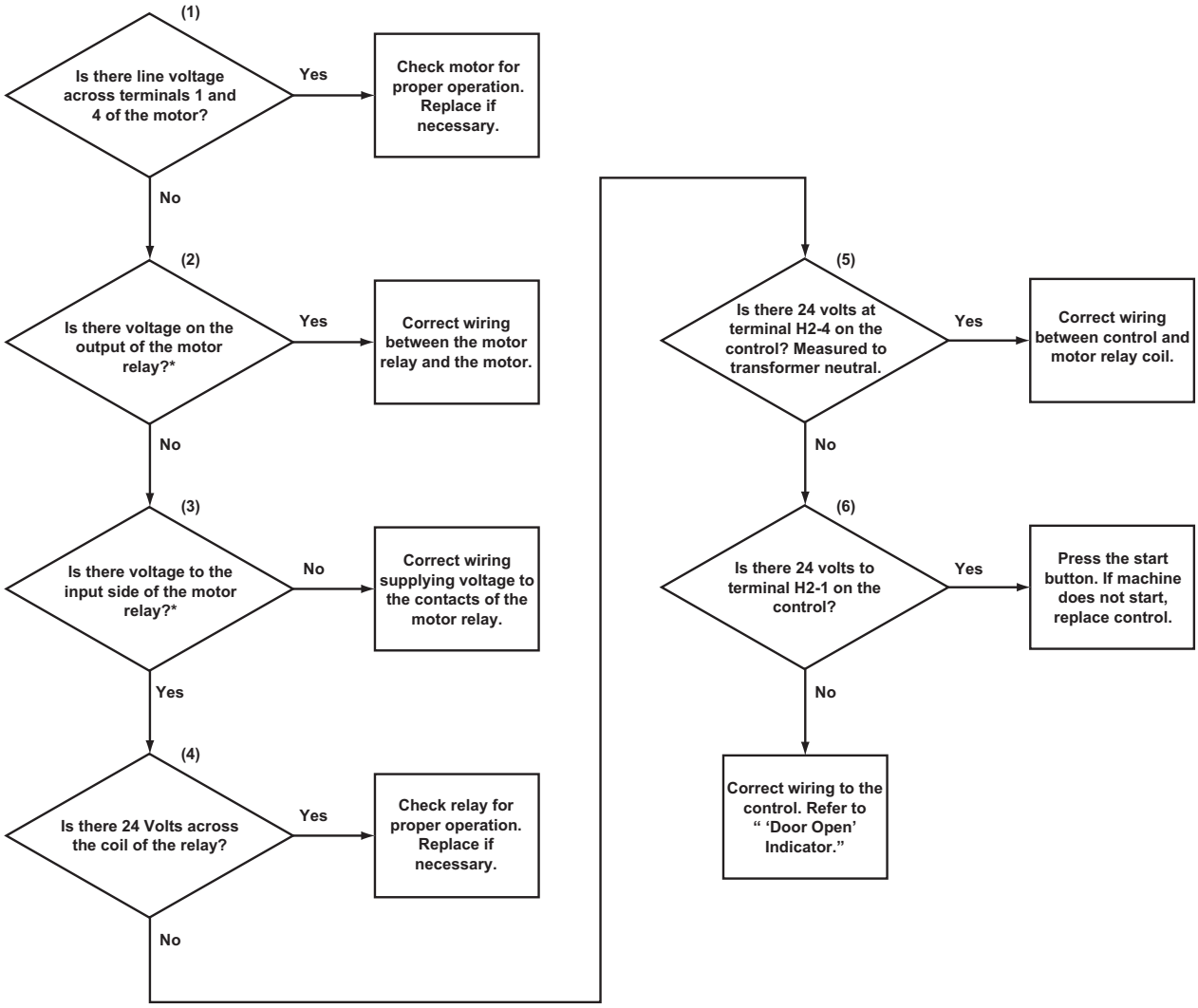
“Door Open” Indicator



TMB2331S

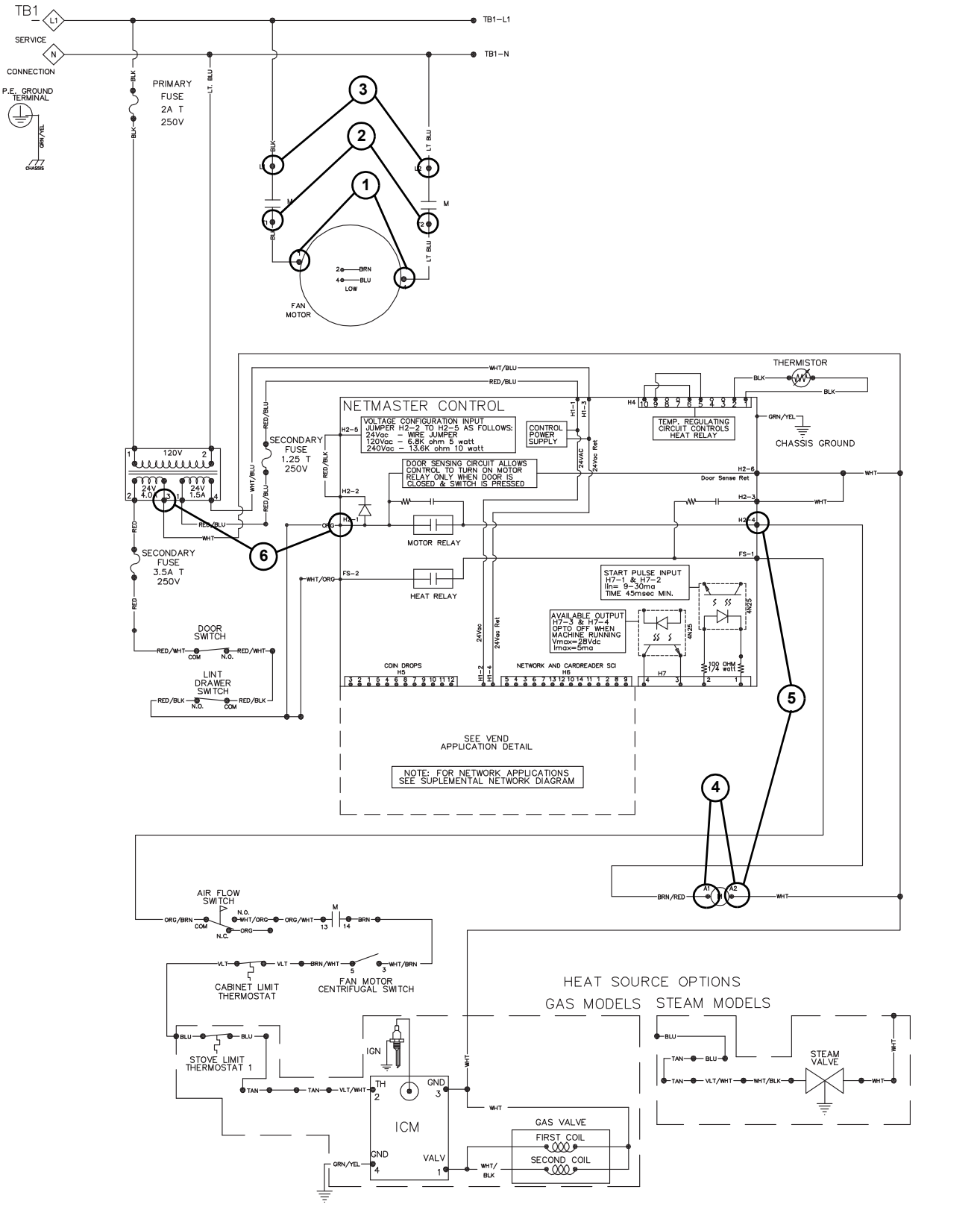
55. No Start/Run

***Note: For steps 2 and 3. For 208/240 1 phase, both lines to the motor are controlled by contacts. Please check second set of contacts. For 3 phase units, the three legs supplied to the moter will be controlled by N.O. contacts. Please check all three legs.**



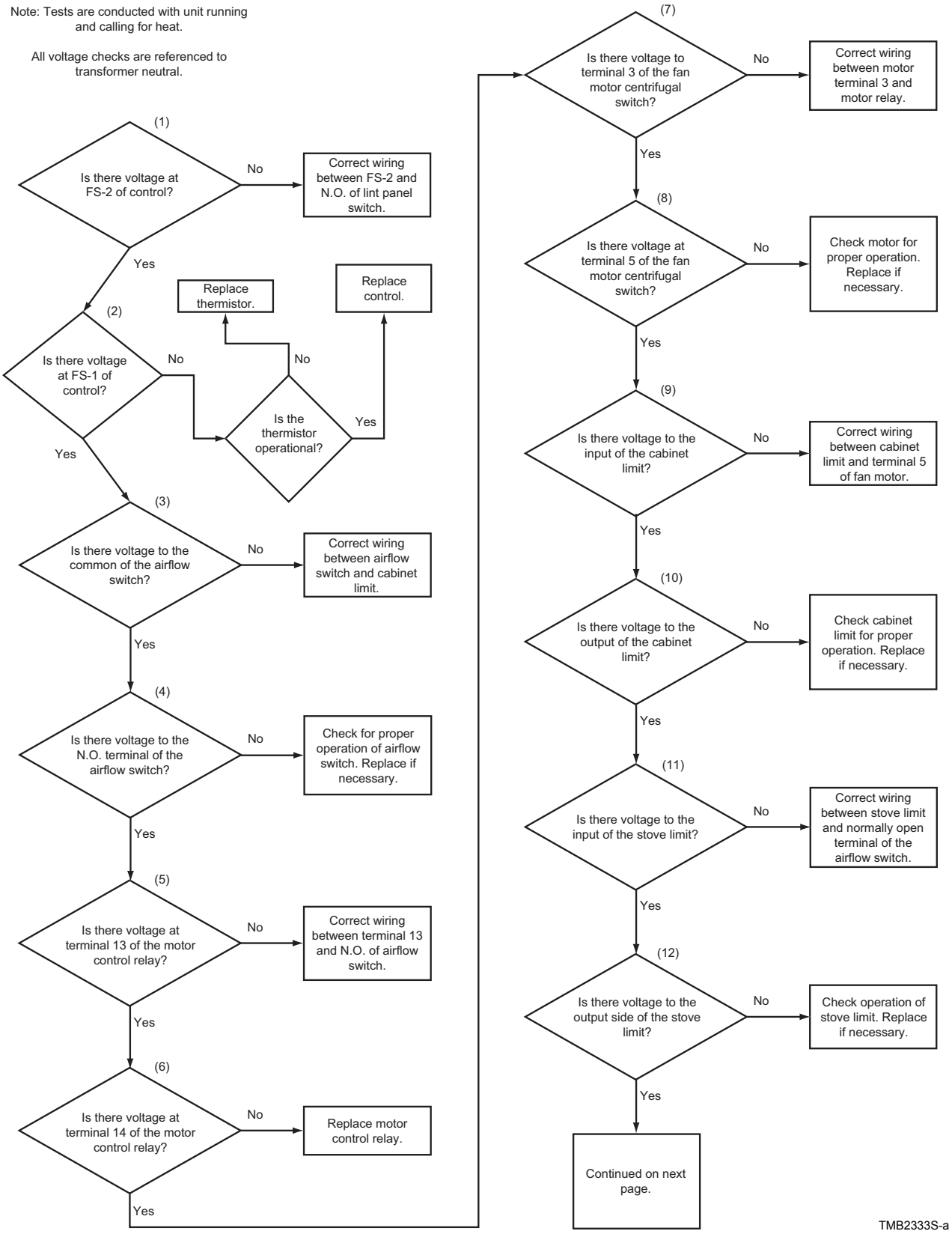
TMB1799S

No Start/Run

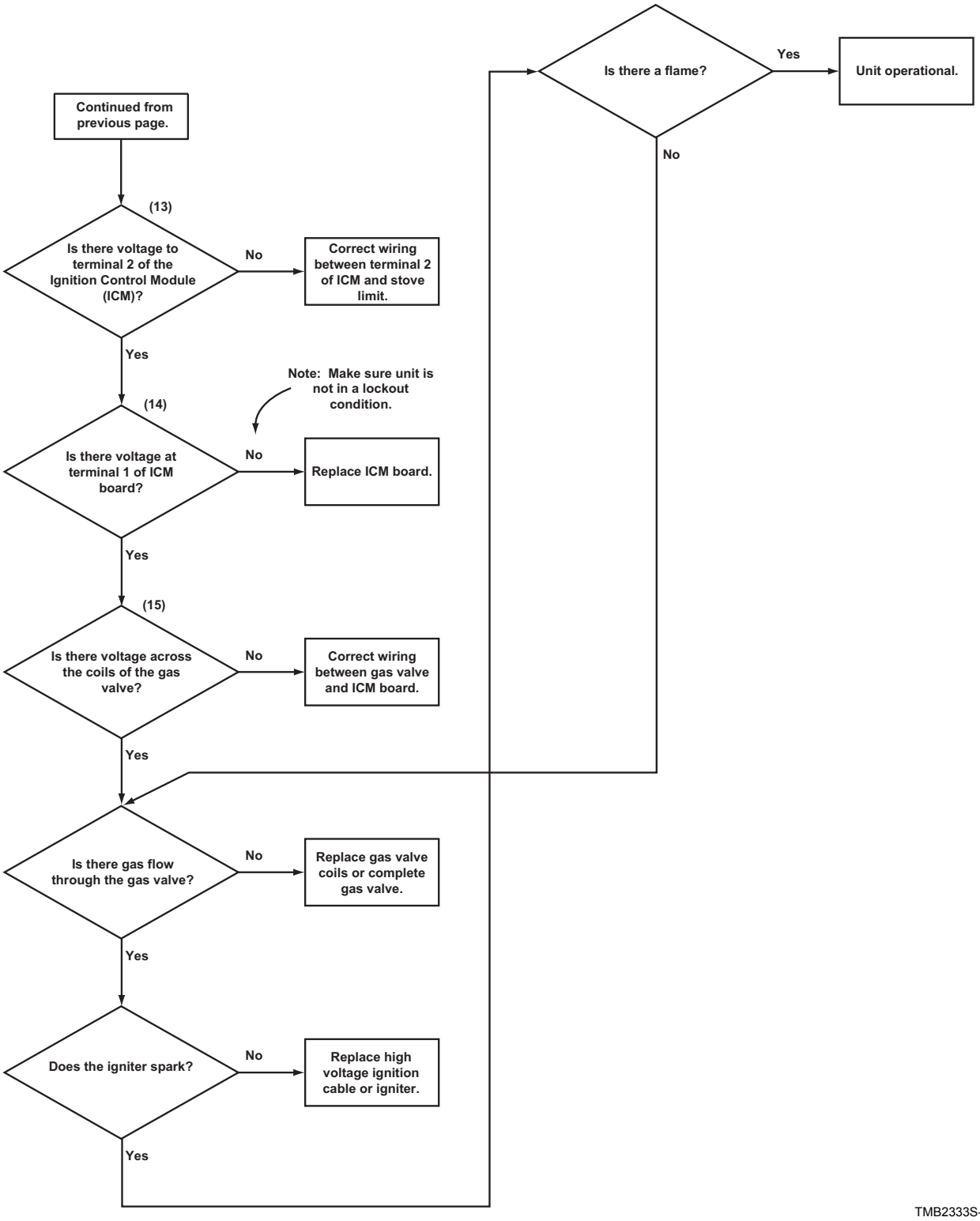


TMB2331S

56. Unit Will Not Heat – Gas

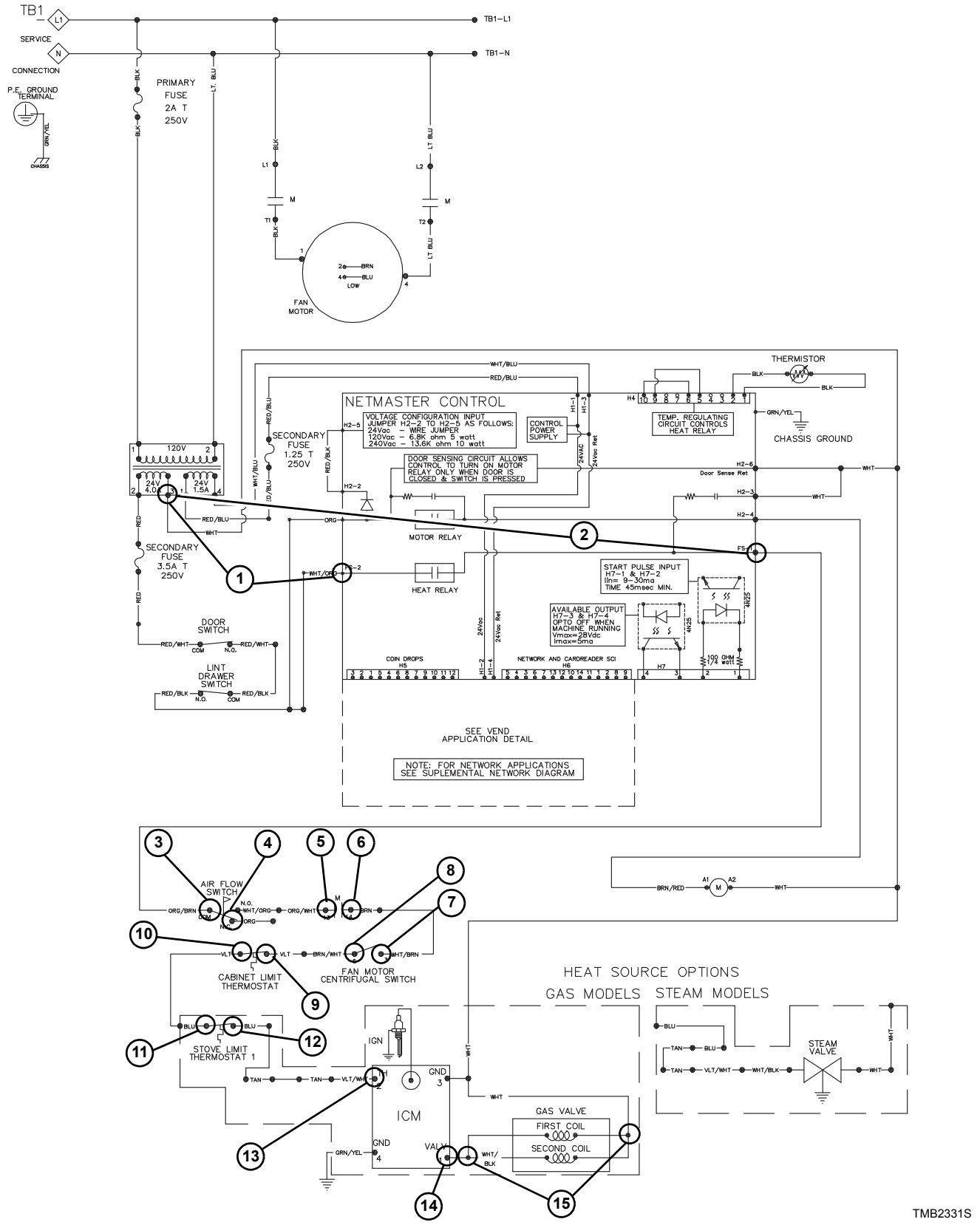


56. Unit Will Not Heat – Gas (continued)



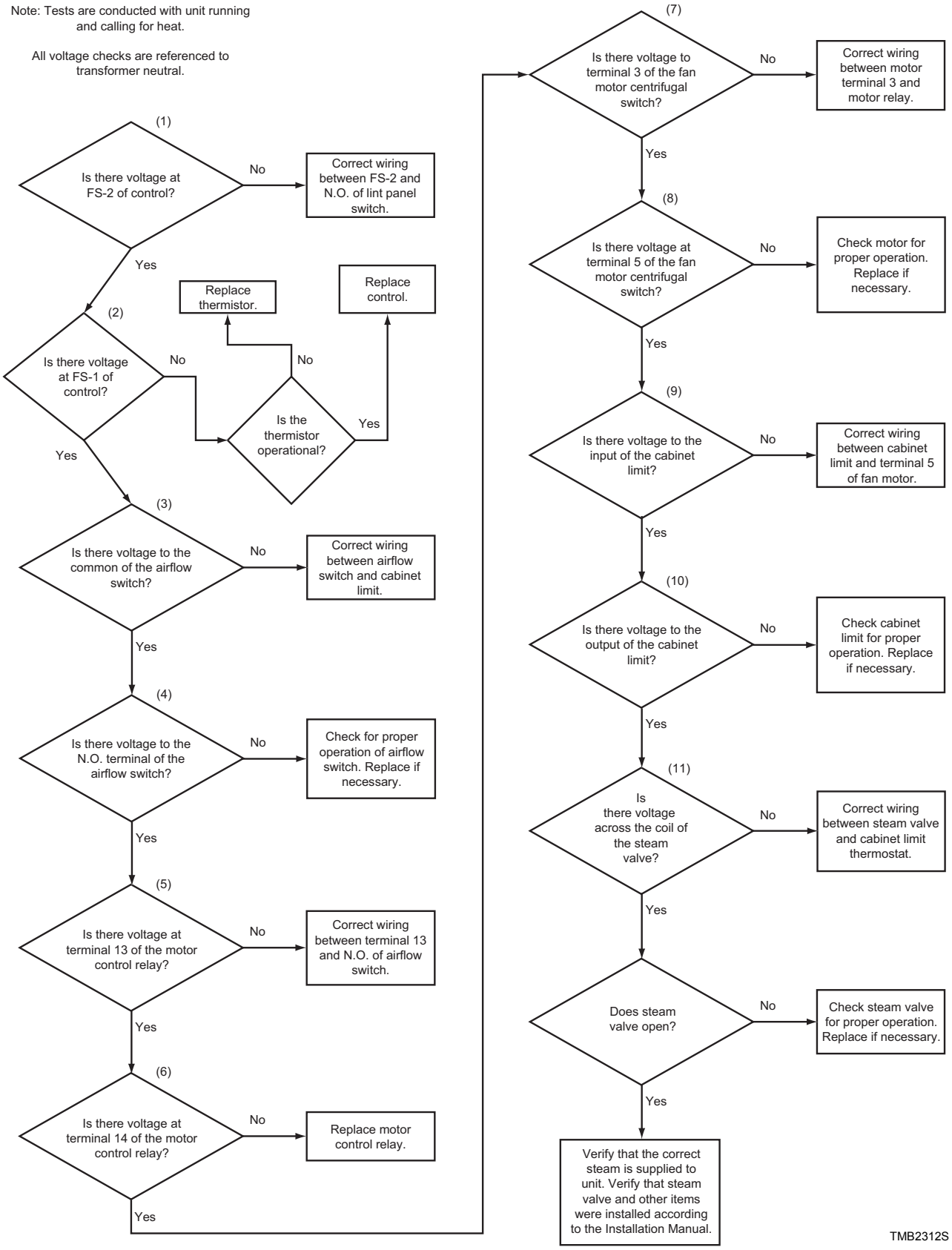
Please see following page for wiring diagram information.

Unit Will Not Heat – Gas

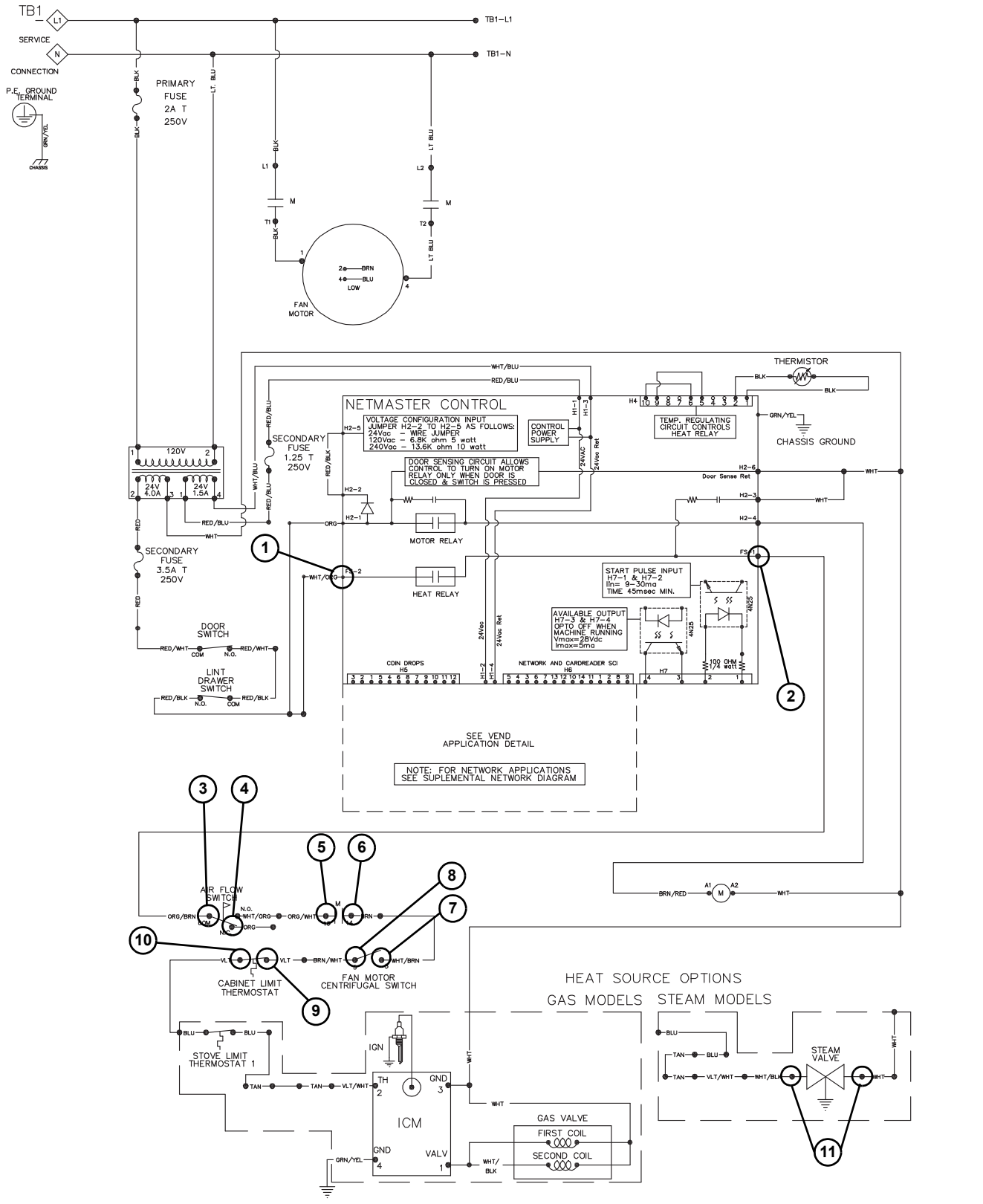


TMB2331S

57. Unit Will Not Heat – Steam



Unit Will Not Heat – Steam

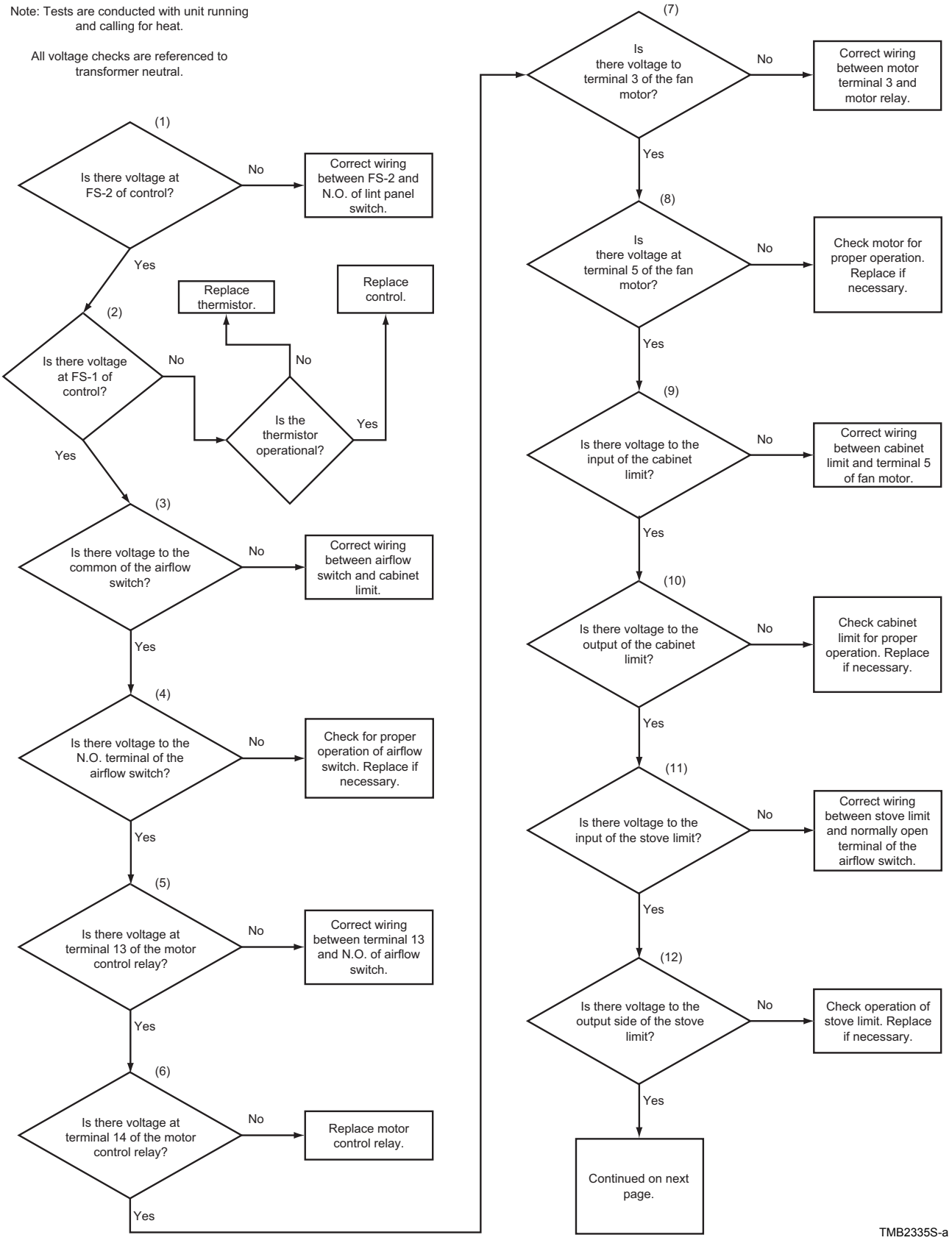


TMB2331S

58. Unit Will Not Heat – Electric

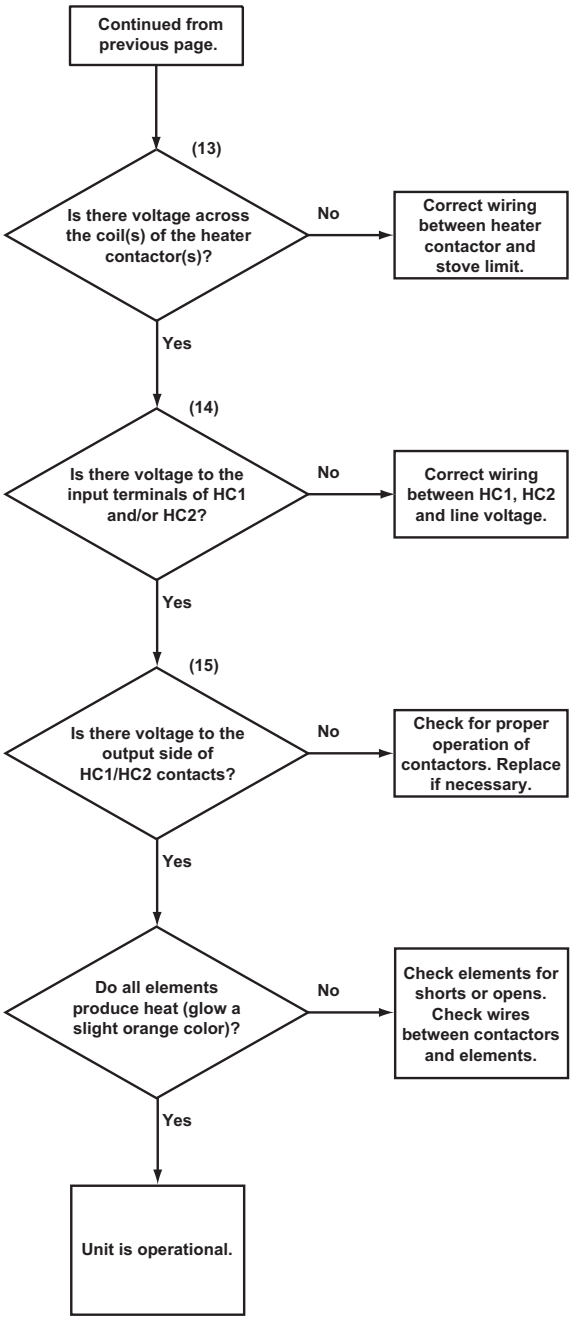
Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.



TMB2335S-a

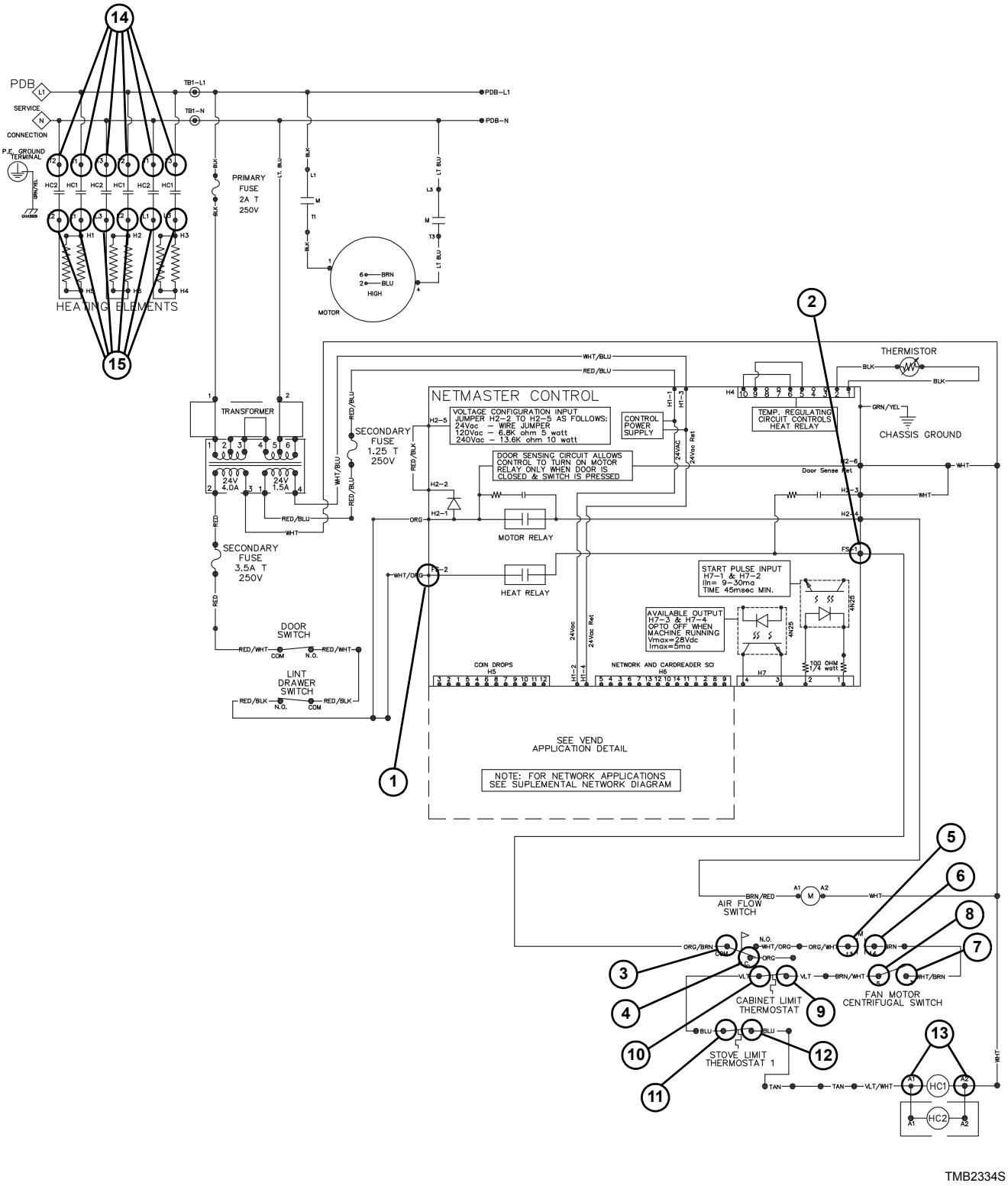
58. Unit Will Not Heat – Electric (continued)



TMB2335S-b

Please see following page for wiring diagram information.

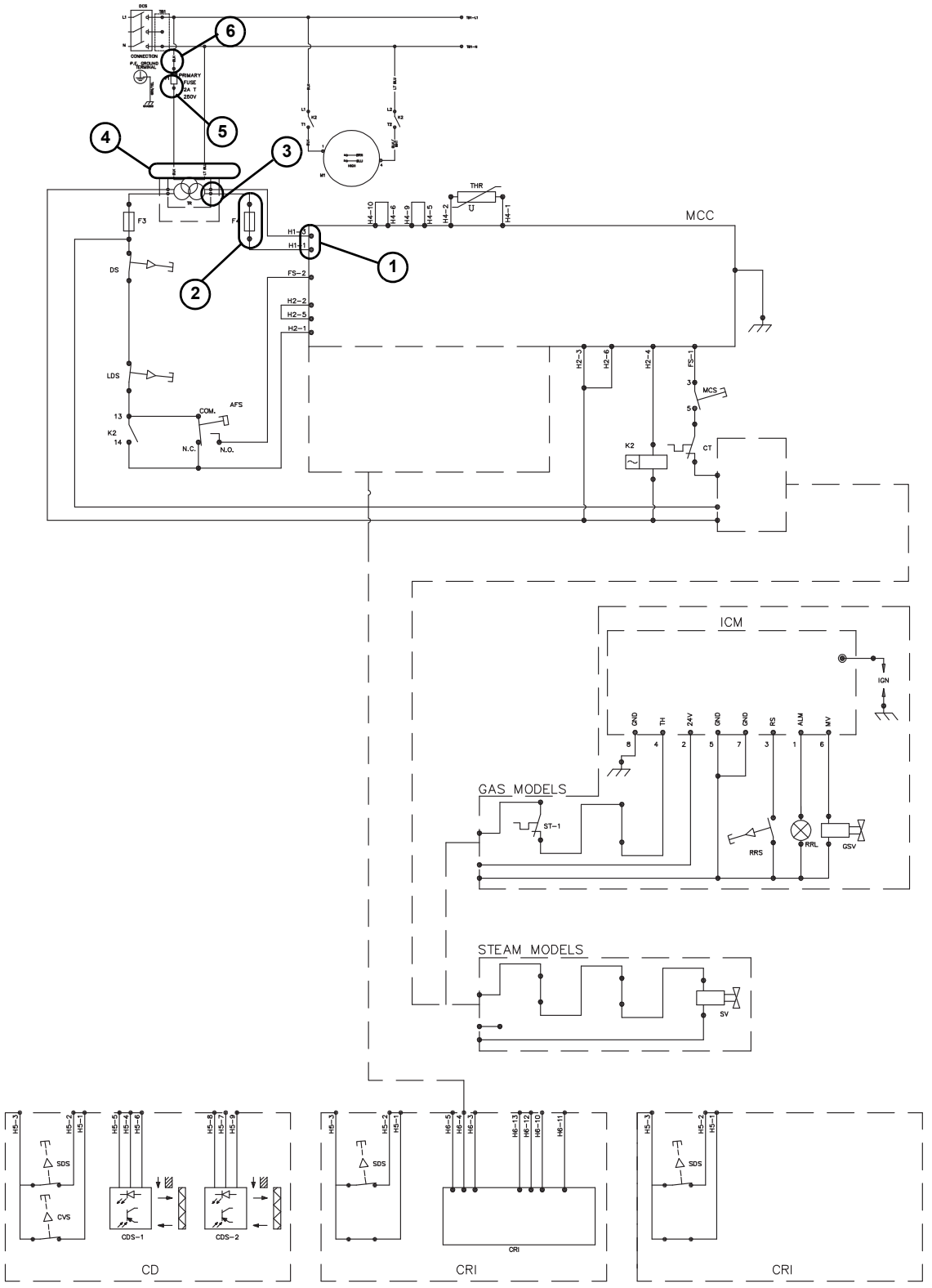
Unit Will Not Heat – Electric



TMB2334S

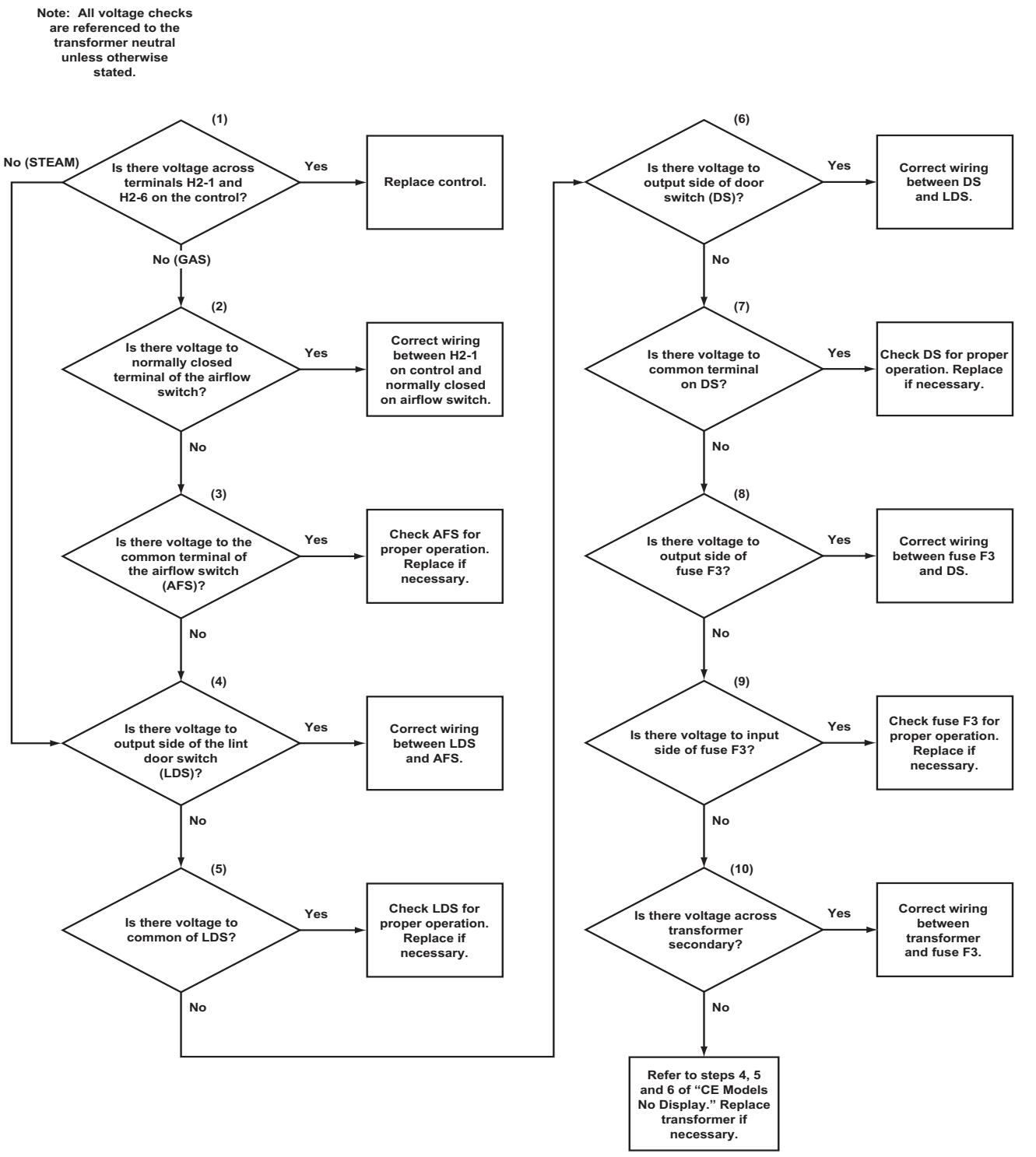
59. CE Models No Display

CE Models No Display



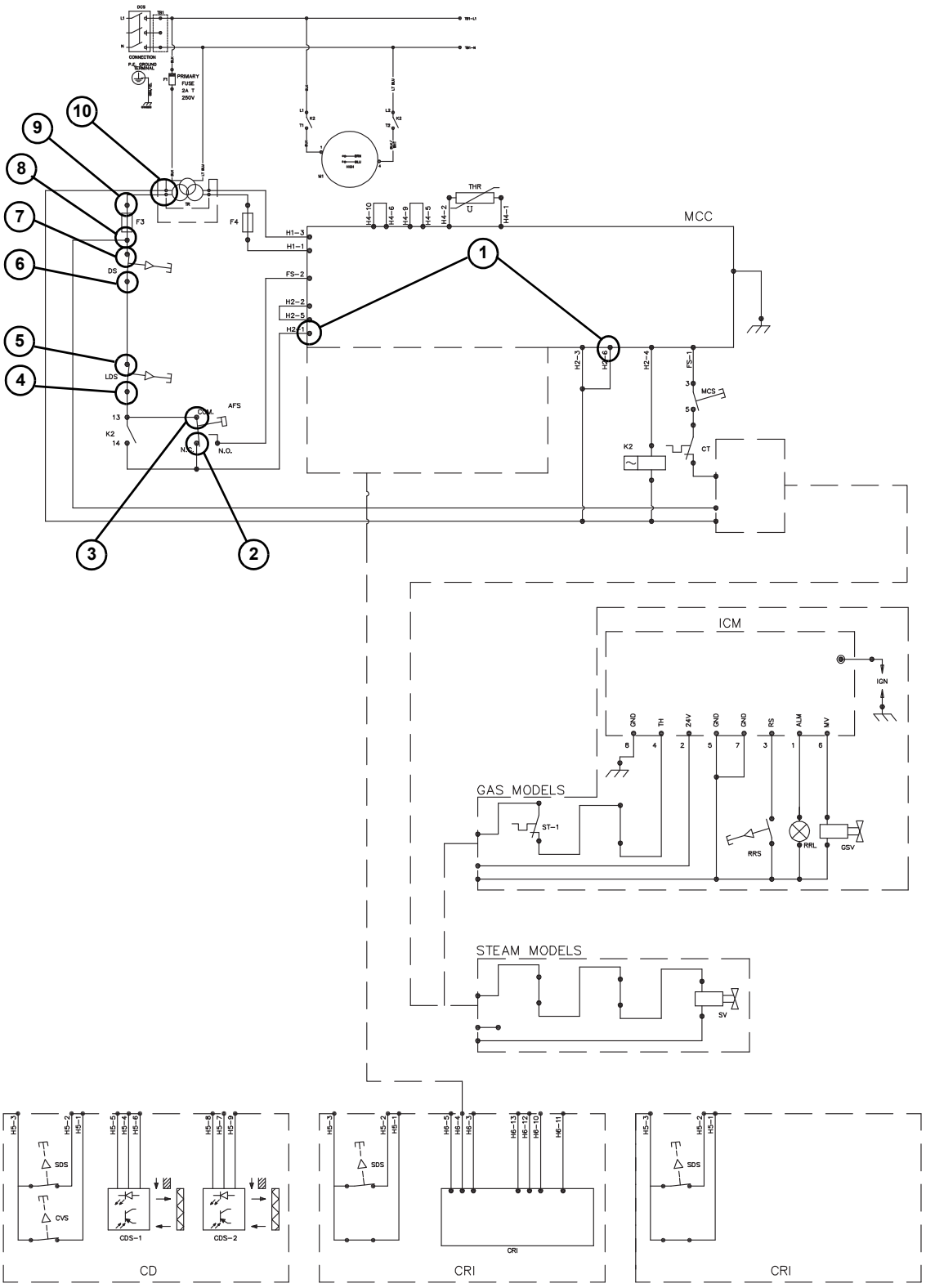
TMB2336S

60. CE Models “Door Open” Indicator



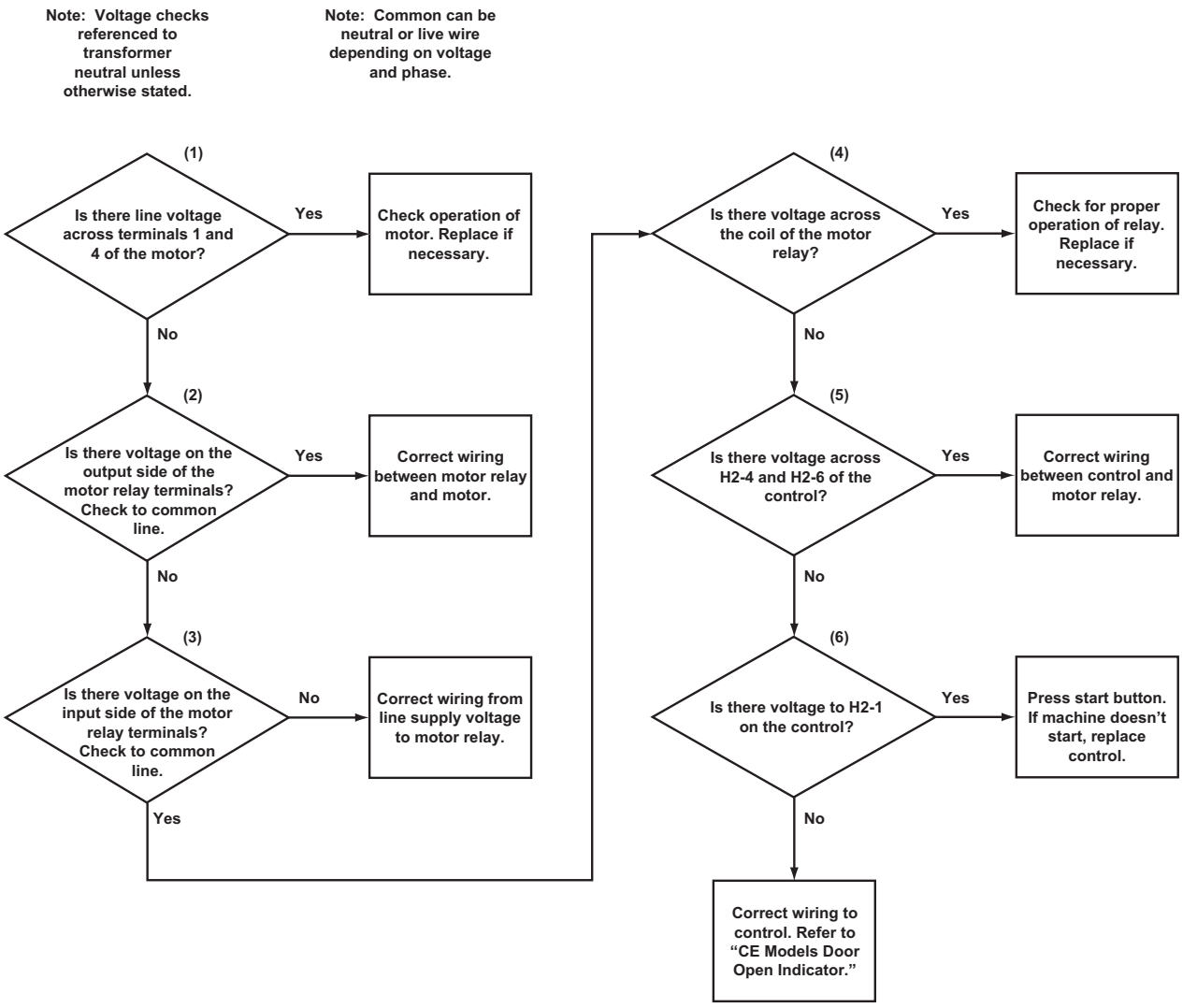
TMB2314S

CE Models “Door Open” Indicator



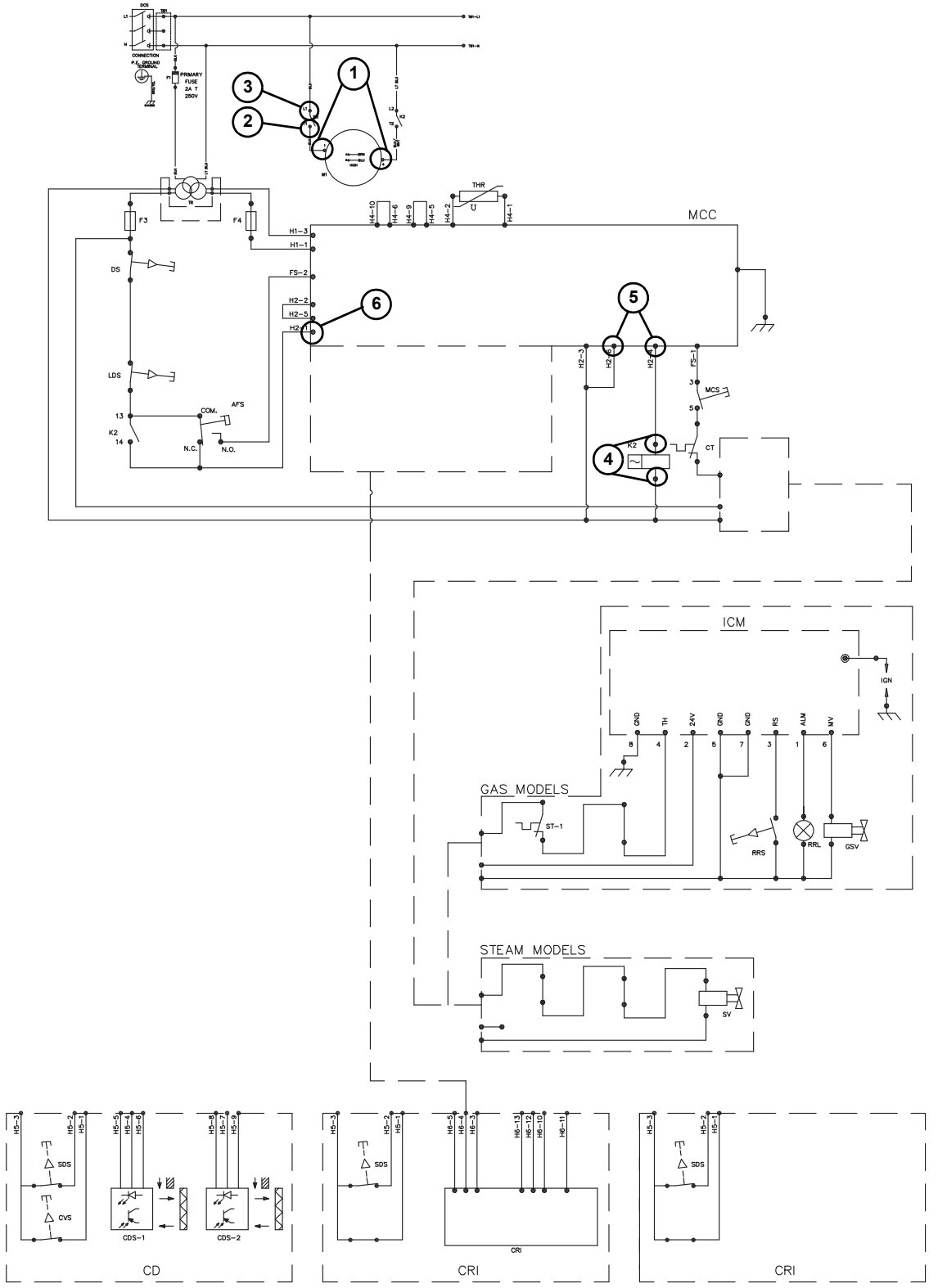
TMB2336S

61. CE Models No Start/Run



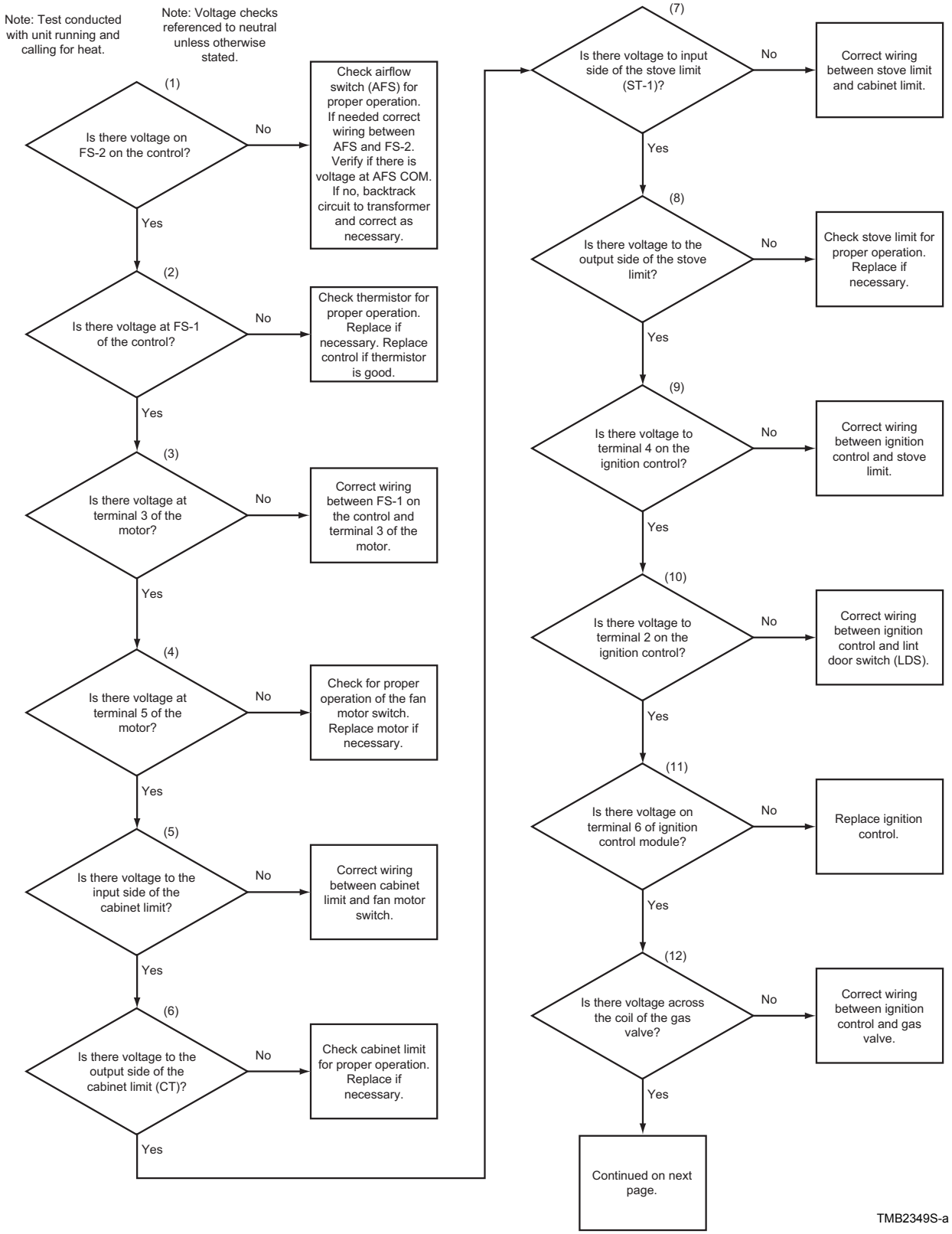
TMB2315S

CE Models No Start/Run

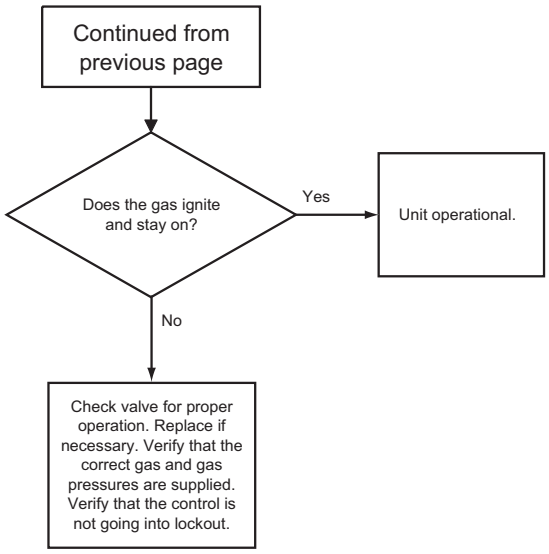


TMB2336S

62. CE Models Will Not Heat – Gas



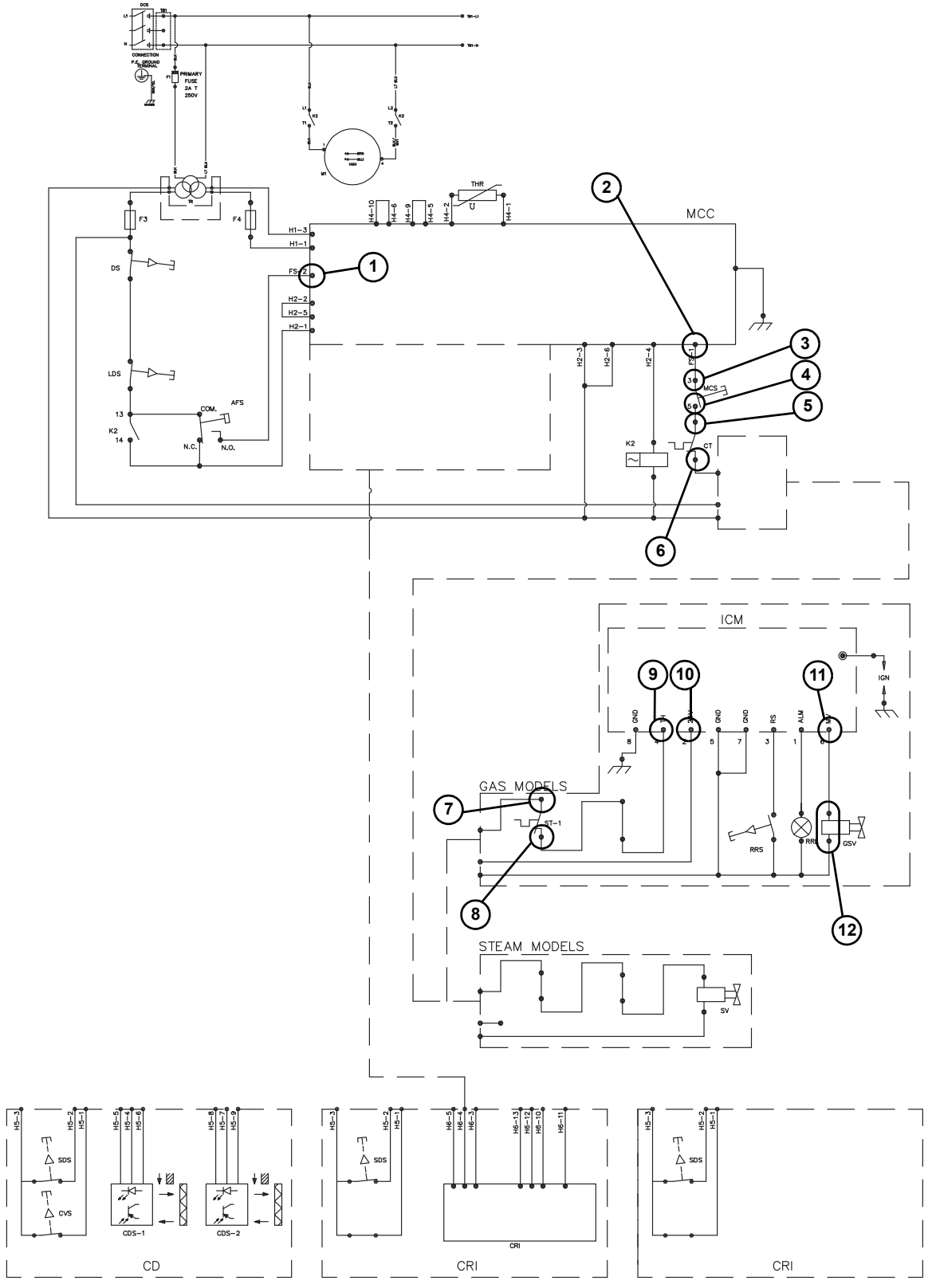
62. CE Models Will Not Heat – Gas (continued)



TMB2349S-b

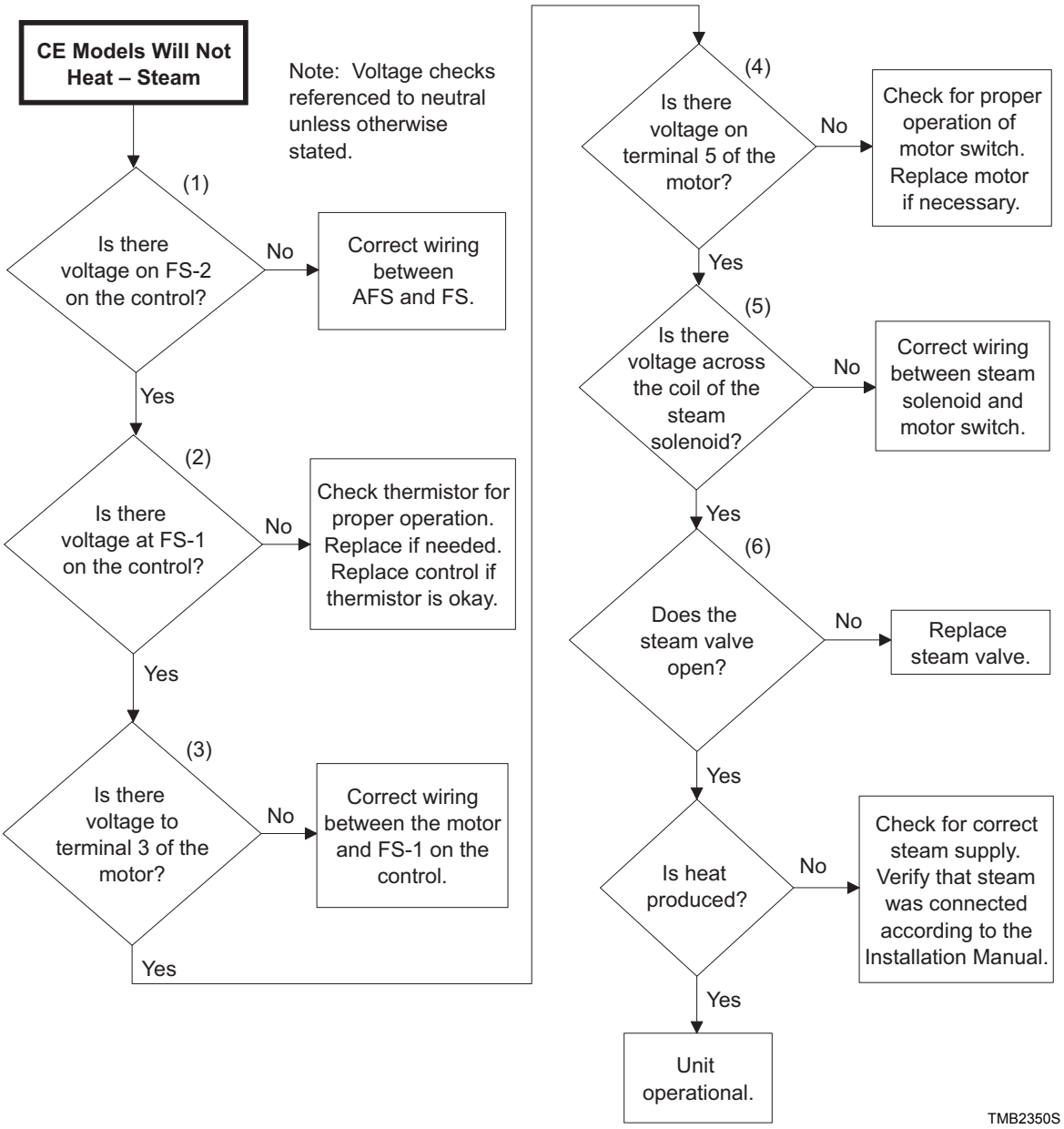
Please see following page for wiring diagram information.

CE Models Will Not Heat – Gas

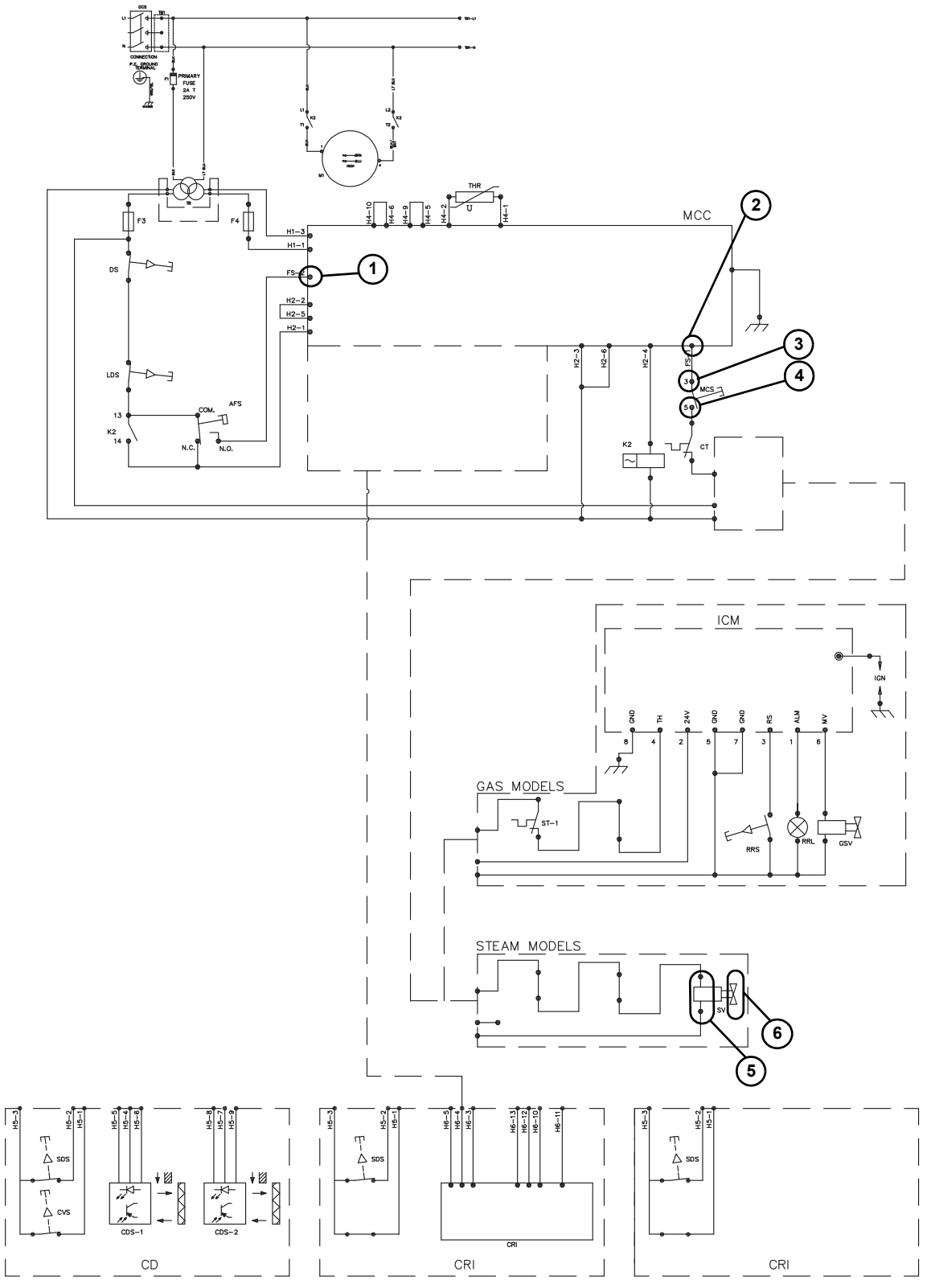


TMB2336S

63. CE Models Will Not Heat – Steam

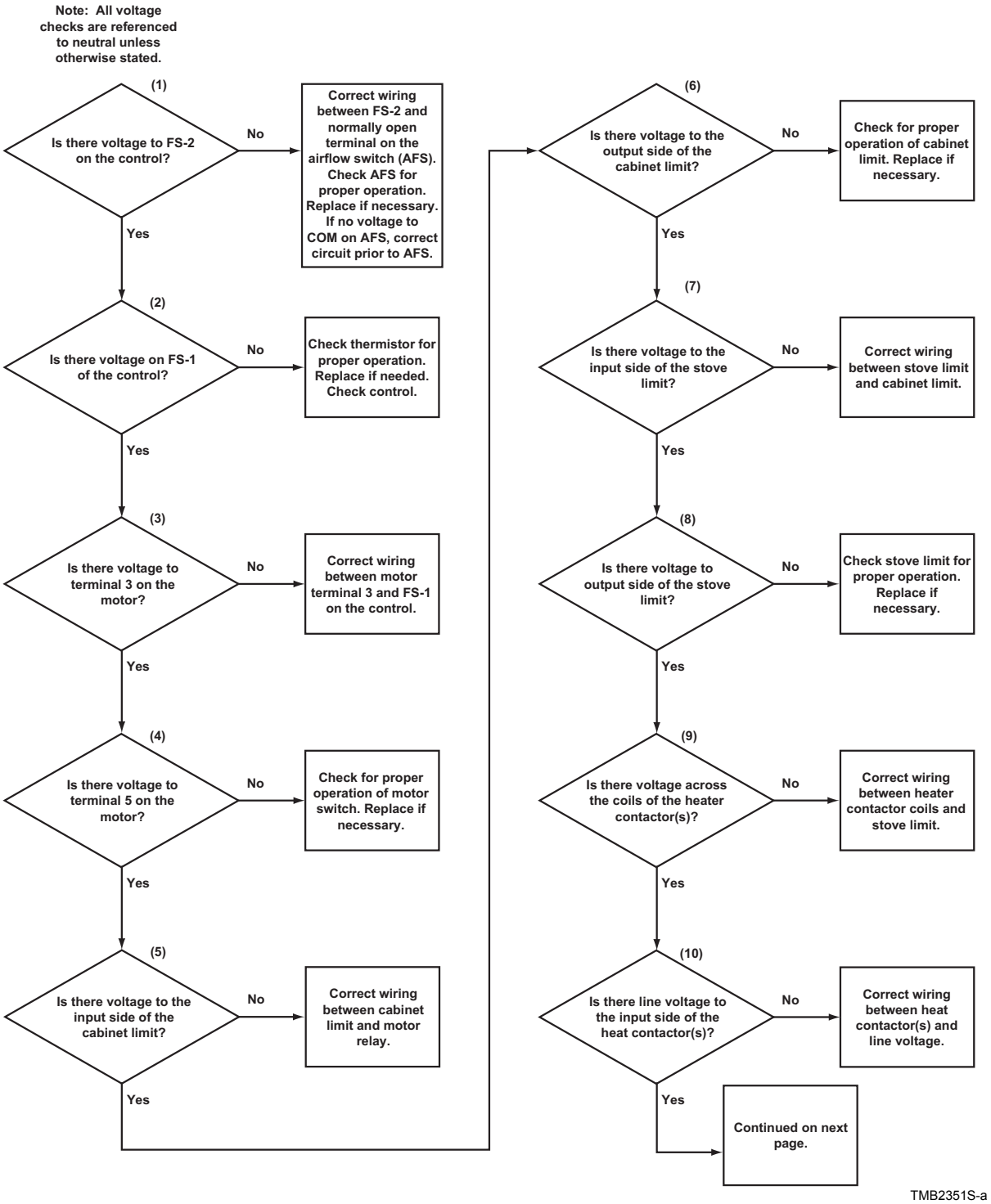


CE Models Will Not Heat – Steam



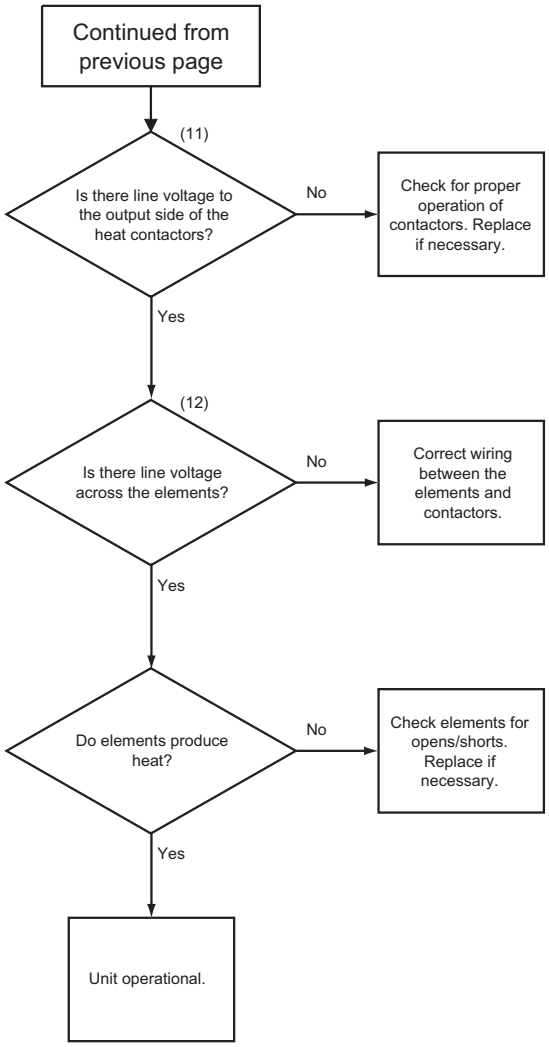
TMB2336S

64. CE Models Will Not Heat – Electric



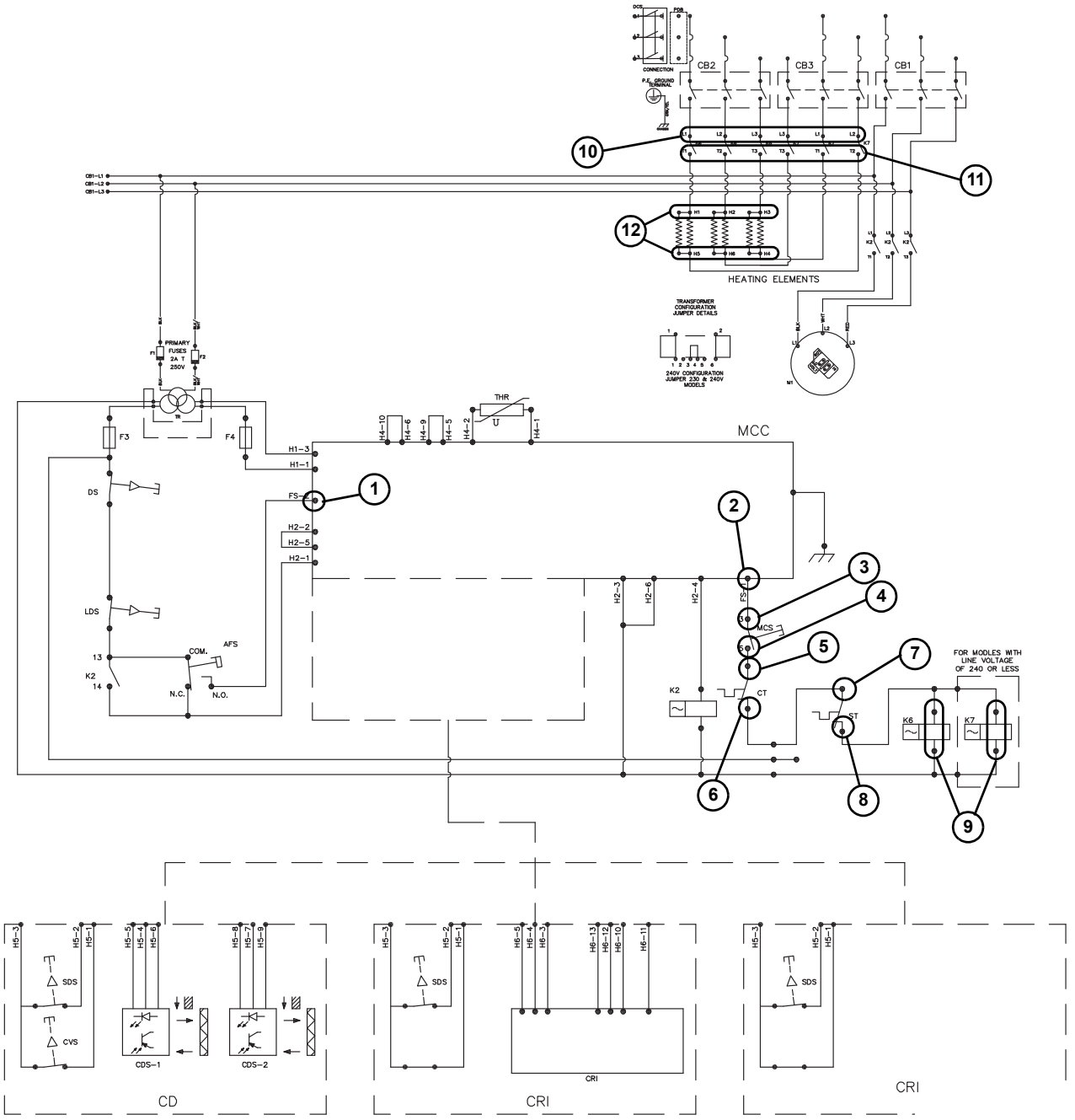
TMB2351S-a

64. CE Models Will Not Heat – Electric (continued)



TMB2351S-b

CE Models Will Not Heat – Electric



TMB2337S

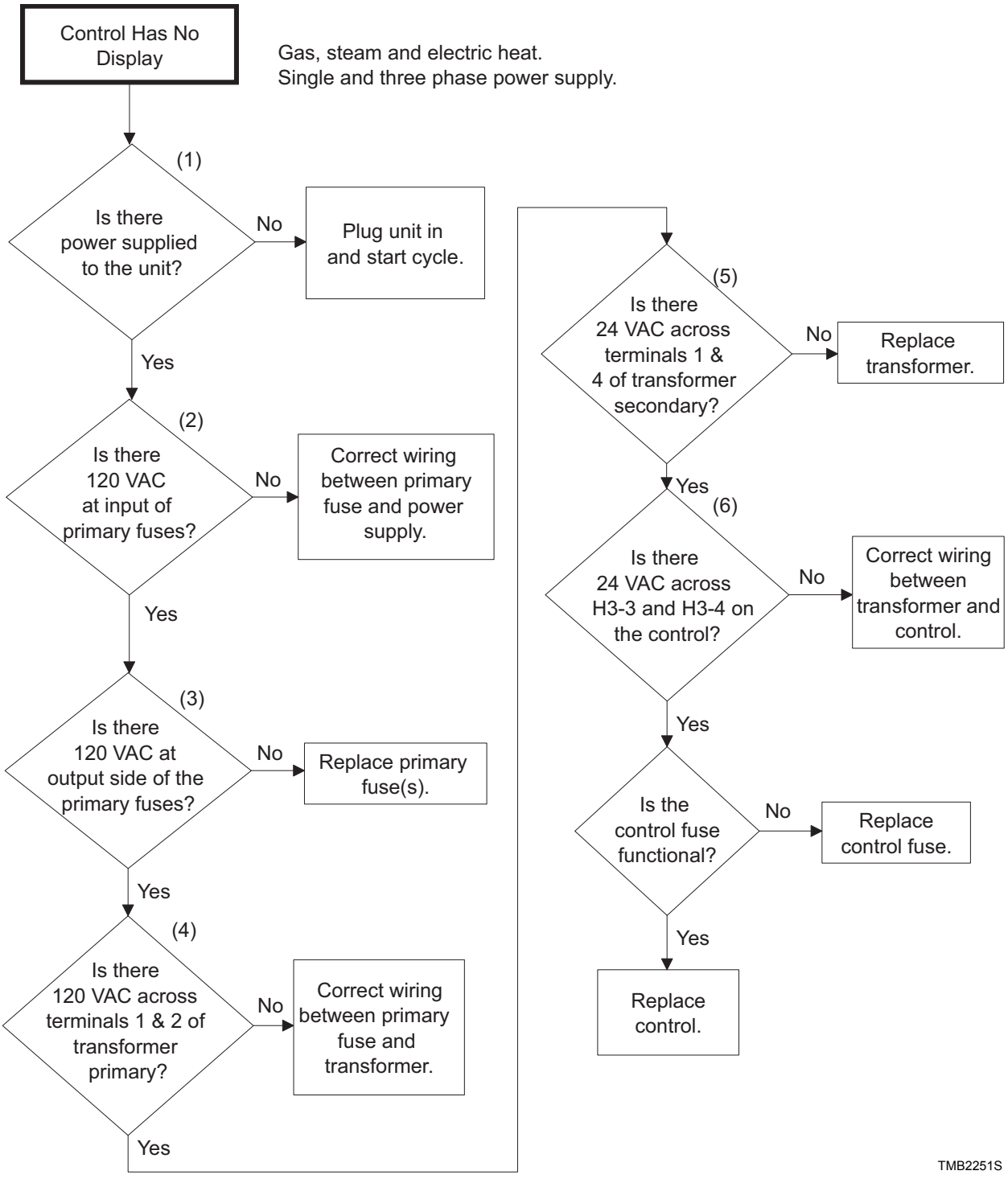
Section 8
On Premise Micro Control (OM) Troubleshooting

WARNING

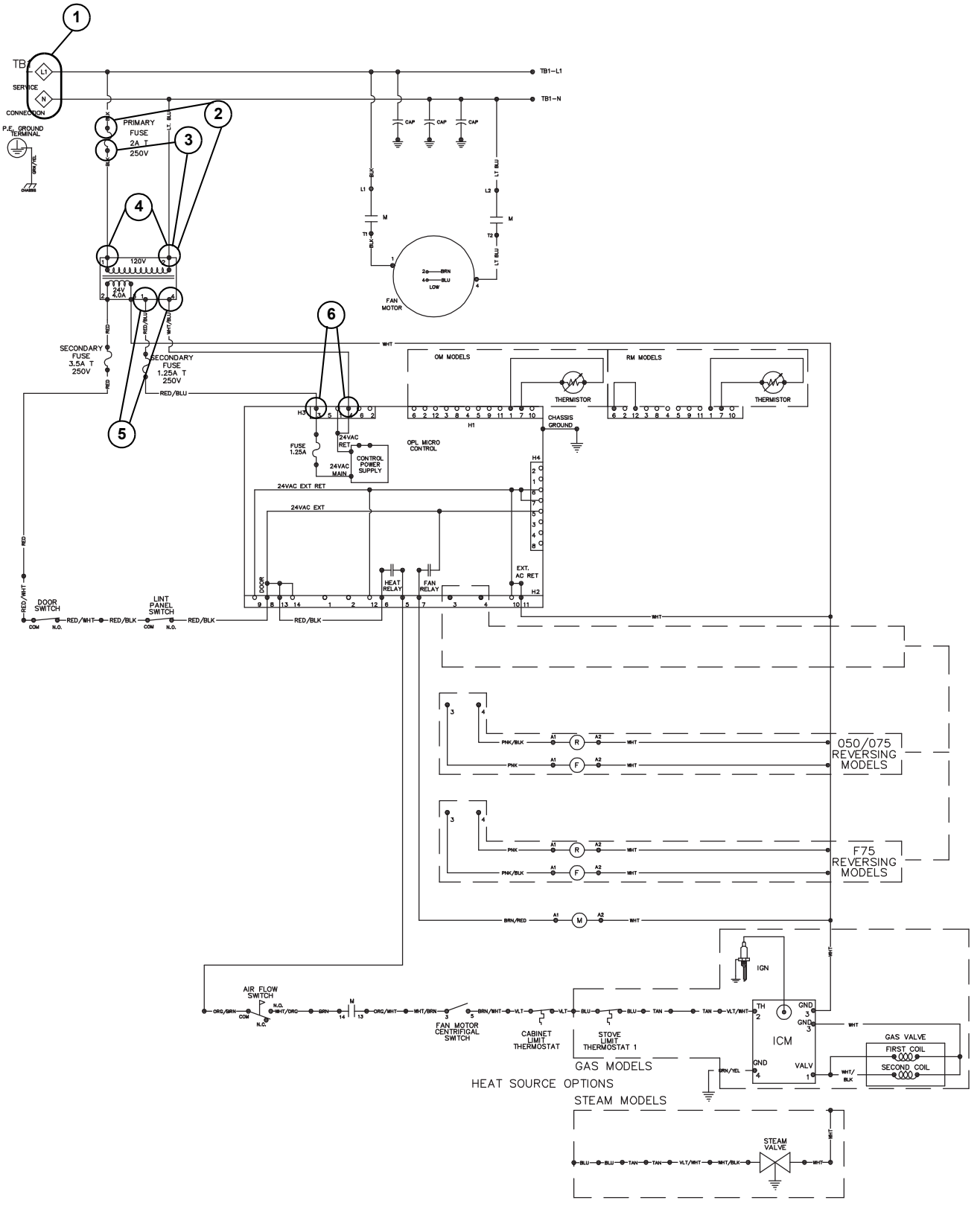
To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

65. Control Has No Display

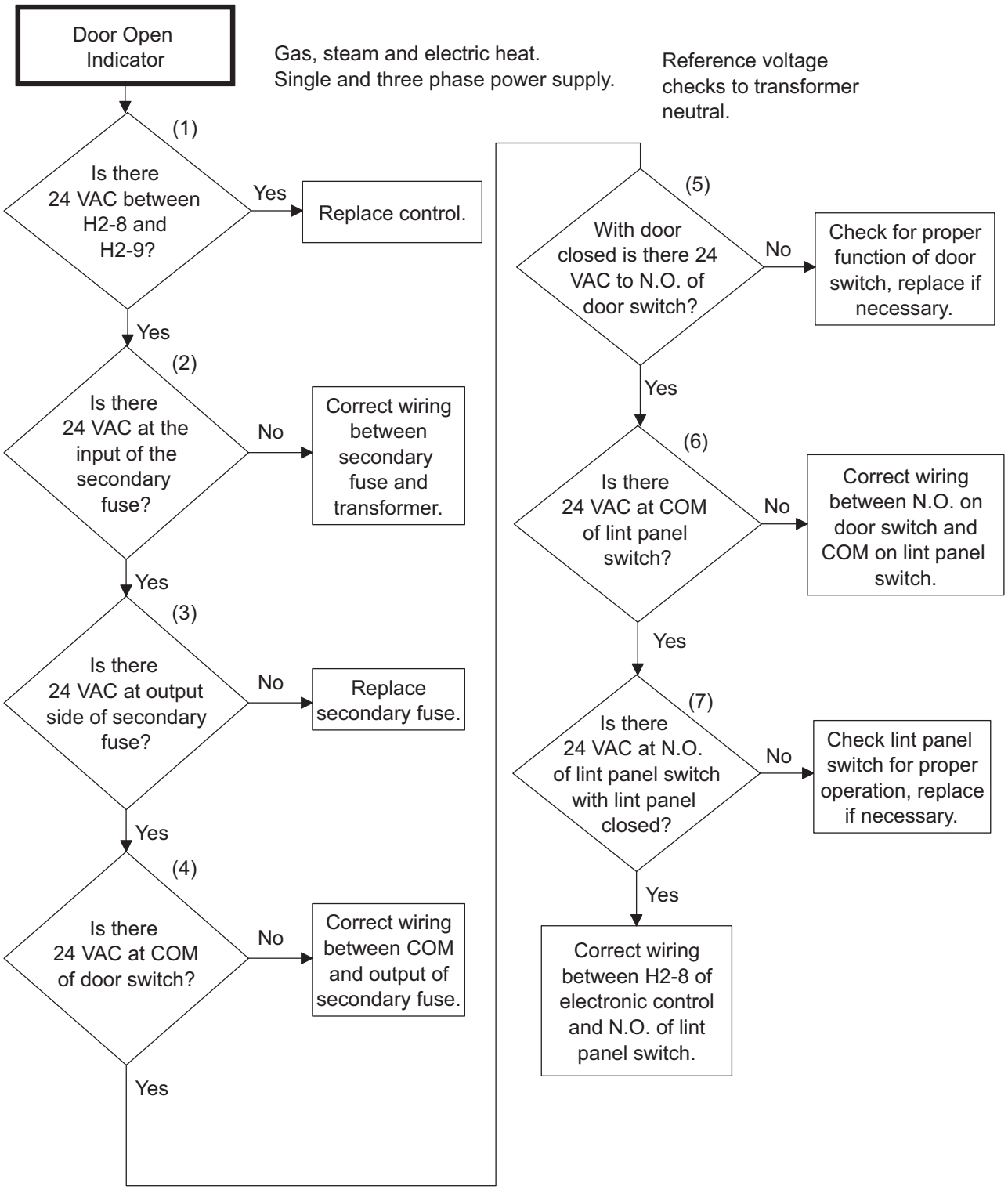


Control Has No Display



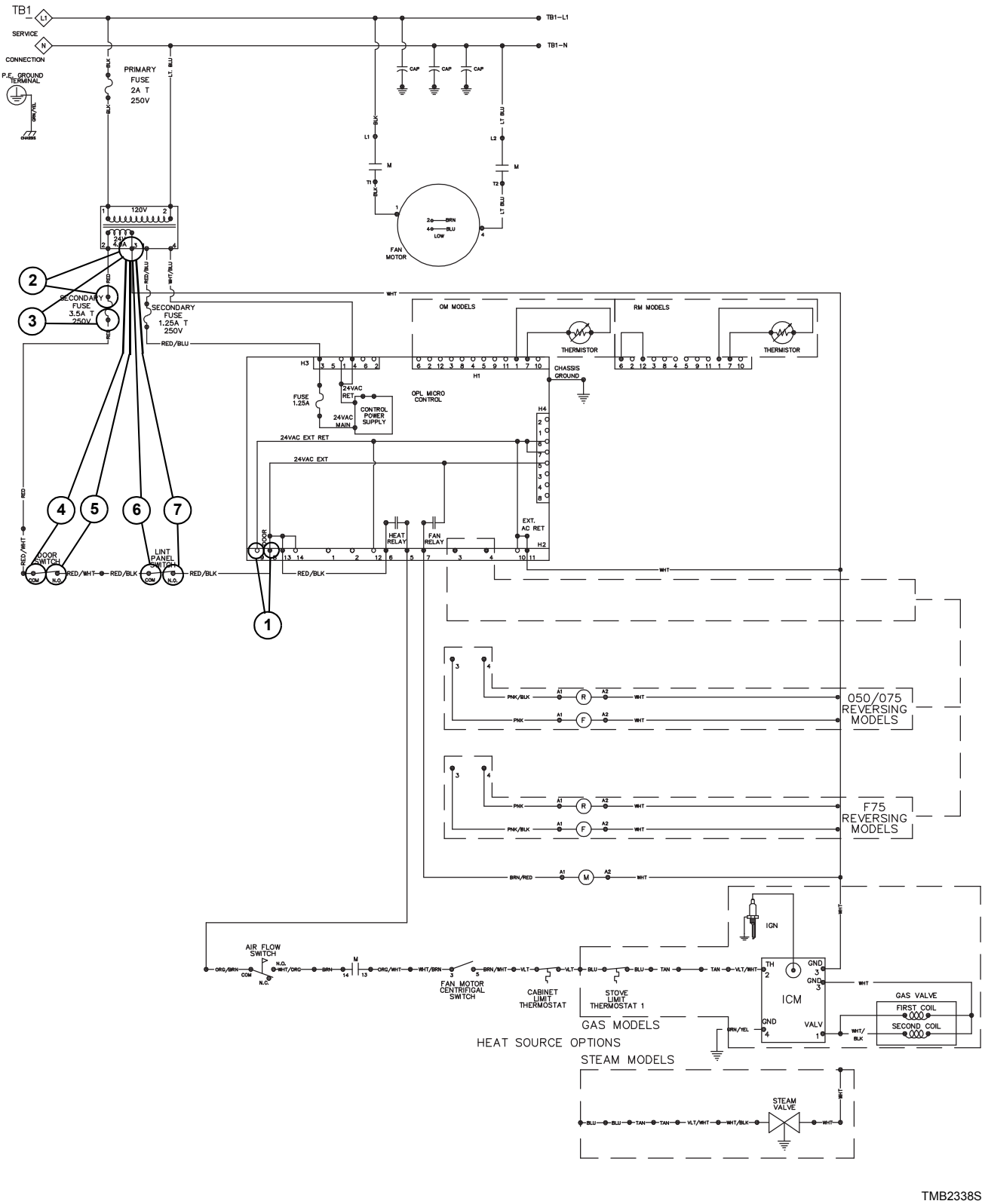
TMB2338S

66. Door Open Indicator



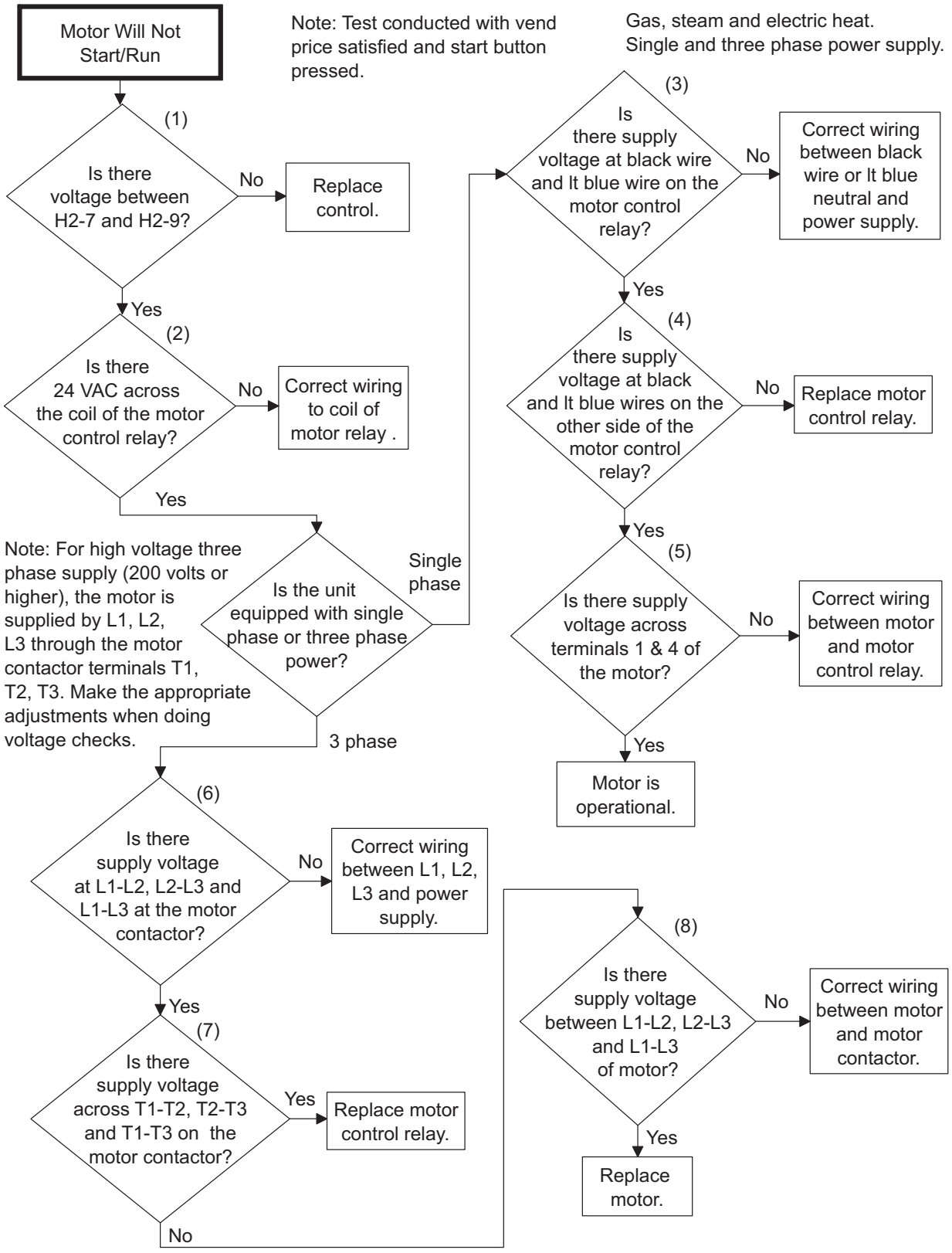
TMB2252S

Door Open Indicator



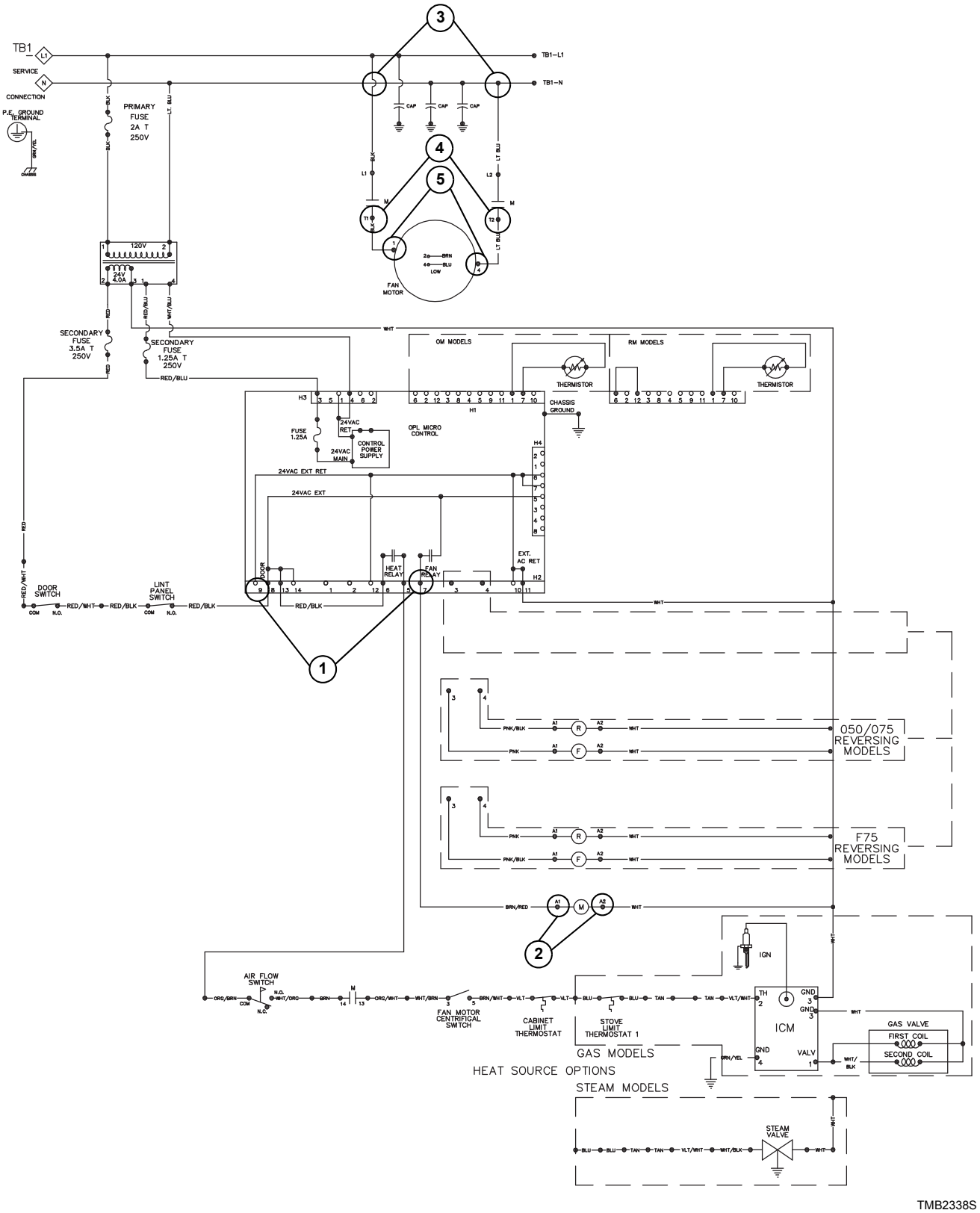
TMB2338S

67. Motor Will Not Start/Run



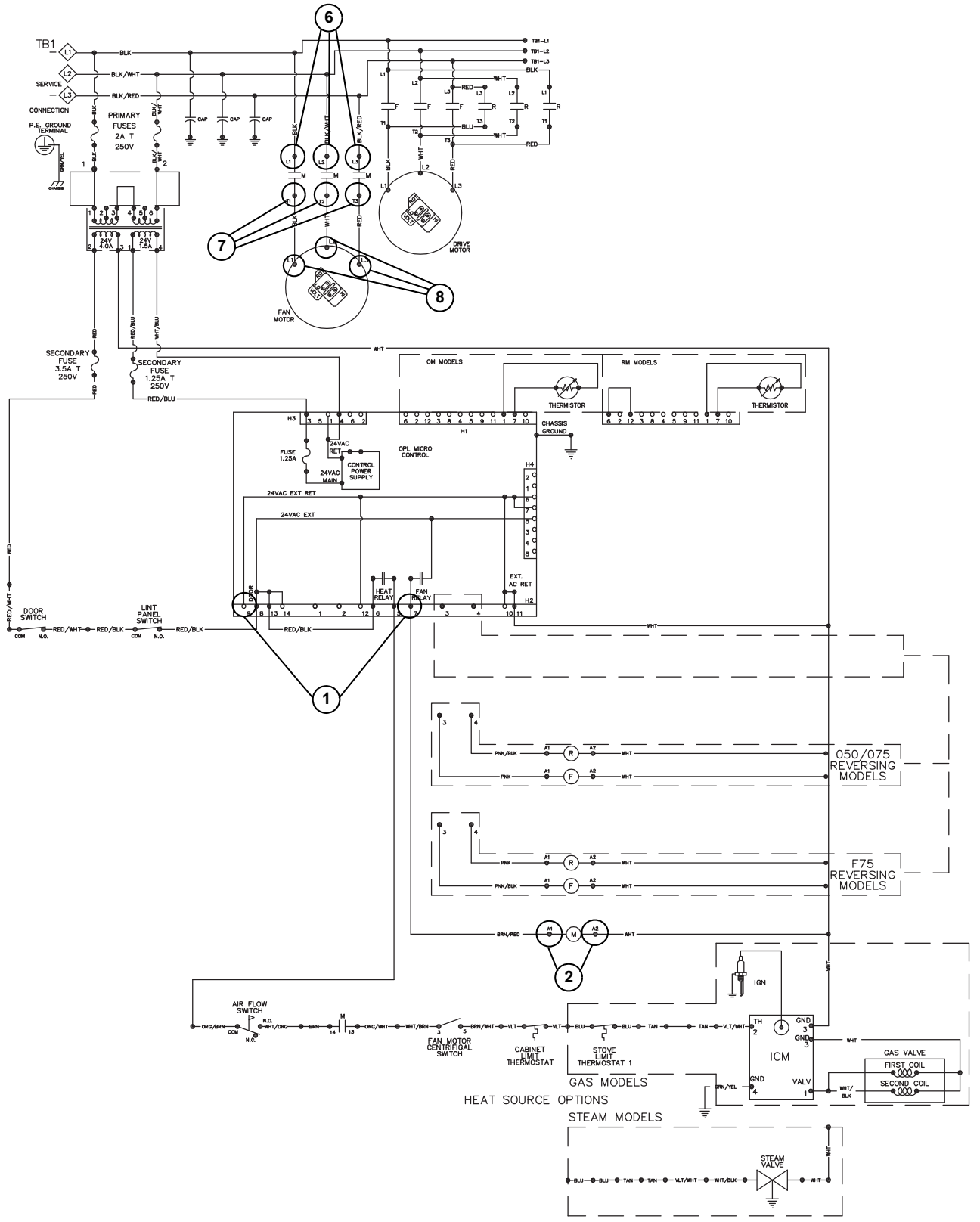
TMB2352S

Motor Will Not Start/Run – Single Phase



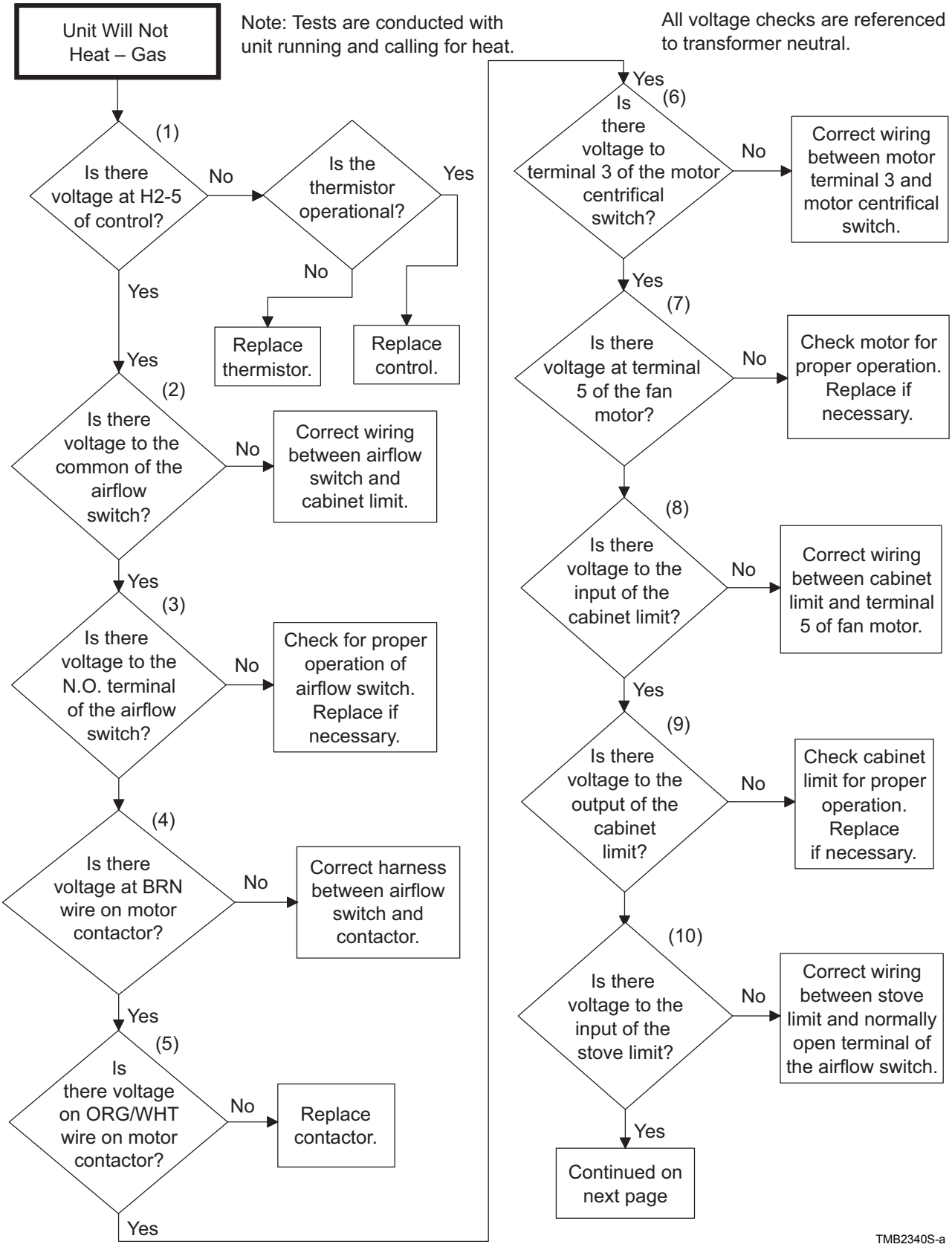
TMB2338S

Motor Will Not Start/Run – 3 Phase

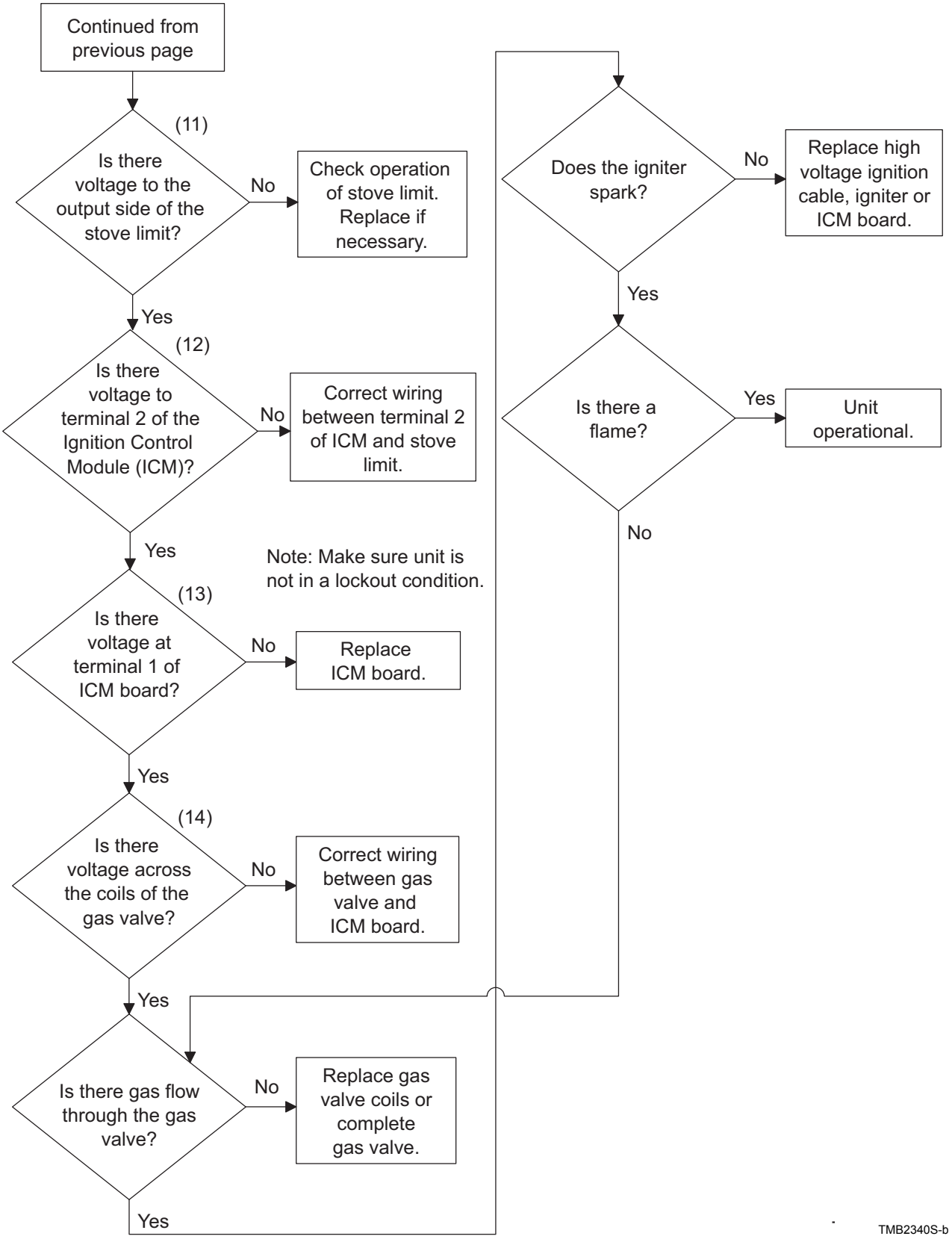


TMB2339S

68. Unit Will Not Heat – Gas

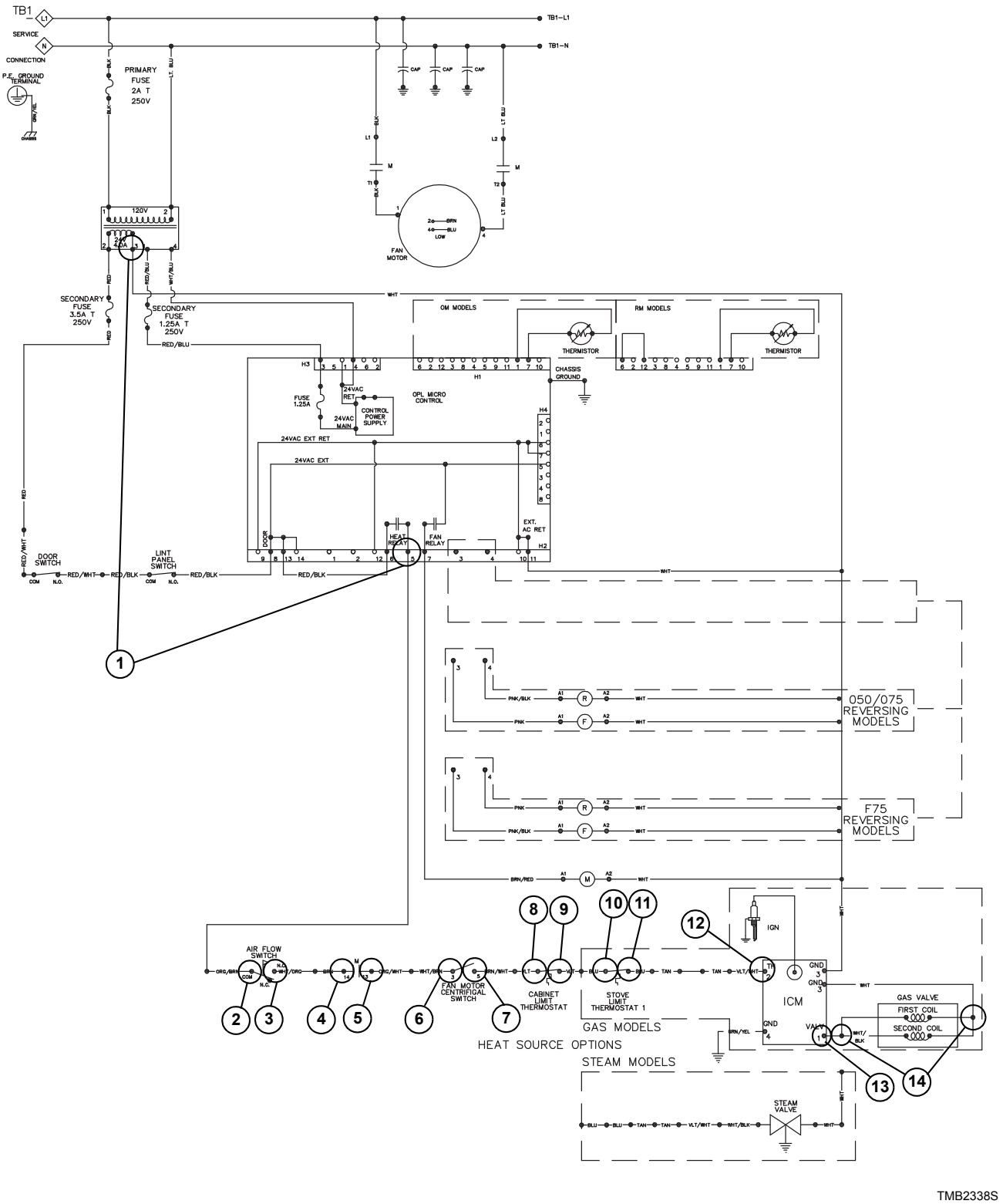


68. Unit Will Not Heat – Gas (continued)



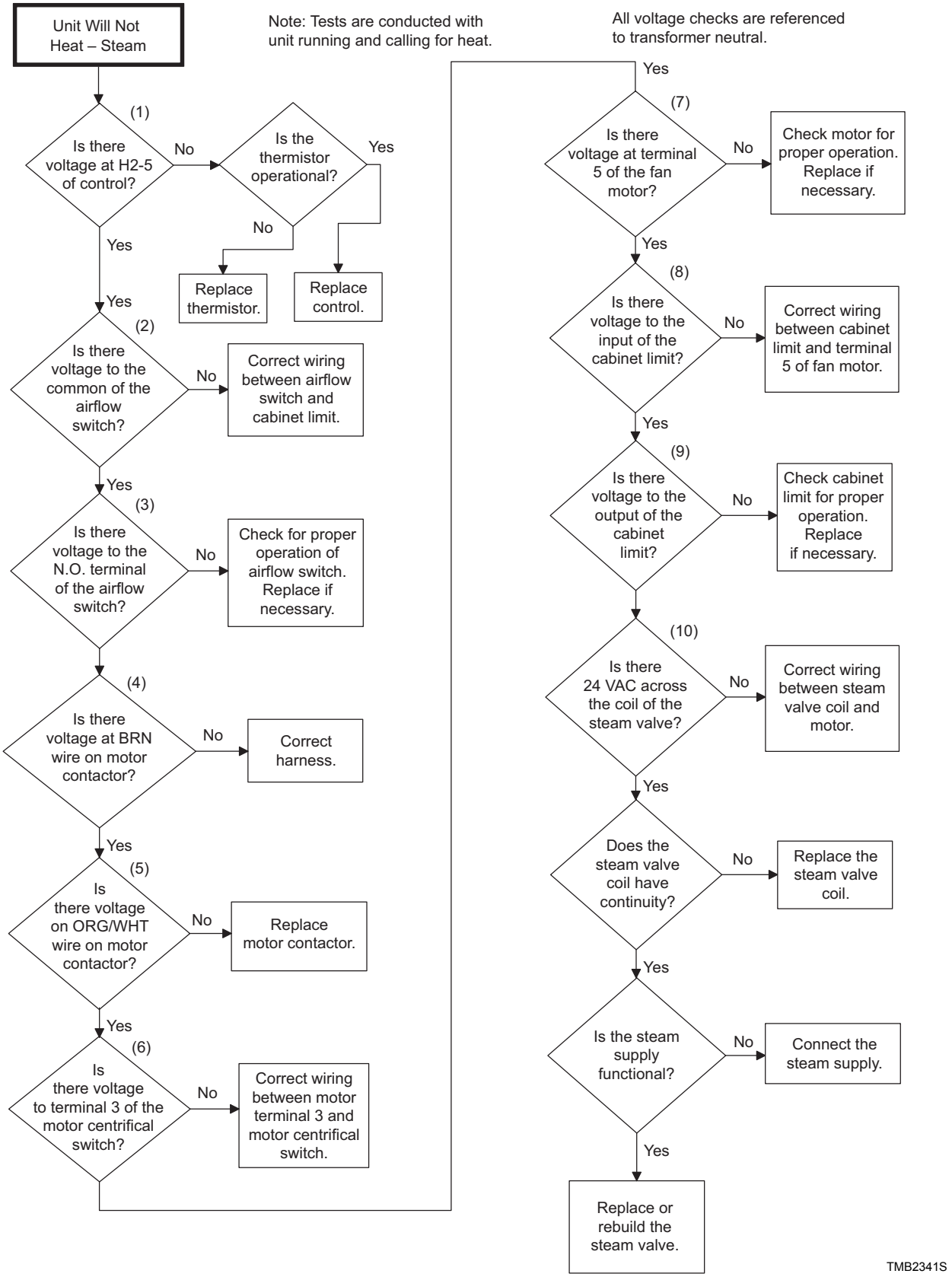
Please see following page for wiring diagram information.

Unit Will Not Heat – Gas

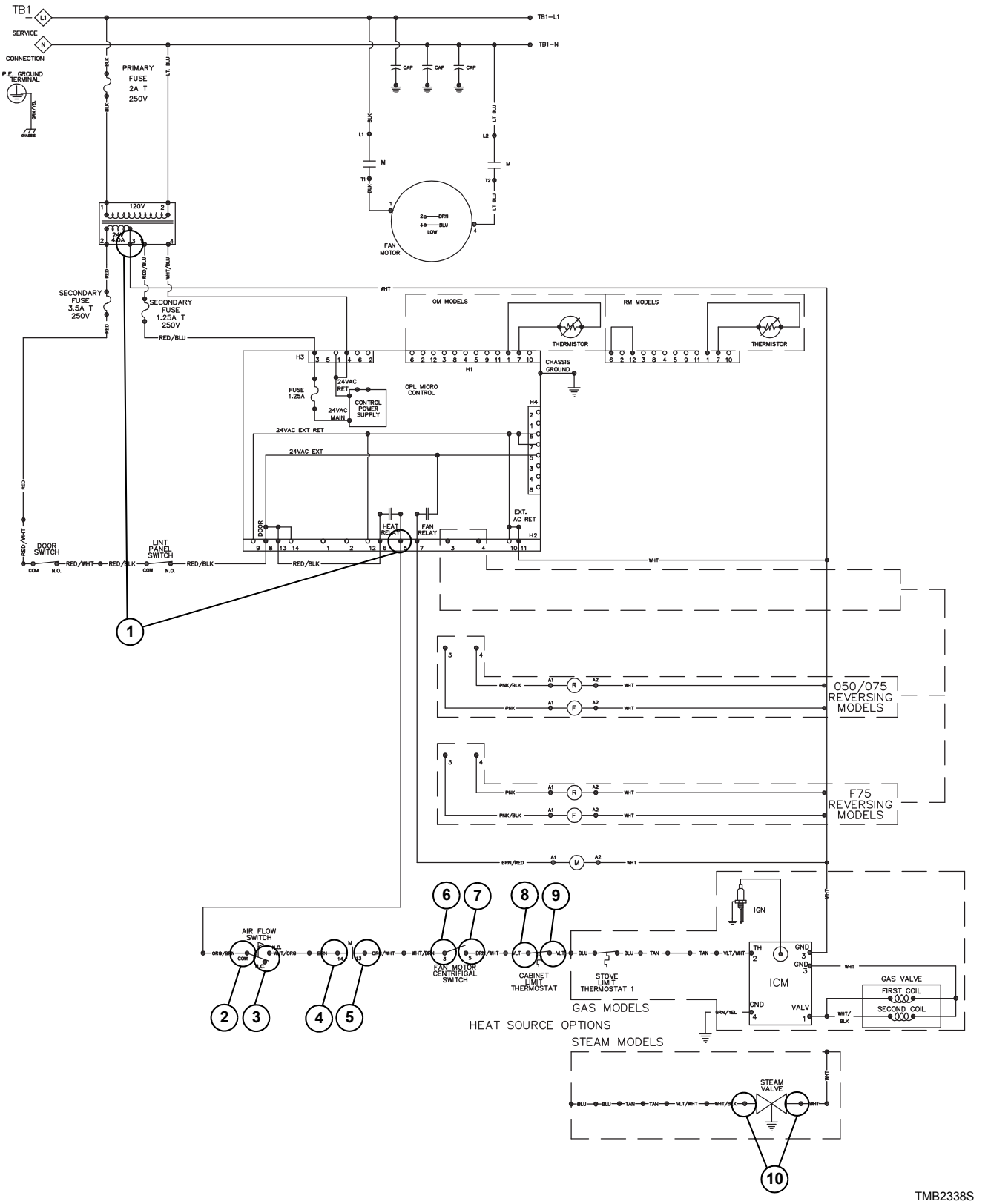


TMB2338S

69. Unit Will Not Heat – Steam

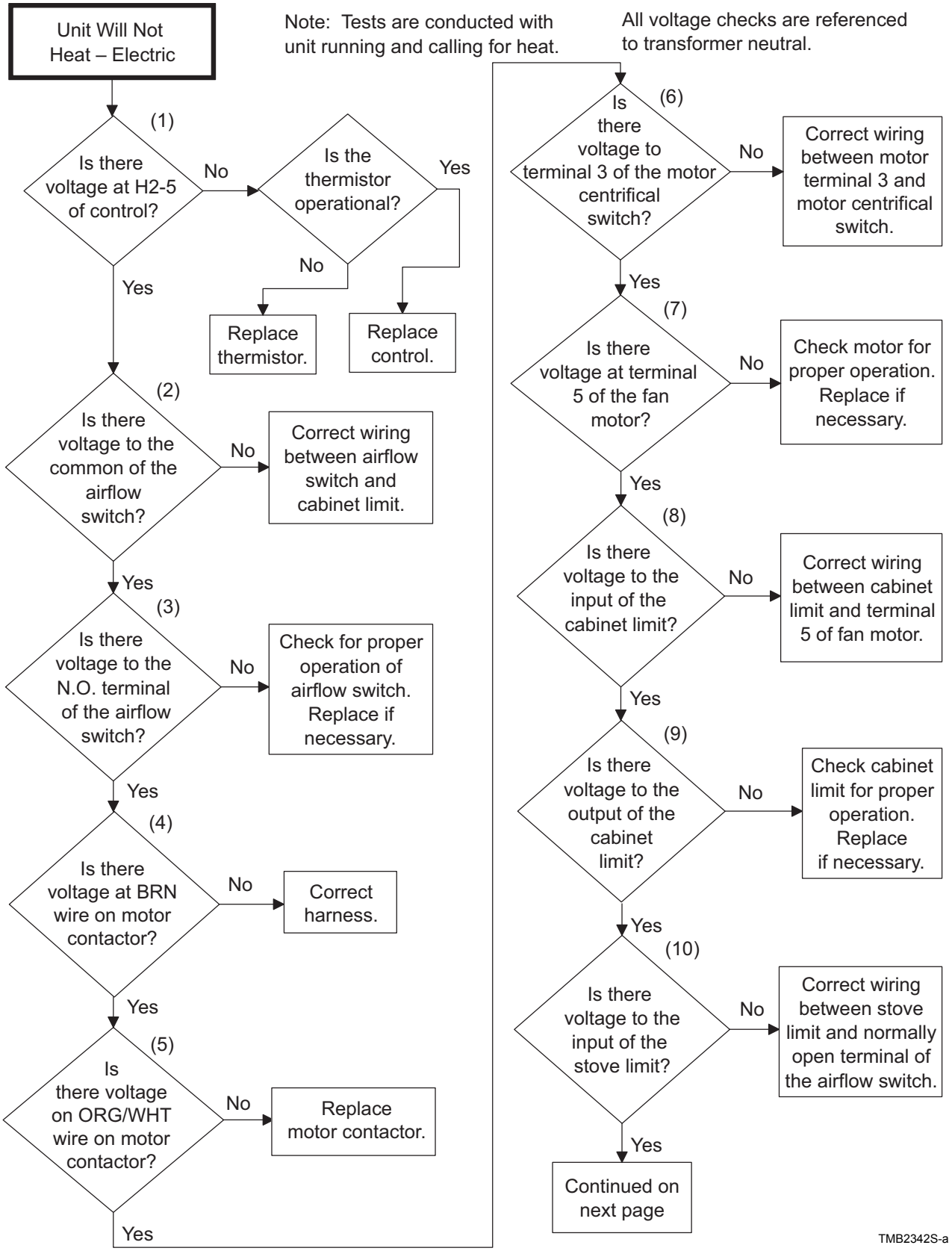


Unit Will Not Heat – Steam

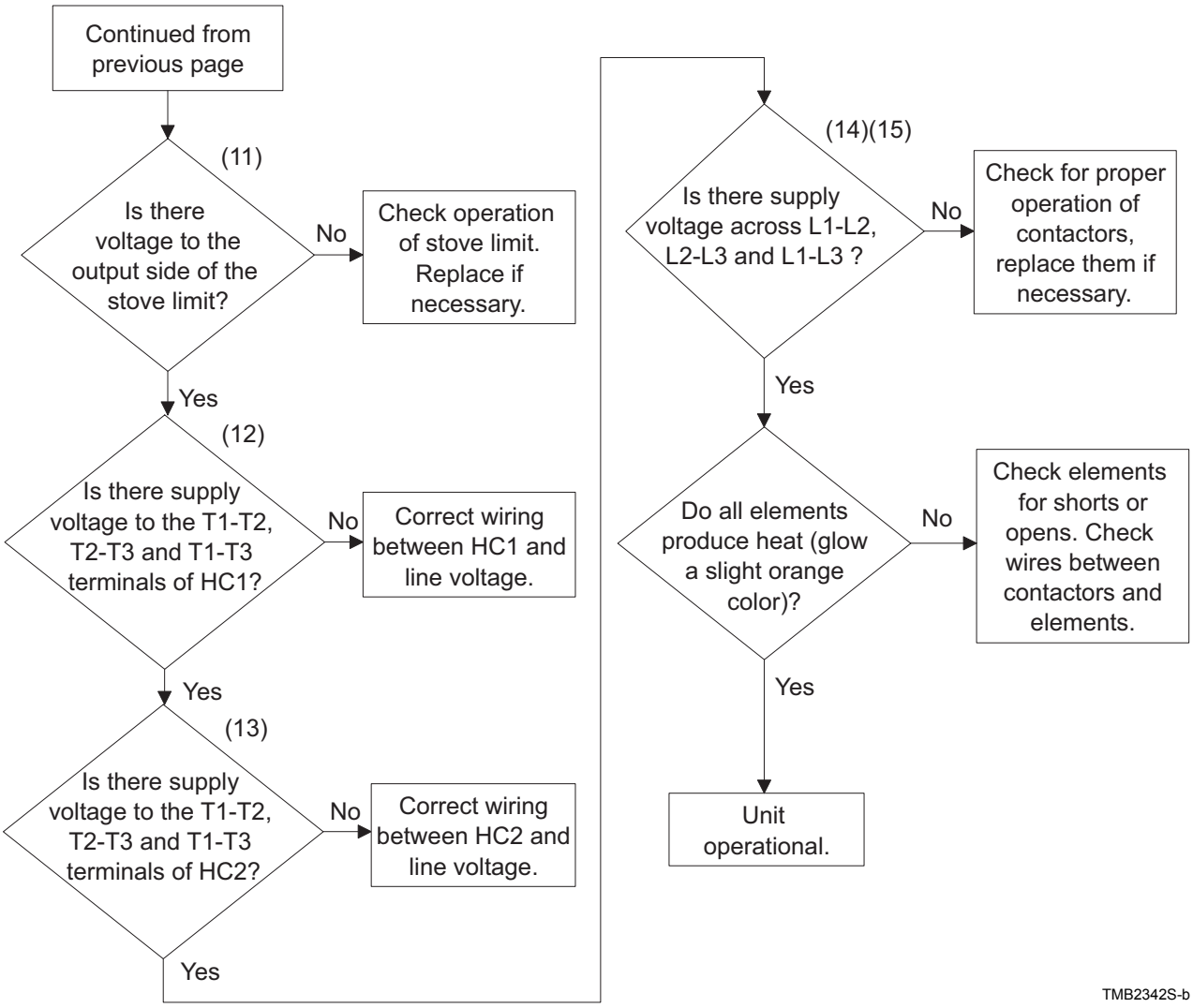


TMB2338S

70. Unit Will Not Heat – Electric

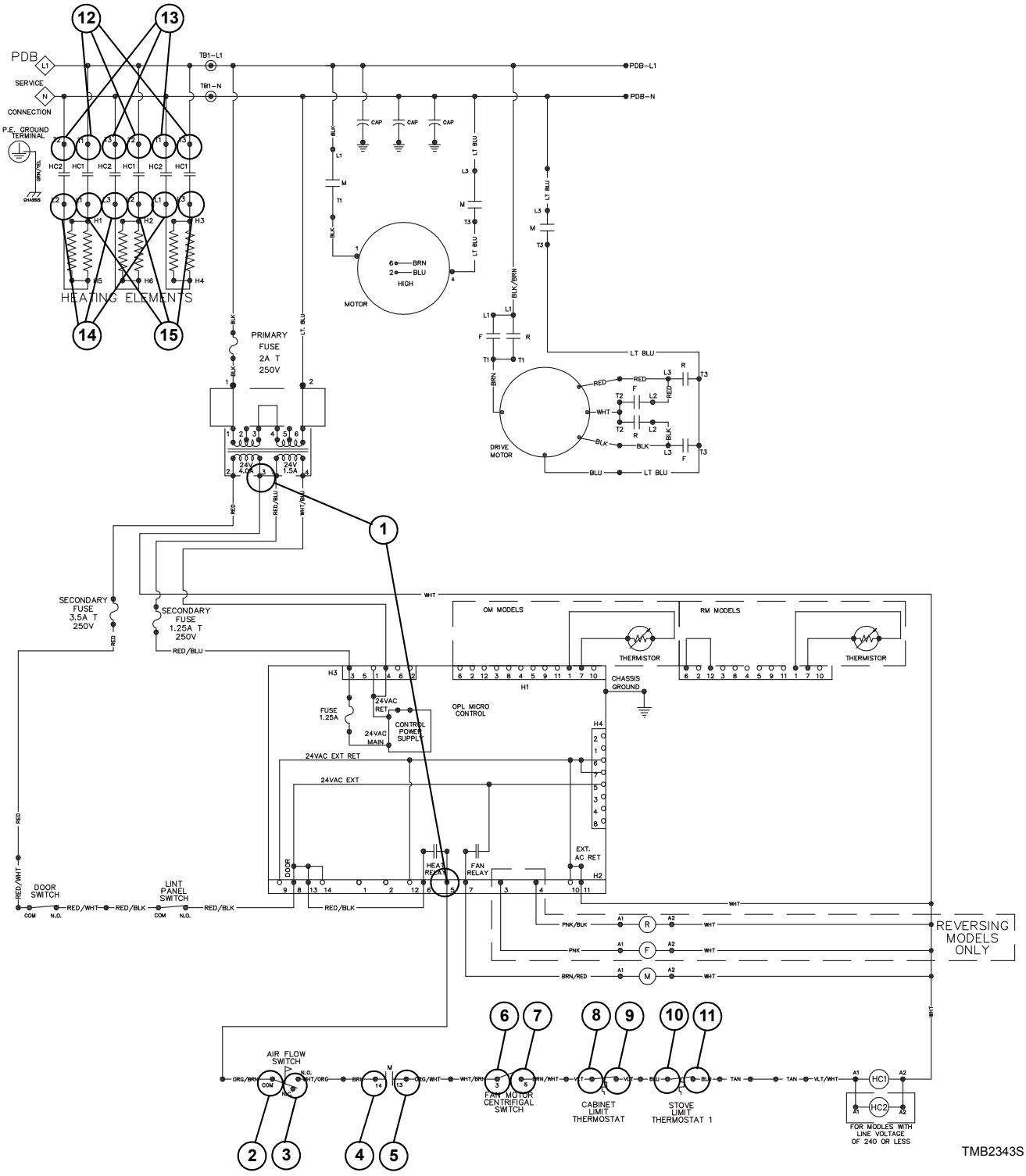


70. Unit Will Not Heat – Electric (continued)



Please see following page for wiring diagram information.

Unit Will Not Heat – Electric



TMB2343S

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the dryer(s) before servicing.**
- **Close gas shut-off valve to gas dryer(s) before servicing.**
- **Never start the dryer(s) with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the dryer is properly grounded.**

W001R1

71. Error Codes

OP - Indicates physical “open” in the thermistor circuit. Possible causes are: 1) thermistor, 2) wiring between control and thermistor, 3) control.
SH - Indicates a “short” in the thermistor circuit. Possible causes are: 1) shorted thermistor, 2) a short in the wiring between control and thermistor, 3) control.

Display	Definition	Corrective Action
OP	Indicates an open circuit in the thermistor.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Indicates a short circuit in the thermistor.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.

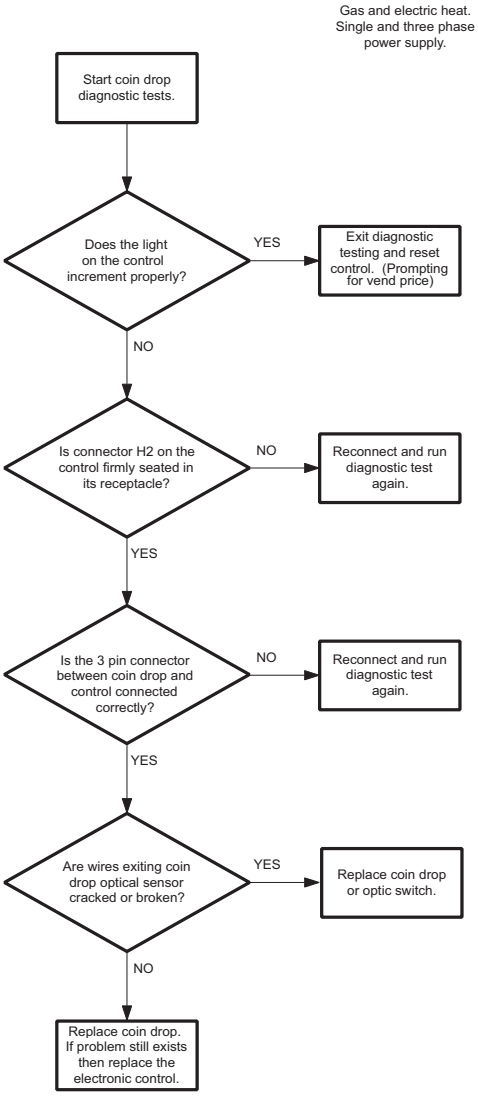
Section 9
Hybrid Timer Control Troubleshooting

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

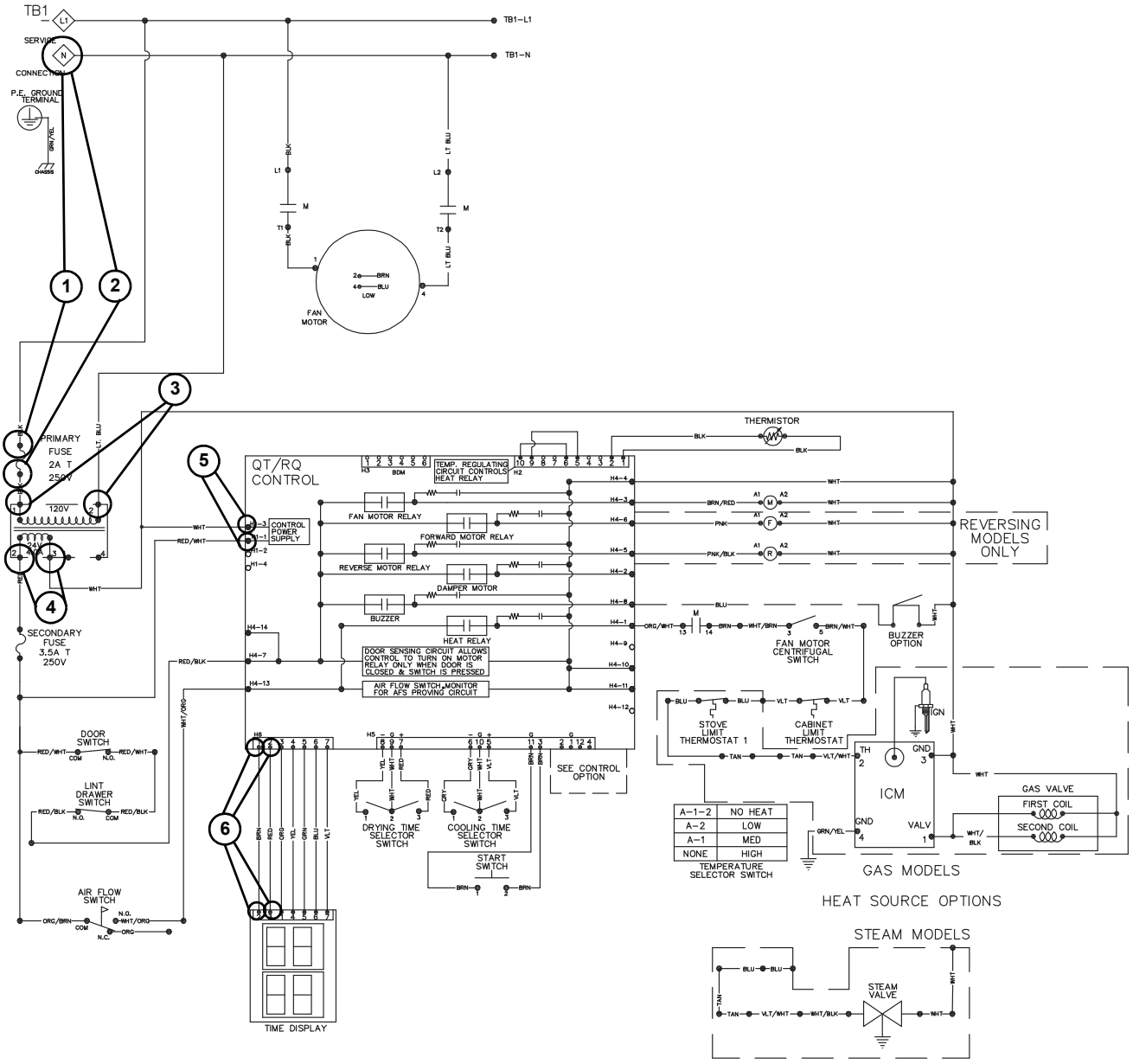
72. Coins Ignored When Entered



TMB2051S

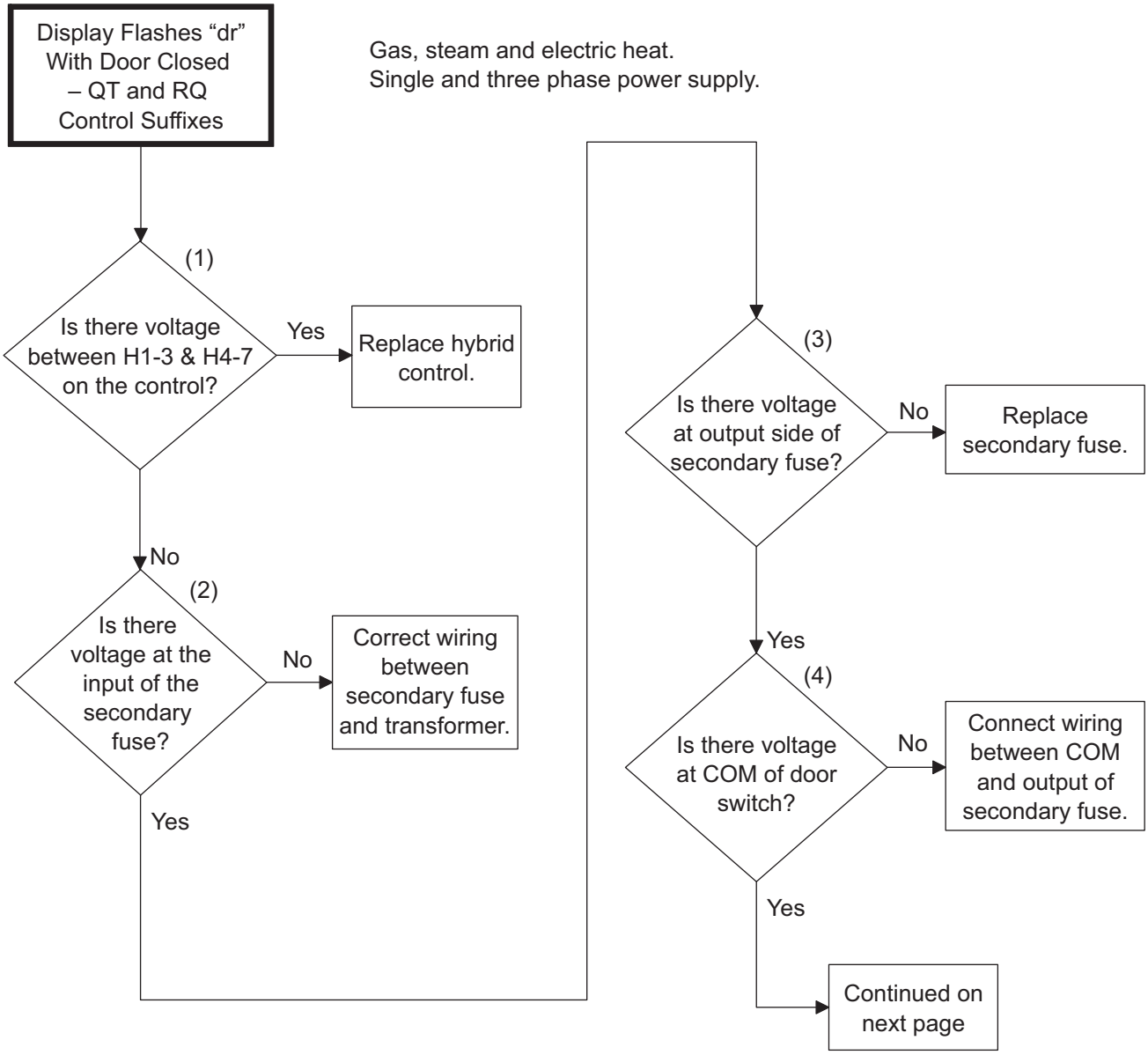
73. Control Has No Display – QT and RQ Control Suffixes

Control Has No Display – QT and RQ Control Suffixes

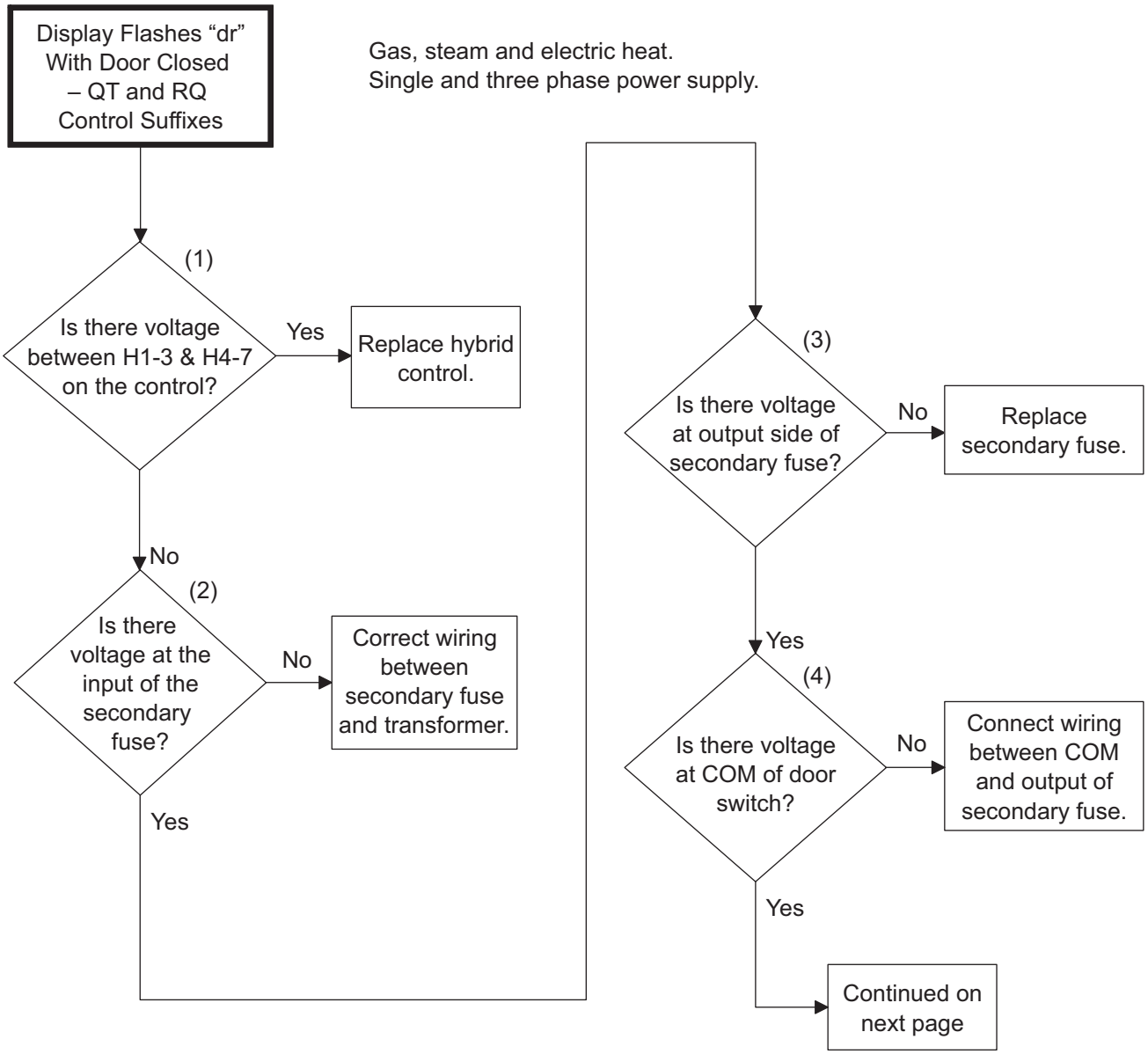


TMB2344S

74. Display Flashes “dr” With Door Closed – QT and RQ Control Suffixes

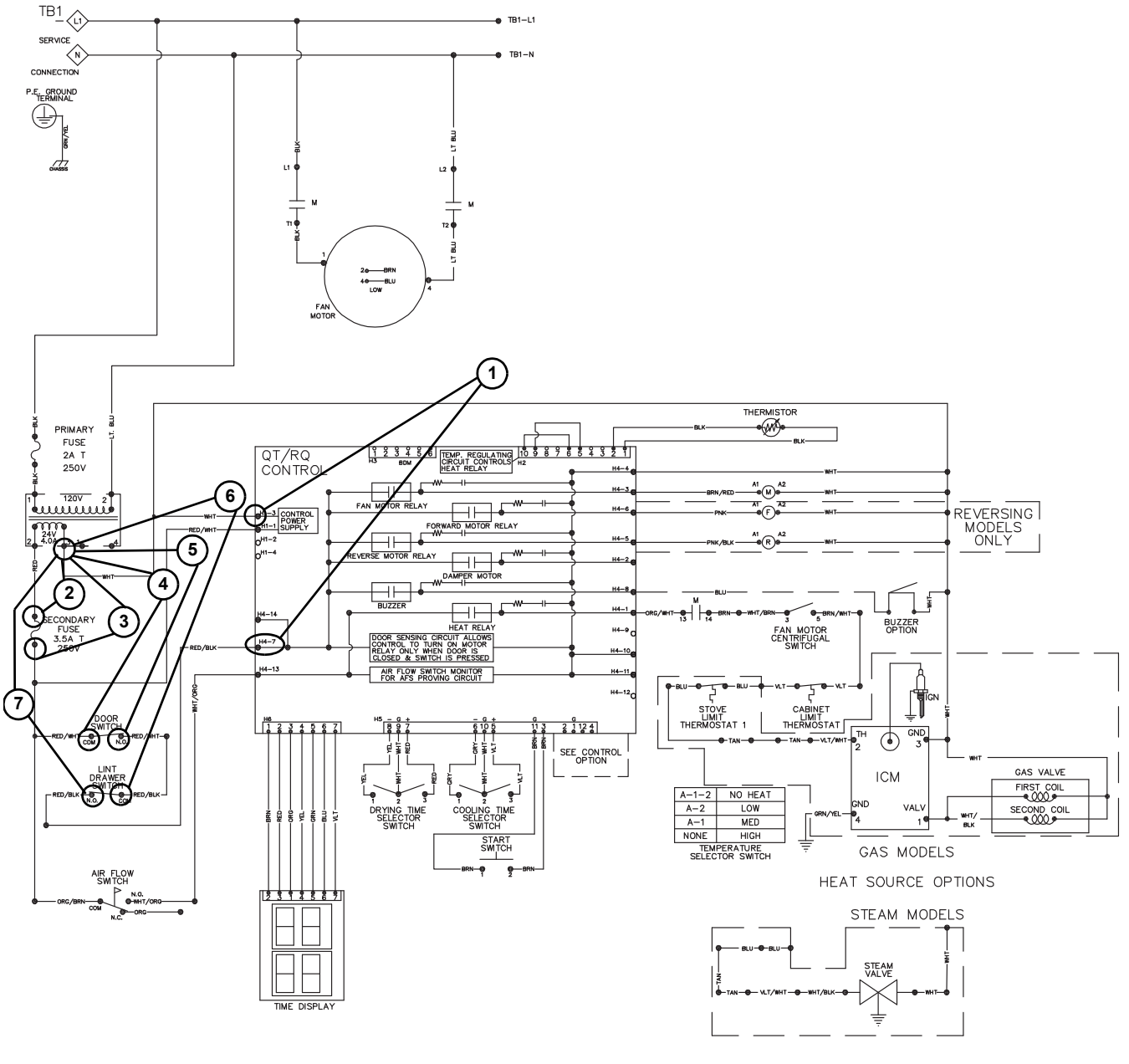


74. Display Flashes “dr” With Door Closed – QT and RQ Control Suffixes (continued)



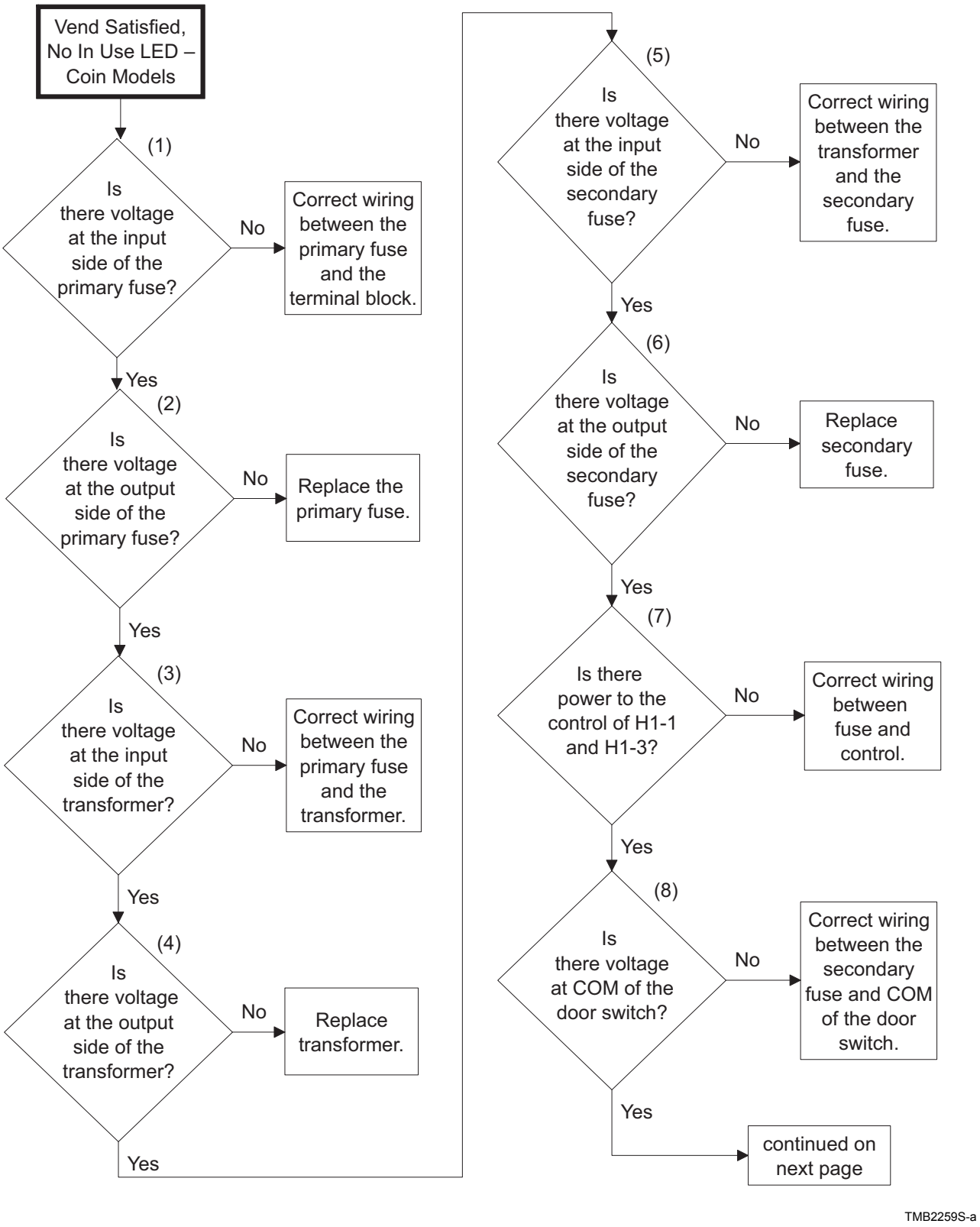
TMB2406S

Display Flashes “dr” With Door Closed – QT and RQ Control Suffixes



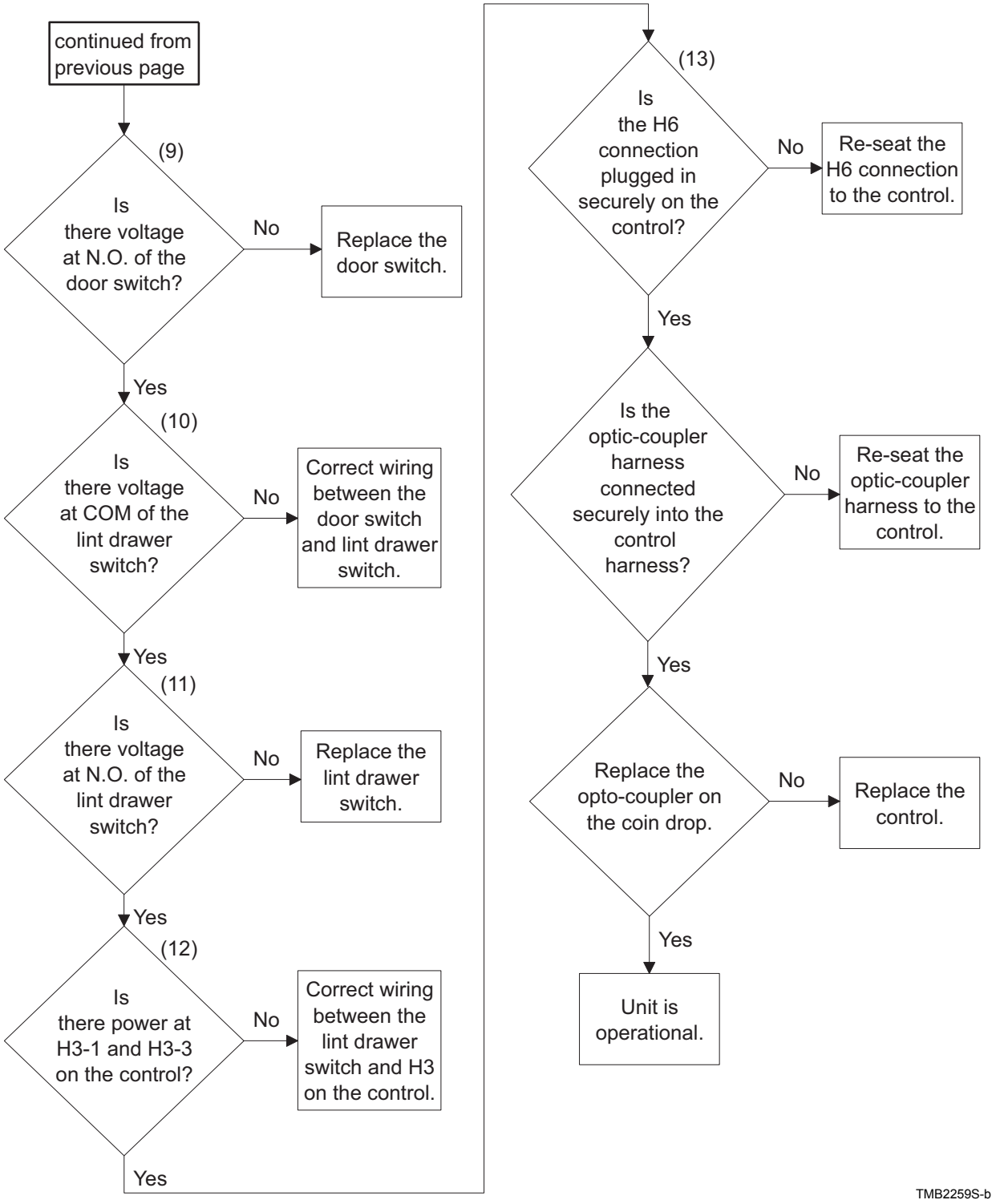
TMB2344S

75. Vend Satisfied, No In Use LED – SD and SX Control Suffixes

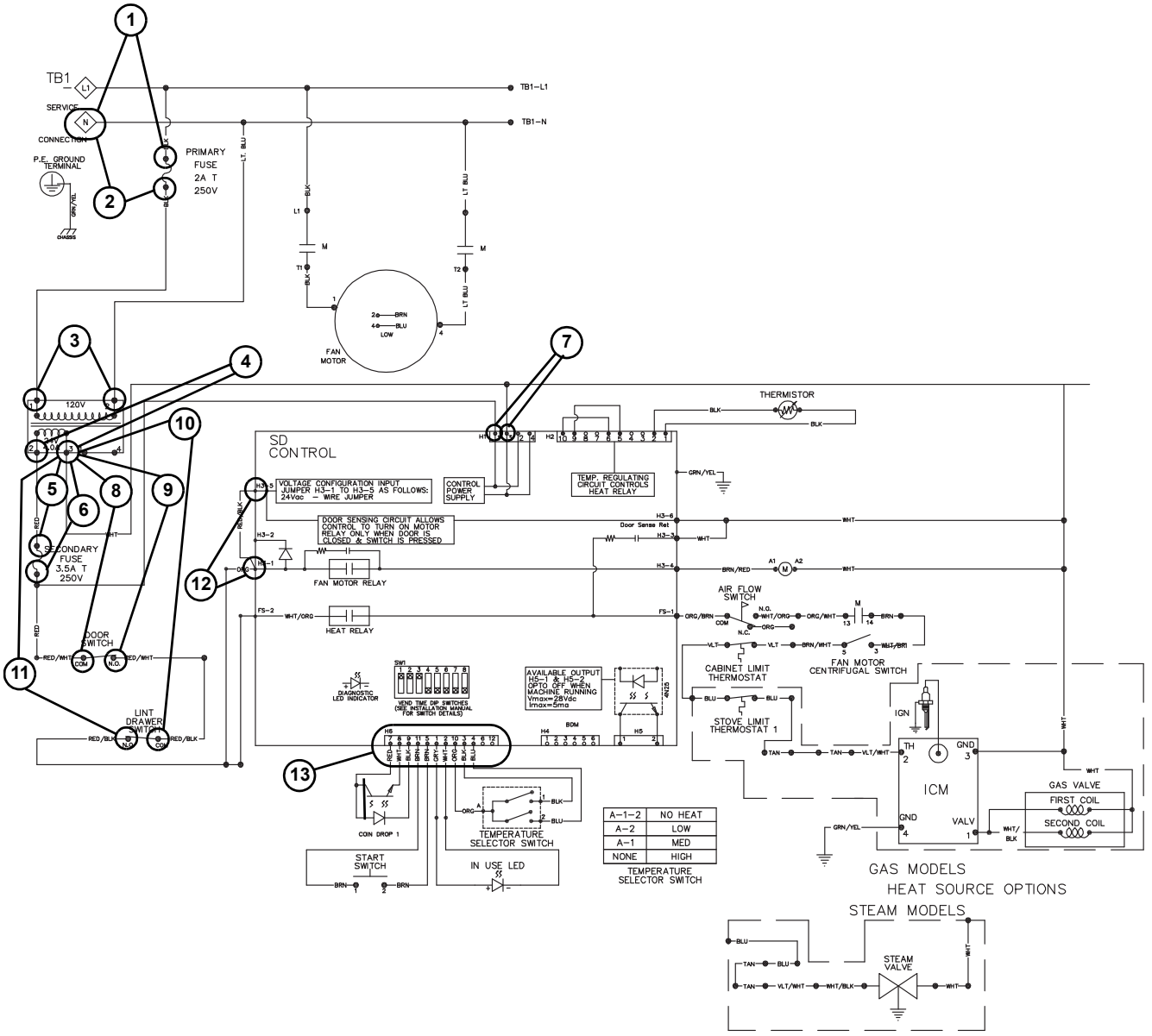


TMB2259S-a

75. Vend Satisfied, No In Use LED – SD and SX Control Suffixes (continued)

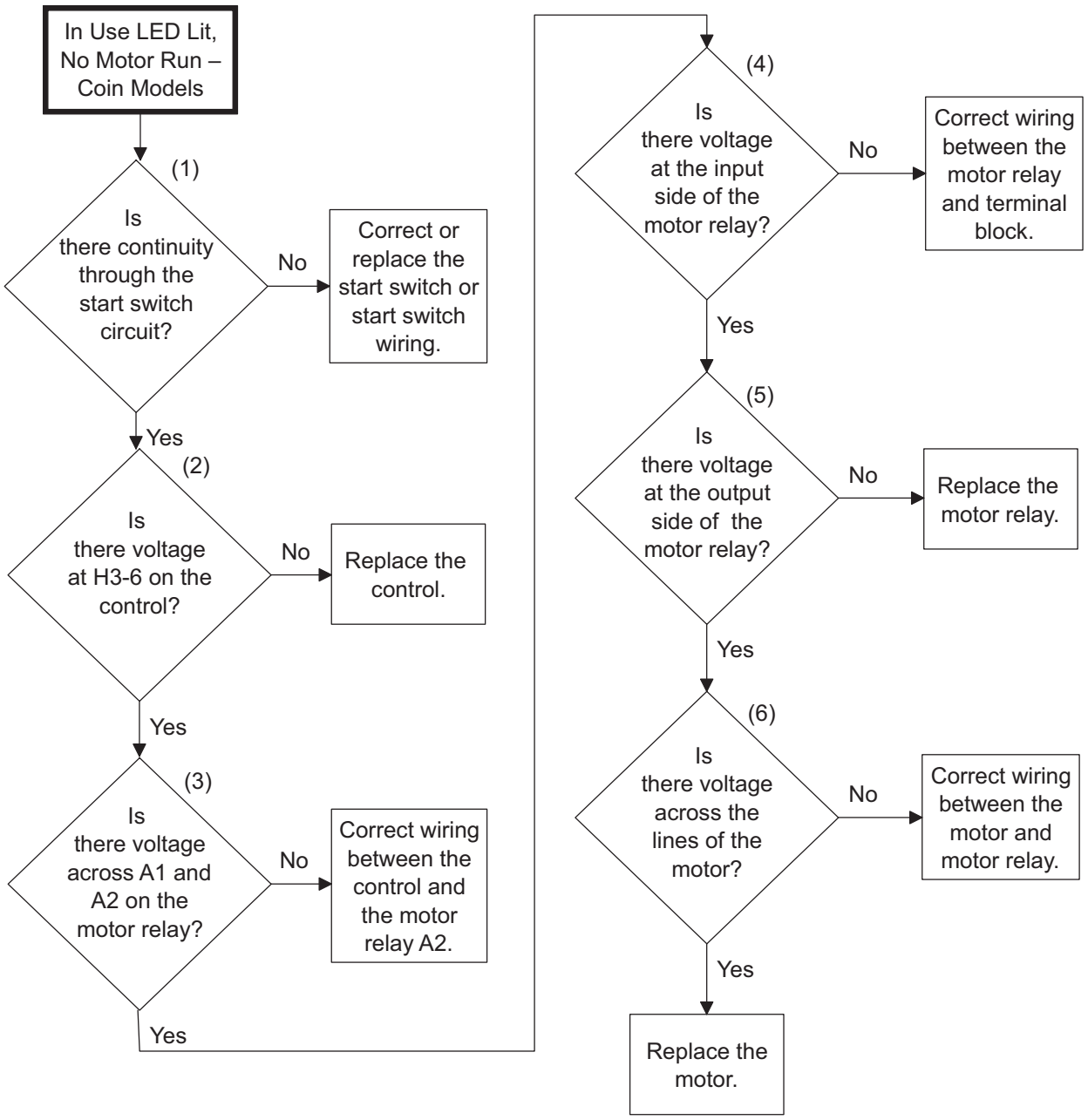


Vend Satisfied, No In Use LED – SD and SX Control Suffixes

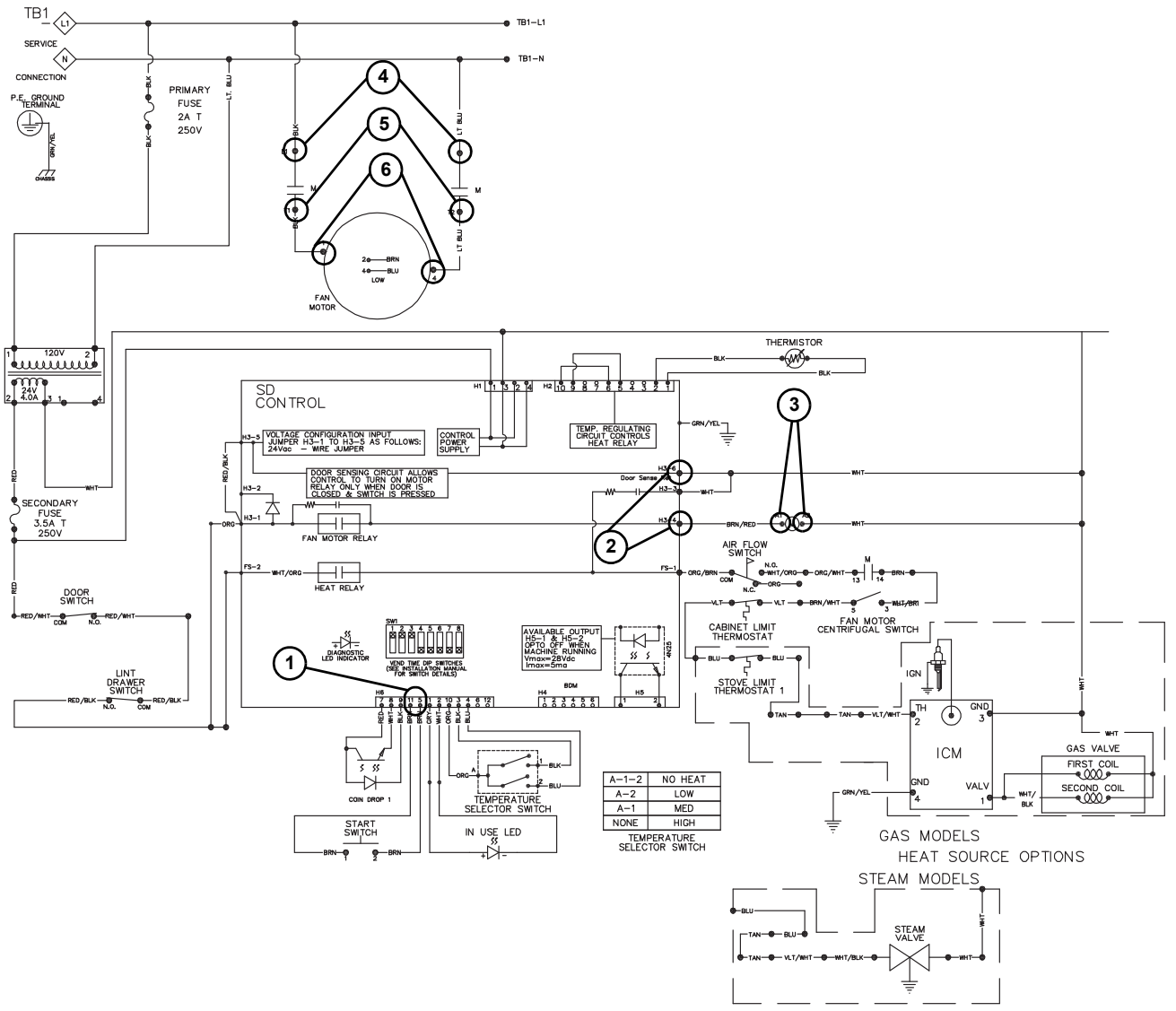


TMB2345S

76. In Use LED Lit, No Motor Run – SD and SX Control Suffixes



In Use LED Lit, No Motor Run – SD and SX Control Suffixes

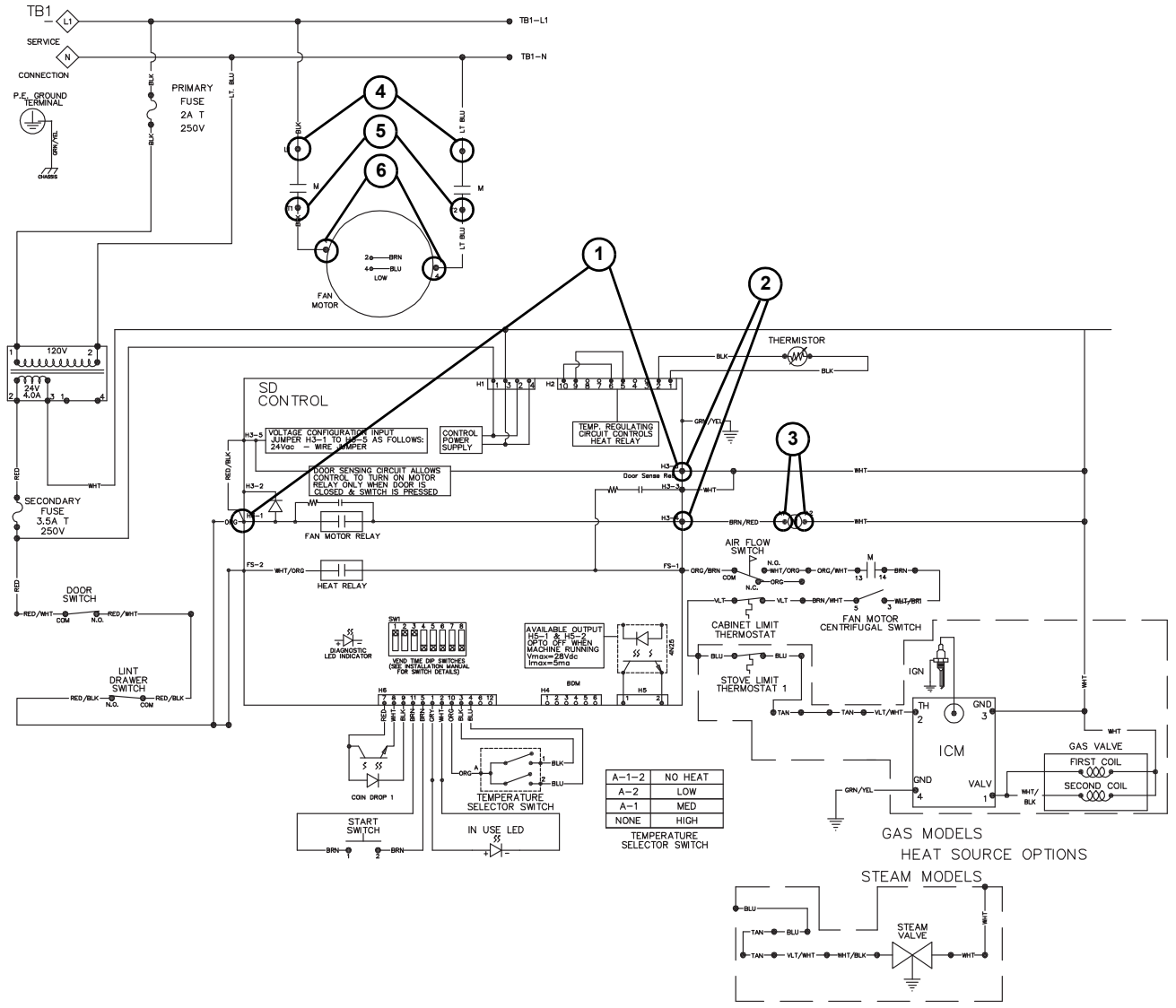


TMB2345S

77. Motor Will Not Start/Run – SD and SX Control Suffixes

Please see following page for wiring diagram information.

Motor Will Not Start/Run – SD and SX Control Suffixes

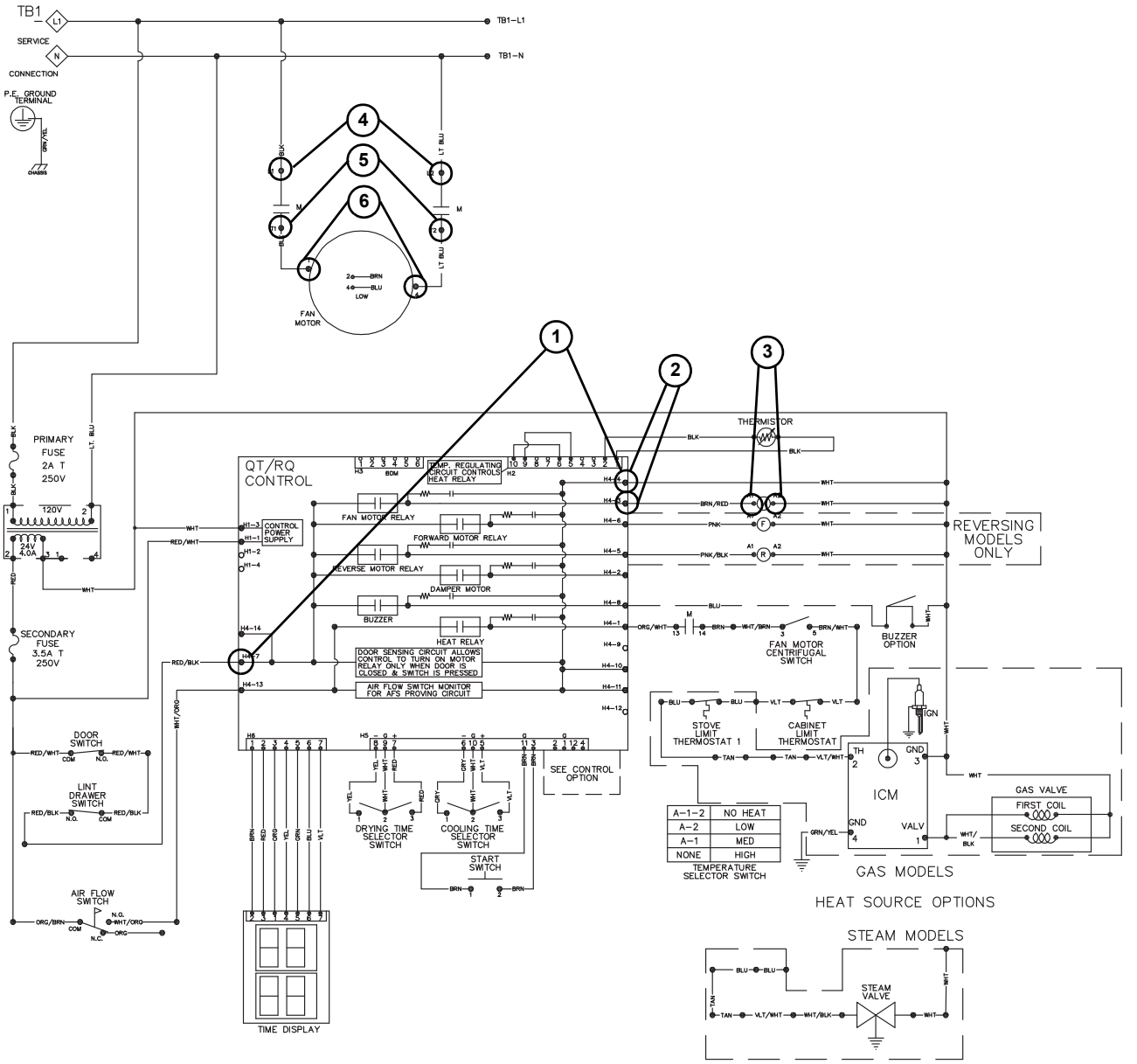


TMB2345S

78. Motor Will Not Start/Run – QT and RQ Control Suffixes

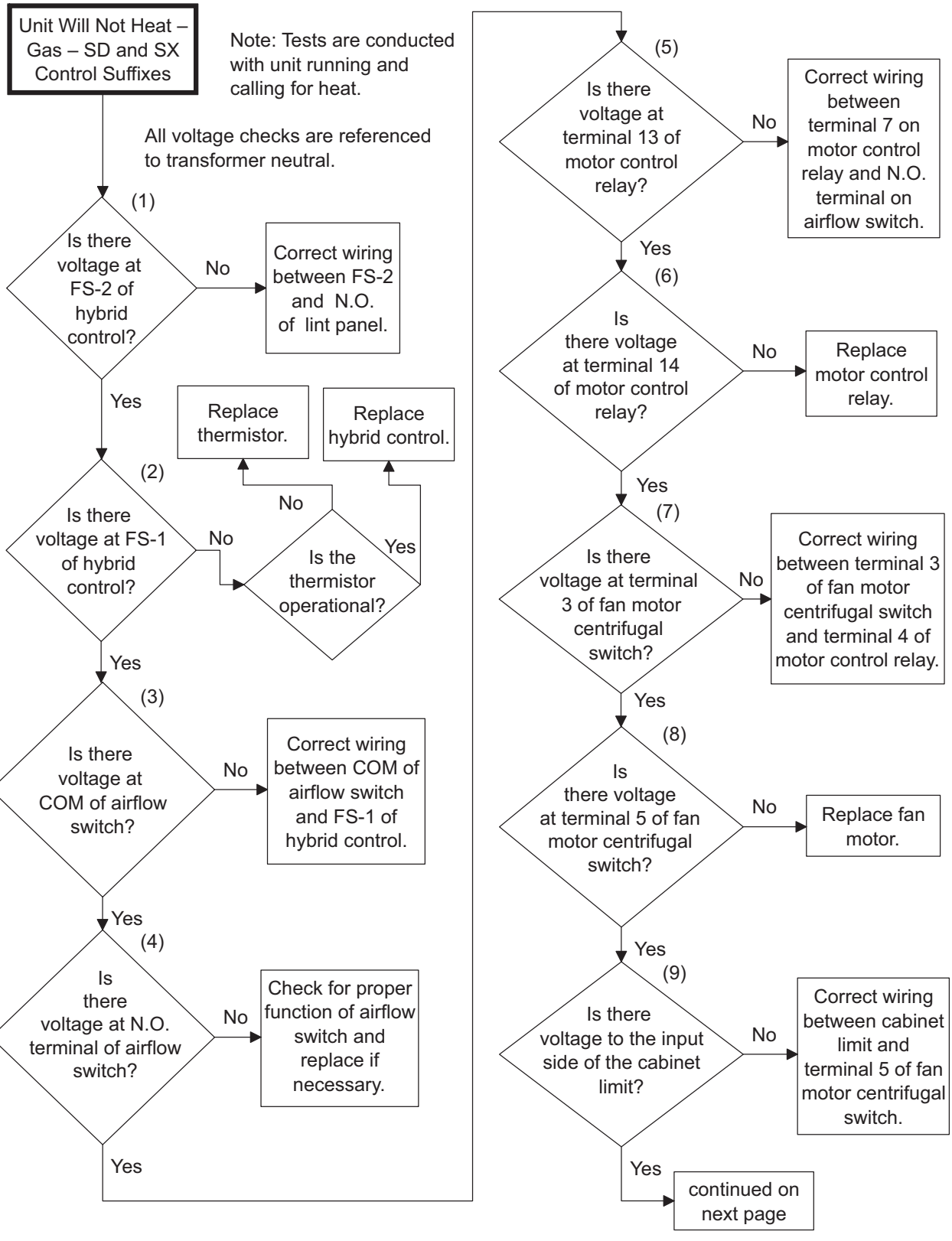
Please see following page for wiring diagram information.

Motor Will Not Start/Run – QT and RQ Control Suffixes



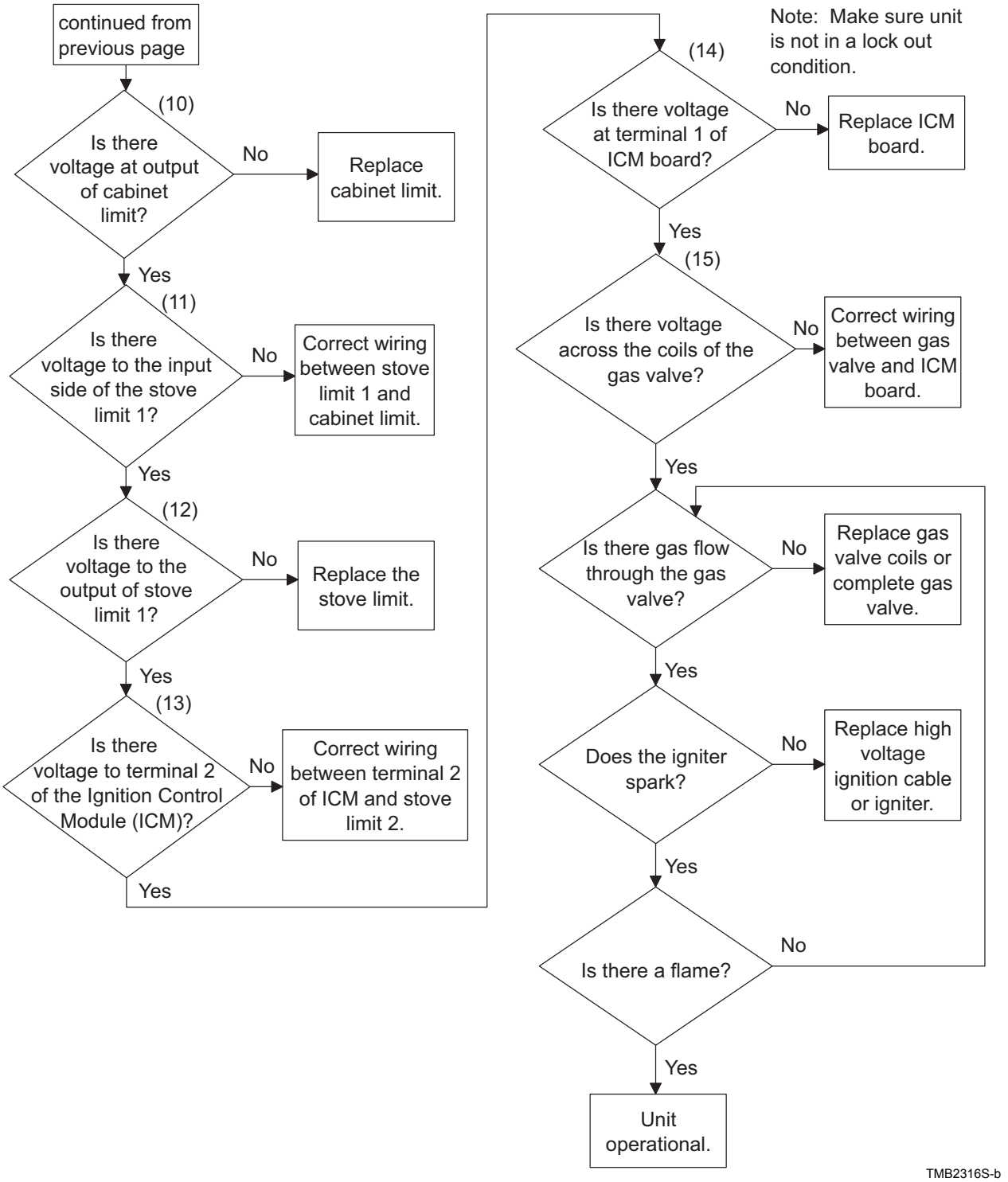
TMB2344S

79. Unit Will Not Heat – Gas – SD and SX Control Suffixes

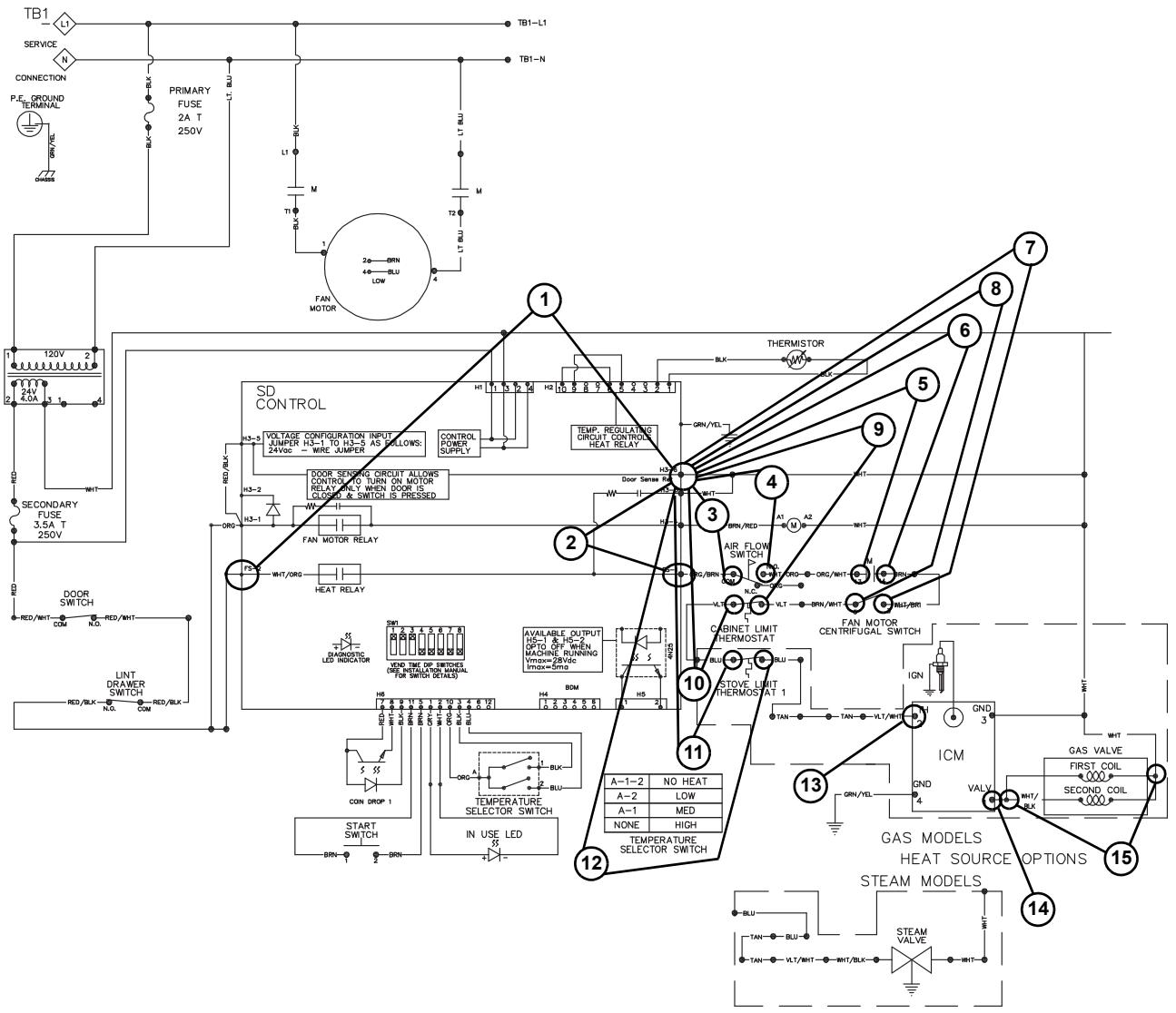


TMB2316S-a

79. Unit Will Not Heat – Gas – SD and SX Control Suffixes (continued)

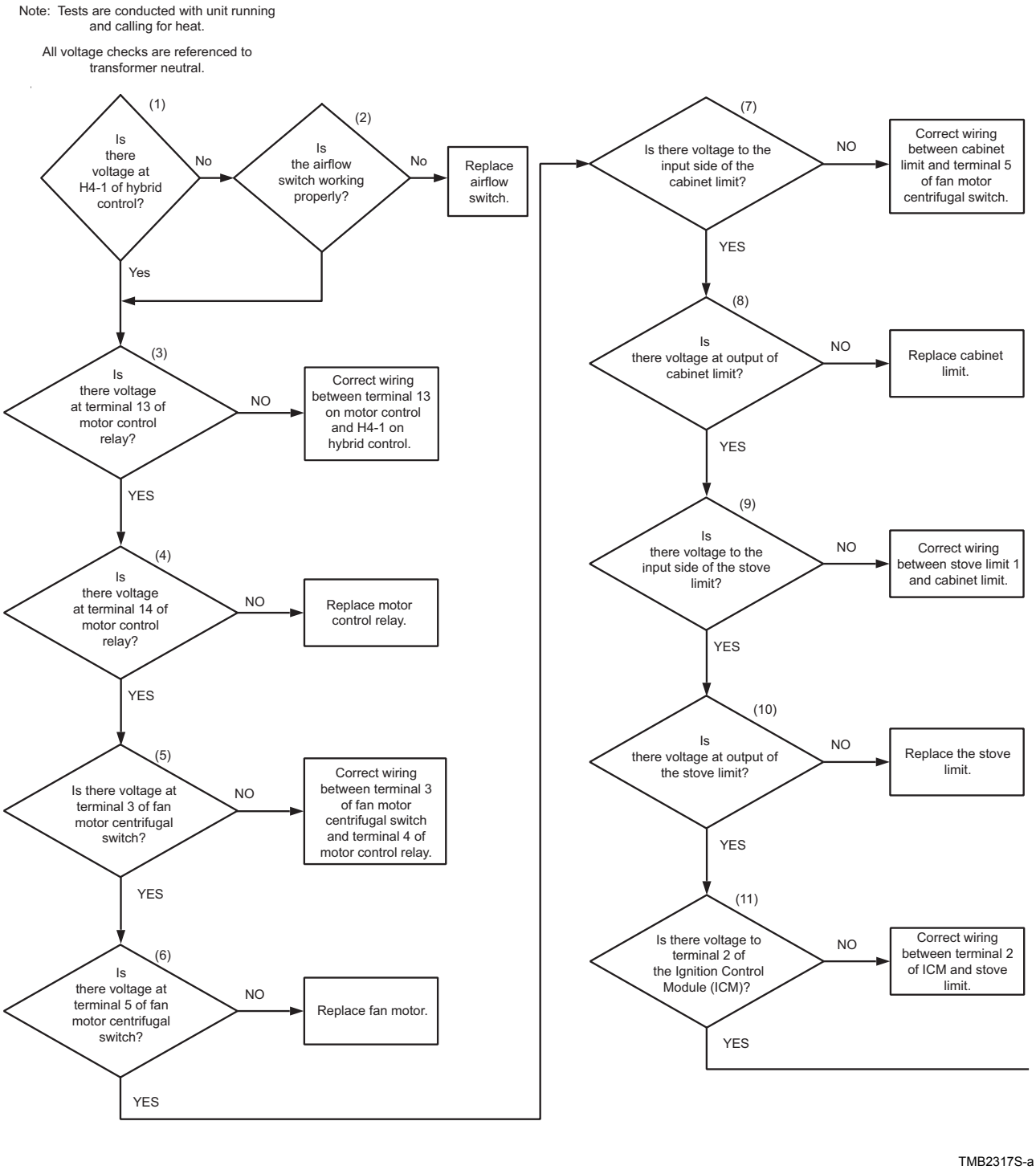


Unit Will Not Heat – Gas – SD and SX Control Suffixes



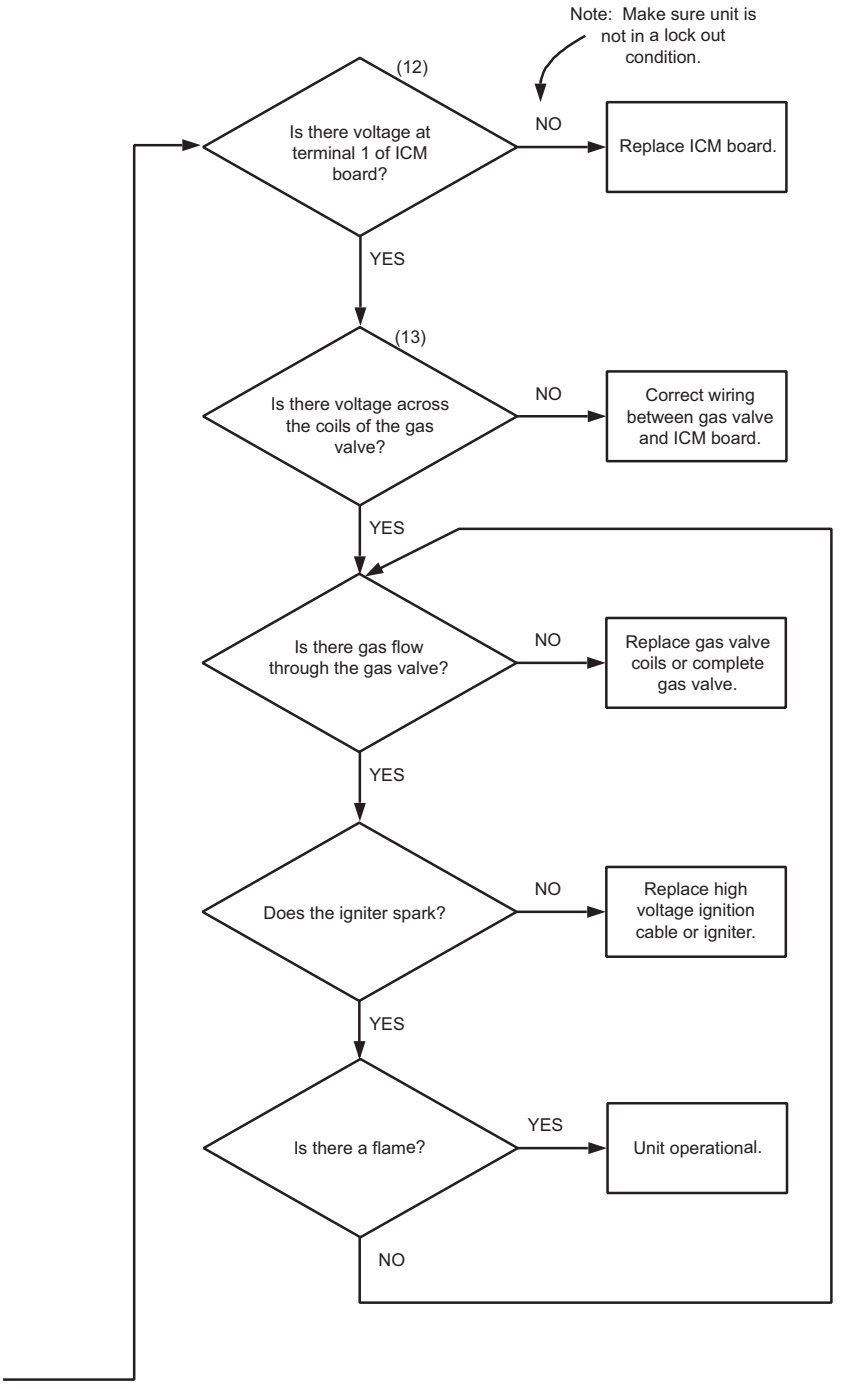
TMB2345S

80. Unit Will Not Heat – Gas – QT and RQ Control Suffixes



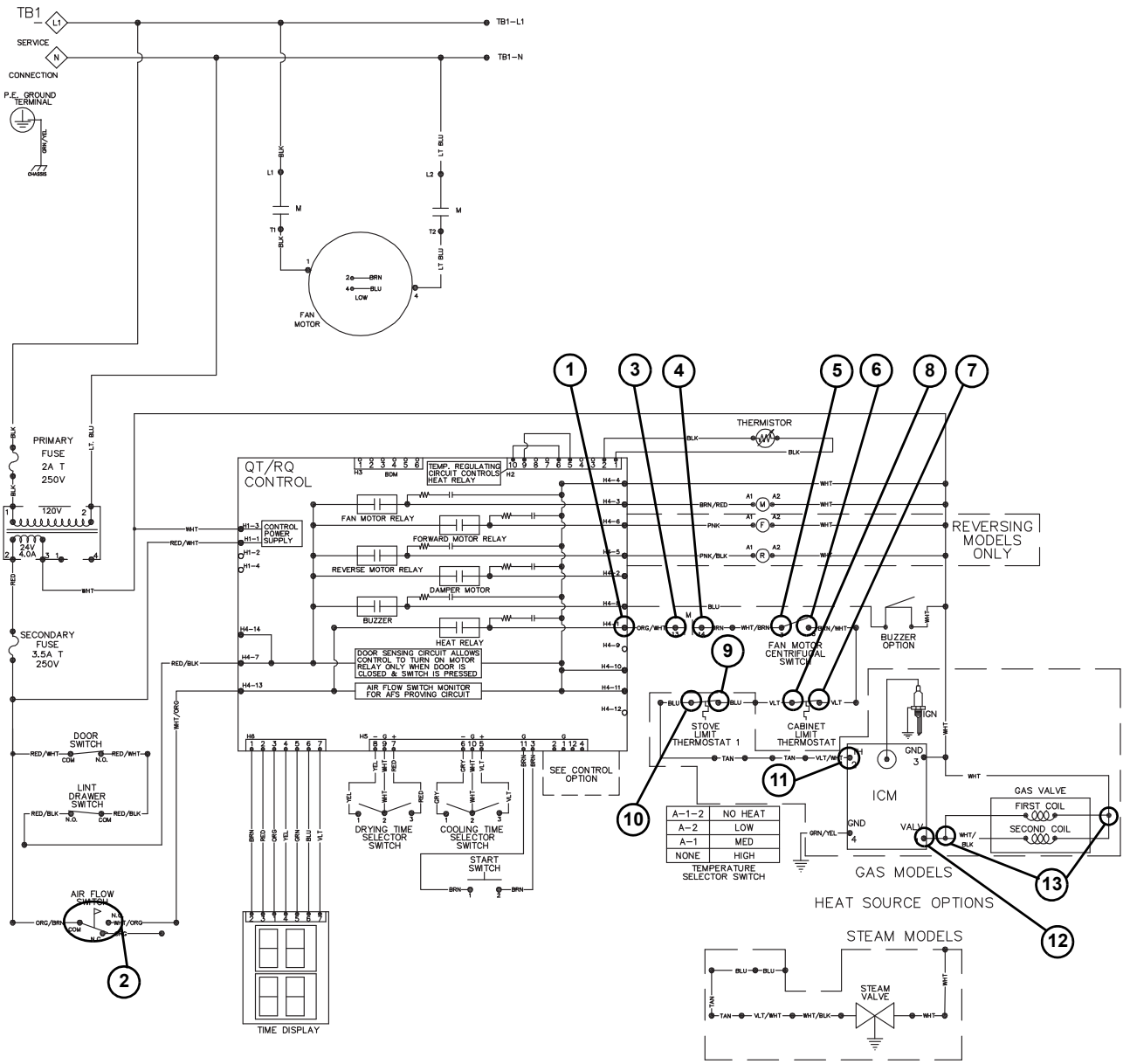
TMB2317S-a

80. Unit Will Not Heat – Gas – QT and RQ Control Suffixes (continued)



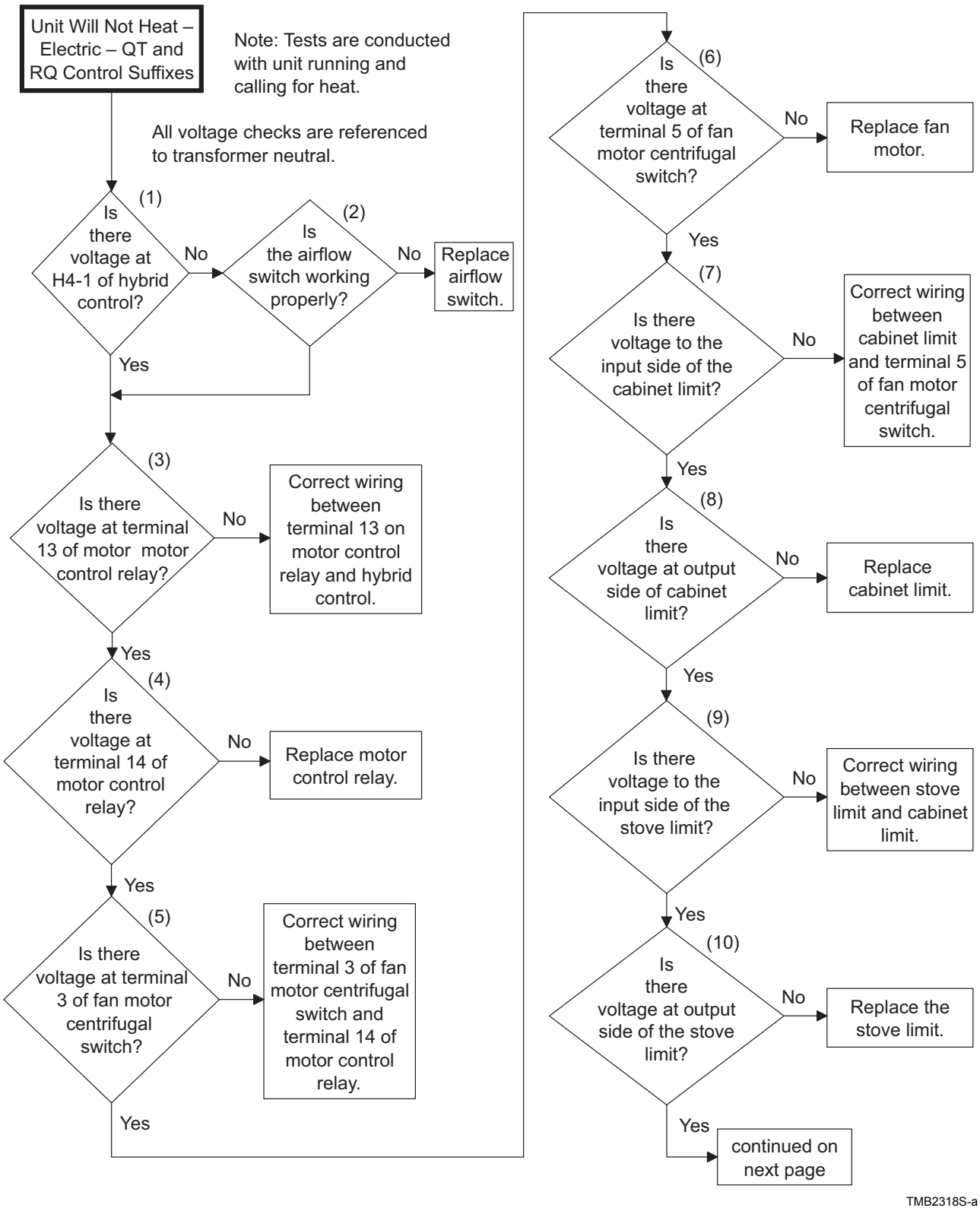
Please see following page for wiring diagram information.

Unit Will Not Heat – Gas – QT and RQ Control Suffixes

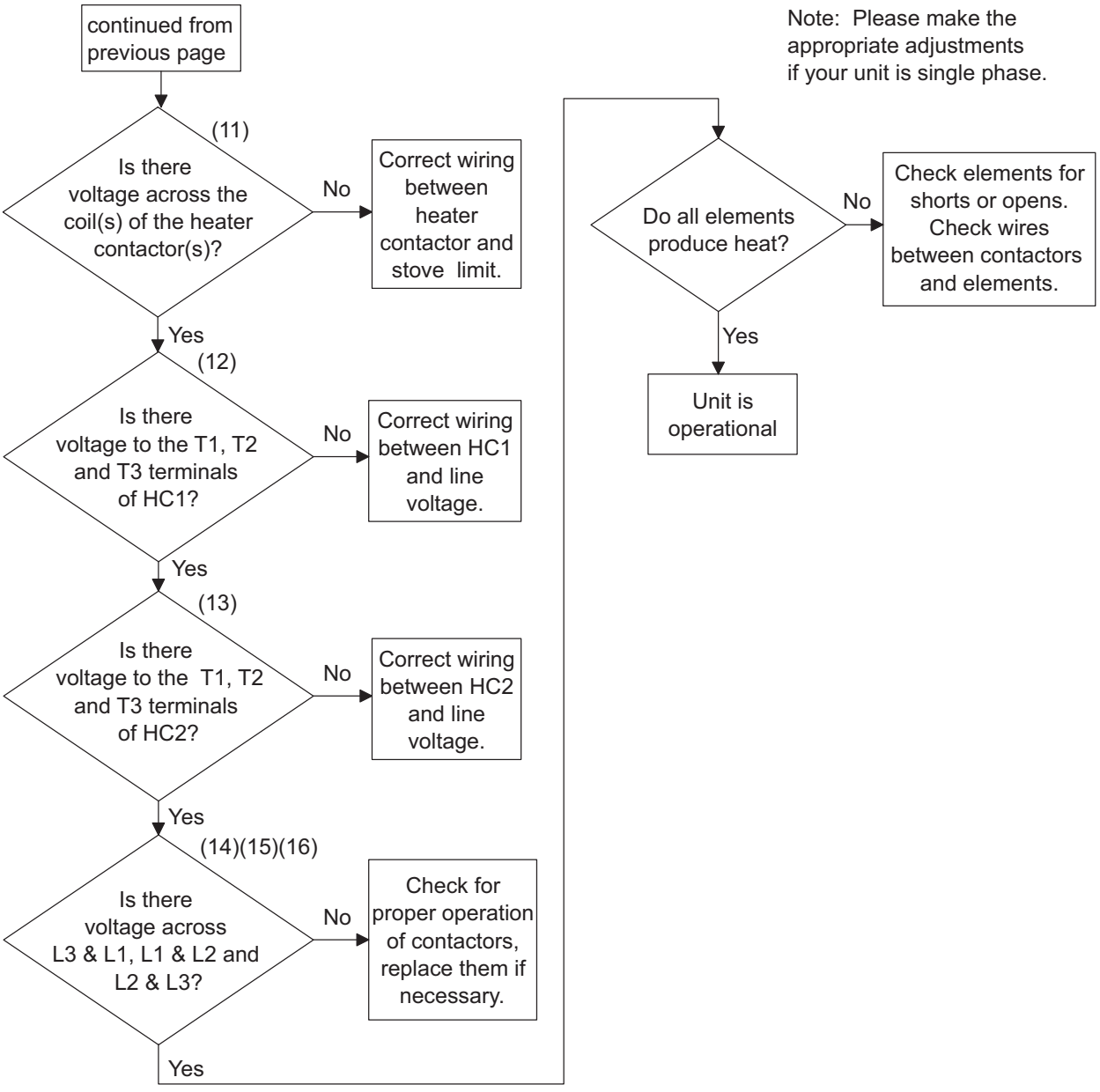


TMB2344S

81. Unit Will Not Heat – Electric – QT and RQ Control Suffixes



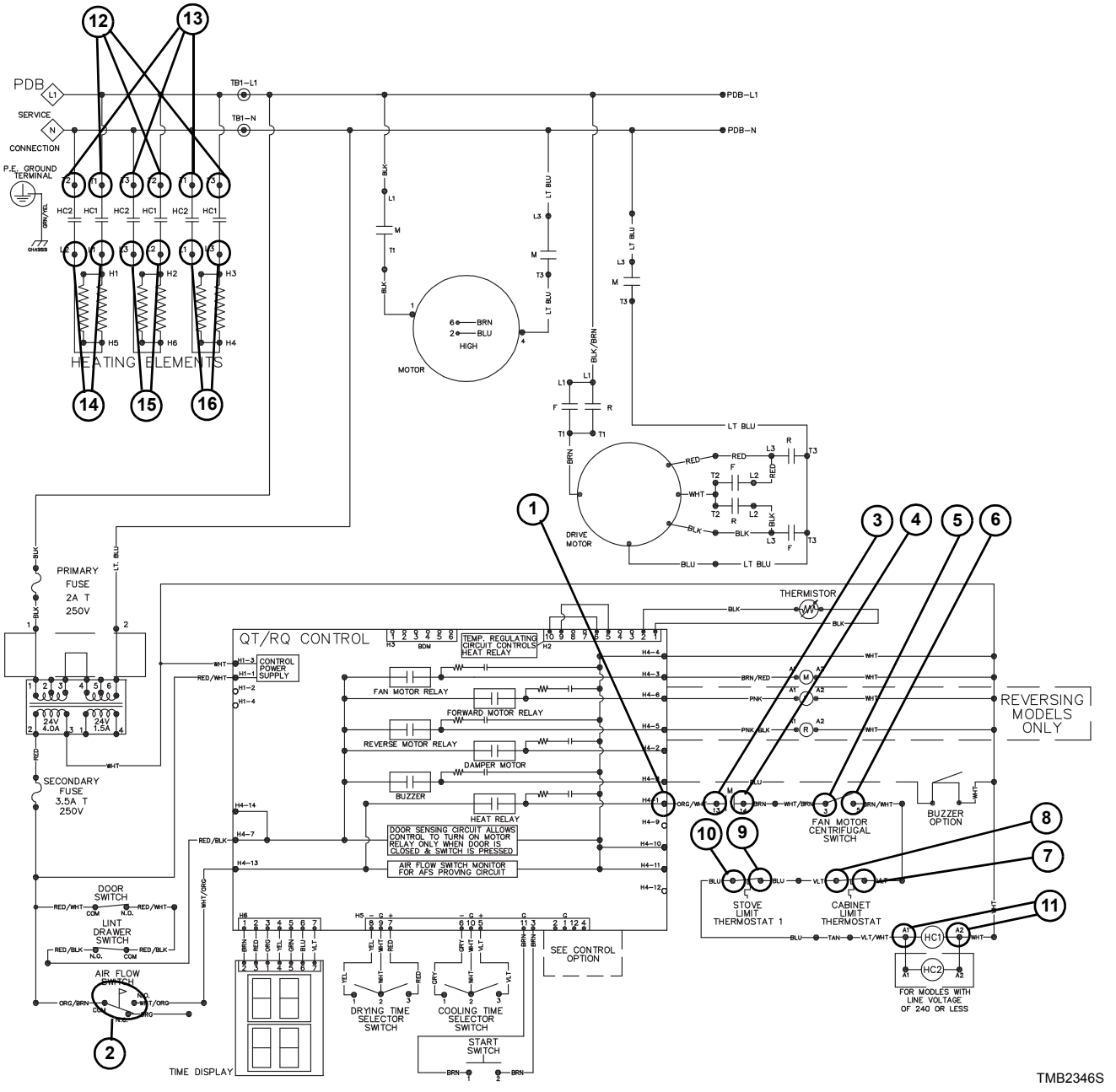
81. Unit Will Not Heat – Electric – QT and RQ Control Suffixes (continued)



TMB2318S-b

Please see following page for wiring diagram information.

Unit Will Not Heat – Electric – QT and RQ Control Suffixes



WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

W002

82. Error Codes

Display	Definition	Corrective Action
OP	Open thermistor error.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
SH	Shorted thermistor error.	• Check thermistor. Replace if inoperative. • Check wiring between control and thermistor. Refer to wiring diagram for proper wiring. • Check control. Replace if inoperative.
AF-1	Airflow switch closed when cycle started.	• Check airflow switch. Replace if inoperative.
AF-2	Airflow switch failed to closed after cycle started.	• Check airflow switch. Replace if inoperative.
AF (flashing)	Airflow switch opened/closed 5 or more times in a running cycle.	• Check airflow switch. Replace if inoperative.

Section 10
Electronic Control Troubleshooting

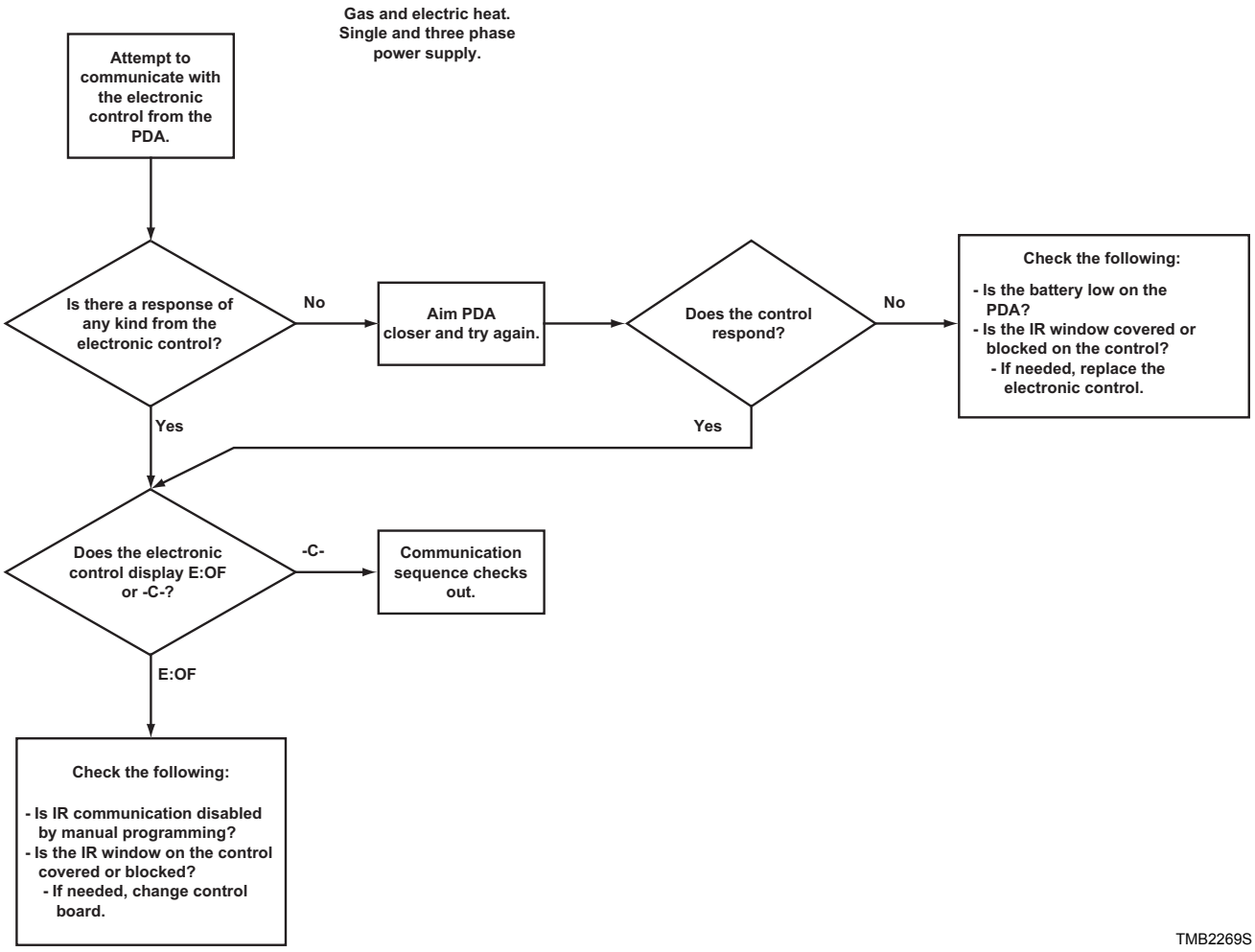
Models with KB, KC, KW, KX, KY, KZ, LB, LC, LW, LX, LY, LZ, WB, WC, WW, WX, WY and WZ Control Suffixes

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumbler before servicing.**
- **Close gas shut-off valve to gas tumbler before servicing.**
- **Close steam valve to steam tumbler before servicing.**
- **Never start the tumbler with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumbler is properly grounded.**

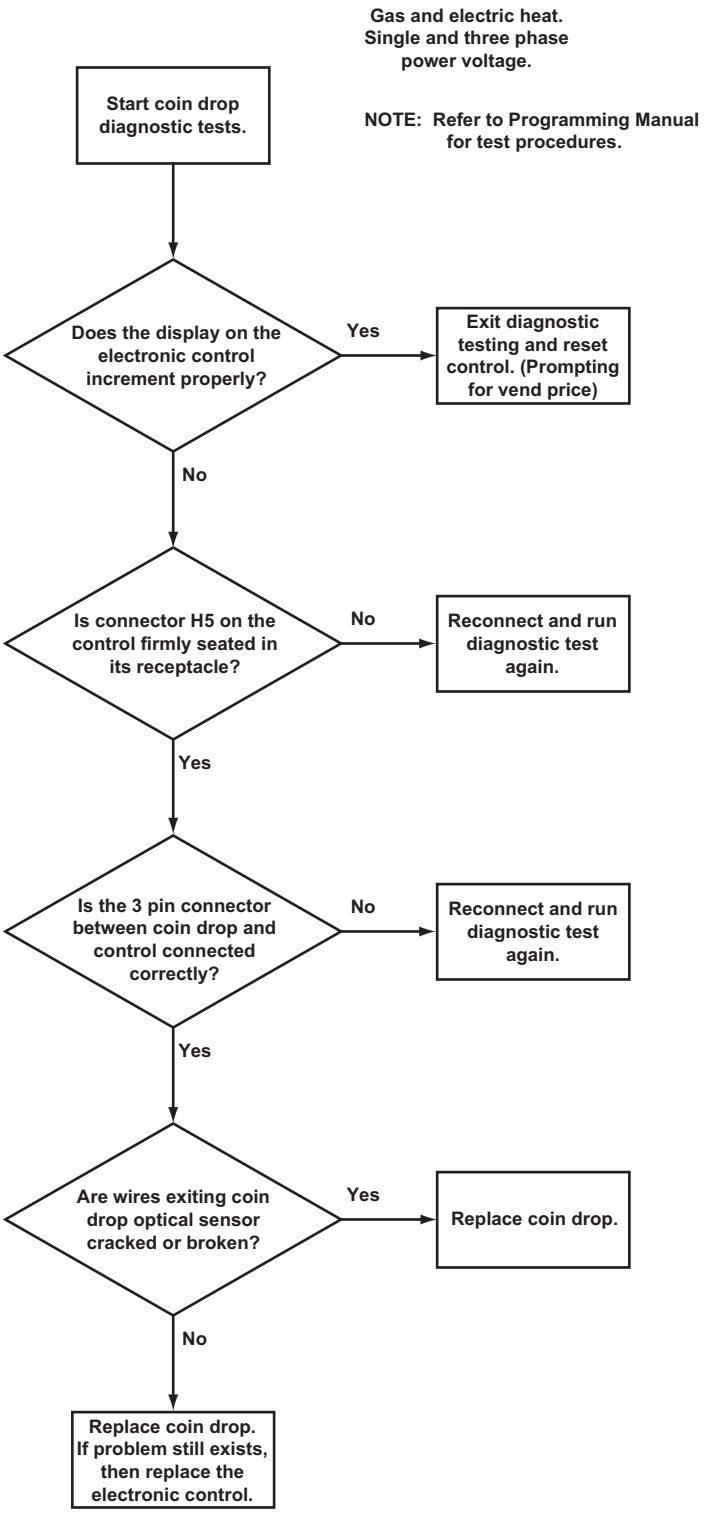
W002

83. No Infrared Communication

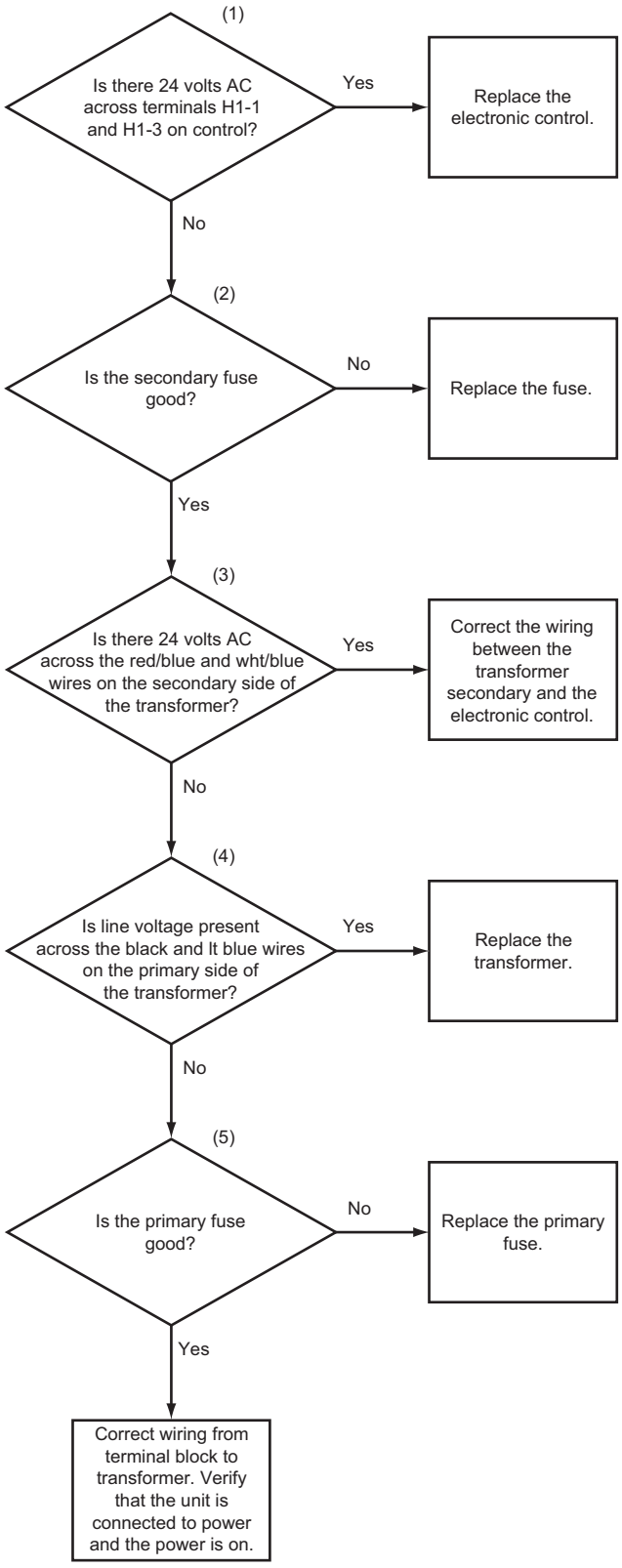


84. Coins Ignored When Entered

L and W Control Suffixes only

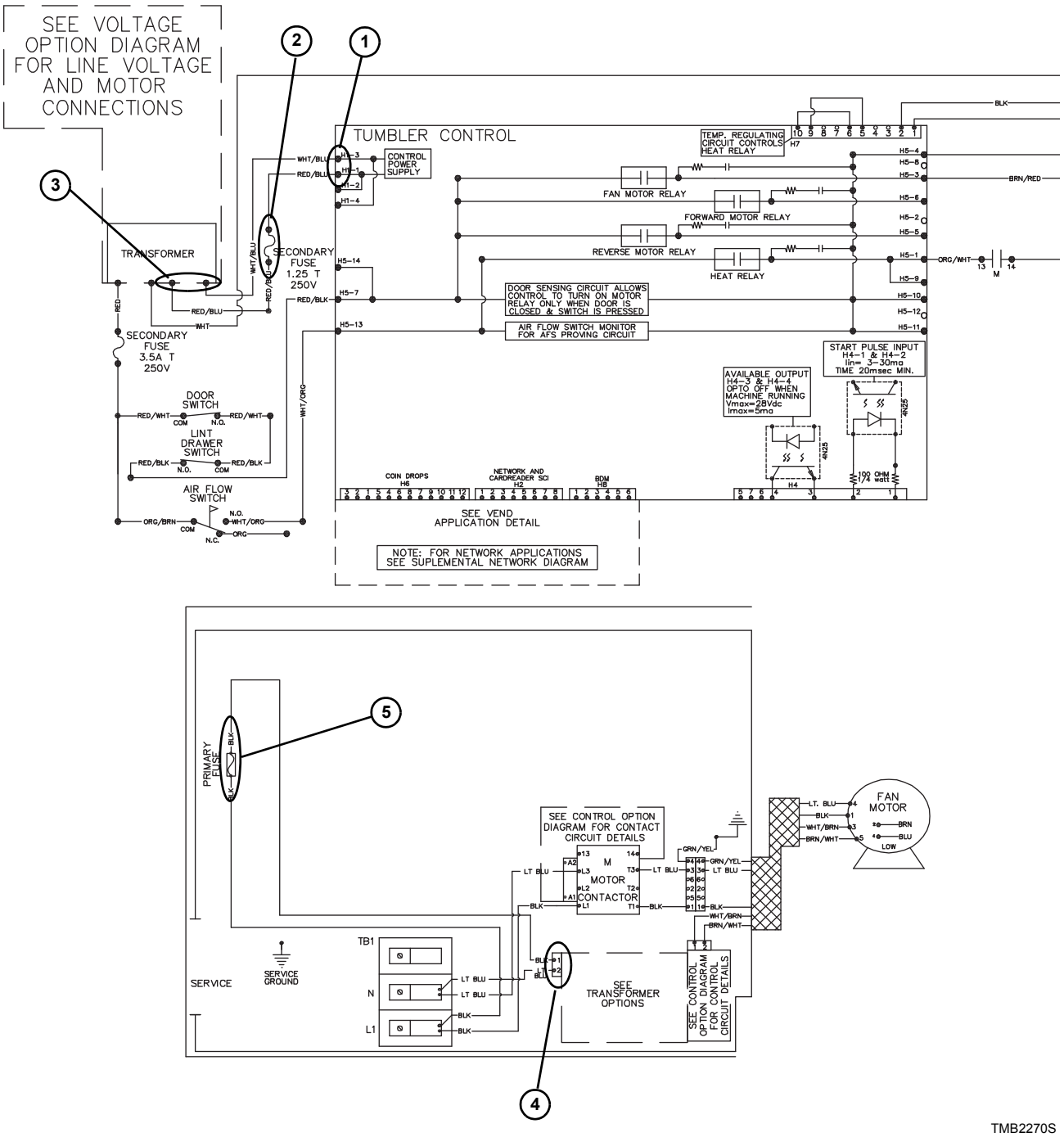


85. No Display



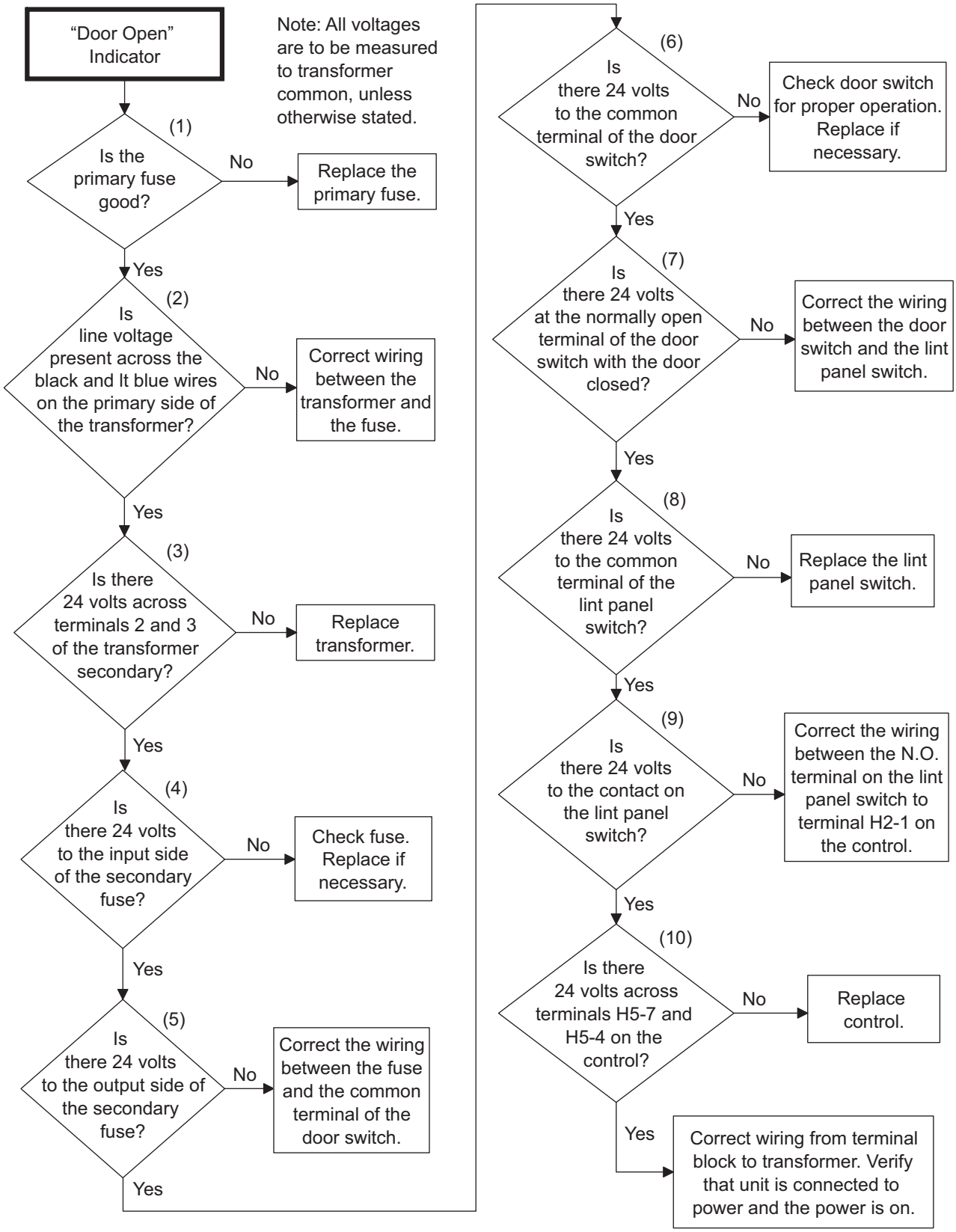
TMB2299S

No Display



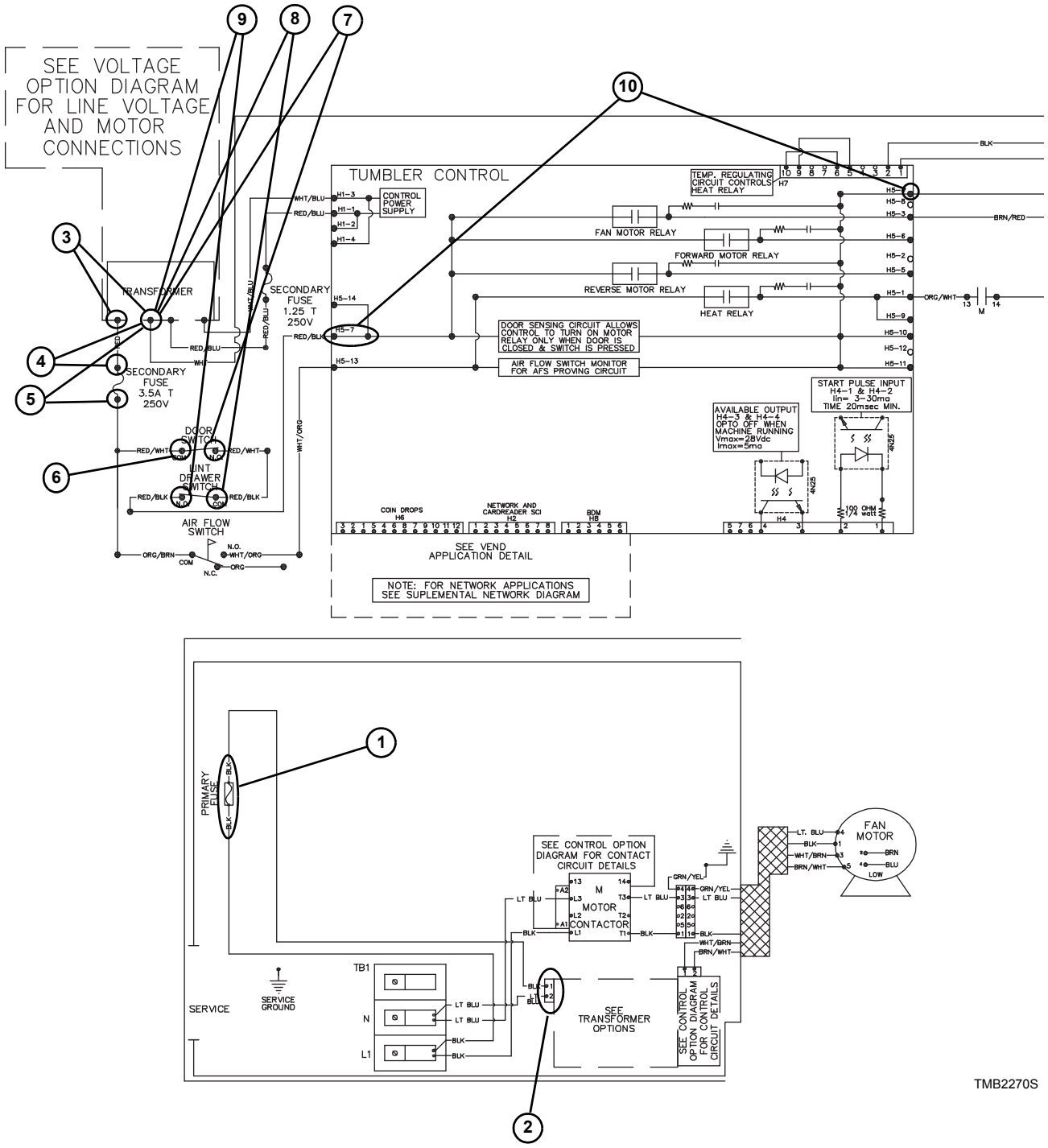
TMB2270S

86. “Door Open” Indicator



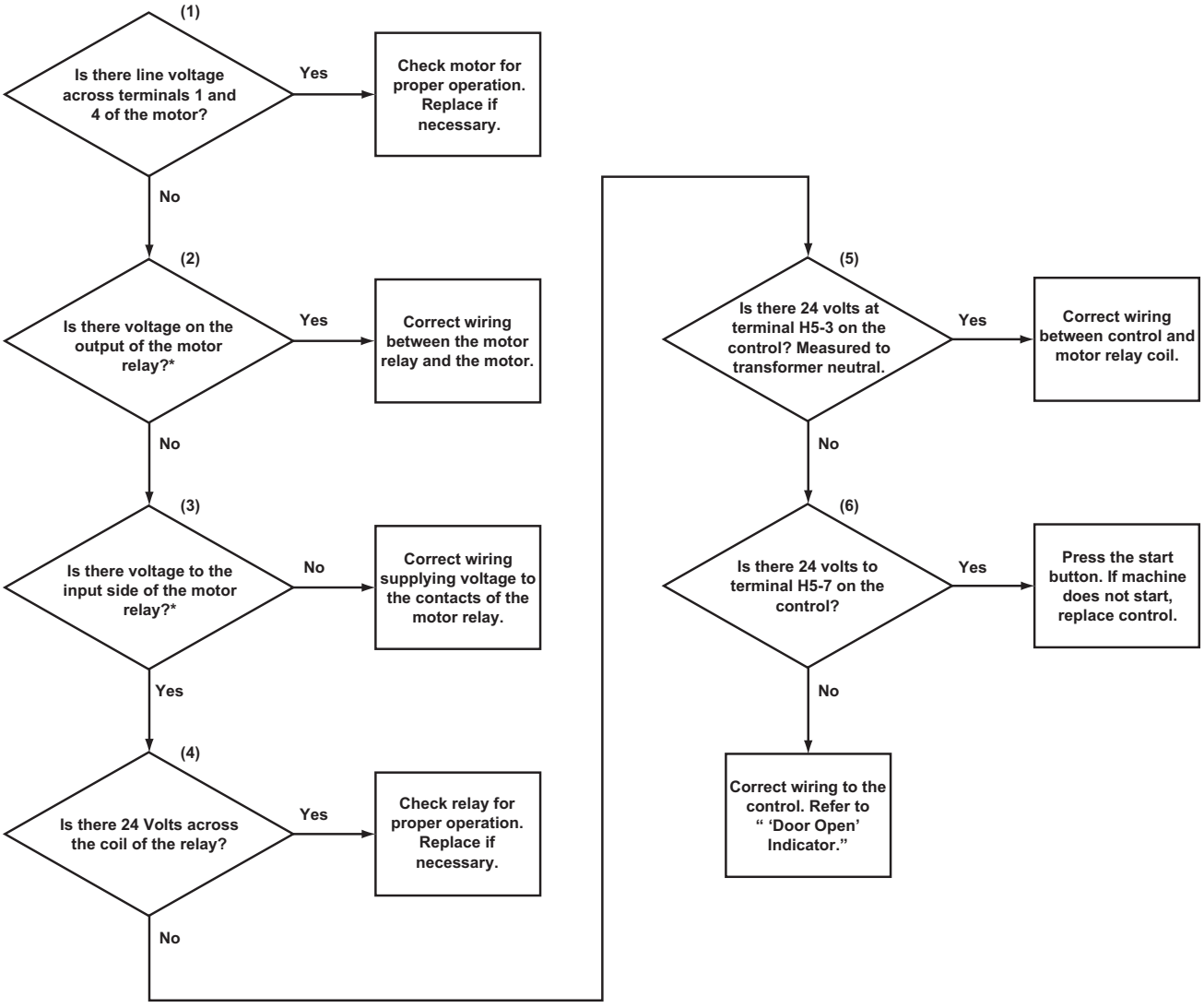
TMB2401S

"Open Door" Indicator



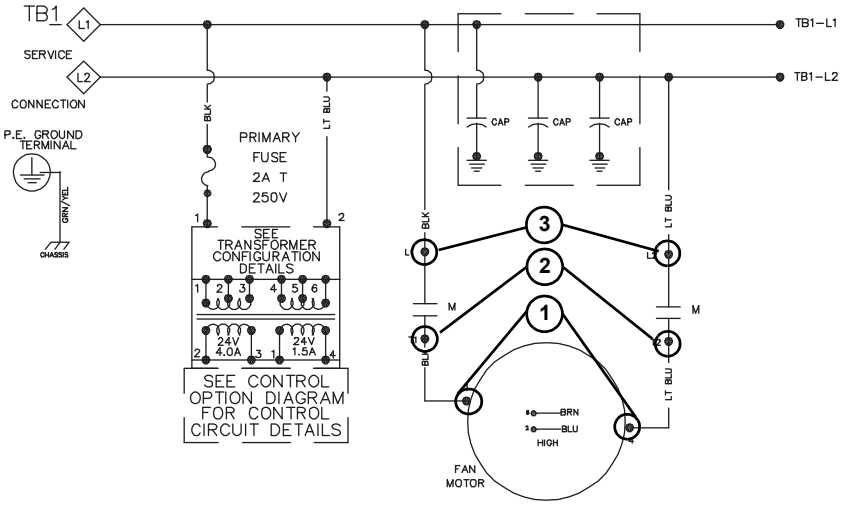
87. No Start/Run

***Note: For steps 2 and 3. For 208/240 1 phase, both lines to the motor are controlled by contacts. Please check second set of contacts. For 3 phase units, the three legs supplied to the moter will be controlled by N.O. contacts. Please check all three legs.**



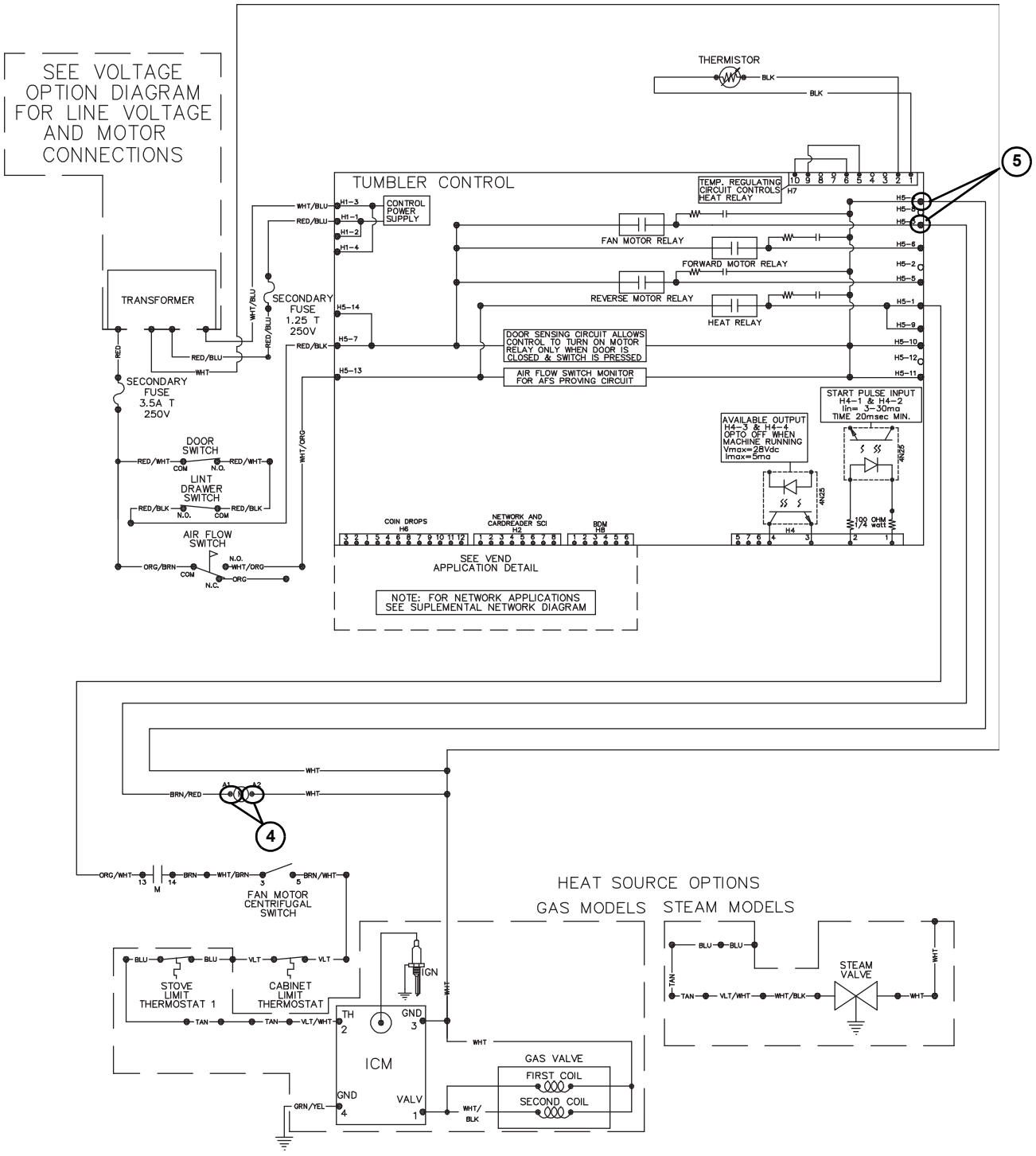
TMB2272S

No Start/Run



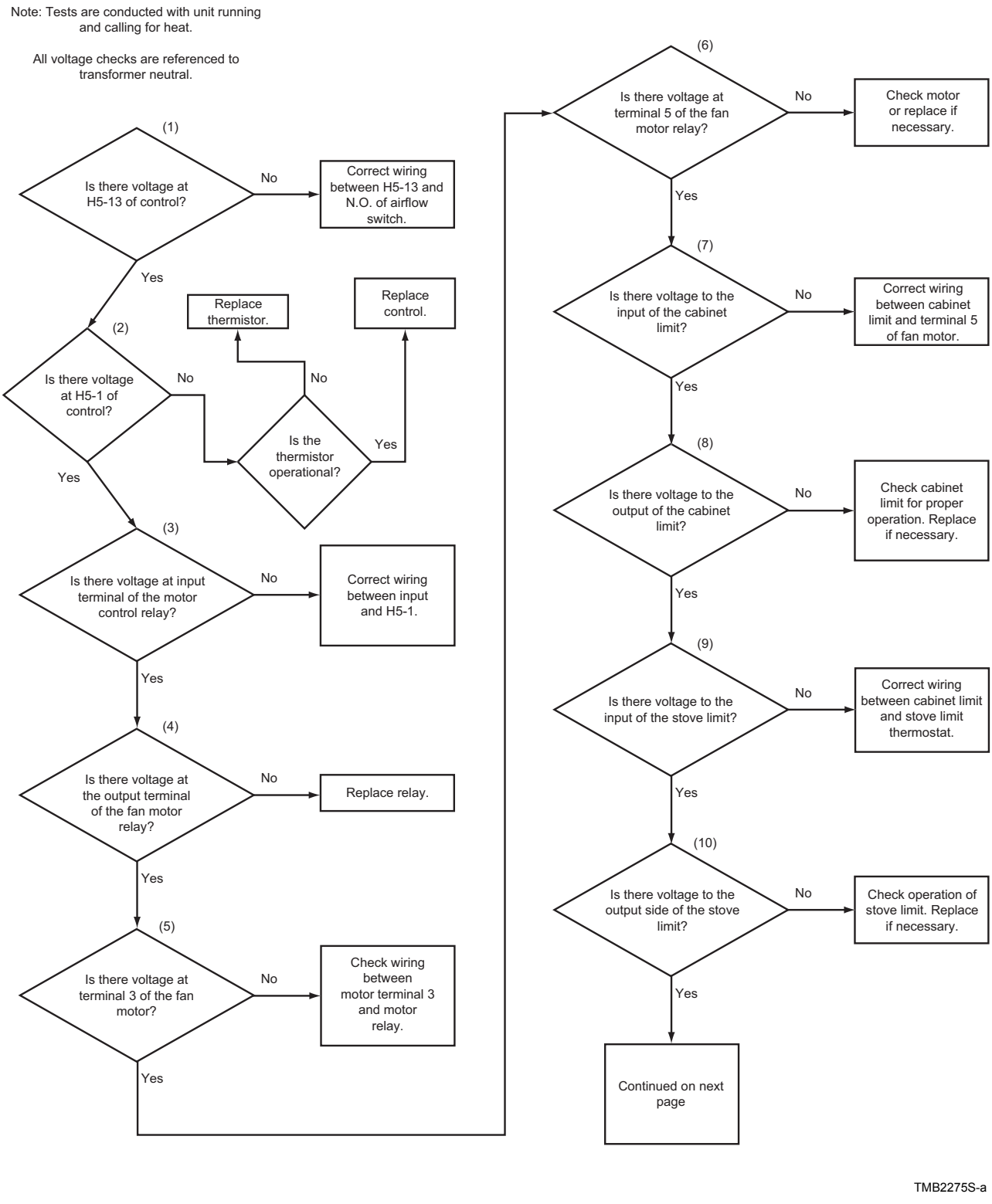
TMB2273S

No Start/Run



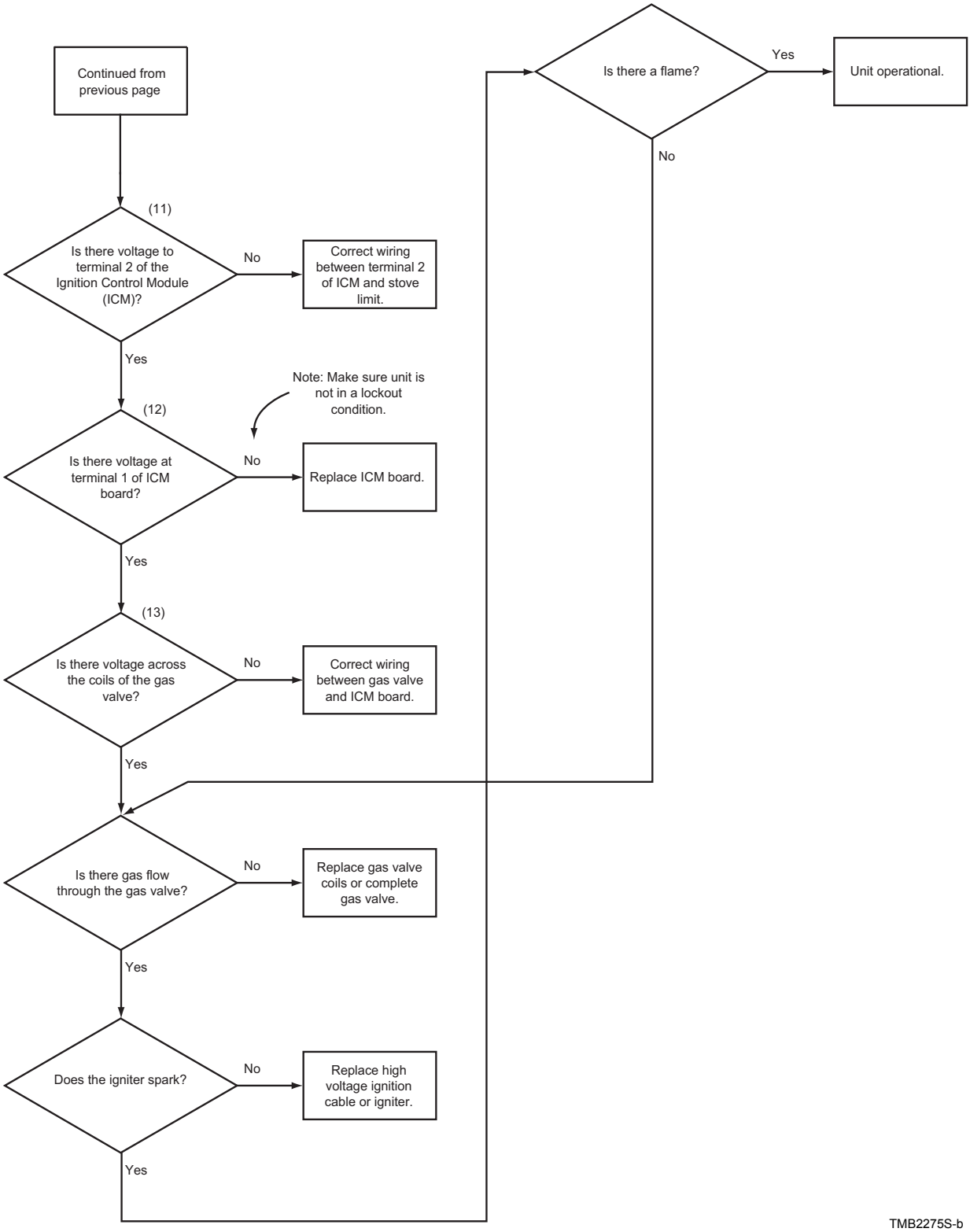
TMB2274S

88. Unit Will Not Heat – Gas



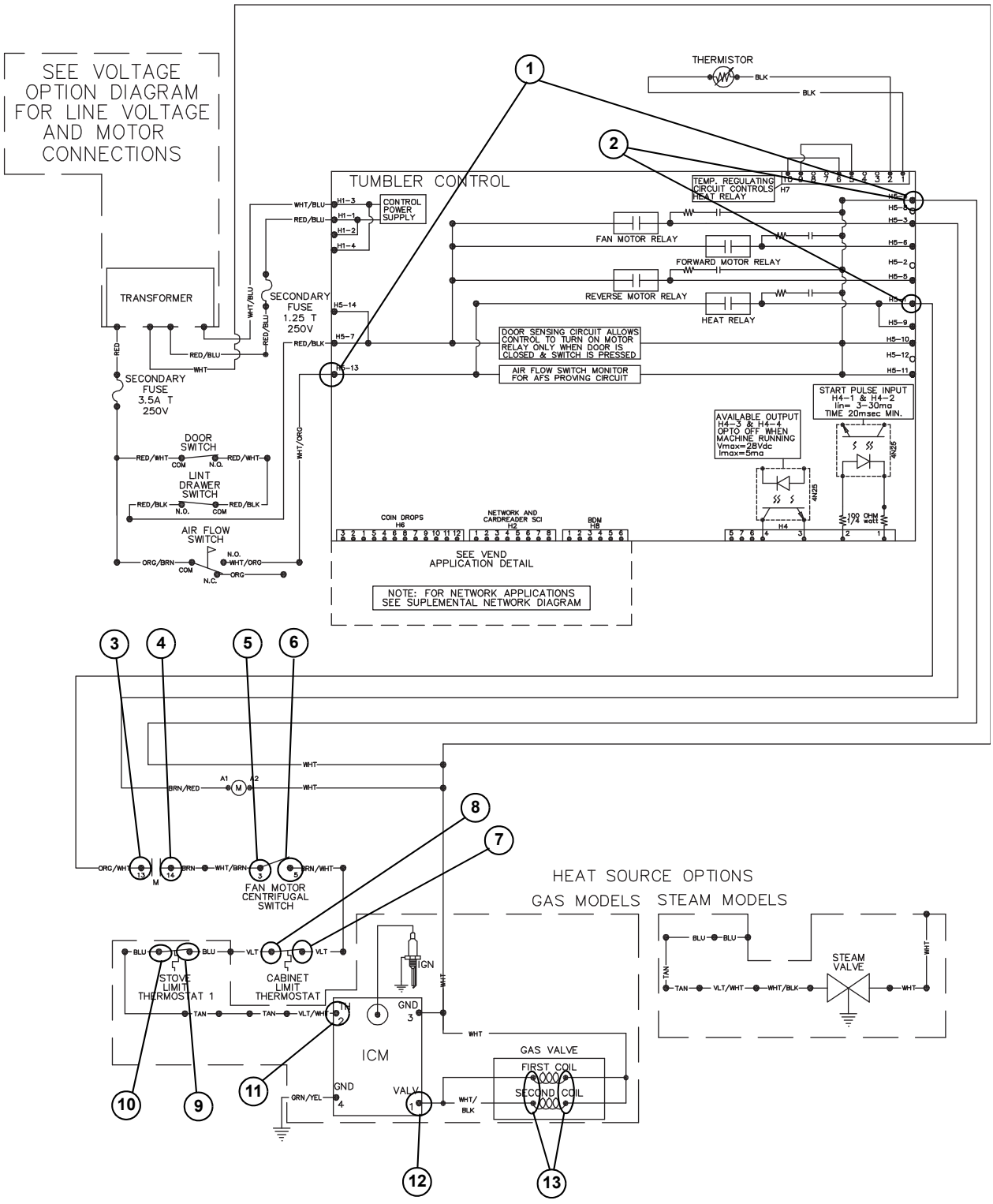
TMB2275S-a

88. Unit Will Not Heat – Gas (continued)



Please see following page for wiring diagram information.

Unit Will Not Heat – Gas

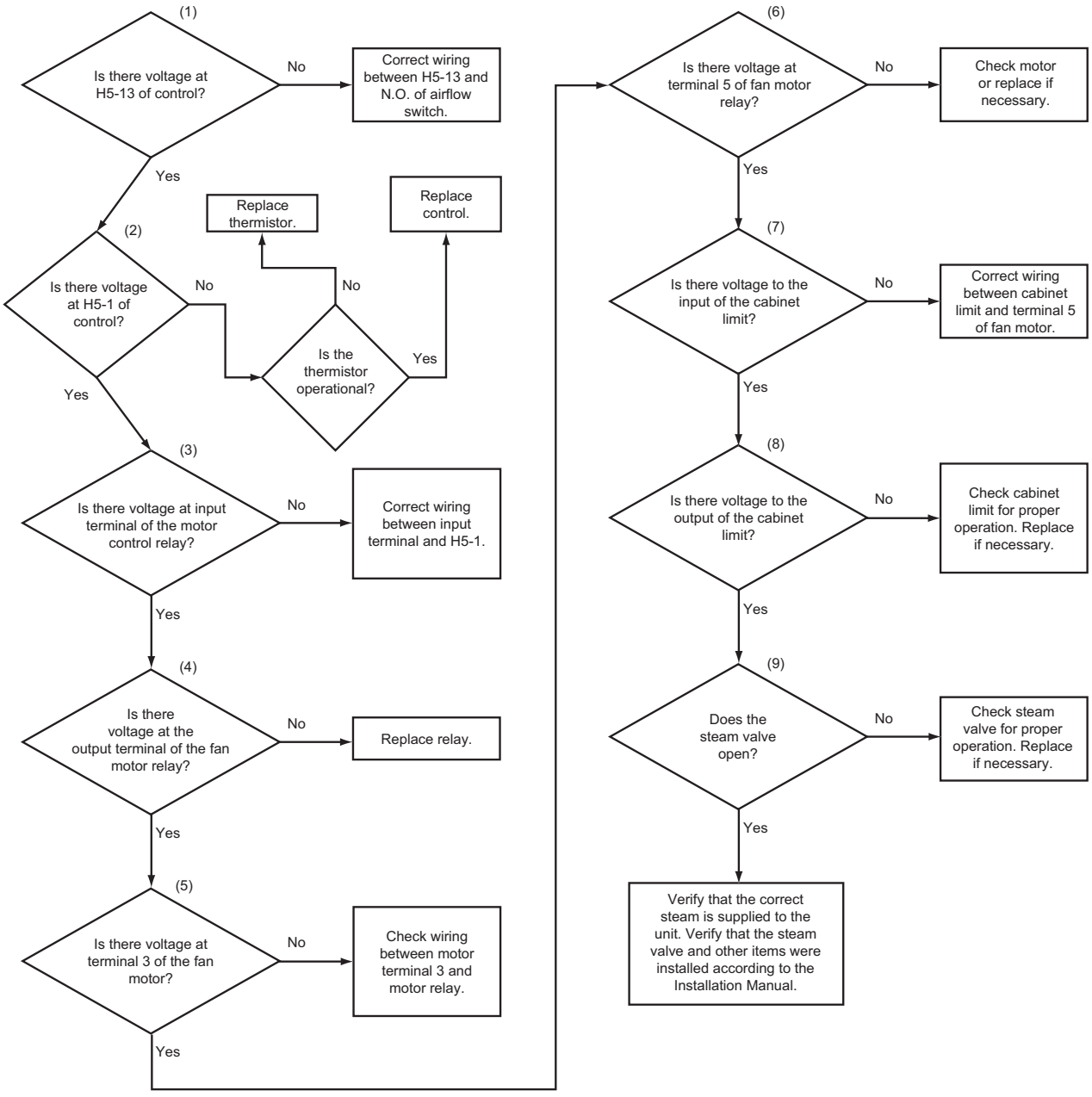


TMB2274S

89. Unit Will Not Heat – Steam

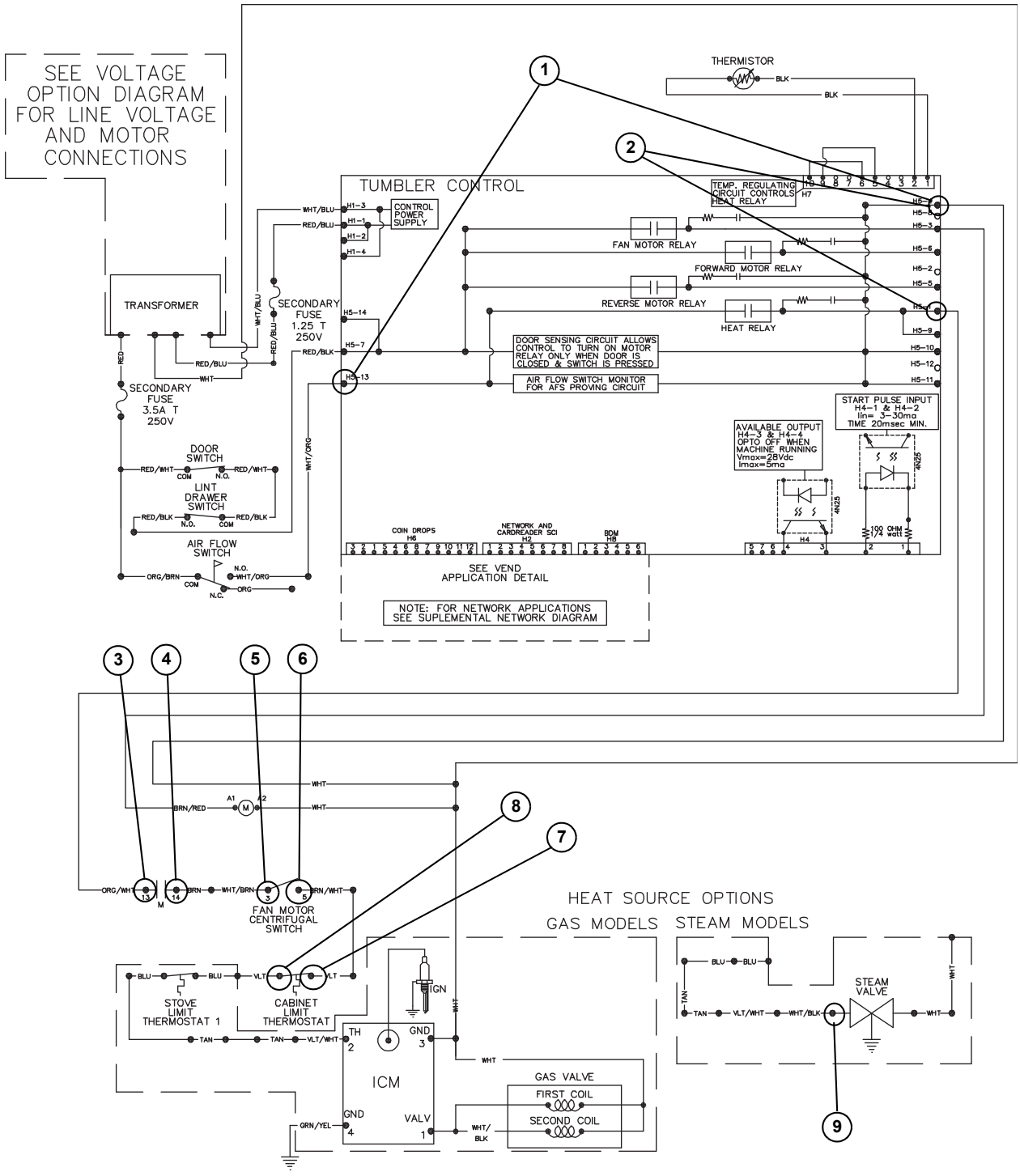
Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.



TMB2276S

Unit Will Not Heat – Steam

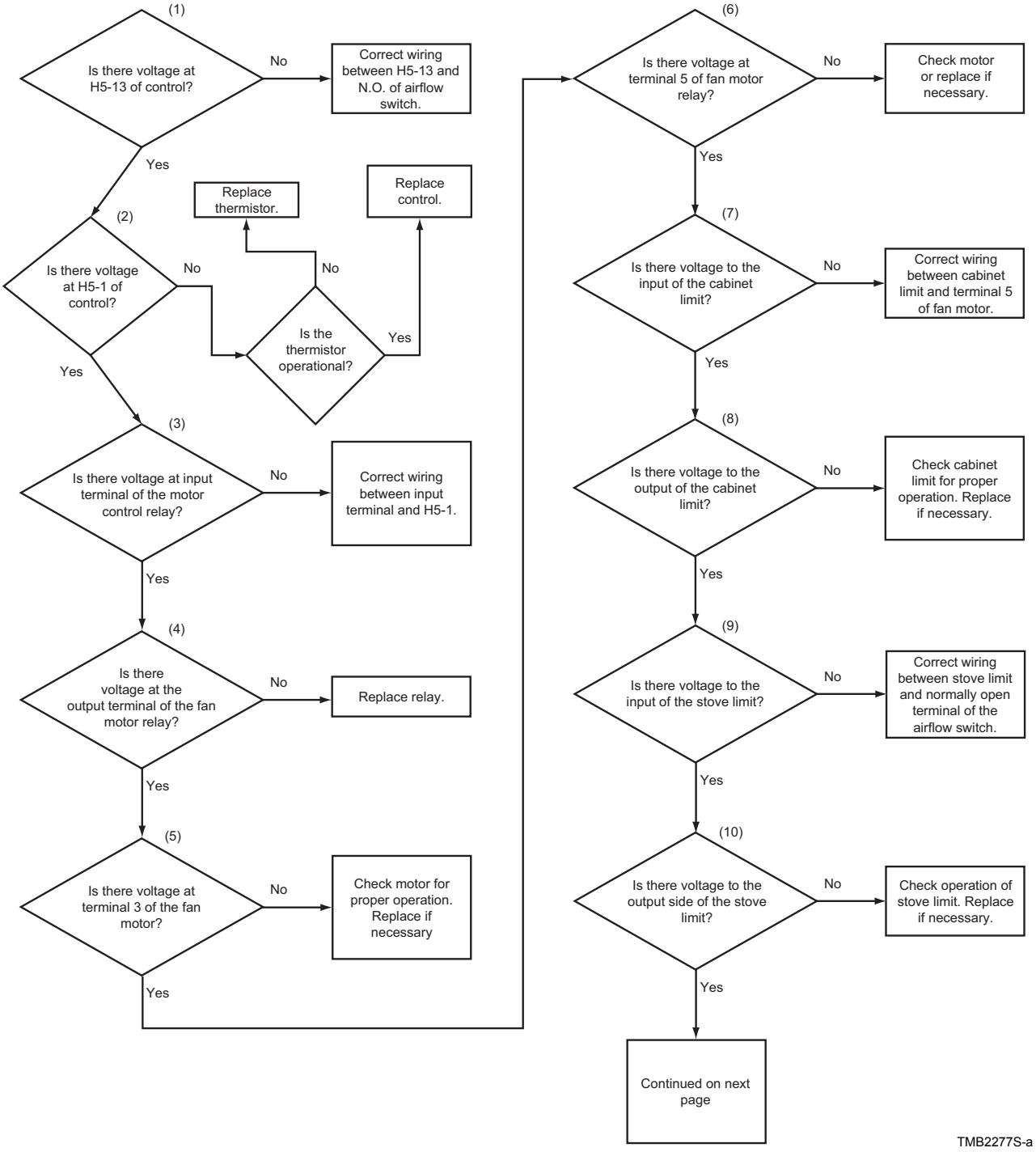


TMB2274S

90. Unit Will Not Heat – Electric

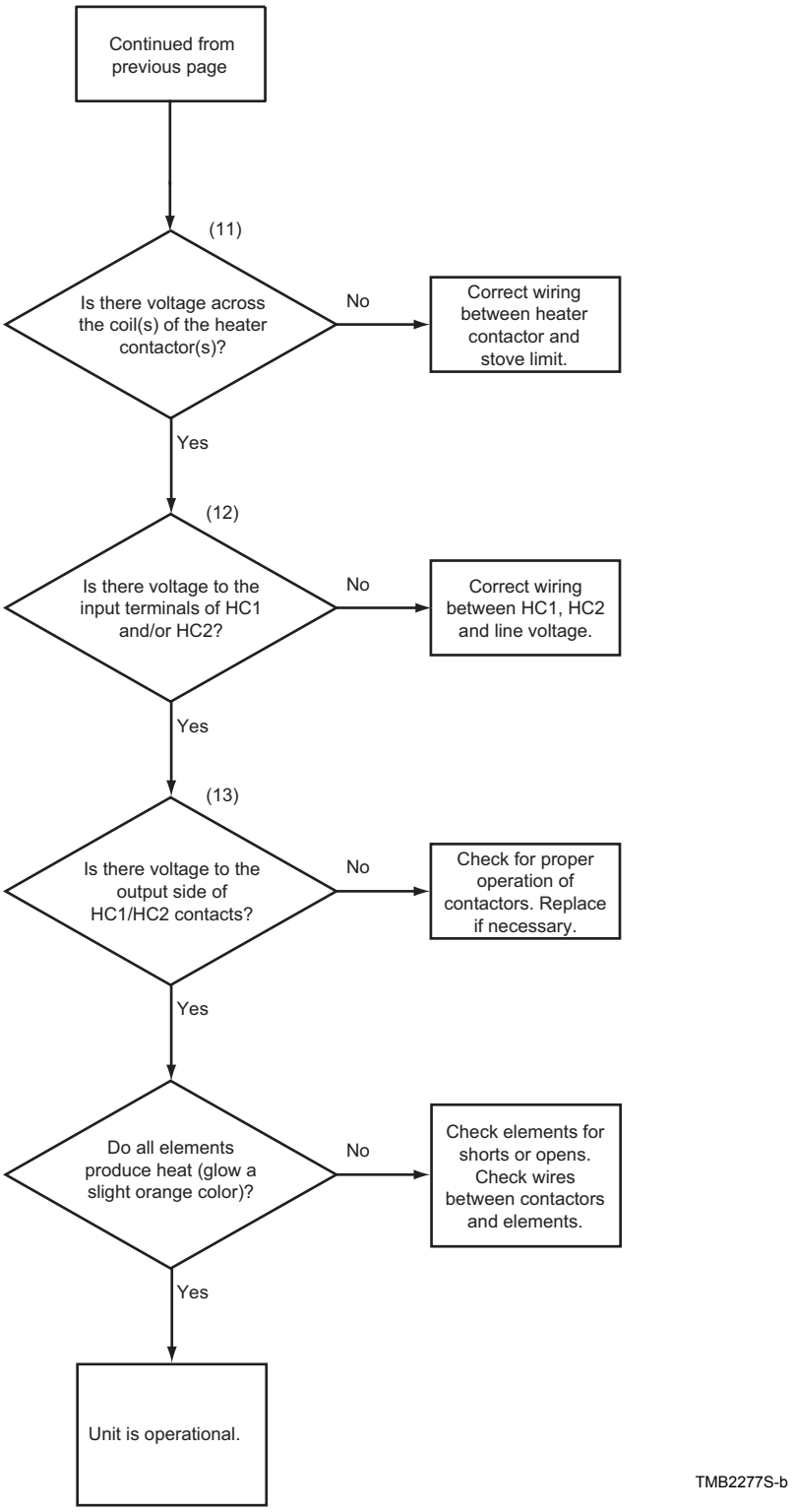
Note: Tests are conducted with unit running and calling for heat.

All voltage checks are referenced to transformer neutral.



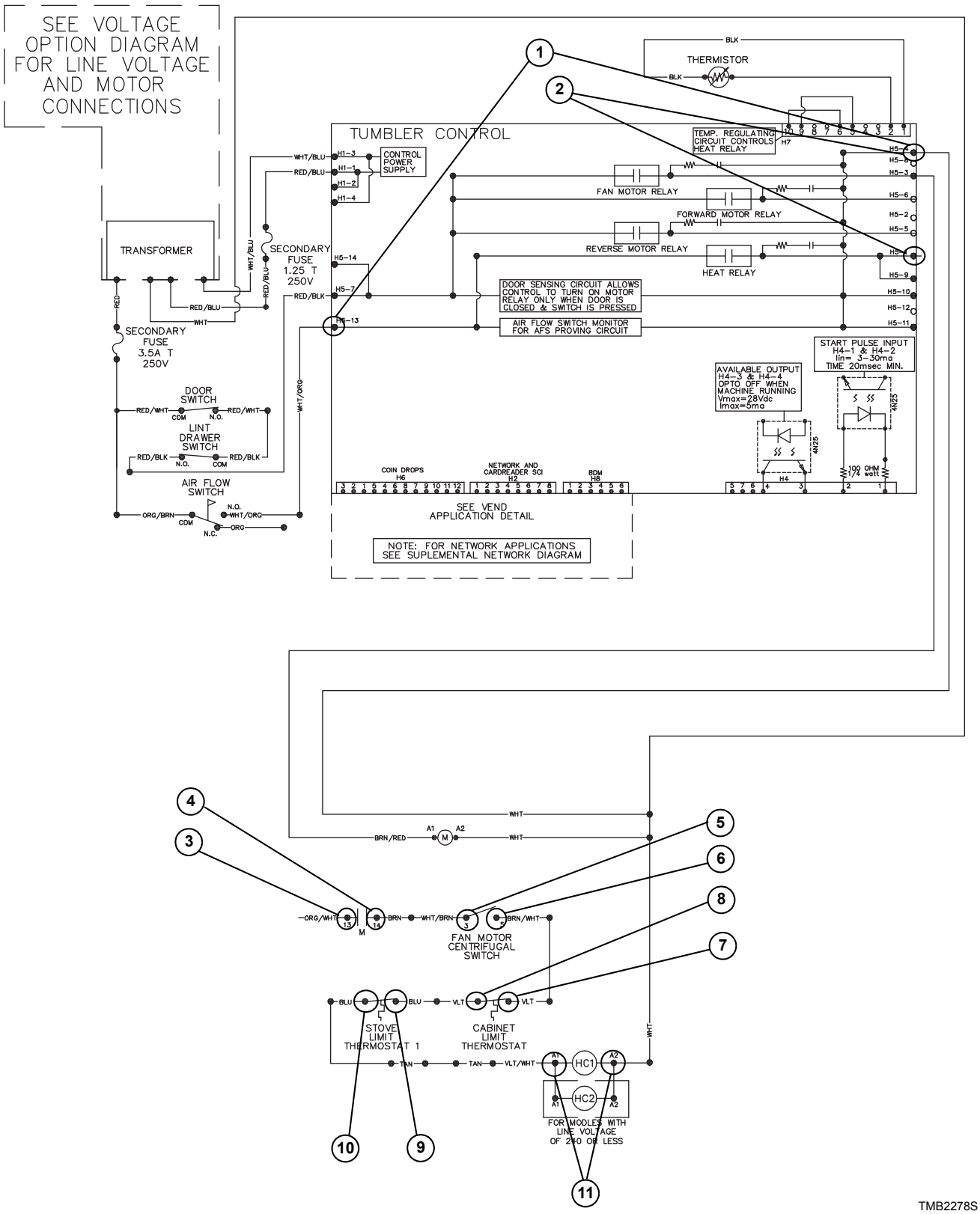
TMB2277S-a

90. Unit Will Not Heat – Electric (continued)



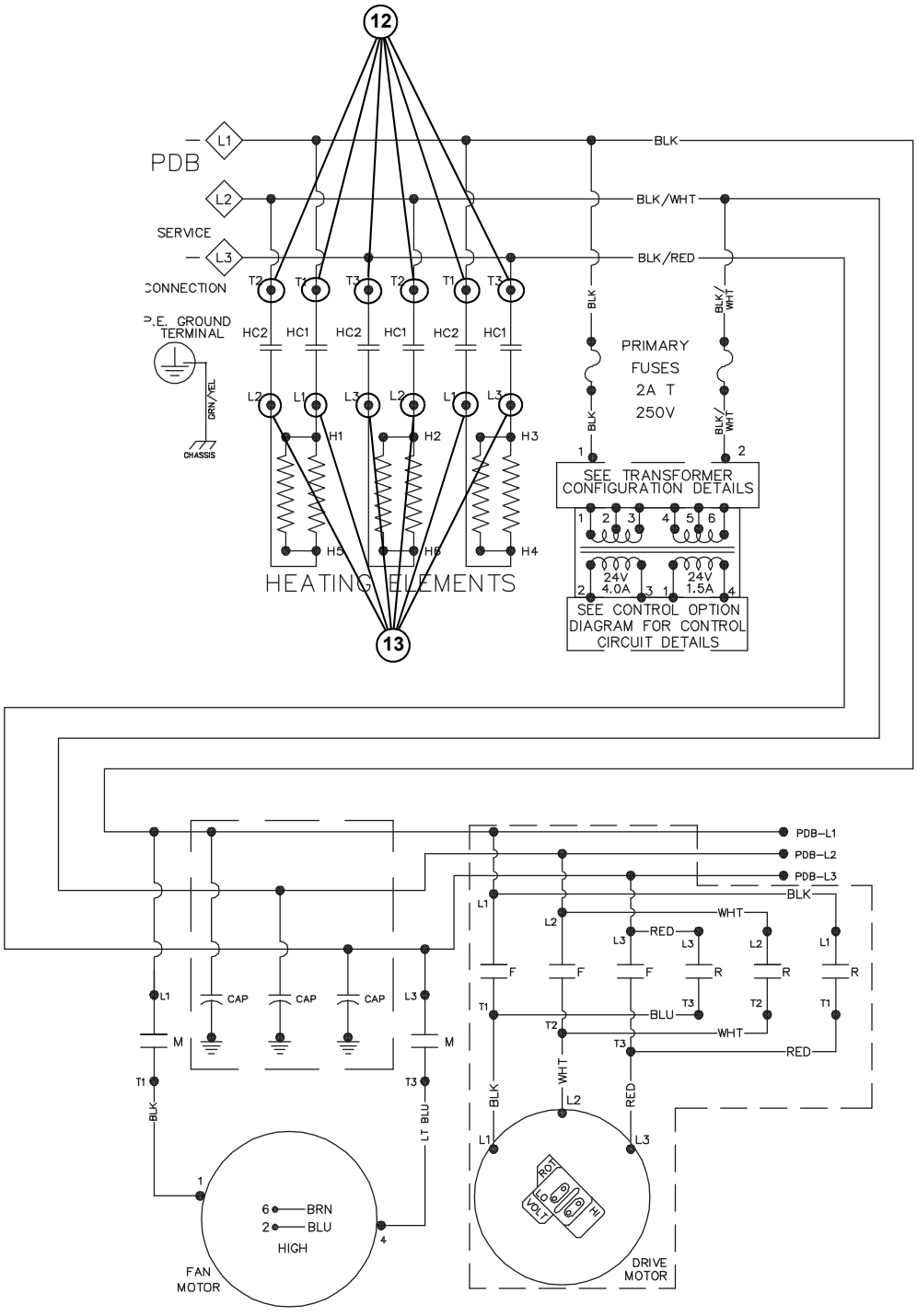
Please see following page for wiring diagram information.

Unit Will Not Heat – Electric



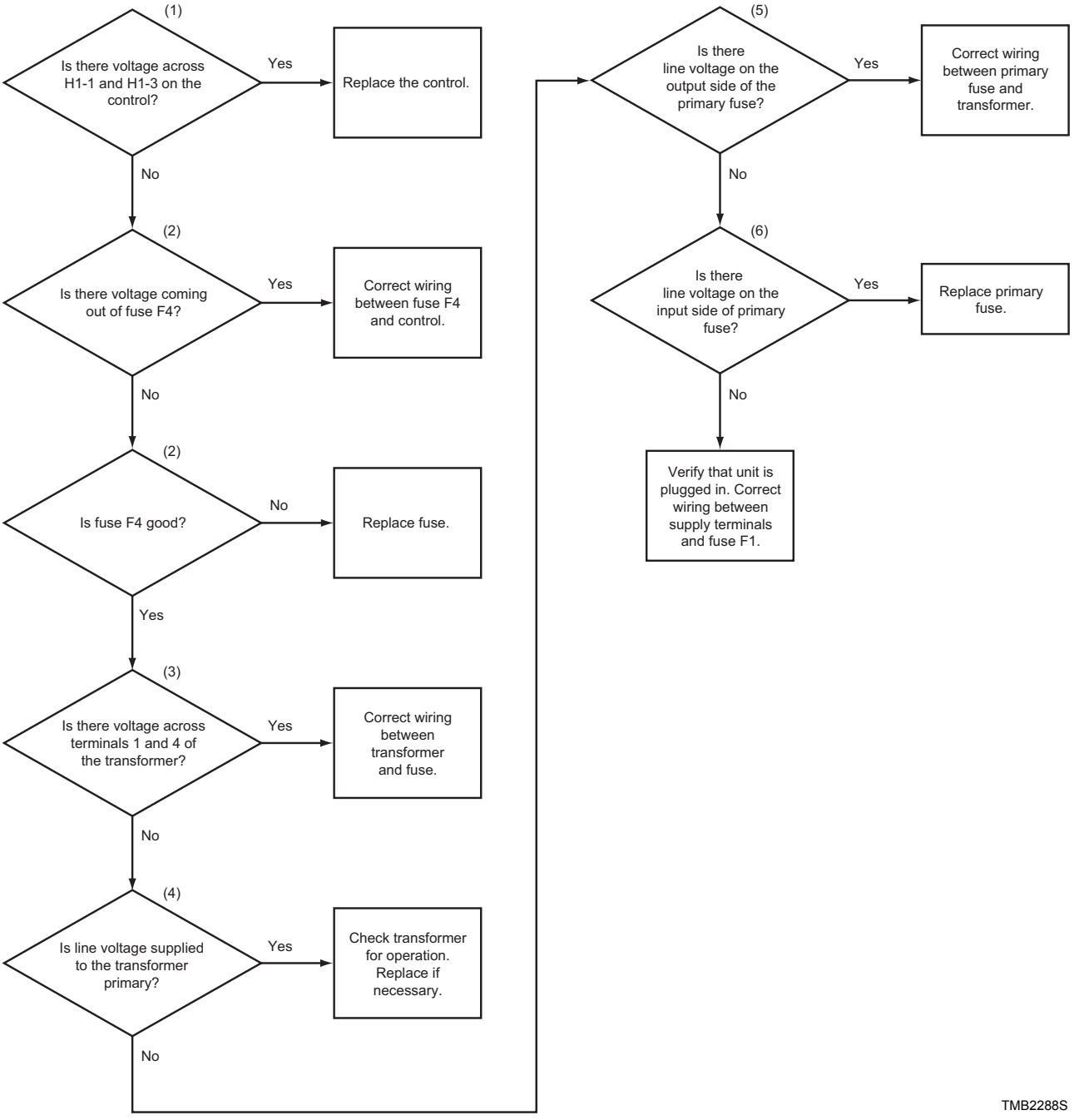
TMB2278S

Unit Will Not Heat – Electric

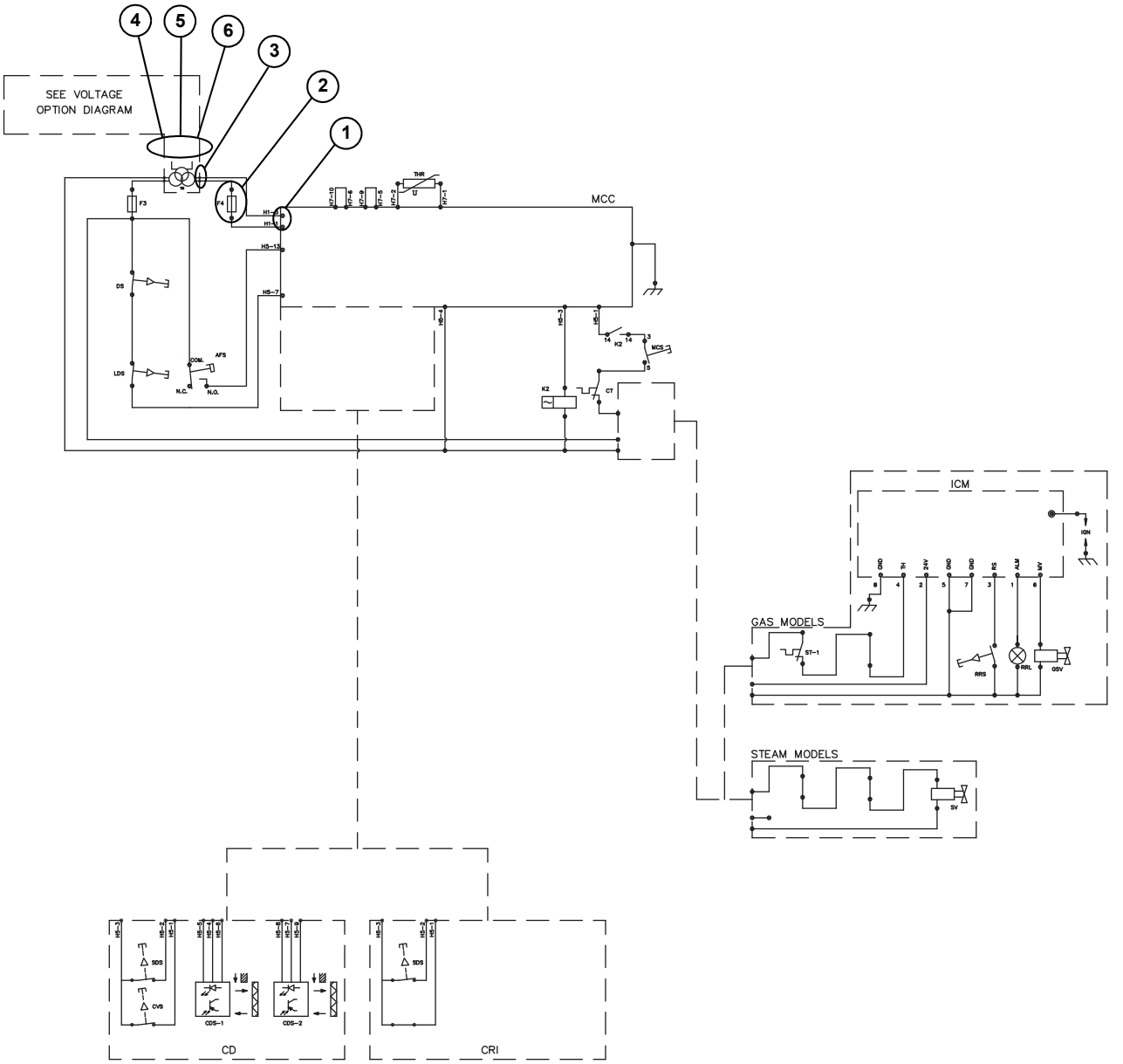


TMB2279S

91. CE Models No Display



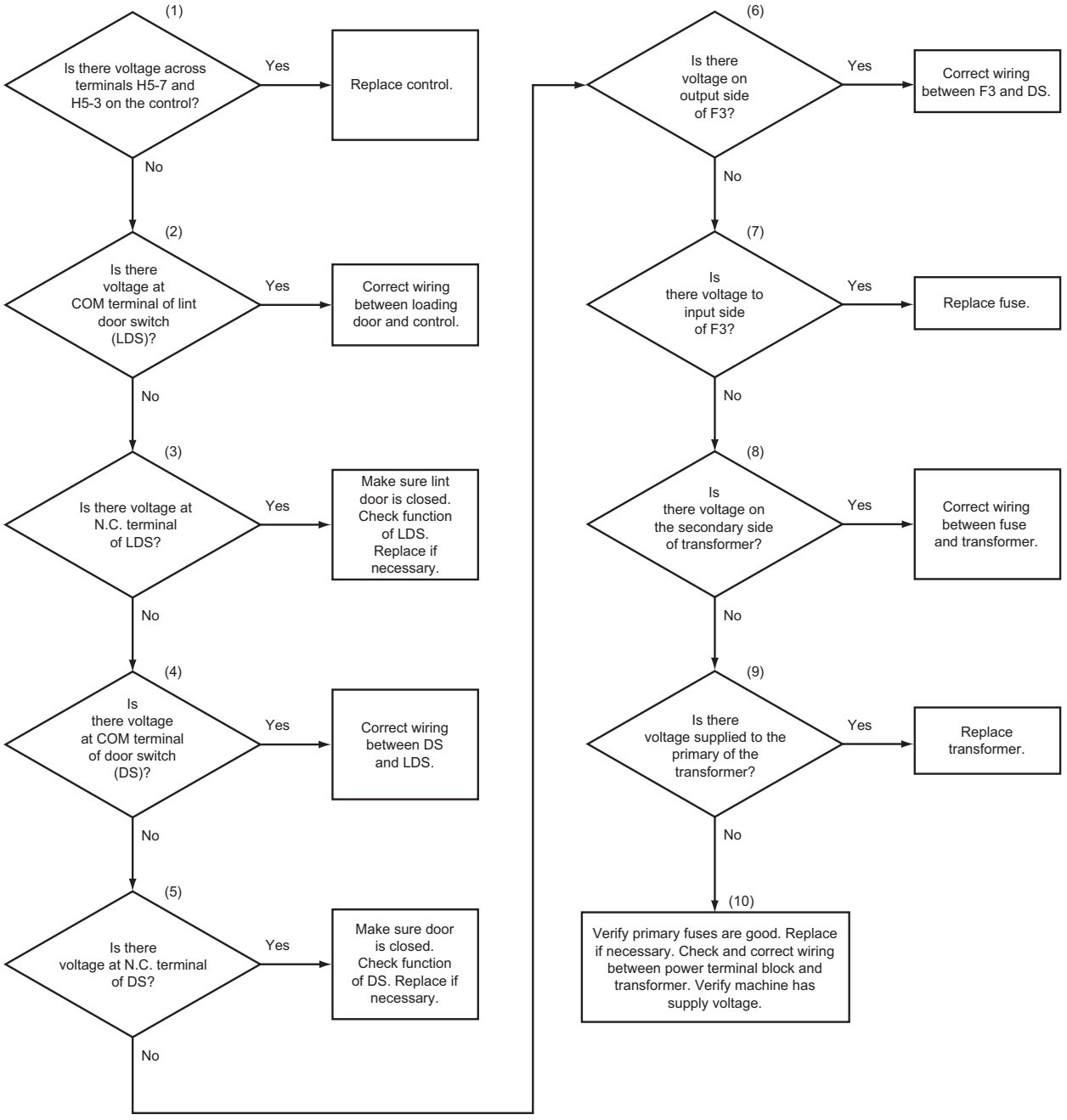
CE Models No Display



TMB2287S

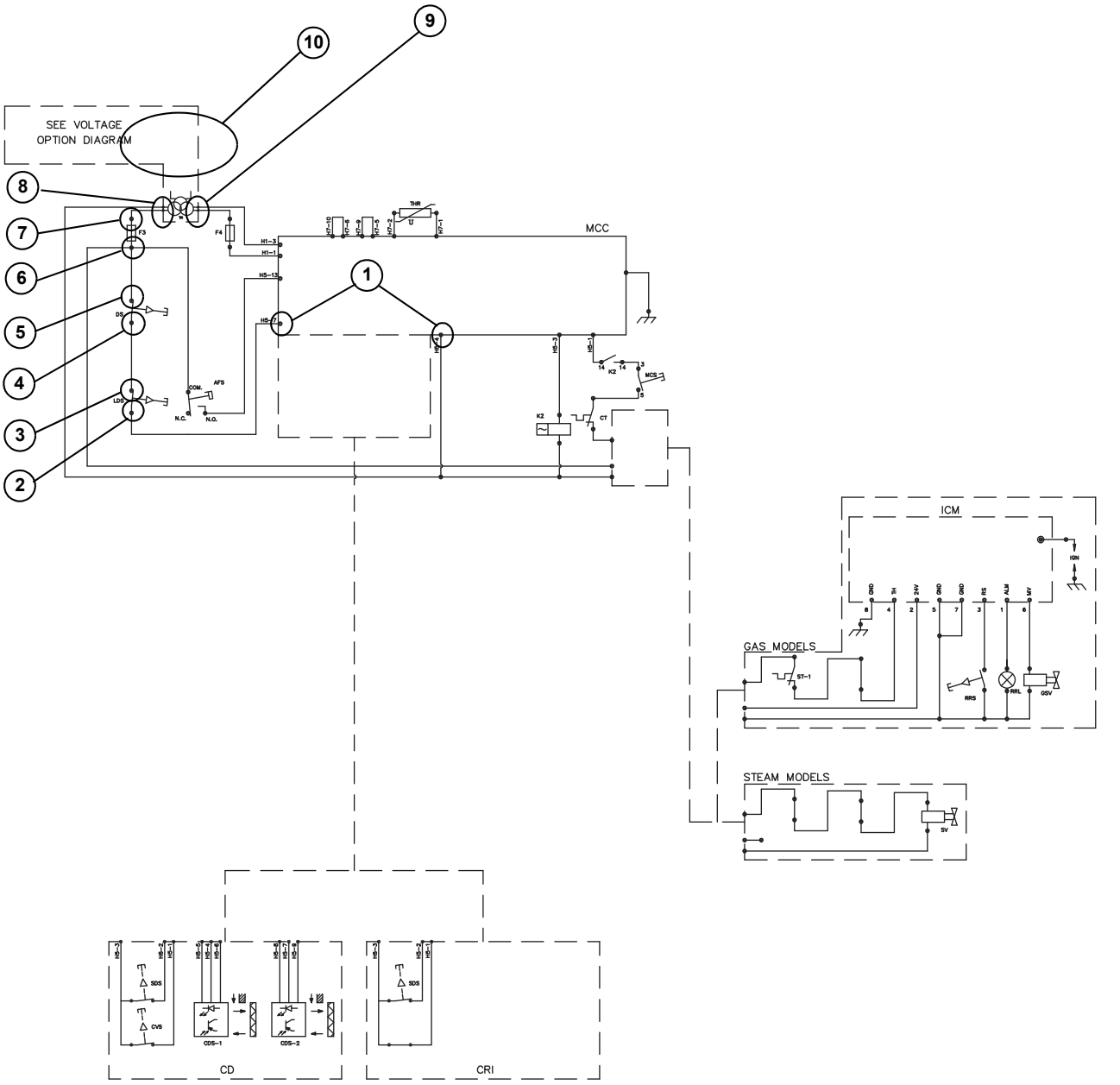
92. CE Models “Door Open” Indicator

Note: All voltage checks are referenced to the transformer common unless otherwise stated.



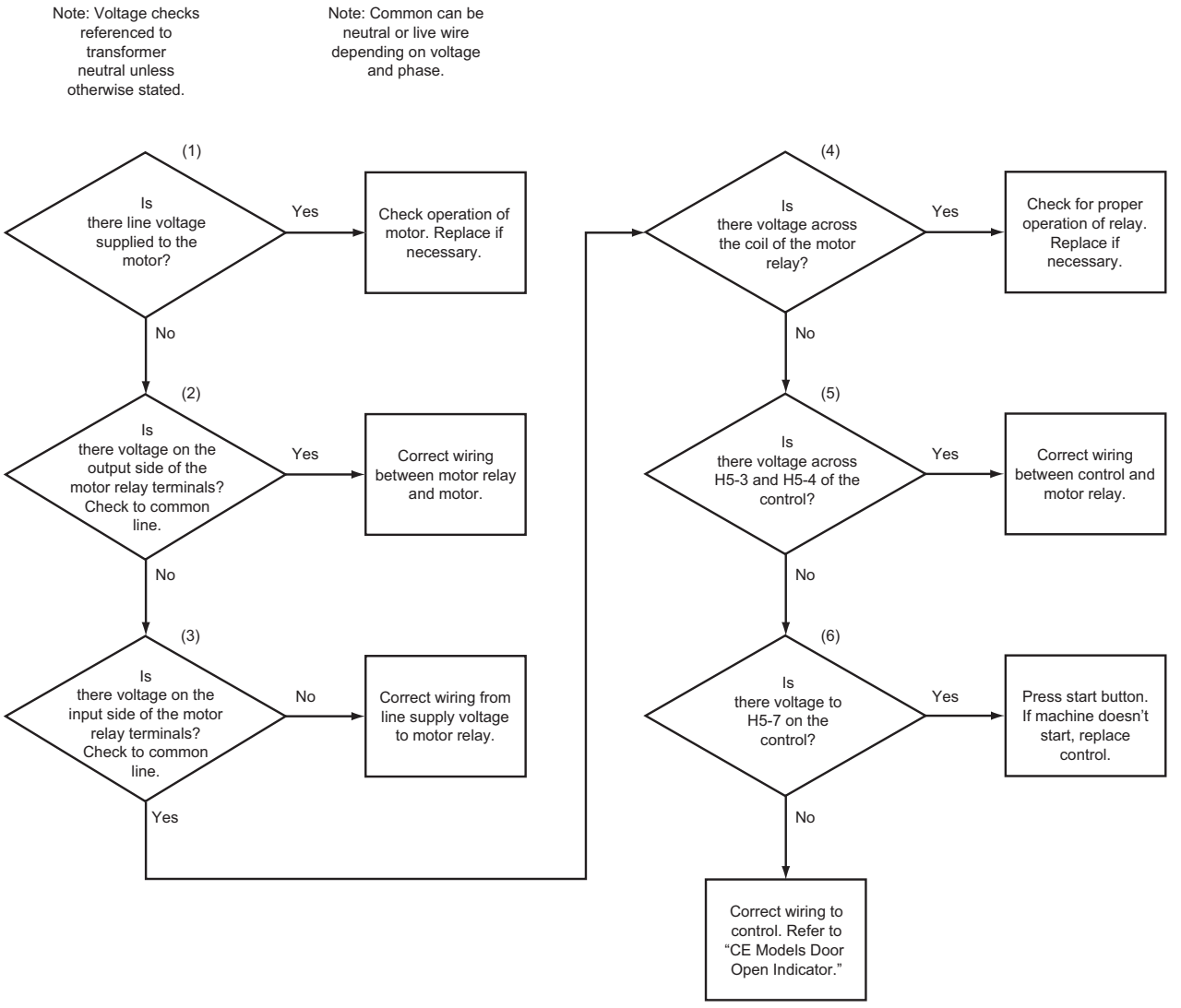
TMB2289S

CE Models “Door Open” Indicator

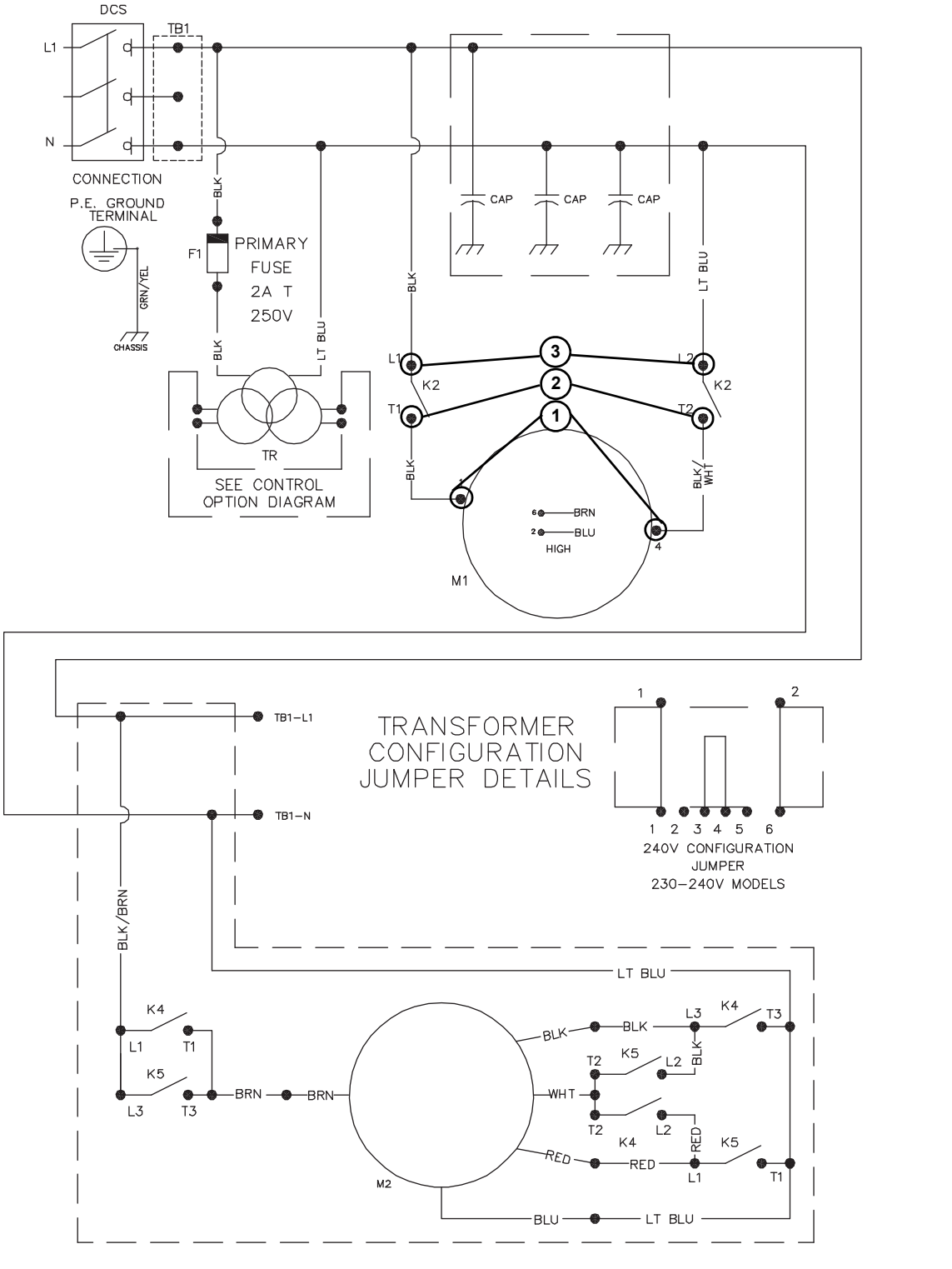


TMB2287S

93. CE Models No Start/Run

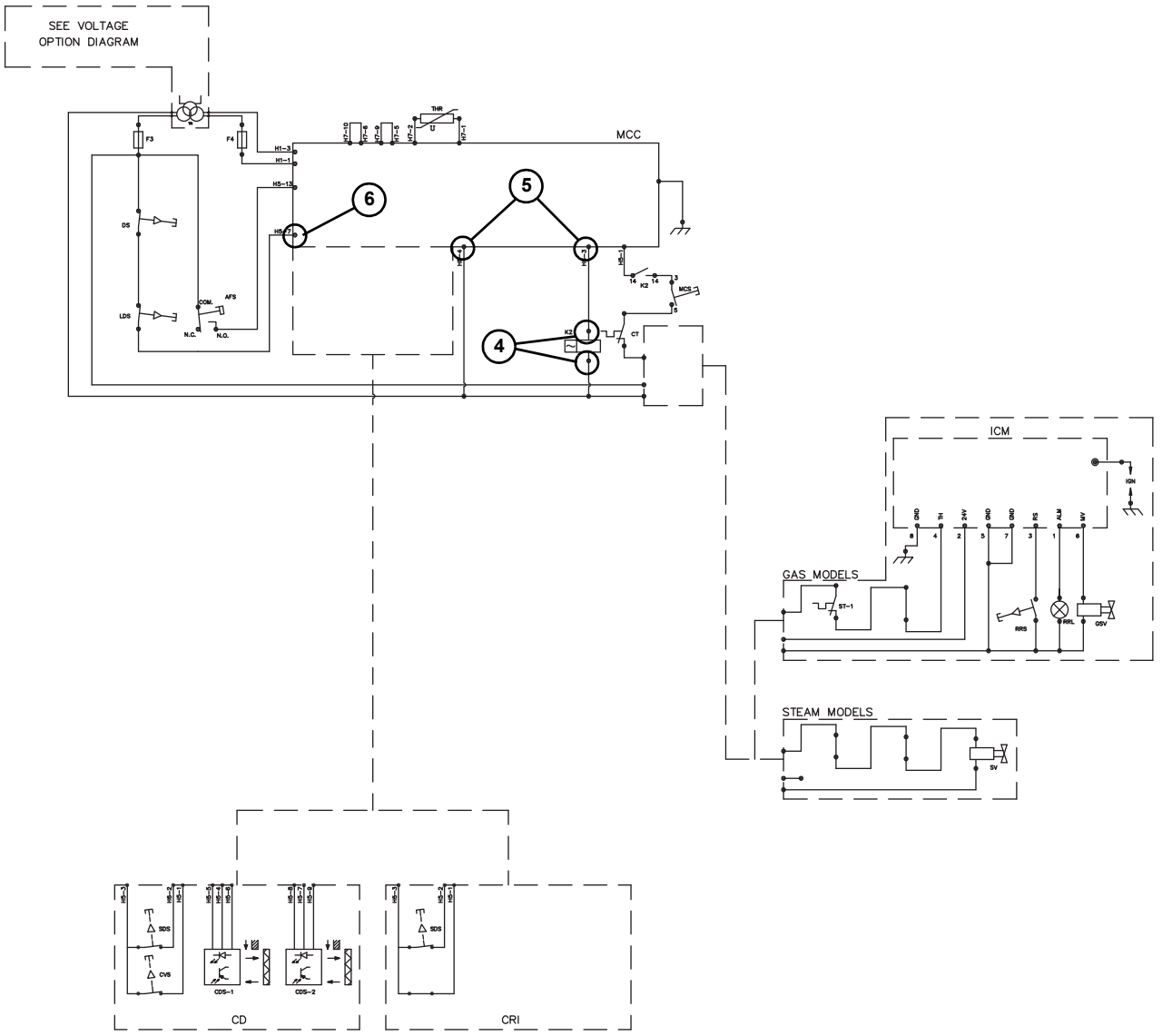


CE Models No Start/Run



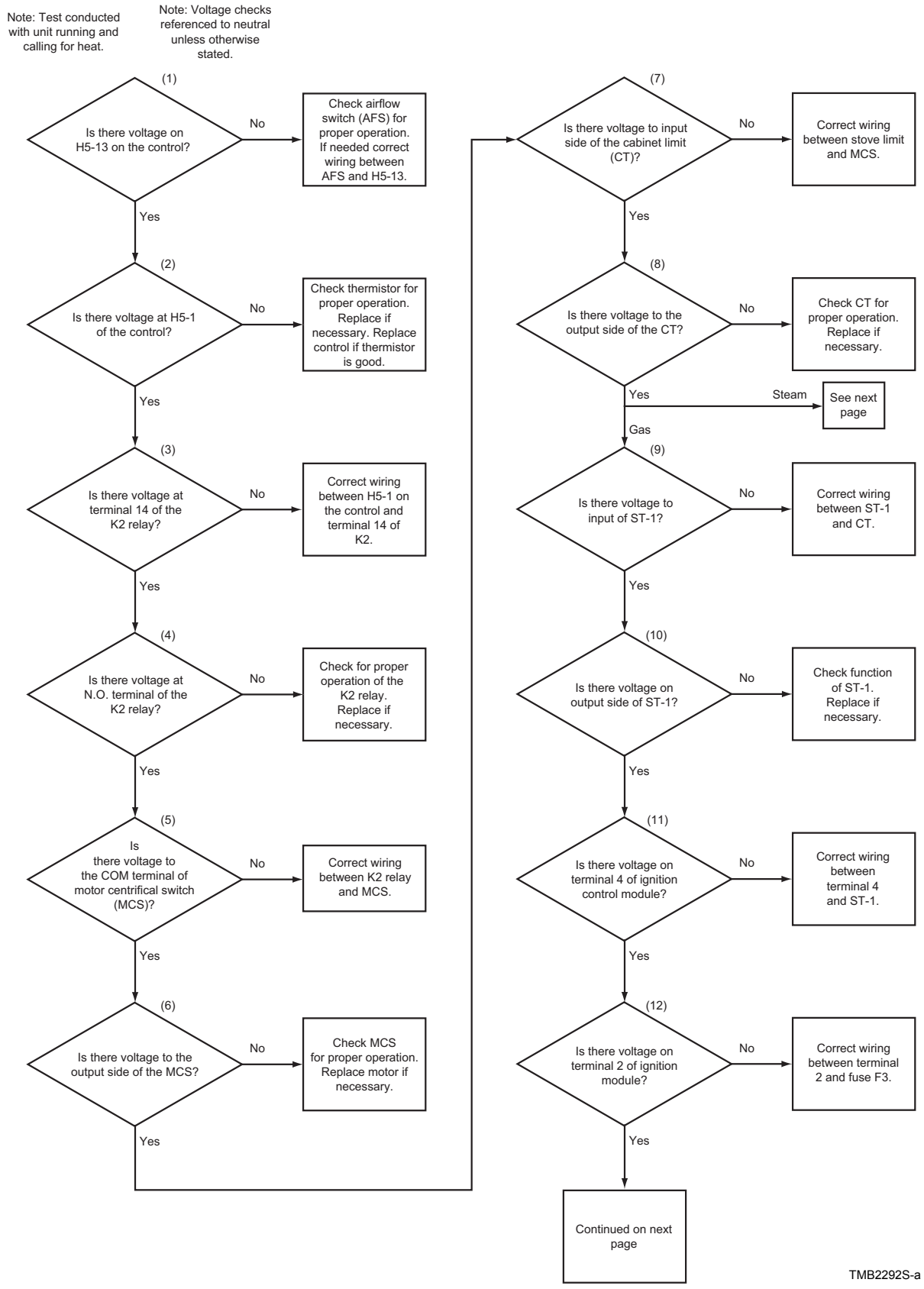
TMB2290S

CE Models No Start/Run

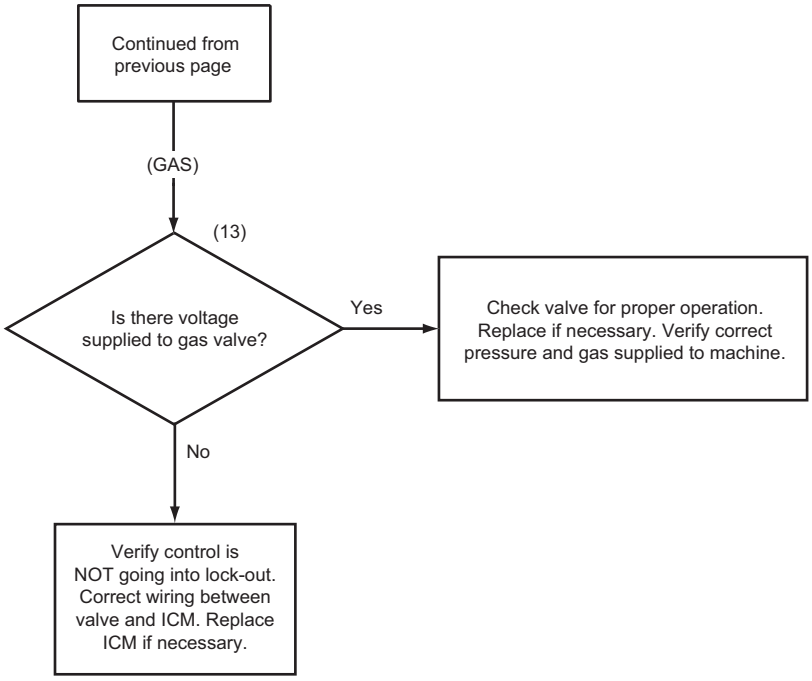


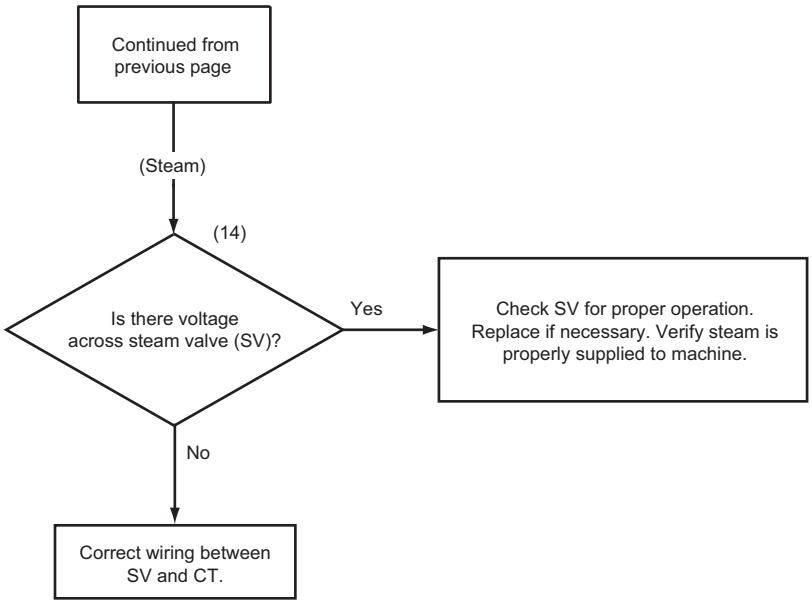
TMB2287S

94. CE Models Will Not Heat – Gas/Steam



94. CE Models Will Not Heat – Gas/Steam (continued)

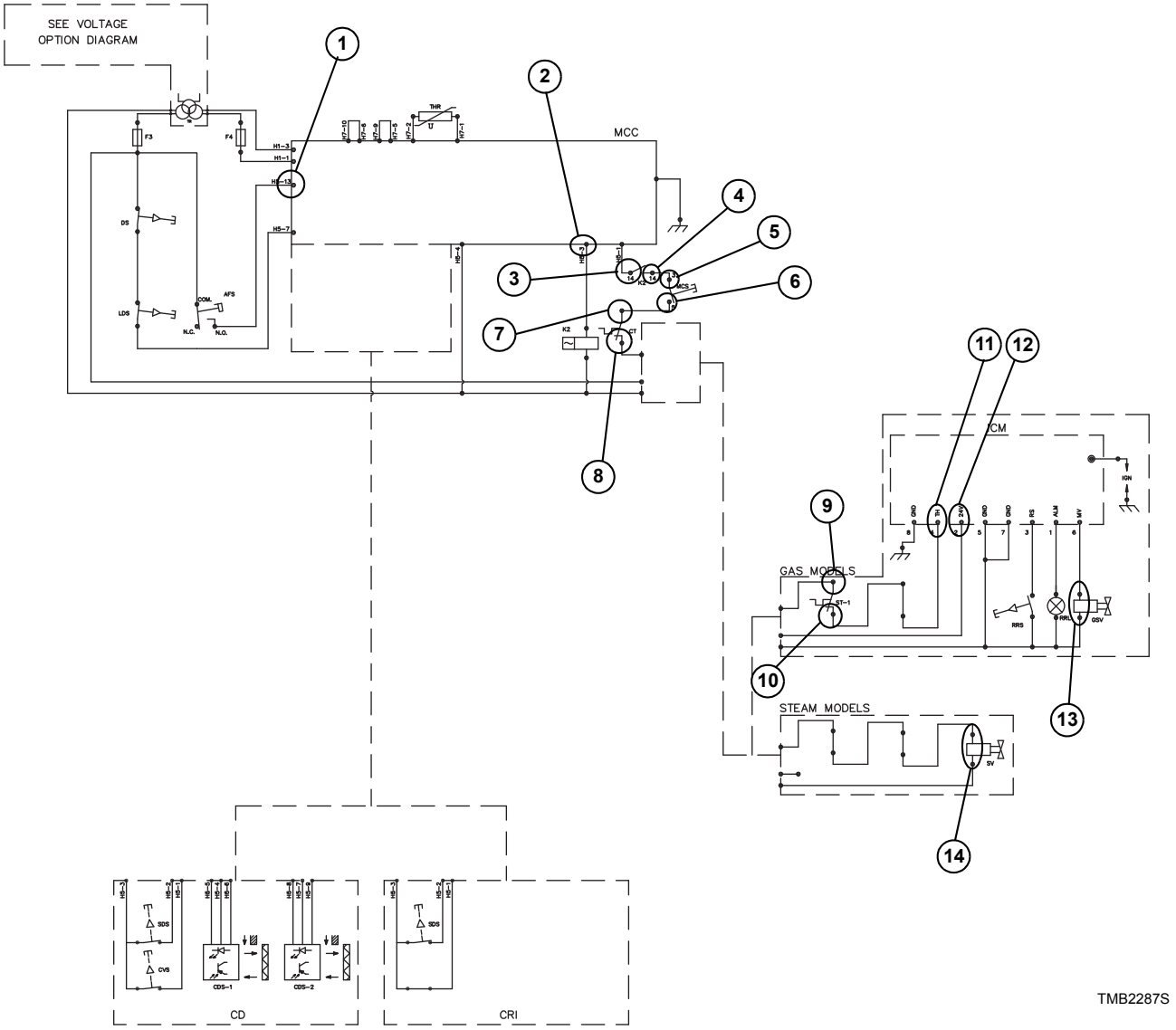




TMB2292S-b

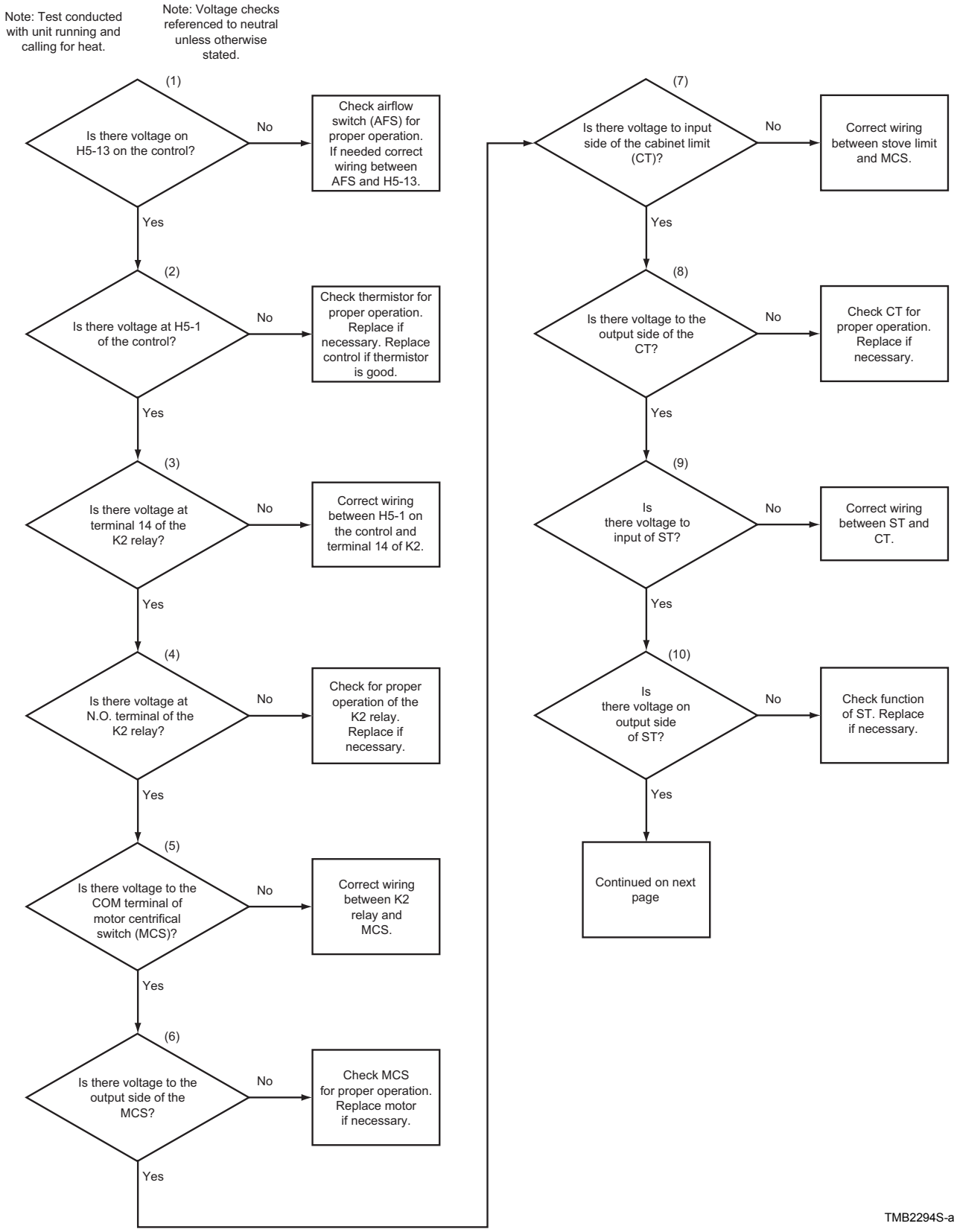
Please see following page for wiring diagram information.

CE Models Will Not Heat – Gas/Steam

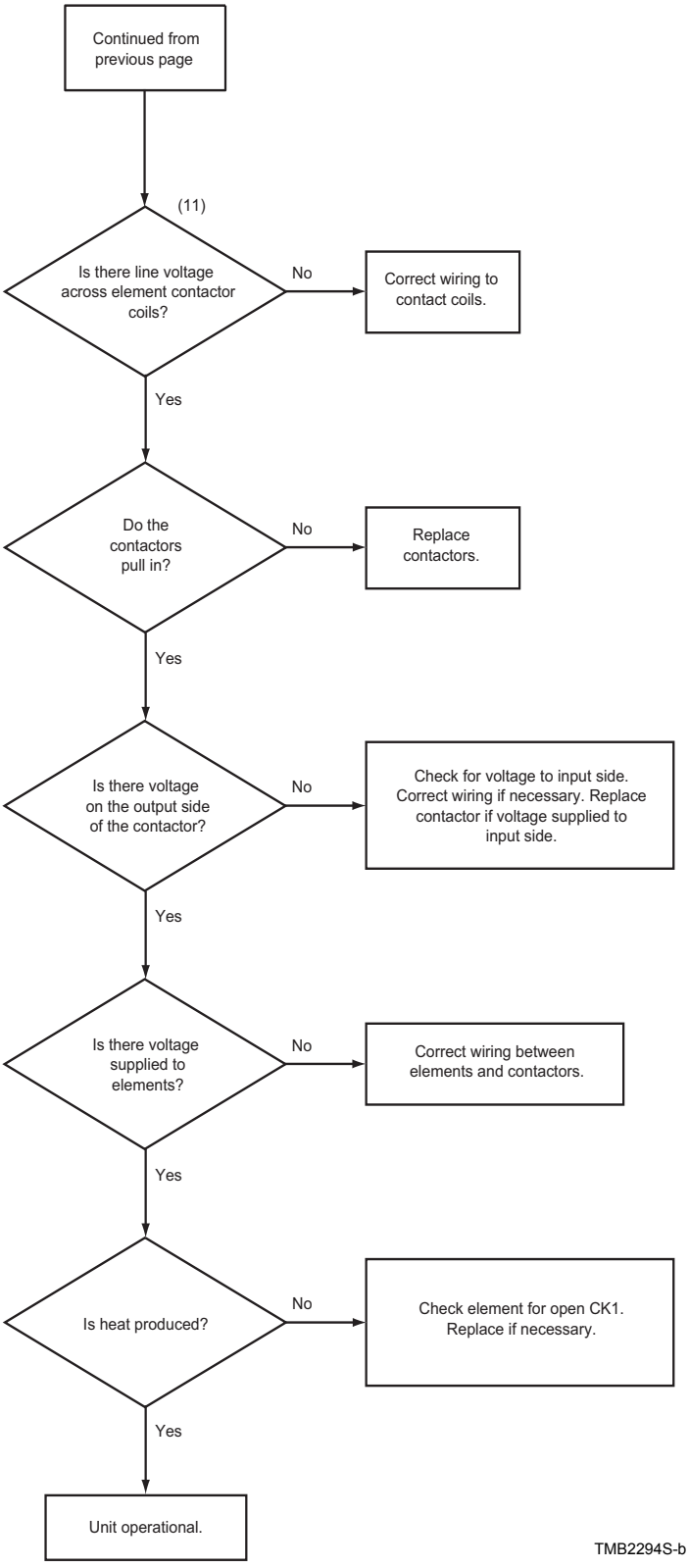


TMB2287S

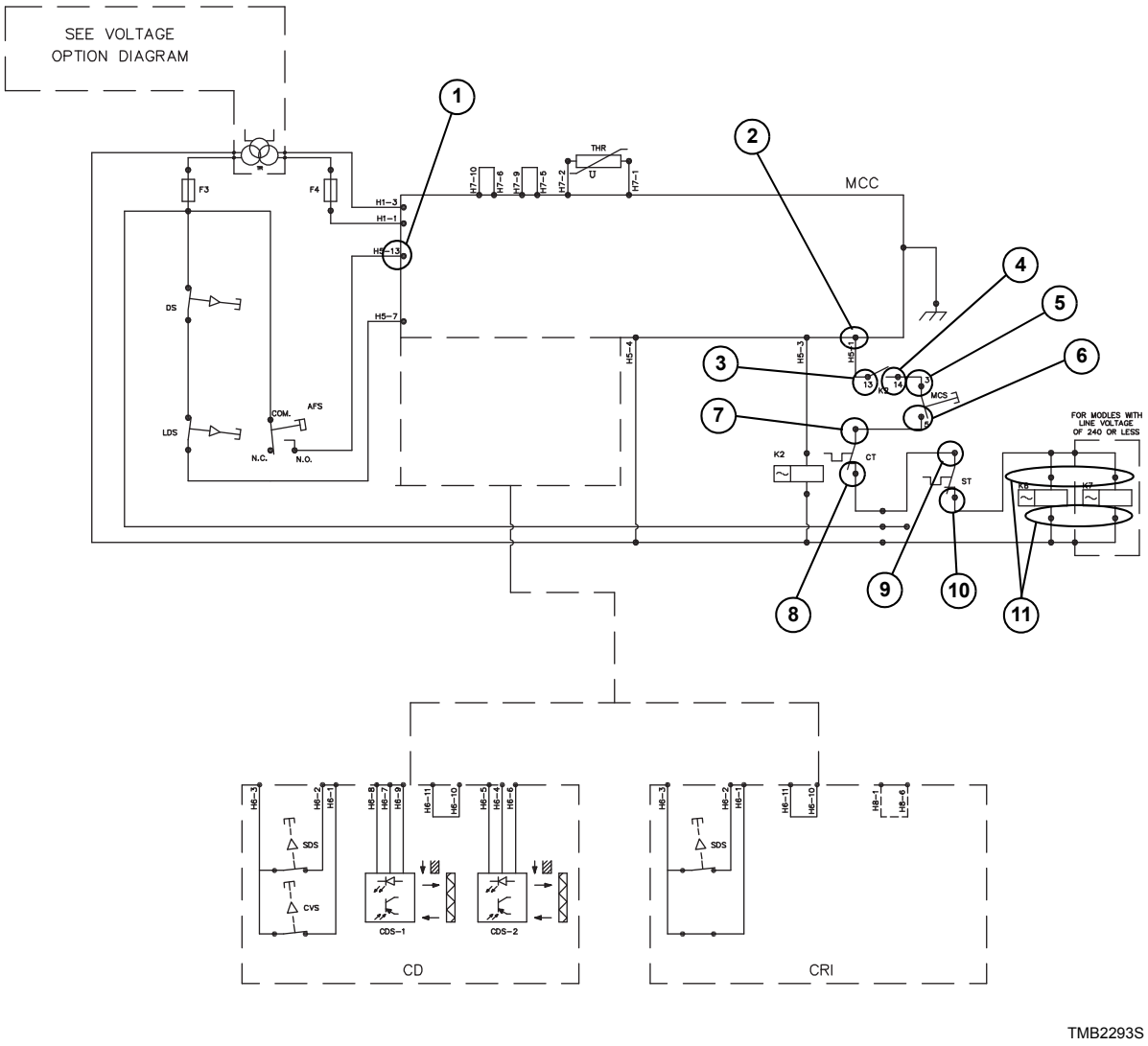
95. CE Models Will Not Heat – Electric



95. CE Models Will Not Heat – Electric (continued)



CE Models Will Not Heat – Electric



TMB2293S

Section 11
LED OPL and UniLinc Troubleshooting
Models with EO, RE, RU and UO Control Suffixes

WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

NOTE: The UniLinc's Inputs and Outputs Menu can be used to check the current status of inputs as well as control the state of any output.

Both UniLinc and LED OPL Controls contain a comprehensive test cycle that can be used to verify machine configuration and functionality.

Diagnostic LEDs

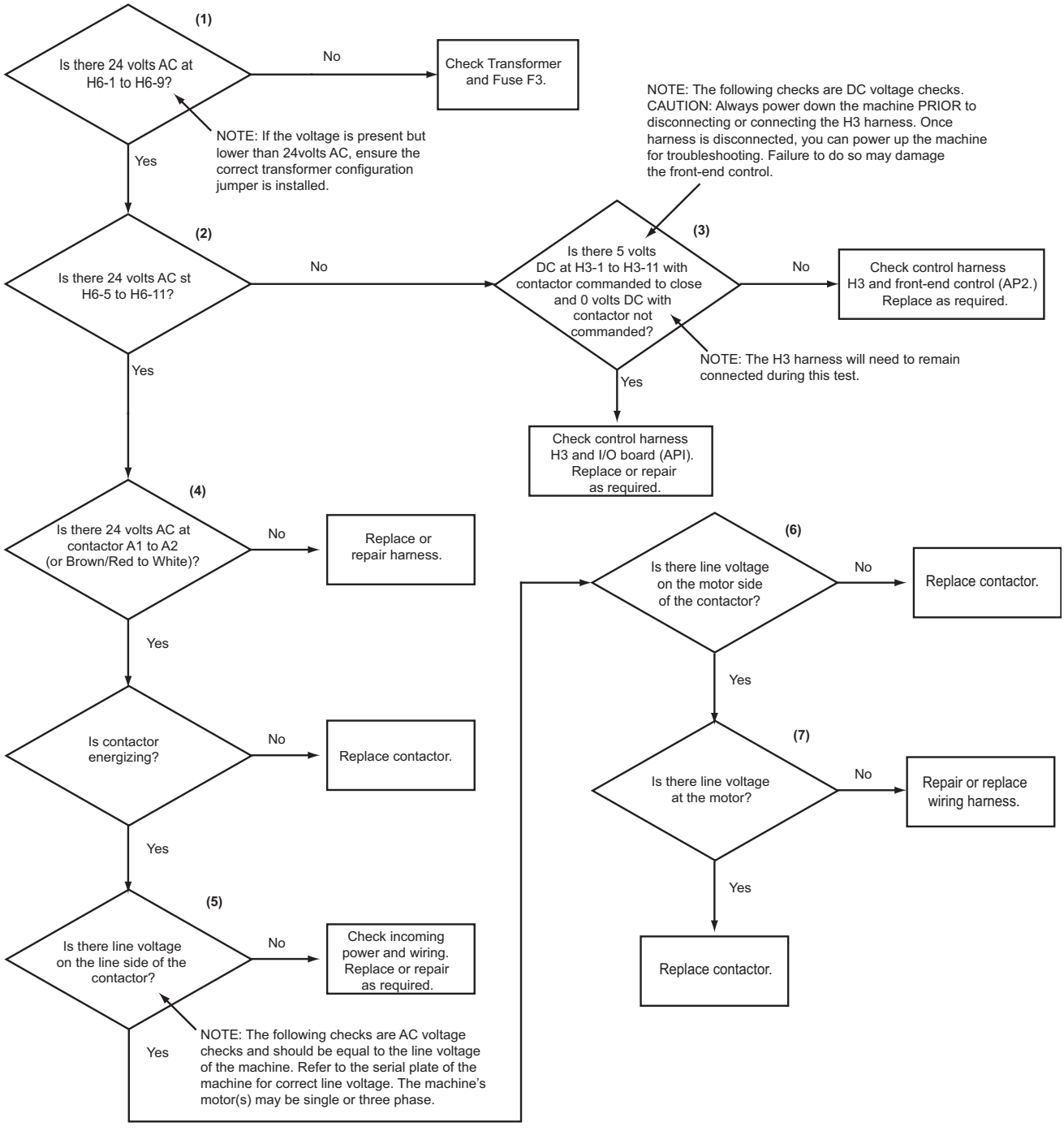
Before troubleshooting the following errors, verify that the front-end control is trying to turn the output on by checking for the corresponding red diagnostic LED on the Input/Output (I/O) Board. Diagnostic LEDs can be found for the following outputs:

- Forward Motor
- Reverse Motor
- Fan Motor
- Damper Motor
- External Alarm
- Heater

In addition, the I/O Board has a LED labeled "+5VDC" that indicates whether the I/O Board is powered. When lit, the I/O Board and front-end control should both be powered. If the LED does not light and both are powered, verify that the loading door and lint door are closed, and, if checking heater-related errors, that the heat interlock chain is closed (AirFlow Switch, Fan Contactor, Fan Centrifugal Switch, Cabinet Limit and Stove Limit). If the LED still does not light, check the connection between the front-end control and the I/O Board. If they are connected properly and voltage is present at the pin corresponding to the error with the ground pin on the same connector, the I/O Board must be replaced. If voltage is not present, the front-end control must be replaced.

96. No Fan Motor Rotation

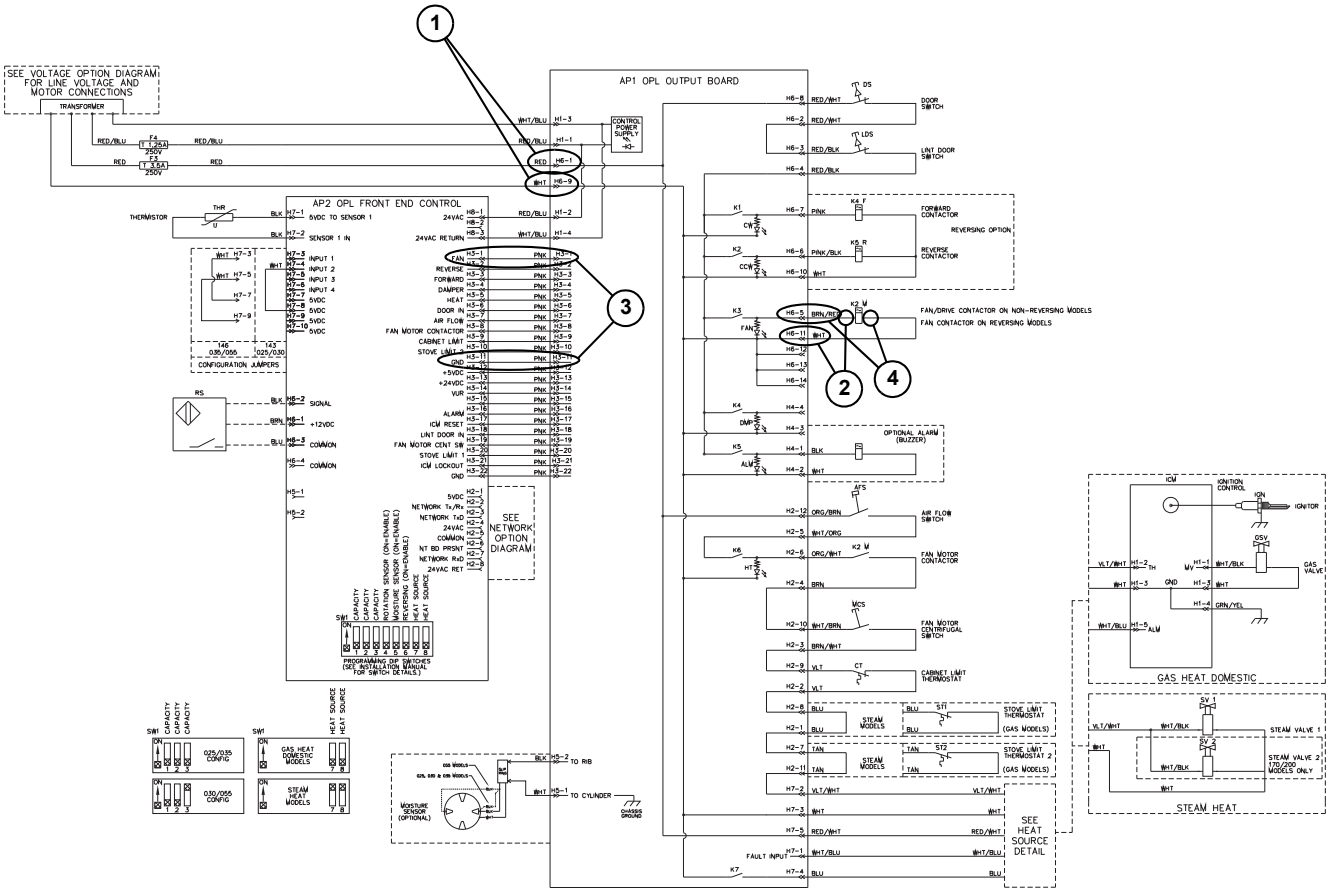
NOTE: All mechanical checks should be performed prior to starting the electrical checks. Ensure the belt(s), basket, idler and pulleys are rotating freely.



TMB2374S

No Fan Motor Rotation (Drawing 1 of 2)

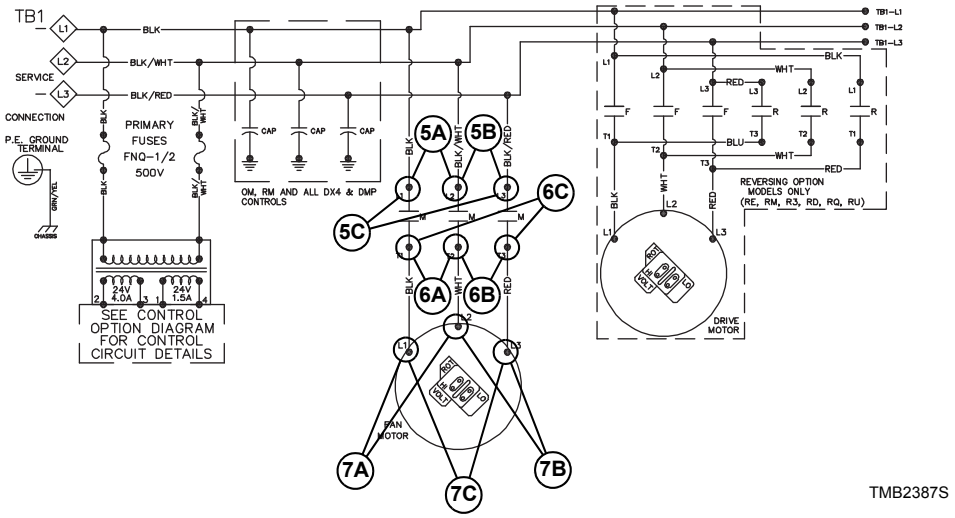
NOTE: The door and lint door must be closed for voltage to be present at the fan.



TMB2383S

No Fan Motor Rotation (Drawing 2 of 2)

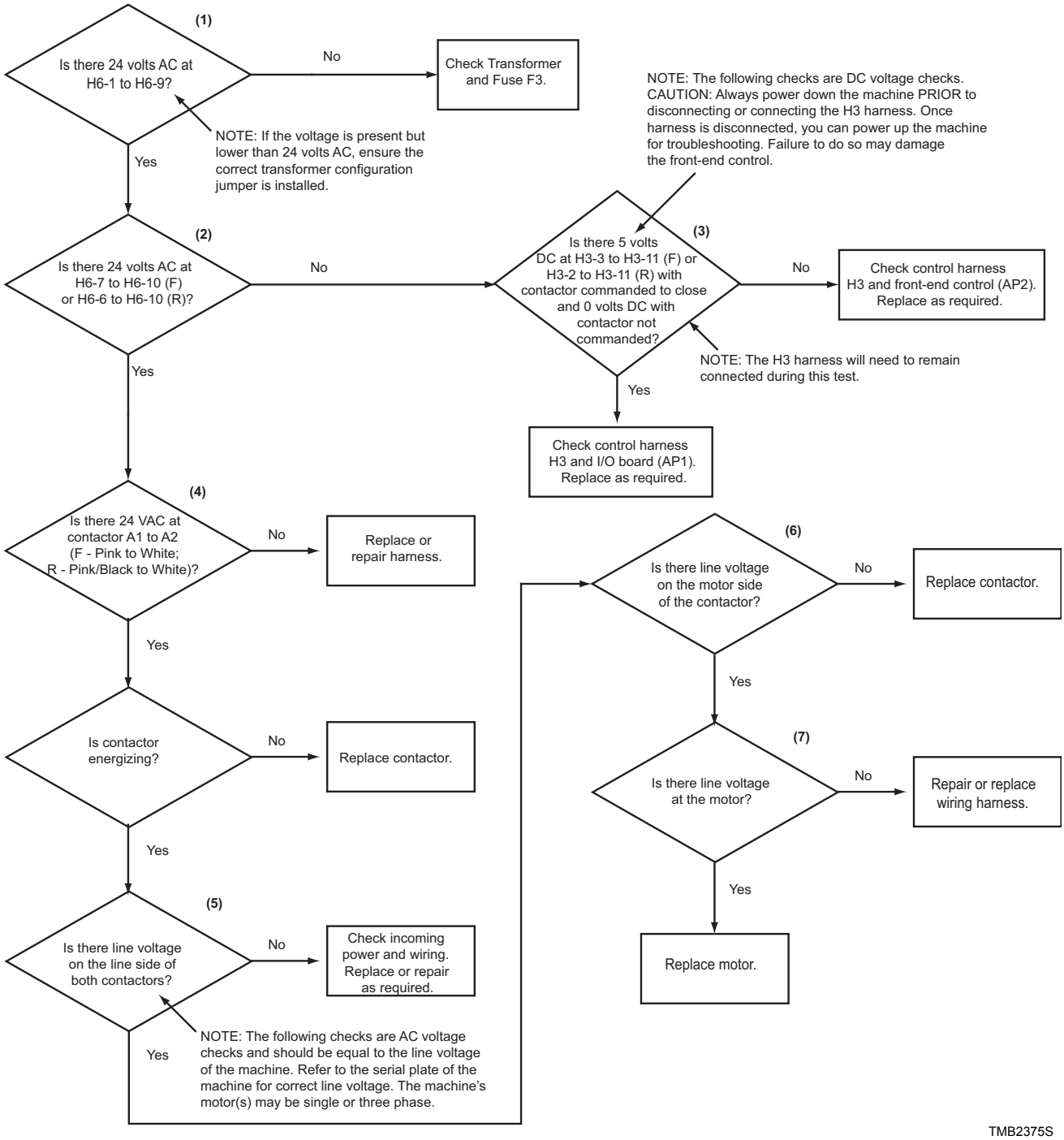
NOTE: The door and lint door must be closed for voltage to be present at the fan.



97. No Drive Motor Rotation

NOTE: This is for machines with the reversing option only. Each step has a F (Forward) or R (Reverse) representing the direction of rotation. Ensure the cycle is programmed for either reversing or non-reversing.

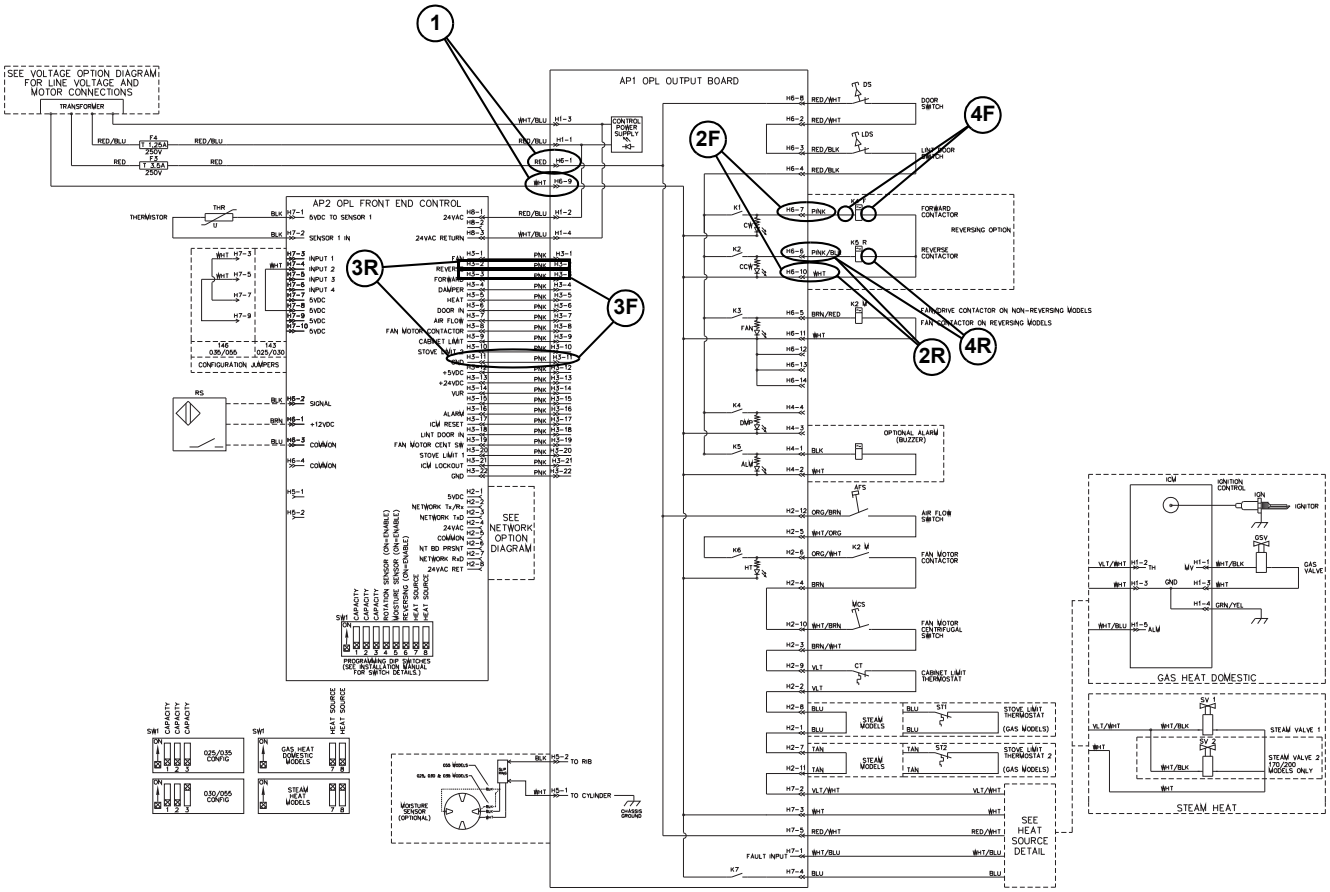
NOTE: All mechanical checks should be performed prior to starting the electrical checks. Ensure the belt(s), basket, idler and pulleys are rotating freely.



TMB2375S

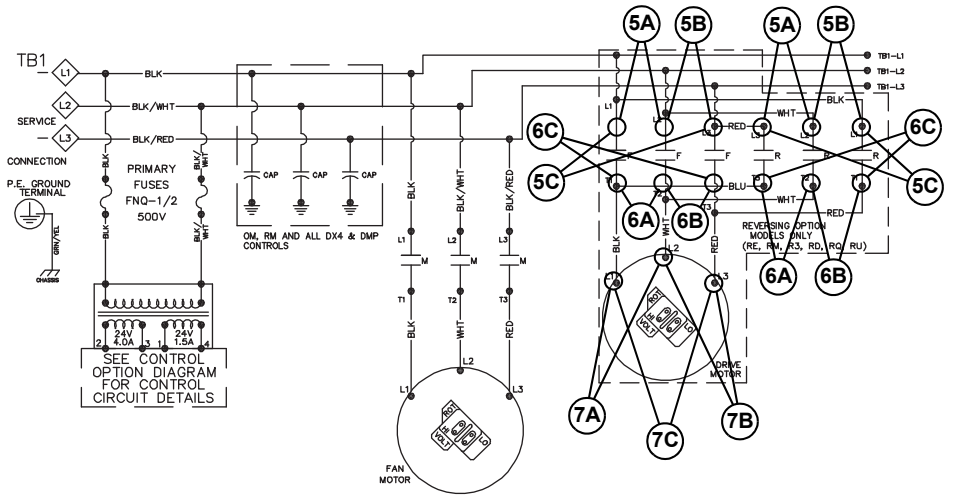
No Drive Motor Rotation (Drawing 1 of 2)

NOTE: The door and lint door must be closed for voltage to be present at the forward and reverse outputs.



No Drive Motor Rotation (Drawing 2 of 2)

NOTE: The door and lint door must be closed for voltage to be present at the forward and reverse outputs.

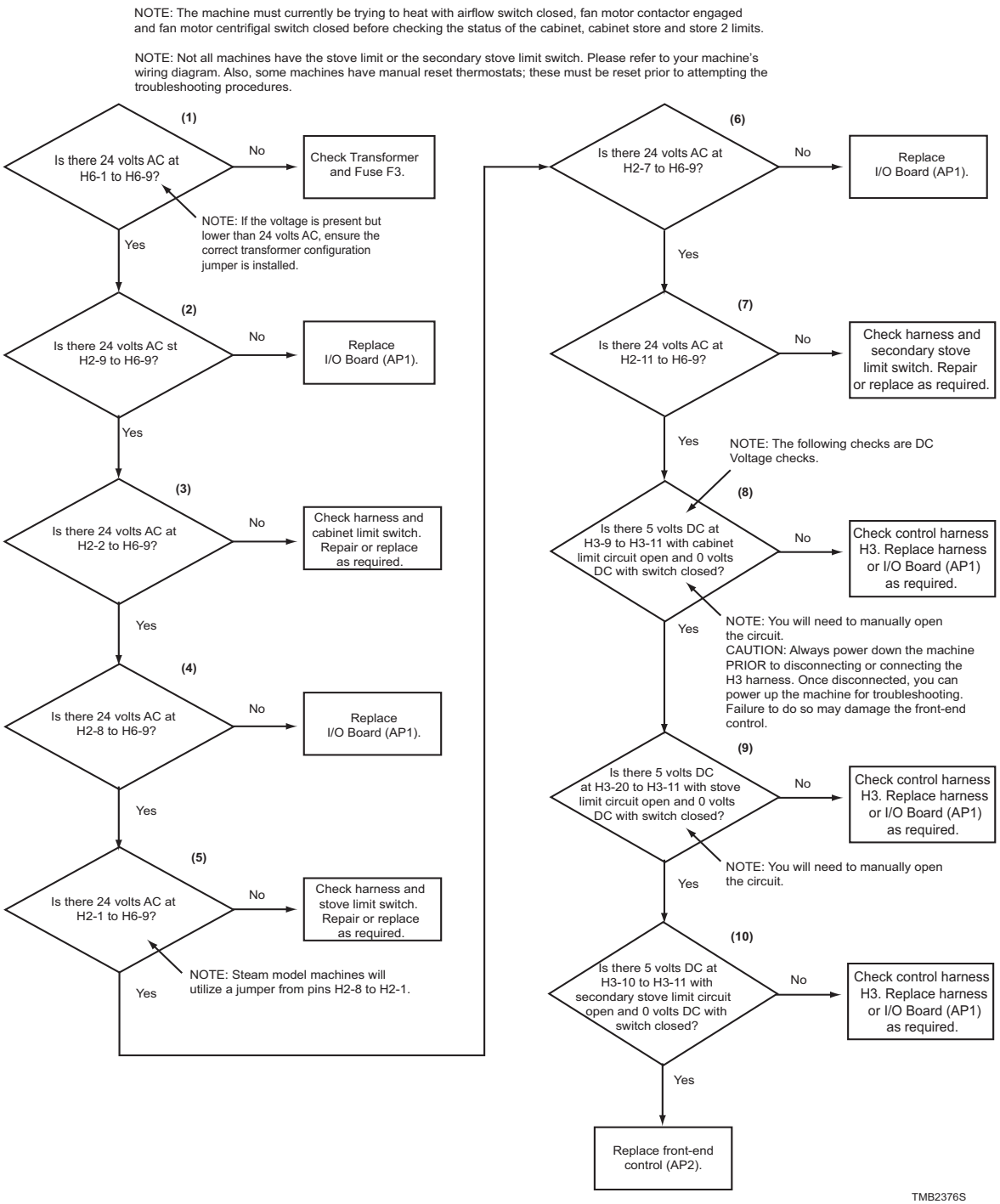


TMB2387S

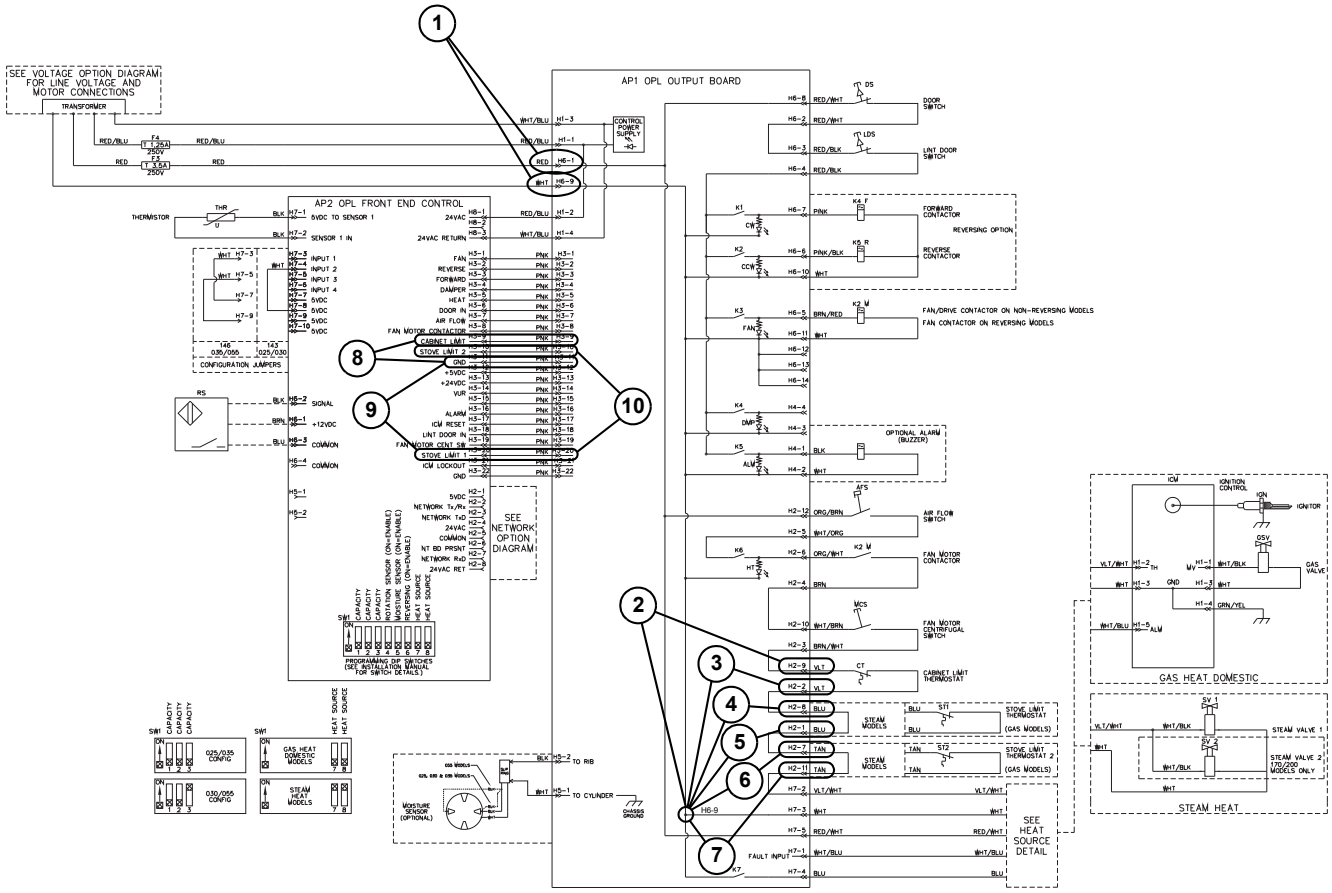
98. Stove and Cabinet Limit Errors

UniLinc Error Display: Stove and Cabinet Limit Errors
LED OPL Error Display: E Cab
E SL
E SL2

NOTE: The machine must currently be trying to heat with airflow switch closed, fan motor contactor engaged and fan motor centrifugal switch closed before checking the status of the cabinet, stove and stove 2 limits.



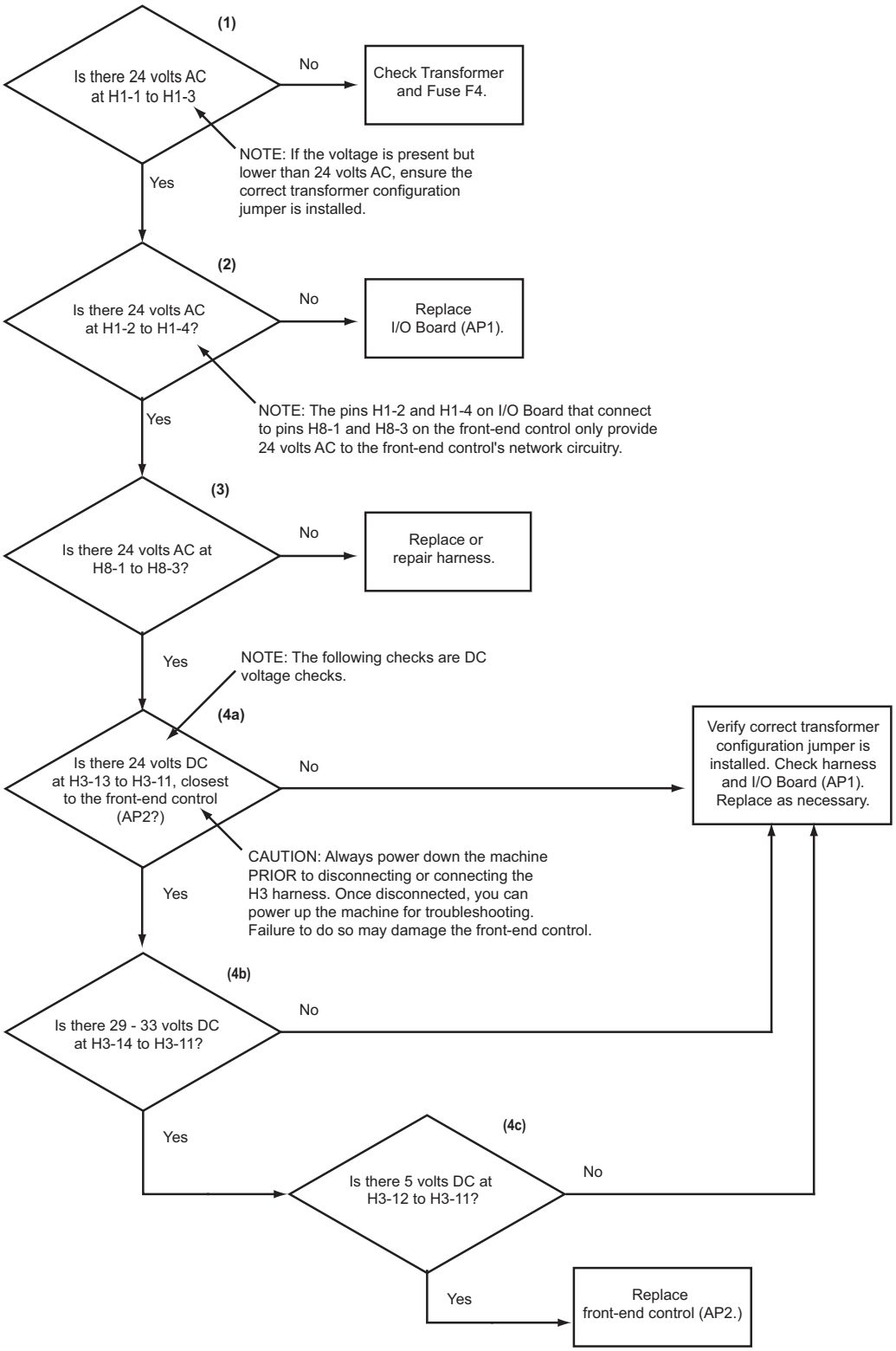
Stove Cabinet Limit Errors



TMB2383S

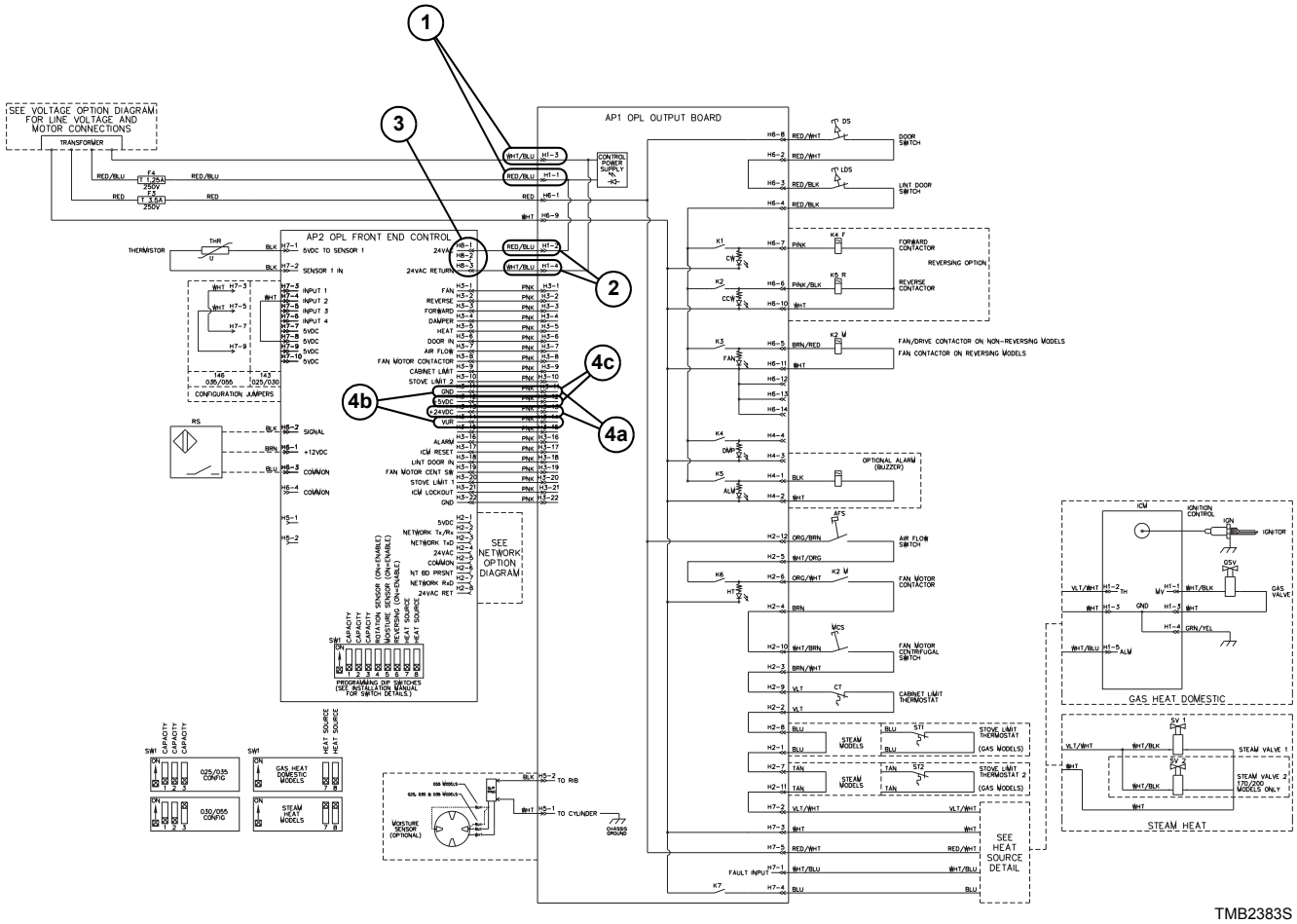
99. No Display

NOTE: On the UniLinc LCD-equipped machines, verify the contrast is set correctly prior to troubleshooting.



TMB2377S

No Display



TMB2383S

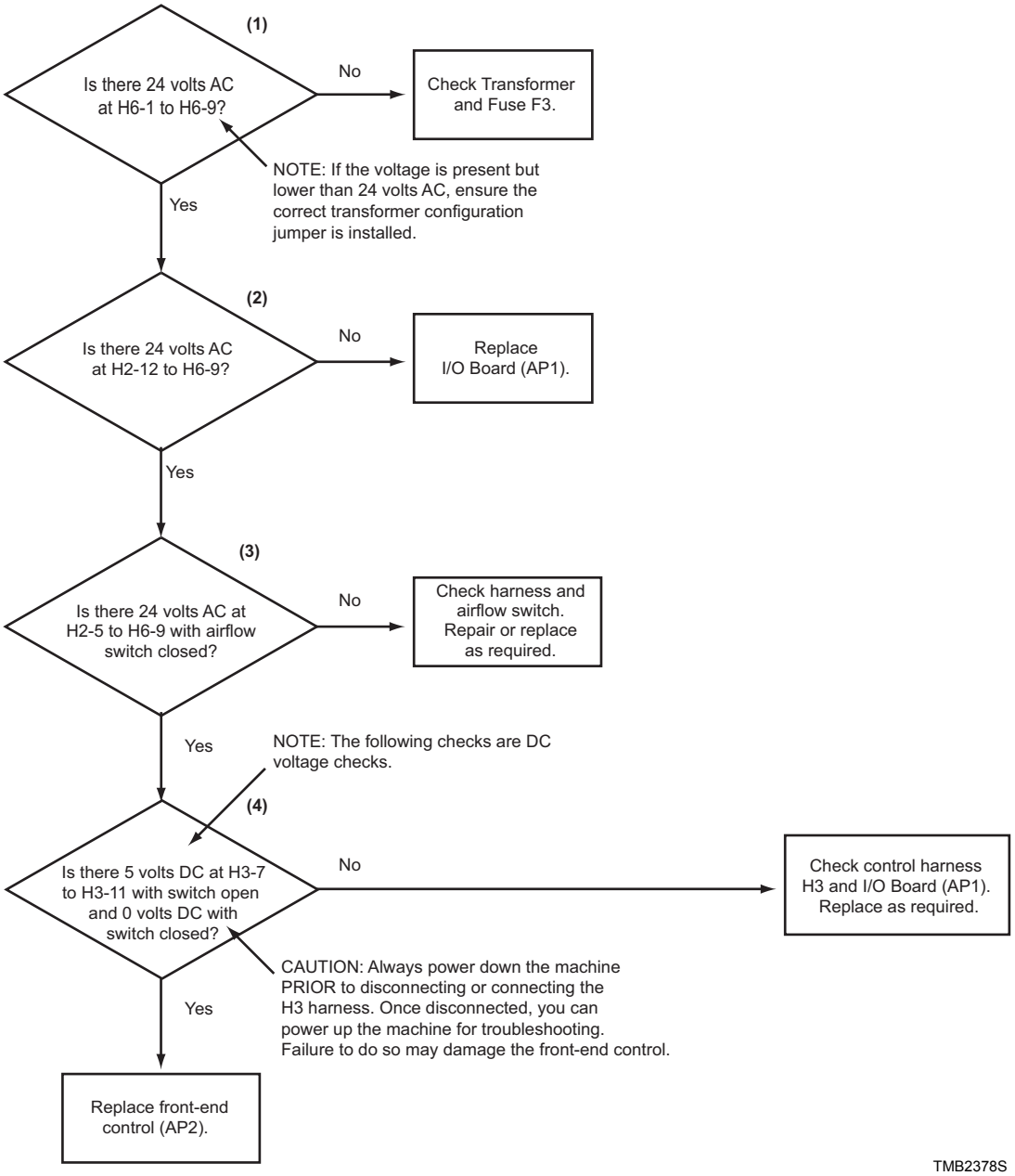
100.Airflow Errors

UniLinc Error Display: **Airflow Switch Sensed Closed While Not In Run Mode**
Airflow Switch Does Not Close After Cycle Started
Airflow Switch Bounces During A Running Cycle

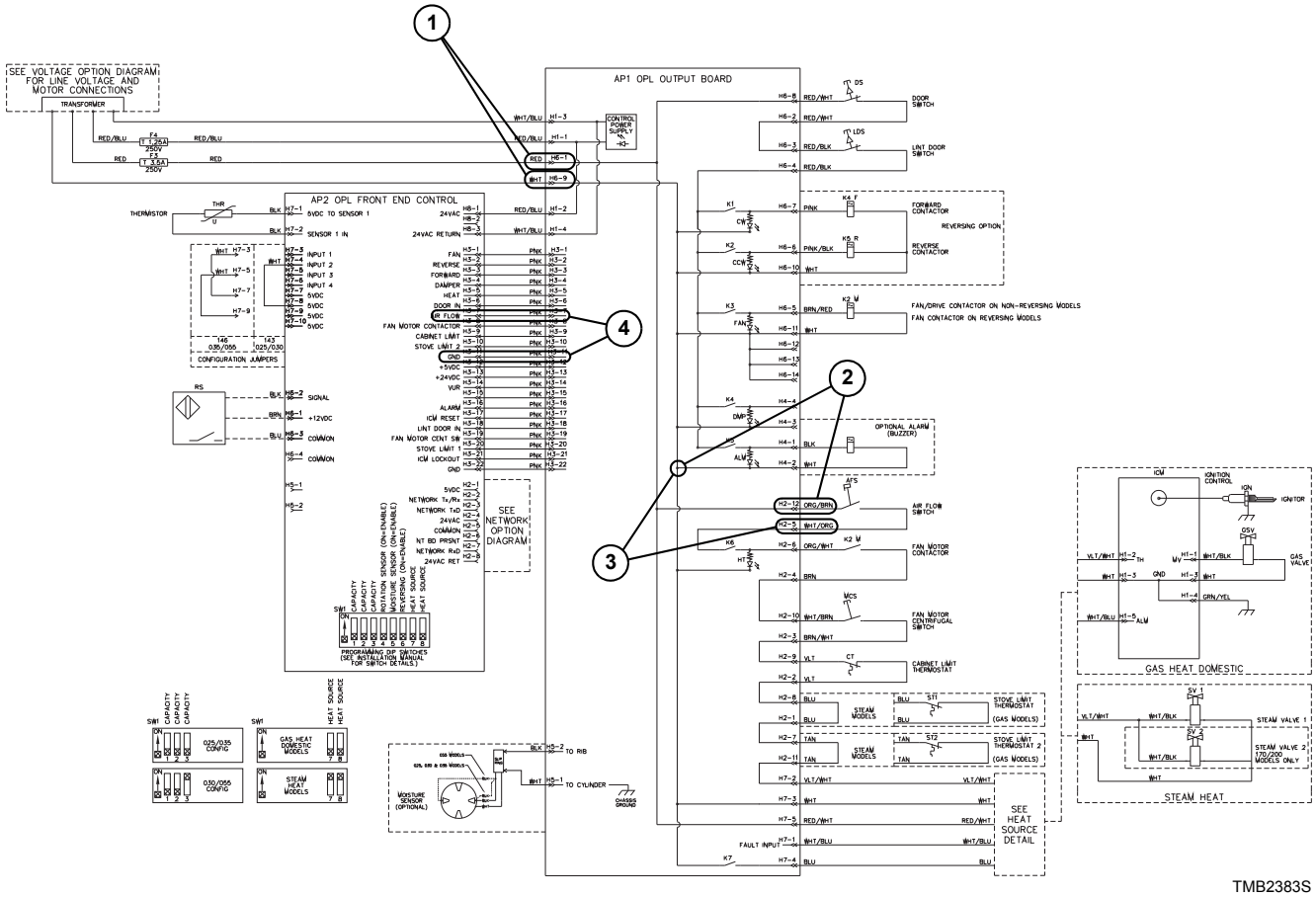
LED OPL Error Display: **E AF1**
E AF2
E AF

NOTE: Check airflow switch for proper mechanical operation; ensure there is no lint or other items interfering with the proper operation.

NOTE: The airflow switch is required to be open prior to the beginning of the cycle. The switch is also required to close within the cycle.



Airflow Errors

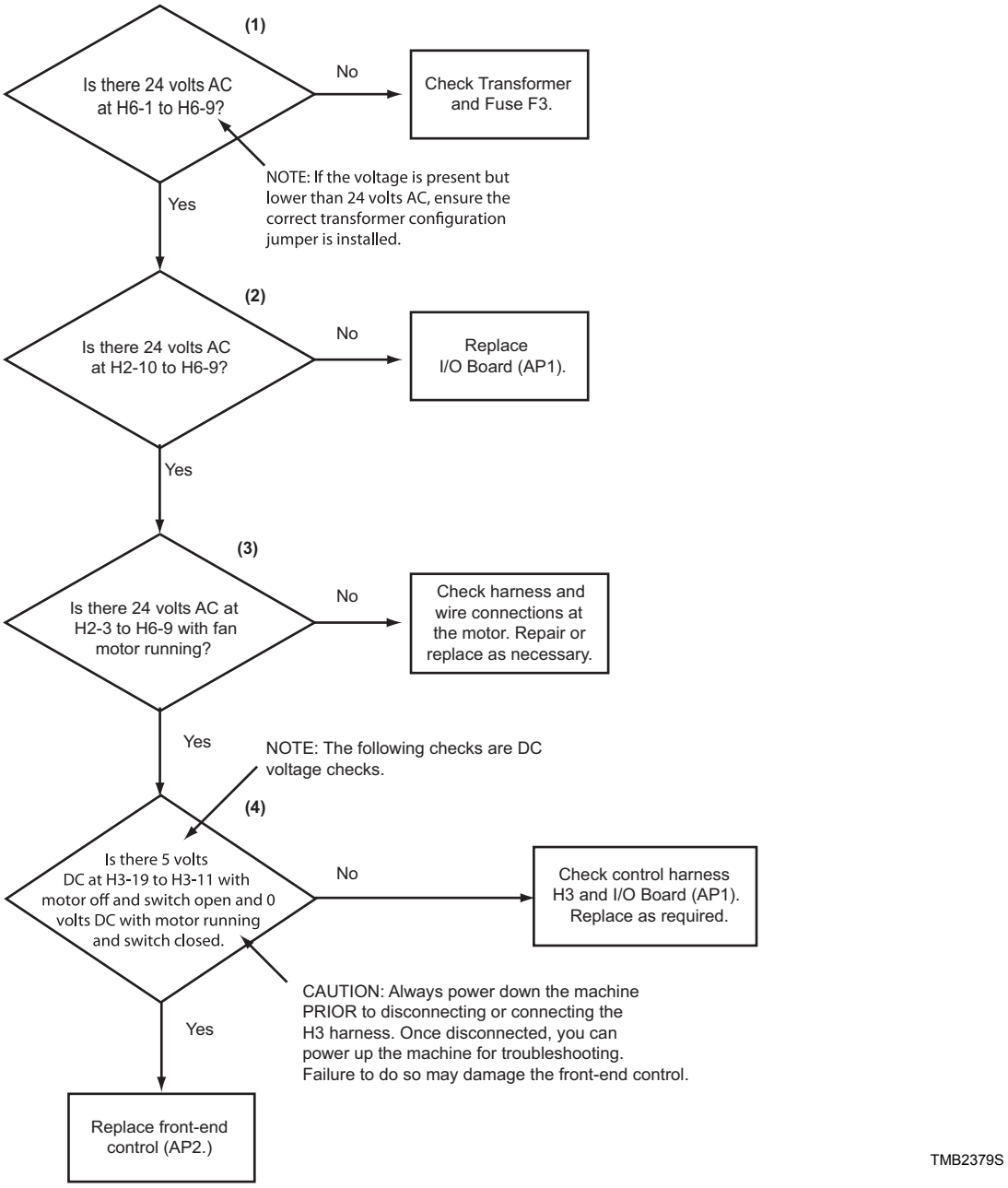


TMB2383S

101.Fan Motor Centrifugal Switch Error

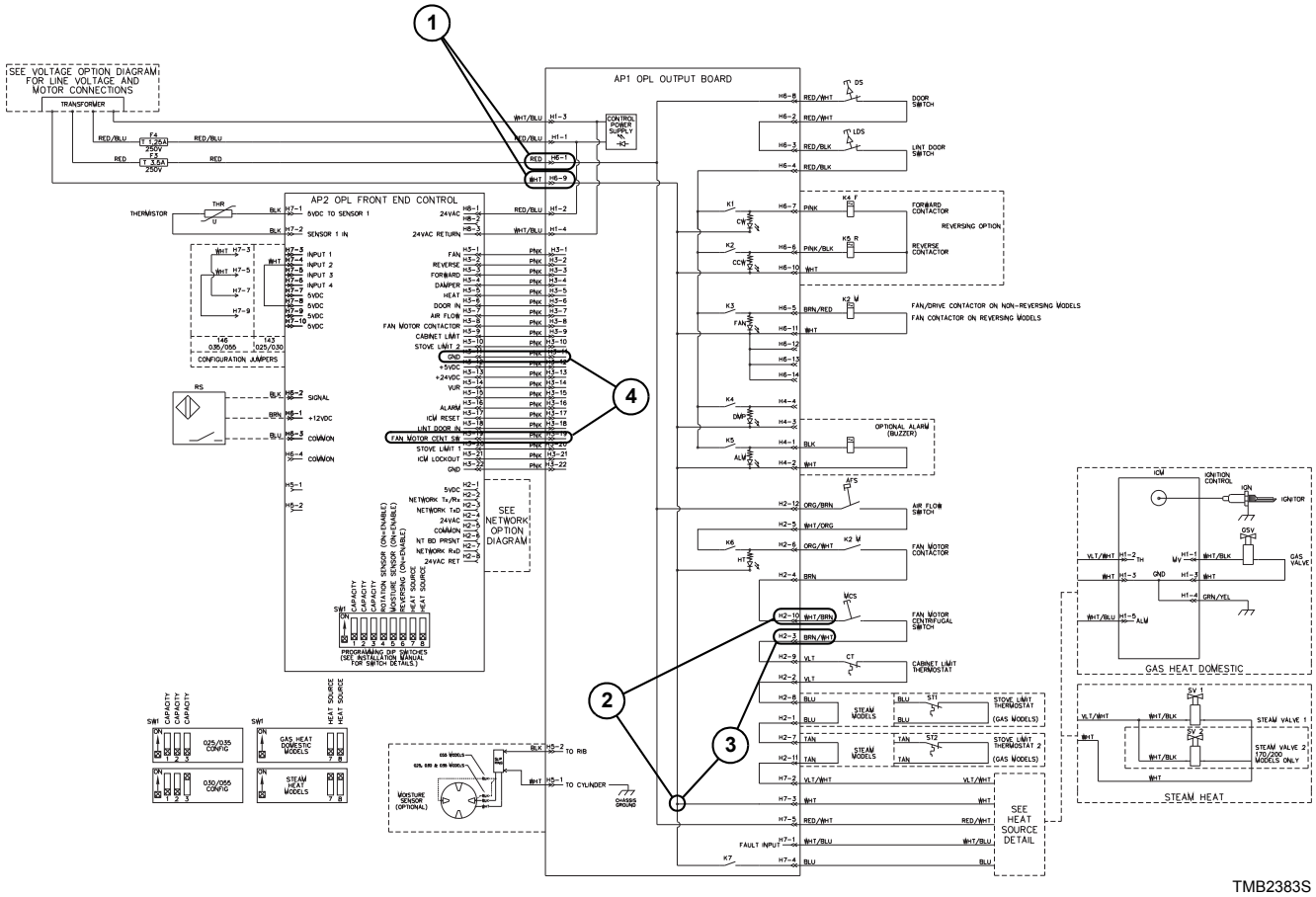
UniLinc Error Display: Fan Motor Centrifugal Switch Error
LED OPL Error Display: E FnCs

NOTE: Before performing these checks, the airflow switch must be pulled in, the fan motor contactor must be closed, and the motor must be running.



TMB2379S

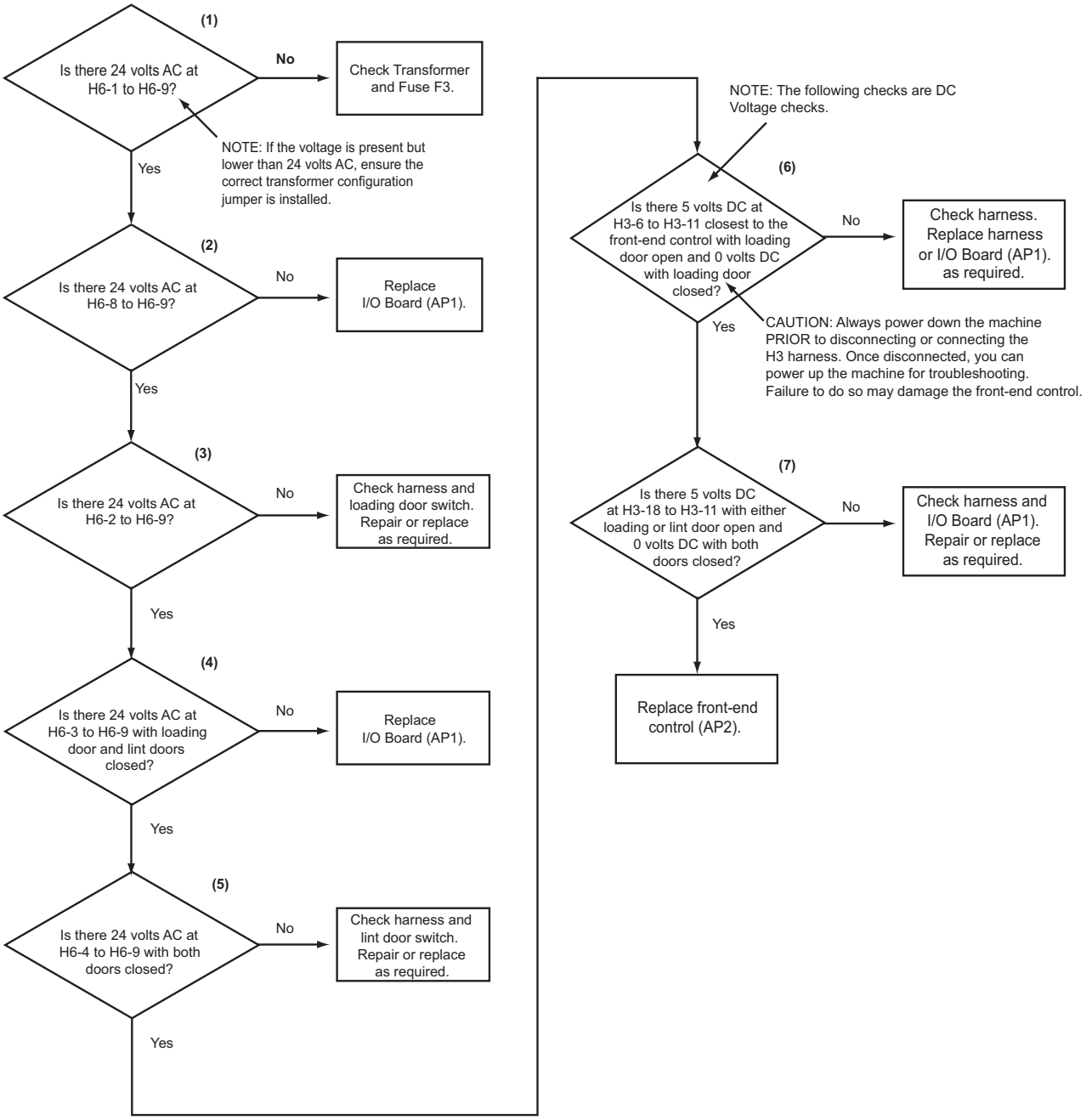
Fan Motor Centrifugal Switch Error



TMB2383S

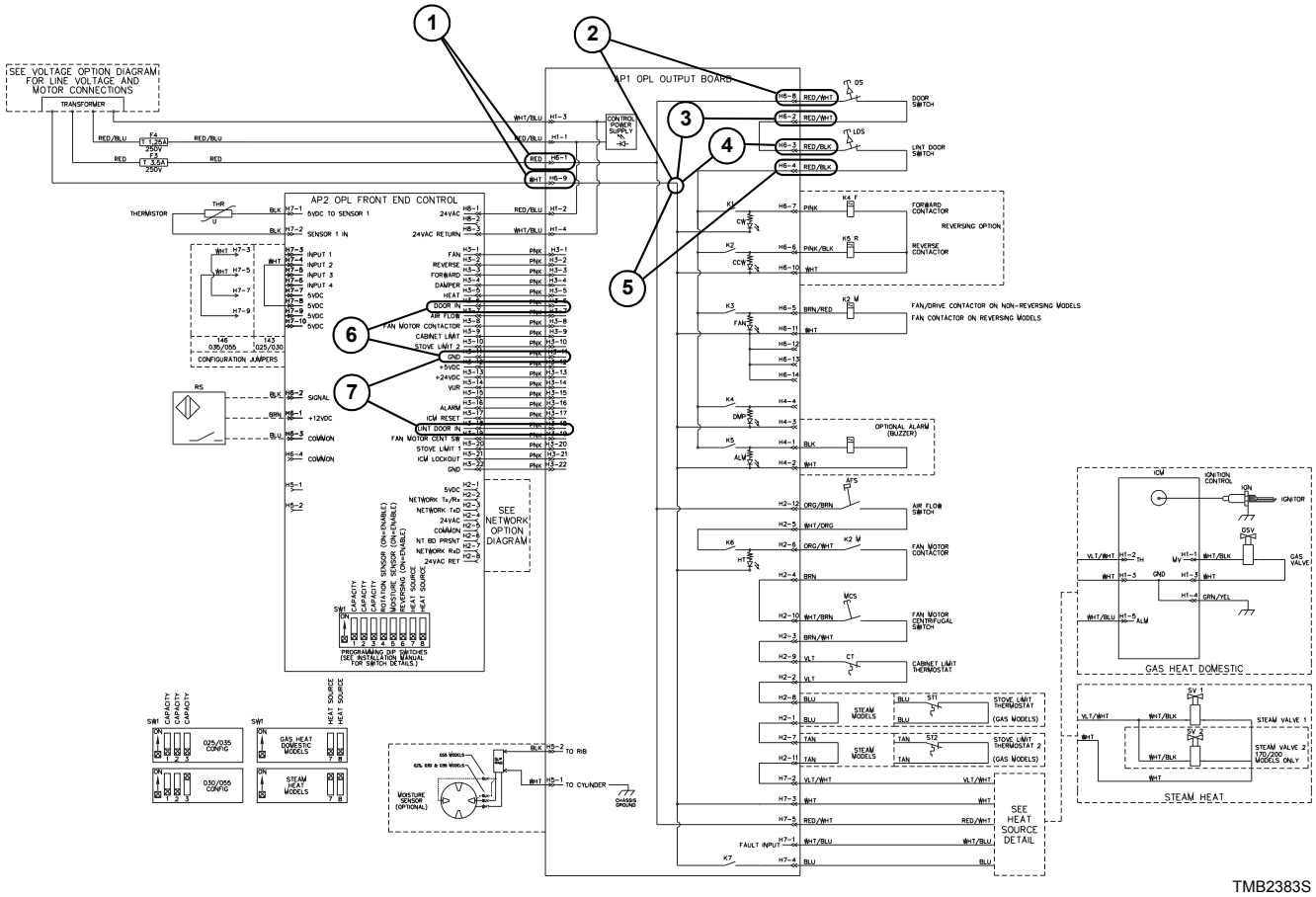
102.Close Door Indication

NOTE: Before proceeding, check the lint door, loading doors and switches for proper mechanical operation.



TMB2380S

Close Door Indication

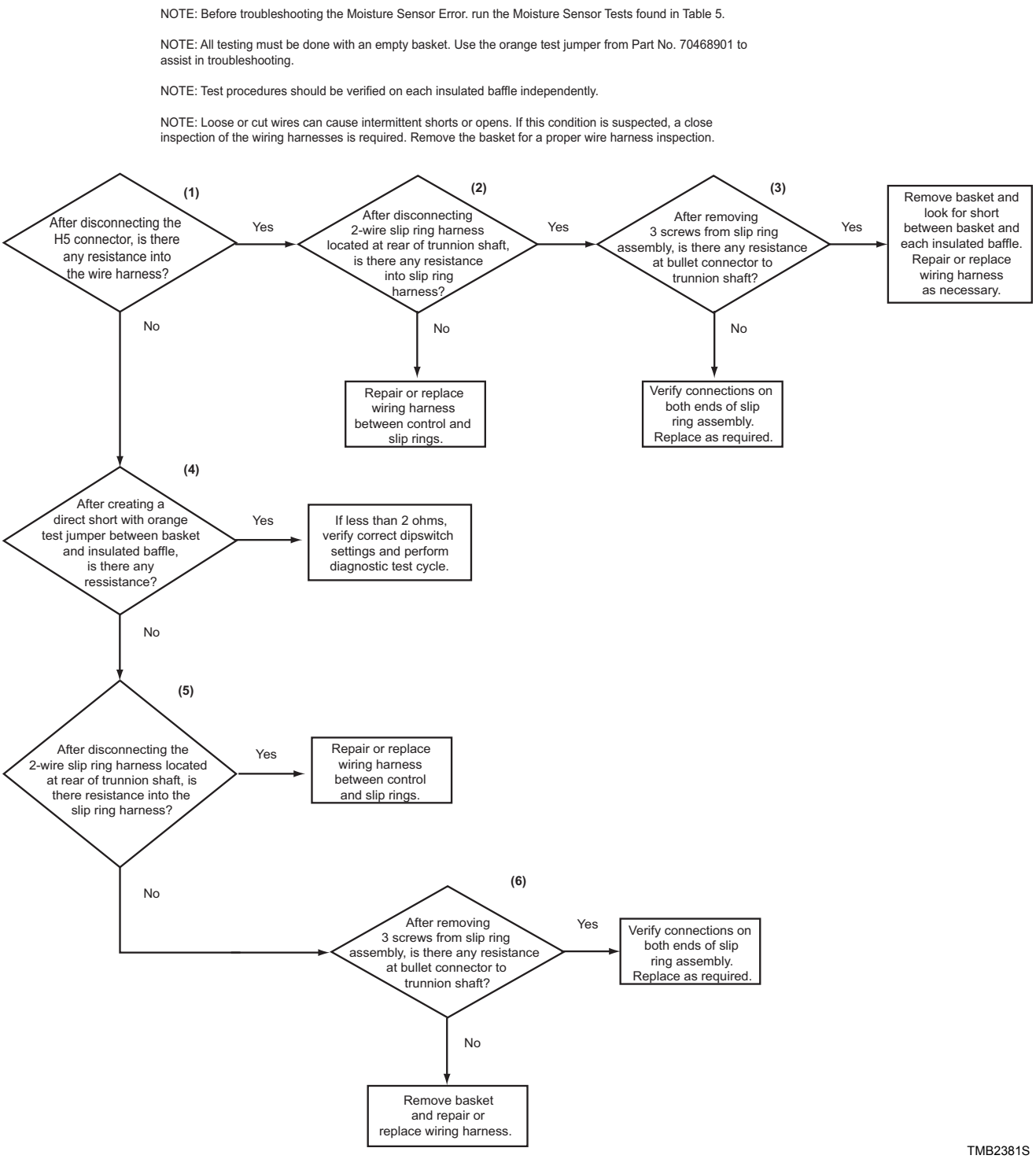


TMB2383S

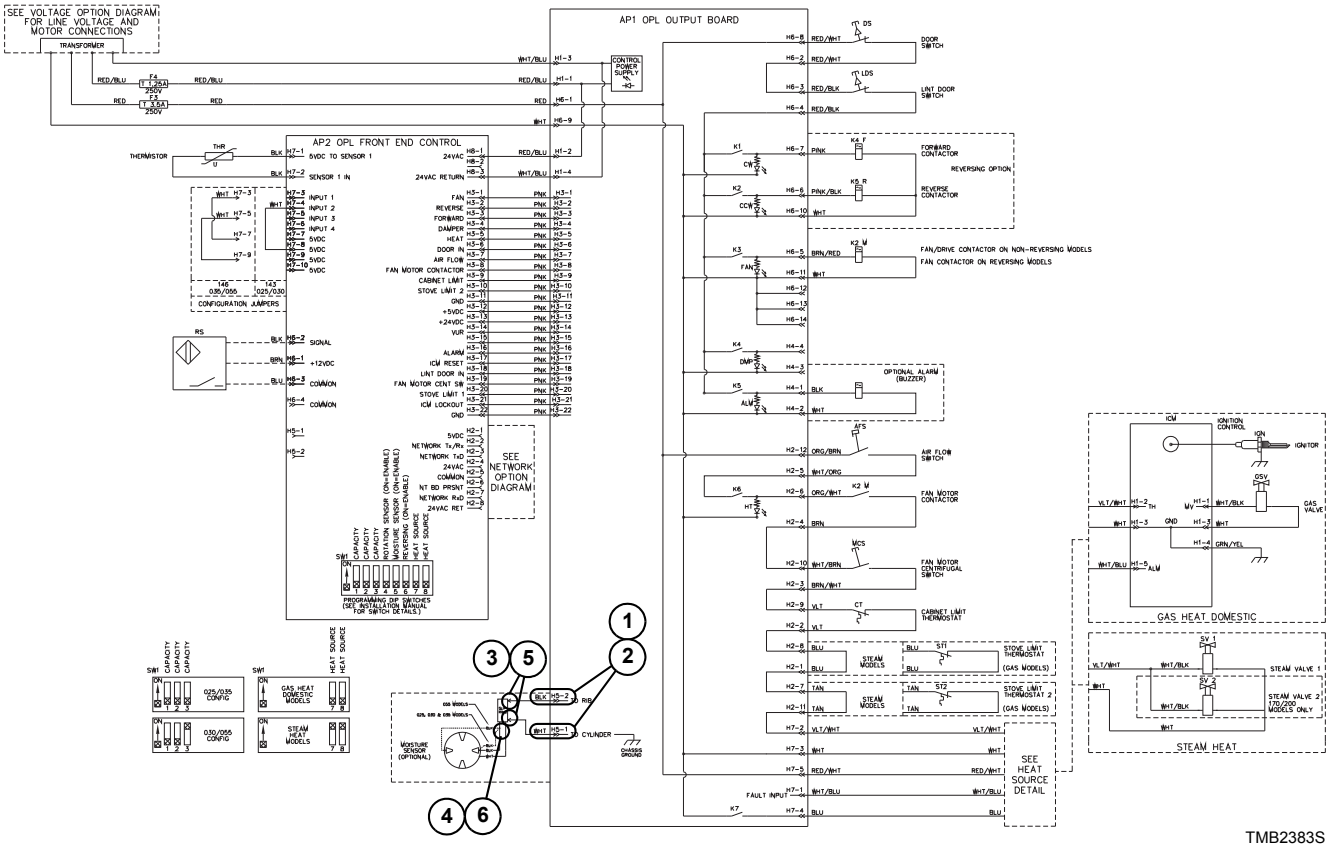
103.Moisture Sensor Error

UniLinc Error Display: Moisture Sensor Error
LED OPL Error Display: EnoiST

NOTE: Before troubleshooting the Moisture Sensor Error, run the Moisture Sensor Tests found in *Table 5*.



Moisture Sensor Error



TMB2383S

Troubleshooting the Moisture Sensor Circuit

WARNING

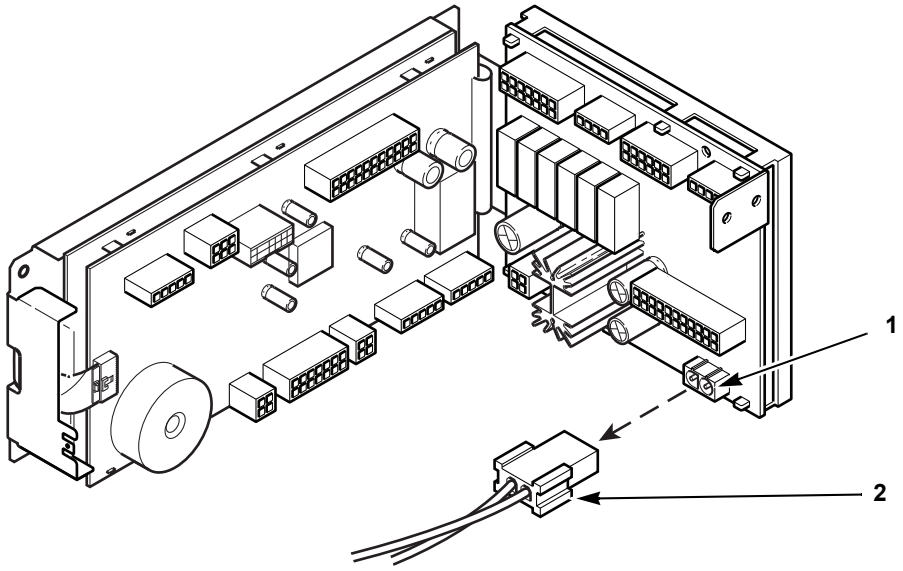
To reduce the risk of electric shock, fire, explosion, serious injury or death:
- **Disconnect electric power to the tumble dryer before servicing.**
- **Close gas shut-off valve to gas tumble dryer before servicing.**
- **Close steam valve to steam tumble dryer before servicing.**
- **Never start the tumble dryer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.**

W002R1

NOTE: Troubleshooting must be done with the machine basket empty.

104.Troubleshooting at the Control

1. On the control board, unplug the harness from header H5 (Refer to *Figure 25*).

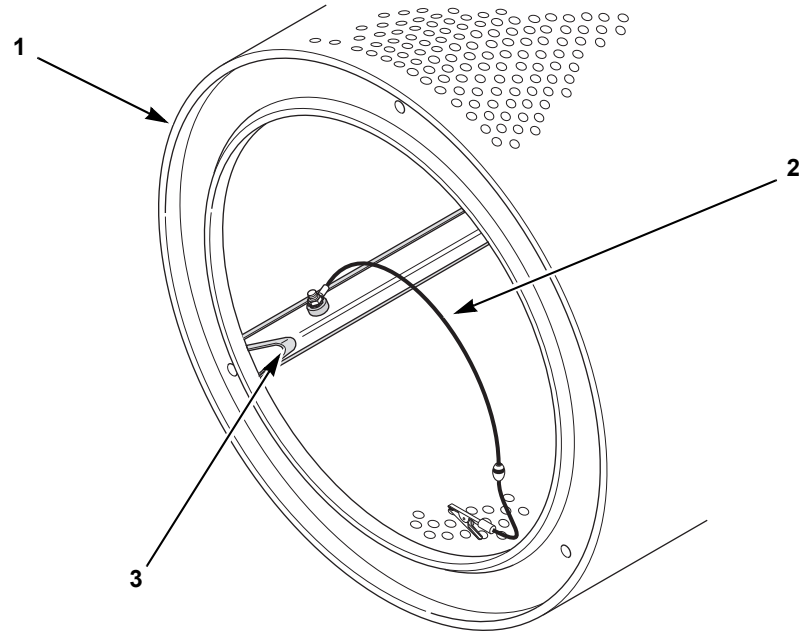


TMB2396S

1	H5
2	Harness

Figure 25

2. Insert ohm meter probes into pins 1 and 2 of the harness. If the metered value is infinite resistance, open load (OL), proceed to step 3. If not, proceed to *Paragraph 105*.
3. Create a direct short between machine basket and moisture sensing baffle/ground using test jumper (Refer to *Figure 26*). If metered value is less than 1 ohm, circuit is functioning properly; double-check machine configuration and cycle programming. If 1 ohm or greater, proceed to *Paragraph 105*.



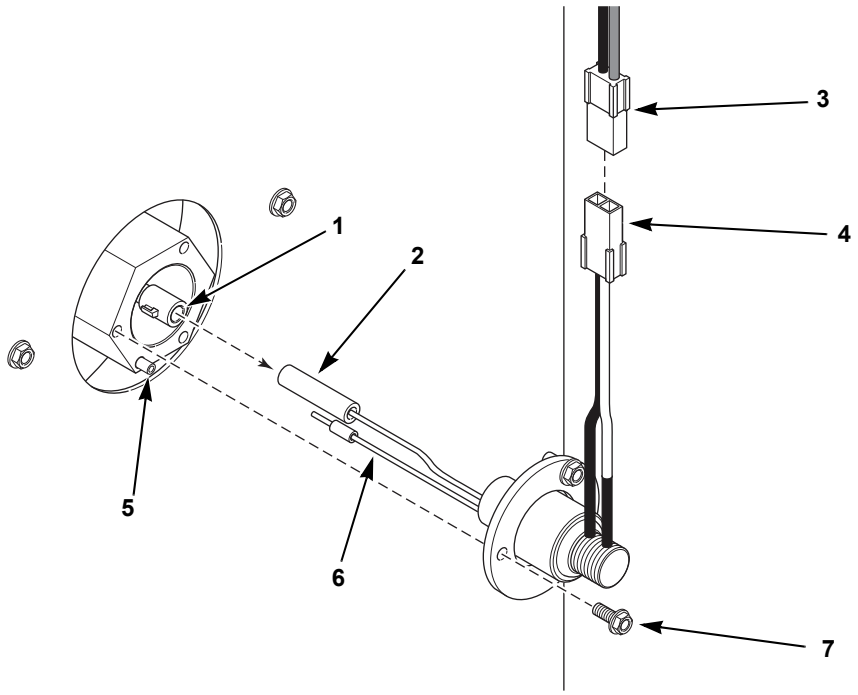
TMB2397S

1	Basket
2	Test Jumber
3	Moisture Sensing Baffle

Figure 26

105.Troubleshooting From Control to Slip Ring Assembly

1. At the control, unplug harness at header H5 (Refer to *Figure 25*).
2. At the slip ring assembly, unplug the moisture sensing harness on the control side of the slip ring assembly (Refer to *Figure 27*).



1	Connector
2	Black Wire
3	Moisture Sensing Harness
4	Slip Ring Assembly Harness
5	Set-Screw
6	White Wire
7	Screws

Figure 27

3. The harness from the control leads into a junction panel before reaching the slip ring assembly. Inspect junction panel for intermittent connections or unplugged harnesses (Refer to *Figure 28*).

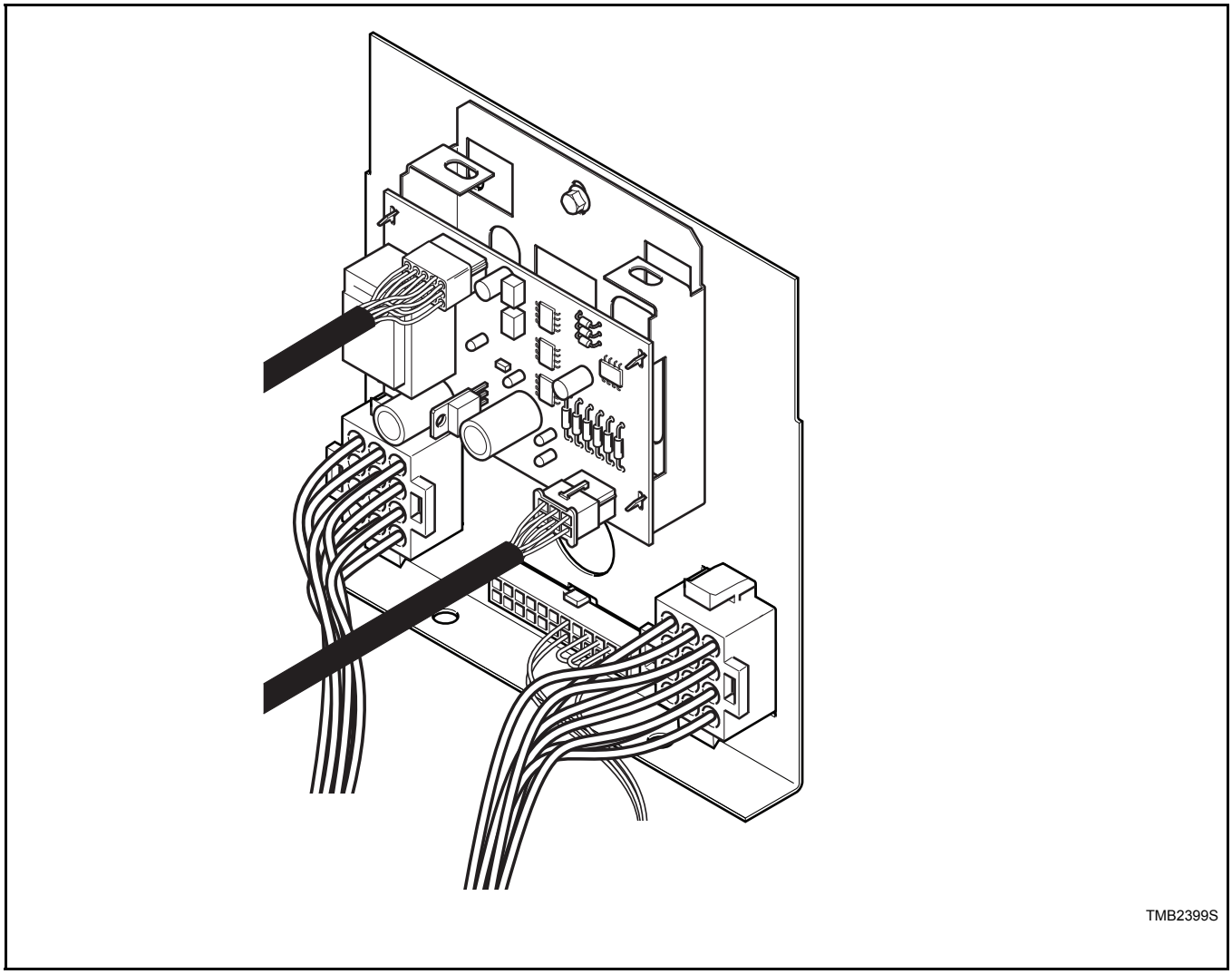


Figure 28

4. An additional harness connection exists between the junction panel and the slip ring assembly. Inspect connection for intermittent connections or unplugged harness.
5. Insert ohm meter probes into pins 1 and 2 of the harness unplugged from H5. If the metered value is infinite resistance, open load (OL), proceed to Step 6. If not, replace harness and return to *Paragraph 104*.
6. Create a direct short between pin 1 and 2 of the moisture sensing harness on the control side of the slip ring assembly (Refer to *Figure 27*). If the metered value is less than 1 ohm, proceed to *Paragraph 106*. If 1 ohm or greater, replace harness and return to *Paragraph 104*.

106.Troubleshooting At Slip Ring Assembly

1. At the slip ring assembly, unplug the slip ring assembly harness on the control side of the slip ring assembly (Refer to *Figure 27*).
2. Remove the three (3) screws holding the slip ring assembly to basket shaft.
3. Carefully disconnect the white wire of the slip ring assembly from the set-screw on the basket shaft.
4. Carefully disconnect the black wire of the slip ring assembly from the connector in the basket shaft.
5. Connect one ohm meter probe to the black wire on the basket side of the slip ring assembly, and connect the other ohm meter probe to the black wire of the slip ring assembly harness. If the metered value is less than 1 ohm, proceed to Step 6. If 1 ohm or greater, replace slip ring assembly and return to *Paragraph 104*.
6. Connect one ohm meter probe to white wire on the basket side of the slip ring assembly, and connect the other ohm meter probe to the white wire of the slip ring assembly harness. If the metered value is less than 1 ohm, proceed to *Paragraph 107*. If 1 ohm or greater, replace slip ring assembly and return to *Paragraph 104*.

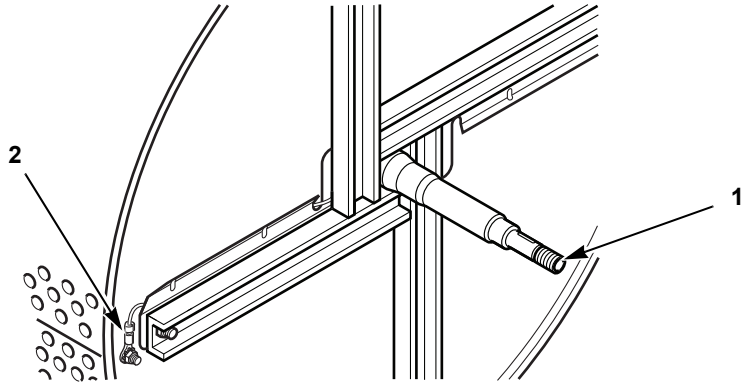
107.Troubleshooting From Slip Ring Assembly to Moisture Sensing Baffle and Basket

1. Remove three (3) screws holding slip ring assembly to basket shaft.
2. Carefully disconnect the white wire of the slip ring assembly from the set-screw on the basket shaft.
3. Carefully disconnect the black wire of slip ring assembly from the connector in the basket shaft.
4. Connect one ohm meter probe to the connector in the basket shaft. Connect the other ohm meter probe to the basket shaft itself. If the metered value is infinite resistance, open load (OL), proceed to Step 5. If not, remove machine basket and proceed to *Paragraph 108*.
5. Create a direct short between basket and moisture sensing baffle (Refer to *Figure 26*).
6. Connect one ohm meter probe to the connector in the basket shaft. Connect the other ohm meter probe to the basket shaft itself. If the metered value is less than 1 ohm, circuit is functioning properly; double-check machine configuration and cycle programming. If 1 ohm or greater, remove machine basket and proceed to *Paragraph 108*.

108.Troubleshooting from Basket Shaft to Moisture Sensing Baffle with Machine Basket Removed

1. Disconnect and remove slip ring assembly before removing machine basket.
2. Remove machine basket.

3. Connect one ohm meter probe to the connector in the basket shaft (Refer to *Figure 29*).



1	Connector
2	Gray Wire Harness Terminal

Figure 29

4. Connect the other ohm meter probe to one of the gray wire harness terminals on the back end of the machine basket. If the metered value is less than 1 ohm, proceed to Step 5. If 1 ohm or greater, replace harness and return to *Paragraph 104*.
5. Connect one ohm meter probe to the connector in the basket shaft.
6. Connect the other ohm meter probe to the other gray wire harness terminal on the back end of the machine basket. If the metered value is less than 1 ohm, proceed to Step 7. If 1 ohm or greater, replace harness and return to *Paragraph 104*.
7. Connect one ohm meter probe to the connector in the basket shaft.
8. Connect the other ohm meter probe to one of the moisture sensing baffles (Refer to *Figure 26*). If the metered value is less than 1 ohm, proceed to Step 9. If 1 ohm or greater, proceed to *Paragraph 109*.
9. Connect one ohm meter probe to the connector in the basket shaft.
10. Connect the other ohm meter probe to the other moisture sensing baffle. If the metered value is less than 1 ohm, circuit is functioning properly; double-check machine configuration and cycle programming. If 1 ohm or greater, proceed to *Paragraph 109*.

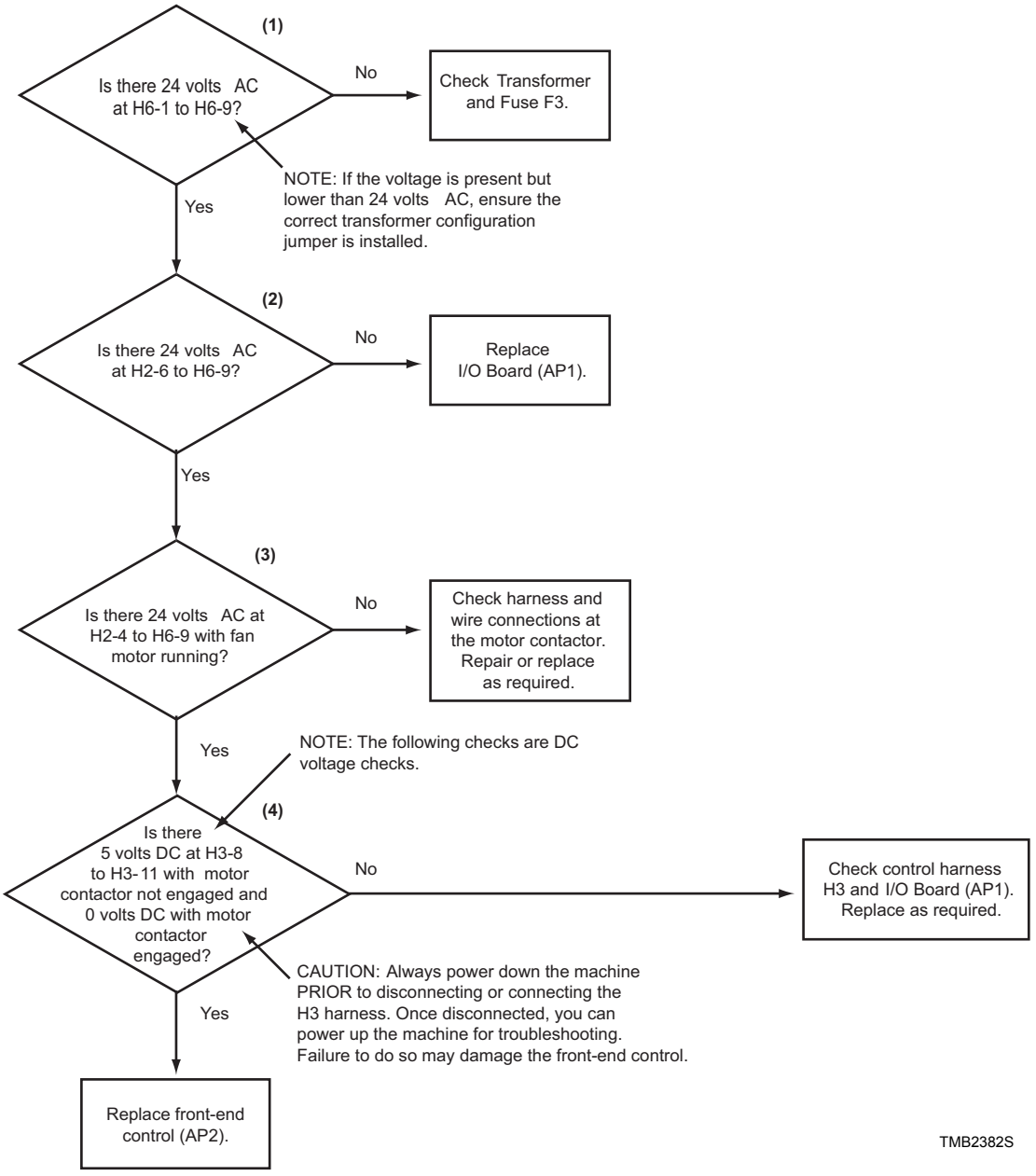
109.Troubleshooting at the Moisture Sensing Baffles with Machine Basket Removed

1. Disassemble moisture sensing baffle and inspect for lint buildup and foreign objects. Verify wire harness connections.
2. Disassemble other moisture sensing baffle and inspect for lint buildup and foreign objects. Verify wire harness connections.
3. Double-check machine configuration and cycle programming.

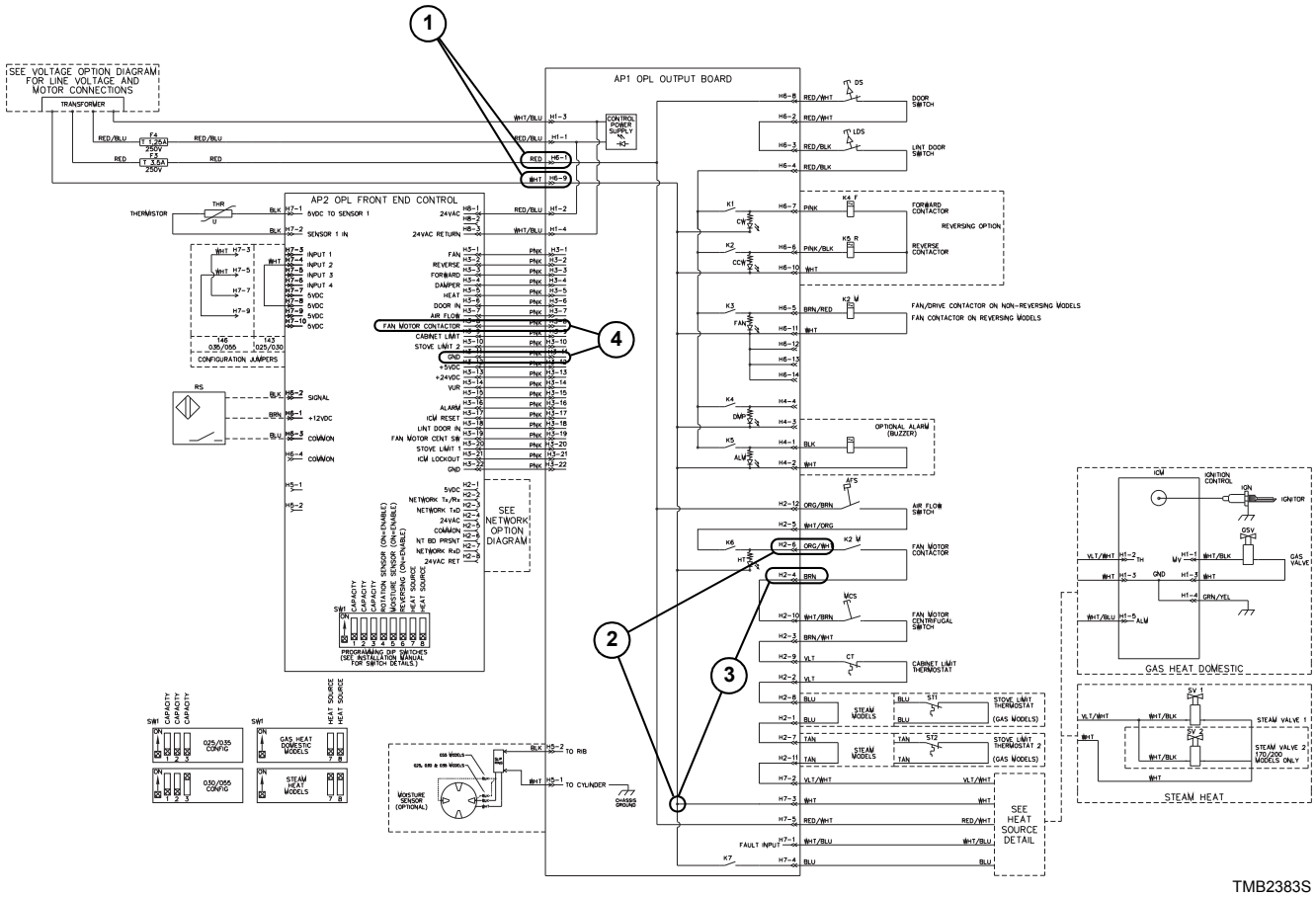
110.Fan Motor Contactor Error

UniLinc Error Display: Fan Motor Contactor Error
LED OPL Error Display: E FCon

NOTE: Before performing these checks, the airflow switch must be pulled in, and the motor must be running.



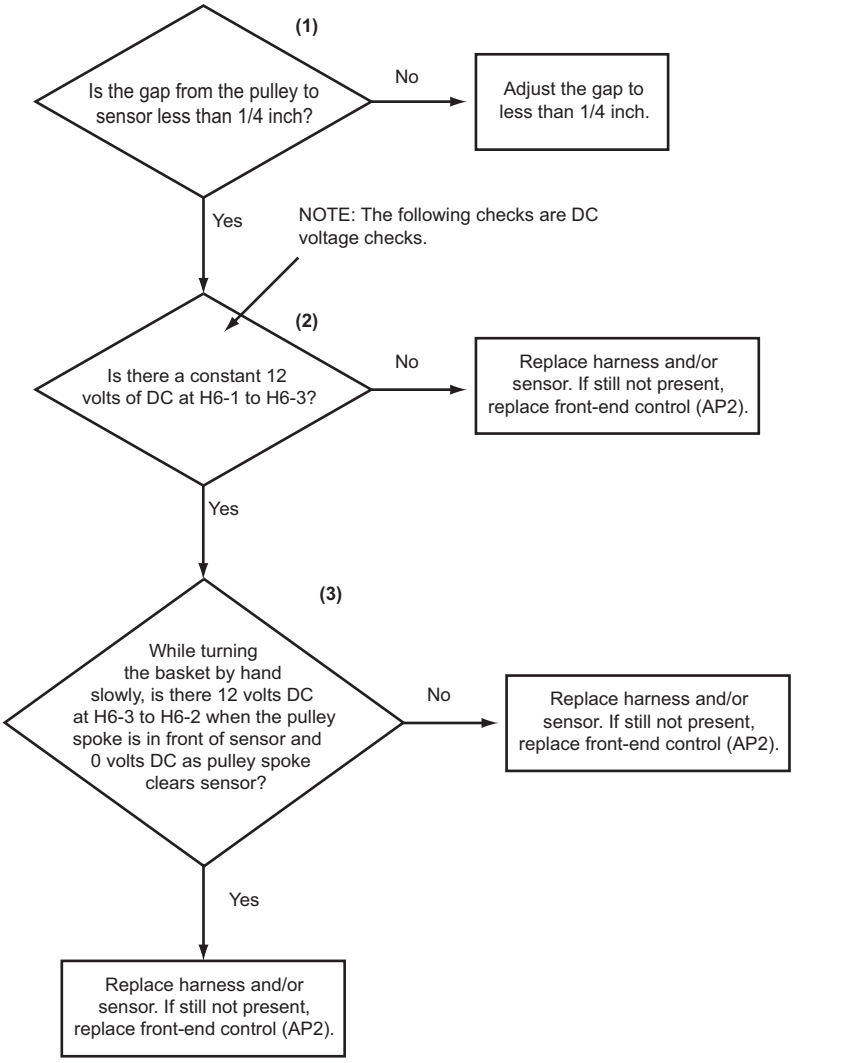
Fan Motor Contactor Error



TMB2383S

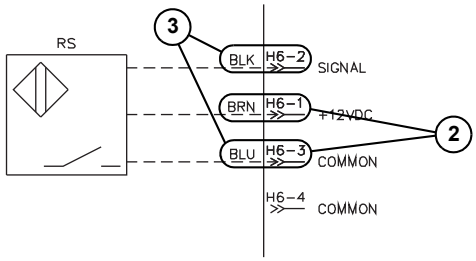
111.Rotation Sensor Error

UniLinc Error Display: Rotation Sensor Error
LED OPL Error Display: E rot



TMB2392S

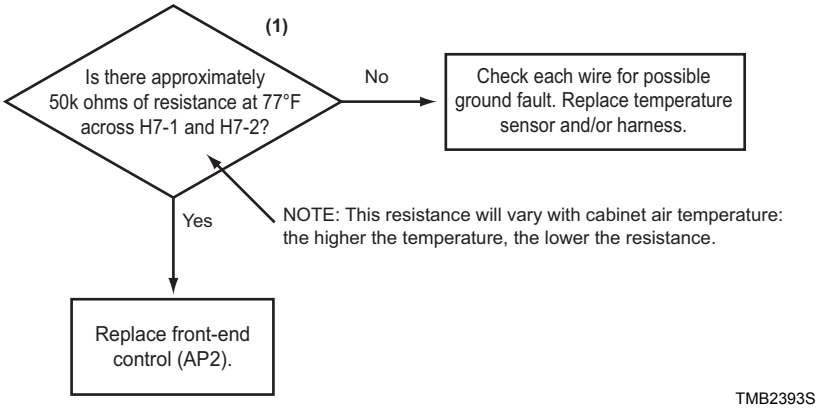
Rotation Sensor Error



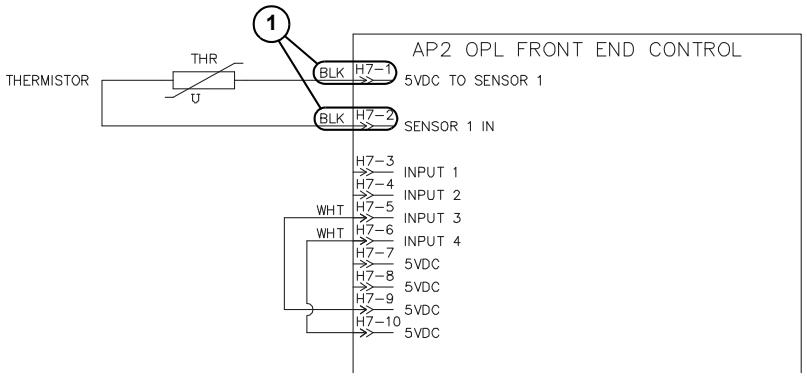
TMB2389S

112.Shorted or Open Thermistor

UniLinc Error Display: Shorted Thermistor
Open Thermistor
LED OPL Error Display: ESH
EoP



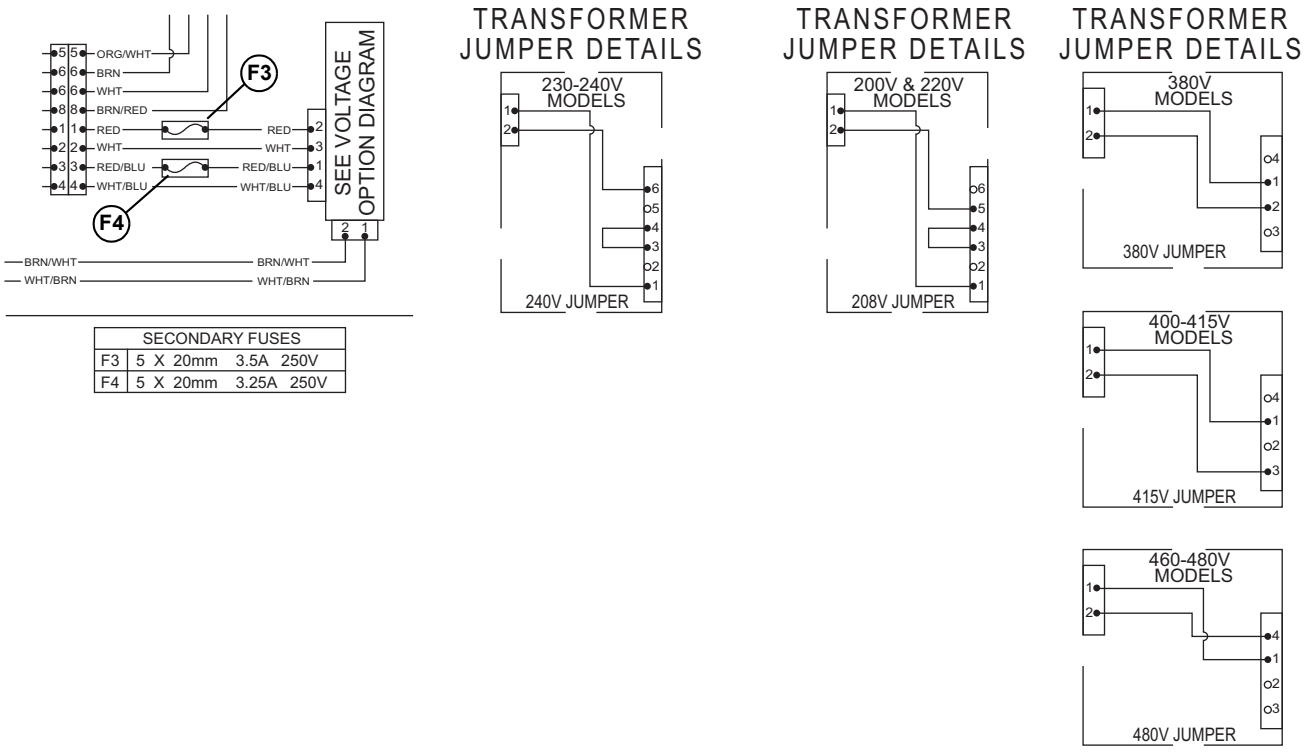
Shorted or Open Thermistor



TMB2390S

113.Fuses and Transformer Configuration Jumper

Check F3 and F4 fuses and verify the jumper. Jumper options shown below.

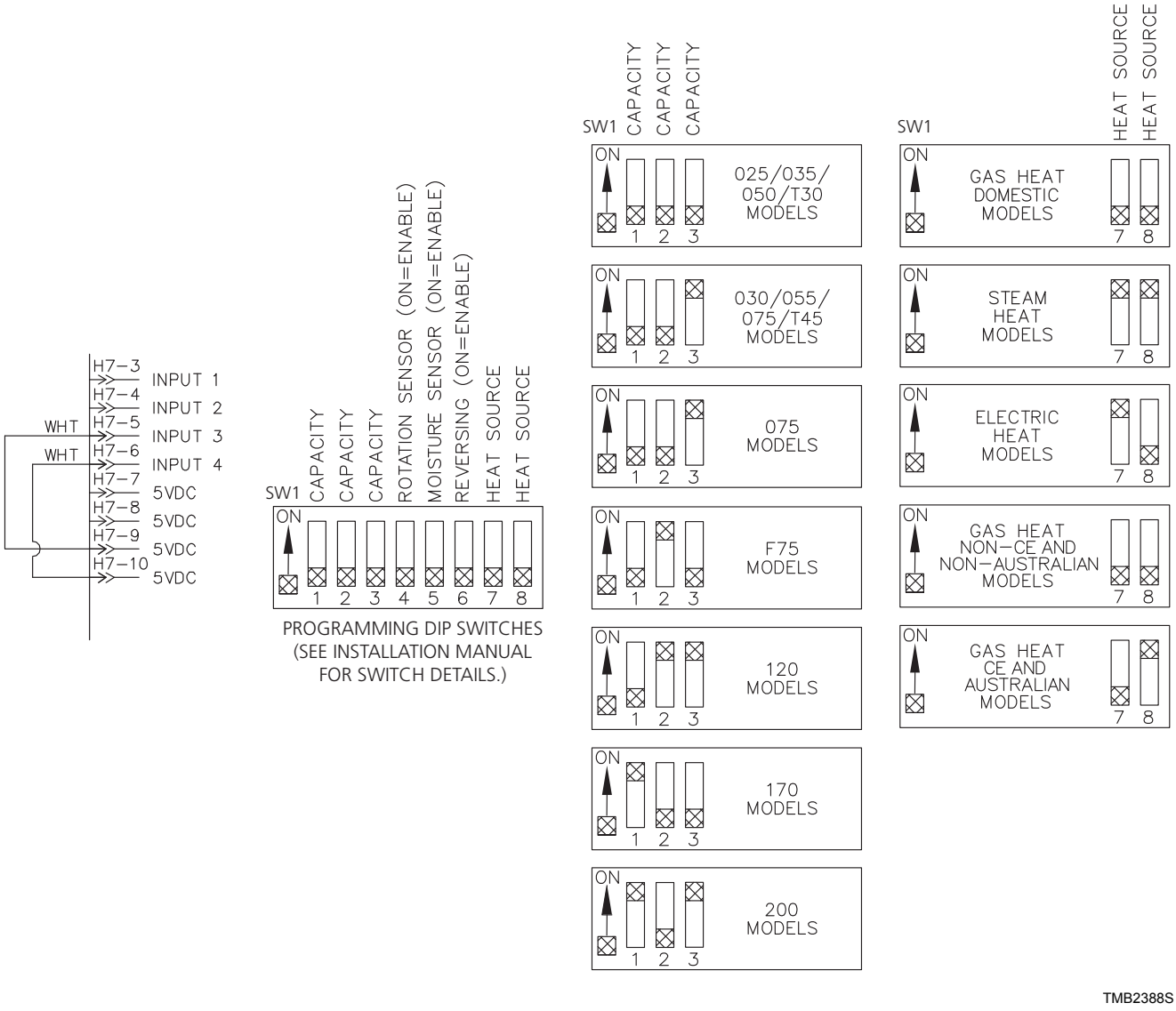


SECONDARY FUSES	
F3	5 X 20mm 3.5A 250V
F4	5 X 20mm 3.25A 250V

TMB2391S

114.Dip Switch/Harness Index Mismatch

Verify the dip switches are in the correct position and the jumper harness is installed on front-end control (AP2).



TMB2388S

115.Electronic Control Testing

Models with EO and RE Control Suffixes

This feature allows the owner to run diagnostic tests on various tumble dryer operations without servicing the tumble dryer. The tests that are available are shown in *Table 1*.

For an overview of the manual diagnostic test feature, refer to the flowchart on the following page.

How to Enter Testing Feature

1. Enter Manual Mode. Refer to ***Entering the Manual Mode***.
2. Press the Up (↑) or the Down (↓) keypad until "d iAG" appears.
3. Press the Start (◇/↵) keypad. Display will change to "dSoFt" indicating the control software version number test.
4. Press the Up (↑) or the Down (↓) keypad to scroll through the diagnostic test options.

How to Start Tests

To start a diagnostic test, refer to the quick reference chart below (*Table 1*). Press the Start (◇/↵) keypad when the desired test is displayed. For detailed information on each test, read the appropriate description.

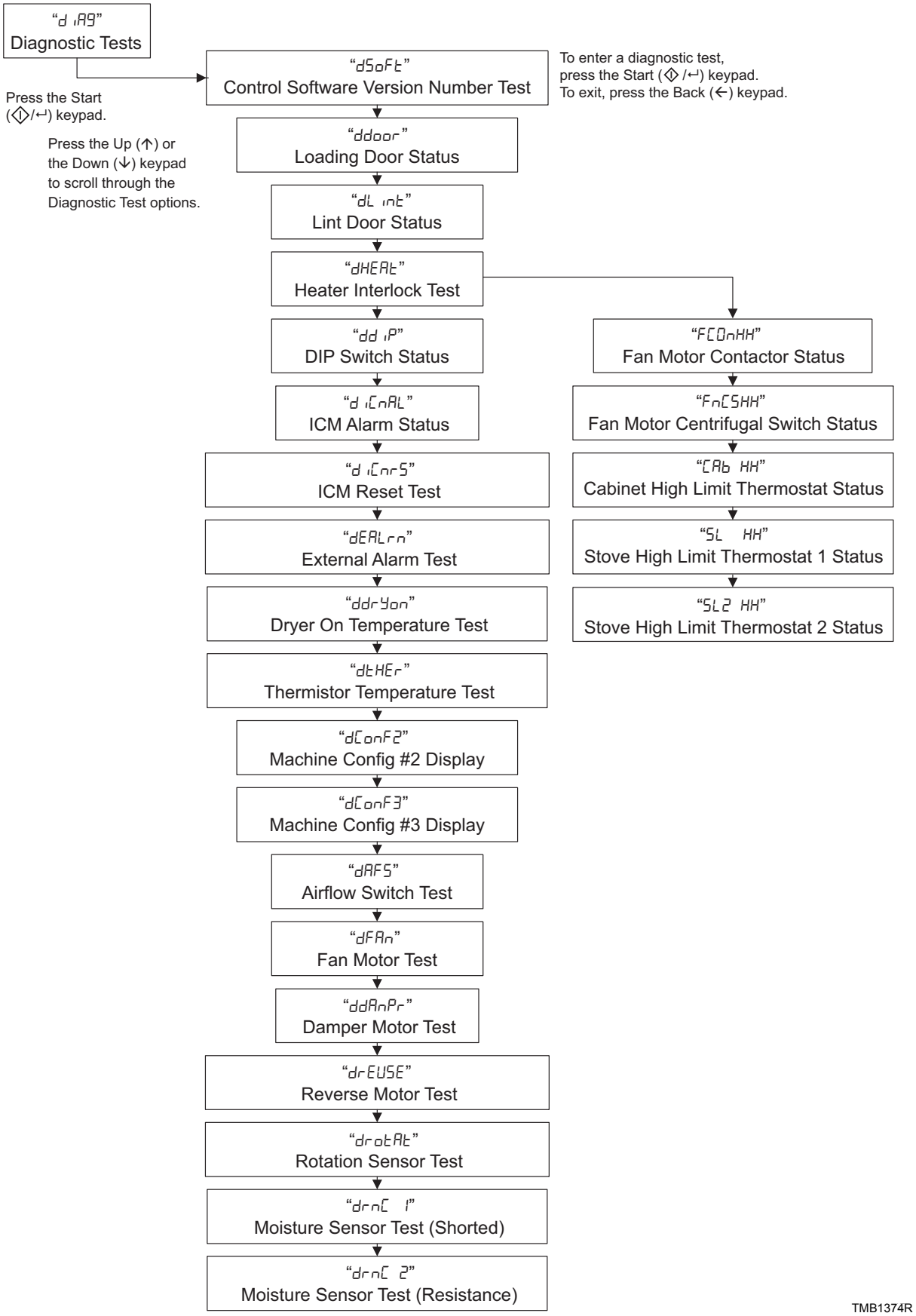
How to Exit Testing Feature

Press the Back (←) keypad. The display will return to Idle Mode.

Diagnostic (Testing) Mode - Quick Reference Chart	
Display	**Diagnostic Mode**
"dSoFt"	Control Software Version
"ddoor"	Loading Door Status
"dL int"	Lint Door Status
"dHEAt"	Heater Interlock Test
"FCOnHH"	Fan Motor Contactor Status (HH represents input status, open "OP" or closed "CL"
"FnCSHH"	Fan Motor Centrifugal Switch Status (HH represents input status, open "OP" or closed "CL"
"CAb HH"	Cabinet High Limit Thermostat Status (HH represents input status, open "OP" or closed "CL"
"SL HH"	Stove High Limit Thermostat 1 Status (HH represents input status, open "OP" or closed "CL"
"SL2 HH"	Stove High Limit Thermostat 2 Status (HH represents input status, open "OP" or closed "CL"
"dd iP"	DIP Switch Status
"d iCnAL"	ICM Alarm Status
"d iCnrS"	ICM Reset Test
"dEALrn"	External Alarm Test
"ddrYon"	Dryer On Temperature Test
"dtHEr"	Thermistor Temperature Test
"dConF2"	Machine Config #2 Display
"dConF3"	Machine Config #3 Display
"dAFS"	Airflow Switch Test
"dFAn"	Fan Motor Test
"ddAnPr"	Damper Motor Test*
"drEvSE"	Reverse Motor Test*
"drotAt"	Rotation Sensor Test*
"drnC 1"	Moisture Sensor Test (Shorted test jumper)*
"drnC 2"	Moisture Sensor Test (Resistance test jumper)*

* = Tests only shown if enabled by the DIP switch configuration.

Table 1



TMB1374R

Diagnostic Test Descriptions

Control Software Version Number Test "dSoFt"

This option displays the control software version number. To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◈/↵) keypad. The display will show "S HH" where "HH" is the software version number.

To exit the Software Version Number Test, press the Back (←) keypad. The control will return to the testing mode.

Loading Door Test "ddoor"

This option tests the loading door switch. To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◈/↵) keypad. The display will show "doorOP" when the loading door switch is open and "doorCL" when the loading door switch is closed.

The loading door switch has to be closed or open for at least one second for the control to register the switch as closed or open.

To exit the Loading Door Test, press the Back (←) keypad. The control will return to the testing mode.

Lint Door Test "dL Int"

This option tests the lint door switch. To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◈/↵) keypad. The display will show "L IntOP" when the lint door switch is open and "L IntCL" when the lint door switch is closed.

The lint door switch has to be closed or open for at least one second for the control to register the switch as closed or open.

NOTE: Loading door must be closed while testing lint door.

To exit the Lint Door Test, press the Back (←) keypad. The control will return to the testing mode.

Heater Interlock Test "dHEAt"

While this test is running, the control will show the status of the following inputs for two seconds each. The control will continue scrolling through the input status displays until the test is aborted.

To start test, the control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press Start (◈/↵). Refer to five sections below for more details on individual statuses.

NOTE: These switches are tested in sequence. If one switch is sensed open, the rest will be open as well. For example, if the fan motor contactor switch is open, all of the switches will be open.

To exit the test, press the Back (←) keypad. The control will return to the testing mode.

Fan Motor Contactor Switch "FCOnHH"

The display will show "FCOnOP" if the switch is sensed open and "FCOnCL" if the switch is sensed closed.

Fan Motor Centrifugal Switch "FnCSHH"

The display will show "FnCSOP" if the switch is sensed open and "FnCSCL" if the switch is sensed closed.

Cabinet High Limit Thermostat "CAb HH"

The display will show "CAb OP" if sensed open for at least 1.5 seconds and "CAb CL" if sensed closed for at least one second.

Stove High Limit Thermostat 1 "SL HH"

The display will show "SL OP" if sensed open for at least 1.5 seconds and "SL CL" if sensed closed for at least one second.

Stove High Limit Thermostat 2 "SL2 HH"

The display will show "SL2 OP" if sensed open for at least 1.5 seconds and "SL2 CL" if sensed closed for at least one second.

Dip Switch Status "ddiP"

The control will show the displays in *Table 2* according to the DIP switch configuration. The control will show which switches are in the ON position. For example, to verify that DS3, DS5 and DS7 are in the ON position, the display will show "dSC084" (DS3=4, DS5=16 and DS7 = 64, 4+16+64 =84).

DS8	DS7	DS6	DS5	DS4	DS3	DS2	DS1	Display
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	dSC000
OFF	OFF	OFF	OFF	OFF	OFF	OFF	**ON**	dSC001
OFF	OFF	OFF	OFF	OFF	OFF	**ON**	OFF	dSC002
OFF	OFF	OFF	OFF	OFF	**ON**	OFF	OFF	dSC004
OFF	OFF	OFF	OFF	**ON**	OFF	OFF	OFF	dSC008
OFF	OFF	OFF	**ON**	OFF	OFF	OFF	OFF	dSC016
OFF	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	dSC032
OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF	dSC064
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	dSC128

Table 2

ICM Alarm Status "diCnAL"

This option shows the status of the ICM (Ignition Control Module) Alarm.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show " iAL on" if the alarm is active for at least one second or " iALOFF" if the alarm is not active for one second.

To exit the test, press the Back (←) keypad. The control will return to the testing mode.

ICM Reset Test "diCnrS"

The ICM Reset Test can be used to both activate the ICM alarm signal and reset the ICM alarm. When this test is started, the ICM reset will become active. If the reset signal is active for a long enough period of time (4 seconds) the ICM Lockout input will become active. To reset the ICM, stop the ICM Reset Test and then start the test again until the ICM Lockout input becomes inactive (4 seconds) and then stop the ICM Reset Test. If " irESEt" shows on the display, ICM Reset output is active.

External Alarm Test "dEALrn"

This option tests whether the external alarm is working.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show "EALArn" and the external alarm will sound until the test is exited.

To exit this test, press the Back (←) keypad. The control will return to the testing mode.

Tumble Dryer On Temperature Test "dDryOn"

This option tests the temperature inside the cylinder while running a cycle.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show "P HHHF" (Fahrenheit) or "P HHHC" (Celsius). Use the Up (↑) or the Down (↓) keypad to select desired temperature. Press the Start (◇/↵) keypad to begin cycle. While the test is running the control will display the temperature estimated in the cylinder ("HHH F " or "HHH C "). Once the cylinder temperature stabilizes at the target temperature, the heater is turned off and there is a two minute cool down period. During cool down, the control will display the time remaining as " nn 55".

NOTE: This test does not increment the Total # of Cycles audit counter.

To exit the test, press the Back (←) keypad. The control will return to the testing mode.

Thermistor Temperature Test "dtHEr"

This option displays the temperature sensed at the thermistor in 5°F (3°C) increments.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show " HHHF" or " HHHC". The "F" will show Fahrenheit, the "C" will show Celsius and the "HHH" will show degrees. If control senses a shorted thermistor, the display will show " SH ". If the control senses an open thermistor, the display will show " OP ".

To exit this test, press the Back (←) keypad. The control will return to the testing mode.

Machine Configuration Display #2 Test "dConF2"

This option shows the machine configuration values for the machine type.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show "C HHH", with "HHH" the number corresponding to the machine capacity. Refer to *Table 3*.

Value	Description
2	25, 30 Pound Tumble Dryer
4	30, 45 Pound Stack Tumble Dryer
5	35, 55 Pound Tumble Dryer
12	50, 75, F75, 120, 170, 200 Pound Tumble Dryer

Table 3

To exit Machine Configuration Display #2 Test, press the Back (←) keypad. The control will return to the testing mode.

Machine Configuration Display #3 Test "dConF3"

This option shows the machine configuration values for the machine capacity.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show "d HHH", with "HHH" representing the machine capacity. Refer to *Table 4*.

To exit Machine Configuration Display #3 Test, press the Back (←) keypad. The control will return to the testing mode.

Value	Description
0	Tumble Dryer
17	25 Pound Tumble Dryer
18	30 Pound Tumble Dryer
19	30 Pound Stack Tumble Dryer
20	30 Pound Stack Tumble Dryer – Lower Pocket
21	30 Pound Stack Tumble Dryer – Upper Pocket
22	35 Pound Tumble Dryer
23	45 Pound Stack Tumble Dryer
24	45 Pound Stack Tumble Dryer – Lower Pocket
25	45 Pound Stack Tumble Dryer – Upper Pocket
26	50 Pound Tumble Dryer
27	55 Pound Tumble Dryer
28	75, F75 Pound Tumble Dryer
29	120 Pound Tumble Dryer
30	170 Pound Tumble Dryer
31	200 Pound Tumble Dryer

Table 4

Airflow Switch Test "dAFS"

This option shows the current state of the airflow switch.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show "AF OP" or "AF CL", with "AF OP" being open and "AF CL" being closed.

Switch has to be closed for at least one second or open for at least one second for a valid change.

To exit Airflow Switch Test, press the Back (←) keypad. The control will return to the testing mode.

Fan Motor Test "dFAn"

This option shows the fan motor running.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show "FAn " to indicate the fan motor is going to run.

The test must run for at least six seconds before it can be exited and off for six seconds before the test can be run again.

NOTE: This test does not count towards the total machine run time operation.

To exit Fan Motor Test, press the Back (←) keypad. The control will return to the testing mode.

Damper Motor Test "ddAnPr"

This option shows the damper motor running.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◇/↵) keypad. The display will show "dAnPEr" to indicate the damper motor is going to run.

The test must run for at least six seconds before it can be exited and off for six seconds before the test can be run again.

NOTE: This test does not count towards the total machine run time operation.

To exit Damper Motor Test, press the Back (←) keypad. The control will return to the testing mode.

Reverse Motor Test "drEUSE"

This option shows the reverse motor running.

To start test, control must be in the Testing Mode. Refer to *"How to Enter Testing Feature"* at the beginning of this section.

To enter, press the Start (◈/↵) keypad. The display will show "rnotor" to indicate the reverse motor is going to run.

The test must run for at least six seconds before it can be exited and off for six seconds before the test can be run again.

NOTE: This test does not count towards the total machine run time operation.

To exit Reverse Motor Test, press the Back (←) keypad. The control will return to the testing mode.

Rotation Sensor Test "drotAt"

This option shows the RPM of the tumble dryer cylinder.

To start test, control must be in the Testing Mode. Refer to "*How to Enter Testing Feature*" at the beginning of this section.

To enter, press the Start keypad. The display will show "rPnHHH". The display is updated every ten seconds. The test must run for at least six seconds before it can be exited and off for six seconds before the test can be run again.

NOTE: This test does not count towards the total machine run time operation.

To exit Rotation Sensor Test, press the Back (←) keypad. The control will return to the testing mode.

Moisture Sensor Test (Shorted Test Jumper) "drnC 1"

This step is skipped if the control is not configured for Moisture Sensing. When entering this test, the control will show "rnC 1" while flashing the Start LED one second on/one second off, allowing the user to short the cylinder to the baffle (orange jumper). When the Start key is pressed, this test step energizes the Fan Motor Contactor and Forward Motor Contactor and the control will show " HH". The moisture sensor test is 30 seconds. During this 30 second period, the control is continually monitoring the moisture sensor input for the expected short circuit. If an intermittent signal or high resistance is sensed before the 30 seconds expire, the test is terminated and the control will show "OPEn ", indicating that the test has failed. At this time the user has the option to press the Back (←) keypad to return and run the test again. If the control ran the whole test reading the expected moisture sensor level and without an intermittent signal or high resistance, "PASS " will be shown. If either the loading or lint doors are opened during the test, the control will reset the test step and allow it to be run again. When the test is complete and result is displayed, the control sounds a 5 second audio signal. Press a key to advance to the next test step. If the Up (↑) or Down (↓) keypad is pressed while the test is in progress the control will toggle between displays " HH", "rnC HH" and "SnrHHH". If the display is left on "rnC HH" or "SnrHHH" for 5 seconds the control will revert to showing "rnC 1".

Moisture Sensor Test (Resistance Test Jumper) "drnC 2"

This step is skipped if the control is not configured for Moisture Sensing. When entering this test, the control will show "rnC 2" while flashing the Start key LED one second on/one second off, allowing the user to place the 510k Ohm resistor between the cylinder and the baffle (black jumper) which simulates an expected moisture sensor level. When the Start keypad is pressed, this step energizes the Fan Motor Contactor and Forward Motor Contactor and the control will show " HH". The moisture sensor test is 30 seconds. During this 30 second period, the control is continually monitoring the moisture sensor input for the expected moisture sensor level. If an intermittent signal or unexpected resistance is sensed before the time expires, the test is terminated and the control will show "OPEn ", indicating that the test has failed. At this time, the user has the option to press the Back (←) keypad to return and run the test again. If the control ran the test reading the expected moisture sensor level and without an inttermittent signal or unexpected resistance, "PASS " will be shown. If either the loading or lint doors are opened during the test, the control will reset the test step and allow it to be run again. When the test is complete and result is displayed, the control sounds a 5 second audio signal. Press a key to advance to the next test step. If the Up (↑) or Down (↓) keypad is pressed while the test is in progress the control will toggle between " HH", "rnC HH" and "SnrHHH". If the display is left on "rnC HH" or "SnrHHH" for 5 seconds the control will revert to showing "rnC 2".

Production Test Cycle

To Enter Production Test Cycle

1. Be certain control is in Idle Mode.
2. While pressing and holding the Down (↓) keypad with one hand, press the Back (←) keypad with the other hand.
3. When the control enters the Production Test Cycle, it will first display "5 HH" with the "HH" showing the software version of the control.
4. The control will advance through the sequence of test steps whenever any keypad is pressed, with the exception of the Keypad Test. Refer to *Table 5* for all tests in the Production Test Cycle.

To Exit Production Test Cycle

The test will be exited when the time reaches "00" on the control in the 10 Minute Test Cycle. Otherwise, the control must be powered down to end the test.

Production Test Cycle Quick Reference Table		
Display	**Test Mode**	**Comments**
"5 HH"	Software Version	HH is the software version number.
"CE HHH"	Control Type	2, 3, 4, 5 or 6, depending on brand.
"PAd "	Keypad Test	When a key is pressed, the control will display the number assigned to the keypad. As each keypad is pressed, the control will display the number assigned to it in the last digit of the display until the next key is pressed (example, if Key 1 is pressed the control will show "PAd 1"). When all keypads have been pressed, the control will advance to next step after a one second delay.
"doorOP" or "doorCL"	Loading Door Test	The control will display the status of the loading door: "doorOP" if door is open or "doorCL" if door is closed.
"LintOP" or "LintCL"	Lint Door Test	The control will display the status of the lint door: "LintOP" if door is open or "LintCL" if door is closed. Loading door must be closed.
All LEDs and display segments will light	Show Entire Display Mode	The audio signal is turned off. Control will stay in this mode until any key is pressed.
"C HH"	Machine Configuration #2 Display	HH is the configuration byte value. The control will remain in this mode until any key is pressed.
"dSCHHH"	DIP Switch Configuration	The control will show the sum of all switches in the On position. The control will remain in this mode until any key is pressed.
Degrees in 5°F (3°C) increments, " SH ", " OP "	Thermistor Temperature Test	The temperature will be displayed in either Fahrenheit or Celsius, depending on machine's configuration (refer to ***Programming Control***). If control senses a shorted thermistor, SH will be displayed. If control senses an open thermistor, OP will be displayed.
–	Moisture Sensor 1 Test (Shorted)	Refer to ***Diagnostic Test Descriptions***. Test step lasts for 15 seconds.
–	Moisture Sensor 2 Test (Resistance)	Refer to ***Diagnostic Test Descriptions***. Test step lasts for 15 seconds.
" nn 55"	10 Minute Test Cycle	Determines if tumble dryer can function in a cycle for 10 minutes. Start pad will flash one second on and one second off. The Start pad can be used to decrease time remaining. If Start pad is not pressed within 4.25 minutes, the control will return to Idle Mode.

NOTE: If power to the control is turned off before 10 Minute Test Cycle has ended, the cycle will be cleared from control.

Table 5

116.Diagnostic Testing
Models with RU and UO Control Suffixes

Diagnostic Menu

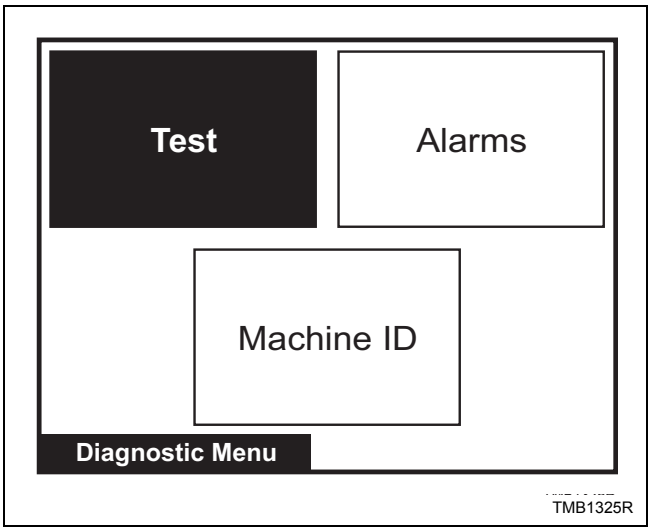


Figure 30

The Diagnostic Menu contains Test, Alarm and Machine ID Menus. The menus contain specific diagnostic information and manufacturing data for the machine. The ← , → , LCD ↑ and ↓ keypads position the highlighted box. Press the START ENTER keypad to select the menu choice.

Press the BACK keypad while in the Diagnostic Menu to return to System Menu.

Test Menu

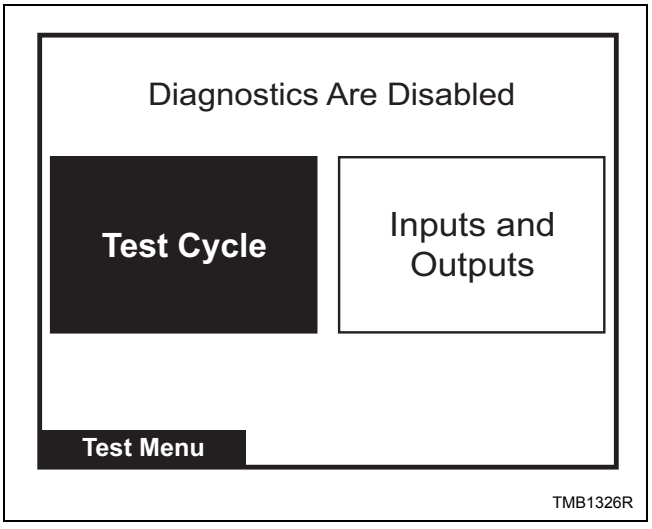


Figure 31

The Test Menu provides features for manufacturing and customer service testing. The highlighted box is moved horizontally and vertically using the ← → LCD ↑ and ↓ keypads. Press the START ENTER keypad to select the menu choice.

Press the BACK keypad to return to Diagnostic Menu.

The screen will display “Diagnostics Are Disabled” if the manual diagnostics have been programmed off. Diagnostic test commands via PDA and network will still function.

Test Cycle Menu

The Test Cycle Menu is used to run several test steps as well as a ten-minute cycle. Step 01 keypad test requires the user to press each keypad. Step 02 Door Status shows whether the loading and lint doors are open or closed. Press any key to advance. Step 03 Screen Test shows four screens that test the LCD screen. Press any key to advance through each of the four test steps.

The Test Cycle Menu for Test Steps 4-13 is shown in *Figure 32*.

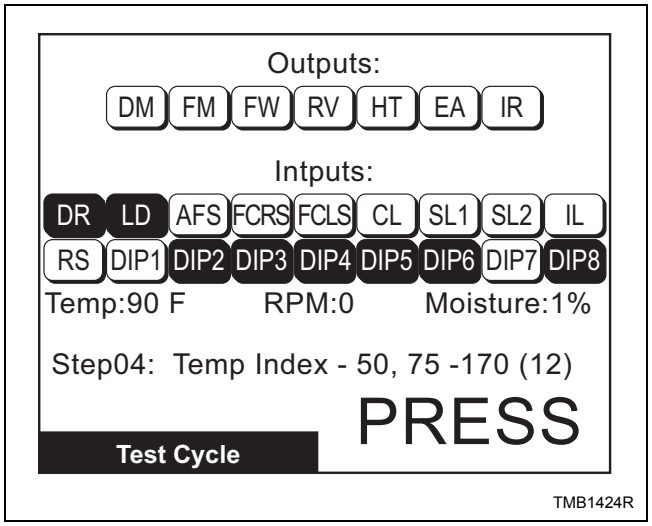


Figure 32

It is similar to the Inputs/Outputs Menu except that the test step is shown at the bottom of the display and a key press prompt message is shown in the lower right corner. Press START ENTER to advance through the steps. Refer to *Table 6* for more details of each step. Press STOP ON/OFF to terminate the test.

Inputs Outputs Menu

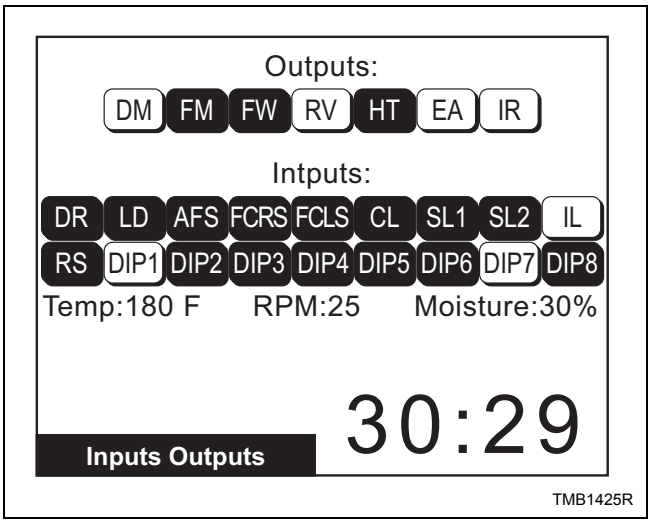


Figure 25

When the Inputs Outputs Menu is accessed through the Diagnostic Menu, the user can manually turn on outputs. The user can scroll through the outputs using any of the arrow keys, the cursor is indicated by flashing the active output on the screen. The user must "setup" the outputs to be turned on. The STOP ON/OFF keypad is used to select individual outputs to be turned on or off. After the START ENTER keypad is pressed the control will turn the selected outputs on and display the text "RUNNING". The outputs cannot be selected until the STOP ON/OFF keypad is pressed. The text "RUNNING" is no longer displayed. The screen will still show the selected outputs on the screen and the user can again select outputs to be turned on or off. If the BACK or STOP ON/OFF keypad is pressed at any time during this test, the control will turn off all outputs if the test is running or return to the previous screen if the test is not running.

If the Inputs Outputs Menu is accessed through the Run Diagnostic Menu (pressing the → keypad during a running cycle) the menu shows only what is turned on and off as the cycle runs. Refer to *Figure 25*.

Abbreviations for the Inputs and Outputs are defined in the following table:

Inputs	
DR	Loading Door
LD	Lint Door
AFS	Airflow Switch
FCRS	Fan Motor Contactor Switch
FCLS	Fan Motor Centrifugal Switch
CL	Cabinet High Limit
SL1	Store 1 High Limit
SL2	Store 2 High Limit
IL	Ignition Lockout
RS	Rotation Sensed
DIP1	Dip Switch 1
DIP2	Dip Switch 2
DIP3	Dip Switch 3
DIP4	Dip Switch 4
DIP5	Dip Switch 5
DIP6	Dip Switch 6
DIP7	Dip Switch 7
DIP8	Dip Switch 8
Temp	Temperature
RPM	Rotations per Minute
Moisture	Moisture Level
Outputs	
DM	Damper Motor
FM	Fan Motor
FW	Forward Contactor
RV	Reverse Contactor
HT	Heater
EA	External Alarm
IR	Ignition Reset

Table 6

Alarms Menus

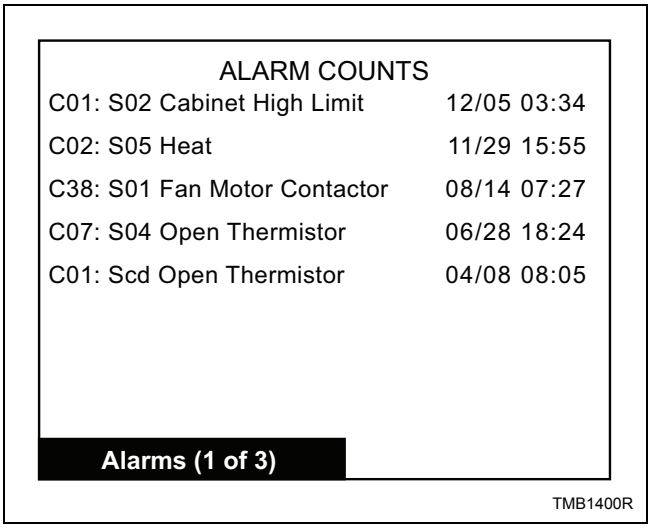


Figure 26

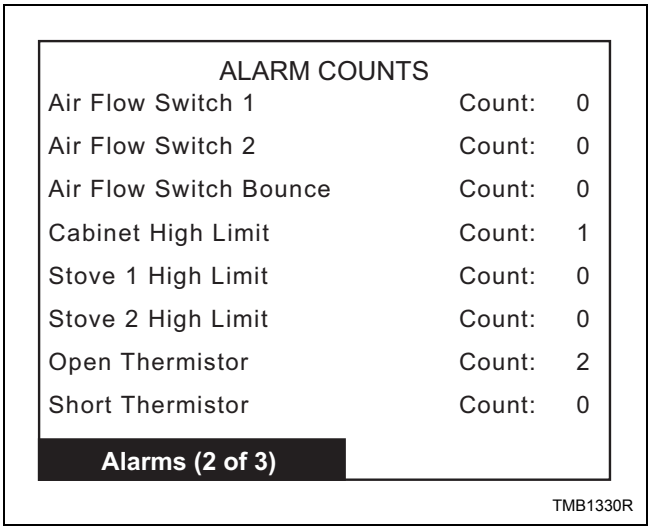


Figure 27

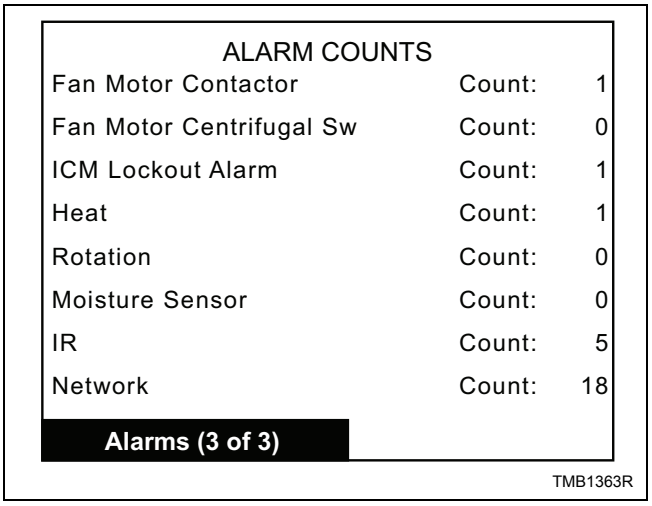


Figure 28

The Alarms Menu contains three screens of information. On the first screen, Alarms (1 of 3), the eight most recent alarms will contain Cycle Number, Segment Number, Alarm Type, and the Date/Time of the Alarm.

The second screen, Alarms (2 of 3), alarm counts list 1 through 8. Alarm counts consist of how many times a specific alarm has occurred.

The third screen, Alarms (3 of 3), is a continuation of the alarm counts 9 through 16.

Press the ← or → keypad to navigate to the different screens in the Alarms Menu. Press the ← keypad to go from screen 1 to screen 3. The actual menus are informational only and cannot be navigated. Press the BACK keypad to return to display to Diagnostic Menu or the Run Diagnostic Menu.

Machine ID Menu

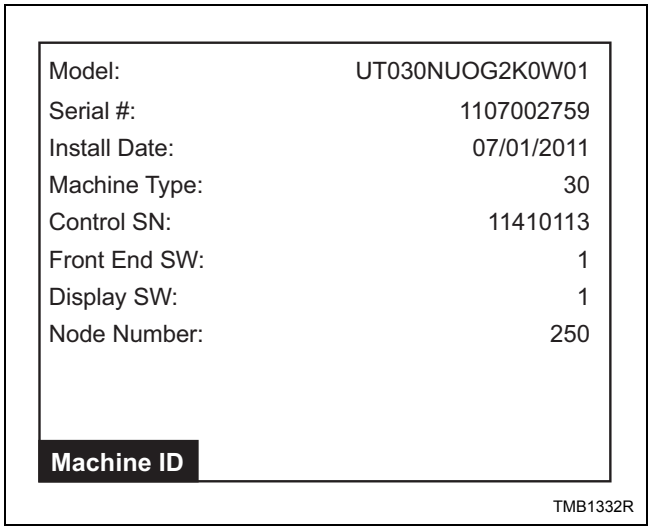


Figure 29

The Machine ID Menu provides several different types of manufacturing and machine information that can be useful to the user and technician. The Machine ID Menu cannot be navigated. Pressing the BACK keypad will return to Diagnostic Menu or the Run Diagnostic Menu.