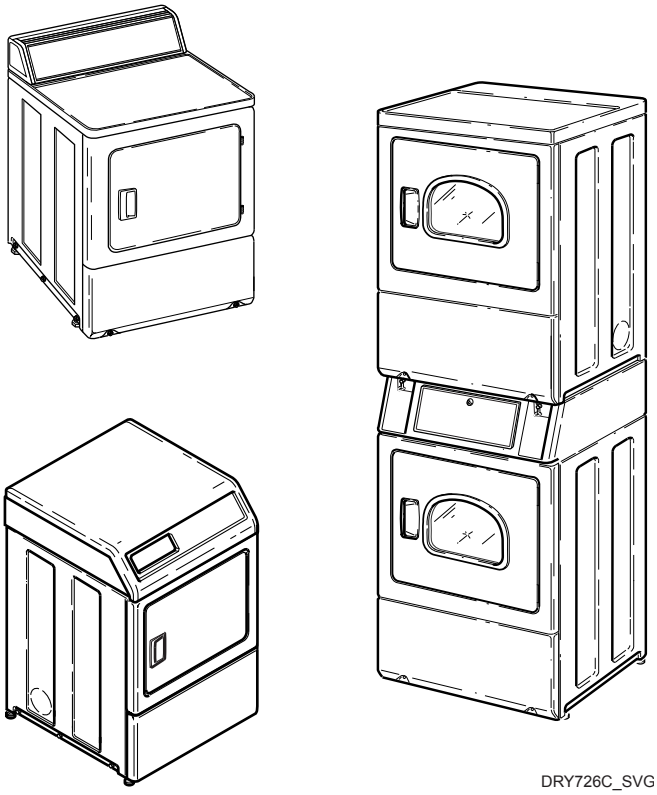
Commercial Dryers

Refer to Page 6 for Model Numbers

Troubleshooting



DRY726C_SVG

Original Instructions
Keep These Instructions for Future Reference.
CAUTION: Read the instructions before using the machine.
(If this machine changes ownership, this manual must accompany machine.)

Alliance™ Laundry Systems

www.alliancelaundry.com

Part No. D515519R3
December 2018

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Safety Information

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

DANGER

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

WARNING

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

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

WARNING

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

- **Disconnect electric power to the dryer before servicing.**
- **Close gas shut-of valve to gas dryer before servicing.**
- **Never start the Dryer 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.**

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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 WARNINGS and IMPORTANT INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining or operating the machine.

Always contact your dealer, distributor, service agent or the manufacturer about 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.

Introduction

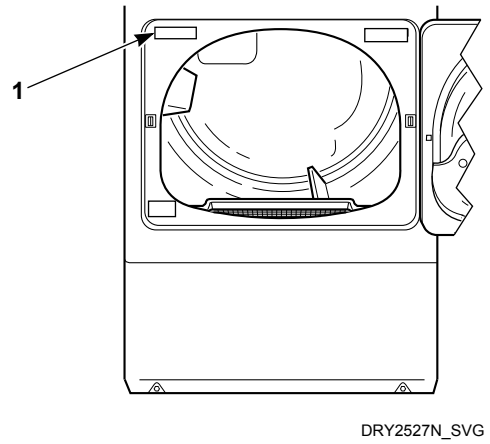
Customer Service

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

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

Serial Plate Location

When calling or writing about your product, be sure to mention model and serial numbers. Model and serial numbers are located on Serial Plate as shown.



1. Serial Plate

Figure 1

Model Identification

Information in this manual is applicable to these washer models:

BD3NGBGS303EW01	HTENYASP285CW01	SDEBXAGS403UW01	SSEWYFGW173TW41
BD3NGBGS403UW01	HTENYASP293CW01	SDEBXAGS433AW01	SSGBCAGS113TW01
BD3NGBSS403UN01	HTENYASP295CW01	SDEBXAGS543DW01	SSGBCAGW113TW01
BD3NLBGS403UW01	HTGBCASP115TW01	SDEBXRGS153TW01	SSGBXAGS113TW01
BD3NLBSS403UN01	HTGBDASP095CW01	SDEBXRGS173TW01	SSGBXAGW113TW01
BD3NXAGS403UW01	HTGBXASP095CW01	SDEBXRGS173TW02	SSGBYAGS113TW01
BD3NXFGS403UW01	HTGBXASP114FW01	SDEBXRGS303NW22	SSGBYAGW113TW01
BDEBCAGS173TN01	HTGBXASP124DW01	SDEBXRGS303ZW01	SSGNCAGS113TN01
BDEBCAGS173TW01	HTGBXASP544DW01	SDEBXRGS433AW01	SSGNCAGS113TW01
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BDEBEAGS173CN01	HTGBYASP115TW01	SDEBYAGS173TW01	SSGNCAGW113TW01
BDEBEAGS173CW01	HTGNXASP093CW01	SDEBYRGS153TW01	SSGNCFGW113TW01

Table continues...

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BDEBXAGS173TW01	HTGNXASP123DW01	SDENCAGS173TN01	SSGNXAGW093CW01
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BDEBYRGS173TW01	KDEBGACW173CN01	SDENCRGS173TW02	SSGNXAGW543DW01
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BDGBCAGS113TW01	KDGBCACW113CN01	SDENEAGS173CW01	SSGNYAGS113TN01
BDGBCRGS113TW01	KDGBCACW113TN01	SDENERGS153CW02	SSGNYAGS113TW01
BDGBEAGS113CW01	KDGBGACW113CN01	SDENERGS173CW02	SSGNYAGW093CW01
BDGBLBGS303AW01	KDGBGACW113TN01	SDENXAGS153CW01	SSGNYAGW113TN01
BDGBLBGW543NW01	KDGBXACW303UN01	SDENXAGS173CN01	SSGNYAGW113TW01
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BDGBXAGS303AW01	ND3NLBGS403ZW01	SDENXAGS433AW01	SSGWCAGW113TW41
BDGBXAGW303AW01	ND3NLBSS403UN01	SDENXAGS543DW01	SSGWCFGW113TW41
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BT3JGASP403UN06	NT1JXASP403UW06	SDENYAGS173TN01	SSLNXAGW543PW01
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BT3JGASP403UW06	NT2JLASP403UW01	SDENYBGS173TN01	ST3JXASP403NW22
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BT3JLASP403UN06	NT3JLASG403UW01	SDENYRGS173CW01	STEBXASP175TW01
BT3JLASP403UW01	NT3JLASP403NN22	SDENYRGS173TW01	STEBXASP304NW22
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Table continues...

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BTEBXASP434AW01	NTEBXASP543NW23	SDEWYAGS153TW01	STENCFSP173TW01
BTGBLASP304AW01	NTEBYASP543NW23	SDEWYAGS153TW41	STENCFSP175TW01
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BTLBXASP304NW22	NTHJXASP543NW01	SDEWYAGS173TW41	STENEASP285CW01
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HDEBCRGS173TW01	NTLBXASP304NW26	SDEWYRGS153TW41	STENEASP295CW01
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HDEBXAGS543DW01	PDEBCRGS173TG02	SDGBCRGS113TQ01	STENXASP285CW01
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Table continues...

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Table continues...

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HSGBXAGW093CW01	PT2JGASG403UG06	SSENEAGW283CW01	STGNYASP095CW01
HSGBXAGW111FW28	PT2JGASP403UG06	SSENEAGW293CW01	STGNYASP113TN01
HSGBYAGW093CW01	PT2JXASG403UG06	SSENXAGW173TW01	STGNYASP113TW01
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HTEBDASP285CW01	PTEJXASP303UG06	SSENYAGS173TW01	STGWXASP113TW01
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HTEBXASP285CW01	PTGJXASP303UG06	SSENYAGW293CW01	STGWYASP113TW01
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HTEBXASP304NW22	PTLJXASP303NG22	SSEWCAGW173TW41	STGWYASP115TW41
HTEBXASP544DW01	SDEBCAGS173TQ01	SSEWCFGW173TW41	STLNXASP303LW01
HTEBYASP285CW01	SDEBCAGS173TW01	SSEWXAGS153TW01	STLNYASP543NW23
HTENXASP133DW01	SDEBCRGS153TW01	SSEWXAGS173TW01	STLNYASP543PW01
HTENXASP283CW01	SDEBCRGS173TQ01	SSEWXAGW173TW01	STLWXASP303NN22

Table continues...

HTENXASP285CW01	SDEBCRGS173TW01	SSEWYAGS153TW01	STLWXASP543NN22
HTENXASP293CW01	SDEBCRGS173TW02	SSEWYAGS173TW01	TD3NGBGS403NW36
HTENXASP295CW01	SDEBLBSS403UN01	SSEWYAGW173TW01	TDEBXAGS403UW01
HTENXASP543DW01	SDEBXAGS173TW01	SSEWYAGW173TW41	TT3JGASP403NW36
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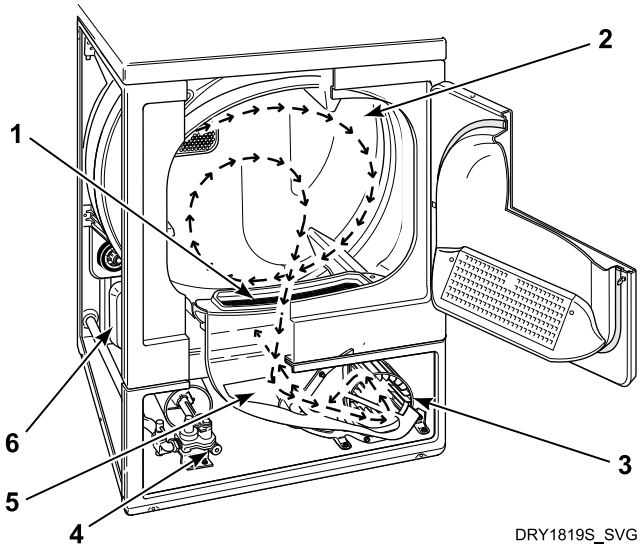
			TTEBXASP304NW22

How Your Dryer Works



1. Lint Filter
2. Cylinder
3. Exhaust Fan
4. Gas Valve
5. Air Duct
6. Heater Duct

The dryer uses heated air to dry loads of laundry. When the motor is started, the exhaust fan pulls room temperature air in through louvers at the rear of the dryer and over the heat source (burner flame for gas and heating element for electric). The heated air moves through the heater duct and into the cylinder, where it circulates through the wet load. The air then passes through the lint filter, air duct, and exhaust fan, where it is vented to the outdoors.

Dryer Troubleshooting

WARNING

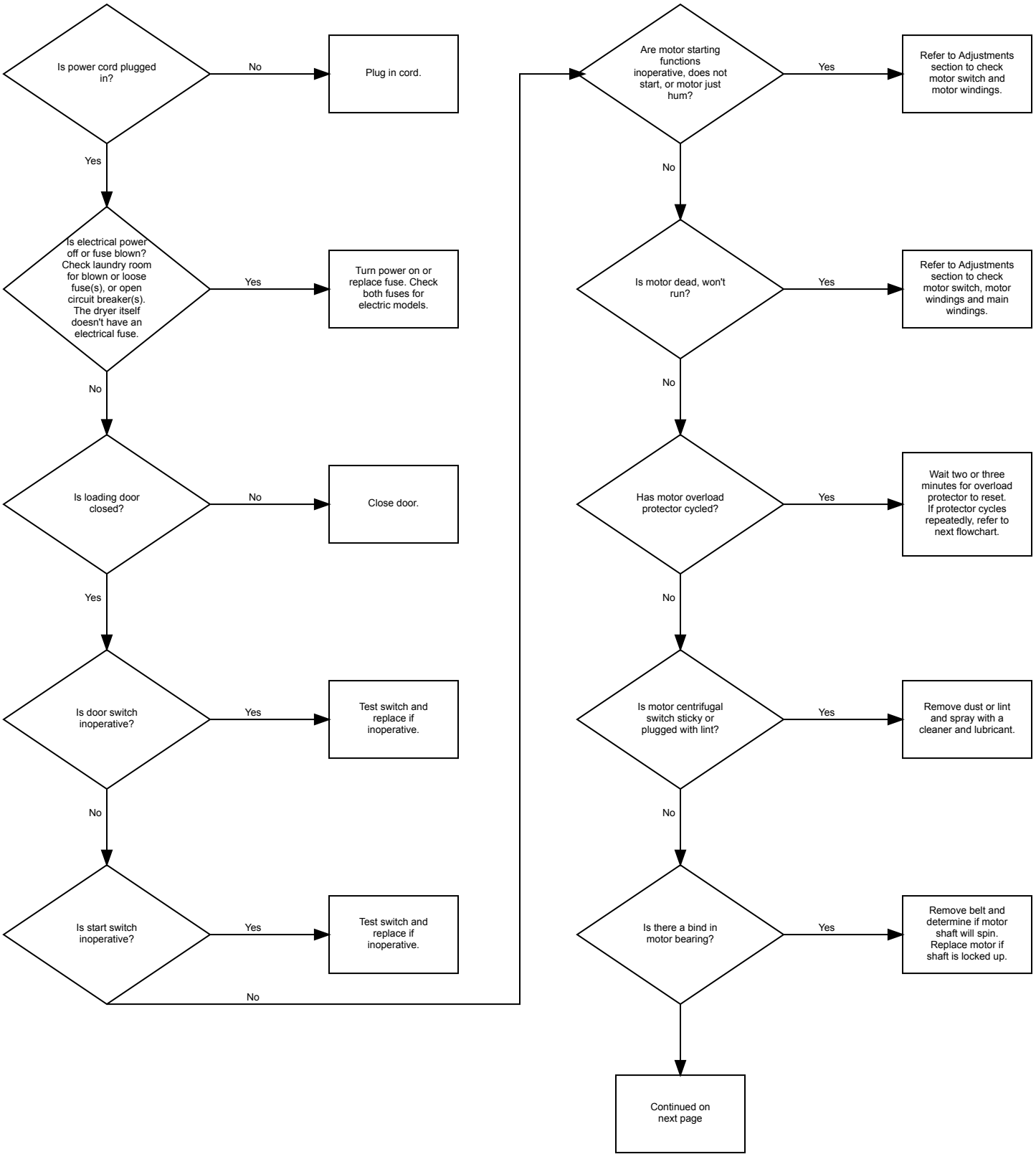
To reduce the risk of electric shock, fire, explosion, serious injury or death:

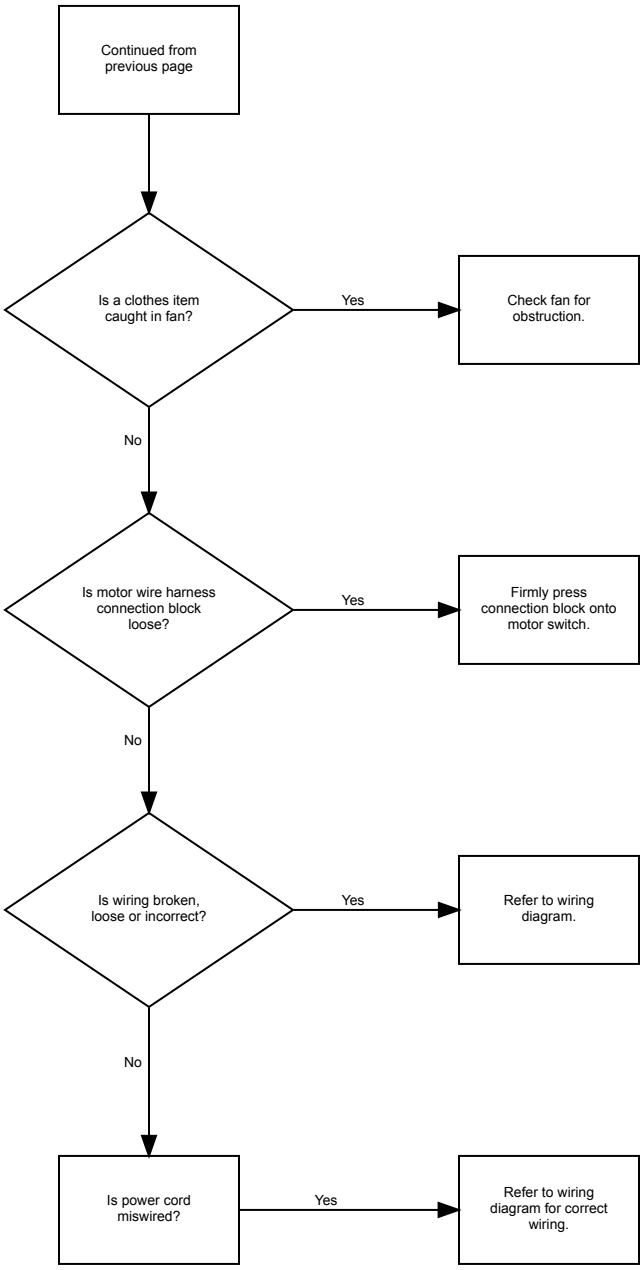
- **Disconnect electric power to the dryer before servicing.**
- **Close gas shut-of valve to gas dryer before servicing.**
- **Never start the Dryer with any guards/panels removed.**
- **Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the dryer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

W001R1

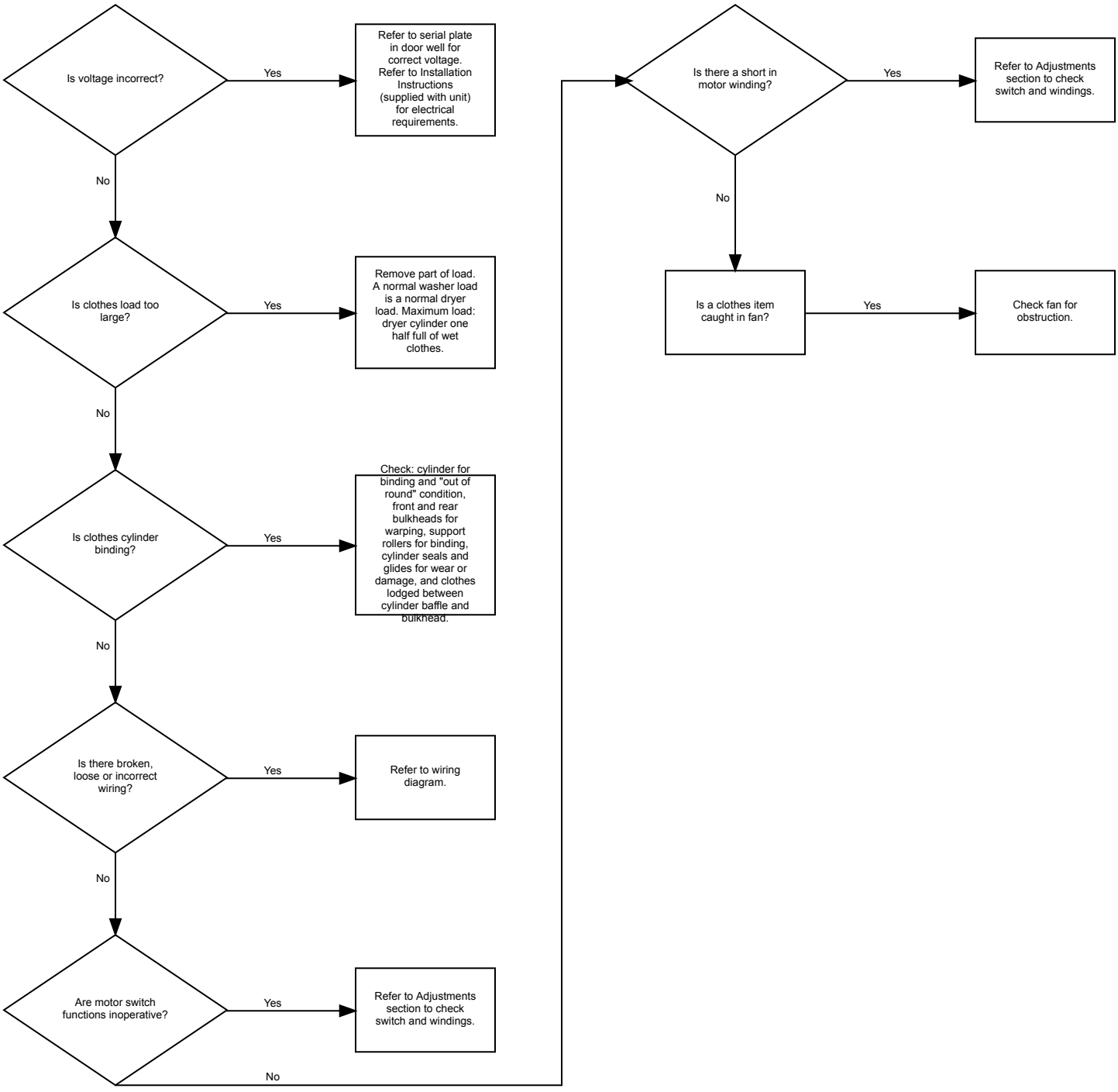
IMPORTANT: Refer to wiring diagram for aid in testing dryer components.

Dryer Motor Does Not Run

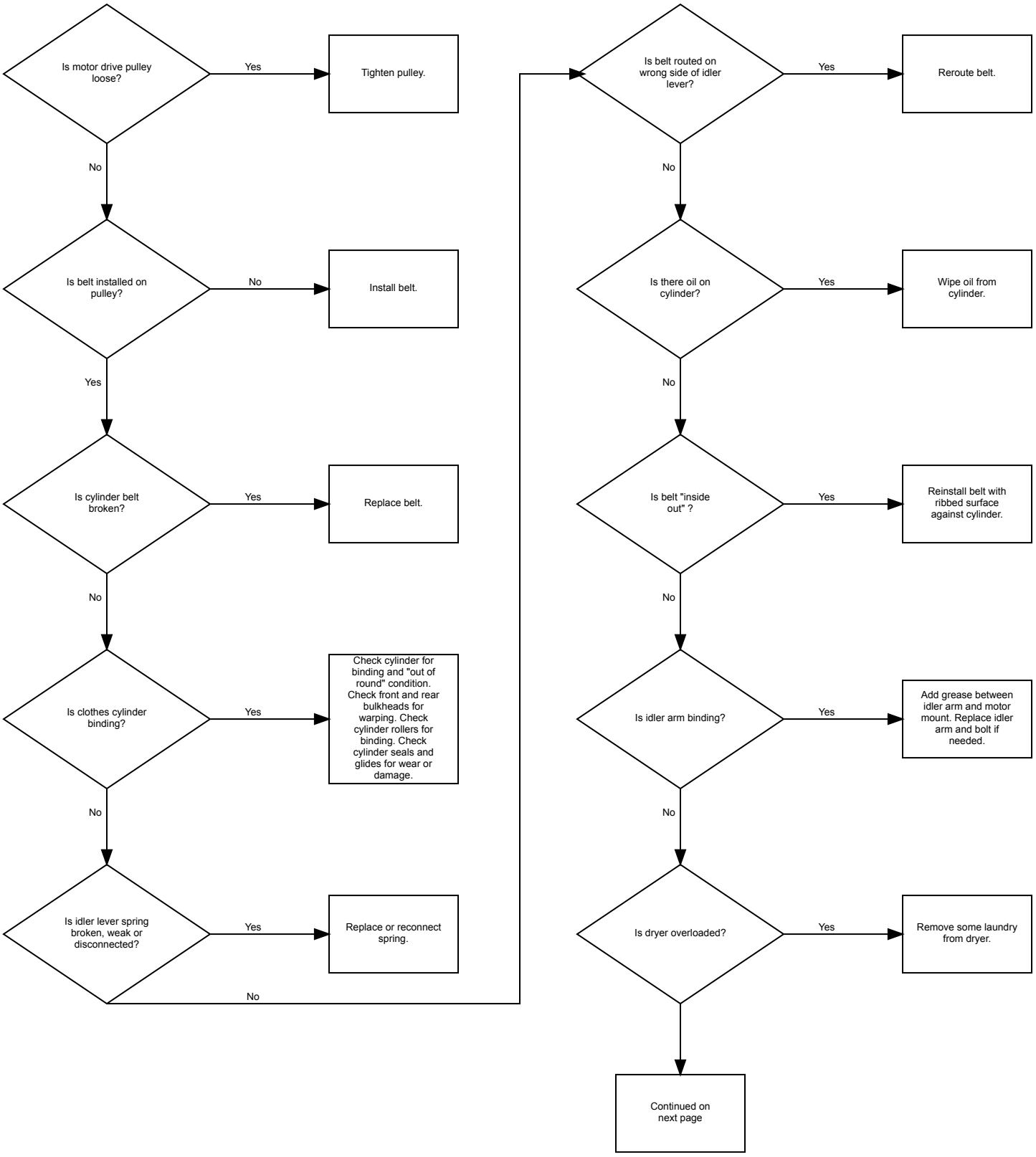


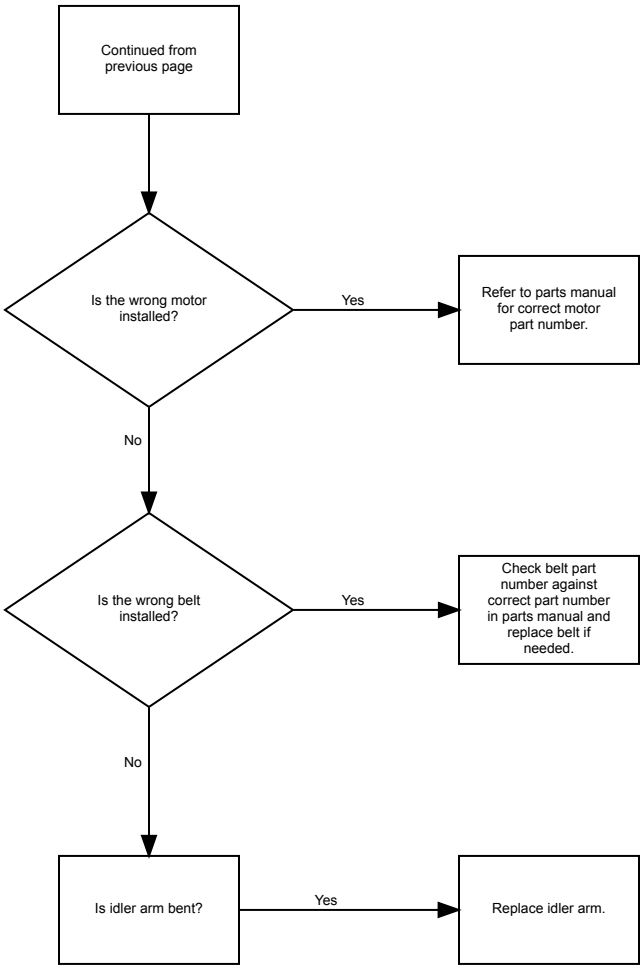


Dryer Stops in Cycle; Quits After the First Few Loads; Has a Burning Smell; Cycles on Motor Thermal Protector

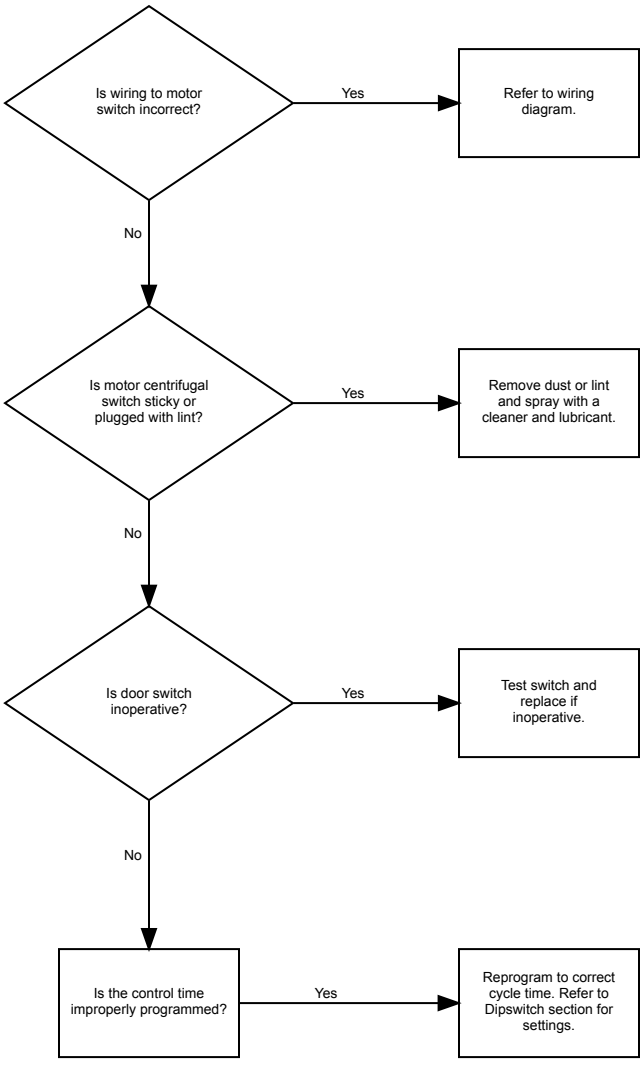


Dryer Motor Runs but Cylinder Does Not Turn

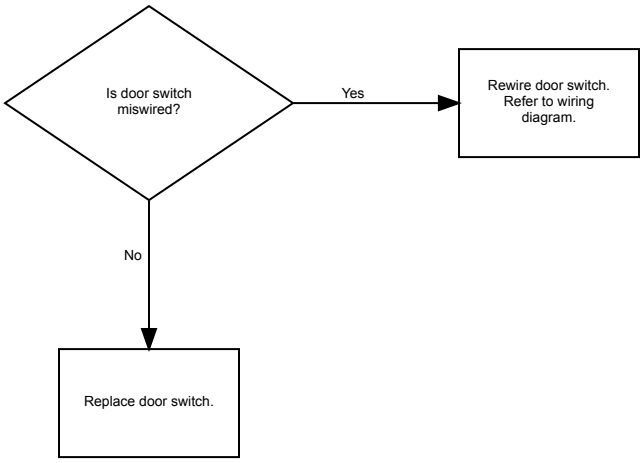




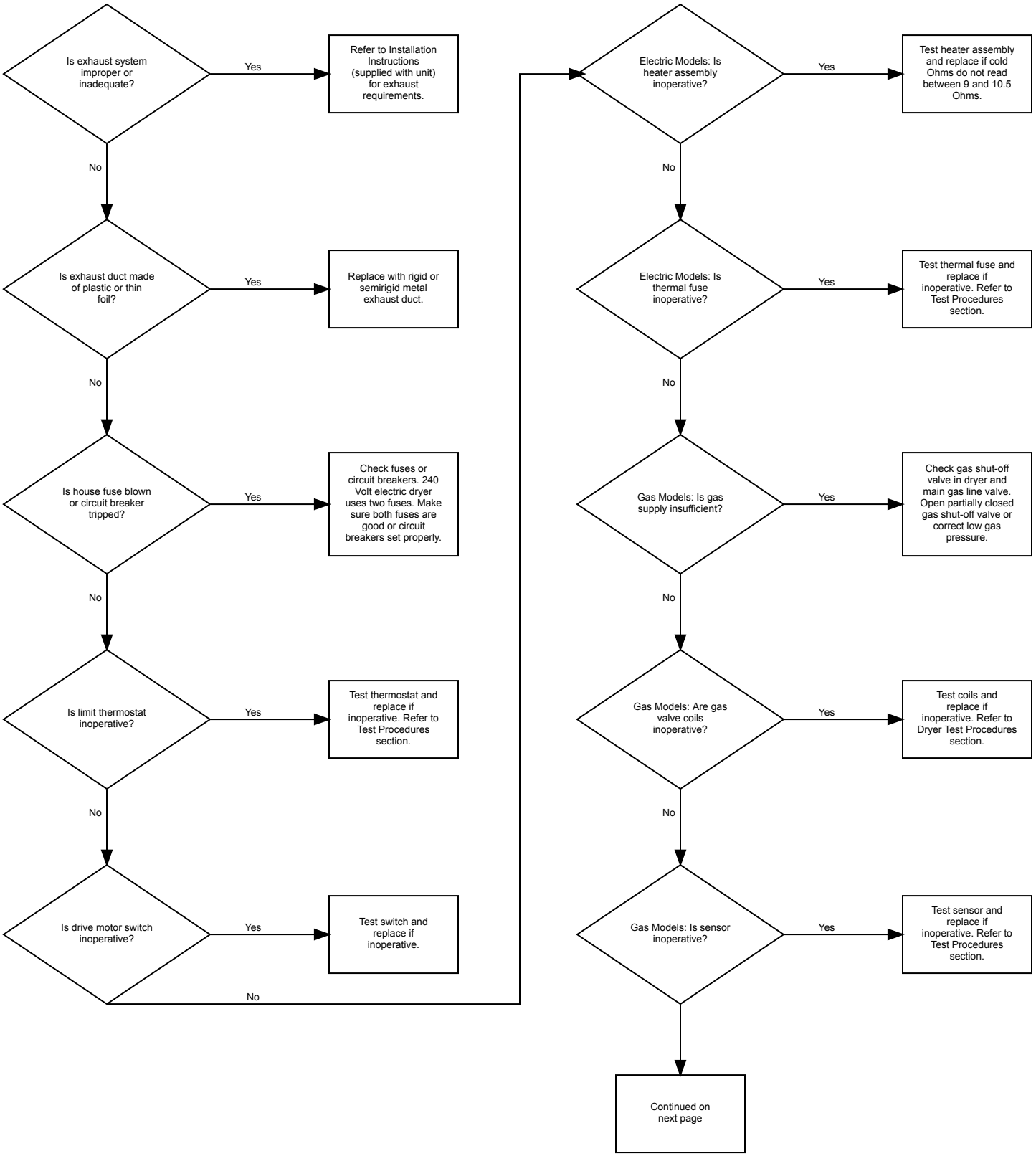
Dryer Motor Does Not Stop

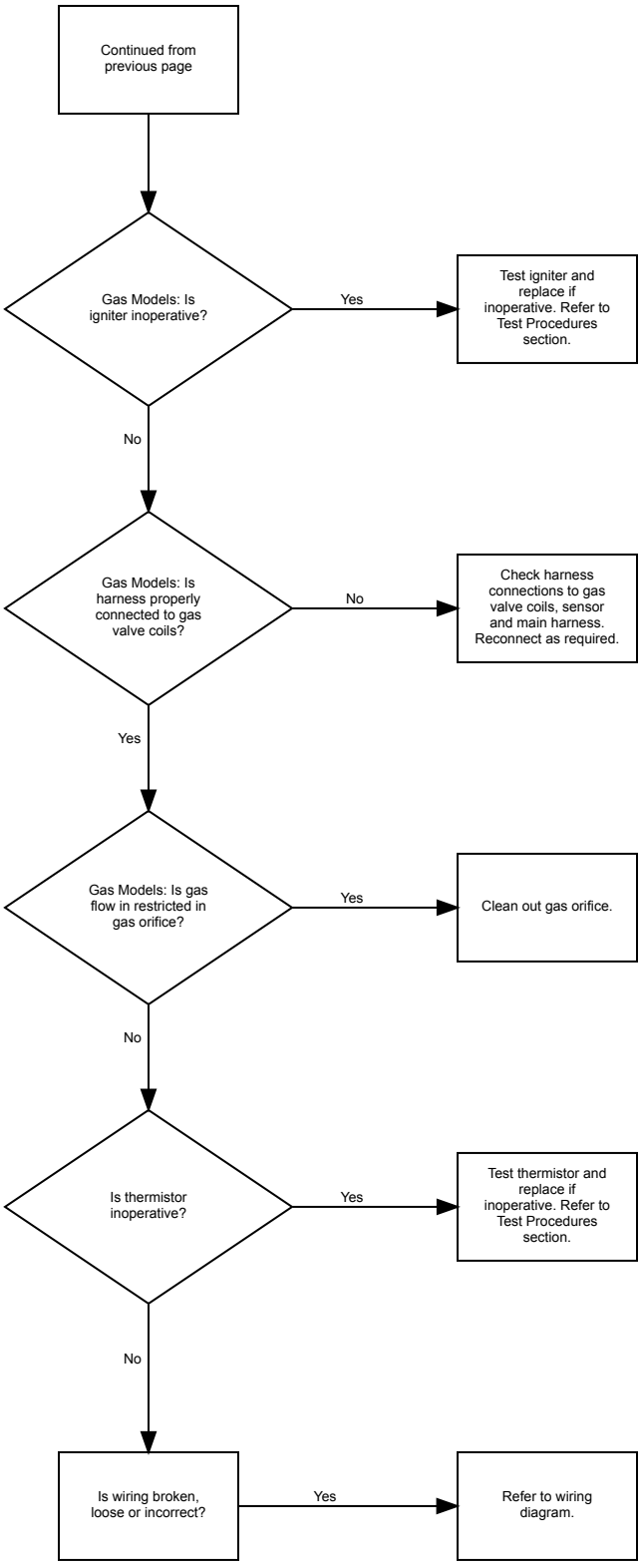


Dryer Runs Only When Door is Open

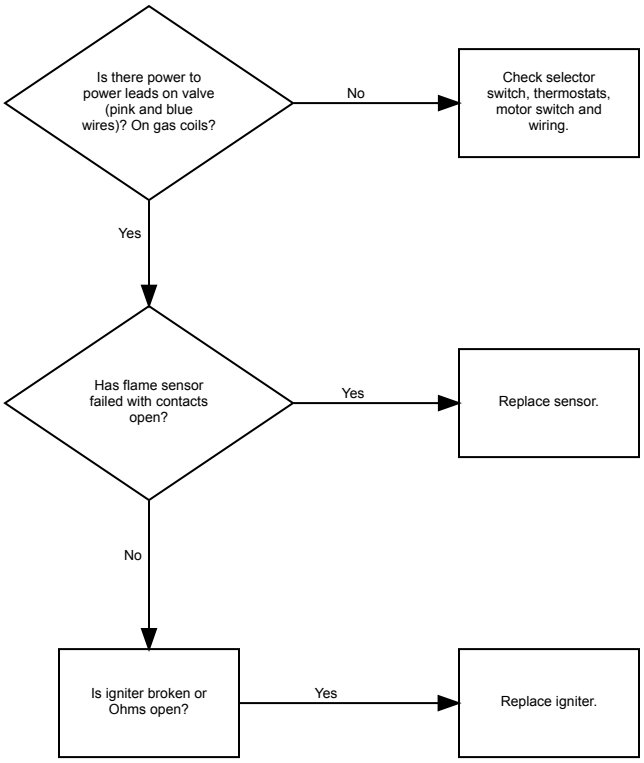


Dryer Heating Assembly Does Not Heat or Burner Does Not Ignite

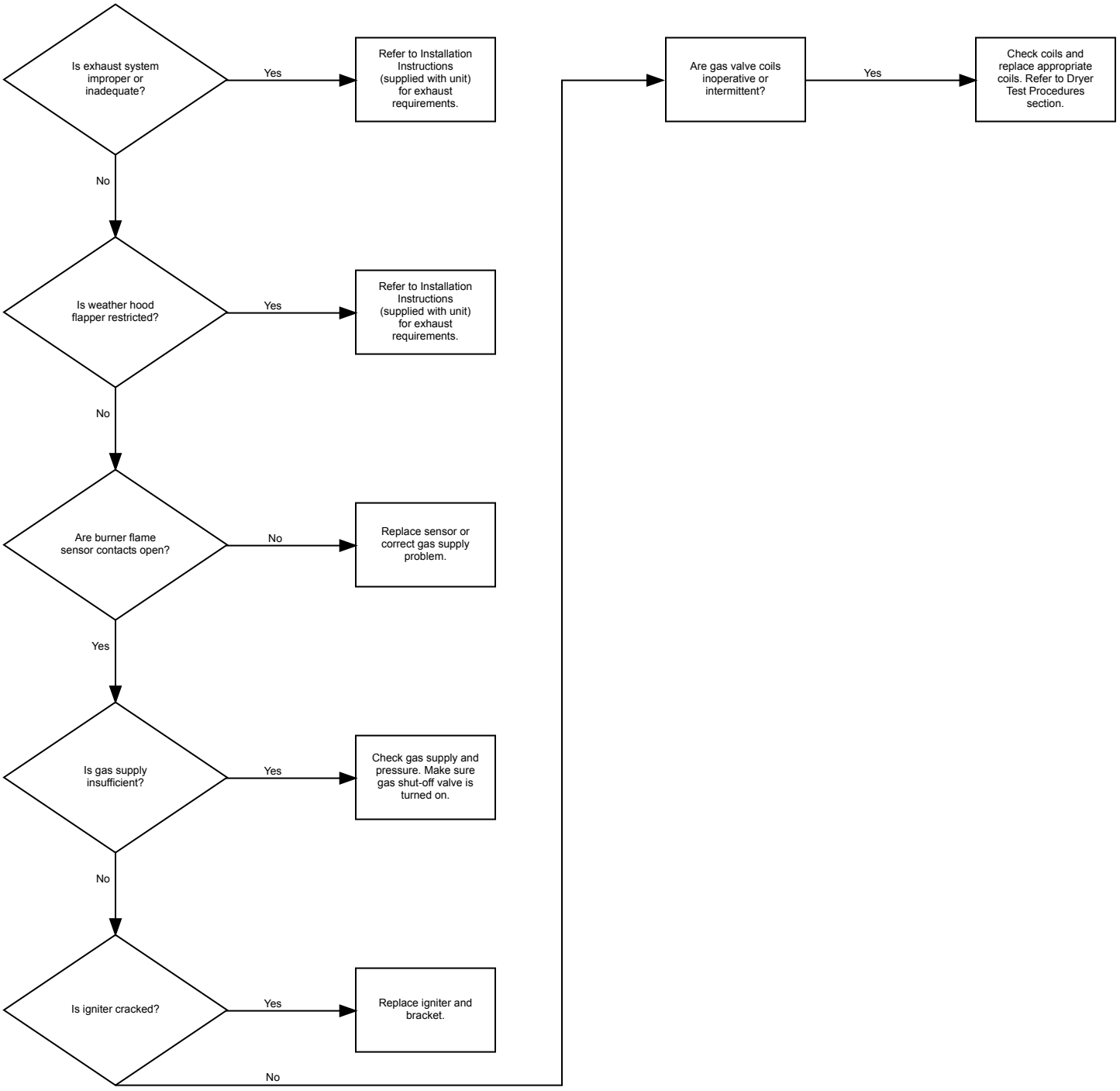




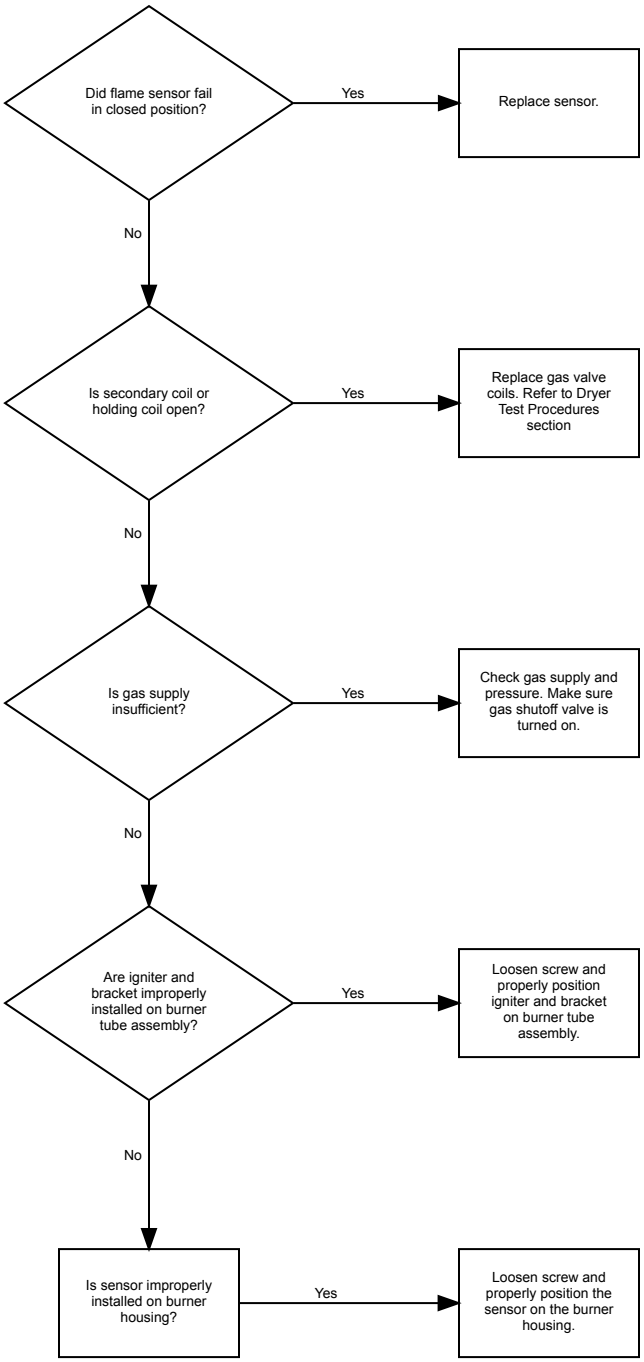
Igniter Does Not Glow (Gas Supply Sufficient) - Gas Dryer Models



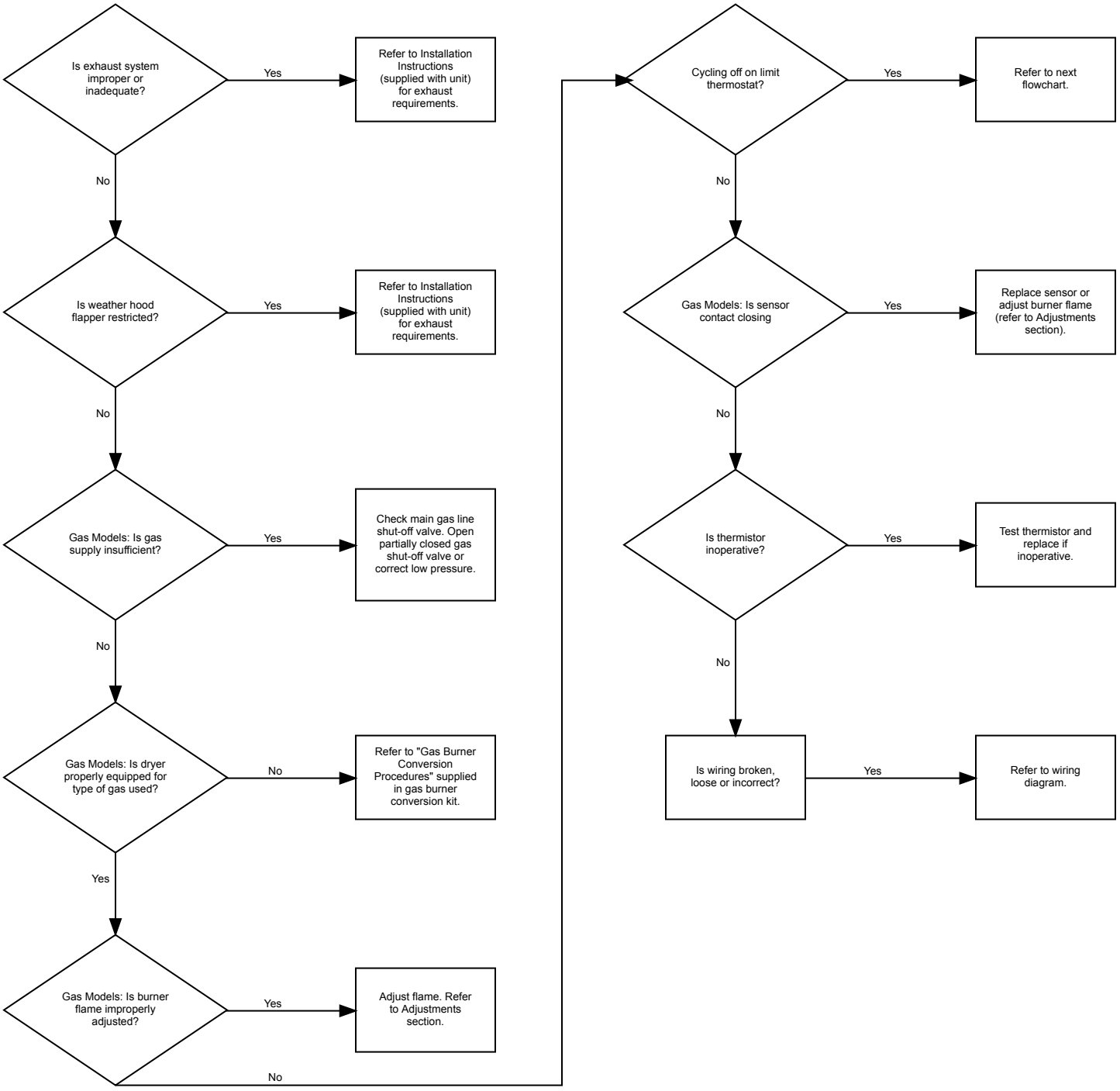
Burner Ignites and Goes Out Repeatedly (Gas Dryer Models)



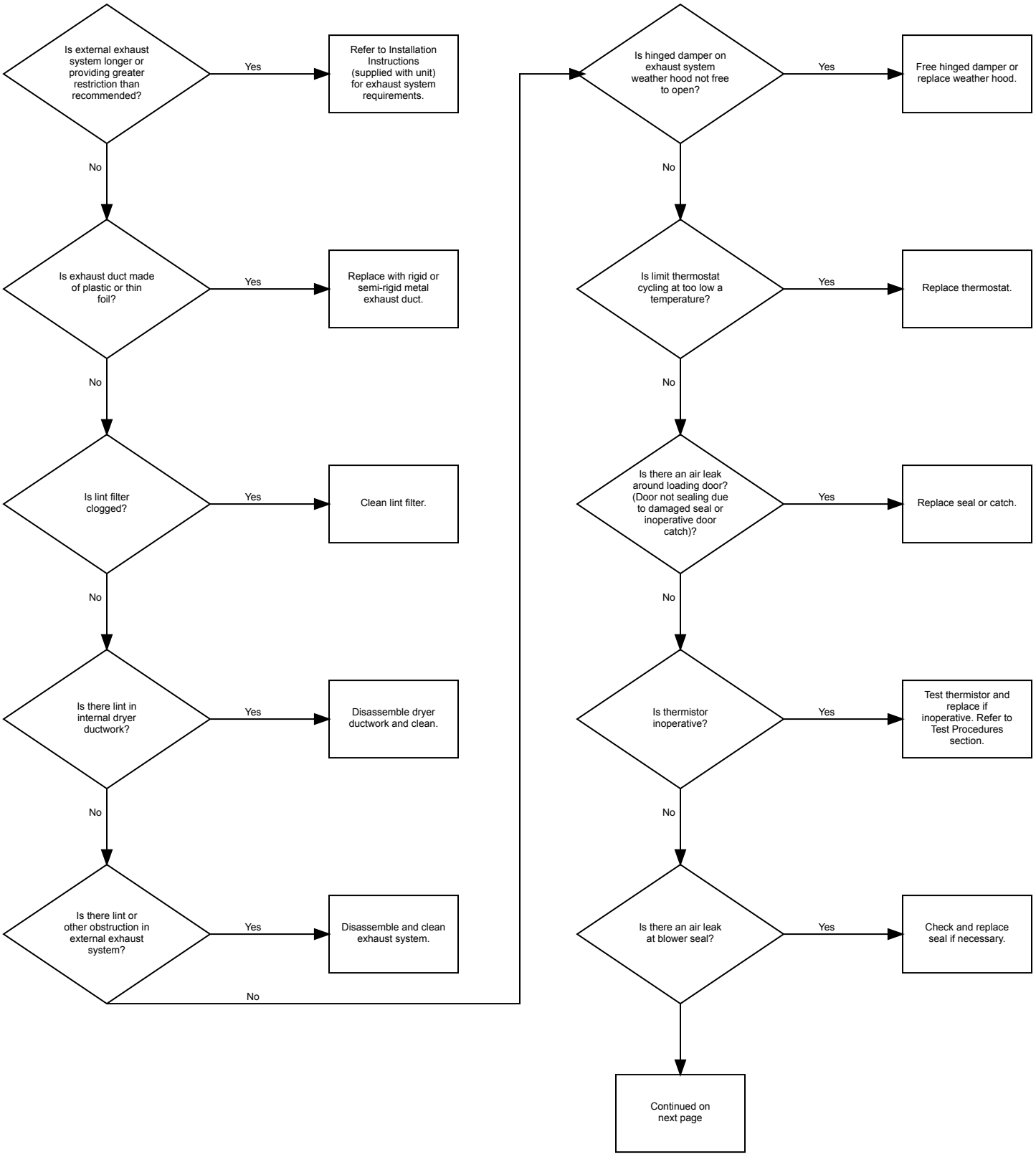
Igniter Glows but Burner Does Not Ignite (Gas Dryer Models)

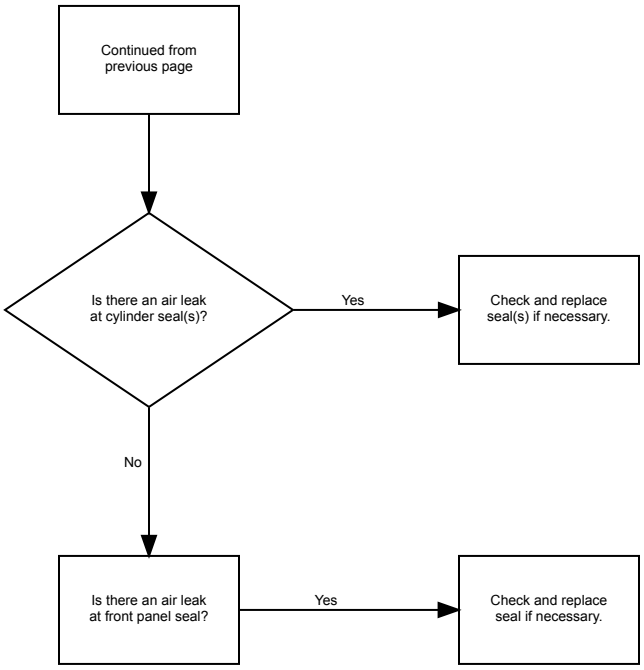


Dryer Heater Assembly or Burner Shuts Off Prematurely

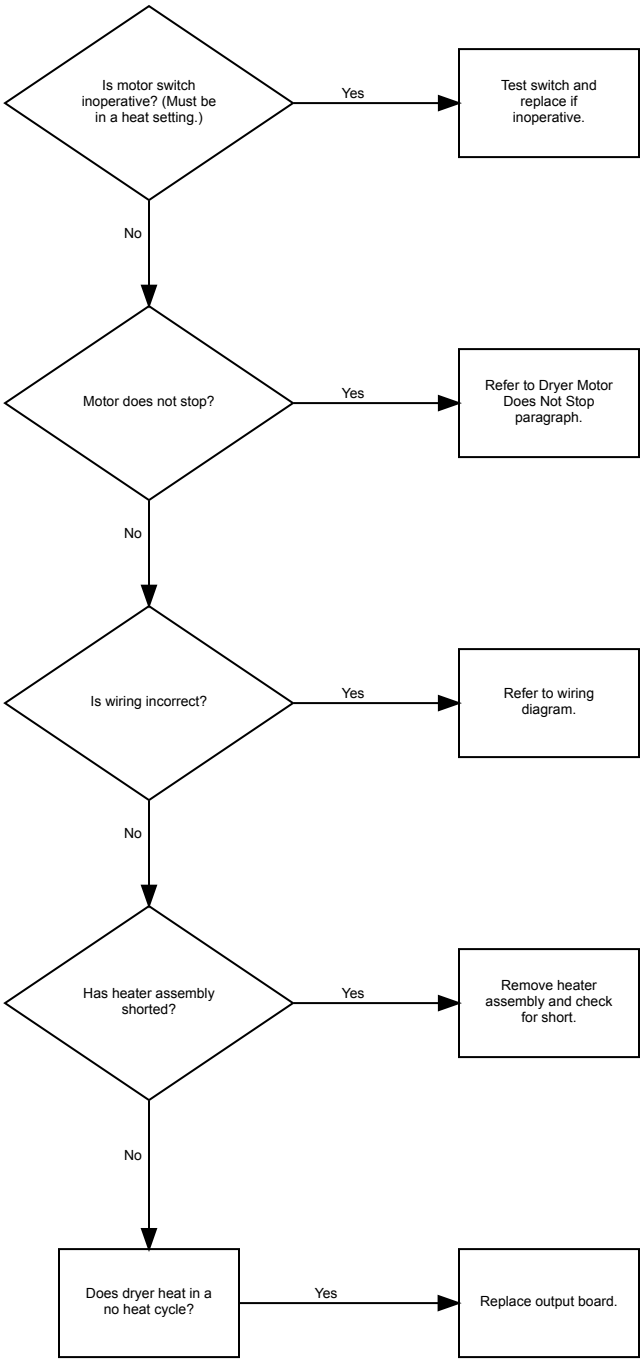


Dryer Heater Assembly or Burner Repeatedly Cycles Off On Limit Thermostat

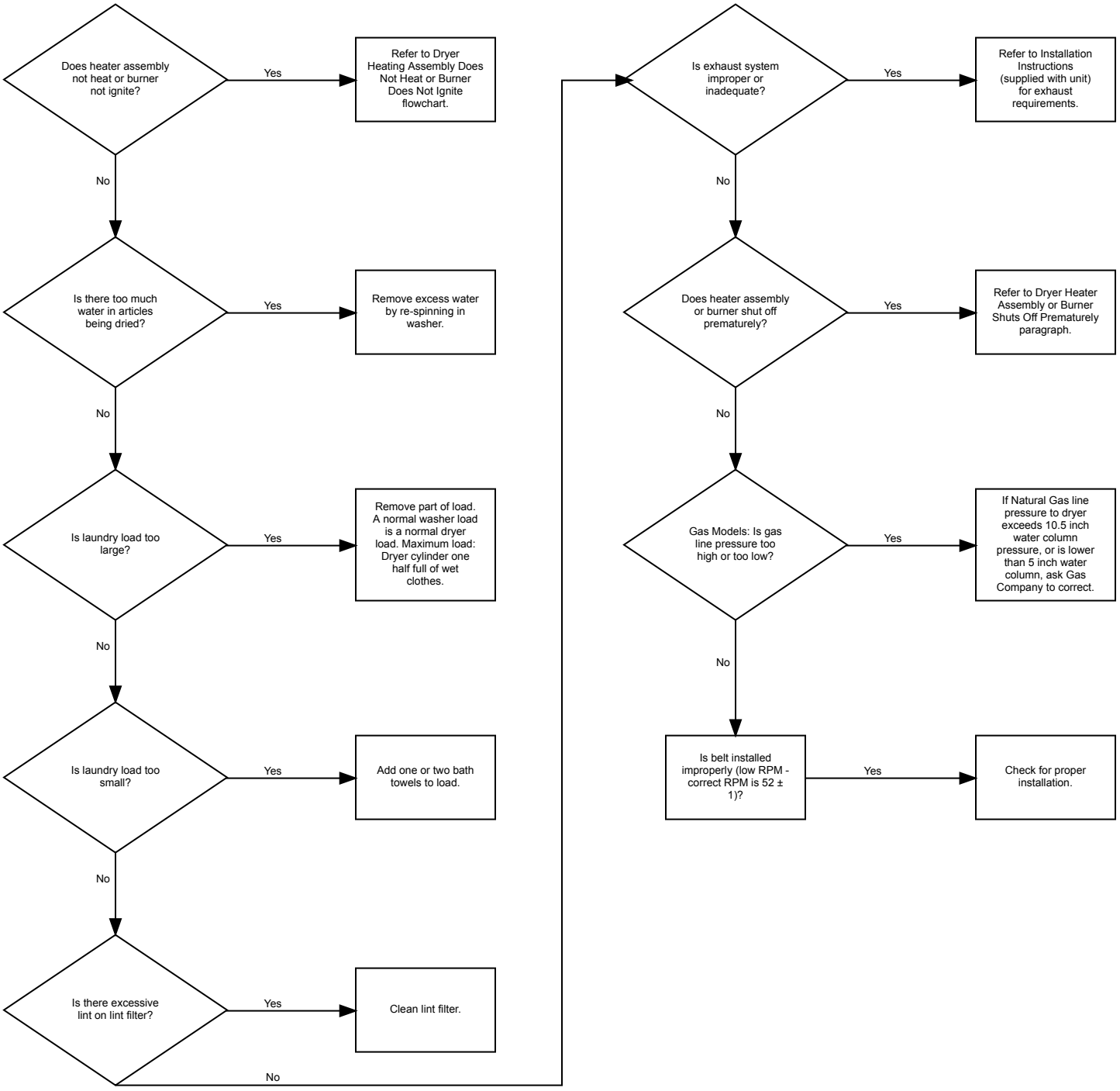




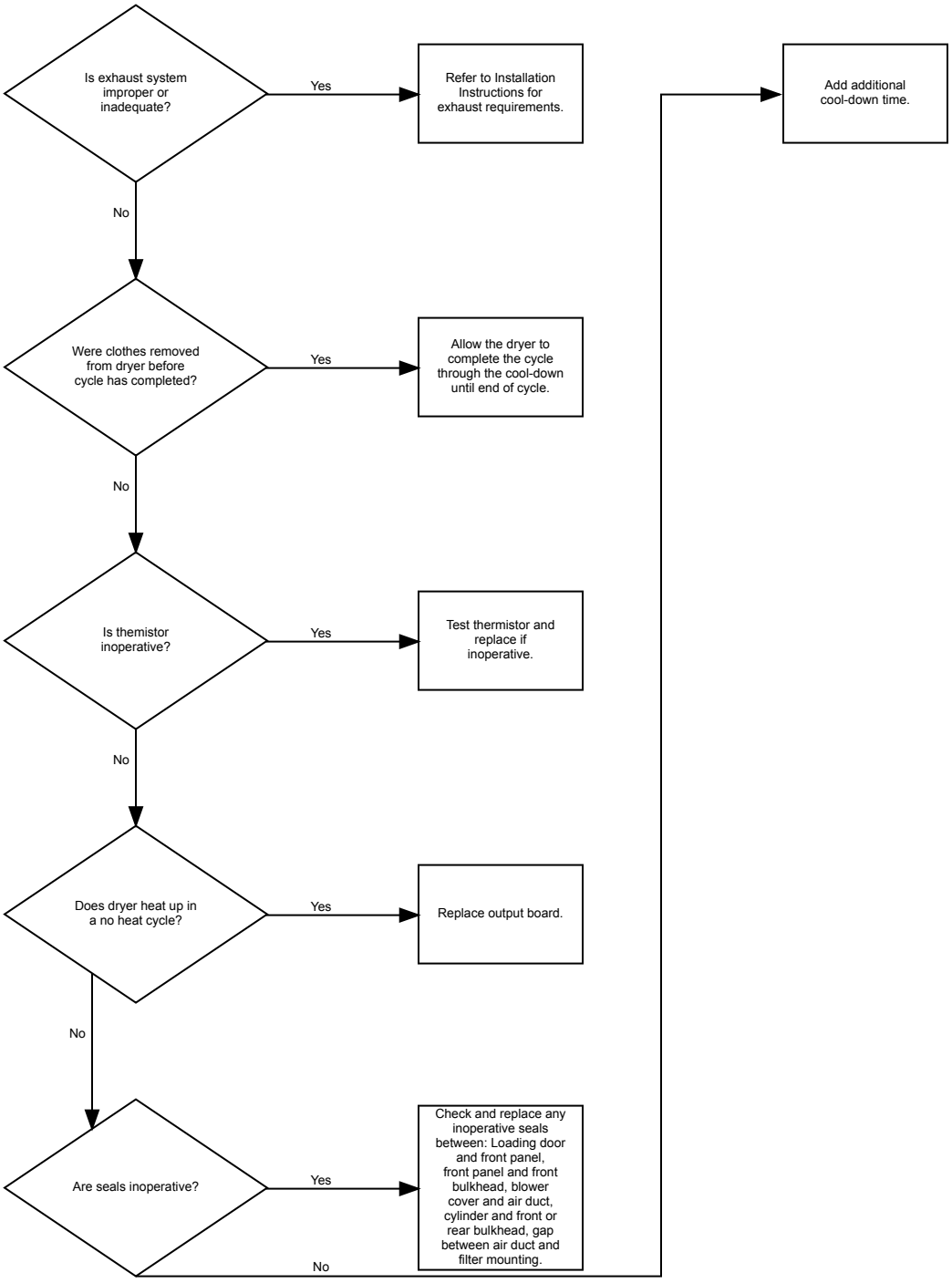
Dryer Heater Assembly or Burner Does Not Shut Off



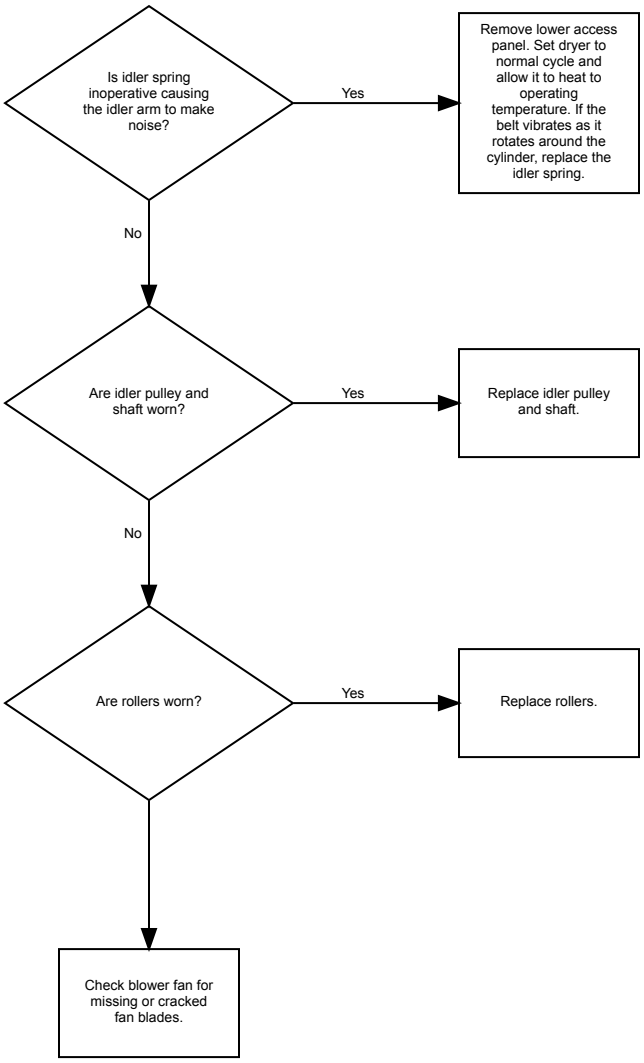
Clothes Do Not Dry in Dryer



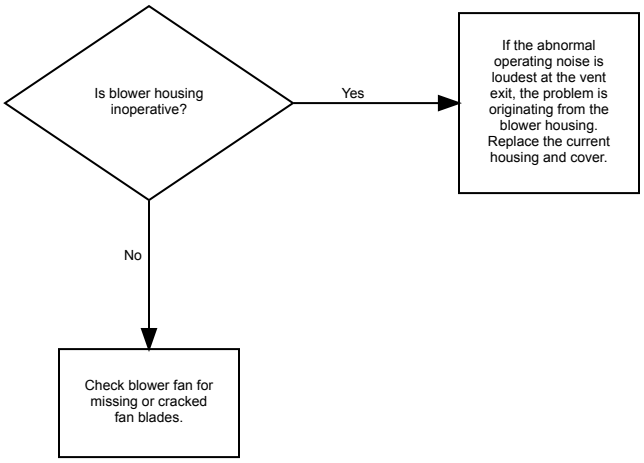
Clothes Are Too Hot When Removed From Dryer



Excessive Chattering or Vibrating Noise in Dryer



Excessive Humming or Whistling Noise in Dryer



Electronic Control Troubleshooting

WARNING

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

- **Disconnect electric power to the dryer before servicing.**
- **Close gas shut-of valve to gas dryer before servicing.**
- **Never start the Dryer 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.**

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Error Codes

Following is a list of possible error codes for an electronic control. Errors beginning with E1 refer to external device Infra-red communication errors. Errors beginning with EC refer to card reader errors. All other errors refer to machine errors.

Display	Description	Cause/ Corrective Action
E1 01	Transmission Failure	Communication failure. Re-aim external device and try again.
E1 02	Device Time-out	Communication failure. Re-aim external device and try again.
E1 03	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
E1 04	Command Packet Time Out	Communication failure. Re-aim external device and try again.
E1 05	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
E1 09	CRC-16 Error	Communication failure. Re-aim external device and try again.
E1 0A	Framing Error	Communication error. Re-aim external device and try again.
E1 0C	Time-out Exceeded	Communication error. Re-aim external device and try again.
E1 0E	Encryption Error	Incorrect machine type. Before downloading, ensure data is for current machine type.
E1 0F	Invalid Wake-up or Infra-red Disabled	Communication failure or infra-red is disabled. Manually enable infra-red on control or re-aim external device and try again.

Table 1 *continues...*

Display	Description	Cause/ Corrective Action
EC02	Time-out Error	Communication failure. Try card again.
EC03	Invalid Command Code	Incorrect machine type. Before downloading, ensure data is for current machine type.
EC05	Invalid or Out-of-Range Data	Incorrect machine type. Before downloading, ensure data is for current machine type and values entered are within the minimum and maximum limits.
EC 11	No Card Reader Initialization	Communication is valid, but there is no card reader initialization. Power down, power up and try again.
EC 18	No Communication	Card reader initialized, communication lost. Power down, power up and try again. If error persists, replace control or card reader.
EC 19	No Card Reader Communication and No Card Reader Initialization	Communication failure. Power down, power up, check connections, harness and try again. If error persists, replace control or card reader.
EC36	Audit Card Removed Prematurely	Re-insert Audit Card and wait until machine prompts for card removal.
Right most decimal point Lit	Network Communication Error	Communication problem. Wait for 1.5 minutes for error to clear. If error doesn't clear, power-down and power-up the machine. Check all network connections. If error persists, replace control or network board.
ALArn	Break-in Alarm Error	Service the service door or coin vault switches.
oFF	Break-in Alarm Shutdown Error	Service the service door or coin vault switches.
Err	Coin Error	Invalid coin pulse or inoperative coin sensor. Check coin drop area and remove obstructions. If error persists, tampering may have occurred. Evaluate security procedures.
E SH	Shorted Thermistor Error	Dead short in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.
E oP	Open Thermistor Error	Physical open in thermistor circuit. Check wiring harness and remove any lint build-up around thermistor. If problem persists, replace thermistor or output board.

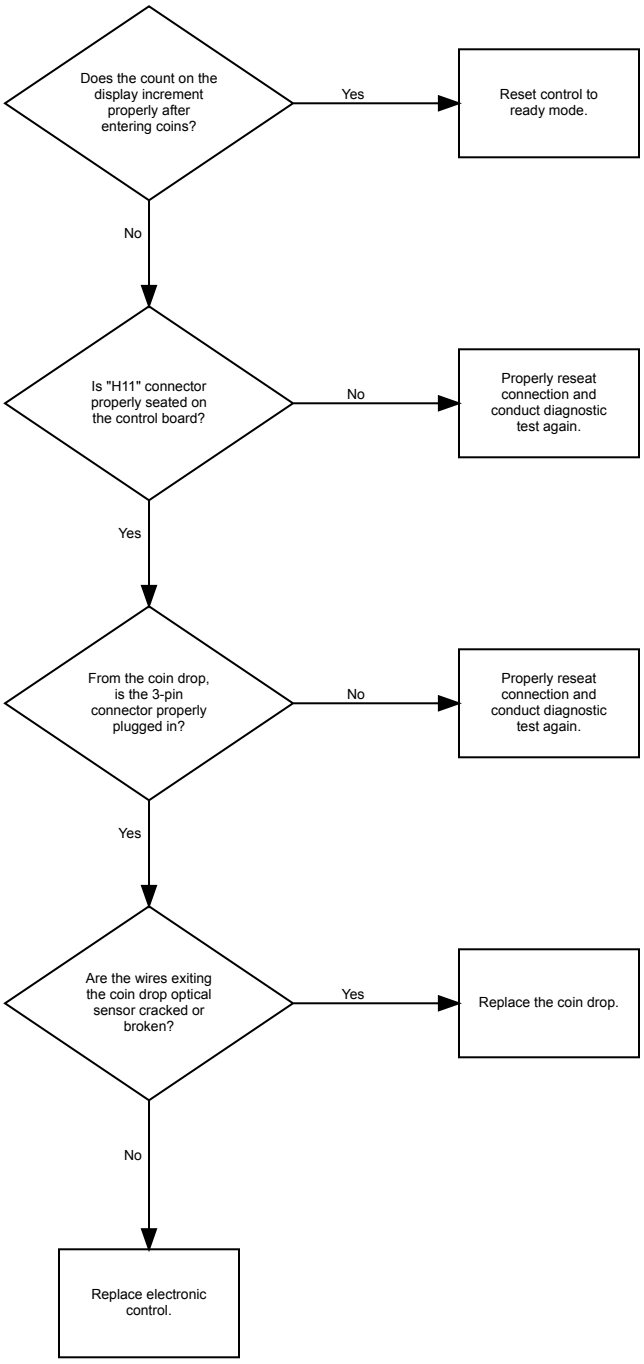
Table 1 *continues...*

Display	Description	Cause/ Corrective Action
E id	Board ID	Incorrect replacement control. Replace user control or output board with correct part.
E dS	Brownout/Voltage Configuration	Unexpected supply voltage. Check the harness connections between the user control and the output board. If the user control was replaced, set dipswitch #1 to the same setting as the previous control. If reworking the machine to use a different supply voltage, the dip switch #1 setting may need to be changed. If the dip switch #1 setting is changed, power down, power up and try again.
E nr	Output Board Not Ready	Hardware failure. Replace output board.
E bS	Output Board Communication	Hardware failure. Replace output board.
EnHH	Machine ID	Communication failure. Power down, power up and try again. If error persists, check connection between user control and Machine ID chip, or try replacing the user control or the Machine ID chip.
E Co	Output Board Communication	Communication failure. Power down, power up and try again. If error persists, check connection between user control and output board, or try replacing the user control or the output board.
E 59	Door Input Acquisition	Hardware failure. Replace output board.
E 60	Centrifugal Switch Input Acquisition	Hardware failure. Replace output board.
E 61	High Limit Thermostat Input Acquisition	Hardware failure. Replace output board.
E ro	Locked Rotor	The motor is not sensed as rotating when it should be. Check that nothing is obstructing motor rotation, check connection between user control and output board, or try replacing the user control or the output board.
E nS	Motor Output Shorted	Hardware failure. Replace output board.

Table 1

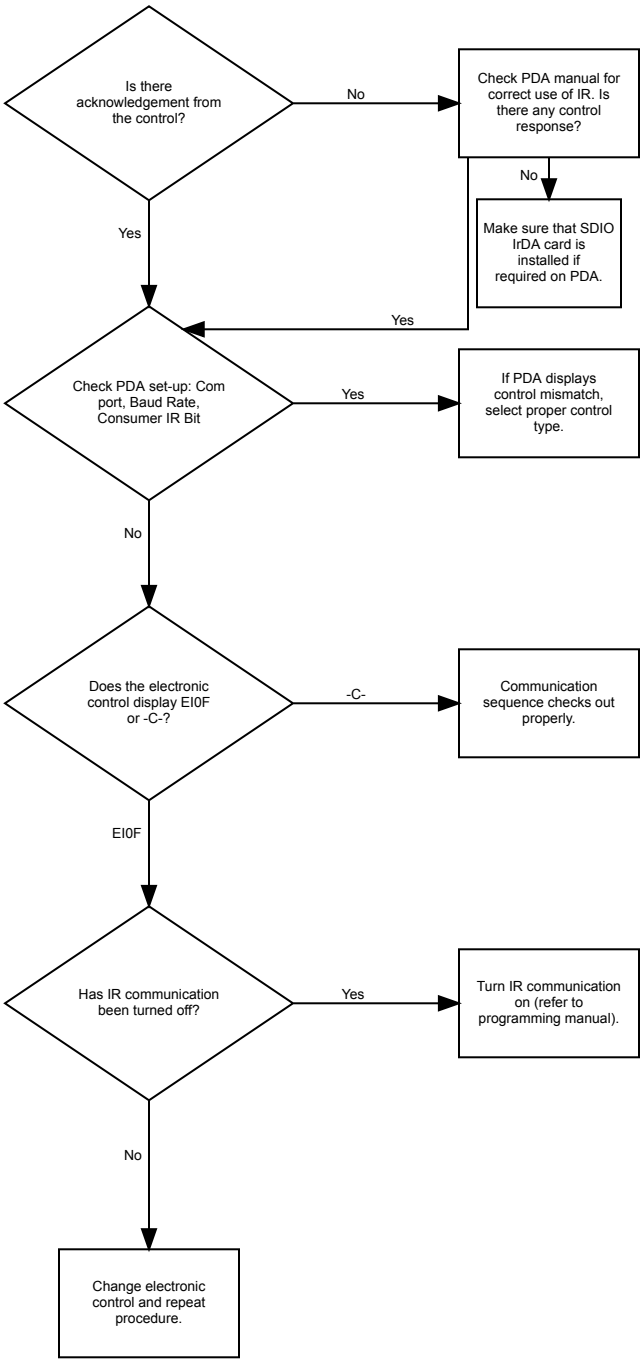
Coins Ignored When Entered

Start Production Test Cycle and advance to Coin Drop step.

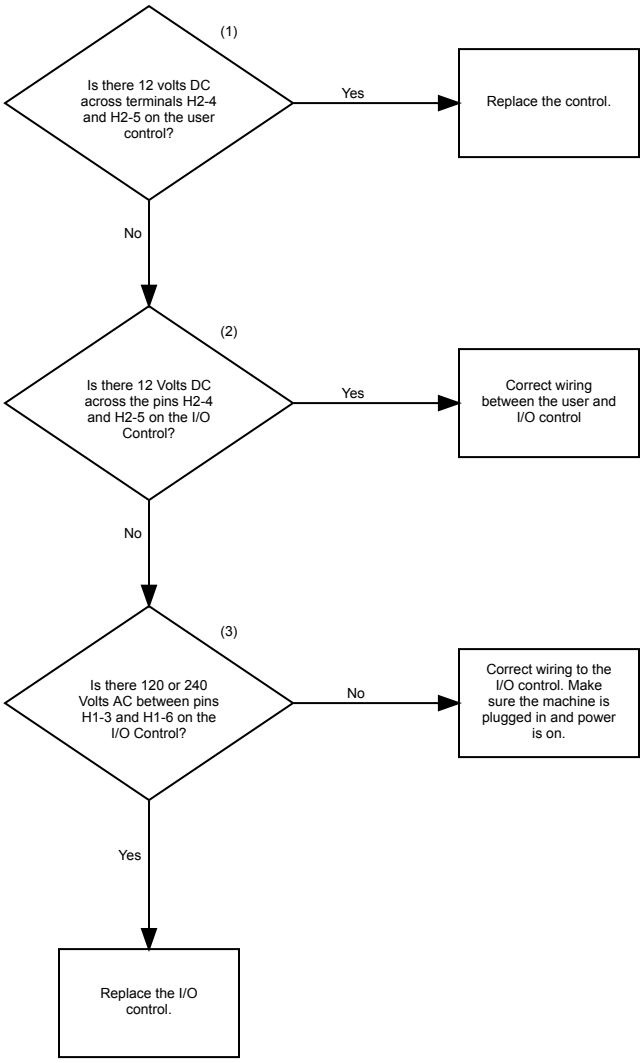


PDA Does Not Communicate With Control

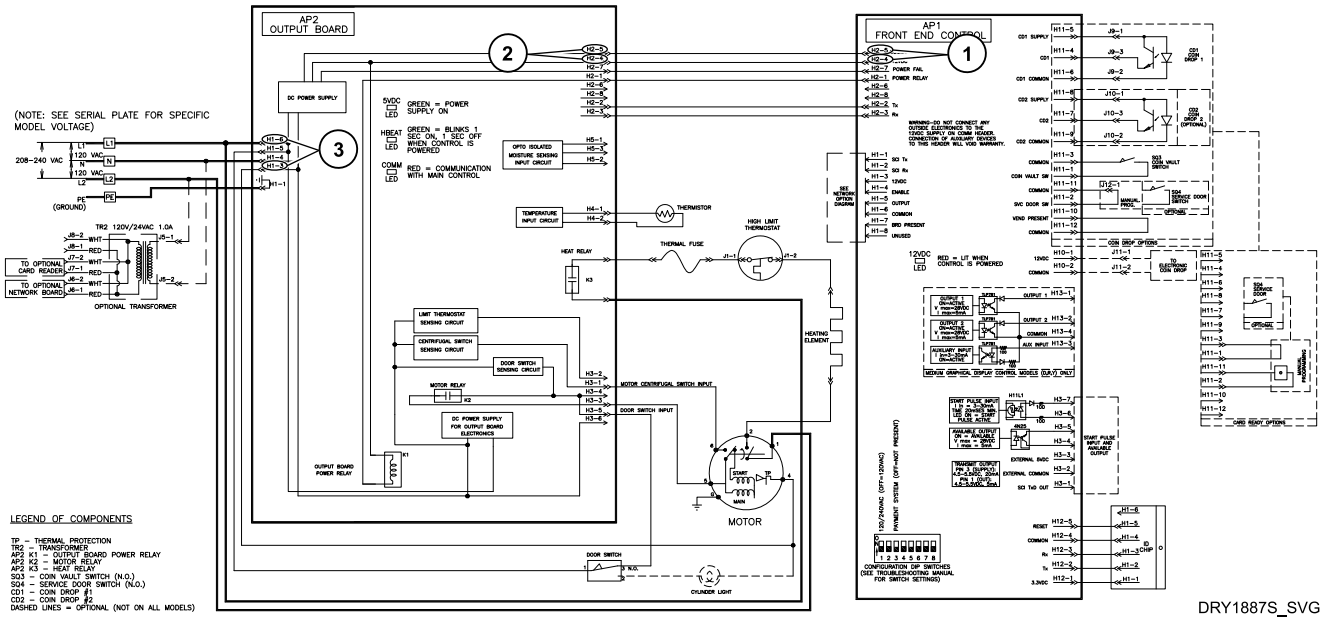
Attempt to communicate with the electronic control using the PDA.



No Display

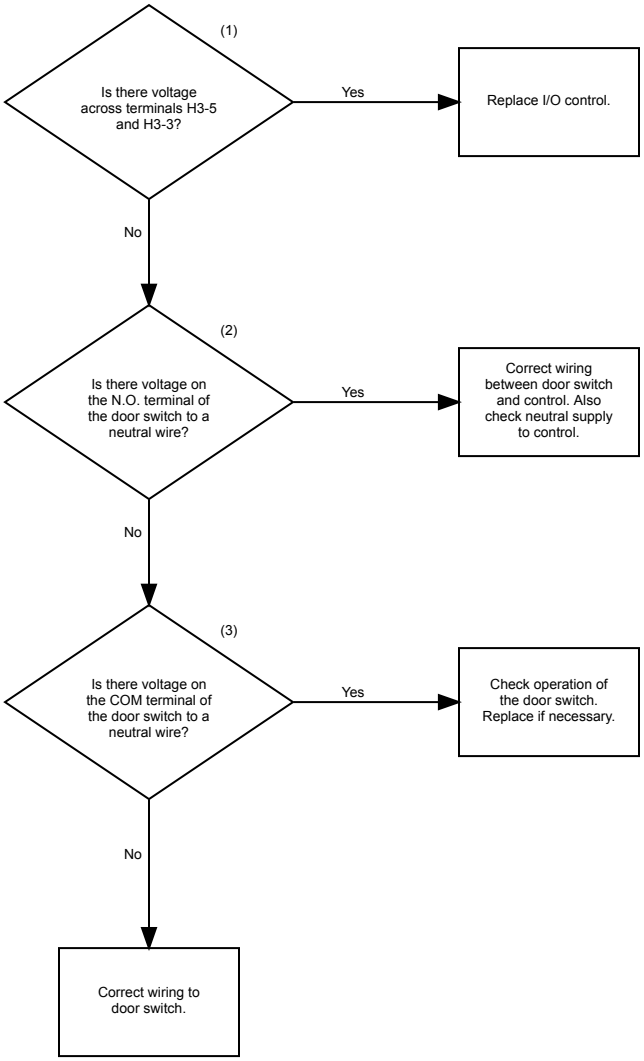


No Display

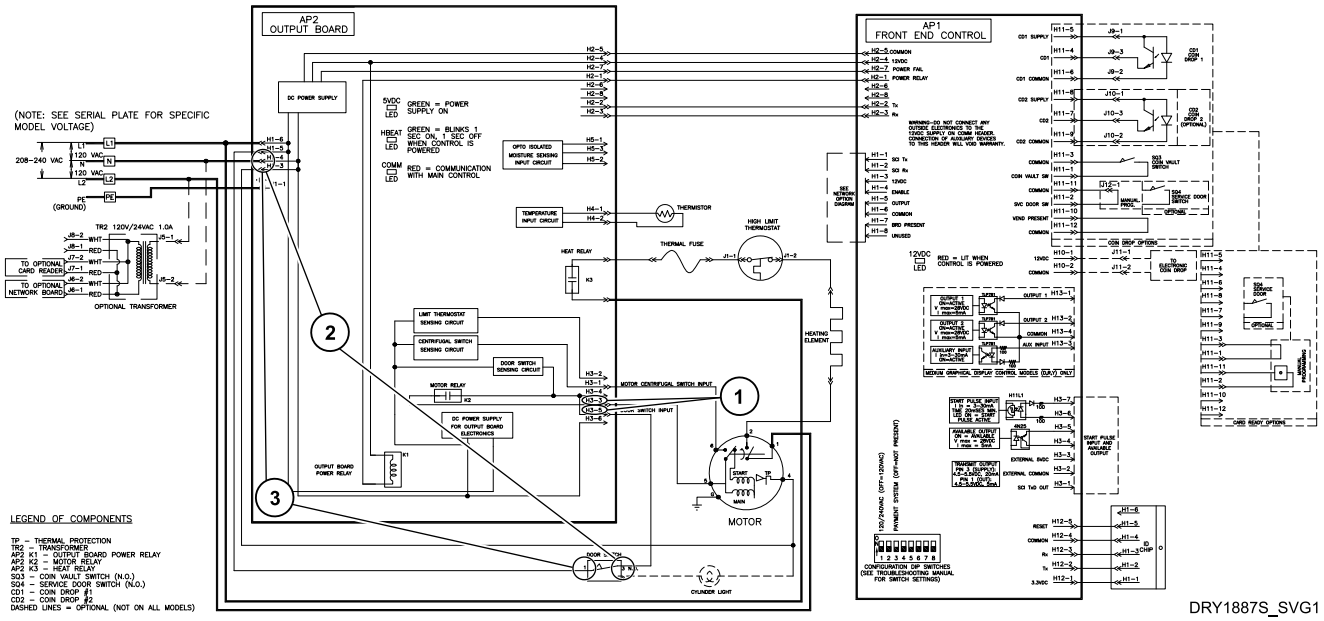

AP2
OUTPUT BOARD
AP1
FRONT END CONTROL
(NOTE: SEE SERIAL PLATE FOR SPECIFIC MODEL VOLTAGE)
208-240 VAC
120 VAC
DC POWER SUPPLY
5VDC LED GREEN = POWER SUPPLY ON
HHEAT LED GREEN = BLINKS 1 SEC ON, 1 SEC OFF WHEN CONTROL IS POWERED
COMM LED RED = COMMUNICATION WITH MAIN CONTROL
OPTO ISOLATED MOISTURE SENSING INPUT CIRCUIT
TEMPERATURE INPUT CIRCUIT
THERMISTOR
HIGH LIMIT THERMOSTAT
THERMAL FUSE
HEAT RELAY
LIMIT THERMOSTAT SENSING CIRCUIT
CENTRIFUGAL SWITCH SENSING CIRCUIT
DOOR SWITCH SENSING CIRCUIT
MOTOR RELAY
DC POWER SUPPLY FOR OUTPUT BOARD ELECTRONICS
OUTPUT BOARD POWER RELAY
MOTOR CENTRIFUGAL SWITCH INPUT
DOOR SWITCH INPUT
HEATING ELEMENT
MOTOR
DOOR SWITCH
CYLINDER LIGHT
TR2 120V/24VAC 1.0A
TO OPTIONAL CARD READER
TO OPTIONAL NETWORK BOARD
OPTIONAL TRANSFORMER
12VDC LED RED = LIT WHEN CONTROL IS POWERED
CONFIGURATION DIP SWITCHES (SEE TROUBLESHOOTING MANUAL FOR SWITCH SETTINGS)
LEGEND OF COMPONENTS
TP – THERMAL PROTECTION
TR2 – TRANSFORMER
AP2 K1 – OUTPUT BOARD POWER RELAY
AP2 K2 – MOTOR RELAY
AP2 K3 – HEAT RELAY
SQ3 – COIN VAULT SWITCH (N.O.)
SQ4 – SERVICE DOOR SWITCH (N.O.)
CD1 – COIN DROP #1
CD2 – COIN DROP #2
DASHED LINES = OPTIONAL (NOT ON ALL MODELS)
DRY1887S_SVG

Door Open

NOTE: Conduct all tests with the door closed.

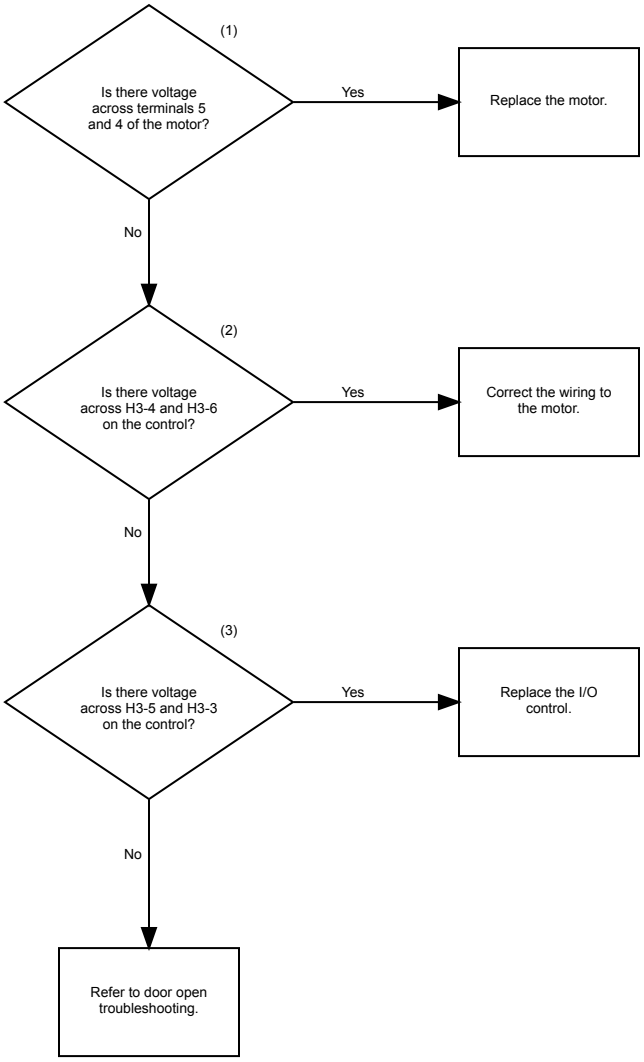


Door Open

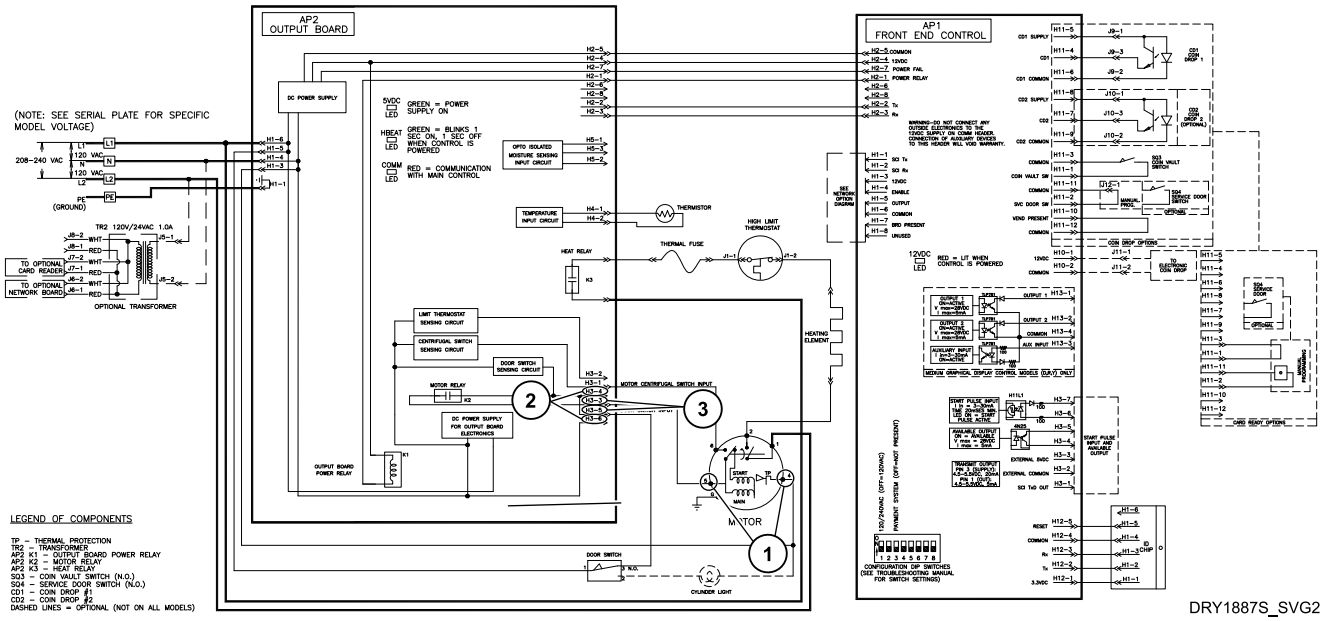


Motor Will Not Start

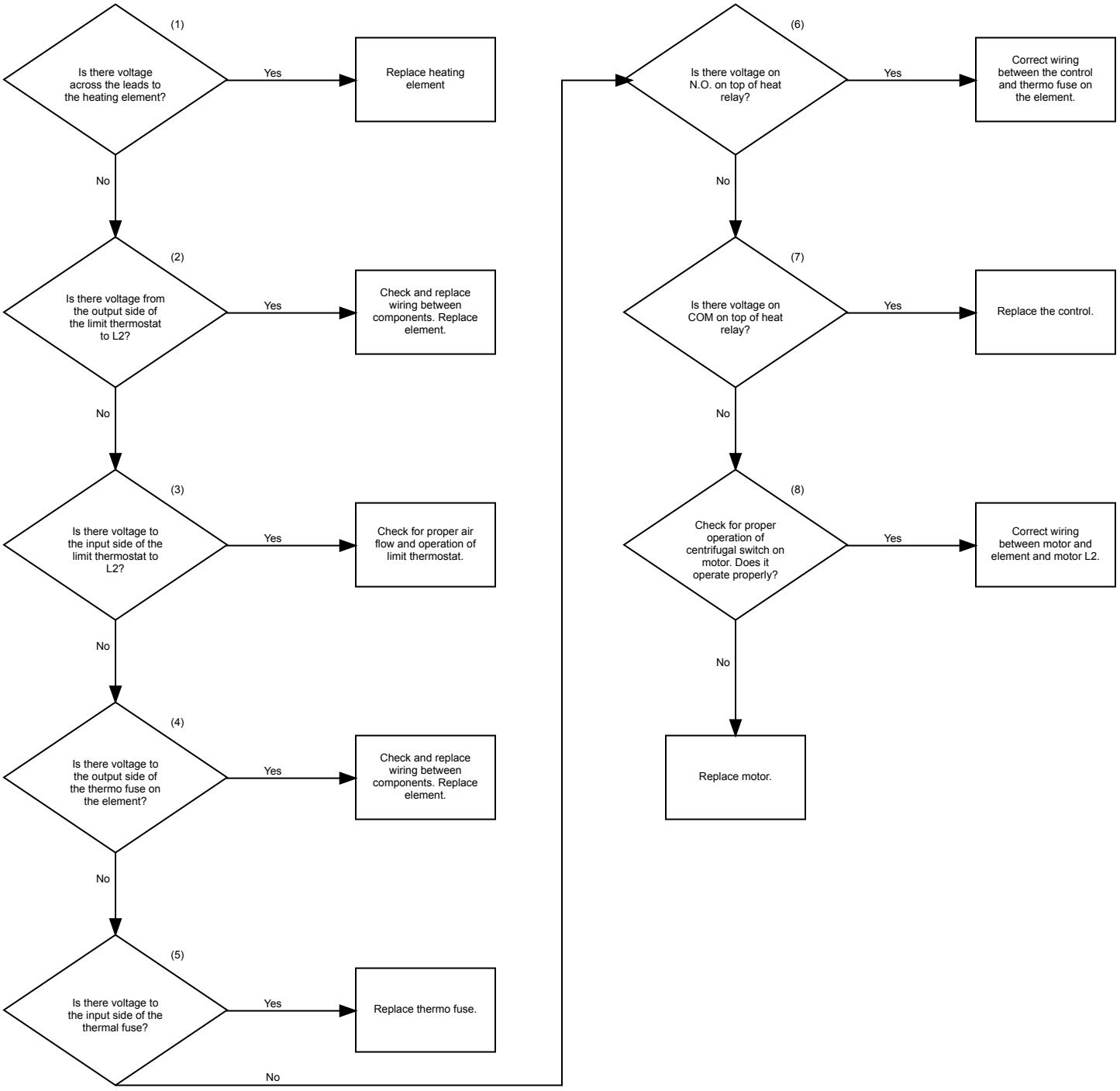
NOTE: Checks to be made only if motor does not start and “door” is not diplayed on control. If “door” is displayed please refer to door open troubleshooting.



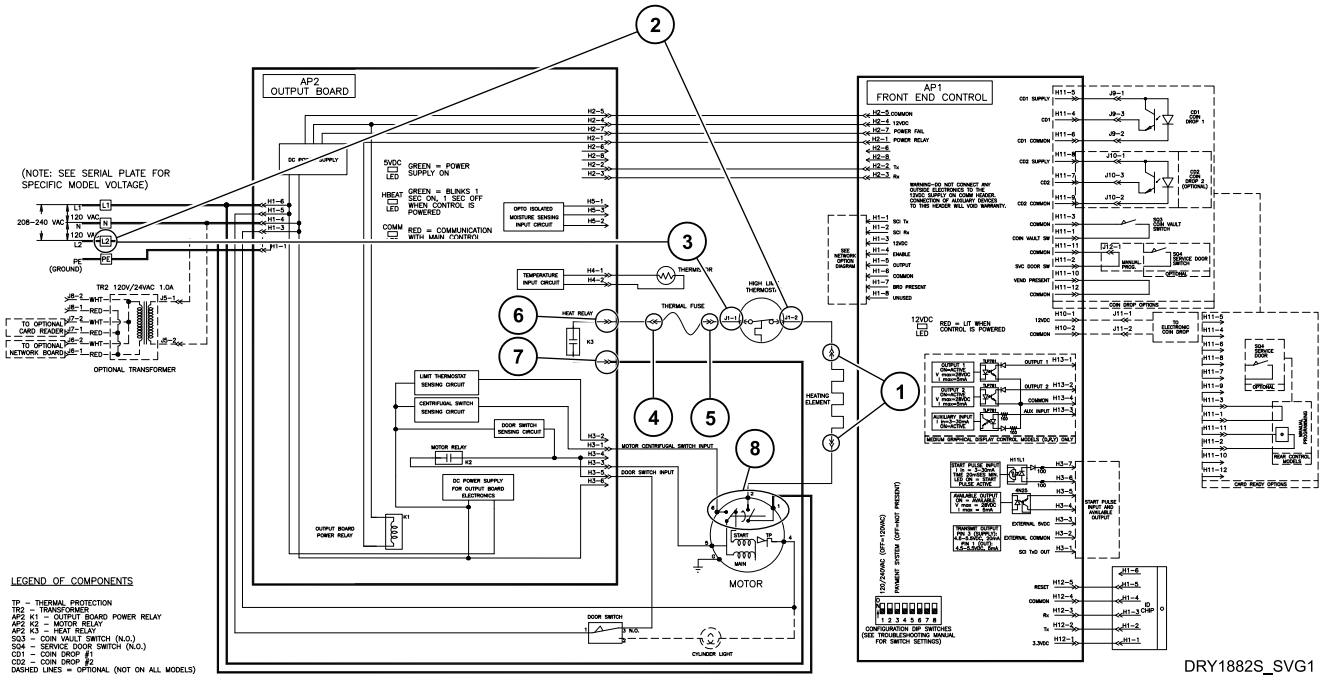
Motor Will Not Start



No Heat - Electric



No Heat - Electric



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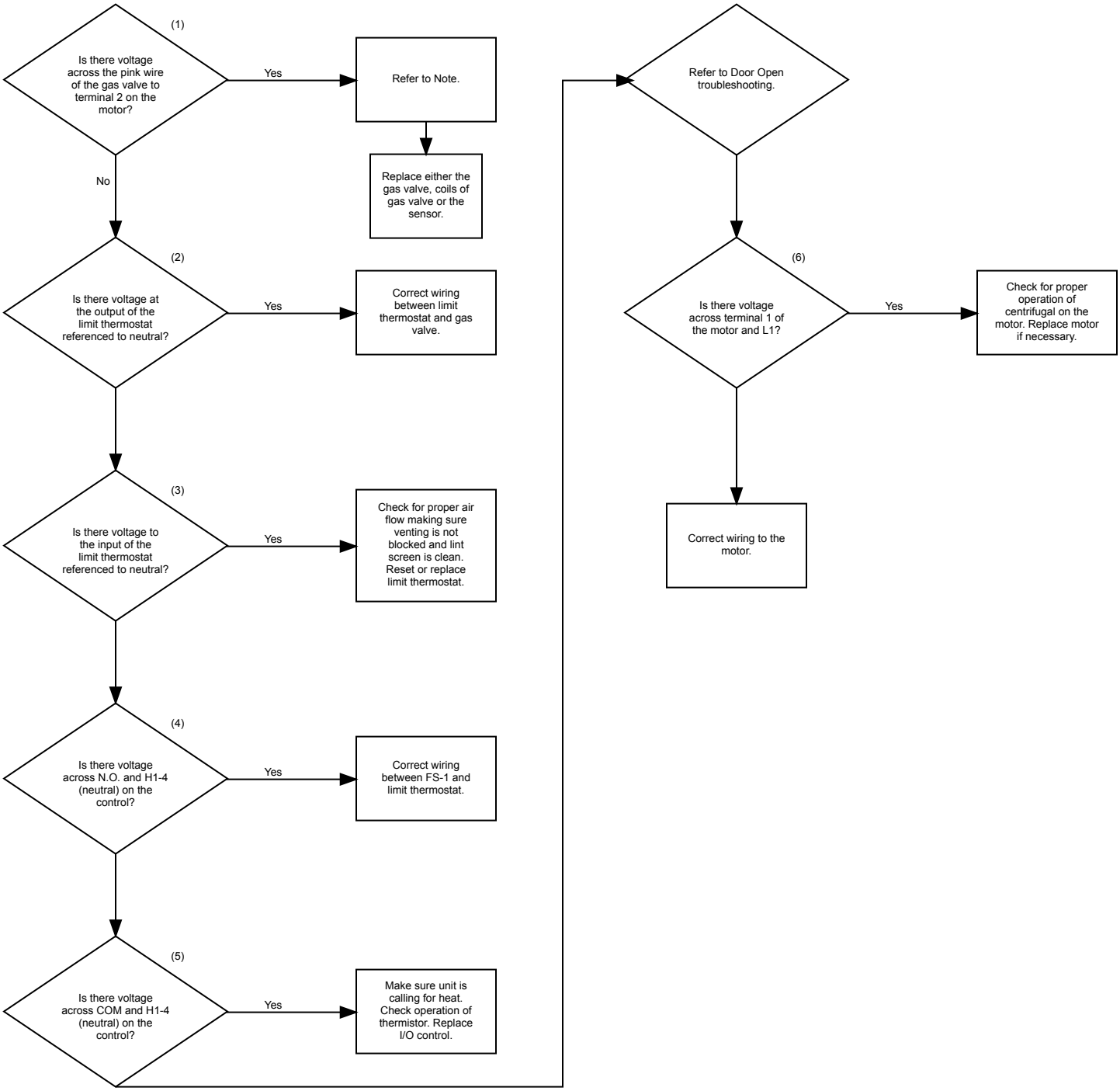
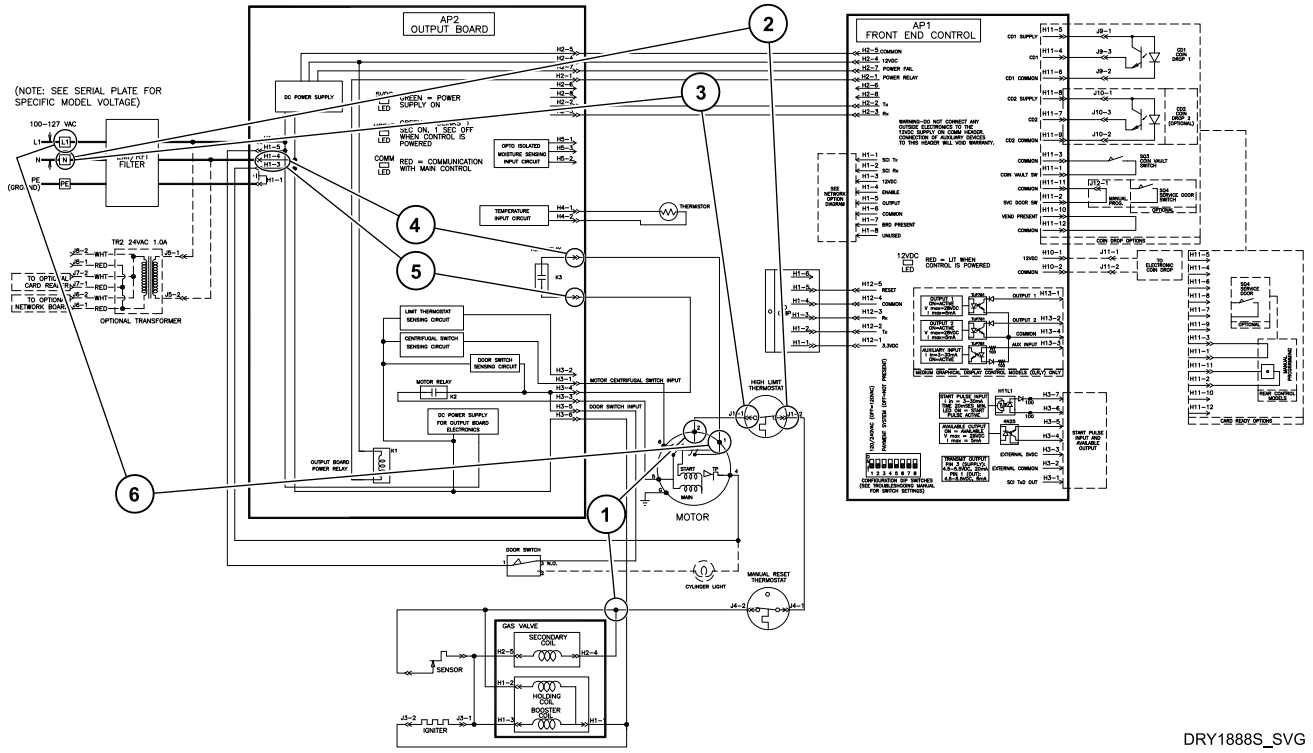
No Heat - Gas

NOTE: When calling for heat the holding coil, the booster coil and the igniter will be energized. Once the sensor senses that the igniter is hot enough for ignition, it will open. At this time the holding coil and the secondary coil will be energized allowing gas to flow. If the flame cycles on and off check for proper operation of sensor. If gas never ignites, check for problems with the coil and check to see if the sensor opens. If coils are good and the sensor opens with the glow bar operational and there is no ignition/gas flow, replace the gas valve.



No Heat - Gas


AP2
OUTPUT BOARD
AP1
FRONT END CONTROL
(NOTE: SEE SERIAL PLATE FOR SPECIFIC MODEL VOLTAGE)
100-127 VAC
FILTER
TR2 24VAC 1.0A
OPTIONAL TRANSFORMER
DC POWER SUPPLY
GREEN = POWER SUPPLY ON
SELF ON, 1 SEC OFF WHEN CONTROL IS POWERED
COMM LED
RED = COMMUNICATION WITH MAIN CONTROL
OPTO ISOLATED MOISTURE SENSING INPUT CIRCUIT
TEMPERATURE INPUT CIRCUIT
THERMISTOR
LIMIT THERMOSTAT SENSING CIRCUIT
CENTRIFUGAL SWITCH SENSING CIRCUIT
DOOR SWITCH SENSING CIRCUIT
MOTOR RELAY
DC POWER SUPPLY FOR OUTPUT BOARD ELECTRONICS
OUTPUT BOARD POWER RELAY
MOTOR CENTRIFUGAL SWITCH INPUT
DOOR SWITCH INPUT
HIGH LIMIT THERMOSTAT
MOTOR
DOOR SWITCH
CYLINDER LIGHT
MANUAL RESET THERMOSTAT
GAS VALVE
SECONDARY COIL
SENSOR
HOLDING COIL
BOOSTER COIL
IGNITER
12VDC LED
RED = LIT WHEN CONTROL IS POWERED
DRY1888S_SVG

Coin Drop Troubleshooting

WARNING

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

- **Disconnect electric power to the dryer before servicing.**
- **Close gas shut-of valve to gas dryer before servicing.**
- **Never start the Dryer 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.**

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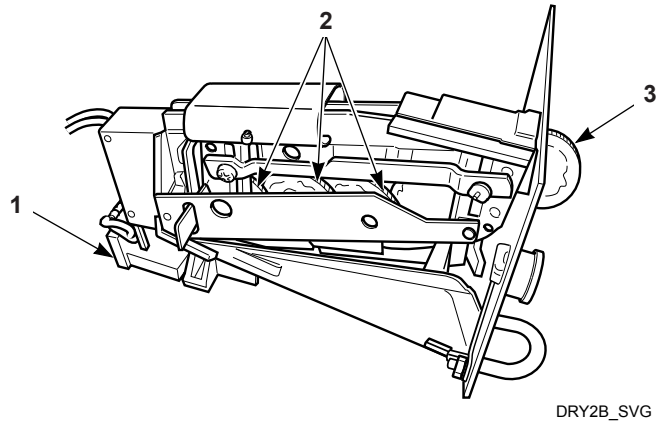
Non-Electronic Coin Drops

When coin is placed into coin slot, the coin should roll down drop and be heard dropping into coin vault. If coin does not fall into coin vault or if coin drop sensor does not register that coin has been entered, follow troubleshooting instructions on following page. Refer to *Figure 2* for path that coin follows when working properly.

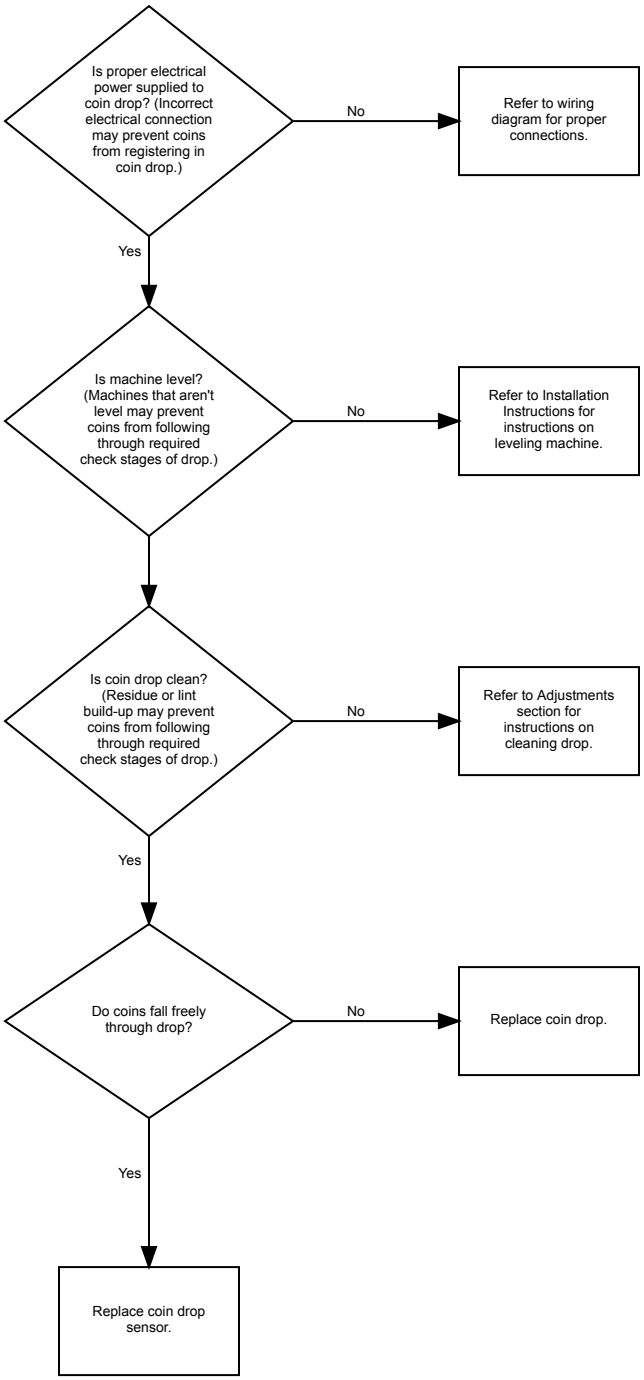
IMPORTANT: Never use oil to correct coin drop problems. Oil residue will prevent coins from rolling properly.

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



1. Coin Drop Sensor
2. Additional Coins Following Path to Sensor
3. Coin in Coin Slot

Figure 2



Electronic Coin Drops

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

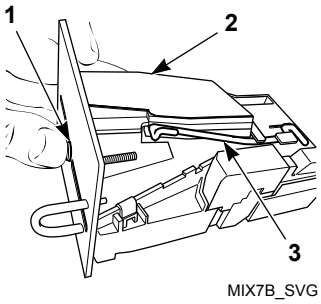
1. Clean coin drop. Refer to *Cleaning Electronic Coin Drop*.
2. On electronic coin drops with an old-style tension spring (shown in *Figure 3* and *Figure 4*), test and replace tension spring using the following instructions.

Remove Coin Drop From Machine

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

Test Tension Spring

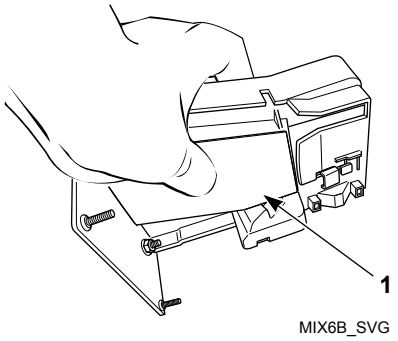
1. Push coin return button to open and close coin drop cover to clear possible coin jams. Refer to *Figure 3* .



1. Coin Return Button
2. Coin Drop Cover
3. Tension Spring

Figure 3

2. Manually hold down coin drop cover and insert coin. Refer to *Figure 4* .



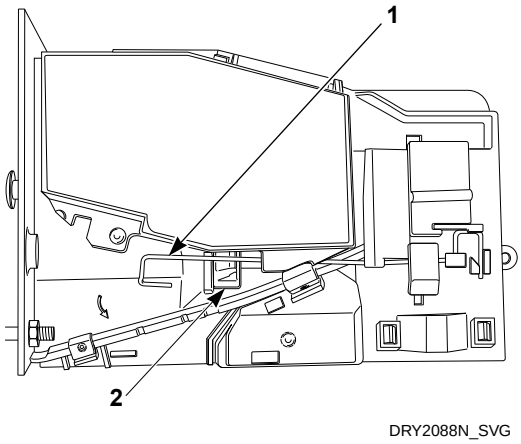
1. Coin Drop Cover

Figure 4

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

Replace Tension Spring

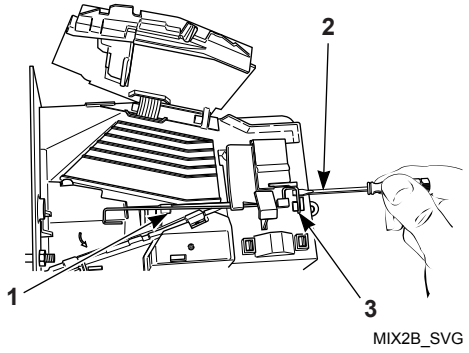
1. Move tension spring downward until cover catch is free. Refer to *Figure 5* .



1. Tension Spring
2. Cover Catch

Figure 5

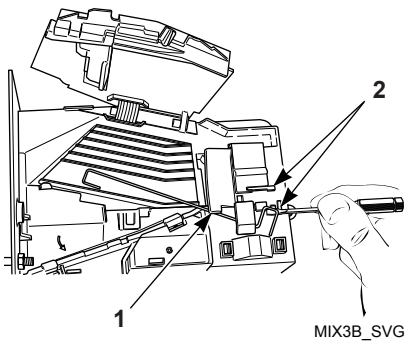
2. Open cover for coin drop.
3. Place a small flathead screwdriver under right side of tension spring and lift up. Refer to *Figure 6* .



1. Left Tab
2. Small Flathed Screwdriver
3. Right Side of Tension Spring

Figure 6

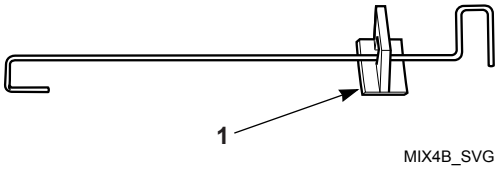
4. Use screwdriver to move spring approximately 3 mm to left.
5. Lift spring over left tab. Refer to *Figure 6* .
6. Rotate spring clockwise, 40 to 60 degrees, until it is free from right tabs. Refer to *Figure 7* .



1. Center Tab
2. Tabs

Figure 7

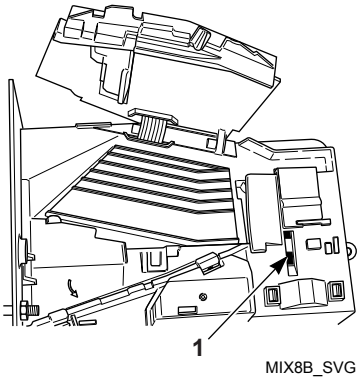
7. Use screwdriver to remove spring from center tab. Refer to *Figure 7* .
8. Lift spring, with attached clip, off drop.
9. Remove clip from spring. Refer to *Figure 8* .



1. Clip

Figure 8

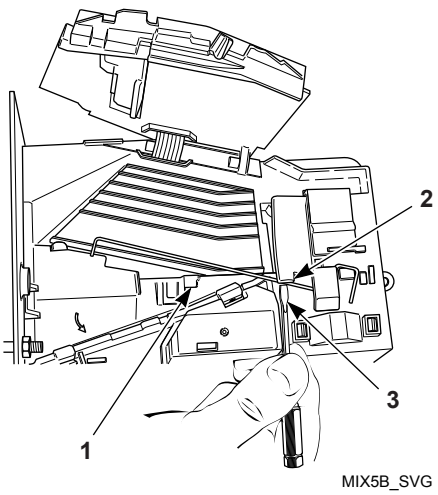
10. Attach clip to new tension spring, Part No. 209/00598/02.
11. Place clip, installed on spring, in slot on coin drop. Refer to *Figure 9* .



1. Slot

Figure 9

12. Use a small flathead screwdriver to push spring under center tab. Refer to *Figure 10* .



1. Left Tab
2. Center Tab
3. Small Flat Screwdriver

Figure 10

13. Lift spring gently to place in position under left tab.
14. Push spring to right until it snaps into position. Refer to *Figure 6* .
15. Close coin drop cover.
16. Move tension spring over cover catch. Refer to *Figure 5* .

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.

Test Procedures

WARNING

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

- **Disconnect electric power to the dryer before servicing.**
- **Close gas shut-of valve to gas dryer before servicing.**
- **Never start the Dryer 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

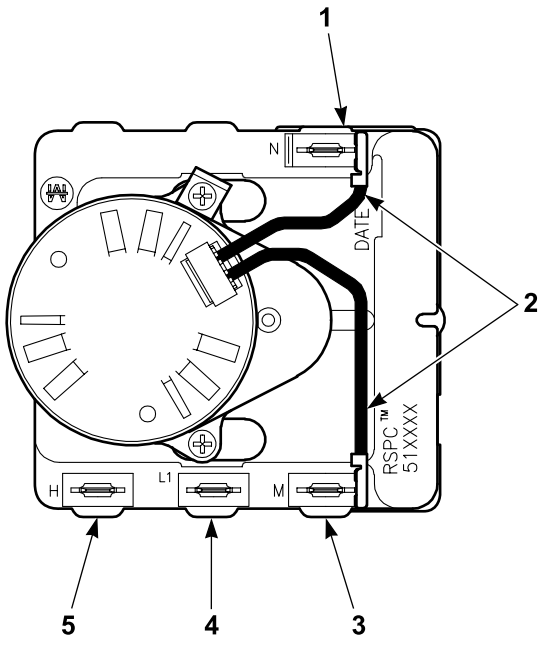
IMPORTANT: Electrical test procedures in this service manual are performed by using a Volt-Ohm meter. Tests can also be performed using a multimeter or any other electrical testing equipment with which the service person is familiar.

Timer Contacts

Refer to *Figure 11* .

1. Disconnect wires from timer, except timer motor wires.

   NOTE: Refer to wiring diagram when rewiring timer.
2. While supporting timer, remove screws holding timer to control cabinet.
3. Pull timer out through control panel opening as far as wires will permit.
4. Manually rotate timer out of "OFF" position and into cycle.
5. Set test meter to read Ohms. The following readings should be found:
   a. Motor circuit test – L1 and M = "zero" Ohms (closed)
   b. Heat circuit test – L2 and H = "zero" Ohms (closed)
   c. Timer motor test – T and M (1702 and1709 suffix models) or T and N (all other models) = approximately 2460-3100 Ohms or apply live power to timer motor terminals and motor should run.



1. "N"
2. Timer Motor Wires
3. "M"
4. "L1"
5. "H"

Figure 11

Timer Motor Resistance:	
120 Volt, 60 Hz	2,460 – 3,100 Ohms
240 Volt	10,900 – 13,000 Ohms
24 Volt	80 – 130 Ohms

   d. Rotate timer to "cooldown" (5 minutes before "OFF"). "Infinite" (open) reading should be found between L2 and H.
   e. Rotate timer to "OFF" position. "Infinite" (open) reading should be found between L1 and M and between L2 and H.

NOTE: Timer motor power is supplied through M (1702 and 1709 models) or N (all other models) terminal.

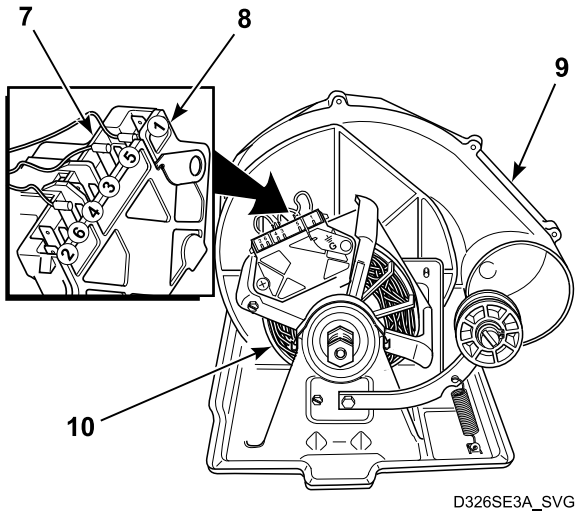
Drive Motor

Refer to *Figure 12* .

1. Remove motor and exhaust assembly.
2. Disconnect motor wire harness at motor disconnect block.

   NOTE: Refer to *Internal Wiring of Dryer Motor Switch* for wiring schematic.

Drive Motor Resistance:	
120 Volt	2,460 – 3,100 Ohms
240 Volt	10,000 - 13,000 Ohms
24 Volt	80 - 130 Ohms



1. Terminal 1
2. Terminal 2
3. Terminal 3
4. Terminal 4
5. Terminal 5
6. Terminal 6
7. Motor Disconnect Block
8. Motor Switch
9. Motor and Exhaust Assembly
10. Drive Motor

Figure 12

Drive Motor - Motor Switch

Refer to *Internal Wiring of Dryer Motor Switch* for wiring schematic.

WARNING

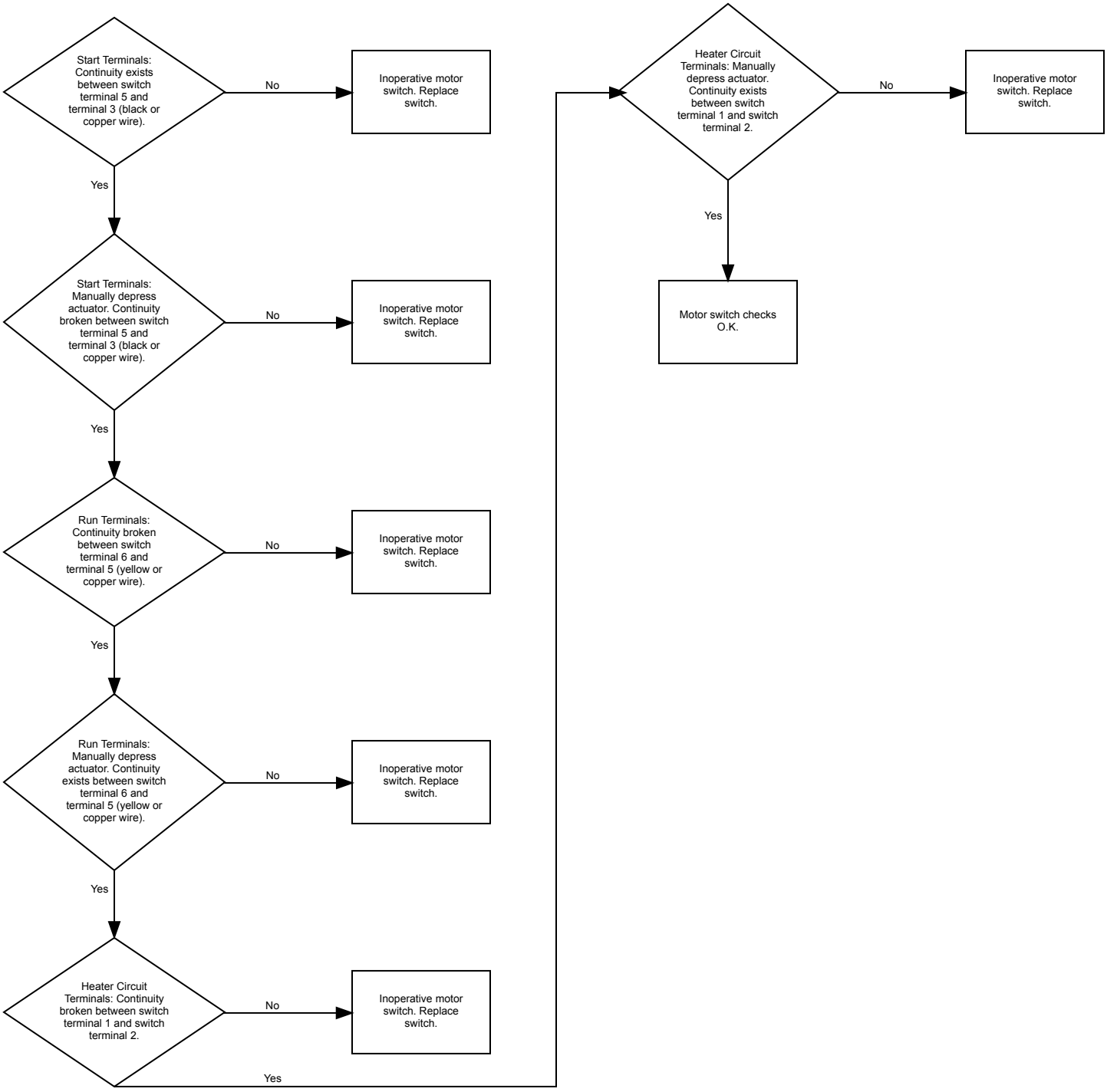
Disconnect electric power to dryer before performing any of the following steps or when replacing inoperative motor switch.

W290

NOTE: Disconnect terminal 5 wire (yellow or copper) from motor switch before testing start terminals.

NOTE: Reconnect terminal 5 wire (yellow or copper) to motor switch before testing run terminals.

NOTE: Unplug the motor wire harness from the motor connection block before starting this test.



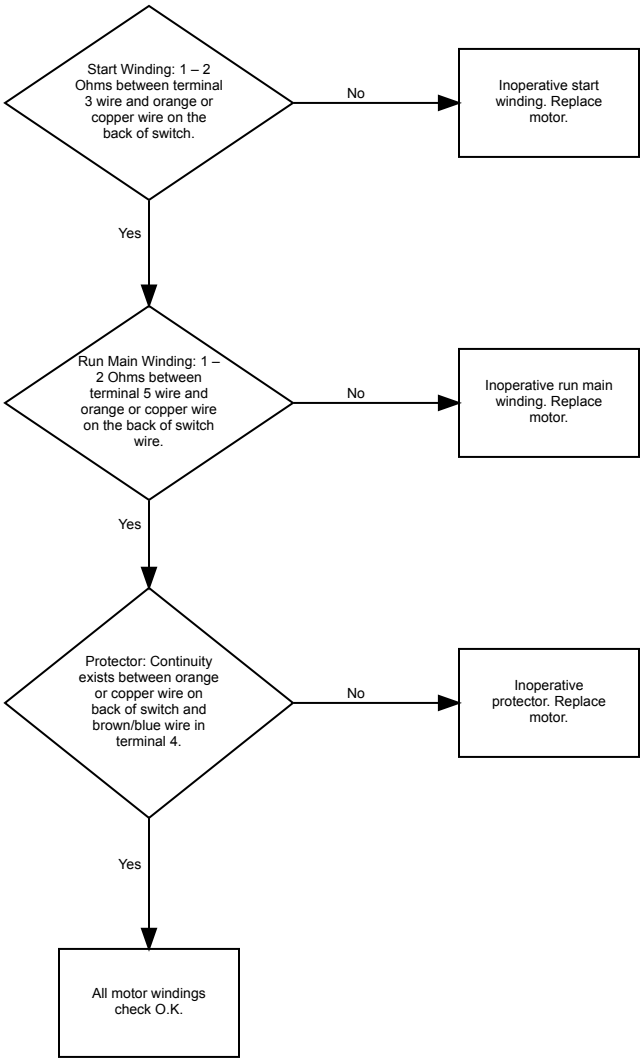
Drive Motor - Motor Windings

Refer to *Internal Wiring of Dryer Motor Switch* for wiring schematic.

WARNING

Disconnect electric power to dryer before performing any of the following steps or when replacing inoperative motor switch.

W290



Motor Switch

1. Remove motor and exhaust fan assembly.
2. Remove the two motor switch attaching screws. Refer to *Figure 13* . Disconnect switch leads. Remove motor switch.
3. Remove thermal overload protector.

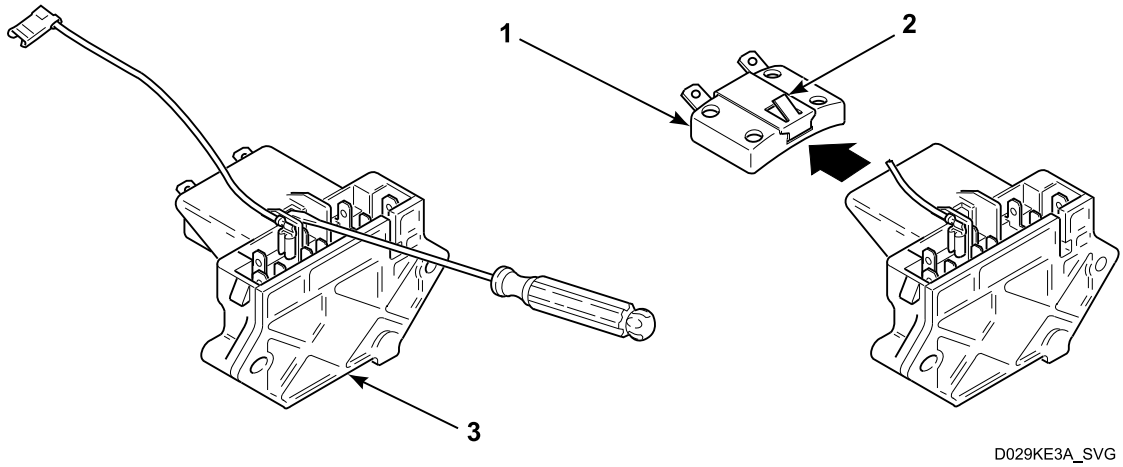
NOTE: The thermal overload protector is unique to the motor from which it was removed and should only be used on that motor. To reduce the risk of overheating the motor, do not use any thermal overload protector other than the one taken from the inoperative motor switch in step 3.

a. **Motor with Switch on Blower End**. Using a small bladed screwdriver, press the thermal overload protector mounting tab downward and remove the thermal overload protector from the inoperative motor switch. Refer to *Figure 13* .

b. **Motor with Switch on Pulley End.** Press the tip of a small bladed screwdriver into the slot located between top of motor switch and plastic clip. Lift up on handle of screwdriver until both clip and thermal overload protector detach from motor switch. Refer to *Figure 14* .

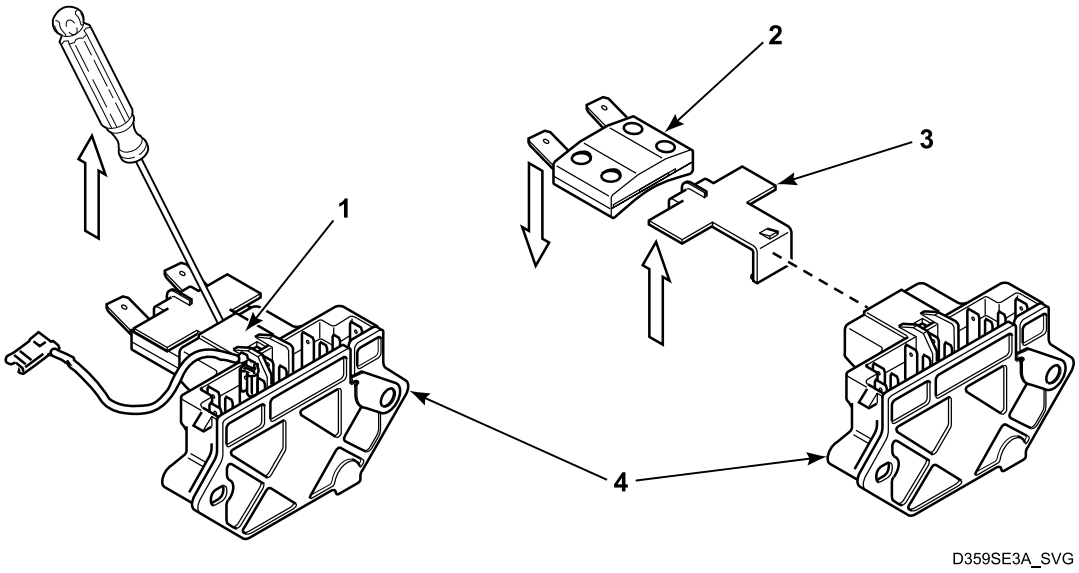
4. Attach the thermal overload protector removed in Step “3” to the new motor switch.
5. Install new motor switch onto motor and reconnect motor switch leads removed in Step “2”. Refer to *Figure 13* .
6. Test motor switch by following the step-by-step procedures. Refer to *Drive Motor*.
7. Before reinstalling the motor assembly, apply power (120 VAC) directly to motor terminals 4 and 5. Then start and run the motor at least 6 times, making sure the motor and switch are operating properly.

NOTE: The dryer manufacturer and parts suppliers are not liable for improper switch installation.



1. Thermal Overload Protector
2. Mounting Tab
3. Motor Switch

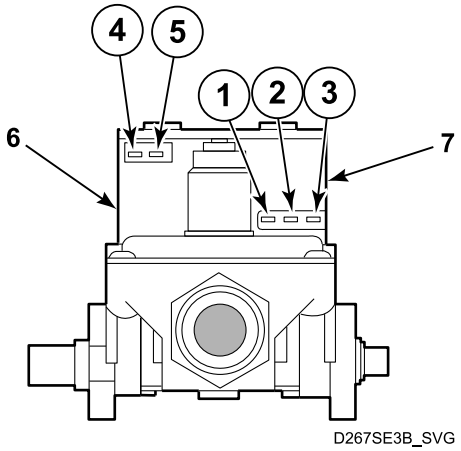
Figure 13



1. Top of Motor Switch
2. Thermal Overload Protector
3. Plastic Clip
4. Motor Switch

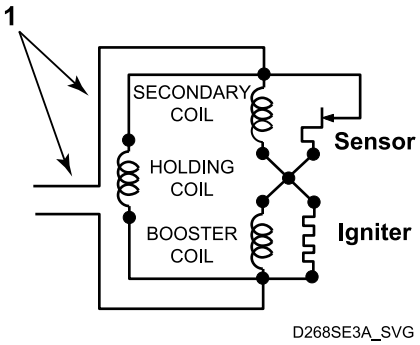
Figure 14

Burner System Operation - Gas Models



1. Terminal 1
2. Terminal 2
3. Terminal 3
4. Terminal 4
5. Terminal 5
6. Secondary Coil
7. Holding Coil and Booster Coil (Split Coil Valve)

Figure 15



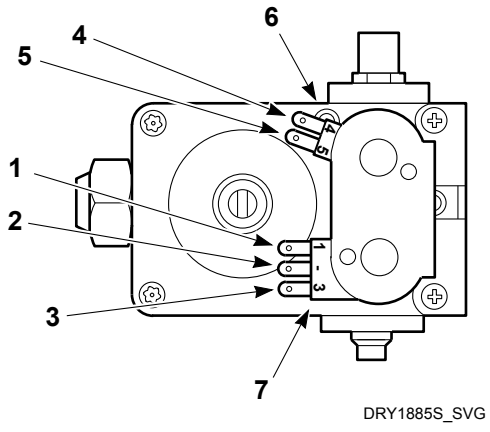
1. 120 Volt, 60 Hertz Electrical Supply Line

Figure 16

Gas Models - Refer to *Figure 15* and *Figure 16* .

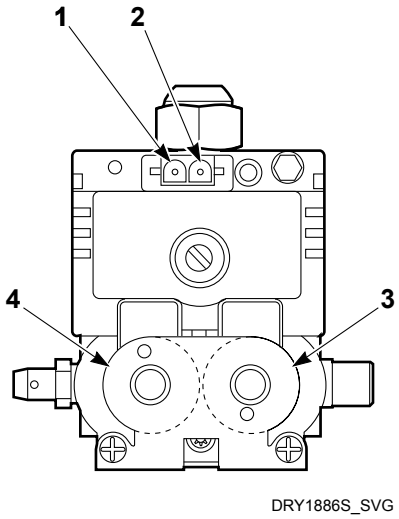
1. **Components.** This burner has four basic components: a silicon carbide (glow bar) igniter, burner tube, sensor, and a two-stage gas valve consisting of a split-coil valve and a secondary coil valve. The split-coil valve is opened when the dryer thermostat calls for heat, while the secondary valve does not open until the igniter has attained ignition temperature.
2. **Pre-Ignition Circuits.** When the dryer thermostat calls for heat, circuits are completed through the holding coil, sensor, booster coil and igniter. Both coils must be energized to open the split-coil valve. Once opened, the holding coil can hold the valve open without assistance from the booster coil. The sensor triggers the current to travel around the secondary coil and through the igniter, causing the igniter to get hot.

3. **Burner Circuit.** In approximately 30 seconds, the igniter attains ignition temperature and ignition is made. The heat from the burner flame causes the sensor contacts (located on burner housing beside the igniter) to open. A circuit is then completed through the secondary valve coil, opening the valve and allowing gas to flow.
4. **Momentary Power Interruption.** Upon resumption of power, sensor contacts will still be open, permitting secondary valve to open. However, with the secondary coil in the circuit, the booster coil cannot draw enough current to open the split-coil valve. When sensor contacts do reclose, the secondary valve will close, and the burner system will be in the normal pre-ignition circuit.
5. **Flame Failure.** In case of flame failure, the sensor contacts will re-close in about 45 seconds. This will close the secondary valve and the burner system will be in the normal pre-ignition circuit.
6. **Ignition Failure.** If flame is not established as sensor contacts open, secondary valve will remain open until sensor contacts re-close. Sensor will continue to recycle the igniter and secondary valve (about once per minute) until ignition is made or dryer is turned off.



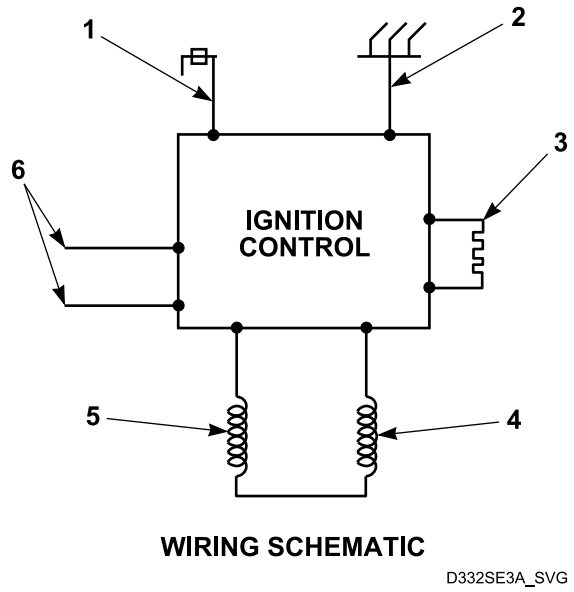
1. Terminal 1
2. Terminal 2
3. Terminal 3
4. Terminal 4
5. Terminal 5
6. Secondary Coil
7. Holding and Booster Coil

Figure 17



1. Terminal 1
2. Terminal 2
3. Redundant Coil
4. Main Coil

Figure 18



1. Flame Sensor
2. Ground
3. Igniter
4. Redundant Coil
5. Main Coil
6. 220/240 Volt, 50 Hertz Electrical Supply Line

Figure 19

Electrical Circuit To Ignition System (Gas Models)

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage locators from bottom edge of front panel.
3. Close main gas shut-off valve. Refer to *Figure 22* and *Figure 23* .
4. Remove valve wire harness disconnect block from the holding and booster coil. Refer to *Figure 17* and *Figure 18* .
5. Plug dryer power cord into wall receptacle, and start the dryer in a heat setting (refer to dryer Operating Instructions).
6. Set test meter to read AC voltage and apply meter probes into terminals on the dryer harness plug that would correspond to terminals “1” and “2” on the coil. Refer to *Figure 15* and *Figure 16* . Meter should register line voltage in all temperature settings, except NO HEAT which should read “zero” VAC.
7. If meter does not read line voltage in step “f”, check motor switch, thermostats, fabric switch, or control.

WARNING

To reduce the risk of fire, explosion and electric shock, close the valve in the gas supply line to the gas dryer and disconnect the electrical power unless gas or power supplies are required to perform test procedure.

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Gas Valve Coils Check (Gas Models)

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage locators from bottom edge of front panel.
3. Close main gas shut-off valve. Refer to *Figure 22* and *Figure 23* .
4. Remove disconnect blocks from gas valve coils.
5. Set test meter to read Ohms and put meter probes to terminals shown in *Figure 17* , *Figure 18* , *Figure 19* , and in the following chart.

Silicon Carbide Ignition:

Coil Tolerance Readings		
Meter probes to terminals:	Meter should read:	
	50 Hertz	60 Hertz
Holding Coil – Terminals 1 & 2	1700 ± 285 Ohms	1365 ± 230 Ohms
Booster Coil – Terminals 1 & 3	685 ± 115 Ohms	560 ± 100 Ohms
Secondary Coil – Terminals 4 & 5	1680 ± 285 Ohms	1325 ± 230 Ohm

Table 2

Silicon Nitride Ignition: Both coils should read between 2400-2800 Ohms.

NOTE: If meter registers any other readings than those listed above, the respective coil(s) should be replaced.

Sensor Check (Gas Models)

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage locators from bottom edge of front panel.
3. Close main gas shut-off valve. Refer to *Figure 22* and *Figure 23* .
4. Remove wires from sensor terminals.
5. Set test meter to read Ohms and put meter probes on sensor terminals. Meter should read “zero” Ohms. If meter registers an Ohm reading of any amount, replace sensor.

Igniter Check - Gas Models

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage locators from bottom edge of front panel.
3. Close main gas shut-off valve. Refer to *Figure 22* and *Figure 23* .
4. Disconnect igniter wires at disconnect block.
5. Set test meter to read Ohms and put meter probes on terminals of igniter wires.
6. **Silicon Carbide Igniter:** Meter should read between 45 – 200 Ohms. **Silicon Nitride Igniter:** Meter should read between 49 – 88 Ohms.

NOTE: If meter does not read appropriate Ohms, then replace the igniter.

IMPORTANT: Always examine all wires, terminals and connectors to be sure wiring is correct before replacing any components.

Ignition Control Grounding Check - Silicon Nitride Ignition

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage locators from bottom edge of front panel.
3. Close main gas shut-off valve. Refer to *Figure 22* and *Figure 23* .
4. Remove wires from sensor terminals.
5. Set test meter to read Ohms and put meter probes on the ground wire connection in 12-pin block (connected to module) and on the green ground screw in base of dryer.
6. Meter should read “zero” Ohms. If meter registers an Ohm reading of any amount, check ground wire connection and replace as necessary.

Thermal Fuse (Electric Models)

1. While supporting the access panel, remove two screws from bottom edge of front access panel.
2. Gently lower the access panel to disengage panel locators from bottom edge of front panel.
3. Label and disconnect wires from thermal fuse.

   NOTE: Refer to wiring diagram when rewiring thermal fuse.
4. Set multimeter to read Ohms. Apply meter probes to thermal fuse terminals. Multimeter should read 0 Ohms. If the meter does not show any reading (infinite Ohms), then the fuse is open. If the fuse is open, then replace BOTH the thermal fuse and the limit thermostat.

Heater Assembly (Electric Models)

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage panel locators from bottom edge of front panel.
3. Disconnect wires from heater assembly.

   NOTE: Refer to wiring diagram when rewiring heater assembly.
4. Set meter to read Ohms. Apply meter probes to the heater assembly terminals. Meter should read as follows: (Cold Ohms).

Heater Element Color Code	KW	Voltage/Hz.	Resistance Reading
Red	5	240 V 60 Hz.	10.39 ± .31 Ohms Cold
White	4.75	208 V 60 Hz.	8.2 ± .5 Ohms Cold
Green	4.8	240 V 50 Hz.	10.75 ± .32 Ohms Cold
Yellow	4	240 V 50 Hz.	13.03 ± .39 Ohms Cold
Blue	3.1	240 V 50 Hz.	16.7 ± .5 Ohms Cold
Orange	5.35	240 V 60 Hz.	9.72 ± .3 Ohms Cold
Purple	4.25	208 V 60 Hz.	9.27 ± .3 Ohms Cold

Table continues...

Cycling or Limit Thermostat

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage panel locators from bottom edge of front panel.
3. Label and disconnect wires from thermostat.

   NOTE: Refer to wiring diagram when rewiring thermostat.
4. **Cycling Thermostat (S.P.S.T. – 2 Terminals) or Limit Thermostat**
   a. Set meter to read Ohms.
   b. Apply meter probes to the thermostat terminals.
   c. Meter should read “zero.”
5. **Cycling Thermostat (S.P.D.T. – 3 Terminals)**
   a. Set meter to read Ohms.
   b. Apply meter probes to terminals 1 and 3. Meter should read “zero”.
   c. Remove screws holding thermostat to blower fan cover.
   d. Heat thermostat with a small flame until a distinct “click” is heard, then immediately apply meter probes to terminals 1 and 2. Meter should read “zero”.

Door Switch

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage locators from bottom edge of front panel.
3. Remove two screws holding bottom tabs on front panel to dryer side panels. Swing bottom of front panel away from dryer far enough to disengage hold-down clips and locators from cabinet top.
4. Disconnect wires from door switch.

   NOTE: Refer to model wiring diagram when rewiring door switch.
5. Set meter to read Ohms and apply meter probes on switch terminals 1 and 3 with door closed. You should get “zero” reading.

6. Apply probes to terminals 1 and 2 with door closed. The meter should read “infinite”.
7. Open door. Meter should read “infinite” between 1 and 3 and “zero” between 1 and 2.

Thermistor

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage panel locators from bottom edge of front panel.
3. Label and disconnect wires from thermistor.

   NOTE: Refer to wiring diagram when rewiring thermistor.
4. Set meter to read Ohms.
5. Apply meter probes to the thermistor terminals.
6. Meter should read that resitance is present (thermistor is not open).

Internal Wiring of Dryer Motor Switch

WARNING

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

- **Disconnect electric power to the dryer before servicing.**
- **Close gas shut-of valve to gas dryer before servicing.**
- **Never start the Dryer 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.**

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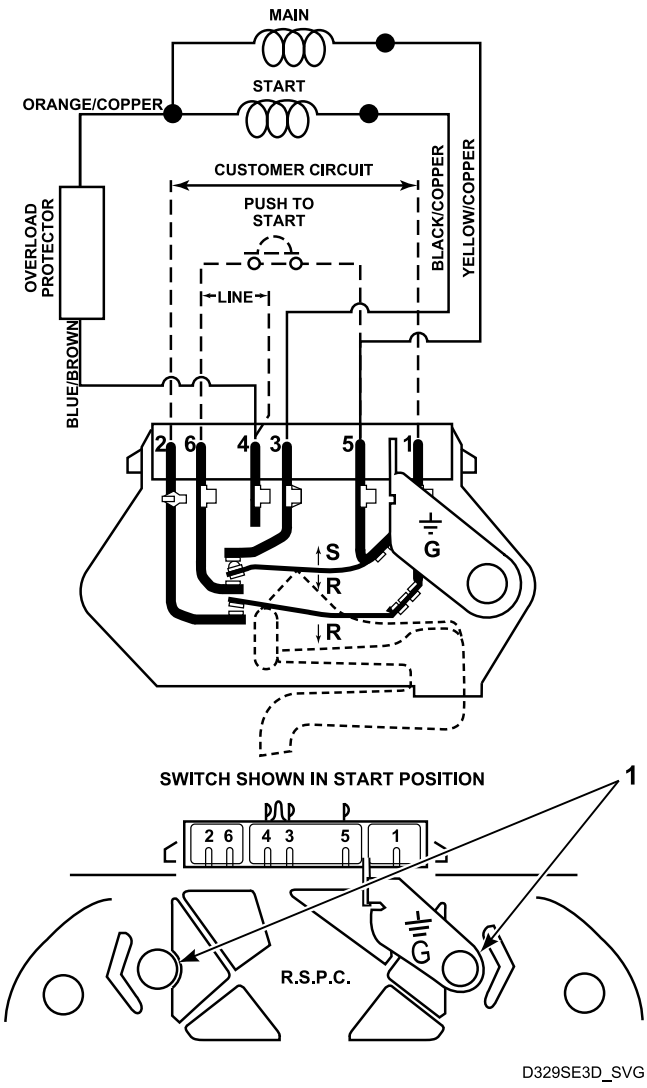


1. Motor Switch Attaching Screws

Figure 20

Adjustments

WARNING

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

- **Disconnect electric power to the dryer before servicing.**
- **Close gas shut-of valve to gas dryer before servicing.**
- **Never start the Dryer 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

IMPORTANT: When reference is made to directions (right or left) in this manual, it is from operator's position facing front of washer.

Leveling Legs

Refer to *Figure 21* .

NOTE: Dryer should be installed on a solid and level floor.

1. Place dryer in position, adjusting the legs until dryer is level.

   WARNING

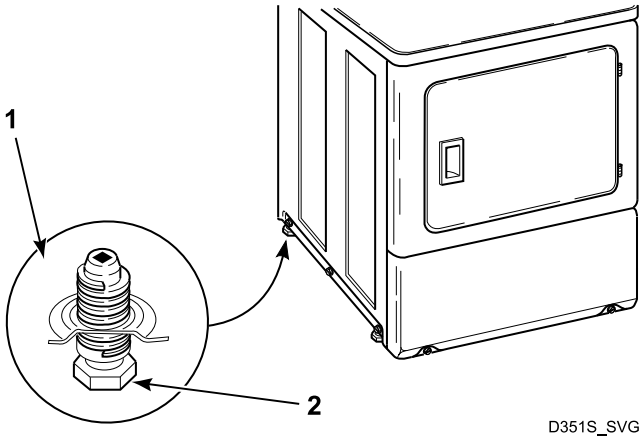
   To reduce the risk of serious injury or death by carbon monoxide and other gases in gas dryers, carefully read and follow all instructions given in this section.

   W005

   NOTE: Legs can be adjusted outside the dryer by using a 1-1/4 inch size wrench, or from inside the dryer (with lower front access panel removed) by using a 1/4 inch drive ratchet with extension.

2. Keep dryer as close to the floor as possible. All four legs must rest firmly on the floor so weight of the dryer is evenly distributed. The dryer MUST NOT rock.

   IMPORTANT: DO NOT move the dryer at any time unless the dryer is completely assembled. DO NOT slide the dryer across the floor once the leveling legs have been extended as the legs and base could become damaged



1. Dryer Base
2. Leveling Leg

Figure 21

Burner Flame (Gas Models)

1. While supporting the access panel, remove two screws from bottom edge of access panel.
2. Gently lower the access panel to disengage locators from bottom edge of front panel.
3. Set drying time to 60 minutes, if applicable.
4. Close the loading door. Start the dryer in a heat setting (refer to dryer's Operating Instructions). The dryer will start, the igniter will glow red, and the main burner will ignite.
5. Allow the dryer to operate for approximately five minutes, then loosen the air shutter lockscrew. Refer to *Figure 22* and *Figure 23* .
6. Turn the air shutter to the left to get a luminous yellow tipped flame, then turn it back slowly to the right to obtain a steady blue flame.
7. After proper flame is obtained, tighten air shutter lockscrew firmly. Refer to *Figure 22* and *Figure 23* .
8. Reinstall access panel and screws.

WARNING

To reduce the risk of fire or serious injury, the access panel must be in place during normal operation.

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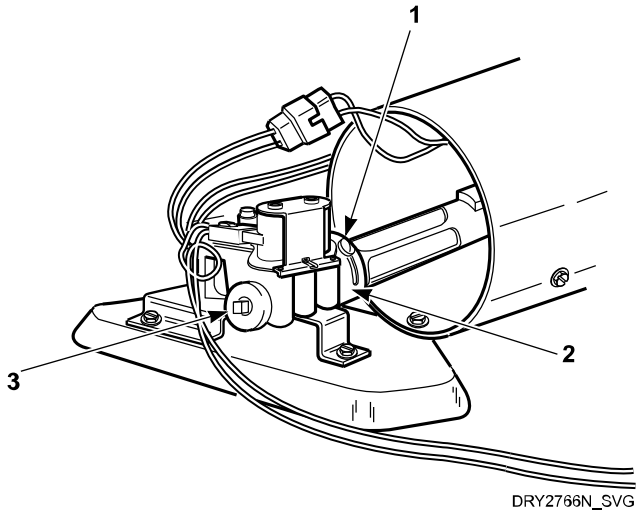
NOTE: After the dryer has operated for approximately three minutes, exhaust air or exhaust pipe should be warm.

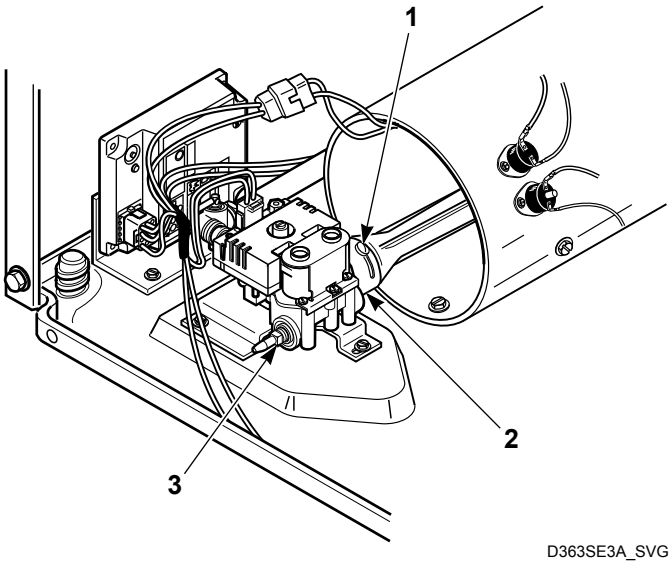
Silicon Carbide Ignition System



1. Air Shutter Lockscrew
2. Air Shutter
3. 1/8 inch Pipe Plug (For checking manifold pressure)

Figure 22

Silicon Nitride Ignition System

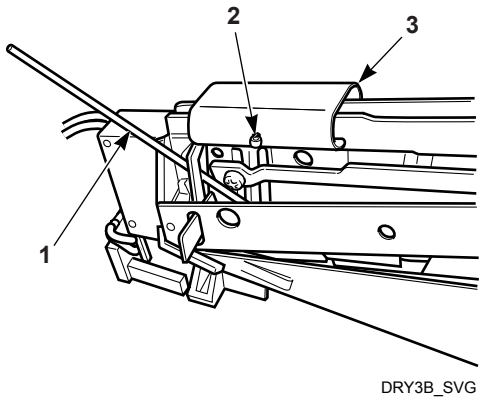


1. Air Shutter Lockscrew
2. Air Shutter
3. 1/8 inch Pipe Plug (For checking manifold pressure)

Figure 23

Cleaning Non-Electronic Coin Drop

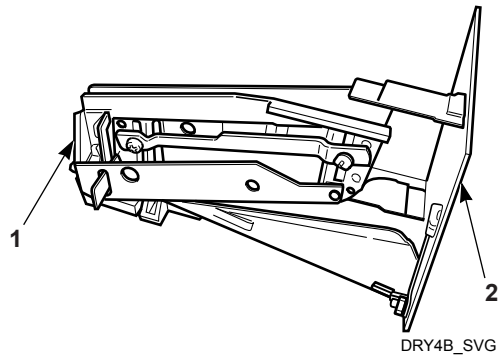
1. Disconnect electrical power to machine and drop.
2. Remove coin drop from machine.
3. If lint is preventing coins from rolling through coin drop, blow compressed air though coin entry and along the side of the coin drop. Refer to *Figure 24* .



1. Compressed Air
2. Cotter Pin
3. Metal Clip

Figure 24

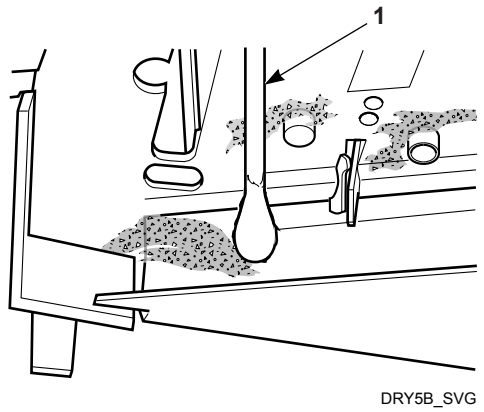
4. Insert a coin through the coin drop. If coin does not roll through drop, continue with the following.
5. Remove cotter pin from top of drop. Refer to *Figure 24* . Save pin for reinstallation when cleaning is complete.
6. Move metal clip closer to sensor so that it comes off frame. Refer to *Figure 24* .
7. Remove coin return from coin drop frame. Refer to *Figure 25* .



1. Coin Return
2. Coin Drop Frame

Figure 25

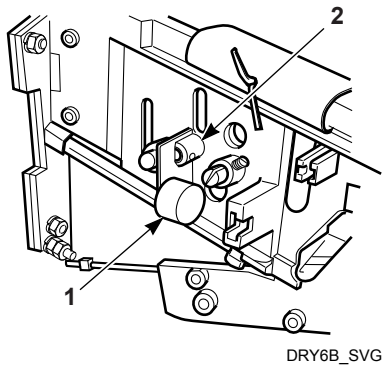
8. Check coin path in coin drop for lint and esidue. If lint or light residues are present, use a cotton swab to remove. If heavy residue is present, it may be necessary to first scrape off excessive residue and then use a cotton swab dipped in water or isopropyl alcohol (rubbing alcohol) to remove remainder of residue. Refer to *Figure 26* .



1. Cotton Swab

Figure 26

9. Check coin return pendulum to verify it swings freely. If pendulum does not swing freely, spray pendulum pivot point with Teflon based lubricant and move pendulum back and forth two to three times. An additional application of Teflon based lubricant may be necessary to ensure that pendulum swings freely. Refer to *Figure 27* .

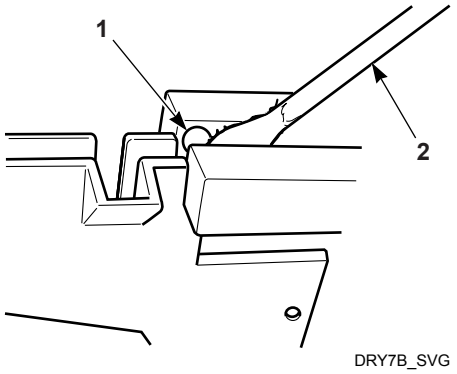


1. Pendulum
2. Pivot Point

Figure 27

10. Check coin drop sensor for dust or dirt on eyes. Wipe eyes with dry cotton swab. Refer to *Figure 28* .

    IMPORTANT: DO NOT use isopropyl alcohol to clean electronic sensor or eyes.



1. Eyes
2. Dry Cotton Swab

Figure 28

11. Reinstall coin return on to coin drop frame.
12. Reinstall metal clip and slide towards coin insert slot. All cotter pin holes must line up.
13. Reinstall cotter pin.
14. Place drop on level surface to verify that coins follow correct path in drop. It may be necessary to lift drop to allow coin to follow through sensor.
15. Reinstall coin drop into machine.
16. Reconnect electrical power to machine and drop.
17. Add a coin to drop to verify that coin drop is operating properly and that electrical connection is working properly.

    NOTE: If coin drop does not operate properly after above steps have been completed, corrosion of metal or vandalized components within coin drop may be preventing the coin drop from functioning correctly. Replace coin drop.

Cleaning Electronic Coin Drop

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

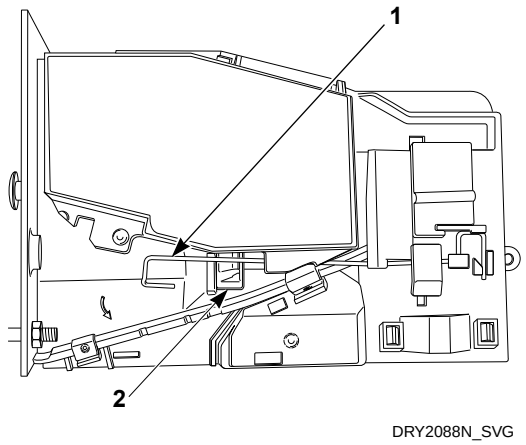
IMPORTANT: Never use abrasives or solvents to clean the drop which may damage the plastic material.

Coin Drops with Old-Style Spring

Refer to *Figure 29* .

1. Disconnect electrical power to machine and drop.
2. Remove coin drop from machine.
3. Open cover of coin drop.
   a. Move spring downward until cover catch is free. Refer to *Figure 29* .

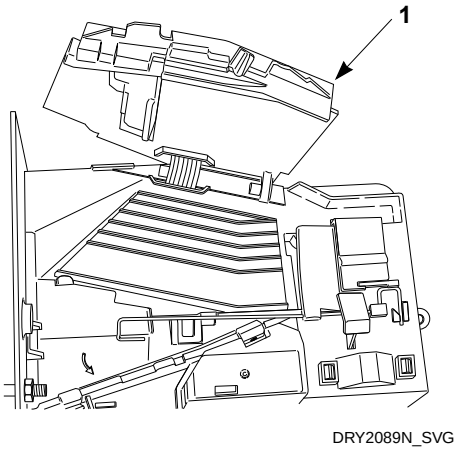
NOTE: Do not lift or overbend the spring in any direction.



1. Spring
2. Catch

Figure 29

b. Open cover for coin drop. Refer to *Figure 30* .



1. Cover

Figure 30

4. Clean the coin path with a soft brush and wipe exposed surfaces with an alcohol moistened cloth. Refer to *Figure 31* .

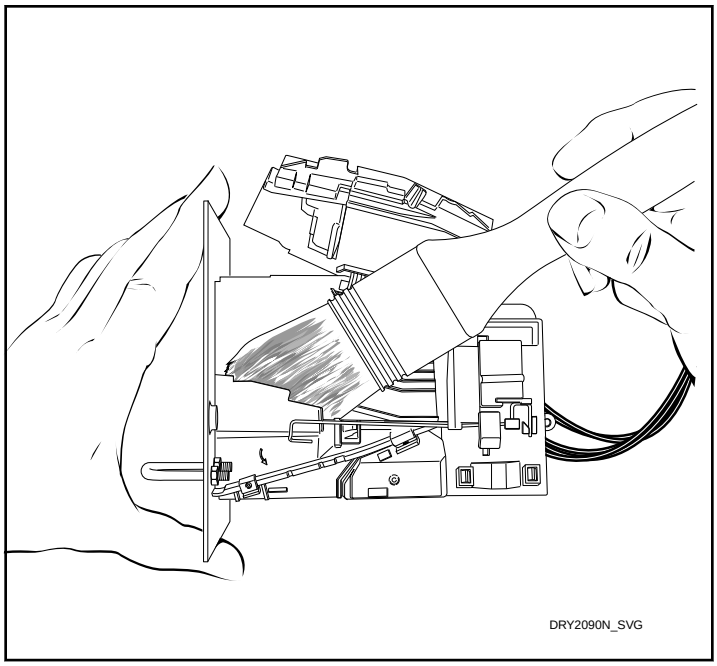
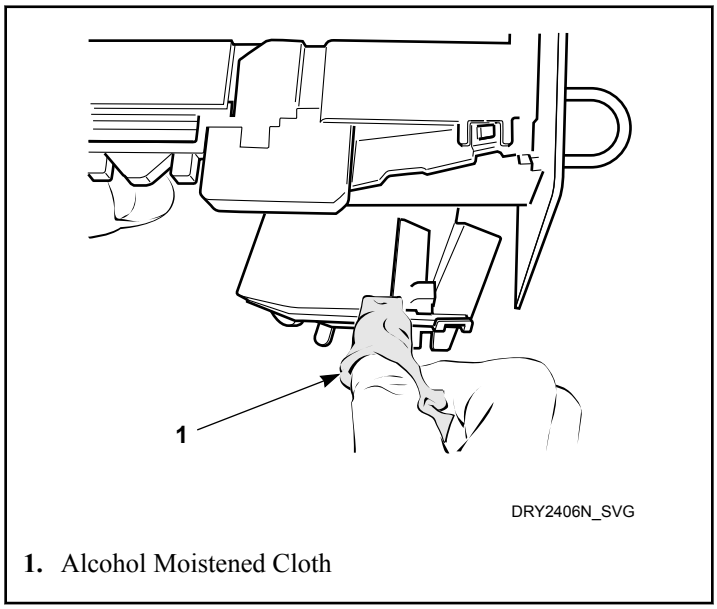


Figure 31

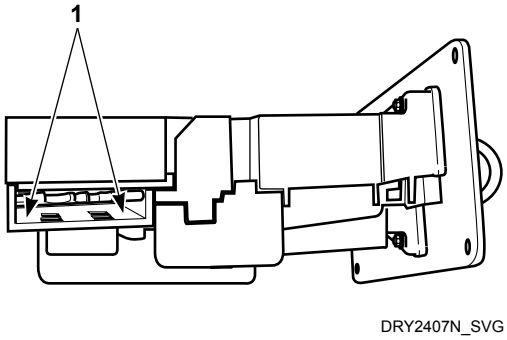
5. Clean residue from coin rail with an alcohol moistened cloth. Refer to *Figure 32* .



1. Alcohol Moistened Cloth

Figure 32

6. Clean light sensors with a soft brush or air spray duster. Refer to *Figure 33* .



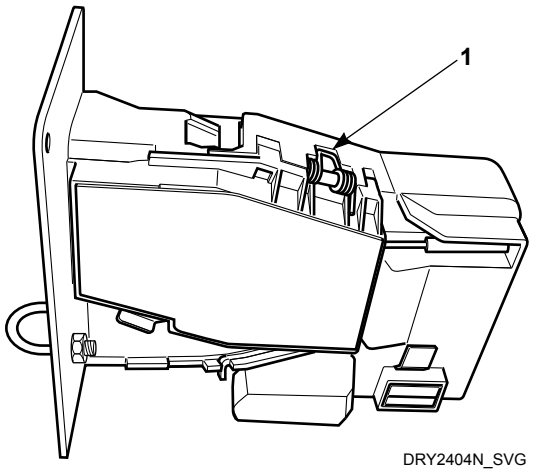
1. Light Sensors

Figure 33

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

Coin Drops with New-Style Spring

Refer to *Figure 34* .



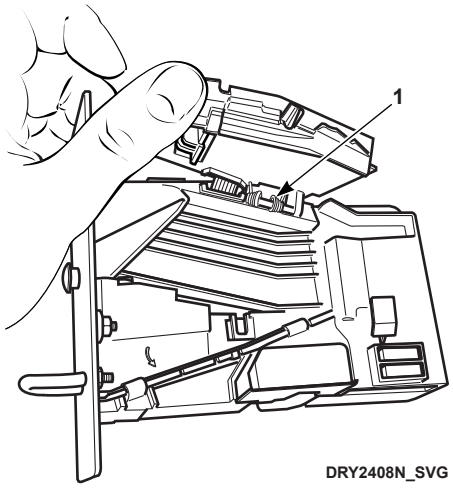
1. Spring

Figure 34

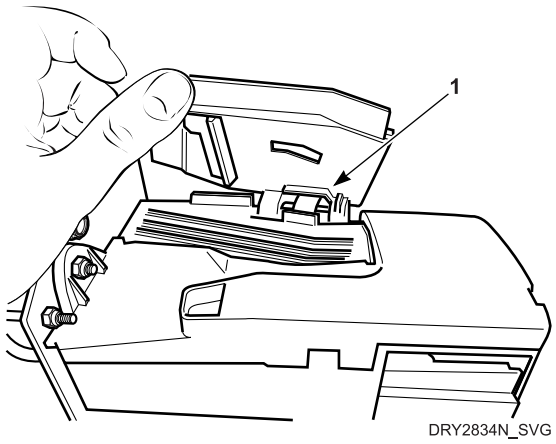
1. Disconnect electrical power to machine and drop.
2. Remove coin drop from machine.
3. Open cover of coin drop. Refer to *Figure 35* .

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

Pre-2018



2018 and Later

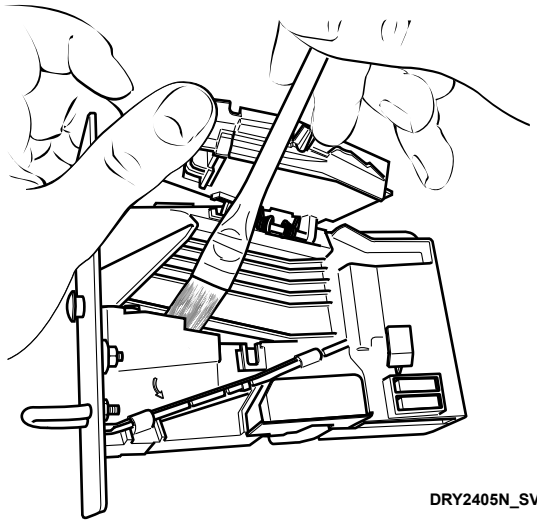


1. Spring

Figure 35

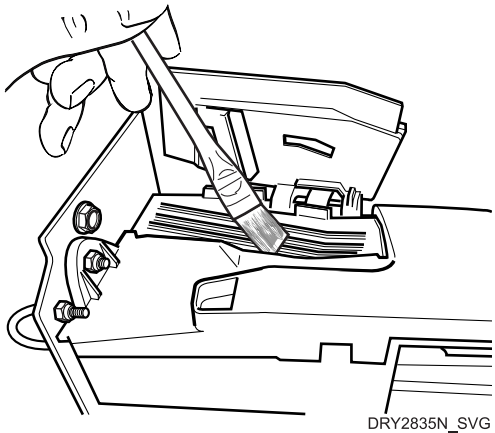
4. Clean the coin path with a soft brush and wipe exposed surfaces with an alcohol moistened lint-free cloth. Refer to *Figure 36* .

Pre-2018



DRY2405N_SVG

2018 and Later

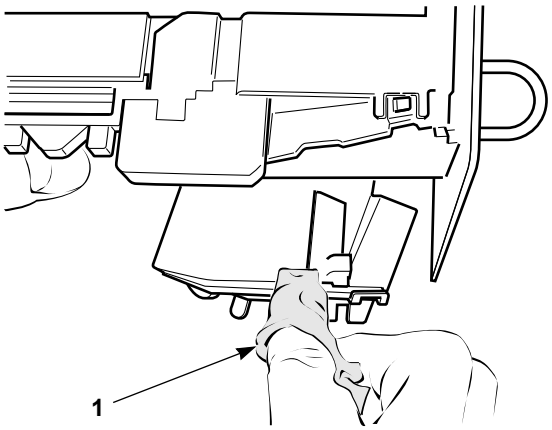


DRY2835N_SVG

Figure 36

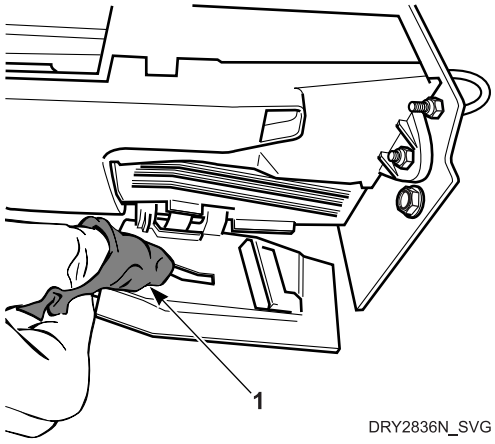
5. Clean residue from coin rail with an alcohol moistened lint-free cloth. Refer to *Figure 37* .

Pre-2018



DRY2406N_SVG

2018 and Later



DRY2836N_SVG

1. Alcohol Moistened Cloth

Figure 37

6. Clean residue from coin rail and pendulum inside flap with an alcohol-moistened soft brush. Refer to *Figure 38* .

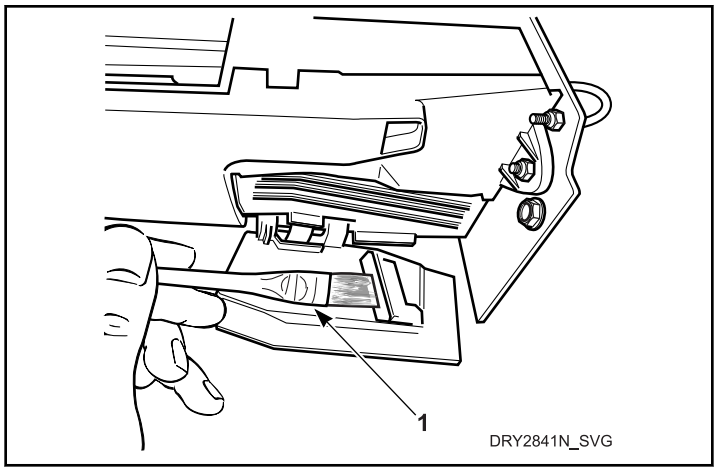
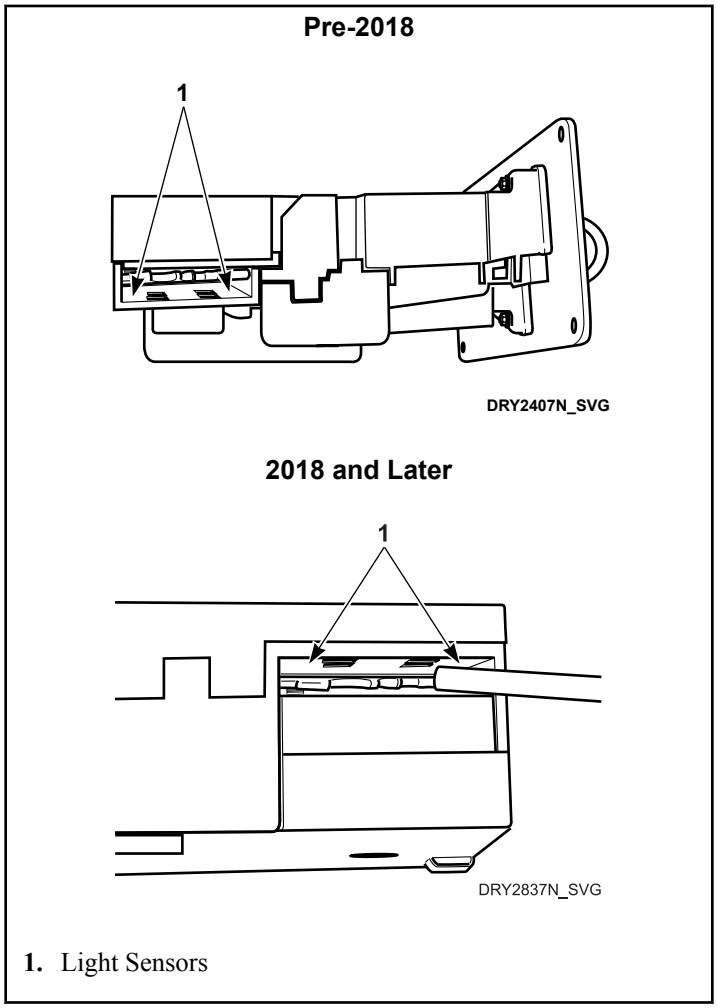


Figure 38

7. Clean light sensors with a soft brush or air spray duster. Refer to *Figure 39* .



1. Light Sensors

Figure 39

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