

# INSTALLATION INSTRUCTIONS FOR MODEL DS3-B



## General Description

Model DS3-B is used to convert the following hot surface ignition control to direct spark ignition in commercial laundry tumblers. Model DS3-B is designed for simple installation and long lasting service in updating old systems with state of the art digitally based controls. Model DS3-B eliminates most nuisance lockouts and provides simple diagnostic indication of failure..

Manufacturer	Model
ADC	#530HS
Fenwal	2465H Triton

## Tools and Materials Required

Installation Instructions for Model DS3-B  
Phillips head screw driver  
Drill motor  
#5/32" drill bit  
Wire Stripper  
Crimping Pliers

## Installation Kit Contents

1ea DS1071E Control  
1ea HV01 High Voltage Lead 30"  
1ea BP202E Ignitor Probe  
1ea "L" Bracket  
1ea Ring Terminal for Ground  
2ea Crimp Wire Nut  
4ea Mounting Screws for Control  
3ea Mounting Screws for Ignitor Probe

## Specifications

Input Voltage: 24Vac, 60Hz, (+10% to -15%)  
Current Draw: .2A flame sense modes  
.35A ignition mode  
Prepurge: 1 seconds  
Ignition Trial: 8 seconds

Reignition Trial: 8 seconds  
Interpurge: 30 seconds  
Lockout: Reset by power interruption of 5 sec.  
Temp. Range: -40F to +175F  
Number of Ignition Trials: 3

### IMPORTANT

**Installation should only be attempted by persons trained and qualified to service and repair commercial laundry tumbler ignition controls.**

## Pre-Installation Instructions

1. Read completely through the Installation Instructions before attempting installation.
  2. Be certain the dryer is operating correctly except for a failed ignition control. Repair malfunctioning items as required. Installation of DS3-B will not correct any malfunction, except for a failed ignition control.
  3. Inspect the burner and burner compartment for sooting, cracks and corrosion. Repair or replace as necessary.
  4. Inspect the flame sense electrode for cracked ceramic insulators, burned electrode rod or misalignment. Repair or replace as necessary.
1. Turn OFF Gas and Electrical Power.
  2. Locate the ignition control to be replaced. Verify that the model number of the control to be replaced is listed in these instructions.

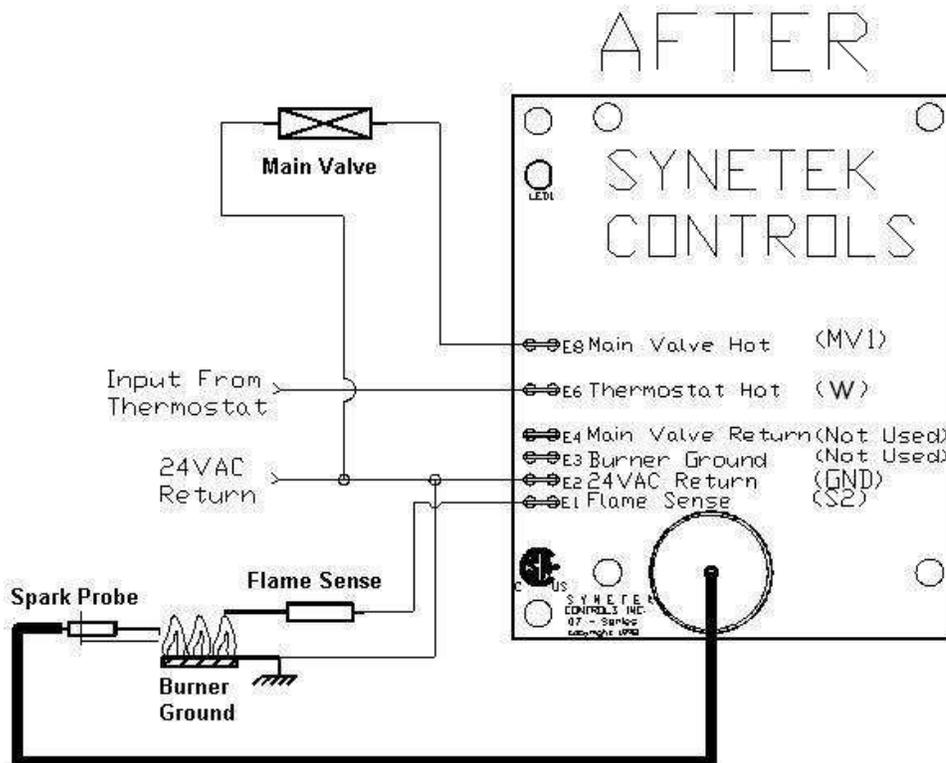
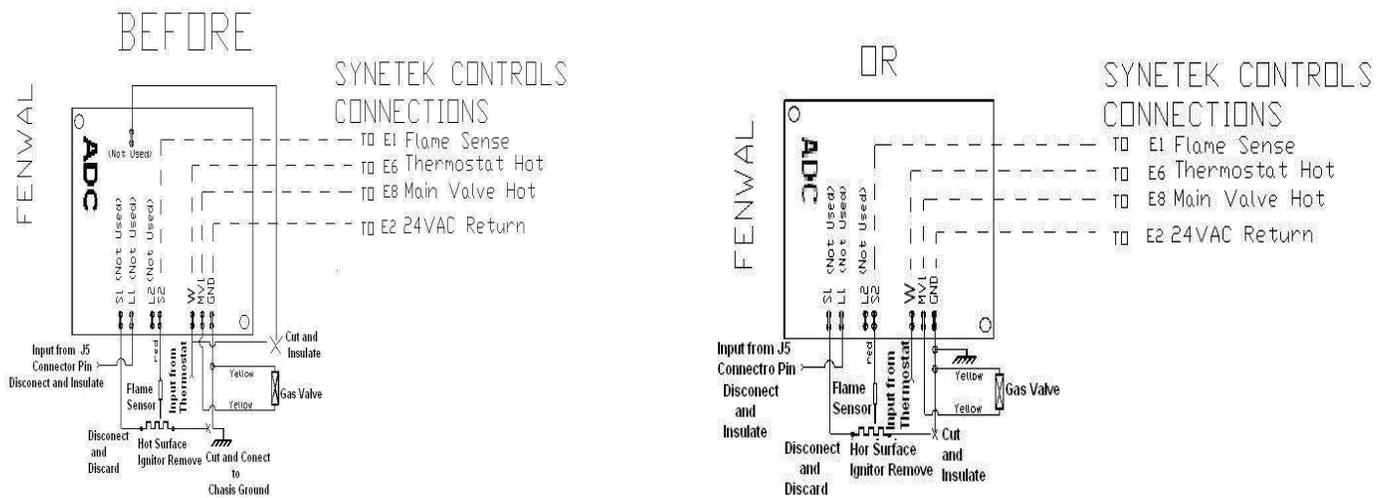
### IMPORTANT

**Property Damage, Injury or Death can result from replacing an ignition control not listed in these instructions.**

3. Remove the mounting screws or nuts from the old control. Leave the leads connected to the old control. Mount the new control module DS1071E in the same place as the old. If necessary drill new holes to mount the new control.
4. Disconnect the following leads from the original Fenwal control and reconnect to the corresponding DS1071E connectors:
  - a. "GND" (Ground) to: DS1071E terminal **#2 24Vac Return**
  - b. "W" (Thermostat) to: DS1071E terminal **#6 Thermostat Hot**
  - c. "MV1" (Main Valve) to: DS1071E terminal **#8 Main Valve Hot**
  - d. "S2" (Sensor) to: DS1071E terminal **#1 Flame Sense**
  - e. "L1" (HSI Power) Not used. Disconnect and Insulate.

5. If applicable, cut the wire going to the "R" (24VAC) terminal on the Fenwal control and insulate it. This terminal is not used.
6. Disconnect "S1" and remove the Hot Surface Ignitor (HSI) assembly and bracket. Cut the remaining lead from the Ignitor. If no chassis ground connection exists in the wiring connected to 24VAC Return (Terminal #2), then crimp the included ring terminal to the Ignitor return line and connect to chassis. Discard Hot Surface Ignitor assembly.
7. Locate and mount the Spark Probe "L" bracket and BP202E Ignitor Probe in the same position as the HSI assembly. Be certain that the metal Electrode Rod of the igniter is not touching the frame or burner. Check that the distance from the tip of the igniter is no less than 1/4" and no more than 3/4" over the burner. It may be necessary to bend the igniter bracket to achieve the required clearance. Use caution when bending the bracket not to crack the ceramic insulator. Connect HV01.
8. Verify all connections are correct and match the following wiring diagram before continuing on to Check Out Sequence on the next page.

## WIRING DIAGRAMS



## Check Out Sequence

1. Turn ON Power to the tumbler, (Gas is OFF) and start the tumbler. Observe the following:
  - A. Green LED is ON.
  - B. 2-3 seconds after the tumbler starts high voltage spark starts.
  - C. Spark continues for 8 seconds.
  - D. Sparking stops for 30 seconds
  - E. Spark starts and runs for 8 seconds.
  - F. Sparking stops for 30 seconds
  - G. Spark starts and runs for 8 seconds.
  - H. Spark stops and control goes into Lockout. LED flashes 2 times.
2. Reset Lockout by opening the tumbler door until it stops. Close the door and restart the tumbler. Observe the same sequence as in step 1 above. If you are satisfied that the previous steps are correct and complete go to 3.
3. Turn ON the Gas Supply to the dryer.

### **IMPORTANT**

**If you smell gas immediately turn the gas supply OFF and repair the gas leak. If you are uncertain or unqualified to repair the gas leak, contact a qualified repair technician. DO NOT continue the check out procedure until the gas leak has been repaired.**

4. Start the tumbler and observe the following:
  - A) Green LED is ON.
  - B) Model DS1071E starts the ignition spark and that flame is established within a few seconds.
  - C) Spark shuts OFF after flame is established.
  - D) Main burner flame shuts OFF after thermostat is satisfied and reignites when temperature drops.

## Troubleshooting

Problem: *No ignition spark. LED is OFF.*

Solution: No power to the control. Be sure the accumulator has time on it, the door switch is closed and the thermostat is calling for heat. Check thermostat, airflow switch and high limit switch. Repair or replace as necessary.

Problem: *No Main Burner Flame, LED is flashing 2 times.*

Solution: Control is in Safety Lockout. Reset by opening the dryer door until the tumbler stops and restarting the dryer.

Problem: *Main Burner ON for 8 seconds, then OFF for 30 until the control flashes 2 times.*

Solution: Control is not sensing the flame. Check that the flame sense probe is in the flame, and is not touching the burner or grounded metal. Verify that there is a good electrical connection from the burner ( chassis ) to E2 ( 24VAC Return ) on the ignition control.

Problem: *Ignition Sparks but doesn't ignite the burner.*

Solution: Check that the spark is arching across the spark gap and it is positioned over the burner. Check the high voltage lead for shorting to the chassis.  
Replace if necessary. Check the ceramic insulator on the electrode for cracks. Replace as necessary.  
Check for power to the gas valve while sparking. Check wiring if not detected if detected, check gas valve and replace as necessary.

Problem: *High voltage lead or flame sensor lead is burned at the connector.*

Solution: Check the lint screen, ducting and fan. Clean, repair or replace as necessary. Check the airflow switch for correct operation. Replace as necessary. Check that the probe is positioned so that only the electrode is exposed to the flame

### **IMPORTANT**

**IS1071E is not field repairable. Attempts to repair or tampering with the control could result in property damage, personal injury or death.**

## Warranty

Synetek Controls Inc., guarantees to the first retail purchaser that should the control be defective, within the first 24 months of manufacture and it's our fault, Synetek will repair or replace the control to the first retail purchaser. Synetek is not responsible for equipment down time, labor costs or any other expense associated with the failure of our control.

## Synetek Controls Inc.

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