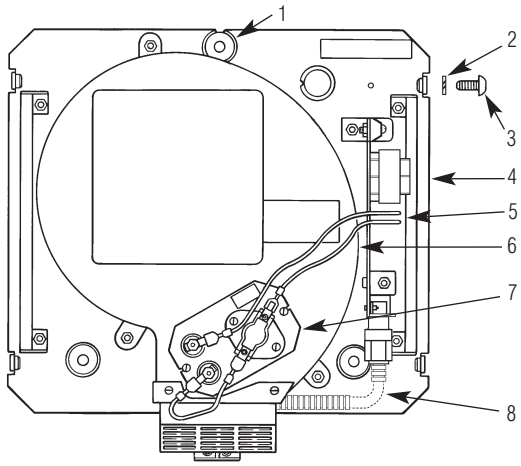
SLOAN
OPTIMA SYSTEMS

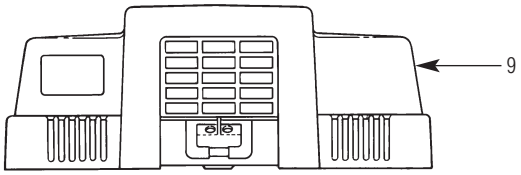
Model EHD
Hand Dryer

Maintenance Guide

OPTIMA® Sensor Activated Surface Mounted Electronic Hand Dryer



VIEW WITHOUT COVER



BOTTOM VIEW OF COVER

Item No.	Part No.	Code No.	Description
1	EHD-93	0305427	Mounting Hardware (Not Shown)
2	EHD-127	0305438	Lock Washer (4 Required)
3	EHD-17	0305437	Cover Screw (4 Required)
4	EHD-214-A	0305574	Chassis Assembly, 120 VAC
	EHD-215-A	0305540	Chassis Assembly, 208 VAC/240 VAC
5	EHD-182-A	0366002	Power Board Assembly, 120 VAC
	EHD-183-A	0366003	Power Board Assembly, 208 VAC/240 VAC
6	EHD-216-A	0305577	Blower Assembly, 120 VAC
	EHD-217-A	0305541	Blower Assembly, 208 VAC/240 VAC
7	EHD-11-A	0305401	Heater Assembly, 120 VAC
	EHD-14-A	0305543	Heater Assembly, 208 VAC/240 VAC
8	EHD-184-A	0366004	Exhaust Grille/Fiber Optic Cable Sub-Assembly
9	EHD-204-A1	0305709	Cover Assembly, White

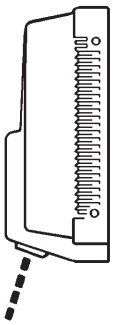
ELECTRONIC HAND DRYER FIBER OPTIC UPGRADE KITS

—	EHD-1006-A	3366007	Repair Kit for 120 VAC Hand Dryers Includes EHD-182-A Power Board Assembly, EHD-184-A Grille/Fiber Optic Cable Subassembly, and EHD-227 Wiring Diagram Label
—	EHD-1007-A	3366008	Repair Kit for 208/240 VAC Hand Dryers Includes EHD-183-A Power Board Assembly, EHD-184-A Grille/Fiber Optic Cable Subassembly, and EHD-178 Wiring Diagram Label

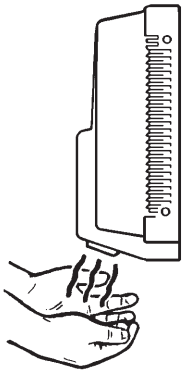
OPERATION

The Sloan Electronic Hand Dryer operates by means of an optical sensory device. The sensor automatically activates the unit when hands are placed in front of the sensor located at the exhaust port. A powerful flow of warm air will dry hands in approximately 30 seconds and will shut off automatically when hands are withdrawn, or after 60 seconds of continuous operation.

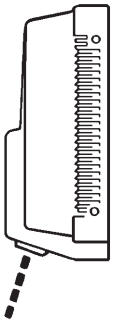
1. The OPTIMA/EHD functions by means of an electronic fiber optic photo-sensor located at the exhaust port beneath the Hand Dryer.



2. When hands are placed beneath the exhaust port, the fiber optic photo-sensor activates the Hand Dryer which emits a powerful flow of warm air to dry hands within 30 seconds.



3. When hands are withdrawn, the Hand Dryer shuts off automatically. It is then ready for the next user.



LIMITED WARRANTY

Sloan Valve Company warrants its Electronic Hand Dryers to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of five years from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

WHEN SERVICING OLDER SLOAN EHD HAND DRYERS

Sloan Valve Company is dedicated to providing sensor activated products that incorporate today's latest electronic technologies. To keep pace with these new technologies it is often necessary to make changes to our products. Current EHD Hand Dryer Power Boards and OPTIMA Fiber Optic Sensors will operate in older Sloan EHD Hand Dryers if the following conditions are met:

- Hand dryers built between September 1995 and June 1999 used Power Board Assemblies EHD-1004-A (120 VAC) and EHD-1005-A (208/240 VAC) and OPTIMA Sensor Assembly EHD-1003-A. These units can be identified by a Range Potentiometer located on the Power Board.
- Hand dryers built before September 1995 used Power Boards EHD-12-A (120 VAC) and EHD-65-A (208/240 VAC) and OPTIMA Sensor EHD-234-A (EHD-13-A if built before 1991). These units can be identified by a Range Potentiometer located on the OPTIMA Sensor (NOT on the Power Board).

IF EITHER THE POWER BOARD OR THE OPTIMA SENSOR HAS FAILED IN AN OLDER UNIT, **BOTH COMPONENTS** MUST BE REPLACED.

Note: Hand Dryers built before 1991 included a flashing indicator light visible through a window on the Hand Dryer Cover. Replacement Covers no longer furnish the indicator light; therefore, disconnect and remove the light if replacing the Cover or OPTIMA Sensor.

Table 1 — Power Board and Sensor Replacement Kits †

Production Dates	Voltage	Power Board Part No. (Obsolete)	Sensor Part No. (Obsolete)	Sensor/Power Board Replacement Kit Part No. (Code No.) ‡
1986 - 1991	120 VAC	EHD-12-A	EHD-13-A	EHD-1006-A (3366007)
	208/240 VAC	EHD-65-A	EHD-13-A	EHD-1007-A (3366008)
1991 - 1995	120 VAC	EHD-12-A	EHD-234-A	EHD-1006-A (3366007)
	208/240 VAC	EHD-65-A	EHD-234-A	EHD-1007-A (3366008)
1995 - 1999	120 VAC	EHD-1004-A	EHD-1003-A	EHD-1006-A (3366007)
	208/240 VAC	EHD-1005-A	EHD-1003-A	EHD-1007-A (3366008)

† Power Boards and Sensors are no longer available for EHD Hand Dryers manufactured prior to June 1999. When servicing this older product, both the Power Board and Sensor must be replaced using the Sensor/Power Board Replacement Kits listed in Table 1 above.

‡ The Sensor/Power Board Replacement Kits include Sloan's latest technology Power Board Assembly (Item No. 5), Exhaust Grille/Fiber Optic Cable Sub-Assembly (Item No. 8), Wiring and Installation Instructions.

TROUBLESHOOTING GUIDE

FOR NEW EHD HAND DRYER MODELS MANUFACTURED SINCE JUNE 1999 (MODELS WITH FIBER OPTIC ADAPTIVE SENSOR)

Note: Each power board has two (2) LED's: a green power indicator and a red sensor indicator. Electrical power must be supplied to Hand Dryer for indicator lights to function.

If none of the solutions shown below works, the power board may need to be reset; disconnect then reconnect electrical power and retest.

I. No air is supplied when hands are placed in Sensor's detection zone.

Remove Cover and check LED indicator light on the Power Board.

A. If green LED does NOT illuminate:

1. Power is not being supplied to dryer; check all electrical connections and main power supply.
2. Power Board has failed; replace Power Board.

B. If a green LED illuminates first and then red LED illuminates when hands are placed in the Sensor's beam:

1. Blower Motor is not connected properly; check Blower Motor leads for secure connection.
2. Power Board has failed; replace Power Board.
3. Blower Motor has failed; replace Blower Motor.

C. If green LED illuminates first, but red LED does NOT illuminate when hands are placed in the Sensor's beam:

1. Power Board or Power Board detection circuit has failed; replace Power Board.

D. If only the red LED illuminates (green LED does NOT illuminate when hands are removed from the Sensor's beam):

1. Power Board or Power Board self-calibration circuit has failed; replace Power Board.
2. OPTIMA Fiber Optic Cable has failed; replace Fiber Optic Cable.

II. Only unheated air is supplied when hands are placed in the Sensor's beam.

A. Heater is not properly connected; check Heater leads for secure connection.

B. Heater Assembly is defective; replace Heater Assembly.

III. Air cycles intermittently on and off.

A. OPTIMA Sensor blocked or out of position; clear obstruction and make sure that it is positioned properly in Exhaust Grille.

B. The Power Board's range feature is not functioning properly; replace Power Board.

IV. Dryer runs continuously (will not stop).

A. Disconnect OPTIMA Fiber Optic Cable from Fiber Optic Connector on the Power Board.

1. If dryer continues to operate, the Power Board has failed; replace Power Board.
2. If dryer stops operating, the OPTIMA Fiber Optic Cable has failed; replace Fiber Optic Cable.

TROUBLESHOOTING GUIDE (Continued)

FOR OLDER EHD HAND DRYER MODELS MANUFACTURED PRIOR TO JUNE 1999

I. No air is supplied when hands are placed in Sensor's detection zone.

Remove Cover and check LED indicator light on the Power Board.

A. If LED does not illuminate:

1. Power is not being supplied to dryer; check all electrical connections and main power supply.
2. Power Board has failed; replace with Sensor/Power Board Replacement Kit.

B. If green LED illuminates and then turns red when hands are placed in the Sensor's beam:

1. Blower Motor is not connected properly; check Blower Motor leads for secure connection.
2. Power Board has failed; replace with Sensor/Power Board Replacement Kit.
3. Blower Motor has failed; replace Blower Motor.

C. If green LED illuminates but does NOT turn red when hands are placed in the Sensor's beam:

1. OPTIMA Sensor blocked or out of position; clear obstruction and make sure that it is positioned properly in Exhaust Grille.
2. OPTIMA Sensor has failed; replace with Sensor/Power Board Replacement Kit.
3. Power Board has failed; replace with Sensor/Power Board Replacement Kit.

D. If red LED is illuminated but does not turn green when hands are removed from the Sensor's beam:

1. OPTIMA Sensor is locked on and unit has exceeded 60 second time out; reduce range.
2. OPTIMA Sensor blocked or out of position; clear obstruction and make sure that it is positioned properly in Exhaust Grille.
3. OPTIMA Sensor has failed; replace with Sensor/Power Board Replacement Kit.
4. Power Board has failed; replace with Sensor/Power Board Replacement Kit.

II. Only unheated air is supplied when hands are placed in the Sensor's beam.

A. Heater is not properly connected; check Heater leads for secure connection.

B. Heater Assembly is defective; replace Heater Assembly.

III. Air cycles intermittently on and off.

A. OPTIMA Sensor blocked or out of position; clear obstruction and make sure that it is positioned properly in Exhaust Grille.

B. Range may be too long; reduce range.

C. OPTIMA Sensor has failed; replace with Sensor/Power Board Replacement Kit.

IV. Unit is difficult to activate.

A. OPTIMA Sensor blocked or out of position; clear obstruction and make sure that it is positioned properly in Exhaust Grille.

B. Range may be too short; increase range.

C. OPTIMA Sensor has failed; replace with Sensor/Power Board Replacement Kit.

V. Dryer runs continuously (will not stop).

A. Disconnect OPTIMA Sensor from Power Board. If Dryer continues to operate, the Power Board has failed. If Dryer stops operating, OPTIMA Sensor has failed. In either case, replace with new Sensor/Power Board Replacement Kit.

If further assistance is required, please contact the Sloan Valve Company Installation Engineering Department at:

1-888-SLOAN-14 (1-888-756-2614)

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