



BUILDING VALUE SINCE 1906

TerraDry™ B-7180, B-7188 Dryer Troubleshooting and Information Guide

Effective 6/1/19

All Bobrick dryers require cleaning every 6 months to ensure that they function effectively. Please note that failing to clean the dryer may result in malfunction and can void the warranty.

www.bobrick.com

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TerraDry B-7180, B-7188 Dryers

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Instructions For Using The Dryer Guide

- Signs for your safety:



General mandatory sign (to be accompanied where necessary by another sign)



Danger: Electricity

- Please fill out the Dryer Service Information Sheet completely. If a section is not necessary/available insert N/A in the space.
- If the faulty dryer has been installed for 2 months or less, then **replace complete dryer and return faulty unit to the nearest [Bobrick Customer Service Department](#)**.
- When you receive a call concerning a dryer problem inform, the customer/end user to **clean the dryer and check the motor brushes** before going on with diagnosing the problem. Fax them the cleaning instructions from the guide. If the dryer still does not function after cleaning, then continue filling out the Dryer Service Information Sheet.
- Inform the customer/end user that the malfunctioning/replaced parts must be returned to the Bobrick Customer Service Department or a charge will be made for replacement parts.



Dryer Service Information Sheet

Distributor/Rep/End-User Name: Bobrick's best

Address: 12345 Your Street, Suite 100

City: Toon Town State: Your State Zip code: 98765

Job Name: Fantasy Lane Job Location: My Town

Contact Name: Jessica Rabbit Telephone: (555) 555-3333 Fax: (555) 555-4444

Email: jrabbit@bobricksbest.com Account #: 99999 Sales order #: 246810

Invoice #: 35791 Invoice Date: 03/03/20

Dryer Model Information:

Automatic Dryer: TouchButton Dryer: (check one)

Dryer: Dryer: (check one)

Dryer model #/voltage: 700 115V

Quantity defective: 1 Quantity on job: 2 Date of installation: 06/03/20

Date code (as seen on bottom edge of cover on dryer UL label. For example: 04A): _____

Dryer Information:

When did dryer problems first occur from date of installation?

(Circle one) Upon Installation 0-2 Months 2+ Months Out of Warranty

If dryer problem occurred within two months of installation, REPLACE dryer and return faulty dryer.

Does the dryer in any way function now? No (Yes or No)

Has the dryer been cleaned in the past 6 months? No (Yes or No). If No, send a cleaning sheet and await outcome.

Full description of fault: Unit would not start upon installation.

Reference to Diagnostic Sheets:

Problem and possible solution: Faulty controller

Problem number(s) (as seen in left margin on diagnostic sheet): # 1 F

Repair kit/parts required (if dryer needs to be returned write RETURN): Return

Part number(s) for replacements: Complete Unit Replaced on SO #: _____

ANY DEFECTIVE PARTS MUST ACCOMPANY THIS COMPLETED SHEET TO BOBRICK'S SERVICE DEPARTMENT.

Information sheet completed by: Your Name Completion Date: 6/6/20

Branch/Rep Firm: _____

Date Code Information

The date code on all Bobrick Dryers is found on the upper left corner of the rating label and on the serial number label.

The date code will contain two digits and one letter.

The digits designate the week and the letter designates the year.

Example: 30Z week thirty, year 2000.

All digits and letters are in ascending order.

Weeks are numbered from 1 to 52 for each year.

V = 2019

U = 2018

T = 2017

S = 2016

R = 2015

P = 2014

N = 2013

M = 2012

L = 2011

K = 2010

J = 2009

H = 2008

G = 2007

F = 2006

E = 2005

D = 2004

C = 2003

B = 2002

A = 2001

Z = 2000

Y = 1999

X = 1998

W = 1997

V = 1996

U = 1995

T = 1994

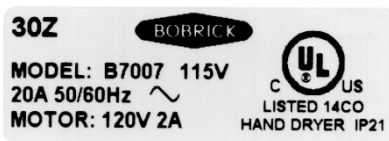
S = 1993

R = 1992

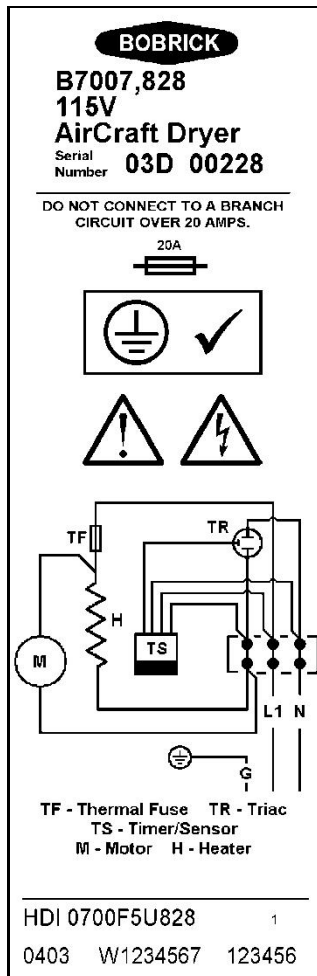
P = 1991

N = 1990

M = 1989



Rating Label



Date code and serial number

Serial Number Label

Routine Maintenance Instructions

- All Bobrick Dryers require cleaning every 6 months to ensure that they function effectively. Please note that failing to clean the dryer may result in malfunction and can void the warranty.
- If the dryer is installed in an area prone to dust and dirt this cleaning procedure should be carried out more frequently.
- Check the length of motor brushes, where applicable, when performing the cleaning procedure.

Cleaning Instructions:



Warning
Risk of electric
shock



Disconnect power
supply before
removing cover

a) The Exterior of Cover

Should be cleaned with a damp cloth, **DO NOT** use aggressive cleaners or solvents as they may permanently damage the surface.

Bobrick dryers are drip proof (IP21 or better, see rating label). **DO NOT** spray with liquids to an extent that they could enter the unit.

b) The Interior

Having turned off all power to the dryer, remove the cover.

Using a small brush or vacuum, carefully clean out the build up of dust and lint.

Check the length of the motor brushes. If less than 1/2" replace. Check that motor brushes are installed correctly and that brushes are worn evenly.

Replace the cover.

Turn the power back on.

TerraDry™ Dryer

B-7180 White cover



B-7188 Chrome cover



Instructions for Removal of Dryer Cover



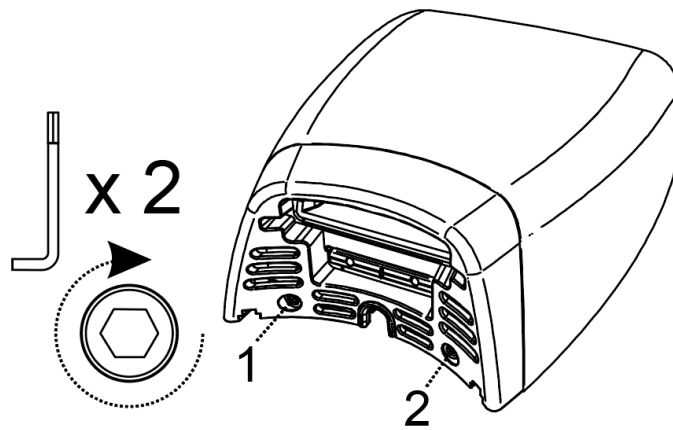
Warning
Risk of electric
shock



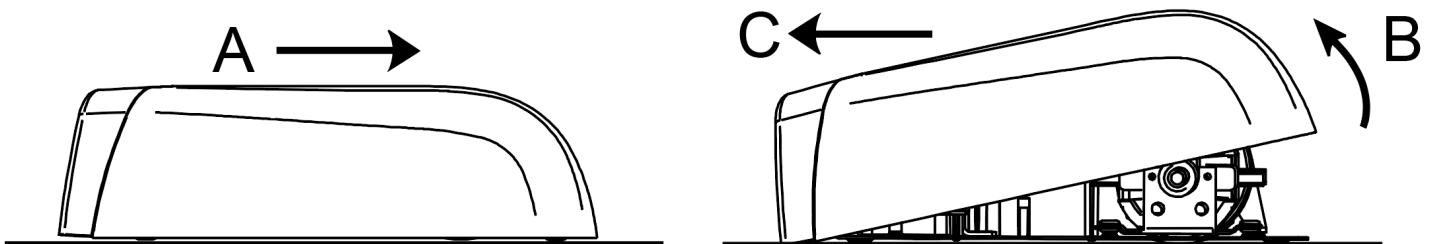
Disconnect power
supply before
removing cover

To Remove Cover

1. Start installation of dryer by removing cover. To loosen two cover bolts, insert Allen Wrench (provided with dryer) into holes located on bottom of cover. Make sure wrench fits into head of cover bolts and turn clockwise until bolts stop turning. When cover bolts are screwed out all the way, cover can be removed.



2. To remove cover, place a hand on each side of cover and push up toward top of dryer releasing cover from studs at top of mounting base. Lift cover off mounting base by pulling forward at the bottom and upward at the same time.



Diagnostic Sheet for DuraDry B-770, B-778 Dryers

| Problem | Possible Cause | Possible Solution |
|---|---|--|
| AUTOMATIC | | |
| 1. Dryer does not run | a) No electricity supply b) Installation fault c) Worn motor brushes d) Element open circuit e) Control nonstart f) Triac open circuit | Check main supply / wiring Check service manual for possible wiring mistakes Check length of brushes; replace if less than ½" Return dryer to Bobrick for repair |
| 2. Sparks from dryer | Worn motor brushes | Replace motor brushes |
| 3. Dryer runs at low speed | a) Worn motor brushes b) Triac halfwave c) Control halfwave | Replace motor brushes Remove white wire from triac; no difference, replace triac Remove white wire from triac; dryer stops, replace control |
| 4. Dryer runs continuously | a) Triac short circuit b) Control faulty | Remove white wire from triac; no difference, replace triac Remove white wire from triac; dryer stops, replace control |
| 5. Dryer cycles on and off | Control | Replace control |
| 6. Dryer sometimes runs | Dirty control lens | Clean control lens |
| 7. Dryer is oversensitive | Control | Replace control |
| 8. Dryer blows cold air or motor runs fast | Heating element | Return dryer to Bobrick for repairs |
| 9. Grinding noise from dryer | a) Worn motor brushes b) Fan cage is bent or damaged | Replace motor brushes Return dryer to Bobrick for repairs |
| 10. Dryer does not run and heating element glows | Worn motor brushes | Replace motor brushes; if still not functioning after replacing the motor brushes, return dryer to Bobrick for repairs. |
| TOUCHBUTTON | | |
| 1. Dryer does not run | a) No electricity supply b) Installation fault c) Tabs are not connecting d) Worn motor brushes e) Element open circuit f) Timer assembly nonstart | Check main supply / wiring Check service manual for possible wiring mistakes Turn off power, remove cover and bend tabs closer to sensor board Check length of brushes; replace if less than ½" Return dryer to Bobrick for repair Perform Screwdriver Test (see test instructions) |
| 2. Sparks from dryer | Worn motor brushes | Replace motor brushes |
| 3. Dryer does not run and heating element glows | Worn motor brushes | Replace motor brushes; if still not functioning after replacing the motor brushes, return dryer to Bobrick for repairs. |
| 4. Dryer runs at low speed | a) Worn motor brushes b) Timer assembly | Replace motor brushes Replace timer assembly |
| 5. Dryer runs continuously | b) Timer assembly | Replace timer assembly |
| 6. Dryer blows cold air | Heating element | Return dryer to Bobrick for repair |
| 7. Grinding noise from dryer | a) Worn motor brushes b) Fan cage is bent or damaged | Replace motor brushes Return dryer to Bobrick for repair |
| 8. Dryer is oversensitive and switches on or off randomly | a) Button loose b) Timer assembly or crystal board | Pack button O ring with tape Perform Screwdriver Test (see test instructions) |
| 9. Dryer cycles on and off | Timer assembly or crystal board | Perform Screwdriver Test (see test instructions) |

Field Replacement Parts

- Replacement parts are intended to be issued by Bobrick after completion of diagnostic sheets and a problem is identified that involves replacement of parts.
- Replacement parts will then be sold to the customer/rep with credit issued upon the return of identifiable malfunctioning and/or unused parts.
- A copy of the Dryer Service Information Sheet must be completed by the rep and sent to Bobrick prior to return of parts.
- Dryer voltage must be identified in order to replace parts. Replacement parts have options for both the 115V and 208–240V dryers. Check voltage and then designate correct part(s).

[TerraDry Dryer Replacement Parts](#)

TerraDry™ B-7180, B-7188 Dryer Replacement Parts

| | 115V | 208-240V |
|----------------------------|---------------|---------------|
| B-7180 White cover | 7180-150 115V | 7180-150 230V |
| B-7188 Chrome cover | 7188-150 115V | 7188-150 230V |
| QuietDry Controller | 7180-360 | 7180-361 |

[Product Identification](#)

Common Parts

| | |
|--|----------|
| Triac | 7180-325 |
| Motor Brushes EMD (Red Retainer) | 7180-101 |
| Motor Brushes Sintech (Brass Retainer) | 7180-111 |
| Motor Brushes Ametek & Winston | 7180-121 |
| Cover Mounting Screws | 7180-156 |
| Allen Wrench | 7180-55 |

The following items are not to be field replaced:

Motor/fan units.
Heating elements.

Cover Replacement



Warning
Risk of electric
shock

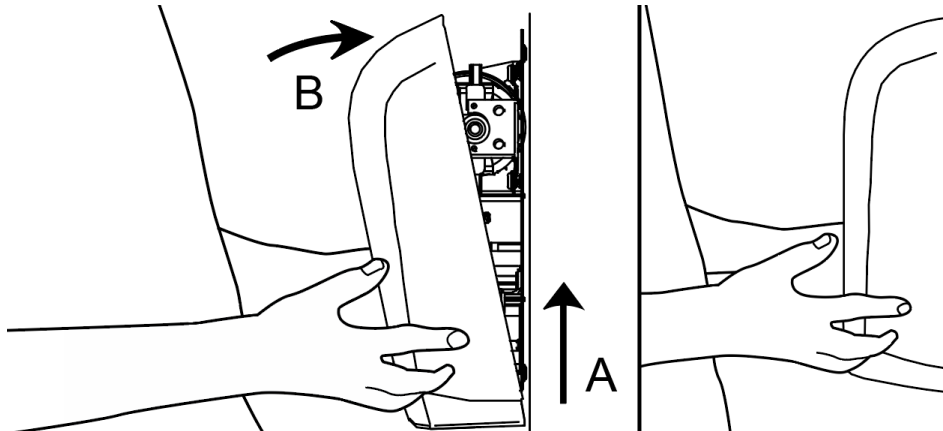


Disconnect power
supply before
removing cover

To Replace Cover

1. Replace cover by positioning top of cover on studs on top of mounting base and tipping bottom of cover toward wall. Push bottom of cover firmly against wall.

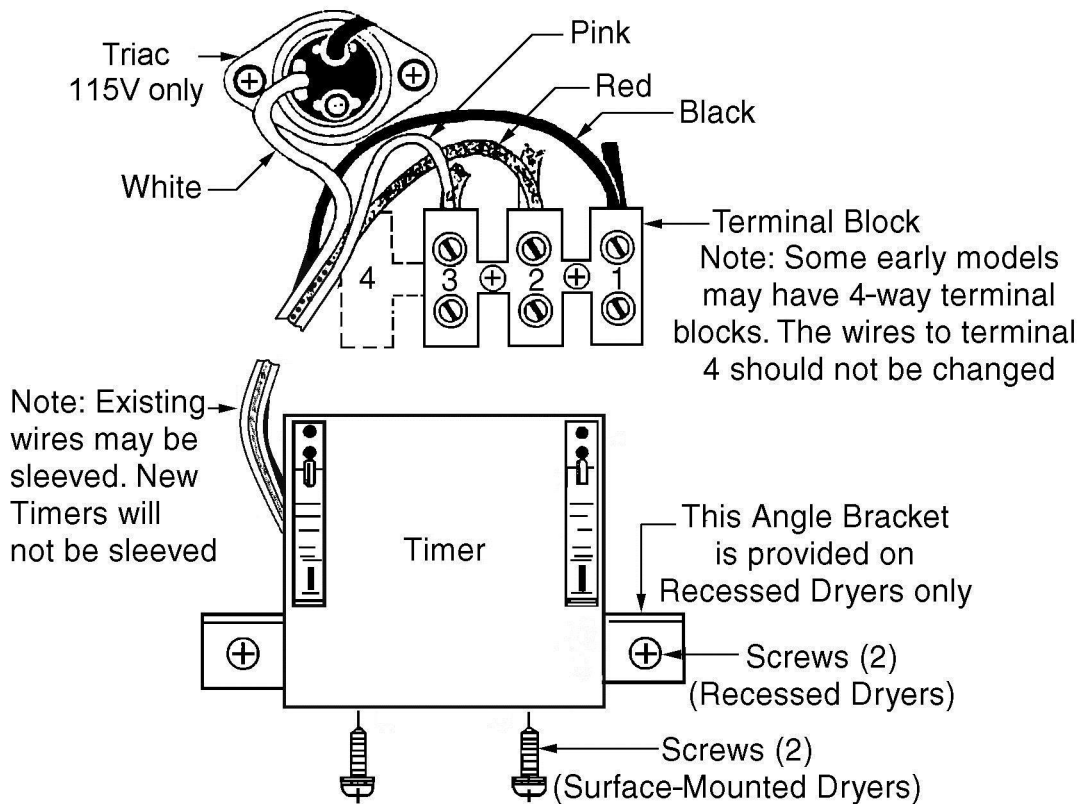
NOTE: Space between cover and wall must be the same on four sides.



2. To tighten two cover bolts, insert Allen wrench into holes on bottom of cover. Make sure wrench fits into head of cover bolts and turn **COUNTERCLOCKWISE** until bolts are tightened.

NOTE: Do not overtighten cover bolts; overtightening cover bolts may damage enamel finish.

Installation of Touch Controller



To Remove Existing Timer

1. Disconnect the power supply and remove the cover.
2. Remove the timer from the base plate by unscrewing the two screws securing the timer bracket to the base. On recessed dryers the timer bracket is secured to a metal angle bracket, this bracket with its screws must be removed and retained for use on the replacement timer.
3. Disconnect the pink or yellow, red, and black timer wires from the terminal block and the white wire push on connector from the triac (115V only). Place the timer aside for return to the Service Department.

To Install New Timer

1. Mount the timer assembly to the base plate. In the case of recessed dryers, it is first necessary to attach the metal angle bracket removed from the faulty timer to the new timer.
2. Route the timer wiring under the element tube and attach the white wire push on connector to the small spade terminal on the triac (115V only), older 208 – 240V units may have a base plate mounted triac, this is no longer required and can be removed.
3. Connect the remaining three timer wires to the terminal block, black wire to terminal 1, red wire to terminal 2, pink wire to terminal 3.
4. Secure wiring with cable ties provided.
5. Replace dryer cover. Switch on electrical supply and test operation.



Warning
Risk of electric
shock



Disconnect power
supply before
removing cover

Installation of Base Plate Mounted Triac



Warning
Risk of electric
shock



Disconnect power
supply before
removing cover

Note: This procedure applies only to surface-mounted or recessed dryers with triac mounted on the base plate. For touch button models with triac mounted on the timer bracket, the complete timer assembly must be replaced.

To Remove Existing Triac

1. Disconnect power supply and remove cover.
2. Remove white, yellow or pink, and black Push On connectors from triac.
3. Remove the two screws securing the triac to the base plate.
4. Remove the triac and place to one side for return to Service Department.

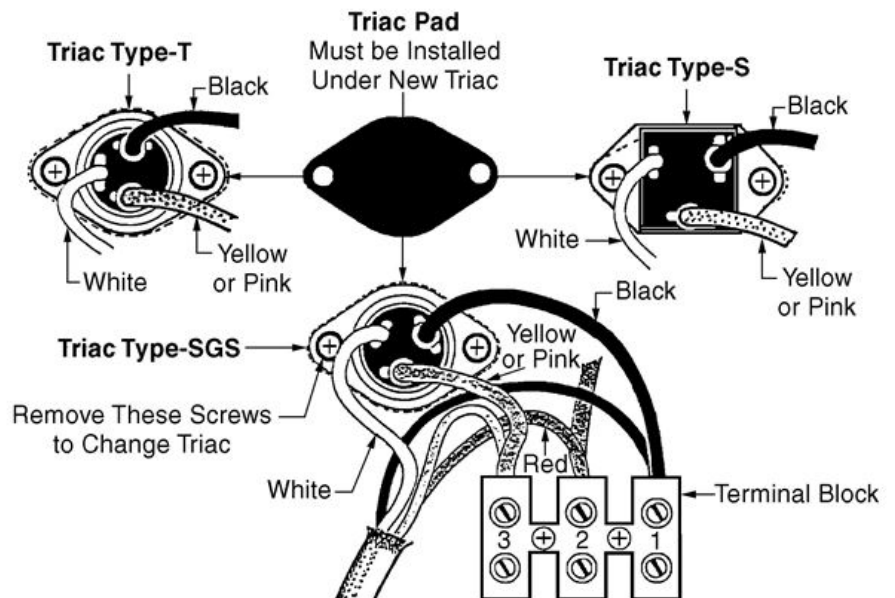
To Install New Triac

Note: On factory-installed triac, a white Heat sink Compound is interposed between the triac flange and the dryer base plate to ensure rapid conductivity of heat away from the triac. For service purposes this compound is replaced by a thin plastic gasket of heat conducting material, this must be sandwiched between the flange and the base plate during assembly.

1. Position new triac and pad on base plate with the Terminals positioned as shown in illustration below. Insert and tighten the two self-threading screws and shake proof washers provided.

2. Attach the white wire Push On connector to the small spade Terminal on the triac. The black wire from the Terminal Block should then be attached to the next Terminal round in a clockwise direction and the yellow or pink wire to the remaining Terminal.

3. Replace dryer cover. Switch on electrical supply and test operation, allow 10 seconds for the controller to stabilize before placing hands in front of lens (automatic units)



Installation of Automatic Controller

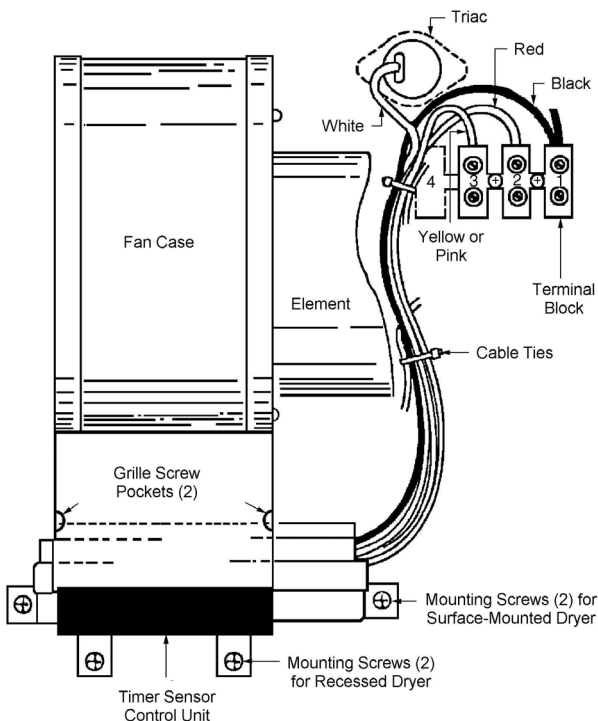


Warning
Risk of electric
shock



Disconnect power
supply before
removing cover

Older units have an intermediate plug and socket in the wiring, this has now been discontinued and can be removed with the faulty controller. The wiring on older units may be sleeved, this was later replaced by plastic cable ties. Some early 115 volt dryers had 4 way terminal blocks instead of the current 3 way blocks, in these dryers the wires to the 4th terminal should not be disturbed.



To Remove Control Unit

1. Remove outlet grille from front of fan case by unscrewing the securing screws.
2. Remove the screws securing the control unit to the base plate. (Note the different position of recessed and surface-mounted screws).
3. If the control unit wiring is secured by cable ties, carefully cut these to free the 4 wires from other wiring.
4. Remove the Push On Terminal securing the white wire to the triac.
5. Disconnect the controller wires from terminals 1, 2, and 3 on the terminal block. Leave all other wires in position.
6. Carefully lift control out of base plate. Avoid disturbing other wiring. (Note: On recessed dryers it will be necessary to slide the control to the right to clear the fan case).

To Install New Control Unit

1. Position the new control unit on the base plate to line up with the screw holes and secure with the screws and washers previously removed.
2. Route wiring under element tube and connect wiring as follows: white wire with Push On Terminal to triac. Black wire to Terminal 1 (with existing black wire). Red wire to Terminal 2 (with existing red wire). Pink wire to Terminal 3 (with existing wiring).
3. Secure all wires to existing wires with a minimum of 2 cable ties.
4. Replace grille and sealing gasket and secure with screws previously removed.
5. Check all wires for security and all screws for tightness.
6. Replace cover. Switch on electric supply.
7. Allow 10 seconds for the controller to stabilize and check operation of the dryer. If the operation is intermittent check that the controller has a clear view out of the cover aperture, use the spacers provided to raise the controller if required.

Instructions for Installation of Sensor Board



Warning
Risk of electric
shock

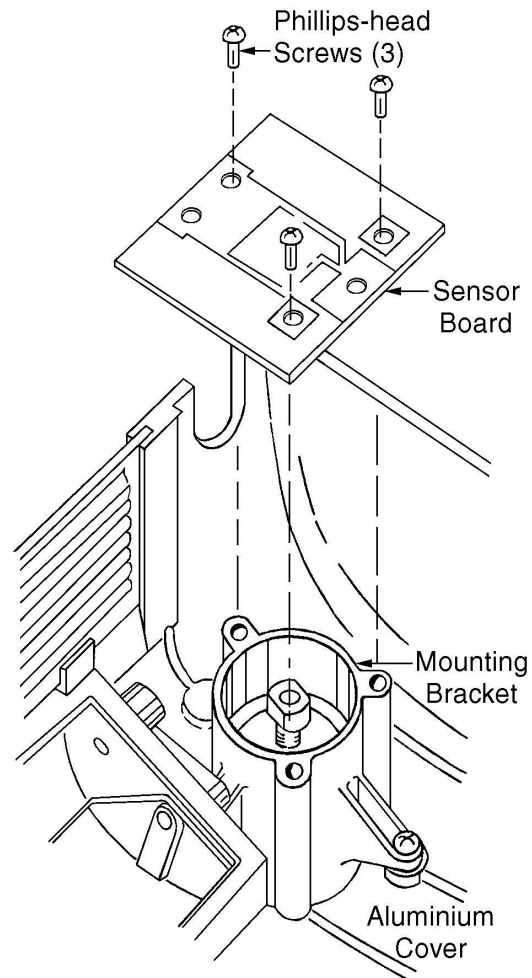
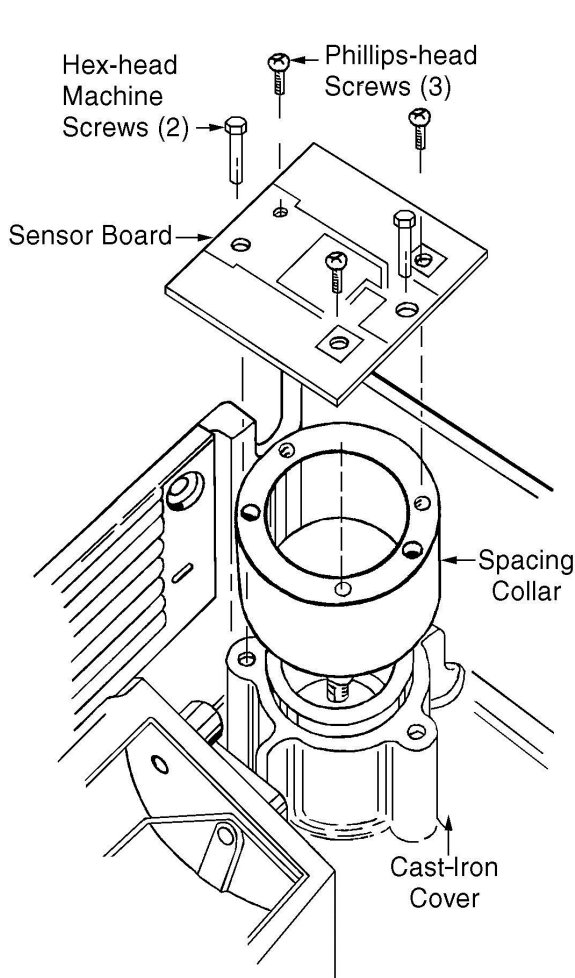


Disconnect power
supply before
removing cover

There are two methods fixing sensor boards.

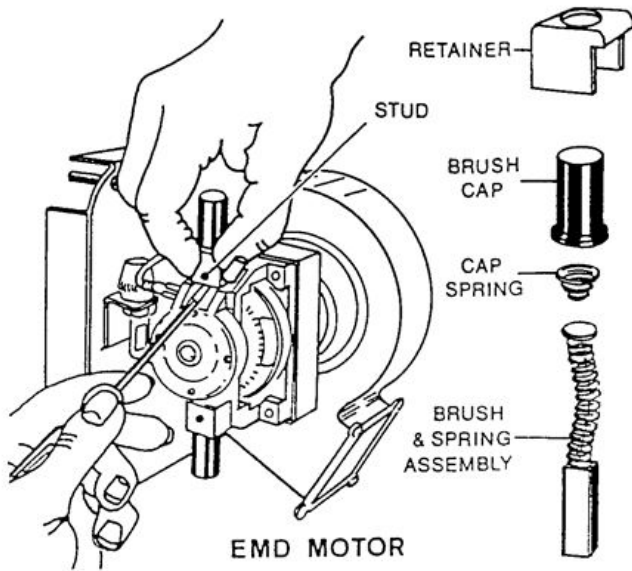
1. Fixed with five screws, Fig 1.
2. Fixed with three screws, Fig 2.

In both cases the orientation of the board is critical.



1. Switch off mains supply and remove cover. Place cover face downward on a bench using a cloth to protect the finish.
2. Remove the screws securing the board to the collar or bracket.
3. Mount the new board.
4. Replace cover. Switch on electrical supply and carry out normal hand drying procedure to test operation.

Instructions for the Replacement of Motor Brushes



Warning
Risk of electric
shock



Disconnect power
supply before
removing cover

The brush spares kit contains two brushes. Always replace BOTH brushes.

EMD MOTOR

To remove the brush:

1. Squeeze the sides of the retainer and ease it over the stud with a small screwdriver.
2. Remove the retainer, cap and brush. Do not mislay the small cap spring.

To replace the brush:

1. Insert the new brush into the holder.
2. Place the cap, with the cap spring inside it, over the brush spring and press it over the holder.
3. Slide the retainer down the cap and snap it into position over the stud.

SINTECH MOTOR

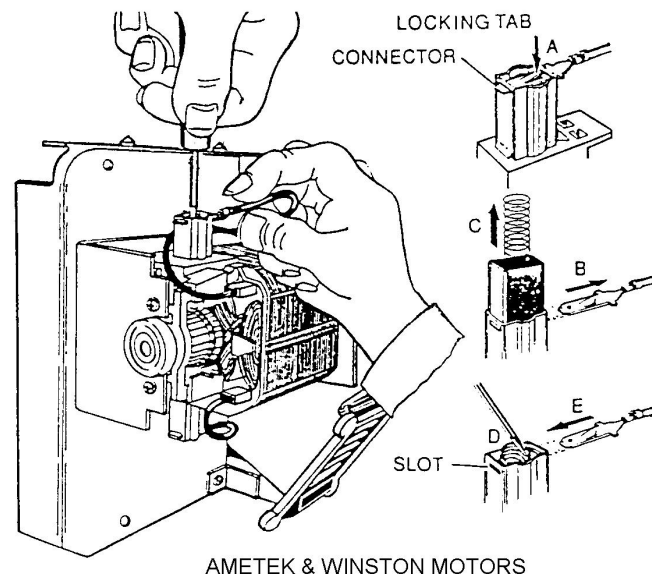
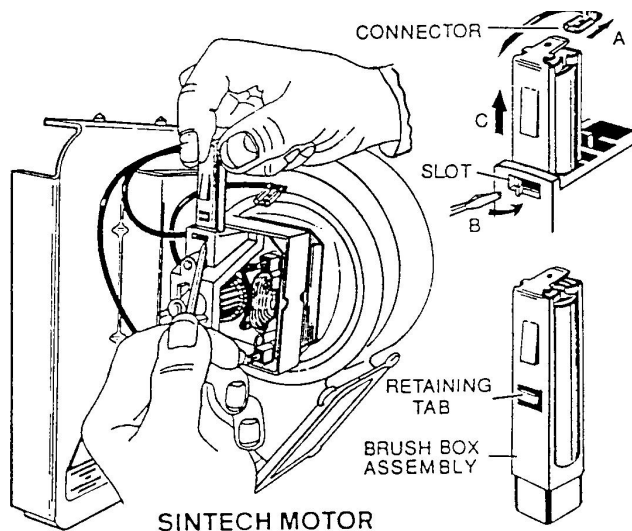
On this motor the brush is replaced by changing the complete brush box assembly.

To remove the brush box assembly:

1. Pull the connector off the terminal tab, (A).
2. Depress the retaining tab with a small screwdriver and pull out the brush box, (B) and (C).

To replace the brush box assembly:

1. Insert the new brush box and push it down until the retaining tab is level with the slot in the motor end frame.
2. Bend out the retaining tab.
3. Replace the connector on the terminal tab.



AMETEK & WINSTON MOTORS

On this motor the brush is replaced without disturbing the brush box.

To remove the brush:

1. Depress the locking tab in the connector with a small screwdriver, (A).
2. Slide out the connector and remove the brush, (B) and (C).

To replace the brush:

1. Insert the new brush into the holder.
2. Press the spring down with a screwdriver until it is below the connector slot, (D).
3. Push the connector into the slot until it locks into position, (E). Make sure that all of the top coil is under the connector.

INSTALLATION INSTRUCTIONS BOBRICK SURFACE-MOUNTED HAND DRYERS

ELECTRICAL CHARACTERISTICS.

115V AC, 20 Amp, 50/60 Hz, Single Phase, UL/c-UL listed.

208–240V AC, 9–10 Amp, 50/60 Hz, Single Phase, UL/c-UL listed, VDE approved.

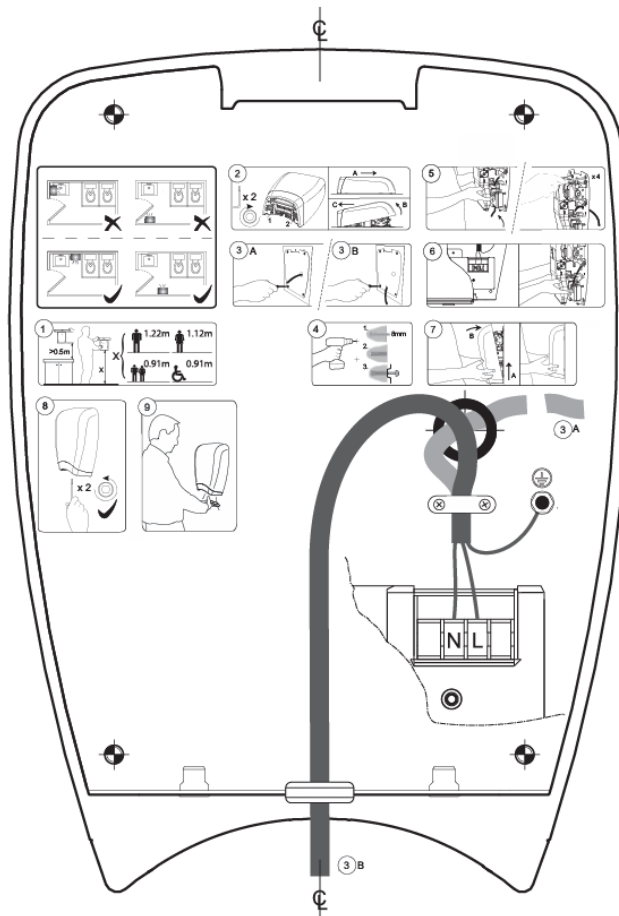
REMOVAL OF COVER

Start installation of dryer by removing cover. To loosen two cover bolts insert Allen Wrench, provided with dryer, into holes located on bottom of cover on each side of air intake grille. Make sure wrench fits into head of cover bolts and turn **CLOCKWISE** until bolts stop turning. When cover bolts are screwed in all the way, cover can be removed.

To remove cover, place a hand on each side of cover and push up toward top of dryer releasing cover from studs at top of mounting base. Lift cover off mounting base by pulling forward at the bottom and upward at the same time.

INSTALLATION OF MOUNTING BASE.

An Installation Template is supplied with each unit.



RECOMMENDED MOUNTING HEIGHTS.

Distance from floor to bottom mounting screw holes of mounting base (Dimension A).

Hand dryer.

| | |
|---|-------------|
| Men's Washroom. | 46" (117cm) |
| Women's Washrooms. | 44" (112cm) |
| Children's Washrooms, ages 3-9. | 32" (81cm) |
| Children's Washrooms, ages 9-12 | 36" (91cm) |
| Children's Washrooms, ages 12-15. | 40" (102cm) |
| Children's Washrooms, ages 15-18. | 44" (112cm) |
| For Wheelchair Access. | 38" (97cm) |

Place mounting base on wall at the desired location of the installed dryer. See recommended mounting heights above. Use the mounting base or the template provided with dryer to mark location of four mounting screw holes and hole for electrical wiring if electrical supply is concealed in wall and will enter dryer from back through mounting base.

NOTE: Surface-mounted electrical supply is attached to mounting base in lower right corner. Flange of mounting base and bottom of cover are notched in lower right corner to accommodate connection of electrical conduit.


WARNING:

**TURN ELECTRICAL POWER SUPPLY OFF BEFORE MAKING ELECTRICAL CONNECTIONS.
DRYER MUST BE GROUNDED (EARTHED).**


ELECTRICAL CONNECTION.

Connect dryer to nearest distribution panel. Use wire as required by local electrical code. In the United States and Canada use No. 12 wire or larger.

Wiring Instructions:

For 115 Volt Dryers: Connect ground (earthed) wire to ground (earthed) terminal marked , the black or Hot wire to terminal marked L1 and neutral or white wire to terminal marked N.

DEDICATED LINE IS REQUIRED FOR EACH 115 VOLT DRYER.

For 208–240 Volt Dryers: Connect ground (earthed) wire to ground (earthed) terminal marked  and the 208-240 Volt wires to terminals marked L(L1) and N (L2).

Secure electrical wire in strain relief clamp provided on mounting base.

REPLACE COVER.

Replace cover by positioning top of cover on studs on top of mounting base and tipping bottom of cover toward wall. Push bottom of cover firmly against wall.

NOTE: Space between cover and wall must be the same on four sides.

To tighten two cover bolts, insert Allen wrench into holes on bottom of cover. Make sure wrench fits into head of cover bolts and turn COUNTERCLOCKWISE until bolts are tightened.

NOTE: Do not over tighten cover bolts; over tightening cover bolts may damage enamel finish.

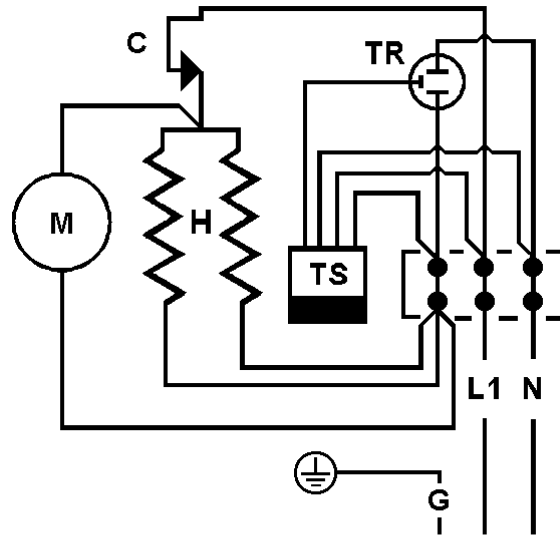
CHECK DRYER OPERATION.

To check operation of dryer, follow these instructions:

For Touch Button Hair Dryers: Turn electrical power supply on. Touch the chrome-plated touch button once and dryer should turn on. Touch the touch button again after a few seconds and dryer should stop. If left on Hair Dryers will shut off after 80 seconds.

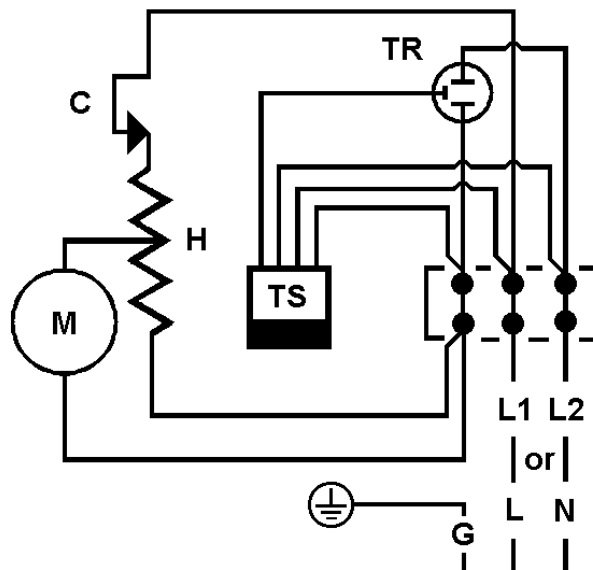
For Automatic Hand Dryers: Turn electrical power supply on. Position hands under nozzle and dryer should turn on. Remove hands from under nozzle and dryer should stop.

SCHEMATIC DIAGRAM 115V DRYER



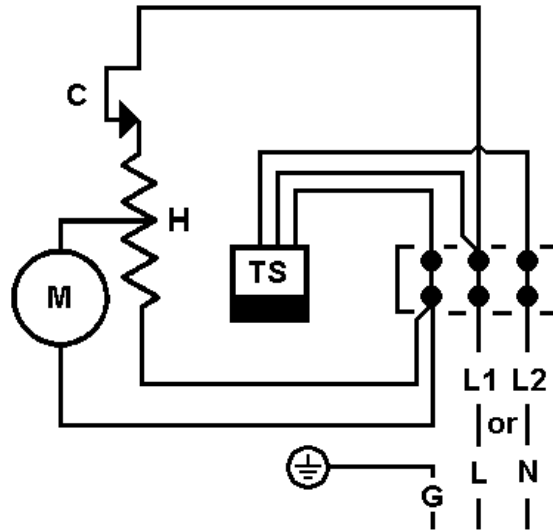
C - Cutout H - Heater
M - Motor
TR - Triac
TS - Timer/Sensor

SCHEMATIC DIAGRAM 208-240V AUTOMATIC DRYER



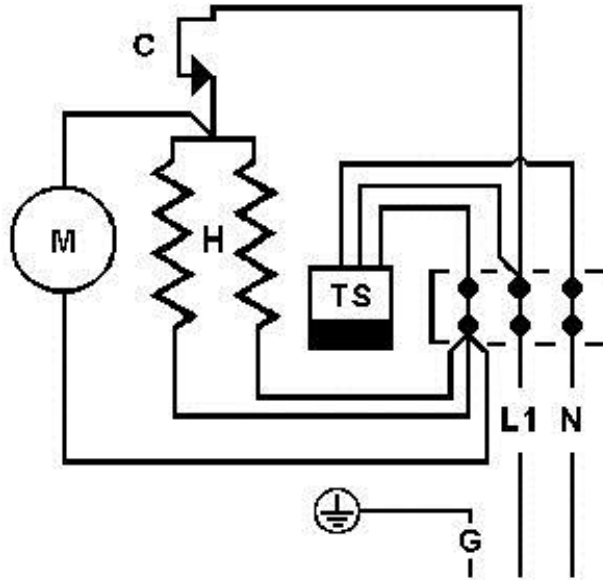
C - Cutout H - Heater
M - Motor
TR - Triac
TS - Timer/Sensor

SCHEMATIC DIAGRAM 208-240V TOUCH DRYER

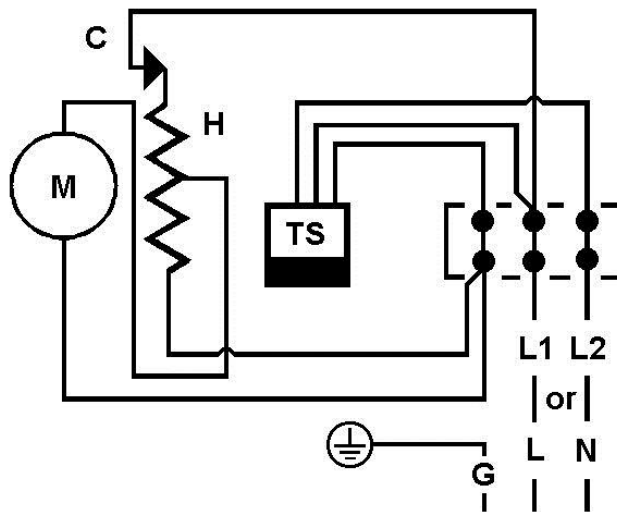


C - Cutout
TS - Timer/Sensor
M - Motor H - Heater

SCHEMATIC DIAGRAM QUIETDRY DRYERS



115V



208-240V

C - Cutout
H - Heater
M - Motor
TS - Timer/Sensor

Limited Warranty

The Bobrick Dryer and all parts (except motor brushes) are warranted to the original owner of the installed unit for ten years from date of original installation for AirCraft® and AirGuard® Automatic and Touch Button hand and hair dryers and five years for AirPro® and Fast Dry hand dryers, against defects in factory workmanship or material under normal use and service. *

Motor brushes shall be warranted for three years from date of installation. This warranty is limited to repair or exchange of defective parts at the option of Bobrick Washroom Equipment, Inc.

THIS WARRANTY DOES NOT COVER ACCIDENTAL DAMAGE, IMPROPER HANDLING OR INSTALLATION, OR REPAIRS MADE BY UNAUTHORIZED PERSONS, AND SPECIFICALLY EXCLUDES CLAIMS FOR INDIRECT, ACCIDENTAL OR CONSEQUENTIAL DAMAGES TO PROPERTY. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE SAME DURATION OF THE ABOVE WARRANTY.

Some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

*** Normal service constitutes performing the following preventive maintenance procedures at six-month intervals.**

Remove cover and clean any lint, dust or grease from air-intake grille and baffle from behind air-outlet nozzle.

Visually inspect motor brushes to insure remaining brush length is a minimum of 1/2 inch (12.7mm).

Labor costs for preventive maintenance shall be at owner's expense.

For repair or exchange of defective part, send the part, together with installation date and serial number, to BOBRICK.