

INSTALLATION INSTRUCTIONS FOR WIRING HARNESS REPLACEMENT KITS USED WITH G26, GHR26, G32, GHR32 AND AM30 UNITS

Shipping and Packing List

Package 1 of 1 contains:

Harness assembly(ies) - quantity varies from 1 to 4

Wires - quantity varies from 0 to 3

- 1 - Patch plate
- 2 - #8 - 18 X 1/2 screws
- 1 - Strain relief bushing
- 1 - Amp plug cap
- 1 - Foam plug (AM30 kit only)

Application

These kits are used to replace wiring harness assembly(ies) in units as outlined in table 1.

Unit Model Number	Kit Number
G26 & 90UGF	23M24
G32	23M25
G32V	23M26
GHR26	23M27
GHR32	23M28
GHR32V	23M29
AM30	23M30

Installation

⚠ WARNING

These instructions must be followed exactly. This kit must be installed by a qualified service technician. Improper installation may result in personal injury, loss of life or equipment damage.

⚠ WARNING

Before attempting to perform any service or maintenance, turn the electrical power OFF to unit at disconnect switch(es). Turn off gas supply to unit at main manual shut-off valve.

Units with Exception of AM30

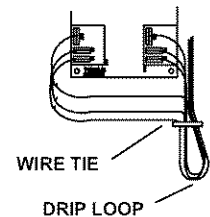
- 1 - Disconnect power and gas supplies to the unit
- 2 - Remove unit access panels.

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⚠ WARNING

Bundle all wires connected to control relays in such a way that drip loops are created. Drip loops will direct moisture away from control.



- 3 - Identify existing wiring harness(es) to be replaced. If the unit is equipped with harnesses routed through a single strain relief bushing in the blower deck, remove the existing harnesses and bushing. Route replacement harnesses through the existing hole in the blower deck and secure in place using the provided strain relief bushing. Make wiring connections per existing wiring diagram. Restore gas and power supplies to the unit and follow start up procedures.

G26, GHR26 & 90UGF

- 1 - In many cases, these units are equipped with separate harnesses that are connected by Molex plugs in the blower deck. Remove these harnesses and plugs from the unit.
- 2 - Use the provided plug to fill the square hole left by the three-wire combustion air inducer harness connectors.
- 3 - Enlarge the hole left by the nine-wire harness connectors. It must be large enough to accommodate the replacement wiring harness and strain-relief bushing.
- 4 - Install the provided patch plate over the enlarged hole. Use the two provided screws to secure the patch plate to the blower deck.
- 5 - Secure the 9-pin (P58) and 6-pin (P156) harness connectors to the matching connectors (J58 and J156) on the SureLight control board.
- 6 - Route the P84 and P159 two-wire harnesses from the 6-pin (P156) harness through the patch plate in the blower deck. Connect the P84 plug (black and white wire) to the J84 jack on the combustion air inducer motor. Connect the P159 plug (two white wires) to the J159 jack on the electrode.

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- 7 - Route all wires from the P58 harness through the patch plate in the blower deck. Fold the strain relief bushing around the harness wires and snap the bushing into place in the round patch plate hole.
- 8 - Make the wiring connections as outlined below:
 - a - Connect the piggy back terminal with the two blue wires to the S10 primary limit along with the blue wire from pin position 6. Connect the loose blue wire from the piggy back to the NO terminal on the S18 combustion air pressure proving switch.
 - b - Connect the yellow and orange wires to the gas valve.
 - c - Connect the two brown wires to the S47 flame rollout switch.
 - d - Connect the purple wire to the C terminal on the S18 combustion air pressure proving switch.
- 9 - Restore gas and power supplies to the unit. Replace access panels and follow start up procedures.

G32Q & GHR32Q Units

- 1 - Remove existing harnesses and plugs from the unit. The two-piece 9-pin harness that connects through the blower deck will be replaced by the provided harnesses.
- 2 - Enlarge the hole left by the 9-pin harness connectors. It must be large enough to accommodate the replacement wiring harness and strain-relief bushing.
- 3 - Install the provided patch plate over the enlarged hole. Use the two provided screws to secure the patch plate to the blower deck.
- 4 - Select the provided harness which includes a 2-pin plug with one (G32Q) or two (GHR32Q) blue wire(s) attached. Secure the 9-pin (P58) connector to the matching connector (J58) on the SureLight control board. Secure the 6-pin (J33) connector to the matching connector (P33) on the two-stage board.
- 5 - *G32Q Units* - Secure the 2-pin plug (J44) to the matching connector (P44) on the two-stage board. *GHR32Q Units* - Secure the 2-pin plug (P135) to the matching connector (J135) on the secondary limit on the blower housing. Connect the blue wire with the piggy back terminal from pin position 1 on the connector (P135) to the S10 primary limit switch. Connect the other wire from the piggy back terminal on the S10 primary limit switch to the C terminal on the S18 combustion air proving switch.
- 6 - Make the wiring connections from P58 as outlined below:
 - a - *G32Q Units Only* -- Connect the piggy back quick connect terminal to the S10 primary limit.
 - b - *G32Q Units* -- Connect the other blue wire to the C terminal on the S102 high fire pressure switch. *G32Q-75 Units Only* -- Connect the other blue wire from S10 to terminal C on the S128 low fire pressure switch. The kit also includes two loose wires (one pink and one blue). Connect the quick connect end of the pink wire to the NO terminal on the low fire pressure switch. Route the wire through the hole in the blower deck and insert the pin into the P44 connector on the two-stage control. Connect the blue wire from the C terminal on the low fire pressure switch to the C terminal on the high fire pressure switch. *GHR32Q Units* -- Connect the blue wire from pin position 6 to the S10 primary limit switch.
 - c - Connect the yellow wire to terminal C on the gas valve.
 - d - Connect the two brown wires to the S47 rollout switch
 - e - *G32Q Units* -- Connect the purple wire to the NO terminal on the S102 high fire pressure switch. *GHR32Q Units* -- Connect the purple wire to the NO terminal on the S18 combustion air proving switch.
 - f - *G32Q Units Only* -- Connect the blue wire from pin position 6 to the S10 primary limit switch.
- 7 - Make the wiring connections from J33 as outlined below:
 - a - Connect the orange wire from pin position 3 to the MV terminal on the gas valve.
 - b - Connect the yellow wire to the RTN terminal on the SureLight board.
 - c - Connect the brown wire from pin position 5 to the W2 terminal on the thermostat.
 - d - Connect the brown wire from pin position 6 to the HI terminal on the gas valve.
- 8 - ***If the two-stage board is equipped with a 9-pin connector*** -- Select the remaining harness with a matching connector and discard the remaining harness. Secure the 9-pin connector to the matching connector on the two-stage board. Secure the 6-pin (P156) connector to the matching connector (J156) on the SureLight control board. Secure the (P98) 3-pin connector to the combustion air inducer connector in the blower deck. Secure the 2-pin connector (P159) to the matching (J159) connector on the ignitor. Make the wiring connections from the 9-pin plug as outlined below:
 - a - Connect the red wire from pin position 1 to the blower motor HEAT terminal.
 - b - Connect the wire from pin position 4 to TB1 terminal 1.
 - c - Connect the wire from pin position 7 to TB1 terminal 2.
 - d - Connect the brown wire from pin position 8 to the blower motor ACB LOW terminal.
- 9 - ***If the two-stage board is not equipped with a 9-pin connector*** -- Select the remaining harness that includes a 6-pin connector, a 2-pin connector and a 3-pin connector. Discard the remaining harness. Secure the 6-pin connector (P156) to the matching (J156) connector on the SureLight control board. Secure the (P98) 3-pin connector to the combustion air inducer connector in the blower deck. Secure the 2-pin connector (P159) to the matching (J159) connector on the ignitor. Make the wiring connections from the 3-pin (P98) plug as outlined below:

- a - Connect the black wire to the NO terminal on the K11 relay on the two-stage board.
 - b - Connect the red wire to the NC terminal on the K11 relay on the two-stage board.
 - c - Connect the black wire from pin position 4 on the 6-pin connector (P156) to the C terminal on the K11 relay on the two-stage board.
- 10 - Fold the strain relief bushing around the harness wires and snap the bushing into place in the round patch plate hole.
 - 11 - Restore gas and power supplies to the unit. Replace access panels and follow start up procedures.

G32V & GHR32V Units

- 1 - Remove existing harnesses and plugs from the unit. The two-piece 9-pin harness that connects through the blower deck will be replaced by the provided harnesses.
- 2 - Enlarge the hole left by the 9-pin harness connectors. It must be large enough to accommodate the replacement wiring harness and strain-relief bushing.
- 3 - Install the provided patch plate over the enlarged hole. Use the two provided screws to secure the patch plate to the blower deck.
- 4 - Select the provided harness which includes a 6-pin connector and a 9-pin connector; but, does NOT include a 3-pin connector. Secure the 9-pin (P58) connector to the matching connector (J58) on the SureLight control board. Secure the 6-pin (J33) connector to the matching connector (P33) on the two-stage board.
G32V Units Only -- Secure the 2-pin plug (J44) to the matching connector (P44) on the two-stage board.
- 5 - Route all remaining wires through the patch plate in the blower deck.
- 6 - Make the wiring connections from P58 as outlined below:
 - a - Connect the yellow wire to terminal C on the gas valve.
 - b - Connect the two brown wires to the S47 rollout switch
 - c - *G32V Units* -- Connect the purple wire to the NO terminal on the S102 high fire pressure switch.
GHR32V Units -- Connect the purple wire to the NO terminal on the S18 combustion air proving switch.
- 7 - Make the wiring connections from J33 as outlined below:
 - a - *G32V Units* -- Connect the blue wire from pin position 1 to the C terminal on the S102 high fire pressure switch.
G32V-75 Units Only -- Connect the blue wire from pin position 1 to the C terminal on the S128 low fire pressure switch. The kit includes two loose wires (one pink and one blue). Connect the quick connect end of the pink wire to the NO terminal on the low fire pressure switch. Route the wire through the hole in the blower deck and

insert the pin into the P44 connector on the two-stage control. Connect the blue wire from the C terminal on the low fire pressure switch to the C terminal on the high fire pressure switch.
GHR32V Units -- Connect the blue wire from pin position 1 to the C terminal on the S18 combustion air proving switch.

- b - Connect the orange wire from pin position 3 to the MV terminal on the gas valve.
 - c - Connect the yellow wire from pin position 4 to the RTN terminal on the SureLight board.
 - d - Connect the brown wire from pin position 6 to the HI terminal on the gas valve.
- 8 - ***If the two-stage board is equipped with a 9-pin connector*** -- Select the remaining harness that includes a 9-pin connector. Secure the 9-pin connector to the matching connector on the two-stage board. Secure the 6-pin (P156) connector to the matching connector (J156) on the SureLight control board. Secure the 3-pin (P98) connector to the combustion air inducer connector in the blower deck. Secure the 2-pin connector (P159) to the matching (J159) connector on the ignitor.
 - 9 - ***If the two-stage board is not equipped with a 9-pin connector*** -- Select the remaining harness that includes a 6-pin connector, a 2-pin connector and a 3-pin connector. Secure the 6-pin connector (P156) to the matching (J156) connector on the SureLight control board. Secure the 2-pin connector (P159) to the matching (J159) connector on the ignitor. Secure the 3-pin (P98) connector to the combustion air inducer connector in the blower deck. Make the remaining wiring connections from the 3-pin (P98) plug as outlined below:
 - a - Connect the black wire to the NO terminal on the K11 relay.
 - b - Connect the red wire to the NC terminal on the K11 relay.
 - c - Connect the black wire from J156 pin 4 to C terminal of the K11 relay on the two-stage board.
 - 10 - Select the provided harness which includes a 15-pin plug. Discard the remaining harness. Secure the 15-pin (J73) connector to the matching connector (P73) on the VSP blower control board.
 - 11 - Make the wiring connections from J73 as outlined below:
 - a - Connect the piggy back connector on the blue wire from pin position 1 to terminal C on the TB1 terminal block. Connect the other end of the blue wire to terminal C on the SureLight control board.
 - b - Connect the piggy back connector on the green wire from pin position 2 to the G terminal on the TB1 terminal strip. Connect the other end of the green wire to the G terminal on the SureLight control board.
 - c - Connect the brown wire from pin position 3 to the W2 terminal on the TB1 terminal strip. Connect the other end of the brown wire into pin position 5 on the 6-pin (J33) connector on the two-stage control board.

- d - Connect the purple wire from pin position 4 to the DS terminal on the TB1 terminal block.
 - e - *G32V Units* -- Route the blue wire from pin position 5 through the hole in the blower deck. Connect the wire to the S10 primary limit switch. *GHR32V Units* -- Secure the 2-pin (P135) connector to the matching connector (J135) on the secondary limit switch on the blower housing. Connect the blue wire from pin position 1 of P135 to the S10 primary limit switch.
 - f - Connect the blue wire from pin position 6 to the R terminal on the TB1 terminal block.
 - g - Connect the black wire from pin position 13 to the R terminal on the SureLight control board. Route the existing wire from the R terminal on the SureLight control board through the hole in the blower deck. Connect this wire to the S10 primary limit switch.
 - h - Connect the orange wire from pin position 15 to the MV terminal on the gas valve.
- 12 - Fold the strain relief bushing around the harness wires and snap the bushing into place in the round patch plate hole.
- 13 - Restore gas and power supplies to the unit. Replace access panels and follow start up procedures.

AM30

The unit may be equipped with two 3-pin harnesses

joined by connectors at the blower deck. Remove existing harnesses and plugs from the unit. The two-piece 3-pin harness that connects through the blower deck will be replaced by the provided longer wires.

- 1 - Disconnect power and gas supplies to the unit
- 2 - Remove unit access panels.
- 3 - Enlarge the hole left by the 9-pin harness connectors. It must be large enough to accommodate the replacement wiring harness and strain-relief bushing.
- 4 - Install the provided patch plate over the enlarged hole. Use the two provided screws to secure the patch plate to the blower deck.
- 5 - Connect stripped end of provided black wire to wire nut in pump housing and connect quick connect terminal to PUMP terminal on AM30 control board.
- 6 - Connect stripped end of provided white wire to wire nut in pump housing and connect quick connect terminal to NEUTRAL terminal on AM30 control board.
- 7 - Connect stripped end of provided green wire to screw terminal on pump and screw terminal on transformer.
- 8 - Restore gas and power supplies to the unit. Replace unit access panels and follow start up procedures.