ACCESSORY KIT INSTALLATION INSTRUCTIONS

473-20937-001 NORTON MINI HOT SURFACE IGNITER CONVERSION KIT

⚠WARNING

This conversion kit is to be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, an explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

⚠WARNING

The conversion of new certified central heating gas appliances must conform to directions outlined in this instruction.Installation must be made in accordance with American National Standard National Fuel Gas Code, ANSI Z223.1- latest edition, unless superseded by local codes. For Canadian installations, the conversion shall be carried out in accordance with the requirements of the Provincial authorities having jurisdiction and in accordance with the CAN/CGAB149.1 and .2 installation codes. The manufacturer accepts no responsibility for malfunctions due to improper conversions.

This kit will convert any of the models listed below to the Norton Mini-Igniter:

MID-EFFICIENCY MODEL, INDUCED DRAFT - 78% AFUE				
Upflow Models:	P(1, 2, 3, 9)UC	P(A, B, C, K)MU		XEU
Downflow Models:	P(1, 2, 3, 9)CC	P(A, B, C, K)MD		XED
HIGH-EFFICIENCY MODEL, INDUCED DRAFT - 90% AFUE				
Upflow Models:	P(1, 2, 9)UD	P(A, B, K)NU		XNU
	P2UR	PBLU		DGU Style A
Downflow Models:	P(1, 2)CD	P(A, B)ND	XND	DGD Style A

GENERAL

This kit is required to convert furnaces from the original W/R, Norton or ISI flat style and Carborundum spiral igniters to the new Norton Mini-Igniter. This kit is NOT to be used to replace the current production models which use the Low Temp Norton igniter (025-32625-000).

Find the appropriate section (1, 2, 3, 4 or 5) of this instruction that corresponds to the furnace model that you are converting. Follow the step by step instructions closely to ensure that the conversion has been made properly. Refer to the pictures/sketches in each section along with Table 1 for the mounting bracket and other parts required for the conversion. Select those parts and discard the remainder.

Description	Part Number	Qty.
Igniter, Hot Surface	025-33421-001	1
Bracket, Igniter	073-20938-001	1
Bracket, Igniter	073-20939-001	1
Bracket, Igniter	073-20940-000	1
Bracket, Igniter	073-20941-000	1
Bracket, Igniter	073-20942-000	1
Harness, Electric	373-06398-502	1
Screw	021-17388-000	1
Screw	021-16019-000	2
Instruction	035-14489-000	1

SECTION 1: Instructions for 78% AFUE Upflow/Downflow Models: P (1, 2) UC, P (A, B) MU, P (1, 2) CC, P (A, B) MD

1. Turn OFF gas supply and electrical power to the unit.
2. Remove the burner compartment access door.
3. Locate the two white wires leading from the hot surface igniter and disconnect the wiring by separating the plugs.
4. Locate the burner cover behind the gas valve.
5. Remove the screw securing the igniter bracket to the heat shield and save for installation of the new igniter/ bracket
6. Remove the old bracket and igniter, observing the path of exit
7. Attach the new igniter to the new bracket with the hex head screw provided (021-16019-000). The correct bracket for these models is shown in Figure 1.

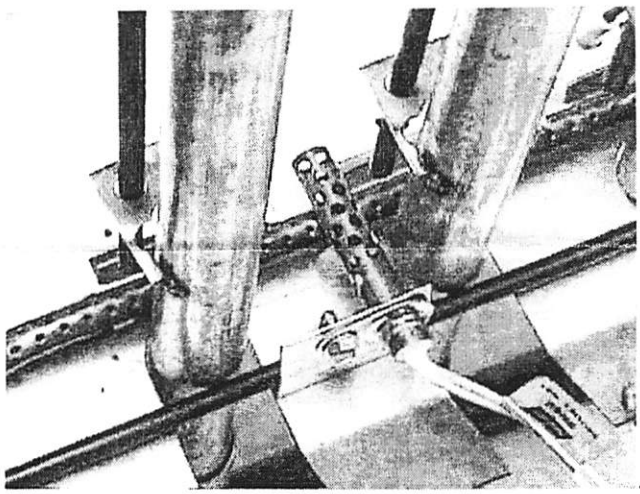

FIGURE 1: Proper Installation of Igniter & Bracket

8. Carefully install the new bracket and igniter using the same path as used in removing the old bracket (a mirror can be helpful). The new bracket slides between the heat shield and the black burner support rod. The proper installation of the new igniter and bracket can be seen in Figure 1.
9. While holding the assembly in place, secure the new igniter bracket to the heat shield using old screw (from Step 6).
10. When properly installed, the metal shield of the igniter MUST touch the burner carryover tube.
11. Reconnect the igniter wiring.
12. Turn ON gas supply and electrical power to the unit.
13. Set room thermostat for heat and with mirror observe crossover ignition with new system.
14. Replace burner compartment access door.

SECTION 2: Instructions for 78% AFUE Upflow/Downflow Models: P (3, 9) UC, P (C, K) MU, P (3, 9) CC, P (C,K) MD, AEU, XED

1. Turn OFF gas supply and electrical power to the unit.
2. Remove burner compartment access door.
3. Remove Burner Heat Shield by removing the two screws at each end of the shield. Put aside shield and screws for reassembly of unit.
4. Locate the two white wires leading from the hot surface igniter and disconnect the wiring by separating the plugs
5. Remove the igniter and igniter bracket from the unit saving the screw for reassembly.
6. Attach the new igniter to the new bracket with the hex head screw provided (021-16019-000). The correct bracket for these models is shown in Figure 2.
7. Carefully install the new bracket and igniter using the same path as used in removing the old bracket. The proper installation of the new igniter and bracket can be seen in Figure 2.

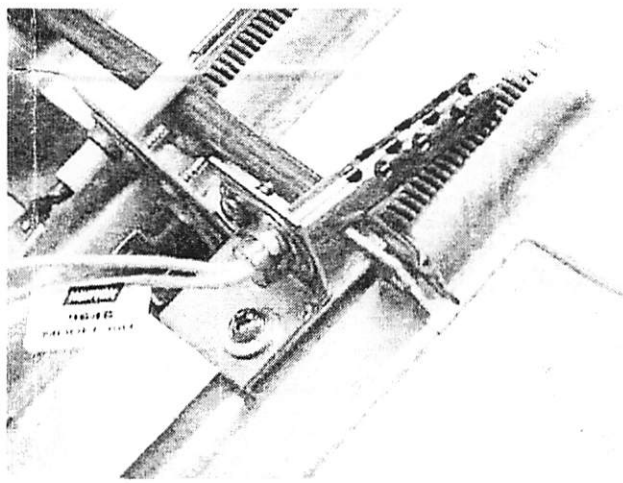

FIGURE 2: Proper Installation of Igniter & Bracket

8. When properly installed, the metal shield of the igniter MUST touch the ribbon portion of the burner.
9. Reconnect the igniter wiring.
10. Reassemble the Burner Heat Shield to the furnace.
11. Turn ON gas supply and electrical supply to the unit.
12. Set the room thermostat for heat and test furnace for correct ignition and operation.
13. Replace burner compartment access door.

SECTION 3: Instructions for 90% AFUE Upflow Models: P (1, 2, 9) UD, P (A, B, K) NU, XNU

1. Turn OFF gas supply and electrical power to the unit.
2. Remove burner compartment access door.
3. Remove burner box cover.
4. Locate the two white wires leading from the hot surface igniter and disconnect the wiring by separating the plugs.
5. Remove igniter and igniter bracket from the unit saving the screws for reassembly.
6. Referring to Figure 3, if Hole "A" is not present, drill a 5/32" hole in this location using the new igniter bracket for alignment (see Figure 4). Do NOT attach igniter to bracket prior to drilling hole. The drill bit should NOT penetrate the insulation behind the panel.

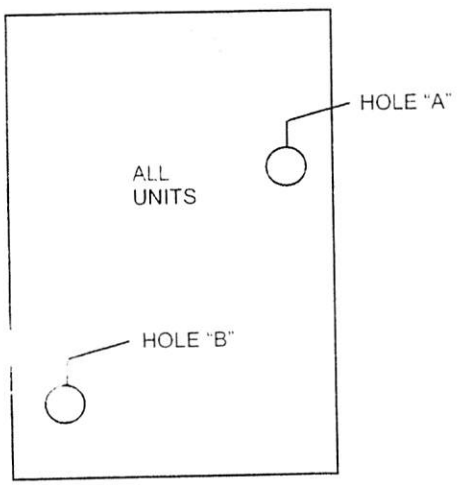

FIGURE 3: Bracket Alignment

7. Attach the new igniter to the new bracket with the hex head screw provided (021-16019-000). The correct bracket for these models is shown in Figure 4.
8. Carefully install the new bracket and igniter using the same path as used in removing the old bracket. Fasten igniter bracket using Philips Head screws from old bracket. The proper installation of the new igniter and bracket can be seen in Figure 4.

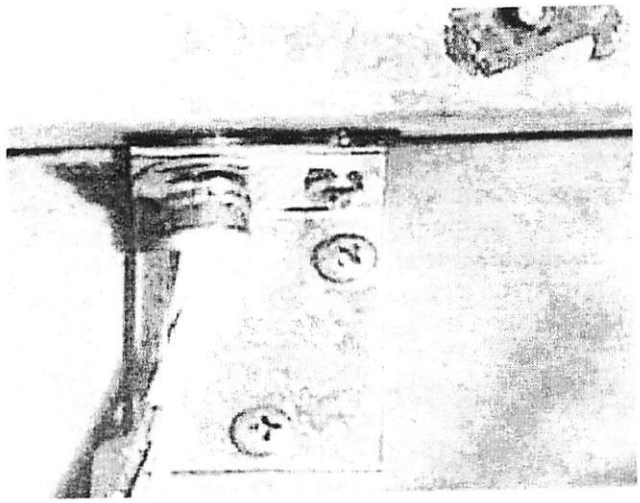

FIGURE 4: Proper Installed Igniter

9. When properly installed, the clearance between the metal shield of the igniter and the carryover tube should be between 0" and 1/8".
10. Reconnect the wiring using the wire harness provided, if needed.
11. Reinstall the burner box cover.
12. Turn ON gas supply and electrical power to the unit.
13. Set the room thermostat for heat and test furnace for correct ignition and operation.
14. Replace burner compartment access door.

SECTION 4: Instructions for 90% AFUE Downflow Models: P (1,2) CD, P (A,B), XND

1. Turn OFF gas supply and electrical power to the unit.
2. Remove burner compartment access door.
3. Remove the burner box cover.
4. Locate the two white wires leading from the hot surface igniter and disconnect the wiring by separating the plugs.
5. Remove igniter and igniter bracket from the unit saving the screws for reassembly.
6. Attach the new igniter to the new bracket with the hex head screw provided (021-16019-000).

7. Carefully install the new bracket and igniter using the same path as used in removing the old bracket. If only one hole is present on the vest panel, align that hole with the right hole on the igniter bracket (see Figure and fasten using one of the existing mounting bracket screws. Align the mounting bracket so it is level horizontally and drill a 7/64" hole into the vest panel through the left hole on the igniter bracket. Secure bracket using remaining existing mounting screw. The proper installation of the new igniter and bracket can be seen in Figure 5.

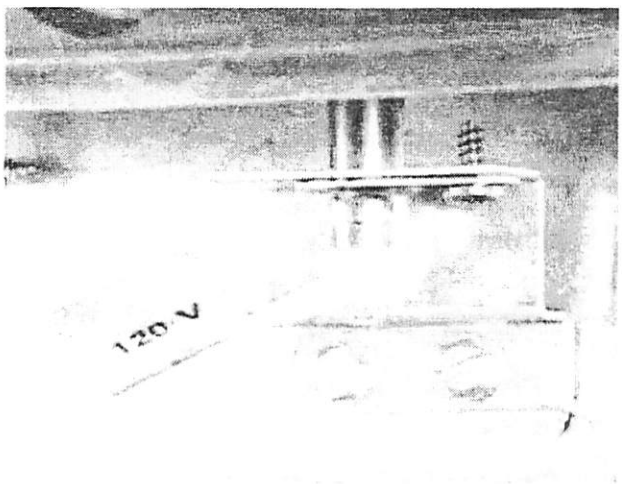

FIGURE 5: Proper Installation of Igniter & Bracket

8. When properly installed, the clearance between the metal shield of the igniter and the burner should be between 0" and 1/8".
9. Reconnect the wiring using the wire harness provided, if needed.
10. Reinstall the burner box cover.
11. Turn ON gas supply and electrical power to the unit.
12. Set the room thermostat for heat and test furnace for correct ignition and operation.
13. Replace the burner compartment door.

SECTION 5: Instructions for 90% AFUE Upflow Models: P2UR, PBLU, DGU Style A

1. Turn OFF gas supply and electrical power to the unit.
2. Remove burner compartment access door.
3. Remove the burner box cover.
4. Locate the two white wires leading from the hot surface igniter and disconnect the wiring by separating the plugs.
5. Remove the existing igniter and bracket from the unit saving the screws and gasket for reassembly.
6. Carefully install the new bracket and igniter on the burner box making sure that the gasket is between the bottom of the burner box and the new igniter bracket. Using the two existing mounting screws, fasten both the igniter and bracket to the burner box. The proper installation of the new igniter and bracket can be seen in Figure 6.

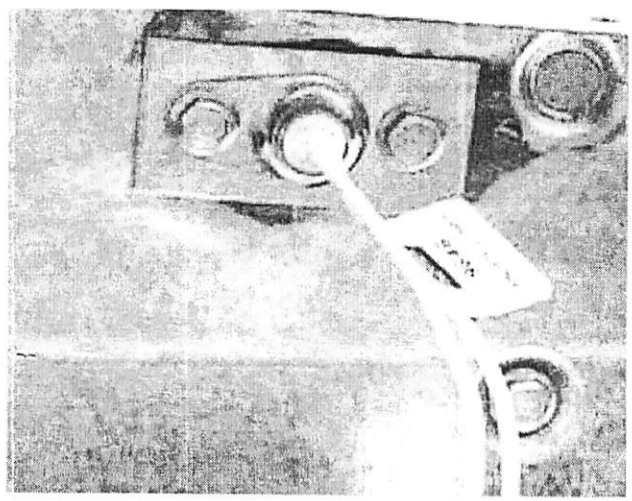

FIGURE 6: Proper Installation of Igniter & Bracket

7. When properly installed, the clearance between the metal shield of the igniter and the burner should be between 0" and 1/8".
8. Reconnect the igniter wiring.
9. Reinstall the burner box cover.
10. Turn on the gas supply and electrical power to the unit
11. Set the room thermostat for heat and test furnace for correct ignition and operation.
12. Replace the burner compartment door.

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Supersedes: 035-14489-000, 650.65-N3.6V (199)