

Combustion Blower Replacement Instructions

Part # 7100P-330

STOP! Follow these instructions or warranty will be void!

WARNING

These instructions are specific to gas fired water heaters and the EFT-399 boiler ONLY, and are not applicable to any other appliance. This installation shall be done by a qualified service agency in accordance with these instructions, all applicable codes, and requirements of the authority having jurisdiction. Failure to follow these instructions could result in substantial property damage, severe personal injury, or death.

Water Heater Installation ONLY - See Page 3 for EFT-399 Installation

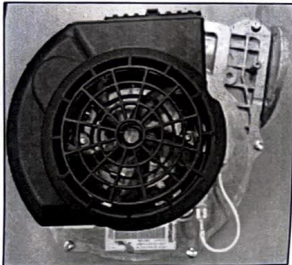
Included with Kit:

Replacement Blower
Three (3) M5x12mm Sockethead Cap Screws (**Boiler Installation ONLY - NOT USED FOR WATER HEATER**)
Instructions

Tools Required (Not Included):

5/32" Allen Key (T Handle Recommended)
Pipe Wrenches
Phillips Head and Flat Head Screwdrivers of Various Sizes

EBM Pabst Blower



Ametek Blower

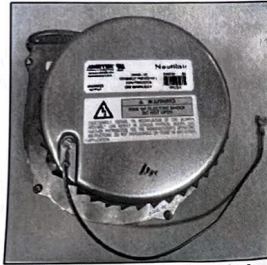


Figure 1 - Replacement Blower - NOTE: The EBM or Ametek Blower Included in this Kit is Interchangeable

Water Heater - Removing the Blower Assembly (See Page 3 for Boiler Instructions)

Step #1 - Turn off all power to the appliance. Turn gas off to the appliance at a shut-off located outside the unit. If the appliance has been operating, wait for it to cool before proceeding with installation.

WARNING

Failure to ensure the gas and power has been turned off and the appliance has had time to cool before proceeding could result in substantial property damage, severe personal injury, or death.

Step #2 - Open the appliance cabinet to expose the appliance combustion assembly. See Figure 2.

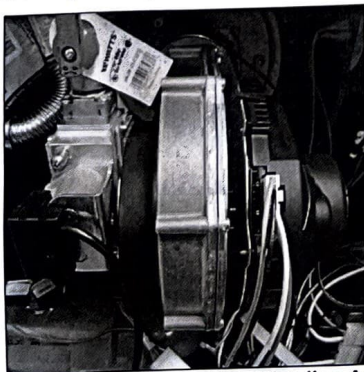


Figure 2 - Tank Type Product Combustion Assembly

Step #3 - Unplug all wires and cables from the blower, including the spark igniter and flame rectification probe. See Figure 3.

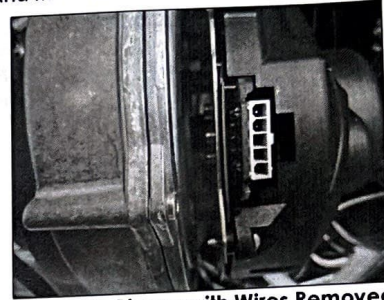


Figure 3 - Blower with Wires Removed

Step #4 - Use two pipe wrenches to disconnect the appliance gas flex line from the combustion assembly. See Figure 4.

CAUTION

Use two pipe wrenches when disconnecting the appliance gas piping. Use one wrench to prevent the combustion assembly fitting from turning. Failure to prevent connections from turning could cause damage to appliance components.

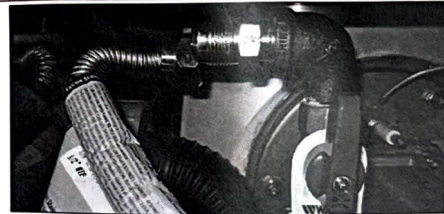


Figure 4 - Disconnected Gas Line

Step #5 - Disconnect the air intake flex hose from the combustion assembly. This can be done by hand. See Figure 5.

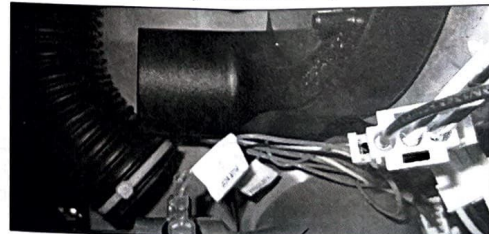


Figure 5 - Disconnected Air Intake Hose

Step #6 - Use a 5/32" allen wrench to remove the four (4) screws connecting the blower to the air channel. See Figure 6.

NOTE: DO NOT lose these four (4) screws. These will be reused. Replacements are not included in this kit.

Step #7 - Remove the blower. Ensure the gasket between the blower and air channel is in good condition. DO NOT lose this gasket. A replacement is not included in this kit. See Figure 7.

NOTICE

The manufacturer reserves the right to make changes or updates without notice and will not be held liable for errors in literature.

NOTE TO CONSUMER: PLEASE KEEP ALL INSTRUCTIONS FOR FUTURE REFERENCE.

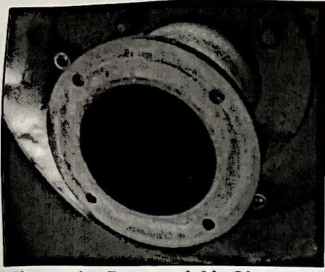


Figure 6 - Exposed Air Channel

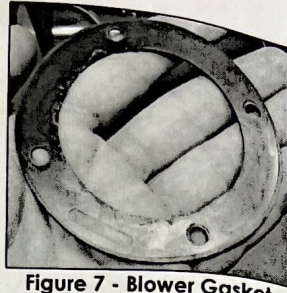


Figure 7 - Blower Gasket

Step #8 - Use a Phillips Head screwdriver to remove the three (3) screws attaching the gas valve / air inlet adapter to the combustion assembly. See Figure 8.

NOTE: DO NOT lose these three (3) screws or the gas valve / air inlet adapter. These will be reused. Replacements are not included in this kit.

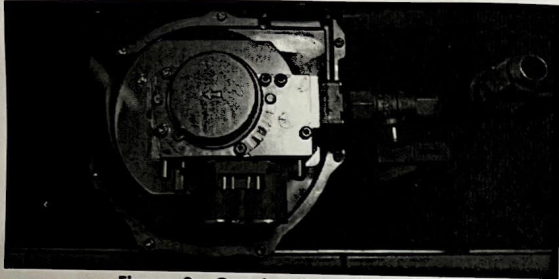


Figure 8 - Combustion Assembly

Step #9 - Use a Phillips Head screwdriver to remove the two (2) screws attaching the adapter plate to the blower. See Figure 9.

NOTE: DO NOT lose these two (2) screws or the adapter plate. These will be reused. Replacements are not included in this kit.

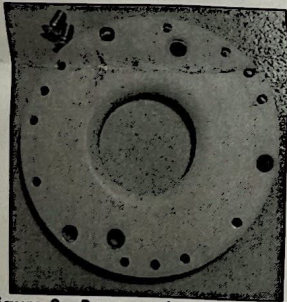


Figure 9 - Removed Adapter Plate

Water Heater - Installing the Replacement Blower Assembly

Step #1 - Use a Phillips Head screwdriver and the two (2) removed screws to install the adapter plate to the replacement blower. Do not over-tighten the screws. See Figure 10.

NOTICE

Take care not to over-tighten the screws. Over-tightening could strip the threads on the blower, increasing blower replacement time and cost.

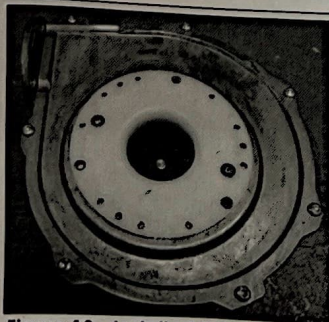


Figure 10 - Installed Adapter Plate

Step #2 - Use a Phillips Head screwdriver and the three (3) removed screws to install the gas valve / air inlet adapter to the blower assembly. See Figure 8.

Step #3 - Use a 5/32" allen wrench and the four (4) screws to install the blower to the air channel. See Figure 3. Ensure the blower gasket is installed between the blower and the air channel.

NOTE: Failure to ensure the blower gasket is installed between the blower and the air channel could result in improper operation.

NOTE: To ease installation, it is recommended to install the top two (2) screws before the bottom two (2) screws.

Step #4 - Reconnect the air inlet flex hose to the combustion assembly. This can be completed by hand.

Step #5 - Use two pipe wrenches to reconnect the appliance gas flex line to the combustion assembly.

CAUTION

Use two pipe wrenches when installing the appliance gas piping. Use one wrench to prevent the combustion assembly fitting from turning. Failure to prevent connections from turning could cause damage to appliance components.

Step #6 - Plug in all the removed wires and cables, including the spark igniter and flame rectification probe, and blower wire harnesses. See Figure 11.

NOTE: In proper installations, a blower harness will connect to the front and the bottom of the blower. See Figure 11.

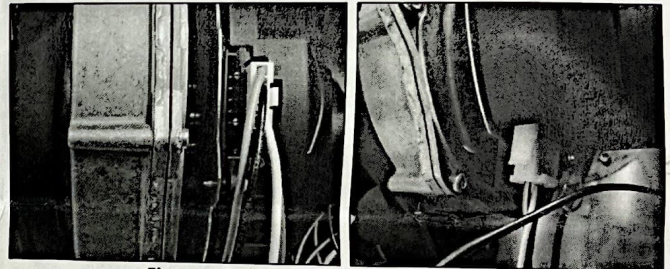


Figure 11 - Installed Blower Harnesses

Restarting the Water Heater

Step #1 - Turn the gas on to the appliance at the shut-off located outside the unit. Check the flex pipe union for leaks with a soapy solution. Repair any leaks before proceeding.

Step #2 - Restore power to the appliance.

Step #3 - Turn on the appliance and initiate a call for heat. It may be necessary to open a hot water faucet in the system.

WARNING

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch.
- Do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.

If you cannot reach your gas supplier, call the fire department. Installation and service must be provided by a qualified installer, service agency, or the gas supplier.

Step #4 - Observe appliance operation for fifteen minutes. Ensure the appliance is meeting the demand for heat.

EFT-399 Installation ONLY - See Page 1 for Water Heater Installation

This blower is not applicable to EFT-285 Boilers - Contact Customer Service for an EFT-285 specific kit.

Included with Kit:

Replacement Blower
Three (3) M5x12mm Sockethead Cap Screws
Instructions

Tools Required (Not Included):

4mm and 5mm Allen Wrenches
Pipe Wrenches
Phillips Head and Flat Head Screwdrivers of Various Sizes
Drill with 1/4" Bit

EFT-399 - Removing the Blower Assembly

(See Page 1 for Tank Type Instructions)

Step #1 - Turn off all power to the appliance. Turn gas off to the appliance at a shut-off located outside the unit. If the appliance has been operating, wait for it to cool before proceeding with installation.

WARNING

Failure to ensure the gas and power has been turned off and the appliance has had time to cool before proceeding could result in substantial property damage, severe personal injury, or death.

Step #2 - Open the appliance cabinet to expose the appliance combustion assembly. See Figure 12.

NOTE: Pay careful attention to combustion assembly orientation. The combustion assembly must be installed as oriented in Figure 12.

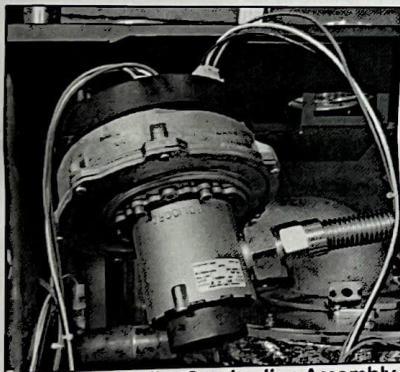


Figure 12 - Boiler Combustion Assembly

Step #3 - Unplug the two (2) wire harnesses from the blower. See Figure 13.

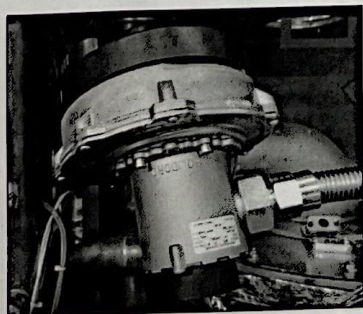


Figure 13 - Blower with Wires Removed

Step #4 - Use two pipe wrenches to disconnect the appliance gas flex line from the combustion assembly. See Figure 14.

CAUTION

Use two pipe wrenches when disconnecting the appliance gas piping. Use one wrench to prevent the combustion assembly fitting from turning. Failure to prevent connections from turning could cause damage to appliance components.

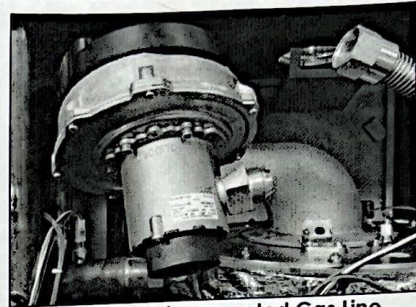


Figure 14 - Disconnected Gas Line

Step #5 - Use a 4mm allen wrench to remove the four (4) screws and nuts connecting the blower to the air channel. See Figure 15.

NOTE: DO NOT lose these four (4) screws and nuts. These will be reused. Replacements are not included in this kit.

Step #6 - Remove the blower and polidoro mixer. See Figure 17. Ensure the gasket between the blower and air channel is in good condition. DO NOT lose this gasket. A replacement is not included in this kit. See Figure 16.

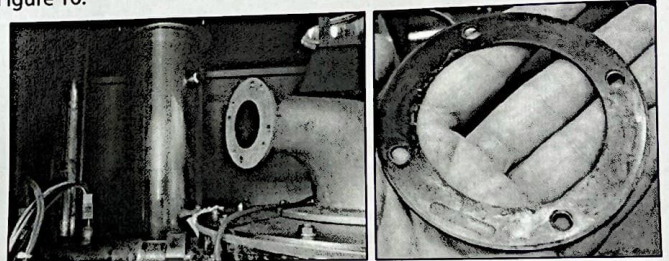


Figure 15 - Exposed Air Channel

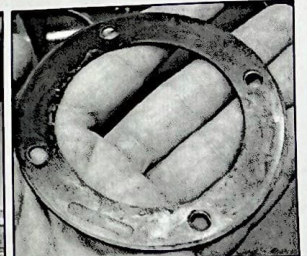


Figure 16 - Blower Gasket

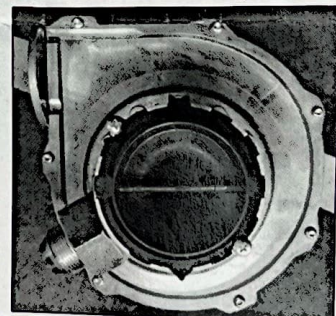


Figure 17 - Removed Blower and Polidoro Mixer

Step #7 - Use a 5mm allen wrench to remove the four (4) screws attaching the polidoro mixer to the blower. See Figure 18.

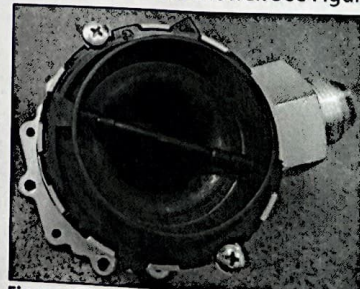


Figure 18 - Removed Polidoro Mixer

Step #8 - Use a Drill and 1/4" Bit to drill out a larger hole in the cast hole of the Polidoro Mixer. See Figure 19 for drill hole location.

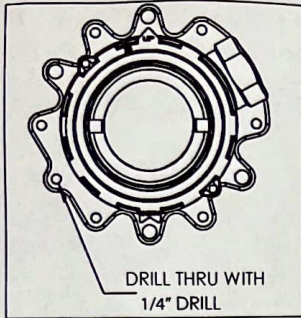


Figure 19 - Drill Hole Location

EFT-399 - Installing the Replacement Blower Assembly

Step #1 - Use a 4mm allen wrench and the three (3) included M5 screws to install the polidoro mixer onto the blower included in this kit. See Figure 20. Ensure completed blower and mixer assembly appear as shown in Figure 21.

NOTICE

Take care not to over-tighten the screws. Over-tightening could strip the threads on the blower, increasing blower replacement time and cost.

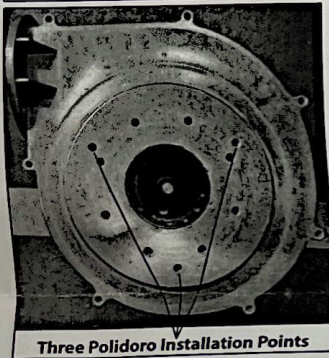


Figure 20 - Polidoro Mixer Installation Points

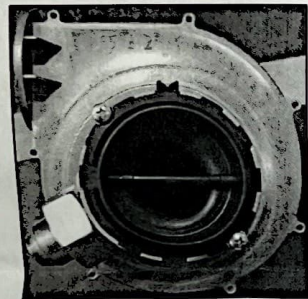


Figure 21 - Blower with Installed Polidoro Mixer

Step #2 - Use a 4mm allen wrench and the four (4) sockethead cap screws and nuts to install the blower and polidoro mixer assembly to the air channel. Ensure the blower gasket is installed between the air channel and the blower. Failure to do so will result in improper appliance operation. See Figure 22.

NOTE: Pay careful attention to combustion assembly orientation. The combustion assembly must be installed as oriented in Figure 22.

Step #3 - Use two pipe wrenches to reconnect the appliance gas flex line to the combustion assembly. See Figure 13.

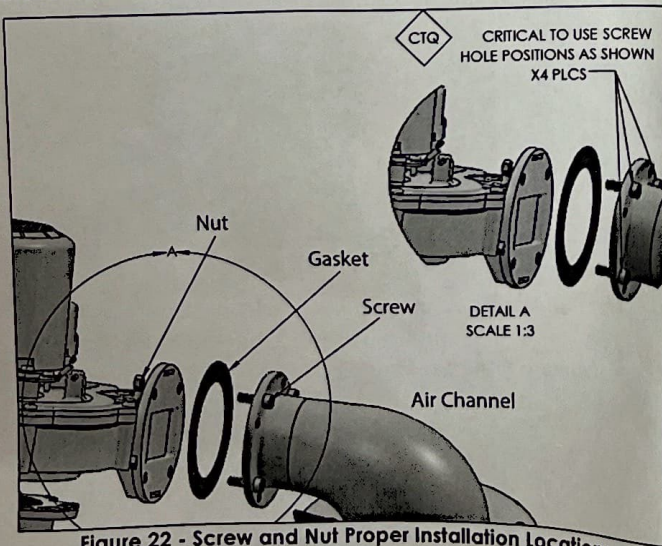


Figure 22 - Screw and Nut Proper Installation Locations

CAUTION

Use two pipe wrenches when reconnecting the appliance gas piping. Use one wrench to prevent the combustion assembly fitting from turning. Failure to prevent connections from turning could cause damage to appliance components.

Step #4 - Plug the two (2) wire harnesses into the blower. See Figure 23.

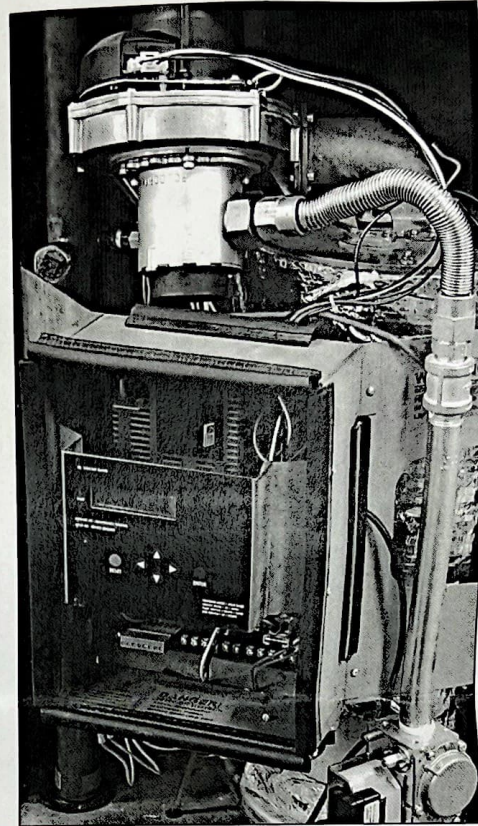


Figure 23 - Boiler with Installed Combustion Assembly

Restarting the Boiler

Step #1 - Turn the gas on to the appliance at the shut-off located outside the unit. Check the flex pipe union for leaks with a soapy solution. Repair any leaks before proceeding.

Step #2 - Restore power to the appliance.

Step #3 - Turn on the appliance and initiate a call for heat. It may be necessary to open a hot water faucet in the system.

WARNING

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch.
- Do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.

If you cannot reach your gas supplier, call the fire department. Installation and service must be provided by a qualified installer, service agency, or the gas supplier.

Step #4 - Observe appliance operation for fifteen minutes. Ensure the appliance is meeting the demand for heat.