

WARNING!

This service kit shall 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.

The information in these instructions must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death. 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 repaired appliance is checked as specified in the manufacturer's instructions supplied with the kit.

CAUTION!

Shut off the gas supply prior to disconnecting the electrical power, before starting.

Notice! Save these instructions for later use.

Service kit instructions, condensate trap and condensate bypass pipe

Logamax plus

GB142-24/30/45/60

Contents

1	Safety considerations	2
1.1	Application purpose	2
1.2	Explanation of Symbols	2
1.3	Additional symbols	2
1.4	Observe the following warnings	2
2	Scope of delivery	2
3	Installation	3
3.1	Shutting down the appliance	3
3.2	Removing the condensate trap	3
3.3	Removing the heat exchanger	4
3.4	Mounting the new condensate trap and flue gas adapter	6
3.5	Testing for gas leaks	6
3.6	Filling the appliance	7
3.7	Start up the appliance	7

1 Safety considerations

The conversion shall be carried out by a manufacturer's authorized representative, in accordance with the requirements of the manufacturer, provincial or territorial authorities having jurisdiction and in accordance with the requirements of the CAN/CGA-B149.1 or CAN/CGA-B149.2 installation codes.

For use in Canada the conversion shall be carried out in accordance with the requirements of the provincial authorities having jurisdiction and in accordance with the requirements of the CAN/CGA-B149.1 and CAN/CGA-B149.2 Installation Code. See also E.I.V.

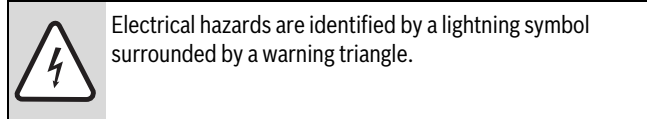
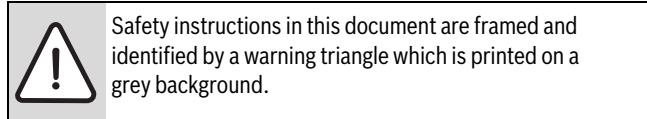
Please observe the following safety instructions.

1.1 Application purpose

This kit and these instructions are to provide the Logamax plus GB142-24/30/45/60 with an internal condensate bypass.

1.2 Explanation of Symbols

Warning symbols



Signal words indicate the seriousness of the hazard in terms of the consequences of not following the safety instructions.

- **NOTICE** indicates possible damage to property or equipment, but where there is no risk of injury.
- **CAUTION** indicates possible injury.
- **WARNING** indicates possible severe injury.
- **DANGER** indicates possible risk to life.

Important information



Notes contain important information in cases where there is no risk of personal injury or material losses and are identified by the symbol shown on the left. They are bordered by horizontal lines above and below the text.

1.3 Additional symbols

Symbol	Meaning
▶	a step in an action sequence
→	a reference to a related part in the document or to other related documents
*	a list entry
-	a list entry (second level)

Table 1

1.4 Observe the following warnings



DANGER: gas explosion.

- ▶ Work only on gas components when you have a license to do so.
- ▶ The assembly of gas and vent connections, the initial start-up, the electrical connections, the maintenance and service can only be performed by a licensed service contractor or technician.



DANGER: electrical shock.

- ▶ Prior to doing any work on the heating system, disconnect all electrical power to the appliance at the emergency switch. It is not sufficient to shut off only the appliance control.

2 Scope of delivery

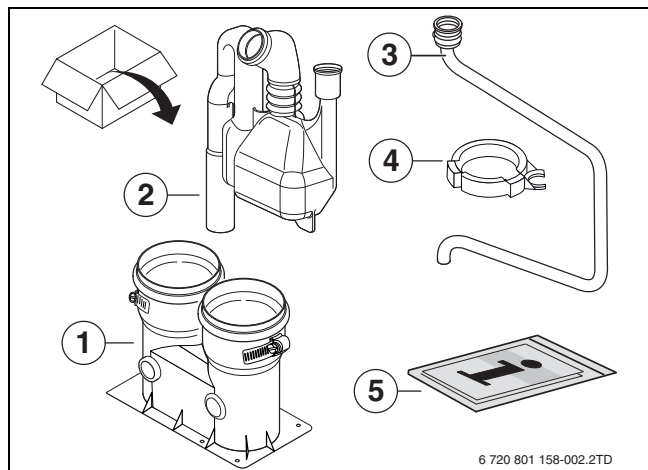


Fig. 1 Service kit with condensate trap, condensate bypass pipe and flue gas adapter

This service kit contains the following parts:

- [1] Flue gas adapter
- [2] condensate trap
- [3] condensate bypass pipe
- [4] gas ring
- [5] instructions

3 Installation

To install the parts of the service kit in the appliance, the following instructions must be adhered to.

3.1 Shutting down the appliance

- ▶ Close the gas shut-off valve.

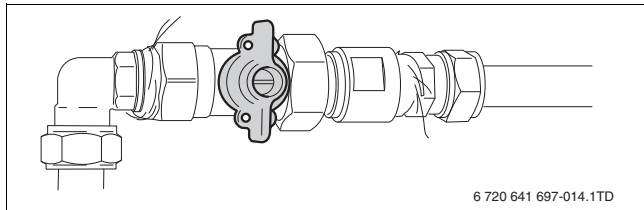


Fig. 2 Gas shut-off valve closed

- ▶ Press the control panel cover to open.

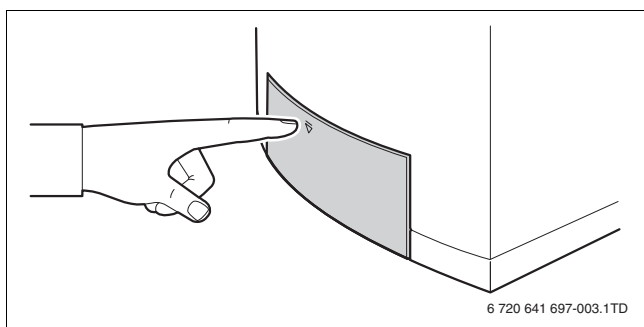


Fig. 3 Control panel cover

- ▶ Switch off the appliance by setting the mains switch [1] to position "0".

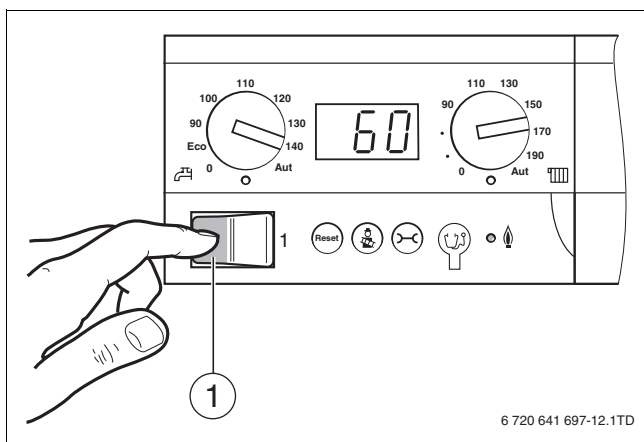


Fig. 4 Mains switch to "OFF"

- ▶ Disconnect the electrical power to the appliance.
- ▶ Set the thermostat or other operating control to the lowest setting.
- ▶ Use the radiator key to unlock the two latches a quarter turn [1].
- ▶ Open the latches [2].



NOTICE: appliance damage due to incorrect lifting.

- ▶ Do not hold the casing by the latches.

- ▶ Remove the casing by lifting it upwards and then pulling it forwards [3].

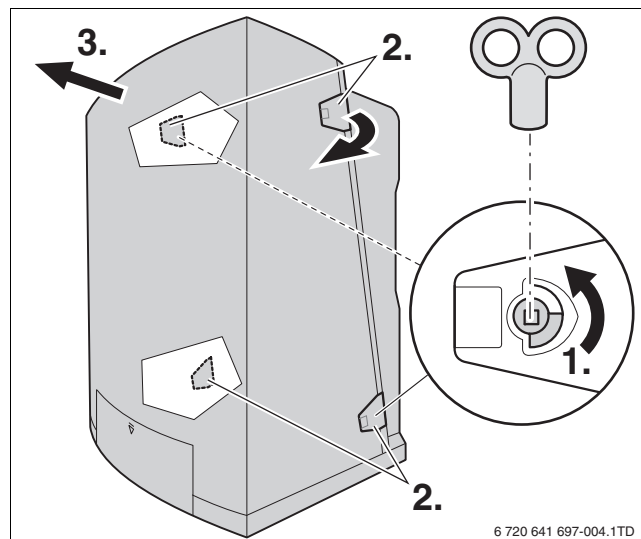


Fig. 5 Removing the casing

3.2 Removing the condensate trap

- ▶ Pull the condensate trap from the condensate collector [1].
- ▶ Loosen the condensate trap from the connection [2] and remove it.

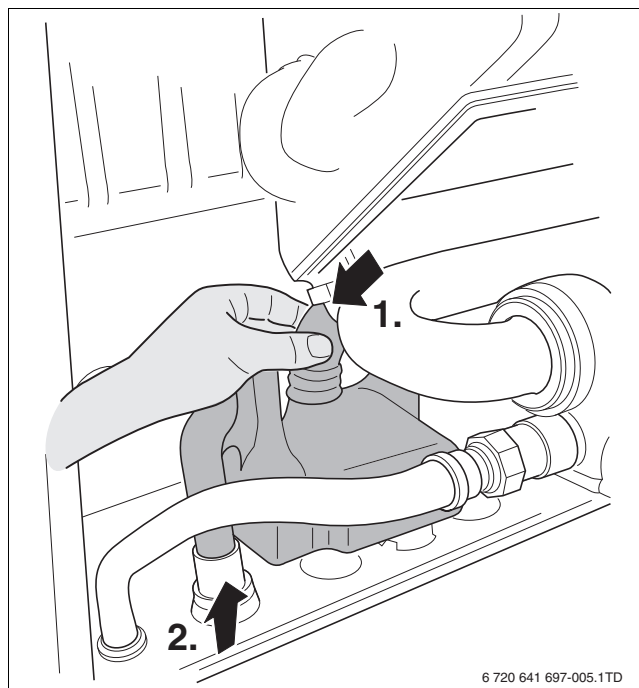


Fig. 6 Removing the condensate trap

3.3 Removing the heat exchanger

- ▶ Close the maintenance shut-off valves [1] and drain [2] of the Logamax plus GB142.

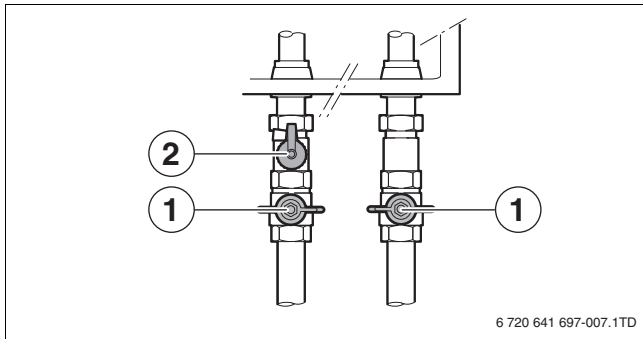


Fig. 7 Maintenance shut-off valves

- ▶ Remove the cable plug from the gas control valve.

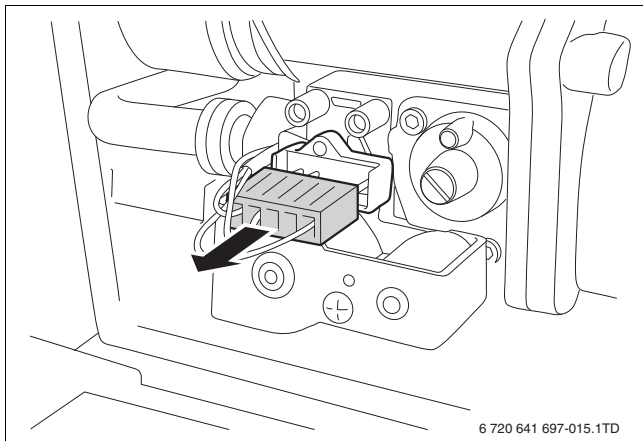


Fig. 8 Removing the gas control valve cable plug

- ▶ Remove both cable plugs [1] from the fan unit.

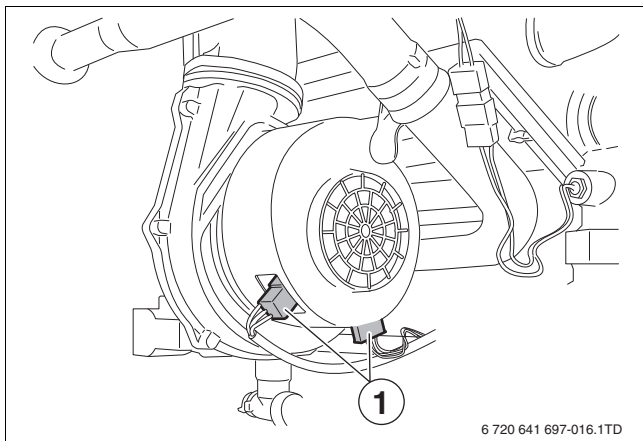


Fig. 9 Removing the fan unit cable plugs

- ▶ Pull both retaining clips [1] on the burner cover to open them and remove the burner cover with the fan unit and the gas control valve.

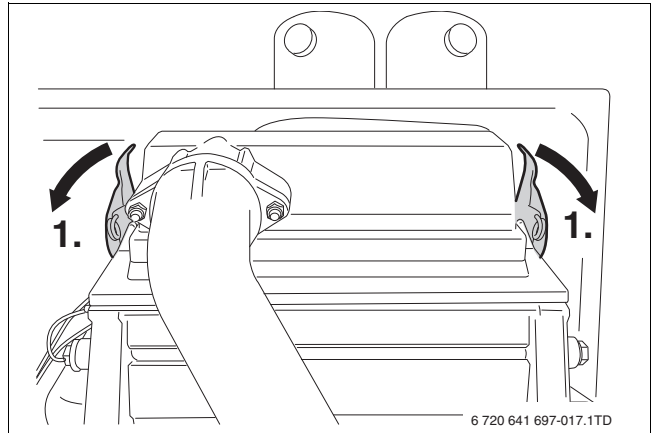


Fig. 10 Loosening the retaining clips

- ▶ Remove the burner [1].

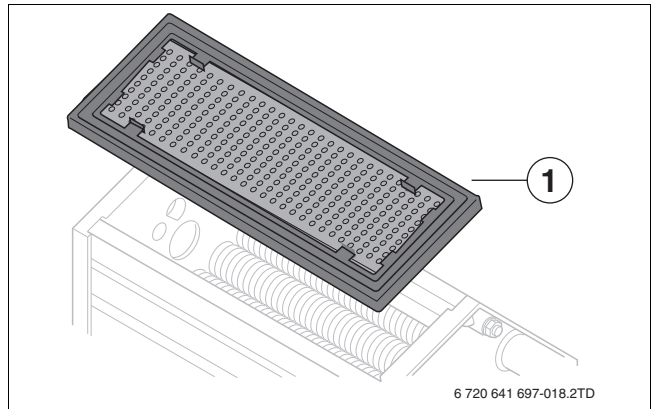


Fig. 11 Removing the burner

CAUTION: electrical short circuit.
To prevent mix-ups, the supply sensor is marked by a red sleeve on the side of the cable harness.

- ▶ Disconnect the supply [1], return [2] and safety [3] sensors.

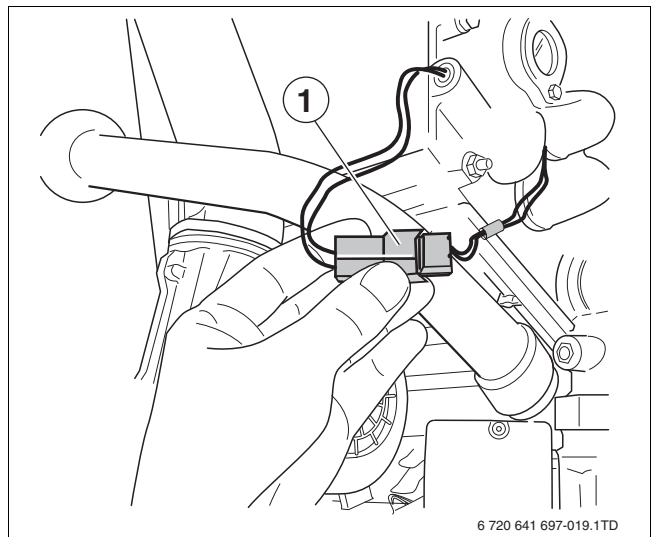


Fig. 12 Disconnecting the supply sensor

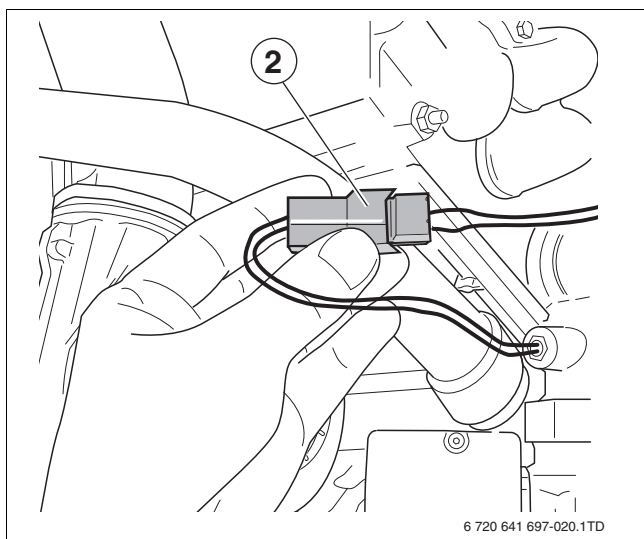


Fig. 13 Disconnecting the return sensor

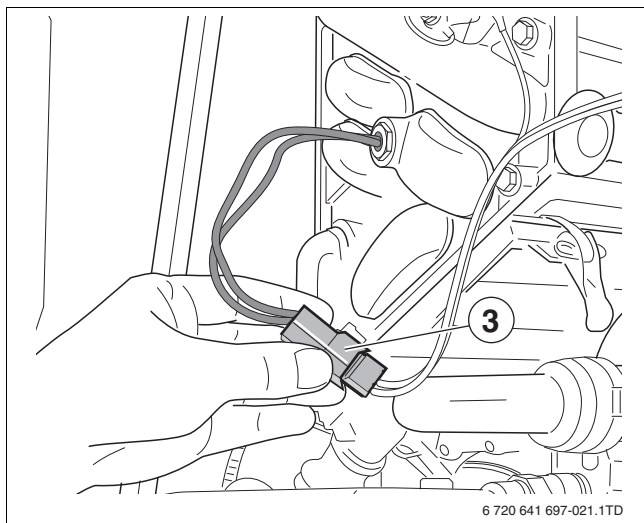


Fig. 14 Disconnecting the safety sensor

- ▶ Disconnect the hot surface ignitor and ionization electrode plugs.
- ▶ Pull the ground cable from the hot surface ignitor [2].

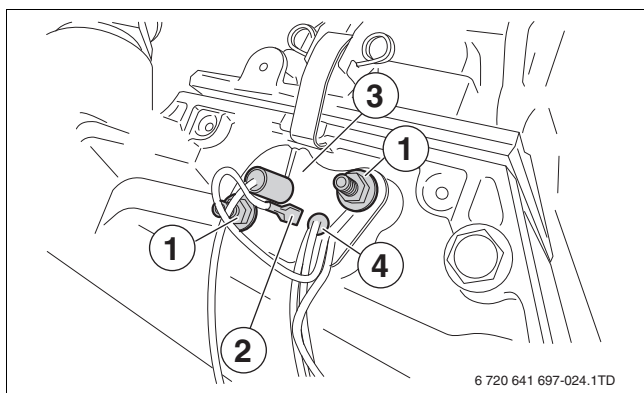


Fig. 15 Dismantling the hot surface ignitor

- ▶ Open all latches [1] of the condensate collector.

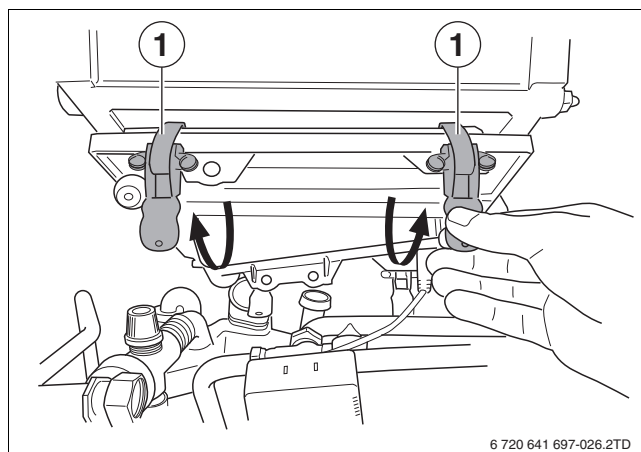


Fig. 16 Opening the latches of the condensate collector

- ▶ Remove the condensate collector.
- ▶ Dismantle the tension spring [1] between the supply pipe and the heat exchanger.

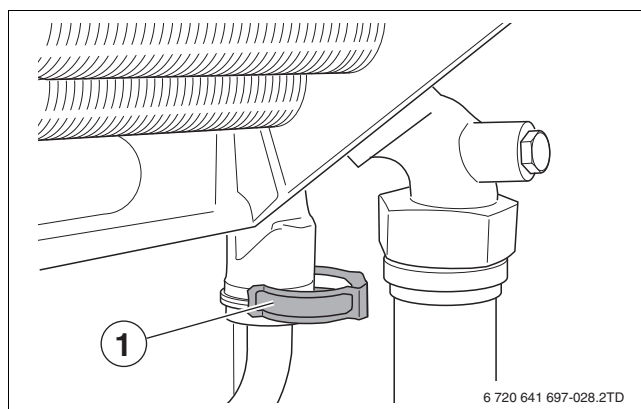


Fig. 17 Dismantling the tension spring

- ▶ Loosening with one turn the nut between the supply connection and three way valve connection AB [1].
- ▶ Pull the supply pipe out of the heat exchanger [2].
- ▶ Loosen the return pipe of the heat exchanger [3].

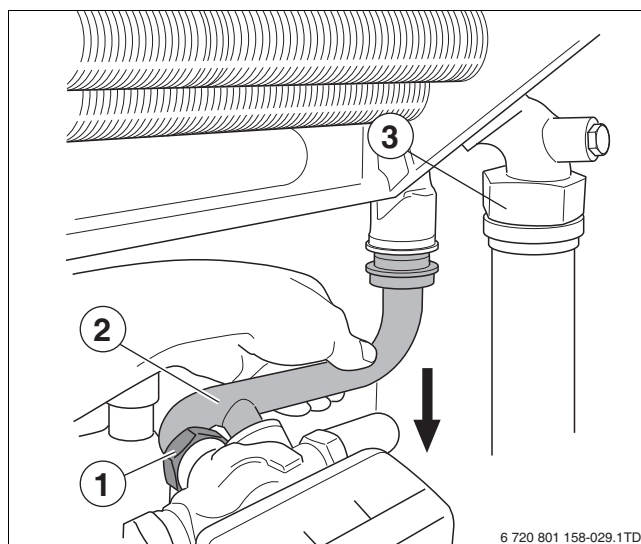


Fig. 18 Removing the supply pipe

- ▶ Pull the combustion air supply and flue gas exhaust connections on top of the appliance upwards to remove them.
- ▶ Loosen all fastening screws of the flue gas adapter.
- ▶ Remove the flue gas adapter [1] from the top of the appliance.

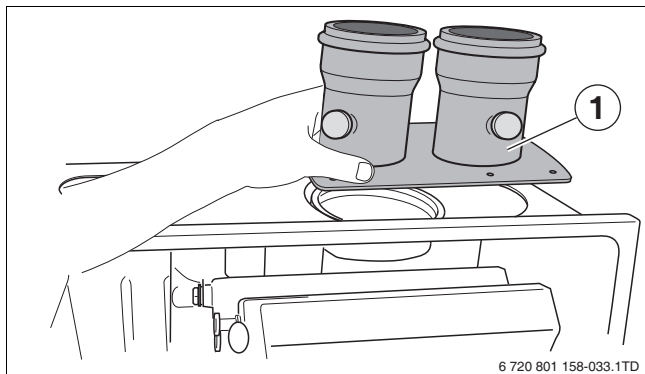


Fig. 19 Removing the flue gas adapter

- ▶ Remove the heat exchanger by grabbing its bottom end and pulling forward and then pushing it upwards.

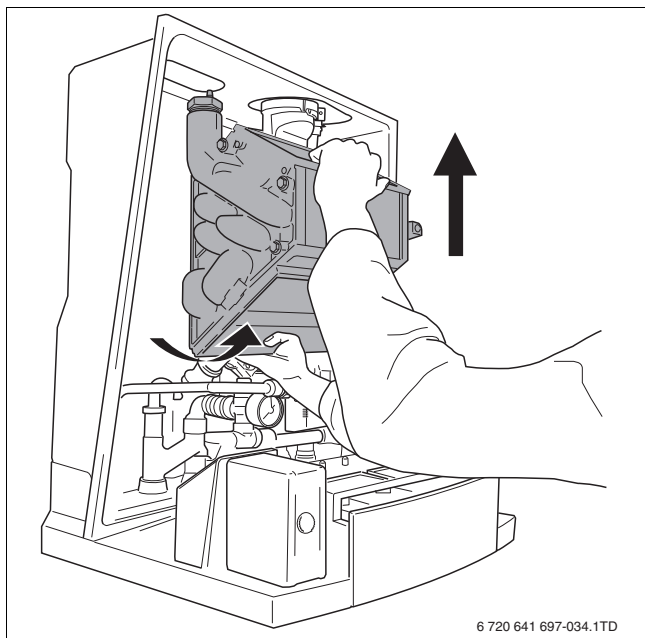


Fig. 20 Removing the heat exchanger

- ▶ Install the gas ring on the flue gas collector.

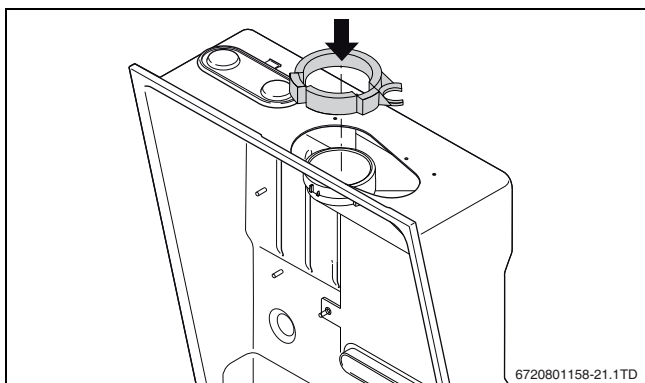


Fig. 21 Installing the gas ring

- ▶ Fit the condensate bypass pipe on the gas ring.

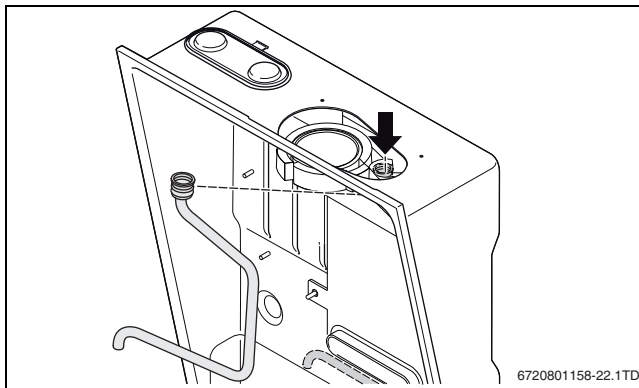


Fig. 22 Fitting the condensate bypass pipe

- ▶ Put the heat exchanger back in the appliance and assemble it in reverse order.
- ▶ Open the maintenance shut-off valves (fig. 7, [1]) and drain (fig. 7, [2]) of the Logamax plus GB142.

3.4 Mounting the new condensate trap and flue gas adapter

- ▶ Fill the new condensate trap (→ fig. 1, [4]) with water before re-installing it. This is to prevent exhaust gases from entering the room.
- ▶ Reassemble the new condensate trap to the appliance
- ▶ Connect the new condensate bypass pipe.

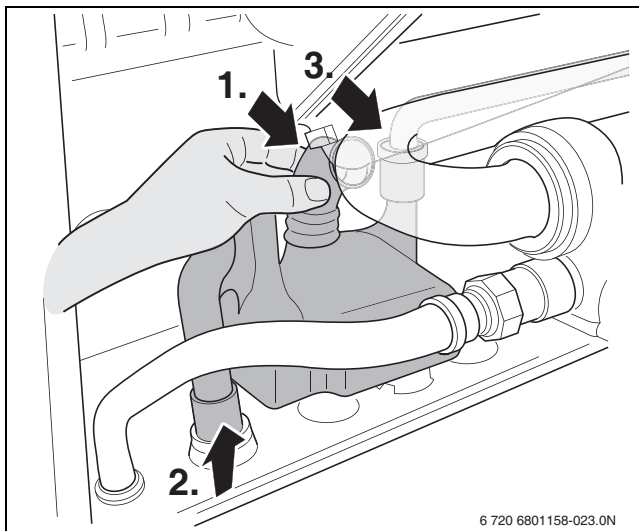


Fig. 23 Connect condensate bypass pipe

- ▶ Screw the new flue gas adapter on the appliance.

3.5 Testing for gas leaks



NOTICE: electrical short circuit.

Leaks may be caused to pipes and screw connections during servicing activities.

- ▶ Carry out a proper leak test.
- ▶ Cover damageable parts before leak testing.
- ▶ Only use approved leak detection agents.
- ▶ Do not spray the leak testing agent onto cables, plugs or electrical connection lines. Do not allow it to drip onto them either.

**DANGER:** gas explosion.

What to do if you smell gas:

- ▶ No open fire. Do not smoke.
- ▶ Avoid formation of sparks. Do not touch any electric switch, phone, electric plug or bell.
- ▶ Shut off the main gas supply.
- ▶ Open windows and doors.
- ▶ Notify all occupants.
- ▶ Leave the building.
- ▶ Immediately call your gas supplier, heating contractor or fire department from a phone outside the building.

- ▶ Open the gas shut-off valve.

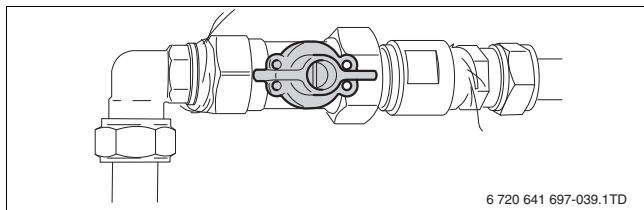


Fig. 24 Gas shut-off valve open

- ▶ Check all joints and gaskets affected by the replacement activities for gas leaks.
- ▶ In case of a gas leak, close the gas shut-off valve (→ fig. 2) and take the safety precautions mentioned above.
- ▶ Check again all joints and gaskets and repair the leakage.
- ▶ Open the gas shut-off valve (→ fig. 24) and check again for gas leaks.

3.6 Filling the appliance

- ▶ Switch on the heating system by setting the mains switch [1] to position "1". It is possible that P0.0 appears in the display of the control panel telling you that the system pressure is too low at.

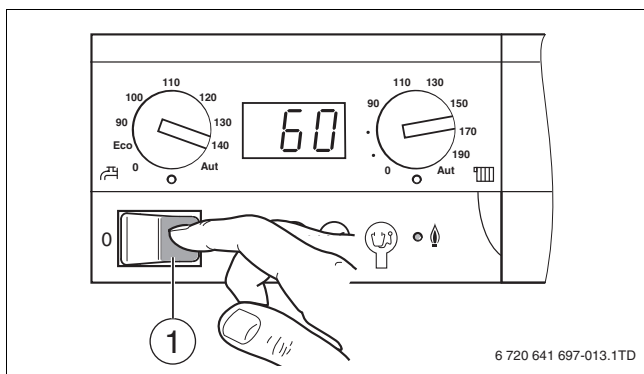


Fig. 25 Mains switch to "ON"

- ▶ Fill the heating system to a pressure of around 20 psi (1.5 bar).
- ▶ Observe the pressure on the control panel or the P/T gauge in the pump manifold (if equipped) for the heating circuit. The fill pressure of the system should be at least the required inlet pressure for the expansion tank plus 7.2 psi (0.5 bar). The minimum pressure is 15 psi (1.0 bar) (on a cold system). The maximum pressure is 44 psi (3.0 bar) (if the heating medium temperature is at its highest possible level). If this pressure is exceeded, the pressure relief valve will open.

3.7 Start up the appliance

For your safety, read before lighting.

**DANGER:** due to not following these instructions.

- ▶ If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.
- ▶ Follow these operating instructions.

A) This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do **not** try to light the burner by hand.

B) BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

C) Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D) Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

- ▶ Wait 5 minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you do not smell gas, go to the next step.
- ▶ Install the casing again.

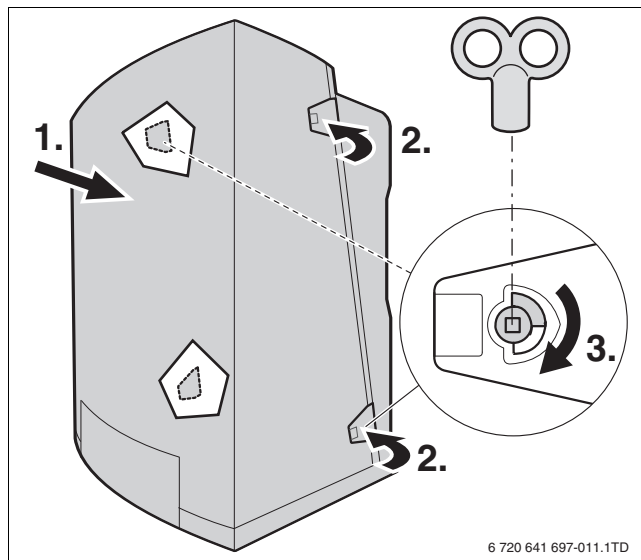


Fig. 26 Installing the casing

- ▶ Set the thermostat or other operation control to the desired setting.
- ▶ Connect the appliance to the power supply.
- ▶ Switch on the appliance using the mains switch (→ fig. 25).
- ▶ Check all gas fittings and water fittings for leaks.

United States and Canada

Bosch Thermotechnology Corp.
50 Wentworth Avenue
Londonderry, NH 03053
Tel. 603-552-1100
Fax 603-965-7581
www.buderus.us
U.S.A.

Products manufactured by
Bosch Thermotechnik GmbH
Sophienstrasse 30-32
D-35576 Wetzlar
www.buderus.com

Bosch Thermotechnology Corp. reserves the right
to make changes without notice due to continuing
engineering and technological advances.

Buderus