



**A.O. SMITH**  
 WATER PRODUCTS  
 COMPANY  
 PSD - Alsip, Illinois

**WATER HEATER  
 BULLETIN**

Date: December 20, 1999  
 Subject: Gas Water Heater Conversion Policy  
 To: All Accounts

No. 137 Rev. 2

\* This supersedes all previous letters and field bulletins concerning residential and commercial water heater conversion.

**GAS WATER HEATER CONVERSION POLICY**

All A.O. Smith Water Products Company's residential and commercial gas water heaters are designed certified by CSA or UL, under ANSI Standards for operation on one type of gas only, as indicated on the water heater's model number and rating plate.

A.O. Smith realizes that there may be certain situations where a field conversion may be necessary and in order to facilitate such a conversion, A. O. Smith complies with CSA or UL regulations ensuring that a field conversion be appropriately and safely completed.

An improper field conversion from one type of gas to another could cause potentially dangerous conditions that may cause an explosion or fire resulting in property damage, bodily injury or both.

**A.O. SMITH WILL ONLY ALLOW THE CONVERSION OF GAS WATER HEATERS FROM LP GAS (PROPANE) TO NATURAL GAS. THE CONVERSION OF A GAS WATER HEATER FROM NATURAL GAS TO LP GAS (PROPANE) IS NOT ALLOWED UNDER ANY CIRCUMSTANCES.**

A.O. Smith will provide kits as demand warrants through our Parts Department, phone no. 1-800-433-2545. Prices, dimensions and specifications are subject to change without notice.

Each conversion kit is to be installed by an A.O. Smith service agent or a gas utility serviceman in accordance with A.O. Smith's written instructions and all codes and requirements of the authority having jurisdiction. Failure to follow instructions could result in serious injury or property damage. The utility performing this work assumes responsibility for this conversion.

**Changing the Input on Gas Water Heaters**

The only changes to the input of a gas water heater allowed are:

Adjustments to match that shown on the rating plate of the heater. The installation instructions supplied with the heater indicate if adjustments to input are a required procedure.

Changes made as required to adjust the heater for proper operation at high altitude as determined by a qualified service technician. Service manuals include the proper procedure for adjusting heaters at high altitudes.

**Conversion of Gas Water Heaters**

The conversion of LP gas (Propane) to Natural gas is ONLY allowed providing:

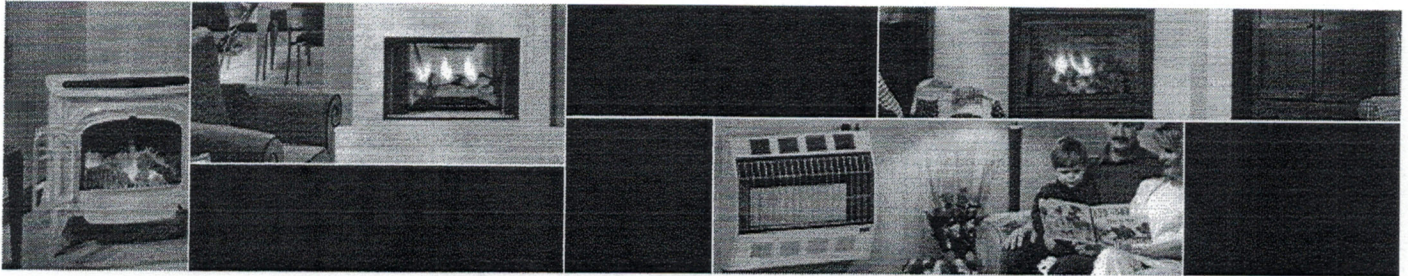
The conversion is done as part of a gas utility's program where propane appliances were installed anticipating the completion of natural gas service to the area. The conversion must be done under the direct supervision of the utility and by their service representatives.

Claims of damage or injury arising from the unauthorized conversion of any A.O. Smith water heater not design certified for conversion will be the complete and total responsibility of the person or entity making the conversion.

If you have any questions regarding the above policy, please contact the A.O. Smith Parts Department at 1-800-433-2545 or our Technical Information Center at 1-800-527-1953.

**A.O. SMITH WATER PRODUCTS CO., INC.**  
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Brooks Exhibit 4



## Information on Safety

Letter from Consumer Products Safety Commission and Safety of Vent-Free Gas Appliances

 [Click here to download 48 Kb](#)

Response of the Vent-Free Gas Products Alliance to Critique of the American Lung Association and their "Health Home" Partners Heat & Glo, Heatilator, Quadra-Fire (BHTD)

 [Click here to download 160 Kb](#)

Answers to Comments Concerning Vent-Free Safety  
[Read more...](#)

Information on Vent-Free Use in High Altitudes  
[Read more...](#)

## SAFETY

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*"The Vent-Free Gas Products Alliance has teamed up with the nonprofit Home Safety Council to support fire and life safety educators in local fire departments across America. Through Home Safety Council's Expert Network of more than 5,000 safety advocates, the partnership supports delivery of accurate home safety information, including important tips for safe home heating."*

— Sue Walker  
Chairman of the Vent-Free Alliance  
"Proud Supporter of the Home Safety Council"

## A unique system called an Oxygen Detection Safety-pilot, or ODS

Oxygen Detection Safety-pilot (ODS) technology was adopted by all U.S. manufacturers for all vent-free gas products in the early 1980s.

ODS technology originated in Europe, where it has been used for more than half a century with an outstanding record of safety. Consumer Product Safety Commission (CPSC) accident/incident data compiled since 1980 show no documented deaths due to emissions associated with the use of an ODS-equipped vent-free gas heating appliance. Industry engineers say the ODS pilot is to gas what a circuit breaker is to electricity.

### HOW THE ODS WORKS

The ODS system consists of three main components:

- a precisely designed, oxygen sensitive pilot burner that regulates flame characteristics;
- a thermocouple positioned in the mantle of the pilot flame; and
- a safety shut-off valve.

The pilot is designed to be stable within a very narrow operating range. The thermocouple responds to changes in the pilot flame characteristics and, when heated, generates a millivoltage, which keeps the gas supply valve in the open position. If low levels of oxygen are detected by the ODS system, the flame extinguishes. The loss of flame causes the thermocouple to cool. This cooling reduces the millivoltage, which causes the gas valve to return to its normally closed position, thus turning off the fuel supply to the appliance. This extinguishes the flame and the pilot. The unit will not operate until the living space is properly ventilated and adequate oxygen is introduced, and the pilot is relighted.

### IT'S TAMPER-RESISTANT

Every ODS system contains a precision orifice. This orifice will disintegrate with any attempt at drilling it out to enlarge the pilot flame. Additionally, it is not interchangeable with a normal standing pilot. Furthermore, propane and natural gas vent-free products cannot be converted from one type of gas to another.