

# 1 FURNACES — GAS AND OIL

*Heating I*  
M O D U L E

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## ► 1.0 OBJECTIVES

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In this Module we will discuss how heating systems work. You will learn how to identify the different types of heating systems and recognize the different fuels and distribution systems. You will learn to identify the various system components and how to inspect and test heating appliances. You'll also learn how to recognize non-performance and understand the causes and implications. We will discuss how to advise your client, depending on the conditions found.

*Goal* Our goal is to enable you to inspect heating systems according to our Professional Standards.

*Not The Last Word* This program is not an in-depth heating course and you should not assume that you have all the knowledge of a heating specialist after studying this material. This program does not qualify you to install or repair heating systems. There are many places to go to learn more and we encourage you to continue expanding your knowledge.

# Heating I

M O D U L E

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## STUDY SESSION 1

1. The first Study Session outlines the Scope of the heating inspection as set out in the ASHI® Standards of Practice.

Note: ASHI® stands for American Society of Home Inspectors.  
CAHI stands for Canadian Association of Home Inspectors.

This Session also includes a discussion of the evolution of residential heating.

2. At the end of this Study Session, you should be able to –
  - list the two components of the heating system items you must inspect
  - list the two things you must describe in your report
  - list six ways heat is generated, four ways heat is delivered, and seven safety controls
  - define the BTU
3. Read Section 1 of the Heating Chapter of **The Home Reference Book** before starting this Study Session.
4. This is a relatively short Study Session. You will probably finish it in about 45 minutes.
5. Quick Quiz 1 is included at the end. Answers can be written in your book.

***Key Words:***

- ***Normal operating controls***
- ***Automatic safety controls***
- ***Chimneys and flues***
- ***BTU***
- ***Forced air system***
- ***Hydronic system***

## ► 2.0 SCOPE AND INTRODUCTION

### 2.1 SCOPE

#### THE ASHI® STANDARDS OF PRACTICE

The following are excerpted from the ASHI®/CAHI Standards of Practice for inspecting heating systems, effective January 2000.

#### 2. PURPOSE AND SCOPE

**2.1** The purpose of these Standards of Practice is to establish a minimum and uniform standard for private, fee-paid home inspectors who are members of the American Society of Home Inspectors. Home Inspections performed to these Standards of Practice are intended to provide the client with information regarding the condition of the systems and components of the home as inspected at the time of the Home Inspection.

#### 2.2 The Inspector shall:

##### A. inspect:

1. *readily accessible systems and components* of homes listed in these Standards of Practice.
2. *installed systems and components* of homes listed in these Standards of Practice.

##### B. report:

1. on those *systems and components* inspected which, in the professional opinion of the *inspector*, are *significantly deficient* or are near the end of their service lives.
2. a reason why, if not self-evident, the *system or component* is *significantly deficient* or near the end of its service life.
3. the inspector's recommendations to correct or monitor the reported deficiency.
4. on any *systems and components* designated for inspection in these Standards of Practice which were present at the time of the *Home Inspection* but were not inspected and a reason they were not inspected.

#### 2.3 These Standards of Practice are not intended to limit *inspectors* from:

- A. including other inspection services, systems or components in addition to those required by these Standards of Practice.
- B. specifying repairs, provided the inspector is appropriately qualified and willing to do so.
- C. excluding systems and components from the inspection if requested by the client.

## 8. HEATING SYSTEM

### 8.1 The *inspector* shall:

- A. inspect:
  - 1. the installed heating equipment.
  - 2. the vent systems, flues, and chimneys.
- B. describe:
  - 1. the energy source.
  - 2. the heating method by its distinguishing characteristics.

### 8.2 The *inspector* is not required to:

- A. *inspect*:
  - 1. the interiors or flues or chimneys which are not *readily* accessible.
  - 2. the heat exchanger.
  - 3. the humidifier or dehumidifier.
  - 4. the electronic air filter.
  - 5. the solar space heating *system*.
- B. determine heat supply adequacy or distribution balance.

## 13. GENERAL LIMITATIONS AND EXCLUSIONS

### 13.1 General limitations:

- A. Inspections performed in accordance with these Standards of Practice
  - 1. are not *technically exhaustive*.
  - 2. will not identify concealed conditions or latent defects.
- B. These Standards of Practice are applicable to buildings with four or fewer dwelling units and their garages or carports.

### 13.2 General exclusions:

- A. The *inspector* is not required to perform any action or make any determination unless specifically stated in these Standards of Practice, except as may be required by lawful authority.
- B. *Inspectors* are NOT required to determine:
  - 1. the condition of *systems* or *components* which are not *readily* accessible.
  - 2. the remaining life of any *system* or component.
  - 3. the strength, adequacy, effectiveness, or efficiency of any *system* or *component*.
  - 4. the causes of any condition or deficiency.
  - 5. the methods, materials, or costs of corrections.
  - 6. future conditions including, but not limited to, failure of *systems* and *components*.