



## **Chapter 1 Introduction to Oilburners -----1-3**

How an oilburner works  
The high-pressure atomizing flame-retention oilburner  
Ignition, the nozzle assembly and air adjustments



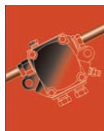
## **Chapter 2 Heating Oil and Its Properties -----2-3**

An introduction to the petroleum industry  
Oil refining  
Fuel related service calls, oil filtration



## **Chapter 3 Oil Tanks and Piping -----3-3**

Oil tanks and piping  
Tank inspection procedures



## **Chapter 4 Fuel Units and Oil Valves -----4-3**

Fuel units and oil valves  
Troubleshooting oil storage and supply systems



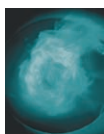
## **Chapter 5 Nozzles and Combustion Chambers -----5-3**

Nozzle construction and flame patterns  
Solving after-drip problems  
Combustion chambers



## **Chapter 6 Draft and Venting -----6-3**

Draft—why it is needed and how it is measured  
Regulating draft and the effects of draft  
Alternative venting systems: Power-venting and direct-venting



## **Chapter 7 Combustion -----7-3**

Combustion theory, efficiency testing and troubleshooting  
Common causes of smoke, soot and low efficiency  
Carbon monoxide



## **Chapter 8 Basic Electricity -----8-3**

Understanding electrical circuits  
Measuring electricity  
Electrical safety



## **Chapter 9 Ignition Systems -----9-3**

Interrupted and intermittent (constant duty) ignition  
How ignition transformers and ignitors work, troubleshooting  
Testing transformers and ignitors, servicing ignition systems



**Chapter 10 Motors ----- 10-3**

Motor components  
How motors work, diagnosing motor problems  
The types of motors used in heating systems



**Chapter 11 Primary Controls ----- 11-3**

Functions of a primary control  
Flame detection  
Ignition modes  
Types of primary controls, troubleshooting primary controls



**Chapter 12 Limit Controls and Thermostats ----- 12-3**

The oil-fired heating system control circuit  
Thermostats, principles and designs, heat anticipators  
Limit controls, warm air fan limits and electronic fan timer center,  
steam pressure controls and low water cutoffs, aquastats  
Switching relays



**Chapter 13 Heating Systems ----- 13-3**

Warm air heating systems  
Hot water heating systems  
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**Chapter 14 Preventative Maintenance Tune-Ups ----- 14-3**

Importance of preventative maintenance  
Tools you will need  
Step-by-step procedures for preventative maintenance



**Chapter 15 Service Procedures ----- 15-3**

A systematic approach to troubleshooting  
Time saving troubleshooting suggestions



**Chapter 16 Energy Conservation ----- 16-3**

Technician's role in equipment sales  
How oil-fired heating systems lose heat and efficiency  
Equipment upgrades and replacements



**Chapter 17 Customer Service ----- 17-3**

Why providing customer service is important  
What customers want when something goes wrong  
Solving customer complaints and handling complaints  
Hot tips for successful service calls