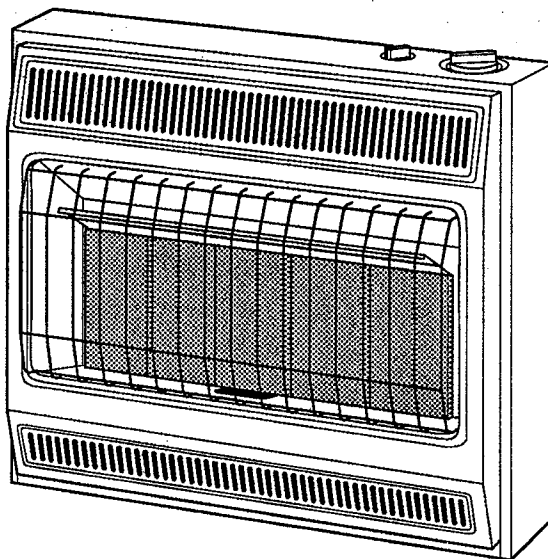


# VANGUARD®

## VENT-FREE NATURAL GAS HEATER OWNER'S OPERATION AND INSTALLATION MANUAL

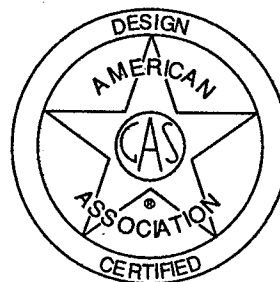


**Models: VN1800C, VN1800TC, VN3000C, and VN3000TC**

**WARNING:** If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **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 performed by a qualified installer, service agency, or the gas supplier.

**WARNING:** Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. Refer to this manual for correct installation and operational procedures. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.



**Save this manual for future reference.**

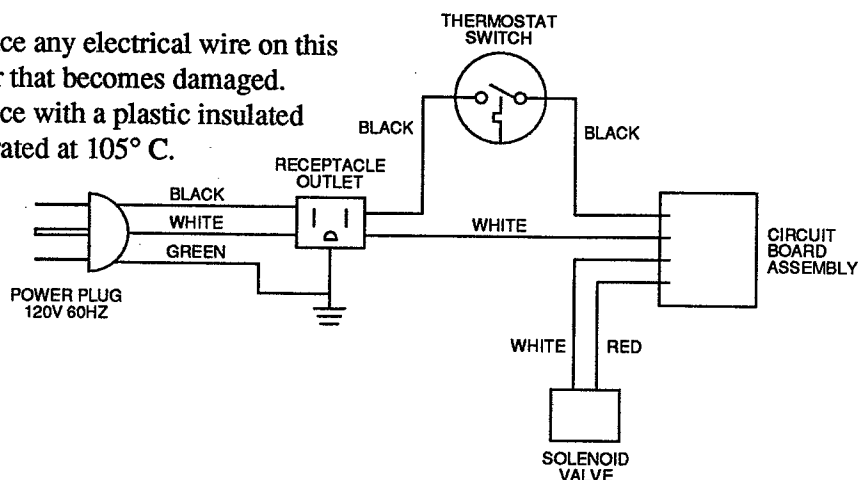
# SPECIFICATIONS

	<b>VN1800TC</b>	<b>VN3000TC</b>
B.T.U (Variable)	6,600-18,000	12,000-30,000
Type Gas	Natural Only	Natural Only
Ignition	Piezo	Piezo
Pressure Regulator Setting	6" W.C.	6" W.C.
Inlet Gas Pressure (in. of water)		
Maximum	10.5"	10.5"
Minimum	7"	7"
Dimensions, Inches (H x W x D)		
Heater	23.5 x 18.5 x 8	23.5 x 25.9 x 8
Carton	25.8 x 21.3 x 10.1	25.8 x 28.7 x 10.1
Weight (pounds)		
Heater	24	32
Shipping	29	38
Electrical Input	120V/60HZ	120V/60HZ
Amperage	.24	.24

	<b>VN1800C</b>	<b>VN3000C</b>
B.T.U (Variable)	6,600/12,000/18,000	6,600/18,000/30,000
Type Gas	Natural Only	Natural Only
Ignition	Piezo	Piezo
Pressure Regulator Setting	6" W.C.	6" W.C.
Inlet Gas Pressure (in. of water)		
Maximum	10.5"	10.5"
Minimum	7"	7"
Dimensions, Inches (H x W x D)		
Heater	23.5 x 18.5 x 8	23.5 x 25.9 x 8
Carton	25.8 x 21.3 x 10.1	25.8 x 28.7 x 10.1
Weight (pounds)		
Heater	22	30
Shipping	27	36

## WIRING DIAGRAM

Replace any electrical wire on this heater that becomes damaged. Replace with a plastic insulated wire rated at 105° C.



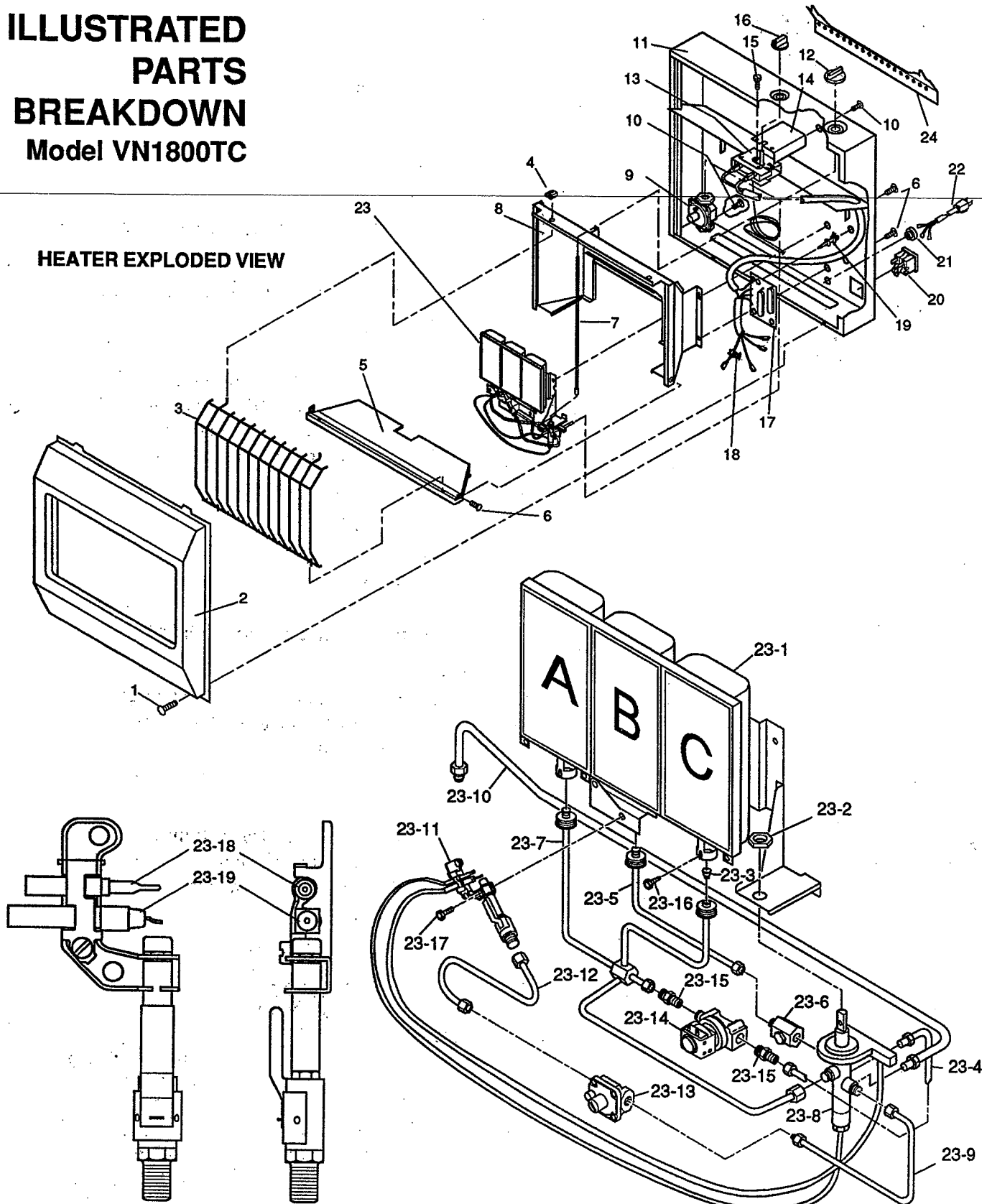
**Figure 24 - Models VN1800TC and VN3000TC**

## SERVICE PUBLICATIONS

You can purchase a service manual from the address listed on the back page of this manual. Send a check for \$5.00 payable to DESA International.

# ILLUSTRATED PARTS BREAKDOWN Model VN1800TC

HEATER EXPLODED VIEW



ODS/PILOT ASSEMBLY

BURNER ASSEMBLY

# **PARTS LIST**

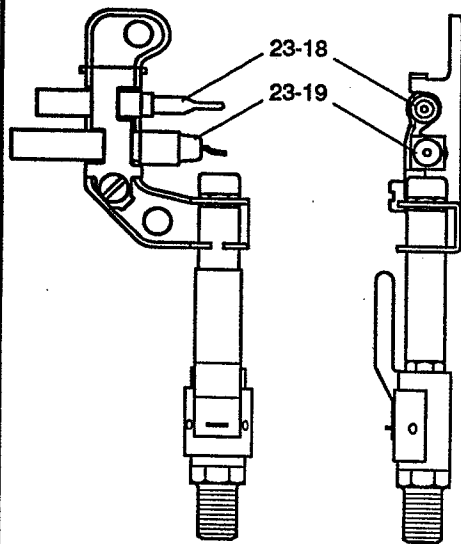
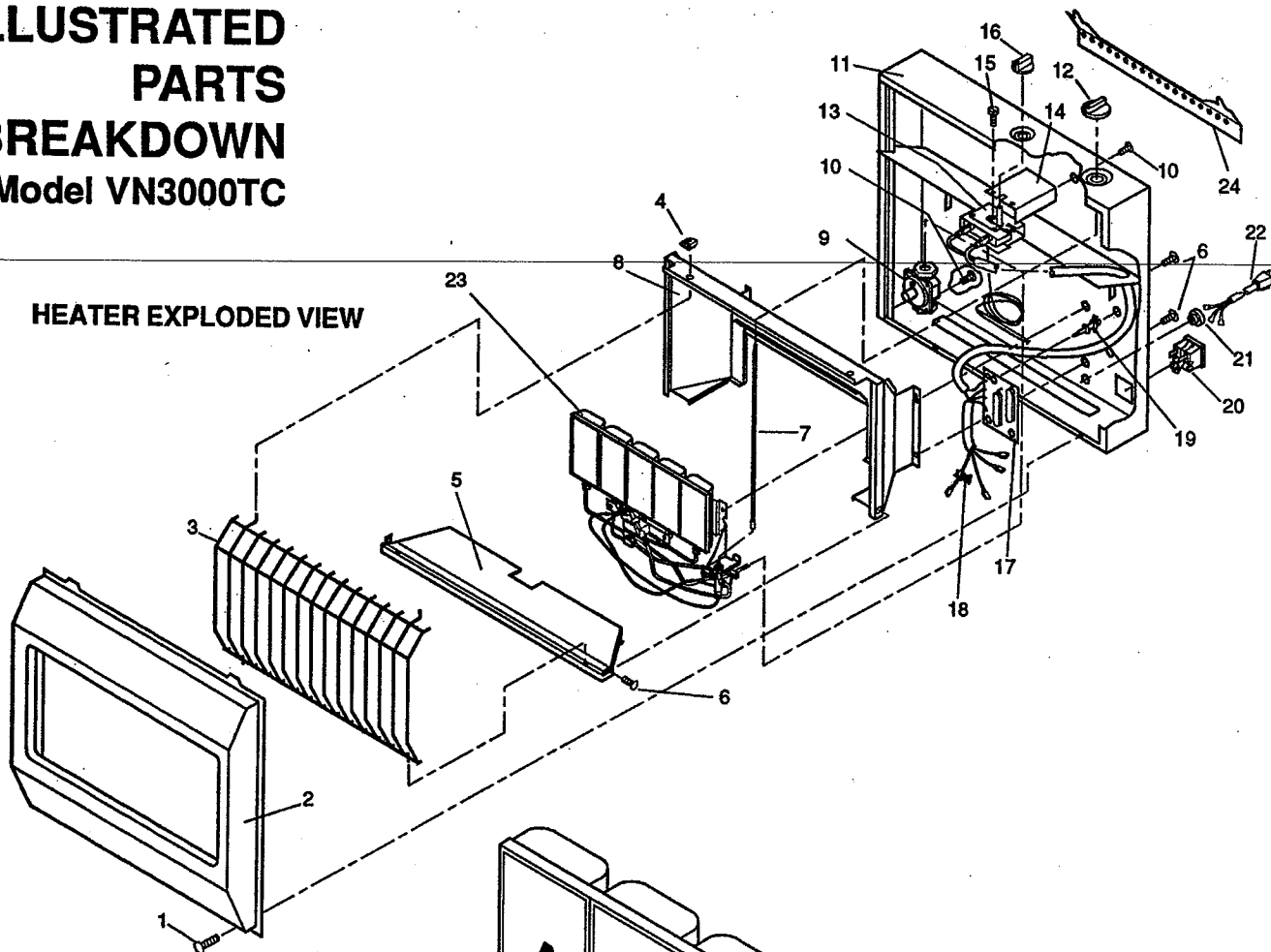
## **Model VN1800TC**

This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under REPLACEMENT PARTS on page 27 of this manual.

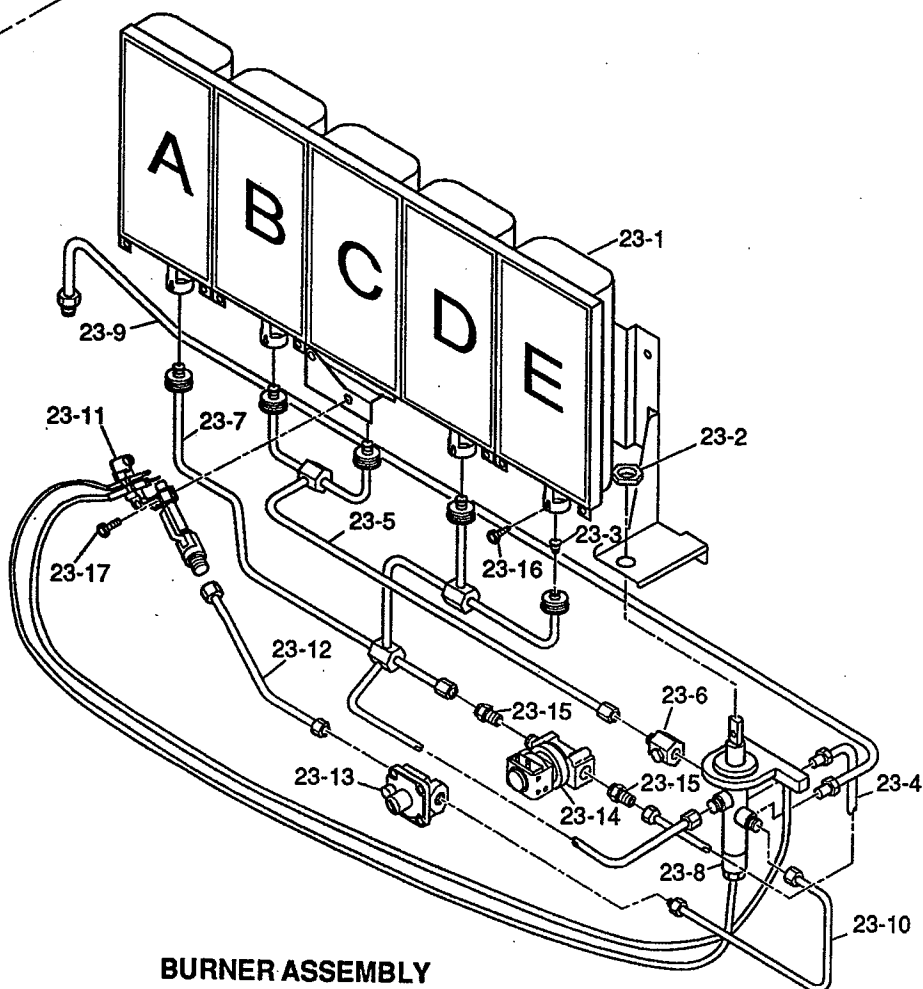
KEY NO.	PART NUMBER	DESCRIPTION	QTY.	KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	098304-01	Screw, #10 x 3/8"	2	23-3	099056-02	Injector	3
2	098742-01	Front Panel	1	23-4	099186-03	Tubing-Valve to solenoid	1
3	098238-01	Grill Guard	1	23-5	099049-01	Tubing-Valve to plaque B	1
4	098342-01	Clip-Grill Guard	2	23-6	099057-01	Pressure Tap Fitting	1
5	098198-01	Apron	1	23-7	099186-02	Tubing-Solenoid to plq A & C	1
6	M11084-26	Screw, #10 x 3/8"	9	23-8	098932-06	Control Valve	1
7	098462-01	Control Rod Assembly	1	23-9	099045-01	Pilot Tubing-Valve to regulator	1
8	098457-01	Reflector Assembly	1	23-10	099051-01	Inlet Tubing	1
9	098867-05	Regulator	1	23-11	099059-01	ODS/Pilot	1
10	M11084-38	Screw, #8 x 3/8"	4	23-12	099046-02	Pilot Tubing-Regulator to pilot	1
11	098455-04	Cabinet Assembly	1	23-13	099918-01	Pilot Regulator	1
12	098324-01	Control Knob	1	23-14	097803-01	Solenoid Valve	1
13	098656-01	Thermostat (includes bulb)	1	23-15	099058-02	Male Connector	2
14	098658-01	Thermostat Bracket	1	23-16	M11084-37	Screw, #8 x 1/4"	3
15	M12461-1	Screw, #6 x 1/4"	2	23-17	M11084-26	Screw, #10 x 3/8"	2
16	098657-01	Thermostat Knob	1	23-18	098593-01	Thermocouple	1
17	098739-01	Circuit Board Assembly	1	23-19	098594-01	Ignitor Electrode	1
18	098870-01	Splice Connector	2	24	099066-01	Mounting Bracket	1
19	M51122-01	Circuit Board Support	3	<b>PARTS AVAILABLE - NOT SHOWN</b>			
20	098788-01	Receptacle Outlet	1		098305-02	Control Position Label	1
21	M11143-1	Strain Relief Bushing	1				
22	098789-01	Power Cord Assembly	1				
23	See Detail	Burner Assembly	1				
23-1	099218-01	Burner	1				
23-2	098508-01	Valve Retainer Nut	1				

# ILLUSTRATED PARTS BREAKDOWN Model VN3000TC

HEATER EXPLODED VIEW



ODS/PILOT



BURNER ASSEMBLY

# **PARTS LIST**

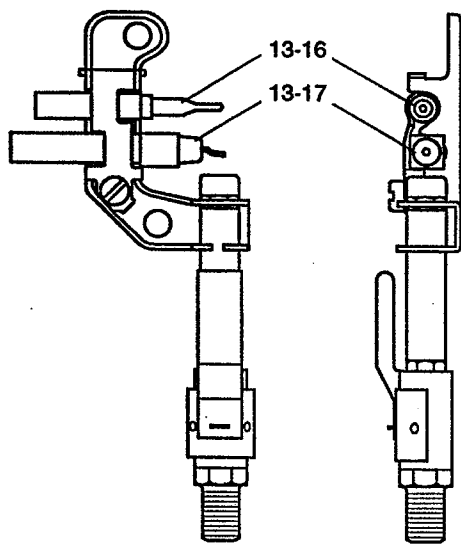
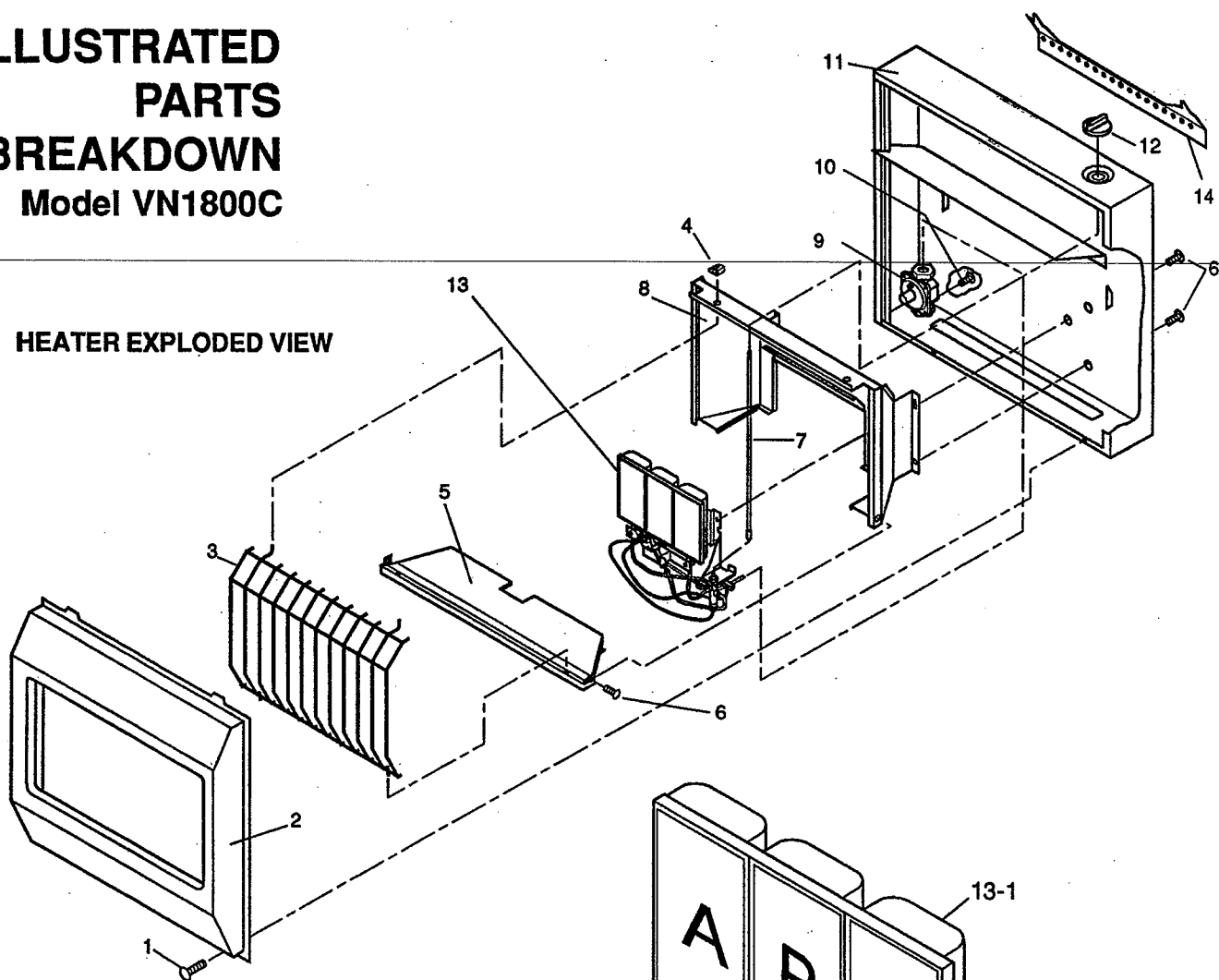
## **Model VN3000TC**

This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under REPLACEMENT PARTS on page 27 of this manual.

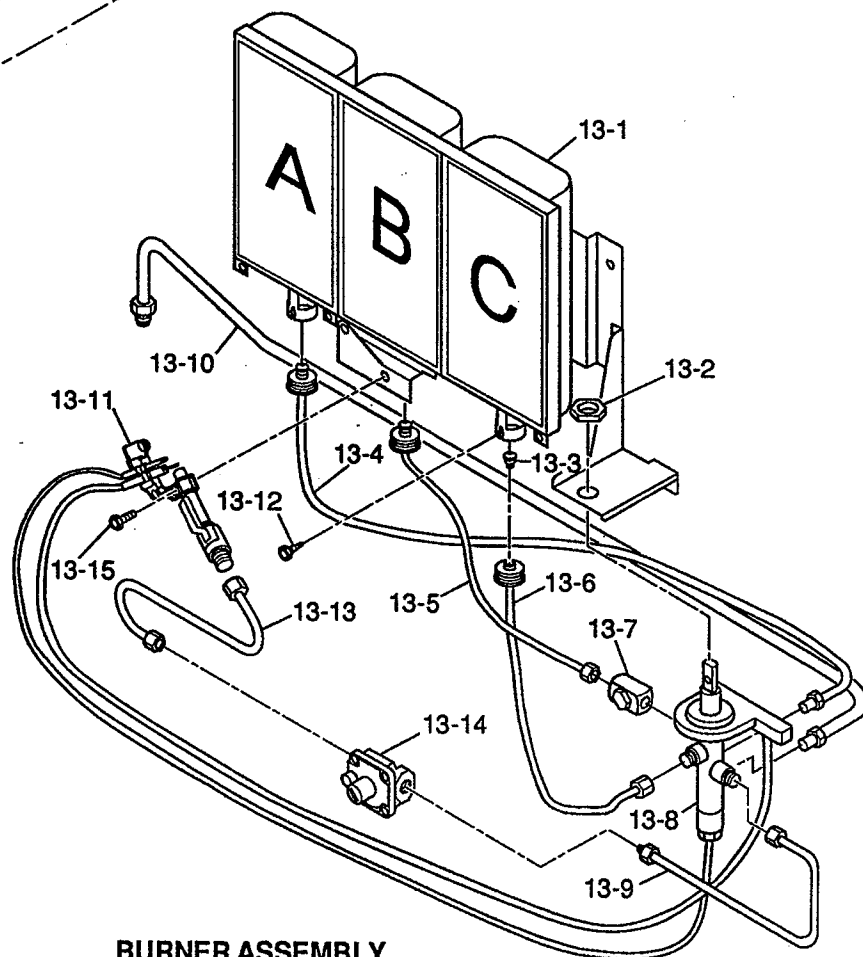
KEY NO.	PART NUMBER	DESCRIPTION	QTY.	KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	098304-01	Screw, #10 x 3/8"	2	23-3	099056-02	Injector	5
2	098742-02	Front Panel	1	23-4	099186-06	Tubing-Valve to solenoid	1
3	098238-02	Grill Guard	1	23-5	099186-04	Tubing-Valve to plaque B & C	1
4	098342-01	Clip-Grill Guard	2	23-6	099057-01	Pressure Tap Fitting	1
5	098198-02	Apron	1	23-7	099186-05	Tubing-Solenoid to plq A, D, & E	1
6	M11084-26	Screw, #10 x 3/8"	9	23-8	098932-06	Control Valve	1
7	098462-01	Control Rod Assembly	1	23-9	099051-02	Inlet Tubing	1
8	098457-02	Reflector Assembly	1	23-10	099045-01	Pilot Tubing-Valve to regulator	1
9	098867-05	Regulator	1	23-11	099059-01	ODS/Pilot	1
10	M11084-38	Screw, #8 x 3/8"	4	23-12	099047-02	Pilot Tubing-Regulator to pilot	1
11	098698-02	Cabinet Assembly	1	23-13	099918-01	Pilot Regulator	1
12	098324-01	Control Knob	1	23-14	097803-01	Solenoid Valve	1
13	098656-01	Thermostat (includes bulb)	1	23-15	099058-02	Male Connector	2
14	098658-01	Thermostat Bracket	1	23-16	M11084-37	Screw, #8 x 1/4"	5
15	M12461-1	Screw, #6 x 1/4"	2	23-17	M11084-26	Screw, #10 x 3/8"	2
16	098657-01	Thermostat Knob	1	23-18	098593-01	Thermocouple	1
17	098739-01	Circuit Board Assembly	1	23-19	098594-01	Ignitor Electrode	1
18	098870-01	Splice Connector	2	24	099066-01	Mounting Bracket	1
19	M51122-01	Circuit Board Support	3	<b>PARTS AVAILABLE - NOT SHOWN</b>			
20	098788-01	Receptacle Outlet	1		098305-02	Control Position Label	1
21	M11143-1	Strain Relief Bushing	1				
22	098789-01	Power Cord Assembly	1				
23	See Detail	Burner Assembly	1				
23-1	099218-02	Burner	1				
23-2	098508-01	Valve Retainer Nut	1				

# ILLUSTRATED PARTS BREAKDOWN Model VN1800C

HEATER EXPLODED VIEW



ODS/PILOT



BURNER ASSEMBLY

# **PARTS LIST**

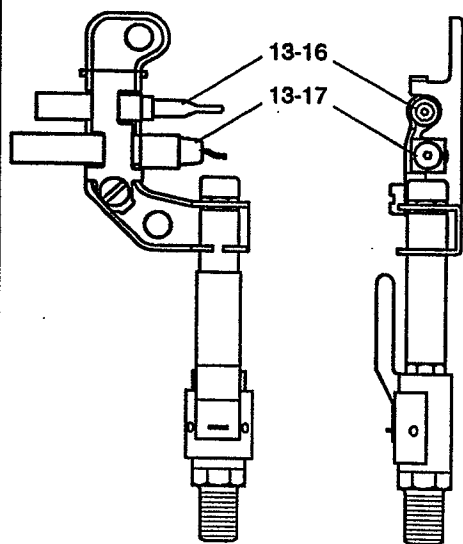
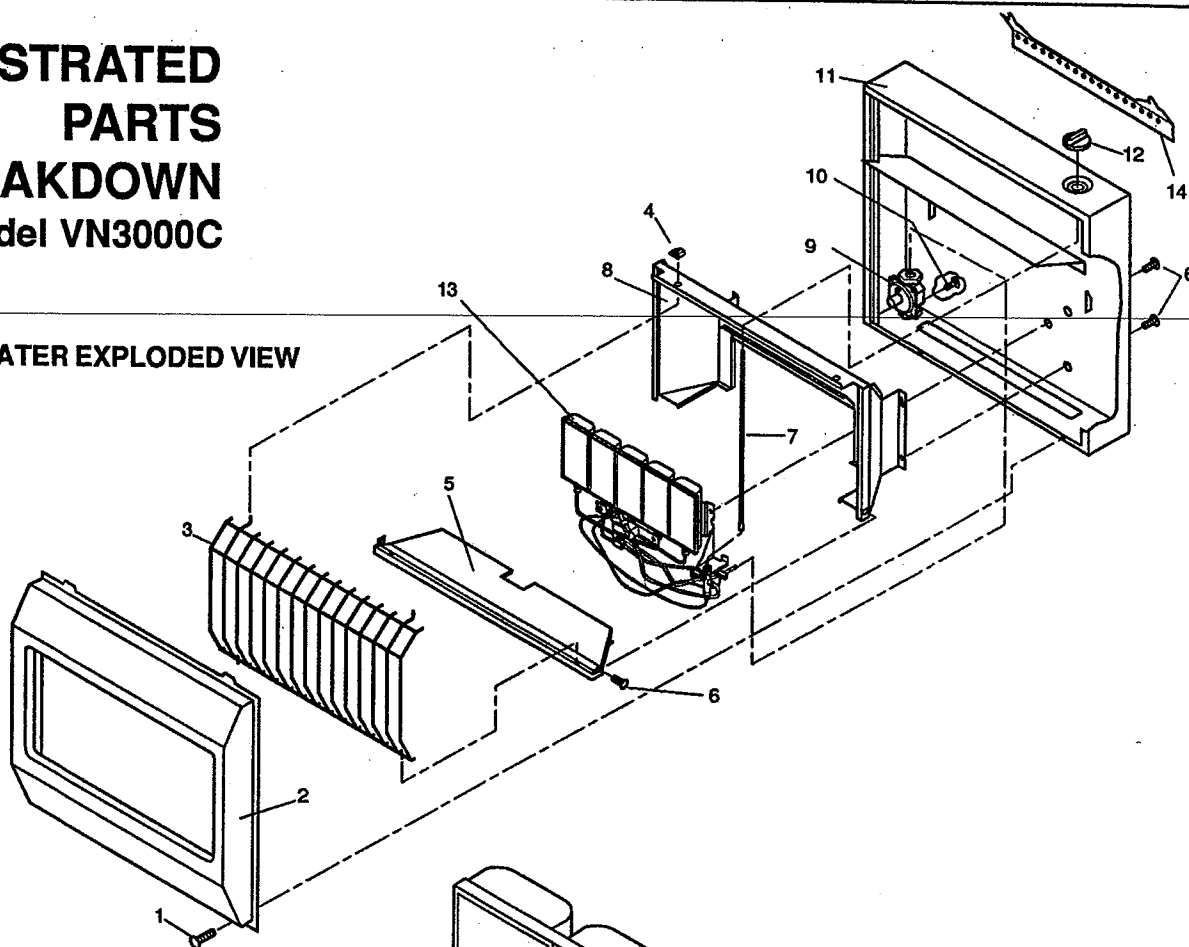
## **Model VN1800C**

This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under REPLACEMENT PARTS on page 27 of this manual.

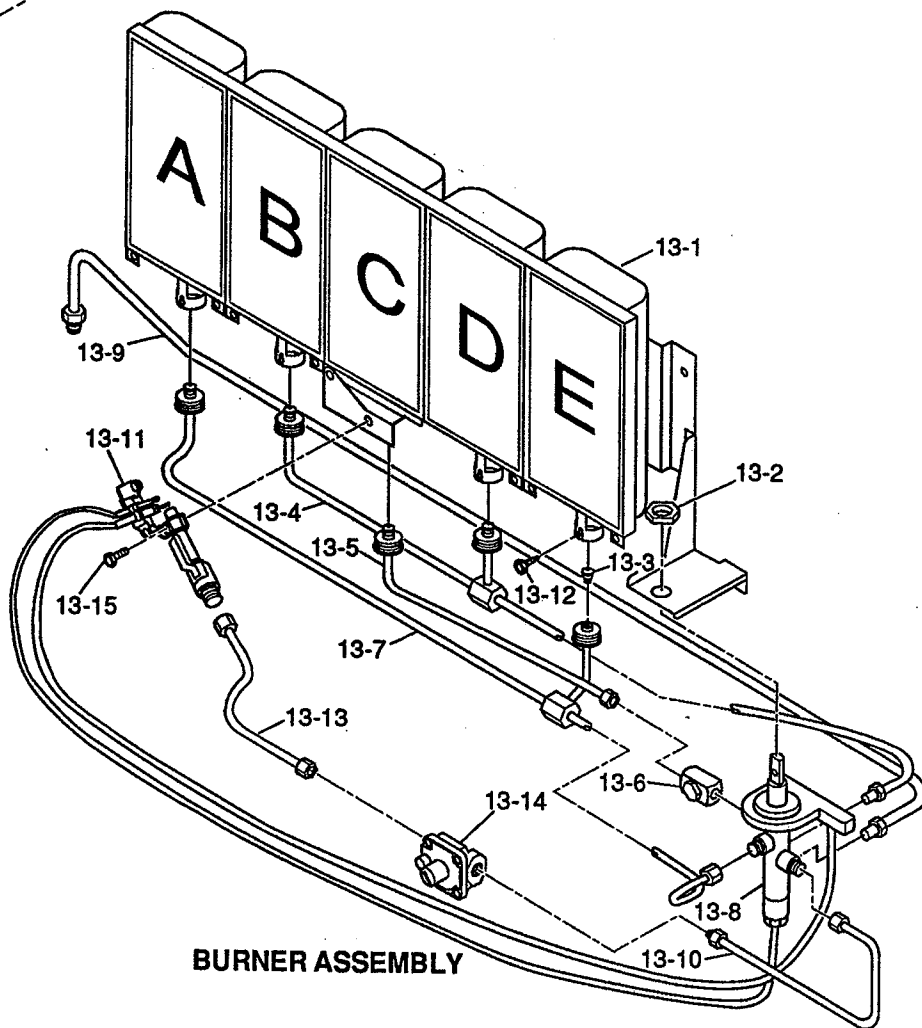
KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	098304-01	Screw, #10 x 3/8"	2
2	098742-01	Front Panel	1
3	098238-01	Grill Guard	1
4	098342-01	Clip-Grill Guard	2
5	098198-01	Apron	1
6	M11084-26	Screw, #10 x 3/8"	9
7	098462-01	Control Rod Assembly	1
8	098457-01	Reflector Assembly	1
9	098867-05	Regulator	1
10	M11084-38	Screw, #8 x 3/8"	2
11	098455-02	Cabinet Assembly	1
12	098324-01	Control Knob	1
13	See Detail	Burner Assembly	1
13-1	099218-01	Burner	1
13-2	098508-01	Valve Retainer Nut	1
13-3	099056-03	Injector	3
13-4	099048-01	Tubing-Valve to plaque A	1
13-5	099049-01	Tubing-Valve to plaque B	1
13-6	099050-01	Tubing-Valve to plaque C	1
13-7	099057-01	Pressure Tap Fitting	1
13-8	098932-06	Control Valve	1
13-9	099045-01	Pilot Tubing-Valve to regulator	1
13-10	099051-01	Inlet Tubing	1
13-11	099059-01	ODS/Pilot	1
13-12	M11084-37	Screw, #8 x 1/4"	3
13-13	099046-02	Pilot Tubing-Regulator to pilot	1
13-14	099918-01	Pilot Regulator	1
13-15	M11084-26	Screw, #10 x 3/8"	2
13-16	098593-01	Thermocouple	1
13-17	098594-01	Ignitor Electrode	1
14	099066-01	Mounting Bracket	1
<b>PARTS AVAILABLE - NOT SHOWN</b>			
	098465-01	Control Position Label	1

# ILLUSTRATED PARTS BREAKDOWN Model VN3000C

HEATER EXPLODED VIEW



ODS/PILOT



BURNER ASSEMBLY

# **PARTS LIST**

## **Model VN3000C**

This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under REPLACEMENT PARTS on page 27 of this manual.

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	098304-01	Screw, #10 x 3/8"	2
2	098742-02	Front Panel	1
3	098238-02	Grill Guard	1
4	098342-01	Clip-Grill Guard	2
5	098198-02	Apron	1
6	M11084-26	Screw, #10 x 3/8"	9
7	098462-01	Control Rod Assembly	1
8	098457-02	Reflector Assembly	1
9	098867-05	Regulator	1
10	M11084-38	Screw, #8 x 3/8"	2
11	098456-02	Cabinet Assembly	1
12	098324-01	Control Knob	1
13	See Detail	Burner Assembly	1
13-1	099218-02	Burner	1
13-2	098508-01	Valve Retainer Nut	1
13-3	099056-02	Injector	5
13-4	099052-01	Tubing-Valve to plaque B & D	1
13-5	099053-01	Tubing-Valve to plaque C	1
13-6	099057-01	Pressure Tap Fitting	1
13-7	099054-01	Tubing-Valve to plaque A & E	1
13-8	098932-06	Control Valve	1
13-9	099051-02	Inlet Tubing	1
13-10	099045-01	Pilot Tubing-Valve to regulator	1
13-11	099059-01	ODS/Pilot	1
13-12	M11084-37	Screw, #8 x 1/4"	5
13-13	099047-02	Pilot Tubing-Regulator to pilot	1
13-14	099918-01	Pilot Regulator	1
13-15	M11084-26	Screw, #10 x 3/8"	2
13-16	098593-01	Thermocouple	1
13-17	098594-01	Ignitor Electrode	1
14	099066-01	Mounting Bracket	1
<b>PARTS AVAILABLE - NOT SHOWN</b>			
	098465-01	Control Position Label	1

# WARRANTY INFORMATION

## KEEP THIS WARRANTY

Model \_\_\_\_\_

Serial No. \_\_\_\_\_

Date Purchased \_\_\_\_\_

Always specify model and serial numbers when communicating with the factory.

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We make no other warranty, expressed or implied.

### LIMITED WARRANTY VANGUARD VENT-FREE NATURAL GAS HEATERS

DESA International warrants this product and any parts thereof, to be free from defects in material and workmanship for two years from the date of first purchase, provided that the product has been properly installed, operated, and maintained in accordance with all applicable instructions. To make a claim under this warranty, the bill of sales or proof of purchase must be presented.

This warranty is extended only to the original retail purchaser. This warranty covers only the cost of parts and labor required to restore this heater to proper operating condition. Warranty parts must be obtained through authorized dealers of this product and/or DESA International who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty. The heater must be installed by a qualified installer in accordance with all local codes and instructions furnished with the unit.

This warranty does not apply to parts that are not in original condition because of normal wear and tear, or parts that fail or become damaged as a result of misuse, accidents, lack of proper maintenance, alteration, tampering, contaminated fuels, or defects caused by improper installation. Travel, transportation, and incidental costs associated with warranty repairs are not reimbursable under this warranty and are the responsibility of the owner.

To the full extent allowed by the law of the jurisdiction that governs the sale of the product; this express warranty excludes any and all other expressed warranties and limits the duration of any and all implied warranties, including warranties of merchantability and fitness for a particular purpose to two years from the date of first purchase; and DESA International's liability is hereby limited to the purchase price of the product and DESA International shall not be liable for any other damages whatsoever including indirect, incidental, or consequential damages.

Some states do not allow a limitation of how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation of implied warranties, or exclusion, or limitation of damages may not apply to you.

This warranty provides the original retail purchaser with specific legal rights. For specific information regarding those rights, please consult the applicable state laws.

For information about this warranty write:

**DESA<sup>®</sup>**  
**INTERNATIONAL**

P.O. Box 90004  
2701 Industrial Drive  
Bowling Green, KY 42102-9004

099142-01  
REV. E  
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