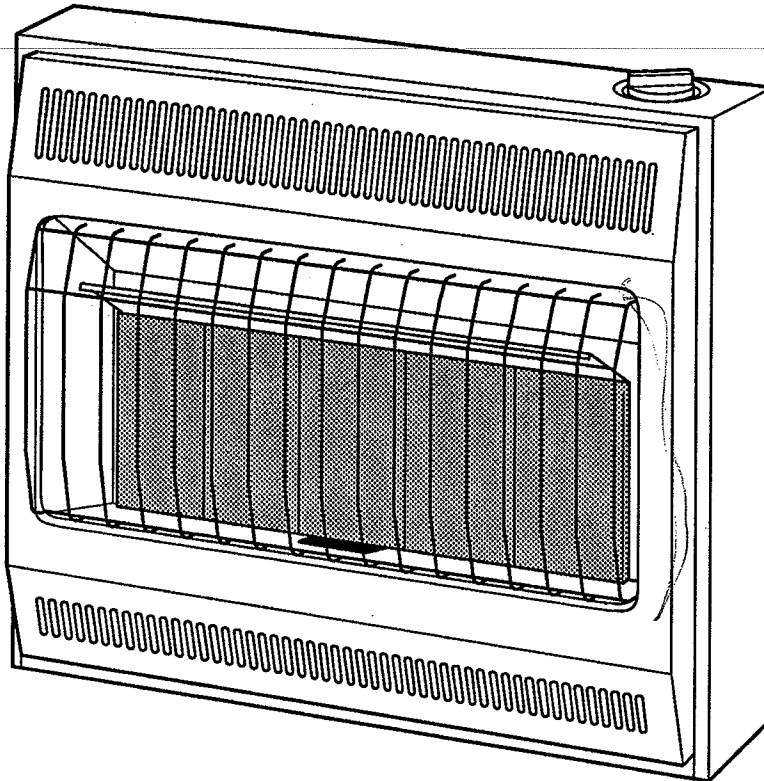


VANGUARD®

UNVENTED NATURAL GAS HEATER



OWNER'S OPERATION AND INSTALLATION MANUAL MODELS VN1800, VN1800T, VN3000 AND VN3000T

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

CAUTION:

Read all instructions carefully before starting the installation.

DO NOT use this heater in sleeping quarters, mobile homes or recreational vehicles.

FOR YOUR SAFETY

If you smell gas:

1. Open windows.
2. Don't touch electrical switches.
3. Extinguish any open flame.
4. Immediately call your 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.

FEATURES

1) SAFETY DEVICES

This heater is equipped with an Oxygen Depletion Sensor Shutoff System (ODS). The system is a required feature for unvented room heaters that will turn off the heater if there is not enough fresh air. Should the ODS pilot detect a decrease in oxygen level, the main burner as well as the pilot will automatically be turned off by the control valve.

2) PIEZO IGNITION SYSTEM

For lighting purpose, a piezo ignitor is incorporated in this heater which requires no matches, batteries, or other combustion sources.

3) THERMOSTATIC HEAT CONTROL

(Models VN1800T and VN3000T Only)

This heater is furnished with a thermostat sensing bulb and thermostat control. This feature results in maximum heating comfort and can significantly reduce gas bills. In the event of a power outage, the heater can be operated manually on HIGH or LOW.

SPECIFICATIONS

MODELS	VN1800	VN1800T	VN3000	VN3000T
B.T.U. (Variable)	6,600/12,000/18,000	6,600/18,000	6,600/18,000/30,000	18,000/30,000
Type Gas	Natural Only	Natural Only	Natural Only	Natural Only
Ignition	Piezo	Piezo	Piezo	Piezo
Pressure Regulator Setting	6" W.C.	6" W.C.	6" W.C.	6" W.C.
Burner Orifice Diameter	.041" (drill size 59)	.041" (drill size 59)	.043" (drill size 57)	.043" (drill size 57)
Inlet Gas Pressure (Inches of Water)				
Maximum	10.5"	10.5"	10.5"	10.5"
Minimum	7"	7"	7"	7"
Dimensions, Inches (H x W x D)				
Heater	23.5 x 18.5 x 8	23.5 x 18.5 x 8	23.5 x 25.9 x 8	23.5 x 25.9 x 8
Carton	25.8 x 21.3 x 10.1	25.8 x 21.3 x 10.1	25.8 x 28.7 x 10.1	25.8 x 28.7 x 10.1
Weight (pounds)				
Heater	22	24	30	32
Shipping	27	29	36	38
Electrical Input	—	120V/60HZ	—	120V/60HZ
Amperage	—	.24	—	.24

UNPACKING

1. Remove the heater from carton.
2. Remove all protective materials which may have been applied to the heater for shipment.
3. Check the heater for possible shipping damage. If any damage is found, immediately notify the dealer from whom the heater was purchased.
4. In the plastic bag containing this owner's manual, you should find a wall template for use in mounting your heater and a hardware package.

LOCAL CODES

Please read these instructions and check all local codes before your heater is installed. This will help you avoid needless service costs that result from causes not covered in the warranty.

The installation of this heater must conform to local codes. In the absence of local codes, the installation must conform with

The National Fuel Gas Code ANSI Z223.1-1984 and AD-DENDA Z223.1a-1987 also known as NFPA 54*.

*Available from the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018 or from the National Fire Protection Association Inc., Batterymarch Park, Quincy, MA 02269.

SERVICE HINTS

When gas pressure is too low:

- Pilot burner will not be maintained.
- Burners will have delayed ignition.
- The specified heating capacity will not be obtained (insufficient heating).

When gas quality is bad:

- Pilot burner ignition will not be maintained.
- Flames and soot will be generated from burners.
- Backfire will occur when ignited.

If you believe your gas pressure is too low or your gas quality is bad, contact your local gas company.

REPLACEMENT PARTS

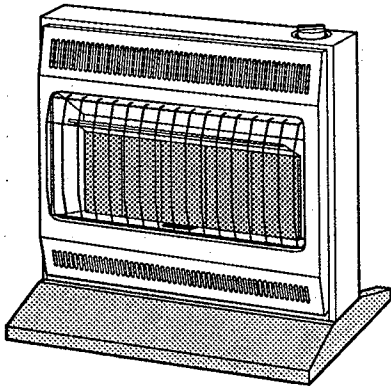
NOTE: In order for you to receive credit for parts replaced under warranty, only original replacement parts must be used.

A. PARTS UNDER WARRANTY - Contact authorized dealers of this product. If they are unable to supply original replacement part(s), call DESA International at 1-800-323-5190. Be prepared to indicate name, address, model number, how heater was malfunctioning, type of gas used and purchase date. In most cases, the defective part will be requested to be returned to the factory.

B. PARTS NOT UNDER WARRANTY - Contact authorized dealers of this product. If they are unable to supply original replacement part(s), call DESA International at 1-502-781-9600. Be prepared to indicate model number and replacement part number.

ACCESSORIES

These accessories for your heater are available at your local dealer.

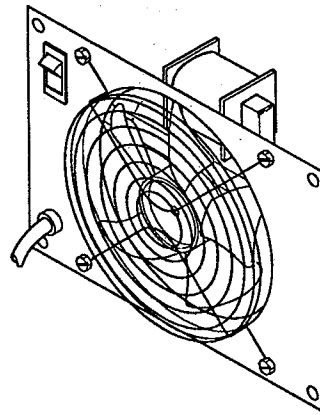


FLOOR MOUNTING STAND

For Models VN1800 & VN1800T - GA4000

For Models VN3000 & VN3000T - GA4010

For locating the heater on the floor, away from a wall.

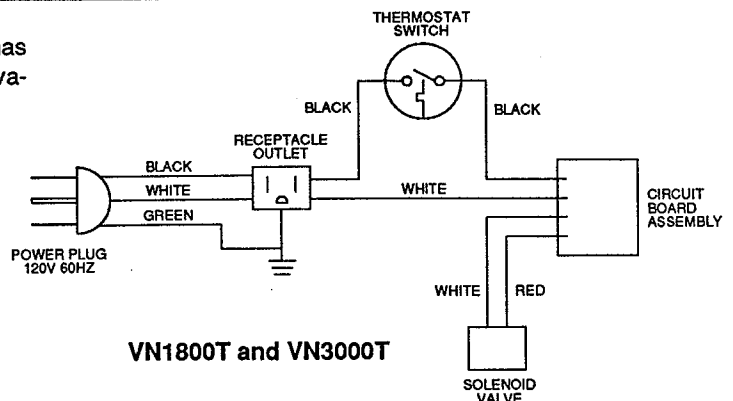


FAN KIT - GA2100A

For all models. Makes heater more efficient by providing better heat distribution.

WIRING DIAGRAM

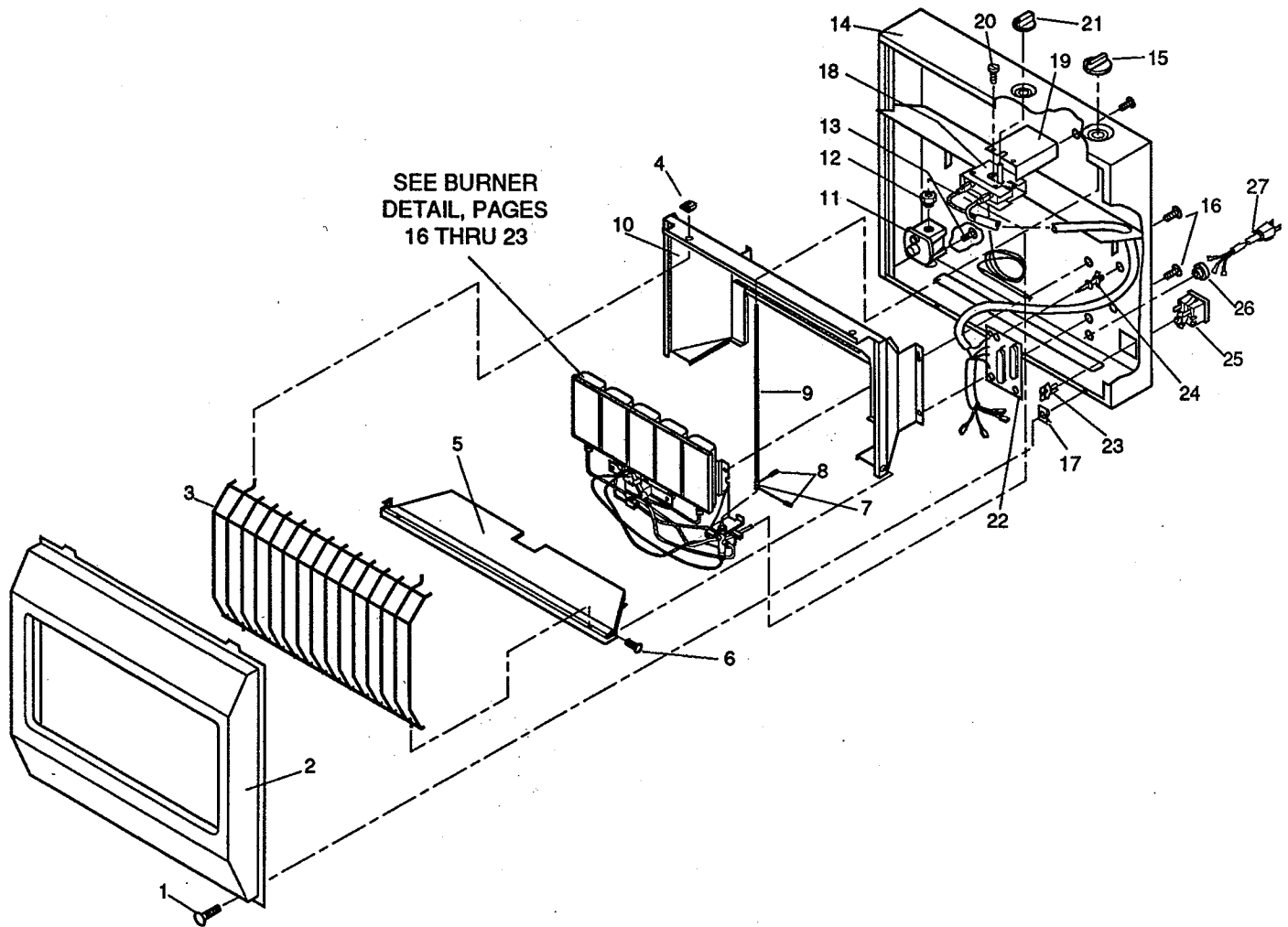
If any of the original wire as supplied with the appliance has to be replaced, it should be replaced by wire having equivalent insulation and temperature rating (105° C Plastic).



ILLUSTRATED PARTS LIST

KEY NO.	PART NUMBER FOR				DESCRIPTION	QTY.
	VN1800	VN1800T	VN3000	VN3000T		
1	098304-01	098304-01	098304-01	098304-01	Screw, #10 x 3/8"	2
2	098742-01	098742-01	098742-02	098742-02	Front Panel	1
3	098460-01	098460-01	098460-02	098460-02	Grill Guard Assembly	1
4	098342-01	098342-01	098342-01	098342-01	Clip-Grill Guard	2
5	098198-01	098198-01	098198-02	098198-02	Apron	1
6	M11084-37	M11084-37	M11084-37	M11084-37	Screw, #8 x 1/4"	2
7	098262-01	098262-01	098262-01	098262-01	Rod Coupling	1
8	098325-01	098325-01	098325-01	098325-01	Roll Pin, .09 x 5/16"	2
9	098261-01	098261-01	098261-01	098261-01	Control Rod	1
10	098457-01	098457-01	098457-02	098457-02	Reflector Assembly	1
11	098254-01	098254-01	098254-01	098254-01	Pressure Regulator	1
12	098473-01	098473-01	098473-01	098473-01	1/2 NPT Male Connector	1
13	098303-01	098303-01	098303-01	098303-01	Screw, #6 x 1/4"	4
14	098455-01	098455-01	098456-01	098698-01	Cabinet Assembly	1
15	098324-01	098324-01	098324-01	098324-01	Control Knob	1
16	M11084-38	M11084-38	M11084-38	M11084-38	Screw, #8 x 3/8"	7
17	M11271-8	M11271-8	M11271-8	M11271-8	Fastener ("U" Nut)	2
18		098656-01		098656-01	Thermostat	1
19		098658-01		098658-01	Thermostat Bracket	1
20		M12461-1		M12461-1	Screw, #6 x 1/4"	2
21		098657-01		098657-01	Thermostat Knob	1
22		098739-01		098739-01	Circuit Board Assembly	1
23		098787-01		098787-01	Tab Adaptor	2
24		M51122-01		M51122-01	Circuit Board Support	3
25		098788-01		098788-01	Receptacle Outlet	1
26		M11143-01		M11143-01	Strain Relief Bushing	1
27		098789-01		098789-01	Power Cord Assembly	1

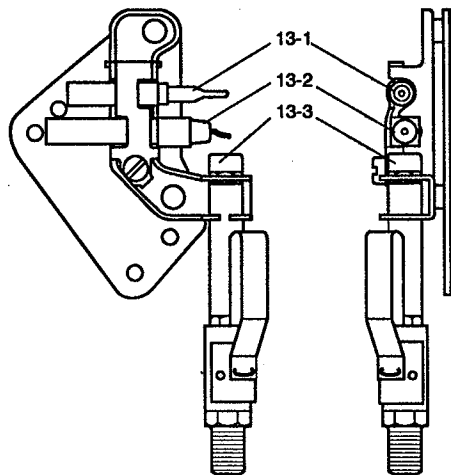
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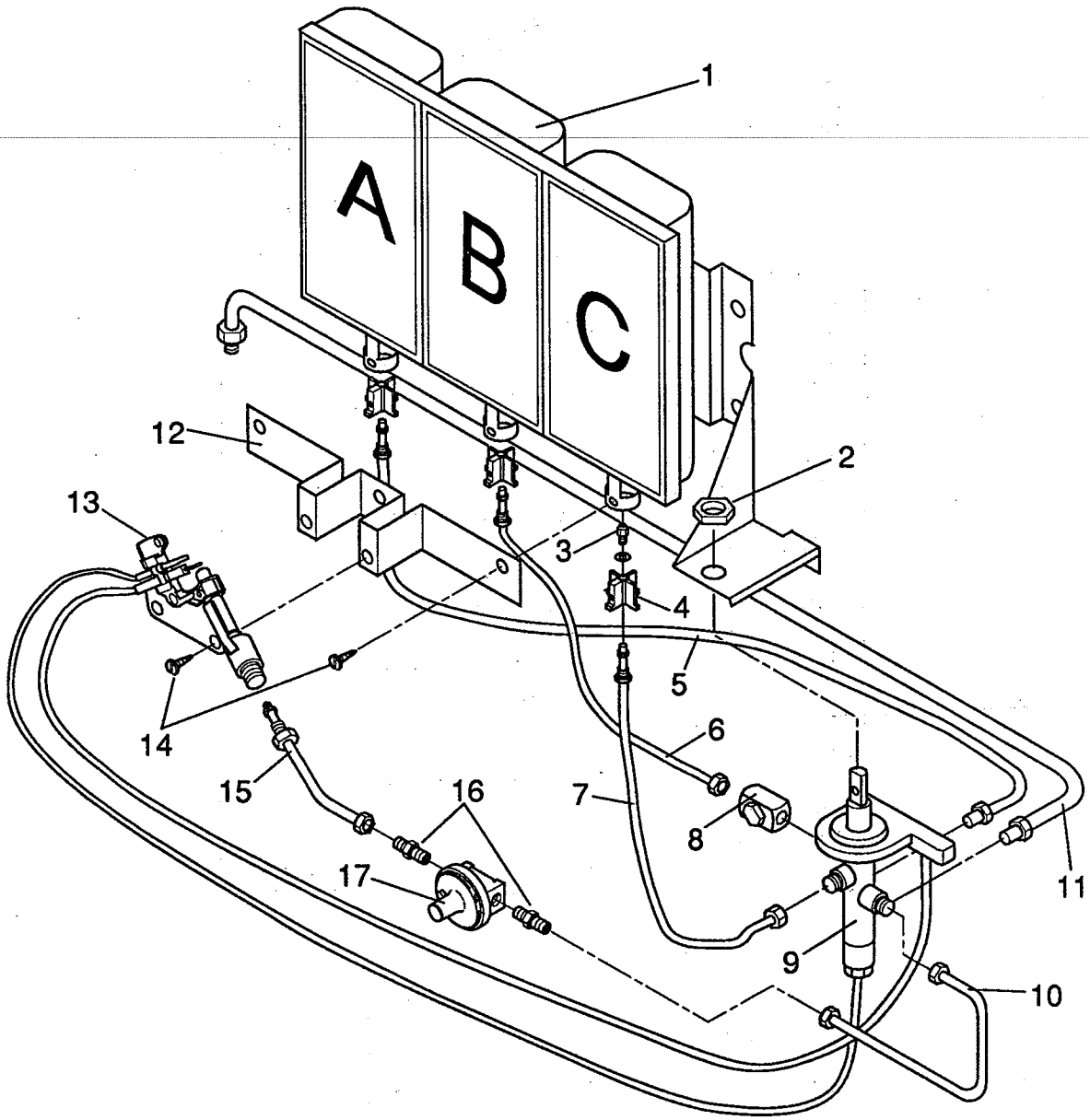
VN1800

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	098568-01	Burner	1
2	098508-01	Valve Retainer Nut	1
3	098570-02	Injector (includes washer)	3
4	098571-01	Injector Holder	3
5	098572-01	Tubing-Valve to plaque A	1
6	098573-01	Tubing-Valve to plaque B	1
7	098574-01	Tubing-Valve to plaque C	1
8	098582-01	Pressure Tap Fitting	1
9	098583-02	Control Valve	1
10	098586-01	Pilot Tubing-Valve to regulator	1
11	098590-01	Inlet Tubing	1
12	098592-01	Pilot Support Bracket	1
13	098743-01	Pilot and Bracket Assy.	1
13-1	098593-01	Thermocouple	1
13-2	098594-01	Ignitor Electrode	1
13-3	098595-01	Pilot With Bracket	1
14	098596-01	Screw, Metric	5
15	098588-01	Pilot Tubing-Regulator to pilot	1
16	098600-01	Pilot Regulator Fitting	2
17	098255-01	Pilot Regulator	1



13 Pilot and Bracket Assembly

ILLUSTRATED PARTS LIST

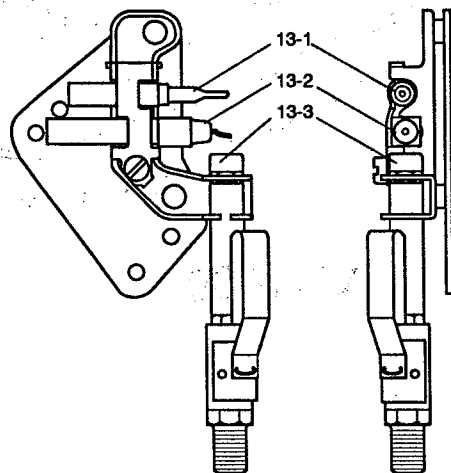


VN1800

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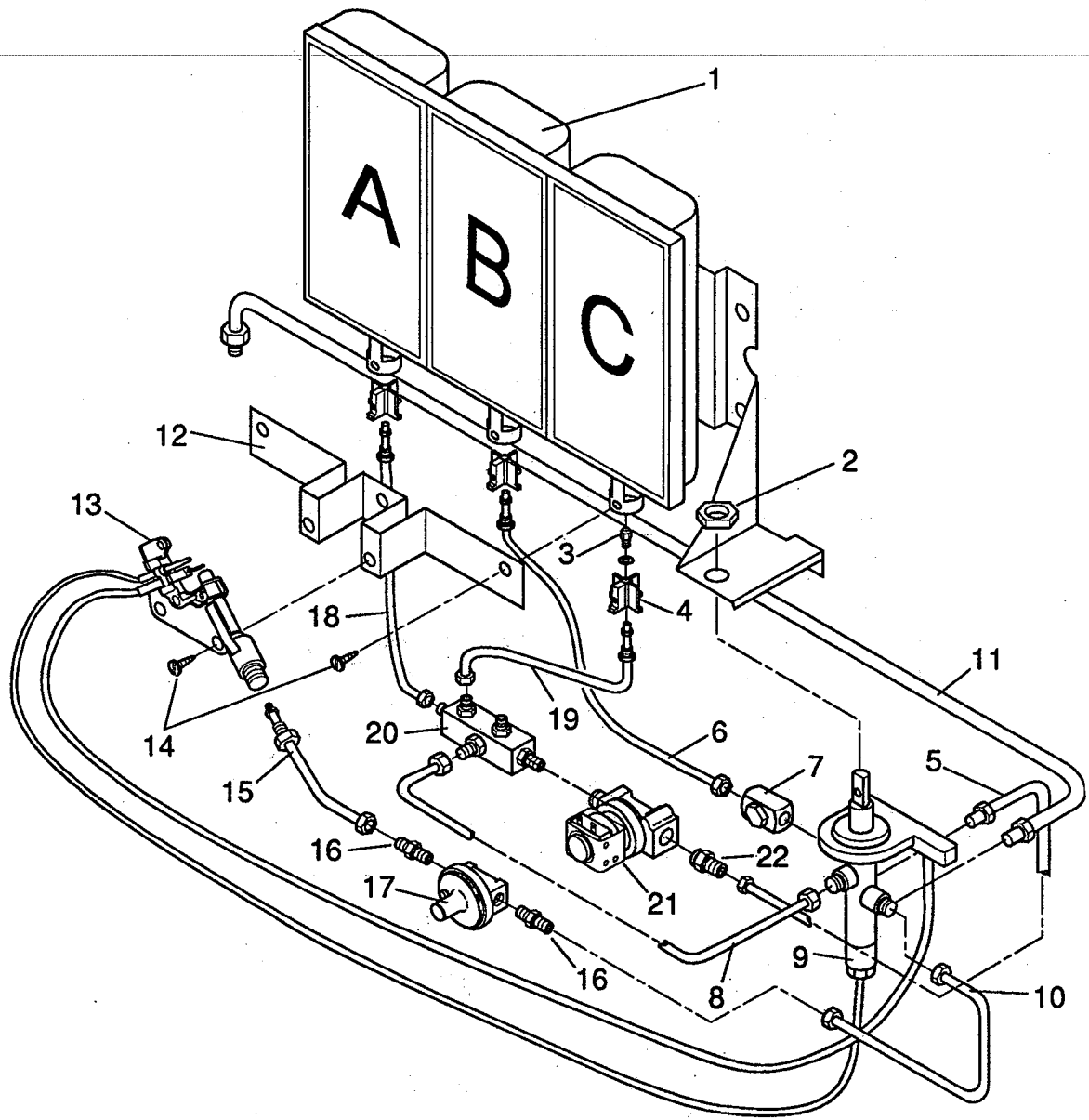
VN1800T

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	098568-01	Burner	1
2	098508-01	Valve Retainer Nut	1
3	098570-02	Injector (includes washer)	3
4	098571-01	Injector Holder	3
5	098790-01	Tubing-Valve to solenoid	1
6	098791-01	Tubing-Valve to plaque B	1
7	098582-01	Pressure Tap Fitting	1
8	098792-01	Tubing-Valve to manifold	1
9	098583-01	Control Valve	1
10	098795-01	Pilot Tubing-Valve to regulator	1
11	098590-01	Inlet Tubing	1
12	098592-01	Pilot Support Bracket	1
13	098743-01	Pilot and Bracket Assy.	1
13-1	098593-01	Thermocouple	1
13-2	098594-01	Ignitor Electrode	1
13-3	098595-01	Pilot With Bracket	1
14	098596-01	Screw, Metric	5
15	098796-01	Pilot Tubing-Regulator to pilot	1
16	098600-01	Pilot Regulator Fitting	2
17	098255-01	Pilot Regulator	1
18	098800-01	Tubing-Manifold to plaque A	1
19	098793-01	Tubing-Manifold to plaque C	1
20	098794-01	Manifold	1
21	097303-01	Solenoid Valve	1
22	098654-01	Male Connector	1



13 Pilot and Bracket Assembly

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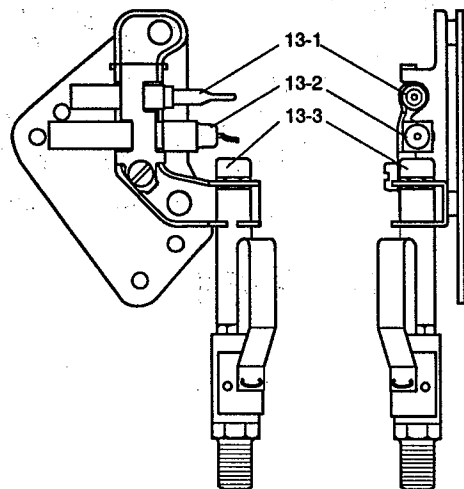


VN1800T

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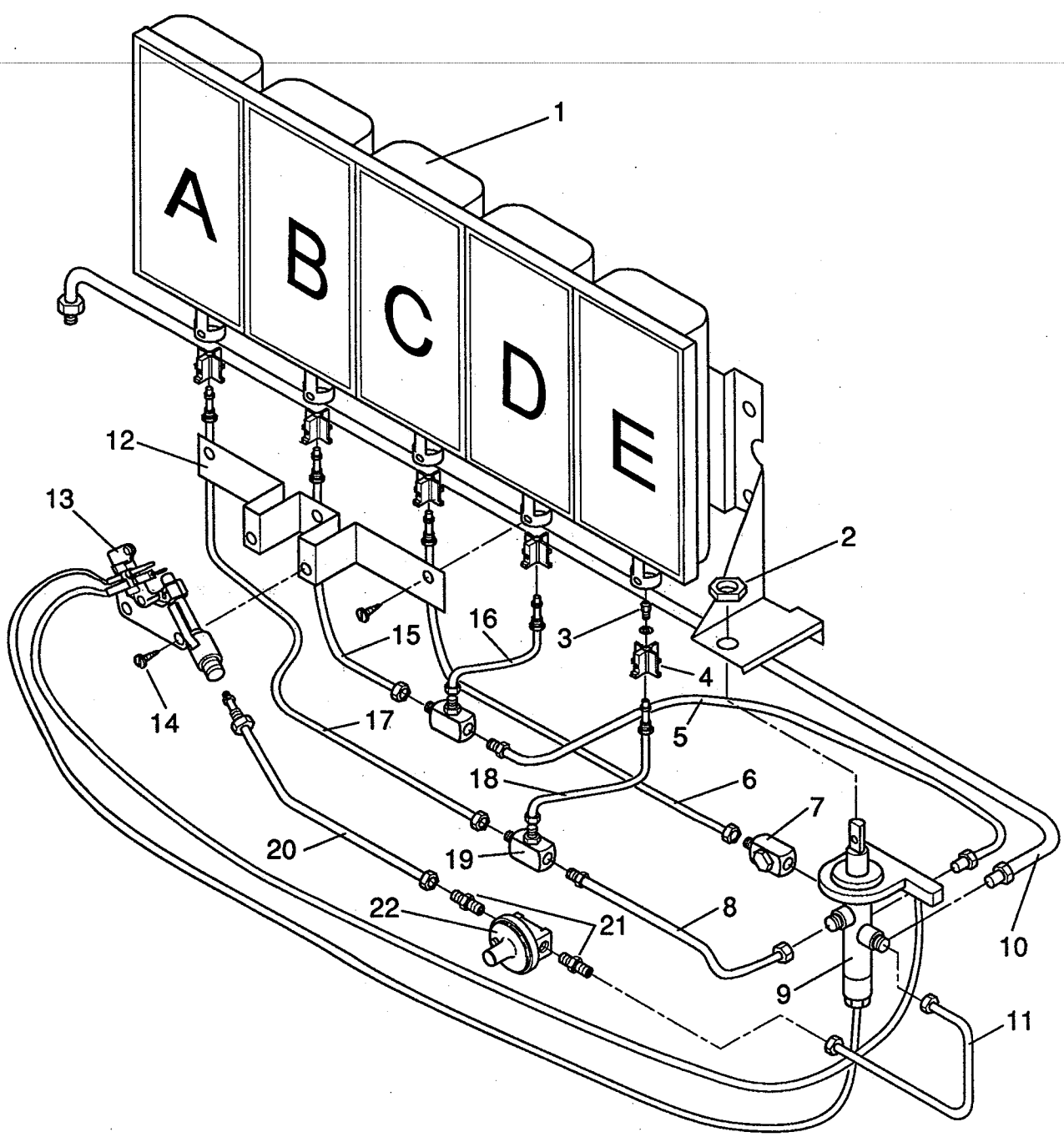
VN3000

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	098569-01	Burner	1
2	098508-01	Valve Retainer Nut	1
3	098570-03	Injector (includes washer)	5
4	098571-01	Injector Holder	5
5	098575-01	Tubing-Valve to Plaque B & D Tee Fitting	1
6	098598-01	Tubing-Valve to Plaque C	1
7	098582-01	Pressure Tap Fitting	1
8	098576-01	Tubing-Valve to Plaque A & E Tee Fitting	1
9	098583-01	Control Valve	1
10	098591-01	Inlet Tubing	1
11	098585-01	Pilot Tubing-Valve to Regulator	1
12	098592-01	Pilot Support Bracket	1
13	098743-01	Pilot and Bracket Assy.	1
13-1	098593-01	Thermocouple	1
13-2	098594-01	Ignitor Electrode	1
13-3	098595-01	Pilot With Bracket	1
14	098596-01	Screw, Metric	7
15	098578-01	Tubing-Tee Fitting to Plaque B	1
16	098579-01	Tubing-Tee Fitting to Plaque D	1
17	098577-01	Tubing-Tee Fitting to Plaque A	1
18	098580-01	Tubing-Tee Fitting to Plaque E	1
19	098581-01	Tee Fitting	2
20	098589-01	Pilot Tubing-Regulator to Pilot	1
21	098600-01	Pilot Regulator Fitting	2
22	098255-01	Pilot Regulator	1



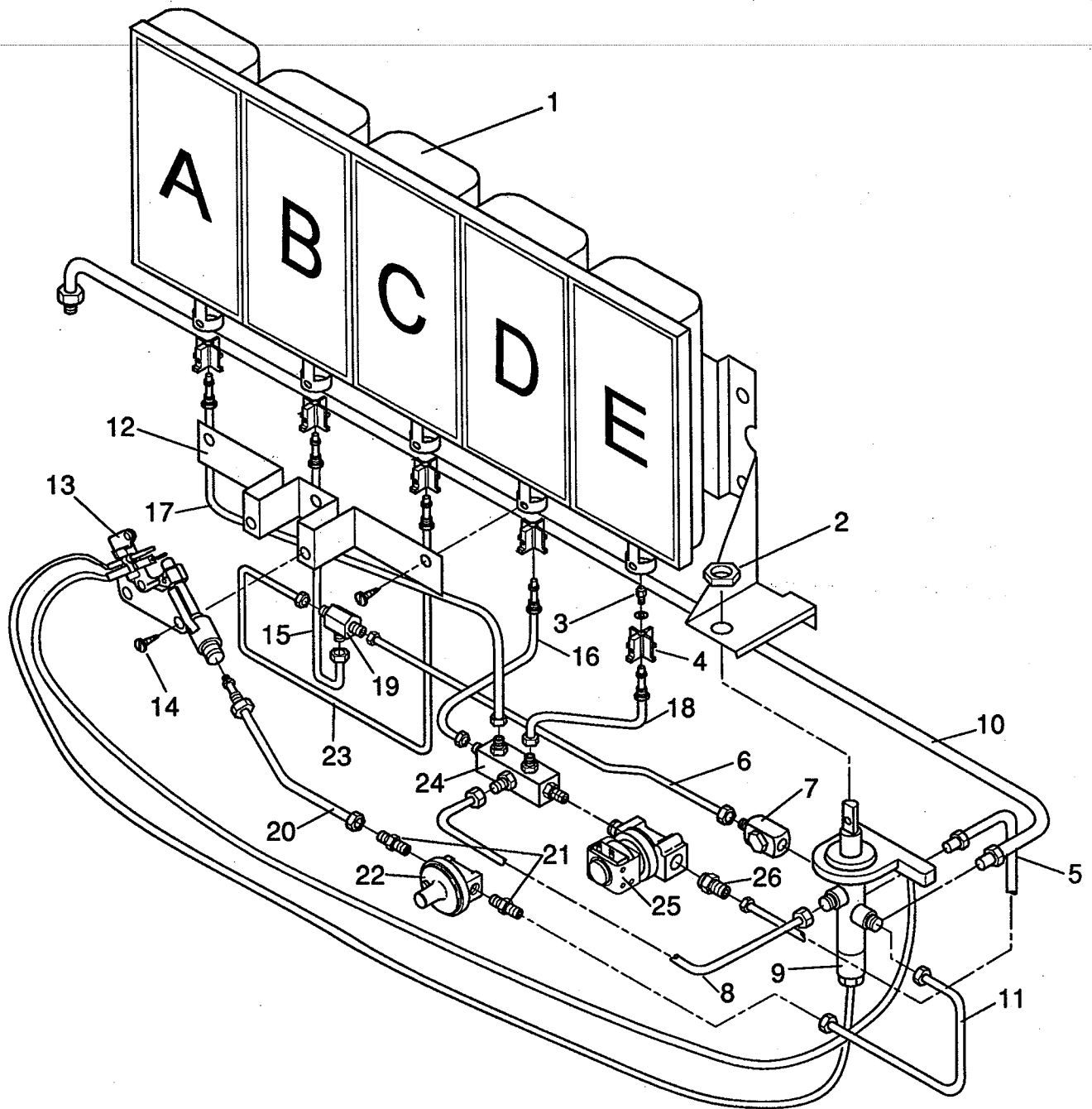
13 Pilot and Bracket Assembly

ILLUSTRATED PARTS LIST



VN3000

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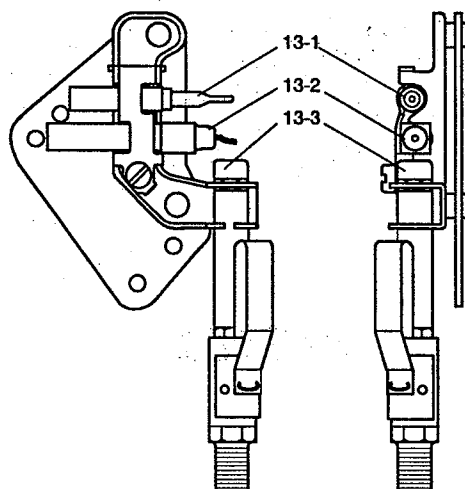


VN3000T

ILLUSTRATED PARTS LIST

VN3000T

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	098569-01	Burner	1
2	098508-01	Valve Retainer Nut	1
3	098570-03	Injector (includes washer)	5
4	098571-01	Injector Holder	5
5	098699-01	Tubing-Valve to Solenoid	1
6	098700-01	Tubing-Valve to B & C Tee Fitting	1
7	098582-02	Pressure Tap Fitting	1
8	098701-01	Tubing-Valve to Manifold	1
9	098583-01	Control Valve	1
10	098591-01	Inlet Tubing	1
11	098702-01	Pilot Tubing-Valve to Regulator	1
12	098592-01	Pilot Support Bracket	1
13	098743-01	Pilot and Bracket Assy.	1
13-1	098593-01	Thermocouple	1
13-2	098594-01	Ignitor Electrode	1
13-3	098595-01	Pilot With Bracket	1
14	098596-01	Screw, Metric	7
15	098703-01	Tubing-Tee Fitting to Plaque B	1
16	098704-01	Tubing-Manifold to Plaque D	1
17	098705-01	Tubing-Manifold to Plaque A	1
18	098706-01	Tubing-Manifold to Plaque E	1
19	098711-01	Tee Fitting	2
20	098709-01	Pilot Tubing-Regulator to Pilot	1
21	098600-01	Pilot Regulator Fitting	2
22	098255-01	Pilot Regulator	1
23	098707-01	Tubing-Tee Fitting to Plaque C	1
24	098708-01	Manifold	1
25	097303-01	Solenoid Valve	1
26	098654-01	Male Connector	1



13 Pilot and Bracket Assembly

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 GAS HEATERS

DESA International warrants this product to be free from defects in materials and components for two (2) 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 Sale or cancelled check must be presented.

This warranty is extended only to the original retail purchaser. This warranty covers only the cost of part(s) required to restore this heater to proper operating condition. Warranty part(s) 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 or defects caused by improper installation. Travel, diagnostic cost, labor, transportation and any and all such other costs related to repairing a defective heater will be 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 ONE (1) YEAR 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 on how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation on implied warranties, or exclusion or limitation on damages may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

For information about this warranty write:

DESA[®]
INTERNATIONAL
P.O. Box 90004
2701 Industrial Drive
Bowling Green, KY 42102-9004

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