

HORIZON

PELLET STOVES & INSERTS

OPERATION & MAINTENANCE

Model: HR - 2

CLASSIC, DESTINY

YOUR HORIZON DEALER IS:

HORIZON PELLET STOVE OWNER:

CONGRATULATIONS on buying a Horizon wood pellet stove. You have selected the finest in residential wood pellet heating technology.

Let me pass on a few "tips" that our experienced customers tell us makes their heating with wood pellets easier. These are:

1. The "highest quality installation" is a must.
2. Know the characteristics of the pellets you burn. Pellets may vary from company to company and even from load to load.
3. Be "diligent in your maintenance program".

With just a minimum of daily care your Horizon pellet stove will provide years of clean, efficient, comfortable and environmentally sound heating.

Thank you for selecting a Horizon pellet stove as your choice. It will provide you and your family the quality of wood heat, without all the hassles of cord wood.

Sincerely,



Tim Carlson
President

OPERATIONS AND MAINTENANCE for the CLASSIC AND DESTINY

INSTALLATION

Proper installation is essential for safety, effective operations, warranty, insurance requirements and to meet local building codes. Acceptable installations are described in the Horizon Installation Manual. A copy is available from an Authorized Horizon Dealer.

PREVENTING CHIMNEY FIRES

Chimney fires can be prevented by properly operating the stove and by periodic inspection and cleaning of the chimney.

**SAVE THIS OPERATIONS AND
MAINTENANCE MANUAL!**

SATISFACTORY PERFORMANCE

The key to satisfactory performance is in properly operating the stove, in diligent maintenance and in burning only quality pellets.

PELLETS

The stove is designed to burn only quality wood pellets. Pellets that are soft, contain loose sawdust, are or have

been wet, produce clinkers and/or heavy ash that will not blow out of the burn grate must not be used.

Clinkers and ash are a by-product of pellets and are not a function of the stove. Performance of the stove can be quickly and severely reduced if poor quality pellets are used. Check with a Horizon Dealer on the quality of pellets in the local area and for recommendations on which pellets to burn.

Note: Pellets with excessive sawdust may be screened to improve quality.

The stove is not warranted against damage caused by poor pellets or poor operations and maintenance.

BASIC OPERATING PRINCIPLES

A Different Type of Heater. The stove is neither a cord wood stove nor a furnace. It's operations and maintenance will be unique to the stove.

OPERATING THE STOVE

BEFORE STARTING THE FIRST FIRE

1. Carefully read this "Operations and Maintenance"

manual.

2. Obtain final inspection and approval by local building officials.

3. Carefully clean all marks off the gold or nickel plated parts before the first fire is lighted. Use a soft cloth and a "Windex" type cleaner. Caution: Never use an abrasive cleaner on any plated parts of the stove.

4. Have the Horizon Dealer demonstrate all the operational and maintenance steps necessary for the stove. Sign and mail the warranty card.

5. Some odors may be given off the stove during the first few hours of burning during initial break in. These odors are not harmful. However, ventilating the room until the odors disappear is strongly recommended.

LIGHTING THE STOVE

1. Clean the burn grate and ash pan before lighting a fire.

2. Turn the ON/OFF switch to [ON], the FUEL FEED and ROOM AIR FAN to [OFF]. Turn the DRAFT to [LOW]. See figure 1.

3. Place a small handful of pellets in the burn grate. Add a solid fuel type fire starter such as those made from sawdust and wax or use wood shavings. Adding some additional pellets around the fire starter may help.

4. Light the fire starter and slowly close the door.

5. When pellets are burning,

(approximately 3 to 5 minutes), slowly move the draft setting towards [HIGH] until the flame is moving briskly.

6. Turn the FUEL FEED on [4] and the room air fan to [ON].

7. Burn the stove at a fuel setting of [4] for 20 to 30 minutes each time a fire is lighted.

8. Set the fuel at the desired fuel setting.

9. Change the fuel setting if and when different amounts of heat is needed.

CAUTION: Never use liquid or volatile fire starters to start a fire in the stove. Do not operate the stove in any room where any liquid or volatile fuels or any other combustible items are in the air or stored in the room.

SHUTTING THE STOVE OFF

1. Turn the fuel setting to [OFF].

2. Turn the ON/OFF switch to [OFF].

The fire will go out in just a few minutes. Once the temperature of the stove drops below the normal operating range, the stove will automatically shut down.

SETTING THE CONTROLS

The fuel, draft and room air settings are designed to work in a synchronized manner.

Generally, when fuel is increased, draft air must be increased and the room air fan speed should also be increased. Likewise when the fuel control is turned down the other controls should be turned down. The exact settings will vary considerably from stove to stove and with the type of fuel, the elevation the stove is installed at and the type of installation.

Fuel Control. The fuel control sets the rate at which pellets are fed into the fire. The amount of fuel fed increases as the fuel setting goes from [1] to [4] and visa versa. See figure 1.

Draft Control. The draft, or "Damper", controls the amount of air supplied to the fire. As fuel is increased or decreased the draft control should likewise be increased or decreased. Turn the draft down to where the flame just begins to become slightly orange and lazy. Then turn the draft back up just past the point where the flame is

once again yellow/white in color, burning briskly and ash is being blown out of the burn grate. Check the flame in a few minutes and readjust the draft setting if necessary. As pellet size, length and quality changes, the draft settings for any given fuel setting can change. See figure 1.

Room Air Fan. The room air fan circulates room air into the back of the stove. As the fuel setting is increased, increase the speed of the room air fan and visa versa. The room air fan has a switch which automatically sets it on high when the stove is producing heat faster than the fan is carrying the heat into the room. After the fan runs at this high setting a few minutes it may cycle back to its original setting. Set the room air fan control where the fan will not cycle back and forth from its setting to high. See figure 1.

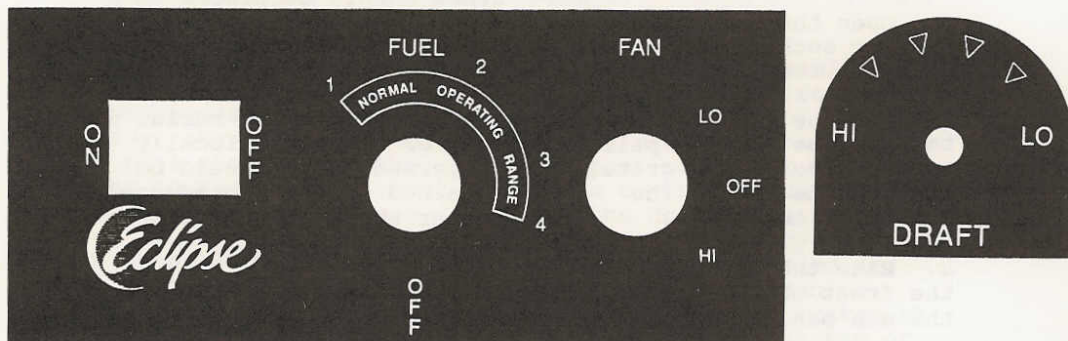


Figure 1

MAINTAINING THE STOVE

DAILY MAINTENANCE

The stove requires a minimum amount of daily maintenance. The amount required depends largely upon the quality of pellet fuel burned and the rate of burn. The amount of daily maintenance should increase if either fuel quality decreases or the rate of burning pellets increases.

Burn Grate. Check the burn grate at least daily. Clean it as often as necessary to maintain proper air flow through the grate. See figure 2.

With proper precautions the grate may be partially cleaned while the stove is hot. Follow these steps: (Caution: The door and front part of the stove will be hot. Do not touch any part of the stove that is hot!)

1. Wear a leather glove that covers the lower arm.
2. Turn the fuel feed and room air fan [off].
3. Open the door slowly to prevent sucking ash or odors into the room.
4. Use the "rake" provided to move the burning pellets to one side of the grate, leaving the ash in the bottom of the grate.
5. Rake the ash out over the front of the grate, into the ash pan.
6. Rake the burning pellets across the bottom of the grate.

7. Close the door.

8. Turn the fuel feed and room air fan back to the [ON] position.

If the fire does not relight immediately, set the stove to shut down, (directions noted above). Let the stove cool and relight the fire.

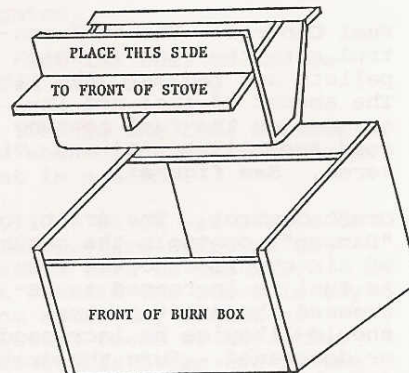


Figure 2

Disposal of ashes. Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

Inspect and clean chimney frequently. Under certain conditions of use, creosote buildup may occur rapidly. Low quality pellets, improper draft settings and poor in-

stallations may require frequent chimney cleanings.

Window. The rate of burn and the quality of fuel will determine how often the window needs cleaning. Burning poor fuel increases the need to clean the window. Cooling the stove and wiping the window daily, with a cloth or paper towel will normally keep the window from accumulating difficult to clean accumulations. Use of a glass cleaner for removing creosote is permitted.

CAUTION: Do not slam the door. Do not operate the stove with a broken glass. Replace only with 5 mm thick, 9 1/4" x 14 1/2", neroceram.

To replace glass, cool the stove, remove the four glass retaining clips, carefully remove glass and any glass pieces. Place new glass gasket over glass, reset glass in door, tighten glass retaining clips only tight enough to be snug.

Do not clean the glass when the stove is hot. Do not use abrasive glass cleaners.

Fuel. Check the fuel level daily. Keeping the fuel level above half full will improve performance and assure several hours of stove operations. Pour fuel slowly into the hopper to reduce the amount of dust put into the house.

High Burn. Burn the stove at a fuel setting of 4+ for 20 to 30 minutes once a day. This higher burn helps keep the window and fire box area clean. A daily high burn also aids in the overall "health"

and performance of the stove.

PERIODIC MAINTENANCE

Caution: Periodic maintenance should only be done while the stove is shut off and cold.

1. **Empty the ash tray.**
The frequency of cleaning the ash tray will depend on the quality and amount of pellets being used. Carefully check to make sure the ash tray door is completely closed after each opening.

2. **Clean out the ash traps** behind the ash tray. The clean-out holes to these ash traps are opened each time the ash pan is removed.

3. **Clean burn grate holes.** Remove the burn grate. Use a small metal object to clean out plugged holes.

4. **Clean under, behind and inside the burn grate box.** An accumulation of ash in or under the burn box may prevent the "grate overload system" from working.

5. **Periodically clean the hopper.** Remove and discard sawdust.

6. **A periodic cleaning of the exhaust system** is required. Judge the frequency of cleaning by checking the amount of ash that accumulates in the Tee's of the exhaust system. Ask the Horizon Dealer for suggested frequency of cleaning, equipment needed and procedures for cleaning. Check the exhaust system at least once for each ton of pellets burned.

7. **A periodic cleaning of the**

exhaust fan blades may be necessary. This is a service item to be performed by the Dealer.

Many Dealers offer a Service Contract that will cover periodic and yearly maintenance that is needed.

YEARLY MAINTENANCE

Yearly maintenance is designed to assure safe operations, prolong the life of the stove and help preserve the aesthetic appeal of the stove.

1. **Spring shutdown.** After the last burn in the spring, cool the stove. Remove pellets from the hopper and the feed tube. Thoroughly clean the burn grate, burn box, ash tray and ash traps behind the ash pan.
2. The **exhaust system** should be thoroughly cleaned at least annually.
3. The **motor/fan area** behind the burn box and under the hopper should be vacuumed annually. **Note: Unplug the stove.** Open the side panels of the stove. Carefully clean or vacuum any sawdust, cobwebs and household dust. Carefully vacuum around the fan motors. If electrical wires become disconnected call a Horizon Dealer for service.
4. The **Exhaust fan** should be removed and cleaned annually. Call a Horizon Dealer for this service.
5. Annual **oiling** of the motors is **not** required.
6. An occasional **painting** of the stove may be desirable.

7. **Fall start up.** Prior to lighting the first fire check the outside area around the exhaust and air intake systems for obstructions. Turn on all controls to see that they are working prior to lighting a fire. Be especially sure to check that the "grate overload protection system" is working.

SAFETY FEATURES

1. **Overheating.** An overheat snap switch will shut the fuel feed off if the stove reaches a temperature above normal operations.
2. **Low Limit.** A "Low Limit" snap switch shuts the stove off automatically when the stove temperature drops below the normal operating range. For the "Low Limit" switch to work, the ON/OFF switch must be in the [OFF] position.
3. **Room Air Fan Override.** The "Room Air Fan Override" snap switch automatically sets the "Room air Fan" on [HIGH] any time the stove is operating in its upper heat range.
4. **Grate Overload Protection System.** This system will automatically shut the fuel feed off if the grate becomes overloaded with either ash or unburned pellets. The first time the grate overload system shuts the fuel feed off, it is past time to clean the burn grate, check pellet quality and draft adjustment.
5. The stove is safety tested by an accredited, independent laboratory.

TROUBLE SHOOTING

The stove is very trouble free in operation when properly maintained and quality pellets are used. When the stove fails to operate properly, trouble shooting by the operator of the stove is limited to the checking of the grate, proper control setting and pellet quality.

CAUTION: The electrical components of the stove are not owner servicable. Call a Horizon Dealer for proper diagnosis of electrical problems and service to those components.

WARRANTY

The wood pellet stove and insert manufactured by Horizon Research, Inc. is warranted for five (5) years, to the original owner, against defects and workmanship on all steel parts (excluding the burn grate) and one (1) year on electrical components from the date of sale to the original owner. There specifically is no warranty on the paint, glass, burn grate, cera board and all gaskets. **There is no written or implied performance warranty on the stove as the manufacturer has no control over the installation, daily operations, maintenance or the type of fuel burned.**

This warranty will not apply if the stove has not been installed, operated and maintained in strict accordance with the manufacturer's instructions. Burning other than high quality wood pellets will void the warranty.

The warranty does not cover damage or breakage due to misuse, improper handling or modifications.

A warranty registration card is provided. The card is to be checked and signed and returned to factory, by the owner. Appropriate information is to be noted on the card.

All claims under this warranty must be made through the dealer where the stove was purchased. If an inspection by the dealer indicates that a warranty claim is justified, and that all conditions of this warrant have been met, the manufacturer's total responsibilities and liabilities shall be to repair or replace, at the manufacturer's option, the defective part(s). All costs of removal, shipment to and from the dealer or manufacturer, any losses during shipment and reinstallation, and any other losses due to the stove being removed, shall be covered by the owner of the stove.

NEITHER THE MANUFACTURER, NOR THE SUPPLIERS TO THE PURCHASER, ACCEPTS RESPONSIBILITY, LEGAL OR OTHERWISE, FOR THE INCIDENTAL OR CONSEQUENTIAL DAMAGE TO THE PROPERTY OR PERSONS RESULTING FROM THE USE OF THIS PRODUCT. ANY WARRANTY IMPLIED BY LAW, INCLUDING

BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS, SHALL BE LIMITED TO ONE (1) YEAR FROM THE DATE OF ORIGINAL PURCHASE. WHETHER A CLAIM IS MADE AGAINST THE MANUFACTURER BASED ON THE BREACH OF THIS WARRANTY OR ANY OTHER TYPE OF WARRANTY EXPRESSED OR IMPLIED BY LAW, MANUFACTURER SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INDIRECT, CONSEQUENTIAL OR OTHER DAMAGES OF ANY NATURE WHATSOEVER IN EXCESS OF THE ORIGINAL PURCHASE PRICE OF THIS PRODUCT. ALL WARRANTIES BY MANUFACTURER ARE SET FORTH HEREIN AND NO CLAIM SHALL BE MADE AGAINST MANUFACTURER ON ANY ORAL WARRANTY OR REPRESENTATION.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations of implied warranties, so the limitations or exclusions set forth in this warranty may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Horizon Research, Inc. 17905 Bothell Way S.E., Bothell, WA 98012.

(July 1990)

REQUIRED MAINTENANCE

- * Stir and clean grate regularly.
(Once or twice a day -- depending on fuel.)
- * Clean window. (Cold stove only.)
- * Clean ash pan and lower ash traps regularly.
(Cold stove only.)
- * Check gaskets and make sure the doors to the firebox
and ash tray are closing tightly.
- * Inspect venting system and clean as needed.
- * Frequency of cleaning windows, grate, ash pan and
exhaust system depends on rate and type of fuel
burned.

Stove Owner: Remove this card and keep it near the stove for ready reference.

WARRANTY REGISTRATION

Name _____ Phone _____

Address _____

City _____ State _____ Zip _____

Date Purchased _____ Serial Number _____ Product Style Number _____

____ Eclipse II Stove, ____ Eclipse II Insert, ____ Destiny stove, ____ Destiny insert

____ Classic Stove, ____ Classic Insert, ____ Zero Clearance Fireplace

Purchased from, Dealership _____ City _____

Please provide the following information: 1 = very poor, 3 = average, 5 = very good.

____ Sales information from Dealer ____ Quality of installation (If dealer installed)

____ Operational/maintenance information from dealer ____ Units operations

____ Overall quality of unit ____ Overall satisfaction with your unit

Owners age group ____ Less than 35, ____ 35 to 55, ____ Over 50

Owner first learned about Horizon's pellet stoves at _____

Owners Signature _____ Date _____

OPERATIONS

- * FUEL SETTING -- Minimum setting of 1. Maximum setting of 4.
- * DRAFT SETTING -- Set high enough to maintain a brisk, intense flame. (Avoid lazy, natural, stick wood type flame.
- * ROOM AIR SETTING -- Turn room air setting up as fuel setting is turned up.
- * TO SHUT STOVE OFF -- Turn fuel to [OFF], then turn [ON/OFF] switch to [OFF].
- * DAILY -- Set the fuel control on 4 and run for 20 to 30 minutes.

Stove Owner: Remove this card and keep it near the stove for ready reference.

Place
Stamp
Here

Horizon Research, Inc.
17905 Bothell Way S.E.
Suite 105
Bothell, WA 98012