

Leisure Line Single  
Burner Direct Vent  
Operations & Maintenance  
Manual  
And  
Safety Instructions

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### **WARNING**

**A CARBON MONOXIDE DETECTOR MUST BE INSTALLED, REFER TO YOUR STOVE, BOILER OR FURNACE MANUAL BEFORE OPERATION OF THIS DIRECT VENT. ADDITIONALLY THE CARBON MONOXIDE DETECTOR WITH INTERLOCK MUST BE USED TO POWER THE STOVE, BOILER OR FURNACE. READ THESE INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE PROCEEDING WITH THE INSTALLATION. DO NOT USE THIS LEISURE LINE DIRECT VENT OR ANY OF ITS COMPONENTS FOR OTHER THAN IS INSTRUCTED IN THIS MANUAL. DO NOT SLEEP IN THE SAME ROOM WITH THE VENT PIPING OR DIRECT VENT. THIS PRODUCT IS INTENDED FOR USE WITH LEISURE LINE STOVES, BOILERS, AND FURNACES ONLY. IF USED FOR ANY OTHER SOLID FUEL APPLIANCE FIRE AND/OR PERSONAL INJURY AND/OR DEATH MAY RESULT.**

## **CAUTION**

**ALL STOVES, BOILERS AND FURNACES MUST UTILIZE A BAROMETRIC DRAFT CONTROL, THIS UNIT IS EQUIPED WITH A 4" FIELD CONTROLS TYPE RC BAROMETRIC DAMPER, THE WEIGHTS SHOULD BE ADJUSTED TO OBTAIN A -.03" TO -.05" WATER COLUMN NEGATIVE PRESSURE IN THE FLUE PIPE AT THE STOVE OUTLET. APPLIANCES SHOULD HAVE A MINIMUM OF 75% EFFICIENCY OR A MEASURED FLUE GAS TEMPERATURE OF NOT MORE THAN 550°F AT THE INLET OF THE VENT.**

**THIS DEVICE MUST BE INSTALLED BY A QUALIFIED INSTALLER IN ACCORDANCE WITH THE INSTRUCTIONS IN THIS MANUAL. A QUALIFIED AGENCY IS DEFINED AS: "ANY INDIVIDUAL, FIRM, CORPORATION, OR COMPANY WHO EITHER IN PERSON OR THROUGH A REPRESENTATIVE IS IN ENGAGED IN, AND IS RESPONSIBLE FOR INSTALLATION AND OPERATION OF SOLID FUEL BURNING HEATING APPLIANCES. WHO IS EXPERIENCED IN SUCH WORK, FAMILIAR WITH ALL PRECAUTIONS REQUIRED, AND HAS COMPLETED THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION".**

## **DIRECT VENT CONCEPT OF OPERATION & GENERAL INFORMATION**

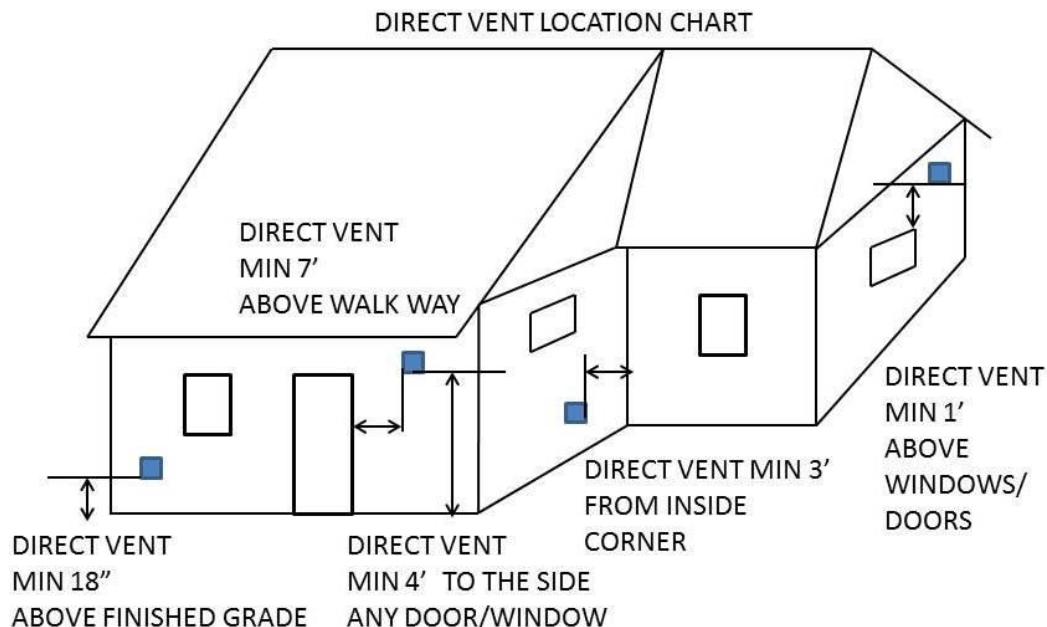
- 1. A Leisure Line direct vent is designed to replace a chimney by providing a draft in the flue pipe. The unit must be used in combination with a barometric draft control and operates continuously as long as the appliance is burning. Speed is controlled by means of a rheostat so that the barometric draft control shows visible sign that there is draft during all burn levels (just slightly moving as a minimum).**
- 2. A CO Detector/Interlock is a required part of the installation and is hooked in series with power to the appliance to ensure shut down in the event of a loss of draft.**
- 3. Ensure that the installation is adequate for safe operation by performing the General Installation Inspection after initial installation and after any major modification to the home.**
- 4. Proper maintenance is important for trouble free and safe operation. Fly ash can build up and block the flue pipe, ensure that periodic inspections are performed by a qualified person.**
- 5. Fly ash is also corrosive, proper cleaning will ensure a long product life and the safety of you and your family.**

**CAUTION: MOISTURE UNDER THE HOPPER LID AND/OR A SLIGHT SULFER SMELL IS AN INDICATION OF POOR DRAFT. DO NOT OPERATE THE STOVE, BOILER, OR FURNACE UNDER THESE CONDITIONS.**

***DO NOT DESTROY, RETAIN THESE INSTRUCTION AFTER INSTALLATION***

## **GENERAL SAFETY AND JOB PLANNING INSTRUCTIONS**

1. There are two models of Direct Vent, one has the Barometric damper mounted on the side of the direct vent, and this unit is for top vent stoves and mounts vertically on top of the stove.
2. The second model has the barometric damper mounted on the end of the direct vent; this unit is for back vent stoves and mounts horizontally on the back of the stove.
3. Safety inspection of a venting system should be performed before and after installing a direct vent system on an existing or new appliance. Follow NFPA 211, the International Mechanical Code and/or The International Residential Code for information on inspection requirements.
4. Installation in a Manufactured/Mobile Home should also be in accordance with Manufactured Home and Safety Standard (HUD) CFR 3280, Part 24.
5. Plan the venting system layout before installation to avoid the possibility of accidental contact with concealed wiring or plumbing.
6. "LEAK FREE" CLASS B 4" VENT SHOULD BE USED WITH THIS DIRECT VENT, check local and national codes for clearances to combustibles materials.
7. All Leisure Line stoves, boilers and furnaces which utilize a direct vent must be connected to a KIDDE safety interlock switch in series with the power supply to the unit.
8. Piping clearances to combustibles, length, fitting configuration and location of the venting system outlet should be installed in accordance with vent pipe manufacturer's recommendations and local codes.
9. The following chart gives guidance for locating the direct vent outlet on the building exterior.



**FIGURE 1 DIRECT VENT LOCATION CHART**

***DO NOT DESTROY, RETAIN THESE INSTRUCTION AFTER INSTALLATION***

**CAUTION: THE LENGTH OF VENT PIPING CONNECTED TO THE STOVE SHALL NOT EXCEED 8 FT HORIZONTAL AND 8 FT VERTICAL (TOTAL 16 FT). THERE SHOULD BE NO MORE THAN TWO 90\* ELBOWS UNLESS PROPER DRAFTING CAN BE VERIFIED USING A DRAFT GAUGE.**



## **FIGURE 2 DIRECT VENT DIMENSIONS**

### **INSTALLATION INSTRUCTIONS**

1. This manual is designed to be used in conjunction with the manufacturer's instructions for the class B self-sealing vent that is used.
2. Open/Unpack Direct Vent, CO Detector/Interlock, and 4" barometric damper.
3. Check for all parts and verify the following are present:
  - Direct Vent Assembly
  - 4" Pellet Stove Adapter Olympia PN VP-SA04 (This part may not be included if you are not using the Olympia Horizontal Vent Kit, other brands of vent piping may be used)
  - 6" Adapter ring (may not be present depending on size of direct vent body)
  - Kidde KN-COB-1C CO detector with Kidde CO120X relay mounted in 4" square box with 24" female power cord and 60" male power cord
5. Plan for the installation using the data contained in the previous section; ensure that the location of the direct vent outlet is in compliance with all requirements.

**NOTE: ENSURE THAT THE DIRECT VENT IS INSTALLED WITH THE MOTOR**

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***CAUTION: THIS DEVICE MUST BE INSTALLED BY A QUALIFIED INSTALLER  
IN ACCORDANCE WITH LEISURE LINE & FIELD CONTROLS SPECIFICATIONS***

***DO NOT DESTROY, RETAIN THESE INSTRUCTION AFTER INSTALLATION***

**SHAFT IN A VERTICAL POSITION, LOCATED AT THE TOP OR BOTTOM OF THE DIRECT VENT. FAILURE TO COMPLY WITH THIS MAY LEAD TO PREMATURE MOTOR FAILURE; ADDITIONALLY THE STOVE SHOULD BE CONNECTED DIRECTLY TO THE DIRECT VENT AND SECURED WITH SELF TAPPING SCREWS.**

6. Ensure that the feeder assembly and all fans are installed on the stove prior to proceeding with the next step.

7. Orient the direct vent to clear all stove components, being careful to comply with the note above.

**NOTE: ENSURE THAT THE DIRECT VENT IS PROPER FOR THE INSTALLATION, VERTICAL MODEL FOR TOP VENT STOVES AND HORIZONTAL MODEL FOR BACK VENT STOVES.**

8. Secure the stove flue outlet to the direct vent/adaptor using #10 or #12 self-tapping screws; it may be helpful to drill a 1/8" pilot hole due to the thickness of the material.

9. Ensure that the direct vent is solid and secure before proceeding to the next step

10. Install the 4" barometric damper and make sure the weight is installed and secure per FIGURE 3 for horizontal installation (back vent stove). Use FIGURE 4 for vertical installation (top vent stove)



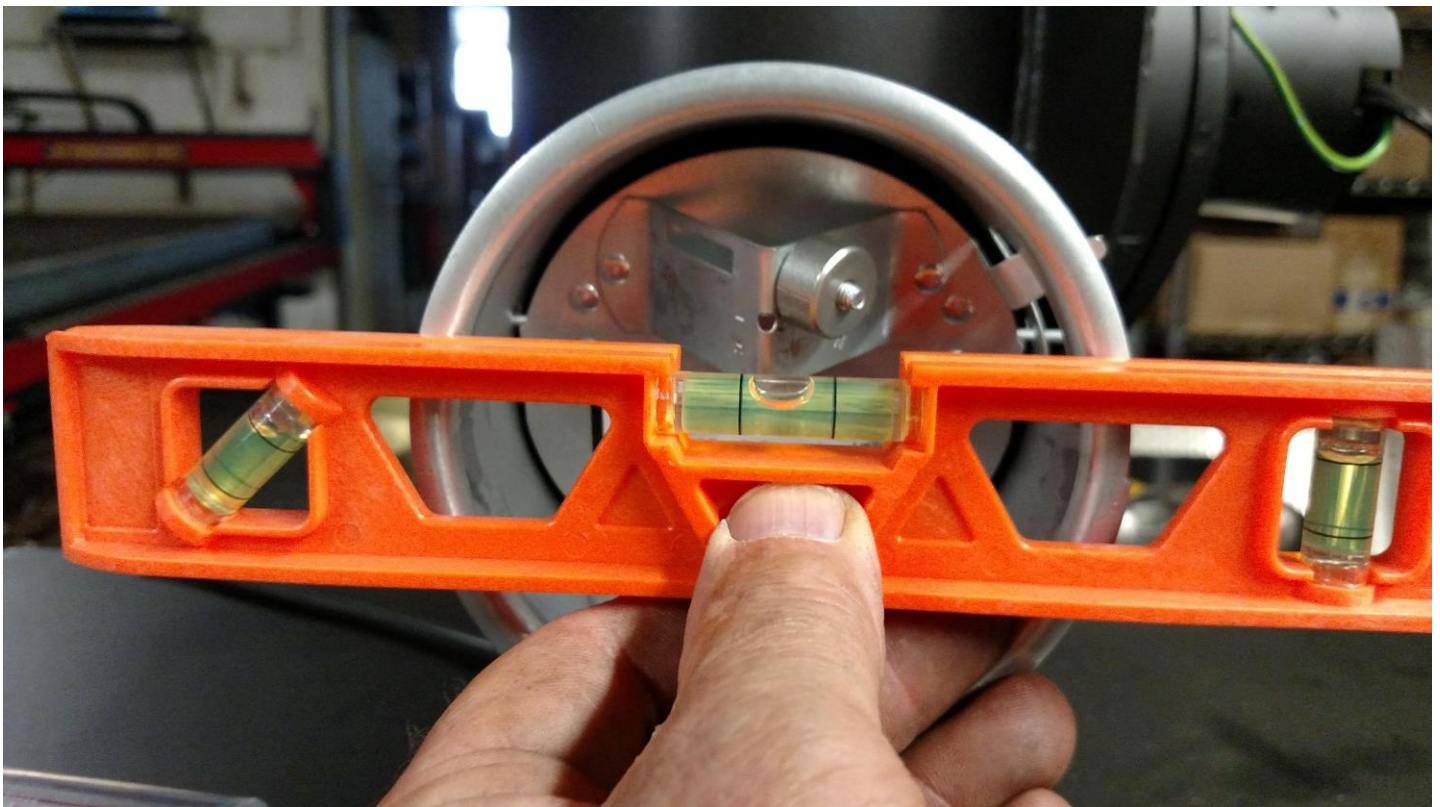
**FIGURE 3 WEIGHT LOCATION FOR HORIZONTAL DIRECT VENT**

***DO NOT DESTROY, RETAIN THESE INSTRUCTION AFTER INSTALLATION***



**FIGURE 4 WEIGHT LOCATION FOR VERTICAL DIRECT VENT**

11. Level the barometric damper per FIGURE 5 by holding a small level even with the pivot pins on the barometric damper (note picture shows a vertical direct vent).



**FIGURE 5 LEVELING THE BAROMETRIC DAMPER**

***DO NOT DESTROY, RETAIN THESE INSTRUCTION AFTER INSTALLATION***

12. Select a location for the direct vent and cut the hole, install the direct vent per instructions and clearances found in the Installation Safety Instructions and per local and national codes. It is recommended that if an inspection is required, a walk through with the inspector should be performed prior to cutting the hole.
13. The venting system should be installed and supported with accordance with any local codes and vent pipe manufacturer's instructions. If the Olympia Chimney Supply VP-SA04 is not utilized a pellet vent adapter should be used to adapt to self-sealing Pellet B Vent.
14. A maximum of two 90° elbows and no more than 16' of vent pipe should be used without verifying draft after installation using a draft gauge.
15. Ensure the 4" barometric draft control is still level and verify free operation of the flapper door.
16. Install the Kidde KN-COB-1C CO detector with Kidde CO120X relay mounted in 4" square box on the wall behind the Stove, Boiler or Furnace within four feet of the direct vent. The CO detector must disconnect power to the burn appliance when it trips, momentarily pushing the test button in the cover will test this.
17. For stoves plug the CO detector into a wall outlet and plug the Coal-Trol power cord into the female plug provided. For boiler and furnace installations the unit will be hard wired to a power source and in series with the power

**WARNING: FOR CONTINUED SAFE OPERATION, THE STOVE, BOILER, OR FURNACE VENT SYSTEM COMBINATION IS REQUIRED TO BE CLEANED, INSPECTED AND MAINTAINED ANNUALLY BY A QUALIFIED AGENCY**

**GENERAL IINSTALLATION INSPECTION**

The following procedure will help evaluate the venting system and must be performed before placing the direct vent into service. It is intended as a guide to aid in determining that the venting system is properly installed and is in a safe condition for continuous use. This procedure should be recognized as a generalized procedure which cannot anticipate all situations. Accordingly, in some cases deviation from this procedure may be necessary to determine safe operation of the equipment.

1. Visually inspect the venting system for proper size and determine that there is no flue gas spillage, blockage, restriction, leakage, corrosion or other deficiency which could cause unsafe operation.
2. Close all doors, windows, fire dampers and other openings in the area where the burn appliance is located. Turn on all clothes dryers, exhaust fans, range hoods and other vents at maximum speed.
3. Set the weight on the barometric draft control per FIGURE 3 or FUGURE 4 on the proper scale (H for horizontal installation and V for vertical installation).
4. Ensure that the appliance lit and in max burn mode so that max output is held (adjust thermostat or whatever control is in play to achieve this), if possible measure the draft to ensure that it is -.04 to -.06" WC at the flue outlet of the appliance. Adjust the rheostat knob so that the desired draft is present and the barometric damper door is just moving slightly at full burn.
5. Visually determine that the flame on the burn grate is blue and consistent. This is a sign that there is sufficient combustion air for proper operation of the unit.

**WARNING: THE NEXT STEP WILL POSSIBLY RELEASE CARBON**



***DO NOT DESTROY, RETAIN THESE INSTRUCTION AFTER INSTALLATION***

**MONOXIDE TO THE ROOM, ENSURE THAT THERE IS A WORKING CARBON MONOXIDE DETECTOR IN THE AREA BEFORE PERFORMING.**

6. Momentarily shut off the direct vent and ensure that the CO Detector/Interlock trips and shuts off the stove.
7. After 30 minutes of operation test for spillage at the barometric draft control using a match or smoke from a candle or cigarette. If spillage occurs there is not enough combustion air, refer to National Flue Gas Code, A.N.S.I. Z223.1 or any applicable local codes for guidance.
8. After completion of the test return all doors, windows, dampers, and fans to their normal condition.

## **MONTHLY MAINTENANCE**

1. Check Elbows and horizontal pipe runs for fly ash build up every ton of coal used, clean as needed.
2. Clean flue pipe at exit of appliance every month or so.
3. Clean the screen opening on the exterior from any foreign objects monthly.
4. Perform the maintenance steps found in Appendix A every 4 to 6 weeks.
5. Oil fan motor every two months or so with white lithium spray grease or 0W5 synthetic oil.
6. Depress the test button on the CO Detector/Interlock to verify that the stove power shuts down.

## **RESOLUTION OF COMMON PROBLEMS**

1. If the direct vent speed is still too fast at the minimum rheostat setting, there is a tuning screw on the side of the rheostat that can reduce the speed.
2. The direct vent will make a rumbling noise when dirty or in need of lubrication.
3. Refer to APPENDIX A for further trouble shooting information.

## **RECOMMENDED SPARE PARTS**

1. A Spare Direct Vent Motor Assembly can be purchased to ensure un interrupted operation in the event of a failure, however the direct vent motor assembly should last five to eight years with proper maintenance.
2. The CO detector should be replaced every ten years, per the manufacturer's instructions.
3. The barometric damper is not a typical failure part, unless mechanical damage occurs due to mishandling or contact.
4. High temperature silicone (the orange colored type), PN 1504 available on the Leisure Line web site <https://leisurelinestove.com/product-category/parts/gasket-material/> or from your local Leisure Line Dealer.
5. Glass gasket Leisure Line PN 1501, available as shown above.

## **END OF SEASON MAINTENANCE**

- 1. The fan impellor should be carefully cleaned and inspected (refer to APPENDIX B for instructions on disassembly). Coat the impellor with WD-40 or other suitable metal protector. Be careful to properly seal all parts upon reassembly with high temperature silicone.**
- 2. Lubricate the motor and run for an hour or so to prevent the bearings from seizing during the summer.**
- 3. Remove all flue pipes from the stove and direct vent. Take pipes and ash pans outside and wash down thoroughly and dry in the sun.**
- 4. Inspect all vent connections for looseness, evidence of corrosion or leakage. Check the barometric draft control for free movement and re-level it when re-installed for the next burn season.**
- 5. Coat all flue pipe with WD-40 or other suitable metal protector and store in a dry location.**
- 6. Make sure to follow the stove manual and perform all cleaning and maintenance on the stove.**
- 7. If Flue Pipe is reinstalled immediately after cleaning, block the flue from inside the stove and leave a conspicuous note as a reminder to remove before lighting stove.**

**NOTE: THE DIRECT VENTS HAVE BEEN TESTED WITH LEISURE LINE STOVES, FURNACES, AND BOILERS PER UL 1482, AND 1523 BY INTERTEK TESTING SERVICES OF MIDDLETON, WI 53562. ANY DEVIATION FROM THESE INSTRUCTIONS COULD RENDER THE DIRECT VENT NON-COMPLIANT WITH UL SAFETY STANDARDS.**

**APPENDIX A: DIRECT VENT TROUBLE SHOOTING INSTRUCTIONS**

<b>Symptom</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
<b>Sulphur smell, or moisture under hopper lid</b>	<b>Poor Draft</b>	<b>Check for proper opening of barometric damper, Adjust Rheostat. Check for fly ash in flue pipe and clean if needed. Direct Vent motor not operating, replace if needed. Stove Gaskets Defective, inspect and replace if needed. Vent Pipe leaking, replace or reseal as needed.</b>
<b>No Power at Stove</b>	<b>CO Detector/Interlock</b>	<b>Verify plugged in and green power light is on. Press reset if needed. Replace unit if still not working.</b>
<b>Stove Not Putting out Enough Heat</b>	<b>Not Enough Combustion Air</b>	<b>Inlet Cover on combustion fan not open all the way, slide it all the way open. Consult stove manual for more information on other causes.</b>
<b>Direct Vent Does Not Run</b>	<b>No Power at Unit</b>	<b>Verify plugged in. Lubricate motor, if still not working disassemble and inspect for cleanliness, clean if needed. Replace motor per APPENDIX B if still not working.</b>

***DO NOT DESTROY, RETAIN THESE INSTRUCTION AFTER INSTALLATION***

## **APPENDIX B: DIRECT VENT MOTOR REPLACEMENT**

- 1. Unplug unit and verify stove is not lit.**
- 2. Remove the 4 self-tapping screws that secure the motor to the housing.**
- 3. Remove the cover on the rheostat control box and disconnect the two motor wires.**
- 4. Rotate the direct vent motor assembly clockwise to disconnect it from the housing.**
- 5. Un-box the new motor assembly and verify the extra mounting tab has been bent out of the way or cut off.**
- 6. Verify/Install glass gasket as shown in the picture (cut in half to make it easier to form around the opening). Install full width around the square outlet as shown.**
- 7. Re-install motor by rotating in place counter-clockwise and secure with the 4 self-tapping screws**
- 8. Seal around the square outlet with high temp silicone.**
- 9. Reconnect the two motor leads and reinstall the rheostat box cover.**

