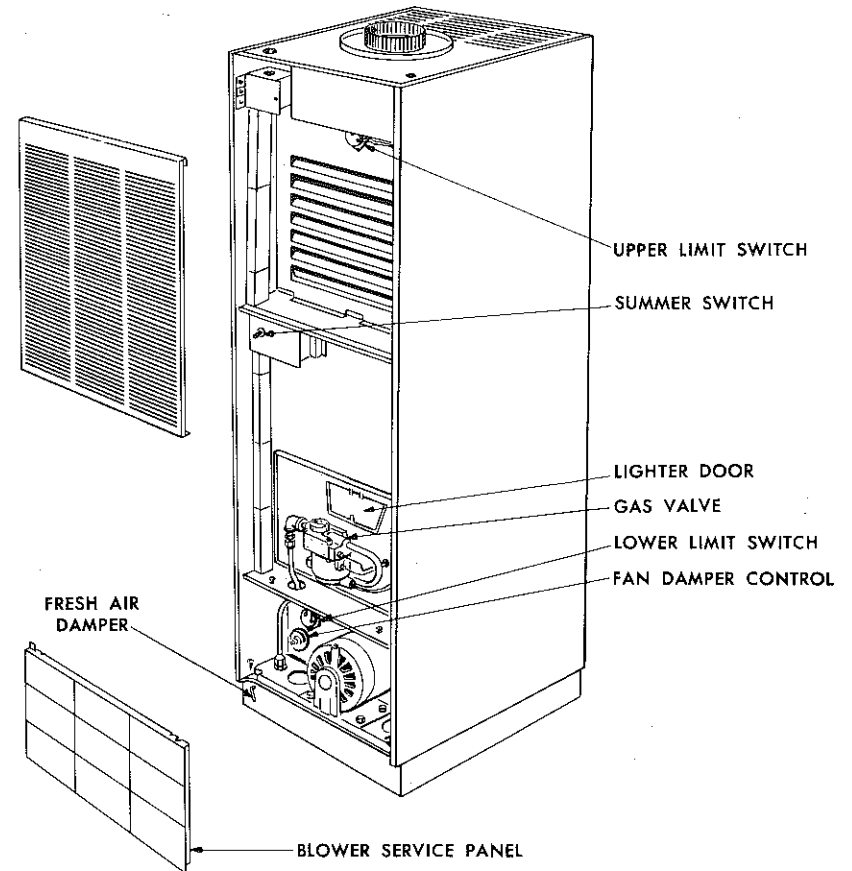


How To Operate Coleman Mobile Home Heater

Model 3011

MAINTAIN THESE INSTRUCTIONS IN A LEGIBLE CONDITION
AND SAVE FOR FUTURE REFERENCE

Caution: Do not place clothing or similar material on or around
the heater.



The Coleman Company, Inc.
WICHITA 1, KANSAS

A. LIGHTING:

The burner in this Coleman Mobile Home Heater is for use with the type of gas shown on the label on the switch box. Never use any gas other than the type marked on the label without first contacting the Coleman Company, Inc. for a conversion kit.

A safety pilot has been provided for your protection. Should the pilot flame be extinguished at any time, the pilot will automatically shut off all gas to the pilot and main burner, preventing the escape of unburned gas.

If at any time you find that the pilot is out, always close the safety valve and wait five minutes before relighting the pilot.

1. Preliminary Check:

- a. See that the fan damper control is set on the heating position, and that the summer switch is set at "OFF." (Refer to Section G, "Fan Operation.")
- b. See that the fresh air damper is set at the appropriate setting. (Refer to Section H, "Fresh Air Intake.")
- c. Push in on reset button in upper limit switch to make sure it is set (Refer to Section D, "Limit Control.")

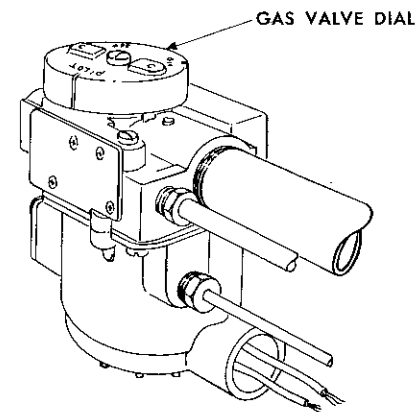


Figure 2

2. Lighting Procedure:

- a. If relighting after heater has gone out, turn the handle on the gas valve to "OFF" position and wait five minutes before lighting pilot.
- b. Turn on any shut-off valve which may have been installed in the gas line.

- c. Turn the dial on the wall thermostat to the desired setting.
- d. Turn the dial on the gas valve (hard) anti-clockwise to "pilot." Light the pilot through the lighter door, holding the gas valve dial on "Pilot" one minute, or until pilot burner remains ignited after dial is released.
- e. Turn the handle to the "ON" position. The main burner will then ignite as long as the dial setting on wall thermostat is above room temperature.

B. TO SHUT THE HEATER OFF:

Turn the handle on the gas valve to "OFF" position.

IMPORTANT: Always shut off the heater before moving the Mobile Home, and always keep the valve shut off when burner is not operating.

C. MAIN BURNER AIR ADJUSTMENT:

The proper air adjustment of the main burner is very important. Too much air causes the fuel to burn with a noisy excessively blue flame. Much of the heat will be wasted.

Insufficient air causes the flame to burn with a red smoky color, resulting in inefficient operation. If necessary to adjust the main burner air, proceed as follows:

- a. Turn burner on and wait 15 minutes for the burner to become sufficiently warm.
- b. Rotate air shutter adjusting tab, closing air shutter so that no air is admitted to the burner and the flame burns with a yellow color.
- c. Open air shutter slowly until fire burns with a blue base and flame tips laced with orange.

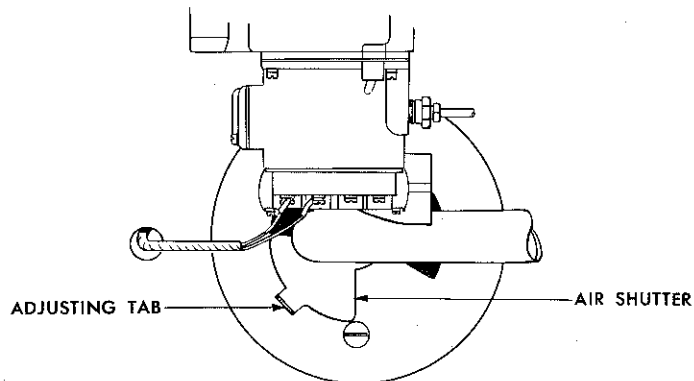


Figure 3

D. LIMIT CONTROL:

This heater is equipped with two limit switches, one found inside the blower compartment and one found at the top of the heater to the right of the junction box. (See Fig. 1.)

If the power failure occurs, in which case the blower will not be operating, then the upper limit switch will shut the burner off.

WHEN THIS OCCURS, THE MANUAL RESET BUTTON ON THE LIMIT CONTROL MUST BE RESET.

The operation of the lower limit switch is entirely automatic. If there is an obstruction in the duct, or if for some other reason enough air is not passing through the base of the heater so that the heater over heats, then this lower limit switch will automatically shut the burner off until the temperature drops. The limit control, after the temperature has dropped, will then turn the burner back on.

E. DRAFT:

This heater is equipped with a draft diverter in the flue so that a high draft does not draw excessive heat from the heater. For that reason, no daper or any restriction should ever be installed in the flue pipe. To do so may cause products of combustion to escape into your Mobile Home.

If your coach is equipped with power vent fans in the ceiling, always open a ventilating hatch or window when using the fans if the heater is in operation. Providing for ventilation by opening a hatch will prevent a back draft from being set up on the heater.

F. FAN OPERATION:

This heater is equipped with an automatic fan damper control. When the heat output of the heater is greatest, the fan is operating at maximum output. In mild weather when the demand for heat is less, the output of the fan is automatically decreased. The fan operates entirely automatically, and is designed to prevent great blasts of relatively cool air coming from the heater, and to provide adequate circulation of the warm air.

During the heating season the fan damper control must be set at the "Heating" position and the summer switch set at "OFF," so that the fan will operate automatically as described above.

For summer ventilation the fan damper control should be set at the "Summer" position, and the summer switch set at "ON," so that the fan operates independently at maximum output. The

summer switch is located at the name plate of heater inside the front door.

The fan damper control is located inside the fan compartment. To gain access to the fan compartment, open the front door of the heater and loosen the screws in the top flange of the lower service panel. Pull the panel straight out. (See Fig. 1.)

To set the fan damper control, pull out on the control wheel and rotate until the pin engages the desired slot — then release the wheel.

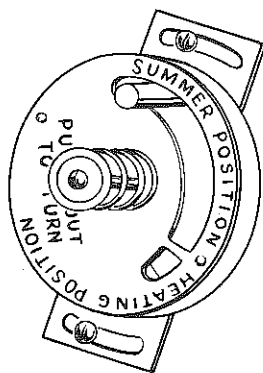


Figure 4

NOTE: When setting the fan for heating or summer operation, it is also necessary to regulate the amount of fresh air entering the heater. Fresh air can be regulated by following the instructions in Section H.

G. FRESH AIR INTAKE:

Fresh air is supplied to the heater through three fresh air inlets in the base of the heater. This fresh air may be regulated by means of the fresh air damper control located in the front lower left corner on the outside of the heater base. (See Fig. 1.) During the winter the damper should be turned to the "Close" position, so that a minimum of outside air is admitted.

During the summer when ventilation is desired, the damper should be set at the "Open" position so that a maximum of outside air is admitted.

Under no circumstances should the fresh air intake ducts be blocked or obstructed in any way, as air for combustion is brought in through these ducts.

H. EXCESSIVE MOISTURE:

Some trailers may have an excessive moisture problem. In some cases the moisture problem may be so bad that condensation may cause water spotted walls or ruined paint jobs. When the air is warm, the moisture in the trailer is invisible. Since warm air can hold more moisture than cold air, air containing too much water vapor condenses to form frost or water whenever it comes in contact with a cold surface. One of the most common illustrations of visible condensation in the trailer is the formation of water or frost on the windows.

Cooking, washing, bathing, etc., all add moisture to the air, and large amounts show up as condensation. The fresh air intake on the Coleman Mobile Home Heater makes it possible to control this condensation by adding cool outside air to the trailer. Cool outside air after being heated in the trailer heater will absorb moisture, eliminating condensation.

At the "Close" setting of the fresh air intake, enough cool outside air is admitted to the trailer to absorb a normal amount of moisture and unless the humidity is high, or the outside temperatures very low, it will be necessary to move the fresh air intake damper from "Close" to half-way between "Close" and "Open." If the conditions of high humidity in the trailer or low outside temperatures, are only temporary, the damper may be moved back to "Close" when these conditions clear up. If one of these conditions persist, for example, very low outside temperatures, the damper may be left at a setting between "Close" and "Open."

Setting the damper at "Open" will not reduce the efficiency of the heater, but more fuel will be required as the increased amount of outside air must be heated.

I. FUEL SUPPLY:

Use at least 1/2" OD Tubing for runs up to 25 feet. Over 25 feet use at least 5/8" Tubing. Connect the tubing to the heater fuel supply line which extends down through the right hand fresh air intake hole underneath the coach. **USE SOAPSUDS TO TEST ALL CONNECTIONS FOR GAS LEAKS.**

J. MAINTENANCE:

1. Care of the Fan:

The fan should be cleaned of all lint and dust at least twice a year. The fan is inside the lower service door and is removed

for cleaning by removing the bolts in the motor base and the screws in the air seal.

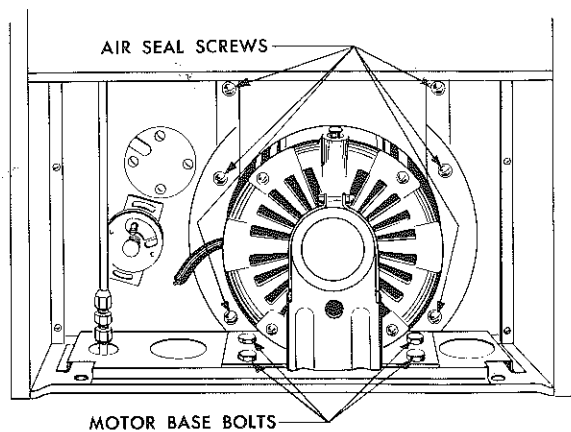


Figure 5

The fan motor should be oiled as directed on the decal on the blower.

Use only SAE 20, Motor Oil.

K. SERVICE HINTS:

The following list of service hints are intended as a guide for an experienced service man. If difficulty is encountered with the heater, contact either your trailer dealer, or any qualified local serviceman. The heater carries a one-year guarantee and any faulty part will be repaired or replaced at no charge when returned to the Coleman Co., Inc., Wichita, Kansas, for inspection.

1. Burner Won't Light:

- a. Cause:
Gas supply valve turned off. Make sure that all supply valves in the gas line and at the tank are turned on.
- b. Cause:
Temperature setting of dial on wall thermostat below room temperature. Be sure wall thermostat is set at desired temperature. In case room is already at desired temperature, then burner will not come on until temperature of the room has dropped.
- c. Cause:
Limit switch may have cut off burner. Reset Limit Control.

2. Pilot Outage:

a. Cause:

Improper lighting procedure. Before the pilot burner will stay lighted, the dial on the gas control must be held at the "Pilot" position (as far anti-clockwise as possible) for one minute so that the thermocouple will get hot enough to generate the amount of millivoltage necessary to keep the valve open.

b. Cause:

Too much primary air. This causes burner to overheat, so that there is a puff-back when the heater shuts off which will blow out the pilot. To correct, turn air shutter so that less primary air is admitted.

c. Cause:

Restricted pilot flame. It is important for the pilot flame to be high enough to bathe the end of the thermocouple properly, otherwise the thermocouple will not be energized.

If pilot flame is too small remove pilot and clean thoroughly. Check to make sure pilot spud (orifice) is correct size. See Parts List for spud markings for L-P and Natural Gas.

d. Cause:

Pilot flame too large. If too much flame is impinging on thermocouple it could damage the thermocouple. Be sure pilot spud is correct size, as shown in the Parts List.

e. Cause:

Faulty gas valve or thermocouple.

3. Sooting:

a. Cause:

Improper main burner air adjustment. Increase amount of air by opening air shutter on burner until flame burns clean. Make sure burner is clean.

b. Excessive Gas Pressure:

Gas pressure for L-P gas should be 10½" W.C., and 3½" W.C. for Natural Gas. Excessive gas pressure usually due to faulty pressure regulator.

c. **Cause:**

Wrong main burner orifice. Check to make sure orifice is correct for type of gas being used. See Parts List for orifice markings for Natural and L-P Gas.

4. Insufficient Heat:

a. **Cause:**

Low Gas Pressure. Gas pressure for L-P Gas should be 10½" W.C., and 3½" for Natural Gas. Low gas pressure can be caused by the fuel lines being too small. Tubing size for runs up to 25 feet should be ½" O.D. (Type K). Runs up to 75 feet, should be ⅝" O.D.

b. **Cause:**

Wrong Orifice. If the orifice in the main burner is too small (i.e. using an L-P orifice for Natural Gas) then the heater cannot operate at full output. Replace orifice.

c. **Cause:**

Hot air duct too small. Duct under heater should be 3" x 12". The main duct should be at least 2" x 10", and branch ducts should be at least 2" x 8".

d. **Cause:**

Wall thermostat out of calibration. Recalibrate.

5. Excessive Motor Vibration:

a. **Cause:**

Motor shaft bent. Replace motor.

b. **Cause:**

Impellor (squirrel cage) out of balance. Replace impellor.

NOTE: This heater must be installed with 710-5421 Flue Cover, 3011-1341 Flue Cover and 710-2261 Fresh Air Thimbles. Clearance from the heater to combustible material should be as follows: zero clearance from back and sides of heater, 15" from the top, 24" from the front, and 4" from the flue covers. One inch clearance should also be maintained from any side of supply plenum and outlet air duct within six feet of the heater. Unless an approved roof jack is used, the hole in the roof must allow six inches all around the flue pipe. **DO NOT INSTALL A FILTER IN THE HEATER OR AIR DUCT SYSTEM.**