

Range & Oven

RANGE AND OVEN ASSEMBLIES

23 & 25 Ft. — Model No. BT22 GS-4T-M2	
28-31 FT. — Model No. BT22 GS4TVX-M3	12-2

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**Combination Range and Oven Assembly,
Model No. BT22GS-4TVX-M2 (Part No. 690066)**

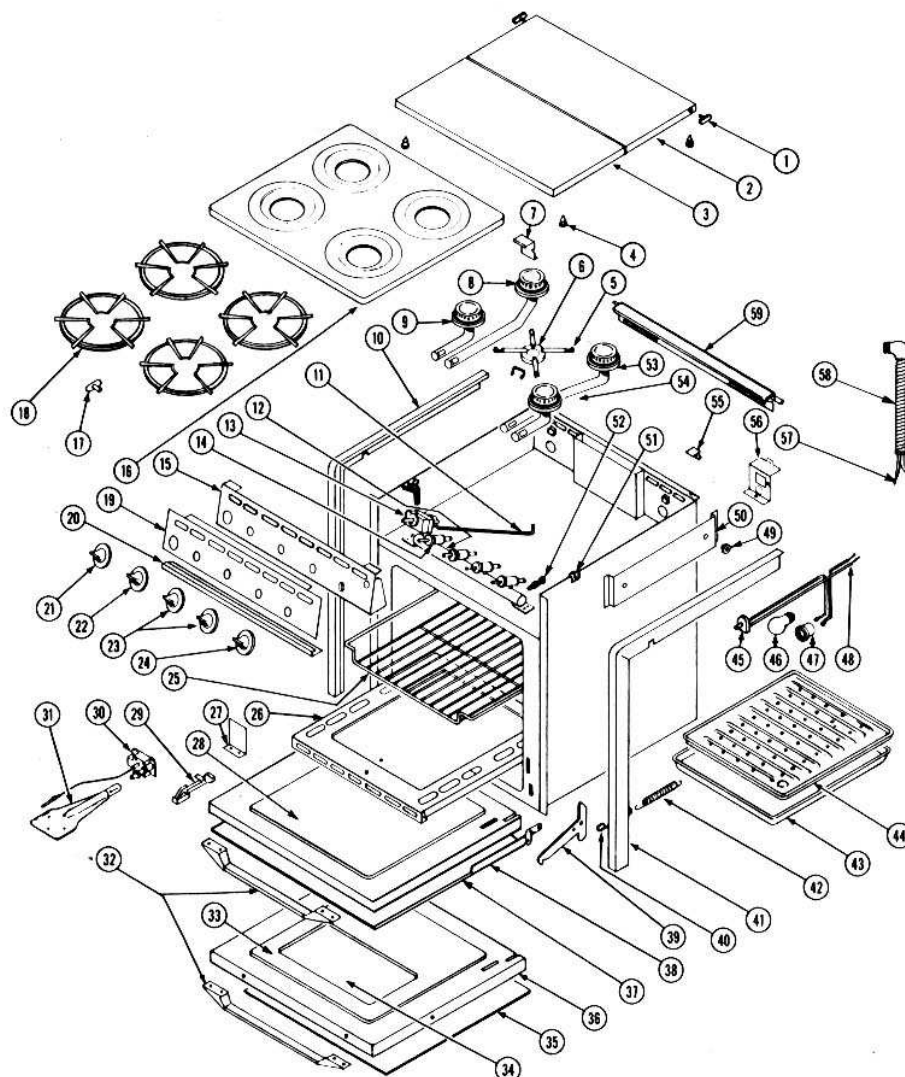


Fig. 1

No.	Description	No.	Description
1	Tee-nut	31	Oven burner
2	Rear lift cover	32	Oven door handle
3	Front lift cover	33	Door liner - window opening
4	Rubber bumper (4)	34	Inside glass
5	Flash tube ext.	35	Outside glass
6	Top pilot lighter cup ass'y.	36	Glass door frame
7	Top pilot shield	37	Door insert - chrome
8	Left rear burner	38	Oven door hinge ass'y. (specify right or left)
9	Left front burner	39	Spring hinge arm
10	Left side trim	40	Spring hook
11	Top pilot tube	41	Side trim - right
12	Manifold pipe	42	Oven door spring
13	Oven thermostat	43	Broiler pan
14	Top burner valve	44	Broiler pan insert
15	Manifold panel	45	Oven light switch
16	Main top (specify color)	46	Oven light bulb
17	Tee-nut	47	Oven light receptacle
18	Top burner trim	48	Oven light wire harness
19	Manifold panel trim	49	Heat shield spacer
20	Manifold trim - lower	50	Heat shield
21	Thermostat dial	51	Main top hold down clip
22	Top burner knob - front	52	Half union
23	Top burner knob - rear	53	Right rear burner
24	Top burner knob - front	54	Right front burner
25	Oven rack	55	Spring, main top rear
26	Oven bottom	56	Receptacle support
27	Broiler pan stop	57	Service cord wires
28	Door liner - no window opening	58	Conduit assembly
29	Oven pilot	59	Flue deflector
30	Automatic oven shut-off valve		

When ordering replacement parts, please specify model number and code number. These numbers are located on a plate in the burner box area below the main top, item #16.

Checking, Replacement & Maintenance

Gas Range & Oven Removal and Replacement

1. Shut off gas supply at gas bottles.
2. Disconnect gas supply line at range and oven unit.
3. Remove 2 screws located in bottom end of slide trim and 4 screws under burner top attaching unit to galley.
4. Remove range and oven unit.
5. Replace by reversing above procedure.

Caution: Check all gas line connections for gas leaks with soap solution.

Instructions for Proper Burner Adjustment and Cleaning

1. Oven Section —

Important: There is no By-Pass adjustment for oven burner on this control. Below 550° the oven burner will turn on and off automatically to maintain proper temperature. At the Broil position, a constant modulated burner flame is maintained.

The oven thermostat on this range will enable you to turn off the Oven Constant Pilot and top burner pilot by simply turning the thermostat to the "PILOTS OFF" position. When the dial is in this position, you cannot light the oven or top burner pilots. When the dial is in the "OFF" position, gas flows to the pilots.

When turning from "PILOT OFF" position to "OFF" position, pilots must be relighted immediately.

There is no pilot adjustment on the thermostat or for the oven pilot. Control has been factory pre-set for use on L.P. gas. No field adjustments necessary.

a. Oven Air Shutter Adjustment

To adjust main oven burner air shutter: The air shutter has been adjusted at the factory, however, it may require some additional adjustment when used at high altitude.

To adjust, open the air shutter to the full open position where you will have a blowing condition. Begin closing the shutter slowly. When you reach the correct adjustment point, the blowing will stop and the burner should have a sharp blue flame approximately 3 inches long.

2. Top Pilot Adjustment on Ranges so equipped:

Adjust top pilot so that the tip of the flame is just over the edge of the inner cone and the lighting of the burner is within 4 seconds. Adjusting screw is located at bottom right corner of thermostat. Remove thermostat knob to provide access to adjustment screw.

3. Cleaning Instructions after Oven is in Use.

Spill-overs or spotting in oven or broiler are more easily removed if done promptly after they occur. Never wash porcelain while warm. Never use cleaning powder containing grit or acid.

NOTE: If oven bottom is removed for cleaning or servicing, be sure that oven bottom is locked in place when it is put back into the range.

4. Cleaning instructions after top burners are in use.

- a. To assist in cleaning the area under the burners, the main top has been hinged so it can be raised. Care should be taken during the cleaning operation that you do not touch the hot pilot shield.
- b. If top burner heads are cleaned with any cleaning compound, care should be taken to see that all ports are opened up with a metal pin to insure proper operation. It is especially important that the lighter ports and slots on the side of the burner heads be kept clean.

Removal of Range Top Burner Valve

1. Shut off gas supply at bottles.
2. Remove knobs.
3. Remove burner grates, main top, and top burners.
4. Remove two bolts from thermostat and raise slightly to permit removal of manifold.
5. Remove gas inlet tube from half union and move tube out of way.
6. Remove two screws, one from each end of manifold assembly.
7. Remove manifold assembly from range.
8. Remove defective valve (screw counterclockwise).
9. To install, reverse above procedure. (Apply L.P. Pipe Seal to new valve thread before installing.)
10. Check for gas leaks at all connections with soap solution before lighting burners.

Range Top Light Adjustment

1. Remove thermostat knob to provide access to adjusting screw. Adjusting screw is located at bottom right corner of thermostat.
2. Adjust so that the tip of the flame is just over the edge of the inner cone and the top burner lights within four seconds.

Oven Thermostat Removal and Replacement

1. Shut off gas at L.P.G. tanks.
2. Remove main top and grates.
3. Disconnect pilot fuel line and 1/4 main fuel line at thermostat.
4. Remove two screws mounting thermostat to manifold pipe.
5. Open oven door and remove capillary bulb clips in top of oven.
6. Pull capillary bulb up through top of stove and remove thermostat.
7. To install, reverse above procedure. Make sure gasket is in place before installing thermostat.
8. Check for gas leaks at all connections with soap solution.

Oven Automatic Shut-Off Valve Removal and Replacement

1. Shut off gas.
2. Remove oven racks and oven bottom. To release oven bottom, push bottom toward back of oven and raise up at front.
3. Remove mounting screw from oven burner and remove burner.
4. Disconnect 1/4 supply tube from shut-off valve.
5. Loosen screw holding sensing bulb to pilot light assembly.
6. Remove sensing bulb.
7. Remove 2 screws attaching automatic oven shut-off valve support and remove automatic oven shut-off valve.
8. To install, reverse above procedure.
9. Check for gas leaks at all connections with soap solution.

Oven Burner Removal and Replacement

1. Shut off gas.
2. Remove oven racks and oven bottom.
3. Remove mounting screws from oven burner and remove burner.
4. To install, reverse above procedure.
5. See "Instructions for Proper Burner Adjustment & Cleaning" page 12-3 for Air Shutter Adjustment.

Oven Pilot Light Assembly Removal and Replacement

1. Shut off gas.
2. Remove oven racks and bottom.
3. Remove screw holding sensing bulb to pilot assembly.
4. Remove sensing bulb from pilot assembly.
5. Remove pilot fuel tube.
6. Remove nut and bolt attaching pilot assembly to support.
7. Remove pilot assembly.
8. To install, reverse above assembly.
9. Check for gas leaks at oil connections with soap solution.

Oven Thermostat Calibration

Before having oven calibration changed, be sure that utensil problems and/or user misunderstanding of oven operation are not the real cause of the service complaint. Here are several possible factors to check:

Setting the Dial. Oven temperatures will be most accurate when you set the dial by turning just TO temperature — not to a higher temperature and then back.

Aluminum Foil. Foil should never be used to cover oven racks or so that it blocks off any of the oven openings provided for air circulation. If you use foil, cut a piece just a little larger than the pan and place on the oven bottom.

Oven Cleaners. Oven cleaners, particularly the spray type, can coat the thermostat temperature bulb so that it does not sense oven temperatures accurately. Carefully clean any residue off the sensing bulb.

Pan too large for Oven. The most common offender is a cookie sheet which is too big — a special problem with RV range ovens because of their small size. There should be at least 1 or 2 inches between the edge of a utensil and any oven surface.

If none of these factors apply and if cooking results have been consistently poor, recalibration is necessary. It is recommended that the calibration is done by qualified service personnel.

1. With an accurate thermometer placed in the oven, light the oven burner.
2. Place reliable mercury thermometer (or other suitable instrument) in center of oven.
3. Set knob to 350° setting.
4. Allow oven to operate at least 20 minutes with 3 readings every 5 minutes. Thermostat calibration is necessary only if temperature is not within 20° of setting.
5. Recalibrate as follows:
 - a. Place reliable mercury thermometer (or other suitable instrument) in center of oven.
 - b. Set knob to 300° setting.
 - c. Allow oven to operate at least 20 minutes.
 - d. Calibration adjustment is in center of knob stem.
 - e. Insert screwdriver into knob stem and engage slotted calibration shaft. Hold screwdriver so it does not turn and rotate knob or knob stem to match temperature recorded in oven.

Trouble Shooting Range Top

1. Gas Odor
TURN OFF GAS SUPPLY at tanks; then open door and windows to evacuate gas from trailer before re-lighting pilots or checking for leaks.

Probable Cause	Remedy
a. Pilot light out	Light and adjust if required
b. Leaky fittings	Soap test all fittings. Tighten or replace
c. Pilot won't stay lit	Check for defective pressure regulator. Check pilot adjustment (See page 12-3)

2. One or more burners won't ignite or improper flame.

Probable cause	Remedy
a. Flash tube out of position	Position burner or flash tube
b. Pilot flame out of adjustment	(See p. 12-3 for proper adjustment)
c. Clogged burner ports.	Clean with small steel pin. (Do not damage ports)
d. Low gas pressure	See Gas System section

3. Porcelain Breaking off Grates.

Probable Cause	Remedy
Operating burners without pan on grate.	Always have pan on grate when burners are ignited.

4. Scorching of Main Top

Probable Cause	Remedy
Pans are too large.	Use pans that do not exceed grate by more than 2".

Trouble Shooting — Oven

1. Gas Odor

TURN OFF GAS SUPPLY at tanks; then open door and windows to evacuate gas from trailer before re-lighting pilots or checking for leaks.

Probable Cause	Remedy
a. Pilot light out	Relight pilot
	Low gas pressure (See gas system section.)
	Faulty thermostat. Replace thermostat if gas is not sufficient to maintain constant pilot.
	Check air shutter adjustment on main burner. See page 12-3. Oven Section for proper adjustment; poor setting will blow out pilot.

2. Runaway oven — overcooking — temperature too hot.

Probable Cause	Remedy
a. Thermostat out of calibration.	Recalibrate. See p. 12-4. Oven thermostat calibration.
b. Heater pilot flame not cycling off.	High pressure could cause the constant or standing pilot flame to act as a heater pilot flame. Check pressure and proceed as follows: (A) Pressure regulated appliance. Check pressure regulator for proper pressure on L.P. gas (11" water column). (B) Replace thermostat if problem is not due to Step A.
c. Faulty safety valve. Safety valve will not turn off main oven burner when heater pilot is turned off.	Replace safety (automatic shut-off) valve. (See p. 12-3)

d. Aluminum foil covering racks and/or for bottom.

Aluminum foil should never be used to cover oven racks or so that it blocks off any of the oven openings provided for air circulation. If you use foil, cut a piece just a little larger than the pan and place on the oven bottom.

e. Broken capillary tube.

Replace thermostat.

f. Pilot not positioned properly.

Relocate pilot. (See p. 12-6)

3. Oven Undercooking - Temperature not hot enough - Oven slow heating up

Probable Cause	Remedy
a. Thermostat out of calibration	Recalibrate. (See p. 12-4)
b. Low gas pressure	(See Gas System section)

4. Oven Burner will not go on.

Probable Cause	Remedy
a. Constant pilot not lit.	Check to see that constant pilot is lit (See Fig. 3)
b. Pilot assembly out of position	Position pilot assembly. (See Fig. 3 for pilot location in oven.)
c. Safety valve sensing element not positioned.	Loosen screw and position as shown in Fig. 3.
d. Heater pilot flame not heating sensing bulb.	Low gas pressure. (See gas system section.)
e. Heater pilot flame too low.	Gas line pinched or dirty. Faulty thermostat — replace.
f. Safety valve will not open with proper heater pilot setting.	Check position of sensing bulb. (See Fig. 3)
	Replace safety (automatic shut-off) valve. (See p. 12-3)

Oven Pilot Location

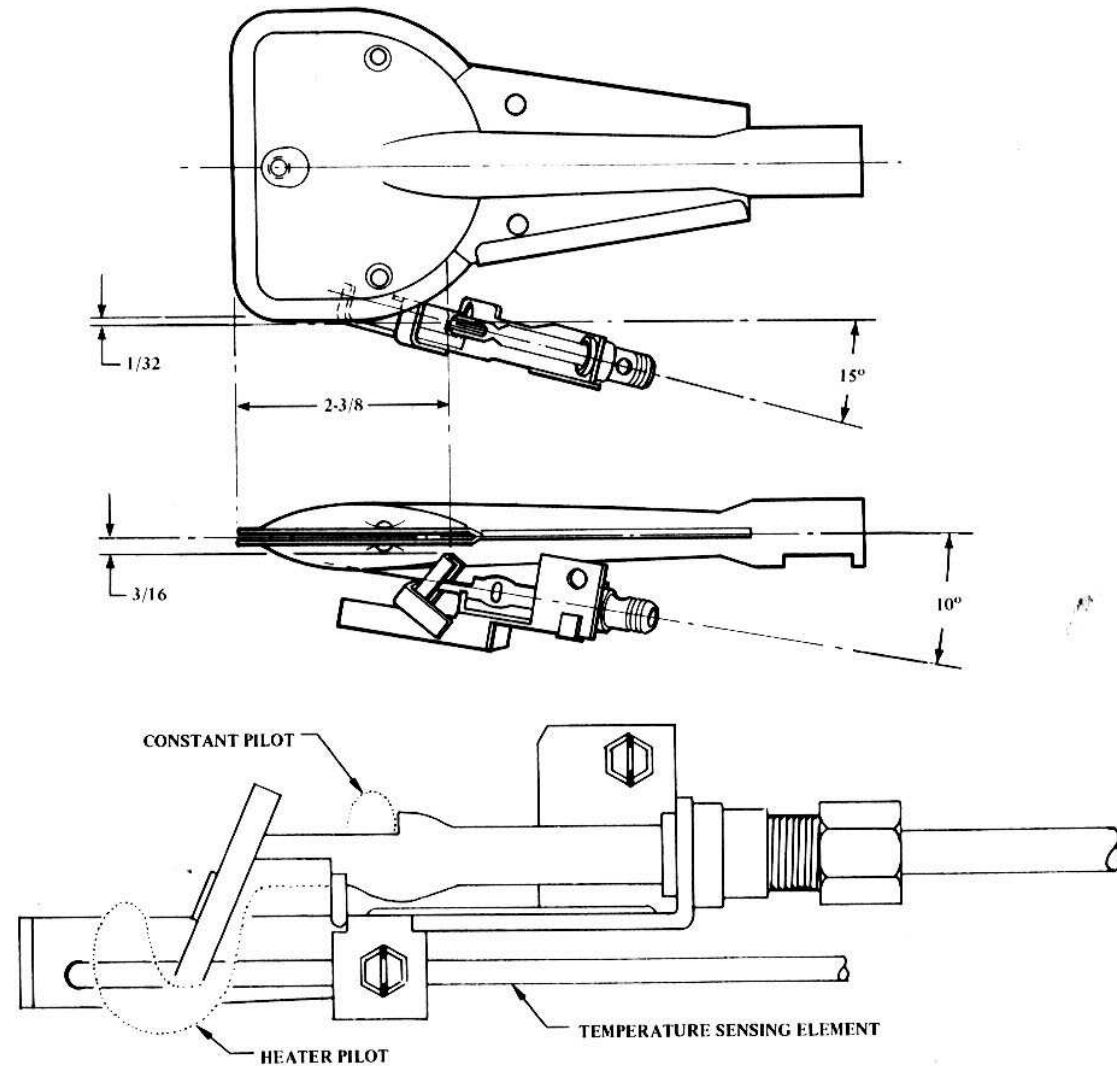


Fig. 3

Micro Wave Oven

The Litton Industries, Atherton Division portable Micro Wave Oven is available as an option. Airstream dealers cannot service or make adjustments to the oven. This must be done by an authorized Litton Industries dealer. If you ever have problems with the oven check the local telephone directory for the nearest dealer.