FLEETWOOD FOLDING TRAILERS, INC. INSTALLATION INSTRUCTIONS

1968X201 February 1998

MODEL NUMBER: 4737R8041 - ATWOOD HEATER AND

INSTALLATION KIT

For use with:

- All 1998 models except Taos, Redwood, Westlake, Niagara, and Rio.
- All 1997 models except Taos and Laredo
- All 1996 models except Taos, Laredo, and Sedona

This kit contains:

A CHBB B	REE COR	O TARA SOUS	1.45,000 20077.
1	404		Atwood 16,000 BTU furnace
1	=	4747-839	Thermostat bracket
1	609	4741B947	Atwood vent assembly
1	609	4737B925	Plastic thermostat base (tan)
1	09	4750A6421	Heater harness 2 www
1	E98	4750A643 /	Thermostat harness 3 were
1		4752-846	Thermostat
2	•	4741A925	Wood block (Key West, Yukon, Laramie)
1	•••	4749A617	3 1/2" furnace box (Bayport, Santa Fe, Cheyenne)
1	634	4755-675	7 1/2" furnace shelf (1996 and 1997 Niagara, 1997 Sun Ridge models
			manufactured prior to 9/24/96, Mesa, and Sea Pine)
1	600	4755-690	9 1/2" furnace shelf (1997 Sun Ridge models manufactured after 9/24/96,
			and all Sun Valley models)
1	400	1215-177	3/8" flared tee
1	***	1215-516	3/8" elbow
4	***	1215-241	Flare nuts
6	-	1103B0806	3/8" screw
4	***	1103B1032	2" self-tapping screw
13	**	1103E1008	1/2" self-tapping screw
4		1201-865	Wire clamp
2	NO	1201-870	Gas line clamp
2	wo	1202B026	Flat washer
6	N/O	1203-864	7/16" aluminum rivet
2		1203-874	13/16" aluminum rivet
3	600	1216-208	Yellow connector
1		4739-125	Split bushing
1	===	4746-178	Gas line hole cover
2 1/2'		4350000029	1/8" x 1/2" putty tape
1	560	4755-689	31" gas line (must cut to length)
1		1215-178	3/8" x 1/2" x 3/8" flared tee

IMPORTANT NOTICE

These instructions are for the use of qualified individuals specially trained and experienced in installation of this type equipment and related system components. Installation and service personnel are required by some states to be licensed. Persons not qualified shall not attempt to install this equipment nor interpret these instructions.

WARNING:

- 1. Before installing the Atwood furnace, refer to the installation instructions included with the furnace. When installing or replacing a furnace or thermostat, it is imperative that the correct thermostat be used. For easy identification of the thermostat and which furnace it should be used with, Atwood will mark the thermostat box as follows:
 - 1. Use with D.S.I. furnace only.
 - 2. Use with pilot ignition furnace only.

Failure to comply may damage the equipment and may create a hazard.

2. Before beginning this furnace installation, be certain all electrical and gas supplies to the trailer are disconnected. Failure to do so could result in electrical shock or fire hazard.

NOTE: All 1996 - 1998 trailers are pre-wired for furnace power supply and thermostat connections.

INSTALLATION INSTRUCTIONS

- 1. Remove the small door and hinges covering the 8 3/8" wide x 11 1/4" high routed furnace opening in the lower galley front or roadside cabinet assembly. Insert four 3/8" Phillips screws into the screw holes exposed from removing the door hinges from the lower galley front.
- 2. Remove the wall paneling knockout centered directly behind the 8 3/8" x 11 1/4" furnace opening.
 - NOTE: Tape up wires found behind paneling knockout to prevent damage.
- 3. For 1996 Models Only: Find the center of the knockout from side to side.
 - For 1996 Key West: Measure 1 7/8" up from the bottom of the knockout.
 - For 1996 Shenandoah and Niagara: Measure 3 3/8" up from the bottom of the knockout.
 - For 1996 Laramie and Yukon: Measure 4" up from the bottom of the knockout.
 - For 1996 Sun Valley: Measure 4 3/8" up from the bottom of the knockout.
 - For 1996 Santa Fe, Cheyenne, and Bayport: Measure 4" up from the bottom of the knockout.
 - Drill a hole from inside the trailer through the exterior body panel at this point.

For Bayport, Santa Fe and Cheyenne: Install the 3 1/2" furnace box in the lower galley opening, centered left to right, 3" behind the lower galley front. Fasten to floor with two 1/2" self-tapping screws.

For 1997 Niagara, 1997 and 1998 Sea Pine, and 1998 Mesa: Install the 7 1/2" furnace support at the midway point of the cabinet centered below the wall paneling knockout. Fasten to floor with two 1/2" self-tapping screws.

For Sea Pine, and Shenandoah: No wood blocks or supports are necessary. The furnace will rest on the wheel well.

For Sun Valley: Install the 9 1/2" furnace support at the midway point of the cabinet centered below the wall paneling knockout. Fasten to floor with two 1/2" self-tapping screws.

For Sun Ridge: Two hutch front configurations have been used. For models produced prior to September 24, 1996, the hutch front had a single opening (11 1/4" x 8 3/8") for the furnace. On these models, install the 7 1/2" furnace support at the midway point of the cabinet centered below the wall paneling knockout. Fasten to the floor with two 1/2" self-tapping screws. For Sun Ridge models produced September 24, 1996 and after (including 1998 models), the hutch front will have two openings, one for the furnace (11 1/4" x 8 3/8") and a smaller opening (6" x 8 3/8") below the furnace opening. On these models, install the 9 1/2" furnace support at the midway point of the cabinet centered below the wall paneling knockout. Fasten to the floor with two 1/2" self-tapping screws.

- 10. Slide the furnace into the opening except for approximately 6" to allow for wire connections.
- 11. Using the yellow wire connectors provided, connect wires found in compartment to furnace as follows:
 - 1. Orange wire to White wire on furnace marked "thermostat"
 - 2. White wire (12V DC NEG.) to Black wire on furnace
 - 3. Black wire (12V DC POS.) to Red wire on furnace

Clamp the furnace power supply wires by the right side of each wood block or by the right side of the furnace support assembly using two plastic wire clamps and two 1/2" self-tapping screws provided. If the furnace is mounted on a wheel well, clamp the furnace power supply wires to the floor of the trailer near the wheel well using two plastic wire clamps and two 1/2" self-tapping screws provided.

- 12. Slide excess wires back into furnace compartment.
- 13. Slide furnace into compartment until flange on furnace housing contacts the lower galley front. Make certain furnace aligns with vent opening.
- 14. Secure furnace to the galley front with two screws, one on each side of the furnace. (Screws from removal of galley door can be used.)
- 15. Attach open end of gas line assembly to gas fitting on furnace.

Cut the 5" x 2 1/2" vent opening into the exterior body panel as shown in figure 1 using the hole drilled in this step as the center point.

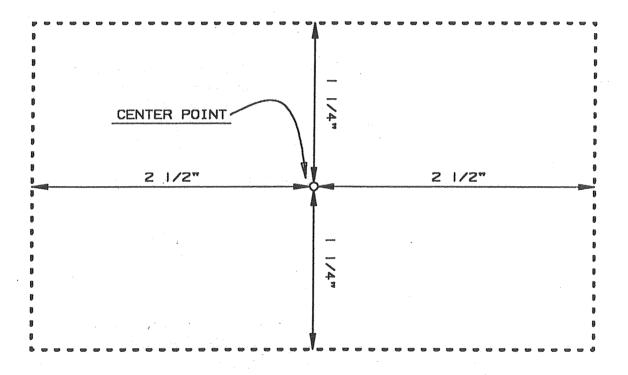
- 4. For 1997 models only: Cut the vent opening in the roadside body panel according to the dimensions in figure 2. (NOTE: 2 different dimensions for Sun Ridge based on date of production.)
 - For 1998 models only: Cut the vent opening in the roadside body panel according to the dimensions in figure 3.
- 5. For 1997 and 1998 models: A white plastic rivet will be installed in the floor where the hole for the gas line should be drilled. Remove the white rivet and drill a 1 1/8" hole in the floor for the gas line. NOTE: On Bayside and Grandview models, it will be necessary to remove the wooden baffle between the furnace opening and the power cord storage compartment and then lift out the wooden panel that serves as the bottom of the furnace compartment. Once this panel has been removed there will be room to drill the gas line hole in the floor.

<u>For 1996 models:</u> A white plastic rivet will be installed in the floor where the hole for the gas line should be drilled. Early production units did not incorporate this rivet. If your trailer is not pre-marked with this rivet, refer to figure 4 for the proper location of the gas line hole. Remove the white rivet (if applicable) and drill a 1 1/8" hole in the floor for the gas line.

WARNING: Ensure all gas and electrical supplies are off.

- 6. <u>Destiny Models Only:</u> Cut existing gas line below hole drilled for furnace gas line or at nearest point to this hole. Install two flare nuts and flare both sections of gas line. Install flared tee. If necessary, route additional 3/8" gas line to hole drilled for furnace gas line and install 3/8" elbow. Flare gas line and use flare nuts at all connections.
 - Grand Tour Models Only: Remove union from existing gas line below hole drilled for furnace gas line. Install 3/8" x 3/8" x 3/8" flared tee. (Casa Grande, Grandview, and Grandview SP use 3/8" x 1/2" x 3/8" flared tee.)
- 7. Cut gas line to desired length (to reach from gas line below floor to gas fitting on furnace), install flare nuts and flare gas line. Place gas line assembly through hole in floor and slide gas line hole cover over gas line (from inside trailer) and into the hole drilled in the floor. Attach one end of the gas line assembly to the elbow or flared tee in the gas line beneath the trailer. If necessary, secure gas line to trailer with gas line clamps and 1/2" self-tapping screws.
- 8. Connect the plugged end of the furnace power supply harness (found in furnace compartment) to the furnace wire harness supplied in this kit. Pull the non-plugged end of the wire harness out through the galley or cabinet front opening. Ensure the proper color coded wires are connected, black to black, white to white, and orange to orange. NOTE: On Bayside and Grandview models, reinstall the wood panel and baffle removed in step 5. Ensure that the power harness and gas line are routed through the notches in the panel that serves as the bottom of the furnace compartment.
- 9. <u>For Key West, Yukon and Laramie:</u> Install the two wooden support blocks, centered left to right in the lower galley opening, according to the dimensions shown in figure 5. Fasten with four 2" screws provided.

FIGURE |



(DRAWING NOT TO SCALE)

USE THESE DIMENSIONS FOR VENT CUTOUT AFTER CENTER POINT HOLE HAS BEEN DRILLED IN BODY PANEL.

68U201A

16. Apply putty tape to perimeter of vent sleeve and slide into rear of furnace casing. Apply putty tape to top and sides of rear exterior vent assembly. Slide exhaust tube into rear of furnace and fasten vent sleeve and vent to panel with two 1/2" self-tapping screws provided.

IMPORTANT: Cutting may be necessary to shorten vent sleeve to allow proper positioning against the exterior body panel when installing the vent sleeve. A minimum overlay of 1/2" must be maintained between the vent sleeve and furnace casing for proper air exchange.

- 17. Locate the loose end of the thermostat wire harness inside one of the dinette seat assemblies. This harness will consist of one orange wire and one black wire. The thermostat will be installed in the paneling of this dinette seat assembly. NOTE: On Bayside and Grandview models, the thermostat wires may also be located in the cabinet by the access doorway.
- 18. Use the back of the thermostat plastic base as a template and mark the dinette seat paneling as shown in figure 5. (The dimensions in figure 5 are a guideline only. These dimensions can be deviated from if necessary.) Cut out this opening. NOTE: On Bayside and Grandview models that have the thermostat wires located in the cabinet by the access doorway, the thermostat should be installed on the back of the cabinet above the level of the gaucho bed.
- 19. Drill a 3/8" hole through the center of the thermostat plastic base.
- 20. Place the split bushing provided through the center hole in the metal U-shaped thermostat bracket. Route the spade terminals through this bushing and through the hole cut in the thermostat plastic base. Attach the wires to the thermostat: black wire to the fused side of the thermostat (thin copper wire); orange wire to the heat anticipator side of the thermostat. Attach the plastic base to the thermostat bracket and bench panel with the two 7/16" aluminum rivets provided. Attach the thermostat to the plastic base with two 13/16" rivets and the two flat washers provided. Connect the male plug end on the thermostat wire harness to the female plug end on the remaining thermostat wires.

NOTE: Ensure that the proper color coded wires are connected: black to black, orange to orange, etc.

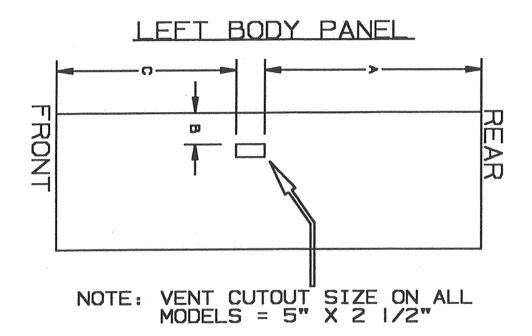
21. Secure thermostat wires to floor with plastic wire clamps and 1/2" self-tapping screws.

CAUTION: Never use a match or open flame to check for leaks as fire or explosion could result. Do not use ammonia solutions to check for leaks.

- 22. Apply pressure to gas line and test all connections for possible leaks using a soap solution.
- 23. Install inside heater grille.
- 24. Refer to furnace operating manual for lighting instructions.

FIGURE 2

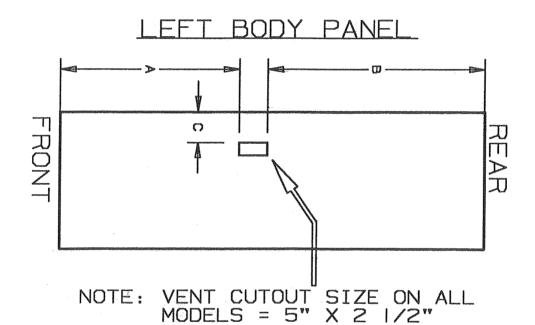
HEATER VENT CUTOUT LOCATION 1997 MODELS ONLY



MODEL	<u>A</u>	В	C
NIAGARA KEY WEST SUN RIDGE (MFG.	54 5/8" N/A PRIOR TO SEP. 64 1/16"	5 3/8" /2" 24, 996) 5 5/8"	N/A 42 3/4" N/A
SUN RIDGE (MFG.	SEP. 24, 1996 64 1/16"	AND AFTER) 3 5/8"	N/A
YUKON SUN VALLEY WESTLAKE SEA PINE SANTA FE CHEYENNE BAYPORT	101" 70 3/8" N/A N/A N/A N/A 18"	11 1/2" 3 5/8" 5 7/8" 5 7/8" 9 3/8" 9 3/8"	N/A N/A 80" 70 1/2" 37 3/16" 37 3/16" N/A 68U201B

FIGURE 3

HEATER VENT CUTOUT LOCATION 1998 MODELS ONLY



MODEL	A	В	C
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GRANDVIEW	14**	N/A	3 7/8"
MESA	N/A	71 1/4"	6"
SEA PINE	70 1/2"	N/A	5 7/8"
SANTA FE	37 3/16"	N/A	9 3/8"
CHEYENNE	37 3/16"	N/A	9 3/8"
SUN RIDGE	N/A	64 1/16"	3 5/8"
BAYSIDE	14"	N/A	3 7/8"
NATCHEZ	N/A	14 1/2"	11 1/8"
(LEFT REAR	PANEL)		
CASA GRANDE	N/A	3 1/4"	11 7/8"
(LEFT REAR			

