

DOUBLE WIDE  
INSTRUCTION MANUAL

12/12/88



NADCO

FEDERAL MANUFACTURED  
HOUSING CONSTRUCTION  
& SAFETY STANDARDS

DEC 12 1988

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*Medallion*®

MANUFACTURED HOMES CORP.

P.O. BOX 1024, WATERTOWN, SD 57201 • 605/886-3270

Dear Dealer:

Here is your NEW CREST HOME Double Wide. Over 30 years of continuously successful mobile home manufacturing experience has gone into the design, quality of material and workmanship of this Double Wide.

It is now your responsibility to see that this same quality construction is passed on to the retail customer. In order to help you set up the CREST HOME promptly and correctly, we have prepared these set up instructions.

Please ask your serviceman to read these instructions thoroughly before starting to set up the CREST HOME. All of the larger materials required for set-up are located in the Living Room and/or Family Room. The smaller items required such as screws, nails, nuts and bolts are located in a carton marked "Double Wide Set-Up Material". Should you require further information, please contact us.

The CREST HOME has been designed to meet or exceed THE NATIONAL MANUFACTURED HOUSING CONSTRUCTION AND SAFETY STANDARDS, therefore, these instructions must be followed carefully in order to maintain compliance with THE NATIONAL MANUFACTURED HOUSING CONSTRUCTION AND SAFETY STANDARDS ACT.

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SITE PREPARATION

The site selected to place the home should be properly graded to prevent the accumulation of water under the home. Enclosed crawl spaces shall be cross ventilated with a free air space of at least 1/150 of the floor area. Internal moisture control is the responsibility of the home owner by controlling the humidity levels in the home. (See Condensation Control information provided in the warranty information).

WARRANTY INFORMATION

Refer to manufacturers warranty information included in the warranty package for periodic maintainance and general upkeep information on items such as exterior siding, shingles, appliances, windows, doors, floor coverings, etc...

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1. Remove weather protective covering from attic area, door ways, electrical and plumbing crossover areas, and any other possible areas which need access on both halves of home.
2. Cut out the 1 x 3 inner Sidewall bottom plates within door openings.
3. Level and block Unit A of Double Wide, blocking points every 8 feet on center or less on main I-beam members of chassis. (See Blocking Instructions attached for additional required blocking)
4. Before moving Unit B into position, cut 3 3/4" wide strips of fiberglass insulation from roll of fiberglass supplied and attach to the marriage wall at floor, endwalls and the top plate of marriage wall. See figure 1.
5. Move Unit B of Double Wide into position beside Unit A. (Approximately 6" apart)
- \*6. Locate and connect all snap together electrical splices of like markings on each half. Make connections and secure connectors per manufactures installation instructions on pages S-24B & S-24C. (With opt. junction boxes, guide wires into boxes at this time and connect per step #21.) When snap together connectors are used, skip parts C & D of step #21.
7. Connect the unions in the water lines at floor level opening and adjust flexible tubing to permit the units to move together. (Hot water lines are marked)
8. Draw the two floors together with jacks or winches (come-alongs). Be sure come-alongs are attached to I-beam in undercarriage area, where reinforcement plate is welded to bottom flange, as close to a center member as possible. Next, insert 3/8" x 3 bolts in the mating bars at the end of the front crossmembers. (See figure 2). Next, attach washers and nuts, but leave loose, DO NOT TIGHTEN until marriage walls are properly aligned, both vertically and horizontally. (Premature tightening of these bolts tends to pull the top apart when it is not yet secured, as well as interfere with the alignment of floors and openings). Check the alignment of opening in the halves, and adjust accordingly.
10. Close the gap at the center ridge beam of the roof by raising the outside (door side) of Unit B. Install 2" x 8" galvanized straps over peaks of joining trusses. Nail with galvanized roofing nails 2"-5 ea. truss end. At this time, install galvanized straps approximately every 12 feet to secure top in position while double checking again to assure proper alignment throughout, of both halves.
11. If all is OK, then snug up nuts on 3/8" bolts through mating bars. If alignment is perfect, then install a pair of Mating Bars 6'-4" O.C. for 24' wides or 8'-6" for 28' wides. (See figure 2).
12. Install galvanized straps, approximately 2" x 8", every four (4) feet on every third truss. (See figure 3.)
13. Using four (4) galvanized roofing nails per shingle, install top row of shingles on Unit A and allow shingles to overlap Unit B. Install top row of shingles on Unit B and allow to overlap Unit A. (See figure 3)
14. Use 12" x 12" individual shingles obtained by cutting shingles into thirds. Place a bead of shingle cement 4" down from the peak on each side of ridge. Shingle ridge. Bend shingles over the ridge 6" on each side. Expose 5" to the weather and nail each side 6" in from the exposed edge so that the galvanized roofing nails will be concealed by the overlapping shingle. Warm shingles in cold weather so they will not crack. (See figure 3.)

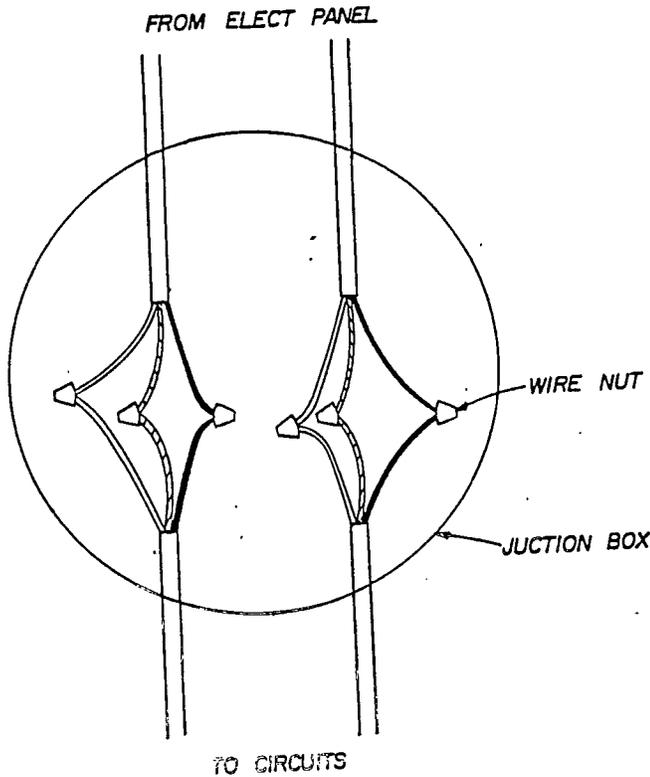
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## Set Up Instructions DOUBLE WIDE

15. USING CARPENTER OR PIPE CLAMPS, clamp together the framing members of the door and archway openings and nail 3" x 6" GALVANIZED METAL PIECES - using 4-penny nails - 3 metal pieces on each side of the door opening or six per opening. Install jambs into openings. Use 6-penny finish nails as required. Install trim on both sides of jamb using #17 x 1 $\frac{1}{4}$ " brads. Install doors and striker plates for doors.
- \*16. Hook up exterior drains and test water and drain systems for leaks.
17. Install 6" fascia board to overhang with color coated nails, cutting it to fit at the peak on each end.
18. On the underside of overhang cover seam with 6" x 11" piece of matching trim, securing it with color coated nails.
19. A. When House Type Siding is used:
1. Apply 1 $\frac{1}{2}$ " wide permagum to the vertical joint (front and rear) from the top of the H.T.S. to the bottom of the unit. Attach rub rail in the same manner as on sides of home with colored nails. Install matching 6" strips to the vertical seams with colored nails. Seal all seams with clear silicone sealer.
- B. When Vinyl Siding is used:
1. Remove weather protective covering and strips from each end. Attach starter strip across the bottom of each end. Apply vinyl siding per manufactures installation instructions included in the warranty pack. Trim Pieces at top, may need to be trimmed to fit.
20. Install connectors, hangers, etc.
21. A qualified electrician should make the electrical connections between unit A and B as follows, as well as run the necessary electrical checks.
- a. Be certain that the incoming electric-feeder line is not connected to the electric distribution panel.
  - b. Be certain that all breakers are in the "OFF" position and carefully check all electrical connections in the electric distribution panel to be certain they are tightened adequately - the trip from the point of manufacture to your home's present location may have caused some loosening of the wires.
  - c. Locate electrical junction box(es) in Unit A typically in Bedroom Clothes Closet.
  - d. Remove cover from box(es) and remove the box(es) from the wall. Reach in the wall and pull out the wires hanging in the cavity (check the main breaker box cover for exact number of circuits to other half). Locate hot wires from breaker box (marked wires) and match these with the similar sized wires from the other half (14-2 to 14-2, 12-2 to 12-2, etc.) Once circuits are determined, knock out plugs in box(es) and insert one wire through each hole and reinstall the box(es). Pull the slack wire through box and cut it about 6" long. Strip the individual wire and connect (black to black, white to white, etc.) with wire nuts. No more than 2 wire should be connected together. Tuck wires into box and reinstall cover. (See illustration on next page)

- 22. If the home has gas plumbing on each half a "Quick Disconnect" device will be installed near the rear of home. Remove the dust caps and from the "Quick Disconnect" and make the connection making sure to keep the flexible line free from kinks.
- 23. The gas system of this home has been tested for leaks before leaving the factory. However, prior to turning on the gas, another test must be made to insure the gas system is free from leaks after the home has been set up. The test should consist of pumping 5 ounces of air pressure of ten minutes with no drop pressure. Gas utility companies generally require this test and are equipped to perform this test for you before the gas service is turned on.
- 24. Remove and store detachable hitches provided.
- 25. To insure grounding of frames - at front crossmember below mating bar (Fig. 2) find grounding wire attached one side - loosen screw on grounding lug on opposite half insert wire and securly tighten.



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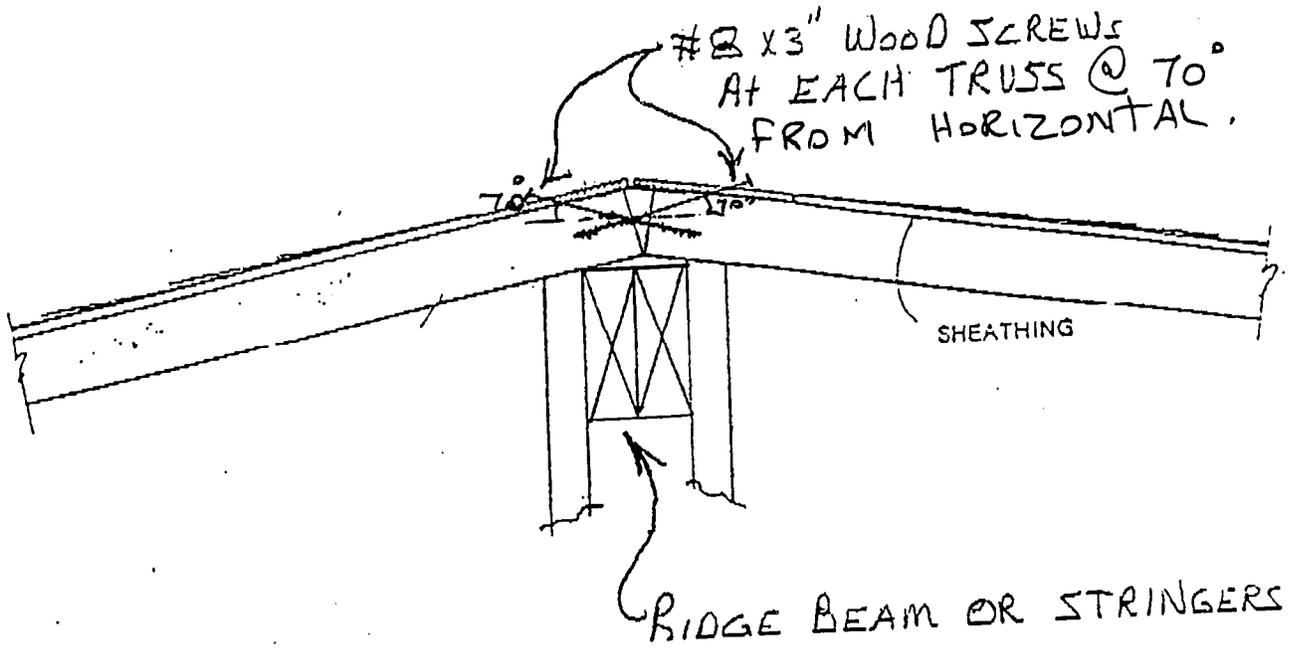
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# MARRIAGE WALL CONNECTION AT PEAK



SEE PAGE S-25 FOR ADDITIONAL FASTENING  
AND FINISHING METHOD.

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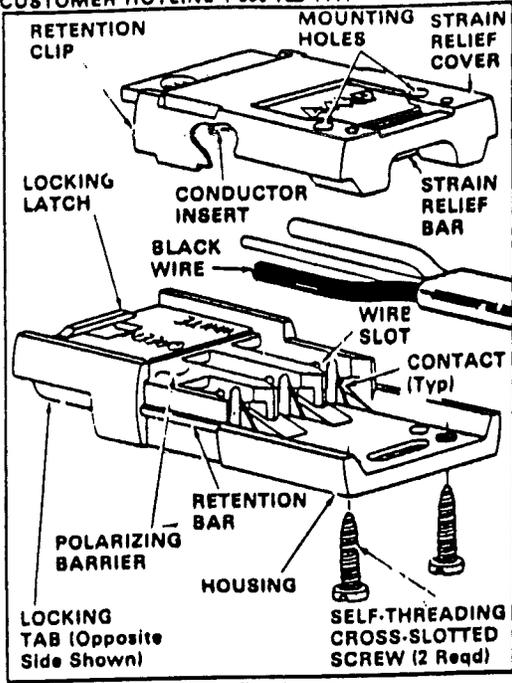


Fig. 1

**1. INTRODUCTION**

This instruction sheet (IS) covers the joining of nonmetallic sheathed cables using AMP Type NM-1 Cable Splice 207877-1 shown in Figure 1.

The splices are intended for factory or on-site inter-connection of modules or other building components. They may be concealed or surface-mounted as described in Articles 545-13, 550-10(I), and 551-16(o) of the National Electrical Code.

Read this material thoroughly before starting assembly.

**NOTE** All dimensions on this sheet are in inches.

**2. DESCRIPTION**

These splices are designed to terminate No. 12 and No. 14 AWG solid-copper-conductor, thermoplastic-jacketed cable (two current-carrying wires plus a ground) using the AMP Insulation Displacement Technique of compressing unstripped wire into slotted contacts. Each splice consists of a pre-assembled housing and contacts, a strain relief cover, and two self-threading, cross-slotted screws.

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IS 7913

The housing features a locking latch, a locking tab, two retention bars, a polarizing barrier, and two screw holes. Note that the mating end of the housing has been designed to permit two housings to mate with each other.

Each contact features a slotted beam which receives the wire during termination, and a broad tab member which is designed to give maximum contact surface when mated.

The strain relief cover features three conductor inserts, two retention clips, a strain relief bar, and two holes to receive the cross-slotted screws. See Figure 1.

**3. ASSEMBLY PROCEDURE**

A cutting blade, end cutters, a cross-bladed screw-driver, and a pair of pliers with parallel-action jaws (AMP Parallel-Action Jaw Pliers 91149-1 or any good adjustable pliers) are recommended for assembling the splices.

Select two splices and assemble them according to the following instructions.

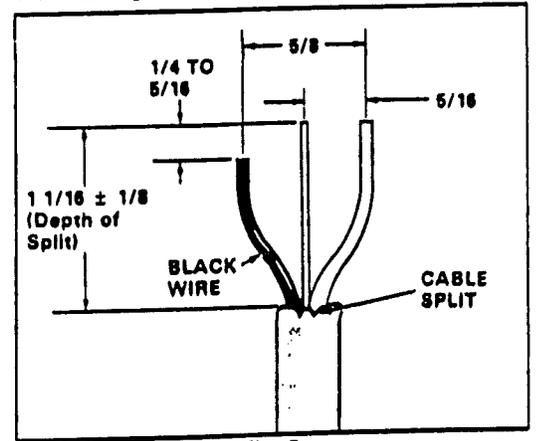


Fig. 2

**DANGER** Make sure power is disconnected before proceeding.

1. Using the cutting blade, split the cable sheathing to the depth shown in Figure 2.
2. Remove the sheathing back to the cable split as indicated in Figure 2.
3. Spread and form the wires to the configuration shown in Figure 2.
4. Cut the BLACK wire to the length shown in Figure 2.

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6. Orient the cable so the black and white wires are aligned with their respective markings on the housing, then place the wires on the contacts. See Figure 1. Wire ends must extend 1/4 in. beyond contact beams.

**CAUTION**

Do NOT push wires into contacts with flat-bladed screwdriver or any other tool as this may spread the contact beams and cause a loose connection. Do NOT re-use a splice if wire was previously inserted into contacts.

**NOTE**

Polarizing barrier will prevent improper assembly if black and white wires are reversed.

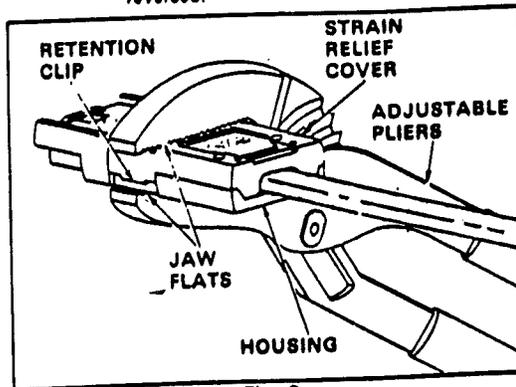


Fig. 3

6. Holding the wires in place, start the strain relief cover onto the housing.
7. Grip the housing and strain relief firmly and hold in position. Adjust pliers so jaw flats will be parallel and press evenly when closing the cover. See Figure 3.
8. Make sure all components are aligned, then squeeze the plier handles until the retention clips snap into place.
9. Tighten the two cross-slotted screws until strain relief cover is bottomed on the housing.
10. Inspect termination.
  - a. Make sure cable jacket is held firmly by strain relief bar.
  - b. Make sure all wire ends extend 1/4 in. beyond contact beam as noted in Step 5.
11. Repeat Steps 1 through 10 to terminate the other cable end. (Note that black and white wires will be aligned when splices are coupled.)

#### 4. COUPLING SPLICES

1. Orient the splices so the mating ends align with each other as shown in Figure 4.
2. Slide the splices into each other until the locking latches engage the locking tabs. This completes assembly of the cable splicing device.

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5. MOUNTING SPLICES  
Coupled splices can be mounted to studs or joists with four 4d common nails. See Figure 1 for appropriate mounting holes.

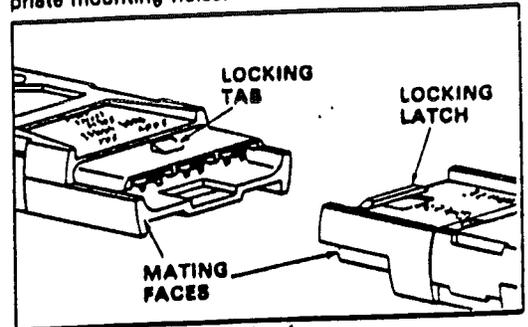


Fig. 4

**CAUTION**

Do NOT use oversize nails nor drive nail heads into splice.

#### 6. UNCOUPLING SPLICES

**DANGER**

Disconnect power from the circuit before proceeding.

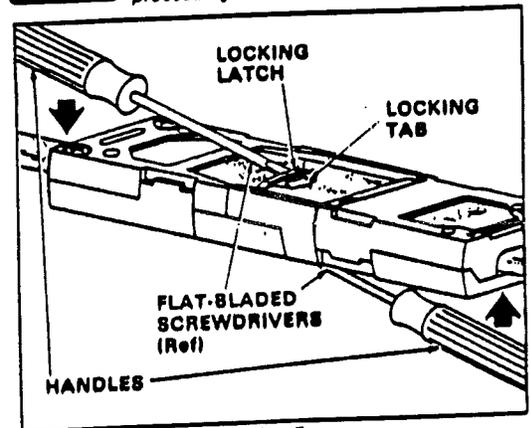


Fig. 5

**NOTE**

The splices can be disconnected; however, they are NOT to be used for a continuous connect/disconnect operation.

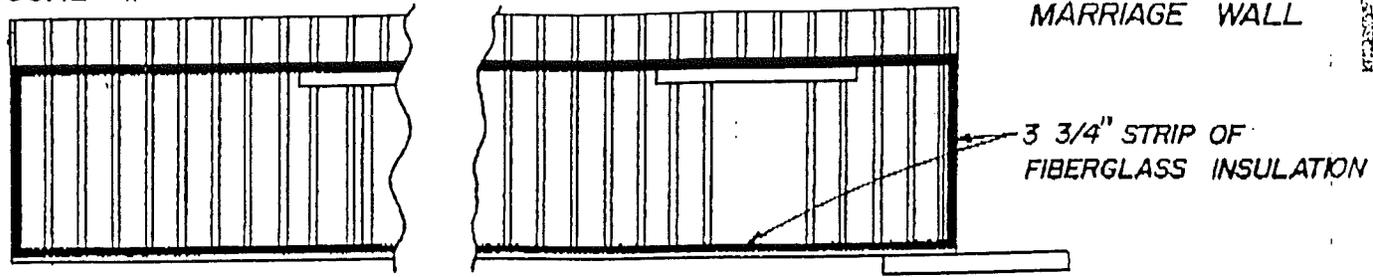
Two small flat-bladed screwdrivers are recommended for disengaging locking latches from locking tabs. See Figure 5.

1. Insert screwdriver blades between locking latches and locking tabs.
2. Without overstressing latches, pry them over the tabs (just enough for disengagement) and pull the splices apart.

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FIGURE 1.



ATTACHMENT OF FIBERGLASS INSULATION

FIGURE 2.

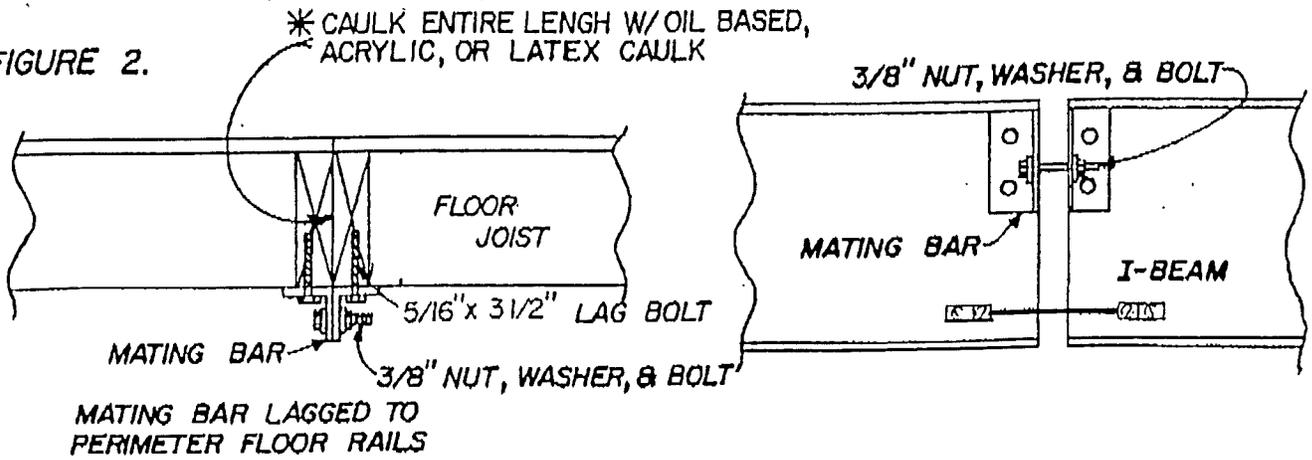
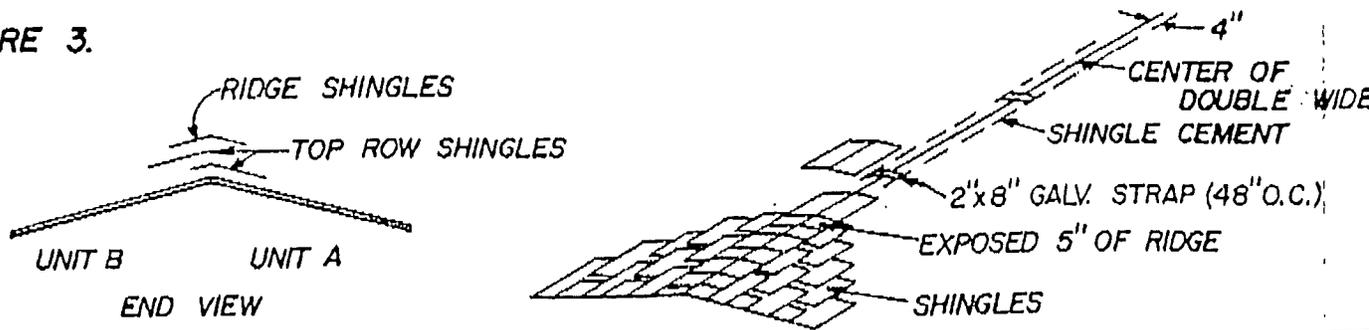


FIGURE 3.



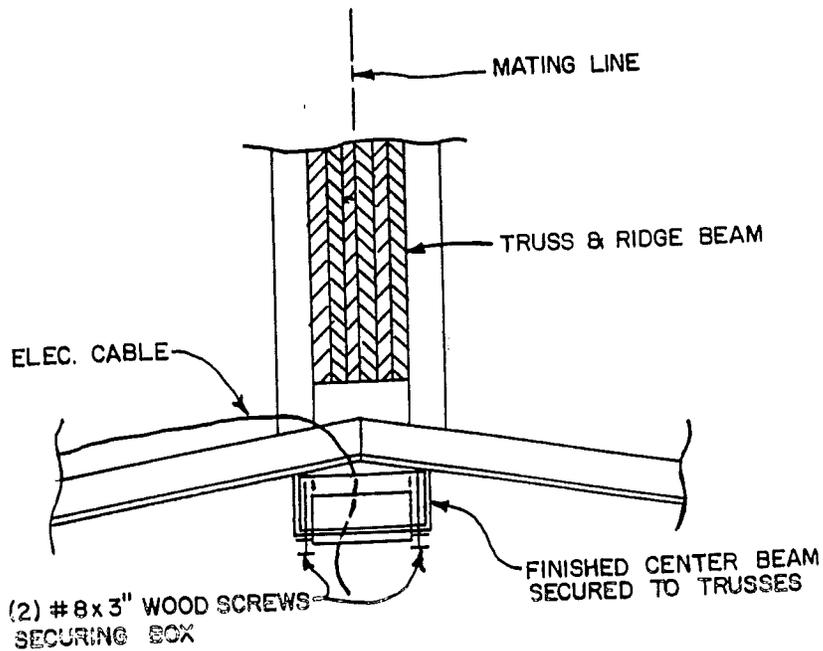
# RELOCATING CEILING FAN BOX AT MATING LINE

The optional factory installed box for a ceiling fan at the mating line of the home has been only temporarily positioned and must be relocated after final set-up.

All electrical installations and connections should be performed by a qualified electrician. Make sure the electrical power to the box is turned off.

Approximately 2' of extra cable has been left for relocation of box to the center beam of the home. The box should be removed from its temporary mounting while the home is being set. Upon installation of the center beam the exact location of the box should be determined and a 4" diameter hole should be cut for the box. The electrical cable should then be fed down thru this hole and through the hole in the box. The cable should then be resecured with 12" of the box and clamped to the box itself with the provided clamps. The box is then secured to the center beam with 2- # 8x3" wood screws. Cable may now be cut to desired length and stripped to make connections to actual fan. Note that ground wire should be reconnected to box with screw provided. Read and follow all installation instructions provided with ceiling fan for proper installation of fan itself.

## TYPICAL INSTALLATION



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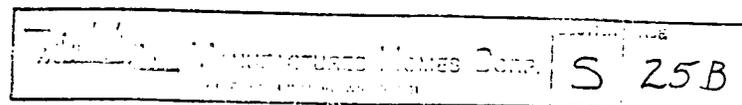
## DRAIN LINE FIELD INSTALLATION

Some units with plumbing in each half will require field installation of drain piping to complete the waste drainage system of the home. Refer to drain line schematic addendum to these instructions to determine proper lay-out, fittings and pipe sizes to make connection.

All drain lines shall be installed in a professional manner with 1/4" per foot slope towards the outlet and shall be supported 4'-0" o.c. with plumbers strapping provided in set-up material.

Clean and glue all joints & fittings completely with ABS glue provided in set-up material.

After all connections are made, test drain system for leaks.



REV. 8-15-91

# BLOCKING AND LEVELING

**WARNING** - LIMITED WARRANTY on your mobile home is partially NULL & VOID, of not properly blocked, steel frame is not to be removed.  
 The footing on which blocks are placed must be on firm ground to assure minimum settling - poured concrete, at least 4" thick, is recommended.

Concrete blocks, placed with walls vertical, must not be more than 8 feet apart, must not be more than two feet from both front and rear ends of the home. Each block support must be capable of holding at least 4,000 lbs. without failure.

Proper blocking and leveling on firm footing will prevent settling and much unnecessary trouble, such as: body sagging, doors dragging, windows binding, interior and/or exterior paneling buckling, floor seams, out of square conditions, etc.

The drawing below shows recommended blocking of a typical DOUBLE WIDE mobile home. Wood shims are recommended to be used above blocks for precision leveling.

Make sure to place leveling jacks directly under center of I beams, floor joists and/or perimeter rails - do not place leveling jacks under axles, outriggers or other brake formed members.

Always place a piece of 2" x 6" lumber or equivalent between leveling jack and frame member to avoid damage to frame.

Blocks should be placed under Rails of floor frame as shown, 1/2" from outer edge of exterior walls, under front and rear exit doors, sliding glass doors each side of sidewall openings 2' or larger, if any, at points indicated by white marks painted on surface of subfloor, along longitudinal perimeter floor rails, and 12' O.C. along remaining perimeter of home. Refer Detail A.

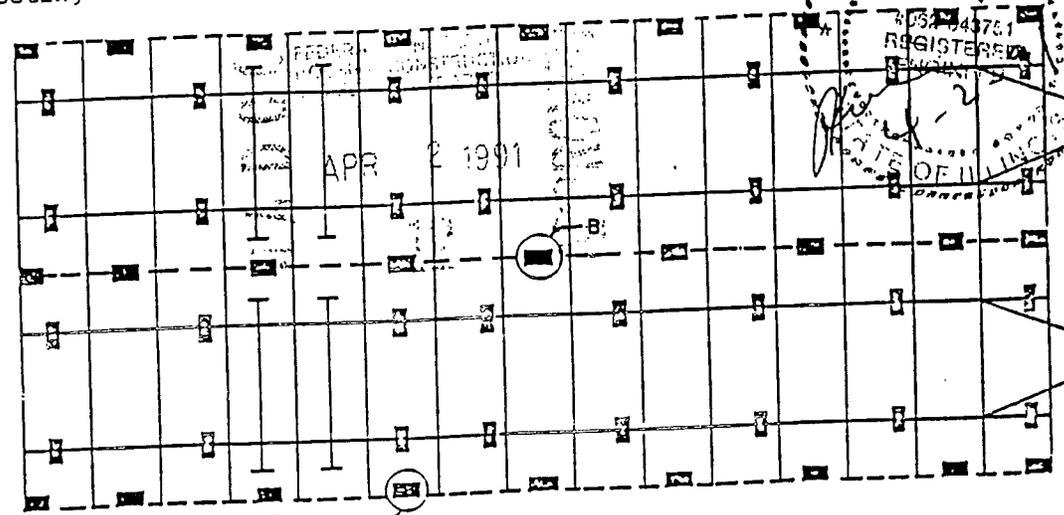
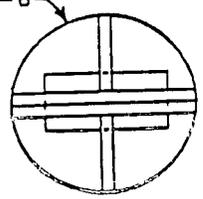
If HURRICANE TIE-DOWN STRAPS (over body type) are used, a set of blocks must be placed just inside each TIE-DOWN STRAP, directly under Rails of floor frame to prevent body sags at those points. Refer Detail A.

When Walk-A-Bay is located in sidewall, at least 2 piers should be located under edgerail-walk-a-bay joint.

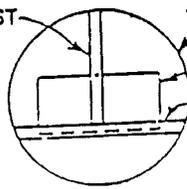
**NOTE:** If 4 or 5 axles are used, add one (1) set of concrete blocks under longitudinal perimeter floor rails on each side of mobile home approximately centered with undercarriage (axle cluster).

For required footing size chart page S-40.  
 Required Anchor spacing page S-41.  
 Required footing size for column at ridge beam chart page S-42.

DETAIL-B



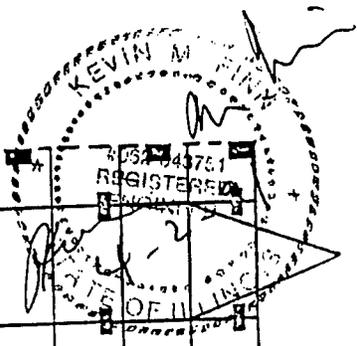
FLOOR JOIST



DETAIL-A

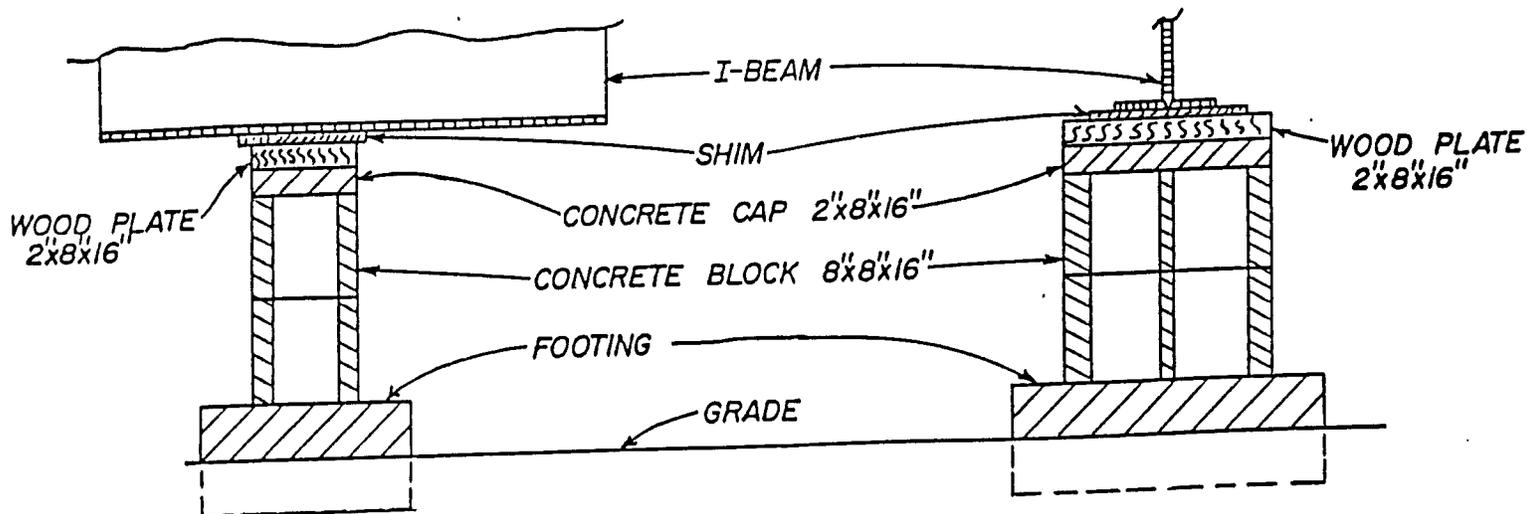
CONCRETE BLOCK

FLOOR FRAME



TYPICAL BLOCKING SUPPORT

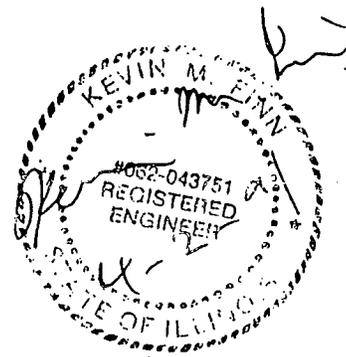
Illustrated below is a typical footing and concrete blocking arrangement. In areas where ground freezes as well as areas where ground support is soft, footings should be extended as necessary - in case of soft soil, to a depth of satisfactory bearing subsoil level. All organic material is to be removed from beneath footings.



For soil bearing conditions and required footing size see page S-15.

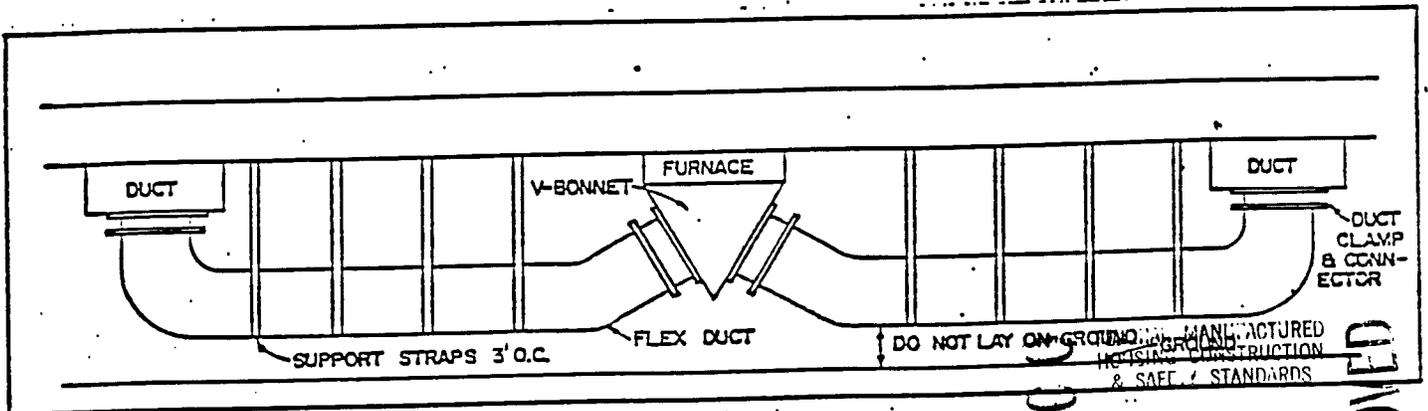
CHECK WITH LOCAL AUTHORITIES FOR SPECIFIC FOOTING, FROST LINE, SOIL CAPACITY AND OTHER LOCAL REQUIREMENTS

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## HEAT DUCT CROSSOVER

1. Connect each end of the insulated flexible duct to the metal duct connectors on each half of the home by sliding the duct over the collars. Secure duct to connectors with the ring clamps provided.
2. Tape each connection with duct tape to assure an air tight seal.
3. Support duct with metal straps as shown below. Straps should be secured to a wood frame member.



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EXTERIOR HEAT TAPE RECEPTACLE OUTLET

A 15 AMP receptacle outlet is provided on the exterior of the home, under the water heater compartment, which may be used for heat tape to protect plumbing to avoid freezing.

If heat tape is used, it shall be listed for mobile homes, and must be used in accordance with the heat tape manufacturer's instructions.

INLET WATER PRESSURE

This Mobile Home is designed for a water inlet pressure of 80 PSI maximum.

When the water pressure exceeds 80 PSI, a pressure reducing valve shall be installed at the water inlet.

MASTER COLD WATER SHUTOFF

A Master Cold Water Shutoff Full Flow Valve is to be installed in the water supply line adjacent to the home.

The Valve is to provide through flow capability equal to or greater than the minimum required water distribution piping size supplied by the valve.

GAS SUPPLY SYSTEM DESIGN PRESSURE

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The design pressure limitation for safe and effective operation of the gas piping system in this mobile home is designed for a pressure not exceeding 14 inch water column and not less than 11 inch water column for L.P. gas and not exceeding 10.5 inch water column and not less than 7 inch water column for natural gas.

DRAINING MAIN WATER LINES

To drain water lines, remove cap from drain location or open faucets and apply air pressure until all water is removed from system.

JUNCTION BOX SIZE

For straight pulls the length of the box shall not be less than eight times the trade diameter of the largest raceway.

For angle pulls the distance between each raceway entry inside the box and the opposite wall of the box shall not be less than six times the trade diameter of the largest raceway.

Note - For angle pulls if one of the raceway entries is opposite a cover the distance between the entry and the cover may be less than indicated above, but shall not be less than given in the following table:

Size of Feeder Conductors To Be Installed, Awg Or MCM	Distance, Raceway Entry To Cover, In.
4-3	2
2	2-1/2
1	3
1/0-2/0	3-1/2
3/0-4/0	4
250	4-1/2
300-350	5

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RESIDENTIAL MOBILE HOME FIXED FEEDER SUPPLY  
(BASED ON 1984 NEC)  
REQUIRED FEEDER RACEWAY SIZE AND MARKING  
FOR CONDUCTOR SIZE

When this Mobile Home is equipped with 100 Amp Maximum Load and Main Breaker or Fuse, the Feeder Raceway is sized for Copper, 75C rated conductors, Types RH, RHH, RHW without outer covering, THW or XHHW, size No. 4 Awg circuit conductors and size No. 8 Awg grounding conductor.

When this Mobile Home is equipped with 200 Amp Maximum Load and Main Breaker or Fuse, the Feeder Raceway is sized for Copper, 75C rated conductors, Types RH, RHH, RHW without outer covering, THW or XHHW, size No. 2/0 Awg circuit conductors and size No. 6 Awg grounding conductor.

TYPICAL DRYER VENTILATION

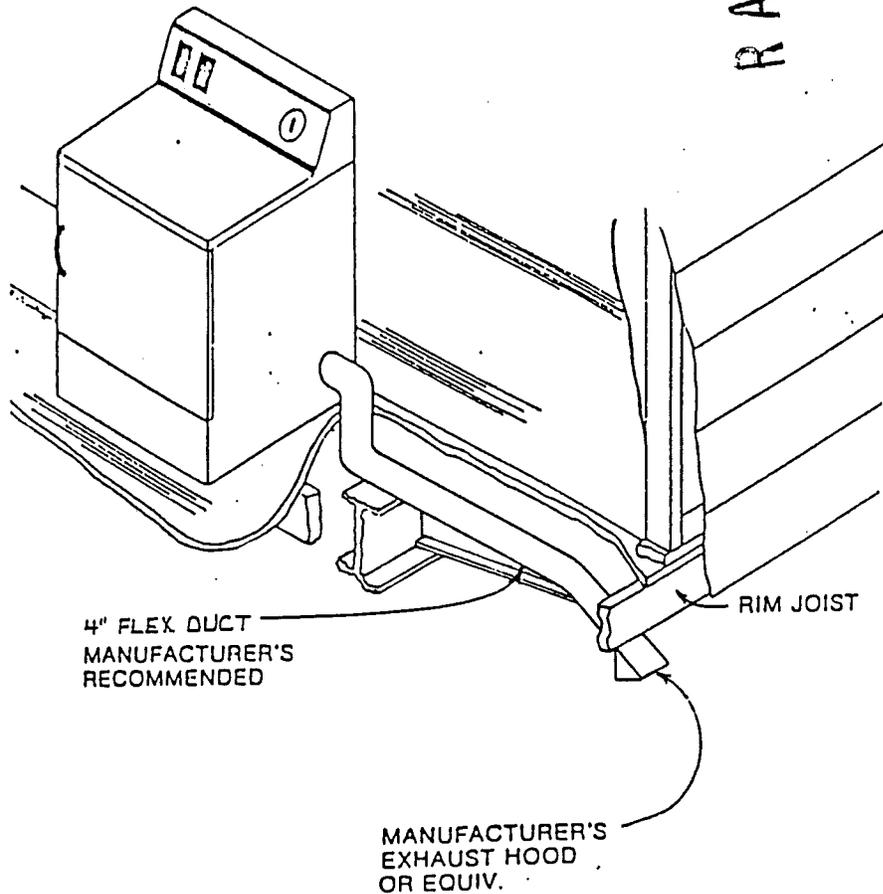
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DRYER INSTALLATION:

If your home is equipped with a clothes dryer, it must be exhausted to the outside by a moisture-lint exhaust system.

CAUTION: THIS EXHAUST SYSTEM MUST NOT TERMINATE IN THE FLOOR CAVITY OR UNDER THE HOME.

All required components and fittings are provided in the home. An opening in the floor is provided. Typical dryer exhaust connections are shown in illustration.

If your home is not equipped with a dryer, but an electrical or gas outlet is provided for one, then the opening in the floor or wall is provided. Installation of the exhaust system must be in accordance with the dryer manufacturer's installation instructions.

EXTERIOR DRYER VENT

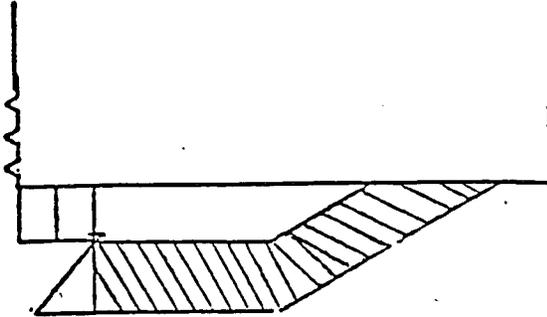


Fig. 1. Remove 2 screws on back side of 2 x 3 x 6 Doublor Vent Block.

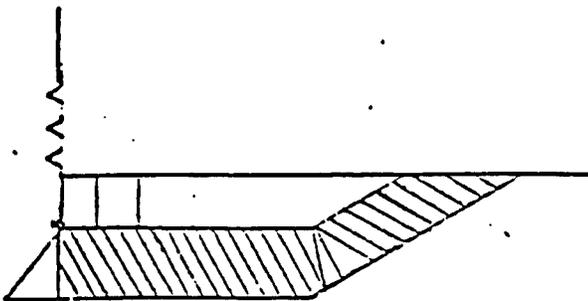


Fig. 2. Extend Dryer Vent beyond 2 x 3 x 6 Doublor Vent Block and resecure to exterior side of mobile home.

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STEEL FRAME TOUCH-UP PAINT

The steel frame on this mobile home is painted with an asphaltic base type material in compliance with Federal Mobile Home Construction and Safety standards, Paragraph 280.305.

It is recommended that Mortell #615 Asphalt Frame Paint be used for touch-up purposes.

BOTTOM BOARD MATERIAL PATCHING INSTRUCTIONS

Below are listed four different patching methods which depending on such factors as size and/or location of tear, type of tear, location of home, etc. offer the manufacturer, dealer, or home buyer a reasonable means of resealing Typar.

1. Using 3M #76 or #90 Spray Adhesive - Patches may be constructed in any shape or size utilizing scrap pieces of Typar or other suitable materials. The adhesive should be sprayed both on the patch and the affected area of the bottom board when using the #90 adhesive. The #76 adhesive needs to be sprayed on one surface only.
2. Using Con-Bond 773 (h), 2153, 1560 NH mastic or approved equal instead of 3M #90. Care should be taken to ensure complete coverage of the patch by the mastic.
3. An approved Shepherd Pressure Sensitive Tape, JF-3, (or equivalent) is available for patching the occasional small tears and cuts which occur during set up, or to affix patches made of Typar or other suitable material around the perimeter of the patch.
4. Outward Flare Tacker - An air operated tool Model LN3045 manufactured by Senco Products, Inc. Suitable for either transverse or longitudinal floor construction. It may be used either in the plant or on erection site. The patch should first be affixed to the bottom using an approved Shepherd Pressure Sensitive Tape, or equivalent, (described in method #3), to secure the perimeter and then fastened on the perimeter at 3 inch intervals. Use the staples described in Senco Bulletin M-100.

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TIE DOWN SYSTEM FOR FRAME TIES ONLY

Diagonal Frame Ties are to be per page S-41 for zone I.

If strap is present at column on marriage wall, it is to be secured per tie-down anchor instructions.

See attached "Minute Man Anchors" brochure for suggested tie down system - For Frame Ties Only.



# Minute Man anchors<sup>®</sup>

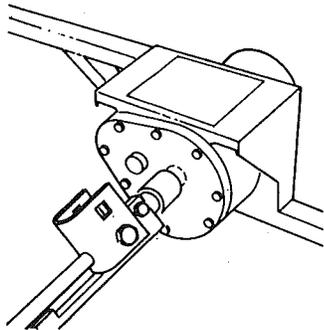


## INSTALLATION

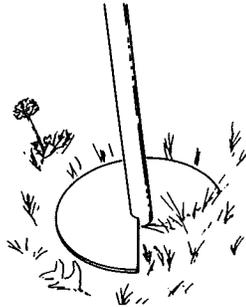
There are two basic methods of installing anchors, each equally effective in properly securing mobile homes to the ground.

### Machine Installation

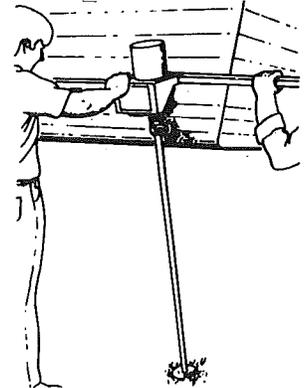
In this method, the anchor is turned the **full depth** of four feet into the ground by an anchor drive machine.



1. Attach anchor to machine.



2. Auger is placed in proper position in line with strap, and machine started.



3. Anchor should be installed at a slight angle as shown to assure head being positioned behind future skirting.

### Installation with Manual or Mechanical Post Hole Digger

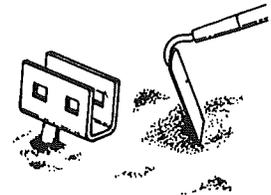
In this method, anchors can be installed with equipment available to the average home owner.



1. A hole is dug to a depth of approximately two feet in the proper position as explained under machine installation.



2. After the hole is dug to 24" depth, the anchor is turned into the ground by hand, using a rod or length of pipe for leverage.



3. After anchor is installed to **full depth**, earth is repacked, six inches at a time.

**WARNING:** Be careful to avoid underground water lines, phone lines and power lines.

PIER AND PAD SCHEDULE SINGLE WIDE AND DOUBLE WIDE 30 Psf

Soil Cap.	Pier Location	16 Feet Wide						Soil Cap.	Pier Location	16 Feet Wide					
		8 Foot O.C.			12 Foot O.C.					8 Foot O.C.			12 Foot O.C.		
		Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	Req'd Footing sq.in.	Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	Req'd Footing sq.in.			Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	Req'd Footing sq.in.	Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	Req'd Footing sq.in.
1000	Chassis Perimeter	2779	3.2	460	5181	6.0	858	1000	Chassis Perimeter	2629	3.0	435	4596	5.3	761
1500	Chassis Perimeter	2779	2.0	293	5181	3.8	547	1500	Chassis Perimeter	2529	1.9	278	4596	3.4	485
2000	Chassis Perimeter	2779	1.5	215	5181	2.8	401	2000	Chassis Perimeter	2629	1.4	203	4596	2.5	356
2500	Chassis Perimeter	2779	1.2	170	5181	2.2	315	2500	Chassis Perimeter	2629	1.1	161	4596	1.9	281
3000	Chassis Perimeter	2779	1.0	140	5181	1.8	251	3000	Chassis Perimeter	2629	.9	133	4596	1.6	232

Soil Cap.	Pier Location	28 Feet Wide (14' Single wide)						Soil Cap.	Pier Location	24 Feet Wide					
		8 Foot O.C.			12 Foot O.C.					8 Foot O.C.			12 Foot O.C.		
		Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	Req'd Footing sq.in.	Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	Req'd Footing sq.in.			Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	Req'd Footing sq.in.	Req'd Pier Cap. (lbs)	Req'd Footing sq.ft.	Req'd Footing sq.in.
1000	Chassis Perimeter	2029	2.3	336	4856	5.6	804	1000	Chassis Perimeter	1829	2.1	293	4076	4.7	675
1500	Chassis Perimeter	2029	1.5	214	4856	3.6	513	1500	Chassis Perimeter	1829	1.3	193	4076	3.0	430
2000	Chassis Perimeter	2029	1.1	157	4856	2.6	376	2000	Chassis Perimeter	1829	1.0	142	4076	2.2	316
2500	Chassis Perimeter	2029	.9	124	4856	2.1	297	2500	Chassis Perimeter	1829	.8	113	4076	1.7	249
3000	Chassis Perimeter	2029	.7	102	4856	1.7	245	3000	Chassis Perimeter	1829	.6	92	4076	1.4	205

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*Evor F. Johns*

18' WIDE

Pier Hght

Zone I

16 in	15 ft
24 in	13 ft
32 in	12 ft
40 in	11 ft
48 in	10 ft

16' WIDE

Pier Hght

Zone I

16 in	14 ft
24 in	12 ft
32 in	10 ft
40 in	9 ft
48 in	8 ft

14' WIDE

Pier Hght

Zone I

16 in	15 ft
24 in	14 ft
32 in	12 ft
40 in	11 ft
48 in	10 ft

24' WIDE

Pier Hght

Zone I

16 in	14 ft
24 in	12 ft
32 in	10 ft
40 in	9 ft
48 in	8 ft

24' WIDE  
(PORCH MODEL)

Pier Hght

Zone I

16 in	14 ft
24 in	12 ft
32 in	10 ft
40 in	9 ft
48 in	8 ft

FEDERAL MANUFACTURED  
HOUSING CONSTRUCTION  
& SAFETY STANDARDS

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28' WIDE

Pier Hght

Zone I

16 in	15 ft
24 in	14 ft
32 in	12 ft
40 in	11 ft
48 in	10 ft

28' WIDE  
(PORCH MODEL)

Pier Hght

Zone I

16 in	15 ft
24 in	14 ft
32 in	12 ft
40 in	11 ft
48 in	10 ft



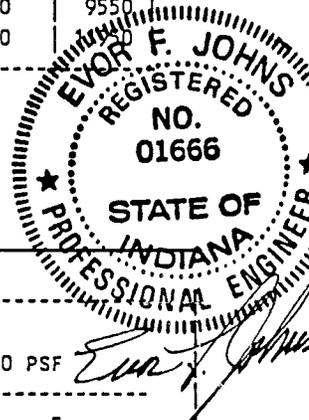
*Evor F. Johns*

A D D O

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# MATING LINE RIDGE BEAM COLUMN FOUNDATIONS

Unit Width	Roof Live Load	Pier Loads (lbs) Based On Column Spacing (ft)						
		5	10	15	20	25	30	35
24 FT 140 IN	20	900	1750	2650	3500	4400	5250	6150
	30	1150	2350	3500	4650	5850	7000	8150
	40	1450	2900	4400	5850	7300	8750	10200
28 FT 164 IN	20	1050	2050	3100	4100	5150	6150	7200
	30	1350	2750	4100	5450	6850	8200	9550
	40	1700	3400	5150	6850	8550	10250	



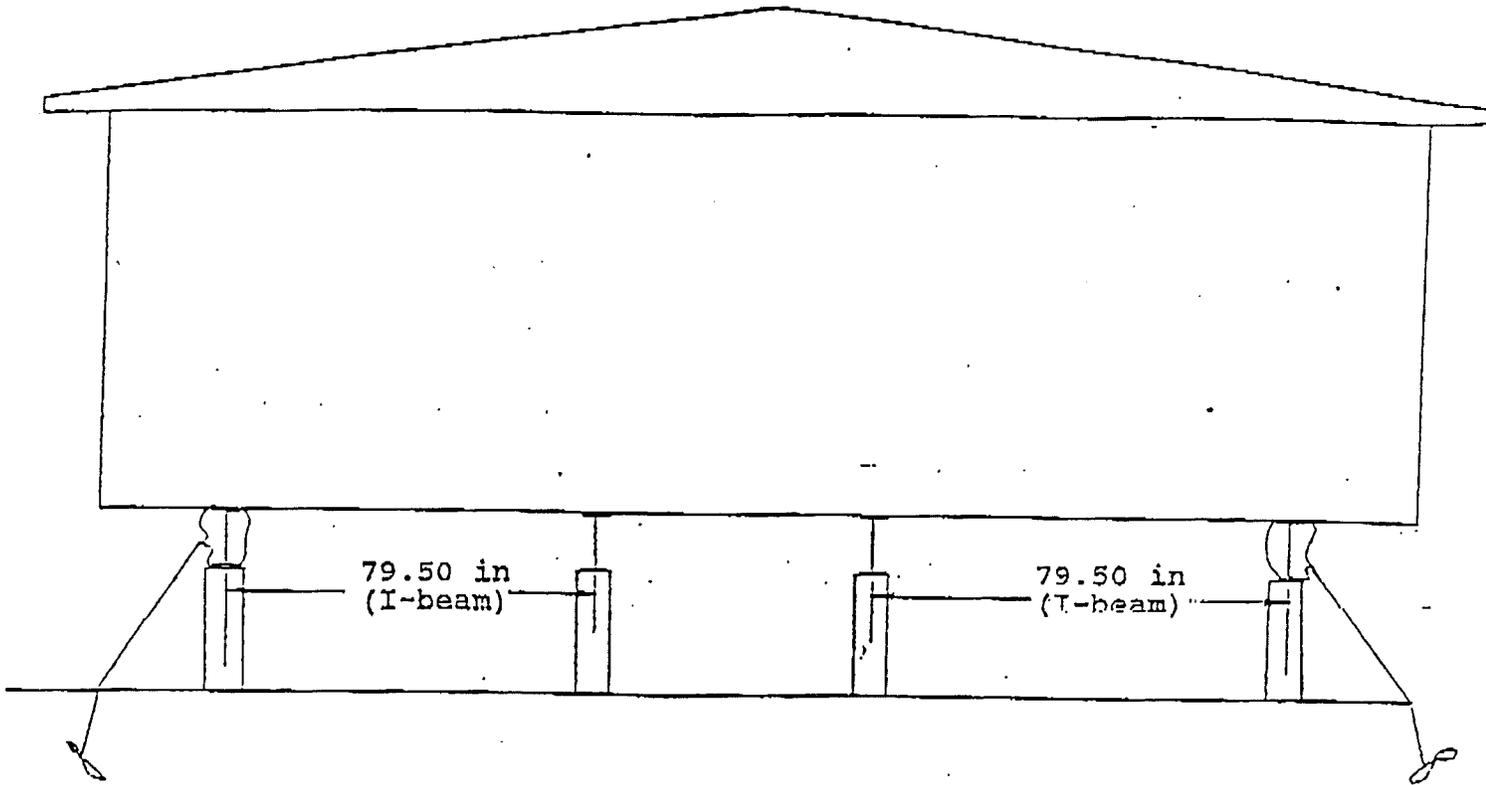
\*\*\* Minimum Footing Size Based On Soil Capacity \*\*\*

Pier Capacity (lbs)	1000 PSF		2000 PSF		3000 PSF		4000 PSF		
	Length	Width	Length	Width	Length	Width	Length	Width	
600	10	X	10	7	X	7	5	X	5
800	12	X	12	8	X	8	6	X	6
1000	13	X	13	9	X	9	7	X	7
1500	16	X	16	11	X	11	9	X	9
2000	18	X	18	12	X	12	10	X	10
2500	20	X	20	14	X	14	11	X	11
3000	22	X	22	15	X	15	12	X	12
3500	24	X	24	16	X	16	13	X	13
4000	26	X	26	18	X	18	14	X	14
4500	27	X	27	19	X	19	15	X	15
5000	29	X	29	20	X	20	16	X	16
5500	30	X	30	21	X	21	17	X	17
6000	32	X	32	22	X	22	17	X	17
6500	33	X	33	22	X	22	18	X	18
7000	34	X	34	23	X	23	19	X	19
7500	35	X	35	24	X	24	19	X	19
8000	36	X	36	25	X	25	20	X	20
8500	38	X	38	26	X	26	21	X	21
9000	39	X	39	26	X	26	21	X	21
9500	40	X	40	27	X	27	22	X	22
11000	43	X	43	29	X	29	24	X	24
12000	45	X	45	30	X	30	25	X	25
13000	46	X	46	32	X	32	26	X	26
14000	48	X	48	33	X	33	27	X	27
15000	50	X	50	34	X	34	27	X	27
16000	51	X	51	35	X	35	28	X	28
17000	53	X	53	36	X	36	29	X	29
18000	55	X	55	37	X	37	30	X	30
19000	56	X	56	38	X	38	31	X	31
20000	58	X	58	39	X	39	32	X	32

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TYPICAL TIE DOWN DOUBLE WIDE



Anchor and anchor head  
must have an ultimate  
strength of 4725 lbs.



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HOUSING CONSTRUCTION  
& SAFETY STANDARDS

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6

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VENTILATION IMPROVEMENT INFORMATION SHEET

MEDALLION MANUFACTURED HOMES CORP. in compliance with Section 3280.710 of the FMHCSS which requires each manufacturer to offer an OPTIONAL Venting or Ventilation System to improve the air quality to each prospective home buyer, has installed as STANDARD a COLEMAN P.O.S. (Positive Operating System) in ALL models. Other ventilation systems offered at extra charge include the COLEMAN BLEND-AIR SYSTEM and Wall Mounted Ventilation Fans. The manufacturers installation instructions for these systems have been included in the following pages.

NOTE: It is the responsibility of the dealer to deliver to the prospective purchaser this Ventilation Improvement Sheet which describes the ventilation option(s) included and offered.

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HOUSING CONSTRUCTION  
& SAFETY STANDARDS  
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REVISED 1-2-90

<i>Medallion</i>	MANUFACTURED HOMES CORP. <small>P.O. BOX 1024, WATERTOWN, SD 57201</small>	SECTION	PAGE
		S	44

## BLEND AIR™ ENVIRONMENTAL SYSTEM ACCESSORY 3400-6601

U.S. PATENT PENDING

### IMPORTANT NOTICE

These instructions are for the use of qualified individuals specially trained and experienced in the 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

**IMPROPER INSTALLATION MAY DAMAGE EQUIPMENT, CAN CREATE A HAZARD AND WILL VOID THE WARRANTY.**

### NOTE

*The words "Shall" or "Must" indicate a requirement which is essential to satisfactory and safe product performance.*

*The words "Should" or "May" indicate a recommendation or advice which is not essential and not required but which may be useful or helpful.*

### CONTENTS OF PACKAGE

Inspect the parts for any evidence of shipping damage. If damage is found, notify freight carrier and file claim.

1. Roof Cap Assembly
2. Blower Assembly
3. Two Plastic Clamps
4. Fuse Box with 10 feet of 1/2 inch flexible conduit, 4 feet of 3/8 inch flexible conduit and wiring
5. Ceiling collar
6. Damper Assembly
7. Ten feet of 5 inch Class 1 Flexible Duct
8. Packet of 9 (No. 10 x 1/4") Sheet Metal Screws, a Strain Relief and a Plastic Wire Clamp

9. Blend Air Plaque with Screws
10. Wiring Diagram and Important Sticker
11. Warranty and Registration Card

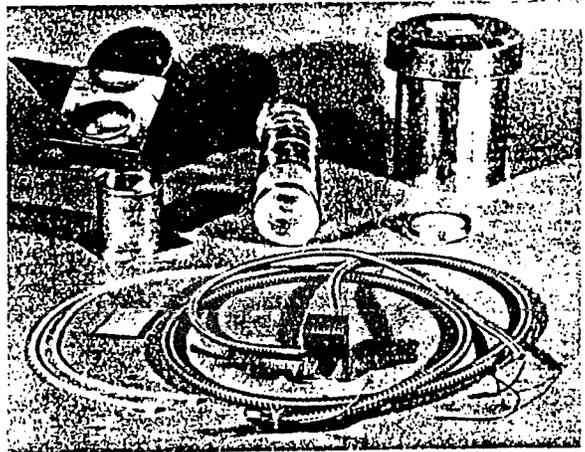


FIGURE 1

### APPLICATION

This device is primarily intended for installation at the manufactured housing plant and designed only for use with the Coleman 3400-800 series downflow electric furnace. The Coleman Blend Air Environmental System will automatically provide fresh air to the living space and outside air to the attic space. The attic must be vented to the outside at each end of the manufactured home, either at the roof or under the eave, for the air to move through the attic. This venting must have a minimum of 35 square inches of free open area at each end of the manufactured home. See figure 2. Make sure the vents cannot be restricted by loose fiberglass or blown in insulation.

The air induction blower is wired in parallel with the furnace blower; therefore, whenever the furnace blower runs,

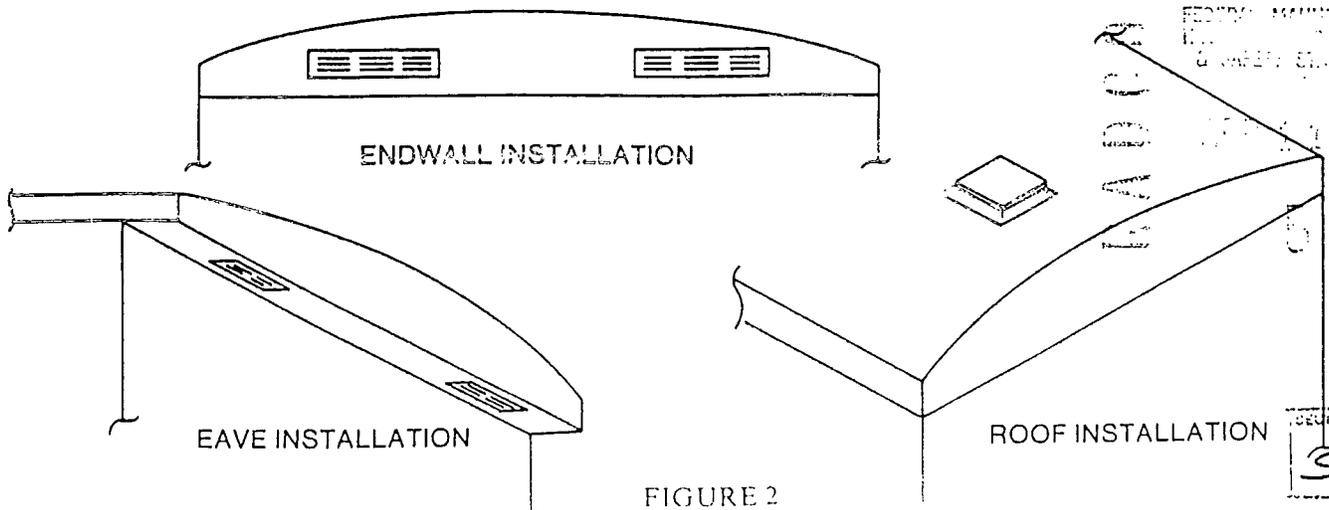


FIGURE 2

FEDERAL MANUFACTURED HOUSING CORPORATION

TECHNICAL FILE

544A

# INSTALLATION INSTRUCTIONS

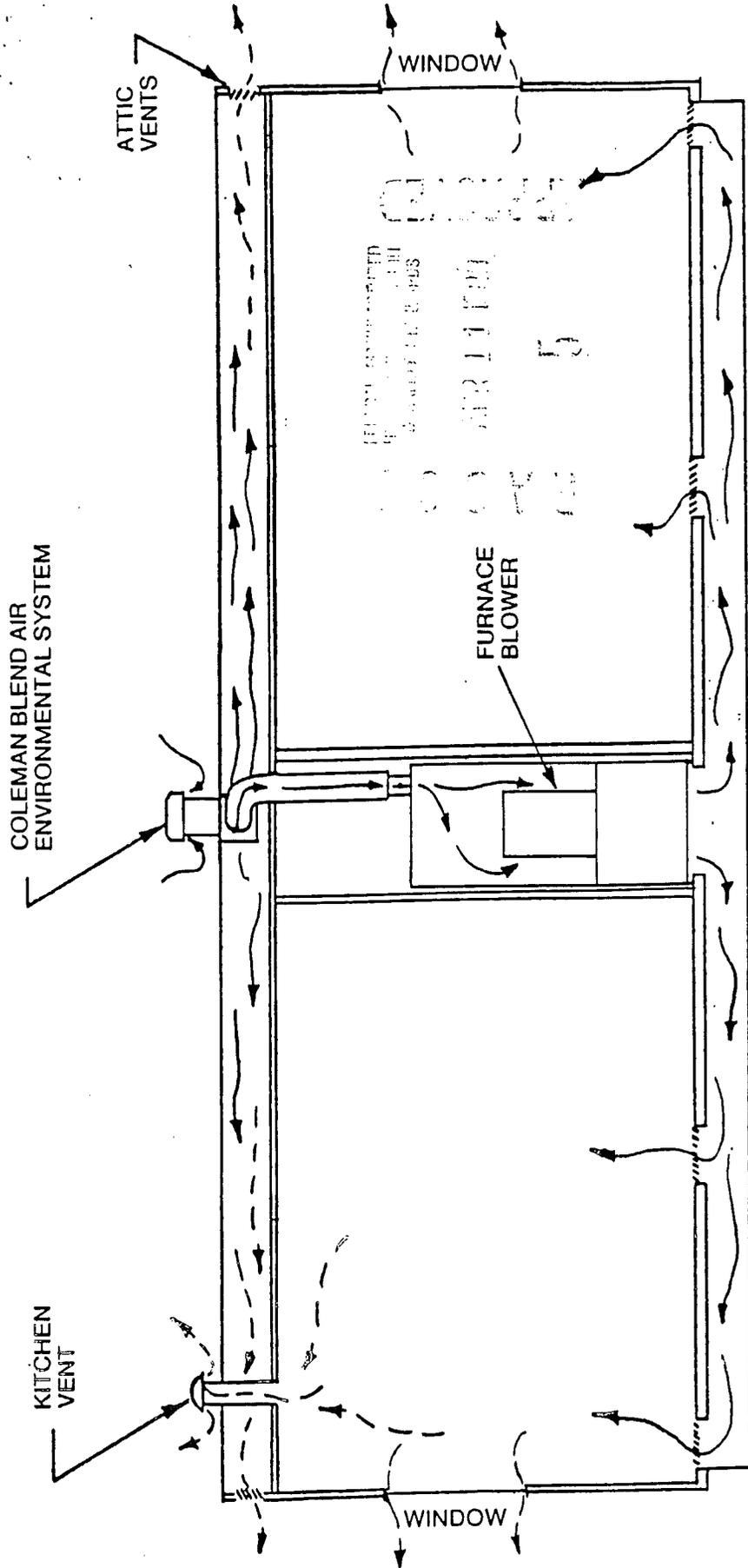


FIGURE 3

- DRY AIR INTRODUCED INTO ATTIC BY THE COLEMAN BLEND AIR ENVIRONMENTAL SYSTEM.
- FRESH DRY AIR INTRODUCED INTO HOME BY THE COLEMAN BLEND AIR ENVIRONMENTAL SYSTEM.
- MOISTURE LADEN AIR LEAVING ATTIC DUE TO PRESSURIZATION EFFECT OF THE COLEMAN BLEND AIR ENVIRONMENTAL SYSTEM.
- STALE MOISTURE LADEN AIR LEAVING HOME DUE TO PRESSURIZATION EFFECT OF THE COLEMAN BLEND AIR ENVIRONMENTAL SYSTEM.

DATE: 5/448

the air induction blower will also run. The furnace fresh air damper assembly opens when the induction and furnace blower run and closes when the blowers stop.

If, for some reason, the homeowner desires to block the damper shut for any length of time, a screw hole has been provided in the furnace fresh air damper assembly which allows a screw to be inserted and "lock" the damper closed. The homeowner must remember to remove the screw when he wants the system to be fully functional again. See page 6 figure 13.

The Blend Air Environmental System electric furnace A/C-H/P accessory 3400-6611 contains an automatic solenoid damper control which provides the home owner the option of shutting off the warmer outside air to the furnace during A/C operation.

### IMPORTANT

When an air conditioning or Heat Pump system is installed in an electric furnace with the Blend Air system, the Blend Air electric furnace A/C-H/P accessory 3400-6611 must also be installed. Failure to do so will cause improper operation of the Blend Air system.

If the home owner does not have air conditioning connected to the furnace or the home's ductwork but has a continuous fan switch on his furnace, then he could circulate air in both the attic and the home by turning this switch "ON".

This Blend Air Environmental System is not designed to work with manufactured housing electric upflow furnaces.

### NOTE

*When the A/C-H.P. Blend Air Environmental System control package is also being installed on the furnace with this 3400-6601 package, then the A/C-H.P. control package installation instructions should also be read before any installation is started on the Blend Air Environmental System.*

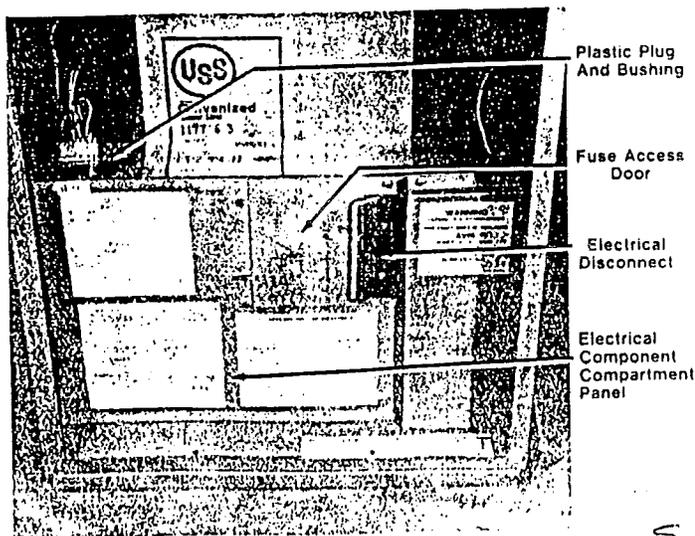


FIGURE 4

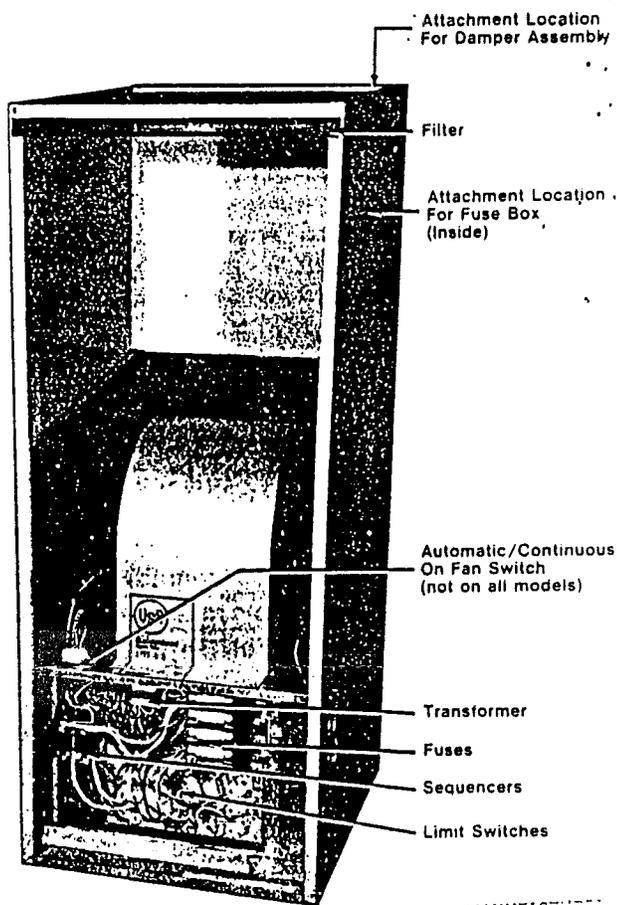


FIGURE 5

### INSTALLATION PROCEDURE

#### A. Prepare the furnace.

1. Remove the furnace door panel.
2. Remove furnace electrical disconnect.
3. Remove filter from top of furnace.
4. Locate damper assembly attachment holes at right, back corner of furnace top. See figure 5. The one inch diameter hole in the filter stop is for routing the 1/2 inch flexible conduit through when going from the fuse box to the air induction blower in the attic.

Earlier production electric furnaces will not have these holes and they will have to be put in by the installer:

- a. Use the ceiling collar as a template.
- b. Set ceiling collar in right, rear corner of furnace top with the large hole of the ceiling collar towards the center of the furnace return air opening. Place the ceiling collar in such a way that neither the furnace flange nor the filter stop blocks off any of the 5 inch opening of the ceiling collar.
- c. Mark the screw hole in the furnace flange and the two screw holes in the filter stop. See figure 5.

5 44C

# INSTALLATION INSTRUCTIONS

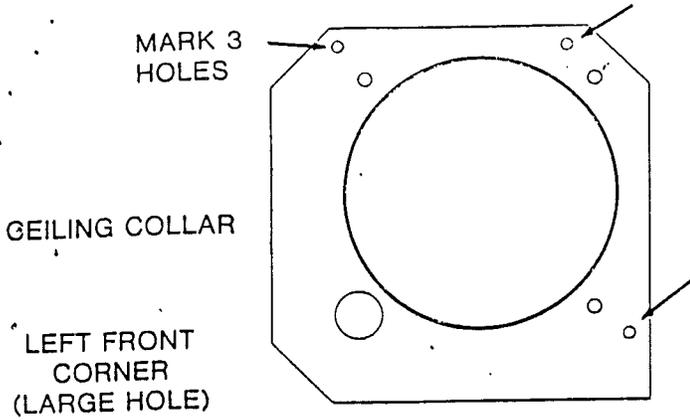


FIGURE 6

- d. Set ceiling collar aside for later use.
- e. Remove filter stop from furnace. See figures 7 and 8.

- f. Mark center locations of 1/2 inch flexible conduit and wiring passage holes in the filter stop. See figure 9 for hole locations and sizes. The 9/16 hole will be used if and when the A/C or heat pump damper control accessory is installed. And, it is easier to cut this hole now, than later trying to do it with various parts in the way at the top, back of the furnace.

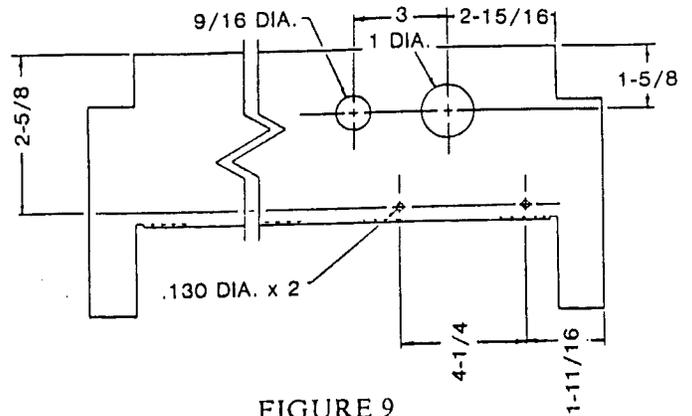


FIGURE 9

- g. Drill sheet metal screw pilot holes in filter stop and furnace flange. The two larger holes can be made with Greenlee Knock-Out punches.
- h. Reinsert filter stop into furnace.
- i. Drill 3 sheet metal screw pilot holes in right side of the furnace for attaching fuse box assembly. See figure 10 for location of holes.

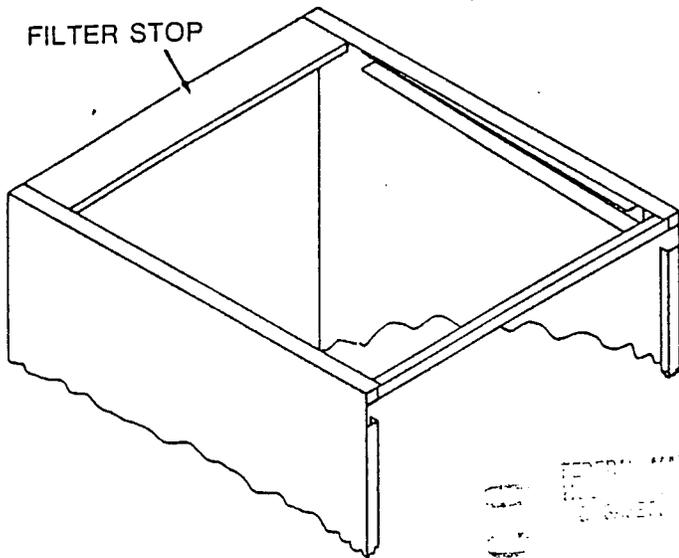


FIGURE 7

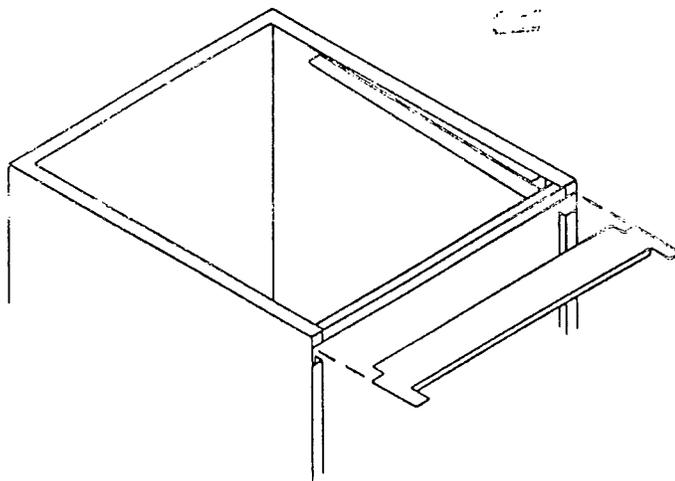


FIGURE 8

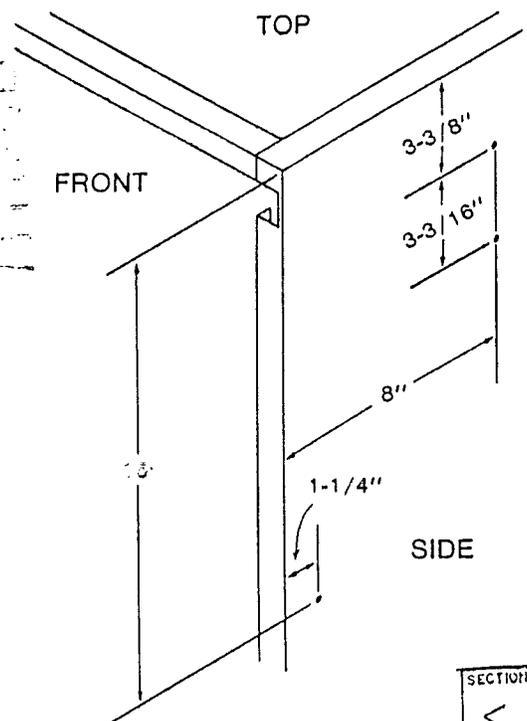


FIGURE 10

- Open furnace electrical component compartment panel.

## DANGER — SHOCK HAZARD

WHEN FITTING THE BLEND AIR ENVIRONMENTAL SYSTEM TO AN INSTALLED FURNACE, FOR PERSONAL SAFETY BE SURE TO TURN THE ELECTRICAL POWER "OFF" AT THE HOUSEHOLD SERVICE BOX AND AT THE FURNACE DISCONNECT BEFORE ATTEMPTING INSTALLATION.

- Remove the plastic plug from the 7/8 inch hole next to the blower plug in the furnace electrical component compartment top. See figure 4.

### B. Attach Fuse Box Assembly to Furnace

- Locate mounting holes on inside, right side of furnace casing. See Figure 10.
- Attach the fuse box at the 2 uppermost holes in the furnace casing with 2 blunt end sheet metal screws provided. Fuse holders should be facing towards the front of the furnace. See Figure 11.
- Route the smaller flexible conduit from the fuse box over to the screw hole near the furnace door opening. See Figure 10. Use plastic wire clamp provided and secure conduit to side of furnace at this location with remaining blunt end sheet metal screw. End of smaller conduit should terminate about one inch above right side of furnace electrical component compartment. Excess of conduit should be looped between the plastic clamp and the fuse box. See Figure 11.

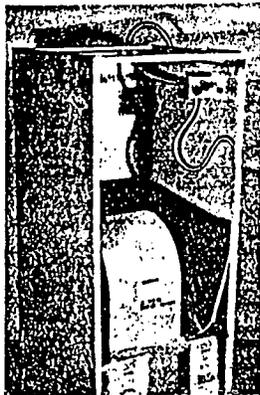


FIGURE 11

- Remove the plastic bushing from the 7/8 inch hole next to the blower plug in the furnace electrical component compartment top. See Figure 4. Slip the plastic bushing around the orange and blue wires coming from the smaller flexible conduit and slide it over to the right of the furnace.

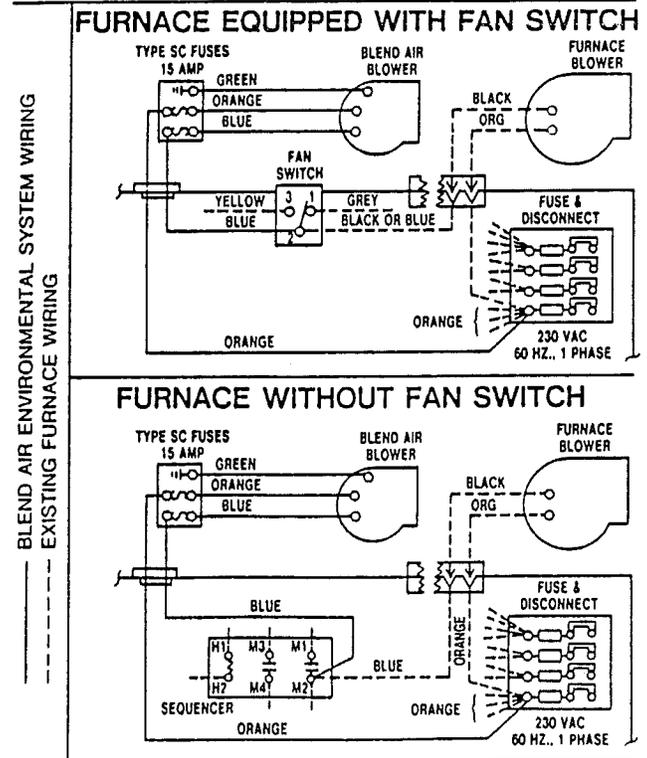
### NOTE

*This plastic bushing is needed for other furnace accessories that may be applied in the future. Do not discard it.*

- Route the orange and blue wires from the smaller flexible conduit over to the 7/8 inch hole next to the blower plug of the furnace's electrical component compartment. Pass the wires through the 7/8 inch hole and attach the orange wire to a bottom terminal of the fuse block. One of the orange wires may have to be removed and attached to the piggy-back spade terminal on the orange conduit wire to make room for attaching the orange conduit wire to the fuse block terminal.
- Attach the blue wire to either the fan switch or M2 of the sequencer per wiring diagram in figure 12.

### NOTICE:

THIS FURNACE IS EQUIPPED WITH AND WIRED AS SHOWN BELOW FOR COLEMAN 3400-6601 "BLEND AIR ENVIRONMENTAL SYSTEM". WHEN AN A/C OR H/P SYSTEM IS ADDED THIS WIRING CHANGES. WHEN INSTALLED, A/C-H/P WIRING DIAGRAM SHOULD COVER THIS ONE.



### DANGER: SHOCK HAZARD

TURN OFF ELECTRICAL POWER BEFORE SERVICING TO PREVENT POSSIBLE DAMAGE TO EQUIPMENT AND POSSIBLE PERSONAL INJURY.

ONLY THE FOLLOWING U.L. LISTED ELECTRIC FURNACES MAY BE USED WITH THE COLEMAN "BLEND AIR ENVIRONMENTAL SYSTEM": 3400-800 SERIES.

\*U.S. PATENT PENDING

1972-397 (10-83) P1

FIGURE 12

- Secure the orange and blue wires in the 7/8 inch hole with the strain relief provided.
- Replace the furnace's electrical component compartment panel. **DO NOT REPLACE THE ELECTRICAL DISCONNECT AT THIS TIME.**

# INSTALLATION INSTRUCTIONS

9. Remove the conduit connector from the end of the larger flexible conduit and set it aside. It will be used later in attaching the conduit to the air induction blower.
10. Route the large flexible conduit up through the one inch hole in the filter stop.

## C. Attach Blend Air Damper Assembly to Furnace

1. Orient the Blend Air damper over the pilot screw holes at back, right corner of furnace top and attach with 3 sheet metal screws provided. The 3 holes in a vertical column on the damper assembly tube should be toward the left of the furnace. See Figure 13.

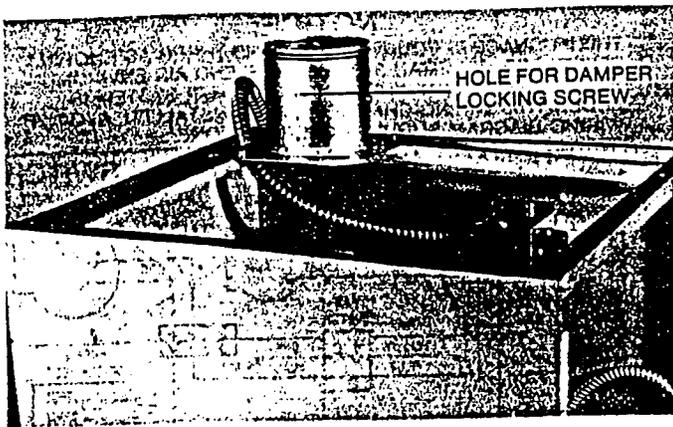


FIGURE 13

2. Put filter back into furnace.

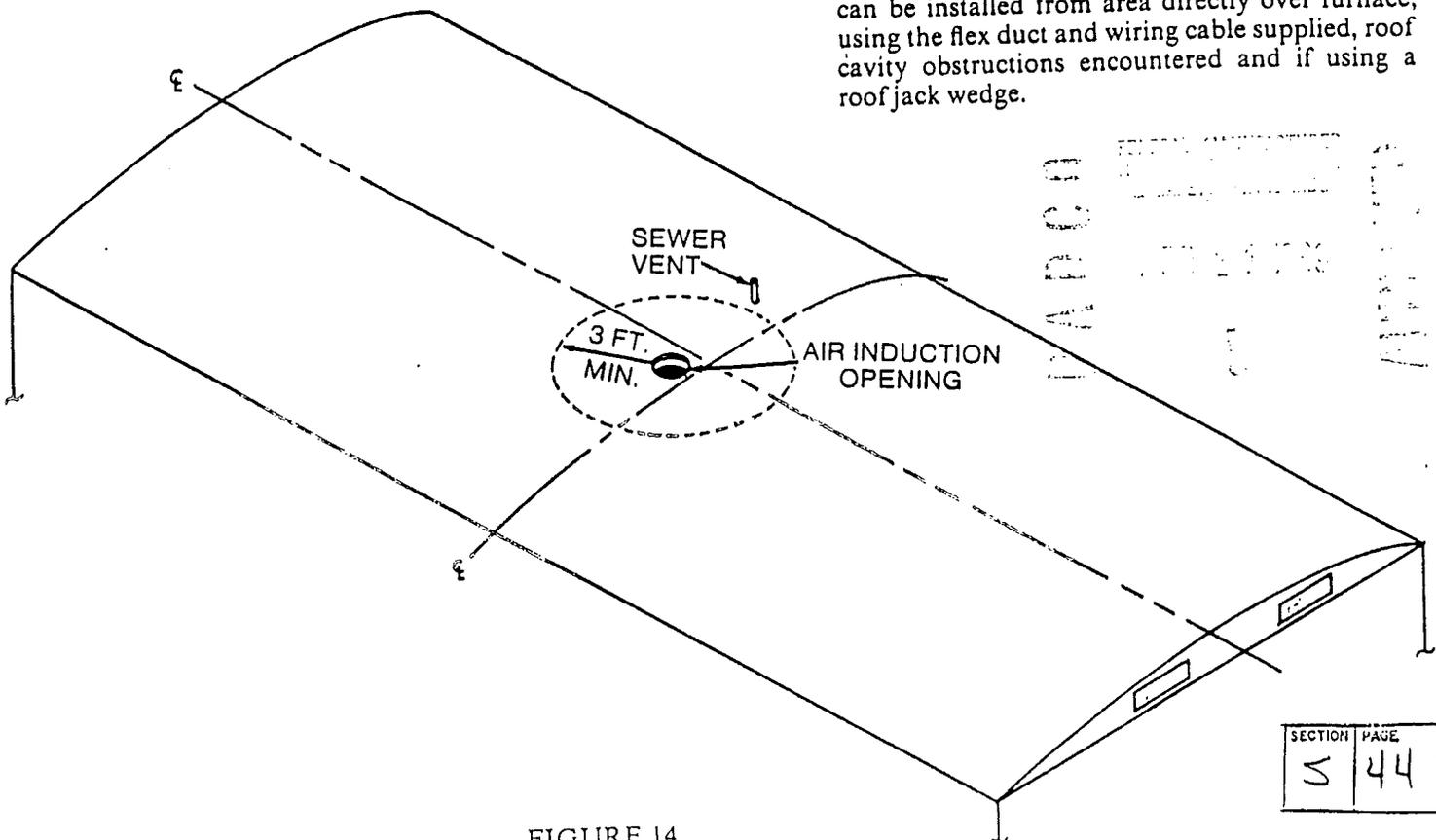


FIGURE 14

## IMPORTANT

WHEN CUTTING INTO THE ROOF AND CEILING CAVITY, EXTREME CARE SHOULD BE TAKEN NOT TO DAMAGE ANY ELECTRICAL WIRING THAT MAY BE HIDDEN UNDERNEATH THE ROOF OR BEHIND THE CEILING STRUCTURES.

## WARNING

CONTACT WITH HOT ELECTRICAL WIRING COULD CAUSE EQUIPMENT DAMAGE, FIRE, PERSONAL INJURY OR DEATH.

## D. Locate And Cut Ceiling Opening For Fresh Air Duct and Flexible Conduit

1. Locate 6-1/2 inch diameter ceiling hole as close as possible to being directly above the damper assembly. The 6-1/2 inch hole location will usually have to be adjusted to miss ceiling joists or other obstructions in roof cavity.
2. Once location has been selected, mark the 6-1/2 inch hole on the ceiling.
3. Cut the 6-1/2 inch diameter hole through the ceiling.

## E. Locate And Cut Air Induction Roof Opening

1. The air induction roof opening shall be no closer than 3 feet to any roof opening. (e.g. sewer vent, bathroom exhaust, etc.)
2. About 4 to 5 feet is the farthest distance the Blend Air Environmental System blower and roof cap can be installed from area directly over furnace; using the flex duct and wiring cable supplied, roof cavity obstructions encountered and if using a roof jack wedge.

3. The opening should be located towards the center of the home's roof.
4. The opening should be located between rafters.
5. Mark the selected location and cut an 11 inch diameter hole through the roof and into the roof cavity. See figure 14.

**F. Install Roof Jack Wedge**

If the pitch of the roof is such that it requires the installation of a roof jack wedge, use the installation instructions packed with the wedge.

**G. Install The Flex Duct, Conduit And Blower Assembly**

1. Route the 5 inch flex duct from the air induction roof opening over to the 6-1/2 inch ceiling hole. Pass enough 5 inch duct through the ceiling hole to reach the furnace damper site.
2. Route the larger flexible conduit through the one inch hole in the ceiling collar from the side opposite the 5 inch diameter flange. This will allow the flange to fit up into the ceiling.
3. Continue routing the conduit on up through the ceiling hole and over to the air induction hole in the roof.
4. Slip the ceiling collar over the flex duct. Compress the flex duct, above the furnace, back to the ceiling opening. Turn the compressed flex duct sideways and pull it through the ceiling collar so the ring of the ceiling collar will fit up into the ceiling hole. See figure 15.

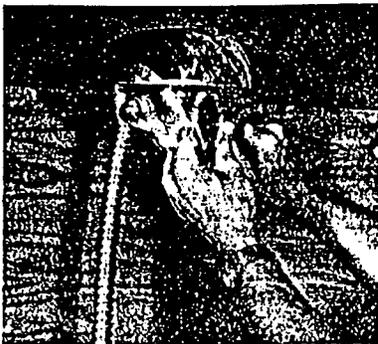


FIGURE 15

5. Attach the ceiling collar to the ceiling.
6. Pull the flexible duct down onto the damper assembly.
7. Secure the flexible duct to the damper assembly with one of the plastic clamps provided. Excess of the plastic clamp may be cut off.

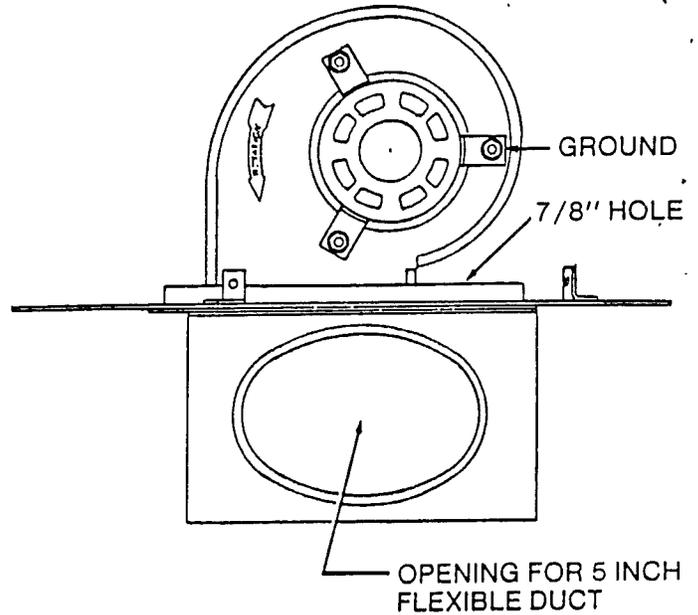


FIGURE 16

8. Pull flexible conduit up through roof air induction hole and clamp the conduit connector back onto the end of the flexible conduit.
9. Route electrical wires and conduit up through 7/8 inch hole behind blower housing. See fig. 16.
10. Secure flexible conduit to the 7/8 inch hole in the blower assembly. See figure 17.

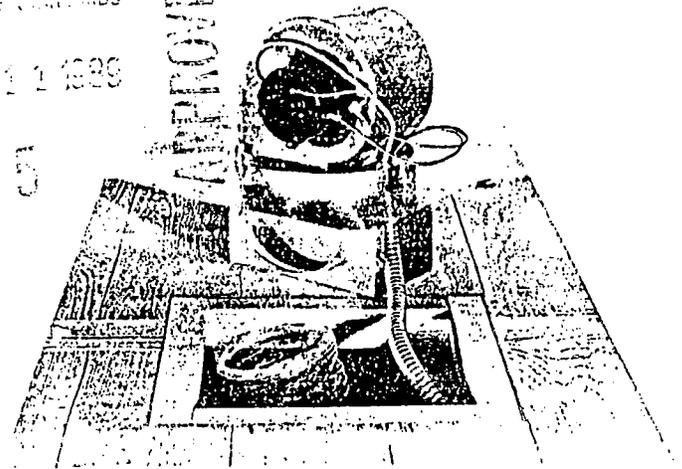


FIGURE 17

FEDERAL MANUFACTURED HOUSING SYSTEMS  
 APPROVED  
 APR 11 1989

# INSTALLATION INSTRUCTIONS

11. Plug the two electrical wires into the motor.
12. Attach the green ground wire from the conduit to the motor mount. See figure 16.
13. Slip flex duct over flex duct collar on blower assembly and secure with remaining plastic clamp. Excess of plastic clamp may be cut off. See figure 18.

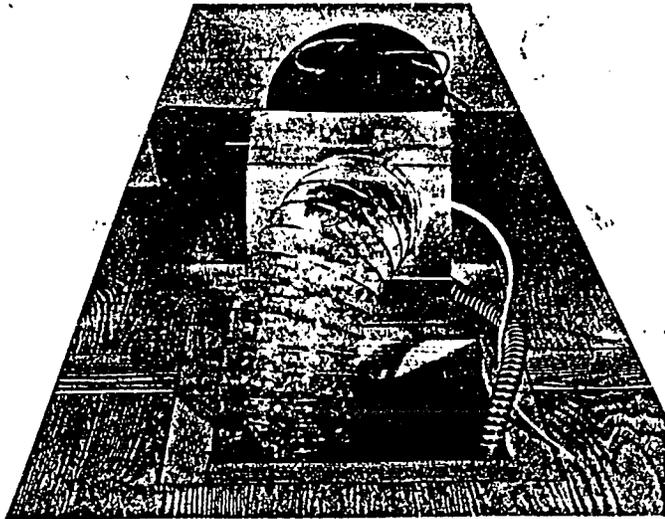


FIGURE 18

14. Insert blower assembly into opening in the roof, caulk around under roof flange to provide a rain tight seal, then secure roof flange to the roof or to a roof jack wedge if used.
15. Attach roof cap to blower assembly. Use the remaining 3 screws from the packet.

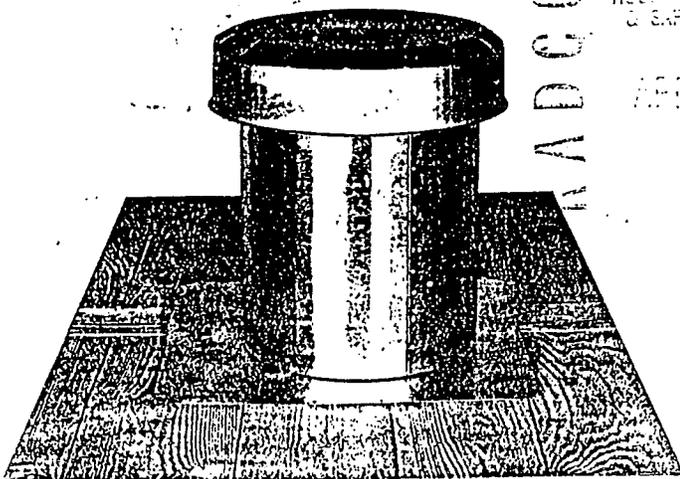


FIGURE 19

## SYSTEM CHECK OUT PROCEDURE (heating only application)

1. Set wall thermostat to the lowest temperature setting.
2. If the furnace has a fan switch, set it to AUTO.

3. Reinstall the furnace electrical disconnect.
4. Replace the furnace door.
5. Set the wall thermostat above room temperature. Then when the furnace sequencer closes the #1 contacts:
  - a. Heater element should start heating up.
  - b. Furnace blower should start running.
  - c. Blend Air Environmental System blower should start running.
  - d. Outside air should blow through attic.
  - e. Damper assembly should open.
  - f. Outside air should be drawn into furnace's return air stream.
6. Turn the wall thermostat to its lowest temperature setting. Then when the furnace sequencer opens the #1 contacts:
  - a. All heater elements should be off.
  - b. Furnace blower should turn off.
  - c. Blend Air blower should turn off.
  - d. Damper assembly should close.
7. If furnace has a fan switch:
  - a. Remove furnace door, turn fan switch "ON" and put door back on furnace.
    1. Furnace blower should run.
    2. Blend Air blower should run.
    3. Outside air should blow through the attic.
    4. Damper assembly should open.
    5. Outside air should be drawn into furnace's return air stream.
  - b. Remove furnace door, turn fan switch "OFF" and put door back on furnace.
    1. Furnace blower should turn off.
    2. Blend air blower should turn off.
    3. Damper assembly should close.
8. Set the wall thermostat to the desired "living space" temperature.

## INSTALLER

1. Place wiring diagram packed with Blend Air Environmental System on furnace side wall between the newly attached fuse box and front right corner of furnace casing.
2. Place "IMPORTANT" sticker referencing A/C-H/P application on the furnace side wall next to the Blend Air wiring diagram installed in step one above.
3. For customer accessibility: Tape the Blend Air Environmental System Installation Instructions, Warranty and Customer Registration Card to outside of furnace door panel.

**POSITIVE OPERATING SYSTEM**

7681-8091

**IMPORTANT NOTICE**

These instructions are for the use of qualified individuals specially trained and experienced in the installation of this type equipment and related system components.

**WARNING**

**IMPROPER INSTALLATION MAY DAMAGE EQUIPMENT AND CREATE A HAZARD RESULTING IN EXPLOSION, FIRE OR ASPHYXIATION.**

**NOTE**

The words "Shall" or "Must" indicate a requirement which is essential to satisfactory and safe product performance. The words "Should" or "May" indicate a recommendation or advice which is not essential and not required but which may be useful or helpful.

**CONTENTS OF PACKAGE:**

- 1) Installation Instructions  
2) Fresh Air Intake Assemblies (6)  
3) Plastic Wire Ties (12)  
4) 50' of 5" Dia. Insulated Duct  
5) Damper Tubes (6)  
6) Sheet Metal Screws (6)

**APPLICATION:**

This accessory is U.L. listed for use with Coleman Series 4000, 7600, 7700, 7900, 8800, or 8900 fuel burning furnaces and 3400 Series electric furnaces. The accessory provides a means of introducing fresh air into the furnace which is then heated and circulated in the home through the duct system. The outside air is induced into the furnace compartment by the suction of the furnace blower and will introduce 30-50 CFM of fresh air. The damper swings open only when the furnace blower runs preventing loss of conditioned air migration.

**WARNING**

**DISCONNECT ALL ELECTRICAL POWER TO THE MOBILE HOME AT THE MAIN ELECTRICAL PANEL BEFORE CUTTING INTO THE ROOF AND CEILING CAVITY. CONTACT WITH HOT ELECTRICAL WIRES COULD CAUSE EQUIPMENT DAMAGE, FIRE, PERSONAL INJURY OR DEATH. IF ALTERNATE SOURCE OF POWER IS NOT AVAILABLE USE SELF POWERED TOOLS OR MANUALLY OPERATED HAND TOOLS TO CUT OPENINGS.**

**IMPORTANT**

**WHEN CUTTING INTO ROOF AND CEILING AREA EXTREME CARE SHOULD BE TAKEN NOT TO DAMAGE ANY ELECTRICAL WIRING THAT MAY BE HIDDEN UNDERNEATH THE ROOF OR BEHIND THE CEILING.**

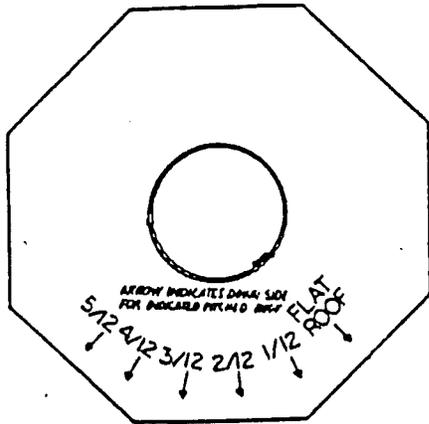
**INSTALLATION INSTRUCTIONS: (See Figure)**

- 1) Fresh air intake on the roof must be located at least 3 feet from any roof opening (eg.; roof jack, sewer vent, bathroom exhaust, etc.)
- 2) Cut a 7" diameter opening in the roof.
- 3) Cut duct to desired length and attach the duct to the 5" diameter tube with a plastic tie.
- 4) Place the fresh air intake flashing over the 7" diameter opening in the roof. Position the flashing so that the arrow on the flashing which matches the pitch of roof is pointed toward the downslope of the pitch. Secure the flange to the roof with long sheet metal screws and adequately seal it to make it water tight. The cap on the fresh air intake may then be rotated until the cap is in a level position.
- 5) To prevent cap rotation, drill 1/8" dia. hole through bead in fresh air intake tube and install sheet metal screw.
- 6) Route the flexible duct in the ceiling cavity.
- 7) Cut a 7" diameter hole in the furnace compartment ceiling above the location where the damper will be on top of the furnace.
- 8) On gas furnaces, cut out the 5" diameter knock-out on top of the furnace.  
On oil furnaces a hole will need to be cut on front right hand corner.  
Locate and fasten the damper assembly on the top.  
On electric furnaces locate and install the damper assembly to the filter stop and furnace side flange.
- a) Attach the flex duct to the damper assembly with a wire tie.
- b) Fire stop requirements must be met by use of approved methods or use of Coleman Accessory ceiling ring (P/N 7660-2841). If the Coleman ceiling rings are used, attach to ceiling tightly around the duct.

11) On gas or oil furnaces, a metal fresh air filter (P/N 7681-7331 bulk packed) must be used. See illustration on filter assembly.

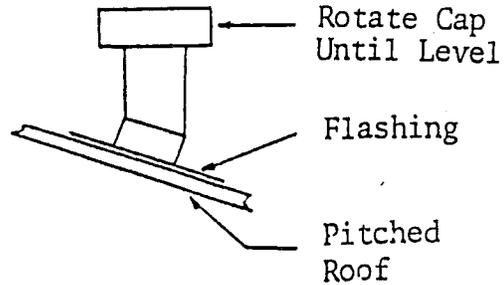
**NOTE TO HOMEOWNER:**

- 1) Be sure to regularly wash the metal fresh air filter used with gas or oil furnace.
- 2) If you do not wish to introduce fresh air into the home, you may lock the damper shut by installing a sheet metal screw in the hole provided on the damper tube.



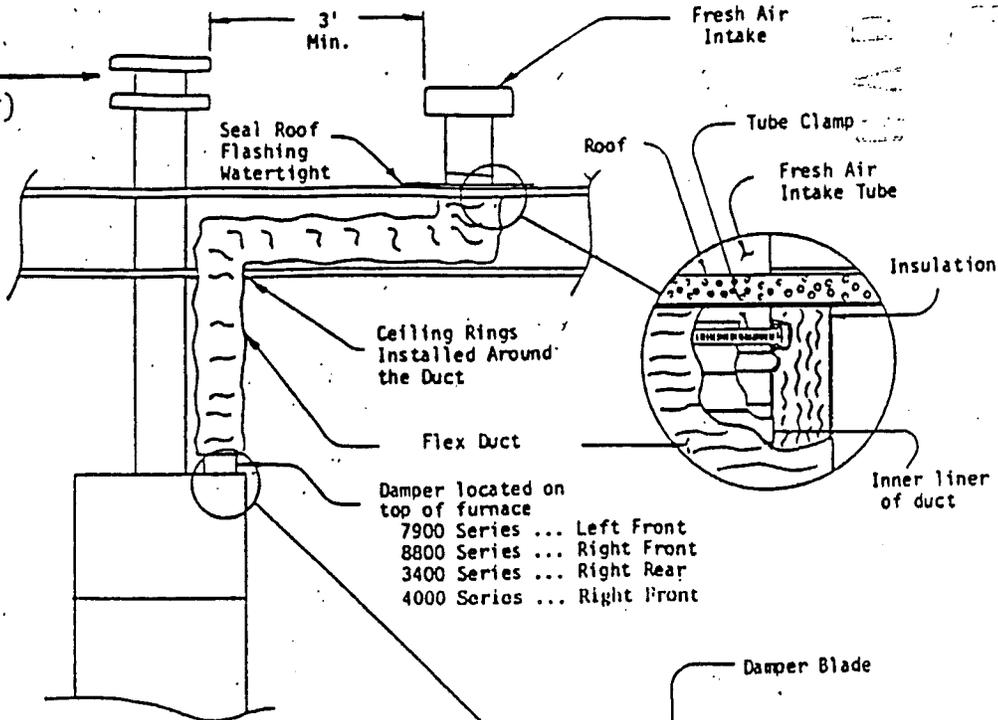
TOP VIEW  
ROOF FLASHING

Position flashing so arrow corresponding to pitch is pointed toward downside of pitch slope.

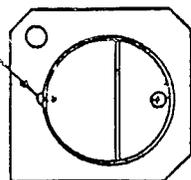


Install sheet metal screw in fresh air intake bead

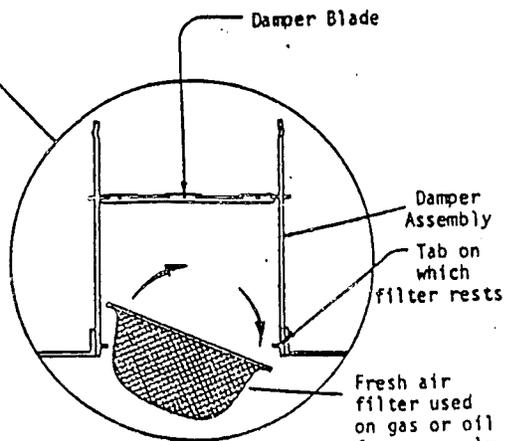
Roof Jack  
(Fuel burning furnaces only)



Optional customer furnished locking sheet metal screw. (#10 x 3/8") (Screw to be BELOW Damper)



TOP VIEW OF  
DAMPER ASSEMBLY



(Be sure to clean every 3 months with soap and water.)

# TYPICAL DOUBLE WIDE ON BASEMENT DETAILS

