

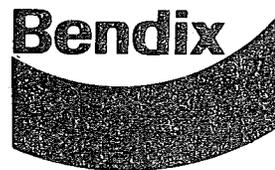
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OWNER'S GUIDE

TO

MOBILE HOME

MAINTENANCE



Home
Systems,
Inc

*Set up
P 22*

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Much of the material in this Guide has been adapted from the "Owner's Guide to Mobile Home Maintenance" published by the Manufactured Housing Institute (MHI).

SECTION I

INTERIOR MAINTENANCE

Air Conditioning

Operating and installation instructions for air conditioners are furnished by the air conditioning manufacturer.

For proper operation of the air conditioner, the return air filter must be kept clean.

For a thorough cleaning, hot water and a detergent should be used. Usually all that is necessary, however, is for the filter to be flushed with water from a hose or tap.

Air conditioning equipment should be listed by a nationally recognized testing agency. It should be properly fused and grounded according to the manufacturer's recommendations.

Furniture

The life and beauty of any kind of furniture can be prolonged with proper cleaning and care.

One form of protection for upholstered furniture is the use of slip covers. It is also important to vacuum the upholstery cover at least two or three times a month.

Loose cushion pieces, as well as mattresses, should be turned frequently. Turn and reverse so that the same side will not be in constant use.

Wood, leather, and synthetic materials all require regular cleaning. This is best accomplished by using some of the countless cleaning agents designed for specific materials and available to the home owner in almost every hardware store or supermarket.

Cabinet Drawers

Most mobile homes have built-in cabinetry. If any drawers should stick, tallow or beeswax applied to the drawer guides will make them work better.

Should heat, cold, or excessive moisture cause plywood or lumber to expand, cabinet doors might stick. If so, a block plane can be used to remove just enough material to eliminate the binding.

Ceilings

Wood fiber ceilings are used in mobile homes because of their attractive appearance, ease of installation, and low maintenance. They require little care, but a few common problems sometimes occur.

Scrapes, Scratches, Chips; These can be rubbed with very soft white chalk and then wiped with a clean cloth. A deep scratch may require more than one application.

Gouges: If possible, the damaged panel* should be removed, and a new one installed in its place. Where this is not practical, the gouge should be cleaned of loose, dusty particles and then filled in with a spackling paste applied with a clean putty knife. The paste should be levelled off to the surface of the panel, and the compound sculptured to conform with the surface of the panel. After the compound dries, touch-up paint should be applied.

Dirt Smudges: Soft art gum will probably remove dirt and finger prints. If a portion remains after art gum has been used, the area should be wiped with soft white chalk and rubbed over the spot to conceal as much as possible.

Water Stains: Replacement of the panel or repainting are the only solutions.

*Panel as used in this section refers to square or rectangular tiles, boards or planks.

Warped Panel: The only remedy is to replace the ceiling panel with a new one after first correcting the conditions which caused the trouble, such as moisture from a leaky roof. If moisture conditions cannot be corrected, mineral fiber tile should be used as a replacement, since it is less affected by moisture.

Panel Removal and Replacement: Tongue-in-groove paneling must be removed by cutting it along the edge with a sharp knife and prying it loose. Before replacing the panel, apply an adhesive to the furring strip where the panel is to fit. If trimming is unnecessary, place the tongue into the groove of the adjacent panel and raise the panel into place. Since the adhesive will not take an immediate bond, nail through the face with a 1" #18 finish nail to the furring strip in the two unattached corners. If possible, conceal the nail in the design of the tile.

Maintenance: The resin emulsion paint of a wood fiber ceiling can be washed clean of smudges with a cloth dipped in a mild soap solution and wrung dry. A vacuum cleaner attachment will remove loose dirt or dust.

Repainting: When repainting is necessary, an acoustical ceiling paint should be used. A quality product should be selected to assure that the paint will not have a tendency to yellow with age.

Condensation and Ventilation

In all types of dwellings-including mobile homes-condensation can be a problem during periods of cold weather. Warm air has the ability to hold much more moisture than cold air, and the tendency is for water vapor to move from a warmer to a cooler place, thereby causing condensation.

Since moisture is added to the air by cooking and washing, it's not always possible to keep the relative humidity of the air to the low degree needed to prevent condensation.

A cooking range, the washer, and bathroom facilities all add to moisture content of the air in all kinds of homes. An open gas flame produces hydrogen as one of the products of combustion and this, combined with the oxygen of the air, produces water.

A vent directly over the cooking range or a window opening directly to the outside will be found in your mobile home. Many mobile homes will, in fact have both.

A window or vent is provided for proper ventilation in mobile home bathrooms. When using the shower or bathtub, it is recommended that the bathroom door be kept closed while in use and for about 30 minutes afterwards. This allows moisture to escape through the bathroom vent or the opened window.

Laundrying and hanging of wet clothes inside the home adds to moisture in the air.

Proper Ventilation: Much condensation can be prevented by heat and ventilation. Because doors and windows usually are open in summer, water and vapor readily escape. At other times it may be advisable to have one of the exhaust fans operating, together with a partially opened window. This eliminates drafts and permits cool outside air with low humidity to enter and lower the moisture content. This will

also add greatly to heating comfort. Other than kitchen and bath exhaust fans, no roof vents are used on present day mobile homes.

Some moisture is needed during winter months. Personal discomfort results from lack of moisture in the air. Lack of moisture also produces a dehydrated feeling and lowers one's resistance to colds and flu.

Most heating units require no extra ventilation under normal circumstances because outside air from the air intake is distributed by the blower throughout the mobile home duct system.

Air Circulation Circulation of warm air to wardrobes and closets and under beds is essential. If the blower in the heating system is allowed to operate continuously, a more comfortable environment will result.

A natural circulation of air or the movement of heated air by a fan or blower can remove cold spots where condensation is liable to occur.

Thermostatic Equipment All mobile home heating equipment--whether gas, oil or electric-- is controlled by a thermostat.

The thermostat can be set to maintain any desired temperature without further attention.

Cooking Ranges

No attempt should be made to clean a porcelain enamel range while it is still hot, as the finish may be damaged.

Gas Ranges Gas cooking ranges in today's mobile homes use either LP gas or natural gas. The gas range should be carefully adjusted to accommodate the type of gas being used (LP or natural). The entire gas system should be thoroughly checked for leaks before the gas is turned on. Incorrect adjustment of any part of the system can result in unsatisfactory operation and pilot failure.

Proper gas pressure is important. Any considerable variation from "normal" will adversely affect the stability of the pilot light. Although all ranges are built today to accommodate either natural or LP gas, the proper size orifice must be installed to accommodate the fuel being used.

The manufacturer of the range will have supplied a "Use and Care" booklet. It should be carefully studied in order to get effective use of the equipment.

Electric Ranges The "Use and Care" booklet supplied by the manufacturer of an electric range will provide all information necessary to assure its proper use.

Dishwashers, Disposers, and Laundry Equipment

Manufacturers of dishwashers, waste disposers and automatic washers and dryers supply booklets covering the use and care of these appliances. These books are supplied with the appliance when it is installed in the home. They should be studied carefully and kept for reference.

Doors

The care of doors in a mobile home is the same as in site-built houses.

The exterior doors of a mobile home have been installed so that they provide a certain amount of clearance at both the top and bottom of the door opening. The clearance space is normally filled with flexible weatherstripping. If the door clearances are not maintained fairly uniform, there is likelihood that the door will bind ... and ultimately the door or hardware may fracture. Careful leveling of the home will normally assure that proper clearances are maintained and prevent this problem from occurring.

Further, it will assure that the door will remain weathertight and the lock mechanism function properly.

Electric Power Supply

Mobile homes require the same type of electric power supply (125/250 volt, 3-pole, 4-wire with ground) that is used in the conventional modern permanent dwelling.

Before moving, the park or the intended site should be checked to see that the electric power supply available meets the needs of the mobile home.

Wiring of inadequate capacity can result in low voltage to the home and cause a drop in the efficiency of all lights as well as appliances. Motors may burn out and the home owner may be paying for electricity he does not use.

To avoid the possibility of low voltage, proper size wiring must be installed. The wiring material should be UL listed. In no case should the main service conductors be less than four (4) #8 for a 40 ampere service or three (3) #6 and one (1) #8 for a 50 ampere service. The ampere rating of the main circuit breakers or main fuses must not exceed the power supply assembly rating.

For the protection of mobile home occupants, it is vital that the mobile home be properly grounded whenever it is connected to a source of electric power. Grounding to a rod or a water pipe or through the mobile home hitch caster or metal stabilizer in most cases will not provide this important protection.

The only safe and approved method of grounding the mobile home is through an electrically isolated grounding bar in or on the mobile home power supply panel which grounds all non-current carrying metal parts of the electrical system and mobile home at a single point. The ground conductor of the power supply cable in turn connects the grounding bar to a good electrical ground back through the mobile home park electric power supply system. This means that for 125/250 volt service, one must have a 3-pole, 4-wire service or power supply cable.

It is extremely important that the neutral conductor NOT be grounded in or on the mobile home or the mobile home service entrance cabinet.

Defective wiring should be repaired only by a licensed electrician.

The electrical system within the mobile home contains a number of branch circuits designed to prevent overloading of any one circuit.

The service entrance equipment of the mobile home is provided with either one of two means of overload protection -- (1) type "S" fuses or (2) circuitbreakers. If a circuit is overloaded or a short occurs in the wiring, the fuse or circuit-breaker will interrupt the circuit. If the fuse or circuit-breaker continually interrupts the circuit, a danger signal is indicated and it is advisable to call in a competent electrician to locate and correct the difficulty. Always replace a blown fuse with a type "S" fuse of the correct current rating. A circuitbreaker needs merely to be re-set.

Floors

Floors, whether they be wood, linoleum, or composition tile will look better and last longer if they are cleaned and waxed regularly. Avoid excessive application of water on new tile

as it may cause lifting and curling of the tile. It is best to establish a good coating of wax in and around tile seams. A number of good floor coatings and preservatives are available and may be purchased locally.

Parquet or cork floors require the use of special cleaning preparations, also available in most stores.

All carpeting should be kept clean for long wear.

Hardware

Mobile homes may have chrome, brass, antique copper, or colonial black hardware.

Chrome-plated Hardware Genuine chromeplated hardware is best cleaned with a commercial chrome cleaner. In some cases, soap and water will remove discoloration and spots.

Brass, Antique Copper, Colonial Black Hardware To clean, simply wipe with a damp cloth. Use a very mild soap or detergent, if necessary. Cleaning agents containing abrasives are not recommended. Do not use chemicals of any kind on these finishes because they will destroy the protective coating usually applied to them.

Heating Systems

Mobile home gas, oil, and electric heating systems are designed to provide maximum comfort with a minimum of maintenance and service.

Air Circulation If the mobile home has a central heating system, adequate circulation of warm air is accomplished by the blower in the furnace. This blower forces air through floor ducts to various points within the mobile home. Air within the home is pulled back to the furnace by the blower through return air openings, reheated, and then discharged through the ducts again.

The furnace pulls in a certain amount of fresh air from the outside which is heated and "blended" with the inside air. Mobile home furnaces are especially designed to provide "sealed combustion." This means that air from the outside is used for combustion and that no inside air is used. Furthermore, sealed combustion

design prevents flue products from entering the home.

Under no conditions, should the fresh air intake on the furnace be blocked or obstructed, and the outside draft opening must not be obstructed.

Oil or Gas Systems Whether operated by oil or gas, the heating equipment is fully automatic and equipped with safety devices. The gas systems are designed to use either natural or liquefied petroleum gas.

Lighting, operating and maintenance instruction information in booklet form is supplied by the furnace manufacturer and usually placed within the burner compartment or attached to the furnace door when the home leaves the factory. These instructions should be carefully followed at all times.

If, by chance, there are no instructions with the furnace, the home owner should write to the furnace manufacturer, giving the model number of the furnace and request a new copy of the Use and Care Manual. The address of the manufacturer can be found on the name plate attached to the furnace.

If adjusting of the furnace appears to be necessary, a qualified oil or gas service man or the mobile home dealer should be contacted.

Electric Heat Systems Electric systems in mobile homes will likely be one of two types:

1. Individual electric baseboard heating units or
2. An electric furnace.

Baseboard heating units are generally controlled by individual room thermostats. This permits the home owner to regulate the temperature of each room separately. A home heated in this manner requires the addition of a duct system if central air conditioning is required.

An electric furnace operates in the same manner as a gas or oil furnace except that electricity, instead of the gas or oil flame, provides the heat source. The duct system and means of heat distribution remain the same.

Maintenance The operating instructions furnished by the furnace manufacturer will outline the maintenance required for the specific model. Basically, the following points should be observed as applicable.

1. The outside fuel tank should be kept clean. Dirt or water in the fuel oil will retard the flow of oil into the burner.

2. With vapor type oil furnaces, a filter should be installed. It should be inspected frequently and kept clean.

3. Vaporizing type furnaces should be cleaned at least once during the season or more often. A dirty burner can reduce oil flow and cause improper combustion.

4. The blower must be cleaned regularly; if the blower or impeller (squirrel cage) becomes linted up and dirty, the blower motor can overheat.

5. The blower motor should be oiled regularly according to the manufacturer's instructions. Avoid over-oiling and use of thin household oil.

6. The flue pipe and roof jack should be kept free from excessive deposits of carbon and inspected at least once a year for rusting and corrosion.

7. A gun type oil furnace should have its nozzle replaced each year. At the same time, the electrodes in the ignition system should be cleaned and adjusted, if necessary.

Service If service is required on the heating system, the dealer from whom the mobile home was purchased should be contacted. In many cases, the furnace manufacturer will have local service stations where service can be obtained.

Guarantee A guarantee card is normally supplied with each furnace. When a new mobile home is purchased, this card should be filled in and returned to the furnace manufacturer within the time specified on the card, in order to validate the guarantee.

Porcelain Enamel

Lavatories, bathtubs, kitchen sinks, and working surfaces of some appliances are often finished with acid-resisting porcelain enamel baked onto steel. Soap or a suitable household cleanser will keep them sparkling clean. Stains or discoloration caused by food acids or alkalis may be removed with a mild scouring cleanser.

If the enamel becomes chipped or broken, patching materials are available that can be used to permanently repair the damage on white or colored units.

Chlorine-type bleach will probably remove stains that have been allowed to remain for any length of time. The stains should disappear after the bleach has remained on the stain for at least 30 minutes. Then rinse with water. Repeat if necessary.

Porcelain enamel should be protected from extreme heat which may crack it. Hot utensils should not be placed on any porcelain surface. A wire rack or protective pad should be placed beneath the hot utensil until it has cooled.

Refrigerator Care Refrigerators installed in mobile homes are the same as those found in on-site homes and apartments. They should be cared for in accordance with the appliance manufacturer's "Use and Care" book.

Walls

The various types of walls generally found in mobile homes include plywood, natural wood, paint coated material, and plastic coated wood or hardboard.

Care of Plywood and Natural Wood Walls Walls may be washed with a mild detergent or household cleanser. A mellow sheen may afterwards be produced on the walls by using a good cleaning polish, household wax, or any oil soap.

Most wax manufacturers recommend using a damp cloth to apply the wax. The cloth should be wiped across the wax in the can, then applied to the walls in a thin, even coat--the thinner the coat, the better the polish.

Liquid polish and cleaner combinations also give excellent results. These should be applied with a damp cloth or sponge, after which the walls should be polished with a clean cloth. These polish-cleaners can also be used on appliances and vinyl upholstery materials.

Wax should be applied, using a circular motion, first rubbing across the grain of the wood with quick strokes, then rubbing with the grain using longer strokes. An area about two feet square should be waxed and polished at a time.

Frequency of waxing depends on amount of wear. Areas receiving hard use may need to be rewaxed occasionally. Smudges can be removed with any of the household waxes marketed for that purpose. The label on the container will tell the type of surfaces for which the wax is made.

Woodwork that has a dull, natural finish to start with should be cleaned with mild, soapy water, dried, and then treated with any of several wood oils, such as lemon oil, olive oil, linseed oil--any one of which prevents drying out of the wood.

Care of Plastic Coated Wood or Hardboard Walls Surface dirt can easily be removed with a damp cloth or with a vacuum cleaner, using one of the special attachments. A mild detergent solution will remove a stubborn stain or grease spot.

Some home owners apply a good furniture wax for added beauty. Any of the liquid or spray waxes intended for use on wood may also be used. Strong soaps or cleansers are not advisable.

Care of Paint-finished Walls Paint-coated materials are easy to keep clean and maintain. They can be kept beautiful for an indefinite period by washing with a moderately wet cloth and a household cleaning agent.

Always avoid the use of abrasive materials. Do not use solvents such as gasoline, turpentine, alcohol, paint thinner, or lacquer thinner.

Walls should be washed before repainting.

Refinishing Interior Walls If it is necessary to refinish plywood or natural wood finish walls, the old finish should preferably be removed. The wall may be refinished with varnish, lacquer, or other coating. The mobile home dealer or a paint dealer should be consulted for the best materials to use for these operations.

The finish remover should best be applied to small sections of the wall surface at a time and the old film removed with a scraper. After removal of the old finish, the walls should be rubbed down with a good paint thinner that will also remove any grease or film that may remain on the walls.

It is important that good ventilation be provided when using varnish, paint removers, and thinners, and that there be no open flame present of any kind including lighted cigarettes, cigars, or pipes.

Water Heaters and Water Softeners

These appliances require very little care. Water heaters are equipped with thermostats to maintain the water at the desired temperature (usually around 150° F). An adjustment can be made to obtain either warmer or cooler water. A water heater must also be equipped with a temperature and pressure relief valve to prevent the build-up of dangerous temperatures or pressures in the event that the tank thermostat should fail.

Consult an authorized dealer when service and parts are needed.

Windows

In extremely cold climates, windows or exposed glass areas may accumulate excessive moisture due to condensation. In most cases, it is helpful to install storm windows when cold weather comes. These can be ordered through a mobile home dealer and are easily installed.

Windows should be opened frequently and cleaned around the metal casing. A good window cleaning preparation should be used to clean the glass. If excessive moisture on the glass becomes bothersome, it should be wiped lightly with a cloth moistened slightly with glycerin.

Loose screws in the window garnish as well as thrust arms should be kept tightened. Window hinges and operating arms should be lubricated with a light oil at least once a year.

SECTION II

EXTERIOR MAINTENANCE

Exterior Finishes

Mobile home exteriors are quite generally either pre-finished color coated aluminum or sheet steel construction. Some homes also have either wood-sided or vinyl exteriors in different forms.

The color coating of the metal-sided mobile home is generally a synthetic enamel, lacquer, or acrylic-type enamel, each of which has good endurance qualities. Any finish will deteriorate with age and exposure to the elements. However, this process can be retarded if the finish is protected by keeping it clean and waxed. Refinishing should be done as needed. The acrylic-type enamels should be washed and buffed only according to the mobile home manufacturer's instructions.

Best maintenance of exterior finishes involves frequent wiping with a damp chamois or cloth or washing with clear, cool water before dirt and grime accumulate excessively. The surface should never be dry dusted.

Exterior Washing A mobile home should never be washed in the rays of the hot sun. The exterior should be allowed to cool before it is washed. A small brush is helpful in removing grit and grime from crevices.

Cleaners and Polishes These come in paste and liquid form and can be used to loosen accumulation of road film, scum, oil, tree sap, and grime which cannot be removed by washing.

An efficient cleaner removes oxidized paint which sometimes forms on a mobile home. Because paint and lacquer are organic materials, they deteriorate from the action of the elements, especially sunlight. A microscopic film of "dead" paint or lacquer forms on the surface which must be removed if the finish is to be bright. The "live" paint remaining is still tough and hard and is unaffected by the cleaner.

Before using either a cleaner preparation or a combination cleaner-polisher, the mobile home should be washed with a detergent, rinsed, and allowed to dry.

A cleaner can then be applied to the finish with a soft, clean cloth. The residue should then be removed with a dry cloth.

For dirt accumulations built up over long periods between cleanings, use a non-etching chemical cleaner diluted three parts of water to one part of cleaner.

A combination cleaner-polish is usually in liquid form. A single application both cleans and polishes. It contains a slightly abrasive cleaning ingredient and a small amount of wax or oil. There is no lasting protection from the wax or oil, however. Such cleaners should be applied often.

Waxing: Pre-finished metal exteriors may be waxed for maximum protection. Wax jobs last longest when applied in Spring or Fall and when the temperature ranges between 50 and 70 degrees. Winters are hard on wax durability because of snow, sleet, mud, and dirt. Hot summer sunshine deteriorates the paint film and makes waxing needed more frequently.

Paste waxes leave a durable coating of wax on mobile home finishes. They provide protection from abrasion and minor scratches. The wax coating makes mobile homes much easier to wash because dirt doesn't stick.

Most waxes have limited cleaning power. Unless a mobile home is brand new, it should be cleaned with a commercial cleaner or cleaner-polish before waxing. The wax should be applied to a small section of the exterior at a time with a soft cloth. Only a thin coating should be put on and then rubbed vigorously until the solvent has evaporated and the wax has set in a hard, brilliant shine.

Oil, Tar, Salt Air: A tar remover can be used to remove tar and oil without damaging the finish. If tar has hardened, use butter or naphtha to soften.

Caution: If the finish is of the acrylic-type high luster enamel, naphtha or gasoline should NOT be used for removing tar as such solvents may soften the finish.

Owners of mobile homes located near the seashore should wash and polish them every few months in order to remove accumulations of salt deposits, which are very damaging to the finish.

Skirting (THIS IS EXTREMELY IMPORTANT)

Before skirting is installed around a mobile home to ground level, provision should be made for both front and rear vents to allow for circulation. The space occupied by the mobile home should be properly graded to provide run-off of water, rain or snow. If the home is located on concrete "ribbons", rather than on a concrete stand, the area between the ribbons should be graveled to a depth of 4 to 6 inches to provide additional moisture protection. As indicated, proper ventilation of skirting will also help prevent any accumulation of moisture under the home.

Caulking

All cracks and openings, no matter how small, around the mouldings, joints, rub rails, splash panels, windows, top seams, doors, roof

vents, and wheel housings should be sealed by caulking. Loose nails and screws that are exposed should be tightened or replaced at once so moisture cannot enter.

Sealing compounds are made in a variety of colors to match the existing finish. The best caulking compounds do not dry out hard, but instead remain elastic. These can be applied with a caulking gun or a putty knife. For filling up small openings and cracks, consistency can be cut with paint thinner. The instructions provided with the caulking compound should be followed.

Insulation

Mobile homes are insulated with fibreglass wool or other suitable type insulation in the walls, floors, and ceilings. Mobile homes also have ventilation and/or a vapor barrier on the warm side of walls and ceilings. If there is ventilation in the outside wall and ceiling, a vapor barrier is added. But, a vapor barrier can be used alone without a means of ventilation in the outside walls and ceilings.

The type, thickness, and application of the insulation have been worked out by mobile home manufacturers in conjunction with insulation engineers so that both winter and summer comfort will be maintained.

Crevices, corners, and exterior connections should be carefully caulked to provide added protection against infiltration of cold air in winter.

Locks

The door locking mechanism for a mobile home provides adequate protection to the owner. It also is easy to unlock in case of an emergency. Powdered graphite should be used to lubricate any lock mechanism.

Locks on mobile homes should have a depth behind the strike which will permit the latch bolt to be fully extended. They are designed to function properly under this condition. The latch bolt and door strike must be completely in alignment. If not, an adjustment should be made so that the door strike and the latch bolt will mate properly.

Keys to Your Mobile Home A record should be kept of the identification number and make of the house lock. With this information, it should be possible to obtain a duplicate key from a locksmith if keys are lost.

Painting

Exterior Preparation A thoroughly clean surface for paint to adhere to is absolutely essential. All dirt, oil, grease, wax, silicone, moisture, and rust must be removed. These can quickly destroy the durability and appearance of the final finish.

A cleaned surface should never be touched with hands, gloves, or other articles of clothing. Checking surface smoothness with the hand should be done before the final cleaning operation.

1. The exterior should always be washed with water. The addition of a small amount of detergent to the water is advisable but be sure to follow with a thoroughly clean water rinse.
2. After washing, the surface should be cleaned with liberal applications of a solvent-type cleaner to insure removal of all wax, grease, oil, and silicone. Plenty of clean cloths should be used. Only small areas should be worked on at a time, and the surface should be thoroughly wiped dry.
3. Next, water sand with No. 320 grit or finer wet or dry paper, to remove any hardened film surface, and to smooth out imperfections. A sanded surface provides a "tooth" that will result in a tight bond between it and the next paint coat. Use a rubber or felt sanding block or a power sander. Sand with smooth, even strokes and plenty of water. Do not allow paint to pile up on the sandpaper. The sanding operation sometimes results in cut-throughs to the metal either because of a thin paint film, or removal of a localized rust (steel) spot or imperfection.
4. To remove paint dust from sanding, wash entire area including any bare metal spots with a solvent-type cleaner or water. If available, blow off with clean, oil free compressed air. Allow area, including crevices, to dry thoroughly before starting next step. Forced drying with heat is helpful.
5. Just before painting, treat exposed metal spots with a phosphate-type metal conditioner (for steel siding only). This phosphate treatment will help prevent rust formation and creepage under the paint film. It also helps to insure excellent adhesion.
6. Allow to dry thoroughly. Apply primer or surfacer to bare metal areas within 30 minutes after metal conditioning treatment.
7. Before applying color coat, wipe the surface. Take great care to avoid touching the surface with hands, gloves, or clothing which often hold oil, grease, and dirt that can seriously harm the final finish.

Finish Coat Windows should be masked with paper and/or masking tape before applying the finish coat. Personal preference and circumstances will determine whether it is to be brush or spray applied. Nearly all finishes on modern mobile homes are spray applied at the factory. A brush job will not produce quite so smooth or glossy a surface as a spray job.

Many professional workmen bring their spray equipment right to the mobile home park. If a spray gun is used, extreme caution must be taken to prevent the spray from being picked up by air currents and deposited on nearby objects.

Paint or other finish materials should not be applied to the mobile home when it is exposed in hot weather to the direct rays of the sun.

In areas where dampness and humidity prevail, the mobile home body should be washed or rubbed down once or twice with paint thinner before the first coating is applied in order to remove any invisible moisture that may be clinging to the surface.

In case of two-toned mobile homes, one color should be masked off with paper, and/or masking tape while the other color is being applied.

Touch-up Painting: Repair of damaged areas and scratches should be made as follows:

1. Prepare the surface around the damaged area by removing all surface dirt or chalked paint with a household cleanser or other mild abrasive.
2. If the dent or scratch is deeper than 1/16", a catalyzed Epoxy type filler should be applied by knifing. The type where the catalyst is added directly to the filler should not be used as this type impairs adhesion of the finish coat.
3. If the dent or scratch is less than 1/16", a body putty similar to that used in automobile repair can be used by knife application over an Epoxy filler. Allow two hours drying time after which it may be sanded. If too much shrinkage has occurred, it may be necessary to apply a second coat. Sand again.
4. Sand the entire area to be refinished with #280 grit or finer wet or dry sandpaper. Be certain to feather edges so that the damaged area feels smooth to the fingertips.
5. After sanding, the residue should be carefully washed from the surface with plain water and allowed to dry.
6. The primer and then the finish coat should be applied.

Colors tend to fade after long exposure to weather, so matching the color for touch-up is usually quite difficult. Test the touch-up paint on an area of the mobile home least likely to show before doing any extensive touch-up. The instructions supplied by the manufacturer of the finish materials should be carefully followed.

An occasional touch of paint applied to window frames, mouldings, and screw heads will prevent rust and prevent discoloration on the exterior.

Unpainted Aluminum

Aluminum is highly corrosion resistant in its natural finish, but this durability may be enhanced by finish treatments, such as painting and waxing.

Regardless of the finishing treatment applied, the mobile home owner should encounter little difficulty in maintaining the original appearance of the aluminum siding.

Avoid use of highly caustic cleaning solutions on aluminum. Such severe cleaners are unnecessary and their cleaning action can damage the finish.

Unpainted aluminum exteriors can be polished. A mild scouring agent is recommended for removing stain and corrosion spots.

Waxing should follow.

Roofs

The smallest leak or break in the roof can mean damaged ceilings, interior panels, and even furnishings.

The cause of most costly roof troubles can be prevented.

1. The mobile home roof should not be walked on except when absolutely necessary. Most inspections, cleaning, and repair work can be done effectively from a stepladder.
2. The roof should be inspected at least twice yearly, and accumulated debris removed. The roof can be washed occasionally with a mild soap solution, followed by a rinse with clear water. This will eliminate corrosive action from accumulated dirt.
3. When sited, it is EXTREMELY IMPORTANT that the mobile home be properly leveled to avoid strain which can part seams and create buckling of the roof area. Low hanging tree branches should not scrape the roof.
4. Roofs should be coated or painted at least every other year and preferably once a year for maximum trouble-free life.
5. When walking on a roof cannot be avoided, only those sections which are supported by rafters or stringers should be walked on. Pieces of board or plywood can be used to distribute one's weight and avoid damage.
6. Roof coating should be applied with an applicator,

never painted with a brush. Coating should be applied in heavy coats.

Metal Roofs: Metal roofs are generally either sheet aluminum or steel. The roofs are either coated or painted. When the roof is inspected, moldings, stacks, vents, as well as the roof surfaces should all be checked.

Moldings: All moldings should fit tightly to the roof, firmly held by screws or nails. Damaged moldings should be removed and either repaired or replaced. Before moldings are reset, a heavy coating of caulking should be liberally applied to the underside with a small brush, putty knife, or caulking gun. If molding is tight, or after it has been reset, a coating should be applied over the top of the entire molding. Special attention should be given to assure that all screw or nail heads are covered or coated.

Stacks and Vents: If stacks or vents have rusted and fail to function properly, they should be replaced. Before replacing them, remove the old, dried caulking around them and apply new caulking. In setting stacks and vents, caulking should be applied to the underside of the base of the fixture as well as the roof where it is to be set.

The fixture should be firmly secured in place with screws, nails, or other suitable fasteners. Caulking should be applied so that it completely covers all fasteners.

If stacks and vents don't have to be removed, old, dried caulking around them should be scraped away and a new coating liberally applied.

Seams: The two most common types of metal roof seams are "locked" or lap. They may run the length or the width of the roof. Regardless of type, the repair procedure is generally the same. The seams should be checked for spreading, parting, or buckling and for loose nails or screws.

Roof Surface: Rust, oxidation, breaks, and cracks on the roof panels are all **potential trouble points**. The roof should be checked for these danger signals.

Rust and oxidation are almost sure signs of roof panel failure. These areas should be scraped or wire brushed and the roof re-coated before additional damage occurs.

Cracks and breaks in roof panels should be treated with a special conditioner before using the regular coating.

Water Supply Line

If the mobile home is located in an area where prolonged periods of freezing temperatures occur, the water supply line to the home should be installed below the frost line. The entire pipe riser above the

frost line should be insulated. There are a number of suitable insulating materials available with which to accomplish this. An electric heating element, generally referred to as a "heat tape", may also be used.

When the heat tape is wrapped around the pipe and plugged into an electrical outlet, protection against freezing will be provided to the pipe even in coldest weather. Electric current consumption is about equal to that of a 25 watt light bulb if the water line is not too long. An alternate method for protection is to provide a thermostatically controlled heat tape which will turn off the electricity when heat is not required to prevent freezing.

Winter Protection during Non-Occupancy All sink and lavatory traps should be drained or anti-freeze should be poured into the traps. Anti-freeze should always be poured into bathroom commode and tub traps. No water should be allowed to remain in the flush cabinet. In addition, all hot and cold water lines should be completely drained to prevent bursting. The shut-off valve below the frost line on the main water supply should also be closed.

Oil Systems

Where oil is used as a fuel for heating, an adequate supply must be readily available. In general, this means the use of either an individual oil storage tank located adjacent to the mobile home or a centralized oil distribution system now found in some of the newer mobile home parks.

The oil tank that feeds vaporizing type oil furnaces must be installed so that oil flows by gravity. The top of the oil tank can be no higher than 8 feet above the appliance oil control and the bottom of the tank can be no less than 18 inches above it.

A readily accessible and approved shut-off valve, manually operated, must be installed at the outlet of the oil supply tank.

Where a centralized system exists, it would normally only be necessary to connect from the mobile home to the oil connection provided. The oil in the system is under pressure and is supplied through a suitable metering device.

During summer months when the heater is not in operation, the oil tank should be kept full to prevent condensation and rusting.

Bottled Gas

If the mobile home is equipped with bottled gas for cooking or heating, or both, extreme caution should be used before turning on gas at the cylinder. All appliance valves MUST be closed. If the mobile home has been in transit, fuel lines, connections, and appliance valves should be checked for loose connections and leaks before and after opening the cylinder valve. CAUTION: A MATCH OR FLAME SHOULD NEVER BE USED IN CHECK FOR LEAKS. A safe and frequently used method of checking for gas leaks is to apply a soapy water solution to suspected points and look for tell-tale bubbles.

CAUTION!

The only butane cylinder or "bottle" that should be used is one bearing the approval marking of either the U. S. Dept. of Transportation (DOT) or ASME. The chief difference between these two is that the DOT cylinders are acceptable in any state, whereas the ASME cylinders, which have been built to the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers may not be acceptable in all states.

No DOT container which has been involved in a fire should be refilled until it has been requalified for service according to DOT regulations.

No ASME container which has been involved in a fire should be refilled until it has been retested in accordance with the requirements for its original hydrostatic test and found to be suitable for continued service.

The mobile home dealer or set-up crew should check, fill, and recheck all connections between the gas cylinder, water heater, range, and other gas appliances. Only after that should the gas be turned on again.

The gas must be turned off at the main valve above the cylinder before the mobile home is moved.

Drain Connections

Mobile homes are provided with a single drain outlet connection. However, there are occasions where the manufacturer, because of the design of his home, provides a loose length of drain piping to be used for connecting a remote drain to the main drain line. This piece will normally be installed at the time the mobile home is first set in place.

If the home is moved frequently, it is convenient to use a section of flexible hose for connection between the waste outlet and the sewer connection.

If the drainage lines underneath the mobile home are exposed, there should be sufficient fall (1/8" per foot) to prevent freezing and bursting of the line. Special treated rubber sewer connectors are available through dealers and mobile home supply houses.

Fats, greases, and oils which are allowed to go down the kitchen sink drain may have a tendency to clog the sink trap. Within a period of a few weeks, they can build up at certain spots until the drainage is partially or completely blocked.

Many owners pour a commercial drain cleaner through the kitchen sink at regular intervals. Caution should be taken to see that the cleaner does not damage the rubber drain hose if one is used. It may be advisable to remove the rubber drain hose and use a bucket or other container instead.

Parking

Setting a mobile home in position--sometimes referred to as "parking"--should not be attempted except by a professional mobile home mover. He knows how to place the home on its lot correctly and how to block it so the home will be level.

Correct blocking accomplishes four important functions:

1. It puts the mobile home on a rigid foundation.
2. It levels the floor so that the plumbing will function properly.
3. It prevents sag in the structure of the mobile home which may ultimately result in expensive repair bills.
4. Prevents door bind.

Settling . There is always the possibility that a mobile home may settle after it has been in position for a period of time. This is most likely to occur in those cases where the home is not sitting on a solid concrete slab, often referred to as a "pad". When settling does occur, it can affect the proper closing of doors, windows, and cabinets as well as place undue strains on the structural portions of the home. It can even cause wall panels to come loose and floor coverings to separate.

Should this problem occur, corrective measures can be taken by following the procedures outlined below:

7-Step Blocking Procedure

- STEP 1 - Place a carpenter's level upon the floor of the mobile home. Use the coupler jack at the front end of the home to level the home lengthwise.

- STEP 2 - Check to see if the mobile home is level crosswise. If not, raise the side that is low. Place a hydraulic jack under the main frame in the axle location to raise the side.
- STEP 3 - Place blocks or supports immediately ahead of and behind the spring hangers under the main frame.
- STEP 4 - Place blocks under the main frame of the home near the front and rear ends.
- STEP 5 - Place blocks under the main frame members beneath the doors and other locations as indicated on your set-up instructions.
- STEP 6 - After you have placed the blocks, add wood boards of the necessary thickness, wood tapers, or wood shingles to make the blocks support the weight. With stabilizer jacks it is just a matter of adjustment to snug up each jack.
- STEP 7 - It is recommended that all mobile homes be attached to the concrete stand, runners, or ground anchor device. Many mobile home parks require them. There are several patented tie-downs on the market. Home owners should consult local building inspection authorities and/or mobile home park operators for the recommended method to be used in their area.

Towing

Mobile homes are moved by professional mobile home movers. There are several firms that specialize in this activity. They have offices in all major cities.

Ready for Towing While the home owner should never attempt to move the mobile home himself, there are certain procedures he can follow to prepare for the move. Pictures, clocks, radios, television sets, lamps, and other fragile items can be tied on the couch in the living room or on a bed. Anything loose will slide forward on a quick stop. Some people prefer to put these small items in cartons.

Dishes should be packed in cartons with towels and pillows. If latches are inclined to jolt open, use masking tape to secure them.

The furniture should be placed so that the weight is well-distributed. Do not overload either the front or rear of the home. Balance the load.

The water inlet and sewer outlet should be capped. Close all windows. Lock all doors.

The mover will check the entire undercarriage of the home and the tires for proper inflation.

If the owner prefers, arrangements can be made for the mover to handle the entire procedure.

Coupler-Hitch Assembly

Mobile homes usually are equipped at the front with a coupling and hoisting device called a hitch. This provides a means for attachment of the mobile home to the towing vehicle.

Most mobile home hitches also include a jack or screw device for raising or lowering the front end of the home.

Lubrication: Grease fittings or oil points are provided on most couplers for lubricating the jack mechanism to prevent rusting and to provide for easier operation. Regular greasing and cleaning of the mechanism is advisable so the parts will be functional when they are again used.

Brakes

A mobile home that has been parked for a prolonged period should have its brakes checked by a competent automotive mechanic before being moved over the highway. Electrical connections to the brakes should be checked to make sure they are clean and tight or the result may be weak, uneven, or grabbing brakes, or a lack of brakes. Linings should be replaced immediately when they become worn out or greasy. Linings approved by the maker of the mobile home brakes should be used.

Tires

Before being moved, the air pressure of the mobile home tires should be checked according to the table at left.

Tire Size	Ply Rating	Air Pressure Lbs.
7.00-15	6	45
7.00-15	8	60
6.50-15	8	60
7.50-15	10	75
7.00-10	8	60
7.00-10	10	75
7.00-10	12	90
7-14.5	8	60
7-14.5	10	80
7-14.5	12	95
8-14.5	10	80
8-14.5	12	95

When a home is blocked in position, tires should carry some of the weight, but a board may be placed under the tire to keep it free of the soil. Tires should be kept inflated.

After the home is positioned and the skirting installed the tires will be shielded from the sun. Painting the tires with a rubber tire paint helps protect them from deterioration.

The original tires furnished with a mobile home are guaranteed by the tire manufacturer to be free from defects in workmanship and material. If an examination shows that any tire has failed under terms of this guarantee, adjustment should be arranged through the nearest tire dealer handling the brand in question.

All tires are designed to carry a specific load at specified air pressures. They will render satisfactory service is used within the load limitation indicated by the tire manufacturer.

Wheels

Wheel bearings can become badly etched or corroded when mobile homes are parked for long periods unless the bearings are well covered with a protective covering of a suitable lubricant.

Corrosion is caused by water getting in through the seals or by moisture due to condensation forming in the hub with variations in temperature. There is no way to prevent the condensation except to fill the hub and bearings completely with grease.

After the mobile home has been permanently located, the wheel bearings and hubs should be cleaned and repacked with grease, leaving no voids in the hub to permit the entrance of moisture.

If the mobile home is to be moved on the highway again, some of the grease should be removed so the hub is about two-thirds full. This will prevent grease leakage through the seals onto the brakes. If the hubs are left fully packed, the grease will expand due to heat generated at higher speeds and be forced through the seals, causing faulty brake operation.

It is important that mobile home wheel bearings be inspected and cleaned prior to moving.

In order to check for spindle tightness, the grease cap under the hub cap should be removed. The spindle nut should be pulled up tight, then backed off to the first cotter pin hole so that the wheel will rotate freely when jacked up. No side play should be present in the bearings. This can be checked by rocking the wheel sideways by hand with the wheel jacked up.

SECTION III

SAFETY

Tips for Home Safety

Fire Safety Devices in your Home All homes built by Bendix are built to Federal Standards and meet all required fire codes. Paneling is manufactured with fire retardant material, and materials for accessories such as curtains, draperies, upholstery, and carpeting are purchased as flame proof as possible.

In addition, two important safety features are built into your mobile home:

1. Egress windows in each of the bedrooms to provide an escape route to the outside.
2. Smoke detectors which serve as early warning devices in the event of fire.

Safety Exit Window

One window in every bedroom is a safety exit. The windows may differ in size; however, each allows plenty of room for easy and fast escape.

To properly use the windows, follow these steps: (Instructions attached to the windows should be carefully read and memorized.)

1. Prepare windows immediately after moving into the home. (This may have been done by your dealer, but make sure that you, as the owner, double-check.)
Remove any installation clips which may have been installed for transit.
Remove all clips installed by supplier at hinges or actuating mechanisms.
2. To exit in case of fire; remove storm sash by turning the retaining clips. (or screen by pulling nylon tabs).
Trip exit latches at sill.
Open the window by either the sliding or hinge method.
Exit.
3. Go over the above procedures several times a year - especially with children. Check to make sure windows and screens can be removed easily.
4. In case of severe emergencies, when there is not time to open windows, break them. A lamp, drawer, picture, or shoe can be used.

Smoke Detectors

Each sleeping area in your home is equipped with a highly sensitive smoke detector. The detectors are mounted as high as possible on the wall or on the ceiling to detect any poisonous gas or smoke which might rise from a fire.

The smoke detectors are capable of sensing visible and invisible particles given off by every fire. In the early stages of the fire, there is no visible smoke, no flame, and no appreciable heat. Yet the early warning system senses fire is in the making and warns of the fire immediately by emitting a loud, distinctive alarm horn sound.

When cleared of combustion products, the detector resets itself automatically. One glance at the smoke detector tells you the power is on, the circuits are functioning, and the sensitivity adjustment is correct. A solid state light set in the detector lets you know that the fire detector is on and working.

For maintenance instructions, please see the separate smoke detector owner manual.

SECTION IV

INSURANCE INFORMATION

There are certain basic principles and fundamental information about insurance which apply to all kinds of home ownership-mobile or site-built.

Insurance companies have given recognition to the problems of the mobile home owner; he will find it easy to insure his home so that he is adequately protected when it is (1) in location or (2) in transit.

If he wants to relocate his home, collision or upset insurance is available either on a full-term or on a "trip" collision basis (for 30, 60, or 90 days, or whatever period is required).

The location of the home, how it is anchored, whether in a mobile home park or on private property, may have some bearing on the type and rate of insurance available.

Specifically, there are three basic types or classifications of insurance of which the mobile home owner should be aware:

1. Physical Damage Insurance
2. Liability Insurance
3. Credit Life, Accident and Health Insurance

In brief outline, the exposures involved under these types are as follows:

1. Physical Damage
 - a. Fire and Lightning
 - b. Theft (Broad Form)
 - c. Combined Additional Coverages (windstorm, hail, earthquake, explosion, riot or civil commotion, the forced landing or falling of any aircraft or its parts or equipment, flood or rising waters, malicious mischief or vandalism (\$25 deductible), external discharge or leakage of water except loss resulting from rain, snow or sleet whether or not wind-driven.)
 - d. Comprehensive ("... any direct and accidental loss of or damage to the mobile home except loss caused by collision...or upset...")
 - e. Collision or Upset (available either on a full term or trip basis).
 - f. Personal Effects. Fire and/or combined additional coverage. Personal effects covers the mobile home owner against loss or damage to wearing apparel, kitchen utensils, linens, beddings, sporting equipment, and all other "personal" property either of the insured or of any other person in the insured's

household while carried in or upon the mobile home.

II. Liability Insurance (Sometimes called "third party" insurance.) Under liability coverage the insurance company agrees to pay (within the limits stated) on behalf of the insured, all sums which the insured shall become obligated to pay as damages physically sustained by another person or another's property as a result of an accident arising out of the insured's ownership, maintenance, or use of the mobile home.

Liability protection is usually purchased as part of the mobile home owner's insurance package. Some firms may add the liability protection as an endorsement to the home owner's automobile liability policy, although this practice is not as prevalent as it once was.

This matter can be reviewed with the insurance agent.

III. Credit Life, Accident and Health Protection

When a mobile home is purchased under installment sales contract or chattel mortgages, many buyers want to include credit life, accident and health insurance which guarantees that (1) in the event of the borrower's death the balance of the loan made to purchase the home is paid off in full, or (2) in the event of accident or sickness the required monthly payments are paid for the borrower until the borrower again is able to return to regular employment.

When one thinks of insurance one should remember that a policy of insurance actually is a contract between two parties: the underwriting company and the purchaser of the insurance. Accordingly, as in any contract, there are carefully laid out in the insurance policy the responsibilities of each party to that contract.

It will be found, for example, that in the event of loss occurring from such cases as are specifically stipulated, the company will do certain things for the insured to protect him from loss.

On the other hand, the purchaser of the insurance, i.e., the insured, usually will find that it is his responsibility to do certain things in the event of a loss-including, among others, protecting damaged property from further loss, the prompt reporting of the loss, prompt execution and return of any forms supplied by the company, and the cooperation of the insured with its adjusters and legal counsel.

The values offered should be carefully measured when considering mobile home insurance. The least expensive policy may prove the most expensive if at time of loss it is learned the policy purchased is not applicable to mobile homes, or the company involved has little or no experience in the prompt, equitable adjustment of mobile home claims.

SECTION V

OWNER'S MAINTENANCE CALENDAR

The following procedures are given to help you in your mobile home care. You may have other activities to add to those listed here.

SPRING

- * Wash, wax exterior
- * Wash, wax walls
- * Inspect roof; clean off debris; rinse off with water and hose
- * Check exhaust fan systems

SUMMER

- * Check air conditioner
- * Clean air filters
- * Replenish fuel oil supply
- * Inspect, clean wheel bearings

VACATION REMINDERS

- * Suspend telephone service, if desirable
- * Stop all regular deliveries
- * Turn off water supply; during winter, put approved anti-freeze in kitchen, lavatory, and toilet traps
- * Turn off water heater
- * Close and lock windows
- * Put the cat out
- * Lock the doors
- * Have fun!

FALL

- * Check/clean furnace
- * Check oil supply
- * Caulk all small openings
- * Wash, wax exterior
- * Inspect and rinse roof; recoat, if necessary
- * Check exhaust fan systems

WINTER

- * Lubricate window hinges & arms
- * Check furnace filters every 30 days
- * Clean filters if necessary

