

1999
40'
WANDERLODGE
WLX
OWNER'S
MANUAL

(1)

THE
FEDERAL
BUREAU OF INVESTIGATION

WASHINGTON, D. C.

REPORT OF THE DIRECTOR OF THE
FEDERAL BUREAU OF INVESTIGATION

(2)

TO THE
ATTORNEY GENERAL

FROM THE
DIRECTOR OF THE
FEDERAL BUREAU OF INVESTIGATION

RE: [REDACTED]

(3)

Dear Wanderlodge Owner:

Thanks for choosing Wanderlodge!

We want to personally welcome you to our Family of Friends and we invite you to visit us at our Fort Valley facilities whenever you wish. We are always happy to see you, and are deeply interested in your experiences as you use and enjoy your Wanderlodge coach. We recognize that it is our relationship to you, the Wanderlodge owner, that contributes most to the prestige of ownership of this finest over-the-road coach.

We trust that as you become more intimately acquainted with your new coach, the sound, careful thoughts behind every aspect of its design will become increasingly evident and your initial decision to choose Wanderlodge will be positively reinforced with every mile.

We acknowledge the good faith you have demonstrated in our product. All of us at Wanderlodge take great pride in our handiwork and want to do everything possible to engender in you what has become the Wanderlodge experience; the deep satisfaction that comes from years of a sure confidence of having chosen ... the very best.

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

Page 1 of 1

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Limited Warranty Wanderlodge®

Wanderlodge® Division gives this Warranty. The terms "*we*", "*us*", and "*our*" in this Warranty refer to that division. The Warranty extends to the original owner of the Wanderlodge®. The terms "*you*" and "*your*" in this Warranty refer to the owner.

Thank you for purchasing a new Wanderlodge®. Wanderlodge® warrants each Wanderlodge® to be free from defects in factory material or workmanship under normal use and service within the time and mileage limits described below:

1. For a period of (3) years or 36,000 miles, whichever occurs first, from date of delivery to the original purchaser or first placed in service as a demonstrator or company vehicle, whichever is earlier (mileage accumulated while in the possession of the dealer is included in the 36,000 mile total), Wanderlodge® warrants the:
 - a. Chassis Frame and Crossmembers
 - b. Body shell (those structural metal components welded or riveted together forming floor, sidewalls, roof, front and rear sections) including rust-through.
 - c. Paint adhesion, except when paint failure is caused by deterioration of paint from weather and exposure or damage to paint after you accept delivery of the Wanderlodge®. This warranty does **NOT** cover cracks in the paint on rubber fenders and does not cover fading of any paint.
2. For a period of (12) months from date of delivery to the original purchaser or first placed in service as a demonstrator or company vehicle, Wanderlodge® warrants the:
 - a. Interior components of the coach such as the following:
 - Interior fabric
 - Floor covering

- Wall covering
- Cabinets
- Components warranted by other manufacturers are not included in any part of this Warranty. We have supplied to you those separate warranties in your owner's package.

3. From the date of delivery to the original purchaser or first placed in service as a demonstrator or company vehicle, (mileage accumulated while in the possession of the dealer is included in the mileage total) the following power train components will be covered by the manufacturer's warranty for that component.

Engine	Manufacturer's warranty
Transmission	Manufacturer's warranty
Axles	Manufacturer's warranty
Batteries	Manufacturer's warranty

The preceding paragraphs describe everything that is covered by this Warranty. Anything else is NOT covered. Without limiting this general statement about what is covered, examples of such non-covered expenses include:

- Telephone calls
- Loss of time
- Commercial loss
- Inconvenience
- Loss of use of the vehicle
- Towing charges
- Hotel or motel accommodations
- Equipment we do not manufacture or supply
- Maintenance services such as but not limited to:
 - wiper blades
 - oil
 - filters
 - bulbs
 - fluids
 - front end and tag axle alignment
 - brake linings and drums

- Damage from things we could have no control over such as:
 - *collision*
 - *modifications*
 - *misuse*
 - *lack of maintenance*
 - *misuse of electrical systems*
 - *broken glass*
- Any part of the vehicle which fails or malfunctions as a result of work done by anyone other than Wanderlodge®.
- Any equipment added to the vehicle by customer or dealer, or temporary installations at the factory designed to accommodate such additions or alterations, may not be covered by this Warranty.
- Parts or accessories which you or your dealer bought or installed.
- Wanderlodge® makes no warranty whatsoever regarding pneumatic tires. Repair or replacement of defective parts is your exclusive remedy under this warranty.

Wanderlodge® will pay for all parts and labor needed to make necessary repairs due to defects in factory material or workmanship covered under this Warranty.

This Warranty covers the original owner of the Wanderlodge® during the Warranty Period. A transfer fee will be required within 30 days of the sale of the Wanderlodge to transfer the Warranty.

Wanderlodge® reserves the right to make changes in design and changes or improvements upon its products without imposing any obligations upon itself to install the same upon products theretofore manufactured.

In order to have defects repaired under this Warranty, you should promptly take your Wanderlodge® to the dealer who sold it to you or to the nearest Wanderlodge® dealer. (You may obtain the name and address of the nearest dealer by writing or calling us at the address and number set forth below). In the event there is some geographic or mechanical reason you cannot get to a Wanderlodge® dealer, you may (with our prior approval) use any capable and reputable repair facility for the repairs. The Wanderlodge® dealer will

make any needed repairs (or arrange for them to be made) within a reasonable time after you deliver the vehicle to him. You must take the vehicle to the dealer promptly after discovering the defect and, in any event, within the Warranty Period. Warranty claims must be submitted no more than 60 days after repairs are completed.

Defective parts that you have replaced under the Wanderlodge® Warranty must be returned to the factory with your invoice for the new part in order to be credited for the repair work.

You are responsible for properly operating, maintaining and caring for your Wanderlodge® in accordance with the instructions contained in your Owner's Manual.

You are responsible for keeping maintenance records, since in some instances, it may be necessary for you to show that proper maintenance has been performed.

This Warranty applies to those Wanderlodge® which are legally registered and normally operated in the United States or Canada.

ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS, ARE LIMITED TO THE WARRANTY PERIOD OF THIS WRITTEN WARRANTY, AND WE WILL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. Some states do not allow limitations on how long an implied Warranty will last, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Any lawsuit for breach of this Warranty must be filed within one year of breach.

No one, including the dealer, is authorized to modify this Warranty or to make any other warranty on our behalf. There is no other express warranty on this vehicle. To the extent allowed by law, Georgia Law governs this Warranty and rights arising hereunder.

40'
WANDERLODGE
WLX
OWNER'S
MANUAL

①

②

③

④

TABLE OF CONTENTS

SECTION

CONTENT

INTRODUCTION

1	AIR CONDITIONING/DEFROSTING SYSTEM OPERATION
2	AIR PRESSURE SYSTEM
3	APPLIANCES
4	AWNING OPERATION
5	CHASSIS SPECIFICATIONS
6	DASH AND MONITOR PANELS
7	DRIVER AND CO-PILOT'S AREA
8	ELECTRICAL SYSTEMS
9	ENGINE, DIESEL
10	FANS, VENT AND EXHAUST
11	FRESH WATER SYSTEM
12	GENERATOR
13	HEATING SYSTEMS
14	INTERIOR / EXTERIOR CARE
15	LEVELING JACK SYSTEM
16	LPG SYSTEM
17	OPTIONAL EQUIPMENT
18	SAFETY AND SECURITY FEATURES
19	SHORELINE OPERATION
20	TRANSMISSION
21	VIDEO AND AUDIO EQUIPMENT
22	WASTE SYSTEM
23	AUTHORIZED SERVICE CENTERS

INTRODUCTION

This section of your Owner's Manual contains general hints and recommendations for using your motor home. Checklists and suggestions are offered which cover just about every phase of motor home travel.

The remaining sections of this manual describe the operation and use of the individual items and systems which comprise your motor home.

Manufacturer's manuals for components and appliances are included in your owner's kit. Please refer to these for more detailed information.

We hope that this manual will help answer questions that may arise about the use, operation and maintenance of your motor home. Any suggestions or recommendations that you might have for including or expanding on material of interest will be carefully considered for incorporation in future publications. We are always interested in providing our coach owners with the most current and comprehensive information about our product.

CHECKLISTS

A little preliminary planning will go a long way to help make your trips successful and enjoyable. As an aid to planning your travels, review the following checklists. If there are any additional items that you should be reminded of, add them where you see fit. These lists are only recommendations based on the experience and suggestions of sources well-versed in motor-coach expertise. You will eventually find that a short "walk-around" the coach, outside and inside, will be adequate and comprehensive enough to ensure that you are ready for travel.

BEFORE YOU LEAVE

- Store valuables and important papers in a safe place.
- Arrange care for your pets.
- Cover all food to keep out mice and insects.
- Store oil, gasoline, matches and other inflammables properly; get rid of newspapers, magazines and oily rags.
- Connect timers to several inside lamps and outside lights; keep some shades open for a lived-in look.
- Discontinue newspaper, milk and other deliveries; store trash cans and outside equipment.
- If weather permits, shut down hot water and heating systems; close main water supply.
- Ask the Post Office to hold your mail.
- Have your lawn, garden and house plants cared for.
- Arrange with the Telephone Company for discontinued or "Vacation Service".
- Lock all windows and doors securely.
- Leave your key with your neighbor and let them know your basic itinerary.
- Notify police.

CHECKOUT YOUR COACH - OUTSIDE

- Disconnect and stow:
 1. Electrical cord.
 2. Sewer hose (flush out).
 3. Water hose.
- Check all exterior lights for proper operation.
- Check wheel lug nuts for tightness. (See **Tire/Wheel Change Procedure**).
- Check tires for correct pressure. (See **Tire Inflation**).
- Check that all external compartments and filler openings are properly closed and/or locked.
- Check that items stored on exterior of coach are secured. (Be sure that these items present no clearance problems.)

NOTE:

If the trip you are planning will take the coach well past suggested maintenance intervals, it may be advisable to perform these procedures before leaving. This may avoid unscheduled stops or interruptions during your trip.

- Check that there are no obstacles to avoid above or under the coach. Be sure that there is sufficient clearance front and rear.

CHECKOUT YOUR AUTOMOTIVE SYSTEMS

- Check that fluid levels are normal (oil, power steering, engine coolant, windshield washers, transmissions, etc.).
- Check generator oil level, coolant level, battery condition.
- Check operation of turn signals, emergency flasher, stoplights and backup lights.
- Check that headlight high- and low-beams operate.
- Check horn operation.
- Check fuel gauge, and add fuel if needed.
- Start engine and check gauges for signs of trouble.
- Check operation of foot brakes and parking brake.

CHECKOUT YOUR COACH - INSIDE

- Close windows and vents.
- Check that cabinet doors and drawers are secured.
- Check that refrigerator door latch is in locked position.
- Check that no heavy item is stored in an overhead cabinet.
- Store large items in base cabinets.
- Check that all doors are secured and latched.
- Check that counter tops, range top, table tops and shelves are clear of unsecured items.
- Check that shower latch is locked.
- Turn off interior lights; check that entrance step is retracted. Secure and lock the entrance door.
- Adjust exterior mirrors.

WARNING:

Mirrors provide needed additional driver visibility. To be effectively used, mirrors must be properly adjusted for each driver and the driver must be aware of the limitations on viewing area that exists even when mirrors are properly used.

AND, BEFORE DRIVING AWAY

- Check operation of appliances and special equipment.
- Check that fire extinguishers are fully charged.
- Check operation of interior and exterior lighting.
- Start generator and check 120 VAC system and wall outlets.
- Adjust driver's seat so that all controls are within easy reach.
- Make sure that seat is locked in position. Do not adjust driver's seat swivel or fore/aft mechanism while vehicle is moving or the seat could move unexpectedly, causing a loss of control.
- Check that front passenger's seat is locked in position.
- Fasten seat belts. Belts should be placed as low as possible around the hips. This places the load of the body on the strong hip bone structure instead of around the soft abdominal area and prevents sliding in case of accident.

CAUTION:

Child restraint systems are designed to be secured in vehicle seats by lap belts or the lap belt portion of a lap-shoulder belt. Children could be endangered in a crash if their child restraints are not properly secured in the vehicle.

- Check that warning lights are lit when the ignition key is turned to the ON or START position.

SOME ITEMS YOU MIGHT WANT TO TAKE ALONG ON YOUR TRIP**NOTE:**

You may find that many items taken were not needed and that some items that were needed were overlooked during the planning of your last trip. Make notes of these items to prevent duplicating the same errors.

- Adequate supply of prescription medicines.
- Prescription sunglasses or reading glasses.
- Camera equipment and film supply.
- Heating pads, ice bags, etc.
- Stationery, envelopes, stamps.
- Telephone number list.
- Reading material.
- Special pet supplies.

- Extra toilet chemicals and toilet articles.
- Spare belts for engine-operated equipment.
- Spare parts for generator: suggested spares include oil filter, fuel pump, air filter, solenoid. Five quarts of approved motor oil.
- A professional-type double-action tire pressure gauge. (Included in coach.)
- Under the heading of Emergency Equipment, it is advisable to consider outfitting your coach with these items:
 1. First aid-kit
 2. Emergency highway flares
 3. Flashlight or lantern (with extra batteries)
 4. Tool kit
 5. Replacement lamp assortment
 6. Replacement fuse and breaker assortment
 7. Trouble light with a long cord

AND SOME OTHER THOUGHTS TO CONSIDER

- Automobile insurance to cover you and your family.
- Avoid cash. Use traveler's checks and credit cards wherever possible.
- Confirm reservations well in advance of arrival.
- Make a clothing check list for everyone.

CITIZEN'S BAND TRANSCEIVER

You might also bear in mind that your coach is equipped with a CB unit (Citizen's Band receiver-transmitter). In the event of an emergency situation which requires outside assistance, remember to call for help on Channel 9. This channel is restricted to emergency use only and it is monitored 24 hours per day! Don't hesitate to use your CB if you see someone else in need of assistance.

HOT WEATHER OPERATION

Wherever possible, choose a shaded parking site so that the coach will be cooler during the hottest part of the day. The optional patio awning will be especially useful in lowering inside temperature. Air conditioning units are indispensable in hot climates. Keep in mind that their proper operation depends on adequate line voltage. Low voltage causes motors to run hotter and reduces compressor motor life. Supply voltage in some campgrounds may not be as high as necessary, especially when there are heavy loads on the lines from other air conditioners. Check the right hand overhand auxiliary panel 120 VAC meters when in doubt.

COLD WEATHER OPERATION

If frost or condensation accumulates in closets or cabinets during long periods of cold weather operation, leave the doors to these areas slightly ajar to provide air circulation. Be sure that roof vents are open when using the gas cooktop.

CAMPGROUND COURTESY

Don't forget the "Golden Rule". Being considerate of your neighbors will help make friends. A few of the "Do's" and "Don'ts" are:

- Good housekeeping - put all litter in the proper receptacles and leave your site neat and clean.
- Don't allow your water or sewer hook-ups to leak.
- Respect your neighbor's desire to retire at an early hour. Avoid loud noises and bright lights after dark.
- Drive slowly through camp areas at any hour for the safety of pedestrians.

INSURANCE

As with your automobile, it is important that you have adequate protection with insurance coverage for personal liability, property damage, comprehensive, collision, medical payments, loss of use, etc.

Canadian and Mexican Insurance

Insurance for travel in Canada can usually be covered by your present U.S. policy for the recreational vehicle, often at no extra cost. Consult your individual company for procedures and be sure of your coverage before entry.

For travel in Mexico (at the present time), there are no U.S. insurance companies that can provide recognized Mexican coverage, with the exception of that required for travel through a narrow strip of Mexican territory in and around parts of entry and the U.S./Mexican border.

Mexican insurance is controlled and rates are set by the Mexican government. There are several reliable companies handling Mexican insurance, with similar rates for the necessary coverage. The principal differences between them are the "fringe benefits", received in the form of informational travelogues and other helpful information, such as dining places considered acceptable for sanitary conditions, fuel stations, and so on.

Some insurance services include detailed route maps with "where to stay" recommendations and "things to see" mile-by-mile (or kilometer-by-kilometer post). While the rates set by Mexico may seem quite expensive at first glance, you usually end up not spending quite as much as expected because you can usually arrange to hold your state-side policy in abeyance during the same period you are in Mexico, thus not having to pay unnecessarily for double coverage. In addition, you may be able to obtain substantial refunds on the Mexican collision insurance after your return to the U.S. Be sure to obtain a certification from the park operator at each location in Mexico to certify the dates that your coach was parked there. If your coach is parked for most of the time, instead of constantly traveling, your refund may be a major portion of the original cost. This feature is referred to as the "in-storage" credit. (It is a good idea to always check with your insurance company before taking a trip to find out whether applicable insurance rules and regulations have changed. Keep up to date on your coverage.)

Carry insurance papers at all times!

SAFETY CONSIDERATIONS

Using LP Gas

Check for leaks at the connections on the LP gas system soon after purchase and initial filling of the LP tank; continued periodic checks of the system are recommended. Even though the manufacturer and dealer have already made tests for leakage, this check is advisable because of the vibrations encountered during travel. Apply a soapy water solution to the outside of gas piping connections to find gas leakage (bubbles). Do not use products that contain ammonia or chlorine. Usually, tightening of connections will be sufficient. If not, ask your authorized dealer service to make the needed repairs.

Liquefied Petroleum Gas (LPG) is heavier than air. Leaking gas tends to flow to low places, and will sometimes pocket in a low area. LP gas can usually be detected by an identifiable odor characteristic to garlic.

CAUTION:

Never light a match or allow any open flame in the presence of leaking gas! Be sure that the main LP gas supply valve is closed or galley panel switch is OFF during refueling to prevent accidental ignition of gas fumes by appliance ignitors.

WARNING:

When coach is to be stored in a confined area, turn off the LPG at the main tank shutoff valve or, more conveniently, at the galley systems control panel. Your Wanderlodge has been provided with an automatic 80% fill valve to protect you from the dangers of an overfilled LPG tank.

Electrical Systems

Your coach has been engineered and checked for your complete electrical system safety. Circuit breakers and fuses are installed to protect electrical circuits from overloading. Before making modifications or additions to the electrical system, consult your dealer for assistance in obtaining a safe and secure installation.

Do not "jump" circuit protectors!

Emergency Stops

Always carry road flares and/or reflective triangular highway warning markers for emergency warning display. Pull off the roadway as far as possible when changing flats or for other emergency situations. Turn on your hazard warning flashers when parked alongside a roadway, even if only for a short while. Have your coach occupants leave the vehicle and stand clear of the area when parked on the edge of a highway.

In Case of Tire Blowout

Michelin Tire Corporation has tested extensively and recommends the following when a blowout occurs:

1. Quickly step on the gas.
2. Adjust steering as needed.

3. Stay off the brakes.
4. Keep driving until you find a safe place to pull over.

Engine Exhaust Gas

Avoid inhaling exhaust gases because they contain carbon monoxide, which by itself is colorless and odorless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal. If at any time you suspect that any exhaust fumes are entering the passenger compartment, have the cause determined and corrected as soon as possible.

The best protection against carbon monoxide entry into the vehicle body is properly maintained engine exhaust system, body and ventilation system. It is a good practice to have the exhaust system and body inspected by a competent mechanic each time the vehicle is raised for lubrication or oil change. It should also be inspected whenever a change is noticed in the sound of the exhaust system, and if the exhaust system, underbody or rear of the vehicle has been damaged.

To allow proper operation of the vehicle's ventilation system, keep ventilation inlets clear of snow, leaves or other obstructions.

Sitting in a parked vehicle with the engine on for extended periods, without proper ventilation, is not recommended!

More Safety Considerations

- Sanitize fresh water supply system periodically.
- Prevent water connection fittings from contacting the ground or drain the hose to reduce chances of contamination.
- Consider using a qualified technician for repairing gas or electrical appliances.
- Check fire extinguishers periodically for proper charge.
- Avoid overloading your vehicle.
- Be careful not to cause an improper load distribution which can adversely affect roadability.
- Insure that tires are in good condition and properly inflated at all times.
- Under-inflated tires overheat and are prone to blowouts!
- Check and tighten wheel lug nuts; manufacturer recommends after first 50-100 miles and every 1,000 miles thereafter.

EMERGENCY EXITS

Sliding windows, which can be easily opened, may be used as an emergency exit. Squeeze the window latch and slide the window open. Emergency exit windows are identified by an EXIT decal on the glass.

OWNER'S MANUAL REQUIREMENTS

The minimum required educational information in the owner's manual shall include:

1. A sample of the weight label's contents affixed to the unit as appropriate.
2. An explanation of the following:
 - Vehicle weight distribution
 - How to weigh the vehicle
 - These definitions:
 - Gross Axle Weight Rating (GAWR)
 - Gross Combination Weight Rating (GCWR)
 - Gross Vehicle Weight Rating (GVWR)
 - Unloaded Vehicle Weight (UVW)
 - Net Carrying Capacity (NCC)
3. Towing guidelines.

MOTORHOME WEIGHT INFORMATION

Model _____

GVWR _____

UVW _____

NCC _____

GCWR _____

GVWR

[Gross Vehicle Weight Rating] means the maximum permissible weight of this motorhome. The GVWR is equal to or greater than the sum of the Unloaded Vehicle Weight plus the Net Carrying Capacity.

UVW

[Unloaded Vehicle Weight] means the weight of this motorhome as built at the factory with full fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, LP gas, occupants, or dealer installed accessories.

NCC

[Net Carrying Capacity] means the maximum weight of all occupants including the driver, personal belongings, food, fresh water, LP gas, tools, tongue weight of towed vehicle, dealer installed accessories, etc., that can be carried by this motorhome.

[NCC is equal to or less than GVWR minus UVW].

GCWR

[Gross Combination Weight Rating] means the value specified by the motorhome manufacturer as the maximum allowable loaded weight of this motorhome with its towed trailer or towed vehicle.

This motorhome is capable of carrying up to _____ gallons of fresh water (including water heater) for a total of _____ pounds. Reference: Weight of fresh water is 8.33 lbs./gal.; Weight of LP gas is 4.5 lbs./gal. (average).

**CONSULT WEIGHT DECAL LOCATED IN COACH
FOR ACTUAL WEIGHTS**

REFER TO SECTION 5 FOR TRAILER TOWING CAPACITIES

VEHICLE LOADING

The Federal Certification Label, located inside and above the driver's windshield between the sun visor mounting brackets describes the maximum weight-carrying capacities of your motorhome and for each axle, respectively abbreviated by "GVWR" and "GAWR".

The Gross Vehicle Weight Rating (GVWR) is the maximum motorhome weight allowable with all systems filled and with passengers and supplies aboard.

Each axle also has a maximum load-bearing capacity referred to as the Gross Axle Weight Rating (GAWR).

The load capacity is the difference between the GVWR and the actual weight. This means that the total weight of all food, clothing, other supplies and passengers must not permit the load capacity to be exceeded.

To find the actual weight, with the motorhome fully loaded, drive to a scale and read the weight on the front and rear wheels separately to determine axle loading. The load on each axle should not exceed its GAWR. If weight ratings are exceeded, move or remove items to bring all weights below the ratings.

When loading your motorhome, store heavy gear first, keeping it on or as close to the floor as possible. Heavy items should be stored centrally to distribute the weight evenly between the front and the rear axles. Store only light objects on high shelves. Distribute weight to obtain even side-to-side balance of the loaded unit. Secure loose items to prevent weight shifts that could adversely affect the balance and roadability of the vehicle.

COACH SERVICE - REPLACEMENT PARTS

A paint color label is located adjacent to the Federal Certification Label above the pilot's sun visor.

Data plates located on the rear of the chassis (raise rear engine compartment door for access) provide information useful for identifying your coach if you are planning on ordering parts. Identification plates provide information such as:

1. Body Serial Number
2. Model Year
3. Body Service Number
4. Chassis Serial Number
5. Chassis Service Number

ECONOMICAL DRIVING

How you drive, where you drive and when you drive — these factors all have an effect on determining how many miles you can get from a gallon of fuel. Careful maintenance will also contribute to fuel economy.

Frequent stops and starts during a trip diminish miles per gallon. Plan even short shopping trips so you can take advantage of through-streets to avoid the traffic lights. Pace your driving like the professional drivers to avoid unnecessary stops.

An idling engine also consumes fuel. If you are faced with more than a few minutes wait, and you are not in traffic, it may be advisable to shut off the engine and re-start later.

A properly lubricated vehicle means less friction between moving parts. Consult the maintenance schedules for proper lubricants, lubrication intervals and general coach maintenance scheduling.

Fuel economy is also related directly to the amount of work accomplished by the engine. Heavier loads require more power. Keep excess weight to a minimum.

CELLULAR PHONE WIRING

A roof mounted antenna and wiring (terminates in driver's area) are supplied for cellular phone hookup.

FOG LIGHTS OR DRIVING LIGHTS

Clear fog or driving lamps are mounted stationary in the front bumper. The fog lamps illuminate only with low beam headlights or the driving lamps illuminate only with high beam headlights, provided the corresponding dash switch is activated.

TRAVELING IN YOUR MOTORHOME

NOTES:

1. Overall height is approximately 12 1/2 feet.
2. It is recommended that compartment doors be locked so they do not open while in transit. There are many modern recreational vehicle parks with good facilities, including State, County and Federal Parks, where electrical, water and sewer connections are readily available. Directories are published which describe these parks in detail, and list available services and hookups.

On overnight or short weekend trips, your motorhome has more than adequate holding tanks and water supply capacity in the event that campgrounds or parking sites are not equipped with these facilities.

On longer trips, where sewer connections and utility hookups are unavailable, it will be necessary to stop from time to time to dispose of holding tank wastes and replenish the water supply. Many gas stations (chain and individually-owned) have installed sanitary dumping stations for just this purpose.

When stopping for the night, park the coach in a location that is relatively level and where the ground is firm. This will ensure your comfort as well as the leveling of your refrigerator (for most efficient operation).

Making a long trip is not very different from making a weekend excursion since everything you need is right at hand and you are home wherever you travel. When packing for an extended trip, try to avoid taking nonessential items.

When planning to stay in the same location for several days, weeks, or even months, be sure to maintain the motorhome level. Use the leveling jacks system for this purpose.

Hook up to the water supply by attaching the water hose to the commercial water supply inlet.

Plug the electrical cable into the shoreline receptacle. Be sure to observe all grounding and connection precautions!

Connect sewage hookup into the disposal facility.

WINTER TRAVELING

Certain precautions should be taken when traveling in your motorhome during the cold winter months. Keep these suggestions in mind:

- Provide heat in the coach at all times.
- Have a plentiful supply of LPG and diesel.
- If your stay is longer than overnight, and you do not use the generator, try to have a shoreline hooked up to outside AC power.
- Minimize your use of electricity if 120 vac is unavailable.
- Leave cabinet doors and wardrobe doors slightly open at night to allow for proper air circulation.

Remember that low temperatures in combination with high winds will cause an equivalent chill temperature much below that indicated by your thermometer. For instance, with an outside temperature of zero degrees and a wind velocity of 10 miles per hour the equivalent chill temperature would be -20 degrees Fahrenheit!

There is no substitute for common sense when traveling in cold weather.

GENERAL STORAGE NOTES

Drawing draperies will reduce fading of rugs and upholstery. Leaving an air freshener agent will minimize odors from plastics and other materials. Slight opening of windows and vents will allow air circulation without worry of water entering. Covering wheels to eliminate direct rays of the sun on tires will reduce sidewall cracking.

NOTE:

Remove all items from the coach that may freeze, including canned foods, miscellaneous liquids, etc. Remove all contents of the refrigerator/freezer, clean unit and leave doors ajar.

REPORTING SAFETY DEFECTS

If you believe your vehicle has a safety defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Blue Bird Wanderlodge.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Blue Bird Wanderlodge.

To contact NHTSA, you may either call the Auto Safety Hotline toll free at 1-800-424-9393 (or 366-0123 in Washington, D.C., area). Or write to: NHTSA, U.S. Department of Transportation, Washington, D.C. 20590. You can also obtain other information about Motor Vehicle Safety from the hotline.

AIR CONDITIONING/ DEFROSTING SYSTEM OPERATION

ROOF AIR CONDITIONING

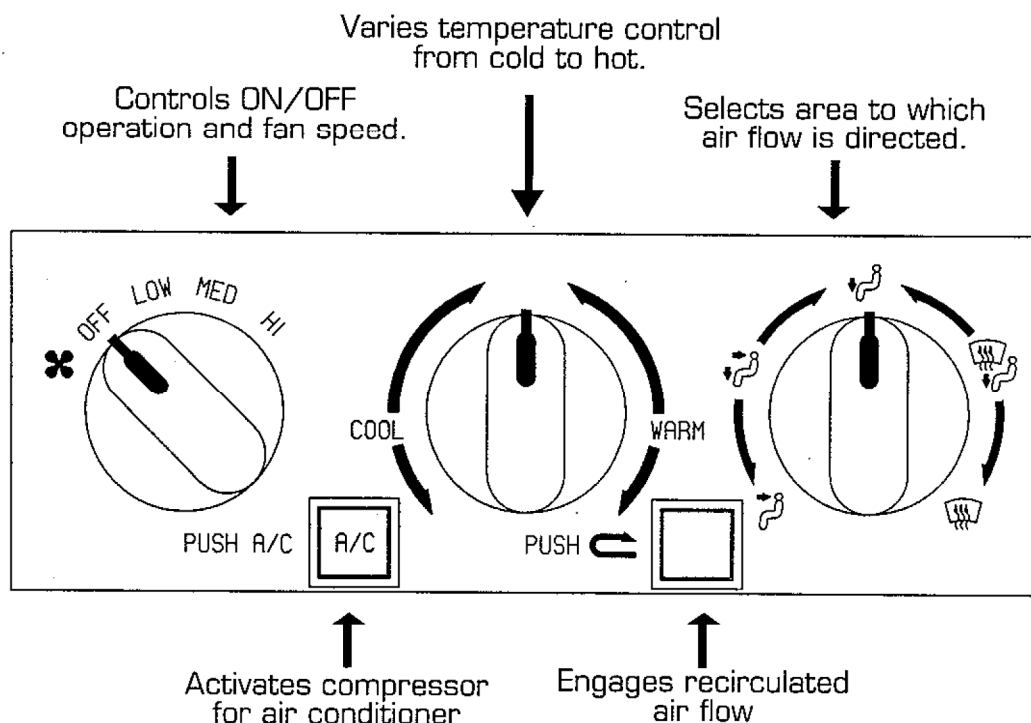
The ducted system includes (3) three 13,500 BTU air conditioning units with condensate drains.

Operation: 120 VAC is required from either generator or shoreline. The thermostat is located in the dinette area with remote temperature sensors located in the front and rear of the coach. Refer to the operator's manual in owner's kit for detailed operating instructions.

Refer to your Dometic "Comfort Control Center" manual for detailed operating instructions.

CHASSIS AIR CONDITIONING

The 30,000 BTU system has an engine-driven compressor. Automotive-style controls are located on the right hand side of the dash panel.



CAUTION:

For proper defroster operation, do not block areas between defroster vents and windshield.

NOTE:

In hot weather, it is recommended to run the roof air units while traveling to help control the heat load inside the coach. This will require running your generator while traveling.

AIR PRESSURE SYSTEMS

INTRODUCTION

The air pressure system on your coach is supplied by an engine-driven compressor. It provides pneumatic power for brakes, suspension, and numerous accessories. This complex, but efficient system is not intended to be totally leak free. After overnight parking, you may notice a significant loss of pressure on the air pressure front/rear gauge, or in systems connected to auxiliary air. This condition is normal, and in fact, our air leakage tolerance is tighter than most manufacturers within the heavy duty equipment industry. Once the engine is running, the engine-driven compressor will quickly build up the system to the correct pressure.

AIR BRAKES

Your motorhome is equipped with dual service air brake systems for front, rear and tag axle brakes, with integral fail/safe operation; and manual/automatic rear spring (parking) brakes. The service brakes are completely independent systems, each including a reservoir and separate distribution lines and valves. The reservoirs are pressurized from a single compressor. Both service brake systems are brought into operation each time the brake treadle is depressed to slow or stop the coach. Reservoir pressure for each service brake system is monitored by a respective pressure gauge on the front panel; system failure(s) are indicated by low pressure readings, illumination of the Low Air failure lamp and sounding of buzzer.

OPERATION

When the coach is parked, and the engine off, the rear spring brake will normally be set by operating the parking brake. The spring brakes cannot be fully released until the air pressure is above 65 psi. These brakes are in the released position when the control is pushed in. In the event that there is a loss of air pressure, the spring brakes will set automatically at the brake-applied position, and will not release until the air reserve has again built up to required value. Consequently, there will be a normal delay, after the coach is first started, while the compressor builds up pressure before the brakes can be released and the coach driven. When the brake treadle is depressed to slow or stop the coach, reservoir air is applied simultaneously to both front and rear service brakes to effect the braking action. The spring brakes are held in a released position by the air pressure supplied from the associated reservoir tank.

CAUTION:

Do not attempt to drive the coach until system pressure is above 90 psi.

BRAKE FAILURES

To compensate for normal lining wear, each brake system is individually self-adjusting.

Protection against brake system failures is provided by fail/safe features. If the front brakes fail, operating the brake treadle still activates the rear service brakes to provide stopping capability.

If a failure occurs in the rear, the front service brakes and rear spring brakes provide braking action.

In the unlikely event of a failure where both service braking systems are disabled, the rear spring brakes will apply automatically and bring the vehicle to a stop. As a safety factor, the coach should not be moved until any type of brake failure is corrected.

NOTE:

With the front brake system service reservoir fully charged, enough air pressure is available to provide for four full releases of the rear spring brakes. This will allow the coach to be brought to a safe position until repairs can be accomplished.

AIR SUSPENSION SYSTEM

Air suspension bags cushion the front and rear axles. Ride height is automatically maintained by height control valves. Dumping these air bags when the vehicle is parked allows the rubber bumpers to come together and eliminate vehicle springiness. Two switches, the TAG DUMP switch on the RH UPPER DASH and the SUSP. DUMP switch on the ARMREST PANEL, control dumping and filling of the respective air bags. The SUSP. DUMP switch controls the front, rear, and tag axle suspension; the TAG DUMP switch controls the tag axle only.

NOTE:

The accessory air tank must contain at least 65 psi pressure for the DUMP switch to function. The accessory air tank pressure does not register on the dash air pressure gauges.

Moving the SUSP. DUMP switch to the ON position (UP) applies air pressure to air pilot-operated valves on the suspension system. The pilot air shifts the valves, cutting off the air supply to the air bags and allows the air in the bags to escape. After the suspension system has been dumped and the ignition is turned on, a warning pilot light is illuminated on the dash to warn the driver that the system is dumped and not to drive the vehicle until the SUSP. DUMP switch is set to the OFF position (DOWN).

Refer to the manual in your owner's kit for additional information and maintenance instructions.

NOTE:

The TAG DUMP switch may be used to dump the tag axle only for close quarter maneuvering or for added traction on the drive wheels. This switch must be in the ON position for normal operation

ADDITIONAL AIR-OPERATED EQUIPMENT

Besides providing the compressed air supply for the coach braking and suspension systems, the compressor also provides the air supply for the stepwell cover and tag axle via separately controlled solenoid switches operated from the dash, or at other locations throughout the coach. (This compressed air source is furnished from the front right side reservoir.) A compressed air outlet fitting and air gun are contained in a center storage compartment on the road side of the coach, convenient for inflating tires, and so on. A schrader valve (air connection) is available in the engine compartment to allow the air system to be pressurized from a "shop" source without the necessity of starting the engine.

AIR STEP SPEED ADJUSTMENT

The adjustments for the entrance step are located under the center portion of the step and are combined with sintered bronze exhaust filters. The extend adjustment is close to the center of the step and the retract adjustment is to the rear.

To adjust the extend or retract function, loosen the lock nut (7/16" wrench) and turn adjustment with blade type screw driver as follows. To increase speed, turn counter-clockwise. To decrease speed, turn clockwise. When adjustment is complete, tighten lock nut.

COMPRESSED AIR SYSTEM AIR DRYER

The air dryer unit collects and removes moisture and contaminants from the compressor air output before the air reaches the reservoirs. This unit is different from a reservoir drain or an after cooler in that it provides dry air for the brake system by eliminating the possible accumulation of condensate in the system reservoirs. Note that each reservoir also has a drain cock on the bottom for draining accumulated moisture. This assures a long maintenance-free life for air brake system components due to the removal of system contaminants.

The air dryer is located between the compressor discharge (output) line and the compressed air reservoirs. A safety valve mounted in the air dryer housing assembly protects against excessive pressure buildup. The desiccant cartridge and pleated paper oil filters are easily removable and replaceable as a complete serviceable unit. The desiccant "Beads" which provide the drying action have a large capacity for absorption due to their combined surface area. In addition, an internal thermostatically-controlled heating element prevents freeze ups on the purge rail valve when the unit is used during sub-freezing temperatures.

Purging of the dryer is automatic, exhausting combined oil and water residue to the atmosphere. At the same time that the contaminants are purged, the reverse air flow across the desiccant material removes the accumulated moisture and reactivates the desiccant. Refer to Bendix Air Dryer Service Data Manual for more detailed information.

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APPLIANCES

REFRIGERATOR/FREEZER/ICEMAKER

The refrigerator will operate with a source of 120 Volts AC from the shoreline, inverter or generator. The refrigerator will first attempt to locate this AC voltage and, if not found, will then attempt to operate in the LP gas mode. If neither AC voltage nor LP gas is present, the refrigerator will set a failure light on the control panel of the refrigerator.

NOTE:

The built-in icemaker will operate only if the refrigerator is running on AC voltage (from the shoreline, inverter or generator).

COOKTOP (RANGE)

The gas supply for the cooktop burners is provided from the LPG tank. The cooktop is equipped with a 120 volt electric igniter. Refer to the manual in your owner's kit for detailed operating instructions.

MICROWAVE/CONVECTION OVEN

The microwave/convection oven provides programmed microwave cooking, convection operation for crisp and even broiling, or a combination of both. (See the manual in your owner's kit for detailed operation and caution notes.) Operates from shoreline, generator or inverter.

AWNING OPERATION

A lift handle is furnished with the patio awnings in addition to the pull rod. This 6 foot aluminum handle may be used to lower/raise the rafter arm from/to locked position.

For complete awning operation refer to **Zip Dee Owner's Manual**.

CAUTION:

The patio awning is equipped with a manual lock at both ends of the awning. Before driving your coach, verify that both front and rear locks are properly engaged. Failure to lock both ends may allow the awning to unroll while in transit.

CAUTION:

Be sure to raise the patio awning high enough to clear the top of the entrance door.

CHASSIS SPECIFICATIONS

ACCELERATOR CONTROL

Electronic Accelerator with Transmission Computer Link Up for Precise Shifting.

AIR COMPRESSOR

13.2 CFM capacity @ 1250 RPM, Gear Driven

AIR RESERVOIR

Three tanks with 1760 cubic inch capacity and one tank with 1240 cubic inch capacity.

ALTERNATORS

12 Volt negative ground 200 amp

AXLES

14,600 # Front; 23,000 # Drive, Single Speed, 4.44 Ratio; 11,500 # Tag; All Wheel Bearings Oil Lubricated.

BATTERY

Two 12 Volt, 1075 cold cranking amps maintenance free batteries wired in parallel.

BRAKES, EMERGENCY

MGM 36" Magnum Piston Type Spring Brake System with Treadle Valve Control – Separate Instrument Panel Mounted Valve provided for parking.

BRAKES, ANTI-LOCK

A Bendix four-channel system which controls the steer and drive axle system along with a standalone single channel system for the tag axle.

CRUISE CONTROL

Combined with Cummins Celect plus Engine Control

DRIVE LINE

Spicer 1810 Series with Protective Guard Around Shaft

ELECTRICAL SYSTEM

12 Volt

ENGINE

Cummins 450 HP M11E+ at 1800 RPM

EXHAUST SYSTEM

16 Gauge Aluminized Steel with Heavy Duty Muffler (6 inch diameter - inlet & outlet)

FUEL FILTER

Racor Fuel Filter Water Separator and Preheater Secondary Filter at rear of engine

FRAME

Channel 10-1/8" high with 3-1/2" flanges made of 5/16" 50,000 PSI steel, section Modulus - 14.8 In.³ Channels doubled in high stress area - Section Modulus 40.9 In.³

FUEL TANK

175 gallon capacity

GROSS VEHICLE WEIGHT RATING

48,600 lbs. max.

HORN

Dual Electric and Dual Air

OIL FILL & CHECK

Located at rear of engine on curb side.

SHOCK ABSORBERS

Direct acting, Double Action Piston Type; Front, Drive and Tag

STEERING GEAR

Ross Model TAS-85 with 23.3 to 1 ratio with Integral Power Steering and Tilt and Telescoping Steering Wheel.

SUSPENSION

Ridewell Air Suspension, 14,600 # Front, 23,000 # Drive and 11,500 # Tag. Front and Drive Systems Utilize 4 Air Springs Each, Tag System Utilizes 2 Air Springs.

TIRES

Tubeless 12R22.5 16-Ply rating Michelin Steel Cord Radial with XZA tread.

TURNING RADIUS

- * CURB RADIUS 38.5 ft.
- ** WALL RADIUS 42.0 ft.

- * Curb radius is the distance from the center of the turn to the outside edge of the front tire.
- * * Wall radius is the distance from the center of the turn to the outside edge of the front bumper.

TIRE/WHEEL CHANGE PROCEDURE

The wheel/tire assemblies used on your motorhome are heavy-duty truck-type. They are heavy and may be difficult to handle. If at all possible, changes should be accomplished by a service station equipped to handle truck equipment. However, if a situation arises where no service facilities are available, the following procedures may be used.

CAUTION:

Severe injury or death may result. **DO NOT** use the leveling system for changing tires or working under the vehicle. Keep the rear wheels in firm contact with the ground with the parking brake set. With the leveling jacks extended, there is a possibility the vehicle may move either toward the front or the rear.

NOTE:

Jack and lug wrench are not furnished with coach. An outside drive axle wheel may be used to replace front or tag wheel until permanent replacement can be made. Road speed must not exceed 40 MPH.

FRONT AXLE WHEELS

1. Drive motorhome out of traffic lane onto a level surface capable of supporting jack.
2. Turn on hazard flasher and apply parking brakes before leaving coach.
3. Turn off ignition and set transmission selector to Neutral (N) position.
4. Remove white plastic wheel saver from luggage compartment.
5. Place wheel chocks against front and rear of tires on opposite side.
6. Place jack under axle and raise slightly until securely in place.

CAUTION:

Bumpers are not designed for lifting and/or towing of the vehicle.

7. Pull off lug nut covers.
8. Install wheel saver.

NOTE:

It is recommended that the wheel saver be used when loosening or torquing lug nuts.

9. Loosen lug nuts slightly, then jack up coach until tire is clear of ground. Solidly support the vehicle under the main frame rails with jack stands or blocks before working under or around the coach.

NOTE:

Lug nuts on right side of coach are right hand threaded (turn counter-clockwise to loosen, clockwise to tighten); lug nuts on driver's side of coach are left hand threaded (turn clockwise to loosen, counter-clockwise to tighten).

10. Remove lug nuts and wheel assembly.
11. Install spare and replace lug nuts. Tighten progressively in the sequence shown on lug nut tightening sequence diagram, starting with #1 and proceeding to #10. Final torque will be 450 to 500 foot-pounds. Wheel must be on the ground for final torque.
12. Snap front hub cover into front wheel opening after front lug nuts have been properly torqued.
13. Place lug nut covers on all lug nuts. Make certain that these nut covers fit snugly. This is accomplished by squeezing the dimpled sides together before installing.
14. Lower coach to ground and remove jack and handle.
15. Replace wheel saver, lug wrench, jack and handles in storage compartment and tie down to prevent road noise. Return damaged wheel/tire assembly to holder and have it repaired as soon as possible.
16. Remove and stow wheel chocks.
17. Turn off hazard flasher before returning to traffic.

DRIVE AXLE DUAL WHEELS

1. Repeat steps 1 through 10, Front Axle Wheels.
2. Loosen inner lug nuts (studs with square heads), if inner wheel is to be replaced.
3. Remove outer lug nuts from the (5) studs which have lock rings and slide hub cover over remaining lug nuts.
4. Remove the (5) remaining lug nuts and wheel.
5. Remove inner lug nuts and inner wheel, if inner wheel is to be replaced.
6. Install replacement wheel and inner lug nuts. Tighten progressively, in the sequence shown on lug nut tightening diagram, starting with #1 and proceeding to #10. Final torque should be between 450 and 500 foot-pounds.
7. Install outer wheel (or replacement wheel) and lug nuts over inner lug nuts marked 1, 3, 7, 9 and 6. Torque nuts in the following sequence 1, 7, 6, 3 and 9 to between 450 and 500 foot pounds.
8. Install hub cover over the (5) lug nuts holding wheel to hub. Place lock rings and lug nuts on remaining inner lug nuts 10, 5, 2, 4 and 8.
9. Replace wheel saver.
10. Torque nuts in the following sequence 10, 2, 8, 5 and 4 to between 450 and 500 foot-pounds. Wheel must be on the ground for final torque.
11. Return to step 13 of Front Axle Wheels and continue.

NOTE:

When checking torque on dual wheels loosen all outside lug nuts. Check torque on inner lug nuts (studs with square heads) for torque value shown above, then torque outer lug nuts to value shown above.

TAG AXLE WHEELS

1. Repeat steps 1 through 9, Front Axle Wheels.
2. Remove lug nuts from the (5) studs which have lock rings and slide hub cover over remaining lug nuts.
3. Remove the (5) remaining lug nuts and wheel.
4. Install replacement wheel and lug nuts on studs marked 1, 3, 6, 7, and 9.
5. Torque nuts in the following sequence 1, 7, 6, 3 and 9 to between 450 and 500 foot-pounds.
6. Install hub cover over the (5) lug nuts holding wheel to hub. Place lock rings and lug nuts on remaining studs 10, 5, 2, 4 and 8.
7. Replace wheel saver.
8. Torque nuts in the following sequence 10, 2, 8, 5 and 4 to between 450 and 500 foot-pounds. Wheel must be on the ground for final torque.
9. Return to step 13 of Front Axle Wheels and continue.

CAUTION:

Check lug nuts for tightness every 1,000 miles. Lug nuts should be torqued to 450 to 500 foot-pounds.

TIRE INFLATION - TOWING - TRAILER

TIRE INFLATION

Under-inflation causes needless tire wear and promotes excessive fuel consumption. Check tire pressures on a regular basis.

The Federal Certification Label shows the cold tire inflation pressures necessary to support the Gross Axle Weight Ratings.

These pressures can be reduced to greatly improve the ride quality after the actual axle weights have been determined (see Vehicle Loading in the Introduction section).

The chart below is taken from the Michelin Tire Data Book and shows the recommended tire inflation pressures for various axle weights. If any axle weight is on the borderline, always use the higher pressure. Be sure weight is distributed evenly side to side.

LOADS PER AXLE (lbs.) AT DIFFERENT PRESSURES										
2 TIRES: SINGLE (S) 4 TIRES: DUAL (D)										
INFLATIONS PRESSURE (psi)										
MICHELIN SIZE - 12R-22.5 MAX. SPEED - 65 MPH										
psi	70	75	80	85	90	95	100	105	110	115
lbs. S	9,410	9,980	10,560	11,140	11,740	12,310	12,910	13,480	14,060	14,780
D	16,840	17,860	18,960	20,030	21,130	22,190	23,220	24,220	25,220	26,440

In addition, a tire inflation information plate is located inside the road side luggage compartment near the air gauge and hose. These are normal pressures as long as the axle weights are not in excess of those shown.

TOWING

Two towing eyes are provided behind the upper part of the generator door. Remove generator panel for access.

CAUTION:

Do not tow a vehicle equipped with Allison automatic transmission unless the drive shaft has been removed, or the rear wheels raised from the ground. Do not attempt to tow unit by front axle or crossmember. Damage to wiring and/or air lines can result because of proximity of these items to front crossmember. Do not tow with generator tray extended. Do not tow by the bumpers. Air pressure is required to release brakes.

TRAILER HITCH CAPACITY

The Receiver Type Hitch and Drawbar are rated for a 10,000 lb. maximum towing capacity and a 1,000 lb. maximum tongue weight capacity.

Standard equipment includes a 2" hitch ball with a 1" shank rated for a 5,000 lb. maximum towing capacity and 500 lb. maximum tongue weight. Hitch ball nut must be torqued to 200 ft. lb.

DAYTIME RUNNING LIGHT OPERATION

The daytime running light module operates the low-beam headlamps at approximately 50% of the normal headlamp intensity. The headlamps will momentarily flash when cranking the engine but extinguish rapidly. If the coach is shifted from Neutral to some transmission range or the parking brake is released and the headlamp switch is OFF, the headlamps will come on at the reduced intensity. In all instances, the headlamp switch on the dash will turn on the headlamps to full intensity.

UPPER DASH PANEL

NOTE:

Some items operate at all times and some require the 12 volt master to be on while others need the 12 volt master and the ignition on. Gauges marked with an * require the engine to be at normal operating temperature for correct readings.

***WATER TEMPERATURE**

Normal: 180 degrees to 210 degrees Fahrenheit
Monitors engine coolant temperature.

CAUTION:

If the engine temperature gauge indicates excessively high temperatures, the engine may be overheating and should be stopped to prevent damage. Allow the engine to cool before checking the radiator coolant level.

***OIL PRESSURE**

Normal: 50 to 70 psi at cruising speed, 5 psi minimum at idle, This gauge indicates the pressure of the oil, not the amount of oil in the engine reservoir.

CAUTION:

No oil pressure or low oil pressure readings (below 25 psi) when engine is operating at cruising speeds are trouble indications! DO NOT Operate the Engine Under These Conditions!

TRANS. OIL TEMPERATURE

Indicates temperature of the transmission oil.

AIR PRESSURE FRONT/REAR - TAG AXLE PRESSURE (55-65 PSI)

Normal: 110 to 135 psi

The Dual Air Service Brake Pressure systems are engine operated and supply independent brake system air pressure for front and rear service brakes and the parking brake. During normal operation, each air pressure gauge reading will build up to 110 psi to 135 psi shortly after the engine is started. Note that, as a safety feature, the parking brake cannot be released until air pressure readings are at least 65 psi.

FUEL LEVEL

Indicates the amount of diesel fuel remaining in the tank. Note that the generator also gets its fuel supply from this tank. The gauge reads only when the ignition switch is in the ON position. As a precaution against generator operation draining the fuel supply, the generator fuel pickup is shorter than the engine pickup. Separate fuel filters are provided for each fuel line.

DV VOLTS ENGINE

Registers the actual voltage at the engine batteries. With the engine running, gauge should read 14 volts (± 0.5).

DC VOLTS COACH

Normal: 14 Volts ± 0 .

Monitors the actual voltage at the coach batteries with the engine running.

SUSPENSION DUMP (LIGHT)

Indicates air suspension is dumped.

LOW AIR FRONT (LIGHT)

Warns of low air pressure on front suspension.

RADAR ON/OFF

Turns power on or off to the radar detector.

AIR COMPRESSOR MASTER

This switch operates the auxiliary air compressor (optional equipment) which is a 120 vac operated back up air compressor. See Optional Equipment for additional information.

LOW AIR REAR (LIGHT)

Warns of low air pressure on rear suspension.

LOWER DASH PANEL

MIRROR CONTROL

Switch controls both left and right mirror heads. Rotate the switch either left for the left mirror or right for the right mirror. Pushing the switch knob to the left rotates the selected mirror to the left, pushing the switch knob to the right rotates the selected mirror to the right, pushing the switch knob up rotates the selected mirror up, and pushing the switch knob down rotates the selected mirror down. The switch provided control the upper (flat) section of each mirror. The mirrors also contain a heating element to help prevent fogging over in inclement weather. The switch for the heater element is located on the lower dash panel, just below the mirror adjust switch.

MIRROR HEAT

This switch turns on thermostatically controlled heater in right and left outside mirrors. With the switch **on**, the mirror heater will automatically come on to defog the mirrors.

LEFT LANDING LIGHT

At the ON position this switch turns on the landing lights on the left side of coach.

RIGHT LANDING LIGHT

At the ON position this switch turns on the landing lights on the right side of coach.

ENGINE BRAKE ON/OFF

Engages or disengages the engine brake.

ENGINE BRAKE

Switches the engine brake power from high to low. "HI" uses 6 cylinders for braking power and "LO" uses 3 cylinders for braking power.

ENGINE BRAKE

Increases (INC) or decreases (DEC) engine idle RPM from 650-800 RPM in 25 RPM increments. Is also used by the service center to move through codes during engine diagnostics.

DRIVING LIGHTS

Driving lights will only operate with headlights on high beam.

WINDSHIELD WASHER

Momentary switch.

CRUISE ON/OFF

Turns power on or off for the cruise control.

CRUISE CONTROL

1. When the desired speed is reached, press the SET/ACCEL switch to the SET position, hold for two seconds before releasing. The coach should automatically remain at that speed.

Following disengagement of the cruise control by braking, the previously set cruising speed may be obtained by depressing the Resume-Cancel switch to the Resume position for two seconds. Note that the coach should be at or above 35 MPH before attempting the Resume function. In addition, if the ignition switch has been turned off, the previous cruise speed will be erased from memory and the new cruise speed will be that speed when the Resume switch was pressed.

If a higher cruising speed is desired and the cruise is enabled, press the Set-Accel switch to the Accel position. The coach will begin to accelerate. When the higher desired cruising speed is obtained, immediately release the Accel switch. The coach should remain at the new speed.

2. This switch also functions as a PTO governor allowing selection of a constant engine RPM regardless of engine load.

WIPER DELAY CONTROL

Knob adjusts wiper speed from 2 to 20 sweeps per minute when intermittent operation is selected.

WINDSHIELD WIPER

This switch turns on the windshield wiper, either high position or low position; center is OFF and wiper returns to the park position.

CLEARANCE LIGHTS

This switch controls the operation of the clearance, identification and marker lights. The switch has three positions and each position has the following function. In the ON position the lights will remain lighted continuously. When the switch is in the middle (OFF) position, these lights are turned on by the headlight switch. The MOM OFF position is to flash lights as a courtesy signal when the headlight switch is ON.

SPEEDOMETER

Indicates speed and accumulated mileage (odometer) and trip meter. This is a solid-state electronic monitor.

TACHOMETER/HOURMETER

Indicates actual engine RPM (Revolutions Per Minute) when scale (0-40) reading is multiplied by 100. Idle RPM should be 600 and full load (uphill) 2500 RPM. May go to 2800 RPM under no-load conditions (downhill).

DASH DIMMER

This control will operate only when the headlight switch is in the ON position. The background lighting (electric-luminescent) for the dash can be dimmed by turning counter-clockwise and brightened by turning clockwise.

HEADLIGHTS

The Headlight switch serves two functions. Pull to first position for parking lights and gauge illumination. Pull to second position for headlights, parking lights and gauge illumination. The dimmer controls brightness of all gauges in the dash. Turn counter-clockwise to increase or clockwise to decrease the brightness.

A/C HEAT CONTROLS

SEE AIR CONDITIONING/DEFROSTING SYSTEM OPERATION (SECTION 1-1)

AQUA-HOT

The hydronic heat switch activates the diesel fueled portion of the Aqua-Hot heating system. Once activated, it takes approximately 30 seconds for the diesel burner to ignite. Allow 20-30 minutes for the system to reach operating temperature upon initial activation. The diesel fueled portion of the Aqua-Hot system may not be required when moderate ambient temperatures exist and/or when there is a low demand for domestic water heat, as the electric heating element is capable of maintaining operative temperatures of 175 to 195 degrees Fahrenheit under these conditions.

The Aqua-Hot's engine preheating system acts as a supplemental heating source, in addition to the diesel burner and electric heating element. While traveling, the engine's heated coolant will automatically pass through the engine preheat loop, transferring heat into the Aqua-Hot's heat tank. This feature reduces the total operating hours of the diesel heater.

ENGINE HEAT

This switch engages the engine preheat pump in the Aqua-Hot heating unit, circulating the engine's coolant through the engine preheat loop, warming the engine for easy starting. Allow approximately 1-2 hours of engine preheating time (longer for colder ambient temperatures). The pump can be allowed to operate overnight if desired.

WARNING LIGHTS

Located on lower dash panel.

CAUTION:

When indicators marked with ** are lit, they indicate a problem which could cause engine damage. Stop engine immediately and do not continue until problem has been corrected

LEFT TURN

When the turn signal lever is pulled down into the left turn position, this indicator flashes in conjunction with the outside directional lights.

*****LOW OIL PRESSURE***

(SEE OPERATOR'S MANUAL.)

HIGH BEAM INDICATOR

The indicator is illuminated when high beam is selected using steering column switch.

*****LOW COOLANT***

(SEE OPERATOR'S MANUAL.)

RIGHT TURN

When the turn signal lever is pushed up into the right turn position this indicator flashes in conjunction with the outside directional lights.

RIGHT HAND UPPER DASH

LIGHTER

Depress to heat the element; pops out when hot.

TAG AXLE DUMP

Switch for tag suspension air. See Air Suspension System for operation.

***CHECK ENGINE (LIGHT)**

1. Warns driver there is a problem with the engine, but it can still be driven. Have engine checked as soon as possible.
2. Is used by the service center for on-board diagnostics.

***STOP ENGINE (LIGHT)**

1. Warns driver of an engine problem that needs immediate attention. Vehicle should be stopped as safely and as soon as possible, and engine should be checked.
2. Is used by the service center for on-board diagnostics.

***ENGINE PROTECT (LIGHT)**

Monitors oil temperature, coolant temperature, oil pressure, and intake manifold air temperature. Warns driver of excess ranges in these areas.

*** NOTE:**

These items are given more detail in your "Cummins" Operation and Maintenance Manual for the M11 series engine.

RIGHT HAND LOWER DASH

STEREO AM/FM CASSETTE

(See video and audio section.)

IGNITION SWITCH

A four-position, standard-type key switch. In the OFF position (center), ignition and accessory positions are disabled and the key can be inserted or removed. In the ON position (right), the battery is connected to the engine-run ignition circuits and the key can be advanced to START to start the engine, providing that the transmission selector is in neutral (N) position. The accessory position is not used.

MONITOR PANEL

REAR VIEW TELEVISION MONITOR

This system consists of a rear camera and a video monitor. System is designed to give the driver a full view of the rear of the motorhome to aid in backing, parking and monitoring a towed vehicle.

To operate:

1. The ignition switch must be on.
2. With the switch in stand-by, the system will automatically come on when the transmission is shifted into reverse.
3. To turn the system on while driving, turn the switch to the ON position.
4. Use the switch at the bottom of the monitor to adjust system for daytime or night time use.
5. Adjust the contrast and brightness to your preference.

ARMREST PANEL

GEN AUTO START (OPTIONAL)

Enables the optional generator auto-start circuit.

AUX BATT

Ties both the engine and coach batteries together for charging from the inverter/charger or cranking the M11 engine from the coach batteries in the event that the engine batteries are discharged.

SAFELINE

The switch disables the buzzer only. If shore power cord is connected to power pole, lights will give visual indication.

SUSPENSION DUMP

Switch will dump all three axle air bags.

DOOR OVERRIDE

Switch will disable the top air lock on the rear top of entrance door.

ACC

This switch allows front TV sound to play through stereo speakers in the living room, kitchen, and dinette.

HAZARD

This switch turns on the emergency flashers. When the switch is used, both left and right turn signals will flash in unison.

DRIVER & CO-PILOT AREA

HORN

Operate the horn by pressing in on the center section of the wheel. Select air or electric horn with the HORN SELECTOR switch on the dash.

COMBINATION TURN SIGNAL AND HIGH BEAM

Push lever toward dash for right turn signal, pull lever away from dash for left turn signal. Pull lever up toward steering wheel and hold for momentary high beam. When lever is released, low beams are activated. Push lever back away from steering wheel to go to high beam operation.

TILT LEVER

Pull lever up to release lock mechanism. While holding lever up, adjust the steering wheel to a comfortable position and release lever. Move the steering wheel slightly to make sure the column locks into position.

CAUTION:

Always make sure that the lever is in the fully locked position in whichever detent setting is used. Do not change the wheel tilt setting while the coach is in motion.

TELESCOPING STEERING WHEEL

To unlock the telescoping wheel, twist center section of steering wheel counter-clockwise and adjust wheel to comfortable position. While holding steering wheel at the desired position with one hand, lock it into position by turning the center section of wheel clockwise.

PARKING BRAKE

The Parking Brake control is located under the lower dash, to the right of the steering column. Note that the parking brake cannot be released unless the system air pressure is at least 65 psi. Pull to set and push to release.

AIR HORN FOOT SWITCE

Operates highway horns. Located on the floor to the left of the steering column.

ACCELERATOR PEDAL

Controls engine fuel flow to select power output. See Diesel Engine Section for detailed description.

BRAKE PEDAL

The coach is equipped with a dual air brake system which includes independent systems for the front and rear service brakes. A separate reservoir and panel mounted pressure gauge is provided for each service brake system. Refer to Air Brake System Section.

SEAT CONTROLS

Electrically operated six-way seat adjustments are built into the pilot's and co-pilot's seats. Three electric SEAT CONTROLS are used to control seat bench tilt, up-down and front-back seat movement. These seats may be rotated by a knob in the arm rest. A lever on the outboard side of seats controls back tilt. An additional switch controls lumbar support.

DEAD BOLT LOCK OPERATION, ENTRANCE DOOR

The entrance door has an automotive style two position catch. The second position is required for FMVSS certification. For maximum security and minimum wind noise be sure the door is fully closed. A dead bolt lock is also provided for your security; however, it will only engage and retract if the door is fully closed. Should you inadvertently open the automotive latch with the dead bolt engaged, you will have to shut the door to retract the dead bolt.

ELECTRICAL SYSTEMS

There are two interrelated electrical systems used in your motorhome...the 12 volt DC supply system and the 120 volt AC supply system. The 12 volt DC system is divided into several branches, or zones, each functioning from the common 12 volt battery source. One branch provides the 12 volts required for the automotive starting, ignition and lighting systems; the remaining branches supply those motorhome circuits and appliances which require 12 volts DC for operation.

The 120 volt AC system includes those motorhome appliances which require 120 volts for their operation, supplied from either the internal generator or from the external 120 volt AC (or a split 240 volt AC) supply via the shoreline hookup. The inverter will supply 120 volt power from the coach batteries to selected circuits.

12 VOLT DC SUPPLY SYSTEM

Wiring diagrams of the 12 volt supply and distribution system are included in the Illustrations and Diagrams Section.

The 12 volts supplied to all motorhome appliances, outlets and accessories is routed from the batteries through a main 12 volt master switch and routed through buses to the individual branches, or zones, that are serviced from this supply. Circuit breakers are located at lower front load center (behind removable panel inside front of coach) and at each of the zones. The circuits supplied and fuse, or circuit breaker protection, at each zone are shown on the diagrams.

COACH BATTERIES

Four (4) 12 volt Marine/RV Deep Cycle batteries are located on a fixed tray in the rear curbside compartment. These will provide 8.4 hours of operation, at a 25 ampere rate, when a charging source is not available.

BATTERY CHARGING

The 12 volt coach battery supply is maintained fully-charged by either the engine alternator (when engine operates) or by the battery charger. The engine battery system is normally charged by the alternators only. The coach and engine battery systems are separated by a relay to prevent deterioration of voltage in the event of one or the other supplies becoming defective.

In the event of a failure of either battery system, the systems may be tied together through the above relay by the AUX. BATTERY switch on the lower dash. The momentary position of the switch should be used for cranking the engine. The ON position should only be used for charging engine batteries by the battery chargers.

Batteries can become discharged because of coach 12 volt loads, while parked, without a 120 volt AC source. For overnight stops this presents no problem, with judicious use of 12 volt service, because the engine alternators will recharge the batteries rapidly during the next day's travel. When operating from shoreline or generator power, the batteries obtain the major portion of the charge during "sleeping" time, while coach loads

are low, so that the battery charger can "top off" the batteries.

If it is planned to leave the coach parked without exterior power for two days or longer, turn off the Electronic Master switch (in addition to the A/T) located in the pilot's front overhead cabinet. This will ensure that there is no drain from the circuits that remain on when the A/T switch is OFF (clock, memory and LPG leak detector).

While in transit, the DC volts gauges on the upper dash panel should reflect an alternator regulated setting of 14 volts (+ 0.5). When parked, with 120 volt source supplied, the DC VOLTS COACH gauge should read between 12.5 and 14.0 volts, depending upon load. When parked, without 120 volt source, do not permit voltage to drop below 11.5.

After a trip, ALTERNATOR/CHARGER AMPS ammeter may show some discharge reading, even when 120 volt source is supplied, if there is a load on the 12 volt coach circuits. The Float type battery charger operates in the 13-14 volt range when there is a load.

AC SUPPLY SYSTEM

Motorhome AC-operated appliances are supplied from either an external shoreline hookup or from the on-board generator. Selection of shoreline or generator power source is determined automatically by a remote changeover switch located in the left center road side compartment above the cable storage shelf. The 120 VAC circuits are normally supplied by the shoreline power cable. Whenever the generator is started, the automatic changeover switch will detect the generator voltage and will switch to the generator in approximately 25 seconds.

CAUTION:

Use of excessively long and improperly rated extension cords may cause your auto changeover system to fail prematurely. If you must use an extension cord, follow these guidelines:

- for 30 amp receptacles: **USE 10 GAUGE WIRE**
- for 50 amp receptacles: **USE 6 GAUGE WIRE**

CAUTION:

After connecting to shoreline power, check your AC voltage gauges and make sure they show at least 110 volts present on the system. If not, disconnect immediately or you will cause premature failure of your auto changeover.

NOTE:

Occasionally you may hear a slight humming or buzzing noise coming from the vicinity of your auto changeover or relay contactor box. This is completely normal behavior.

POWER LINE MONITOR

Dual power line monitors are located in the shoreline/utility box to monitor the voltage and amperage in both legs of the AC shoreline supply (or generator supply). The monitors have a polarity and ground detector circuit to indicate possible electrical hazards due to incorrect hookups.

Refer to Shoreline Operation Section.

AC CIRCUIT BREAKER AND DISTRIBUTION PANEL

The main AC Distribution Panel is located in the bedroom.

CELLULAR PHONE WIRING

A roof mounted antenna and wiring (terminates in driver's area) are supplied for cellular phone hook up.

INVERTER

One 3000 watt Trace 3000 inverter with integral battery charger is located in forward portion, above battery bank, of rear curbside compartment. The inverter will power all accessible outlets in the coach as well as the ice maker, televisions, microwave oven, and opera light as long as the power demand is below 3000 watts. There is one remote control panel for control and status of the inverter located on the wall adjacent to the pilot seat.

LOAD MANAGEMENT

There are two important 12v system gauges located in the driver's area which, if properly understood and occasionally monitored, will ensure proper operation, and prevent an inconvenient and possibly damaging situation of discharged batteries.

On the upper dash are:

- Engine volt gauge for two engine batteries.
- Coach volt gauge for four coach batteries. Proper charger operation while parked will keep batteries between 12.5 and 14.0 volts depending on load.

Should battery voltage fall below 11.5 volts, remember:

1. The auxiliary battery switch on armrest panel may be helpful in starting the engine or the generator as needed.
2. **Battery voltage below 9v will damage fluorescent light bulbs and possibly the light ballast. Turn off fluorescent lights with low battery voltage!**

STORING THE COACH

If you plan to store your coach without 120 v power for two (2) days or longer, be sure to turn off your master switch and inverter at both inverter panel and inverter switches. Your objective is to minimize power drain.

With the master off, you can still expect a battery discharge of 2-4 amps because of non-mastered circuits to refrigerator and engine/transmission control circuits.

For storage over a three (3) week time period, disconnect your batteries if there is no shore power available for the battery charger. The best storage technique is to turn off the master switch, turn off the inverter at both switch locations and run your battery charger 24 hours per week. This procedure will keep batteries u,p but avoid a damaging overcharge condition.

NOTE:

Do not attempt to charge the batteries or start the coach with the battery disconnect switch OFF! The charger will output detrimental AC ripple voltage which could cause damage to RVDC electronics!

ENGINE, DIESEL

IMPORTANT:

Always consult your Cummins and Allison owners and operators guides before operating vehicle.

NOTE:

In the event your Cummins Engine service technician must use a diagnostic reader to perform tests on the engine computer, access to the diagnostic connector may be obtained at the lower area of the lower dash.

TO START ENGINE

Cummins Engines will start at temperatures above 10 degrees Fahrenheit (-12° C) without using a starting aid. However, for cold temperatures it will be helpful to activate the engine block heater (120 volt AC-operated). The ENGINE BLOCK HEATER is controlled by a breaker in the AC load panel. Remember to turn the breaker OFF after starting. Refer to the Cummins Manual in your owner's kit for starting instructions.

When outside temperature is below 35 degrees Fahrenheit (+2° C), turn on ignition switch for a minimum of 10 minutes, so Racor fuel filter heater element can warm the fuel, before starting engine.

1. As soon as the engine starts, reduce engine speed to low idle. After normal oil pressure is indicated, HIGH IDLE may be used to build up air pressure more rapidly.
2. Do not apply a load to the engine or increase engine speed until oil pressure gauge indicates normal.
3. Operate the engine at low load until all systems reach operating temperatures. Check all gauges during warmup period.

REMOTE ENGINE STARTING

Because it may sometimes be necessary to start the diesel engine remotely, a separate switch is located on the right side of the engine compartment. Be sure the hinged switch cover is snapped back in place after key withdrawal to prevent moisture damage. Toggle switch must be down (REAR) to start from engine compartment.

TO STOP ENGINE

CAUTION:

Before stopping the engine, operate at low idle for a minute or so. This will allow hot areas in the engine to cool gradually and extend engine life.

Refer to the Cummins Manual for additional information.

FUEL TANK

Open petcock at rear of sump on the bottom of tank to drain. Fill fuel tanks after completing a run. Partially-filled tanks will collect moisture if the coach is allowed to sit for an appreciable length of time.

FUEL ADDITIVE

Fuel Additive recommended for use with #2 Diesel Fuel ... US Borax Biobor JF
Fuel Additive to use per 100 gallons ... 2.8 fl. oz.

ENGINE AIR FILTER

Check the air filter condition indicator on a regular basis. Sometimes the red band will show after a high power run. This is a normal condition. Reset to green band and run engine at a maximum of 2000 RPM. Filter should be replaced if red band is shown.
WL P/N 1570415, (ECO-SM) (Disposable).

CAUTION:

Do not operate the engine without the air filter in place or sensitive air metering systems may be damaged.

CRANKCASE OIL LEVEL CHECK

The oil level must be checked only with the engine off. Maintain oil level at the proper fill line. If checking the oil level immediately after engine has been operating, allow a few minutes for the oil to drain back into the crankcase before checking the oil level reading.

The best time to check the oil is before getting underway because the engine is cool and the reading will be most accurate.

Check crankcase oil level before starting and when refueling. Refer to Cummins books in your owner's package for further information.

FUEL FILTERS

A Racor fuel filter/water separator is incorporated in the diesel fuel supply line and processes the fuel supply for maximum purity. It is located on the curb side of the engine compartment.

The fuel filter/water separator includes a built in Racor in-filter disc pre-heater, which operates automatically below 35 degrees Fahrenheit, (+2° C) when ignition switch is on from the 12 volt DC battery supply.

OIL FILTER

Oil filter is located under the engine on road side. It should be replaced at each oil change.

COOLANT

Open rear engine door and check coolant level (with engine cool and off). Fill with coolant mixture to the top of the surge tank sight glass.

Coolant Specification:

50% water, 50% low silicate ethylene glycol base antifreeze (formulation standard GM 6038-M)

Coolant Additive:

NALCOOL 2000

POWER STEERING & HYDRAULIC COOLING FAN

RESERVOIR FLUID LEVEL CHECK

Regularly check fluid level in the power steering and hydraulic cooling fan reservoir. The oil reservoir is the large canister located right rear engine compartment. Add only Rando (Texaco) HD32 oil as necessary to maintain the correct dipstick reading, depending on fluid/engine temperature. (Note that the dipstick is attached to the bolt on top of the reservoir.) If the fluid is at normal operating temperature, about 150 degrees and hot to the touch, the dipstick should indicate 1/2 to 3/4 full. If the engine is cool, the fluid level should read about 1/2 full.

CAUTION:

The hydraulic fluid used in this unit is Rando (Texaco) HD32 Oil. Do not use conventional power steering fluid or the pump may be damaged. Filter oil through a 10 micron filter, run engine with fan on at idle for 10 to 15 minutes. Replace filter in hydraulic reservoir. Run engine and fan again. Check reservoir and add oil as necessary.

CAUTION:

When inspecting or servicing engine or other components in engine compartment, the engine control switch must be placed in OFF, or REAR position, to prevent starting of the engine from the driver's area.

WARNING:

Cooling fan is driven by hydraulic pressure and by the air conditioner compressor drive signal. Flow is controlled electrically by a thermostat that senses engine coolant temperature. Any time the engine is running, the fan may engage and start without warning. Also, on hydraulically driven fans, the fan may start and run for several seconds when the engine is shut off or if electrical power is interrupted. Shut off the engine and wait for fan to stop before servicing.

Power Steering and Hydraulic Engine Cooling Fan Maintenance

Specification	Rando (Texaco) HD32 Oil
Capacity	20 quarts
Reservoir Element	WL P/N 4524393 (Filter Kit) BB P/N 1764133 (3 reqd.)

ENGINE COOLING SYSTEM REFILL

Use of low silicate ethylene glycol base antifreeze (formulation standard GM 6038-M) is recommended for summer or winter operation because of its corrosion inhibition and lubrication properties. A 50-50 solution of antifreeze and water is preferred, and it gives freeze protection to about 30° F below zero. Ultimate protection is attained at 68% antifreeze (about 92° F below zero). A higher concentration of antifreeze should never be used.

The approximate (dry) cooling system capacity is 72 quarts.

The system requires 9 gallons of antifreeze for a 50% solution or 12.25 gallons for a 68% mixture. Final solution should always be tested with a thermo-hydrometer or equivalently reliable testing device to determine actual protection.

If it becomes necessary to completely refill the chassis coolant system, the following procedure must be followed. Pure antifreeze can be used initially until the prescribed amount has been installed, and then water for final filling.

1. Fill the engine, radiator, and engine hoses. Locate and close the manual gate valves separating the engine from the heater system. Pressure and return gate valves are located at the engine. Remove the radiator surge tank cap and fill to the top. Replace cap and run engine at 1500 to 1800 RPM for one minute to purge air from the engine water jacket. Shut off engine; carefully remove the radiator surge tank cap; refill and replace the cap.

CAUTION:

Use extreme care at all times when removing the radiator surge tank cap as hot coolant under pressure can cause injury.

2. Fill the heater system. An air bleeder valve for the front heater is located behind the exterior front access panel on the right side. Leave the return line gate valve, located at lower left side of engine, closed and open the pressure line valve, by hydraulic reservoir. Move the Front Heat Selector to the warm position. Using suitable containers to catch coolant, open the bleeder valve at front heater and remove hose from return valve. Run the engine at 1800 RPM until a steady flow of coolant passes through the front bleeder valve and open hose at rear.

The radiator must be refilled often during this time as coolant from the engine will be filling the heater lines. When steady flow is attained, close pressure valve and reconnect return hose. Open both valves allowing coolant to flow back into the engine. Shut off engine. Refill radiator using coolant caught from bleeding operation and add coolant as necessary. Restart engine and run at 1800 RPM for at least two minutes to complete system purge. Test heater blowers to make sure heaters are filled with hot coolant.

Allow engine and radiator to cool. Remove cap and fill radiator surge tank to the top of sight glass. Replace cap. Refill procedure is completed.

COOLING SYSTEM ADDITIVES

Automotive cooling systems are subject to various types of corrosion, rust, pitting and cavitation-erosion. These are common factors which prevent efficient cooling and contribute to engine overheating and higher maintenance costs resulting from replacement of hoses, fittings, filters and cracked heads. The manufacturer of the engine used in your motorhome recommends the use of Nalcool 2000 - a chemically buffeted liquid additive which effectively neutralizes the formation of acids caused by dissolved exhaust gases, and inhibits the cooling system against corrosion and scale formation. This additive is compatible with most commercial automotive and antifreeze solutions containing ethylene glycol; however, its use is not recommended in cooling systems using DOW Therm 209. When refilling the coolant system, add seven pints of Nalcool before topping off with antifreeze solution. To ensure constant system protection, replenish Nalcool 2000 additive periodically in accordance with manufacturer's instructions. Use only low silicate ethylene glycol base antifreeze.

BATTERY MAINTENANCE

Your motorhome is equipped with separate engine and coach battery systems for greater assurance that there will be sufficient voltage to crank the motorhome engine.

Two engine batteries are located in the engine compartment on the curb side. Those located in the curb side rear compartment are used for coach loads.

The coach batteries are charged from either the alternator or battery chargers. The engine batteries are charged from only the alternator (unless the auxiliary battery switch is in the ON position, which permits the engine batteries to be charged by the battery chargers.) In order for the battery chargers to operate, either the generator must be running or the coach must be connected to a shoreline supply.

To make sure that the batteries are always ready for use, periodically check and charge as necessary.

A dirty battery may eventually dissipate its charge through conductive surface contamination. Clean battery top surface with a damp cloth and dry thoroughly. Check that battery terminals and associated battery jumper terminals are tight and free of corrosion. To clean terminals, neutralize corrosive deposits with a solution of baking soda, rinse with clear water, and dry. Note that commercial type spray-on battery cleaners are available at automotive supply stores. Use as directed to keep the batteries clean. Spray-on cable and terminal protective coatings are also available, easy to use and effective.

CAUTION:

Avoid sparking of any form in the vicinity of the batteries.

CAUTION:

Do not wear metal rings, watches or jewelry when working on or near the batteries, cables, solenoids, or chassis wiring. These can short out electrical wiring and cause injury.

BATTERY STORAGE IN FREEZING WEATHER

Batteries that are not kept fully-charged must be given protection against freezing. Partially-charged batteries will freeze at low temperatures, so batteries must either be left charged or removed from the vehicle and stored in a warm location.

The motorhome can be left connected to the shoreline AC supply and the coach battery chargers will keep the coach batteries charged. Note that even in a warm location it is advisable to keep the batteries charged to prevent deterioration. The engine batteries are the sealed type and require no electrolyte service.

Coat battery terminals with lubricant or protective coating.

BATTERY TERMINALS & JUMP STARTING

Proper procedure for jump-starting, using the Wanderlodge® engine batteries, is as follows:

1. Turn off all main battery-operated accessories in both vehicles ... lights, radio, etc.
2. Connect one end of the positive-coded jumper cable to the positive (+) battery terminal, and the opposite end of the cable to the positive (+) terminal on the other battery.
3. Connect one end of the negative-coded jumper cable to the negative (-) terminal on the other battery and the opposite end of the cable to the Wanderlodge engine block.
4. Once the engine of the disabled vehicle is started and brought up to idle, reverse the above procedure to remove the jumper cables. Always remove the jumper cable connected to the Wanderlodge engine block terminal first to prevent sparks at the other battery.

CAUTION:

Avoid sparks in the vicinity of a charging battery. The gas produced is explosive.

ENGINE SPECIFICATIONS

MAKE

Cummins M11, 450 E+, 450 HP

TYPE

4 Cycle In Line Turbo/Air To Air Charger Cooled

NUMBER OF CYLINDERS

6 Cylinders

BORE ... (INCHES)

5.79

STROKE ... (INCHES)

4.92

DISPLACEMENT

661 Cubic Inches

10.8 Liters

COMPRESSION RATIO

16.0 to 1

SAE HORSEPOWER

75.0

MAX. (NET) BHP @ RPM

450 HP (336 KW) @ 1800

MAX. (NET) TORQUE @ RPM

1450 Ft. Lbs. @ 1200

MAX. GOV. RPM

Load ... 2100

No Load ... 2300

GOVERNOR TYPE

Electronic

FANS, VENT & EXHAUST

KOOL-O-MATIC FAN

12 VDC power ventilator located in the kitchen.

OPERATION

1. Open inlet dampers on fan.
2. Be sure windows are open to provide proper air flow cooling and ventilation.
3. The heat-cool thermostat located in the kitchen activates the fan. The selector switch (at the bottom) must be moved to COOL and the temperature lever set so the fan will operate. The fan will then start automatically whenever the temperature rises above the desired level.
4. Thermostat on fan position will run all the time.

FANTASTIC FAN

12 VDC exhaust fan located in the bathroom.

OPERATION

1. Open damper from control located on the face of the vanity.
2. Turn on fan from control located on the fan. Set desired speed. Switch on fan may be left on in order for the vanity (remote) switch to operate all functions.

6" 12V DC POP-UP FAN

The 12v DC 6" exhaust fan is located in private toilet area of coaches so equipped.

OPERATION

1. Push handle up to open vent.
2. Turn on fan from control located on fan.

FRESH WATER SYSTEM

WATER SUPPLY AND DISTRIBUTION SYSTEM

The dual purpose Tank Water Fill/Commercial Water inlet connection is located in the road side holding tank compartment. The Tank Fill On-Off switch, located in the same compartment, diverts the commercial water input to fill the pure water storage tanks, located in outside compartment. System water pressure is provided by water pumps located in the road side center luggage compartment rather than by tank pressurization. An activated carbon water filter filters all the water supplied to the coach.

COMMERCIAL WATER HOOKUP

When facilities are available, the Commercial Water hookup can be used to supply all coach water system requirements. In this manner, the coach water tank and pump system are automatically bypassed and water pressure is developed by the external connection. Water inlet pressure is regulated to 40 psi maximum by a valve which is part of the city (commercial) water fill.

FILLING THE TANK - STANDARD CAPACITY APPROX. 100 GALLONS

To fill the water supply tank, connect the water hose to the commercial water inlet, set Tank Fill switch to ON, then turn on the water supply. When tank is full, as indicated by water overflow beneath the coach, set the Tank Fill switch to OFF position, shut off the water supply and disconnect the hose. At this time, check that the Monitor panel readout indicates a full water tank. To check, press the Pure tank switch and observe that the E through F indicator segments are lit.

NOTE:

The Tank Fill switch should be ON only when the water tank is being filled. This switch must be in the OFF position at all other times.

SANITIZING THE WATER SYSTEM

Water system sanitizing procedures should be followed before the system is used for the first time and after long idle periods, where water may become stagnant; or after any suspected contamination of the water supply. Whenever possible, use a commercially approved tank sanitizer and follow the procedures on the product package. If it is not possible to use a commercial product, prepare your own mixture and sanitize the tank in accordance with the following procedures:

1. **Empty the Water Tank** - To drain the tanks, open the two inch Cold Water Drain Valve behind the door in road side holding tank compartment. After tanks are completely drained, close Cold Water Drain.

2. **Prepare the sanitizing solution** - Use 1/4 cup of household bleach (sodium hypochlorite solution) for each gallon of water. Use one gallon of the solution for each 15 gallons of tank capacity. This procedure will result in a residual chlorine concentration of 50 ppm in the water system. If a 100 ppm concentration is required, use 1/2 cup of household bleach with one gallon of water to prepare the chlorine solution. Seven to eight gallons of solution will be adequate for the tank. [Approximately 100 gallons].
3. **Add sanitizing solution to water tank** - Remove cover in road side close-out pane and 3/4" plug from end of tank and pour the solution into the tank. Reinstall plug in tank and replace cover.
4. **Fill tank to capacity** - Connect hose to the commercial water inlet, turn on the Tank Fill Switch and fill water tank completely. Shut off hose and turn off Tank Fill switch. Turn on the water pumps. Open each faucet (hot and cold) and run the water until a distinct odor of chlorine can be detected. Shut off the water pumps.
5. **Allow the system to stand** - Let stand for at least 4 hours when disinfecting with 50 ppm residual chlorine. If a shorter time period is desired, then a 100 ppm chlorine concentration should be permitted to stand in the system for at least 1 hour.
6. **Drain tank** - Open the Cold Water Drain valve and allow the tank to drain completely.
7. **Refill tank** - Close the Cold Water Drain valve and turn on the water supply to the commercial water inlet, turn on Tank Fill switch and fill tank completely. When the tanks are full, turn off Tank Fill switch, shut off water supply and disconnect hose. Replace fill cap and turn on water pumps. When water flows from the opened faucets, close them and open the other faucets until water flows. This flushes the system, removing trapped air from the piping and ensures that the fresh water supply is ready for use.

CAUTION:

Do not permit sanitizing or antifreeze solutions to enter water purifier.

8. Repeat steps 6 and 7 until chlorine smell and taste are no longer present at faucets.

WATER FILTER REPLACEMENT

Filter replacement depends upon the condition of the municipal water used. The only practical way to determine when replacement is required is to go by the sense of taste. If a faint taste of chlorine is detected, it is time for a change.

AIR ACCUMULATOR

An accumulator in the water system will smooth out the water flow, and eliminates water hammer and pulsations from the water pump. This accumulator has a diaphragm which separates the air on top from the water so it will not become "water logged."

WATER HEATER

With the Aqua-Hot at operating temperature, the domestic water is automatically heated as it is being used. Open any hot water faucet and a continuous supply of domestic hot water will be present within a few seconds. This is accomplished by the Aqua-Hot's domestic hot water loop which is an integral part of the heating system. A mixer valve has been installed to assure that excessively hot water does not flow to the faucets.

CAUTION:

The mixer valve is not an anti-scald device. Always exercise reasonable caution when using hot water.

CAUTION:

Do not turn Aqua-Hot unit off if outside temperature is 32 degrees F or lower when potable water system is not drained.

WATER PUMP

The water pump, located in the road side luggage compartment, is equipped with a factory-calibrated pressure control switch that is preset to turn the pump on when the system pressure falls below 25 psi; and turn the pump off when the pressure reaches 40 psi. If the pump has been out of service for a period of time, it is advisable to open a faucet before turning it on. When water flows steadily from the opened faucet, close the faucet and observe that the pump shuts off when the system becomes pressurized. (It may also be necessary to bleed the air from the other faucets as well.) When the potable water supply tank level is low or empty, shut the pump off to prevent possible damage to the pump motor. In addition to integral motor overload protection, the pump mechanism is also protected from damage by the presence of a filter at the water pump inlet. The filter should be cleaned periodically.

Under normal usage, the water pump should require no periodic maintenance other than ensuring that the input water supply is properly filtered of particles that could damage the pump mechanism. Pump failures can generally be tied in to the plumbing system or to electrical wiring. If a pump fails to operate properly, refer to the general troubleshooting guide. Note that detailed pump repairs and overhaul should be performed by a qualified repair facility.

WATER PUMP SWITCH

The central control switch for the water pump is in the bathroom. The associated indicator is lit whenever power is being supplied to the pump. Turning ON the switch pressurizes the water system, with the pump operating on demand to maintain constant pressure. Continuous or erratic pump operation can indicate an empty water tank, system leakage, or air lock in the water lines. Switches enabling the water pump are located in the bathroom, in the kitchen and dash areas.

MANIFOLD

All hot and cold water is directed to the distribution manifold. Hot and cold water is distributed to each fixture via individual 3/8" I.D. lines. Individual shut-offs, located on the manifold, will shut off water to any fixture in the coach.

WATER PUMP TROUBLESHOOTING GUIDE

Symptom:

Possible Cause

Corrective Action

Pump operates but no water flows through faucet:

Low water level in tank.

Add water.

Suction lines or filters clogged.

Clear water lines and clean filters.

Kink in water suction hose.

Check water hose connections to tank and straighten or replace, as necessary.

Air leak in suction line.

Replace suction line.

Defective water pump.

Replace diaphragm or jammed check valve.

(See Shur-Flo's service instructions.)

Pump cycles on and off when faucets are closed:

Water leak in plumbing.

Check for signs of leakage and tighten or replace fittings, pipe, etc.

Defective toilet flush valve.

Repair flush valve.

Defective water pump.

Replace upper housing.

(See Shur-Flo's service instructions.)

Pump operates roughly and has excessive noise and vibration:

Intake line is restricted, kink in suction hose or fittings are too small.

Check input hoses and straighten or replace, as necessary.

Defective water pump.

Replace lower housing.

(See Shur-Flo's service instructions.)

Pump fails to start when faucet is opened:

Clogged pressure piping.

Blow out water lines with compressed air.

No voltage to pump.

Check input wiring circuit breaker and switches.

Defective water pump.

Replace upper housing or check valve.

(See Shur-Flo's service instructions.)

GENERATOR

GENERATOR OPERATION

MANUAL

The generator can be started and stopped manually from either of two locations within the coach, the lower dash panel or the galley panel. Additionally, the generator can be operated from the control box located in the front road side compartment and, if the generator is extended out, from the control box integral to the generator itself.

To start the generator, momentarily depress any of the four switches to the START position. The generator will begin its automatic start sequence and crank in approximately 10 to 12 seconds. After a successful start, the indicator light will come on. In the event of a failed start, the system will automatically reinitiate one (1) additional start cycle after a pre-programmed rest period. Two complete failed start cycles consumes approximately 52 seconds. In the unlikely event that the generator fails to start, it should be concluded that service is required.

AUTOMATIC

Refer to OPTIONAL EQUIPMENT section.

GENERATOR MAINTENANCE

Refer to Operator's Manual in your owner's kit for inspection and maintenance requirements.

CAUTION:

The generator tray is electrically operated and extends outward with considerable force. To extend the tray, move around to the road side and operate the tray switch in the front compartment to the out position. Be sure that there is sufficient clearance in front of the tray and that nobody is in the way! Use extreme caution when observing and operating generator with the tray extended.

OIL CHECK

To be on the safe side, check oil (dipstick located on road side of generator behind access door) in engine crankcase daily, or before each start, to ensure that the level is in the safe range between the upper and lower marks on the dipstick. Do not operate generator if level exceeds the upper mark or is below the lower mark.

CAUTION:

Do not check oil level while engine is operating. Engine must be stopped to obtain a true reading as well as for safety reasons!

HOURS RUN METER

Meter is located on generator.

GENERAL TROUBLESHOOTING

Refer to the Generator Service Manual for repair and maintenance data. Generator repairs should be accomplished by a qualified repair agency.

GENERATOR OVERLOADS

If the rated capacity of the generator is exceeded, the safeguard circuit breaker, located on the front surface of the generator electrical box, will trip to protect the generator against damage. This condition could be caused by a short in the coach AC supply circuits, or by operating too many appliances simultaneously, resulting in an overload condition. If the safeguard circuit breaker trips, the generator will continue running but no AC output will be supplied. Before resetting the circuit breakers, turn off some of the coach appliances and lighting to reduce the load to within the operating limits of the generator. If this is done and the generator breakers still trip, a short circuit is indicated. Turn off the generator, locate and correct the cause of the short circuit.

OIL PRESSURE

Oil pressure is monitored by the controller integral to the generator.

STORAGE PROCEDURES

If the generator is to be out of service for a long period of time, refer to the Generator manuals(s) for recommendations.

GENERATOR SPECIFICATIONS

Electrical Rating	12 KW at 120 VAC
Fuel Supply	Diesel, separate pickup in main tank
Cooling System	6 quarts
Crankcase Capacity	6.75 quarts
Oil Specifications for Generator	
API Classification	CD 10W30/10W40 (See Operator's Manual)

CHASSIS HEATING SYSTEM

Heat generated by the engine is supplied through the coolant to a 46,000 BTU unit for the pilot and co-pilot area.

OPERATION FOR DRIVER/CO-PILOT HEATER

1. The coach ignition switch must be on for operation of blower motors.
2. Use chassis AC-Heat control panel to select fan speed, heat temperature, and venting desired.

HYDRONIC HEAT EXCHANGER

Heat generated by the engine coolant is also supplied to heat exchangers which provide heat to the Hydronic System while in transit without the necessity of using the diesel burner or AC circuit. See Section 13-3.

ELECTRIC HEAT

Electric forced air heaters (120 vac) are located in the bathroom and kitchen. Your electric heaters are provided for auxiliary heating. Since each heater draws 10-15 AC amps, operator load management becomes an important consideration.

KITCHEN HEATER OPERATION

1. Kitchen thermostat must be set to HEAT and set for temperature desired.

BATHROOM HEATER OPERATION

1. On/Off thermostat control on heater must be turned on and set.
2. Bathroom thermostat must be turned on and set for temperature desired.

DIESEL FIRED HYDRONIC HEATING

INTRODUCTION

The Aqua-Hot Motor Coach and Marine Heating System is an on-board heating system that provides a continuous supply of domestic hot water as well as interior heat where and when it is needed. Both heating features are accomplished by a 50,000 BTU diesel-fired burner and a 1650 watt (5630 BTU) electric heating element (110 volt/AC). These two heating sources separately or simultaneously (during high heat demand periods) maintain the temperature of the Aqua-Hot's 50/50 solution of water and antifreeze. In addition to domestic hot water and interior heating capabilities, the Aqua-Hot has also been designed to preheat the vehicle's engine prior to starting. This feature provides easy engine start-up on cool mornings.

DIESEL BURNER

Turn the diesel burner control switch ON. This procedure will activate the diesel burner and the indicator light. Allow 20-30 minutes for the system to reach operating temperature.

ELECTRIC HEATING ELEMENT

The electric heating element is hard-wired into your coach's 110 volt/AC electrical system and is operational whenever the AC circuit is activated. If the system has been out of service for a period of time, allow two to three hours for the system to reach operating temperature. We mention the electric heating element because there will be times when you will need to use only the electric heating element for all of your heating needs, such as when the moderate, ambient temperatures exist and/or when there is a low demand for domestic water heating.

SUPPLEMENTAL HEAT

The Aqua-Hot's engine preheating system acts as a supplemental heating source, in addition to the diesel burner and electric heating element. While traveling, the engine's heated coolant will automatically pass through the engine preheat loop, transferring heat into the Aqua-Hot's heat tank. This feature reduces the total operating hours of the diesel heater.

NOTE:

Do not operate the engine preheat circulating pump while traveling.

ROOM THERMOSTATS

This installation uses two room thermostats for the living area. The livingroom, kitchen and bedroom utilize the Dometic "Comfort Control Center (see the Dometic Manual for its operation). The bath uses a separate thermostat. Adjust each thermostat to the desired temperature. This procedure activates the Aqua-Hot's zone circulation pumps and zone relays. The pumps circulate the heated solution of water and antifreeze to the heat exchanger's blowers. There are three heat exchangers in the kitchen/living room, one or two in the bathroom, and one or two in the bedroom.

BAY THERMOSTAT

This installation uses a low temperature thermostat in the bay. This thermostat is pre-set to 40 degrees Fahrenheit. This will prevent freezing of the water system.

UPKEEP

3.1 MAINTENANCE SCHEDULE

MONTHLY

Check the Aqua-Hot's 50/50 solution of water and antifreeze to ensure it is at the proper level. Do this by visually checking the coolant level in the Aqua-Hot's expansion tank. This should be checked only when the Aqua-Hot is HOT. Adding solution to the expansion tank when the heater is cold will result in solution overflow when the Aqua-Hot heats to normal operating temperatures.

ANNUALLY

CAUTION:

**Before cleaning or servicing,
disconnect all power supplies.**

Be sure to have your Aqua-Hot tuned up yearly. A tune-up should consist of a fuel nozzle and filter replacement, and a thorough cleaning. This simple tune-up will keep your Aqua-Hot running smoothly throughout the year as well as allow service personnel to inspect for additional wear and tear of other important components.

CAUTION:

**Operating the Aqua-Hot diesel burner or electric
heating element without the 50/50 solution of water
and antifreeze will cause serious damage to the heater.**

See Operator's Manual for further information.

WINTERIZATION

See Section 11-5 for Wanderlodge procedure in lieu of Aqua-Hot procedure. Either is acceptable; however, the procedure in the Wanderlodge manual is preferred.

BLEEDING THE SYSTEM

The Aqua-Hot system is self purging via the header (or surge) tank located in the Aqua-Hot compartment.

Keep the surge tank at the appropriate level; fill only when the system is at operating temperature, or the tank will overflow when it reaches operating temperature.

INTERIOR & EXTERIOR CARE

CORIAN TOPS

Even stubborn stains, such as grape or beet juices, wipe off with a damp cloth and household cleanser. Because CORIAN is solid all the way through, it cannot be harmed by abrasive cleansers and normal household cleaners.

CORIAN is strong and tough, but slicing on it with knives can cause scratches. Use a cutting board.

While CORIAN does provide an extra measure of protection (better than ordinary counter tops), it is not recommended as a hot pad. Do not place hot pots and pans directly on your CORIAN counter top.

Since it is a solid material with color and pattern all the way through, unusual damage such as cigarette burns, scratches or other surface abuse can usually be removed using ordinary household cleansers or fine sandpaper. If the stain persists or if the scratch is particularly deep, first use a medium sandpaper (120 or 240 grit), then fine sandpaper (320 or 400 grit) followed by a circular buffing motion with a Scotch Brite pad to match the gloss of adjacent surfaces. Household cleanser, steel wool or Du Pont No. 7 polishing compound can also be used if higher gloss levels are needed.

CAUTION:

Certain chemicals found in the home, such as paint removers, paint brush cleaners, acid drain cleaners and certain brands of nail polish and polish removers, can harm CORIAN if left in contact even for short periods of time. These materials should be wiped away promptly and flushed with water. Depending on the time of exposure, surface damage caused by these materials can sometimes extend too deeply for practical repairs.

INTERIOR CARE

The interior can be kept in good condition with the use of approved cleaning agents for wall coverings and ceilings, plastic fixtures, stainless steel, formica and so on. Never use abrasive cleaning agents on interior of refrigerators or on the lavatory, tub/shower or toilet as they can cause permanent scratches. Be sure that the cleaning agent will not damage the material. Note that some plastics are incompatible with certain cleaners. Read the directions on the container before using. For the most part, the cleaners and polishes that would normally be used in your home are equally well-suited for use in your motorhome.

STRESS CRACK AVOIDANCE OF LAMINATE MATERIALS

Stress cracking is caused by the concentration or buildup of stresses in a particular area of a laminated assembly. When this stress becomes greater than that which the laminate can withstand, a stress crack will occur. If such stresses are allowed to

concentrate around a cutout or other such fabrication detail, one or more cracks can characteristically radiate from the sharper corners of the cutout where, for mechanical reasons, the laminate is the weakest.

The stresses can be caused by external mechanical forces, but are generally caused by the normal dimensional movements of the laminated assembly as it reacts to the surrounding environment. As with all wood-based products, high pressure laminates and their substrates react to humidity changes. Under moist conditions, laminated assemblies gain moisture and expand dimensionally; however, when this same assembly is subjected to dry conditions, this moisture is lost and shrinkage results. If the laminate shrinks more than the substrate, stress cracking of the laminate surface can occur in certain areas.

STEPS TO MINIMIZE STRESS CRACKING

In extremely dry conditions, a relative humidity of 10% or less, and excessively warm temperatures, generally greater than 95 degrees Fahrenheit, the following precautions should be taken when storing the coach for a any length of time greater than 48 hours:

- Open a roof vent hatch to permit heat to escape from the interior of the coach.
- Provide a source of moisture for the interior of the coach, such as an open container of water, to boost interior moisture content.

By reducing heat buildup and adding moisture content to the interior, less dimensional movement between the laminate and substrate should occur, thus minimizing the stress between the laminate and substrate.

EXTERIOR CARE

Exterior paint finish life can be extended by periodic cleaning and waxing. This will preserve the paint and allow easier removal of dirt and road tars. Use touch-up paint for small areas to keep the coach's finish in like new condition.

Frequent washing of the coach is necessary to prevent corrosion in areas where heavy salt sprays are evident. A clear acrylic spray may be used, with care, to control corrosive effects of salt spray on metal surfaces.

CAUTION:

Some car/truck wash facilities may use strong detergents or other chemicals that could cause permanent staining or streaking of exterior paint and aluminum trim. A strong alkaline solution, while useful for dissolving dirt, is a suspected harmful ingredient. Before enlisting any commercial wash service or facility, you should determine that cleaning agents used will not damage the finish of your coach.

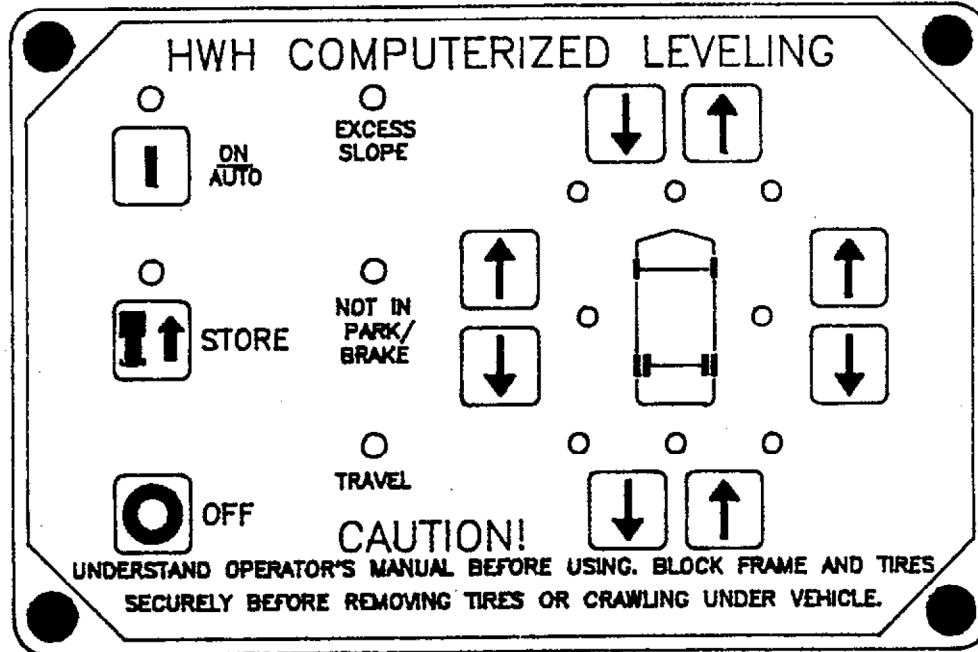
CAUTION:

Avoid spraying water through the refrigerator vent door. Refrigerator PC control boards are not completely sealed and are vulnerable to an inadvertent dousing.

LEVELING JACK OPERATION

AUTOMATIC LEVELING JACKS CONTROL

The control panel is mounted on the sidewall beside the pilot.



CAUTION!

Read and understand entire operators manual before operating.

Block frame and tires securely before changing tires or crawling under vehicle. Do not use leveling jacks (or air suspension) to support the vehicle while under the vehicle or changing tires. Vehicle may move forward or backward without warning causing injury or death.

Keep all people clear of vehicle while leveling system is in use.

Do not over extend the rear jacks. If the weight of the vehicle is removed from one or both rear wheels, the vehicle may roll forward or backward, off the jacks.

Never place hands or other parts of the body near hydraulic leaks. Oil may cut and penetrate the skin causing injury or death.

1. RED WARNING LIGHT (DASH MOUNTED)

Anytime one or more jacks are not fully retracted this light should be on.
Do not move the vehicle if this light is on.

PANEL FUNCTIONS

1. CONTROL BUTTONS

The "OFF" button is in the lower left hand corner of the touch panel. Push the "OFF" button to stop hydraulic operation.

Top left is the "I" button with its operating light above it. Below the "I" button is the "STORE" button for retracting hydraulic jacks, with its operating light directly above it.

The remaining buttons on the righthand side of the panel are MANUAL control buttons that operate only during the manual mode. The manual buttons are the eight (8) buttons on the right half of the label, two for the FRONT, REAR, LEFT SIDE, and RIGHT SIDE. Pushing UP arrows will cause the coach to raise and DOWN arrows will cause the coach to lower.

2. INDICATOR LIGHTS

The four (4) yellow indicating lights are level sensing indicators. When a yellow light is "ON", it indicates that its side or end of the vehicle is low. No more than two (2) lights should be on at the same time.

The four (4) red lights surrounding the yellow level indicators are jack warning lights. They are functional only when the ignition is "ON" or in "ACCESSORY". During the hydraulic mode, they light when the respective jack is extended. The vehicle should not be moved while these lights are on.

The "EXCESS SLOPE" indicator will light when the leveling system cannot level the coach.

The "NOT IN PARK" indicator is "ON" when the control panel is "ON" and the parking brake is not set.

The "TRAVEL" indicator is "ON" when the control panel is off, the jacks are retracted, and the ignition switch is on. Do not move vehicle unless travel light is "ON".

The "LOW BATTERY" indicator is "ON" when the controls sense low voltage set between 8.0 and 9.0 volts. The system will stop leveling functions when low voltage is detected.

The master "JACKS DOWN" warning light on the dash will be lit when any one touch panel "Jacks Down" warning light is on. This light will function when the ignition is "ON" and the touch panel is "ON" or "OFF". IMPORTANT: This light will be the only working "Jacks Down" warning light when traveling.

GENERAL INSTRUCTIONS

Press the "OFF" button and turn the ignition switch to OFF at any time to stop the operation of the system.

Any time a hydraulic leveling process is interrupted, retract the jacks according to the "JACK RETRACTION" section and then restart the leveling process.

Do not operate the system when the "LOW BATTERY" light is on. If the parking brake is not set when the "I" button is pressed, the "NOT IN PARK" light will come on and the system will not operate. It will remain "ON" only while the "I" button is pressed.

PREPARATION FOR TRAVEL

Before traveling, the red jack warning lights must be "OFF" and the travel light must be "ON". If lights are not correct for travel, retract jack as described in the "JACK RETRACTION" section.

CAUTION:

Do not rely solely upon the warning indicator lights. It is the operator's responsibility to check that all jacks are up before moving the vehicle.

SYSTEM OPERATION

AUTOMATIC HYDRAULIC LEVELING

1. Place transmission in neutral position and set parking brake. Turn the ignition to the "ON" position. Note: Coach engine must be off for leveling.
2. If the vehicle is parked on soft ground, blocks may be placed under the jacks for added support.
3. De-pressurize the suspension system by moving "TAG DUMP" and "SUSP DUMP" switches to "DUMP", (away from "UP"). Dump tag axle first.
4. Press the "I" button to enter the hydraulic operation mode. The "I" indicator light will glow steady.
5. Press the "I" button a second time. The "I" indicator light will start to flash. The system automatically extends the jacks to level the vehicle and then extends any remaining jacks until they touch the ground. In the event the jacks are unable to level the vehicle, the "EXCESS SLOPE" indicator light will come "ON". One or more yellow level lights will be "ON" indicating that its jack is fully extended.
6. After a short pause, the system will automatically shut off.
7. Turn the ignition switch to the "OFF" position.

JACK RETRACTION

1. The operator must be sure that there are no objects under the vehicle and that all people are clear of the vehicle.
2. Start coach. Pressurize the suspension system by moving the "SUSP DUMP" switch to the "UP" position. When the front and rear suspension is fully pressurized, put the "TAG DUMP" switch in the "UP" position.
3. Press the "I" button one time. The "I" indicator light will glow steady. Press the "STORE" button. The store indicator light will flash. As each jack retracts, its red warning light will go out. Approximately one minute after the four red warning lights are off and the "TRAVEL" light is on the vehicle may be moved.
4. The system will automatically shut off six minutes after the four "Jacks Down" warning lights on the touch panel have gone out. If a "Jacks Down" warning light stays lit, the system will continue to run for thirty minutes. It will then shut off regardless of the touch panel warning lights. Note: DO NOT interrupt power to the control box until the red indicator light above the "I" button has gone out.
5. If jacks cannot be retracted by the above procedure see "VALVE RELEASE OPERATION" section.

MANUAL HYDRAULIC OPERATION

1. Place transmission in neutral and set the parking brake. Turn the ignition to the "ON" position.
2. If the vehicle is parked on soft ground, blocks may be placed under the jacks for added support.
3. De-pressurize the suspension system by moving "TAG DUMP" and "SUSP DUMP" switches to "DUMP" (away from "UP"). Dump tag axle first.
4. Press the "I" button. The indicator light will glow steady.
5. The vehicle may be leveled using the manual raise buttons on the right half of the panel. If a yellow "LEVEL SENSING" light is "ON", that side or end of the vehicle is low. Jacks will extend (or retract) in pairs to raise (or lower) a side or end of the vehicle. When a jack is extended, approximately two (2) inches, the respective jack warning light on the right half of the panel will come on.

IMPORTANT: Do not continue to push a raise button for more than 10 seconds after that pair of jacks are fully extended.

6. When leveling is completed, push the "OFF" button on the leveling panel and turn the ignition switch to the "OFF" position.

VALVE RELEASE OPERATION

1. Use the valve release "T" handles for retracting only if the "STORE" button on the control panel will not retract the jacks for travel.

CAUTION: Keep away from the wheels, do not crawl under the coach, keep a safe distance in front and rear of vehicle. The vehicle may drop and/or move forward or backward without warning or as the valve release is operated.

2. Locate the valve release "T" handles on the solenoid valves. The solenoid valves are located on the pump manifold assembly.
3. Allow clearance for the coach to lower.
4. Open the two outer valves slowly by turning counter clockwise. The handles may turn easily at first, but as an internal spring is compressed, turning may become more difficult. The valves need only be opened enough to retract the jack.
5. Retract the front jacks by opening the two center valves as described in step 4.
6. Check that all four jacks are now retracted.
7. Close the valves by turning the release handles clockwise. Once the internal spring tension has been released, the handles will turn free for several turns. **DO NOT** tighten the handles past this point as internal damage may occur to the solenoid.
8. The system should now be repaired before being used again.

SERVICING OF LEVELING SYSTEM

HYDRAULIC OIL

Retract the four leveling jacks before checking the oil level. Locate the pump/manifold assembly and clean any dirt away from the breather/filler cap on the oil reservoir. Check that the oil is within one (1) inch of the top of the reservoir.

The oil should be checked when the vehicle is first purchased and then once every two years. More often if there is an oil leak in the system. Use universal, multipurpose or Dexron transmission fluid. **DO NOT USE** brake fluid or hydraulic jack fluid. Use of these fluids can damage seals. The hydraulic tank should be filled to within one (1) inch from the top.

VISUAL INSPECTION

Periodically inspect the leveling jacks for damaged or missing parts such as pivot bolts, springs, or warning switches. Check the hydraulic lines and wiring for damage and wear.

"NOT IN PARK/BRAKE" CHECK

Set parking brake. Switch ignition to the "ON" position. Continuously press "I" button on the touch panel to turn on the system. Release parking brake and confirm that the "NOT IN PARK/BRAKE" indicator light comes on. Reset parking brake. Switch ignition to "OFF" position.

NOTE: If any of the above checks or inspections reveal a problem or if there are other problems or questions, consult your vehicle or coach manufacturer, or HWH Corporation for service or repair.

OPERATIONAL CHECK

Review operators manual and confirm that the system is operating correctly. Check warning switch operation by extending one jack approximately four inches, check that the warning light on the dash came on, retract the jack, and then repeat for other three jacks.

NOTE:

If any of the above checks or inspections reveal a problem or if there are other problems or questions, consult your nearest service center.

NOTE:

If the jacks are not retracted before driving away, a buzzer will sound.

CAUTION:

Do not drive the coach unless the tag axle is correctly pressurized to assure even weight distribution. There must be pressure in the TAG AXLE air bags to prevent flat spotting of TAG AXLES tires during brake application.

CAUTION:

Severe injury or death may result. Do not use the leveling system for changing tires or working under the vehicle. Keep the rear wheels in firm contact with the ground with the parking brake set. With the leveling jacks extended, there is a possibility the vehicle may move either toward the front or rear.

LPG SYSTEM

LPG SYSTEM

The coach is equipped with a permanently mounted 44 gallon (148 pounds of fuel-net) LP gas tank, which is the energy source for the cooktop (range) hydronic heat system and alternate source for the refrigerator.

LPG TANK AND CONTROLS

The LPG supply tank is located between the frame rails directly to the rear of the pass-through compartment. LPG system controls include a main gas service valve, solenoid shut-off valve, two stage pressure regulator, filler connection with Auto Stop (80%) fill valve, 20% vapor (stop filling when liquid appears) valve, and the pressure relief valve. The main gas service valve has an extension accessible through a door on the road side. Extensions for the filler connection and the 20% vapor valve terminate below the road side diesel fuel fill. The regulator and associated components at the tank are accessible after removal of a plate in a road side compartment.

WARNING:

When the coach is to be stored in a confined area, turn off the LPG at the main tank shutoff valve. With the LPG leak detector, this may now be accomplished by turning off the LPG Master Switch on the galley panel.

The LPG tank level can be monitored at the galley panel above the microwave oven.

FUEL REQUIREMENTS

Liquefied petroleum gas is a material composed of various hydrocarbons such as propane and butane, or a mixture thereof. In its gaseous form (vaporized), it is colorless and has a garlic-scented additive to ensure detection. In addition to being highly inflammable, it is also dangerous to inhale. For ease of transportation and storage, LPG is compressed into a liquid state and stored in this form within the LPG tank. As fuel is used, vapor passes from the top of the tank into the two stage pressure regulator and to the various gas appliances.

Appliances will not function if the LP gas does not vaporize. Butane will not vaporize below 32 degrees Fahrenheit (the freezing point of water), but propane will continue to vaporize down to 44 degrees below zero. Propane has become the main type of LP gas used in RVs in recent years. Your LP supplier will have the correct type or blend for your locale. If your travels will take you into an area where climate differs, ask your LP dealer for his recommendations. The names of LP suppliers can be found in the yellow pages of the telephone directory under "Gas-Liquefied Petroleum-Bottled & Bulk". Many campgrounds now have LP gas fill facilities as do some service stations.

Prevent condensation and possible regulator or line freeze-ups when filling the tank by requesting the dealer to add a small amount of methyl alcohol to the fill up. A common mixture is one ounce of methyl alcohol to each 20 pounds of LPG.

NOTE:

Liquefied petroleum gas is heavier than air.

FILLING THE LP GAS TANK

When the tank is being filled, the service valve must be closed and the 80% liquid level valve (20% vapor valve) must be open. The 80% auto stop fill valve may close before liquid appears at the 80% liquid level valve, but if liquid does appear, stop filling immediately; the tank is filled to its LP capacity. Close the liquid level valve. Do not use a wrench to tighten this valve or the service valve; they are designed to be closed leak-tight by hand. If you cannot hand-tighten properly, the valve probably needs repair or replacement.

CAUTION:

Be sure that the main LPG supply is shut off during refueling to prevent accidental ignition of gas fumes by appliance igniters.

CAUTION:

All gas appliances must be cut off before filling the LPG tank. Check gas lines and fittings periodically for tightness and leakage.

REGULATOR

The two stage pressure regulator regulates the pressure of the LPG supplied to the appliances. The regulator functions automatically and is factory-preset to provide the correct line pressure. Do not attempt to tamper with or reset the regulator! Even a small variation above the normal gas line pressure can be sufficient to create a dangerous situation and cause possible damage to individual appliance components. If there is any doubt about the regulator setting it can be checked by your Wanderlodge dealer or LPG supplier. The correct setting is 11-14 inch water column.

OPERATION

To operate any LPG appliance, the main gas (Service) valve must be open. Also, individual valves at each appliance must be opened prior to use. When first used, or after a refill, there may be some air in the gas lines which will escape when you open a range burner or similar LP gas valve. The air may extinguish your match or igniter the first time or two before you get ignition. Remember, too, that when you close the tank's service valve some of the gas will remain in the lines. To completely bleed the lines of gas, close the tank's service valve and light a range burner to use up the excess. When the flame burns out, turn the range burner off.

CHECKING FOR LEAKS

Periodically check the LPG system for possible leakage. Do not wait for an alarm condition to occur before correcting a leak! Although the entire system and associated appliances undergo extensive factory testing for leakage, road shocks and heavy vibrations may loosen or damage piping or fittings. Leaks will usually become noticeable by the characteristic odor of the garlic-scented gas additive. To check, turn off all burners and pilot lights. Open all doors and windows. Open LPG tank service valve and use an ammonia and chlorine free soap-bubble solution on all connections. Any bubbles are evidence of leakage.

NOTE:

The gas leakage detectors may momentarily sound an alarm when the engine is initially started or when a heavy electrical load is placed on the system. Further, the ultra sensitive response of these units may also cause an alarm to be given in the presence of certain pressurized-can sprays or cleaning agents. Do not assume! Always determine the reason for this vital alarm being given!

LPG CONSUMPTION

Most gas appliances are intermittently operated; however, operation during cold weather conditions does cause heavy consumption. The amount of LPG consumption depends on the total use and the manner in which these appliances are used.

Note that each gallon (4 1/4 lb.) of LPG fuel produces approximately 91,500 BTUs of heat energy. The LPG tank used in your coach will furnish over three million BTUs.

For your guidance in estimating your anticipated fuel consumption, the following is a listing of typical appliance consumption ratings when the appliance is operated for one hour:

Refrigerator	1,500 BTUs
Cooktop Burners	5,200 BTUs each

LPG SYSTEM WARNINGS

WARNING:

LP gas containers shall not be placed or stored inside the vehicle. LP gas containers are equipped with safety devices which relieve excessive pressure by discharging gas to the atmosphere.

WARNING:

It is not safe to use cooking appliances for comfort heat.

This warning label has been located in the cooking area to remind you to provide an adequate supply of fresh air for combustion. Unlike homes, the amount of oxygen supply is limited due to the size of the recreational vehicle, and proper ventilation when using the cooking appliance(s) will avoid dangers of asphyxiation. It is especially important that cooking appliances not be used for comfort heating as the danger of asphyxiation is greater when the appliance is used for long periods of time.

Cooking appliances need fresh air for safe operation. Before operation:

1. Open overhead vent or turn on exhaust fan.
2. Open window.

A warning label has been located near the LP gas container. This label reads:

WARNING:

Do not fill container(s) to more than 80 percent of capacity.

Overfilling the LP gas container can result in uncontrolled gas flow which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid LP gas.

WARNING:

Portable fuel-burning equipment, including wood and charcoal grills and stoves, shall not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle may cause fires or asphyxiation.

WARNING:

Do not bring or store LP gas containers, gasoline or other flammable liquids inside the vehicle because a fire or explosion may result.

The following label has been placed in the vehicle near the range area:

IF YOU SMELL GAS

1. Extinguish any open flames, pilot lights and all smoking materials.
2. Do not touch electrical switches.
3. Shut off the gas supply at the tank valve(s) or gas supply connection.
4. Open doors and other ventilating openings.
5. Leave the area until odor clears.
6. Have the gas system checked and leakage source corrected before using again.

LP gas regulators must always be installed with the diaphragm vent facing downward. This will minimize any chances of vent blockage which could result in excessive gas pressure causing fire or explosion.

WARNING:

Never check for leaks with an open flame. Do not check copper plumbing lines for leaks using ammoniated or chlorinated household-type detergents. These can cause cracks to form on the line and brass fittings. If the leak cannot be located, take the unit to your Wanderlodge dealer or LPG supplier.

LPG LEAK DETECTOR SYSTEM

The system has been developed to the point where it is unique; it shuts off the LP gas at the high pressure source, yet holds the valve open to provide ample appliance flow with a minimum amount of current usage.

Three components make up the system:

1. **Gas Detection Control Unit:** mounted in toekick of the kitchen base cabinet. This is the "brains" of the system and provides an electrical signal to the solenoid valve when LPG service is required.
2. **Solenoid Valve:** installed in the high pressure LPG line feeding the two stage regulator. It is a "normally closed" solenoid valve and has a special winding of 22 ohms (approximate) resistance, so it uses very little current in the "hold open" position. In order to close the valve, it is only necessary to break the circuit. This provides a "fail-safe" feature in the event of loss of 12 volt power.
3. **LPG Master switch:** located on the galley panel.

The following events will result in an open/low voltage circuit and allow the solenoid valve to close and shut off the LPG supply:

1. Pushing the switch to "OFF" on the LPG MASTER switch or the Gas Detection Control Unit. Green light will go out.
2. The Gas Detection Control Unit senses the presence of LP gas (or can be triggered by a propane lighter or even hair spray!). Green light goes out, Red light comes on, along with audible signal.
3. The Electronic Master switch is turned off. Green light will go out.

NOTE:

System is not Master Switch activated.

In order to restore LP gas flow to the coach, use the following procedures corresponding to the events above:

1. Push switch on the LPG MASTER and the Gas Detection Control Unit to "ON". Green light will come on.
2. Correct the cause of LP gas leak or determine if other fumes caused the shut down. Green light will come on.
3. Turn Electronic Master Switch on. Green light will come on.

NOTE:

Because of the presence of an excess flow valve in the LPG tank outlet (safety feature), sometimes an appliance will not relight after a shutdown. In this circumstance, wait five (5) minutes for LPG pressures to equalize before relighting.

OPTIONAL EQUIPMENT

AUXILIARY AIR COMPRESSOR

This unit provides a quick source of air so there is no need to wait for pressure to build up after starting the engine. It can be used to operate air tools and accessories without starting the coach engine. It also serves as a standby unit in the rare case of a malfunction in the engine driven air compressor system.

The compressor and starting relay are located in a left (road) side center compartment while the 12 volt switch to operate the relay is located on the lower dash panel.

OPERATION

The compressor operates from 120 volt AC power so the coach must be plugged into shore power or the generator must be running. Press dash switch to "ON".

Refer to Operating Manual for additional information.

MAINTENANCE

No lubrication is required for the life of the unit.

The air inlet filters should be inspected once or twice a year. The black plastic air inlet covers can be removed by turning counter-clockwise. This will reveal the felt filters. If there is evidence of dirt on filters and covers, they may be washed in a solvent and air dried.

TIRE CHANGE KIT

Includes a 12 ton hydraulic jack, jack handle, torque multiplying lug wrench and handle.

GENERATOR AUTO-START OPERATION

The auto-start enable switch is located on the driver's armrest panel. With the switch in the "OFF" position, generator operation is the same as described under "Generator Operation, A. Manual." Positioning the switch to "ON" applies power to the automatic control processor board. If the generator is already running, the processor will shut it down. It will then check the voltage level of the batteries and of shore power. If the battery level is within tolerance (greater than 11.25 VDC) and the "LO AC/NO AC" switch is in the "LO AC" position without shore power, monitoring only will continue. If the "LO AC/NO AC" switch is in the "NO AC" position, the processor will initiate the generator start sequence. The generator will then run for a period of two (2) hours providing full power capabilities to the coach. At the end of two (2) hours, the processor will shut down the generator and return to monitor mode. We strongly advise you to operate with shore power attached and the AC monitor mode switch in "LO AC". When shore power is not available, "dry" camping, use the "NO AC" mode during the day and turn off the auto-start system when you retire for the night. This will reduce the number of lifetime start cycles the starter motor of the generator is subjected to and extend battery life.

The auto-start system monitors both DC and AC voltages. With the auto-start enable switch "ON", DC and AC voltages are monitored. The AC switch has two positions: 1) Low AC volts, and 2) No AC volts. With the AC switch in the low AC volts position, the generator will crank if the voltage is between 60 VAC and 105 VAC. If the AC voltage drops below 60 VAC, the generator will not crank.

With the switch in the "No AC" volts position, the generator will crank at voltages less than 105 VAC.

The DC voltage set point is 11.25 VDC. If the DC voltage drops below 11.25 VDC, the generator will crank.

WARNING:

Be sure the auto-start enable switch is "OFF" prior to rolling out the generator tray for maintenance or fluid checks.

NOTE: Other optional equipment may be specified. Consult your dealer or the factory for additional information.

SAFETY & SECURITY FEATURES

FIRE EXTINGUISHER

A portable, multi-purpose dry chemical fire extinguisher is located behind the rear living room companion chair. A second fire extinguisher is located in an outside coach compartment. To use, release the clamp and remove the fire extinguisher from the bracket, pull the safety pin from handle, squeeze handle and apply chemical under flame.

SMOKE DETECTOR

A smoke detector (now code mandated) is installed over the rear dinette seat. A warning label is attached to the exterior of the smoke detector.

LP GAS LEAKAGE DETECTOR

The gas leakage detector is located in the kitchen base cabinet. In the event of an LP leak, the unit sounds an alarm and closes the main LPG supply by deactivating the solenoid valve located in the high pressure gas line just before the regulator. See LPG Leak Detector System for additional information.

BURGLAR ALARM

The security of your motor home and contents are assured by an intruder alarm system that protects windows and entry door. The windows are protected by two glass breakage sensors, which are located in the bedroom and living room area. These sensors trigger an alarm if a window is opened. The entry door uses a door jamb switch that activates the alarm when the door is opened. A panic switch, located on the bedroom control panel, allows you to alarm the system any time that a disturbance is noted. To arm or disarm the system, use the key chain (RF) wireless transmitter. For more detailed information, see manual in owner's kit.

MIRRORS

All interior mirrors meet ANSI A119, and 297.1 codes for your safety.

(S)

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(S)

POWER CORDS & HOOK UP

Your coach is supplied with a ~~permanently attached~~ 50 amp power supply cord, located in the utility compartment (road side rear), for hook up to an external power source.

In addition, a single 30A twist lock connection is supplied to provide two 30A 120 vac lines (from separate external circuits in conjunction with the 50A fixed cord and 50A/30A adapter). This will permit use of all motor home appliances without overloading the supply lines. The total cord complement is as follows:

- 50A male (1) ~~fixed~~
- 50A female to 30A male (1)
- 30A female to 30A male (1)
- 30A female to 30A male extension (2)
- 30A female to 20A male adaptor (2)

Note that each cord has a ground pin that provides proper electrical system grounding. The ground pin is your personal protection from electrical shock hazards. **Do not use any adapter, cheater, or extension cord that will break the continuity of the grounding circuit. Never remove the grounding pin for convenience of being able to make a connection to a non-grounded receptacle!**

Never operate your coach with a "hot skin"! If you can feel even a slight "tingling" shock from touching the coach body while standing outside on the ground, immediately disconnect the electrical hookup until the trouble is located. This fault is usually caused by a break in the grounding circuit, which should be continuous from the coach skin or frame to the distribution panel board to the ground pin on the power supply cord, and from there to the park receptacle and earth ground.

NOTE:

In order to keep the utility compartment clean while traveling, move the flap located at the bottom of the compartment to its outward position and then shut the compartment door.

SHORELINE OPERATION (COMMERCIAL POWER)

CAUTION:

Your motor home has been wired in accordance with the National Electrical Code. All 120 volt AC wiring is two-wire service with ground; all 240 volt wiring is three-wire service with ground. For personal safety, check the polarity detector indicator on the power line monitor to be sure that lines are properly connected and grounded.

CAUTION:

During thunderstorms, lightening strikes may detrimentally impact the electrical system of your coach just as it would your home. To avoid potential catastrophic damage to sensitive electronic devices in your coach, disconnect shore power and cable television service prior to electrical storms reaching maximum intensity.

CAUTION:

If the ground pin is used as a starting point for insertion of the 50 amp plug, the possibility exists that an over voltage condition will occur on the 120 volt lines, ie., the neutral pin of the plug will not make contact at the same time the two 120 volt pins. Without the neutral pin making contact as a voltage reference, 240 volts may be presented to the 120 volt appliances.

Therefore, to reduce the possibility of over voltage, switch off the 50 amp main breakers located in the 120 volt ac load center prior to insertion and removal of the 50 amp plug. In addition, insert and remove the 50 amp plug straight into the receptacle instead of tilting the plug. (See Power Cord Hookup illustration in last section of manual.)

For purposes of safety, observe all precautions when making SHORELINE connections. Poor grounding or incorrectly-wired receptacles can cause personal harm as well as equipment damage or fire hazards. Check reverse polarity indicator in shoreline/utility compartment to verify correct polarity and grounding of hookup.

ELECTRICAL RATINGS FOR MOTOR HOME APPLIANCES

In many instances, the shoreline hookups will not be rated to operate all electrical appliances in your coach. Check with facility personnel to determine the maximum current capability of the hookup. Sometimes, only one air conditioner may be operated.

<u>ITEM</u>	<u>CURRENT RATING (AMPERES)</u>
Air Conditioners	13,500 BTU (Run) 15.0-18.0
Water Heater	13.8
Television Receivers (Color)	1.0
Battery Charger <i>(depends on battery condition/load)</i>	0 to 14.0
Engine Block Heater	10.0
Electric Heaters	
Interior Heater	12.5
*Battery Heaters	1.2
Heat Tapes	3 watts/ft
Microwave Oven	15.0
Refrigerator	2.7
*Instant Hot Water	6.5
*Optional Item	

SHORELINE OPERATION...TROUBLESHOOTING

Your coach is designed and tested to make sure the 120 volt AC Neutral (white) wire and the Ground (bare copper or green) are not tied together (no continuity). This will prevent any danger of a "hot skin" if the source of power has reversed polarity (red LED lit) as indicated on the polarity indicator panels located on the right hand overhead auxiliary panel and in the utility compartment.

Problem

Probable Cause

Corrective Action

Yellow LEDs lit ... Normal (desired)

Red LEDs lit

Reversed Polarity at power source.

Convince park management to correct or change lot assignment.

Neither Red or Yellow LED lights

No ground connection with park service.

Use jumper lead from ground pin on shore cord to service box.

Power source (park) circuit breaker trips

Reversed polarity in park, and coach neutral and ground tied together.

Use on-board generator until qualified electrician can correct coach problem.

(Generator polarity is correct).

Yellow LEDs lit plus Red LEDs glow when additional load is turned on (Air Conditioner or Water Heater).

Poor ground connection at park (floating ground).

Make sure shoreline plug is fully engaged. Twist locked (clockwise) at coach.

SAFELINE ALARM

See **Armrest Panel** for function.

TRANSMISSION

IMPORTANT:

Your Wanderlodge® is equipped with an Allison model HD-4060 electronic 6 speed World Transmission. Refer to the operator's manual supplied in your owner's package before vehicle operation.

TRANSMISSION SPECIFICATIONS

NO. SPEEDS GEARS**RATIOS**

First	3.51
Second	1.91
Third	1.43
Fourth	1.00
Fifth	0.74
Sixth	0.64
Reverse	4.80

Torque Converter
Lubricant Capacity

TC 541-1.9 Stall Ratio
37 qts. (Includes Filter and Cooler)
Dexron II (or Mecnron)

Bellhouse Size
Companion Flange
Dipstick Location

SAE #1
1810 Spicer
Left side at rear of wheel

VIDEO & AUDIO

STEREO TELEVISION RECEIVER, LIVINGROOM

Installed in the front overhead. Operates from a 120 volt source (inverter, shoreline or generator). Will not operate while in transit. Refer to owner's manual supplied with set for operating instructions.

TELEVISION RECEIVER, BEDROOM

Installed in the bedroom. Operates from a 120 volt source (inverter, shoreline or generator). Refer to owner's manual supplied with set for operating instructions.

AUTOMOTIVE STEREO

Installed in the lower right dash. Is comprised of a tuner/cassette with two (2) 6 x 9 inch coaxial speakers, and two (2) 4 x 10 inch coaxial speakers. The tuner/cassette has auto reverse, electronic tuning sensor, Dolby noise reduction and metal tape capabilities.

The speakers are located two (2) in the living room and two (2) in the front overhead. See instruction manual for operating instructions.

STEREO SYSTEM

AM/FM tuner cassette with electronic tuning and auto reverse located in the bedroom night table with two (2) 6 1/2 inch coaxial speakers.

CLOSED CIRCUIT TV SYSTEM

Includes a monitor which enables the operator to view behind the coach for purposes of backing or passing other vehicles on the highway.

The rear-facing CCTV camera transmits images directly to the monitor via coach cabling.

Note that the system requires a brief warmup period before achieving full resolution. CCTV camera controls are preset and the standard lens supplied with the unit is designed to focus from about two feet to infinity.

CB RADIO

CB radio is in compartment (floor) at driver's right leg. Refer to CB Operator's Manual for additional information.

VIDEO CASSETTE RECORDER

Installed in co-pilot side of overhead dash. Operates from a 120 volt source (inverter, shoreline or generator). Refer to owner's manual supplied with the VCR for operating instructions.

TV ANTENNA & ROTATOR SYSTEM

The control components of the radome-type TV roof antenna are a hand held rotator switch for the antenna or cable inputs, and a switch for raising and lowering the antenna.

The antenna rotators, located in the co-pilot's front overhead compartment and in the bedroom, control the position of the TV antenna within the radome. The three-position momentary switch (center OFF) provides right/left antenna rotation.

The radome includes an amplifier and rotator mechanism. The remote power supply operates from 12 volts dc. Low-loss coaxial cable and three wire rotator control cable interconnect the antenna and power supply.

Note that the system is protected by a fuse in the front load center. In the event that the TV set exhibits problems relating to low antenna input (ghosts, etc.), check this fuse before servicing the TV set.

ANTENNA OPERATION

With the TV on and a station tuned in, rotate the antenna by pressing the rocker switch located on the control unit. Press the right side of the switch to run the antenna clockwise; press the left side to turn the antenna counter-clockwise. Although the actual antenna movement is not visible, the indicator arrow on the control unit lights and shows the direction of movement. When the antenna has made one full turn (360 degrees), the End of Rotation light comes on. Observe the picture while rotating the antenna, first in one direction, then the other, to obtain best picture quality.

MUSICAL HORN (OPTIONAL)

The lower dash panel has three different switches for use with the musical horn. The POWER switch provides power to the horn. When this switch is turned on, the selection display will light up and indicate selection number 0.

The SONG select switch controls the scanning of the song desired. When this switch is pressed in the up position, the selection display will begin to increment up, slowly at first and then increasing in speed. When this switch is pressed in the down position, the selection display will increment down.

When depressed, the PLAY switch initiates the selection displayed on the selection display. If this switch is depressed while a song is playing, the horn will automatically reset and repeat the song.

The volume control operation is controlled by operating the PLAY switch and the SONG select switch simultaneously. To increase volume, depress the PLAY switch and the SONG select switch in the UP position at the same time. To decrease volume, depress the PLAY switch and the SONG select switch in the DOWN position at the same time. The volume level will be displayed on the selection display in levels from L1 (lowest) to L5 (highest).

PHONE OUTLETS, LAND LINE

Phone outlets are located in the bedroom and at the rear of the sofa. Connection is in the utility box.

Pump gives low water pressure and flow:

Defective water pump.

Replace diaphragm or motor.

(See Shur-Flo's service instructions.)

WINTERIZING

If you are planning on storing your motorhome in an unheated area during cold weather, it will be necessary to winterize the water system to prevent damage from freezing conditions. Winterizing procedures are covered in the following paragraphs.

DRAINING AND WINTERIZING THE FRESH WATER SUPPLY SYSTEM

The following procedures show the use of the various drain valves, controls and pressurized air system to remove the water from the plumbing and appliances in the fresh water supply system.

1. Open the main circuit breaker box and turn off the Water Heater and optional Instant Hot circuit breakers.
2. Turn on Water Pump switch and open all faucets (galley sink, lavatory, shower, outside hose connection and toilet water valve - after depressing pedal insert block to maintain position). Note that the outside water hose connection should always be left open when freezing temperatures are expected. Also remove drain plugs at rear of toilet and at bottom of Instant Hot. Refer to the Ice-Maker and Toilet Manuals for winterizing these units.
3. Open the 3/4" water tank drain located in road side rear holding tank compartment. Open Cold and Hot Water Drain valves located in road side holding tank.
4. Allow water to drain completely before proceeding to the next step.
5. Close Cold Water Drains and water tank drain valve.
6. Turn ON Water Purge Air Pressure switch to activate the solenoid that applies air pressure to the input water line to purge the water system. Note that it may be necessary to start the engine to build up air pressure.
7. Remove the cap from cold water circuit in Aqua-Hot compartment and pour in 8 oz. of RV Antifreeze. Replace cap and repeat step 6. Then proceed to step 8.
8. When only air remains in the lines, close Hot Water Drain Valve and all faucets. Replace drain plugs in toilet and Instant Hot. Operate the Instant Hot valve to clear the heat exchanger of remaining water.
9. Turn Water Purge Air Pressure Switch and Water Pump Switch to OFF and shut down engine.
10. Open all faucets (toilet valve is to remain open).
11. At this point, the only water remaining in the system is contained in the P traps beneath the lavatory, shower, kitchen sink and clothes washer (optional). To prevent this water from freezing and damaging the traps, put one pint of RV system anti-freeze into each drain. See WASTE SYSTEM winterizing.

NOTE:

When reactivating system, make sure (optional) Instant Hot is full of water before switching on.

WASTE SYSTEM

Separate holding tanks for gray water and body waste are located in compartments directly in front of the drive wheels. Each holding tank has a separate drain valve, dumping gray water and wastes through a common single discharge connection. Separate vents from each holding tank extend through the roof of the coach.

Holding Tank Capacity: Approx. 150 Gallons Combined

DRAINING THE HOLDING TANKS

The waste water holding tank is drained first, then the gray water holding tank. Drain the holding tanks as follows:

NOTE:

It is advisable to drive your unit for a short distance to agitate the contents of the holding tank before dumping.

1. Check that both drain valves are in a closed position before removing drain cap.
2. Remove the safety cap from the single discharge connection by turning in a counter-clockwise direction and connect the three-inch sewer hose coupling to the end of the valve. Tighten securely, in a clockwise direction. The sewer hose is stored in the tube to the rear of the holding tanks on the road side. Place the discharge end of the hose into the sewer connection and check that all connections are secure to prevent accidental spillage.
3. Open the waste holding tank dump valve (located in the roadside holding tank compartment) and drain contents of tank, then close valve. Open the gray holding tank and drain contents of gray tank, then close valve.

NOTE:

To clean the holding tanks, add a detergent solution to the tanks after they are emptied. The agitation action caused by vehicle movement will clean the tank.

7. Disconnect and wash out the sewer hose. Replace hose and replace safety cap securely.

HOLDING TANK DRAIN VALVE MAINTENANCE

Periodically the drain valve may become difficult to open. It is recommended that the two screws in the top of the mechanism be removed and pull paddle out. After cleaning paddle, a coat of Vaseline should be added to both surfaces and the valve reassembled.

WASTE TANK LEVEL INDICATORS

Each holding tank has a level detector which provides an electrical input to the Systems Monitor panel in the galley area. Activate the display to read the level of liquid remaining in each tank by pressing the appropriate push button switch.

WINTERIZING HOLDING TANKS

Drain the holding tanks and add RV antifreeze (several quarts) to each tank through the toilet (into the sewage tank), and through the tub/shower drain (gray water tank).

WINTERIZING FIXTURE TRAPS

In addition to the above, pour a pint of RV antifreeze into the kitchen sink and bathroom lavatory drains.

TOILET

The Sealand toilet operates from the fresh water supply, flushing wastes directly into the sewage holding tank.

NOTE:

A water pump must be on or the coach connected to city water to operate the toilet.

WINTERIZING TOILET

See toilet user manual in owner's kit.

INDEX

DESCRIPTION

SECTION

A

A.C.VOLTAGE GAUGE (RH OVERHEAD PANEL)	6
A.C. AMPERAGE GAUGE (RH OVERHEAD PANEL)	6
A.C./HEAT MASTER SWITCHES (SHIFTER PANEL)	6
A.C. CIRCUIT BREAKER AND DISTRIBUTION PANEL	8
ACCELERATOR PEDAL	7
AIR BRAKE SYSTEM	2
AIR BRAKE SYSTEM MAINTENANCE	2
AIR COMPRESSOR MASTER SWITCH (LOWER DASH PANEL)	6
AIR COMPRESSOR, AUXILIARY	17
AIR CONDITIONING, CHASSIS	1
AIR CONDITIONING, ROOF (DUCTED)	1
AIR DRYER, COMPRESSED AIR SYSTEM	2
AIR HORN FOOT SWITCH	7
AIR OPERATED EQUIPMENT	2
AIR OUTLET, AUXILIARY	2
AIR PRESSURE FRONT/REAR GAUGE (UPPER DASH PANEL)	6
AIR PRESSURE SYSTEM	2
AIR STEP SPEED ADJUSTMENT	2
AIR SUSPENSION SYSTEM	2
AISLE LIGHT SWITCH (LOWER DASH PANEL)	6
ALARM CLOCK (BEDROOM PANEL)	6
ALT/CHGR AMPS GAUGE (UPPER DASH PANEL)	6
ANTENNA AND ROTATOR SYSTEM	21
AUTHORIZED SERVICE CENTERS	23
AUXILIARY BATTERY SWITCH	6
AUXILIARY STEP SWITCH (LOWER DASH PANEL)	6
AWNING	4

B

BACK UP ALARM SWITCH (LOWER DASH PANEL)	6
BATTERIES, COACH	8 & 9
BATTERIES, ENGINE	5 & 9
BATTERY CHARGER & CHARGING	8
BATTERY MAINTENANCE	9

BATTERY STORAGE IN FREEZING WEATHER	9
BAY HEAT	13
BRAKE PEDAL	7
BURGLAR ALARM SYSTEM	18

C

CAPACITY, FUEL	5
CAPACITY, HOLDING TANKS	22
CAPACITY, LPG	16
CAPACITY, WATER (FRESH)	11
CB RADIO	21
CELLULAR PHONE WIRING	8
CHASSIS SPECIFICATIONS	5
CLEARANCE LIGHTS SWITCH (SHIFTER PANEL)	6
CLOSED CIRCUIT TV SYSTEM	21
CRUISE CONTROL (SHIFTER PANEL)	6

D

D.C. AMPERAGE GAUGE (RH OVERHEAD PANEL)	6
D.C. VOLTS GAUGE (UPPER DASH PANEL)	6
DASH DIMMER (LOWER DASH PANEL)	6
DASH DIMMER (LH OVERHEAD PANEL)	6
DATA PLATES	INTRO
DEAD BOLT LOCK OPERATION, ENTRANCE DOOR	7
DEFROSTER OPERATION	1
DIPSTICK, TRANSMISSION	20
DRIVING LIGHTS SWITCH (SHIFTER PANEL)	6
DUCTED ROOF AIR CONDITIONING	1
DUMP VALVES	22

E

ELECTRICAL RATINGS FOR APPLIANCES	19
ELECTRICAL SUPPLY SYSTEM, 12 VDC	8
ELECTRICAL SUPPLY SYSTEM, 120 VAC	8
ENGINE AIR FILTER	9
ENGINE COOLING SYSTEM	9
ENGINE COOLING SYSTEM ADDITIVES	9
ENGINE, DIESEL	9
ENGINE FUEL ADDITIVES	9
ENGINE FUEL FILTERS	9
ENGINE MAINTENANCE	9
ENGINE MONITOR	6

ENGINE OIL FILTER	9
ENGINE OIL LEVEL	9
ENGINE PREHEAT (LH OVERHEAD PANEL)	6
ENGINE SPECIFICATIONS	9
ENGINE, REMOTE START	9
ENGINE, STARTING THE	9
ENGINE, STOPPING THE	9

F

FAN, FANTASTIC	10
FAN, KOOLOMATIC	10
FIRE EXTINGUISHER	18
FRESH WATER SUPPLY AND DISTRIBUTION	11
FUEL LEVEL GAUGE (UPPER DASH PANEL)	6

G

GENERATOR AIR CLEANER	12
GENERATOR COOLING SYSTEM	12
GENERATOR FUEL FILTER	12
GENERATOR HOURS RUN METER	12
GENERATOR IN-OUT SWITCH	12
GENERATOR MAINTENANCE	12
GENERATOR OIL CHECK/CHANGE	12
GENERATOR OIL FILTER	12
GENERATOR OPERATION	12
GENERATOR OVERLOADS	12
GENERATOR START/STOP SWITCH	6
GENERATOR STORAGE PROCEDURE	12
GENERATOR TROUBLESHOOTING	12

H

HAZARD SWITCH	6
HEADLIGHT ALERT (UPPER DASH PANEL)	6
HEADLIGHT SWITCH (LOWER DASH PANEL)	6
HEATING SYSTEM, CHASSIS	1
HEATING SYSTEM, ELECTRIC	13
HEATING SYSTEM, HYDRONIC	13
HIGH BEAM INDICATOR (LOWER DASH PANEL)	6
HOLDING TANK DUMP PROCEDURE	22
HOLDING TANKS, HEATED	22
HOLDING TANK WINTERIZATION	22
HORN	7

HORN, MUSICAL	21
HYDRAULIC COOLING FAN	9
HYDRAULIC COOLING FAN FLUID LEVEL CHECK	9
HYDRONIC HEATING, DIESEL FIRED	13

I

IGNITION SWITCH (LOWER RIGHT HAND DASH PANEL)	6
INTERIOR AND EXTERIOR CARE	14
INVERTER	8
INVERTER PANEL	6

J

JUMP STARTING, ENGINE	9
-----------------------------	---

L

LANDING LIGHT SWITCHES (LOWER DASH PANEL)	6
LEVEL WARNING LIGHT (LOWER DASH PANEL)	6
LEVELING JACK FLUID	15
LEVELING JACK OPERATION	15
LEVELING JACK RESERVOIR	15
LIGHTER (UPPER RH DASH PANEL)	6
LOAD MANAGEMENT	8
LOADING, VEHICLE	INTRO
LOW AIR WARNING (UPPER DASH PANEL)	6
LPG CONSUMPTION	16
LPG FUEL REQUIREMENTS	16
LPG LEAK DETECTOR SYSTEM	16,18
LPG REGULATOR	16
LPG SYSTEM LEAK CHECKING	16
LPG SYSTEM WARNINGS	16
LPG TANK AND CONTROLS	16
LPG TANK FILLING	16
LPG TANK LEVEL MONITOR (GALLEY CONTROL PANEL)	6
LPG VAPOR DETECTORS	16,18

M

MANIFOLD, FRESH WATER	11
MARKER LIGHTS SWITCH	6
MICRO/CONVECTION OVEN	3
MIRROR ADJUST., REARVIEW	6
MIRROR HEAT SWITCH	6

MONITOR CONTROLS, REARVIEW	6
MUSICAL HORN CONTROLS, REMOTE	17
MUSICAL HORN OPERATION	21

O

OIL PRESSURE GAUGE (UPPER DASH PANEL)	6
---	---

P

PARKING BRAKE	7
PHONE OUTLETS, LAND LINE	21
PORCH LIGHT SWITCH (ENTRANCE DOOR CONTROL PANEL)	6
POWER CORDS AND HOOKUP PROCEDURE	19
POWER LINE MONITOR (POLARITY INDICATOR)	8
POWER STEERING FLUID CHECK	9

R

RACOR FUEL FILTER	9
RADAR DETECTOR	6
RADAR MASTER SWITCH	6
RANGE (COOKTOP)	3
REAR PARKING SWITCH	6
REFRIGERATOR ALARM	6
REFRIGERATOR/FREEZER	3
RETARDER OPERATION	20
RETARDER SWITCH	6

S

SAFELINE ALARM	6
SAFETY DEFECTS, REPORTING	INTRO
SEAT CONTROLS	7
SHORELINE OPERATION AND TROUBLESHOOTING	19
SMOKE DETECTOR	18
SPEEDOMETER	6
SPOTLIGHT CONTROLS	6
STEERING WHEEL, TILT/TELESCOPING, OPERATION	7
STEP MASTER, SWITCH	6
STEPLIGHT SWITCH	6
STEPWELL COVER SWITCH	6

STEREO SYSTEM, BEDROOM	21
STEREO SYSTEM, AUTOMOTIVE	21
STORING THE COACH	INTRO.&8
SUSPENSION DUMP	2
SUSPENSION DUMP SWITCH	6
SUSPENSION DUMP WARNING LIGHT	6

T

TACHOMETER (LOWER DASH PANEL)	6
TAG AXLE DUMP SWITCH (.....	2, 6
TAG AXLE PRESSURE GAUGE	6
TANK MONITORS	6
TELEVISION, BEDROOM	21
TELEVISION, FRONT OVERHEAD	21
TILT WHEEL OPERATION	7
TIRE CHANGE PROCEDURE	5
TIRE INFLATION	5
TOILET	17
TOILET, MECHANICAL SEAL	22
TOWING	5
TRAILER HITCH	5
TRANSMISSION CHECK LIGHT	6
TRANSMISSION MAINTENANCE	20
TRANSMISSION OIL TEMP GAUGE	6
TRANSMISSION OIL TEMPERATURE	20
TRANSMISSION OPERATION	20
TRANSMISSION RETARDER SWITCH	20
TRANSMISSION SHIFT SELECTOR	6
TRANSMISSION SPECIFICATIONS	20
TURN INDICATOR, LEFT	6
TURN INDICATOR, RIGHT	6
TURN SIGNAL LEVER FUNCTIONS	7
TURNING RADIUS DATA	5
TV ANTENNA & ROTATOR SYSTEM	21

V

VIDEO CASSETTE RECORDER	21
-------------------------------	----

W

WASHER/WIPER SELECTOR	7
WATER FILTER	11
WATER HEATER	11

WATER HOOKUP, COMMERCIAL	11
WATER PUMP	11
WATER PUMP SWITCH	11
WATER PUMP SWITCH	6
WATER PUMP TROUBLESHOOTING GUIDE	11
WATER SYSTEM SANITIZING PROCEDURE	11
WATER SYSTEM WINTERIZING PROCEDURE	11
WATER TANK FILL PROCEDURE	11
WATER TEMPERATURE GAUGE	6
WINDSHIELD WASHER RESERVOIR	7
WINTERIZING	11,22
WIPER DELAY	6

AUTHORIZED SERVICE CENTERS

Blue Bird Wanderlodge
One Wanderlodge Way
Fort Valley, GA 31030
(800) 992-6337
Phone (912) 822-2356 or
(912) 825-2021
Fax (912) 822-2476
Service Manager - Butch Bennett

Buddy Gregg Motor Homes
11730 Snyder Road
Knoxville, TN 37922
(800) 421-0031
Phone (615) 675-1986
Fax (615) 675-2077
Service Manager - Dennis Kissinger

Buddy Gregg Motor Homes
940 Crevasse Street
Lakeland, FL 33809
(800) 243-5278
Phone (941) 859-5656
Fax (941) 858-2702
Service Manager - Lester Burgess

Buddy Gregg Motor Homes
1206 North Stemmons Freeway
Lewisville, TX 75067
(800) 858-7139
Phone (972) 420-8586
Fax (972) 436-3151
Service Manager - Howard Tate

Holiday on Wheels
Robin Hill Corporate Park, Route 22
Patterson, NY 12583
Phone (914) 878-9400
Fax (914) 878-3647
Service Only - Chris Grindley

Holland Motor Homes
670 East 16th Street
Holland, MI 49423
(800) 221-7197
Phone (616) 396-1461
Fax (616) 396-1391
Service - Mike Meulenberg

Holland Motor Homes
7490 Copley Park Place
San Diego, CA 92111
(800) 961-4464
Phone (619) 874-4444
Fax (619) 874-8484
Service - Loren Swartz

Miller's RV
12912 Florida Boulevard
Baton Rouge, LA 70815
Phone (504) 275-2940
Fax (504) 275-6807
Service Only - Doug Miller

