

1999
41'
WANDERLODGE
WLXi
OWNER'S
MANUAL

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.

1. The first part of the report discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is essential for the company's financial health and for providing reliable information to stakeholders. The report also highlights the need for transparency and accountability in all financial dealings.

2. The second part of the report focuses on the implementation of a new accounting system. This system is designed to streamline the accounting process, reduce errors, and improve the efficiency of financial reporting. The report outlines the steps involved in the implementation, including the selection of the system, the training of staff, and the testing of the system.

3. The third part of the report discusses the results of the implementation. It shows that the new system has been successfully implemented and that it has led to a significant improvement in the accuracy and efficiency of the accounting process. The report also notes that the implementation has been well-received by the staff and that it has helped to reduce the risk of errors.

4. The fourth part of the report discusses the future of the accounting system. It notes that the system is still in the early stages of implementation and that there are still some areas that need to be addressed. The report also discusses the potential for further improvements to the system and the need for ongoing monitoring and evaluation.

5. The fifth part of the report discusses the conclusion of the project. It notes that the project has been completed successfully and that the new accounting system is now in place. The report also discusses the lessons learned from the project and the need for ongoing communication and collaboration between the accounting department and other departments.

6. The sixth part of the report discusses the appendix. It includes a list of the documents and materials used in the project, as well as a list of the people who were involved in the project. The appendix also includes a list of the questions and answers that were asked during the project.

7. The seventh part of the report discusses the bibliography. It includes a list of the books, articles, and other sources that were used in the project. The bibliography also includes a list of the websites that were visited during the project.

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

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.

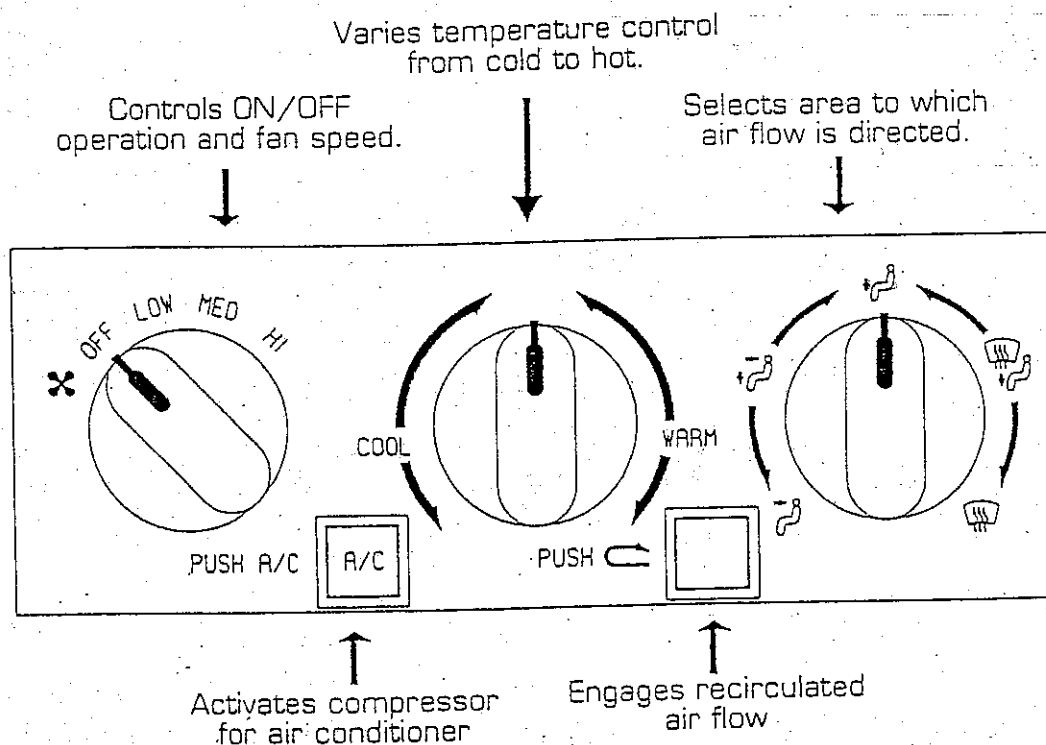
Operation: *120 VAC is required from either generator or shoreline. The thermostat is located in the dinette area with remote temperature sensors located in the front and rear of the coach. Refer to the operator's manual in owner's kit for detailed operating instructions. Refer to your Dometic "Comfort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

*NOTE:

One air conditioner may be operated on the inverter.

CHASSIS AIR CONDITIONING

The 30,000 BTU system has an engine-driven compressor. Automotive rotary 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.

THE UNIVERSITY OF CHICAGO

PHILOSOPHY DEPARTMENT

1100 S. MICHIGAN AVE.

CHICAGO, ILL. 60607

TEL: 773-936-5000

FAX: 773-936-5001

WWW.CHICAGOEDU.EDU

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.

ANTI-LOCK BRAKES

In addition to the above, a four-channel anti-lock brake system for the steer and drive axles and standalone single-channel anti-lock brake system for the tag axle are installed. In the event one of the wheels begins to lock up under severe braking conditions, the anti-lock system will detect this situation and gradually remove air pressure from the brake chamber until the wheel begins to turn. This will help assure smooth braking action and minimize wheel lockup.

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. A switch, located on the top right side of the LOWER DASH PANEL, controls dumping and filling of air bags. The SUSP. DUMP switch controls the front, rear and tag axle suspension.

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 away from the UP position 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 UP position.

In addition, the coach has automatic tag axle lift capability. A switch on the arm rest panel (TAG LIFT) controls this function. When the switch is in the ENABLED position, the tag axle will lift when the speed of the coach reaches approximately 12 mph, thus permitting tighter turning radius. The tag axle will automatically be dropped when the coach speed reaches approximately 18 mph.

NOTE:

The tag axle will not lift from the ground but air pressure is removed from the tag axle suspension, thus removing load from the tag axle.

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

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 entry step, stepwell cover, tag axle and waste dump system all 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.

AIR PRESSURE SYSTEMS - ADDENDUM

AIR SUSPENSION SYSTEM - TAG AXLE SUSPENSION DUMP

ADDITIONAL NOTE:

The tag axle suspension dump to gain additional traction should not be used while the vehicle is being operated on public highways.

APPLIANCES

INSTANT HOT

Provides an additional hot water source at the kitchen sink. Switch is located in the kitchen base cabinet. Operates from generator or shoreline.

ICE MAKER

The ice maker, located in the kitchen base cabinet, is designed to provide a continuous automatic supply of ice cubes. It will operate unattended providing the water supply line is open and AC power is applied to the unit. The water supply cutoff valve is located under the kitchen sink. The AC power may be supplied from shoreline, generator or inverter.

OPERATION

1. Put the ON-OFF switch, located behind the hole at the top of the front grill, in the ON position.
2. Open the water supply valve, located on the manifold distribution block.

The compressor will start. As soon as the ice maker mold reaches the proper temperature, the ice maker mechanism will fill the mold with water. The first cubes may be small because of air in the water line. Subsequent cubes will be of standard size. Approximate time for the first cycle is 45 minutes.

- When the ice bucket is full, the ice making mechanism will shut off but the refrigeration system will continue to cycle to maintain the cube supply.

IMPORTANT:

Never use an ice pick, knife or other sharp instrument to separate cubes.

- During periods of limited usage or high ambient temperatures, it is common for cubes to fuse together. Ruffle cubes as needed.
- If ice maker is not used regularly, the ice bucket should be emptied periodically to ensure fresh cubes.
- It is normal for cubes to appear cloudy. This is nothing more than air being trapped in the water due to fast freezing. It has nothing to do with the health, taste or chemical make up of the water. It is the same air that is in every glass of water you drink.
- To provide for higher ice rate (production of more cubes), adjust the temperature control to a warmer setting. If hollow cubes result, adjust temperature somewhat colder. For less cube production, adjust to a colder setting.

NOTE:

Use a flat tip screwdriver to turn adjusting screw, located behind the front grill, clockwise for colder or counter-clockwise for warmer.

- Cube size may be adjusted by changing the amount of water injected into the ice maker assembly.
 - A. Remove the ice maker assembly cover.
 - B. Locate the adjusting screw on the ice maker assembly control box. The adjusting screw is just below the minus (-) and plus (+) signs on the control box.
 - C. Turn the adjusting screw toward the minus (-) sign (clockwise) for smaller cubes or toward the plus (+) sign (counter-clockwise) for larger cubes.
 - D. Install the ice maker assembly cover.
- To stop ice production but maintain the existing ice supply, manually raise the bin arm to the full up position.

PERIODIC CLEANING AND MAINTENANCE

- The unit is not frost-free and must be defrosted periodically. To defrost, turn the unit OFF, remove cubes and prop door open at least two inches. To speed defrosting, place pans or trays of hot water inside the unit.

CAUTION:

DO NOT use any type of electrical heating device, ice pick, knife or other sharp instrument to defrost, as this would damage the inner lining and void the warranty.

- Avoid the use of solvent cleaning agents, abrasives and all cleansers that may impart taste to the ice cubes. The exterior may be cleaned with cleansers and polish as used on fine furniture.
- The front grill should be kept free of dust and lint to permit free air flow to the condenser.
- The condenser coil, located behind the front grill, should be cleaned three to four times each year. Using a brush or vacuum cleaner, remove dirt, lint and other accumulations from the condenser coil.
- The condenser fins are SHARP. DO NOT run hands over condenser fins.
- The solenoid valve inlet screen must be cleaned at least once each year as follows:
 - A. Shut off the water at the water supply valve, located under the kitchen sink.
 - B. Remove the entire hose connector from the solenoid valve.
 - C. Use a toothbrush to clean sediment from the inlet screen. DO NOT remove the screen.
 - D. Attach the hose connector to the solenoid valve. Tighten connector securely with pliers. Open the water supply valve and check for leakage at the hose connector.

STORAGE

If the unit is to be stored or not used for extended periods, it will be necessary to drain the system of water.

1. Shut off water supply at the main water source.
2. Disconnect the water supply line from the solenoid valve.
3. Disconnect the water line from the solenoid valve outlet.
4. Allow the unit to run for an hour or more to drain all the water.
5. Dry out excess water from the ice maker assembly.
6. Prop the door open at least two inches.
7. Disconnect unit from main electrical power source.
8. Leave water supply line and power cord disconnected until ready to use.

NOTE:

The use of anti-freeze or other products of this nature is not necessary and is not recommended.

REFRIGERATOR/FREEZER

See refrigerator operator's and owner's manuals (owner's package).

COOKTOP (RANGE)

The gas supply for the cooktop burners is provided from the LPG tank. The cooktop is equipped with a 12 VDC 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.

ELECTRIC GRILL

The electric grill is stored on a slide out tray in the curb side rear luggage compartment.

NOTE:

Grill will not operate unless grill and tray are in the fully extended position.

To use the electric grill, pull on tray to release tension latches at rear of tray. Pull grill and tray to its fully extended position. Ensure that the electrical plug is secure in receptacle and all components of the electric grill are in the correct position. Refer to instruction manual on appliance (supplied in the coach) for important safeguard and general cooking tips.

To store the grill, turn the grill off and let unit cool down completely. Push grill and tray back into closed position and ensure that the tray is secured by tension latches. Use tie down strap to secure top in stowed position.

CAUTION:

Ensure that the grill is cooled completely before storage and that no flammable materials are stored in close proximity to the stored grill.

APPLIANCES - ADDENDUM

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

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

16.5 CFM capacity @ 1250 RPM, Gear Driven

AIR RESERVOIR

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

ALTERNATORS

12 Volt negative ground 300 amp

AXLES

14,600 # Front; 23,000 # Drive, Single Speed, 4.69 (Standard) Ratio;
13,000 # Tag; All Wheel Bearings Oil Lubricated.

BATTERY

Three 12 Volt, 925 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 DDEC III Engine Control

DRIVE LINE

Spicer 1810 Series with Protective Guard Around Shaft

ELECTRICAL SYSTEM

12 Volt

ENGINE

Detroit Diesel Series 60, 500 HP at 2100 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

260 gallon capacity

GROSS VEHICLE WEIGHT RATING

50,600 lbs. max.

HORN

Dual Electric and Dual Air with Selector Switch

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 13,000 # Tag. Front and Drive Systems Utilize 4 Air Springs Each, Tag System Utilizes 2 Air Springs.

TIRES

Tubeless 31580R22.5 16-Ply rating Michelin Steel Cord Radial with XZE

TURNING RADIUS

- * CURB RADIUS 35.3 ft.
- ** WALL RADIUS 40.4 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.

NOTE:

Turning Radii is with Standard 31580R22.5 tires.

CHASSIS SPECIFICATIONS - ADDENDUM

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.

TIRE/WHEEL CHANGE PROCEDURE

The wheel/tire assemblies used on your motor home 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 road side rear 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.

NOTE:

For more towing capacity, we offer an optional 2 5/16" hitch ball with a 1 1/4" shank rated for a 10,000 lb. maximum towing capacity and a 1,000 lb. maximum tongue weight. Hitch ball nut must be torqued to 200 ft. lb.

UPPER DASH PANEL

NOTE:

Some items operate at all times and some require the 12 volt master (A/T switch) 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 TEMPERATURE

Normal: 200 degrees Fahrenheit
Gives a constant reading of the engine oil in the supply line from the pump. If the temperature goes over 250 degrees, the engine may be low on oil or there is overheating of the cooling system.

CAUTION:

Your Wanderlodge is designed to operate at ambient temperatures up to 100 degrees Fahrenheit with no problems. If temperatures greater than 100 degrees Fahrenheit are encountered, the operator must closely observe engine water and oil temperature and transmission oil temperature to avoid overheating conditions. If overheating conditions occur at ambient temperatures less than 100 degrees Fahrenheit, the cooling system must be checked and the problem corrected.

*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!

AIR PRESSURE FRONT/REAR

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.

ALTERNATOR/CHARGER AMPS

Shows charging amps of the alternator. When parked, with a source of 120 vac (shoreline or generator) the gauge will show a total output of the battery charger.

DC VOLTS COACH

Normal: 13.8 to 14.2 VDC.

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

DC VOLTS ENGINE

Registers the actual voltage at the engine batteries. With the engine running, gauge should read 13.8 to 14.2 VDC.

LOW FUEL

When this light comes on, the operator should begin looking for a refueling station.

LOW AIR (LIGHT & BUZZER)

These warn the driver that there is an insufficient supply of air (65 psi or less) to properly operate the coach. If the air pressure is low when the ignition key is turned on, the light and buzzer will come on immediately. Both warnings will continue until the air pressure is built back up, or the ignition key is turned off.

ACCESSORY

This blank position may be used for the installation of an additional switch for customer add-on equipment.

CAUTION:

Use existing panel holes for installation of additional controls or indicators. Drilling new holes will destroy the electroluminescent lighting.

A/T

(Anti-Theft) deactivates the starting system for protection against unauthorized cranking and theft. This switch also provides 12V master switch operation to shut off 12V battery power to all circuits except digital clocks, radio memory, monitoring panel functions, refrigerator control system, and burglar alarm.

ENGINE ALARM

This red light with the word FIRE will come on when signaled by over temperature sensors in the engine compartment and will sound a buzzer.

HEADLIGHT ALERT

When the ignition switch is turned off while the headlight switch is on, this warning light, along with a buzzer, will come on. These will remain on until the headlight switch is turned off or the ignition switch is turned back on.

LOWER DASH PANEL

NOTE:

Some items operate at all times, some require the 12 volt master (A/T switch) 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.

SPEEDOMETER

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

TACHOMETER/HOUR METER

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) 2100 RPM. May go to 2425 RPM under no-load conditions (downhill). HOURMETER shows number of hours engine had been in operation.

TAG AXLE PRESSURE

Monitors the tag axle suspension pressure. Factory set at approximately 40 psi.

CAUTION:

Before driving, check gauge to make sure there is pressure in the tag axle air bags. This is critical for proper coach axle weight distribution. Applying brakes with tag axle suspension not inflated will likely cause tire skid and "flat spotting".

TRANSMISSION OIL TEMPERATURE

Indicates temperature of the transmission oil. If the WARNING LIGHT comes on, reduce speed or load.

HIGH BEAM INDICATOR

The Blue Bird logo is illuminated when the high beam is selected using the steering column switch.

ACCESSORY WARNING LIGHTS

WATER IN FUEL

This light comes on when there is an excess of water in the bottom of the fuel tank.

SUSP. DUMP

Light comes on to indicate that the suspension system has little or no air, and that the suspension needs to be pressurized before the coach is driven. See Air Pressure System.

LEVEL WARNING

This light comes on when any of the four (4) leveling jacks are not fully retracted.

TURBO PYROMETER

Registers the temperature of the exhaust gas output of the Turbo. The correct temperature of the exhaust should be around 600 degrees Fahrenheit at power.

***TURBO BOOST**

Registers the pressure of the Turbo Compressor outlet. The gauge should read an approximate maximum of 30 psi at maximum power.

COMPARTMENT LOCK

Actuates (optional) electric locks on compartment doors. Doors may be opened with key or actuated from key pad by entrance door or compartment lock/unlock switch by the entrance door.

MIRROR HEAT

This switch turns on a thermostatically controlled heater in the right and left outside mirrors (convex mirrors excluded). With the switch ON, the mirror heaters will automatically come on to defog the mirrors.

ACCESSORY

These blank positions may be used for the installation of an additional switch and indicator light for customer add-on equipment.

CAUTION:

Use existing panel holes for installation of additional controls or indicators. Drilling new holes will destroy the electroluminescent lighting.

REAR PARKING

This switch controls the ON-OFF operation of the rear parking lights (rectangular halogen lights on the rear of the coach) when transmission selector lever is in R. An indicator next to the switch lights when the rear parking lights are on.

HYDRONIC HEAT

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.

GENERATOR AUXILIARY BATTERY

A two-position switch - OFF and momentary ON. The momentary ON position connects the generator battery and coach batteries to aid in generator starting should this need arise.

LEFT LANDING

At the ON position, this switch turns ON the landing lights on the left side. Note that a small green indicator lights when the lights are on.

RADAR MASTER

Turns on power to the radar detector. The RADAR DETECTOR is a high-sensitivity superheterodyne microwave radar detector. This unit is designed to activate when transmissions are received from radar-type speed detection equipment.

NOTE:

Because some states have ruled radar detection equipment illegal, it is the responsibility of the driver or owner to obey the appropriate laws. (There are quick-disconnect features provided which allow for easy removal of the unit.)

GEN AUTO START

Optional switch location for activating the generator auto start system. (See Optional Equipment Section.)

RIGHT LANDING

At the ON position, this switch turns ON the landing lights on the right side. Note that a small green indicator lights when the lights are on.

DASH DIMMER

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

HEADLIGHTS

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

aisle LIGHTS

This switch allows you to turn the aisle lights on or off from the pilot's chair.

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. The left cornering light will come on continuously if the headlights or the parking lights are turned on while the turn signal lever calls for a left turn.

FAN OVERRIDE

This switch operates the engine cooling fan in the engine compartment. Normally, this fan will operate at 125 to 400 RPM from an engine RPM of idle to 2100 RPM. If the coolant temperature reaches 195 degrees Fahrenheit, the fan will be thermostatically controlled to run at 1800 RPM. To override the thermostat, turn the fan override switch ON, and the engine cooling fan will turn 1800 RPM continuously at any temperature. The indicator light shows the fan override is engaged.

AUXILIARY BATTERY

A three-position switch - ON, OFF and Momentary ON. The Momentary ON position connects chassis and coach batteries to aid in engine or generator starting should this need arise. The ON position connects both sets of batteries to the battery charger and is primarily intended to maintain all batteries during long-term storage. The OFF position is the normal position while the coach is in use, either driving or parked.

SUSP. DUMP

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

DOOR LOCK

Switch used to enable or override the top plunger lock on the entrance door when the coach is selected into gear.

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.

TAG LIFT ENABLE

Switch used to allow the tag axle to be raised below 15 mph for close quarter maneuvering or for added traction on drive wheels. Above 15 mph, the tag axle will be lowered and the tires will be set back on the ground, thus carrying the rated tag axle load.

HORN SELECTOR

Allows selection of the air or electric horns when the steering wheel horn button is depressed.

BACK UP ALARM

In the ON position, this switch enables the back-up alarm buzzer when the transmission selector is in R.

WIPER DELAY

Knob adjusts wiper speed from 2 to 20 sweeps per minute when intermittent operation is selected at the steering column switch.

AUX. STEP

An ON-OFF switch when set to the EXTENDED position with the ignition off, activates a relay locking the outside entry step in the EXTENDED position. When the ignition is turned on, the entry step automatically extends when the door is opened and automatically retracts when the door is closed. The indicator reminds you that your switch is in the ON position.

HAZARD

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

THE HORN

See Musical Horn for operation.

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. The right cornering light will come continuously if the headlights or the parking lights are turned on while the turn signal lever calls for a right turn. The indicator, along with the left turn indicator and all outside directional lights, flash in unison when the HAZARD switch is pressed to the ON position.

LO WASH FLUID

Light indicates when there is approximately 1/4 fluid level remaining in the fluid reservoir. See Windshield Washers for additional information.

UPPER RIGHT HAND DASH PANEL

LIGHTER

Depress to heat the element; pops out when hot.

DOOR LOCK

Switch used to lock and unlock the dead bolt on the entrance door.

COLD START

An ether injection system used to aid starting the engine in cold weather. To activate valve, depress the switch for three seconds to fill the valve, then release the switch to inject charge into the engine. Allow three seconds before starting the engine.

CAUTION:

Use only for starting the engine and inject just prior to cranking.

A/C HEAT CONTROLS

See Air Conditioning/Defrosting System Operation (Section 1-1)

LOWER RIGHT HAND DASH PANEL

IGNITION SWITCH

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

SHIFTER & ARMREST PANEL

SHIFTER

This is the push button shift selector made available with the Allison Transmission Electronic Control (ATEC). See Transmission Section for detailed description.

CRUISE CONTROL

These three switches operate in the following manner: the switch on the left turns the cruise control on or off; the switch on the right locks the cruise control in on the desired cruising speed and permits resetting at a lower speed following a previous setting; and the switch in the middle permits returning to cruising speed following disengagement by stopping and also permits obtaining a higher cruising speed.

NOTE:

The coach must be traveling at least 35 MPH before the cruise control will operate properly.

When the desired speed is reached, press the ON-OFF switch to the ON position, then press the SET-COAST switch to the SET position and hold for two seconds before releasing. The coach should automatically remain at that speed. If a lower cruise speed is desired, press the SET-COAST switch to the COAST position and hold until the desired cruising speed is obtained. Release the switch immediately. The coach should remain at the new speed.

Following disengagement of the cruise control by braking, the previously set cruising speed may be obtained by depressing the RESUME-ACCEL 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 depressed.

If a higher cruising speed is desired and the cruise is enabled, press the RESUME-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.

NOTE:

If retarder becomes activated, it will disable the cruise control.

MAP LIGHT

This switch controls the ON-OFF operation of the reading lights above the driver.

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 lit 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.

FOG/DRIVING LIGHTS

Switches for fog lights or driving lights. Fog lights will only operate while the headlights are on low beam. Driving lights will only operate with the headlights on high beam.

ABS WARNING

Indicates (when lit) that the ABS system is being used.

DO NOT SHIFT

Indicates when a potential transmission damaging condition has been detected.

ENGINE RETARDER

The ON/OFF switch enables the engine brake. An intensity switch is used to select two, four or six cylinders to produce low, medium or high braking power. The intensity switch outputs are connected to the ECM's digital input ports.

ENGINE MONITOR**ENGINE SHUTDOWN PROTECTION FEATURE**

The engine will shutdown within 30 seconds after the stop engine lamp illuminates. The engine will power down from 100% throttle to 70% throttle immediately. Power reduction will continue to reduce to 50%. The stop engine override switch can be used to reset the 30 second shutdown sequence (must be depressed prior to engine shutdown) with a maximum power of 50%. This shutdown protection feature will begin when limits of oil pressure, oil temperature, coolant level or coolant temperature are exceeded.

STOP ENGINE

Indicates when a potential engine damaging condition has been detected.

LOW COOLANT

Indicates when a potential engine damaging condition has been detected.

STOP ENGINE OVERRIDE

This switch momentarily overrides the DDEC engine shut-off system.

CHECK ENGINE

Indicates that a problem has occurred.

AC MASTER

These switches allow the driver to start or stop the roof air conditioners from the dash area while driving.

ELECTRIC MIRROR ADJUST

Each 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 up rotates the selected mirror up, and pushing the switch knob down rotates the selected mirror down. The two switches provided control the upper (flat) and lower (convex) section of each mirror, as marked. 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.

ACCESSORY

Operates optional electric windshield shades or other customer options.

PILOT'S OVERHEAD DASH PANEL

ENGINE PREHEAT

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.

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.

WATER PUMP

Switch for "Demand" water pumps in fresh water system. Indicator light shows when pumps are enabled.

DASH DIMMER

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

SPOTLIGHT

The roof-mounted remote-control high intensity spotlight is operated by the SPOTLIGHT controls. The spotlight produces 130,000 BCP (beam candle power), and can be turned on and off, positioned horizontally or vertically at an adjustable rate of speed, and can be used for spot- or floodlighting. The following controls operate the spotlight:

SPOTLIGHT BEAM SELECTOR SWITCH

Depressing the left side of the switch turns on both lights in the FLOOD mode. Right side position selects SPOT mode. Center position is OFF.

SPOTLIGHT SPEED CONTROL

Adjusts the speed of the light head movement during aiming function.

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/HIGH BEAM AND WASHER/WIPER SELECTOR

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 the steering wheel to go to high beam operation. The washer ring is located at the end of the lever and, when pushed, activates the windshield washer. To activate the wiper, twist the lever from -O- position to 1 or II for continuous speeds or to INT for intermittent operation. When in INT position, the delay of the wipers can be changed by the wiper delay knob on the lower dash panel. Twist lever back to -O- position to turn wipers off. Ignition must be on to operate the wipers.

Check the windshield washer reservoir fluid level periodically and use a prepared washer solution if possible. (Note that low reservoir levels are indicated by a dash monitor light.) During freezing weather, use a solution additive or a solution specifically designed for cold weather usage. The washer reservoir is accessible through the front road side storage compartment.

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 SWITCH

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 the 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.

Dead bolt can be activated from switches located on the upper right hand dash panel, the entrance door systems control panel, and the bedroom control panel.

KEYLESS ENTRY

A keypad is located adjacent to the entrance door. By entering a preset code, the entrance door dead bolt is unlocked. This keyless entry system will also unlock the electric locks on the luggage compartment doors.

Your Wanderlodge Keyless Entry System permits the locking and unlocking of your entrance door (Electric Deadbolt Lock Only) and the electric luggage compartment door locks. Both of these door systems also have manual key locking and unlocking which will permit you to override the electrical locking system.

To unlock the entrance door - enter the five-digit combination code via the externally mounted keypad (the keypad will illuminate to aid visibility at night). Note: If more than five seconds elapse between button pushes, the system will time out, requiring that you start over. You will hear the electric solenoid engage and unlock the deadbolt immediately after you enter the fifth digit of your combination code.

To unlock the electric luggage compartment door locks - enter your code as described in the preceding paragraph and then, within five seconds, depress the 3/4 button on the keypad. You will hear the electric solenoids engage and unlock the luggage compartment doors immediately after you depress the 3/4 button.

To lock both entrance door and the electric luggage compartment door locks - simultaneously depress the 7/8 and 9/0 buttons on the keypad. You will hear the electric solenoids engage, locking the entrance door and the luggage compartment doors.

In addition to using the combination supplied with your system, you may also program a second code of your choice. This code must be five digits in length. Note: If for any reason the door lock module senses a loss of coach voltage, or you turn off the electronic master switch, this second code will be erased from memory and the factory pre-programmed code only will be active. To program a second combination code, enter your factory code as described in the section "to unlock the entrance door" and then, within five seconds, depress the 1/2 button. Then, within five seconds of each other, depress five buttons in any sequence you choose. Wait six seconds before depressing any other button. Your system is now programmed for the second code. To erase the second code, enter your factory code and then depress the 1/2 button and wait six seconds. The second code is now erased.

(1)

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The document also notes that records should be kept for a sufficient period of time to allow for a thorough review in the event of an audit.

The second part of the document describes the various methods used to collect and analyze data. It includes a detailed discussion of the sampling techniques used to select a representative group of transactions for analysis. The document also describes the statistical methods used to analyze the data and to identify any patterns or trends that may be indicative of fraud.

The third part of the document discusses the results of the analysis and the conclusions that were drawn. It notes that the analysis revealed a number of instances of fraud, including the use of fictitious invoices and the manipulation of financial records. The document also discusses the steps that were taken to address these issues and to prevent similar incidents from occurring in the future.

The fourth part of the document discusses the implications of the findings for the financial system as a whole. It notes that the results of the analysis suggest that there is a need for more stringent controls and oversight in the financial system. The document also discusses the steps that are being taken to implement these controls and to improve the overall integrity of the financial system.

The fifth part of the document discusses the role of the various stakeholders in the financial system. It notes that each stakeholder has a responsibility to ensure that the system is operated in a transparent and accountable manner. The document also discusses the steps that are being taken to ensure that each stakeholder is held accountable for their actions.

The sixth part of the document discusses the future of the financial system. It notes that there are a number of challenges that must be addressed in order to ensure the long-term integrity of the system. The document also discusses the steps that are being taken to address these challenges and to ensure that the financial system remains a reliable and trustworthy institution.

ELECTRICAL SYSTEMS

There are two interrelated electrical systems used in your motor home ... 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 motor home circuits and appliances which require 12 volts DC for operation.

The 120 volt AC system includes those motor home 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 motor home appliances, outlets and accessories is routed from the batteries through a main 12 volt master switch (A/T) and routed through buses to the individual branches, or zones, that are serviced from this supply. Circuit breakers are located behind the co-pilot's overhead compartment, lower front load center 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 roll-out tray in the "tag axle" compartment on the curb side and two (2) batteries are located in the engine compartment. These will provide 10.0 hours of operation, at a 50 ampere rate, when a charging source is not available.

NOTE:

Roll-out tray is retained in the stored position by a quick release pin with a button on the top. Be sure to reinstall the pin after battery service.

BATTERY CHARGING

The 12 volt coach battery supply, is maintained fully-charged by either the engine alternator (when the engine operates); or by battery charger. The engine battery system is normally charged by the alternator 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 auxiliary 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 to 14 volt range when there is a load.

AC SUPPLY SYSTEM

Motor home 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 contractor box. This is completely normal behavior.

POWER LINE MONITORS

Dual power line monitors are located on the co-pilot overhead dash panel 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. An additional power line polarity monitor is located in the shoreline/utility box. Refer to Shoreline Operation Section.

AC CIRCUIT BREAKER AND DISTRIBUTION PANEL

The main AC Distribution Panel is located in the bedroom behind the mirrored door on the curb side.

CELLULAR PHONE WIRING

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

INVERTER

Two 3000 watt Trace 3000 inverters with integral battery chargers are located in the right hand rear compartment. The inverters will power all accessible outlets in the coach as well as the ice maker, televisions, microwave oven, opera light, and 120 volt fluorescent lights as long as the power demand is below 6000 watts. There are two remote control panels for control and status of the inverters located on the wall adjacent to the pilot's seat.

NOTE:

Two air conditioners are wired to the inverter circuit.
However, only one will be permitted to operate at a time.

GENERATOR AUTO-START OPERATION

The auto-start system is comprised of two switches, a system board, a 120 VAC voltage monitor, and a generator flywheel sensing element.

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.

LOAD MANAGEMENT

There are five 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 three 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.
- Alternator/charger Amp gauge shows alternator output while driving or charger output while parked with 120 VAC service from shoreline or generator.

On the overhead dash are:

- DC amperage gauge (labeled CHARGE) shows net output from the battery charger or alternators to the batteries.
- DC amperage gauge (labeled COACH LOAD) shows the amount of 12v current being consumed by coach systems.

The sum of these two readings should approximate the alt/charger amp reading. Be sure, with load management techniques, that coach load does not exceed charger capacity. This is easily determined by ensuring: (1) DC amperage (charge) gauge shows positive reading, and (2) upper dash coach volt gauge does not drop below 11.5 volts. Should battery voltage fall below this range, remember:

1. The auxiliary battery switch on the lower dash 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 days or longer, be sure to turn off your master (A/T) switch, the electronic master and inverter at both shifter panel and inverter switches. Your objective is to minimize power drain.

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

For storage over a three 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 both master switches, turn off the inverter at both switch locations and run your battery charger 24 hours per week. This procedure will keep batteries up 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 Detroit Diesel and Allison owners and operators guides before operating the vehicle. These manuals and ATEC and DDEC III diagnostic code cards are furnished in your owner/operator kit.

NOTE:

In the event your Detroit Diesel Engine service technician must use a diagnostic reader to perform tests on the engine computer, access to the diagnostic connector may be obtained by removing the driver's auxiliary control panel (the one with the remote mirror adjust switches) from the front of the shifter box. The diagnostic connector is attached to the side approximately six to ten inches from the front.

TO START ENGINE

Detroit diesel engines will start at temperatures above 10 degrees Fahrenheit (-12 degrees Celsius) 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 switch located in the kitchen base cabinet. Remember to turn the switch OFF after starting. Refer to the Detroit Diesel Manual in your owner's kit for starting instructions.

When outside temperature is below 35 degrees Fahrenheit (+2 degrees Celsius), turn on the ignition switch for a minimum of 10 minutes so the Racor fuel filter heater element can warm the fuel before starting the 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 the 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 key 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 the 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 your Detroit Diesel Manual for additional information.

FUEL TANK

If the Water-In-Fuel light on dash comes on, open the petcock at the rear of the sump on the bottom of the 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 the green band and run engine at a maximum of 2000 RPM. Filter should be replaced if the 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 the 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 the most accurate.

Check the crankcase oil level before starting and when refueling. Refer to the Detroit Diesel 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 degrees Celsius), when the ignition switch is on, from the 12 volt DC battery supply, and a water sensor that lights a dash indicator and sounds a buzzer when the water level in the bowl is high enough to require drainage. (See the Racor Manual for additional information.)

When the fuel vacuum gauge goes over 10 inches HG vacuum, replace the element with WL P/N 3831310 (Racor 2020SM); also gasket (large) WL P/N 3747359 (Racor 11007), T-Handle WL P/N 3747342 (Racor 11350).

A secondary fuel filter is located on the rear of the engine. This element is WL P/N 6082390 (AC TP916D).

OIL FILTER

The oil filter is located under the engine on the road side. It should be replaced at each oil change (WL P/N 6082408 (AC PF2100)).

COOLANT

Open the rear engine door and check the coolant level (with the 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

Coolant Filter:

WL P/N 6082416 Detroit Diesel 23507545

POWER STEERING & HYDRAULIC COOLING FAN

RESERVOIR FLUID LEVEL CHECK

Regularly check the fluid level in the power steering and hydraulic cooling fan reservoir. The oil reservoir is the large canister located at the right rear engine compartment. Add only Rando (Texaco) HD32 oil as necessary to maintain the correct dipstick reading, depending on the 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, then 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 the engine with the fan on at idle for 10 to 15 minutes. Replace the filter in the hydraulic reservoir. Run the engine and fan again. Check the reservoir and add oil as necessary.

CAUTION:

When inspecting or servicing the engine or other components in the 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:

The cooling fan is driven by hydraulic pressure and by the air conditioner compressor drive signal. The 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 the 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 required)

BATTERY MAINTENANCE

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

Three engine batteries are located in the engine compartment on the curb side. Those located in the curb side "tag axle" 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 them as necessary.

A dirty battery may eventually dissipate its charge through conductive surface contamination. Clean the 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 motor home 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

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

1. Turn off all main battery-operated accessories in both vehicles such as the 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.

BULK OIL FILL

The bulk oil fill system provides a convenient means of replenishing the oil supply during an oil change and for adding oil between changes. There is no need to use valuable storage space for bottles of oil and so forth.

An oil storage tank (with an approximate 20 quart capacity) is located at the rear on the right side of the engine compartment. When this is pressurized from the air supply, oil can flow through the nozzle directly into the engine crankcase return oil passage. A meter is provided to measure the quantity by means of quart and gallon pointers for each individual fill and a totalizer to show all oil added to date. This is a handy way to keep track of oil consumption and so forth.

WARNING:

Bulk oil system is under pressure when the red light is illuminated. Do not open the filler cap before making sure the bulk oil switch is turned off (red light off). Open the filler cap slowly to allow any pressure in the tank to bleed off before removing the cap completely.

OPERATION

1. Run engine, if necessary, to build up on board air supply.
2. Shut down the engine.

CAUTION:

Do not run the engine while the bulk oil fill is in use. Place engine compartment ignition switch in OFF or REAR position to prevent starting from the driver's area.

3. Zero meter pointers.
4. Turn on bulk oil switch.
5. Observe that bulk oil red light is on.
6. Push nozzle tab lock out of the way and depress the lever until the desired amount of oil is shown by the meter pointers.
7. Turn off the bulk oil switch.
8. Check the oil level.

ENGINE SPECIFICATIONS

MAKE

GM Detroit Diesel Series 60, 500 HP (DDEC III)

TYPE

4 Cycle In Line Turbo/Air To Air Charger Cooled

NUMBER OF CYLINDERS

6 Cylinders

BORE ... (INCHES)

5.12

STROKE ... (INCHES)

6.30

DISPLACEMENT

778 Cubic Inches

12.7 Liters

COMPRESSION RATIO

15.0 to 1

SAE HORSEPOWER

75.0

MAX. (NET) BHP @ RPM

500 HP (350 KW) @ 2100

MAX. (NET) TORQUE @ RPM

1450 Ft. Lbs. @ 1200

MAX. GOV. RPM

Load ... 2100

No Load ... 2225

GOVERNOR TYPE

Electronic

FANS, VENT & EXHAUST

KOOL-O-MATIC FAN

12 VDC power ventilator located in the kitchen.

OPERATION

1. Open the inlet dampers on the fan.
2. Be sure the 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. The thermostat on the fan position will run all the time.

FANTASTIC FAN

12 VDC exhaust fan located in the bathroom.

OPERATION

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

6" 12 VDC POP-UP FAN

12 VDC six inch exhaust fan is located in the private toilet area of coaches so equipped.

OPERATION

1. Push handle up to open the vent.
2. Turn on the fan from the control located on the 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, which are located in the outside compartments. System water pressure is provided by water pumps located in the road side center luggage compartment rather than by tank pressurization. A bacteriostatic water purifier system purifies all of 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 that is part of the city (commercial) water fill.

FILLING THE TANK - STANDARD CAPACITY APPROX. 120 GALLONS

To fill the water supply tank, connect the water hose to the commercial water inlet, set the Tank Fill switch to ON, then turn on the water supply. When the tank is full, the level switch in the tank will close the tank fill solenoid. Set the Tank Fill switch to the 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 Tanks - To drain the tanks, open the 2 inch Cold Water Drain Valve behind the door in the road side holding tank compartment and the 3/4 inch drain valve in the curb side rear luggage compartment (just in front of the tool box). After the tanks are completely drained, close the two Cold Water Drains.
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 water to prepare the chlorine solution. Eight to nine gallons of solution will be adequate for the tanks. (Approx. 120 Gallons).
3. Add sanitizing solution to water tanks - Remove 1-1/4 inch plug/connector from the top of the small tank in the curb side luggage compartment and pour the solution into the tank. Reinstall the plug/connector in the tank.
4. Fill tanks to capacity - Connect the hose to the commercial water inlet, turn on the Tank Fill Switch and fill the water tanks completely. Shut off the hose and turn off the 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 one hour.
6. Drain tanks - Open the Cold Water Drain valves (as in Step 1), and allow the tanks to drain completely.
7. Refill tanks - Close the Cold Water Drain valves and turn on the water supply to the commercial water inlet. Turn on the Tank Fill switch and fill the tank completely. When the tanks are full, turn off the Tank Fill switch, shut off the water supply and disconnect the hose. Then replace the fill cap and turn on the 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 & 7 until the chlorine smell and taste are no longer present at the faucets.

PURIFIER REPLACEMENT

Depending upon the condition of the municipal water used, the filter media will normally process 75,000 gallons of water before the purifier will need to be replaced. For the majority of "Wanderers", this means there will be at least five years of useful life. 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. Even when there is a noticeable taste, the bacteria stopping properties have not been compromised.

AIR ACCUMULATOR

An accumulator in the water system will smooth out the water flow, and eliminate water hammer and pulsations from the water pump. This accumulator has a diaphragm that 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 the Aqua-Hot unit off if the outside temperature is 32 degrees Fahrenheit or lower when the potable water system is not drained.

WATER PUMPS

The water pumps, located in the road side luggage compartment, are equipped with a factory-calibrated pressure control switch that is preset to turn the pumps on when the system pressure falls below 25 psi, and to turn the pumps off when the pressure reaches 40 psi. If the pumps have been out of service for a period of time, it is advisable to open a faucet before turning them on. When water flows steadily from the opened faucet, close the faucet and observe that the pumps shut 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 pumps off to prevent possible damage to the pump motors. In addition to integral motor overload protection, the pump mechanisms are also protected from damage by the presence of a filter at each water pump inlet. These filters should be cleaned periodically.

Under normal usage, the water pumps should require no periodic maintenance other than ensuring that the input water supply is properly filtered of particles that could damage the pump mechanisms. Pump failures can generally be tied 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 pumps is in the bathroom and has three settings. For a longer interval between water pump maintenance, select either "Pump A" or "Pump B". When one pump fails, the other pump can be used as a backup. For a higher flow rate, select "Pumps A & B".

The associated indicator is lit whenever power is being supplied to the pumps. Turning ON a switch pressurizes the water system, with the pumps 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 pumps are located in the bathroom, in the kitchen and dash area.

MANIFOLD

All cold and hot 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:

Pumps operate but no water flows through the faucet.

Low water level in the tank.

Add water.

Suction lines or filters clogged.

Clear water lines and clean filters.

Kink in the 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 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 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 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 service instructions.)

Pump gives low water pressure and flow:

Defective water pump.

Replace diaphragm or motor.

(See Shur-Flo service instructions.)

WINTERIZING

If you are planning on storing your motor home 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 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 faucet 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 Cold and Hot Water Drain valves located in driver side rear luggage compartment. Open 2" water tank drain valve in road side holding tank compartment and the 3/4 inch drain valve in the curb side rear luggage compartment (just in front of the tool box).
4. Allow water to drain completely before proceeding to the next step.
5. Close both 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 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 off, and shut down engine.
10. Open all faucets (toilet valve to remain open).
11. At this point, the only water remaining in the system is contained in the P traps beneath the lavatory, shower and 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 the system, make sure (optional) Instant Hot is full of water before switching on.

GENERATOR

GENERATOR OPERATION

The generator can be started and stopped from any of three locations within the coach: at the left hand overhead dash panel, at the galley panel, or at the bedroom panel. In addition, the generator can also be operated from the controller box in the blower/radiator (front roadside) compartment.

To start the generator, push the Generator switch to the START position and hold until the generator starts, as indicated by the indicator light. Do not hold the switch on for longer than 5 seconds at a time! If the generator does not start the first time, wait a minute and try again. Release the switch when the indicator light glows. After starting, there will be a delay of approximately 25 seconds before the automatic change over switch will permit the generator to pick up the load. The generator may be stopped at any time by holding the switch to the STOP position until the generator stops (light extinguishes).

In cold weather, it is necessary to activate the cylinder glow plugs before starting. Push the Start-Stop switch to the STOP position and hold for 15-20 seconds. See operator's manual for more detailed information.

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 the generator with the tray extended.

GENERATOR EXHAUST

The generator can be run in one of two ways: (1) the cap on the blow out pipe can be left on if the generator is to be run while in close proximity to other coaches in a campground situation; (2) or it can be left open while traveling or when the exhaust gases will not bother neighbors in camping situations. The generator runs on diesel fuel, so to reduce water contamination and sooting, Wanderlodge recommends that the roof exhaust only be used when needed in campground situations.

CAUTION:

The generator exhaust will be hot when the generator is running and for a time after the generator has been turned off. To avoid burn injuries, allow the generator exhaust to cool down before any contact with the pipe.

AIR CLEANER

Cleaning Instructions:

Donaldson does authorize cleaning the Dura-Lite unit (throwaway type), but this can be impractical in most cases. If it is cleaned, the following should be observed.

Blow air into the Dura-Lite's outlet neck causing dirt to flow off the media and out the dirty air inlet opposite the normal air flow direction. This procedure keeps the abrasive contaminants away from the clean air side.

Do Not use pressurized air higher than 100 psi.

Do Not use compressed air cleaning when the filter media is wet.

OIL CHECK

To be on the safe side, check the oil (dipstick located on the road side of the generator) in the 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 the generator if the level exceeds the upper mark or is below the lower mark.

CAUTION:

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

HOURS RUN METER

Meter is located on generator control panel.

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

Always ensure that, with the engine running, oil pressure is registering on the upper dash generator oil pressure gauge

STORAGE PROCEDURES

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

GENERATOR SPECIFICATIONS

Electrical Rating	15 KW at 120 VAC
Fuel Supply	Diesel, separate pickup in main tank.
Fuel Filter Element	WL P/N 3970860
Cooling System	16 quarts
Crankcase Capacity	9.5 quarts
Oil Filter	WL P/N 3970878
Oil Specifications for Generator	
API Classification	CD 10W30/10W40 (See Operator's Manual)
Air Filter Element	WL P/N 3838158 (Donaldson ECB05-5001)

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 the blower motors.
2. Use the 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 that 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. A/C Master Front switch on shifter panel must be turned ON.
2. Kitchen thermostat must be set to HEAT and set for temperature desired.

BATHROOM HEATER OPERATION

Bathroom thermostat must be turned ON and set for the 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 to 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 living room, kitchen, and bedroom utilize the Dometic "Comfort Control Center" (see the Dometic manual for 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 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 does reach 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 circular motion buffing 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 the 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 motor home.

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. When this same assembly is subjected to dry conditions, however, 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 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 the 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 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.

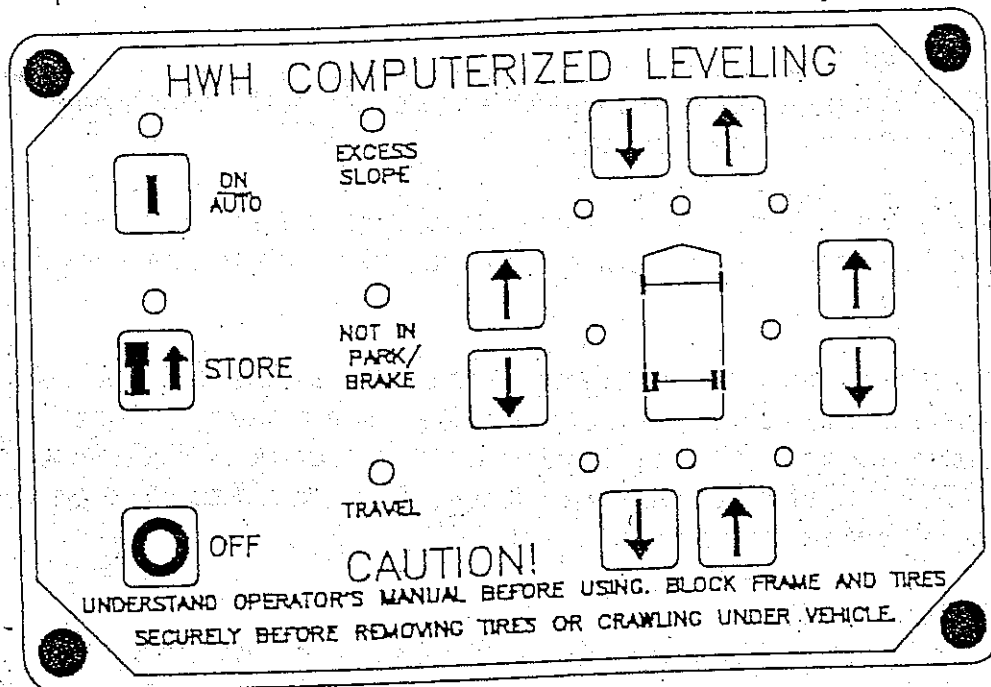
CAUTION:

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 the entire operators manual before operating.

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

Keep all people clear of the vehicle while the 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 the hydraulic jacks, with its operating light directly above it.

The remaining buttons on the right hand 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 each of the FRONT, REAR, LEFT SIDE, and RIGHT SIDE. Pushing UP arrows will cause the coach to raise and pushing DOWN arrows will cause the coach to lower.

2. INDICATOR LIGHTS

The four (4) yellow indicator 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 the vehicle unless the 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 the lights are not correct for travel, retract the 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 the "SUSP DUMP" switch to "DUMP" (away from "UP").
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 the 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 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 the 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 the "SUSP DUMP" switch to "DUMP" (away from "UP").
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 ten (10) seconds after that pair of jacks is 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 the front and rear of the 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 and all slide-out rooms 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 park brake. Switch ignition to the "ON" position. Continuously press the "I" button on the touch panel to turn on the system. Release the parking brake and confirm that the "NOT IN PARK/BRAKE" indicator light comes on. Reset the parking brake. Switch ignition to the "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 HWVH Corporation for service or repair.

OPERATIONAL CHECK

Review the operator's manual and confirm that the system is operating correctly. Check the 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 the 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.

SLIDE-OUT ROOM OPERATION

(OPTIONAL FEATURE)

If you have a coach with the slide-out room option, you will have one or two slide-out room control panels depending on how you have your coach equipped. The control panel for the livingroom slide-out is typically located to the rear of the room inside the pantry door on the driver's side of the coach. The bedroom slide-out control panel is typically located on the passenger side of the coach on the bottom of the bedroom valance to the rear of the bedroom. You may have specified a different location for these panels.

To operate the slide-out rooms you will first need to level your coach (refer to the section on "Leveling Jack Operation"). The slide-out rooms will not operate if the coach is not level. Once the coach is level, the following procedure is to be used to extend a slide-out room.

WARNING:

The hydraulics used to operate the slide-out rooms run at 3000 psi and will not slow down when encountering a person or a foreign object. In order to avoid bodily harm or to avoid damage to your coach, it is very important to make sure everyone and everything is clear when extending or retracting your slide-out room.

1. Make sure the exterior of the coach on the slide-out room side is clear of all obstacles and people. Make sure there is ample space for your room to extend. You will need at least 36 inches if you are not going to extend the window awnings. If you plan to extend the window awnings you need at least 66 inches to provide adequate clearance. Also, make sure that the luggage compartment doors below the slide-out room are closed.
2. Place the ignition key in the "ON" position; it is not necessary to start the engine. Next, go to the control panel of the room you wish to extend and turn the key on the panel to the "ON" position. This will engage the air seal deflation automatic procedure. It will take approximately 45-60 seconds for the seal to deflate. Once the air seal is deflated, the amber indicator light will come on. This will signal that the room is ready to be extended.
3. To extend the room, press and hold the rocker switch to the "EXTEND" position. The hydraulic pump will begin to run (you may or may not hear the pump operating). The first thing that will happen is the room lock pins will disengage and then the room will begin to slide out. Hold the switch in the "EXTEND" position until the pump stops automatically. If you can't hear the pump, you should see the lights in your coach brighten slightly when the pump stops. At this point the room should be completely extended and the room lock pins engaged.

4. When the room is extended and the pump has stopped, release the switch from the "EXTEND" position. Turn the key to the "OFF" position and the air seal should automatically inflate. Remove the keys to prevent accidental operation of the room.
5. Repeat the above four steps for the next room.
6. Once all the rooms are extended as desired, turn the ignition key to the "OFF" position. This will complete the room extending process.

To retract a slide-out room, use the following procedure:

1. Make sure all objects and people are clear of the exterior of room. If you have extended the window awnings move them back to the closed position. Make sure the luggage compartment doors are closed below the room.
2. Make sure the area inside the coach where the room slides in is clear of obstacles and people.
3. Place the ignition key in the "ON" position; it is not necessary to start the engine. Next, go to the control panel of the room you wish to retract and turn the key on the panel to the "ON" position. This will engage the air seal deflation automatic procedure. It will take approximately 45 to 60 seconds for the seal to deflate. Once the air seal is deflated, the amber indicator light will come on. This will signal that the room is ready to be retracted.
4. To retract the room, press and hold the rocker switch to the "RETRACT" position. The hydraulic pump will begin to run (you may or may not hear the pump operating). The first thing that will happen is the room lock pins will disengage and then the room will begin to slide in. Hold the switch in the "RETRACT" position until the pump stops automatically. If you can't hear the pump, you should see the lights in your coach brighten slightly when the pump stops. At this point the room should be completely retracted and the room lock pins engaged.
5. When the room is retracted and the pump has stopped, release the switch from the "RETRACT" position. Turn the key to the "OFF" position and the air seal should automatically inflate. Remove the keys to prevent accidental operation of the room.
6. Repeat the above five steps for the next room.
7. Once all the rooms are retracted as desired, turn the ignition key to the "OFF" position. This will complete the room retracting process.

A TYPICAL ROOM EXTENSION CONTROL PANEL

1. Key operated "ON"/"OFF" switch.
2. Extend/Retract rocker switch.
3. Amber indicator light. (Lights up when air seal is deflated and the room is ready to slide.)

INSERT DIAGRAM HERE

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.

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, 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 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 that 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 the 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 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 that 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 the 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 the 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. The green light will go out.
2. The Gas Detection Control Unit senses the presence of LP gas (or it can be triggered by a propane lighter or even hair spray). Green light out, red light on, along with an 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 the switch on the LPG MASTER and the Gas Detection Control Unit to ON. The green light will come on.
2. Correct the cause of LP gas leak or determine if other fumes caused the shut down. The green light will come on.
3. Turn the Electronic Master Switch on. The green light will come on.

NOTE:

Because of the presence of an excess flow valve in the LPG tank outlet (a 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 the starting 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 the dash switch to on. Refer to the 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 the filters and covers they may be washed in a solvent and air dried.

EXTERIOR LIGHTING PACKAGE

This lighting package includes an additional porch light on the curb side in the rear and an additional porch light on the road side above the utility box.

MUSICAL HORN CONTROLS-REMOTE

With this option a remote horn panel is located on the co-pilot's kick panel. (See Musical Horn for operating instructions.)

TABLE INFINITY

This option provides an infinity table in lieu of the standard living room table. The table is two tiered with wood tops. The top is smoked glass with vista lighting. The inside of the table includes mirrored back and sides with provisions for bottle storage. The front of the table includes two smoked glass doors. The vista lights operate from a 12 volt DC source. The On/Off switch is located in the drape channel on the back of the table just below the top.

DINETTE PACKAGE, "L" SHAPED

The dinette is a three place dinette with a motorized retractable table for increased kitchen work space. Option includes:

1. Eight strips of vista lights inside the ceiling fixture. Vista lights are wired to a separate switch.
2. Switches for in-out operation of the dinette table, overhead fluorescent light fixture, vista lights and reading light are located in the bottom of the dinette overhead cabinet.

SEAT, CO-PILOT 33" W/POWER FOOTREST

This optional seat is a wider seat with power footrest and lumbar support. It has the same six way electric seat adjustments as the standard co-pilot seat.

FREEZER, 50 LB. CAPACITY

The freezer is located in the curbside center luggage compartment. It is mounted on a roll out tray with latch on the right side. Power is supplied by either 120 or 12 volt. (See the manufacturer's operation manual for further information.)

GARBAGE DISPOSAL

The disposal is located under the sink bowl and requires 120 vac power via the generator or shoreline hook up. The switch controlling the disposal is in the kitchen base cabinet. (See the manufacturer's operation manual for further information.)

SKYLIGHT

A roof-mounted skylight with sliding covers is offered in the ceiling. To open the skylight for fresh air or light, slide the covers outward by applying pressure on the cover handles.

To adjust the covers for optimum sliding tension:

1. Remove the caps over the screws that hold the skylight trim in place. The caps may be removed by lifting the edge with the tip of a small screw driver or knife blade.
2. Screws along the straight section of the frame may be loosened or tightened as required to obtain the desired sliding tension.

NOTE:

Do not adjust the two screws on each end for slide tension purposes.

Occasional glass adjustment may be required to maintain weatherproof integrity. Follow the adjustment instructions that are printed on the skylight glass to obtain proper sealing between glass and rubber gasket.

CAUTION:

Improperly installed glass can lift while vehicle is in motion.

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 the handle, squeeze the handle and apply the chemical under the 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.

HEAT ALARM

Heat alarm sensors are located at the 120V distribution panel and in the refrigerator vent stack. A buzzer in the pilot's front overhead will sound if excessive heat is detected in either area.

BURGLAR ALARM

The security of your motor home and contents are assured by an intruder alarm system that protects the windows and the 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 the manual in your owner's kit.

A/T SWITCH

The anti-theft switch for the ignition circuits (A/T switch on the lower dash) can be operated so that the unit cannot be started. This also serves as the coach master switch.

MIRRORS

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

GENERATOR AUTO-START OPERATION

The auto-start system is comprised of two switches, a system board, a 120 VAC voltage monitor, and a generator flywheel sensing element.

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.

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 indicators on the power line monitors to be sure that the lines are properly connected and grounded.

CAUTION:

During thunderstorms, lightning 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, i.e., 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 the reverse polarity indicator in the shoreline/utility compartment to verify the correct polarity and grounding of hookup.

***30 AMP ADDITIONAL SERVICE HOOKUP**

First, connect the shoreline to the coach (rotate plug clockwise to assure firm connections). The coach receptacle is located in the left side utility compartment. Connect the other end of the shoreline to the power source. Poor grounding or incorrectly wired receptacles can cause personal harm as well as equipment damage or fire hazards. Check the reverse polarity indicator in the shoreline/utility compartment to verify the correct polarity and grounding of hookup.

***NOTE:**

30 amp additional service not available on California coaches

ELECTRICAL RATINGS FOR MOTOR HOME APPLIANCES

In many instances, the shoreline hookups will not be rated to operate all of the 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.

ITEMCURRENT RATING
(AMPERES)

Air Conditioners	13,500 BTU (Run) 15.0-18.0
Water Heater	13.8
Television Receivers (Color)	1.0
Battery Charger (depends on battery condition/load)	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
Food Center	4.0
Refrigerator	2.7
Ice Maker	Start 15, Run 2.5
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 Overhead dash 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	TC 541-1.9 Stall Ratio
Lubricant Capacity	37 qts. (Includes Filter and Cooler) Dexron II (or Mecnron)
Bellhouse Size	SAE #1
Companion Flange	1810 Spicer
Dipstick Location	Left side of engine (at rear)

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 the owner's manual supplied with the set for operating instructions.

STEREO TELEVISION RECEIVER, BEDROOM

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

AUTOMOTIVE STEREO

Installed in the lower right dash. Is comprised of a tuner/cassette, equalizer, CD changer, 4 channel amp, and a single channel amp with four satellite coaxial speakers and a sub-woofer. The tuner/cassette has auto reverse, electronic tuning sensor, Dolby noise reduction and metal tape capabilities. Two (2) speakers are located in the living room and two (2) in the front overhead. See the 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 that 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

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

STEREO VIDEO CASSETTE RECORDER

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

VIDEO CONTROL CENTER

Installed in the overhead dash above the pilot. Provides independent switching capabilities for two (2) VCRs, TV antenna, cable TV, and a TV game to the television sets. Provisions have been made for the installation of a second VCR to be connected near the rear television.

With a second VCR installed, it becomes possible to record video tapes between the two VCRs. The following procedure allows this to be accomplished:

- Place the tape that is going to be played in VCR 2 (the rear VCR).
- Place the tape that is going to be recorded in VCR 1 (the front VCR).
- The TV/VCR button on VCR 2 should be depressed.
- The VCR 2 button that is listed under the VCR 1 input of the video control center should be depressed.
- Press the play button on VCR 2 and the record button on VCR 1.
- The VCRs are now recording the tape.

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 Video Selector switch, located in the pilot's front overhead compartment, switches antenna or cable input.

The switches for raising or lowering the antenna are located in the Pilot's Area Overhead Dash and in the bedroom.

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 overhead 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

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 increase 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).

ELECTRONIC DOOR CHIME

The door chime is located in a removable compartment in the right hand overhead storage compartment.

The door chime can be preset to play any one of 60 different tunes when the doorbell button is pressed. All controls for tune selection, volume, tone and tempo are easily accessible. Tunes may be selected as follows:

1. Refer to the tune index, at the bottom of the chime and note the code number for the desired tune. For example, "William Tell Overture" is identified by D8.
2. Press in the left hand tune selector button and move it to position D.
3. Press in the right hand button and move it to position 8.
4. Press the test button to play the selected tune and adjust the volume, tone and tempo as desired. Note that tunes identified with an asterisk (*) will play longer if the button remains depressed.

PHONE OUTLETS, LAND LINE

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

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. 160 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 the 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 behind the door below the fuel fill 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. Move the waste tank toggle switch on the power dump valve control panel (located in the roadside holding tank compartment) from the closed to the waste position. Then dump the gray tank by moving the toggle switch from the closed to the gray position.

NOTE:

The air system must be pressurized to use the power dump valve system.

4. After the contents are emptied, dislodge remaining solids in the body waste tank by attaching a garden hose to the water inlet labeled "sewer." Valve must be open when using this inlet. Flush for about 2 minutes.

NOTE:

Do not use the same hose to fill your potable (fresh) water tank that is used for the flushing system.

5. Disconnect the garden hose from the faucet and lay it on the ground to allow water to drain from the system before detaching from the water inlet.

6. After flushing the waste tank, move the toggle switches to the closed position.

NOTE:

To clean the holding tanks, add a detergent solution to the tanks after they are emptied. The agitation action caused by the vehicle's 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 the paddle out. After cleaning the paddle, a coat of lithium grease should be added to both surfaces and the valve reassembled.

WASTE TANK LEVEL INDICATORS

Each holding tank has a level detector that 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 the bathroom lavatory drains.

TOILET

The microphor toilet (12 volt electric or air flush) operates from the fresh water supply, flushing wastes directly into the sewage (body waste) holding tank.

NOTE:

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

WINTERIZING THE TOILET

See the toilet user manual in your 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
A/T SWITCH	18
A/T SWITCH (UPPER DASH PANEL)	6
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 SPARE PARTS KIT	17
AIR SUSPENSION SYSTEM	2
aisle LIGHT SWITCH (LOWER DASH PANEL)	6
ALARM CLOCK (BEDROOM PANEL)	6
ALT/CHGR AMPS GAUGE (UPPER DASH PANEL)	6
ALTERNATOR AMPS SWITCH (LOWER DASH PANEL)	6
ANTENNA AND ROTATOR SYSTEM	21
ANTENNA SWITCHES (LH OVERHEAD PANEL)	6
AUTHORIZED SERVICE CENTERS	23
AUXILIARY BATTERY SWITCH (LOWER DASH PANEL)	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 CHARGER HIGH/LOW SWITCH	8
BATTERY MAINTENANCE	9
BATTERY STORAGE IN FREEZING WEATHER	9
BAY HEAT	13
BRAKE PEDAL	7
BULK OIL FILL DIRECT INJECTION	9
BURGLAR ALARM SYSTEM	18

C

CAPACITY, FUEL	5
CAPACITY, HOLDING TANKS	22
CAPACITY, LPG	16
CAPACITY, WATER (FRESH)	11
CB RADIO	21
CB VOLUME CONTROL (CO-PILOT CONTROL PANEL)	6
CB VOLUME CONTROL (LH LOWER DRIVER'S AUX PANEL)	6
CELLULAR PHONE WIRING	8
CHASSIS SPECIFICATIONS	5
CLEARANCE LIGHTS SWITCH (SHIFTER PANEL)	6
CLOCK PANEL (LH OVERHEAD PANEL)	6
CLOSED CIRCUIT TV SYSTEM	21
COCKPIT LIGHT SWITCH (SHIFTER PANEL)	6
COMPARTMENT LOCK SWITCH	6
CO-PILOT LIGHT SWITCH (ENTRANCE DOOR CONTROL PANEL)	6
COLD START SWITCH (UPPER RH DASH PANEL)	6
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
DINETTE "L" SHAPED	17
DIPSTICK, TRANSMISSION	20

DOOR CHIME, ELECTRONIC	21
DOOR LOCK SWITCH (UPPER RH DASH & ENT. DOOR PANEL)	6
DRAPE SWITCHES (BEDROOM PANEL)	6
DRIVING LIGHTS SWITCH (SHIFTER PANEL)	6
DUCTED ROOF AIR CONDITIONING	1
DUMP VALVES, POWER	22

E

ELECTRIC GRILL	3
ELECTRICAL RATINGS FOR APPLIANCES	19
ELECTRICAL SUPPLY SYSTEM, 12 VDC	8
ELECTRICAL SUPPLY SYSTEM, 120 VAC	8
ELECTRONIC MASTER SWITCH	8
ENGINE AIR FILTER	9
ENGINE ALARM (UPPER DASH PANEL)	6
ENGINE COOLING SYSTEM	9
ENGINE COOLING SYSTEM ADDITIVES	9
ENGINE, DIESEL	9
ENGINE FUEL ADDITIVES	9
ENGINE FUEL FILTERS	9
ENGINE HOUR METER (LOWER DASH PANEL)	6
ENGINE MAINTENANCE	9
ENGINE MONITOR (SHIFTER PANEL)	6
ENGINE OIL FILTER	9
ENGINE OIL LEVEL	9
ENGINE PREHEAT (LH OVERHEAD PANEL)	6
ENGINE SPARE PARTS KIT	17
ENGINE SPECIFICATIONS	9
ENGINE, REMOTE START	9
ENGINE, STARTING THE	9
ENGINE, STOPPING THE	9

F

FAN, FANTASTIC	10
FAN, KOOLOMATIC	10
FAN OVERRIDE SWITCH (LOWER DASH PANEL)	6
FIRE EXTINGUISHER	18
FOG LIGHT SWITCH (SHIFTER PANEL)	6
FOOD CENTER	3
FREEZER, 50 LB	17
FRESH WATER SUPPLY AND DISTRIBUTION	11
FUEL LEVEL GAUGE (UPPER DASH PANEL)	6
FUEL VACUUM GAUGE (LH OVERHEAD PANEL)	6

G

GARBAGE DISPOSAL	17
GENERATOR AIR CLEANER	12
GENERATOR COOLING SYSTEM	12
GENERATOR EXHAUST	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 OIL PRESSURE	12
GENERATOR OIL PRESSURE GAUGE (RH OVERHEAD PANEL)	6
GENERATOR OPERATION	12
GENERATOR OVERLOADS	12
GENERATOR START/STOP SWITCH (BEDROOM PANEL)	6
GENERATOR START/STOP SWITCH (GALLEY PANEL)	6
GENERATOR START/STOP SWITCH (LH OH PANEL)	6
GENERATOR STORAGE PROCEDURE	12
GENERATOR TROUBLESHOOTING	12
GENERATOR WATER TEMP. GAUGE (RH OVERHEAD PANEL)	6

H

HAZARD SWITCH (LOWER DASH PANEL)	6
HEADLIGHT ALERT (UPPER DASH PANEL)	6
HEADLIGHT SWITCH (LOWER DASH PANEL)	6
HEAT ALARM	18
HEAT CONTROL, CHASSIS HEAT (LH LOWER AUX PANEL)	1
HEAT SWITCH, PILOT (LOWER DASH PANEL)	6
HEAT SWITCH, CO-PILOT (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 SELECTOR SWITCH (LOWER DASH PANEL)	6
HORN, MUSICAL	21
HYDRAULIC COOLING FAN	9
HYDRAULIC COOLING FAN FLUID LEVEL CHECK	9
HYDRONIC HEATING, DIESEL FIRED	13

I

ICE MAKER	3
IGNITION SWITCH (LOWER RIGHT HAND DASH PANEL)	6
INSTANT HOT	3
INTERIOR AND EXTERIOR CARE	14
INVERTER	8
INVERTER PANEL	6

J

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

K

KEYLESS ENTRY SYSTEM	7
----------------------------	---

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
LIGHTING PACKAGE, EXTERIOR	17
LIGHTS SWITCHES (BEDROOM PANEL)	6
LOAD MANAGEMENT	8
LOADING, VEHICLE	INTRO
LOW AIR WARNING (UPPER DASH PANEL)	6
LOW FUEL LIGHT (UPPER DASH PANEL)	6
LOW WASHER FLUID LIGHT (LOWER DASH PANEL)	6
LOWER LIGHTS SWITCH (ENTRANCE DOOR CONTROL PANEL)	6
LPG CONSUMPTION	16
LPG FUEL REQUIREMENTS	16
LPG LEAK DETECTOR SYSTEM	16, 18
LPG REGULATOR	16
LPG MASTER SWITCH (GALLEY SYSTEM CONTROL PANEL)	6
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
LUGGAGE COMPARTMENT LOCKS	17

M

MANIFOLD, FRESH WATER	11
MARKER LIGHTS SWITCH (SHIFTER PANEL)	6
MICRO/CONVECTION OVEN	3
MIRROR ADJUST., REARVIEW (LH LOWER DRIVER'S AUX PANEL)	6
MIRROR HEAT SWITCH (LOWER DASH PANEL)	6
MONITOR CONTROLS, REARVIEW (LH LOWER DRIVER'S AUX PANEL)	6
MUSICAL HORN CONTROLS, REMOTE	17
MUSICAL HORN OPERATION	21

O

OIL PRESSURE GAUGE (UPPER DASH PANEL)	6
OIL TEMPERATURE 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 MONITORS (POLARITY INDICATORS)	8
POWER STEERING FLUID CHECK	9
PROTECTIVE FRONT COVER	17

R

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

S

SAFELINE ALARM (LH OVERHEAD PANEL)	6
SAFETY DEFECTS, REPORTING	INTRO.
SEAT CONTROLS	7
SEAT, CO-PILOT 33 IN. W/POWER FOOTREST	17
SECURITY SWITCHES (BEDROOM PANEL)	6
SHORELINE OPERATION AND TROUBLESHOOTING	19
SKYLIGHT	17
SLIDE-OUT ROOM OPERATION	15
SMOKE DETECTOR	18
SPARE PARTS KITS	17
SPEEDOMETER (LOWER DASH PANEL)	6
SPOTLIGHT CONTROLS (LH OVERHEAD PANEL)	6
STEERING WHEEL, TILT/TELESCOPING, OPERATION	7
STEP MASTER, SWITCH (CO-PILOT CONTROL PANEL)	6
STEPLIGHT SWITCH (CO-PILOT CONTROL PANEL)	6
STEPWELL COVER SWITCH (CO-PILOT CONTROL PANEL)	6
STEREO SYSTEM, BEDROOM	21
STEREO SYSTEM, PREMIUM	17
STEREO SYSTEM, AUTOMOTIVE	21
STORING THE COACH	INTRO. & 8
SUSPENSION DUMP	2
SUSPENSION DUMP SWITCH (LOWER DASH)	6
SUSPENSION DUMP WARNING LIGHT (LOWER DASH PANEL)	6

T

TABLE, INFINITY	17
TACHOMETER (LOWER DASH PANEL)	6
TAG AXLE DUMP SWITCH (LOWER DASH PANEL)	2, 6
TAG AXLE PRESSURE GAUGE (LOWER DASH PANEL)	6
TANK MONITORS (GALLEY PANEL)	6
TELEVISION, BEDROOM	21
TELEVISION, FRONT OVERHEAD	21
TILT WHEEL OPERATION	7
TIRE CHANGE KIT	17
TIRE CHANGE PROCEDURE	5
TIRE INFLATION	5
TOILET, ELECTRIC OPERATED	17
TOILET, MECHANICAL SEAL	22
TOWING	5
TRAILER HITCH	5
TRANSMISSION CHECK LIGHT (SHIFTER PANEL)	6
TRANSMISSION MAINTENANCE	20

TRANSMISSION OIL TEMP GAUGE (LOWER DASH PANEL)	6
TRANSMISSION OIL TEMPERATURE	20
TRANSMISSION OPERATION	20
TRANSMISSION RETARDER SWITCH	20
TRANSMISSION SHIFT SELECTOR (SHIFT PANEL)	6
TRANSMISSION SPECIFICATIONS	20
TRIP ODOMETER (LH OVERHEAD PANEL)	6
TURBO BOOST GAUGE (LOWER DASH PANEL)	6
TURBO PYROMETER (LOWER DASH PANEL)	6
TURN INDICATOR, LEFT (LOWER DASH PANEL)	6
TURN INDICATOR, RIGHT (LOWER DASH PANEL)	6
TURN SIGNAL LEVER FUNCTIONS	7
TURNING RADIUS DATA	5
TV ANTENNA & ROTATOR SYSTEM	21

U

UPPER LIGHTS SWITCH (ENTRANCE DOOR CONTROL PANEL)	6
---------------------------------------------------------	---

V

VIDEO CASSETTE RECORDER	21
VIDEO CONTROL CENTER	21

W

WASHER/DRYER	17
WASHER/WIPER SELECTOR	7
WATER HEATER	11
WATER HOOKUP, COMMERCIAL	11
WATER IN FILTER LIGHT/BUZZER (LH OH PANEL)	6
WATER IN FUEL WARNING LIGHT (LOWER DASH PANEL)	6
WATER PUMPS	11
WATER PUMP SWITCH	11
WATER PUMP SWITCH (GALLEY PANEL) & (LH OVERHEAD PANEL)	6
WATER PUMP TROUBLESHOOTING GUIDE	11
WATER PURIFIER	11
WATER SYSTEM SANITIZING PROCEDURE	11
WATER SYSTEM WINTERIZING PROCEDURE	11
WATER TANK FILL PROCEDURE	11
WATER TEMPERATURE GAUGE (UPPER DASH PANEL)	6
WINDSHIELD WASHER RESERVOIR	7
WINTERIZING	11, 22
WIPER DELAY (LOWER DASH PANEL)	6