# WINNEBAGO Operator's Manual

## TO THE OWNER

Congratulations! We welcome you to the exciting world of motor home travel and camping. You will find it convenient and enjoyable to have all the comforts of home and still enjoy the great outdoors, wherever you choose to go.

Your motor home has been carefully designed, engineered and manufactured to provide dependability as well as safety. Before sliding into the driver's seat, take a few minutes to become familiar with the operation and features. This manual was prepared to aid you in the proper care and operation of the vehicle and equipment. We urge you to read it completely. In addition, spend some time with the dealer when you take delivery, you will want to learn all you can about your new motor home.

Your Winnebago motor home is covered by a factory warranty against defects in material and workmanship. This warranty should be validated at once and returned to the factory by your dealer.

Throughout this manual, reference is made to the following terms: Important, Caution and Warning. These terms indicate important information which must be understood and followed. The definitions of these terms are:

### **IMPORTANT**

Indicates a special point of information.

CAUTION

Indicates that a failure to observe can cause damage to equipment.

WARNING

Indicates that failure to observe can cause damage to equipment or personal injury.

This operator's manual is not applicable to Centauri, LeSharo, Phasar and Utility Van vehicles.

OWNER'S NAME	
STREET ADDRESS	_
CITY AND STATE (OR PROVINCE IN CANADA)	
VEHICLE IDENTIFICATION NO.	<u> </u>
DATE OF DELIVERY TO FIRST RETAIL PURCHASER	_
VEHICLE MILEAGE AT TIME OF SUCH DELIVERY	_
SELLING DEALER NAME AND ADDRESS	_
CHASSIS SERIAL NUMBER	

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#### ONE SHOW OF STREET

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## INTRODUCTION

Congratulations on the purchase of your new motor home which has been carefully designed, engineered and quality built by Winnebago Industries, Inc., the company that founded the motor home industry.

This manual was assembled with the owner in mind. Please read it thoroughly, as it is intended to provide information needed to properly and safely operate and maintain your new motor home. It also contains warranty information which applies to your vehicle. Additionally included are tips and information which will aid in the overall enjoyment of your motor home, whether traveling or camping.

This manual and the chassis manual should be considered permanent components of your vehicle. They should remain with the vehicle whenever sold, to provide the next owner with important safety, operating and maintenance information.

NOTE: Frequent reference is made, throughout this manual, to the chassis manufacturer's Owner's Manual. The chassis manual provides important information pertaining to operation and maintenance of the chassis on which your motor home was built.

Before entering the drivers seat, always check around your vehicle in all directions to assure that you have proper clearance in order to avoid minor accidents. When backing up, be positive there is nothing behind your vehicle. As an extra precaution, have a passenger check the area around your vehicle as you maneuver out of a difficult parking space.

Even though your motor home has been equipped with automotive features such as power steering and power brakes, driving a motor home requires a somewhat different handling technique than driving an automobile. When driving your motor home, always remember that the weight, length, width and height are greater than that of an automobile. A motor home requires greater stopping distance, more parking space, more maneuvering space and more acceleration time when passing other vehicles than does an automobile.

Always be aware of the dimensions of your motor home, which are listed in the specifications section of this manual. Tunnels, low hanging canopies and signs in service stations and restaurants can cause clearance problems. Keep in mind the added height of any options on the roof such as air conditioner units, TV antennas or luggage boxes. Also, remember that certain bridges, old ones in particular, may not accept the weight of your motor home. Always observe any posted weight limits.

When planning a trip to another state, write to the Chamber of Commerce of the state capital for information on state laws pertaining to RV's.

Remember: Always use your seat belt and instruct your passengers to do so as well. Frequent rest stops while traveling are advised to relieve stress on the driver, passengers and the vehicle

Keep this manual in your motor home for personal reference and for service and/or warranty repair information.

Your dealer will be glad to provide any additional information you feel you need, as well as answer any questions you might have about operating the equipment in your motor home. When it comes to service, remember that your dealer knows your vehicle best and is interested in your satisfaction. Your dealer will provide quality maintenance and any other assistance that you may require during your ownership of the vehicle.

NOTE:

The descriptions, illustrations, and specifications in this manual were correct at the time of printing. We reserve the right to change specifications or design without notice, and without incurring obligation to install the same on products previously manufactured.

Since Winnebago and Itasca motor homes are built in several models and sizes, accessories and components may differ between models. Therefore, some equipment described in this manual may not apply to your vehicle.

## Winnebago International Travelers (W.I.T.) Club/Itasca Travelers Club (I.T.C.)

If you have not received information within 30 days after purchasing your motor home, please write either W.I.T. or I.T.C., Winnebago Industries, Inc., Forest City, Iowa 50436, Attention: W.I.T. or I.T.C.

## SAFETY PRECAUTIONS

Read and understand all instructions and precautions in this manual before operating your new motor home. The symbol WARNING is used throughout the manual to alert you to precautions that involve your safety. Read and follow them carefully. Listed are some safety precautions that must be adhered to. These precautions as well as others that involve damage to equipment are also listed in the appropriate areas in this manual.

- Sleeping facilities are not to be utilized while vehicle is in motion.
- Never allow passengers to stand or kneel on seats while the vehicle is in motion.
- Make sure all passengers have seat belts fastened in a low and snug position so the force exerted by the belt in a collision will be spread across the strong hip area.
- Do not attempt to adjust the driver's seat while the vehicle is in motion.
- Do not adjust tilt steering in a moving vehicle.
- · Do not operate speed control on icy roads.
- Store or secure all loose items inside the motor home before traveling.
- Use care when accelerating or downshifting on a slippery surface. Abrupt speed changes can cause skidding and loss of control.

Adverse weather conditions and extremes in terrain may affect handling and/or performance of your vehicle. Refer to your chassis manual for related information.

- Do not alter the LP gas system at any time or in any way.
- Never use an open flame to test for LP gas leaks. Replace all
  protective covers and caps on LP system after filling. Make
  sure valve is closed and door latched securely.
- When lighting range burners do not turn burner controls to "On" and allow gas to escape before lighting match.
- Avoid inhaling exhaust gases produced by burned gasoline, diesel fuel or LP gas in items such as the range, chassis engine, generator engine, refrigerator, furnace and water heater. They contain carbon monoxide, which by itself is odorless, colorless, and poisonous.
- Be aware of the GVWR, GAWR and individual load limit on each tire or set of duals. See "Loading the Motor Home".
- Do not fill LP 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.
- All pilot lights must be extinguished and appliances turned off while refilling the fuel tank or LP tank and before traveling.

## **IMPORTANT**

Some states or cities may prohibit vehicles equipped with LP gas containers to pass through certain highway tunnels. If your route includes a tunnel, check with the highway patrol or department of highways before venturing forth.

- Never load the motor home in excess of the gross vehicle weight rating or the gross axle weight rating for either axle.
- Do not remove radiator cap while engine and radiator are still hot. Always check coolant level visually at the seethrough coolant reservoir.
- Never get beneath a vehicle that is held up by the jack only.
- Do not mix different construction types of tires on the vehicle such as radial, bias or belted tires, as vehicle handling may be affected. Replace tires with exact size, type and load range.
- Examine the escape window and be familiar with its operation, but do not use except in an emergency.
- · Do not attempt to start the vehicle by hot wiring.
- Driving through water deep enough to wet the brakes may affect stopping distance or cause the vehicle to pull to one side. Check brake operation in a safe area to be sure they have not been affected. Never operate any vehicle if a difference in braking efficiency is noticeable.
- Only seats equipped with seat belts are to be occupied while the vehicle is in motion.

- Monthly, and before beginning a vacation or extended trip, check the fire extinguisher for proper charge and inspect to assure proper operating conditions.
- LP gas containers shall not be placed or stored inside the vehicle. LP gas containers are equipped with safety devices which relieve excessive pressure by discharging gas to the atmosphere.

It is not safe to use cooking appliances for comfort heating. Cooking appliances need fresh air for safe operation. Before operation:

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

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.

 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.

- Do not bring or store LP gas containers, gasoline or other flammable liquids inside the vehicle because a fire or explosion may result.
- · Never connect natural gas to the LP gas system.
- LP gas regulators must always be installed with the diaphragm vent facing downward. Regulators that are not in compartments have been equipped with a protective cover. Make sure that regulator vent faces downward and that cover is kept in place to minimize vent blockage which could result in excessive gas pressure causing fire or explosion.
- The following label has been placed in the vehicle near the range area:

## IF YOU SMELL GAS:

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

## FORMALDEHYDE WARNING



Some components in this vehicle contain formal-dehyde based adhesives which may release formal-dehyde fumes into the air for an unknown period of time until total dissipation occurs. Individuals who are allergic to formaldehyde gas fumes may experience irritation to eyes, ears, nose and throat. Reaction in infants may be more severe. Although long range effects are not well understood, testing to date has not revealed any serious health effects in humans at the level of emission from these products.

#### **IMPORTANT**

To aid in dissipation, ventilate the vehicle by opening all windows and circulating the air with a fan.

For further information or assistance in proper elimination of formaldehyde fumes, contact your dealer.

## **CARBON MONOXIDE WARNING**



Avoid inhaling exhaust gases, as they contain carbon monoxide, which is a colorless, ordorless and poisonous gas.

If you suspect that exhaust fumes are entering the passenger compartment, have the cause determined and corrected as soon as possible. If you must drive under these conditions, drive only with ALL WINDOWS FULLY OPENED.

The best protection against carbon monoxide entry into the vehicle body is a properly maintained engine exhaust and ventilation system. It is recommended that the exhaust system and body be inspected by a qualified motor home service center.

- Each time the vehicle is raised for oil change.
- Whenever a change in the sound of the exhaust system is noticed.
- Whenever the exhaust system, underbody or rear of the vehicle is damaged.

To allow proper operation of the vehicle's ventilation system, keep front ventilation inlet grill clear of snow, leaves or other obstructions at all times.

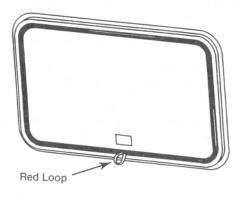
DO NOT OCCUPY A PARKED VEHICLE WITH ENGINE RUNNING FOR AN EXTENDED PERIOD.

Do not run engine in confined areas such as a garage, except to move vehicle in or out of area. When vehicle is stopped in an UNCONFINED area with the engine running for any more than a short period, adjust heating or cooling system to force outside air into the vehicle.

- Set fan to medium or high speed and vent control to "air".
- On vehicles equipped with air conditioning, set fan to medium or high speed and set control to obtain maximum vent air.

Doors and rear windows should be closed while driving to avoid drawing dangerous exhaust gases into the vehicle.

## **EMERGENCY EXITS**



## **Emergency Exit Window**

Your motor home is equipped with a one piece stationary window at the rear or side of the vehicle which functions as an escape exit in an emergency situation. The glass is installed with a rubber extrusion and is removed by pulling on the red plastic loop located at the bottom of the windows, until the rubber cord is completely removed. This allows the window to be pushed out. Instructions for removal are also located on a label on the glass for quick reference and for passengers who may not be familiar with the exit. Be certain the label is not removed.

## CAUTION

Use the window for emergency exit only. Do not test for proper operation.

If the cord is released by accident, but the glass remains in place, the cord can be replaced using a blunt instrument, preferably one made of plastic. We suggest you contact a Winnebago or Itasca dealer for assistance.



Use care when exiting emergency window, as broken glass may be present in the exit area.

## Use of Slider Windows as Emergency Exits

Most single and double slider windows along the side of the motor home can also be used as emergency exits, should the need arise. To use the windows as exits, slide the window open, then strike the screen near one corner to loosen it and push out.

## FIRE EXTINGUISHER

The dry chemical fire extinguisher is conveniently located near the entrance door area on both A-body and C-body motor homes.

It is highly recommended that you become thoroughly familiar with the operating procedure displayed on the side of the extinguisher. Fire extinguisher must be inspected at least once a month in accordance with National Fire Protection Association (NFPA) recommendations as stated on the label.

Before departing on a vacation or any extended trip, it would be most beneficial to instruct all passengers on the use of all safety devices contained within the motor home including the location and operation of the fire extinguisher.

## TRAVELING WITH YOUR MOTOR HOME

## PRE-TRAVEL CHECK LIST

Before starting the engine on departure for an outing, be sure your motor home has been properly prepared and maintained. This will ensure an enjoyable trip and help avoid delays. Use this checklist as a guide.

- Fluid Levels Check and fill if necessary; engine oil, transmission, power steering, radiator, brake, battery and windshield washer.
- Wheel Lug Nuts Check for tightness.
- Tires Check for proper cold inflation pressures as specified in pressure chart.



Never check oil level in generator while engine is operating.

Lights - Make sure all exterior lights operate properly.

## LOADING THE MOTOR HOME

The cargo capacity rating of a motor home is an indication of the approximate cargo carrying capacity of the vehicle. Cargo is defined as all items placed in or on your vehicle excluding engine fluids and fuel. This includes all passengers and luggage, potable water and LP, all items placed in the interior, all items placed on the exterior including root and bumper

loads, and the weight on the hitch due to a towed vehicle. The cargo capacity rating is determined by subtracting the weight of each model, with all options and full fuel, from the Gross Vehicle Weight Rating (GVWR). Some vehicles may have a cargo capacity rating listed as manufactured, including factory installed options. Your cargo capacity may vary due to the options provided on your vehicle or the addition of other equipment or components not supplied with the unit. Do not exceed the allowable weights.

## **ROOF LOADING**

The roof on most models of motor homes is capable of carrying some lightweight articles while the vehicle is in motion. However, maximum weight being carried while the vehicle is in motion is not to exceed 10 pounds per square foot or a maximum of 100 pounds. A roof mounted luggage carrier designed for this purpose is available from your dealer.

When the vehicle is stationary, a cargo load of 100 lbs. plus the weight of a 225 lb. person to load the cargo or to conduct inspection and maintenance is permissible.

Weight added to both the roof and the trailer hitch contribute to the gross vehicle weight, which must not exceed the vehicle's GVWR.

Total weight added to the roof, hitch and bumper must not exceed 250 pounds.

Design and weight distribution considerations limit the use of the roof for storage on some models. Luggage carriers or other articles should not be placed or mounted on roofs of these vehicles. NOTE: Total weight does not include the weight of the optional 110-Volt roof air conditioner.

## TRAILER TOWING

Since your motor home was designed and intended to be used primarily as a load carrying vehicle, it is not recommended that it be used for trailer towing, as handling, durability and economy may be adversely affected. Maximum safety and satisfaction when towing depend on proper use of correct equipment and adherence to certain limitations.

It is important that the trailer tongue load be maintained at approximately 10 percent of the loaded trailer weight, not to exceed the tongue load indicated on the label, located near the trailer hitch on the backwall of your vehicle. Tongue loads may be adjusted by proper distribution of the load in the trailer.

WARNING

For safe towing and vehicle handling, maintain proper trailer weight distribution.

Do not install a frame equalizing type hitch on your vehicle.

CAUTION

It is crucial that any auxiliary transmission cooler installation does not create an oil flow restriction to the existing transmission cooling system.

Before descending a steep or long grade when towing a trailer, reduce speed and shift into a lower gear to control vehicle speed. Avoid prolonged or frequent application of the brakes which could cause overheating.

The maximum permissible weight of any towed vehicle must not exceed the weight indicated in the specifications for your vehicle. Trailers weighing in excess of 1000 lbs. require trailer brakes. The weight of the fully equipped motor home with passengers plus the weight exerted on the hitch ball by the trailer (including cargo), must not exceed the gross vehicle weight rating (GVWR) of the motor home.

## CAUTION

Engine, drive train, and option combinations may limit the installation, use, or listed hitch capacity of a trailer hitch on your vehicle. To determine the recommended towing weights for your vehicle, refer to the "Towing Capacity" as indicated on the label located near the hitch or rear bumper.

## **INSTRUMENTS AND CONTROLS**

This section describes only those instruments and controls unique to Winnebago/Itasca motor homes which are not covered in the chassis manufacturer's Owner's Manual supplied with your vehicle. Refer to your Chassis Manual for all other instrument and control descriptions.

#### DANA® SPEED CONTROL

Refer to information supplied in your Owner's Packet for operating instructions.

## WINDSHIELD WASHER AND WIPER (A-Body)

## Two Speed Manual Wipers

Washer and wiper switches are located on the left side of the instrument panel beneath the ventilator. Pressing the left side of the switch activates the wipers at low speed. When the right side is depressed, the wiper will operate at high speed. A spring loaded rocker switch, located to the right of the wiper switch, operates the windshield washer. With the switch held against the spring loaded side, washer solvent is directed onto the windshield.

## Intermittent Wipers - A Body

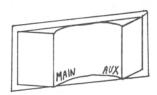
The intermittent wiper switch is located on the left side of the instrument panel beneath the washer switch. Turning the switch clockwise activates the intermittent wipers. The farther clockwise you turn the switch, the slower the wipers will operate. To cancel intermittent wipers, turn the switch counterclockwise until it "clicks" into the off position. The low/high speed rocker switch will override this switch at any intermittent setting.

NOTE: During winter months, a windshield washer anti-freeze solution is recommended to avoid damage to the system due to freezing.

## **FUEL TANK SELECTOR SWITCH**

The fuel tank selector switch is incorporated into the dashboard of the motor home. It is connected to an electronically controlled three way solenoid valve mounted on the chassis near one of the fuel tanks. Switching the fuel tank selector switch to the "Aux" position energizes the solenoid valve causing the valve to open allowing fuel to flow from the auxiliary fuel tank. When the fuel tank selector switch is pushed to the "Main" position, the solenoid is de-energized, closing the auxiliary fuel tank valve. This allows fuel to flow from the main tank only.

To obtain fuel from the auxiliary tank, push the side of the fuel selector switch labeled "Aux". To obtain fuel from the main tank, push the side of the switch labeled "Main".



#### **IMPORTANT**

Keep in mind that the optional 110-volt generator draws fuel from the main tank on all gasoline equipped vehicles. Therefore, consuming the auxiliary fuel tank first will assure an adequate supply of fuel to operate the generator when desired.

# BATTERY CONDITION METER AND SWITCH (Optional on Some Models)

This gauge is a voltmeter which allows the driver to monitor the state of charge of all batteries in the motor home. The gauge will indicate the state of charge of the automotive battery when the left side of the switch is depressed or the charge in the auxiliary battery when the right side of the switch is depressed. To obtain an accurate reading, the dual battery switch must be in the neutral position and the automotive engine and optional 110-volt generator must not be running. This meter and switch are located on an overhead console on all C-body motor homes and above the heater controls on all A-body motor homes.

## VACUUM - FUEL ECONOMY GAUGE (Gas Engine Only) (A-Body Only) - Optional

This gauge provides a value guide to efficient engine operation. It is impossible to specify an ideal gauge reading, as this will vary a great deal according to operating conditions. However, as a general rule, a high reading usually indicates the most efficient engine operation and the best fuel economy. The vacuum level will be high at idle speed, and as speed and load increase, the vacuum level will drop. To obtain maximum fuel economy, operate the motor home in such a way as to maintain vacuum level as high as possible.

## **DUAL BATTERY SWITCH (Gas Engine Only)**

The dual battery switch permits connecting the auxiliary battery to the automotive electrical system, permitting it to be charged by the engine alternator while driving. In the event of automotive battery failure, the vehicle engine can be started by holding the switch in the momentary position to obtain additional starting power from the auxiliary battery(s).

The dual battery switch is located either on the dashboard, overhead console or on the left wall panel behind the driver's seat.

# AUXILIARY GENERATOR SWITCH (Motor Homes Equipped with 110V Generator Option)

This start/stop switch controls the 110-volt auxiliary generator. It allows the generator set to be started or stopped from inside the motor home.

## CAUTION

Do not turn on the optional 110V generator with both batteries connected while driving. This can cause damage to the automotive alternator. Never leave the dual battery switch in the dual position when parked, as it could cause both batteries to discharge.

# AUXILIARY GENERATOR HOURMETER (Motor Homes Equipped with 110V Generator Option)

This meter registers the number of hours the auxiliary generator has operated. Use it as a reminder when the generator unit is due for periodic lubrication and routine maintenance.

# INSTRUMENTS AND CONTROLS (Elandan & Windcruiser)

## **Digital Thermometer**

The thermometer will display either interior or exterior temperature in degrees Fahrenheit as selected with the switch on the instrument panel.

## Temperature Display Switch

The thermometer display is off while the switch is in the neutral position. Rock the switch to the left to display interior temperature and to the right to display outside temperature.

#### Map Light Switch

A switch on the instrument panel controls the map light located between the sunvisors.

## **Beverage Tray Light Switch**

The beverage tray on the engine cover contains a small light for nighttime convenience. The switch for this light is located on the instrument panel to the right of the radio/cassette player.

### Courtesy Lights Switch

The courtesy lights are located near the floor of the driver's compartment ahead of the cab doors and illuminate when the cab doors are open. The switch, located on the instrument panel, allows you to turn the courtesy lights on while the doors are closed.

## **Exterior Compartment Light Switch**

This is the master switch for the exterior storage compartment lights. The lights may be individually activated in each compartment while this switch is on. Remember to shut switch off when not in use to prevent accidental battery discharge if a compartment switch is inadvertently left on.

#### Auxiliary Fan Switch - Optional

If your vehicle is equipped with the optional auxiliary defrost fans, the switch is located on the instrument panel to the left of the radio/cassette player.

## Aisle Light Switch

The aisle lights are mounted near the floor in various locations throughout the motor home to illuminate walkways. The power switch is located on the instrument panel. A control switch is located on a cabinet side near the entrance. The control switch functions only while the power switch is on.

#### ICC Courtesy Blink Switch

This switch may be used to momentarily blink clearance lights off and on when meeting another Winnebago/Itasca owner or anyone else you wish to greet in this manner. This function is also helpful in signaling to truckers when they may safely pull back into the lane after passing you. To use, press the right side of the switch momentarily and release. This switch will operate only while the headlight switch is in either the "Park" or "Headlight" position.

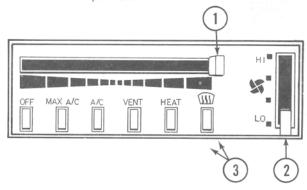
## **AIR HORNS - Optional**

The air horns are sounded using the horn button on the steering wheel while the air horn switch is activated. This switch is located on top of the side panel to the left of the dash. With the switch off, the air horns are de-activated and only the chassis horn will sound.

# Combination Auto Air Conditioner Heater (All A-Body) - Optional

Controls for the air conditioner, heater, defroster and vent are all incorporated into one control panel. Refer to the following instructions for use of individual controls.

**Auto Air Conditioner -** To cool the driver's compartment, push the button labeled "A/C" or "MAX A/C". The "A/C" function blends fresh air with cooled air; the "MAX A/C" function continually recirculates inside air. Slide the top temperature lever to the left to obtain desired temperature. Turn the "Fan" selector switch to desired level of air output. Maximum cooling is achieved by pushing the "MAX A/C" button, sliding the temperature lever totally to the left (cool) and turning the fan switch to the "Hi" position.



- Temperature Lever
- 2. Fan Switch
- 3. Function Switches

#### **IMPORTANT**

The automotive air conditioner was not designed to cool the entire interior of the motor home, but is meant to cool only the driver's compartment.

**Heater -** To heat the driver's compartment, push in the "HEAT" switch. Turn the fan switch to desired level of air output and slide the temperature lever toward the right ("WARM") to obtain desired temperature.

**Defroster -** To defrost or defog the windshield, push in the "Defrost" switch. Turn the fan switch to desired level of air output and slide the temperature lever to the desired temperature.

**Vent -** To provide outside air to the interior of the motor home, push in the "Vent" switch. Turn the fan switch to desired level of air output and slide the temperature lever to desired temperature blend

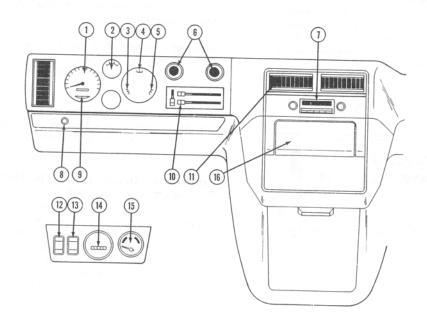
## Automotive Air Conditioner (420RG & 424RB - Gas Engine Only) - Optional

The air conditioner is controlled by two separate knobs located above the heater control panel. The "Air" knob controls fan speed while the "Temp" knob controls cooling temperature. The "Air" knob provides three fan speeds which are obtained by rotating the knob clockwise. Rotating the "Temp" knob clockwise produces colder air temperature. For maximum cooling, turn the "Air" knob to the high position and the "Temp" knob to the coldest position.



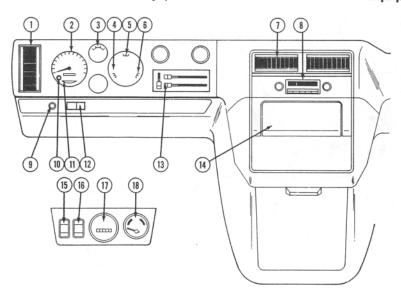


# INSTRUMENT PANEL - C-Body (Chevrolet Chasis - Gas Equipped)



- 1. Speedometer
- 2. Fuel Gauge
- 3. Oil Pressure Gauge
- 4. Temperature Gauge
- 5. Voltmeter (Alternator Indicator)
- 6. Air Conditioner Controls (optional)
- 7. Radio
- 8. Headlight Switch
- 9. Brake Warning Light
- 10. Heater Controls
- 11. Air Conditioner Vent (optional)
- 12. Ashtray/Cigarette Lighter
- 13. Battery Condition Meter (optional)
- 14. 110 Volt Generator Start/Stop Switch (optional)
- 15. 110 Volt Generator Hourmeter (optional)
- 16. Battery Conditioner Meter (optional)

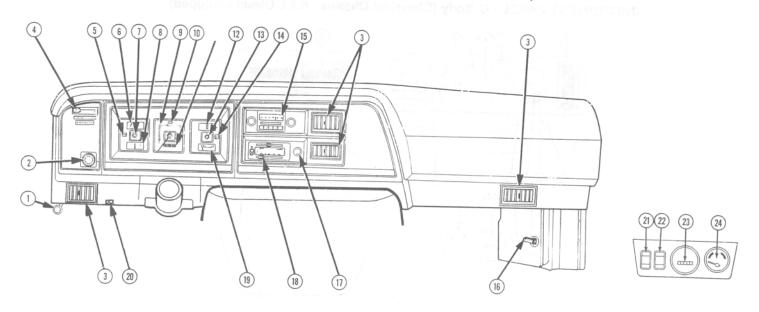
## INSTRUMENT PANEL - C-Body (Chevrolet Chassis - 6.2 L Diesel Equipped)



- 1. Air Conditioner Vent (optional)
- 2. Speedometer
- 3. Fuel Gauge
- 4. Oil Pressure Gauge
- 5. Temperature Gauge
- 6. Voltmeter

- 7. Air Conditioner Vent (optional)
- 8. Radio
- 9. Headlight Switch
- 10. Low Coolant Light
- 11. Brake Warning Light
- 12. Glow Plug/Water in Fuel Indicator Light
- 13. Heater/Air Conditioner (A.C. optional)
- 14. Ashtray/Cigarette Lighter
- 15. Battery Condition Switch (optional)
- 16. 110 Volt Generator Start/Stop Switch (optional)
- 17. Generator Hourmeter (optional)
- 18. Battery Condition Meter (optional)

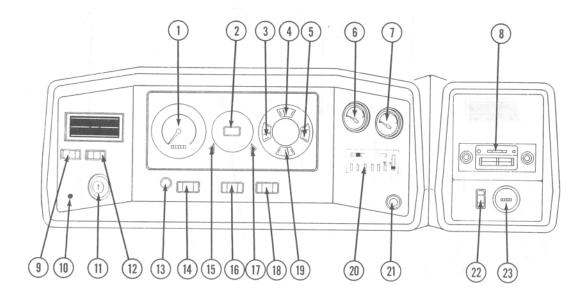
## INSTRUMENT PANEL - C-Body (Ford Chassis)



- 1. Left Fresh Air Vent Knob
- Headlight Switch
- 3. Vent A/C Register
- 4. Windshield Wiper/Washer Switch
- 5. Seat Belt Warning Light
- 6. Oil Pressure Indicator
- 7. Left Turn Indicator
- 8. Fuel Gauge

- 9. Speedometer
- 10. High Beam Indicator
- 11. Odometer
- 12. Alternator Indicator
- 13. Right Turn Indicator
- 14. Brake Warning Light
- 15. Radio
- 16. Right Fresh Air Vent Lever
- 17. Cigarette Lighter
- 18. Heater/Air Conditioner Controls (A/C optional)
- 19. Engine Temperature Gauge
- 20. Dual Battery Switch
- 21. Battery Condition Switch (optional)
- 22. 110 Volt Generator Start/Stop Switch (optional)
- 23. Generator Hourmeter (optional)
- 24. Battery Condition Meter (optional)

## INSTRUMENT PANEL - A-Body (Chevrolet Chassis - Gas Equipped)

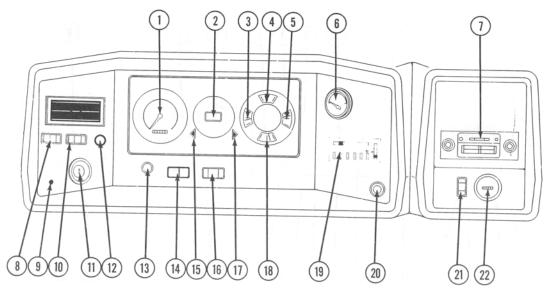


- 1. Speedometer
- 2. Brake Warning Light
- 3. Voltmeter
- 4. Fuel Gauge
- 5. Oil Pressure Gauge
- 6. Battery Condition Meter
- 7. Vacuum (Fuel Economy) Gauge
- 8. Radio

- 9. Windshield Wiper Switch
- 10. Intermittent Wiper Control
- 11. Ignition Switch
- 12. Windshield Washer Switch
- 13. Headlight Switch
- 14. Fuel Tank Selector Switch
- 15. Left Turn Indicator

- 16. Battery Condition Switch
- 17. Right Turn Indicator
- 18. Dual Battery Switch
- 19. Temperature Gauge
- 20. Heater/Air Conditioner Controls (A.C. optional)
- 21. Cigarette Lighter
- 22. 110-Volt Generator Start/Stop Switch (optional)
- 23. 110-Volt Generator Hourmeter (optional)

# INSTRUMENT PANEL - A-Body (Chevrolet Chassis - 6.2 L. Diesel Equipment)

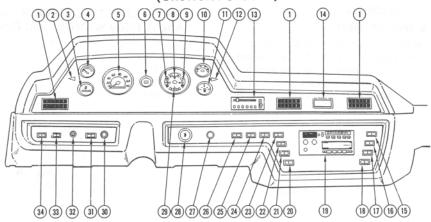


- 1. Speedometer
- 2. Brake Warning Light
- 3. Voltmeter
- 4. Fuel Gauge
- 5. Oil Pressure Gauge
- 6. Battery Condition Meter
- 7. Radio
- 8. Windshield Wiper Switch

- 9. Intermittent Wiper Control
- 10. Windshield Washer Switch
- 11. Ignition Switch
- 12. Low Coolant Light
- 13. Headlight Switch
- 14. Glow Plugs/Water in Fuel Indicator Light
- 15. Left Turn Indicator Light

- 16. Battery Condition Switch
- 17. Right Turn Indicator Light
- 18. Temperature Gauge
- 19. Heater/Air Conditioner Controls (A.C. optional)
- 20. Cigarette Lighter
- 21. 110-Volt Generator Start/Stop Switch (optional)
- 22. 110-Volt Generator Hourmeter (optional)

# INSTRUMENT PANEL - Elandan & Windcruiser (Chevrolet Chassis)



- 1. Vent
- 2. Left Turn Indicator
- 3. Hourmeter (Opt.)
- 4. Voltmeter
- 5. Speedometer
- 6. Brake Warning Light
- 7. Ammeter
- 8. Fuel Gauge
- 9. Oil Pressure Gauge
- 10. Vacuum Gauge
- 11. Auxiliary Fuel Gauge
- 12. Right Turn Indicator

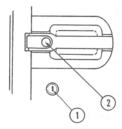
- 13. Air Cond./Heater Controls (A.C. Opt.)
- 14. Digital Thermometer
- 15. Courtesy Light Switch
- 16. Aisle Light Switch
- 17. Map Light Switch
- 18. Beverage Tray Light Switch
- 19. Radio/Cassette Player
- 20. Thermometer Display Switch
- 21. Exterior Compartment Light Switch
- 22. Auxiliary Fan Switch (Opt.)
- 23. Electric Generator Switch (Opt.)
- 24. Fuel Tank Selector Switch (Opt.)

- 25. Battery Mode Switch
- 26. Battery Condition Switch
- 27. Cigarette Lighter
- 28. Ignition Switch
- 29. Temperature Gauge
- 30. Switch Panel/Headlights
- 31. ICC Courtesy Blink Switch
- 32. Wiper Delay Control
- 33. Windshield Washer Switch
- 34. Windshield Wiper Switch

# SEAT AND DOOR PANEL CONTROLS

# DOOR LOCKS AND HANDLES - Exterior (Elandan & Windcruiser)

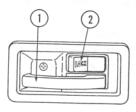
To unlock the entrance and cab doors from outside, insert the key into the lock, turn the key toward the front of the vehicle and press the push button in the handle assembly. To lock from the outside of the vehicle, insert the key into the lock and turn the key toward the rear of the vehicle until the lock mechanism engages.



- Keyhole
- 2. Push Button

## Interior (Elandan & Windcruiser)

To open the entrance and cab doors from inside, pull the door lever outward. To lock the doors from inside the vehicle, push the lock rocker switch toward the side labeled "LOCK".



- 1. Lever
- 2. Lock Switch

# ENTRANCE DOOR LOCK - A and C Body Coach and A-Body w/Driver and Co-Pilot Door Option

The entrance door can be locked or unlocked from the outside of the vehicle by inserting the key into the lock and turning. To lock the door from inside, slide the lock button to the right. Lubricate the lock periodically with graphite to maintain good working condition.

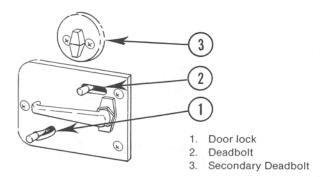


## **Exterior Extrance Door Handle**

### **ENTRANCE DOOR HANDLE**

The entrance door may be opened from outside the vehicle by pulling the door handle outward. To open the door from inside, pull upward on the door handle. When the door is locked, neither the inside or the outside door handle can be operated.

The deadbolt locks are for added security and should be used as security night locks.



#### Interior Entrance Door Handle

## CAUTION

When releasing security night lock, be sure to retract bolt before opening door latch to prevent drag on bolt pin. Instruct all passengers in operation of this door catch system as well as emergency exit window.

Never force the inside door handle downward, as damage could occur.

# DRIVER COMPARTMENT DOOR LOCK (C-Body Only)

The driver's compartment door may be locked from inside the vehicle by depressing the door lock buttons located on the upper door panel. The doors may be locked and unlocked from outside of the vehicle with a key. The doors may also be locked by depressing door lock button and closing the door.

#### IMPORTANT

Keys should always be removed when leaving the vehicle. Since doors can be locked without keys, make sure they have been removed from the ignition before locking the driver's compartment.

### **ENTRANCE STEP - Manual**

To extend the entrance step, lift up on the front of the step and pull out until it drops into position. To retract, lift up on front of step and push back until step locks into travel position.

# ENTRANCE STEP - Powered (Optional)

The electric power entrance step extends and retracts automatically as the entrance door is opened and closed. If the door will be repeatedly opened and closed while parked at a site, you may want to cancel the power to the step for convenience and to conserve wear on the mechanism. A rocker switch for this purpose is located on the side of the cabinet near the entrance. The step will remain in whichever position it was when power was cancelled for as long as the switch is off. Turn the switch on to reactivate the power mechanism.

## CAUTION

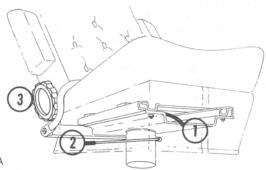
Always remember to retract the entrance step before traveling or moving vehicle.

## **SEATS**

The driver and front passenger seats may be independently adjusted to suit individual preference. To move the seat forward or backward, move the slide release lever, located under the front of the seat, to the left and exert slight body pressure in the direction desired.

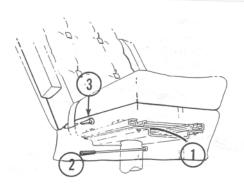
The seats may be swiveled to provide easy entrance and exit. The swivel feature also allows the seats on some models to be turned toward the living area for additional seating while the unit is parked. To swivel the seats, press the release lever, located on the right side of the seat, to the rear and rotate seat. The seats are designed to lock only when returned to the forward facing position.

## **Driver and Passenger Seat**



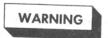
Type A

- 1. Slide Release Lever
- 2. Swivel Release Lever
- 3. Reclining Knob



## Type B

- 1. Slide Release Lever
- Swivel Release Lever
- 3. Reclining Lever



Do not adjust drivers seat while vehicle is in motion

After adjusting seat, always use body pressure to make sure slide and swivel mechanism have engaged.

## RECLINING SEATS

To recline the seat;

Type A: Rotate the black knob 3 to the rear to the desired incline.

Type B: Lift lever 3, lean back to desired incline and release lever.

To return to upright position;

**Type A:** Rotate knob 3 forward to desired position while leaning body forward.

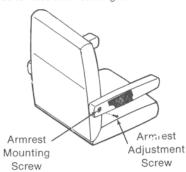
**Type B:** Lift lever 3, lean body forward to allow seat back to return to desired position. Release lever.

### ARM REST ADJUSTMENT

The seat assembly arm rest may be adjusted to alter the angle at which the arm rest will remain when placed in the lowered position. To reposition the arm rest angle, proceed as follows:

### Type A:

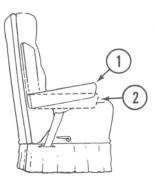
- Unzip cover fabric at the rear of the arm rest assembly and
  raise armrest
- Carefully force the foam cushion material away from the inside bottom edge of the arm rest frame. This allows access to an allen head adjustment screw located on the bottom portion of the arm rest frame assembly.
- Turn screw clockwise to lower arm rest angle or counterclockwise to raise arm rest angle.



### Type B: (2-position)

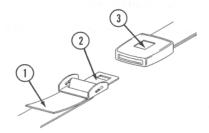
Position 1 - Raise armrest, push in toward seat body and lower into position.

Position 2 - Raise armrest, pull outward from seat body and lower into position.



## **SEAT BELTS**

All seats in the motor home intended for occupancy while the vehicle is in motion are equipped with seat belts. These are installed for the protection of the driver and passengers and must be fastened while the vehicle is in motion. The lap belts must be worn as low as possible and fit snugly across the hip area. Always sit erect and well back into the seat. To implement full protection of the safety belt, never allow more than one occupant to use the same safety belt at any one time, and do not let the safety belts become damaged by pinching them in the doors or in the seat mechanism. After any serious accident, any safety belts which were in use at the time should be replaced.



## **Seat Belt**

- 1. Adjustment Strap
- 2. Tongue
- 3. Release Button

Adjustment: To lengthen belt, turn tongue at a right angle to belt and pull to desired length To shorten, pull loose end of belt.

To Fasten: Be sure belt is not twisted. Grasp each part of the belt assembly and push tongue into buckle. Adjust to a snug fit by pulling the loose end away from the tongue.

To Unfasten: Depress button in center of buckle and slide tongue out of buckle.

## WARNING

Snug and low belt positions are essential. This will ensure that the force exerted by the lap belt in a collision is spread over the strong hip area and not across the abdomen, which could result in serious injury.

Only seats equipped with seat belts are to be occupied while vehicle is in motion. Seats not equipped with seat belts will be labeled: "This seat not intended for occupancy when vehicle is in motion."

## **ELECTRICAL SYSTEM**

All Winnebago and Itasca motor homes are equipped with an electrical system consisting of two separate voltages: a 12-volt DC system and a 110-volt AC system. The 12-volt system consists of two internal power sources, while the 110-volt system is operated from an outside power source (or the optional 110-volt generator if equipped) in the unit. All systems operate through a single power convertor control center to provide electrical power to the motor home.

### 12-VOLT DC SYSTEM

The DC voltage system consists of the automotive battery(s) and the 12-volt motor home auxiliary battery. The automotive battery is used solely to operate the engine starter and all automotive accessories and controls found on the instrument panel. This includes the horn, speed control, all exterior lights, radio, windshield wipers, etc.

The auxiliary battery(s) supplies current to all 12-volt equipment located in the living area of the motor home. This includes: interior lights, range exhaust fan, furnace fan, water pump, water level and holding tank gauges, 110-volt generator starting, refrigerator (when operated in DC mode), bath roof vent fan, ignition on water heater and the rear automotive heater. In addition, the auxiliary battery may be used to start the engine if for some reason the automotive battery is discharged; refer to "Dual Battery Switch" and "Isolator".

### 110-VOLT AC SYSTEM

The 110-volt system operates from an outside 110-volt utility service such as those at campgrounds, or from the optional 110-volt generator on units so equipped. When the power cord is connected to an outside power source, or when the generator is in operation, the power converter automatically changes a

portion of the 110-volt current to 12-volt DC current. All equipment in the motor home that is normally powered by the auxiliary battery is then powered through the converter.

In addition, the following equipment is entirely dependent on the 110-volt generator or outside source: roof air conditioner, refrigerator (when placed in 110-volt mode), microwave oven, ice maker, vacuum cleaner and other 110-volt electrical equipment used at convenience outlets.

## **AUXILIARY 110-VOLT GENERATOR**

Consult the information contained in your Owner's Packet for instructions on Operation, Troubleshooting and Maintenance of the optional auxiliary generator.

## **EXTERNAL UTILITY SUPPLY**

The external utility power cord is located in a storage compartment on the left side of the motor home.

To connect to an external power source, remove the cord from the storage compartment and plug it into a suitable power receptacle.

When disconnecting the power cord, neatly replace it in the storage compartment. On motor homes equipped with a 110-volt generator, plug the power cord into the generator receptacle within the compartment.

The three-wire power cord is designed to ground the electrical system through the receptacle. It is also designed to carry the amperage output of most campground outlets. If the electrical receptacle to be used is designed to mate with the three prongs on the power cord plug, the electrical connection can be expected to carry rated load.

# WARNING

Do not plug the power cord into an outlet which is not grounded, or adapt the plug-in to connect to a receptacle which is not designed for the plug on your unit. Make sure that all three prongs on the supply cord are properly plugged into the receptacle.

Should an overload on an appliance occur due to an excessive amperage draw, the breaker for the appliance, located on the power converter panel, will trip.

Most campgrounds are equipped with a fuse or circuit breaker at the receptacle. This protects the park's wiring, as well as the power cord on your vehicle, from electrical damage. If electrical power fails, contact the park attendants and have them check the fuse or breaker for your supply receptacle.

## WARNING

Do not connect the power cord to an improper supply source. Check for correct grounding and polarity before utilizing the 110 volt system. If you are unable to determine proper grounding, securely place a metal rod into the ground and attach to the motor home frame by means of a metal grounding strap. Improper grounding of the vehicle can cause personal injury.

## POWER CONTROL CENTER

The 110-volt to 12-volt power converter is mounted within one of the cabinets or beds, depending on the model. All power (except second optional roof air and 12-volt current to the refrigerator) to the living area of the motor home passes through the control center before going to the individual appliances, lights, outlets, etc. Current drawn from the 12-volt battery passes through the control center unchanged, but is routed through a series of fuses to the various functions. While the unit is connected to an external power source, current draws from the 110-volt power source and is routed to the appliances or equipment through the protective circuit breakers in the control system. In addition, a 12 portion of the 110-volt current is changed to 12-volt DC power by the convertor. While operating from 110-volt electrical power, all 12 volt equipment (with the exception of the refrigerator in DC mode) is powered through the appropriate fuse circuit within the convertor unit, and no power is drawn from the automotive and/or auxiliary battery.

A battery charger circuit in the converter recharges the battery while 110-volt external power is connected. The Charging Section will automatically "sense" the condition of the RV battery. If it is below "full charge", the Charging Section will start charging the battery.

If the RV battery has been extremely discharged, it will charge at a relatively high amperage rate. If battery is only slightly discharged, it will be charged at a lower amperage rate. The rate of charge will decrease as the battery reaches "full charge". After battery reaches "full charge", the Charging Section will drop back to "maintenance" level. Active charging will not resume until battery again falls below "full charge". If your storage battery does not charge as described above, it is possible the battery is defective.

A protective Thermal Breaker will "break" the 110-volt AC power to the converter section of Power Center if the power converter becomes overheated from operating above its maximum limit for an extended period of time or by obstruction of ventilation to unit.

NOTE: Power converter section will automatically switch 12-volt lights and motors to battery in this event.

In either case, the Thermal Breaker will reset itself after a period of time, and the lights and motors will again resume operation from power converter section. If the breaker trips again shortly after reset, take immediate steps to correct cause of overheating. A portion of RV 12-volt load (lights or motors or both) should be turned off to reduce total load. Also, inspect power converter section to make certain ventilation is not obstructed.

#### **IMPORTANT**

The converter will not change 12-volt DC current to 110-volt AC

The breaker panel protects all 110-volt components in the motor home from either an overload on the circuit or a short in the wiring or component itself. When an overload or short develops, the breaker will open preventing any further flow of electricity and, therefore, damage to the system. After shutting off the equipment (example: roof air conditioner) and allowing a brief cooling period, reset the breaker by moving the switch to "Off" then back to "On". If the breaker is continually tripped and no overload is evident, have the system checked for a short in the wiring or the appliances.

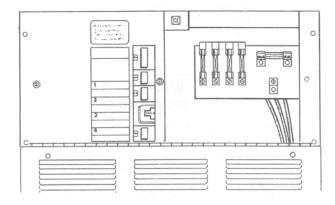
The fuse panel protects all 12-volt equipment in the living area of the motor home. When a circuit is overloaded or a short

develops in any part of the system, the fuse will burn out and must be replaced before the system can be operated. Shut off all affected lights or equipment and replace the fuse with another of equal size and amperage value.

A label located on the control panel provides the amperage of each fuse and indicates which circuit or appliance each fuse or breaker protects.



Do not store anything on or around the power converter, as it requires unrestricted air flow to dissipate generated heat.



**Power Convertor** 

## GROUND FAULT CIRCUIT INTERRUPTER

The ground fault interrupter is an electrical device designed to prevent fatal shock to a person in a normal state of health. This device is integrated into 110-volt outlets in the bathroom, on the exterior, and in various other locations depending on model and floor plan. Should an electrical appliance, equipped with a three-prong plug which has an internal short circuit or other electrical defect, be plugged into a protected outlet, the device will automatically trip and electrical current will be discontinued to that outlet until the appliance is unplugged and the breaker reset.

Test the device monthly by depressing the test button, which is incorporated into the 110-volt breaker panel of the power control center. Refer to the label attached to the power convertor cover (door) for test instructions.

In the event power is not available at either the bathroom or external 110-volt outlet, check to assure that the indicator shows the "on" position.

## WARNING

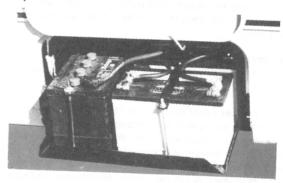
The ground fault interrupter does not provide protection unless the appliance plugged into the outlet is equipped with a three-prong plug which incorporates a ground wire. Also, the vehicle must be properly grounded through the power cord or a metal ground rod connected to the bumper.

## **BATTERY ACCESS**

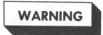
## **Exterior A-Body**

Depending on the motor home model, the auxiliary and automotive batteries are is located in a compartment accessible from the exterior of the unit. (Except Elandan & Windcruiser) A slide-out tray within the compartment allows access for periodic inspection or maintenance.

To service or remove the batteries, remove the retainer pin and slide the tray out. On some models, the battery tray will not extend out far enough to service the back two cells. The water level of these cells may be checked by holding a small mirror at a 45° angle over the cell and shine a flashlight beam onto the battery.



Exterior - Elandan & Windcruiser
See ENGINE ACCESS (Elandan & Windcruiser)



Be sure to replace the battery terminal boot back onto the positive terminal before sliding tray in after servicing. Care must be taken when sliding the battery tray back in, to avoid pinching the extra cable between the tray and the vehicle frame. Should the cable be damaged, a short could result in personal injury or damage to equipment. Replace any damaged cables at once. Always remove jewelry and wear protective clothing and eye covering when checking or handling batteries.

Reinstall the retainer pin when returning the tray to the storage position.

## **Exterior C-Body**

The auxiliary battery is located in a compartment accessible from the exterior of the unit or beneath the hood in the engine compartment. A slide-out tray within the compartment allows access for periodic inspection or maintenance.

To service or remove the auxiliary battery, remove the retainer pin and slide the tray out.



Reinstall the retainer pin when returning the tray to the storage position.

## Interior A-Body (Except Elandan & Windcruiser)

Some models contain a battery storage compartment accessible from the interior of the unit. Models utilizing the interior battery compartment may be typically identified by the forward most entrance door installation.

The interior battery compartment is located in the floor of the unit, above the entrance door step and accomodates both the automotive and auxiliary battery.

Periodic inspection and maintenance may be performed by grasping the floor level latch and lifting the carpet covered and hinged compartment door.

## Interior - Elandan & Windcruiser

The two auxiliary batteries are located in separate compartments in the pilot and co-pilot door stepwells. Access to either battery is gained by removing a metal cover behind the carpeted plastic stepwell panel. Remove the four screws that retain the stepwell panel, slide the panel up and remove. Next, extract the screws fastening the metal cover to the stepwell and remove the cover. To slide the battery tray out for servicing, pull up on the tray retainer pin and pull tray outward.

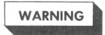
## **BATTERY MAINTENANCE**

A battery is merely a storage reservoir, not a source of electricity. As soon as energy is removed from the battery, it should be replaced by the alternator system. To ensure that the battery will always accept and hold a charge, some minor maintenance practices should be followed.

Make sure that batteries always remain securely clamped in the battery tray and the cable clamps are tight on the terminal posts and free of corrosion. Any corrosion build up on the battery may be neutralized by washing with a solution of baking soda and water and then rinsing with clear water.

#### **IMPORTANT**

Make sure vent caps are on securely to prevent baking soda solution from contaminating the battery electrolyte.



Before removing any battery cables or battery, make sure all 12-volt equipment in the motor home is off and the power cord has been disconnected.

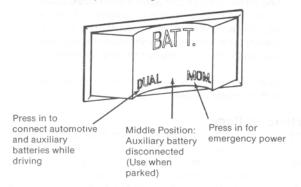
Clean and tighten battery terminals and have the specific gravity checked at least once a year. Every two months, or more often in hot weather, check the battery fluid level. Fill to approximately 3/8 inch above the plates. DO NOT OVERFILL. If fluid is added during freezing weather, the motor home should be driven several miles to mix water and electrolyte and prevent freezing. Fluid level check may be omitted if equipped with maintenance free batteries.

## WARNING

To prevent wiring damage, it is essential when replacing the cables on the battery, or when using a "booster" battery, that the positive post and the positive cable be attached and the negative post and negative cable be attached. The posts are marked (+) plus and (-) minus. If a "fast charger" is used while battery is in the motor home, disconnect both battery cables before connecting the charger. Never attempt to charge or boost a frozen battery.

# DUAL BATTERY SWITCH A & C-Body Motor Homes (Not Available Diesel Equipped Vehicles)

The dual battery switch is used to connect the auxiliary battery to the automotive electrical system, allowing it to be recharged by the engine alternator while driving. The momentary position can be used to provide additional starting power from the motor home auxiliary battery, if for some reason the automotive battery is discharged.



## **Dual Battery Switch**

## CAUTION

Damage to the automotive alternator can occur if the 110-volt auxiliary generator is started while both batteries are connected. Never leave the dual battery switch in the dual position while parked as it could allow both batteries to discharge.

# BATTERY ISOLATOR (Diesel Equipped Vehicles)

The battery isolator is designed to connect the auxiliary battery to the automotive electrical system, allowing it to be charged by the engine alternator while driving.

# Auxiliary 110-Volt Generator (Optional)

See information supplied in Owner's Information Packet for operating and maintenance instructions.

## CAUTION

Damage to the automotive alternator can occur if the 110-volt auxiliary generator is started while both batteries are connected.

## WARNING

To prevent the possibility of electrical shock, properly ground the motor home. Securely drive a metal rod into the ground and connect it to the bumper by means of a metal grounding strap. Careless handling of the generator and electrical components can be fatal. Never touch electrical leads or appliances when your hands are wet, when standing in water or on wet ground. Do not attempt to repair the generator yourself. Service should be performed by an authorized service center.

### **Operation Cautions**



The exhaust of all internal combustion engines contains carbon monoxide (CO). This gas is colorless, odorless, tasteless, lighter than air and poisonous. The exhaust systems of both your motor home engine and your generator engine have been installed with your safety in mind. However, certain precautions must be taken in their use to protect you from conditions beyond the control of the manufacturer.

- Do not simultaneously operate the generator engine and a ventilator which could draw air into the vehicle, resulting in the entry of exhaust gases.
- Do not open windows or ventilators on the end or side of the vehicle where exhaust of the generator is located.
- When parked, orient the vehicle so that the wind will carry the exhaust away from the vehicle. Also, note the position of other vehicles.
- Do not operate the generator engine when parked so that vegetation, snow, buildings, vehicles, or any other object can deflect the exhaust under or into the vehicle.

#### Hourmeter

The hourmeter indicates the actual running time of the 110-volt generator set. Refer to the hourmeter often to determine when periodic maintenance is due and keep a record of all service that has been performed.

## LP GAS SYSTEM

### LP GAS SUPPLY

The LP Gas system supplies fuel for the range, water heater, furnace and refrigerator (while in gas mode). When used and handled properly, this system is safe and economical and provides modern living conveniences wherever you travel.

#### **How It Works**

LP (Liquified Petroleum) Gas is a true gas compressed into liquid form for easy transportation and storage. It is known by several names such as tank gas, bottled gas or simply as butane or propane, which are the two types of LP available.

LP is used by appliances in vapor form only, but is stored in the tank as a liquid under very high pressure. When the liquid gas is released, it reverts back to a vapor and expands to many times it's compressed volume. It passes through a regulator which reduces the pressure to under one pound to be used by the appliances. This is how so much fuel is available from a relatively small container.

### Selecting Fuel Types

Butane burns hotter than propane, but will not develop a usable gas vapor at temperatures lower than 32° F. Propane, on the other hand, does not burn as hot but will convert to usable gas at temperatures down to -44° F. For this reason, propane is popular in cold climates, while butane and propane/butane mixtures are used most widely in milder climates.

#### **IMPORTANT**

Most LP dealers normally handle only the type of LP gas in their climate and area. If you anticipate filling your tank in one of the

warmer states prior to traveling to a colder area, it is advisable to request propane only. Otherwise your LP system may fail to operate if the temperature drops below 32° F.

Each gallon of liquid LP gas contains approximately 92,000 BTU's of heat energy; or putting it another way, each gallon of LP gas produces approximately 36 cubic feet of dry gas for cooking, heating, water heating and refrigeration.

To find out how long a gallon of LP gas will last, you should determine the total BTU input on all your LP gas appliances in use. Let's say you have a heater that has a 10,000 BTU input per hour of operation. A gallon of LP gas would last 9.2 hours of continuous operation (92,000 -10,000 = 9.2). To estimate how long a gallon of LP gas lasts, try to determine what your total daily BTU input is, then divide into 92,000 to arrive at an approximate daily LP gas consumption.

## TROUBLE-FREE AND SAFE USE OF THE LP GAS SYSTEM

Use caution at all times. Know the distintive odor of LP gas. If a leak is suspected, turn off the tank valve(s) immediately. Ask an LP gas dealer to check the system.

Have the entire LP gas system inspected for possible leaks and missing or damaged parts at the time of filling. Inspect before and after each trip, and any time trouble is suspected.

Do not tamper with the LP gas piping system, pressure regulator or appliances. Use caution when drilling holes or attaching objects to the wall. Gas lines and electrical wiring could be seriously damaged and present an extreme safety hazard.

Be sure appliance and outside vents are open and free from obstruction when using LP gas operated appliances.

Never attach a lock or device requiring a key to open the LP gas compartment door. According to federal law, the tank valve must be readily accessible in an emergency.

When not using the gas system, turn off the gas at the tank valve.

Never use a wrench to tighten the tank service valve. It is designed to close leak-tight by hand. If a wrench is required to stop a leak, the valve is defective and must be replaced.

Never allow the tank to be filled above the 80 percent level indicated by the flow of liquid gas out the overflow valve or by the automatic stop-fill device.

Test the LP system with leak detector every time the gas valve at the tank is turned on.

Never operate the vehicle with LP gas appliances on or with the LP tank valve open.

Never attempt to hook up natural gas to the LP gas system.

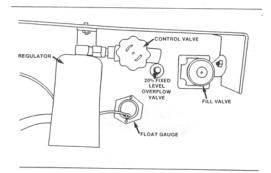
## **BULK TANK SYSTEM**

The storage reservoir for the LP gas system is a horizontally mounted tank which is permanently attached to the vehicle frame. The tank is accessible only from the outside of the vehicle. The tank control valve is located near the top center of the tank, next to the regulator. Before opening the control valve, check to be sure all controls for gas appliances are in the "Off" or "Pilot Off" position. If this step is not performed, LP gas could accumulate inside the motor home creating a fire or explosion hazard.

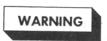
The pressure regulator is protected from the elements by a plastic cover which should be left in place at all times. Any removal of the cover and adjustments of the regulator should be

done by your dealer or a qualified LP gas dealership. A system leak detector is located in the refrigerator compartment. Refer to ("Leak Detector").

A float gauge, located near the center of the tank, indicates the liquid level in the tank. It is recommended that the tank be refilled at an authorized LP gas dealership anytime the gauge indicates approximately 10 percent of capacity.



## LP Gas System Controls



Do not alter or remove LP tank gauge at any time.

## Refilling Bulk LP Tank

There are many LP gas refueling stations located throughout the country. These stations are listed in the telephone directory in the Yellow Pages under "Gas-Liquified Petroleum-Bottled and Bulk".

Since the bulk LP container is permanently mounted to the frame, the motor home must be taken to an LP dealership for filling. Do not attempt to remove the LP tank from the vehicle. The bulk tank is equipped with a fill adapter with both internal and external threads which allows easy filling with any LP filling equipment. The tank is full when liquid LP gas appears at the overflow valve.

NOTE: The LP tank is equipped with an automatic 80% stop-fill device.

## WARNING

Never allow the LP bulk tank to be filled above the 80 percent level. Make sure the motor home is level when filling. It is possible to accidentally overfill the tank if the vehicle is unlevel, especially if the fill valve is on the uphill side. Twenty percent of the tank volume must remain empty to allow the gas to vaporize.

All pilot lights must be extinguished before refilling LP gas tanks or vehicle fuel tanks.

Because of the extreme flammability of LP gas and its heavier-than-air qualities, do not smoke or

expose the tank to an open flame while near a refueling area. Never use an open flame to test for gas leaks.

Replace all protective covers and caps on LP system after filling.

Never fill the LP tank with engine or generator running.

#### TRAVEL WITH LP GAS

All LP gas appliances must be turned off and the valve on the LP tank closed before traveling for a number of reasons:

Safety - Should your vehicle be involved in an accident and a gas supply line broken, LP gas would be free to escape from an open line, creating a fire hazard.

State Regulations - Many states are becoming increasingly regulatory concerning use of LP tanks. For example, it is illegal for motor homes to pass through certain tunnels in the nation due to an LP tank aboard. We suggest you always check local regulations of states through which you plan to travel.

#### REGULATOR FREEZE-UP

Regulator freeze-ups are caused by the presence of moisture in fuel. This moisture will pass through the cylinder valve and into the regulator where it freezes. Fuel producers, tank and bottle manufacturers and LP gas dealers take every precaution to reduce moisture, but sometimes only a fraction of an ounce entering tank can cause problems. To help avoid the possibility of freeze-up, always keep tank control valve closed when not in use, even when tank is empty, to prevent moisture from collecting on the inside.

If moisture begins causing problems, have your LP gas dealer inject a small amount of dry methyl alcohol in your tank

(approximately one ounce to 20 pounds or one pint to 100 gallons) to help guard against regulator freeze-ups.

In very cold weather when a large volume of gas is being used for heat production, it is possible to experience a loss of gas pressure. At first occurance this problem may appear to be caused by a regulator freeze-up, but is actually caused by failure of the liquid gas to vaporize as fast as it is needed. As the temperature becomes colder, it is increasingly harder for the liquid LP gas to "boil-off" into a vapor. At the same time, the demand for LP to produce heat increases to point where the system cannot maintain production. The only actual solution to this problem is to reduce the consumption of gas where possible. Adjusting the temperature on the gas/electric refrigerator may be a first step. Reducing the water temperature at the hot water heater and using less hot water will help as well.

## **LP Leak Detector**

Your motor home is equipped with the Marshalltown Instrument LP gas leak detector.

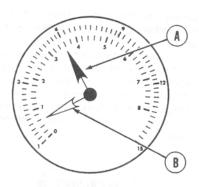
The leak detector is mounted in the refrigerator compartment and is readily accessible and visible when required.

Read the following operating instructions prior to conducting the LP gas leak test procedure.

#### IMPORTANT

This device does not prevent leaks. It detects leakage only when observed.

If the detector indicates a leak, recheck to be sure all appliance gas valves have been shut off.



**Leak Detector** 



Do not smoke or expose the unit to open flame or extreme heat when conducting an LP gas leak test. Never use an open flame to test for gas leaks.

- Close LP gas tank or cylinder valve(s).
- Ventilate vehicle. Open doors and windows.
- Shut off LP gas appliances, including pilots.
- Now, slowly open LP gas tank or cylinder valve(s).
- Observe the pressure reading on the gauge as indicated by the black pointer (A) and match this position with the moveable red pointer (B).
- 6. Close LP gas tank or cylinder valve(s).

- With LP gas tank or cylinder valve(s) in a closed position, monitor position of the black pointer for a period of 5 minutes.
  - A. If the black pointer does not move to a lower setting on the gauge, as compared to the red pointer, your system is secure at this time.
  - If the black pointer does move to a lower setting on the gauges to the red pointer, the system has a leak.
- Conduct a soapy water test at all joints. Tighten if necessary and retest.

## WARNING

Check for leaks with each tank fill and before each overnight camping. When testing for gas line leaks with a soapy water solution, DO NOT use a detergent containing ammonia or chlorine. These substances may generate a chemical reaction causing corrosion to gas lines resulting in dangerous leak conditions.

 If test still shows a leak, contact your Winnebago/Itasca dealer.



Never use an open flame to test for gas leaks.

#### Air in the LP Gas Tank

Air in LP gas containers must be removed prior to initial filling with LP gas. If the container is not properly purged, air in the container dilutes the LP gas vapor. Appliances then require constant adjustment and pilot lights won't stay lit. This condition could exist for several months until all air is depleted, leaving pure LP gas vapor. Your LP gas dealer is equipped to purge the tank of air prior to filling.

### WINTER USE OF LP GAS

Due to vaporization characteristics of LP gas, it is important that the winter camper knows how to most effeciently use the LP system. The vaporization rate of LP gas decreases in a direct relationship to a decrease in temperature. As explained in the "Selecting Fuel Types" section, butane does not vaporize below 32° F, so propane must always be used in cold climates. However, even propane vaporizes at a slower rate as it becomes colder.

The greater the amount of liquid gas in the tank (up to the 80% level) the greater the amount of LP gas vapor generated. The following is an example of the number of BTU's available from an 84 pound tank at 0°F at three levels. As you can see the number of BTU's decreases as the tank is emptied. Nearly twice as many BTU's are available from a full tank than one that is one fourth full. Therefore, it is to your advantage to keep the tank as full as possible (not to exceed the full level of 80%).

#### BTU's Available at

_	Tank Level	0° F.
	80%	64,400 BTU's
	50%	50,400 BTU's
	20%	33,000 BTU's

The following LP Gas Vaporization and Temperature Relationship chart typifies the LP gas loss with a decrease in temperature. The percentage figures are the increase or decrease in the amount of vapor that would be available at 0° F. These figures are applicable to all size LP gas tanks.

TEMPERATURE	PERCENTAGE OF BTU'S AVAILABLE AT 0° F.
20° F.	200%
10° F.	150%
-5° F.	75%
-10° F.	50%
-15° F.	25%
-20° F.	12 1/2%
-44° F.	Propane will
	not vaporize



Make sure the filling attendant uses the 80% overflow valve when filling the tank. A tank should never be filled above the 80% level to allow for vaporization and liquid expansion.

# PROCEDURES TO FOLLOW IN THE EVENT OF A LP LEAK

If at any time you smell gas within the vehicle, quickly and carefully perform the following procedures:

- Extinguish any open flames, pilot lights and smoking materials.
- Shut off LP gas supply at the tank valve on gas supply connections.
- 3. Open doors and other ventilating openings but **do not** turn on any electrical fans or vents.
- 4. Do not touch any electrical switches.
- 5. Leave area until odor clears.
- Have the LP gas system checked and leakage source corrected before using again.

## WATER SYSTEM

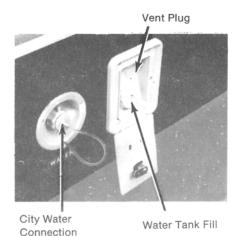
The water system in your motor home may be supplied from either of two sources; a water tank located within the motor home, or from an outside city or campground water source. The water from either source supplies the kitchen sink, shower, bathroom vanity, toilet and water heater.

### **INTERNAL WATER SYSTEM**

#### Filling Procedure

The tank fill access is located on an exterior sidewall of the vehicle. The tank may be filled with a hose, or when city water or a hydrant is not available, a bucket and funnel may be used.

Prior to filling the tank, remove the plastic plug from the tank vent tube to allow air to escape from the tank as it is filled.



**Water Pump** 

Pressure from the water system is supplied by a water system demand pump which is fully automatic after initial priming. When a faucet is opened, the pump instantly begins operation to provide a constant flow from the tank. As soon as the faucet is closed, the pump automatically shuts off.

The water pump switch is located on the right side of the optional water/holding tank monitor panel. If your vehicle is not equipped with the monitor panel, the switch will be located on a lower cabinet, the panel below a bed or on the wardrobe wall panel, depending upon model. While the switch is in the "On" position, the pump will automatically supply water pressure as it is needed. It is recommended that the pump switch be turned off whenever you are away from the vehicle or not using the water system. A slow leak in a faucet could drain the water system, as well as the battery.

#### Initial Start-up

- Turn water pump switch to "Off" position. Open water fill spout and fill with hose or suitable container.
- 2. Open all faucets, hot and cold.
- 3. Turn on pump at control switch.
- Close each faucet as it begins to deliver a steady stream of water. (Close cold water first). Leave hot water faucets on until they also deliver a steady stream of water. This will ensure that the water heater is filled with water. Make sure water heater drain valve is closed.
- Check to be sure pump stops soon after all faucets have been closed.
- Pump is now ready for automatic operation. Pump will start when a faucet is opened and stop when faucet is closed.

## SANITIZING THE POTABLE WATER SYSTEM

To sanitize a new potable water system, a system that has not been used for a period of time, a water system that may be soured due to mineral deposits, a fill-up of bad water or the remains of water system antifreeze, the following procedure is recommended:

- Prepare a chlorine solution using one gallon of water and 1/4 cup of household bleach (5 percent sodium hypochlorite solution.) With tank empty, pour chlorine solution into tank. Use one gallon of solution for each 15 gallons of tank capacity.
- Complete filling of tank with fresh water. Open each faucet and drain cock and operate demand pump until system is filled.
- 3. Allow to stand for three hours.
- 4. Drain and flush with potable fresh water.
- To clean and deodorize the potable water system, add a solution of one cup baking soda dissolved in five gallons warm water for every ten gallons of tank capacity. Example: For 30 gallon tank, use 3 cups baking soda and 15 gallons warm water.
- Agitate the solution by alternately accelerating and braking a few times.
- Drain the tank and flush with fresh water.
- For a complete system treatment, run two gallons of clean soda water solution through kitchen and bathroom faucets to clean hoses and connections.

## EXTERNAL WATER SUPPLY - OPERATION

To operate from a city water supply, first turn the demand pump switch "Off". Then attach a hose between the connection on your vehicle and the source of water.

## CAUTION

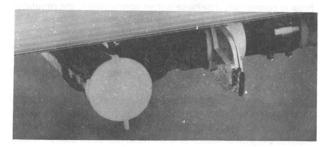
Pressure should not exceed 60 pounds on the line, as lines could rupture or fixtures could leak.

Due to variations in local water pressures, it is suggested that you install a pressure regulator at the water hook-up where the hose is connected. The hose is then connected to the regulator. The pressure will be lowered before it enters the lines. When connected to an outside source of water, the water bypasses the demand pump and storage tank and supplies pressure directly to individual faucets and toilet. A check valve built into the pump prevents water from entering the pump and filling the storage tank.

To disconnect from external water supply, first turn off water at source. Open faucet inside motor home to relieve line pressure and disconnect hose from the vehicle. Be sure to replace plug on connection after hose has been disconnected.

## DRAINAGE SYSTEM

The drainage system is self-contained, allowing use of the toilet, sinks, or shower even in areas where hook-up is not available. The drainage system may have one or more holding tanks depending on model and floor plan. When the unit is equipped with more than one tank, one accepts sewage water from the toilet and lavatory, and the remaining tank(s) receive waste water from the galley and shower. The holding tanks are dumped through a common outlet located on the left side of the vehicle. On models with one or two tanks, this is generally located to the rear of the dual wheels. If the unit is equipped with three tanks, an additional outlet may be located ahead of the dual wheels.



Sewage Dump Valve

### **DUMPING HOLDING TANKS**

 Remove drain hose from rear bumper or exterior storage compartment.

- Remove dust cap from drain and connect drain hose. Be sure it is firmly attached.
- 3. Place the other end of sewer hose into disposal opening.
- Unscrew the sewage drain valve retainer and open the valve with a quick pull. OPEN ONE VALVE AT A TIME. Move hose gently about to dislodge any waste and to ensure complete drainage.
- Close sewage valve and open waste water valve with a quick pull. Make sure there are no sags in the hose during drainage. Close valve handle and secure retainer as soon as tank is empty.
- After both tanks have been drained, run several gallons of water into the sewage tank through the toilet. Then open sewage dump valve and drain the tank again. Close valve and lock in place. Securely replace dust cap.
- It is advisable to add an odor control chemical to the sewage holding tank. These chemicals are available at most R.V. stores.
- 8. Rinse sewer hose thoroughly with water and stow.

## **USE OF IN-PARK SEWER SYSTEM**

When using a sewer hook-up while parked, such as in a trailer park, keep the dump valves closed; and open only when preparing to leave or when the tank becomes full. This keeps the solids in suspension, allowing them to be carried out with the rush of liquids when the dump valve is opened. If the valve is left open, the liquids will run off leaving solids in the tank. Should this accidently happen, disconnect the hose, fill the tank about half full with water, and drive a few miles to dislodge the solids. A few starts and stops aid in this process. Then reconnect the hose will and drain in the normal manner.

## **EQUIPMENT AND APPLIANCES**

WARNING

Hydrogen gas can be produced in the water heater system served by a water heater that has not been used for an extended period of time, (usually two weeks or more). Hydrogen gas is extremely flammable. Due to risk of injury under these conditions, it is recommended that the hot water faucet be opened at the sink and the system totally filled before turning on the water heater. If hydrogen gas is present in the water system, there will probably be an unusual sound such as air escaping through the pipe as the water begins to flow. NEVER smoke or allow open flames near the faucet at the moment it is first turned on after an extended idle period or refilling of an empty system.

## **INTERIOR FURNISHINGS**

WARNING

Sleeping facilities are not to be utilized while vehicle is in motion.

Latch the pull-down bunk securely in position when the vehicle is in motion or when the bunk is not in use. Do not use for storage.

## MOTOR HOME CARE AND MAINTENANCE

### **ROOF**

The roof utilizes Thermo-Panel® construction like the walls and floor. It will support the weight of an average adult should it become necessary to repair the roof or roof mounted components. It is not recommended, however, that very large or heavy objects be carried on the roof when the vehicle is in motion. Always have sealant around the vents, air conditioner, body to roof seams, etc., or damage to the roof area repaired immediately. Delaying these repairs may allow water leakage and result in damage to interior ceiling and body panels, upholstery, etc.

## CAUTION

Sealants must be inspected every 6 months and resealed if necessary.

#### **UNDERBODY**

Buildup of mud under the body can not only cause rust, but add unnecessary weight which contributes to the gross weight of the vehicle. This, in effect, reduces the amount of cargo you can carry and remain within GVWR and GAWR limits.

Corrosive materials, such as those used for ice and snow removal and dust control, also accumulate on the underside of a vehicle. These materials should be removed by flushing the underbody regularly with water, especially areas where mud and other foreign materials collect.

#### **EXTERIOR**

The exterior surface of your motor home has an automotive finish. Frequent washing and thorough cleaning is recommended

to prevent damage to the vehicle finish after exposure to damaging salts, calcium chloride, road tar, tree sap, insects and other foreign material. Never wash the vehicle in direct sunlight, while the vehicle surface is hot, or using hot water.

Do not use strong soaps or detergents for washing the motor home. Always use a mild soap in warm water, a commercially prepared product for cleaning automotive finishes or your local car wash.

After washing the motor home, carefully inspect caulking around window frames and vents and any other joints that may have separated. Re-caulking, if necessary, is quite simple. Appropriate compounds are sold at Winnebago/Itasca dealers, and the materials are quickly and easily applied. Also, inspect weather seals around door, etc., and if necessary have a dealer replace them immediately.

## CAUTION

Sealants must be inspected every 6 months and resealed if necessary.

Never use a strong solvent such as lacquer thinners or harsh abrasives on painted surfaces.

It is recommended that a coat of automotive wax be applied to the surface occasionally to provide added protection against harmful deposits coming in contact with the paint.

# UPHOLSTERY, CARPETING AND DRAPERIES IMPORTANT

To minimize fading of upholstery caused by excessive sunlight, the drapes should be pulled closed when the motor home is parked for an extended period of time.



When cleaning upholstery, carpeting and fabric, do not use lacquer thinner, nail polish remover, laundry soaps, or bleach. Never use carbon tetrachloride, gasoline, or naptha for any cleaning purpose. These materials may cause damage to the material being cleaned and most are highly flammable.

#### **BATHROOM**

The shower walls in the bathroom should be cleaned with a mild soap and water solution or (to obtain maximum luster), use a good quality wax cleaner. Do not use an abrasive cleaner on the shower walls. However, a mild abrasive cleaner may be used to clean the shower floor or bathtub. If the shower has a Plexiglass door, it is extremely important that abrasives not be used. Solvents and aromatic spirits that contain a petroleum base or additive should also not be used. These products can cause a reaction with the glass that results in visible deterioration marks. Use only a mild detergent and water solution with a soft cloth to clean Plexiglass surfaces.

The bathroom lavatory is also a molded plastic material and should be cleaned with a mild soap and water solution. Abrasive cleaners or harsh detergents should not be used.

For instructions on the care of the fresh water toilet, refer to the information in your Owners Information Packet.

### **DOORS AND WINDOWS**

Windows may be periodically cleaned with a good quality glass cleaner or mild soap solution using a soft cloth. Use care when removing ice or frost from the windows. Always use a plastic ice scraper, never one made of metal. Use care when removing ice from the mirrors to protect the reflective surfaces.

Door locks and hinges should be lubricated periodically with powdered graphite to ensure trouble-free operation and to protect against freeze-up.

#### **WORK SURFACES**

Work surfaces are covered with a plastic laminate that is resistant to solvents, stains and abrasions. A coat of furniture wax applied to these surfaces on the counter and table will help preserve their beauty and make cleaning easier. Always clean the surface before applying wax.

#### STAINLESS STEEL SINK

The stainless steel sink can be cleaned with soap or detergent. Rinse thoroughly with warm water and wipe dry to avoid streaks.

Use a mild abrasive for stubborn stains. Work in the direction of the polish lines. To keep the original finish, polish with a wax cleaner and rub with a soft dry cloth.

## CAUTION

Salt, mustard and mayonnaise may cause pitting. If spilled, clean immediately.

## **RANGE AND REFRIGERATOR**

For care and appearance maintenance of the range and refrigerator, refer to the operation and maintenance manual for each of the individual appliances included in your Owner's Information Packet.

## **VEHICLE MAINTENANCE**

## **ENGINE ACCESS (C-Body)**

Hood release locations and directions are given in your Chassis Owner's Manual.

#### IMPORTANT

Refer to the appropriate sections in the Chassis Manufacturer's Owner's Manual for fluid level and maintenance schedules. When closing the hood, push down firmly to ensure that it latches.

### **Engine Cover**

The engine cover located in the driver's compartment, is retained by two latches at the forward end and with screws at the floor area. Access to the air cleaner and other engine parts can be gained through this opening.

## **ENGINE ACCESS (A-Body Motor Homes)**

### Hood

The hood release lever is located on the steering column bracket near the bottom of the dash. To open, pull out on the knob and the hood will pop open. Lift up the hood and secure it with the hood support rod.

With the hood open, the oil dipstick, oil fill, radiator fill, and the windshield washer reservoir are accessible. On Elandan and Windcruiser, the power steering fluid reservoir and automotive battery are also accessible.

## **Engine Cover**

Remove the four (4) bolts securing the engine cover to the floor of the driver's compartment and lift cover off to gain access to engine.

Removal of the engine cover allows access for servicing the power steering fluid reservoir, transmission dipstick and fill tube, engine air cleaner and other engine parts.

## **BRAKE FLUID RESERVOIR (A-Body Motor Homes)**

Access to the brake fluid reservoir is located under the left front wheel well. To check the fluid level, turn the front wheel completely to the left; the reservoir is just above and ahead of the left wheel.

### **ENGINE OIL**

## **Checking Oil Level**

Engine oil must be maintained at the proper level. Refer to engine manufacturer's recommendations found in your Chassis Owner's Manual.

## BRAKE MASTER CYLINDER (All A-Body Motor Homes)

The brake master cylinder is located on the chassis frame under the left front wheel well and is covered by a metal shield for protection against road debris.

## **ENGINE COOLING SYSTEM**

Refer to your Chassis Owner's Manual for information and precautions regarding coolant system capacities, filling, servicing and fluid level inspection.

## CAUTION

When refilling the coolant system of a vehicle with a rear auxiliary automotive heater and motoraide

water heater, be sure to allow for additional coolant capacity of the heater and its supply and return hoses.

#### **TIRES**

Low air pressure not only results in tire overloading and abnormal wear, but also affects handling and fuel economy. The proper inflation pressure may be obtained from your Chassis Owner's Manual.



Radial ply tires are optional on some models. The tire option is not intended to upgrade the load rating of the entire vehicle and does not imply that GVWR and GAWR ratings may be increased over the figures found on the certification label or in the "Specifications" section of this manual.

Make sure all replacement tires are of the same size and ply rating as these installed as original equipment.

# Care of Aluminum Wheels - Optional (Elandan & Windcruiser)

If your aluminum wheels should become dull or discolored by road film, use any commercially available designated aluminum

wheel cleaner/ polish to restore the bright finish. The manufacturer of the wheels suggests monthly cleaning during constant daily use and less frequently with decreasing use.

#### WINDSHIELD WASHERS AND WIPERS

See your Chassis Owner's Manual for recommendations and precautions regarding washers and wipers.

#### LIGHTS

All exterior lights should be checked for proper operation each time the vehicle is prepared for a trip. Any bulbs which fail to light should be checked and replaced, when necessary, with a new bulb of the same size. A failure of more than one light, such as both taillights not operating, may indicate a burned-out fuse. Check fuse and replace with one of the same rating when necessary. If a fuse is not the cause of the problem, the wiring system should be checked immediately by an authorized service center.

The headlight circuit is protected by a circuit breaker. An overload on the breaker will cause the lights to flicker on and off. Headlight wiring should be checked immediately anytime this condition is apparent. Refer to your Chassis Owner's Manual for further information.

### **FUSES**

The automotive electrical circuits and accessories incorporated in your motor home are protected from short circuit conditions by a fuse panel. This panel is located beneath the dash to the left side of the steering column. See your Chassis Owner's Manual for additional fuse replacement information.

# MOTOR HOME JACKING AND TIRE CHANGE PROCEDURE (A-Body)

## **IMPORTANT**

The jack referred to in the following instructions is not supplied with the vehicle and must be obtained by the owner from your selling dealer.

The jack is designed for use as a tool for changing tires only, not for use as a leveling device or as a support for service purposes.



Tire change procedures should be used in emergency situations only. The operator is advised to obtain qualified road service when possible.

#### SAFETY PRECAUTIONS

Before attempting to change either the front or rear tires, the following precautions should be adhered to:

- Jack vehicle on level surface only.
- Turn off engine and set parking brake.
- Activate hazard warning flasher.
- Block both front and back of wheel opposite wheel to be removed.
- On soft ground, use a board or other material under jack as a firm base to ensure that the jack will not shift.

## JACKING POINT ON VEHICLE

MODELS	FRONT	REAR
All	Lower Control Arm	Under Axle Housing Near Wheel to be Raised

#### Front Wheel

Before attempting to remove the front wheel, observe the above safety precautions, then initiate the following procedures:

- Turn the jack extension out to approximately ground to spring height.
- Position jack under lower control arm.

NOTE: Lower control arm base must be cradled by the U-shaped saddle on the jack. Begin jacking until the jack is firmly positioned, but do not jack tire off the ground.

- 3. Loosen wheel nuts with lug wrench.
- 4. Resume jacking until wheel is free of ground.
- 5. Remove wheel nuts and wheel; put spare wheel in place.
- 6. Install wheel nuts and tighten as much as possible with wheel and tire off the ground.
- Lower tire until tire just contacts the ground. Tighten nuts with lug wrench in recommended sequence.
- 8. Finish lowering jack, remove jack and blocks.



Upon satisfactory completion of emergency tire change, it is highly recommended that wheel nuts be properly torqued and inspected by qualified service personnel as soon as possible.

#### **Dual Rear Wheels**

Before attempting to remove the rear wheel, follow safety precautions in the beginning of the motor home jacking procedures and then initiate the following procedures.

- Turn jack extension out to approximate ground axle housing tube height.
- Place jack under axle housing near wheel to be raised. Center jack on the housing so vehicle will not slide off jack. Place jack far enough inboard on the axle housing so that when the handle is inserted, the jack may be operated from either in front or behind the tire without crawling under the vehicle.
- Begin jacking, but DO NOT lift wheel and tire off the ground.
- 4. Loosen wheel nuts with lug wrench.
- Resume jacking until wheel and tire are free of ground.

NOTE: Full torque must be applied to dual rear wheel nuts with both wheels off the ground.



DO NOT crawl under vehicle.

6. Remove wheel nuts and wheel.

#### IMPORTANT

When installing the outboard wheel and tire assembly, rotate the wheel so that an outboard wheel cutout, without the tire valve, is opposite the inboard wheel tire valve.

 Mount spare wheel on studs and replace wheel nuts. Refer to your chassis manual for wheel nut torque and tightening sequence.



The operator is advised to obtain road service whenever possible and attempt tire changing under emergency conditions only and with close adherence to instructions. If it becomes necessary to change a wheel, that wheel should be checked, after being properly torqued and inspected by qualified service personnel, at 100 miles and every oil change thereafter.

#### **Wheel Nuts**

To eliminate the possibility of the wheel nuts becoming elongated, all wheel nuts should be tightened at frequent intervals. This is especially important during the first hundred miles of operation to allow the wheel nuts to become properly set.

All nuts should first be firmly seated against the wheel. Then the nuts should be tightened to recommended torque by always tightening the nut opposite to the previously tightened nut.

NOTE: When installing or tightening dual wheels, both wheels on the same side must be off the ground (not resting on the

inner dual). This minimizes the possibility of loose wheels after correct mounting torque is applied.



Upon satisfactory completion of emergency tire change, it is highly recommended that the wheel nuts be properly torqued and inspected by qualified service personnel as soon as possible.

# WHEEL NUTS - Optional Aluminum Wheels (Elandan & Windcruiser)

## WARNING

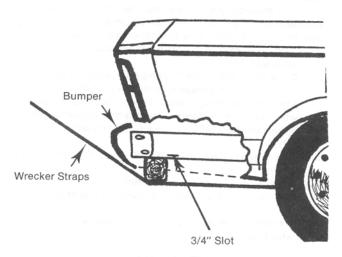
Do not use wheel nuts intended for aluminum wheels to mount the steel wheel spare tire. These nuts will not seat properly on steel wheels. Use only the wheel nuts and steel trim ring provided with the spare tire for mounting.

## Towing Safety Precautions (All A-Body)

Correct preparation is required or damage to the bumper and/or front end of the motor home may occur.

- Remove any equipment that interferes with towing sling. Place padding (heavy cloth or carpeting) between bumper and sling to prevent marring the bumper finish.
- Do not place tow hooks where they will damage brake lines.

- Do not attach tow hooks to bumper or associated brackets, front brake strut, sway bar or shock absorbers.
- Place a 4" x 4" (minimum) block of wood across both bumper extension channels forward of the 3/4" slot on the bottom of the extension as shown.
- Place a 3/4" pin or bolt through the slot behind the wood block. (This maintains the block in correct position to protect bumper.)



- Make sure wrecker straps do not come in contact with bumper.
- Use a safety chain system that is completely independent of the primary lifting and towing assembly.
- Secure any loose or protruding parts of damaged units before towing.

### **IMPORTANT**

Be familiar with and observe all state and local towing regulations.

CAUTION

Make sure wrecker straps do not come in contact with bumper. DO NOT LIFT ON BUMPER!



Stay out from under the motor home when it is suspended by the towing assembly unless the unit is adequately supported by safety stands. Do not allow passengers to ride in a towed unit.

## **STORAGE**

Your motor home is equipped with many vital systems that may be damaged due to improper storage or freezing conditions. Therefore, it is crucial to have your vehicle properly prepared for prolonged storage.

Proper winter storage procedures will lessen the possibility of costly repairs, assure the vehicle's reliability, and provide continued motor home enjoyment.

After each use, it is advisable to prepare the motor home for vacancy just as you would if you left your house or apartment for a period of time. Make sure all perishables have been removed from the cabinets and refrigerator. Also, make sure that proper ventilation has been provided. Always check to ensure that the LP gas tank has been turned off. It is advisable to drain the water heater, water tank and holding tanks. Close the shade to protect upholstery from direct rays of the sun.

When preparing the vehicle for winter storage in cold climates, it is extremely important that all winterizing steps be performed.

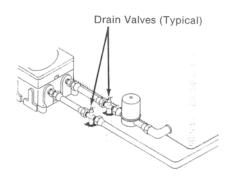
#### WINTERIZING

The objective in winterizing the motor home is to protect the various components and systems against damage from freezing. The most vulnerable areas are the water system, drainage system water heater and batteries. Perform each of the following steps to ensure that each system has been completely drained or protected.

It is also important to wash the exterior of your motor home before storage. After washing the motor home, carefully inspect the seams and caulking around window frames, vents and any other joints that may have separated. Re-caulking, if necessary, is quite simple. Appropriate compounds are sold at Winnebago/ Itasca dealers and the material is quickly and easily applied.

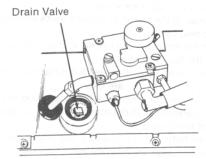
Also, inspect weather seals around doors, windows, etc., and if necessary have a dealer replace them immediately.

- 1. Level the motor home.
- 2. Remove all foods and equipment that may cause odors.
- Clean entire vehicle. Dirt and stains are more easily removed when fresh.
- 4. Close all windows and roof vents.
- Drain the complete water system.



- Open all needle valves by pulling up on a "T" handle or ring.
- B. Open all faucets and the shower head.
- Allow demand water pump to operate until all water lines have been drained.
- With water pump running, operate toilet flush mechanism and hold until water stops flowing.

E. Drain water heater by opening drain valve located at base of water heater tank and accessible from the outside of the motor home. Also open the pressure relief valve, located at the top right portion of the tank. This will assist the draining and prevent air locking in the tank.



### Water Heater Drain Valve

- F. Disconnect discharge and intake water lines from demand water pump. Start pump and allow to run until all water has been expelled from the unit (Running dry will not harm the pump). Then reconnect the lines.
- G. Pour dealer recommended non-toxic antifreeze into the bathroom sink drain, shower drain and kitchen sink drain(s).

NOTE: As an alternative to system draining, all tanks and lines may be winterized with the use of non-toxic antifreeze added to the storage tank and pumped throughout the system. Follow

the directions on the container to determine the correct amount of antifreeze to be used.



Do not use automotive type radiator antifreeze; it is poisonous.

- 6. Completely drain both the waste water and sewage holding tanks. Thoroughly rinse tanks and drain again. It is recommended that when rinsing the tanks, the vehicle be driven a few blocks, or alternately accelerate and apply brakes to make sure all material has been loosened. Close the dump valves and replace cap to prevent the dump valve shafts from rusting and to prevent rodents from entering the tank.
- 7. Turn furnace thermostat to "Off" position.
- 8. Lubricate all hinges and door locks.
- 9. Clean and defrost refrigerator. Leave door slightly ajar.
- 10. Seal all appliance vent openings.
- 11. Have chassis completely lubricated.
- 12. Disconnect battery cables from all batteries.
- 13. Whenever possible, the batteries should be removed and stored indoors. When they are left in the vehicle, the state of charge of all batteries must be checked regularly in areas where freezing temperatures occur. A battery will discharge by itself in time, and a battery with one half charge or less may freeze. Since the discharge time varies with temperature, battery age and other conditions, batteries should be checked at least every two weeks.

- Make sure antifreeze level in the automotive radiator is sufficient to protect against freezing at the lowest anticipated temperature.
- Winterize the fresh water toilet by one of the following methods.
  - A. Disconnect water line at ball valve. Depress foot pedal and insert an object, such as a wedgeshaped block of wood or similiar object, into the outlet at the bottom of the bowl.

#### **IMPORTANT**

Avoid using items small enough to drop through outlet into tank.

- B. Use non-toxic antifreeze to winterize the entire motor home fresh water plumbing system. Follow the directions on the antifreeze container.
- Prepare the optional 110 volt generator for storage by following the instructions given in the generator manual supplied in your Owners Information Packet.

## REMOVAL FROM STORAGE AND NEW SEASON PREPARATION

- Completely ventilate the motor home.
- Check window operation.
- Check cabinet and door hinges. Lubricate with penetrating oil, if necessary.
- Close all faucets and drain valves that are open. If necessary, reconnect toilet water line and close flush valve.
- 5. Fill water tanks and check for leaks especially at junctions.

- Also make sure all hangers and supports are securely in place. Sanitize the water system as outlined under "Sanitizing the Potable Water System".
- Check operation of all faucets to be sure faucet washers have not hardened during storage.
- Check sealing valve in the toilet for proper operation and lubricate with silicone spray.
- Add water to the holding tank and check to be sure dump valves seal tightly.
- Check the entire LP gas system and appliances for leaks using the leak detector.
- Check around all appliances for obstructions and ensure that all vent openings are clear.
- 11. Start refrigerator and check for proper cooling.
- Clean paneling and counter surfaces and apply a thin coat of furniture wax.
- Replace batteries if necessary and check out electrical system to make sure all lights and electrical components operate.
- 14. Check tires for proper cold inflation pressure.
- 15. After washing accumulated grime from the motor home, carefully inspect the seams and caulking for cracks that may have appeared around window frames and vents and any other joints that may have separated. Recaulking, if necessary, is quite simple. Appropriate compounds are sold at Winnebago/Itasca dealers and the material is quickly and easily applied. Also, inspect weather seals around doors, etc. and, if necessary, have a dealer replace immediately.
- 16. Check smoke detector operation, if so equipped.

## WATER SYSTEM DRAIN VALVE LOCATIONS

MODEL	DRAIN VALVE LOCATIONS
WC420RG	Beneath galley shelf; beneath water tank in bottom refrigerator cabinet compartment.
WC421RB	Beneath range; beneath shower (behind false panel); beneath rear dinette seat
WF421RB IF421RB	Beneath range; beneath shower (behind false panel); beneath rear dinette seat.
WC424RC IC424RC	Beneath shower (behind false panel); beneath rear dinette seat.
WC424RB IC424RB	Beneath shower (behind false panel); beneath ice maker (optional)
WF426RU IF426RU	Beneath galley cabinet; beneath lavatory; beneath pantry.
WCN22RC ICN22RC	Beneath water tank under wardrobe; beneath shower behind false panel.
WCN23RG ICN23RG	Beneath water tank under wardrobe; beneath shower behind false panel.
WCN26RB ICN26RB	Beneath galley cabinet shelf; in bath linen closet at floor.
WCN26RH ICN26RH	Beneath galley cabinet shelf; in bath line closet at floor.

## DRAIN VALVE LOCATIONS (CONT.)

MODEL	DRAIN VALVE LOCATIONS
WCN27RU ICN27RU	In bottom refrigerator cabinet compartment; beneath lavatory shelf false panel.
WCN30RC	Beneath shower pan behind false panel; beneath wardrobe at floor, right front luggage compartment.*
WCN33RU ICN33RU	Beneath lavatory; behind shower pan false panel; behind false door beneath left wardrobe, right front luggage compartment.*
ICP28RU	Beneath rear bed; beneath shower; beneath galley cabinet shelf.
WCP31RC	Beneath wardrobe; beneath shower; beneath ice maker (optional) or entertainment cente (optional).
WCP31RT ICP31RT	Beneath rear bed; beneath shower; beneath ice maker (optional) or entertainment center (optional).
WCP34RU ICP34RU	Beneath rear bed; beneath shower; beneath ice maker (optional) or entertainment center (optional)

<sup>\*</sup> When equipped with ice maker option. Drain all other lines first, then attach a hose or place a container inside the luggage compartment to drain this line.

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